UICI - 8 - 4

WDW-4
DRILLING
REPORT

2018

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, January 11, 2019 2:52 PM
To: Denton, Scott (Scott.Denton@HollyFrontier.com); Holder, Mike (Mike.Holder@hollyfrontier.com); Dade, Lewis (Randy); Combs, Robert (Robert.Combs@hollyfrontier.com)
Cc: Sanchez, Daniel J., EMNRD; Griswold, Jim, EMNRD; Goetze, Phillip, EMNRD; Bratcher, Mike, EMNRD
Subject: Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Oil Conservation Division UIC Class I (Non-hazardous) Disposal Well AUTHORIZATION TO INJECT

Mr. Denton, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the "Drill Report WDW-4 May 2018 – August 2018" (Report) submitted under HollyFrontier Navajo Refining L.L.C. (Navajo) cover letter dated November 13, 2018. In addition, Navajo has responded and satisfactorily addressed all subsequent OCD Report and Water Quality Control Commission (WQCC) UIC Class I (Non-hazardous) Disposal Well discharge permit related questions, concerns, clarifications, etc. etc.

OCD has determined Navajo has met the current and/or applicable requirements of WQCC 20.6.2.5000 through 20.6.2.5399 NMAC in addition to other applicable requirements of the commission regulations, i.e., 19.15.26 NMAC. Navajo is hereby **authorized to inject** into WDW-4.

OCD would like to thank Navajo for its excellent communication, cooperation and technical efforts throughout the OCD WQCC Discharge Permit Process.

Please contact me if you have questions.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

ECONOMICALLY RECOVERABLE HYDROCARBON, INJECTION POTENTIAL AND PROTECTION OF CORRELATIVE RIGHTS EVALUATION

HollyFrontier Navajo Refining LLC
SWDW #4
API# 30-015-44677
Section 23, Twp. 17S-27E
Eddy County, New Mexico

Prepared for
HollyFrontier Navajo Refining LLC
Artesia, New Mexico

by
Geolex, Inc.
500 Marquette, NW, Suite 1350
Albuquerque, NM 87102

January 11, 2019

GEOLEX® INCORPORATED

I, Alberto A. Gutierrez, RG, as a professional geologist have examined and analyzed the available data in the vicinity of Navajo SWDW#4 (API # 30-015-44677). The results of this analysis is presented in this report prepared by me and under my direct supervision.

Based on the results of the analyses presented below, it is my professional opinion that there are no economically recoverable hydrocarbons in the permitted injection zone. Furthermore, I hereby certify that the operation of this well as permitted for injection will not adversely affect the correlative rights of adjacent mineral owners or leasees.



Dated January 11, 2019

I, Louis J. Mazzullo, RG, as a Certified Petroleum Geologist, have examined and analyzed the available data in the vicinity of Navajo SWDW#4 (API # 30-015-44677). The results of this analysis is presented in this report prepared by me.

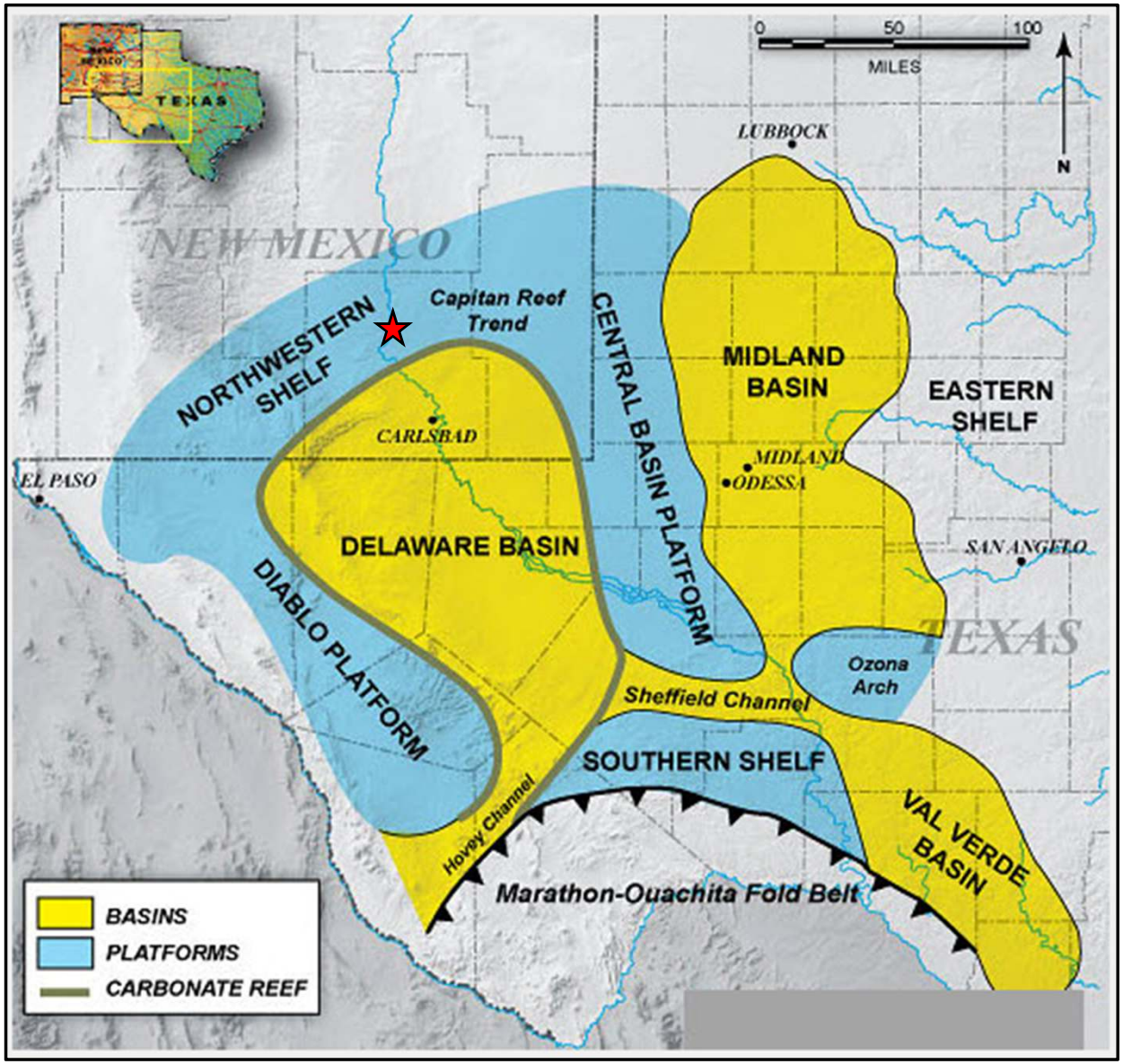
Based on the results of the analyses presented below, it is my professional opinion that there are no economically recoverable hydrocarbons in the permitted injection zone. Furthermore, I hereby certify that the operation of this well as permitted for injection will not adversely affect the correlative rights of adjacent mineral owners or leasees.

Certified Petroleum Geologist #4693
American Association of Petroleum Geologists (AAPG)

GEOLEX INCORPORATED

GEOLOGIC SETTING OF SWDW #4 (RED STAR)

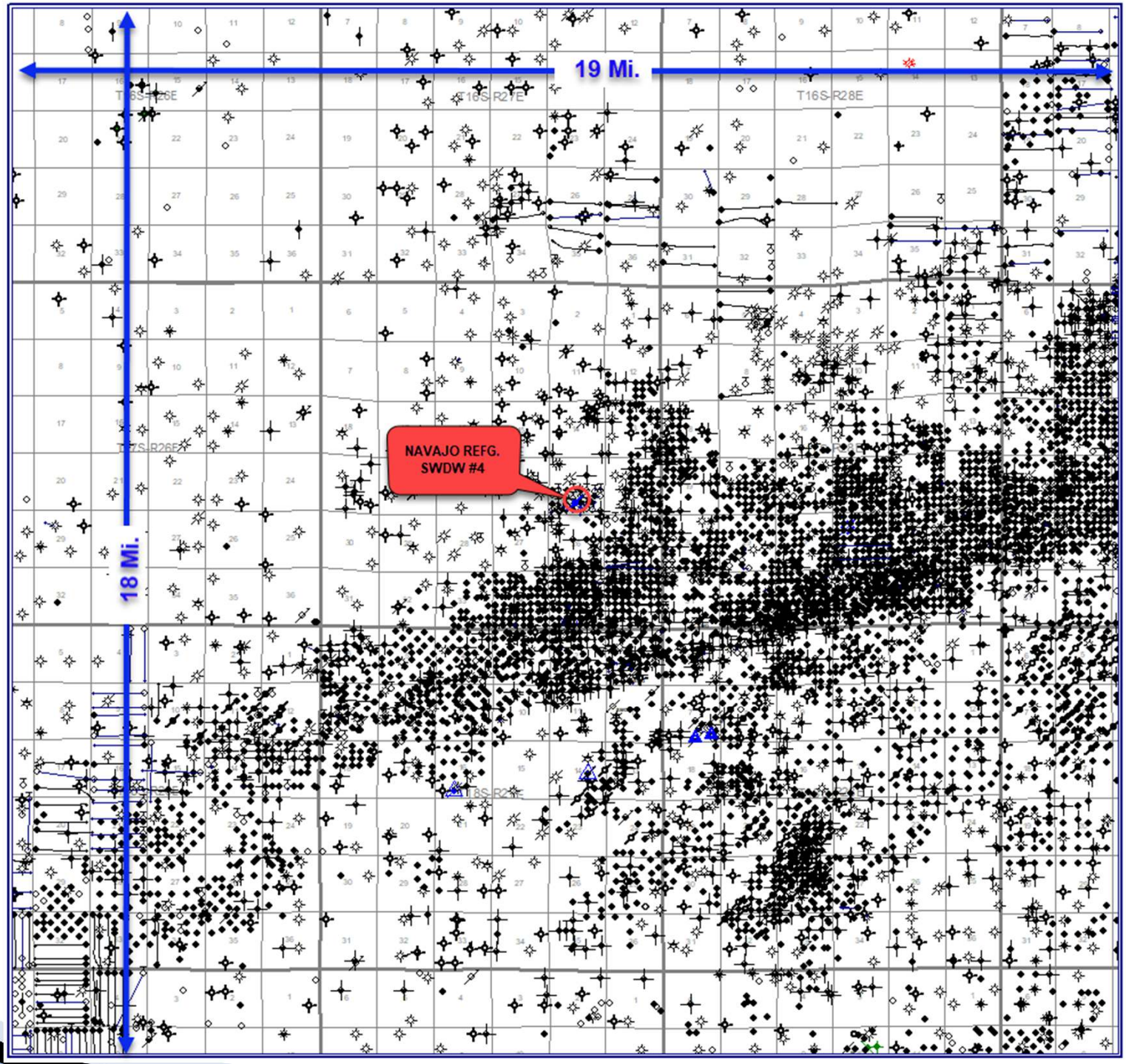
The SWDW #4 (API# 30-015-44677) is located on the Northwest Shelf of the Delaware Basin sub-province of the Permian Basin, near Artesia, New Mexico.



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REGIONAL LOCATION OF SWDW #4

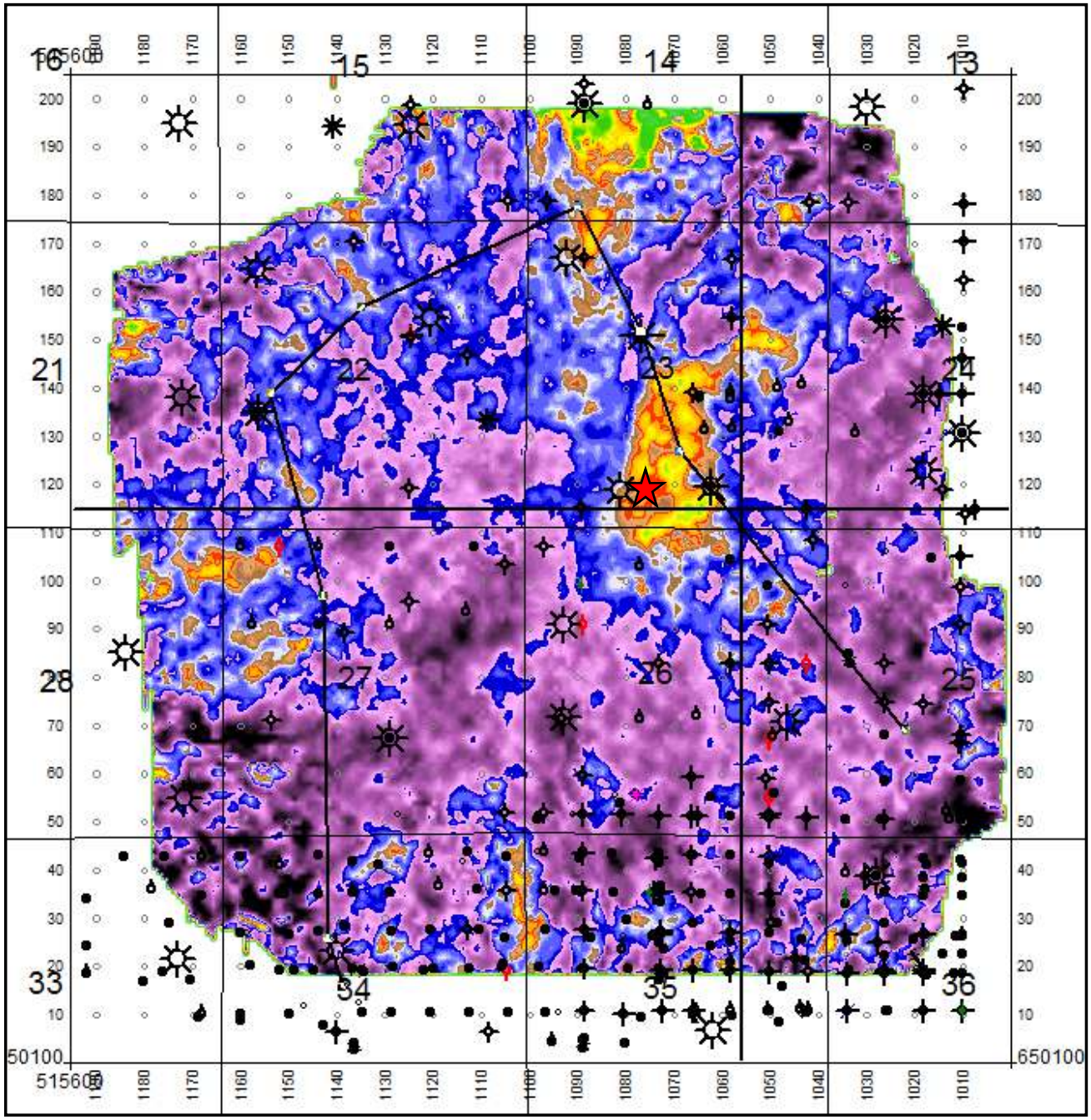
The Navajo Refining Co. SWDW #4 (API# 30-015-44677) is located on the northern edge of the Red Lake (Yeso) Field in Twp. 17S-27E, Section 23, in Eddy County, New Mexico. At this location, *there are or never have been any wells that produced hydrocarbons from the Silurian and Devonian formations,* and for some distance away from the boundaries of this map. The nearest Siluro-Devonian production is about 21 miles to the northeast of the well, in the Little Lucky Lake area of southern Chaves County.



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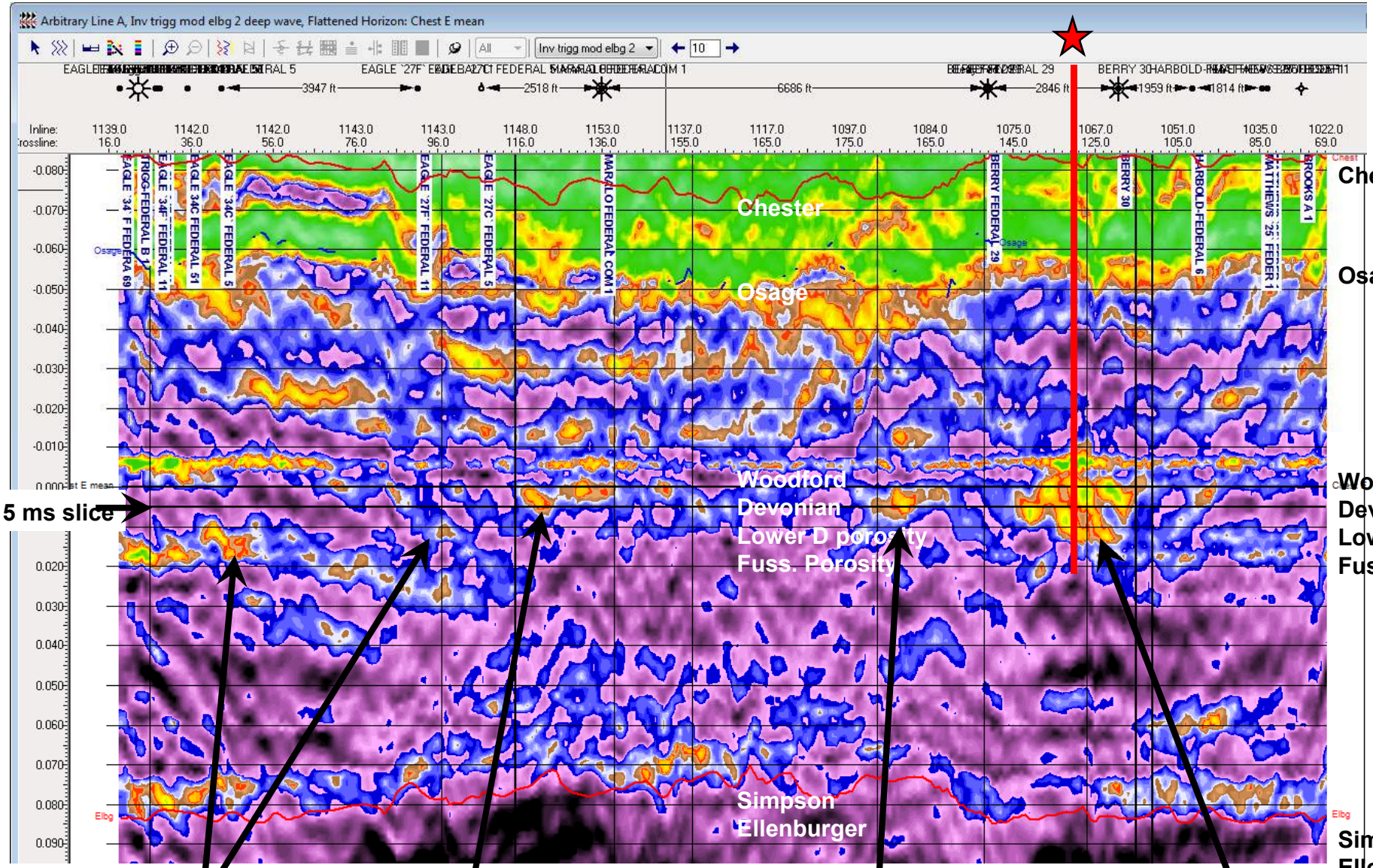
SEISMIC INVERSION SLICE THROUGH UPPER SILURO-DEVONIAN

The location for the SWDW #4 well (red star) was selected on the basis of seismic inversion analysis of a 3D seismic volume that was shot and interpreted by Geolex in 2017 for HollyFrontier. The bright warm color swatch in the vicinity of the well location represents an area of thick, high porosity within the upper Siluro-Devonian section.



GEOLEX INCORPORATED

FLATTENED SEISMIC TIME SLICE, UPPER SILURO-DEVONIAN



Chester

Osage

Woodford
Devonian
Lower D porosity
Fuss. Porosity

Simpson
Ellenburger

This vertical section slice through the inverted seismic volume passes through the SWDW #4(red star) location, and shows that the Siluro-Devonian here is riddled with porous, karst and karst-collapse facies that start 25-30 feet below the top of the Siluro-Devonian, with well-interconnected porosity that is evidently very vertically transmissive.

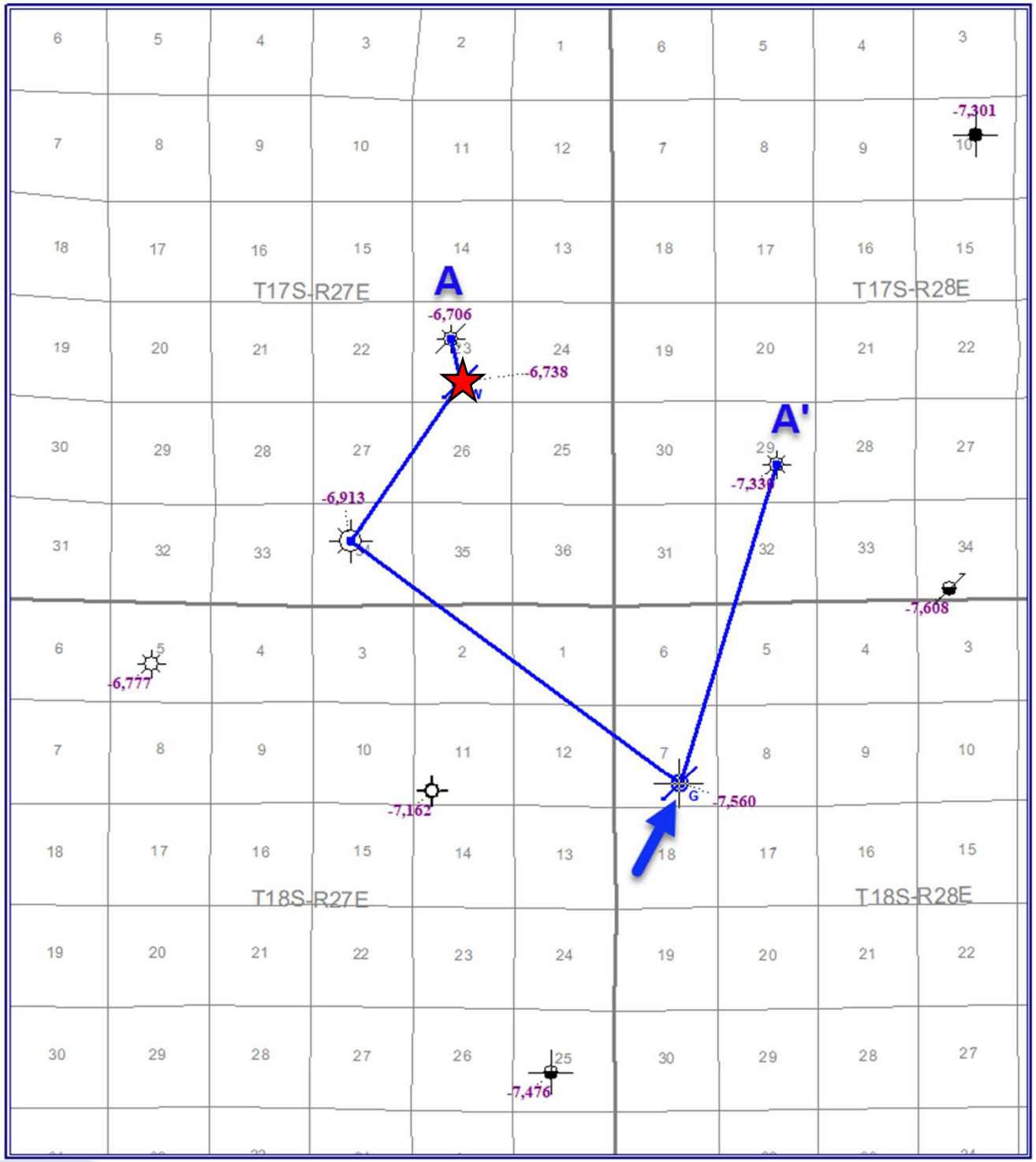
GEOLEX INCORPORATED

DEVONIAN OR DEEPER WELL CONTROL AROUND SWDW #4

Devonian structural subseas are shown for each well.

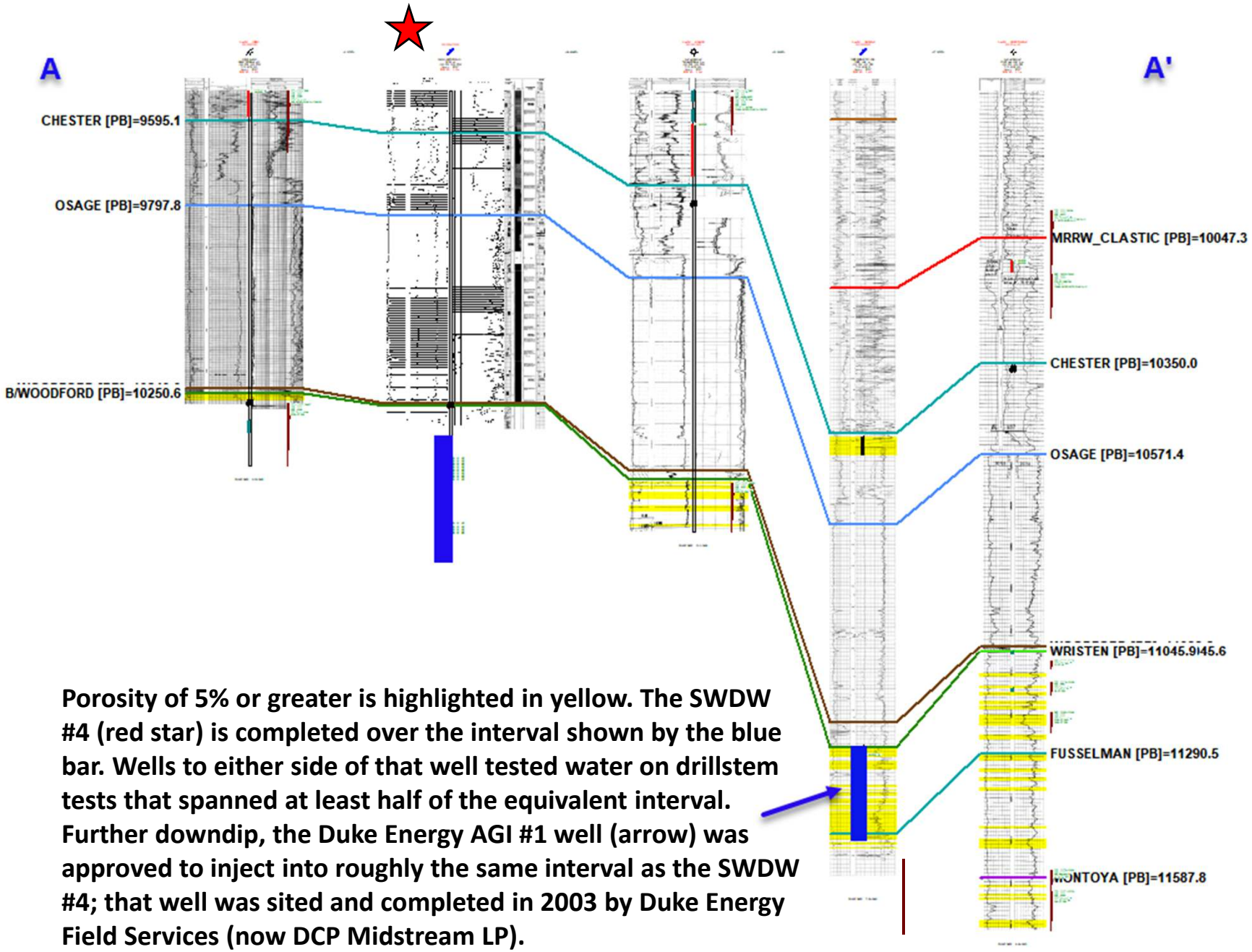
Only a handful of wells were drilled to the Devonian or deeper in the more immediate area of the subject well (red star). One of these wells is an active acid gas injection (AGI) well operated by DCP Midstream (arrow). The SWDW #4 is one of the structurally higher wells on top of the Devonian. *None of the wells on this map had hydrocarbon shows in the Siluro-Devonian, and most tested wet in the upper Siluro-Devonian by drillstem tests and/or through perforations*.

Cross-section A-A', indexed here and presented on the next slide, illustrates the structure and geology of the Siluro-Devonian section in the area.



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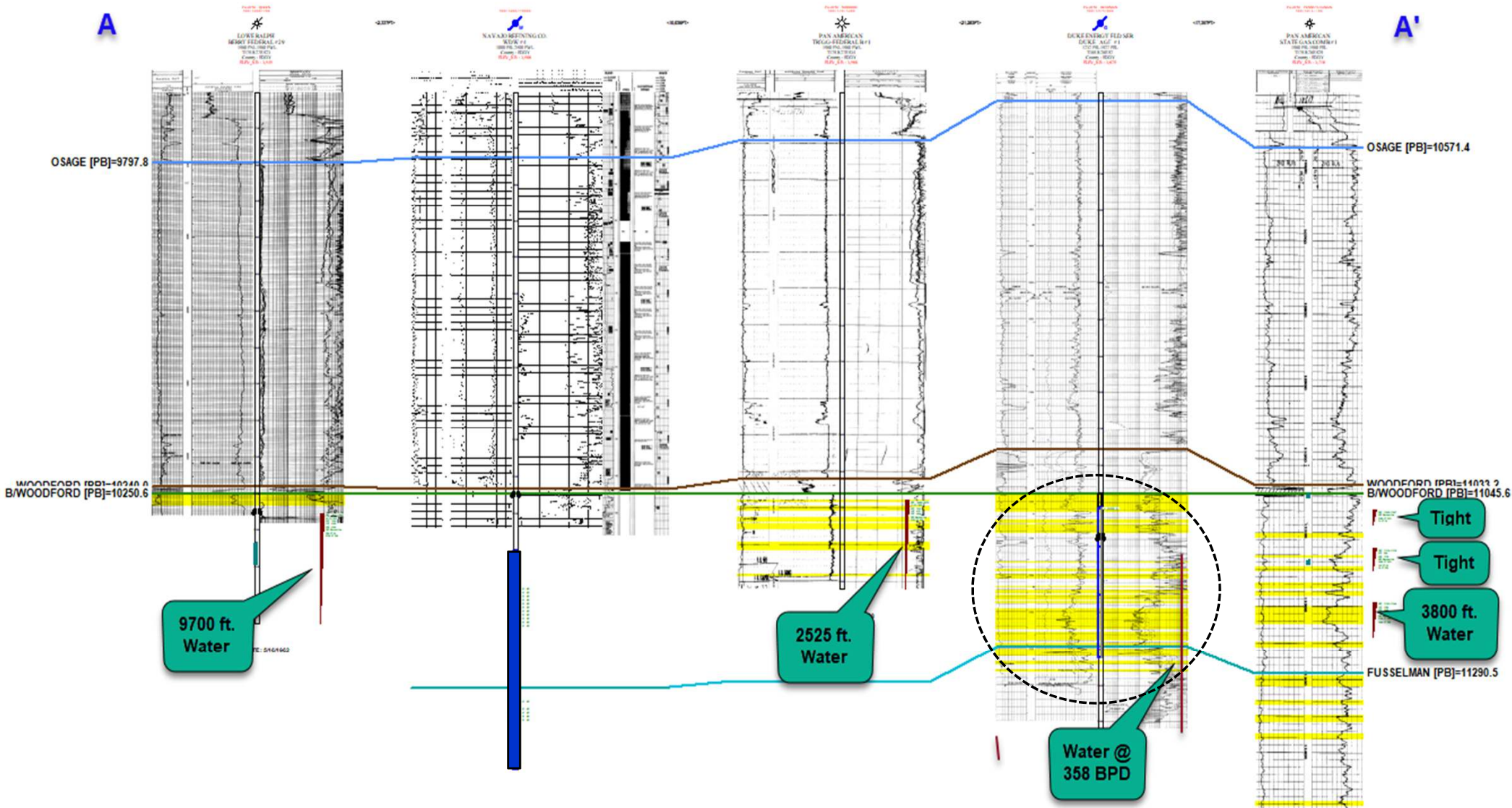
STRUCTURAL CROSS-SECTION INCORPORATING DEEP PENETRATIONS



Porosity of 5% or greater is highlighted in yellow. The SWDW #4 (red star) is completed over the interval shown by the blue bar. Wells to either side of that well tested water on drillstem tests that spanned at least half of the equivalent interval. Further downdip, the Duke Energy AGI #1 well (arrow) was approved to inject into roughly the same interval as the SWDW #4; that well was sited and completed in 2003 by Duke Energy Field Services (now DCP Midstream LP).

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STRATIGRAPHIC CROSS-SECTION INCORPORATING DEEP PENETRATIONS



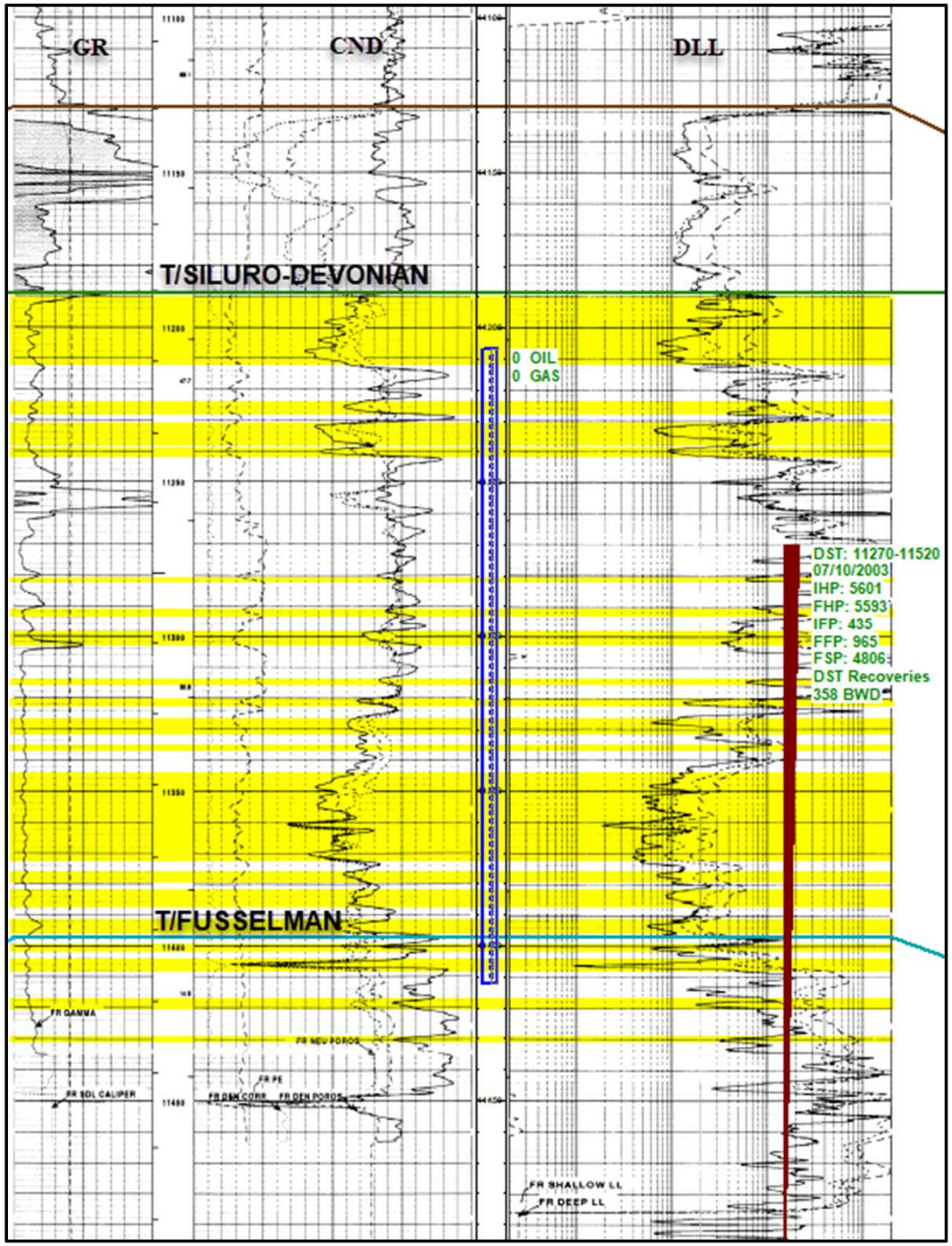
Porosity of 5% or greater is shown in yellow. Fluid recoveries from drillstem tests are shown, and NONE showed any hydrocarbon recovery. *Even the structurally-highest wells tested wet across the intended injection interval of the SWDW #4 (blue bar).* Although the SWDW #4 was not logged through the intended injection interval, its section is equivalent to the structurally-lower Duke AGI #1 well, whose log section (dashed black outline) is shown on the next slide.

GEOLEX INCORPORATED

LOG COMPOSITE SECTION, DUKE AGI #1

An open-hole drillstem test was run across the interval shown, and recovered water at a calculated rate of 358 barrels per day. Casing was then set and cemented, and perforations shot as shown. *The perforations were given an acid frac treatment, and recovered no hydrocarbons.*

The differences in resistivity values between the upper porosity zone and those of the zone just above the Fusselman are probably the result of varying water chemistry, particularly, more sulfurous waters at the top of the Siluro-Devonian. Water recovered from the drillstem test showed 4,786 mg/l sulfate in the upper sample chamber of the test tool, decreasing with depth (see next slide). The higher resistivity readings in the upper-most porosity zone (below the top of Siluro-Devonian) are likely reflecting increased sulfates, which would give the appearance of less saline water even though the water in the upper zones are more saline.



SILURO-DEVONIAN WATER ANALYSES, DUKE AGI #1

Water chemical variances from 4 samples taken from the drillstem test of the Duke AGI #1. The highest water sample shows higher sulfates and higher salinity than samples taken lower in the section. The higher sulfates would register on a resistivity tool as higher resistivity, giving the appearance of fresher water or more oil-prone fluids. ***The presence of oil in the upper-most porosity zone is unlikely, because of (1) the lack of oil shows in the upper-most porosity zones in any of the other wells on cross-section A-A', especially in wells that are structurally higher than the Duke AGI #1, (2) the fact that the SWDW #4 well is structurally low to an adjacent well that tested water in the upper-most zone, and (3) there is no Siluro-Devonian production within 21 miles of the SWDW #4.***

Martin Water Laboratories, Inc.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

TO: Mr. Robert Wheeler
P.O. Box 1642, Houston, TX 77251-1642

LABORATORY NO. 902-147
SAMPLE RECEIVED 9/25/02
RESULTS REPORTED 9/27/02

COMPANY Duke Energy Field Services LEASE AGI #1
FIELD OR POOL
SECTION 7 BLOCK SURVEY T-18S&R-28E COUNTY Eddy STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Recovered water - taken from AGI #1 (top). 9/24/02
NO. 2 Recovered water - taken from AGI #1 (middle). 9/24/02
NO. 3 Recovered water - taken from AGI #1 (bottom). 9/24/02
NO. 4 Recovered water - taken from AGI #1 (upper sample chamber). 9/24/02
REMARKS: DST #1 - Devonian

CHEMICAL AND PHYSICAL PROPERTIES

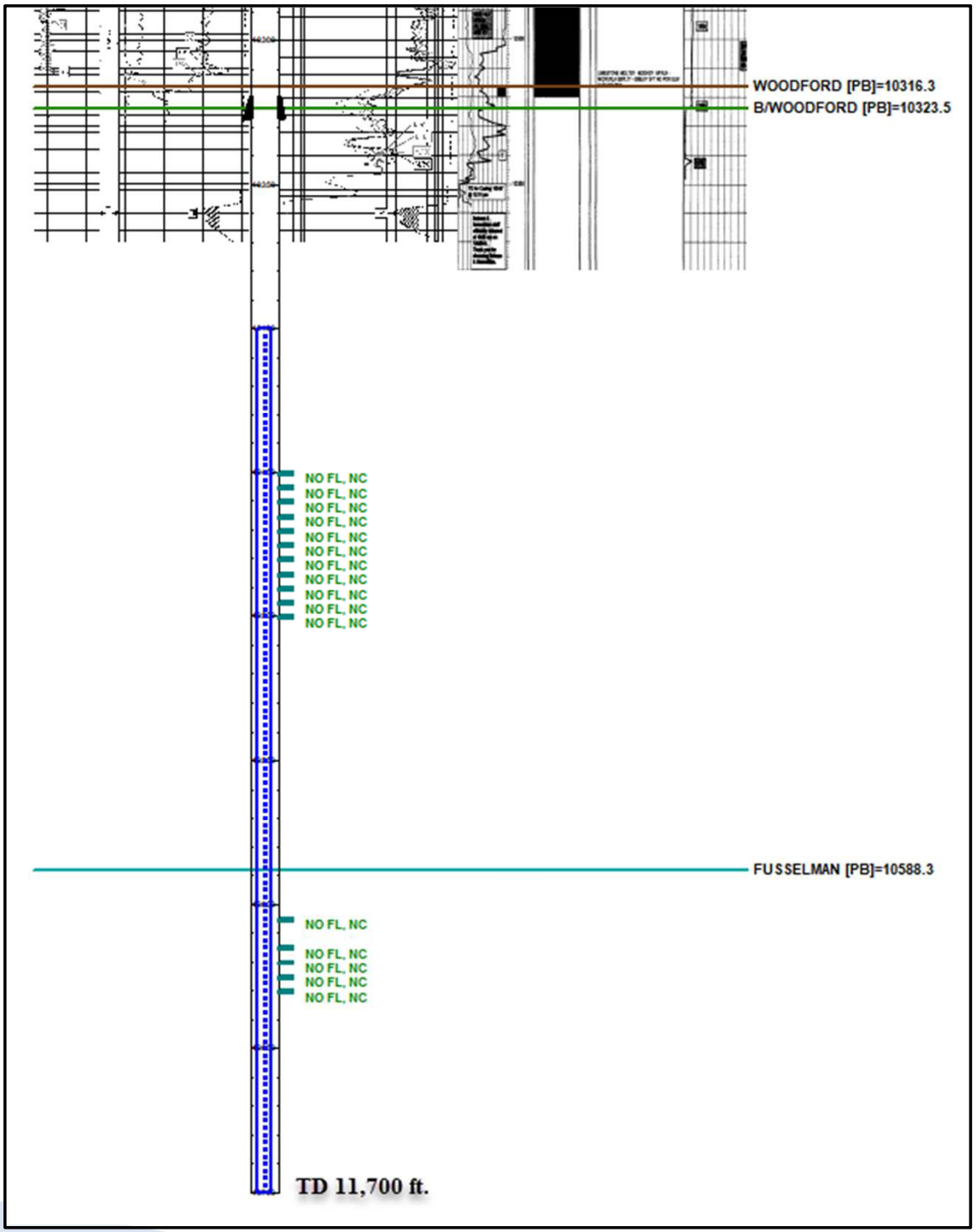
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0666	1.0420	1.0420	1.0422
pH When Sampled				
pH When Received	6.95	6.21	6.41	6.37
Bicarbonate as HCO_3	1,903	903	878	732
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	850	4,800	4,300	4,100
Calcium as Ca	248	1,120	1,240	1,120
Magnesium as Mg	56	486	292	316
Sodium and/or Potassium	38,536	20,728	20,664	20,295
Sulfate as SO_4	4,786	2,952	3,319	2,470
Chloride as Cl	55,380	32,660	31,950	31,950
Iron as Fe	29.6	175	353	422
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	100,908	58,849	58,343	56,882
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	0.0	0.0	0.0	0.0
Resistivity, ohms/m at 77° F.	0.096	0.144	0.145	0.147
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

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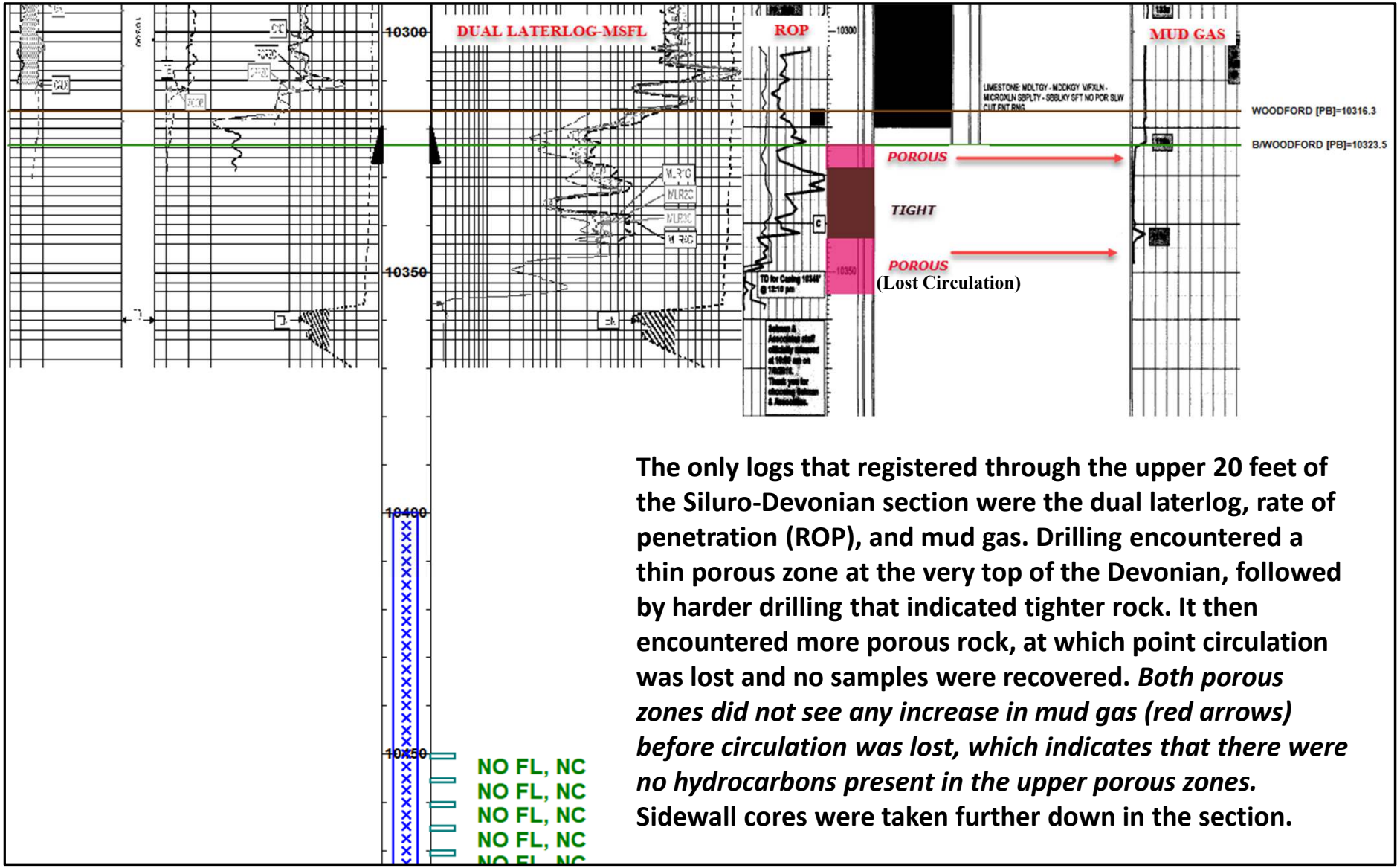
WELL SECTION, SWDW #4

Open-hole geophysical logs were only run to the top of the Siluro-Devonian, and only the resistivity log sampled the upper 20 feet of the Devonian (see next slide). Although logs were not run in the open hole below the top of the Siluro-Devonian, sidewall cores were taken through the middle and lower parts of the intended injection interval. The sidewall cores are indicated by the green tick marks; *none of the cores reported any fluorescence (NO FL) or cuts (NC).*



GEOLEX INCORPORATED

WELL SECTION CLOSE-UP, UPPER DEVONIAN IN SWDW #4



The only logs that registered through the upper 20 feet of the Siluro-Devonian section were the dual laterlog, rate of penetration (ROP), and mud gas. Drilling encountered a thin porous zone at the very top of the Devonian, followed by harder drilling that indicated tighter rock. It then encountered more porous rock, at which point circulation was lost and no samples were recovered. *Both porous zones did not see any increase in mud gas (red arrows) before circulation was lost, which indicates that there were no hydrocarbons present in the upper porous zones.* Sidewall cores were taken further down in the section.

GEOLEX INCORPORATED

SIDEWALL CORE REPORT- CORE LABS

SIDEWALL CORE ANALYSIS

Company: WSP USA
Well Name: Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid:
Elevation:

File Number: 201802772
Date: 08/17/2018
API Number:
Analyst: JS, SO

Sample Number	Sample Depth ft	Sample Received in	Permeability (Horizontal) Kair md	Porosity Helium % of BV	Saturation Oil % of PV	Saturation Water % of PV	Oil Bulk % of BV	Gas Bulk % of BV	Grain Density gm/cc	Gas Detector Units (0-250)	Description
1	10630.0	1.9	0.003	3.5	0.1	42.4	0.0	2.0	2.83	0	Dol, sl vug, 0% flu no cut
2	10625.0	2.0	0.056	2.5	0.3	68.2	0.0	0.8	2.85	0	Dol, tr vug, 0% flu no cut
3	10620.0	1.0	0.538	1.5	0.9	97.5	0.0	0.0	2.82	0	Dol, tr vug, 0% flu no cut
4	10615.0	1.1	1,570	3.8	0.4	50.0	0.0	1.9	2.84	1	Dol, sl vug, 0% flu no cut
5	10605.0	1.8	0.001	2.5	0.8	49.6	0.0	1.3	2.84	2	Dol, sl vug, 0% flu no cut
6	10500.0	1.5	162	6.2	0.3	45.7	0.0	3.3	2.85	1	Dol, tr cht, tr sul, sl vug, 0% flu no cut
7	10495.0	1.8	1.08	9.8	0.2	96.9	0.0	0.3	2.71	0	Cht, sul, dol, sl vug, 0% flu no cut
8	10490.0	1.9	1.20	6.2	0.4	95.2	0.0	0.3	2.68	0	Cht, sl dol,tr vug, 0% flu no cut
9	10485.0	1.8	62.8	11.1	0.8	96.4	0.1	0.3	2.55	1	Cht, sul, sl dol, sl vug, 0% flu no cut
10	10480.0	1.0	1.10	8.2	2.9	72.8	0.2	2.0	2.65	0	Cht, tr dol, sl vug, 0% flu no cut
11	10475.0	1.3	194	8.4	0.5	44.6	0.0	4.6	2.84	4	Dol, sl vug, 0% flu no cut
12	10470.0	1.1	0.001	9.5	0.1	23.0	0.0	7.3	2.83	1	Dol, sl vug, 0% flu no cut
13	10465.0	2.2	0.337	2.1	0.7	87.8	0.0	0.2	2.81	0	Dol, tr vug, 0% flu no cut
14	10460.0	1.8	133	4.6	0.5	52.3	0.0	2.2	2.84	23	Dol, sl vug, 0% flu no cut
15	10455.0	1.5	0.694	3.6	0.4	44.6	0.0	2.0	2.84	5	Dol, sl vug, 0% flu no cut
16	10450.0	2.5	6,510	12.3	0.1	43.3	0.0	7.0	2.83	4	Dol, vug, 0% flu no cut

Sidewall core analyses confirm variable water saturations, and only trace hydrocarbon shows. These results conclusively demonstrate the absence of economically recoverable hydrocarbons and confirm that injection into this zone will not endanger correlative rights of mineral holders or leases in the area.

SUMMARY OF RESERVOIR CHARACTERISTICS OF THE PROPOSED INJECTION INTERVAL CONCLUSIVELY DEMONSTRATES THE ABSENCE OF ECONOMICALLY RECOVERABLE HYDROCARBONS

- Injection is proposed into porous dolomites and dolomitic limestones of the Siluro-Devonian (Devonian, Wristen, Fusselman). This interval has been drillstem-tested across various zones in nearby wells, and never recovered any hydrocarbons. The injection interval in the SWDW #4 was acid-fracked and did not recover any trace of hydrocarbon.

- Mudlog gas shows across the top of the injection interval are absent, clearly indicating the lack of any movable (recoverable) hydrocarbons in the upper Siluro-Devonian section.

- Sidewall core analyses indicated variable water saturations throughout the middle and lower interval, no fluorescence, and no cuts, which also indicate the lack of recoverable hydrocarbons in the injection interval.

- The caprock which was verified by coring and logging shows that it is impermeable and adequate to contain injection fluids in the injection zone protecting correlative rights of mineral owners or leasees in overlying zones.

- Seismic inversion analyses, which were used to locate the well site and which were verified by drilling, showed well-interconnected porosity extending down-section from about 20-30 feet below the top of the Siluro-Devonian (base of Woodford) that is evidently water-wet.

- SWDW #4 is directly downdip of a well ½ mile away that tested water across 150 feet of the upper Siluro-Devonian interval and updip of the Duke AGI #1, which was successfully permitted to inject through the same interval as proposed for SWDW #4.

- **There is no production from the Siluro-Devonian within 21 miles of the well site.**

Chavez, Carl J, EMNRD

From: Denton, Scott <Scott.Denton@HollyFrontier.com>
Sent: Thursday, December 27, 2018 2:17 PM
To: Chavez, Carl J, EMNRD
Cc: Goetze, Phillip, EMNRD; Griswold, Jim, EMNRD; Bratcher, Mike, EMNRD; Dade, Lewis (Randy); Griswold, Jim, EMNRD; Brancard, Bill, EMNRD; Denton, Scott
Subject: [EXT] RE: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review
Attachments: GMoore statement 12-21-18.pdf; 30-015-30386_54009.pdf; 30-015-30386_54026.pdf; 30-015-30386_54027.pdf; Appendix 9.19 Mudlog.pdf; Appendix 9.17 Sidewall Core Report.pdf

Carl,

Please find the attached in response to outstanding item for WDW-4. Let me know if you have any comments or concerns.

Regards,

SMD

Scott M. Denton
Environmental Manager

The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
575-746-5487 (o)
970-581-7268 (c)

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Friday, December 21, 2018 4:11 PM
To: Denton, Scott <Scott.Denton@HollyFrontier.com>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Brancard, Bill, EMNRD <bill.brancard@state.nm.us>
Subject: RE: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Scott, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of Navajo Refining, LLC's December 14, 2018 responses to OCD's December 12, 2018 Drill Report and MIT Review Comments below.

The only outstanding issue is the appropriate submittal for the Drill Report No. 2 below.

Upon receipt of the appropriate documentation, OCD will wrap up its review of drill report for consideration of final authorization to inject into WDW-4.

Please contact me if you have questions. Thank you for the cooperation in this matter.

****

Drill Report:

All electronic logs were submitted on a thumb drive with the report. Navajo can provide another thumb drive if needed.

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Denton, Scott <Scott.Denton@HollyFrontier.com>
Sent: Friday, December 14, 2018 10:38 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Denton, Scott <Scott.Denton@HollyFrontier.com>
Subject: [EXT] FW: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Carl & Team,

Please see responses in **bold black text**: The input for responses is from Navajo and our contractor WSP.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.

   Yes, this is a possibility.

2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.

   Correct

3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

While there are some areas lacking cement between 7250 ft and 9200 ft, we do have good cement around the casing shoe from 10,327 ft and up to 10,160 ft, then some cement from 10,160 ft to 9,900 ft, and then good cement from 9,900 ft to 9,650 ft. This should be enough cement to create a barrier between the injection zone and the confining zone (top at 9805 ft) and prevent upward migration of wastewater, even hazardous wastewater. This observation is from evaluating Exhibit 10.26 Weatherford BondView Cement Evaluation from the Drilling & Completion report.

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.

Understood

2) Please submit the chart recorder calibration sheet information from the MIT.

Please find the attached calibration sheet.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?

Because this is a new reservoir for injection, we anticipated to see a pressure response in the early portion of the well shut-in time within the 24 hours. We observed the radial flow period to occur within 0.108 hrs of shut-in time on the log-log diagnostic plot. The data we gathered from the radial flow period was analyzed to provide the permeability measurement.

A longer FOT monitoring period (at least 30 hours) is used on the existing three Navajo disposal wells because their reservoirs take longer to provide a pressure response.

2) Please provide a FOT signature page by the approving engineer.

Please find attached FOT signature page by Ted Jose, New Mexico PE licensed engineer. Because Ted also PE sealed the entire Drilling & Completion report, we erroneously concluded that the FOT results were also covered.

3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?

We decided to use 330 ft net thickness because the last time we ran a wireline tool, we had tagged plug back depth at 10,670 ft (the well was drilled to 10,700 ft) and decided that 330 ft net thickness would be more conservative than using the gross thickness of 373 ft.

4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

Yes, we have observed the permeability is related to the naturally occurring fractures in the injection interval and the cavernous lost circulation zone that we observed from ~10,330 ft to ~10,385 ft (as seen in Exhibit 10.12 Caliper Log Open-Hole in the report)

Drill Report:

1) Electronic logs have not been submitted to date. Please address.

All electronic logs were submitted on a thumb drive with the report. Navajo can provide another thumb drive if needed.

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**

   Due to the lost circulation zone encountered between 10,330 ft to 10,385 ft, we did have returns while drilling from 10,360 ft to total depth at 10,700 ft. Because we did not have returns, we could not retrieve any samples for the mud loggers to analyze. This is why the Selman Mud Log ends at 10,360 ft.

3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.

   The Selman Mud Log and Weatherford Cement Evaluation Logs belong to this well. The correct API number is 30-015-44677 and the wrong API number was placed on the header of these two logs. The incorrect number is from the previously permitted well that was never drilled.

4) Was side-core wall data obtained from the well?

   Appendix 9.17 (see attached) includes the sidewall core data from the 16 sidewall cores recovered from the Injection Interval in various depths from 10,450 ft to 10,630 ft.

5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.

   Please find attached Confining Zone and Injection Interval picks from our geologist Graciela Moore. Correlation picks were made by comparing open hole logs to the N-S and E-W cross sections in the permit application.

Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Please find attached the signed OCD C-105 form.

Thanks,

SMD

Scott M. Denton
Environmental Manager

The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
575-746-5487 (o)
970-581-7268 (c)

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Wednesday, December 12, 2018 4:09 PM

To: Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Denton, Scott <Scott.Denton@HollyFrontier.com>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Randy, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the WDW-4 Drilling Report for Well API# 30-015-44677. OCD needs responses to the review comments and questions below. The red text items below are a high priority to the OCD. Once OCD receives adequate responses to the items below, it will expedite the approval to inject process.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.
2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.
3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.
2) Please submit the chart recorder calibration sheet information from the MIT.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?
2) Please provide a FOT signature page by the approving engineer.
3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?
4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

Drill Report:

1) Electronic logs have not been submitted to date. Please address.
2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**
3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.
4) Was side-core wall data obtained from the well?
5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.
6) Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Miscellaneous:
OCD is still reviewing logs.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

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In response to the question concerning oil and gas production in the Silurian-Devonian and the WDW-4 Injection Interval, the probability of this zone being an economical resource is low based on the following:

- During drilling, viable gas production was not observed. From the top of the Injection Zone (10,220 ft) to the end of the mud log at 10,330 ft, the mud log shows equivalent average of 100 gas units (1-2% gas) which can be defined as background gas. Viable gas production would need to have sustainable gas units in the thousands.
- The attached sidewall core analysis of the 16 cores taken in the Injection Interval indicate no fluorescence, no cut, and no residual oil saturation greater than 1% of pore volume. Viable oil production is not observed based on the analysis of these sidewall cores. In addition, we did not find any producing wells that penetrated this deep in the AOR for the permit application of WDW-4.
- Only one (1) of the 91 non-freshwater artificial penetrations identified within 1-mile of WDW-4 was advanced to a depth to penetrate the top of the planned WDW-4 Silurian-Devonian age Injection Zone (API 30-015-00472). Records show that this well was properly constructed and plugged and abandoned. Other non-freshwater artificial penetrations in the area are producing from a shallower interval. Within the Township and Range of WDW-4, API 30-015-30386 was drilled to the depth of 9,800 ft into the Morrow Formation where "no commercial production was encountered". This well was plugged and later recompleted as an injection well (7850-8938 ft). Record from OCD database is attached for API 30-015-30386.

Graciela Moore, P.G.

Senior Geologist

Phone: 281-589-5988

Email: Graciela.Moore@wsp.com

(PG - TX#10394)

Graciela E. Moore

STATE OF TEXAS
GRACIELA E. MOORE
GEOLOGY
10394
LICENSED
PROFESSIONAL GEOSCIENTIST

December 21, 2018

WSP USA
16200 Park Row
Suite 200
Houston, TX 77084

wsp.com

APPENDIX 9.17

CORE ANALYSIS REPORT

WSP USA

Navajo WDW 4

Eddy County, Texas

08/17/2018

DISCLAIMER

These analysis, opinions or interpretations are based on observations and materials supplied by the client to whom; and for whose exclusive and confidential use; this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories (all errors and omissions excepted); but Core Laboratories and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness or any oil, gas or other mineral well or formation in connection with which such report is used or relied upon.

201802772

SIDEWALL CORE ANALYSIS

Company: WSP USA
Well Name: Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid:
Elevation:

File Number: 201802772
Date: 08/17/2018
API Number:
Analyst: JS, SO

Sample Number	Sample Depth ft	Sample Received in	Permeability (Horizontal) Kair md	Porosity Helium % of BV	Saturation Oil % of PV	Saturation Water % of PV	Oil Bulk % of BV	Gas Bulk % of BV	Grain Density gm/cc	Gas Detector Units (0-250)	Description
1	10630.0	1.9	0.003	3.5	0.1	42.4	0.0	2.0	2.83	0	Dol, sl vug, 0% flu no cut
2	10625.0	2.0	0.056	2.5	0.3	68.2	0.0	0.8	2.85	0	Dol, tr vug, 0% flu no cut
3	10620.0	1.0	0.538	1.5	0.9	97.5	0.0	0.0	2.82	0	Dol, tr vug, 0% flu no cut
4	10615.0	1.1	1,570	3.8	0.4	50.0	0.0	1.9	2.84	1	Dol, sl vug, 0% flu no cut
5	10605.0	1.8	0.001	2.5	0.8	49.6	0.0	1.3	2.84	2	Dol, sl vug, 0% flu no cut
6	10500.0	1.5	162	6.2	0.3	45.7	0.0	3.3	2.85	1	Dol, tr cht, tr sul, sl vug, 0% flu no cut
7	10495.0	1.8	1.08	9.8	0.2	96.9	0.0	0.3	2.71	0	Cht, sul, dol, sl vug, 0% flu no cut
8	10490.0	1.9	1.20	6.2	0.4	95.2	0.0	0.3	2.68	0	Cht, sl dol,tr vug, 0% flu no cut
9	10485.0	1.8	62.8	11.1	0.8	96.4	0.1	0.3	2.55	1	Cht, sul, sl dol, sl vug, 0% flu no cut
10	10480.0	1.0	1.10	8.2	2.9	72.8	0.2	2.0	2.65	0	Cht, tr dol, sl vug, 0% flu no cut
11	10475.0	1.3	194	8.4	0.5	44.6	0.0	4.6	2.84	4	Dol, sl vug, 0% flu no cut
12	10470.0	1.1	0.001	9.5	0.1	23.0	0.0	7.3	2.83	1	Dol, sl vug, 0% flu no cut
13	10465.0	2.2	0.337	2.1	0.7	87.8	0.0	0.2	2.81	0	Dol, tr vug, 0% flu no cut
14	10460.0	1.8	133	4.6	0.5	52.3	0.0	2.2	2.84	23	Dol, sl vug, 0% flu no cut
15	10455.0	1.5	0.694	3.6	0.4	44.6	0.0	2.0	2.84	5	Dol, sl vug, 0% flu no cut
16	10450.0	2.5	6,510	12.3	0.1	43.3	0.0	7.0	2.83	4	Dol, vug, 0% flu no cut

ABBREVIATIONS

Core Description

abund	Abundant	**incl**	Inclusion	**SA**	Sieve Analysis
anhy	Anhydrite	**ixp**	Intercrystalline Porosity	**SCAL**	Removed For SCAL Work
AST	Appears Similar To	**lam**	Laminations	**sd / sdy**	Sand / Sandy
bk	Break	**lim**	Limestone	**silica**	Silica
bldr	Boulder	**lmy**	Limey	**snd / sndy**	Sand / Sandy
c / crs	Coarse	**LPSA**	Laser Particle Size Anal	**SEM**	Scanning Electron Micoscope Analysis
calc	Calcite	**ls**	Limestone	**sh / shly**	Shale / Shaly
carb	Carbonaceous	**lv**	Large vug	**sl**	Slight
cbl	Cobble	**m**	Medium	**slt / slty**	Silt / Silty
CEC	Cation Exchange Cap	**mi**	Mud Invaded	**styl**	Stylolite (itic)
cem	Cemented	**mic**	Micaceous	**sulf**	Sulfur
cgl	Conglomerate	**mold**	Moldic	**sv**	Small Vug
chlor	Chlorite	**mv**	Medium Vug	**tr**	Trace
cht	Chert	**N/A**	Not Available/Analyzed	**TS**	Thin Section
coal	Coal	**NP**	No Perm Measurement	**uncons**	Unconsolidated
dol	Dolomite	**NR**	Not Received	**v**	Very
f	Fine	**ool**	Oolitic	**v frac**	Vertical Frac
fest	Ironstone	**OB**	Overburden	**vf**	Very Fine
foss	Fossil (iferous)	**P**	Preserved	**VOB**	Vertical Overburden
frac	Fracture	**pbl**	Pebble	**vug**	Vuggy (ular)
fri	Friable	**PET**	Petrographic Analysis	**ws**	Water Sand
glauc	Glauconite	**POA**	Removed For Oil Analys	**XRD**	X-ray Diffraction
grnl	Granule	**poro stk**	Porosity Streak		
gyp	Gypsum	**pp**	Pin Point	**cpl**	Continuous Planar Lams
h frac	Horizontal Frac	**ppm**	Pin Point Moldic	**cwl**	Continuous Wavy Lams
hal	Halite	**PSA**	Particle Size Analysis	**dpl**	Discontinuous Planar Lams
igp	Intergranular Porosity	**pyr**	Pyrite	**dwl**	Discontinuous Wavy Lams

Fluorescence

Color:		
	yel	Yellow
	ora	Orange
	gld	Gold
	wht	White
Adjectives:		
	br	Bright
	dul	Dul
	cont	Contaminated
	tif	Trace In Frac

Company:	**WSP USA**	**CL File No.:**	**201802772**
Well Name:	**Navajo WDW 4**	**Date:**	**08/17/2018**
Location:		**Analyst(s):**	**JS, SO**
Co. & St.:	**Eddy County, Texas**		

DEAN STARK SIDEWALL ANALYSIS PROTOCOL

Sample Preparation

Sidewall were gassed, length measured, trimmed, weighed, visual fluorescence, bulk volume on teflon sealed samples me
Archimedes principle and calipers and brief rock description.

Core Extraction

Plugs for routine core analysis were placed in Dean Stark equipment using toluene for water extraction.
Plug batch cleaning in toluene to remove remaining oil.
Plug samples were leached in methanol to remove salts.
Sample # 7 and # 9 contained sulfur.
Sulfur is removed during cleaning. Sulfur weight was added to dry weight. Sulfur volume to was added to the measured gr
Grain density and porosity were corrected using the data above.

Sample Drying

Samples were oven dried at 240° F to weight equilibrium (+/- 0.001 g).

Porosity

Porosity was determined using Boyle's Law technique by measuring grain volume at ambient conditions.

Grain Density

Grain density values were calculated by direct measurement of grain volume and weight on dried plug samples.
Grain volume was measured by Boyle's Law technique.

Permeability

Permeability to air was measured on each sample using steady-state air method at indicated 400 psi NCS.
Sample # 7 and # 9 contained sulfur. Samples were low temperatured dried at 125° F then permeability was measured be
extraction. Permeability reported for # 7 an # 9 represents samples' permeability before removal of sulfur.

SELMAN AND ASSOCIATES, LTD.
GEOLOGICAL CONSULTING / SURFACE LOGGING SERVICES
CORPUS CHRISTI TEXAS
P.O. BOX 61150
MIDLAND TEXAS 79711
ROCK SPRINGS WYOMING
OFFICE (432) 563-0084 --- 24 HOURS (800) 578-1006

NAVAJO REFINING COMPANY LLC
ARTESIA, NEW MEXICO

COMPANY:	NAVAJO REFINING COMPANY, L.L.C.					**DRILLING CO:**	PATRIOT
WELL:	WDW-4					**RIG #:**	4
FIELD:	SWD; DEVONIAN					**API:**	30-015-42872
LOCATION:	2310' FNL & 1100' FEL, SEC 28, T-17-S, R-27-E					**GL (FT):**	3565.8'
COUNTY:	EDDY	**STATE:**	NM	**LAT:**	32.815814	**DF (FT):**	3585.8'
INTERVAL:	120'	**TO:**	10348'	**LONG:**	-104.250034	**KB (FT):**	
DATE:	5/5/2018	**TO:**	7/6/2018	**JOB #:**	10150RATIO	**UNIT #:**	63
LOGGER(S):	C HILMES A MOHAMMED L HIBBARD E NIAMKEY J LEE J CRUZ					**PHONE #:**	432/260-7002

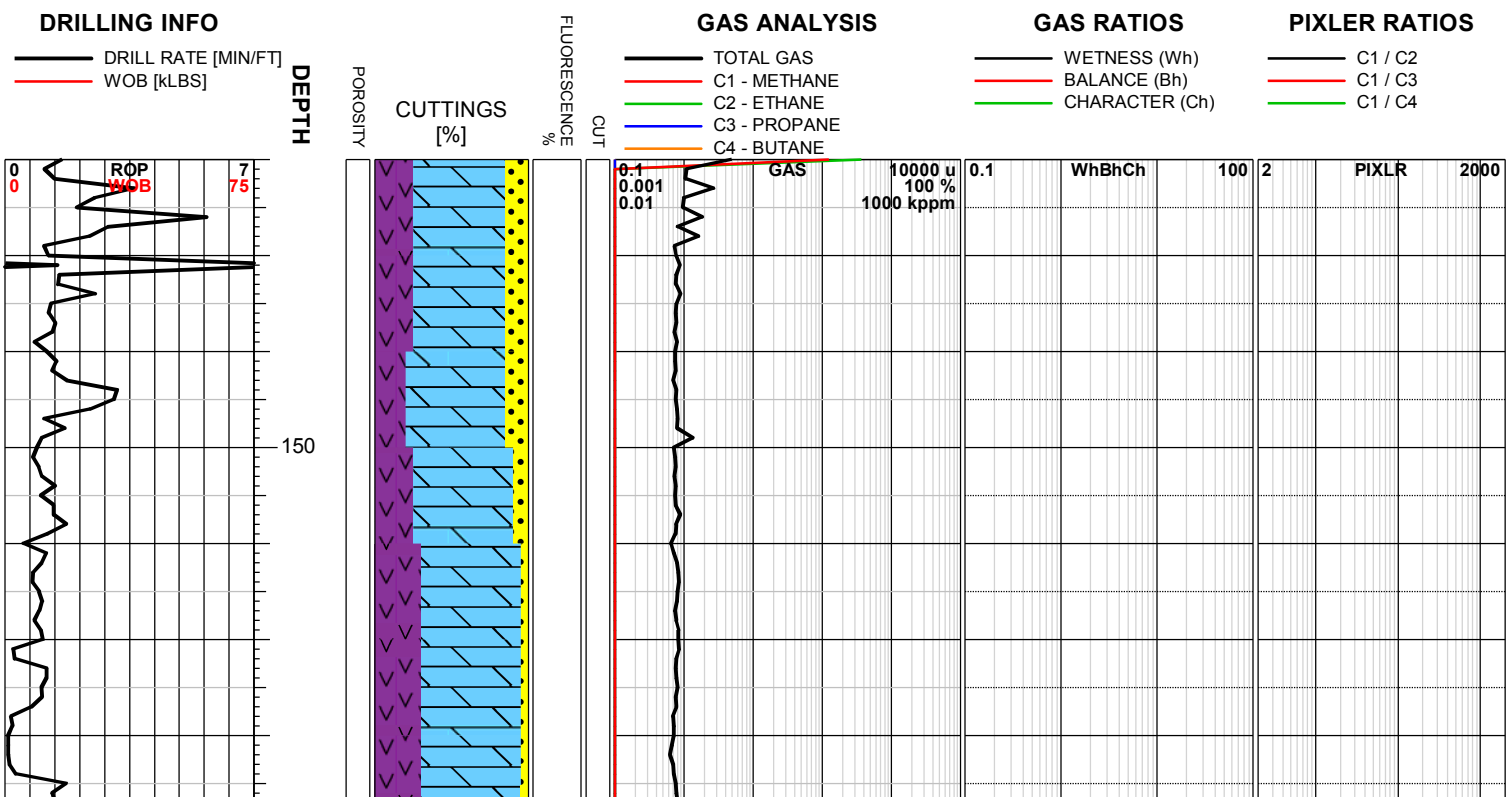
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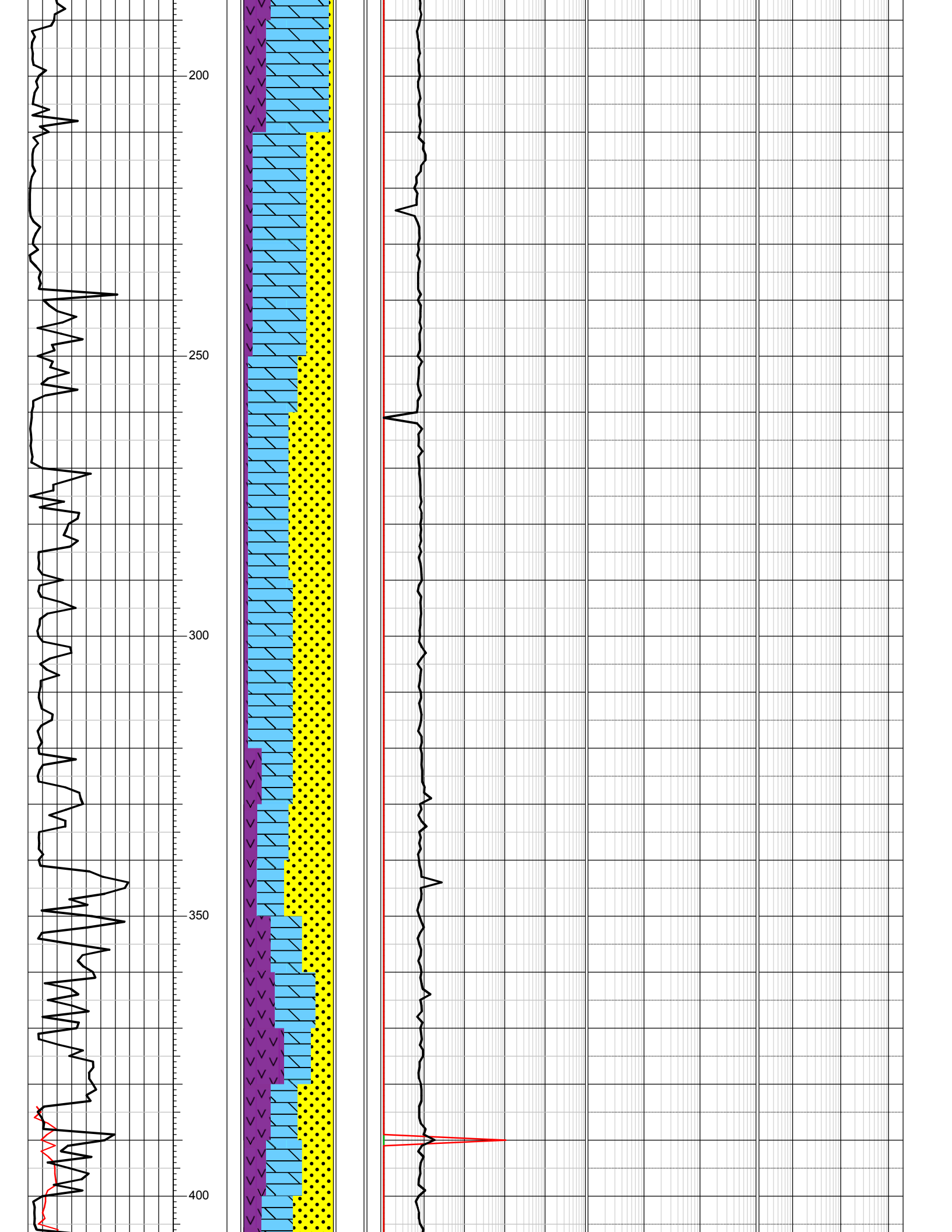
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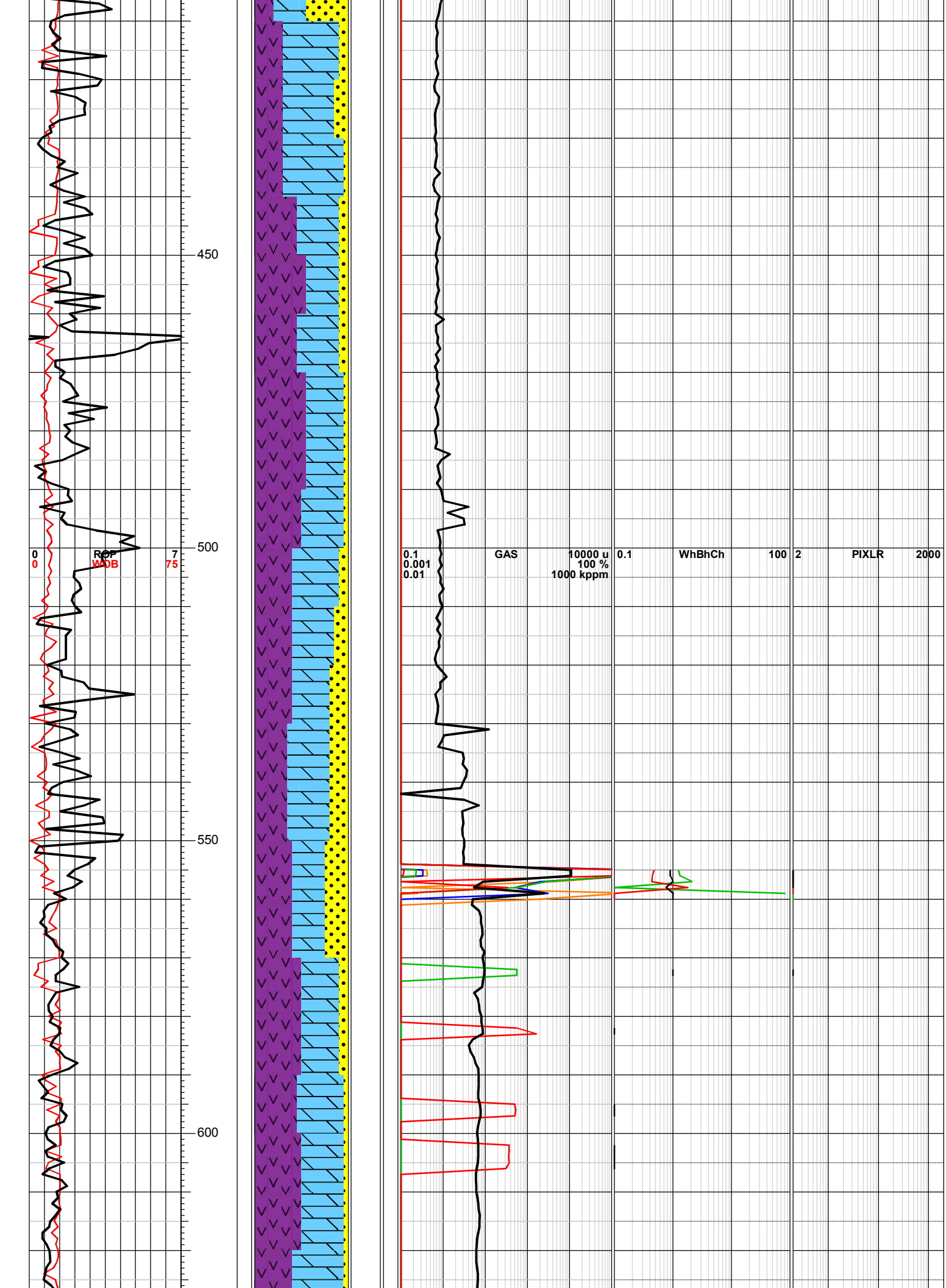
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BENTONITE, COAL, GRANITE, SALT, SAND
CALCITE, CONGLOMERATE, GRANITE WASH, SHALE, CEMENT

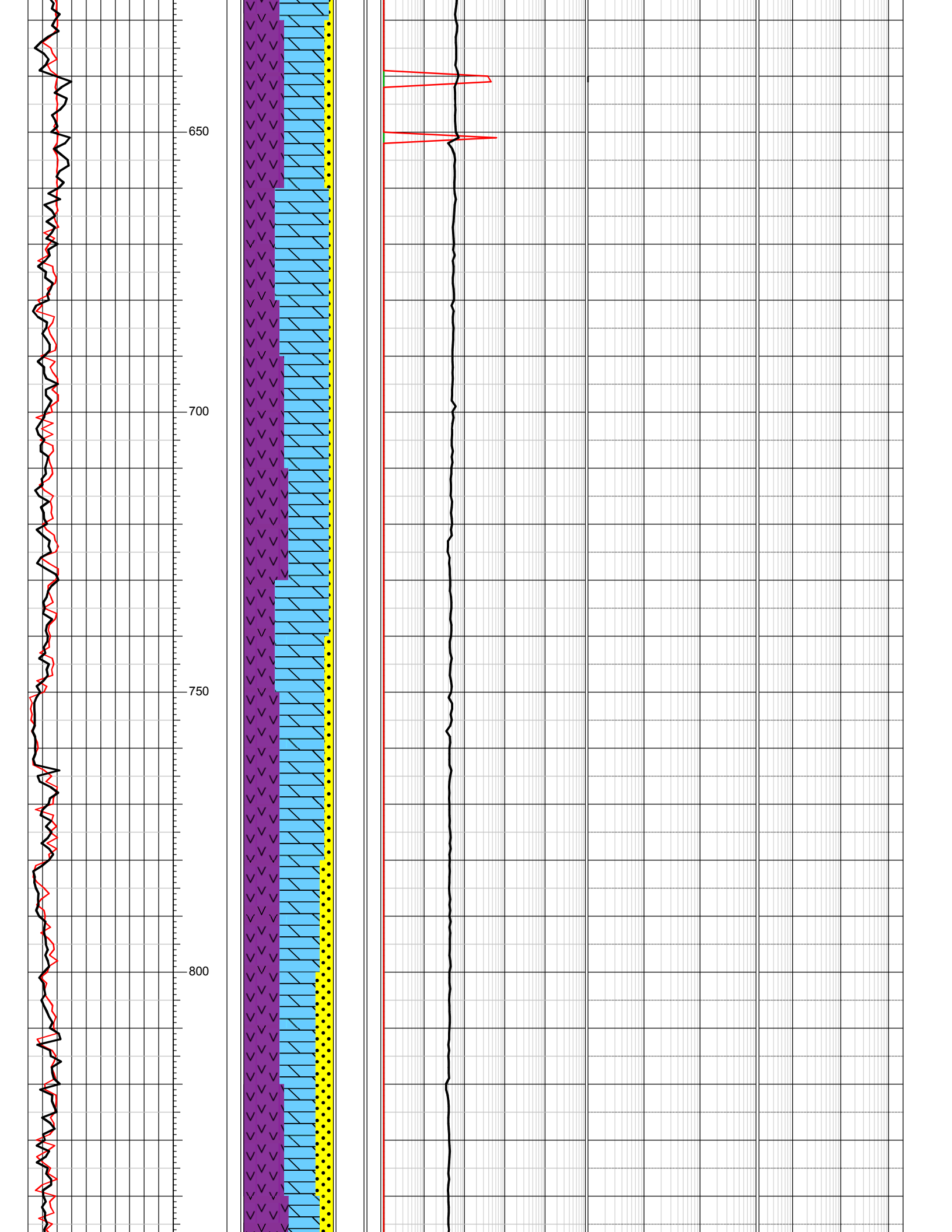
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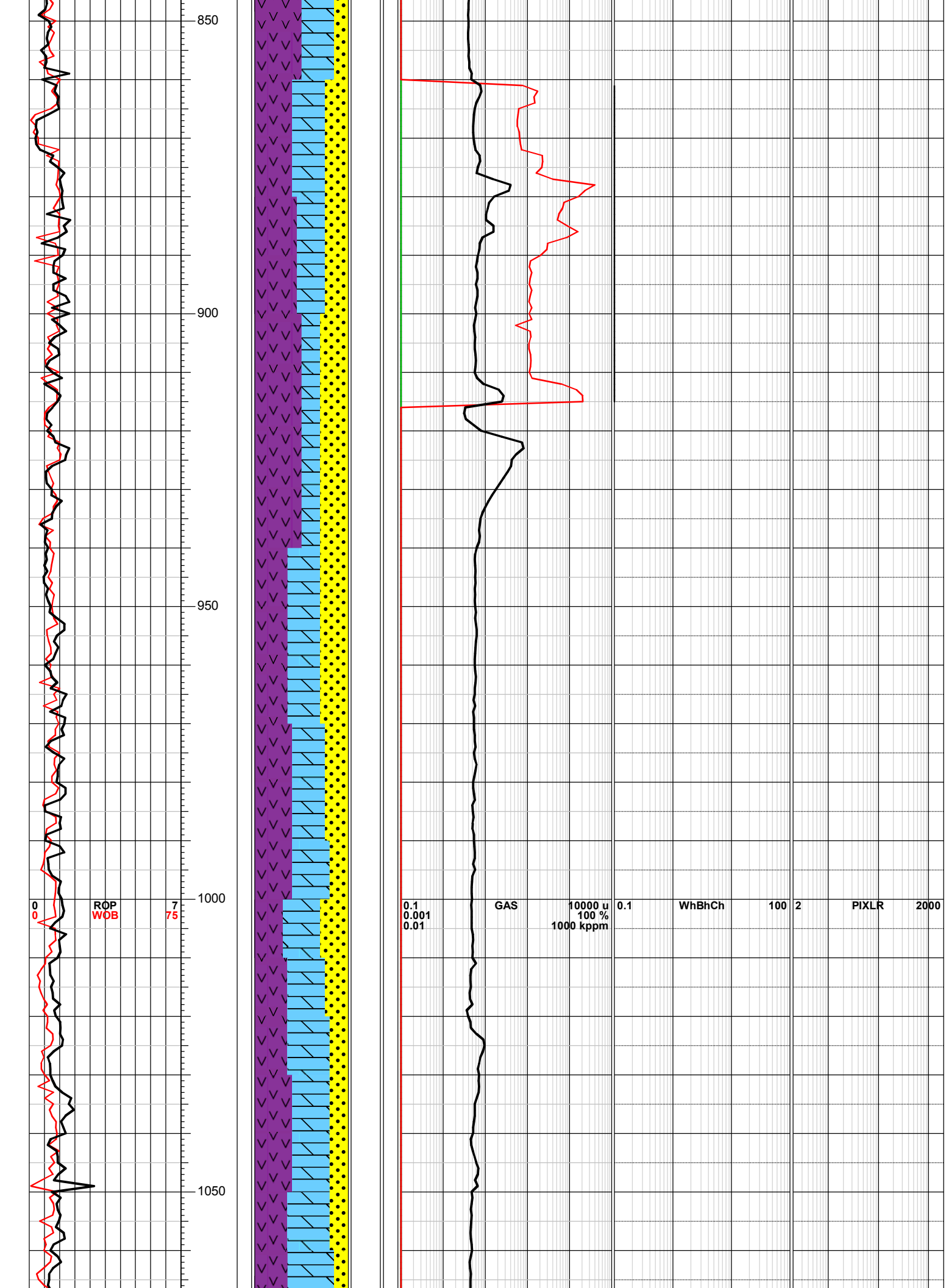
NONE, TRACE, FAIR, GOOD

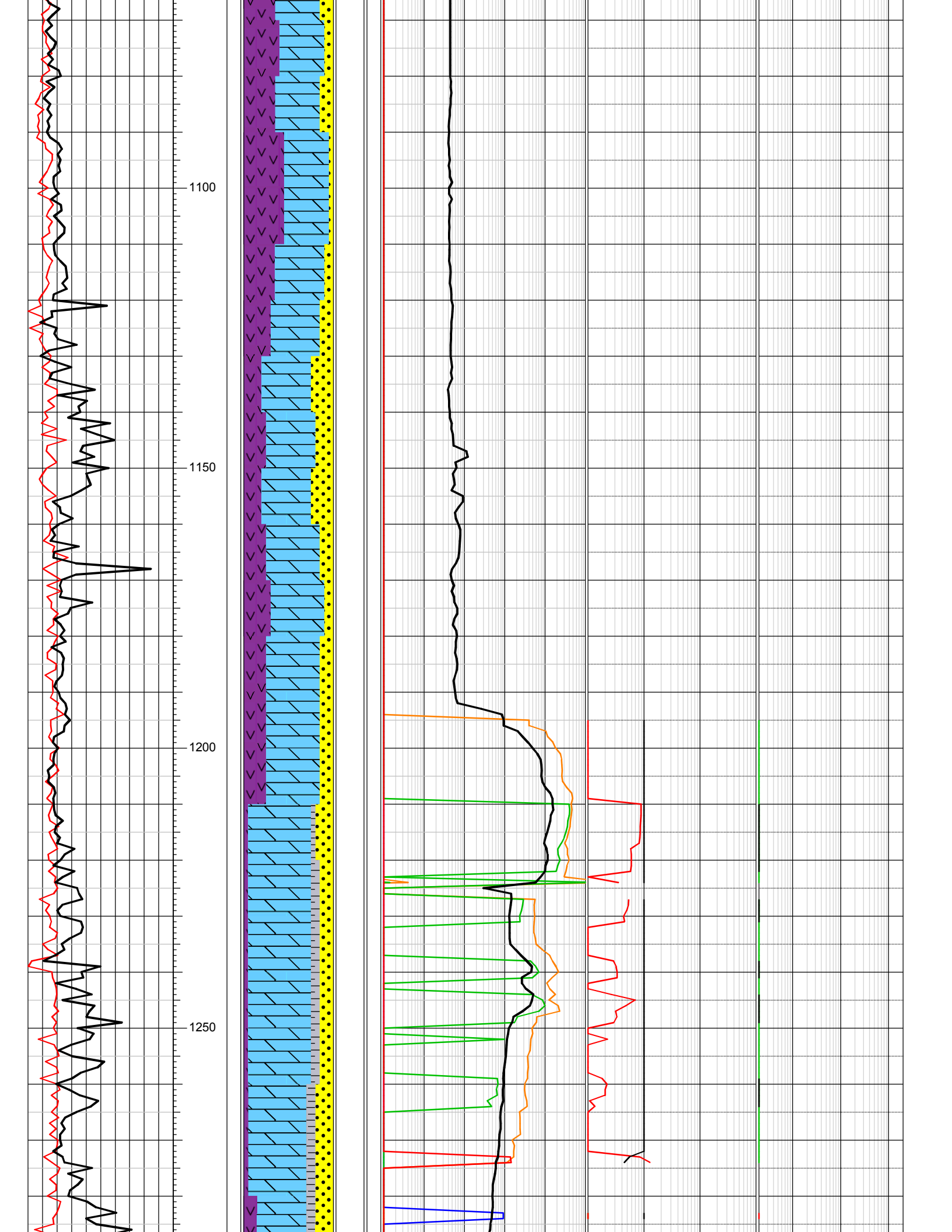


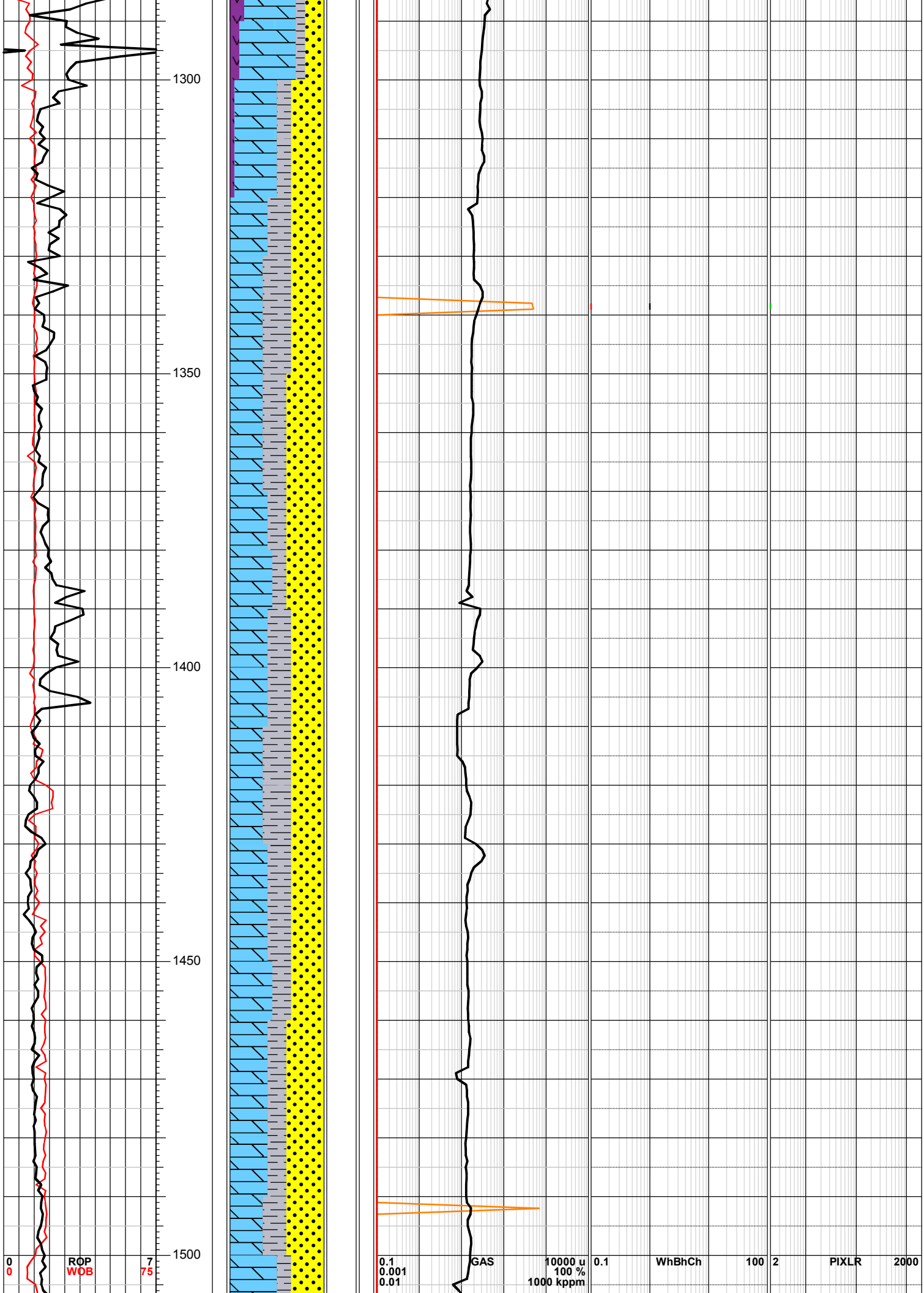

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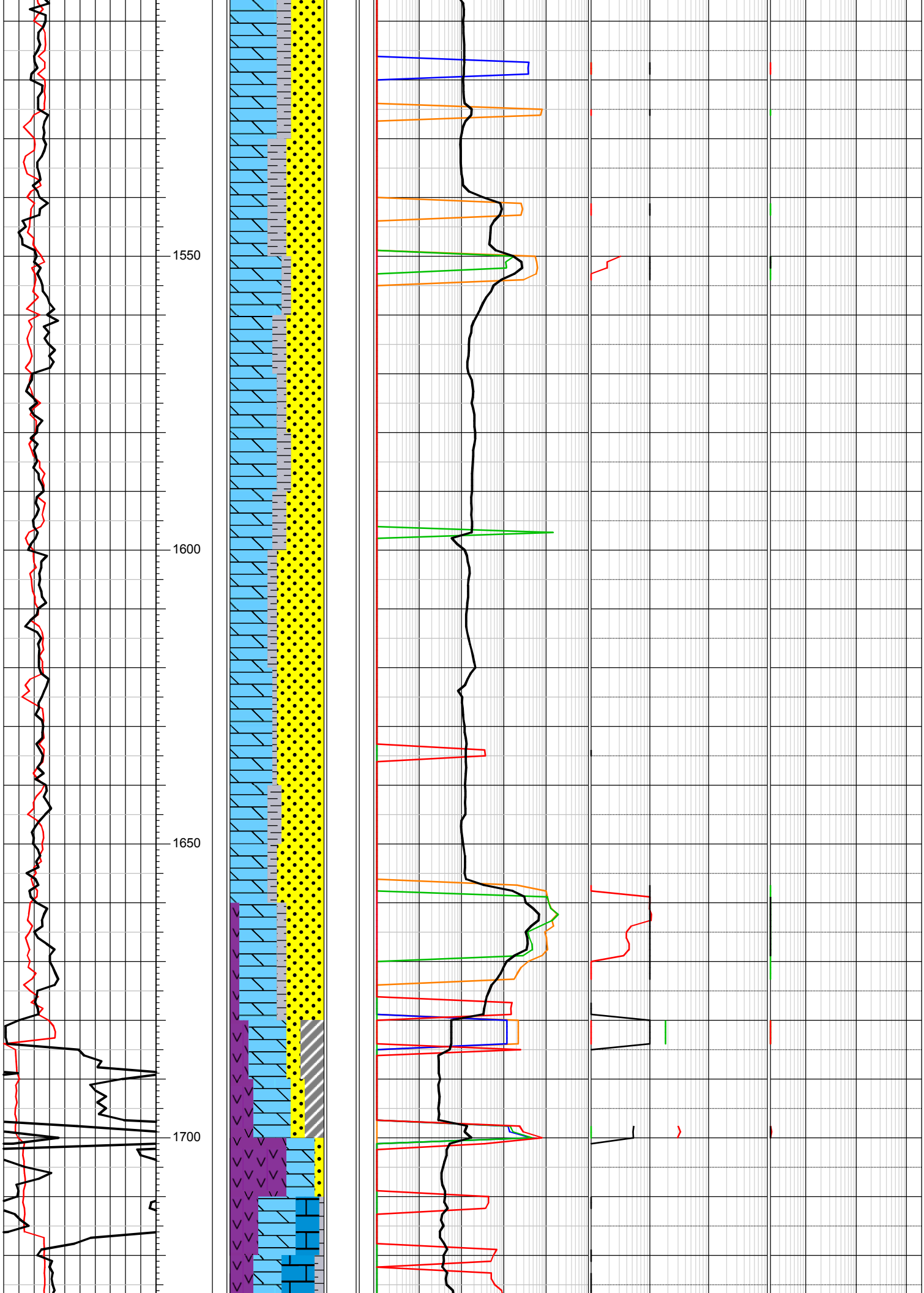

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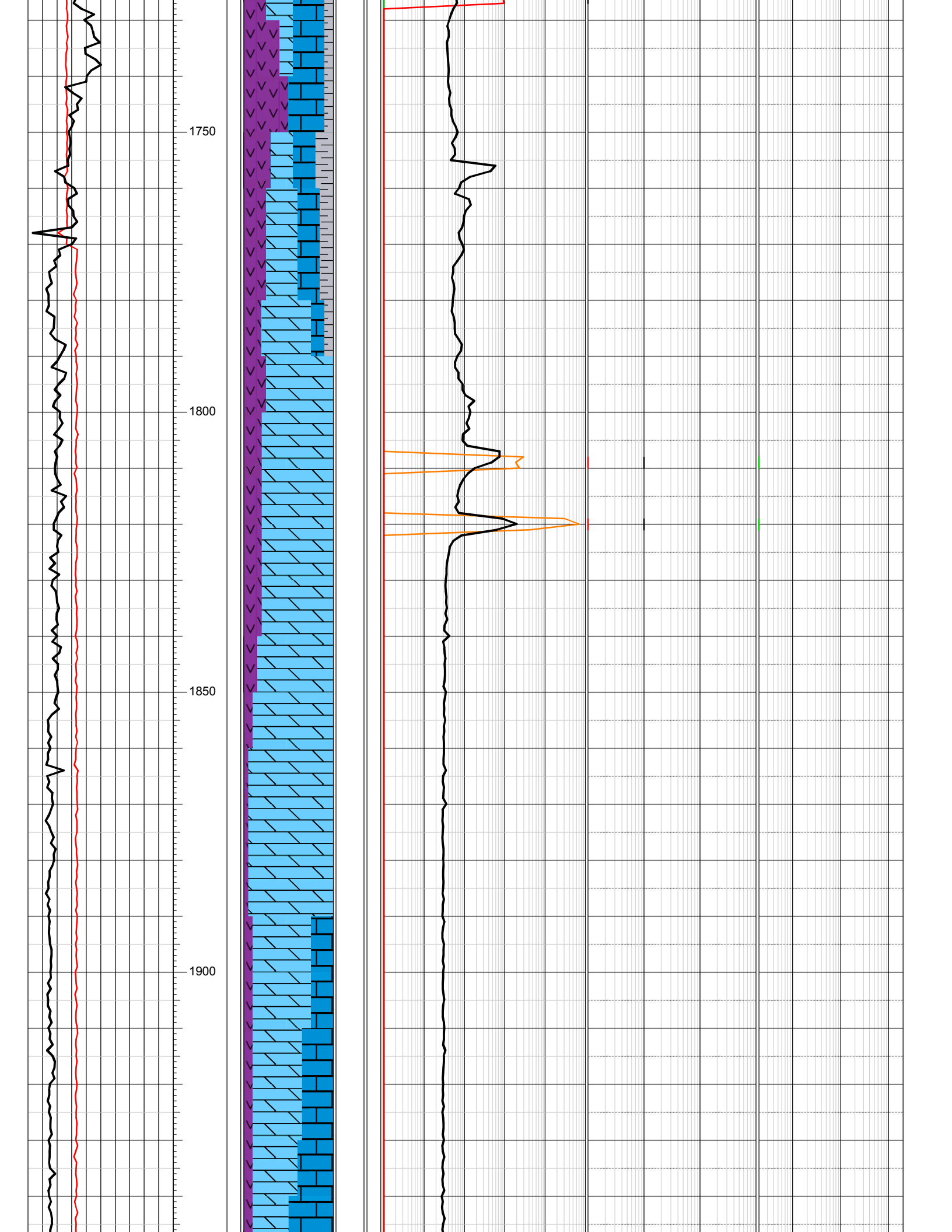

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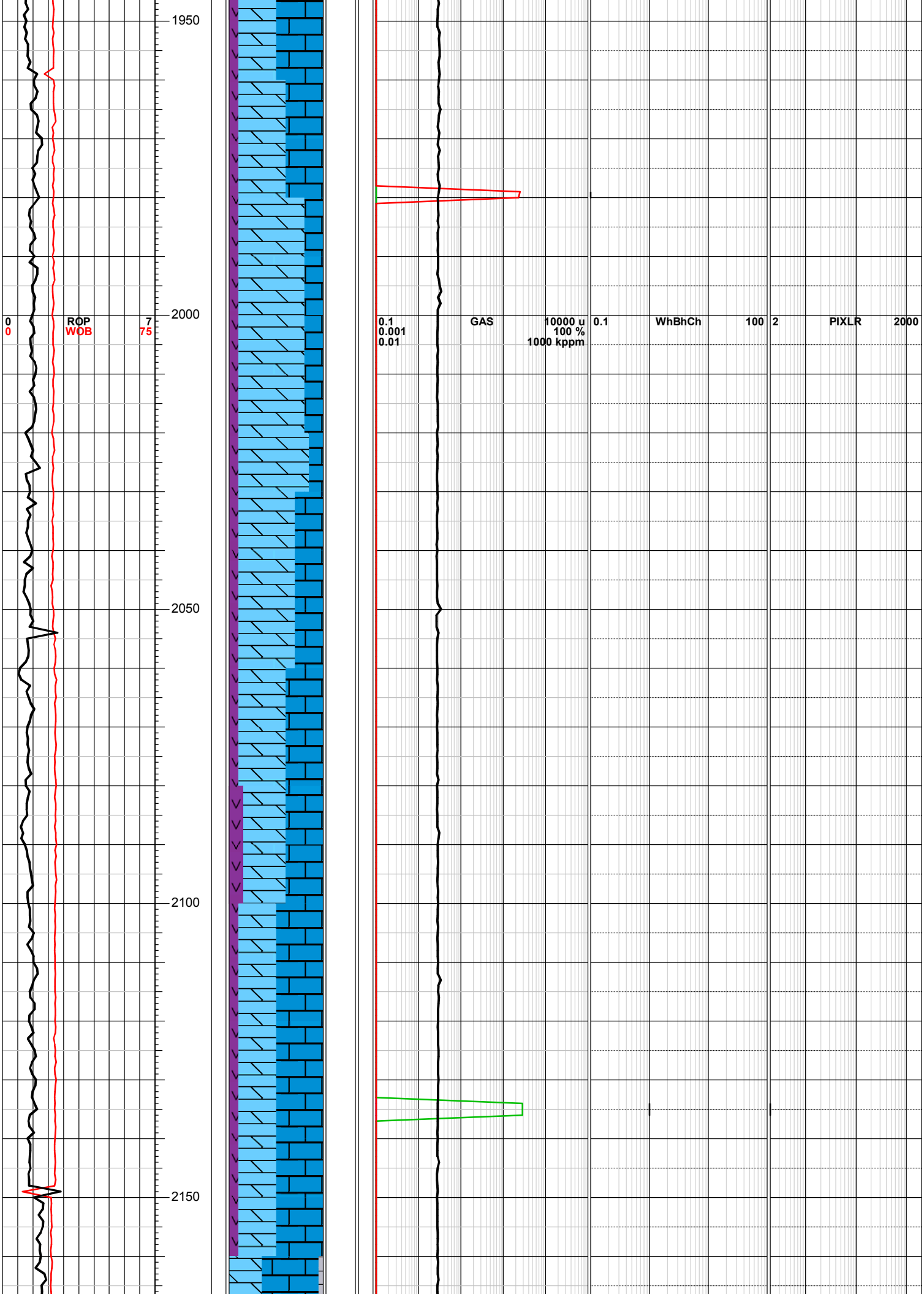

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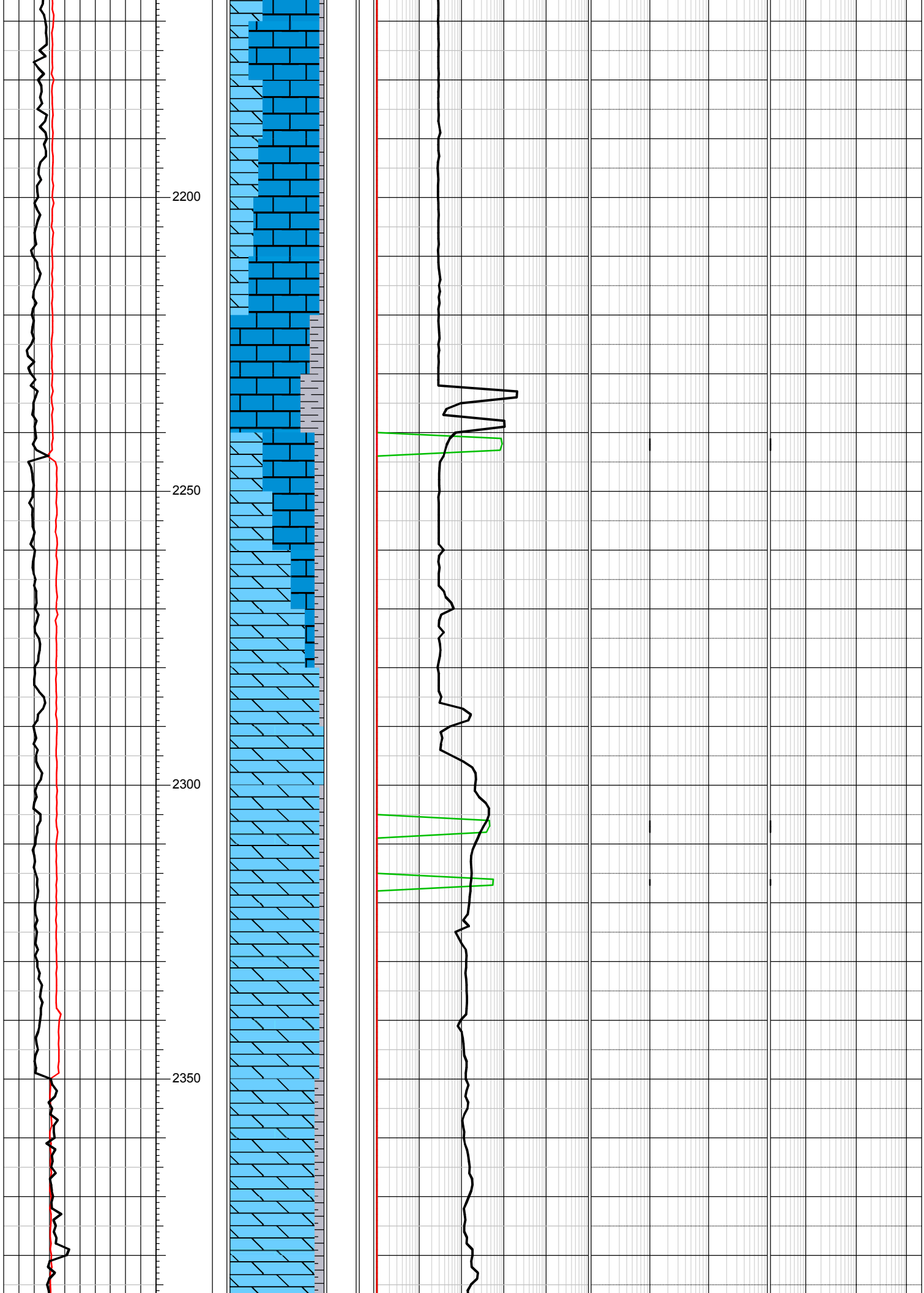

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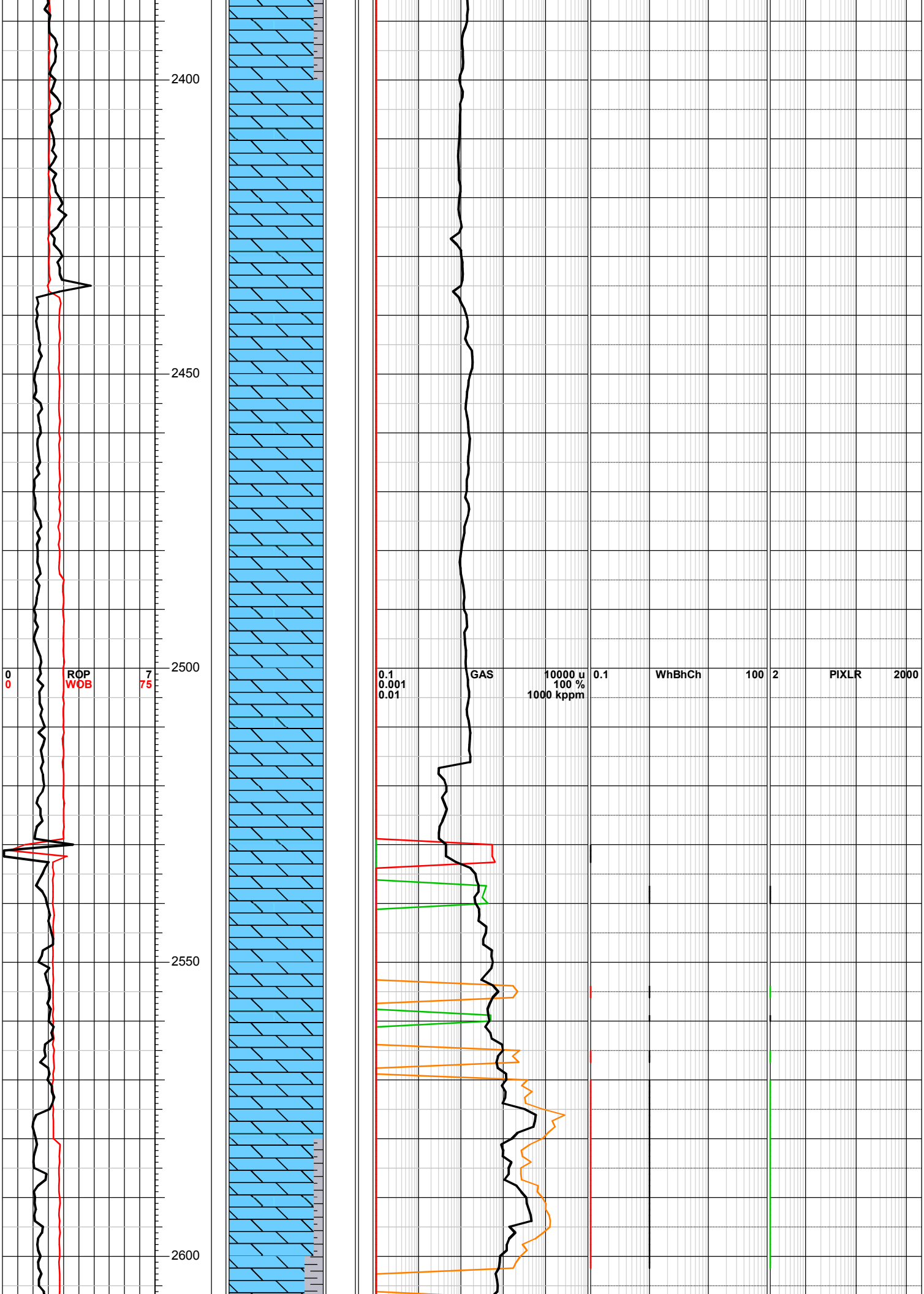

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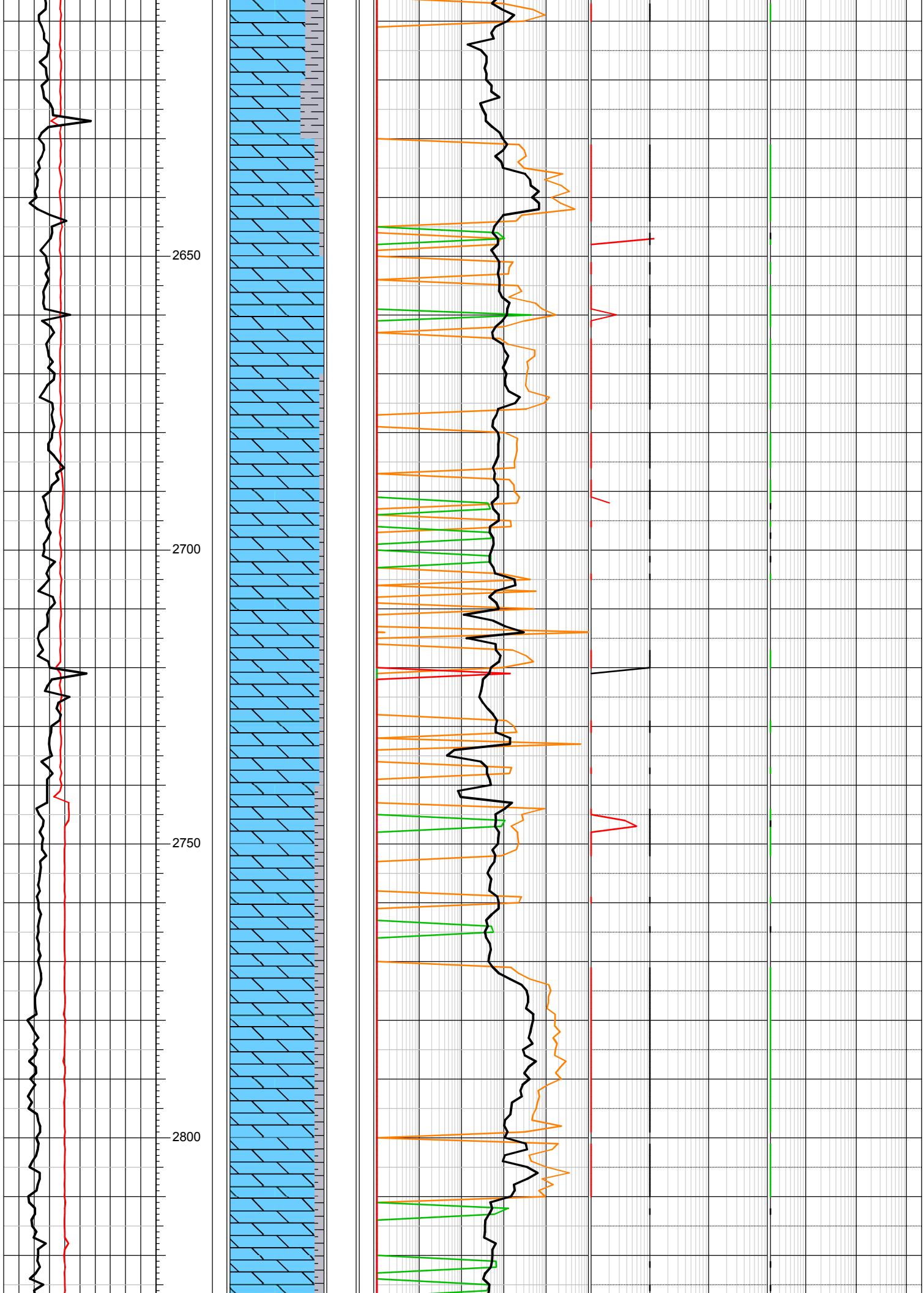

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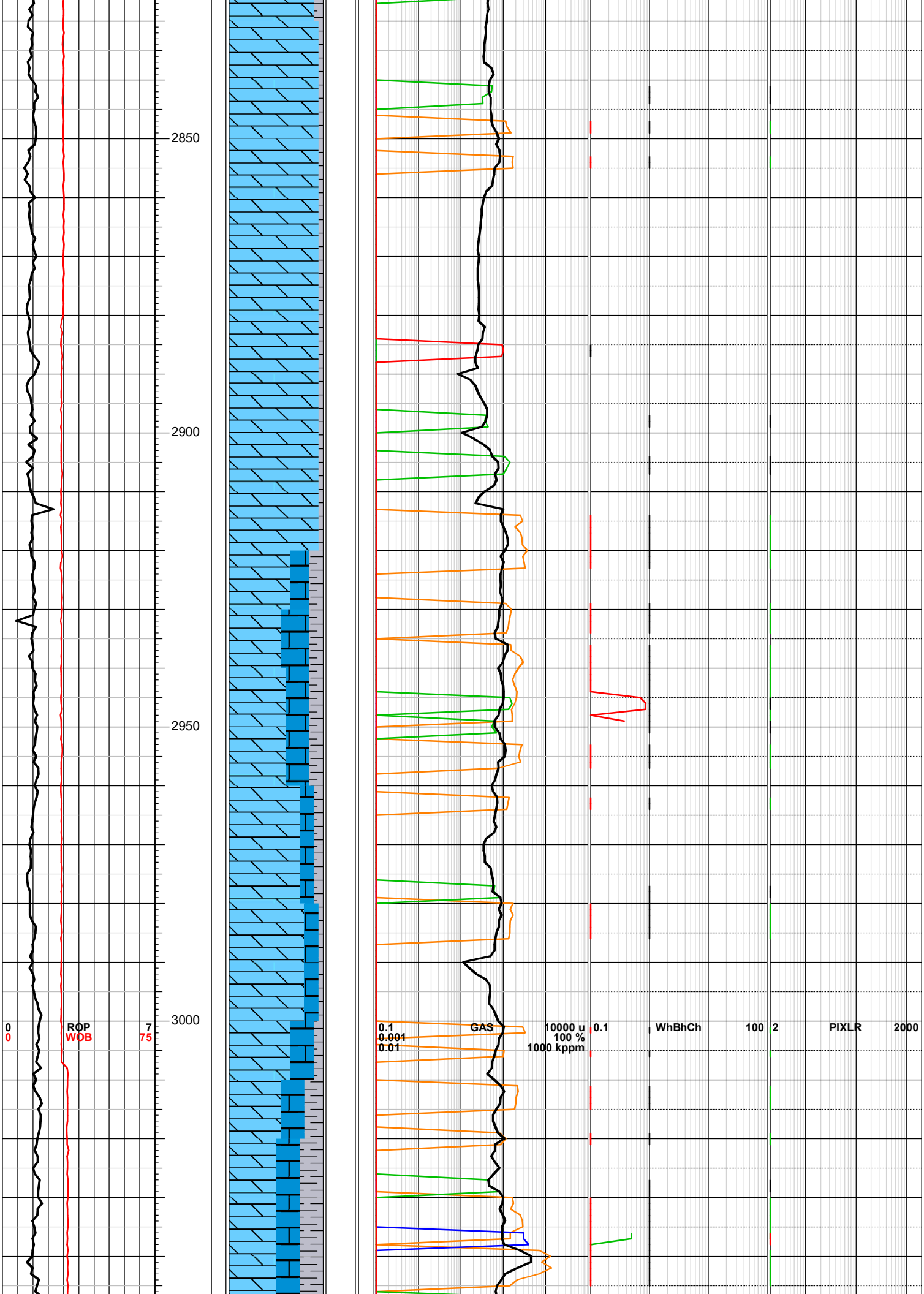

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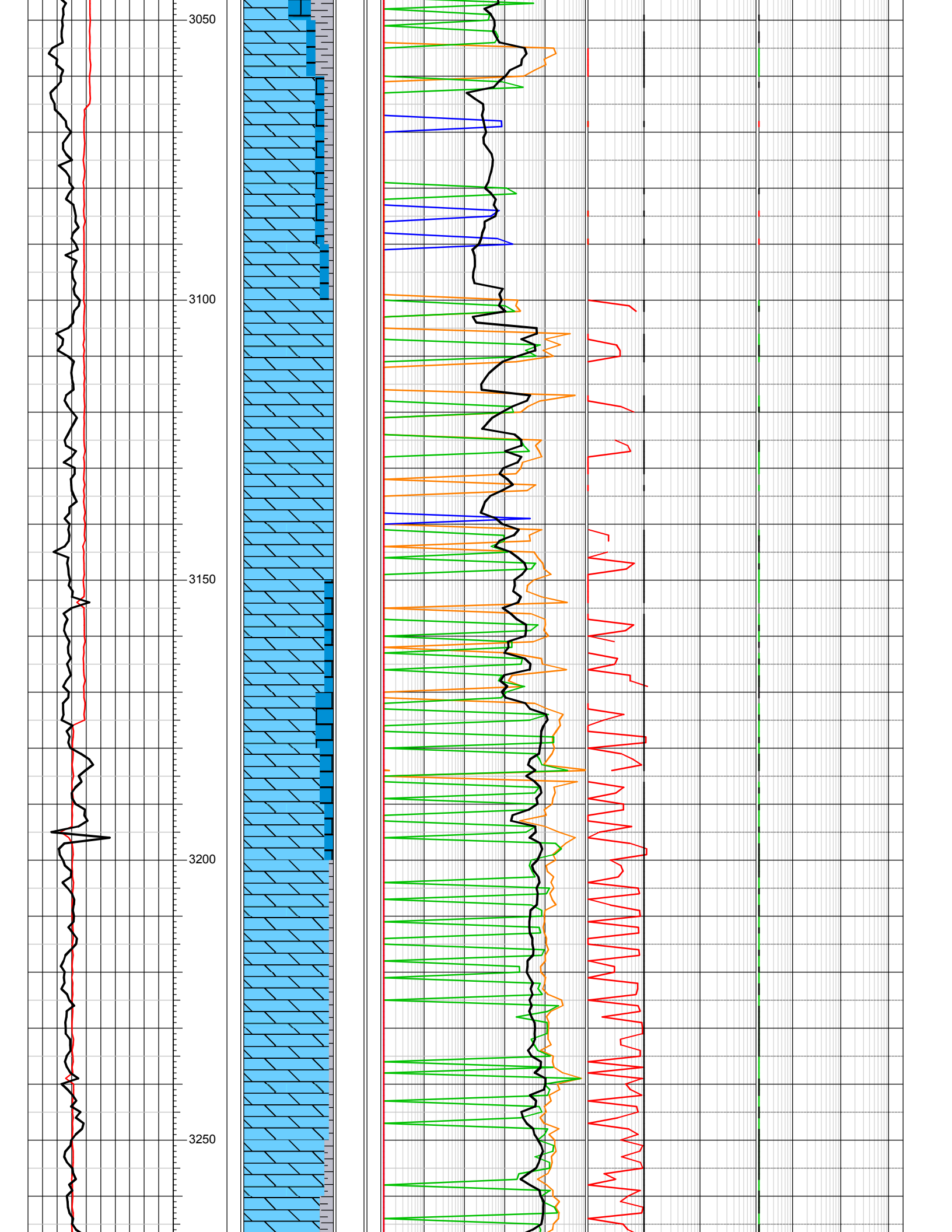

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0.1
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10000 u
0.001
100 %
0.01
1000 kppm
0.1
WhBhCh
100
2
PIXLR
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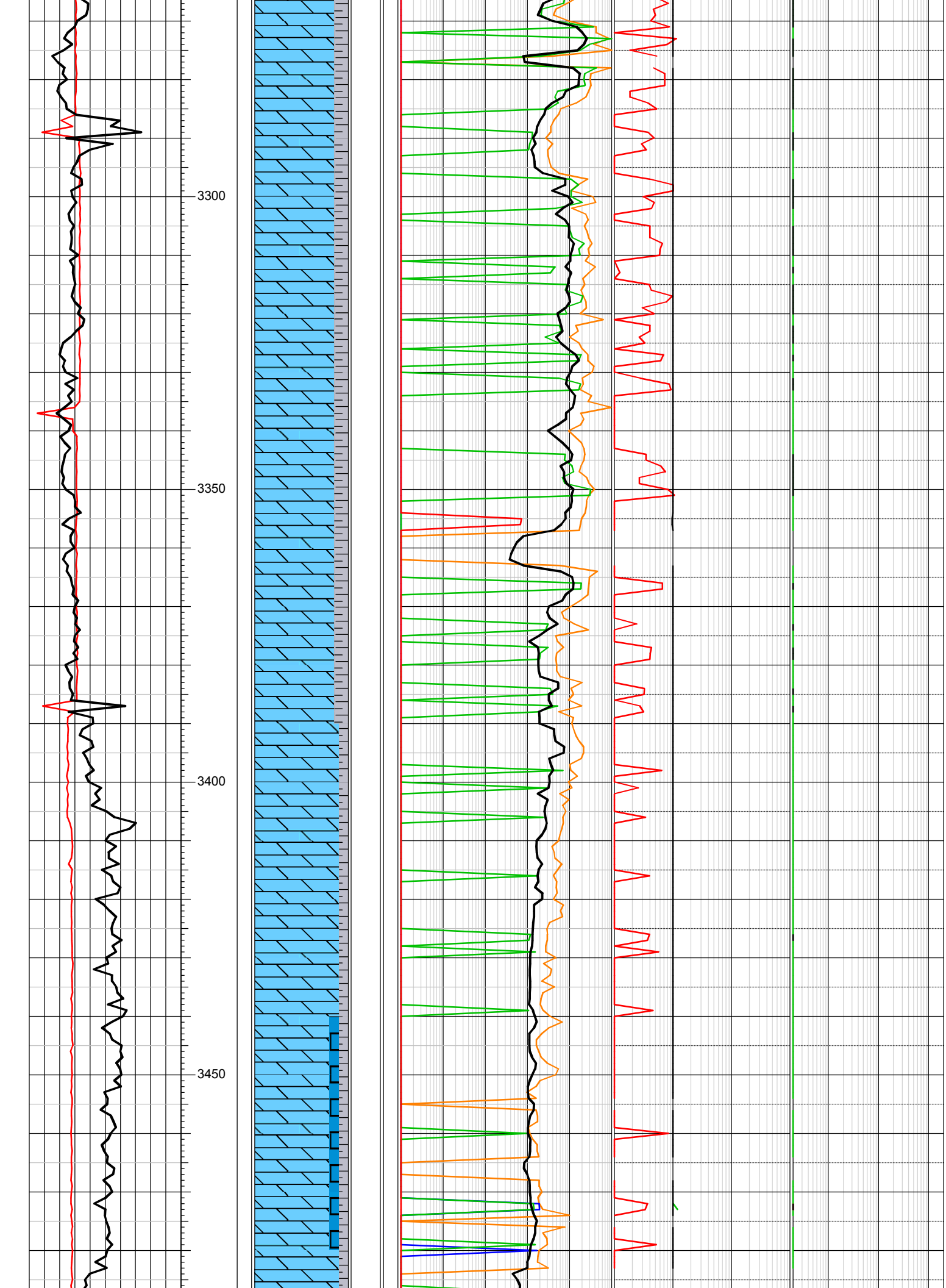

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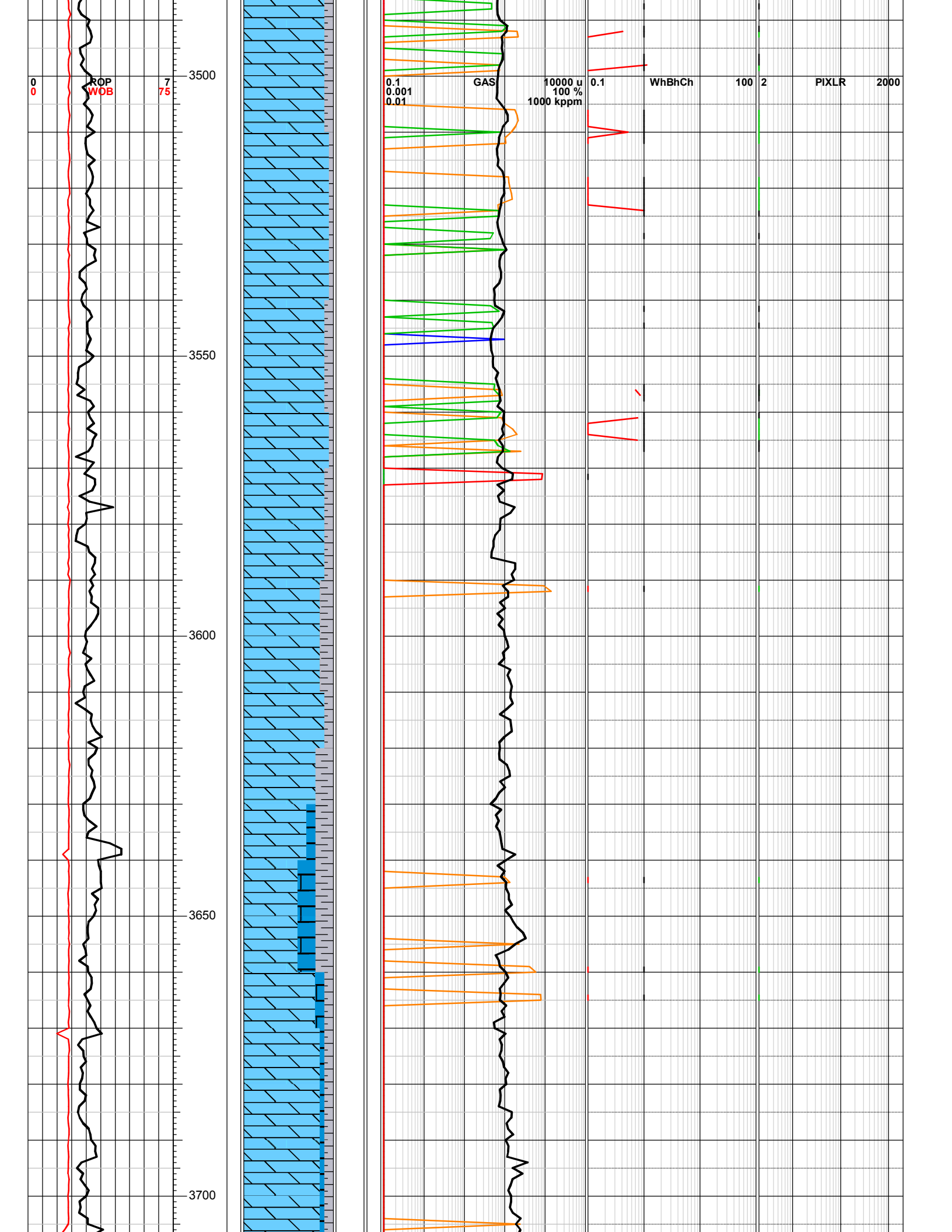

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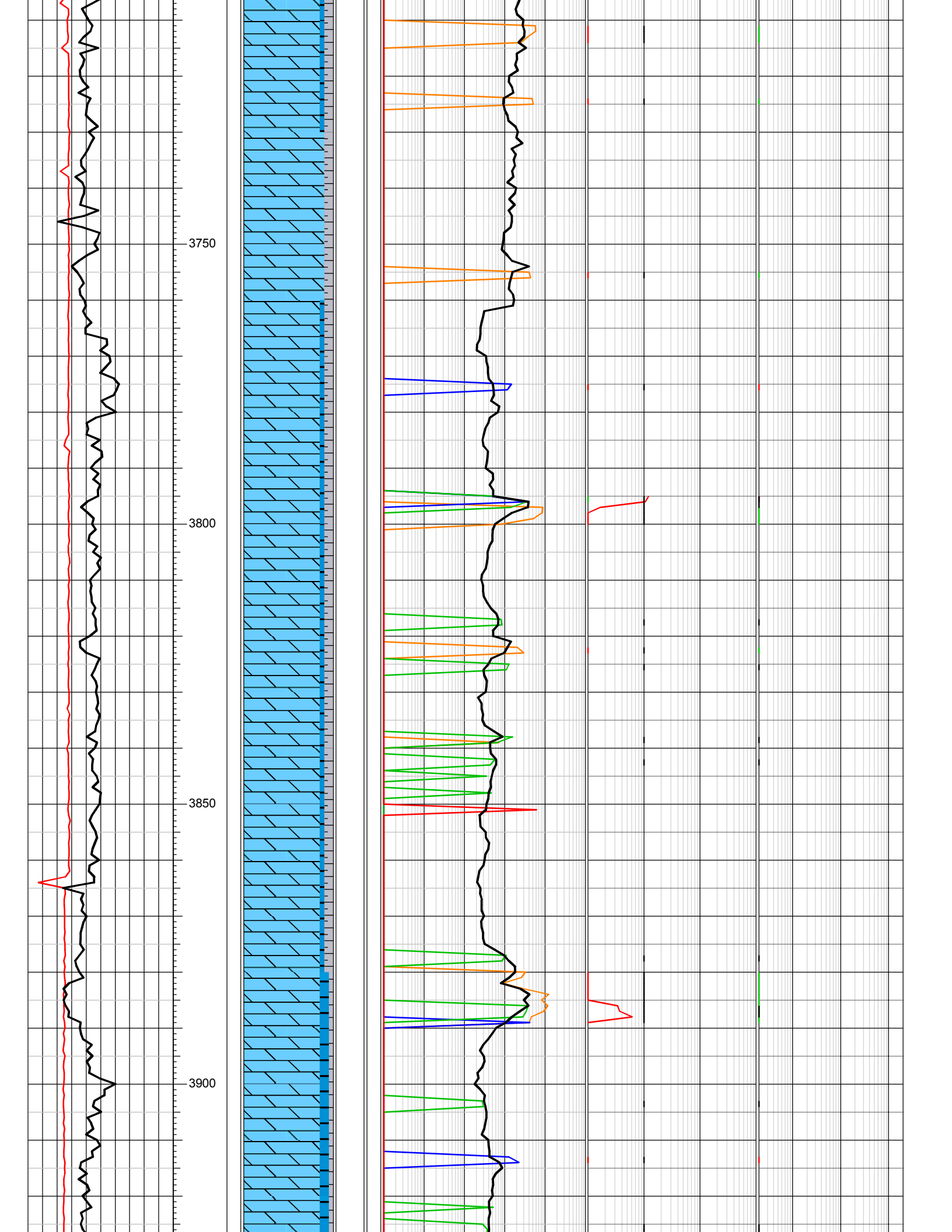

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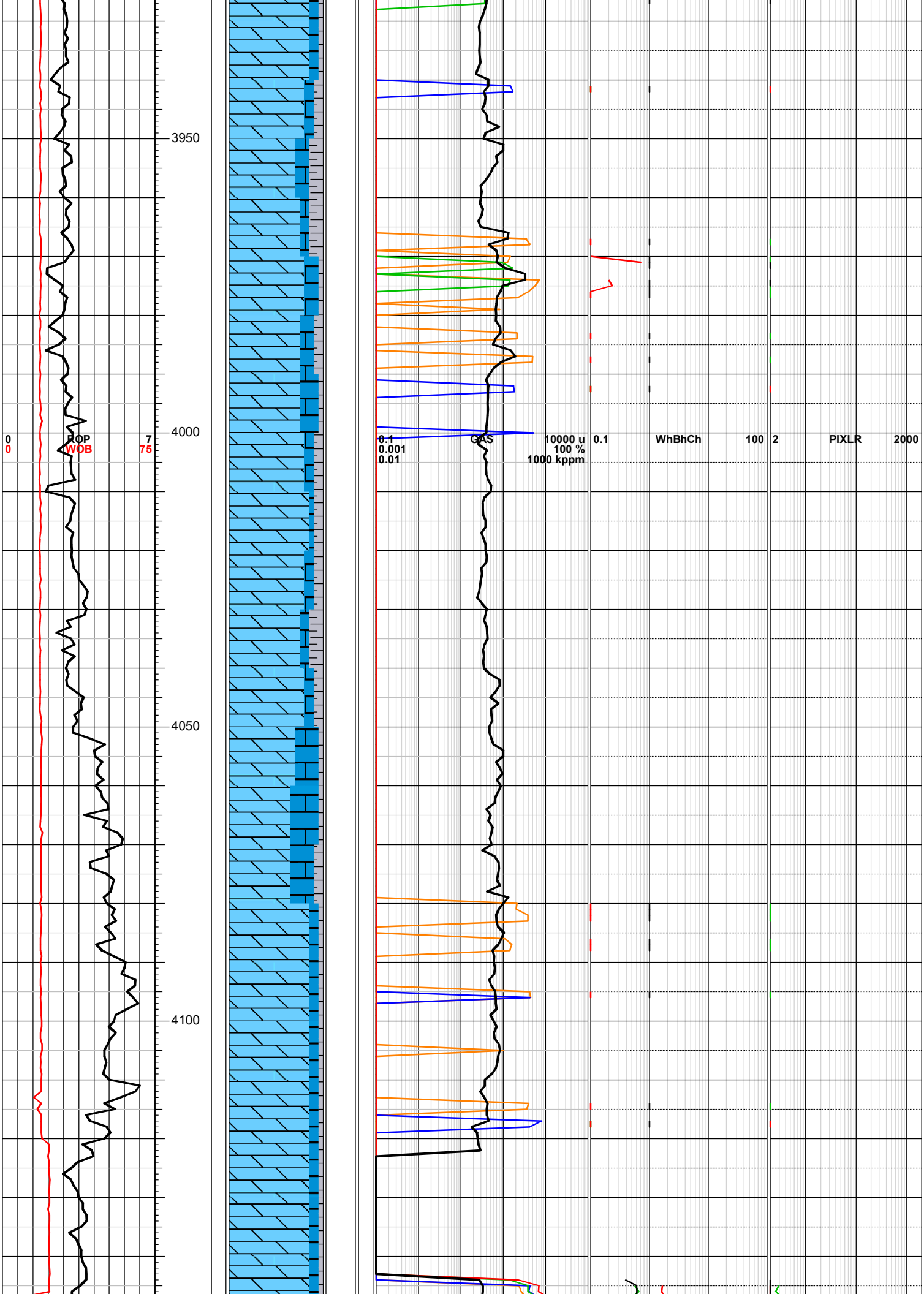

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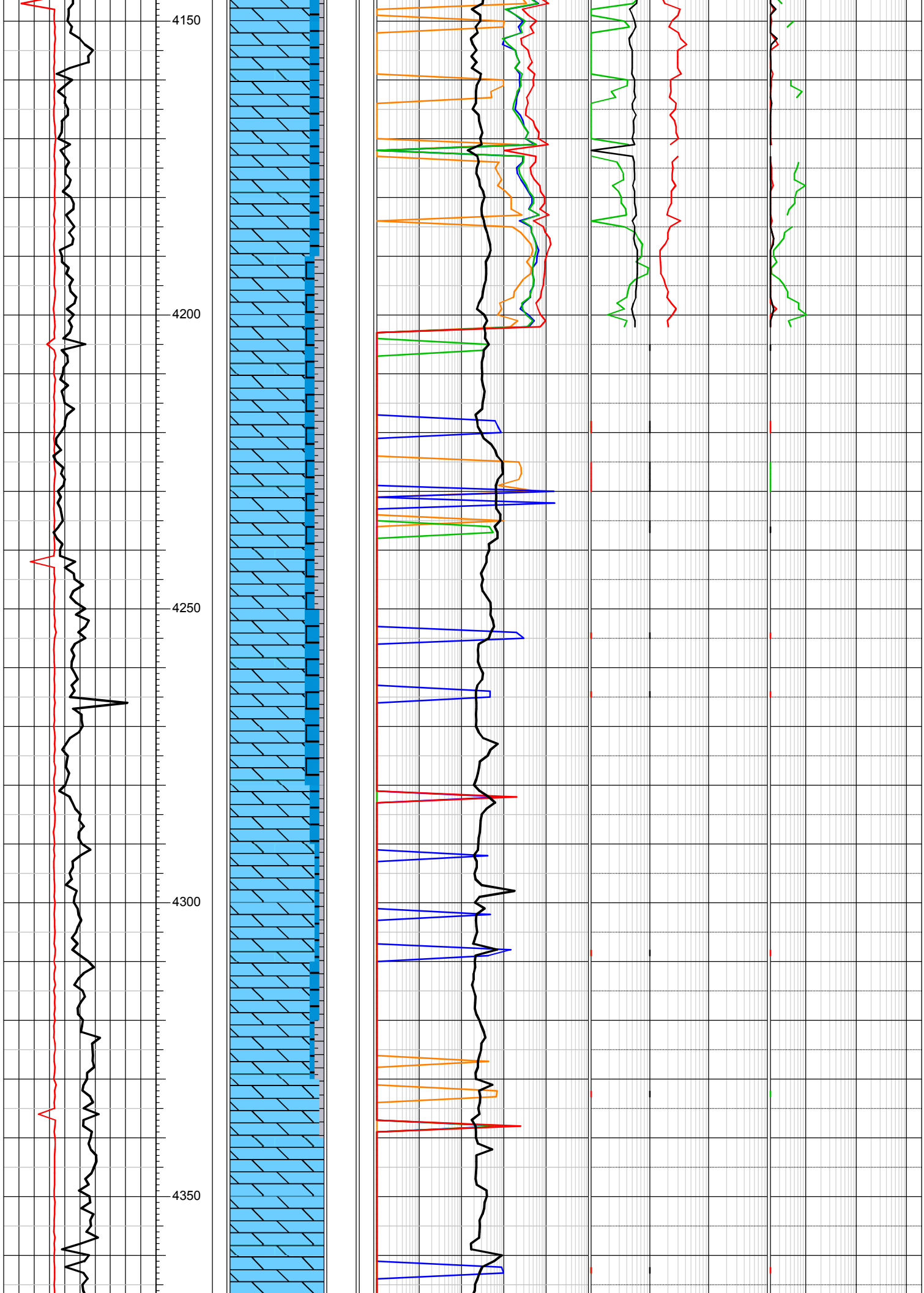

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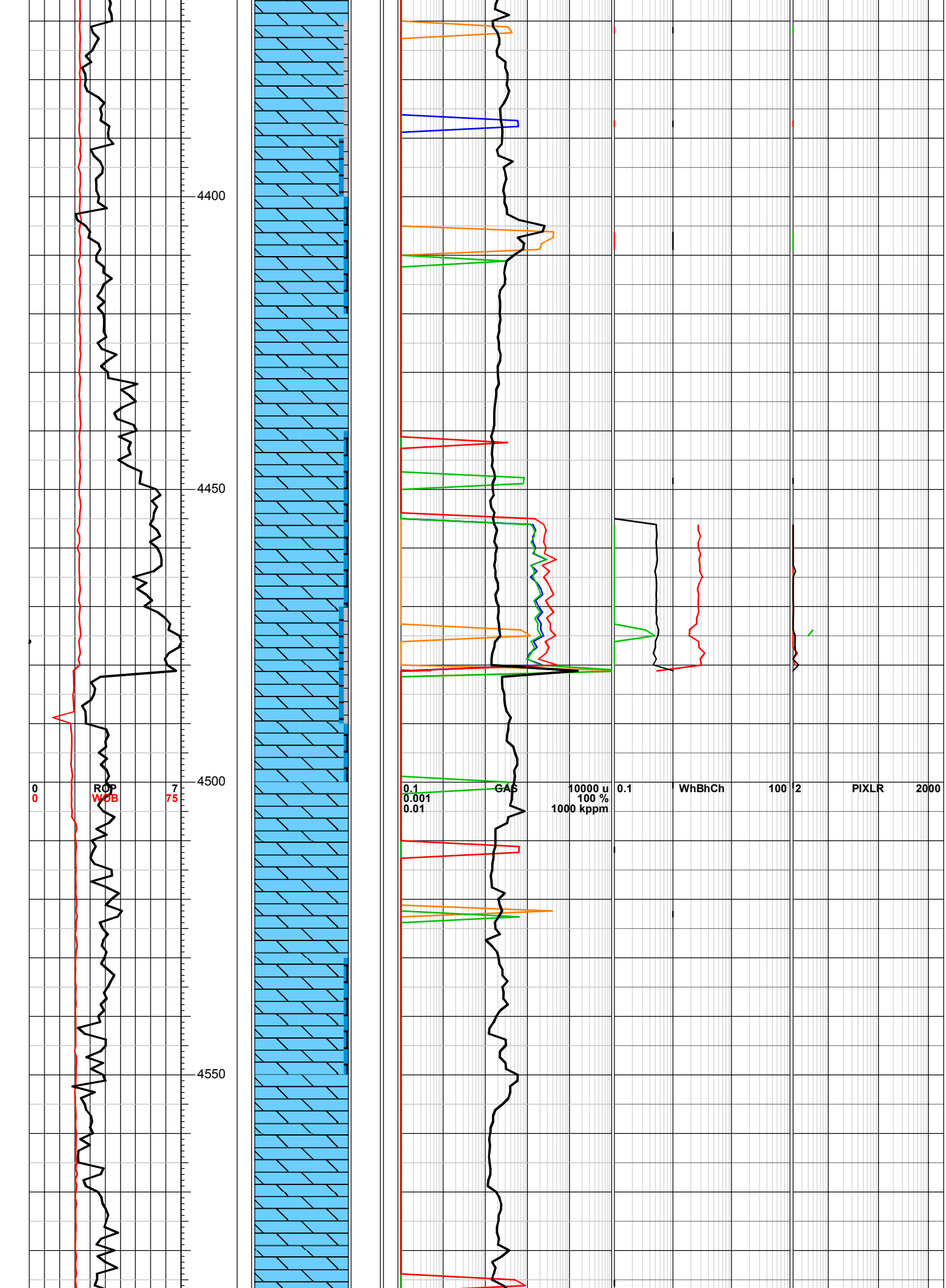

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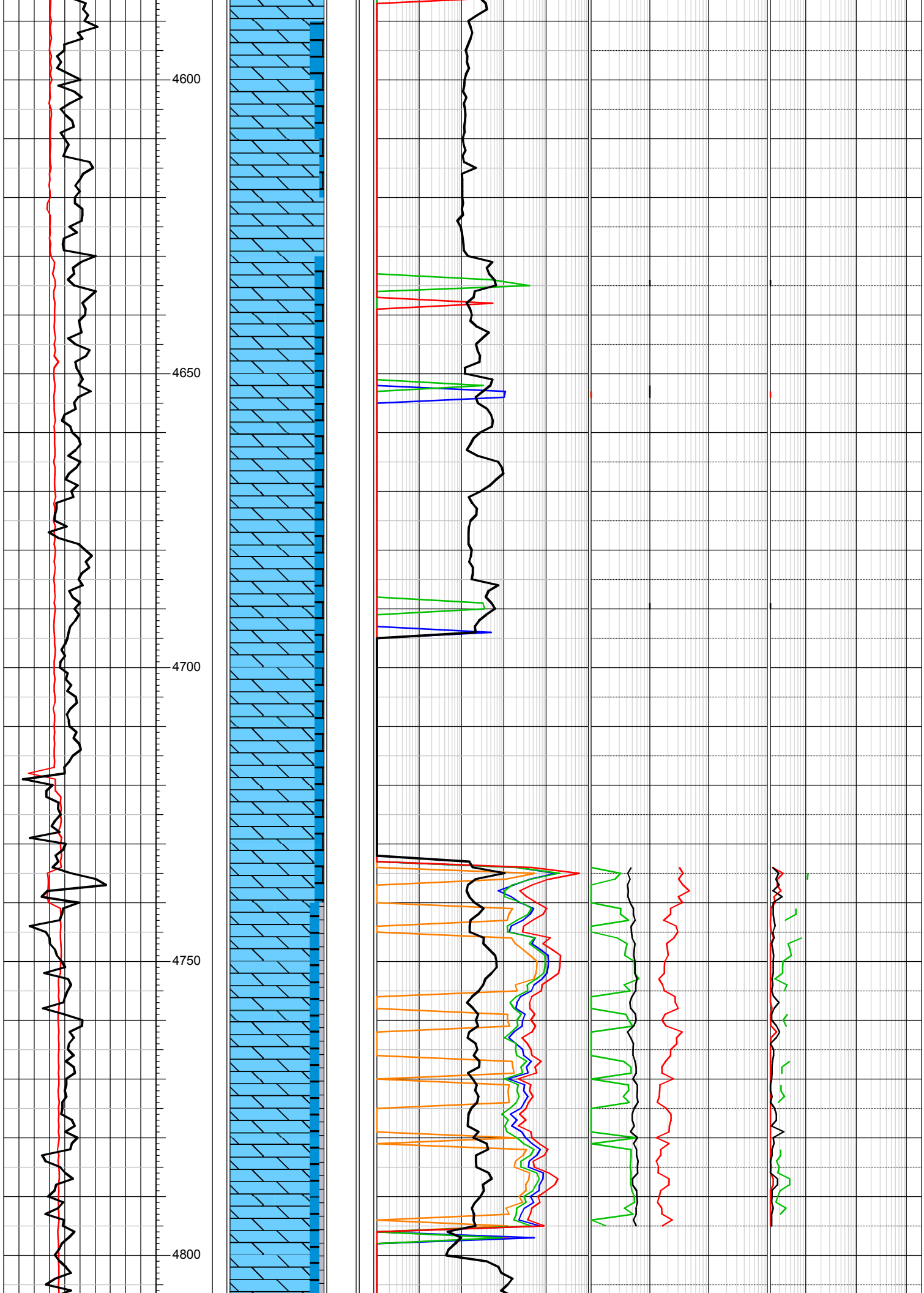

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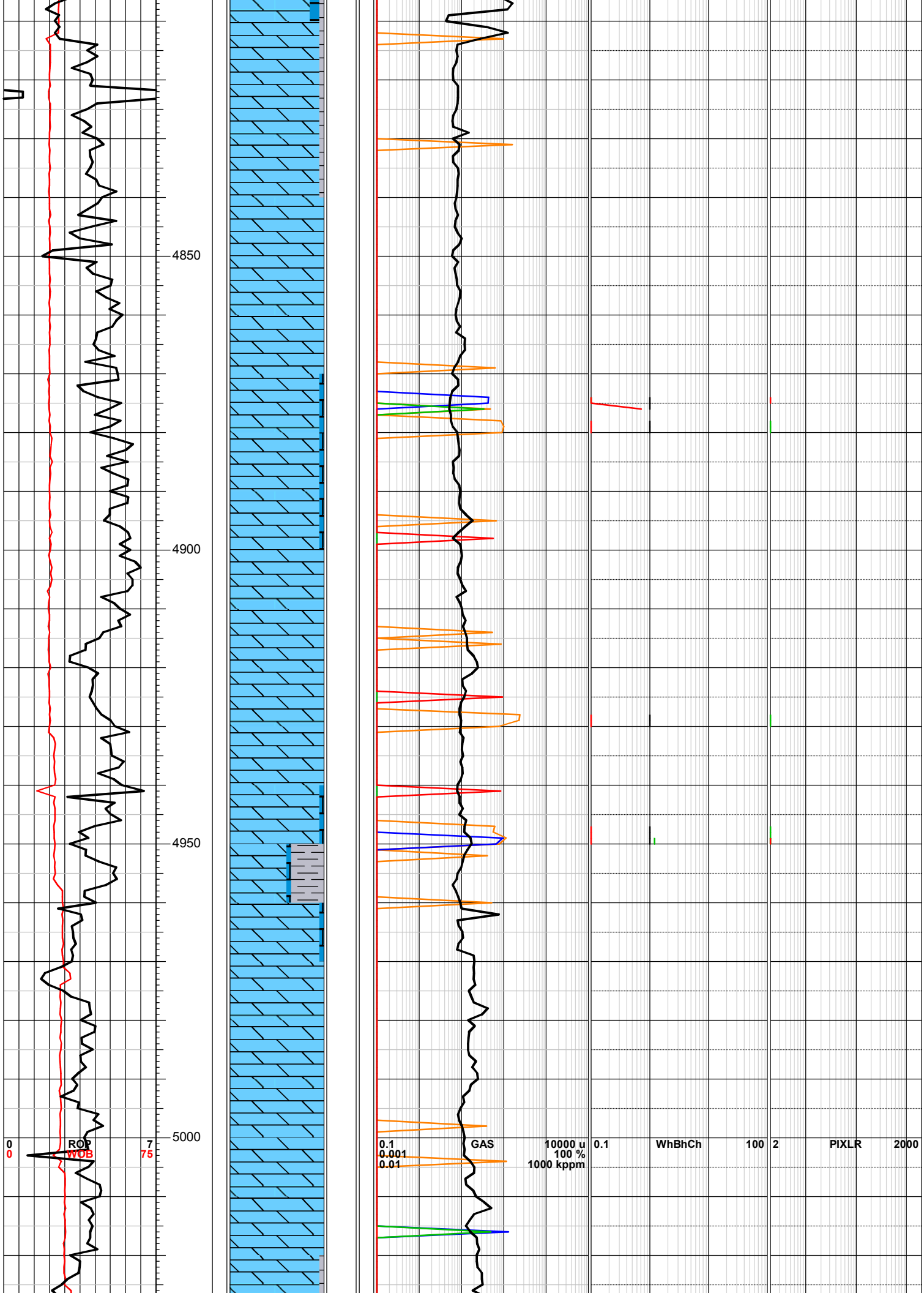

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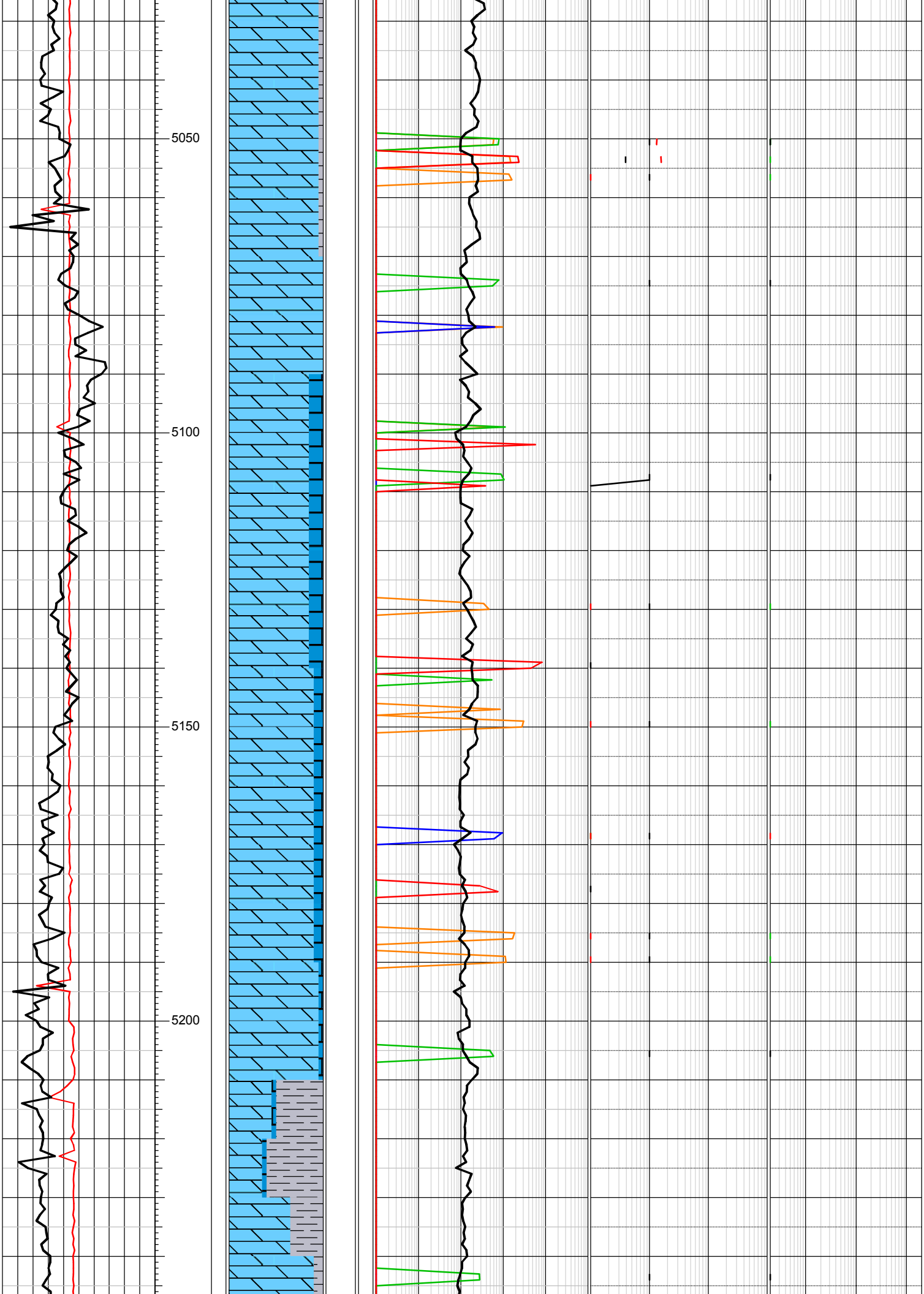

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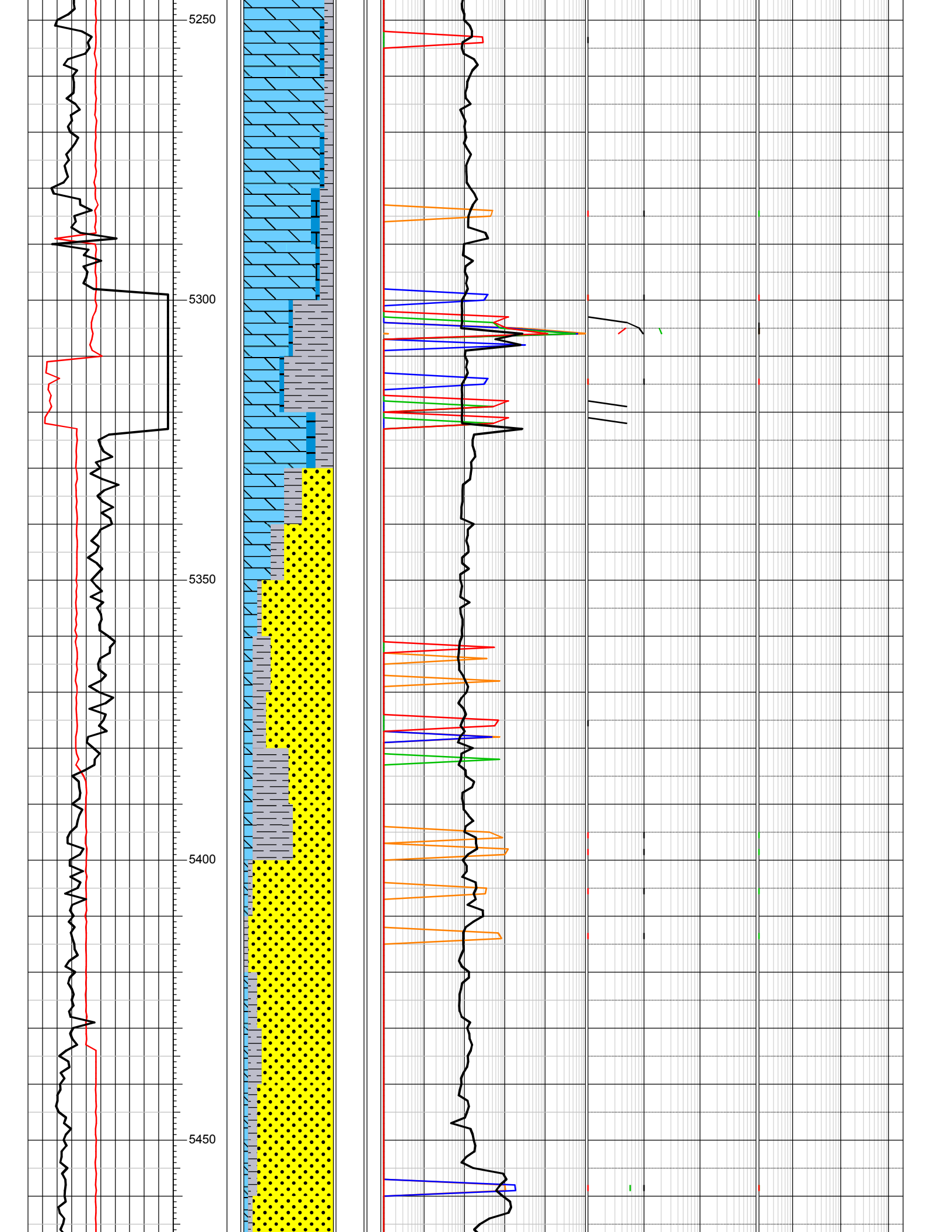

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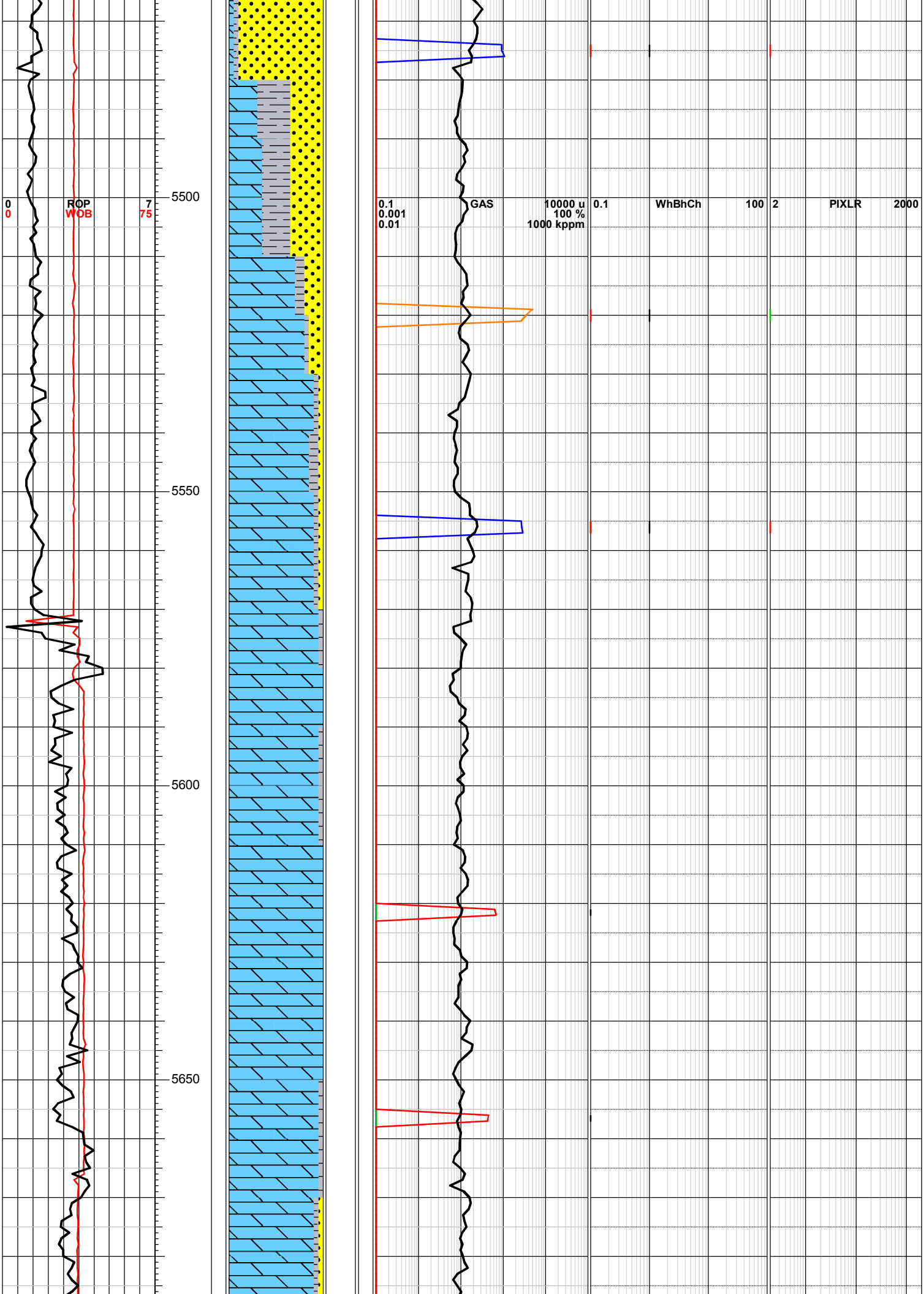

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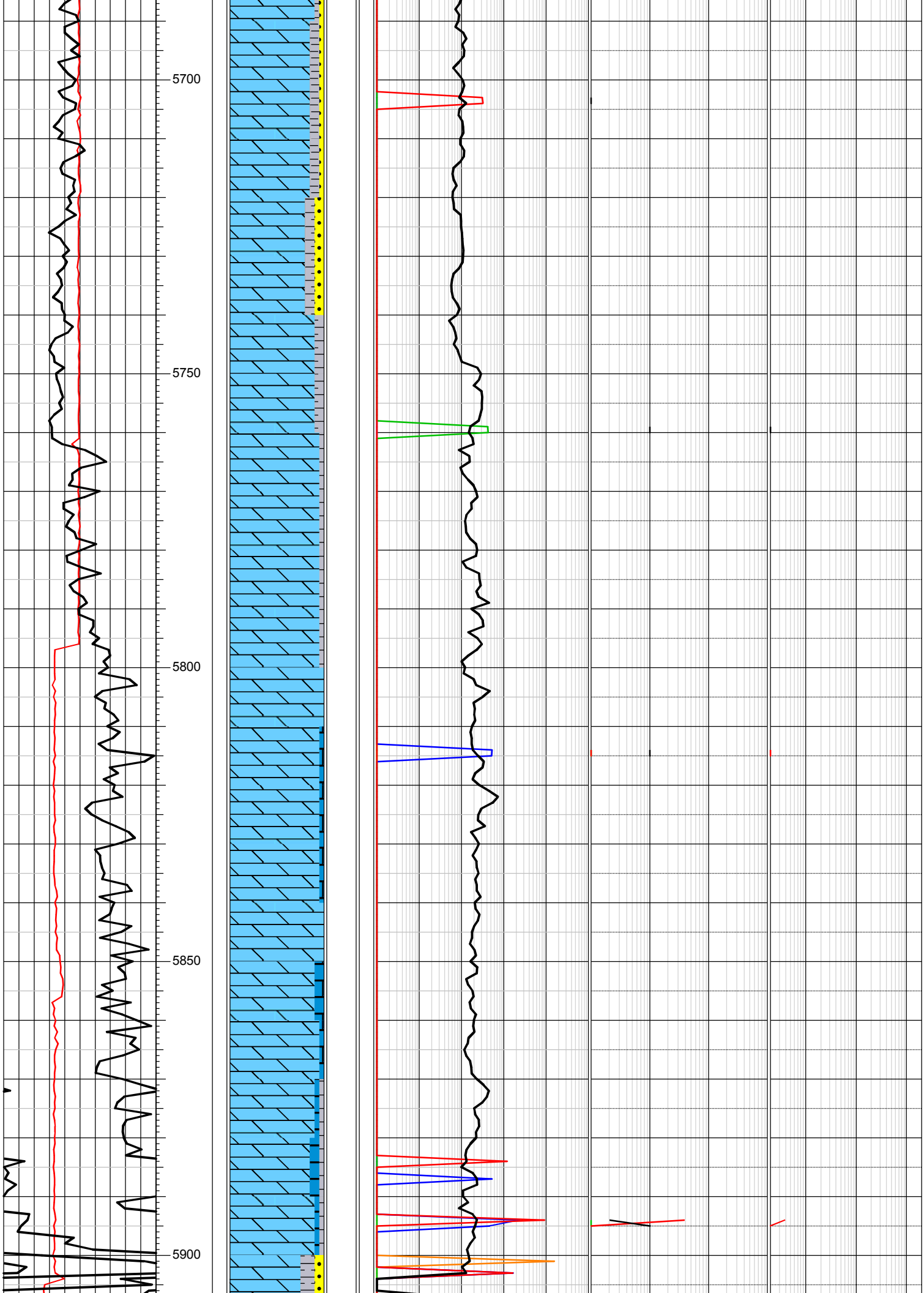

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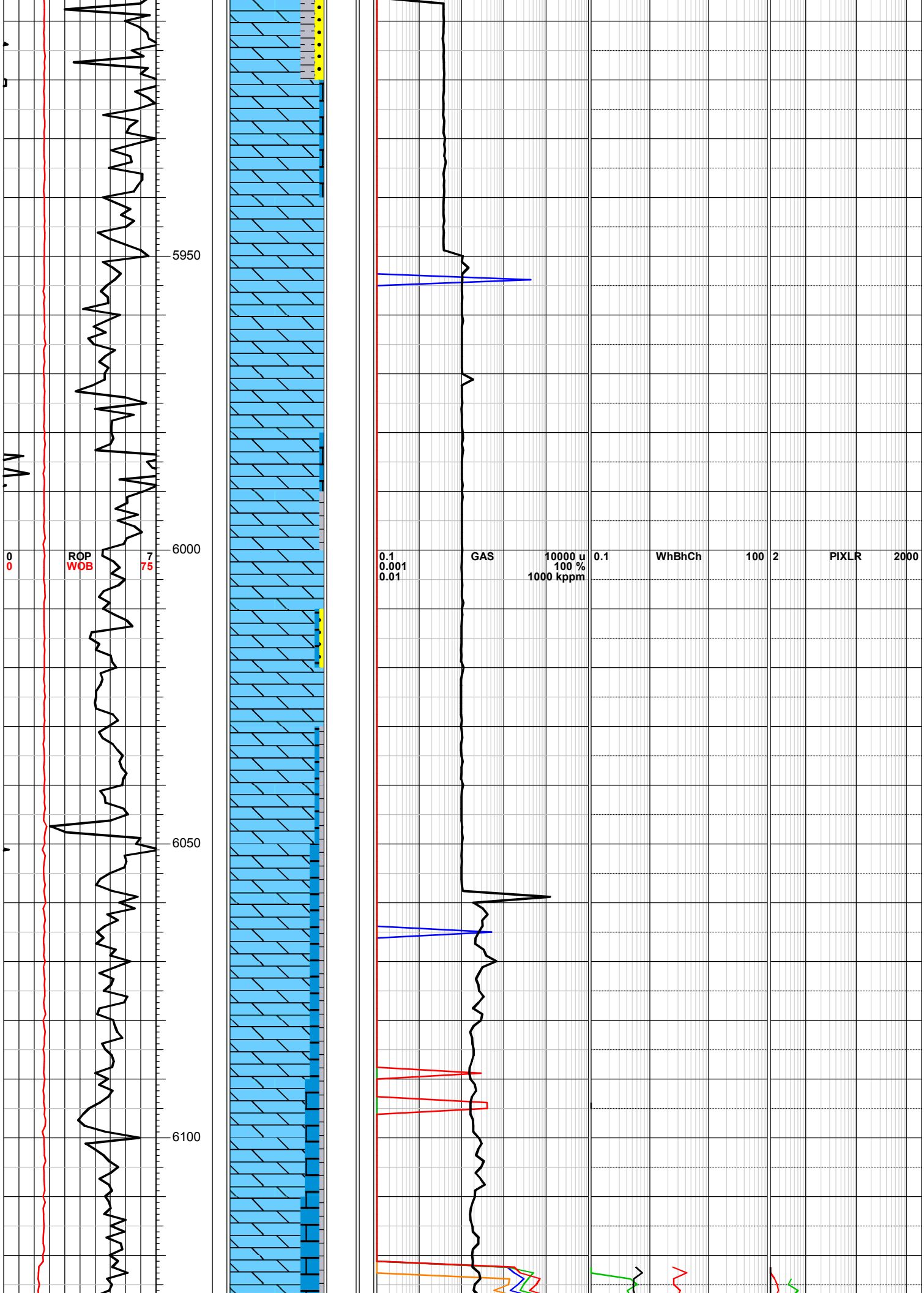

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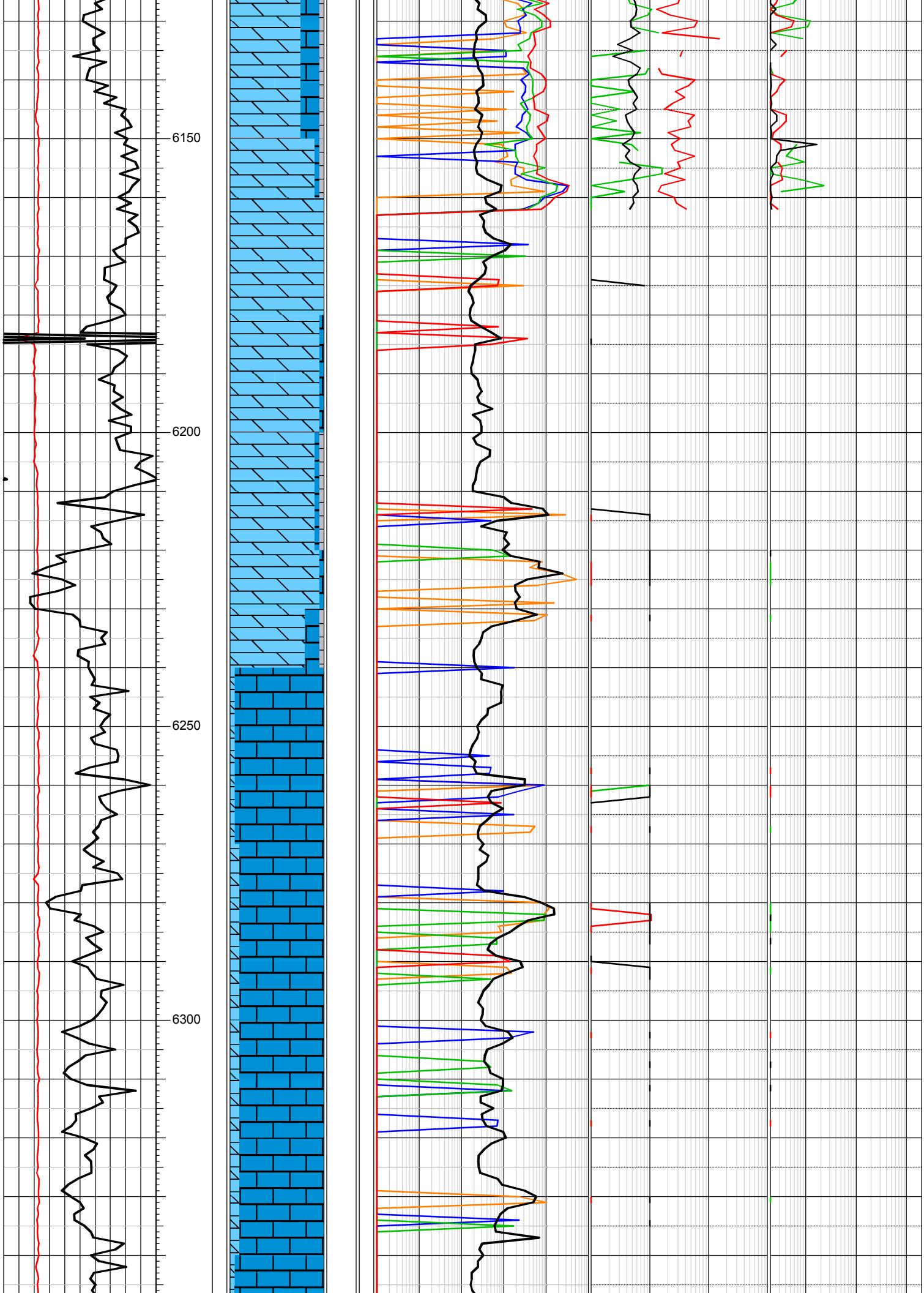

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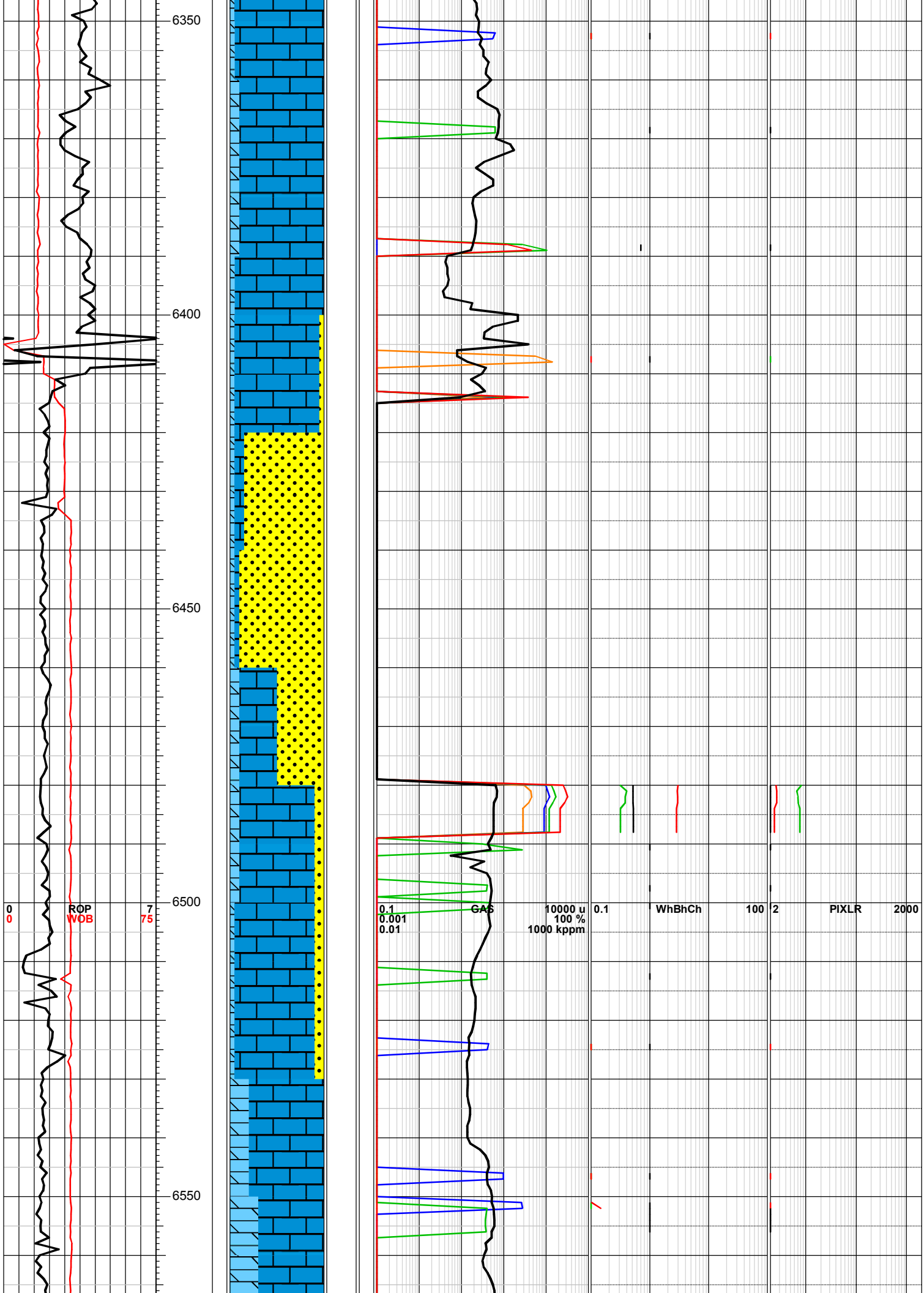

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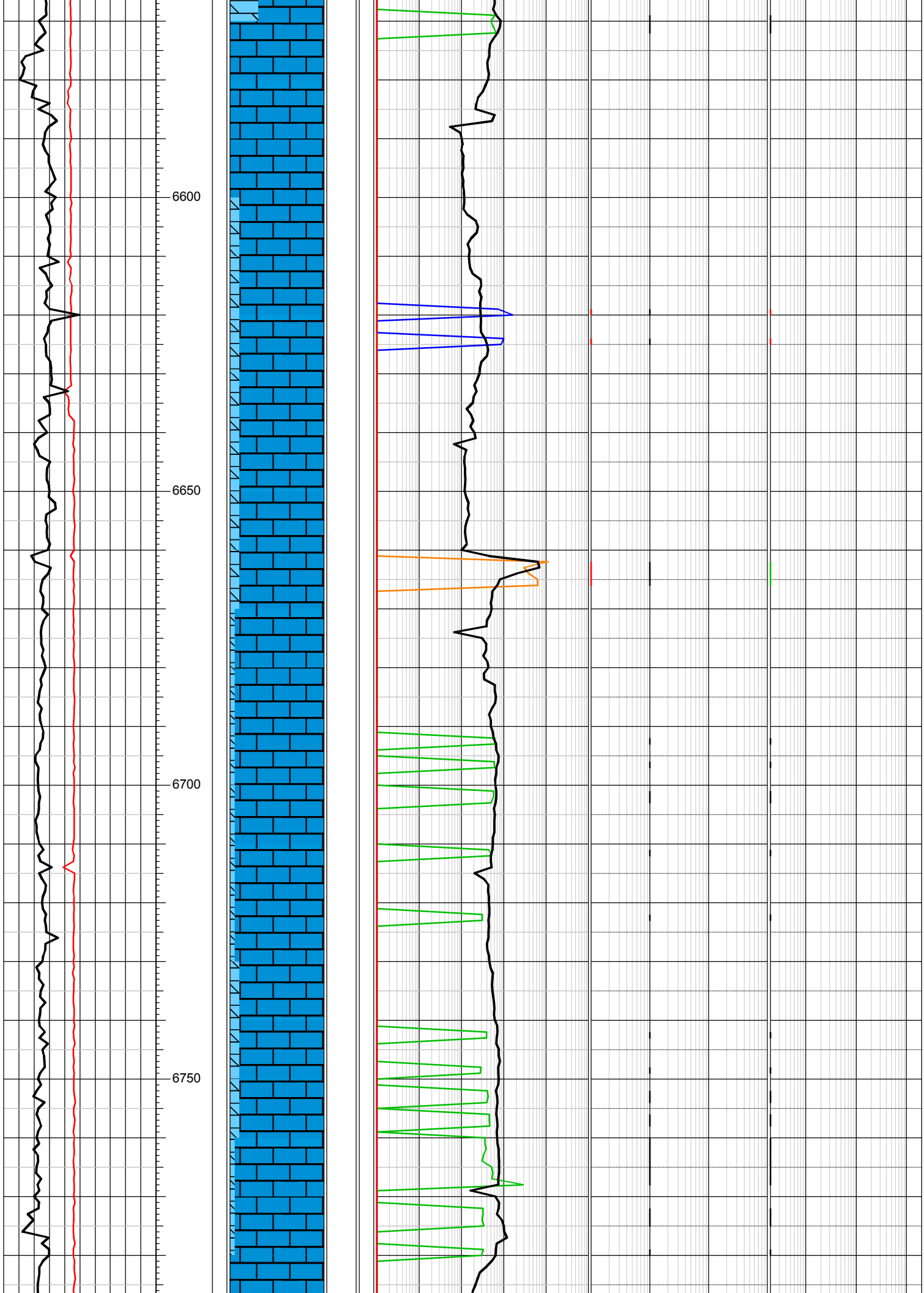

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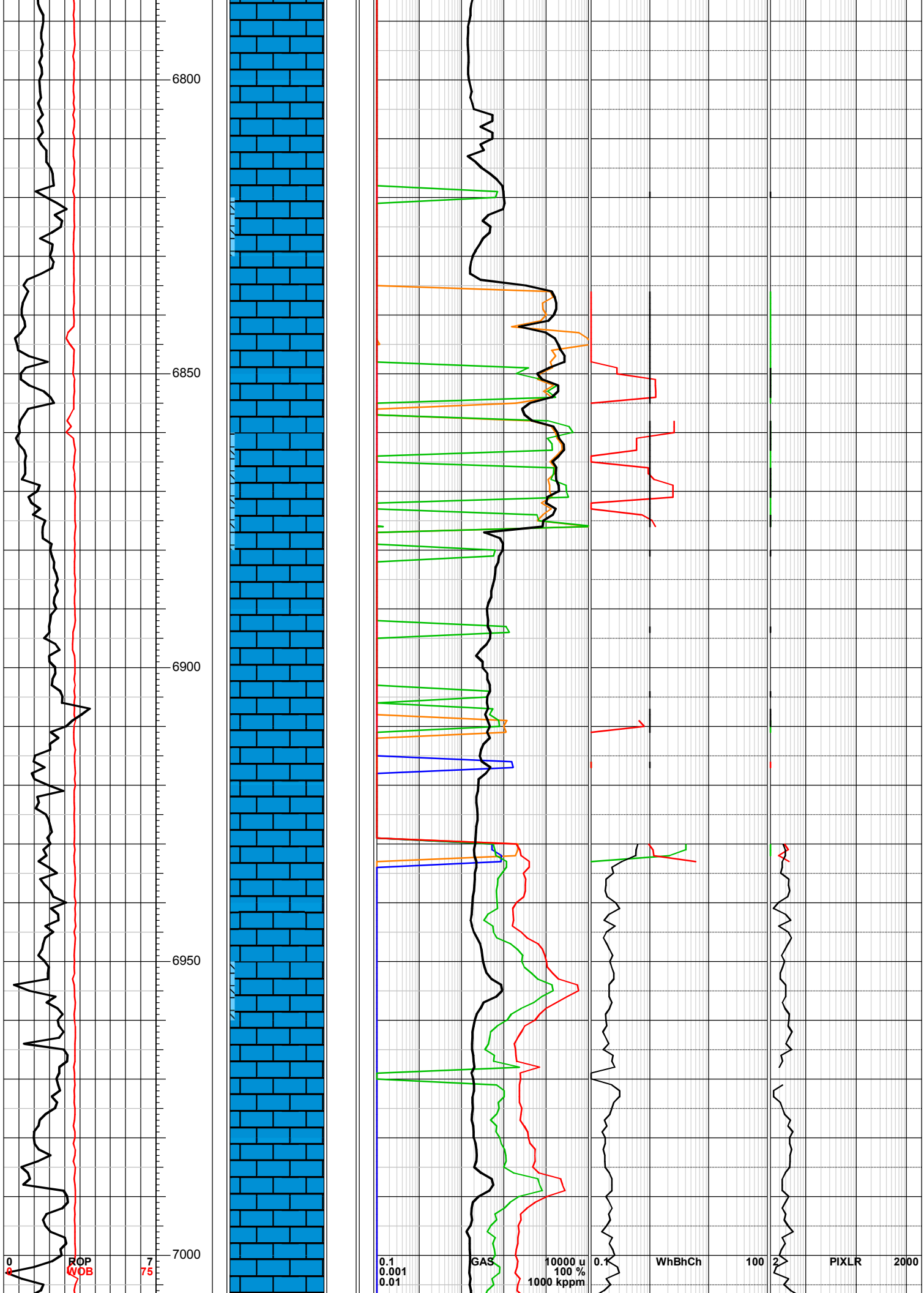

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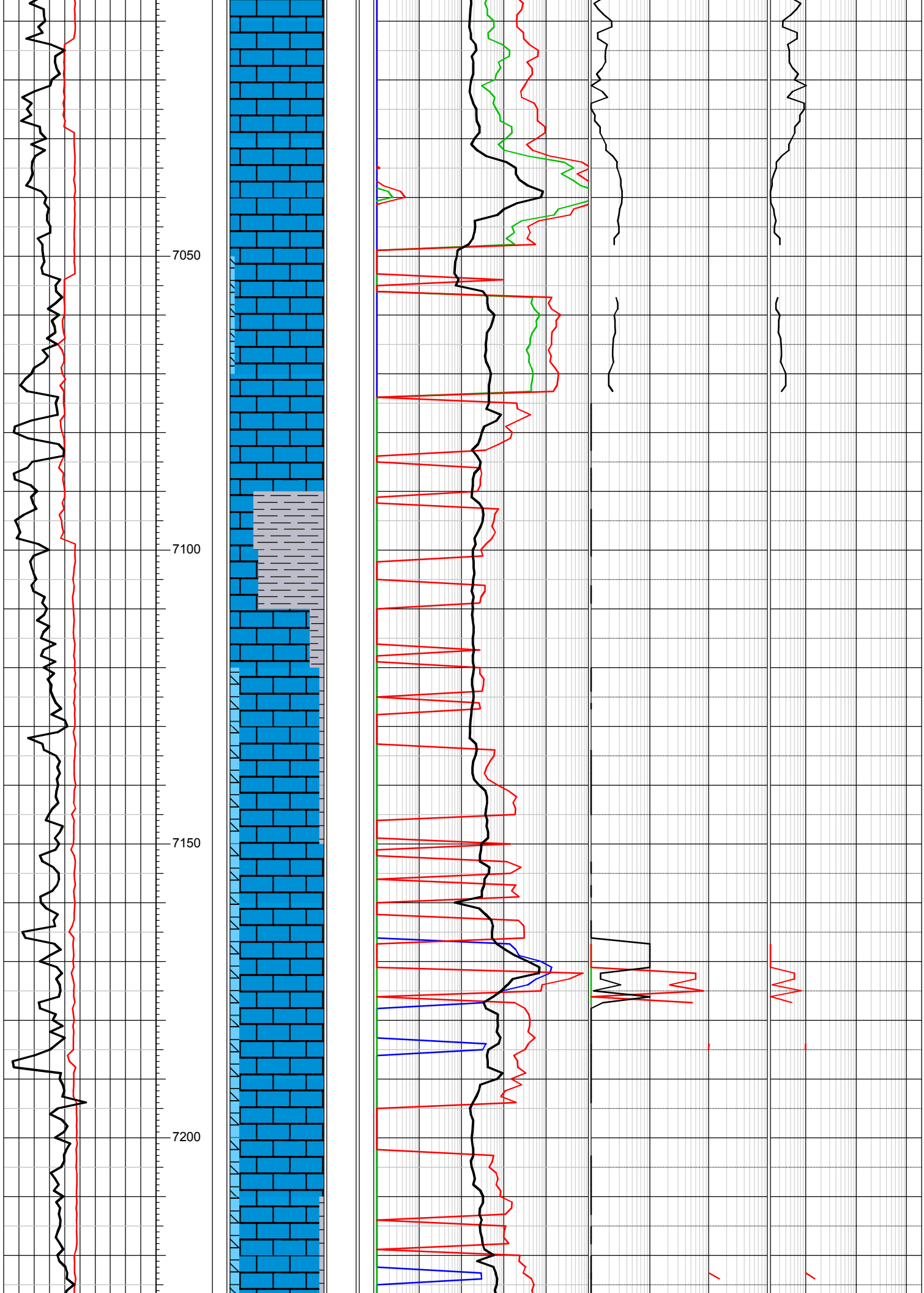

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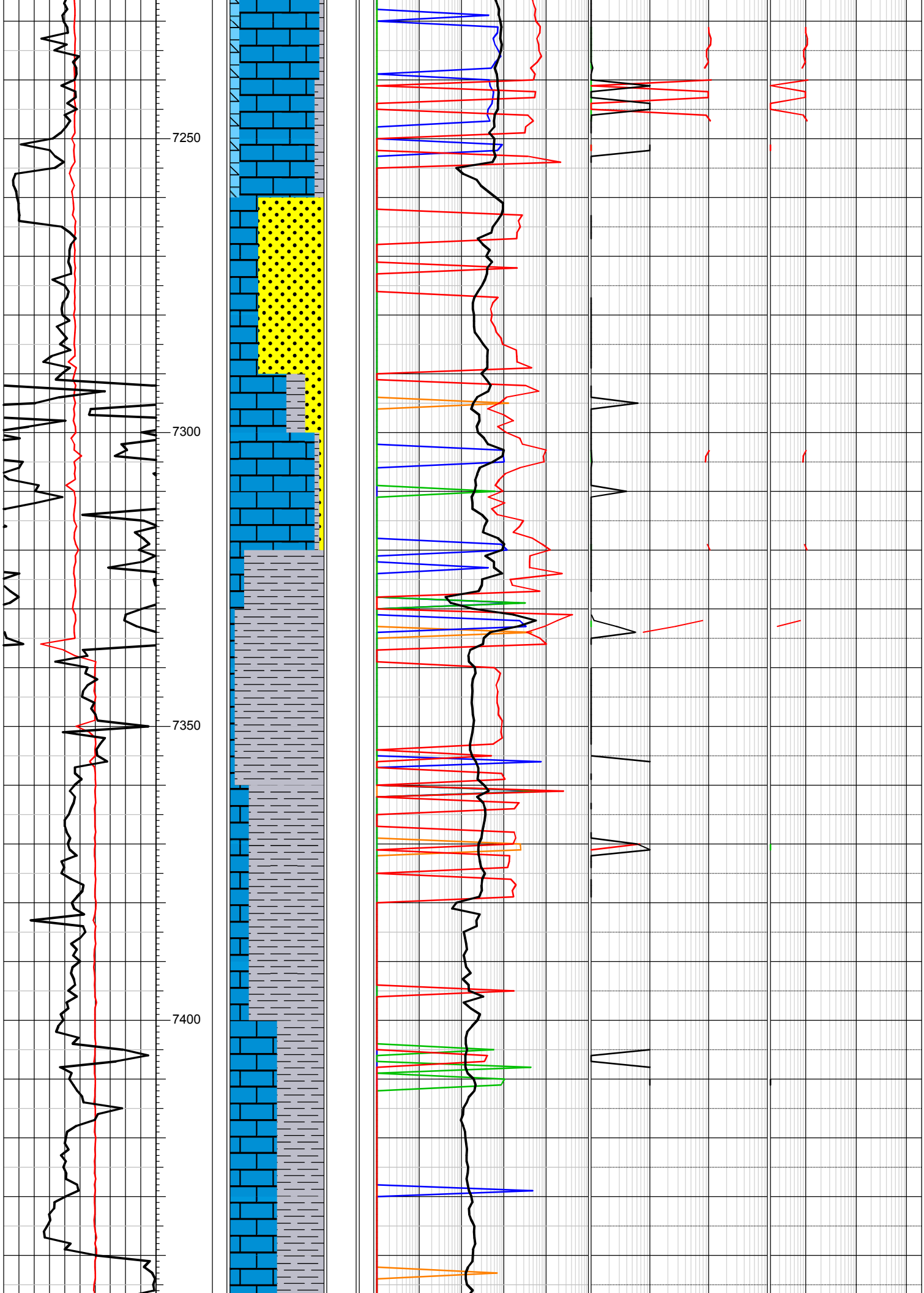

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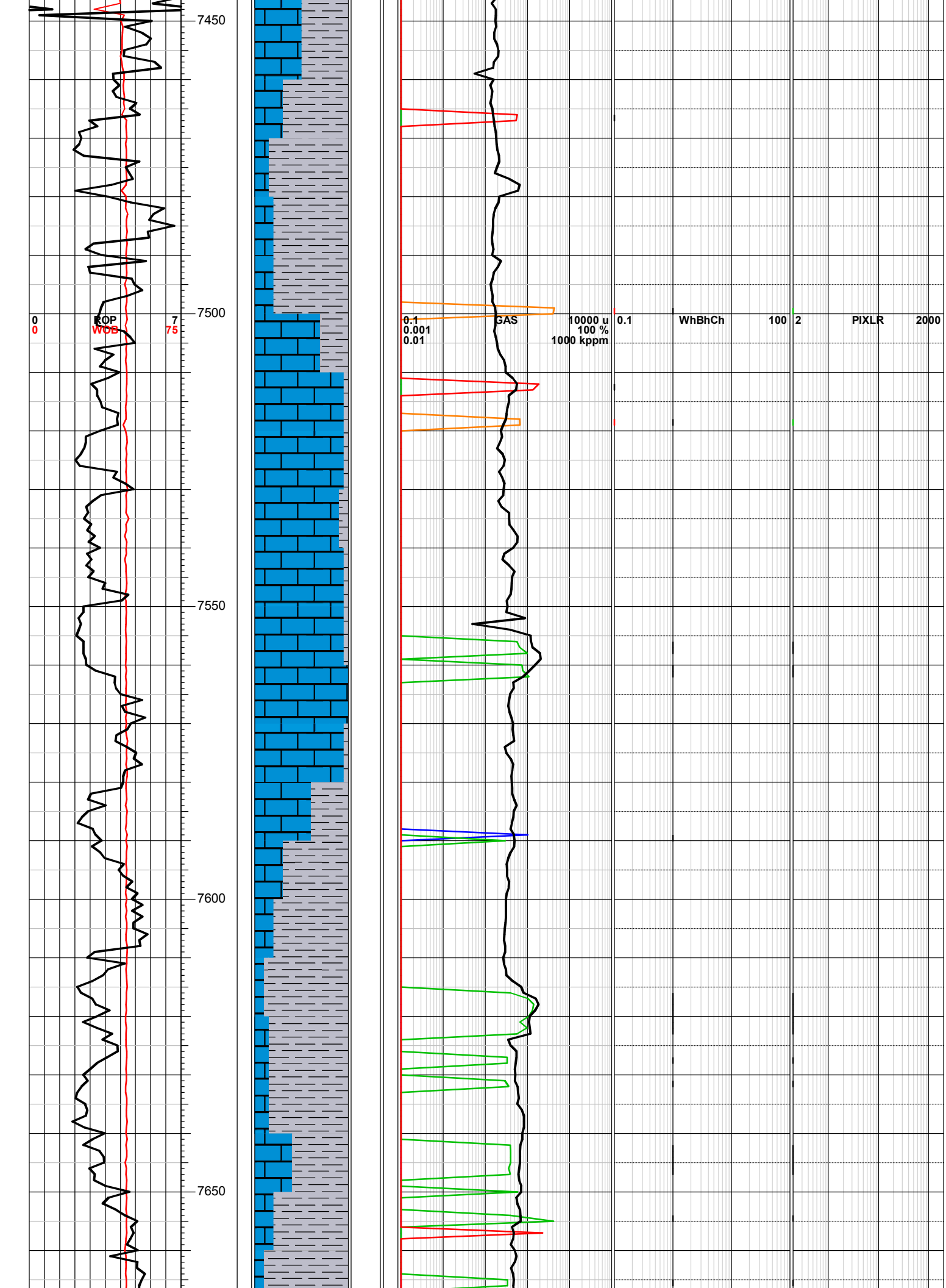

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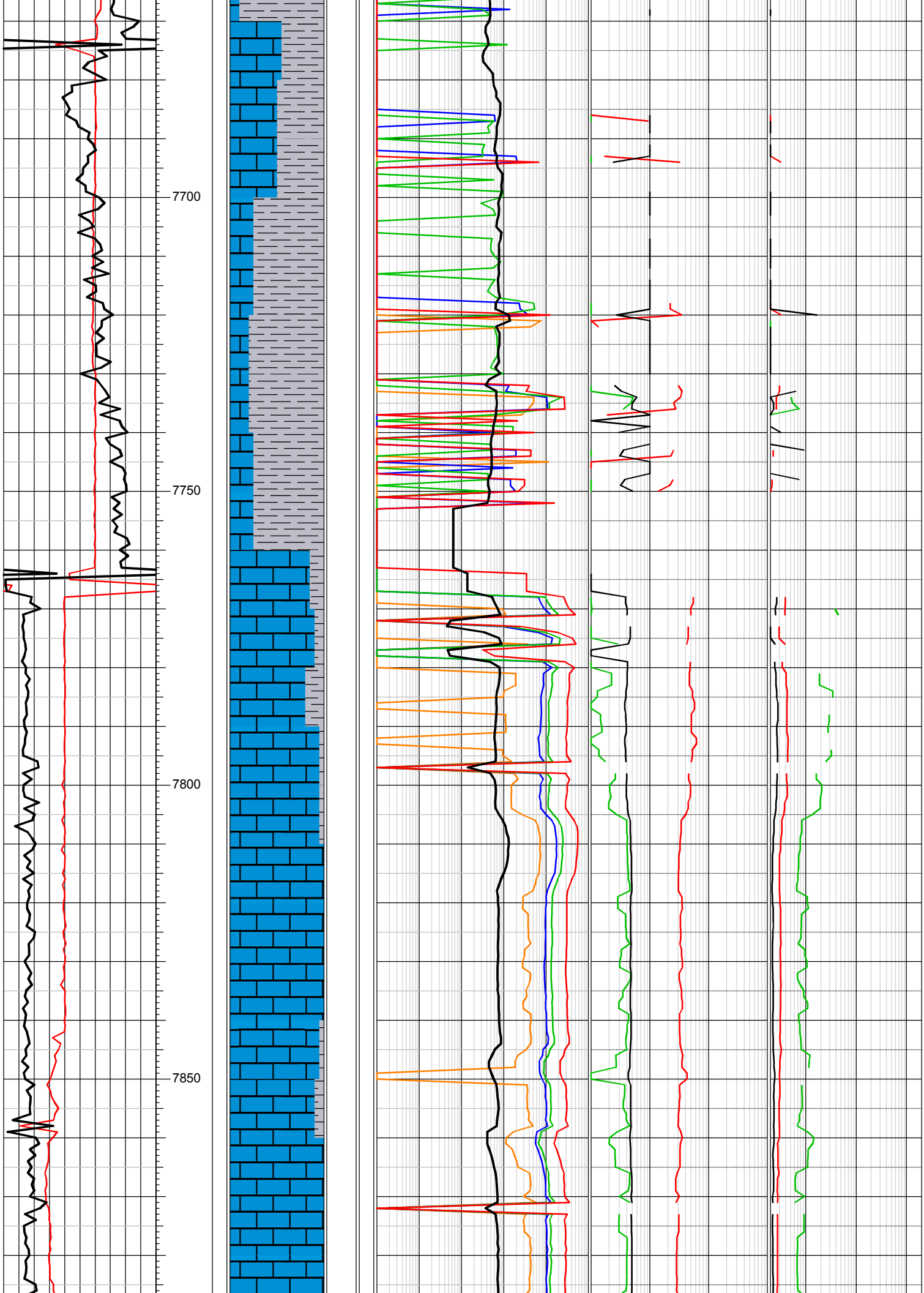

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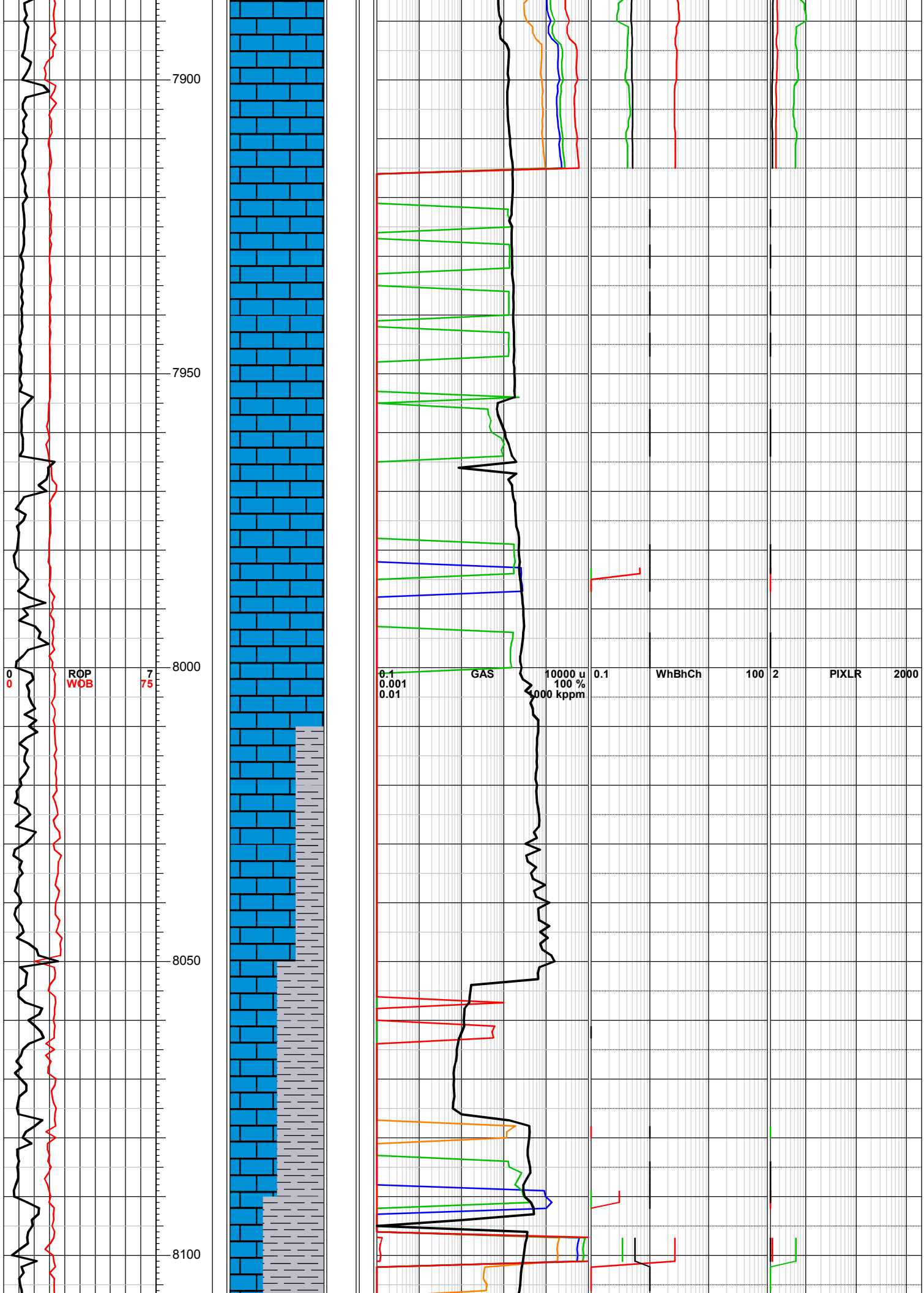

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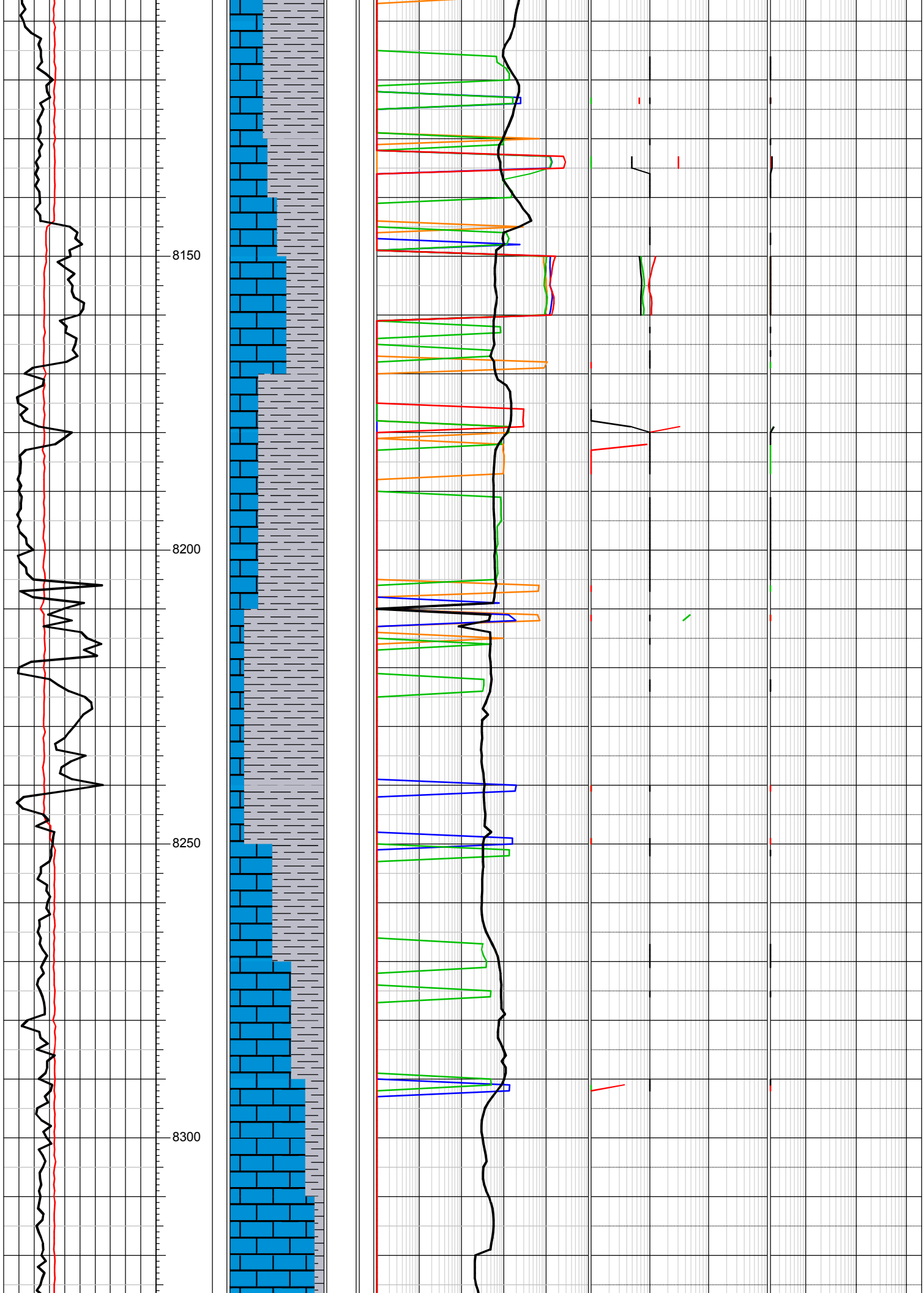

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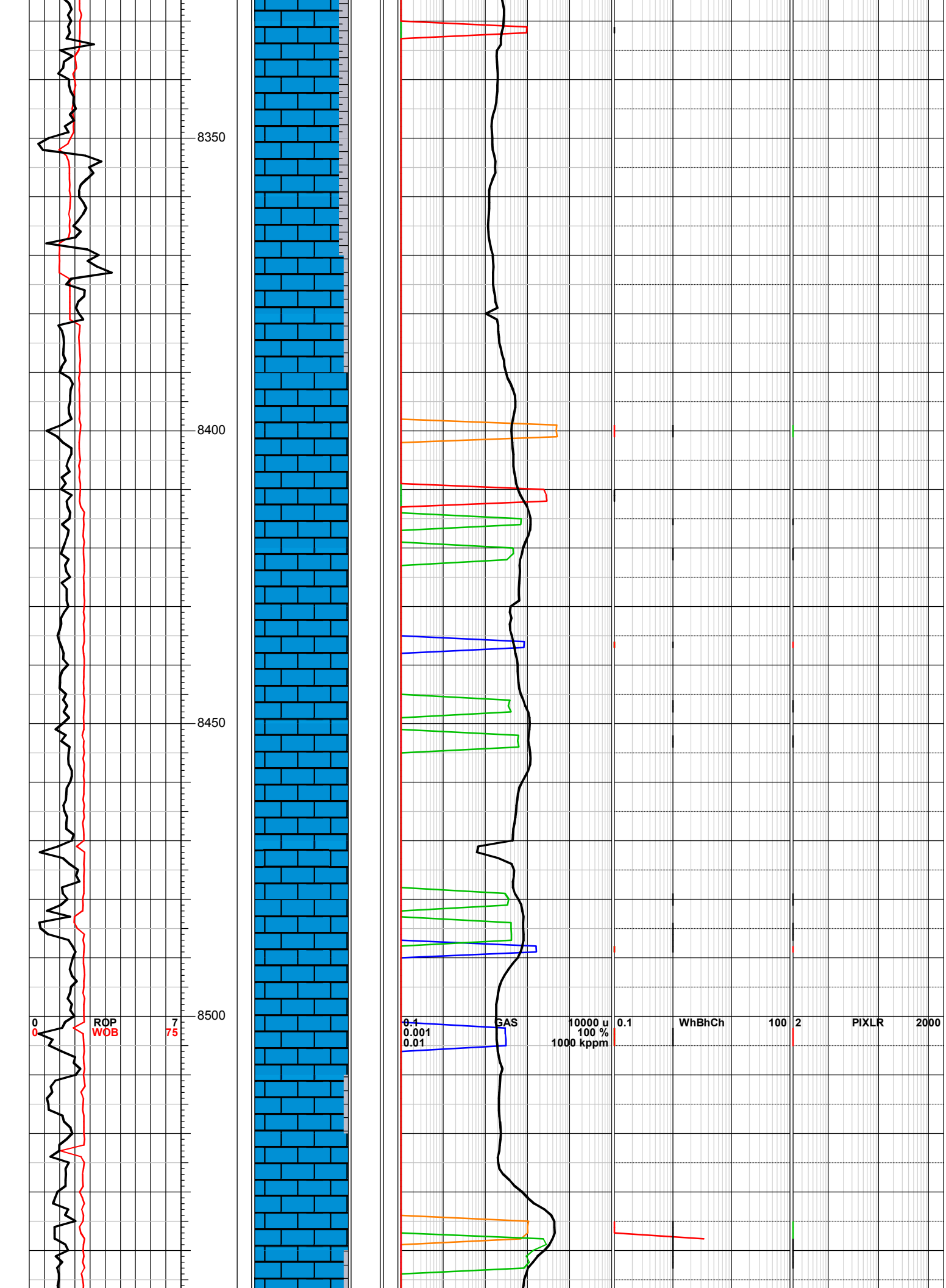

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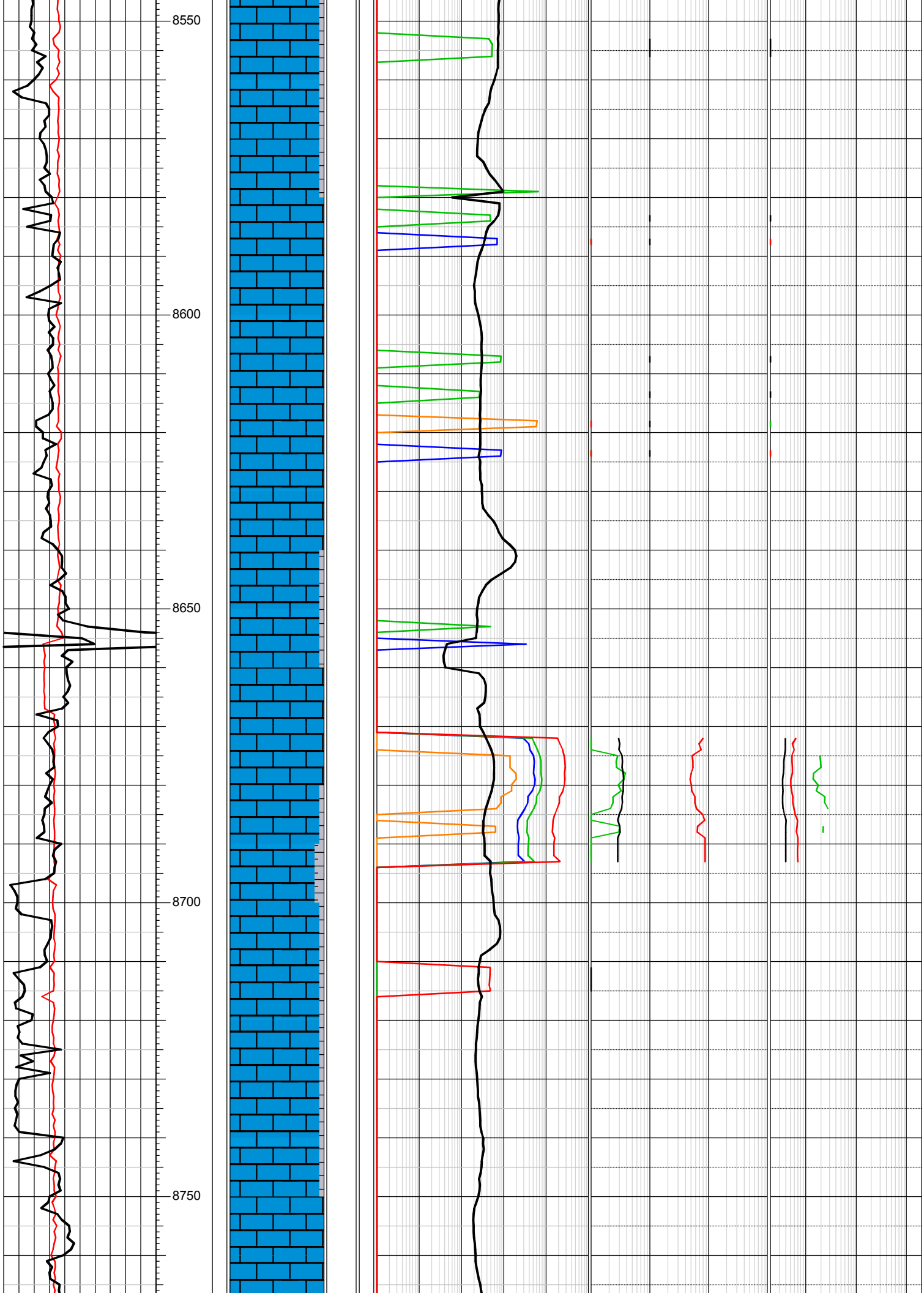

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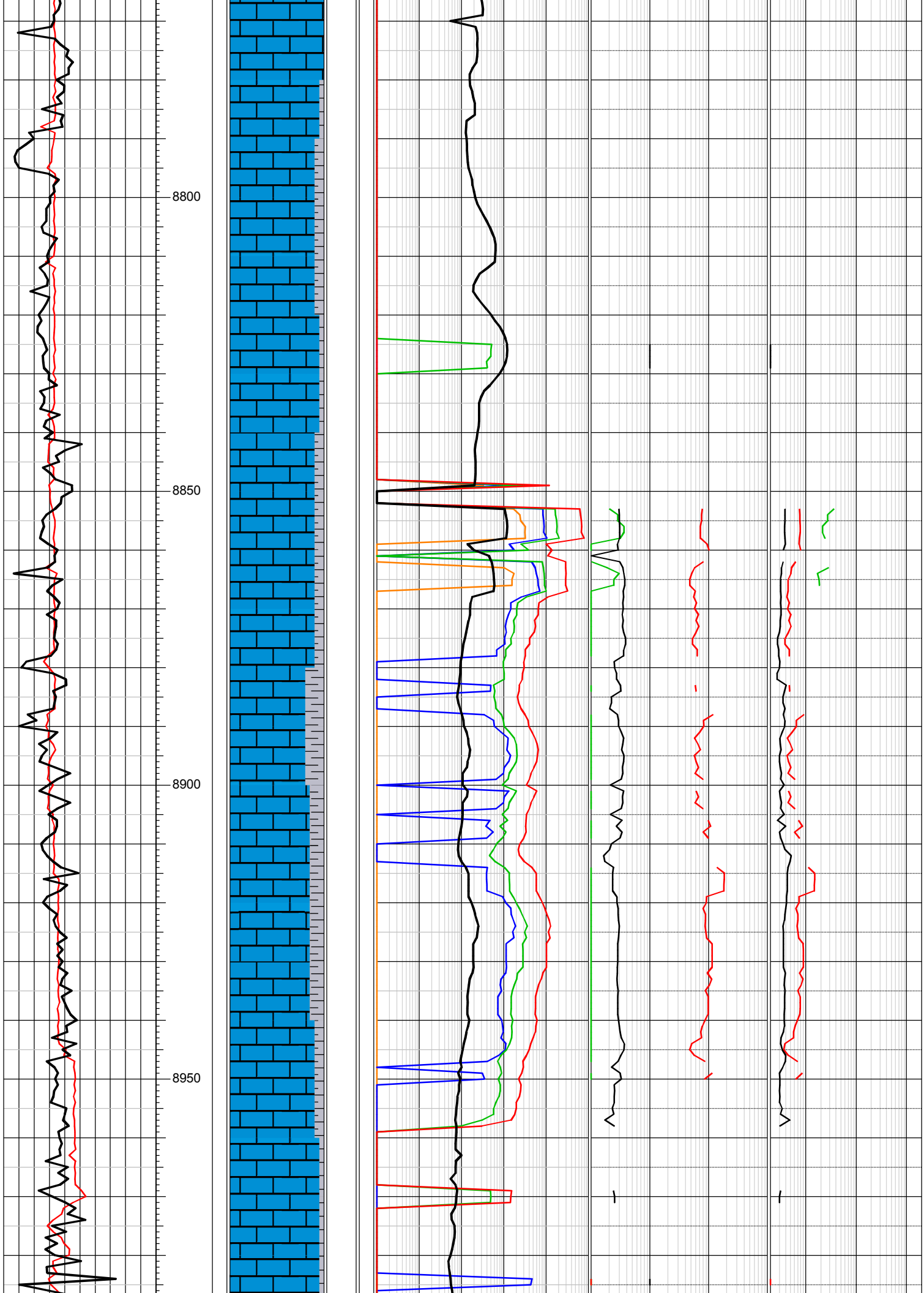

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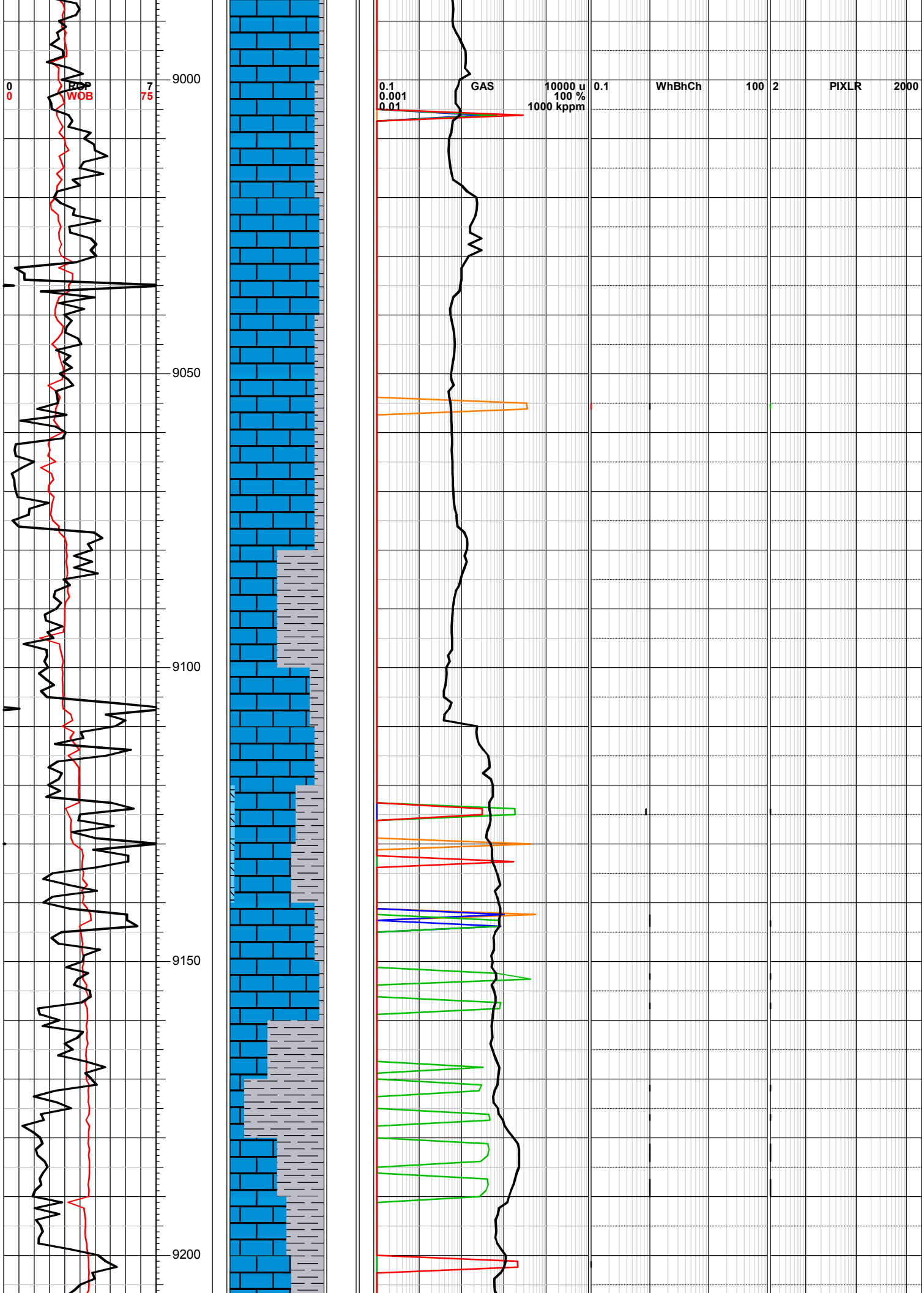

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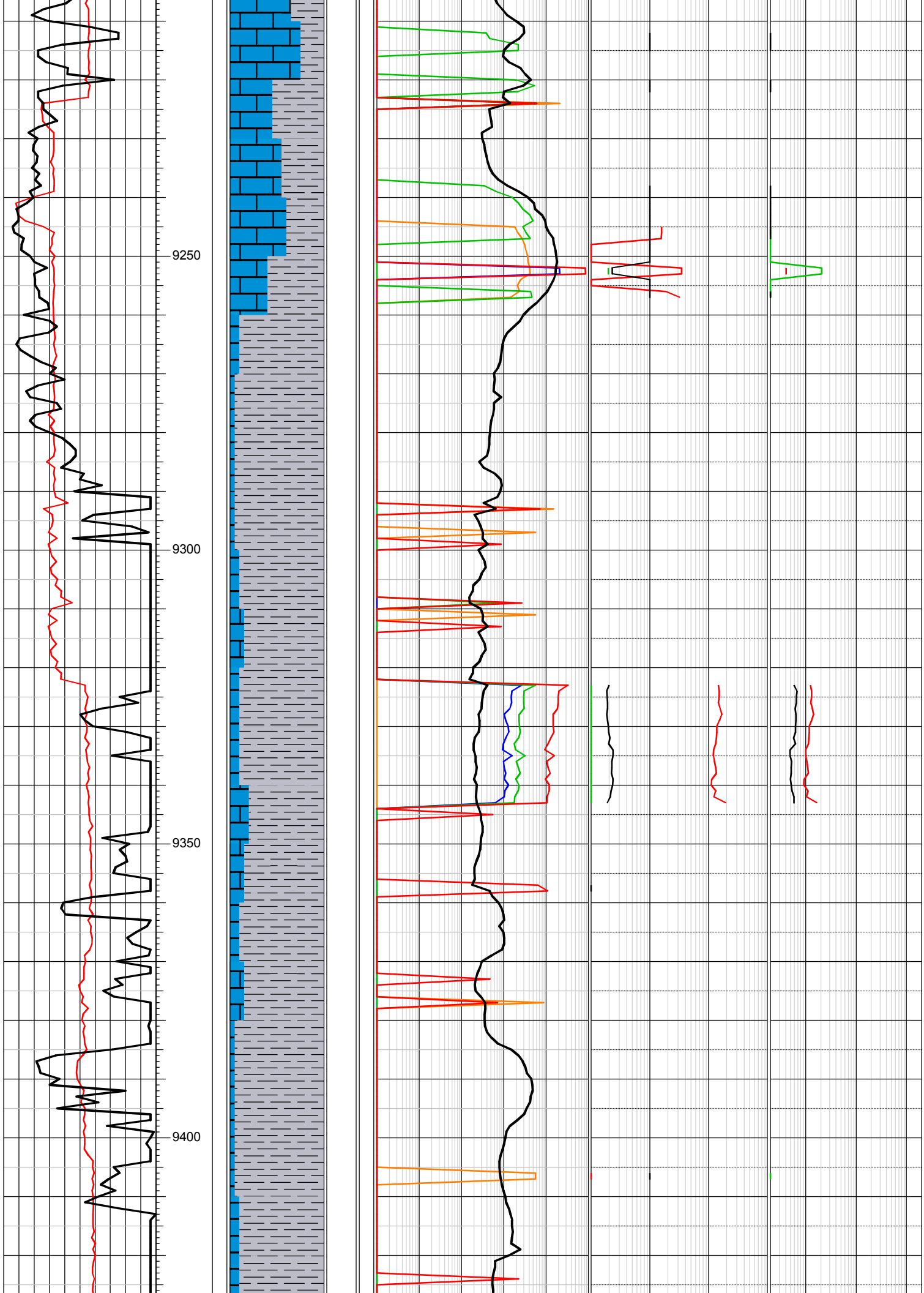

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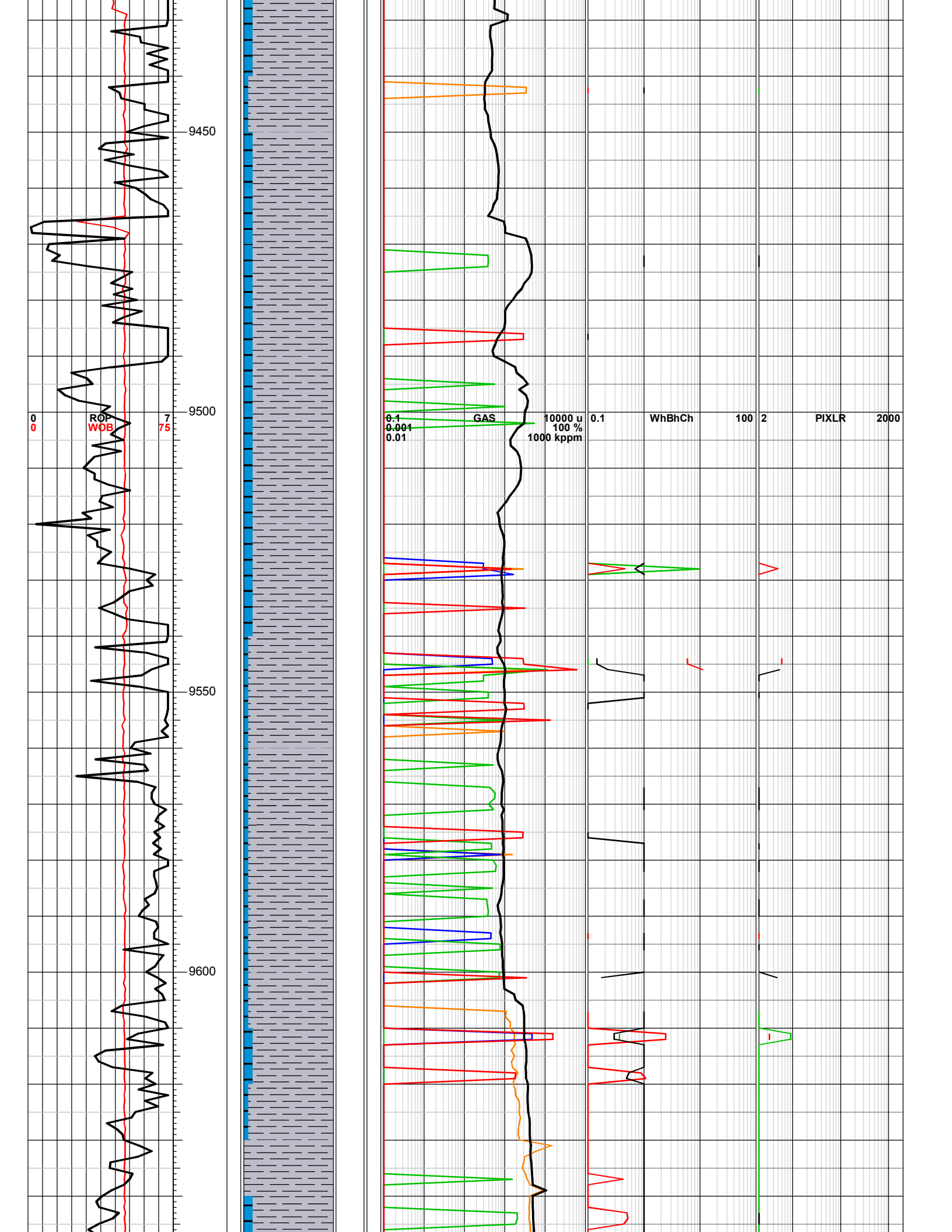

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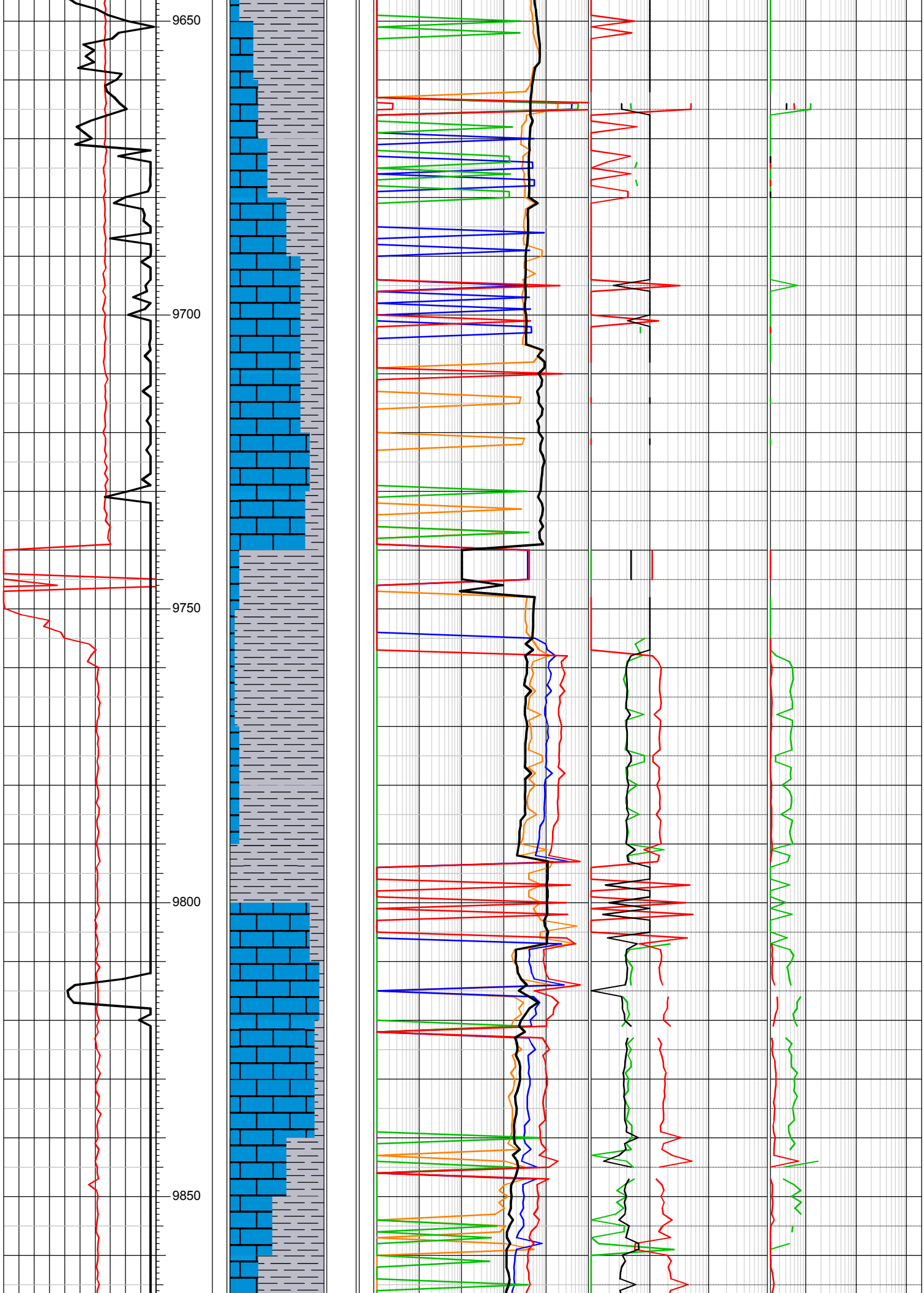

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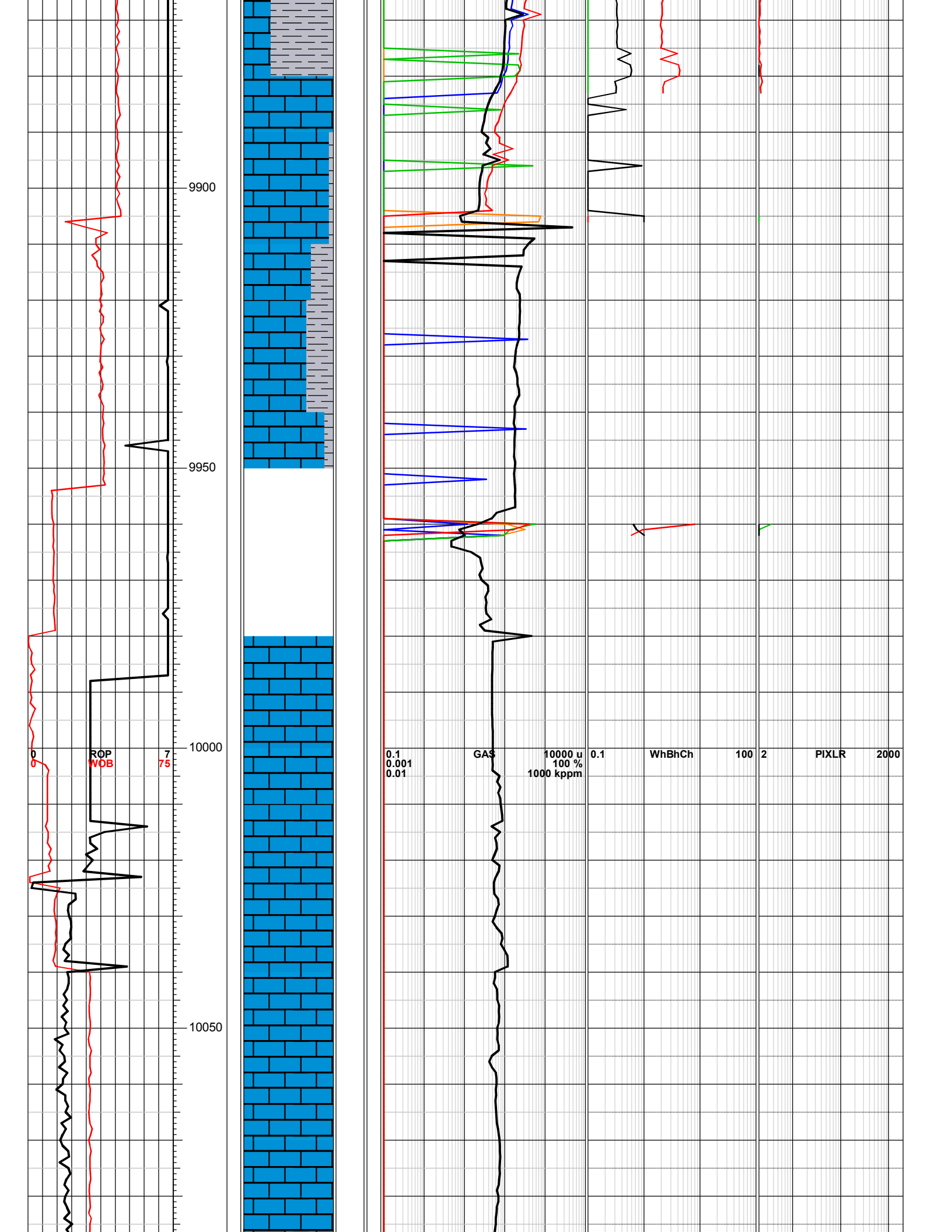

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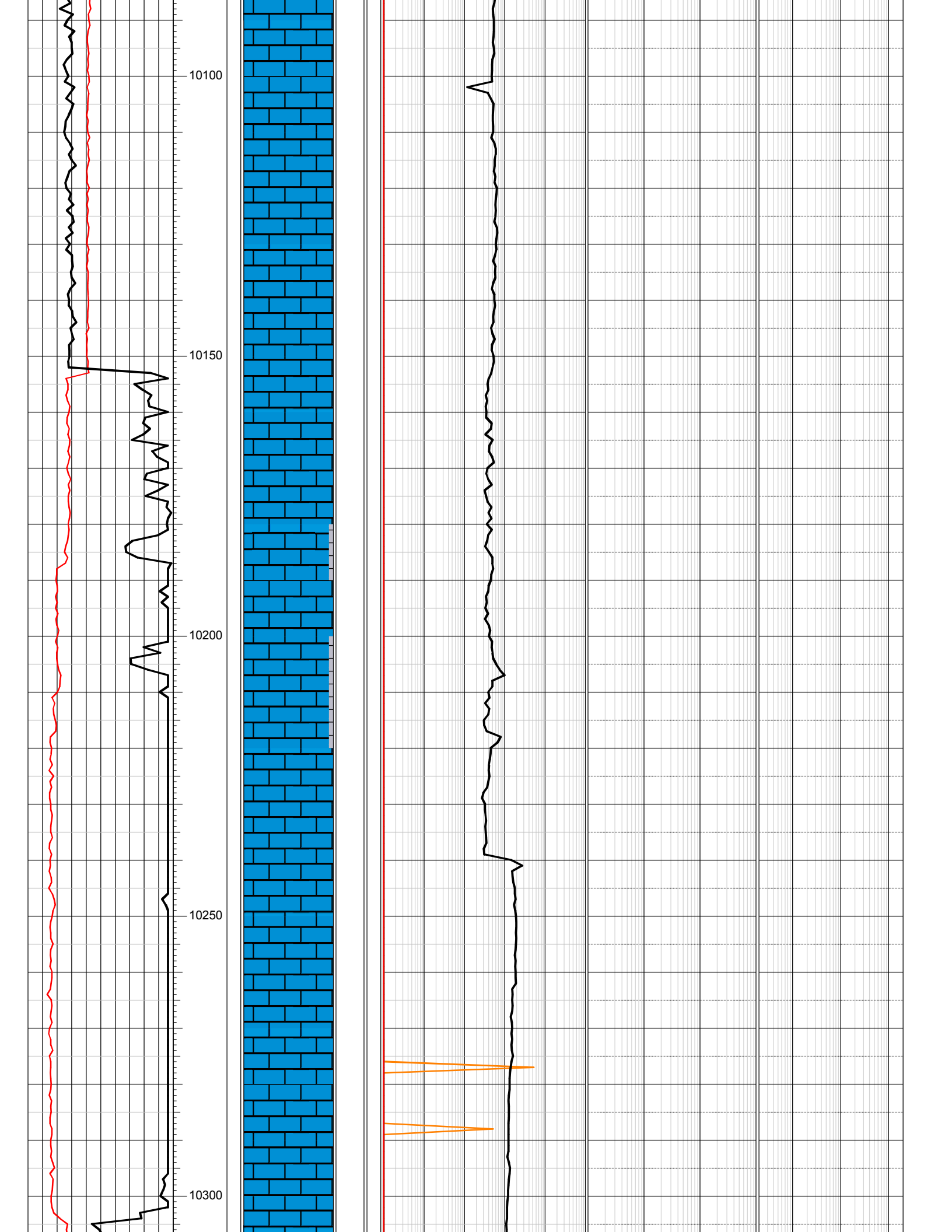

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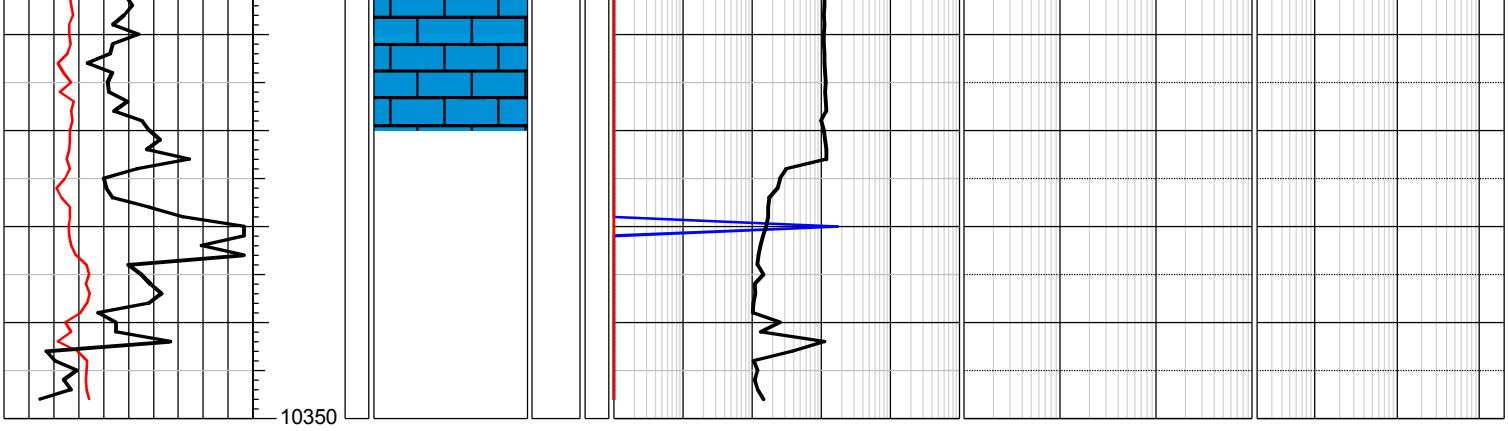

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10350

N. M. Oil Cons. Division
811 S. 1ST ST.
ARTESIA, NM 88210-2834

Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM025527

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: 23632

8. FARM OR LEASE NAME, WELL NO.: OXY Woden Federal #1

9. API WELL NO.: 30-015- 30386

10. FIELD AND POOL, OR WILDCAT: 80420 Undesg. Logan Draw Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 23 T17S R27E

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: OXY USA Inc. 16696 16696

3. ADDRESS AND TELEPHONE NO.: P.O. Box 50250 Midland, TX 79710-0250 915-685-5717

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660 FNL 1650 FEL NWNE(B)
At proposed prod. zone:

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 6 miles southeast of Artesia, NM

12. COUNTY OR PARISH: Eddy

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	320	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
N/A	9800'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3495'

22. APPROX. DATE WORK WILL START*: 9/18/98

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING		WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	H40	48#	400'	420sx - Surface WITNESS
11"	8-5/8"	K55	24#	1800'	515sx - Surface
7-7/8"	4-1/2"	N80	11.6#	9800'	605sx - 6000'

ROSWELL CONTROLLED WATER BASIN

Post ID-1
8-28-98
APD & Loc.

SEE OTHER SIDE

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED David Stewart TITLE Regulatory Analyst DATE 7/23/98

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY (ORIG. SGD.) ARMANDO A. LOPEZ TITLE Acting Assistant Field Office Manager, Lands and Minerals DATE AUG 26 1998

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

ATTACHMENT 3160-3
OXY USA Inc.
OXY Woden State #1
SEC 23 T17S R27E
Eddy County, NM

PROPOSED TD: 9800' TVD

BOP PROGRAM:

0' - 400'	None
400'-1800'	13-3/8" 5M blind and pipe rams with 5M annular preventer.
1800'-9800'	13-3/8" 5M blind and pipe rams with 5M annular preventer and rotating head below 8500'.

CASING:

13-3/8" 48# H40 ST&C casing @ 400'. 17-1/2" hole.

8-5/8" 24# K55 ST&C casing @ 1800'. 11" hole.

4-1/2" 11.6# N80 LT&C casing @ 9800'. 7-7/8" hole.

CEMENT:

Surface - Circulate cement with 220sx 35:65 POZ/Class C with 6% gel + 2% $CaCl_2$ + 0.25 #/sx Cello-Seal and 200sx Class C with 2% $CaCl_2$.

Intermediate - Circulate cement with 315sx 35:65 POZ/Class C with 6% gel + 5% salt + 0.25 #/sx Cello-Seal and 200sx Class C with 2% $CaCl_2$.

Production - Cement with 530sx Super C Modified cement with 0.5#/sx FL-25 + 0.2 #/sx CD-32 + 0.5 #/sx gilsonite and 75sx Class C with 2% $CaCl_2$.

Estimated top of cement is 6000'. Cement volumes may be adjusted to hole caliper.

MUD:

0'- 400'	FW/Native Mud. Lime for pH control (9-10). Paper for seepage. Wt.8.7-9.2ppg, vis 32-34sec.
400'- 1800'	Brine water. Caustic for pH control (10-10.5). Paper for seepage. Wt.10-10.1ppg, vis 28-29sec.
1800'-6300'	Fresh water. Caustic for pH control (9-9.5). Paper for seepage. Wt. 8.4ppg, vis 28-29sec
6300'-9000'	Cut brine. Caustic for pH control (10-10.5). Wt. 9.2-9.4ppg, vis 28-29sec
9000'-9800'	Mud up with a XCD Polymer system Wt. 9-9.6ppg, vis 32-34sec WL 8cc.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Instruction on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-	80400	Undesignated Logan Draw Morrow

Property Code	Property Name	Well Number
	OXY WODEN FEDERAL	1

OGRID No.	Operator Name	Elevation
16696	OXY USA INC.	3495'

Surface Location

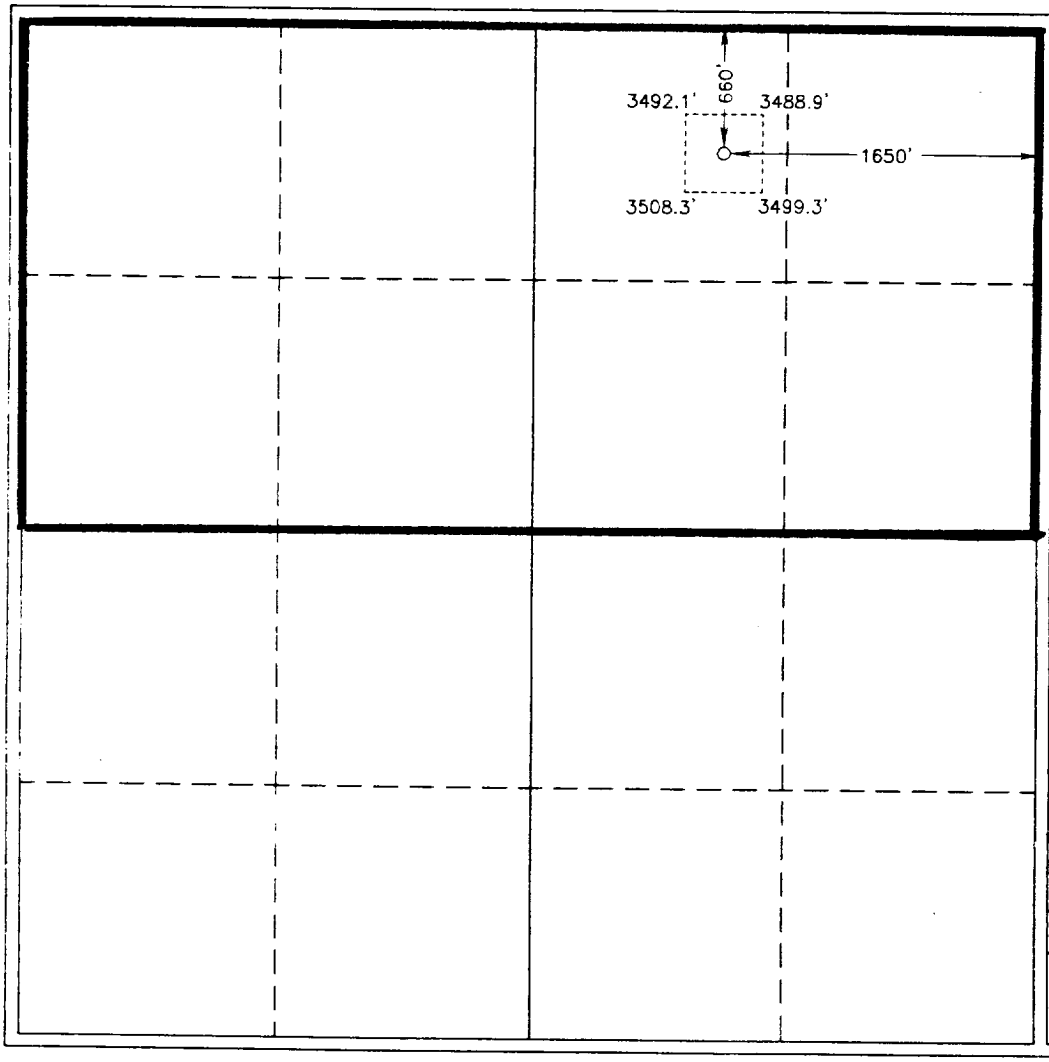
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	17 S	27 E		660	NORTH	1650	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320	N		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

David Stewart
Printed Name

Regulatory Analyst
Title

7/23/98
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

January 20, 1998
Date Surveyed JONES

Signature & Seal of Professional Surveyor

7977

W.O. No. 89230a

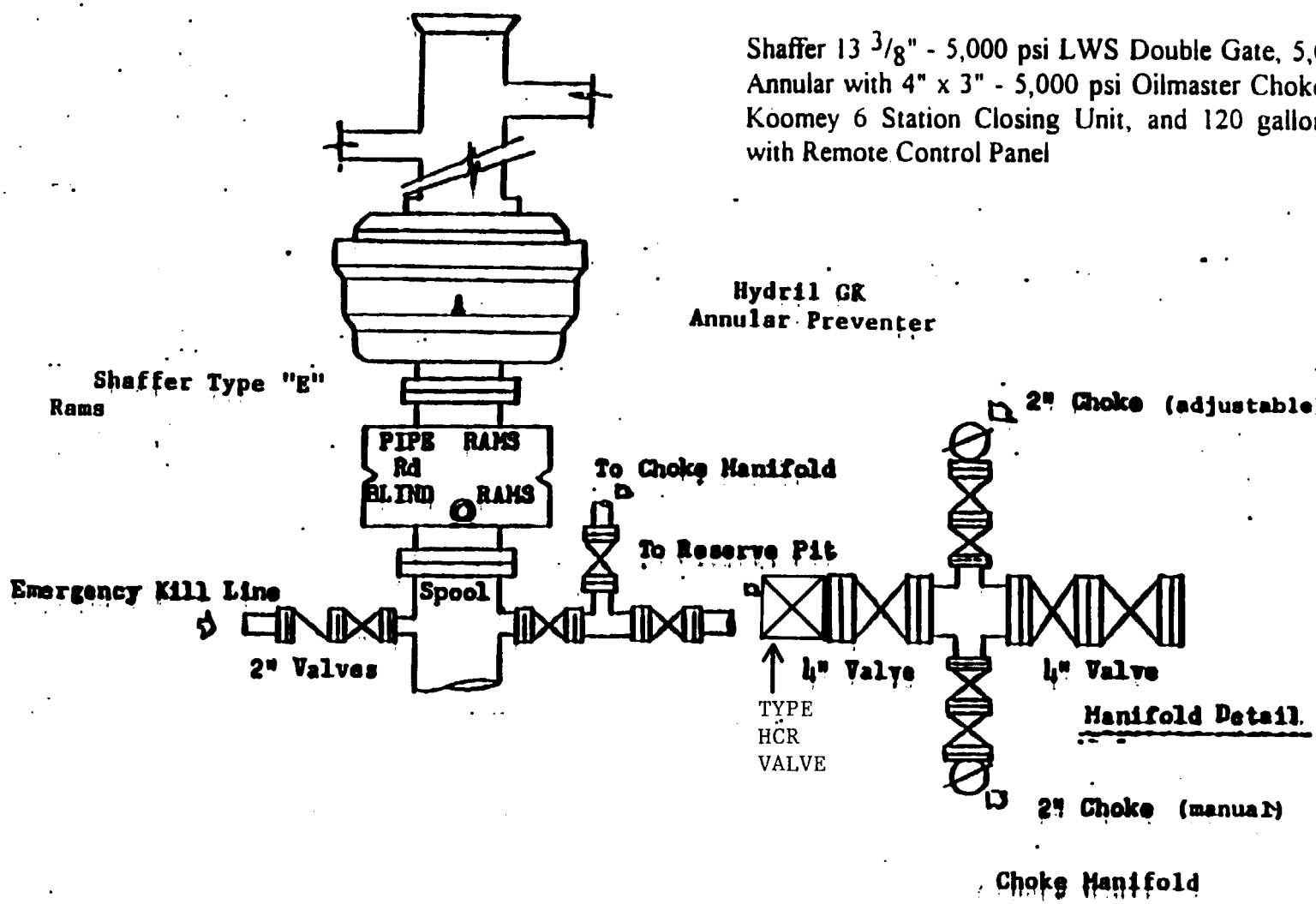
Certificate No. Gary L. Jones 7977

BASIN SURVEYS

BLOWOUT PREVENTOR SCHEME

EXHIBIT A

Shaffer 13 3/8" - 5,000 psi LWS Double Gate, 5,000 psi Shaffer Annular with 4" x 3" - 5,000 psi Oilmaster Choke Manifold and Koomey 6 Station Closing Unit, and 120 gallon Accumulator with Remote Control Panel



Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM-025527

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL ☐ DEEPEN ☐ RE-ENTRY

b. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER Disposal SINGLE ZONE ☐ MULTIPLE ZONE ☐

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME, WELL NO.: Woden Federal #1 35881

2. NAME OF OPERATOR: SDX Resources, Inc. 30-015

9. API WELL NO.: 30-015-30386

3. ADDRESS AND TELEPHONE NO.: PO Box 5061, Midland, TX 79704 915/685-1761

10. FIELD AND POOL, OR WILDCAT: ~~Undesignated~~ Loco Hills Dr

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL, 1650' FEL, Unit B, NWNE
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 23, T17S, R27E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 6 miles SE of Artesia, NM

12. COUNTY OR PARISH: Eddy

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660' (600')	320	0

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH	20. ROTARY OR CABLE TOOLS
NA	8938	

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3495' G-R

22. APPROX. DATE WORK WILL START*: 07/01/00

23. PROPOSED CASING AND CEMENTING PROGRAM — POTASH CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Existing17-1/2"	13-3/8", H40	48#	400'	463 sx, Circ
Existing 11"	8-5/8", K55	32#	1800'	675 sx, Circ
Proposed 7-7/8"	5-1/2", J55	17#	7850'	1000 sx Circ

Propose to drill out plugs to 8938' & run 5-1/2" csg to 7850' w/packer shoe & 2 stage cmt to surface.

Drill out pkr shoe & clean out open hole to 8938'.

Treat as necessary & run 2-7/8" PC tbg w/PC pkr & set @ 7750'.

Will complete as a disposal well in the OH interval from 7750' - 8938'.

MAY 2000 RECEIVED OCD - ARTESIA

APPROVAL SUBJECT TO GENERAL REQUIREMENTS & SPECIAL STIPULATIONS ATTACHED

IN ABOVE SPACE DESCRIBE PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Chad Monzingo TITLE Engineer DATE 03/27/00

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

(SGD.) ARMANDO A. LOPEZ Assistant Field Manager, Lands And Minerals

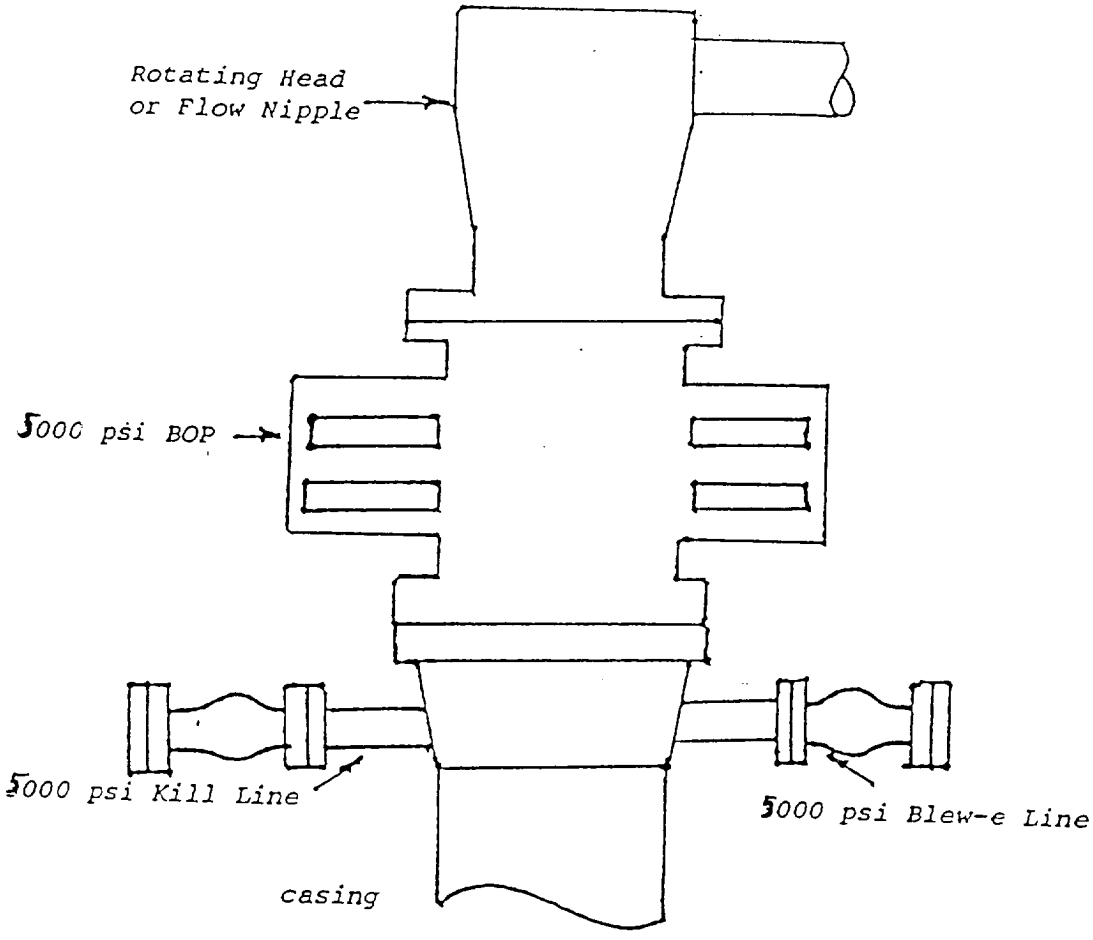
APPROVED BY _____ TITLE _____ DATE MAY [illegible] 2000

*See Instructions On Reverse Side

APPROVED FOR 1 YEAR

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Blow Out Preventor Schematic



SDX RESOURCES, INC.

Lease: Woden Fed Well: 1

Exhibit #1

.RICT I
. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Instruction on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-30386	80400	Undesignated Logan Draw Morrow

Property Code	Property Name	Well Number
	OXY WODEN FEDERAL	1

OGRID No.	Operator Name	Elevation
16696	OXY USA INC.	3495'

Surface Location

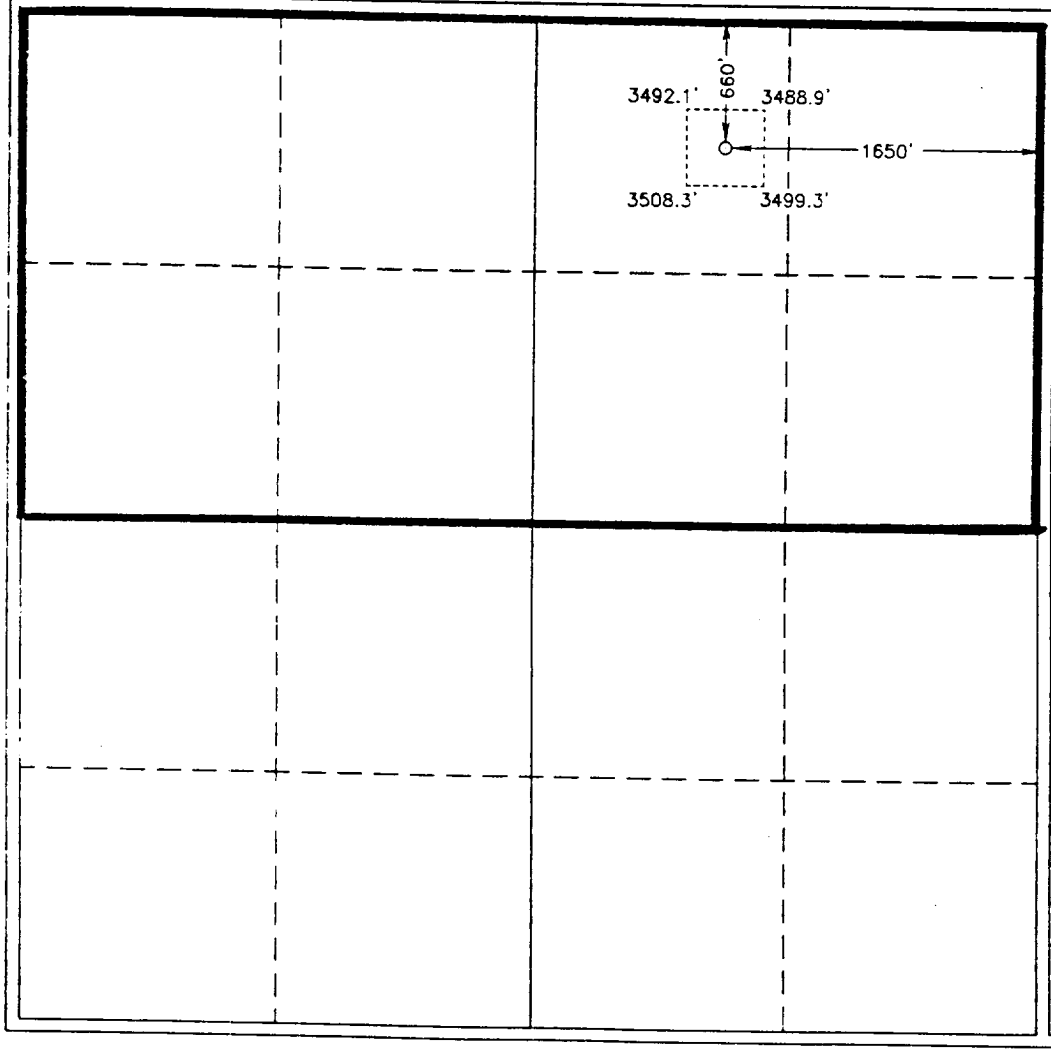
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	17 S	27 E		660	NORTH	1650	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320	N		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

David Stewart
Printed Name

Regulatory Analyst
Title

7/23/98
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

January 20, 1998
Date Surveyed JONES

Signature & Seal of Professional Surveyor

7977

W.O. No. 80250

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Exhibit 2A

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-30386	80400	Undesignated Logan Draw Morrow

[4] Property Code	[5] Property Name	[6] Well Number
	Woden Federal	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
020451	SDX Resources, Inc.	3495'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

660'
1650

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Chuck Morgan
Signature

Chuck Morgan
Printed Name

Engineer
Title

3/27/00
Date

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyer:

Certificate Number

Exhibit 2B

Water Order
File when
Approved for
injection

SDX RESOURCES, INC.
P.O. BOX 5061
MIDLAND, TEXAS 79704
(915) 685-1761



May 26, 2000

NMOCD
2040 S. Pacheco
Santa Fe, NM 87505

NMOCD
811 S. First St
Artesia, NM 88210

Re: Application for Authority to Inject
Sec. 23, T17S, R27E
Eddy Co., NM

Gentlemen:

Enclosed is Form C-108 (Application for Authority to Inject) for the following well operated by SDX Resources Inc.

Woden Federal #1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FEL
Eddy Co., NM

The legal ad will be run in the "Artesia Daily Press". We will forward that affidavit to you as soon as we receive it.

Should you have any questions, please contact us at the letterhead address.

Sincerely,

Bonnie Atwater

Bonnie Atwater
Regulatory Tech

/ba

attachment

ENERGY AND MINERALS DEPARTMENT

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: SDX Resources, Inc.

Address: PO Box 5061, Midland, TX 79704

Contact party: Chuck Morgan Phone: 915/685-1761

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Bonnie Atwater Title Regulatory Tech

Signature: Bonnie Atwater Date: 5/26/00

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office

Application for Authorization to Inject
SDX Resources, Inc.

Woden Federal # 1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FWL
Eddy Co., New Mexico

I. SDX plans to convert this well to an injection well in the Penn formation.

II. Operator: SDX Resources, Inc.
PO Box 5061
Midland, TX 79704

III. Well Data: See Attachment A1 - A3.

IV. This is not an expansion of an existing project.

V. See Attachment B1 & B2 (1/2 – 2 mile map & large scale map)

VI. See Table VI

VII. (1.) Proposed Average Daily Injection Volume: 400 BWPD.
Maximum Daily Injection Volume: 2000 BWPD.

(2.) This will be a closed system.

(3.) Proposed Average Injection Pressure: Unknown.
Proposed Maximum Injection Pressure: 1570#.

(4.) Injection water would be produced water from the producing wells on the Berry Federal lease in the San Andres and Grayburg formations. Injection fluid analysis attached (Attachment C).

(5.) Formation Water Analysis not available.

VIII. (1.) The proposed injection interval is the portion of the Penn consisting of porous dolomite.

(2.) Limited fresh water zones overlie the proposed injection zone at appx. 150'.

IX. The proposed injection interval may be acidized with 15% HCL acid.

X. Well logs are on file at the OCD.

XI. No fresh water wells are within a ½ mile radius.

XII. Geologic and engineering data have been examined and no evidence of open faults or any other hydrological connection between the injection zone and any fresh water aquifer has been found.

XIII. (1.) Certified letters sent to offset operators. (Attachment D)
Surface Owner: Bureau of Land Management.

(2.) Copy of legal advertisement. (Attachment E)

ATTACHMENT A1

III. Well Data: Woden Federal #1

A. (1.) Unit B, Sec 23, T17S, R27E
Eddy Co., New Mexico
660' FNL 1650' FEL

(2.) Casing: 13-3/8", 48#, set at 400'. Cement with 463 sx. TOC surface.
8-5/8", 32#, set at 1800'. Cement with 675 sx. TOC surface.
Propose to set 5-1/2" 17# casing to 7850 and cement with 1000 sacks and circulate to surface.
Well P&A'd in 1999 as shown in Attachment A2.

(3 & 4.) Proposed well condition: Open Hole from 7850' – 8938'.
2-7/8" PC tubing with an AD-1 PC packer. Set at 7750' as shown in Attachment A3.

B. (1.) Injection Formation: Canyon/Strawn

(2.) Injection interval will be thru open hole 7850'-8938'.

(3.) Well was drilled and tested in the Morrow formation. No commercial production was encountered.

(4.) Morrow zone isolated by 60 sack plug set at 9138'-8938'.

(5.) Next shallow oil or gas zone: San Andres.
Next deeper oil or gas zone: Morrow.

WELL NAME: Woden Fed. #1 FIELD AREA: Undes. Logan Draw Morro

LOCATION: Sec. 23 T17S R27E 660' FNL 1650' FEL (B)

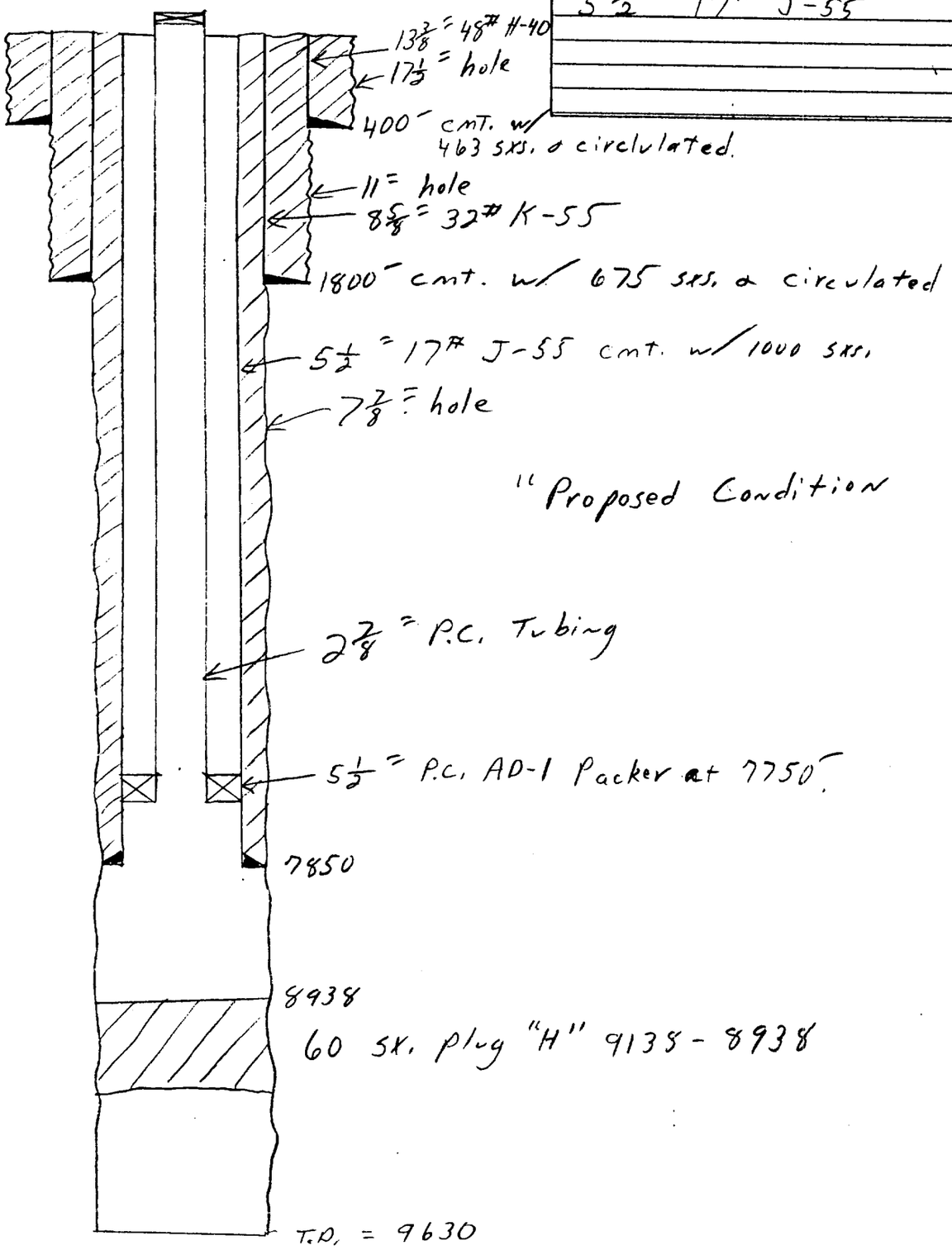
GL: 3495' ZERO: _____' AGL: _____'

KB: 3512' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: _____

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SE
13 3/8" 48# H-40	400
8 5/8" 32# K-55	1800
5 1/2" 17# J-55	7851



- SKETCH NOT TO SCALE -

REVISED: _____

A-3

WELL NAME: Woden Fed. #1 FIELD AREA: Undes. Logan Draw Morro

LOCATION: Sec. 23 T17S R27E 660' FNL 1650' FEL (B)

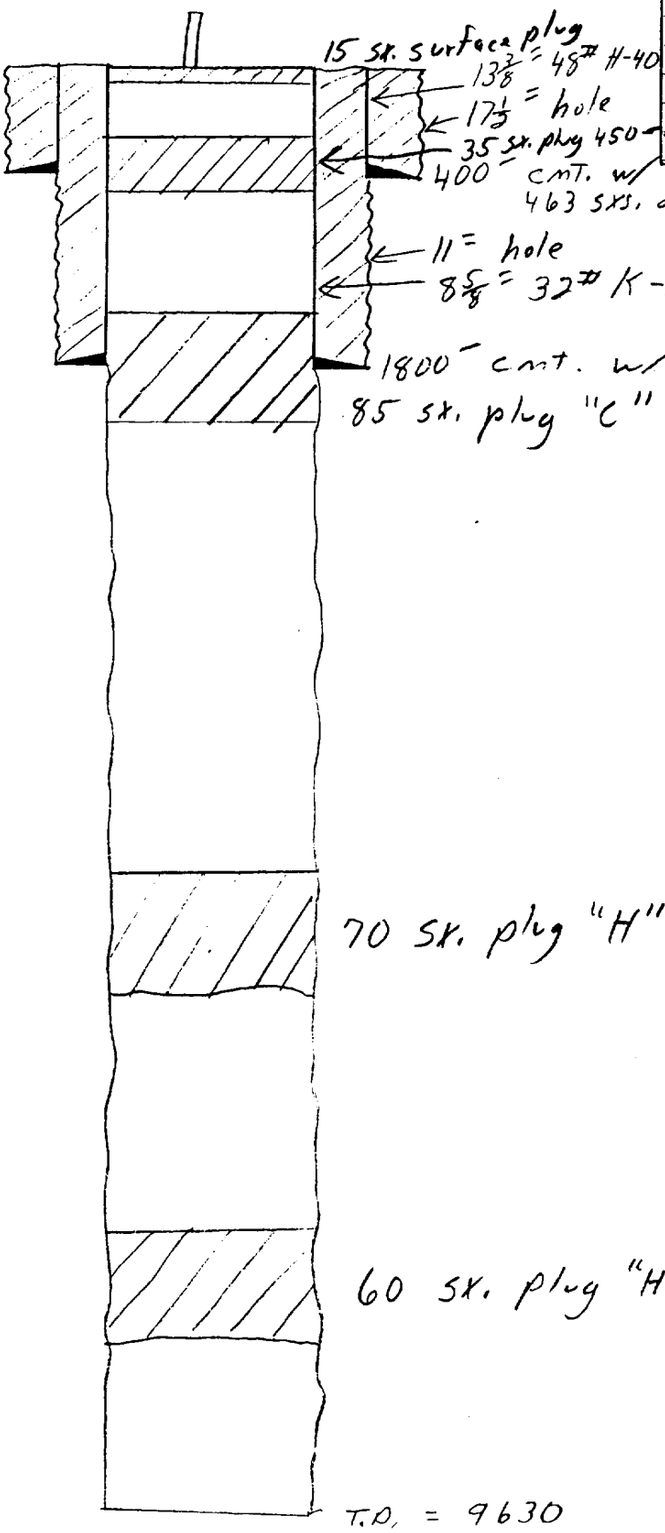
GL: 3495' ZERO: _____' AGL: _____'

KB: 3512' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: _____

CASING PROGRAM:

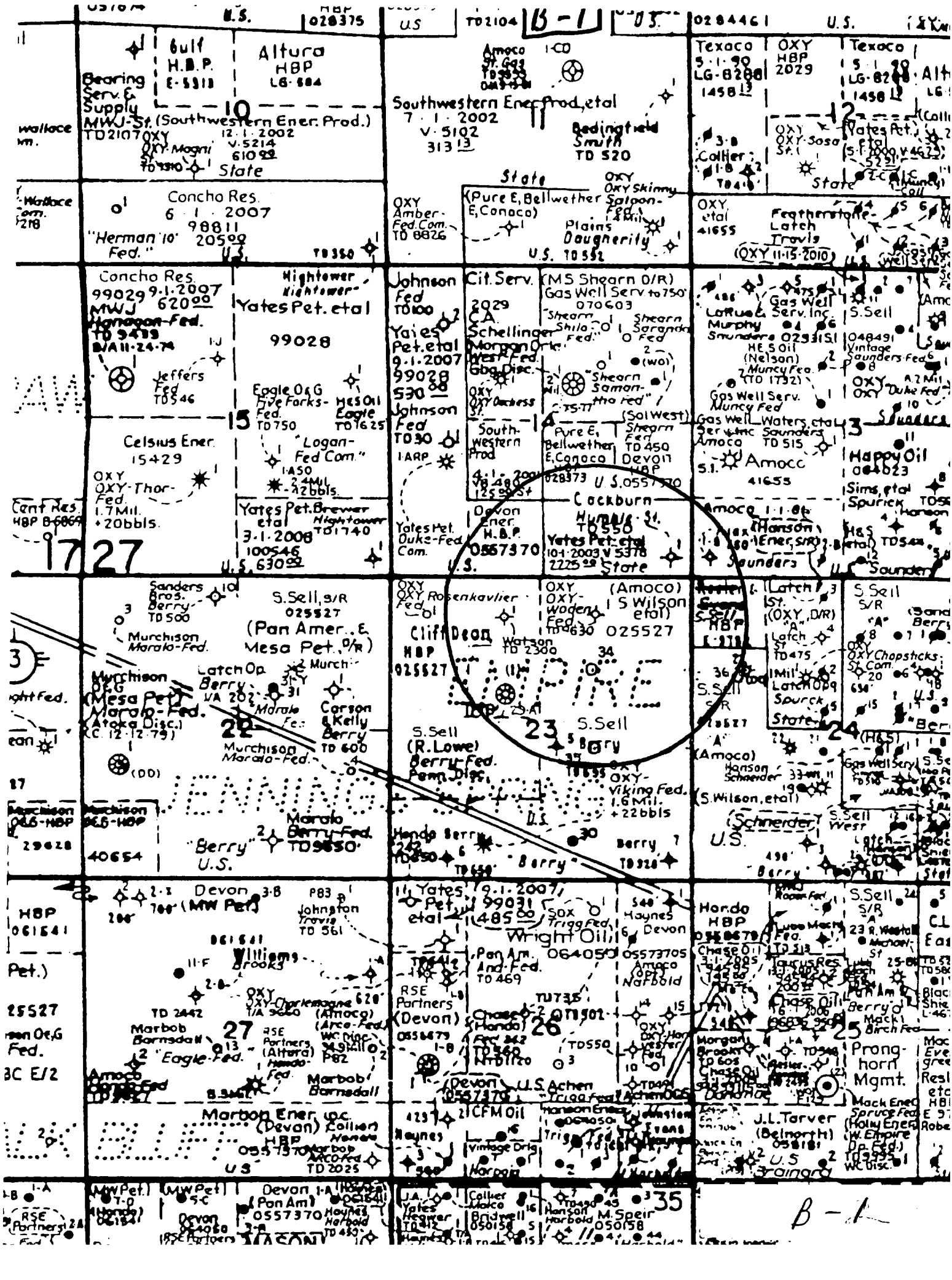
SIZE/WT./GR./CONN.	DEPTH S
13 3/8" 48# H-40	40
8 5/8" 32# K-55	180
350	



"Current Condition"

- SKETCH NOT TO SCALE -

REVISED: _____


B-1
U.S.
028375
Gulf H.B.P. E-5318
Altura HBP LG-884
Bearing Serv. & Supply
MWJ-St. (Southwestern Ener. Prod.)
TD 2107 OXY
12-1-2002 V-5214 610 99
OXY-Magni St.
TD 3910
State
10
Wallace
Concho Res.
6-1-2007
98811
"Herman 10" Fed."
205 00
TD 3350
US
US
TD 2104
B-1
05
Amoco St. Gas
Southwestern Ener. Prod, etal
7-1-2002
V-5102
313 13
Redingfield Smith
TD 520
State
OXY Amber-Fed. Com.
TD 8826
(Pure E, Bellwether E, Conoco)
OXY Skinny Saloon-Fed.
Plains Daugherity
U.S. TD 552
0284461
U.S.
Texaco 5-1-90 LG-8288 1458
OXY HBP 2029
OXY-Sosa St.
Texaco 5-1-90 LG-8288 1458
Collier
State
12
Yates Pet. etal
OXY, etal 41655
Featherstone-Latch-Travis
(QXY 11-15-2010)
Concho Res.
99029 9-1-2007
MWJ 620 00
Hanagan-Fed.
TD 9499
B/A 11-24-74
Jeffers Fed
TD 546
Celsius Ener.
15429
OXY
OXY-Thor-Fed.
1.7 Mil.
+20 bbls.
Cent Res.
HBP B-6869
15
17
27
Hightower
Hightower-Yates Pet. etal
99028
Eagle O&G Five Forks-Fed.
TD 750
HES Oil Eagle
TD 1625
"Logan-Fed Com."
1-ASO
2.4 Mil.
+12 bbls.
Yates Pet. Brewer etal
3-1-2008
100546
630 00
U.S.
Hightower
TD 1740
Johnson Fed
TD 100
Yates Pet. etal
9-1-2007
99028
530 00
Johnson Fed
TD 930
1-ARP
Cit. Serv. 2029 CA Schellinger
Morgan Oil
West Fed. Gbg. Disc.
OXY
OXY Duchess St.
South-western Prod
4-1-2007
78 480
125 00
St
(MS Shearn O/R)
Gas Well Serv to 750
070603
Shearn Shilo Fed.
Shearn Samantha Fed
(wo)
7S-17
(Sol West) Shearn Fed
TD 450
Devon HBP
Pure E, Bellwether E, Conoco
028373
U.S. 0557370
Cockburn Hump Sl.
TD 550
Yates Pet. etal
10-1-2003 V-5378
2225 00
State
Devon Ener. H.B.P.
0567370
U.S.
Yates Pet. Duke-Fed Com.
Amoco
Gas Well Serv. Inc.
Murphy
Saunders 025351
H.E.S. Oil (Nelson)
Muncy Fee
(TD 17921)
Gas Well Serv. Muncy Fed
Gas Well Serv. Inc.
Waters, etal
Saunders
Amoco TD 515
S.I.
Amoco
41655
S. Sell
048491
Vintage Saunders Fed.
OXY
OXY Duke Fed
A2 Mil
3
Happy Oil
064023
Sims, etal
Spurlock
Hanson
Amoco 1-1-86
Hanson Ener. S/R
H&S etal
TD 5400
Saunders
Sanders Bros. Berry
TD 500
Murchison Morelo-Fed.
S. Sell, S/R
025527
(Pan Amer. E. Mesa Pet., O/R)
Murchison O&G (Mesa Pet.) Morelo-Fed. (Atoka Disc.)
(C 12-12-79)
Latch Op. Berry VA 202
Morelo Fed
Murchison
Morelo-Fed.
Carson & Kelly Berry
TD 600
22
(DD)
Murchison O&G-HBP
29028
Murchison O&G-HBP
40654
Morelo Berry-Fed.
TD 9650
"Berry"
U.S.
OXY
OXY Rosenkavlier Fed.
Cliff Deon
HBP
025527
Watson
TD 2300
OXY
OXY-Woden Fed.
TD 630
(Amoco)
S. Wilson etal)
025527
34
23
S. Sell
(R. Lowe)
Berry Fed.
Penn. Disc.
S. Sell
S Berry
TD 6550
OXY-Viking Fed.
1.6 Mil.
+22 bbls
Hondo Berry
242
TD 6550
Berry
TD 6550
Berry
TD 6328
U.S.
30
Hester Evans S. Sell HBP
Latch
ST.
(OXY, D/R)
"A"
Latch ST
TD 475
1 Mil
Latch Op
Spurck
State
S. Sell
S/R
TD 6527
A
(Amoco)
Hanson Schneider
(S. Wilson, etal)
(Schneider)
U.S.
S. Sell
S/R
(Sand Berry)
"A"
OXY
OXY Chopsticks St. Com.
20
6540
U.S.
"Berry"
24
(H&S)
Gas Well Serv.
TD 6510
S. Sell West
Berry
Devon 3-B
(MW Pet.)
P83
Johnston Travis
TD 561
061641
Williams Brooks
11-F
2-B
OXY
OXY Charlemagne
T/A 9650
(Amoco)
(Arco-Fed)
WC Disc.
TD 2442
Marbob Barnsdall
27
RSE Partners (Altura)
Hondo Fed
P82
"Eagle-Fed."
Amoco
Marbob Barnsdall
Marbob Ener. Inc.
(Devon) Collier
HBP
055 7370
Marbob
AMCO-Fed
TD 2025
US
Yates Pet. etal
9-1-2007
99031
485 00
Sox Trigg Fed.
Wright Oil
Pan Am. And-Fed.
TD 469
0640501
Haynes
Devon
0557705
Amoco OPT
Nafbold
RSE Partners (Devon)
0558679
1-B
Chase (Hondo) Fed
TD 2462
Arbuco
TD 5600
26
Devon
0557370
U.S.
Achen
CFM Oil
Vintage Drlg
Morgan
Haynes
Hondo HBP
055 8678
Chase Oil
3-1-2005
Chase Oil
Pan Am. Berry "A" Mack
Birch Fed.
25
Morgan Brooks
TD 605
Chase Oil
Prong-horn Mgmt.
Mack Ener.
Spruce Fed.
(Holly Ener.)
W. Empire Dp. Fed.)
TD 9935
WC Disc.
J.L. Tarver (Belmorth)
058181
U.S
Grainger
S. Sell
S/R
(Sand Berry)
"A"
23 R. Westfall
Michaux St
TD 513
Black Shire
L-46
TD 5800
Eas
C.L.
HBP
061641
Pet.)
25527
Fed.
BC E/2
RSE Partners
Haynes
Devon
0557370
Hayes Harbold
TD 450
Devon
0640501
RSE Partners
Devon
0557370
Pan Am
Hayes Harbold
TD 450
Devon 1-A
Collier Malco
Bridwell
050158
Yates Regner
TD 412
Hanson Harbold
M. Speir
050158
35
B-1

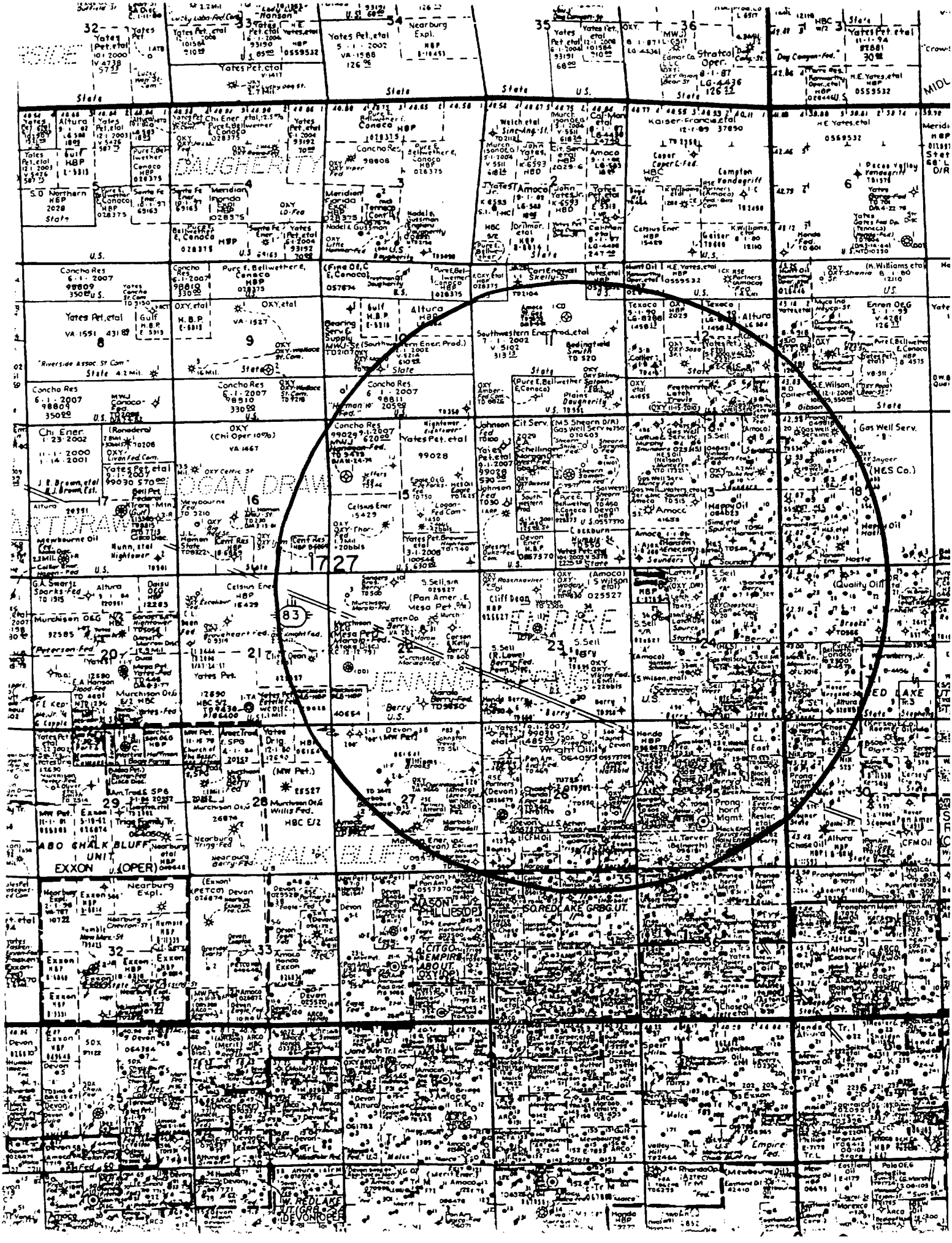

LOGAN DRAW
ART DRAW
ALPINE
JENNINGS
ABO CHALK BLUFF UNIT
EXXON (OPER)
W. REDLAKE ATOKA (GRAB) DEVONIAN OPER
ISO. RED LAKE GRBG. UT.
CITGO EMPIRE ABO UT.
JOSON ELLENBURGER
DAUGHERTY
Yates Pet. etal
Altura
Conoco
Amoco
Texaco
Stratcal Oper.
Kaiser-Francis etal
Compton
Celsius Ener
Cit Serv.
Happy Oil
Gas Well Serv.
Quality Oil
Prong Horn Mgmt.
Nearburg Expl.
Exxon
Devon
Meridian Oil
Pecos Valley Energy
Concho Res
Gulf
Oxy
Chi Ener
Murchison O&G
Celsius Ener
Cliff Dean
S. Sell
Wright Oil
Hondo
Tr. 1
Tr. K
Tr. L
Tr. M
Empire Fed.
Molco
Speir
Aztec
Rhombo Op.
Mewbourne Oil
Eastland Oil
Pale O&G
Morrow
Atoka
Devonian
Fed.
State
U.S.

Table VI

Berry Federal # 29
(formerly Berry Fed. #1)

"F" Sec. 23 T17S R27E
1980' FNL & 1980 FWL

Spudded:1/22/62 Completed: 4/18/62 Plugged Back: 1/28/65

Original TD 10,427 PBTD: 1550

13-3/8" 48# set at 400 and circulated with 400 sxs
9-5/8" 36# set at 1690' and circulated with 950 sxs.
5-1/2" 17# set at 10,427 and cemented with 525 sxs.

CRT set at 10,200 and O.H. sqz'd with 150 sxs.
9541-81 perf'd, acidized & fracd
CRT set at 9300
9154-64 perf'd, acidized, & fracd
9292-9453 perf'd & acid fracd

Perfs 9154-9453 IP'd at 680 MCFGPD
Well non-commercial after several months

35sx plug set at 9200-8920 & 5-1/2" csg cut & pulled at 8200
40 sx plug set at 7664-7384, 35 sxs at 6370-6090, 35 sxs at 5200-4920, 35 sxs at 3280-3000, 20 sxs at 1750-1800, and 20 sxs at 1500-1550.

Perforated in the Queen 1148-63 IP: 70 MFCGPD

Frac'd with 20,000 gals. Gelled water and 10,000 # sand

Currently operated as a gas well by SDX Resources, Inc.
In the Red Lake-Qn-Gb-SA field.

Wellbore Skematic attached

WELL NAME: Berry "A" #1 FIELD AREA: Red LAKE

LOCATION: Sec. 23 T17S R27E 1980' FNL 1980' FWL "F"

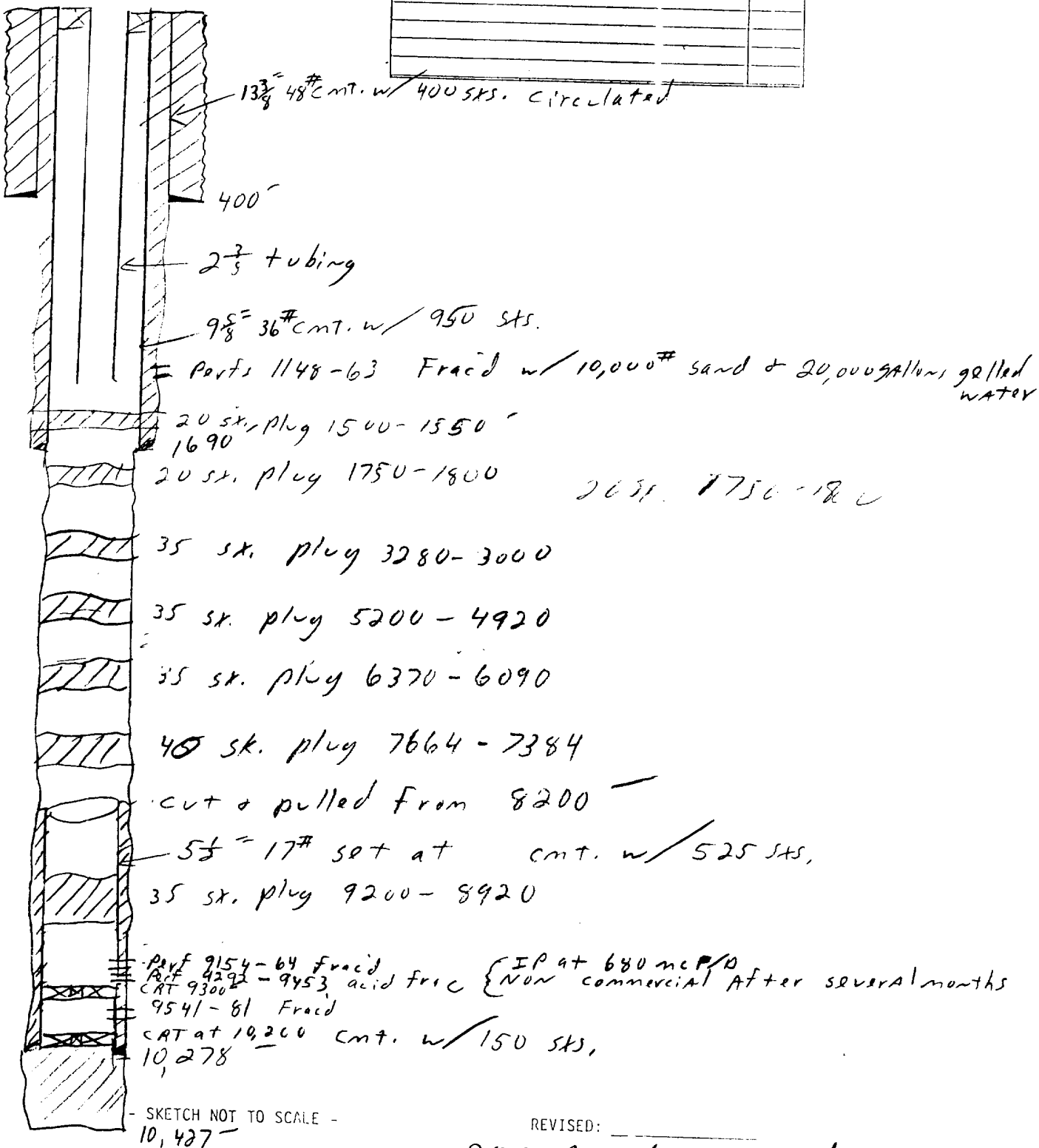
GL: 3545' ZERO: _____' AGL: _____'

KB: _____' ORIG. DRLG./COMPL. DATE: _____

COMMENTS: SDX Resources, Inc. current "operator" Ralph Lowe original deep test operator as Berry Fed. #1

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SET



IP at 680 mcf/D Now commercial After several months

20 sx. 1750-1800

REVISED: _____

DST Record Attached.

Baker Petrolite

BAKER HUGHES

WATER ANALYSIS REPORT

422 West Main Street
Artesia, NM 88210-2041 USA
Phone: (505) 746-3588
Fax: (505) 746-3580

Reply to:
P.O. Box 1140
Artesia, NM 88211-1140 USA

Company : SDX Resources
Address : 204 N. 7th Artesia
Lease : Berry
Well : WaterTank
Sample Pt. : Incoming Line

Date : 4/3/00
Date Sampled : 4/3/00
Analysis No. : 001

	ANALYSIS		mg/L		* meq/L
1.	pH	7.3			
2.	H2S	Pos.			
3.	Specific Gravity	1.185			
4.	Total Dissolved Solids		239250.8		
5.	Suspended Solids		0.0		
6.	Dissolved Oxygen		0.0		
7.	Dissolved CO2		250		
8.	Oil In Water		0.0		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	415.0	HCO3	6.8
12.	Chloride	Cl	142710.0	Cl	4025.7
13.	Sulfate	SO4	3125.0	SO4	65.1
14.	Calcium	Ca	1900.0	Ca	94.8
15.	Magnesium	Mg	1034.5	Mg	85.1
16.	Sodium (calculated)	Na	90066.3	Na	3917.6
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		9004.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

95	*Ca <----- *HCO3	7
	/------->	
85	*Mg -----> *SO4	65
	<---------/	
3918	*Na -----> *Cl	4026

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	6.8	551
CaSO4	68.1	65.1	4429
CaCl2	55.5	22.9	1272
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	85.1	4052
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	3917.6	228946

REMARKS:

Baker Petrolite

Respectfully submitted,
R.Allison

XI

ATTACHMENT D
OFFSET OPERATORS

Oxy USA
PO Box 50250
Midland, TX 79710

Yates Petroleum
PO Box 327
Artesia, NM 88211-0327

Devon Energy Corp
20 N Broadway, Ste 1500
Oklahoma City, OK 73102-8260

Southwestern Energy Production Co
2350 N. Sam Houston Pkwy E #300
Houston, TX 77032

Altura Energy, LTD
PO Box 4294
Houston, TX 77210-4292

Warren Hanson
R 342 S. Haldeman Rd
Artesia, NM 88210

Steve Sell
PO Box 5061
Midland, TX 79704

Pure Energy Group, Inc.
700 N. St. Mary's St, Ste 1925
San Antonio, TX 78205

Conoco
10 Desta Dr, Ste 100W
Midland, TX 79705-4500

Gas Well Services Inc.
26 E Compress Rd
Artesia, NM 88210

SDX RESOURCES, INC.
P.O. BOX 5061
MIDLAND, TEXAS 79704
(915) 685-1761

May 26, 2000

Re: Application for Authority to Inject
Sec. 23, T17S, R27E
Eddy Co., NM

Gentlemen:

Enclosed is a copy of Form C-108 (Application for Authority to Inject) for the following well operated by SDX Resources Inc.

Woden Federal #1
Unit B, Sec. 23, T17S, R27E
660' FNL & 1650' FEL
Eddy Co., NM

Should you have any questions, please contact us at the letterhead address or call 915/685-1761. Thank you for your consideration in this matter.

Sincerely,

Chuck Morgan
Engineer

CM:bja

enclosure

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

SDX Resources, Inc., located at 511 W. Ohio St., Ste 601, Midland, TX 79702, mailing address PO Box 5061, Midland, TX 79704, Contact: Chuck Morgan 915/685-1761 is seeking administrative approval from the New Mexico Oil Conservation Division to complete the Woden Federal #1 located in Section 23, T17S, R27E,660' FNL & 1650' FEL in Eddy Co., New Mexico as an injection well. The proposed injection zone is the Penn formation thru open hole from 7850'-8938'. SDX Resources, Inc. intends to inject a maximum of 2000 barrels of produced formation water per day at a maximum injection pressure of 1570#.

Interested parties must file objections or request for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, New Mexico 87505 within 15 days of this notice.

This legal ad will run in the "Artesia Daily Press".

E

Chavez, Carl J, EMNRD

From: Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>
Sent: Wednesday, January 2, 2019 1:25 PM
To: Chavez, Carl J, EMNRD
Cc: Dade, Lewis (Randy)
Subject: [EXT] FW: {EXTERNAL}1000 Chart Box Recorder Certification
Attachments: 1000 Chart Recorder Cert..pdf; SKM_C754e18121411300.pdf

Carl,
Here is the MIT Chart Recorder Certification for the MIT that was performed and witnessed on 12/4/2018. This is from man Welding. I have also attached pictures of the chart recorder tag and a picture of the Chart Calibration form that was in the recorder. Thanks for your help in this, Randy

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D & L Meters & Instrument Service, Inc.

Lovington, NM 88260
P.O. Box 1621
Office: (575) 396-3715
Fax: (575) 396-5812

BLOW-OUT PREVENTERS
FLUID CONTAINMENT SYSTEMS

Date: Monday, December 3, 2018

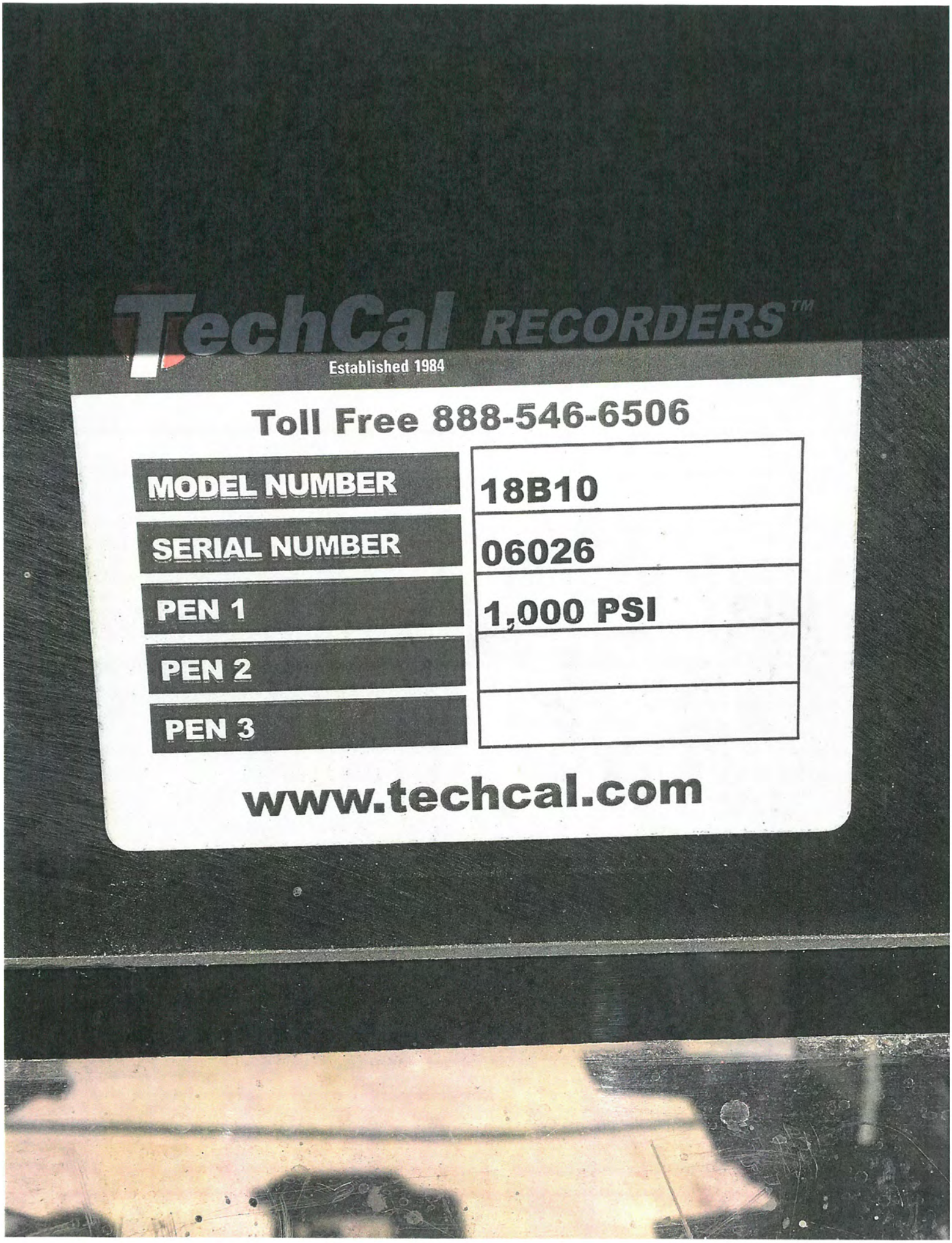
Invoice # 118666

Certification of Pressure Recorder Test:

Company:	Man Welding
Unit:	N/A
Model:	TechCal Recorders
Pressure Rating:	1000#
Serial #:	6026

This Pressure Recorder was tested at midrange for accuracy and verified within +5% and –5% for a 1000# pressure element.

Jesse Arenivas, Technician


TechCal RECORDERS™
Established 1984
Toll Free 888-546-6506
MODEL NUMBER
18B10
SERIAL NUMBER
06026
PEN 1
1,000 PSI
PEN 2
PEN 3
www.techcal.com

& L Meters & Instrument Service, Inc.

ovington, NM 88260
.O. Box 1621
)ffice: (575) 396-3715
Fax: (575) 396-5812

BLOW-OUT PREVENTERS
FLUID CONTAINMENT SYSTEMS

Date: Monday, December 3, 2018

Invoice # _____

Certification of Pressure Recorder Test:

Company:	Man Welding
Unit:	N/A
Model:	TechCal Recorders
Pressure Rating:	1000#
Serial #:	6026

This Pressure Recorder was tested at midrange for accuracy and verified within +5% and –5% for a 1000# pressure element.

Jesse Arenivas, Technician

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, December 14, 2018 4:02 PM
To: 'Denton, Scott'
Cc: Goetze, Phillip, EMNRD; Griswold, Jim, EMNRD; Bratcher, Mike, EMNRD; Dade, Lewis (Randy)
Subject: RE: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Scott, et al.:

Currently, at this particular moment, OCD is focused on Navajo's response to the Drill Report No. 2 Item below. Please refer to OCD's highlighted section below with our concerns/comments.

Drill Report:

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to *prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities*. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**

Due to the lost circulation zone encountered between 10,330 ft to 10,385 ft, we did have returns while drilling from 10,360 ft to total depth at 10,700 ft. Because we did not have returns, we could not retrieve any samples for the mud loggers to analyze. This is why the Selman Mud Log ends at 10,360 ft.

OCD Response:

OCD appreciates the response, but needs additional technical information in the drill report as follows:

A Reservoir Engineer or qualified expert characterization and/or assessment of the injection zone and its potential for the economic recovery of hydrocarbons, or payable quantity of hydrocarbons to adequately address **§70-2-12 (4) NMSA**. This information may be received as an "amendment" to the drilling report with any appropriate drill report and/or scientific literature references with hydrocarbon knowledge of the area.

Phil Goetze (OCD) may elaborate further on the above by receipt of this msg.

Thank you.

From: Denton, Scott <Scott.Denton@HollyFrontier.com>
Sent: Friday, December 14, 2018 10:38 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Denton, Scott <Scott.Denton@HollyFrontier.com>
Subject: [EXT] FW: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Carl & Team,

Please see responses in **bold black text**: The input for responses is from Navajo and our contractor WSP.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.

   Yes, this is a possibility.

2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.

   Correct

3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

   While there are some areas lacking cement between 7250 ft and 9200 ft, we do have good cement around the casing shoe from 10,327 ft and up to 10,160 ft, then some cement from 10,160 ft to 9,900 ft, and then good cement from 9,900 ft to 9,650 ft. This should be enough cement to create a barrier between the injection zone and the confining zone (top at 9805 ft) and prevent upward migration of wastewater, even hazardous wastewater. This observation is from evaluating Exhibit 10.26 Weatherford BondView Cement Evaluation from the Drilling & Completion report.

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.

   Understood

2) Please submit the chart recorder calibration sheet information from the MIT.

   Please find the attached calibration sheet.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?

   Because this is a new reservoir for injection, we anticipated to see a pressure response in the early portion of the well shut-in time within the 24 hours. We observed the radial flow period to occur within 0.108 hrs of shut-in time on the log-log diagnostic plot. The data we gathered from the radial flow period was analyzed to provide the permeability measurement.

   A longer FOT monitoring period (at least 30 hours) is used on the existing three Navajo disposal wells because their reservoirs take longer to provide a pressure response.

2) Please provide a FOT signature page by the approving engineer.

   Please find attached FOT signature page by Ted Jose, New Mexico PE licensed engineer. Because Ted also PE sealed the entire Drilling & Completion report, we erroneously concluded that the FOT results were also covered.

3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?

We decided to use 330 ft net thickness because the last time we ran a wireline tool, we had tagged plug back depth at 10,670 ft (the well was drilled to 10,700 ft) and decided that 330 ft net thickness would be more conservative than using the gross thickness of 373 ft.

4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

Yes, we have observed the permeability is related to the naturally occurring fractures in the injection interval and the cavernous lost circulation zone that we observed from ~10,330 ft to ~10,385 ft (as seen in Exhibit 10.12 Caliper Log Open-Hole in the report)

Drill Report:

1) Electronic logs have not been submitted to date. Please address.

All electronic logs were submitted on a thumb drive with the report. Navajo can provide another thumb drive if needed.

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**

Due to the lost circulation zone encountered between 10,330 ft to 10,385 ft, we did have returns while drilling from 10,360 ft to total depth at 10,700 ft. Because we did not have returns, we could not retrieve any samples for the mud loggers to analyze. This is why the Selman Mud Log ends at 10,360 ft.

3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.

The Selman Mud Log and Weatherford Cement Evaluation Logs belong to this well. The correct API number is 30-015-44677 and the wrong API number was placed on the header of these two logs. The incorrect number is from the previously permitted well that was never drilled.

4) Was side-core wall data obtained from the well?

Appendix 9.17 (see attached) includes the sidewall core data from the 16 sidewall cores recovered from the Injection Interval in various depths from 10,450 ft to 10,630 ft.

5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.

Please find attached Confining Zone and Injection Interval picks from our geologist Graciela Moore. Correlation picks were made by comparing open hole logs to the N-S and E-W cross sections in the permit application.

Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Please find attached the signed OCD C-105 form.

Thanks,

SMD

Scott M. Denton
Environmental Manager

The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
575-746-5487 (o)
970-581-7268 (c)

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Wednesday, December 12, 2018 4:09 PM
To: Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Denton, Scott <Scott.Denton@HollyFrontier.com>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Randy, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the WDW-4 Drilling Report for Well API# 30-015-44677. OCD needs responses to the review comments and questions below. The red text items below are a high priority to the OCD. Once OCD receives adequate responses to the items below, it will expedite the approval to inject process.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.
2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.
3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.
2) Please submit the chart recorder calibration sheet information from the MIT.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?
2) Please provide a FOT signature page by the approving engineer.
3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?
4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

Drill Report:

1) Electronic logs have not been submitted to date. Please address.

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**
3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.
4) Was side-core wall data obtained from the well?
5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.
6) Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Miscellaneous:
OCD is still reviewing logs.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

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-LAEmHhHzdJzBITWfa4Hqs7pbKI

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Chavez, Carl J, EMNRD

From: Denton, Scott <Scott.Denton@HollyFrontier.com>
Sent: Friday, December 14, 2018 10:38 AM
To: Chavez, Carl J, EMNRD
Cc: Goetze, Phillip, EMNRD; Griswold, Jim, EMNRD; Bratcher, Mike, EMNRD; Dade, Lewis (Randy); Denton, Scott
Subject: [EXT] FW: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review
Attachments: Navajo WDW-4 Confining Zone and Injection Interval Picks.pdf; Appendix 9.17 Sidewall Core Report.pdf; Certification Statement PFO Analysis.pdf; 2018-12-13 OCD C-105 Form - Navajo WDW-4.pdf; 2018-12-04 MIT Chart Recorder Calibration - Navajo WDW-4.pdf

Carl & Team,

Please see responses in **bold black text**: The input for responses is from Navajo and our contractor WSP.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.

   Yes, this is a possibility.

2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.

   Correct

3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

   While there are some areas lacking cement between 7250 ft and 9200 ft, we do have good cement around the casing shoe from 10,327 ft and up to 10,160 ft, then some cement from 10,160 ft to 9,900 ft, and then good cement from 9,900 ft to 9,650 ft. This should be enough cement to create a barrier between the injection zone and the confining zone (top at 9805 ft) and prevent upward migration of wastewater, even hazardous wastewater. This observation is from evaluating Exhibit 10.26 Weatherford BondView Cement Evaluation from the Drilling & Completion report.

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.

   Understood

2) Please submit the chart recorder calibration sheet information from the MIT.

   Please find the attached calibration sheet.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?

Because this is a new reservoir for injection, we anticipated to see a pressure response in the early portion of the well shut-in time within the 24 hours. We observed the radial flow period to occur within 0.108 hrs of shut-in time on the log-log diagnostic plot. The data we gathered from the radial flow period was analyzed to provide the permeability measurement.

A longer FOT monitoring period (at least 30 hours) is used on the existing three Navajo disposal wells because their reservoirs take longer to provide a pressure response.

2) Please provide a FOT signature page by the approving engineer.

Please find attached FOT signature page by Ted Jose, New Mexico PE licensed engineer. Because Ted also PE sealed the entire Drilling & Completion report, we erroneously concluded that the FOT results were also covered.

3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?

We decided to use 330 ft net thickness because the last time we ran a wireline tool, we had tagged plug back depth at 10,670 ft (the well was drilled to 10,700 ft) and decided that 330 ft net thickness would be more conservative than using the gross thickness of 373 ft.

4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

Yes, we have observed the permeability is related to the naturally occurring fractures in the injection interval and the cavernous lost circulation zone that we observed from ~10,330 ft to ~10,385 ft (as seen in Exhibit 10.12 Caliper Log Open-Hole in the report)

Drill Report:

1) Electronic logs have not been submitted to date. Please address.

All electronic logs were submitted on a thumb drive with the report. Navajo can provide another thumb drive if needed.

2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**

Due to the lost circulation zone encountered between 10,330 ft to 10,385 ft, we did have returns while drilling from 10,360 ft to total depth at 10,700 ft. Because we did not have returns, we could not retrieve any samples for the mud loggers to analyze. This is why the Selman Mud Log ends at 10,360 ft.

3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.

The Selman Mud Log and Weatherford Cement Evaluation Logs belong to this well. The correct API number is 30-015-44677 and the wrong API number was placed on the header of these two logs. The incorrect number is from the previously permitted well that was never drilled.

4) Was side-core wall data obtained from the well?

Appendix 9.17 (see attached) includes the sidewall core data from the 16 sidewall cores recovered from the Injection Interval in various depths from 10,450 ft to 10,630 ft.

5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.

Please find attached Confining Zone and Injection Interval picks from our geologist Graciela Moore. Correlation picks were made by comparing open hole logs to the N-S and E-W cross sections in the permit application.

Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Please find attached the signed OCD C-105 form.

Thanks,

SMD

Scott M. Denton
Environmental Manager

The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
575-746-5487 (o)
970-581-7268 (c)

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Wednesday, December 12, 2018 4:09 PM
To: Dade, Lewis (Randy) <Lewis.Dade@HollyFrontier.com>; Denton, Scott <Scott.Denton@HollyFrontier.com>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Randy, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the WDW-4 Drilling Report for Well API# 30-015-44677. OCD needs responses to the review comments and questions below. The red text items below are a high priority to the OCD. Once OCD receives adequate responses to the items below, it will expedite the approval to inject process.

General Observations:

1) OCD is aware of the drilling problems encountered by the Permittee on the well. OCD observes a reduced quality of cementing below the DV tool with discontinuous cement especially between 6550 feet and 6750 for the 9⅝-inch production casing. This may correspond to the formations that are pressured up with gas in this portion of the stratigraphic section.
2) There is a confining zone present above the injection interval which is identified as the Woodford Shale.

3) There appear to be areas within borehole where cement is lacking as shown in the Weatherford bond log for the 9⅝-inch production casing from 7250 feet to 9200 feet. Since this may be "hazardous well" someday, please address?

Mechanical Integrity Test (MIT):

1) The MIT witnessed by OCD on 12/4/2018 passed, but OCD does not authorize injection into the well in advance of the Permittee addressing questions herein.
2) Please submit the chart recorder calibration sheet information from the MIT.

Fall-Off Test (FOT):

1) Only a 24-hour FOT monitoring period was applied. Please address?
2) Please provide a FOT signature page by the approving engineer.
3) Why was an interval thickness of 330 ft. (net) and not 373 ft. (gross) used in the FOT algorithmic calculations?
4) The permeability of the injection zone appears to be dominated by fracturing observed in bedrock and naturally occurring fractures.

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4) Was side-core wall data obtained from the well?
5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.
6) Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Miscellaneous:

OCD is still reviewing logs.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us

"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD and see "Publications")

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-LAEmHhHzdJzBITWfa4Hqs7pbKI

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged and confidential.If you received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any attachments.Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATION STATEMENT

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Client:	Navajo Refining Company
Well Name:	WDW-4 Pressure Falloff Analysis
Test Date:	August 15 – 16, 2018

Name: Ted L. Jose
Title: Project Engineer

Phone Number: 281-589-5900

Signature Ted L Jose Date Signed 12/13/18

New Mexico Professional Engineer
License No. 23819

WSP USA INC.
Texas Engineering Firm F-2263



& L Meters & Instrument Service, Inc.

ovington, NM 88260
.O. Box 1621
)ffice: (575) 396-3715
Fax: (575) 396-5812

BLOW-OUT PREVENTERS
FLUID CONTAINMENT SYSTEMS

Date: Monday, December 3, 2018

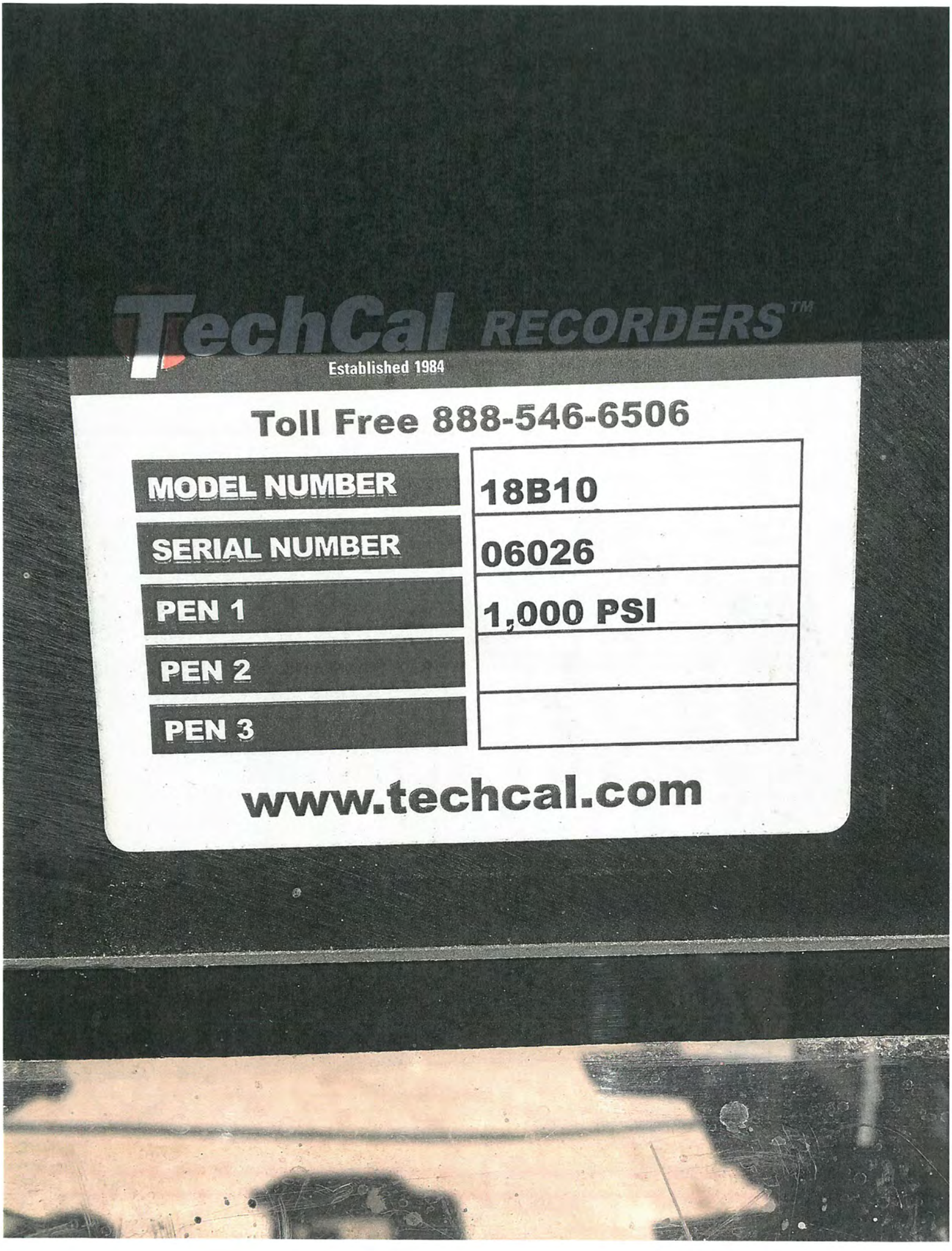
Invoice # _____

Certification of Pressure Recorder Test:

Company:	Man Welding
Unit:	N/A
Model:	TechCal Recorders
Pressure Rating:	1000#
Serial #:	6026

This Pressure Recorder was tested at midrange for accuracy and verified within +5% and –5% for a 1000# pressure element.

Jesse Arenivas, Technician


TechCal RECORDERS™
Established 1984
Toll Free 888-546-6506
MODEL NUMBER
18B10
SERIAL NUMBER
06026
PEN 1
1,000 PSI
PEN 2
PEN 3
www.techcal.com

APPENDIX 9.17

CORE ANALYSIS REPORT

WSP USA

Navajo WDW 4

Eddy County, Texas

08/17/2018

DISCLAIMER

These analysis, opinions or interpretations are based on observations and materials supplied by the client to whom; and for whose exclusive and confidential use; this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories (all errors and omissions excepted); but Core Laboratories and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness or any oil, gas or other mineral well or formation in connection with which such report is used or relied upon.

201802772

SIDEWALL CORE ANALYSIS

Company: WSP USA
Well Name: Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid:
Elevation:

File Number: 201802772
Date: 08/17/2018
API Number:
Analyst: JS, SO

Sample Number	Sample Depth ft	Sample Received in	Permeability (Horizontal) Kair md	Porosity Helium % of BV	Saturation Oil % of PV	Saturation Water % of PV	Oil Bulk % of BV	Gas Bulk % of BV	Grain Density gm/cc	Gas Detector Units (0-250)	Description
1	10630.0	1.9	0.003	3.5	0.1	42.4	0.0	2.0	2.83	0	Dol, sl vug, 0% flu no cut
2	10625.0	2.0	0.056	2.5	0.3	68.2	0.0	0.8	2.85	0	Dol, tr vug, 0% flu no cut
3	10620.0	1.0	0.538	1.5	0.9	97.5	0.0	0.0	2.82	0	Dol, tr vug, 0% flu no cut
4	10615.0	1.1	1,570	3.8	0.4	50.0	0.0	1.9	2.84	1	Dol, sl vug, 0% flu no cut
5	10605.0	1.8	0.001	2.5	0.8	49.6	0.0	1.3	2.84	2	Dol, sl vug, 0% flu no cut
6	10500.0	1.5	162	6.2	0.3	45.7	0.0	3.3	2.85	1	Dol, tr cht, tr sul, sl vug, 0% flu no cut
7	10495.0	1.8	1.08	9.8	0.2	96.9	0.0	0.3	2.71	0	Cht, sul, dol, sl vug, 0% flu no cut
8	10490.0	1.9	1.20	6.2	0.4	95.2	0.0	0.3	2.68	0	Cht, sl dol,tr vug, 0% flu no cut
9	10485.0	1.8	62.8	11.1	0.8	96.4	0.1	0.3	2.55	1	Cht, sul, sl dol, sl vug, 0% flu no cut
10	10480.0	1.0	1.10	8.2	2.9	72.8	0.2	2.0	2.65	0	Cht, tr dol, sl vug, 0% flu no cut
11	10475.0	1.3	194	8.4	0.5	44.6	0.0	4.6	2.84	4	Dol, sl vug, 0% flu no cut
12	10470.0	1.1	0.001	9.5	0.1	23.0	0.0	7.3	2.83	1	Dol, sl vug, 0% flu no cut
13	10465.0	2.2	0.337	2.1	0.7	87.8	0.0	0.2	2.81	0	Dol, tr vug, 0% flu no cut
14	10460.0	1.8	133	4.6	0.5	52.3	0.0	2.2	2.84	23	Dol, sl vug, 0% flu no cut
15	10455.0	1.5	0.694	3.6	0.4	44.6	0.0	2.0	2.84	5	Dol, sl vug, 0% flu no cut
16	10450.0	2.5	6,510	12.3	0.1	43.3	0.0	7.0	2.83	4	Dol, vug, 0% flu no cut

ABBREVIATIONS

Core Description

abund	Abundant	**incl**	Inclusion	**SA**	Sieve Analysis
anhy	Anhydrite	**ixp**	Intercrystalline Porosity	**SCAL**	Removed For SCAL Work
AST	Appears Similar To	**lam**	Laminations	**sd / sdy**	Sand / Sandy
bk	Break	**lim**	Limestone	**silica**	Silica
bldr	Boulder	**lmy**	Limey	**snd / sndy**	Sand / Sandy
c / crs	Coarse	**LPSA**	Laser Particle Size Anal	**SEM**	Scanning Electron Micoscope Analysis
calc	Calcite	**ls**	Limestone	**sh / shly**	Shale / Shaly
carb	Carbonaceous	**lv**	Large vug	**sl**	Slight
cbl	Cobble	**m**	Medium	**slt / slty**	Silt / Silty
CEC	Cation Exchange Cap	**mi**	Mud Invaded	**styl**	Stylolite (itic)
cem	Cemented	**mic**	Micaceous	**sulf**	Sulfur
cgl	Conglomerate	**mold**	Moldic	**sv**	Small Vug
chlor	Chlorite	**mv**	Medium Vug	**tr**	Trace
cht	Chert	**N/A**	Not Available/Analyzed	**TS**	Thin Section
coal	Coal	**NP**	No Perm Measurement	**uncons**	Unconsolidated
dol	Dolomite	**NR**	Not Received	**v**	Very
f	Fine	**ool**	Oolitic	**v frac**	Vertical Frac
fest	Ironstone	**OB**	Overburden	**vf**	Very Fine
foss	Fossil (iferous)	**P**	Preserved	**VOB**	Vertical Overburden
frac	Fracture	**pbl**	Pebble	**vug**	Vuggy (ular)
fri	Friable	**PET**	Petrographic Analysis	**ws**	Water Sand
glauc	Glauconite	**POA**	Removed For Oil Analys	**XRD**	X-ray Diffraction
grnl	Granule	**poro stk**	Porosity Streak		
gyp	Gypsum	**pp**	Pin Point	**cpl**	Continuous Planar Lams
h frac	Horizontal Frac	**ppm**	Pin Point Moldic	**cwl**	Continuous Wavy Lams
hal	Halite	**PSA**	Particle Size Analysis	**dpl**	Discontinuous Planar Lams
igp	Intergranular Porosity	**pyr**	Pyrite	**dwl**	Discontinuous Wavy Lams

Fluorescence

Color:		
	yel	Yellow
	ora	Orange
	gld	Gold
	wht	White
Adjectives:		
	br	Bright
	dul	Dul
	cont	Contaminated
	tif	Trace In Frac

Company:	**WSP USA**	**CL File No.:**	**201802772**
Well Name:	**Navajo WDW 4**	**Date:**	**08/17/2018**
Location:		**Analyst(s):**	**JS, SO**
Co. & St.:	**Eddy County, Texas**		

DEAN STARK SIDEWALL ANALYSIS PROTOCOL

Sample Preparation

Sidewall were gassed, length measured, trimmed, weighed, visual fluorescence, bulk volume on teflon sealed samples me
Archimedes principle and calipers and brief rock description.

Core Extraction

Plugs for routine core analysis were placed in Dean Stark equipment using toluene for water extraction.
Plug batch cleaning in toluene to remove remaining oil.
Plug samples were leached in methanol to remove salts.
Sample # 7 and # 9 contained sulfur.
Sulfur is removed during cleaning. Sulfur weight was added to dry weight. Sulfur volume to was added to the measured gr
Grain density and porosity were corrected using the data above.

Sample Drying

Samples were oven dried at 240° F to weight equilibrium (+/- 0.001 g).

Porosity

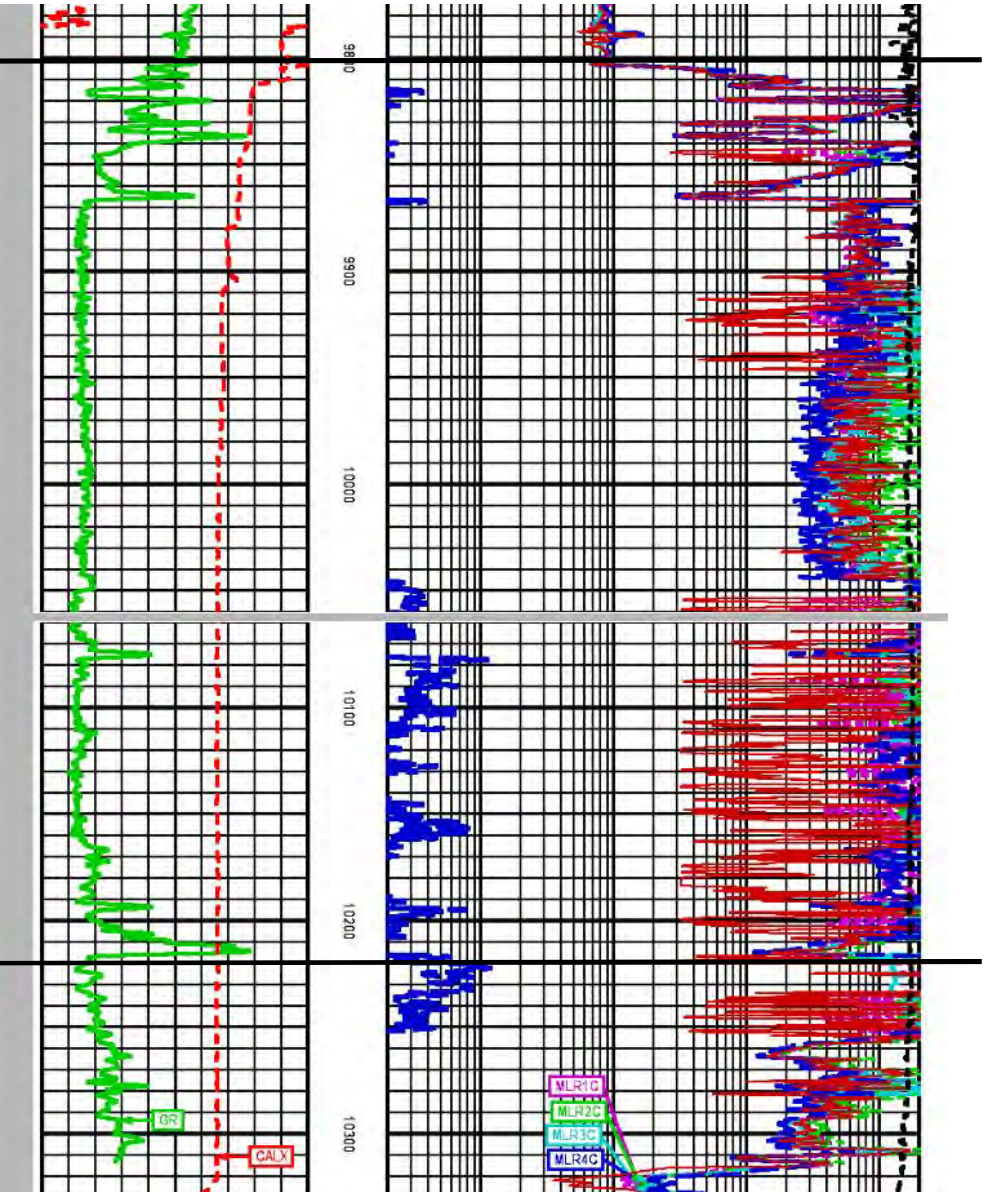
Porosity was determined using Boyle's Law technique by measuring grain volume at ambient conditions.

Grain Density

Grain density values were calculated by direct measurement of grain volume and weight on dried plug samples.
Grain volume was measured by Boyle's Law technique.

Permeability

Permeability to air was measured on each sample using steady-state air method at indicated 400 psi NCS.
Sample # 7 and # 9 contained sulfur. Samples were low temperatured dried at 125° F then permeability was measured be
extraction. Permeability reported for # 7 an # 9 represents samples' permeability before removal of sulfur.



Top of Confining Zone (Mississippian) – 9,805 md

Top of Injection Zone (Silurian-Devonian) – 10,220 md
Estimated Top of Montoya 10,885 md

Submit To Appropriate District Office
Two Copies
District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
Revised April 3, 2017

1. WELL API NO.
30-015-44677

2. Type of Lease
☐ STATE ☐ FEE ☒ FED/INDIAN

3. State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☒ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☐ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

5. Lease Name or Unit Agreement Name: 320715

6. Well Number: WDW-4

7. Type of Completion:
☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8. Name of Operator : HollyFrontier Navajo Refining LLC

9. OGRID: 15694

10. Address of Operator : 501 EAST MAIN STREET
ARTESIA,NM 88210

11. Pool name or Wildcat
96101: SWD - DEVONIAN

12.Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	N	23	17S	27E		1217	SOUTH	2443	WEST	EDDY
BH:										

13. Date Spudded	14. Date T.D. Reached	15. Date Rig Released	16. Date Completed (Ready to Produce)	17. Elevations (DF and RKB, RT, GR, etc.)
5/5/2018	8/2/2018	8/17/2018		3565.00 GL

18. Total Measured Depth of Well	19. Plug Back Measured Depth	20. Was Directional Survey Made?	21. Type Electric and Other Logs Run:
10,700 feet	N/A	YES	LaterLog, BoreHole Profile, Caliper, Segmented Bond log, Temp Log, LaterLog, BoreHole Profile,STAR Resistivity Confining Log, STAR Resistivity Injection Log, Pulsed Neutron Log, Weatherford Bondview Log, Radioactive Tracer Survey Log, ZIP File available with 29 Logs

22. Producing Interval(s), of this completion - Top, Bottom, Name

23. **CASING RECORD** (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13.375	54.50/FT	1680	17.500	1080 LEAD; 365 TAIL	449 TO SURFACE
9.625	47.00/FT	10327.00	12.250	1st STG 1400; 2nd STG 1625 Lead, Tail 200	271 TO SURFACE

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
7.00	10,314.30	10,265

26. Perforation record (interval, size, and number) N/A; OPEN HOLE FROM 10,327 – 10,700

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

28. **PRODUCTION**

Date First Production	Production Method *(Flowing, gas lift, pumping - Size and type pump)*	Well Status *(Prod. or Shut-in)*

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - *(Corr.)*

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*

30. Test Witnessed By

31. List Attachments	
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit. N/A	33. Rig Release Date: 8/17/2018
34. If an on-site burial was used at the well, report the exact location of the on-site burial: N/A	
Latitude	Longitude NAD83

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Lewis R Dade Printed: Lewis R. Dade

Date 12/13/2018 Name Title: Environmental Specialist

E-mail Address: Lewis.Dade@hollyfrontier.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T.Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T.Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs	T.Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to..... No. 3, from.....to.....

No. 2, from.....to..... No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology		From	To	Thickness In Feet	Lithology

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, December 12, 2018 4:09 PM
To: 'Dade, Lewis (Randy)'; Denton, Scott (Scott.Denton@HollyFrontier.com)
Cc: Goetze, Phillip, EMNRD; Griswold, Jim, EMNRD; Bratcher, Mike, EMNRD
Subject: OCD Navajo Refining, LLC WDW-4 (UICI-8-4) API# 30-015-44677 Drill Report and MIT Review

Randy, et al.:

The New Mexico Oil Conservation Division (OCD) has completed its review of the WDW-4 Drilling Report for Well API# 30-015-44677. OCD needs responses to the review comments and questions below. The red text items below are a high priority to the OCD. Once OCD receives adequate responses to the items below, it will expedite the approval to inject process.

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1) Only a 24-hour FOT monitoring period was applied. Please address?
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Drill Report:

1) Electronic logs have not been submitted to date. Please address.
2) **The Mud Log provided in the report has no coverage through the Injection Interval As part of the OCD requirements under §70-2-12 (4) NMSA is obligated to prevent the drowning by water of any stratum capable of hydrocarbon production in paying quantities. With this consideration and the fact that this is federal mineral estate, the Permittee needs to assess the oil and gas potential as to satisfy this obligation prior to commencing injection.**
3) The well log headers to some exhibits show an incorrect API# 30-015-42872 and Legal Location Information. Examples: the Selman Mud Log and the Weatherford Cement Evaluation Log Please verify the logs as being from this well.
4) Was side-core wall data obtained from the well?
5) Where are the geologic formation changes and illustrated formation picks of the Consultant? If these have been provided to the BLM in their well completion report, then please provide a copy.
6) Where is the Federal Compilation Report submitted to the EPA to address the OCD C-105 Submittal requirement?

Miscellaneous:
OCD is still reviewing logs.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

HOLLYFRONTIER.

November 13, 2018

Mr. Carl Chavez, CHMM
NM Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, NM 87505-5472

RE: WDW 4, (30-015-44677), Drilling Report and Logs from HollyFrontier Navajo Refining LLC

Dear Mr. Chavez,

With this cover, Navajo is submitting to the OCD the WDW 4 (30-015-44677) Drilling Report and Logs. This report covers the dates of May 2018 through August 2018. Along with the hard copies of the report, there is also an electronic version saved to a flash drive.

Thank you for your help in this project and also the help from the OCD Staff.

If there are any questions, please contact Randy Dade at 575-746-5281.

Respectfully,

Scott M. Denton
Environmental Manager
HollyFrontier Navajo Refining LLC

NAVAJO REFINING LLC

DRILLING REPORT

WDW-4

ARTESIA, NEW MEXICO

MAY 2018 – AUGUST 2018



PREPARED BY
WSP USA
HOUSTON, TEXAS

PROJECT NO. 192080D

NAVAJO DRILLING REPORT

WDW-4

NAVAJO REFINING LLC

PROJECT NO.: 192080D
DATE: NOVEMBER 2018

WSP
16200 PARK ROW
SUITE 200
HOUSTON, TX 77084

WSP.COM

November ___, 2018

Name
Navajo Refining LLC
Address 1
Address 2

Dear Madam/Sir:

Subject: WDW-4 Drilling Report
Navajo Refining LLCInsert main text.

Yours sincerely,

Tim Jones

XX/xx
Encl.
cc:
WSP ref.: 192080D

16200 Park Row
Suite 200
Houston, TX 77084

wsp.com

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1 EXECUTIVE SUMMARY

Navajo Refining received a final approval letter from the New Mexico Oil Conservation Division (NM OCD) to drill and complete WDW-4, a UIC Class I nonhazardous waste disposal well on February 9, 2018.

WSP USA (WSP) was contracted to install the well. Installation began in March 2018. Twenty-inch conductor casing was augured to 80 feet below ground level. A 17-1/2-inch hole was drilled to a depth of 1680 feet and 13-3/8-inch surface casing was set at 1680 feet below ground level. The casing was cemented to surface with good cement returns. The casing was pressure tested according to NM OCD requirements.

A 12-1/4-inch diameter hole was drilled to 10,360 feet relative to the kelly bushing elevation (RKB), which is 20 feet above ground level and 9-5/8-inch protection casing was installed from 10,327 feet RKB to the surface. The casing was cemented with 1716 cubic feet (306 barrels) of Halliburton's Premium Plus Cement from total depth to 6,550 KB. The upper portion of the casing was cemented with 3092 cubic feet (551 barrels) of Halliburton's Premium Plus Cement with good cement returns.

A Weatherford model AS 1-X packer was set in the 9-5/8-inch at 10,265 feet RKB and 10,265 feet of 7-inch, 26 pound per foot (lb/ft), K-55 LT&C was run. The annulus was filled with corrosion inhibited 9.2 ppg brine water and was pressure tested according to NM OCD requirements.

A mechanical integrity test was successfully conducted, according to NM OCD guidelines, and consisted of an annulus pressure test and a radioactive tracer survey. NM OCD personnel elected not to witness the radioactive tracer survey. An injection pressure buildup and falloff test was conducted according to guidelines of the NM OCD for Class I Nonhazardous Waste Injection Wells. Installation of the well was finished on August 17, 2018.

2 INTRODUCTION

The permit to drill for WDW-4 was issued to Navajo by the NM OCD on February 9, 2018.

Navajo contracted WSP to begin installation of the well during the first quarter of 2018. The original well design schematic as presented in the permit, is reproduced as Figure 8.1. The as-built wellbore schematic is presented as Figure 8.2. The as-built wellhead schematic is presented as Figure 8.3. Field operations to construct the location began on March 6, 2018. Drilling operations began on May 6, 2018, and continued through August 4, 2018. Completion operations were conducted from August 5, 2018, through August 17, 2018.

3 SUMMARY OF FIELD OPERATIONS

The following discussion is a summary of the field operations during the installation of WDW-4. Detailed daily operations are presented in Appendix 9.2 of this report. Table 7.1 shows a summary of the tubulars installed in WDW-4. Table 7.2 shows the cementing program used for the surface and long string casing. The surveyed well location is presented in Appendix 9.1.

3.1 LOCATION

The surface location was leveled to accommodate Patriot Drilling Rig No. 4, the drilling rig that was contracted to drill the well.

Twenty-inch conductor casing with 0.625-inch wall thickness was augered to refusal at 80 feet below ground level and cemented in place with 15 yards of ready mix concrete. Table 7.3 provides details of the conductor casing. Mobilization of the drilling equipment began on May 2, 2018.

3.2 INSTALLATION OF SURFACE CASING

A 17-1/2-inch hole was drilled to a depth of 1680 feet. Baker Hughes (Baker) logged the well with a Micro Laterolog, 6-arm Borehole Caliper Log, Compensated Z-Densilog, Compensated Neutron Log, and Gamma Ray Log (Exhibit 10.1 through Exhibit 10.4). The base of the Lowermost Underground Source of Drinking Water (USDW) was calculated to be at approximately 500 feet GL/RKB.

The surface hole was cased with 13-3/8-inch diameter casing to a depth of 1680 feet below ground level. Details of the surface casing and setting depths are provided in Table 7.4. The mill certifications are presented in Appendix 9.3 and casing tally in Appendix 9.4. The casing was cemented to the surface, with 1080 sacks of Halliburton's ExtendaCem System lead cement, mixed at 13.5 pounds per gallon (ppg) and 1.747 cubic feet per sack followed by 365 sacks of Halliburton's tail cement, mixed at 14.8 ppg and 1.332 cubic feet per sack. The total volume of cement mixed and pumped was 2373 cubic feet. The annular volume was 1847 cubic feet, as calculated from the open-hole caliper log, for an overall excess of 22% of the measured annular volume. A summary of the surface casing cementing program is provided in Appendix 9.5. A Cement Bond Log and Temperature Survey were run on the 13-3/8-inch surface casing (Exhibit 10.5 and Exhibit 10.6).

The 20-inch conductor was cut off and a 13-3/8-inch casing head was welded to the 20-inch casing and blowout preventers were installed. The 13-3/8-inch casing was pressure tested to 900 psig, with 90 psi loss of pressure during the one-hour test or 45 psi in a 30-minute test period. This results in a pressure loss of 5% which is within the 10% pressure change allowed by the NM OCD in a 30-minute test period. The pressure test chart is presented as Figure 8.4.

3.3 DRILLING TO TOTAL DEPTH

A 12-1/4-inch hole was drilled below the surface casing from 1680 feet to 9740 feet RKB. Baker logged this interval of the open hole with a Micro Laterolog, 6-arm Borehole Caliper Log, Compensated Z-Densilog, Compensated Neutron Log, and Gamma Ray Log (Exhibit 10.7 though Exhibit 10.10). A 12-1/4 inch hole was then drilled to 10,360 feet RKB. Baker logged the interval between 9740 feet RKB to 10,360 RKB with a Micro Laterolog, 6-arm Borehole Caliper Log, Compensated Z-Densilog, Compensated Neutron Log, and Gamma Ray Log (Exhibit 10.11 though Exhibit 10.13). Baker logged the confining interval between 9745 feet RKB and 10,360 feet RKB with the STAR Resistivity Imaging Log (Exhibit 10.14). Baker logged the injection interval between 10,330 feet RKB and 10,660 feet RKB with the STAR Resistivity Imaging Log (Exhibit 10.15). Samples of the borehole cuttings were collected starting just below the conductor casing to a depth of 10,350 feet RKB. The detailed description of the borehole resulting from the examination of the cuttings is presented as Appendix 9.19.

3.4 INSTALLATION OF LONG STRING CASING

Upon completion of the open-hole logging, the well was conditioned for casing. Cement volumes were calculated from the caliper log, and the stage tool was placed such that the first stage cement would fill the annulus below the tool without excess above the stage tool located at 5800 feet RKB. The 12-1/4-inch hole was cased with 9-5/8-inch diameter casing with an inflatable packer to a depth of 10,320 feet RKB. Each connection was made up to the optimum torque of 8930 foot-pounds. Details of the long string casing and setting depths are provided in Table 7.5 The mill certifications are presented in Appendix 9.6 and the casing tally in Appendix 9.7.

A plug was dropped and the casing was pressured up to 1900 psi to set the packer. The plug didn't set in the packer and the packer failed to set. The 9-5/8-inch casing was pressured up a second time to 1850 psi. Again, the plug didn't set in the packer and the packer failed to set.

A casing collar locator log (CCL) which was run, it was determined from the results of the CCL the plug didn't reach the inflatable packer but instead opened the lower DV tool at 10,297 feet RKB. The CCL is presented in Exhibit 10.14.

Baker ran a Segmented Bond Tool with Gamma Ray Log and CCL. The results from this log indicated there was no cement bonded to the 9-5/8-inch casing. To isolate the lost circulation zone below the 9-5/8 inch casing shoe, a 48-barrel, 9.5 ppg sodium silicate slurry was pumped followed by 101 barrels of 16.4 ppg cement. The closing plug was dropped followed by 755 barrels of fresh water displacement. The closing plug did not set. A cement bond log (Exhibit 10.15) was run and an additional 48-barrel sodium silicate slurry was pumped followed by 50 barrels of 16.4 ppg cement. The cementing details are presented in Appendix 9.8 and Appendix 9.9.

A CCL (Exhibit 10.16.) and the top of cement was tagged at 9510 feet wireline measurement. The 9-5/8-inch casing was hung off in the slips with 375,000 pounds in compression. The cement and upper DV tool were drilled out of the casing. The casing was pressure tested at 2500 psi. The pressure test chart is presented as Figure 8.5. The lower DV tool and float shoe were then drilled out of the casing. The casing was pressure tested at 2500 psi. The pressure test chart is presented as Figure 8.6. Drilling continued and returns were lost at 10,327 feet RKB and could not be reestablished. Fifteen (15) thousands of pounds of pea gravel and sand were pumped into the well and circulation was reestablished. Additional pea gravel and sand were pumped into the well to bring the total depth to 10,350 feet. A 21-barrel, 15.6 ppg balanced cement plug was pumped on top of the pea gravel and sand.

After waiting on the cement to set, the drill string could not be pulled out of the well. A freepoint, cement bond log and temperature survey were run. The cement bond log and temperature survey are presented in Exhibit 10.16 and Exhibit 10.17. The drill string was backed off at 9632 feet and the drill string was pulled out of the well and the drill string left in the well was subsequently washed over and pulled out of the well.

In order to reestablish circulation above the balanced plug, a cement bond log (Exhibit 10.18) was run and the 9-5/8-inch casing was perforated at 10,240 feet RKB.

Circulation could not be established through the perforation at 10,240 feet RKB and Temperature (Exhibit 10.19) and Pulsed Neutron (Exhibit 10.20) surveys were run. Based on the results of these logs, the casing was perforated at 10,180 feet RKB.

Circulation could not be established through the perforation at 10,180 feet RKB and the casing was perforated at 9900 feet RKB. Circulation was established through the perforation at 9900 feet RKB and the hole was conditioned to cement the 9-5/8 inch casing to surface.

A cement retainer was run and set at 9798 feet RKB and the first stage was cemented from 9900 feet RKB to 6550 feet RKB with 1400 sacks of VersaCem cement mixed at 14.5 ppg with a yield of 1.226 cubic feet per sack. A Temperature Survey (Exhibit 10.21) was run and the casing was perforated at 6550 feet RKB.

The second stage lead cement was 1625 sacks of EconoCem Premium Plus Cement, mixed at 12.9 ppg with a yield of 1.739 cubic feet per sack which was followed with 200 sacks of HalCem Premium Plus Cement mixed at 14.8 ppg, with a yield of 1.329 cubic feet per sack. The total cement volume cement pumped was 3092 cubic feet. The total annular volume measured from the caliper log and calculated for the 12-1/4-inch by 9-5/8-inch annulus, was 2235 cubic feet. The total volume of the cement pumped was 28% excess of the total calculated volume. Approximately 85 barrels of cement were circulated to the surface. The cement was in place at 2357 hours on July 25, 2018. A Temperature Survey (Exhibit 10.22) was run approximately 16 hours after the cement was in place.

Weatherford ran their UltraView/BondView Cement Evaluation Log (Exhibit 10.23) and UltraView Casing Inspection Log (Exhibit 10.24) in the 9-5/8-inch long string casing. The analysis of the cement bond log concluded that the cement provided sufficient zonal isolation in the injection zone and injection interval. These results were discussed with the NM OCD and approval to continue the installation of WDW-4 was granted on August 1, 2018.

The post job cementing reports for the three cement jobs previously discussed are included as Appendix 9.8 (sodium silicate), Appendix 9.9 (plug on top of the sodium silicate), and Appendix 9.10 (cementing the 9-5/8-inch casing to surface).

An 8-1/2-inch hole was then drilled to a total depth of 10,700 feet.

3.5 COMPLETION OPERATIONS

On August 5, 2018, the 7-inch x 9-5/8-inch AS1-X injection packer was picked up and run into the well on 7-inch, 26 pounds per foot, J-55, LT&C casing. Details of the injection string and packer with the setting depths are provided in Table 7.6. The mill certifications are presented in Appendix 9.11 and the casing tally in Appendix 9.12.

On August 6, 2018, the remaining four joints of the injection tubing were run in the hole while pumping 9.2 ppg fluid packer fluid down the 7-inch by 9-5/8-inch annulus. Each connection was made up to the optimum torque of 3,670 foot-pounds. The torque turn charts are presented in Appendix 9.13. The injection packer was set at 10,265 feet with 30,000 pounds of compression.

The 7-inch slips were installed and the upper section of the wellhead was nippled up and the p-seals were tested to 3000 psi. Began rigging down Patriot Drilling Rig #4.

On August 14, 2018, Renegade Wireline Services arrived on the well site and the initial Differential Temperature Survey (Exhibit 10.25) was run. The initial bottom-hole pressure was recorded at 10,327 feet RKB. Cudd Pressure Control was rigged up and Renegade Services ran a Radioactive Tracer Survey (Exhibit 10.26).

On August 15, 2018, Renegade Services ran two memory pressure gauges into the well to a depth of 10,327 feet RKB. Cudd was rigged up and pumped 4783 barrels of 8.9 ppg fluid into the well at a rate of 10 bpm or 420 gpm for approximately six hours. The well was shut in and the pressure falloff was monitored for 24 hours.

On August 16, 2018, the bottom-hole pressure gauges were pulled out of the well and static gradient stops were made at 1000-foot interval while pulling the gauges out of the well.

On August 17, 2018, an annulus pressure test was conducted. The annulus was pressured up to 1200 psi at 1020 hours and the annulus was isolated from the pressure source. The final pressure at 1130 hours was 1100 psi. This represents a loss of 100 psi (4.17%) in 30 minutes, which is within the 10% pressure change allowed by the NM OCD in a 30-minute test period.

WDW-4 demonstrated mechanical integrity, as defined in the Navajo approved Discharge Permit dated December 14, 2017.

4 MECHANICAL INTEGRITY TESTING

Mechanical integrity testing for WDW-4 was conducted between August 14, 2018 and August 17, 2018. The testing consisted of an annulus pressure test and a radioactive tracer survey. The NM OCD elected not to witness the radioactive tracer survey. WDW-4 demonstrated mechanical integrity, as defined in the NM OCD Underground Injection Control Program Manual.

4.1 ANNULUS PRESSURE TEST

On August 17, 2018, the annulus between the casing and the injection tubing was pressured to 1200 psi at 1020 hours. The test was conducted for one hour with a final pressure of 1100 psia at 1130 hours. The annulus pressure change was 100 psi over, which is 4.17% of the original test pressure. This represents a loss of 50 psi (4.17%) in 30 minutes, which is within the 10% pressure change allowed by the NM OCD in a 30-minute test period. The chart of the recorded pressure is presented as Figure 8.7. The certificate of calibration for the chart recorder is presented as Appendix 9.14.

4.2 RADIOACTIVE TRACER SURVEY

Renegade conducted the radioactive tracer survey on WDW-4. The tool was run into the well to 10,330 feet. The injection rate was set at 84 gallons per minute (gpm) and a baseline gamma ray log was run from 10,070 feet RKB to 10,330 feet RKB.

The radioactive tracer tool was set at 10,050 feet and a slug of Iodine 131 (I_{131}) radioactive material was ejected while injecting fluid at 84 gpm. The path of the radioactive slug was tracked downhole by conducting a series of overlapping passes with the radioactive tracer tool.

The radioactive tracer tool was set at 10,050 feet and a second slug of Iodine 131 (I_{131}) radioactive material was ejected while injecting fluid at 84 gpm. The path of the radioactive slug was tracked downhole by conducting a series of overlapping passes with the radioactive tracer tool.

The radioactive tracer tool was set at 10,302 feet RKB, which is 25 feet above the 9-5/8-inch casing shoe, and a third slug of I_{131} radioactive material was ejected while injecting at a rate of 84 gpm. The gamma ray response was monitored on time drive for 5 minutes. There was no apparent upward migration of radioactive material observed outside the 9-5/8-inch casing shoe.

The radioactive tracer tool was set at 10,255 feet, which is 10 feet above the pacer, and a fifth slug of I_{131} radioactive material was ejected while injecting at a rate of 84 gpm. The gamma ray response was monitored on time drive for 5 minutes. There was no apparent upward migration of radioactive material observed behind the packer.

The radioactive tracer tool was set at 10,302 feet, the injection rate was increased to 336 gpm, and a sixth slug of I_{131} radioactive material was ejected. The gamma ray response was monitored on time drive for 15 minutes. There was no apparent upward migration of radioactive material observed outside the 9-5/8-inch casing shoe.

The radioactive tracer tool remained at 10,302 feet and a seventh slug of I131 radioactive material was ejected while injecting at a rate of 336 gpm. The gamma ray response was monitored on time drive for 15 minutes. There was no apparent upward migration of radioactive material observed outside the 9-5/8-inch casing shoe.

A post-survey gamma ray log was run from 10,070 feet to 10,330 feet. The gamma ray response was elevated between the packer set at 10,269 feet and in the open-hole interval below the 9-5/8-inch casing shoe. There was no elevated response in the gamma ray log above the packer.

The radioactive tracer survey showed no of vertical migration of injected fluid outside of the 9-5/8-inch casing shoe. A copy of the radioactive tracer survey is included as Exhibit 10.17.

4.3 BASELINE TEMPERATURE SURVEY

A baseline differential temperature survey was run from the surface to 10,330 feet KB on August 14, 2018. A copy of the baseline differential temperature survey is included as Exhibit 10.25.

4.4 BASELINE CASING CALIPER SURVEY

A baseline casing evaluation log was run inside the 9-5/8-inch long string casing on July 31, 2018. A copy of the casing evaluation log is included as Exhibit 10.26.

5 RESERVOIR EVALUATION

WSP performed the initial pressure falloff test on WDW-4 from August 15, 2018 to August 16, 2018. Appendix 9.15 contains the complete reservoir evaluation report. The results of the pressure falloff analysis indicate a reservoir mobility-thickness, kh/μ of 3,844,211 md-ft/cp and a permeability, k, of 6640 millidarcies (md). Analysis of logs indicates the average porosity of the injection interval is 25%. The net open-hole thickness is 330 feet.

The following table compares the previously used parameters to the parameters determined following construction of the well:

Parameter	Permit Application	Post Construction
Permeability, md	32	6640
Thickness, feet	75	450
Porosity, percent	8.5	.25
Temperature, °F	141	141
Viscosity, cp	0.57	0.57

*BHT just below the at top of injection interval at 10,320 feet KB

Because the "Post Construction" parameters exceed the parameters of the reservoir model used in the permit application, the cone of influence and pressure buildup were not recalculated because the reservoir model in the permit application is sufficient. The "Post Construction" parameters that exceed the reservoir model will result in a lower injection pressure and therefore a smaller cone of influence and lower pressure buildup as calculated in the permit application.

6 REGULATORY AND PERMIT COMPLIANCE

The construction of WDW-4 was performed in accordance with the regulatory considerations and general standards specified in the approved NM OCD Permit UICI-8-4 for WDW-4 that was issued on December 14, 2017. This section will provide the NM OCD's Director, evidence that the construction of the well has been completed in accordance with the provisions of the approved Discharge Permit and with the design and construction specifications of Navajo's permit application.

6.1 WELL CONSTRUCTION AND COMPLETION STANDARDS SPECIFIED BY THE NEW MEXICO OIL CONSERVATION DIVISION

WSP designed and constructed a non-commercial Class I non-hazardous disposal well, WDW-4, in accordance with the terms and conditions of the original NM OCD permit application. The permit authorized the disposal of wastes generated from the Navajo plant. The injection interval is the Silurian-Devonian Formation between the depths of 10,400 feet below ground level and 10,900 feet below ground level. WDW-4 was constructed to meet or exceed the construction and operation standards set forth in 20.6.2.5355 Construction Requirements.

6.2 VERIFICATION OF WELL CONSTRUCTION TO REGULATORY STANDARDS

6.2.1 PLANS AND SPECIFICATIONS

Drilling and completion procedures were included as part of the Permit Application for WDW-4 Permit No. UICI-8-4. The construction plan complied with the drilling and completion requirements of the permit. All work performed during the installation of WDW-4 was performed in accordance with 20.6.2.5355 and with the approved permit specifications.

6.2.2 CASING AND CEMENTING

Installation and cementing of the casing were completed in accordance with 20.6.2.5355 Subsections A through D.

Table 7.1 is a summary of the tubular program for WDW-4. Table 7.2 is the cementing program for WDW-4. The inspection certificates for the 13-3/8-inch casing, 9-5/8-inch casing, and the 7-inch injection string are presented in Appendix 9.3, Appendix 9.6, and Appendix 9.11, respectively.

A 17-1/2-inch hole was drilled to a depth of 1680 feet RKB. A 13-3/8-inch diameter, 54.5 lb/ft, J-55, ST&C surface casing was installed to a depth of 1680 feet RKB which is 20 feet above ground level.

The surface hole was cased with 13-3/8-inch diameter casing to a depth of 1680 feet RKB. Details of the surface casing and setting depths are provided in Table 7.4. The casing was cemented to the surface, with 1080 sacks of Halliburton's ExtendaCem System lead cement, mixed at 13.5 ppg with a yield of 1.747 cubic feet per sack followed by 365 sacks of Halliburton's tail cement, mixed at 14.8 ppg with a yield of 1.332 cubic feet per sack. The total volume of cement mixed and pumped was 2373 cubic feet. The annular volume was 1847 cubic feet, as calculated from the open-hole caliper log, for an overall excess of 22% of the measured annular volume (20.6.2.5355 Subsection C(2)). A summary of the surface casing cementing program is provided in Appendix 9.5.

A 12-1/4-inch hole was drilled below the surface casing to 10,360 feet RKB. A 9-5/8-inch diameter, 47 lb/ft, HC L-80, LT&C casing string was run into the well as detailed in Table 7.5. Several issues were encountered once the casing had been run and prior to cementing the casing in place. These issues are discussed in detail in Section 3.4.

A cement retainer was run and the first stage was cemented from 9900 feet RKB to 6550 feet RKB with 1400 sacks of VersaCem cement mixed at 14.5 ppg with a yield of 1.226 cubic feet per sack.

The casing was then perforated at 6550 feet and the second stage lead was 1625 sacks of EconoCem Premium Plus Cement, mixed at 12.9 ppg with a yield of 1.739 cubic feet per sack which was followed with 200 sacks of HalCem Premium Plus Cement mixed at 14.8 ppg, with a yield of 1.329 cubic feet per sack. The total cement volume pumped was 3092 cubic feet. The total annular volume measured from the caliper log and calculated for the 12-1/4-inch by 9-5/8-inch annulus, was 2235 cubic feet. The total volume of the cement pumped was 28% excess of the total calculated volume (20.6.2.5355 Subsection C(3)). Approximately 85 barrels of cement were circulated to the surface. The cement was in place at 2357 hours on July 25, 2018. A summary of the long string casing cementing program is shown in Appendix 9.10.

6.2.3 TUBING AND PACKER

Installation of the tubing and the packer was conducted in accordance with 20.6.2.5355 Subsection D(1) to D(3).

The tubing was designed to withstand the maximum burst, collapse pressures and tensile stresses that may be experienced during the life of the well. Table 7.6 is the packer and 7-inch injection tubing detail for WDW-4. Figure 8.8. is a schematic of the Weatherford AS1-X injection packer installed in WDW-4.

6.2.4 DESCRIPTION OF THE LOGGING PROGRAM AND TESTS OF THE SURFACE AND LONG STRING SECTIONS

(1) DIRECTIONAL SURVEYS

Inclination checks were obtained during the drilling of WDW-4, in accordance with 20.6.2.5356 Subsection A(1). Inclination checks were conducted in the 12-1/4-inch borehole during drilling. Surveys were obtained at frequent intervals to determine the location of the borehole and to assure the well was placed in the permitted target. The inclination surveys can be found in Appendix 9.18.

(2) LOGGING PROGRAM

The logging program for WDW-4 was completed in accordance with the regulations specified in 20.6.2.5356 Subsection A(2)(a) through A.2)(c). The complete set of open and cased hole logs for WDW-4 are presented in Exhibits 10.1 through 10.28. As required in Section 2, Subsection 2.G of the approved WDW-4 Approved Permit, a detailed record of the borehole was made by examining the cuttings returned to the surface while drilling WDW-4. The characterization of the borehole is presented in Appendix 9.19.

6.2.5 MECHANICAL INTEGRITY TESTING

The demonstration of the mechanical integrity of WDW-4, required by 20.6.2.5356 Subsection A(3) is discussed in detail in Section 4.0 of this report. The associated interpretation of the results obtained from the mechanical integrity tests is also included in Section 4.0 of this report. The associated logs are included as Exhibit 10.27 (Differential Temperature Survey) and Exhibit 10.28 (Radioactive Tracer Survey).

6.2.6 PRESSURE TESTS CONDUCTED

The approved permit for WDW-4 specified the surface casing to be pressure tested to a minimum of 1000 psig for 30 minutes and the long-string casing to a minimum of 1500 psig for 30 minutes. On May 11, 2018, the surface casing was pressure tested to 900 psig, with 90 psi loss of pressure during the one-hour test or 45 psi in a 30-minute test period. This results in a pressure loss of 5% which is within the 10% pressure change allowed by the NM OCD in a 30-minute test period. The pressure test chart is presented as Figure 8.4.

On July 30, 2018, after drilling out the lower DV tool, the long-string casing was pressure tested to 2600 psig, with a 100-psi loss during the one-hour test or 50 psi in a 30-minute test period. This results in a pressure loss of 3.85% which is within the 10% pressure change allowed by the NM OCD in a 30-minute test period. The pressure test chart is presented as Figure 8.6.

6.2.7 CORE SAMPLES RECOVERED

In accordance with 20.6.2.5356 Subsection B., a full hole core was obtained from the drilling WDW-4. The full hole core taken from the confining zone between the depths of 9950 feet RKB and 9980 feet RKB. The report discussing the results of the full hole core analysis is presented in Appendix 9.16.

Sidewall cores were taken from the injection zone between the depths 10,450 feet RKB and 10,630 RKB. The report discussing the results of the sidewall core analysis are presented in Appendix 9.17.

6.2.8 BOTTOM-HOLE TESTING

After the completion of the well, the NM OCD requires bottom hole testing be performed in accordance with 20.6.2.5356 Subsection E.

An injectivity/falloff test was performed on WDW-4 between August 15, 2018 and August 16, 2018. Appendix 9.15 of this report details the analysis of the injectivity/falloff test results.

6.2.9 REGULATORY WITNESSING

In accordance with 20.6.2.5363 Subsection F, the NM OCD Director had the opportunity to witness the commencement of the drilling, all cementing of the casing strings, logging and testing. The BLM was also notified of these activities. Chase Messer with BLM witnessed the surface casing cement job on May 9, 2018. BLM did not witness any other activities.

The NM OCD personnel elected not to witness the mechanical integrity testing of WDW-4.

6.3 COMPATIBILITY

In accordance with 20.6.2.5260 Subsection B(6), the fluids in the injection zone and minerals in both the injection zone and the confining zone must be compatible with the injected waste stream. A detailed discussion regarding the waste stream compatibility with the fluids in the injection zone, and minerals in both the injection zone and confining zone, can be found in the application for permit application to install WDW-4, Section 7(l).

The well materials used to construct WDW-4 were compatible with fluids with which the materials may be expected to come into contact. Well materials would be deemed to have compatibility if the materials used in the construction of the well meet or exceed standards developed for such materials by the American Petroleum Institute (API), the American Society for Testing Materials (ASTM), or comparable standards acceptable to the NM OCD Director.

6.3.1 LONG STRING CASING

The long-string casing is 9-5/8-inch, 47 lb/ft, HC L80 carbon steel and will be in contact with an annular fluid treated with corrosion inhibitors and bactericide. This casing is run across the injection interval and has historically shown excellent resistance to similar process waste streams.

6.3.2 INJECTION TUBING

The injection tubing is 7-inch, 26 lb/ft, J-55, LT&C.

6.4 SURFACE FACILITIES AND WELL ANNULUS MONITORING SYSTEM

The surface facilities and the Well Annulus Monitoring System (WAMS) were designed and installed by Navajo in accordance with 20.6.2.5357 Subsection F. The WAMS consists of a purge tank directly connected to the WDW-4 annulus. A schematic of the WAMS and equipment is presented as Figure 8.9. The installed equipment monitors the annulus pressure, annulus

fluid holding tank liquid level, injectate pressure, flow rate and volume. High-value and low-value alarms have been set where needed to ensure proper monitoring and continuous operation.

This system, as operated by Navajo, meets all the requirements set forth by the USEPA in 40 CFR 146.67(2)(f) and by the NM OCD 20.6.2.5357 Subsection F.

6.4.1 INJECTION WELL OPERATION PROCEDURE

In accordance with 20.6.2.5210 Subsection C(4), the anticipated maximum pressure and flow rate at which Navajo will operate are dictated by the conditions of the WDW-4 Approved Permit (Exhibit 10.29).

6.5 AREA OF REVIEW

In accordance with 20.6.2.5360 Subsection B(7), the information obtained during the logging and testing of WDW-4 did not indicate necessary revisions to the area of review information submitted in the original permit application.

6.6 CONSTRUCTION PERFORMANCE STANDARD

The information obtained during the logging and testing of WDW-4 did not indicate necessary revisions to the permit to provide for additional testing and/or monitoring of the well to ensure the continuous attainment of the performance standard. WDW-4 was cased and cemented, as discussed throughout Section 3.2 and Section 3.4, and in accordance with 20.6.2.5360 Subsection A(16). Logging and testing results conducted during the installation of WDW-4 confirmed external mechanical integrity, in accordance with 20.6.2.5360 Subsection B(2). All casing was successfully cemented to prevent the movement of fluids along the borehole into or between USDWs freshwater aquifers, and out of the injection zone.

6.7 REPORTING REQUIREMENTS FOR DRILLING AND COMPLETION

The drilling and completion report for WDW-4 was completed in accordance with 20.6.2.5341 Subsection B.

6.7.1 PRE-OPERATION REPORTS

The drilling and completion report for WDW-4 will be submitted for the NM OCD Executive Director's review and approval. The information contained in this document was compiled in accordance with the considerations and standards specified in 20.6.2.5341 Subsection B relating to Class I well construction standards.

A surveyor's plat, illustrating the exact location of WDW-4 showing the latitude and longitude, is presented as Appendix 9.1.

The information obtained during the drilling and completion of WDW-4 has been integrated into the contents of this document. Reservoir evaluation of the injection interval is discussed in detail in Appendix 9.15.

The depths of the injection zone are presented below.

6.7.2 SUBMISSION OF THE PERMIT TO REGULATORY AGENCIES

The permit application for WDW-4 was submitted to the NM OCD for review and approval prior to construction. The permit application was approved by the NM OCD on December 14, 2017. The permit to drill and complete WDW-4 was submitted to the Bureau of Land Management (BLM) for review and approval prior to construction. The application to drill and complete WDW-4 was approved by the BLM on February 9, 2018.

6.7.3 CERTIFICATION OF CONSTRUCTION AND COMPLETION

This document was prepared in accordance with 20.6.2.55101 Subsection G(2), and is sealed by a professional engineer with a current registration pursuant to the New Mexico Engineering Practice Act (Page a of this document).

7 TABLES

7.1 SUMMARY OF INSTALLED TUBULARS

TABLE 7.1

WELL TUBULAR INFORMATION
HOLLY FRONTIER NAVAJO REFINING LLC
WASTE DISPOSAL WELL NO. 4
ARTESIA, NEW MEXICO

Ref	Section	Outside Diameter (in)	Depth Interval (feet BGL)	Material	Collapse Resistance (psi)	Internal Yield (psi)	Tensile Strength (lbs)	Body Yield (lbs)	Max. External Press (psi)	Max. Internal Press (psi)	Maximum Tensile Load (lbs)	Safety Factor Collapse	Safety Factor Burst	Safety Factor Tension
	Conductor	20	0 - 80 (BGL)	129.33 ppf; 0.625" wall, Welded	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1	Surface Casing	13⅜	0 - 1680	54.5 ppf, K-55, ST&C	1,130	2,730	547,000	853,000	559	1,000	91,560	2.02	2.73	5.97
2	Protection	9⅝	0 - 10,327	47 ppf, N-80, LT&C	4,760	6,870	905,000	1,086,000	3,437	1,500	485,369	1.38	4.58	1.86
3	Injection Tubing	7	0 - 10,265	26 ppf, K-55, LT&C	4,320	4,980	401,000	415,000	2,054	2,881	266,890	2.10	1.73	1.50

References:

1. Maximum external pressure after cementing 14.8 ppg cement with fresh water inside. Assumed gradient equal to 6.4 ppg (14.8-8.4). Maximum internal pressure during pressure test at 1000 psi excluding external pressure.

2. Maximum external pressure after cementing 14.8 ppg cement with fresh water inside. Assumed gradient equal to 6.4 (14.8-8.4) ppg. Maximum internal pressure during pressure test at 1500 psi excluding external pressure.

3. Maximum external pressure pressure during APT assumes 10 ppg water in 7" x 9⅝" annulus with 1200 psi surface test pressure and 8.4 ppg fluid inside tubing. Maximum internal pressure = Hydrostatic pressure inside 7" tubing (10 ppg*0.052*10,265') + Maximum Permitted Surface Injection Pressure (2080) - Minimum Expected Annulus Pressure (8.5*0.052*10,265).

7.2 CEMENTING PROGRAM

TABLE 7.2

CEMENTING PROGRAM FOR WDW-4

TYPE OF CASING	CASING SIZE (inches)	HOLE SIZE (inches)	DEPTH (feet DF)	REMARKS
Conductor	20	--	80 (GL)	Augered to refusal.
Surface	13-3/8	17-1/2	1680	Lead: 1080 sacks of Halliburton ExtendaCem cement, mixed at 13.5 lb/gal with a yield of 1.747 cubic feet per sack Tail: 365 sacks of Halliburton HalCem cement, mixed at 14.8 lb/gal with a yield of 1.332 cubic feet per sack. 449 sacks of cement were circulated to the surface.
Long string	9-5/8	12-1/4	10,327	Two stages. **First Stage from 9900 feet to 6650 feet:** with 1400 sacks of Halliburton VersaCem cement mixed at 14.5 lb/gal with a yield of 1.226 cubic feet per sack. **Second Stage from 6650 feet to the surface:** Lead Cement: 1625 sacks of EconoCem cement, mixed at 12.9 lb/gal with a yield of 1.739 cubic feet per sack Tail Cement: 200 sacks of HalCem mixed at 14.8 lb/gal, with a yield of 1.329 cubic feet per sack. 271 sacks of cement were circulated to the surface.

7.3 20-INCH CONDUCTOR CASING DETAIL

TABLE 7.3

20-INCH CONDUCTOR CASING DETAIL, WDW-4

JOINTS	DESCRIPTION	LENGTH	DEPTH TO BOTTOM
	RKB to top of casing	20 feet	
2	20-inch, 0.625-inch wall thickness	80 feet	80 feet (BGL) 100 feet (RKB)

7.4 13-3/8 INCH SURFACE CASING DETAIL

TABLE 7.4

13-3/8-INCH SURFACE CASING DETAIL, WDW-4

JOINTS	DESCRIPTION	LENGTH	DEPTH TO TOP (feet RKB)
	RKB to Top of Casing	20	
39	13-3/8-inch, 54.5 lb/ft, K-55, LT&C	1613.32	20
1	13-3/8-inch Float Collar	1.0	1633.32
1	13-3/8-inch, 61 lb/ft, J-55, BTC	44.83	1634.32
1	13-3/8-inch Cement Shoe	0.85	1679.15
	Casing String Bottom		1680

7.5 9-5/8 INCH LONG STRING CASING DETAIL

TABLE 7.5

9-5/8-INCH LONG STRING CASING DETAIL, WDW-4

JOINTS	DESCRIPTION	LENGTH	DEPTH TO TOP
	RKB to Top of the Casing	20	
137	9-5/8-inch, 47 lb/ft, L-80HC-80, J-55, LT&C	5780	20.00
1	Cement Stage Tool	6.90	5800.00
107	9-5/8-inch, 47 lb/ft, L-80HC, J-55, LT&C	4494.70	5806.90
1	9-5/8-inch Cement Shoe, Shoe Joint, and Float Collar	25.40	10,301.60
	Casing String Bottom		10,327

7.6 7 INCH INJECTION TUBING AND PACKER

TABLE 7.6

PACKER AND 7–INCH INJECTION TUBING DETAIL, WDW-4

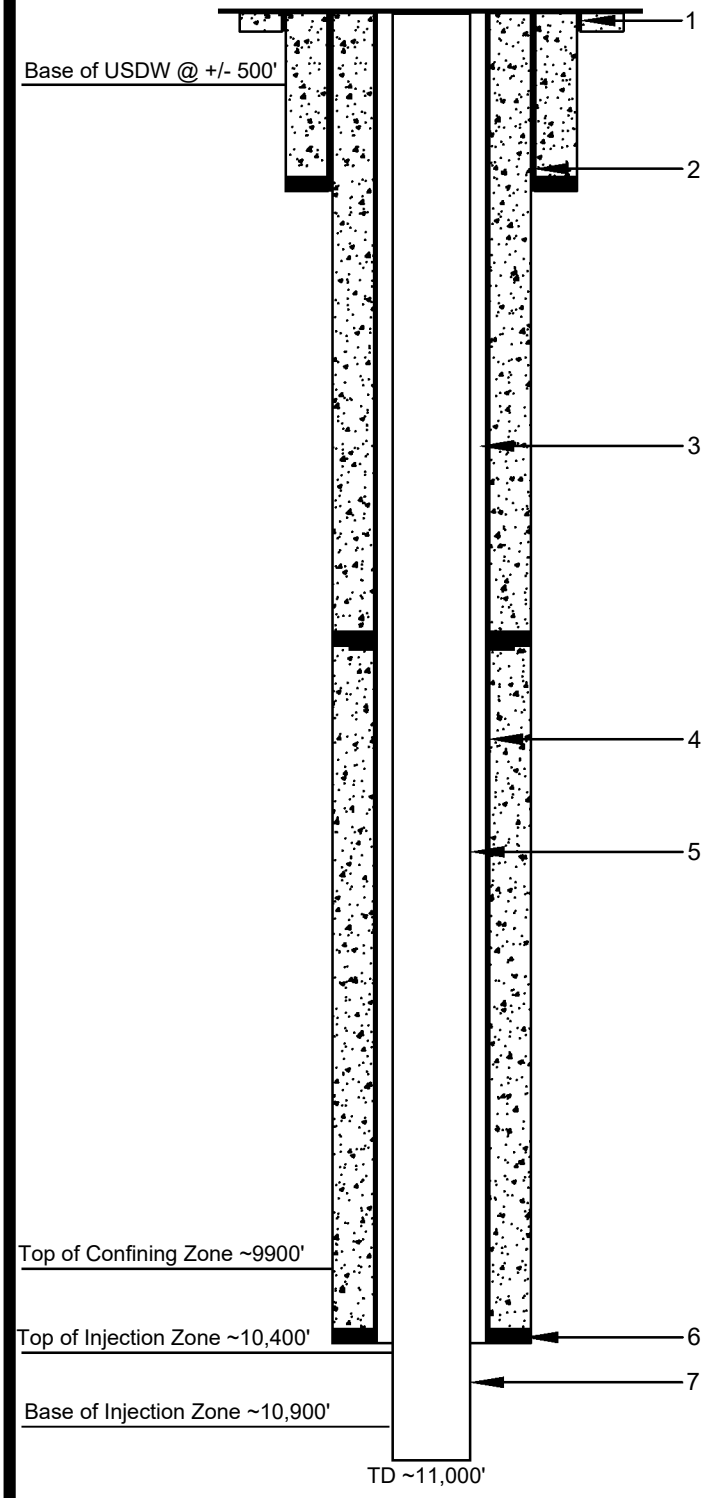
JOINTS	DESCRIPTION	LENGTH	DEPTH TO TOP
	RKB to Top of Tubing	20.00	
258	7-inch, 26 lb/ft, J-55, LT&C	10,164.89	0.00
1	7-inch Pup Joint	9.13	10,164.89
1	7-inch Casing	40.00	10,174.02
1	7-inch Pup Joint	8.00	10,214.02
1	7-inch Casing	39.37	10,222.02
1	7-inch LT&C Box by 4-1/2-inch EU 8 round Pin	1.20	10,262.59
1	9-5/8-inch On/Off Tool	2.41	10,262.59
1	9-5/8-inch by 7-inch, Weatherford Arrow Set 1-X	8.25	10,265.00
1	7-inch LT&C Box by 4-1/2-inch EU 8 round Pin	0.90	10,273.25
1	4-1/2-inch Tailpipe	40.15	10,274.15
	Bottom of Injection String		10,314.30

Tubing string was set with 30,000 pounds in compression

8 FIGURES

8.1 ORIGINAL WELLBORE SCHEMATIC

FIGURE 8.1



BELOW GROUND DETAILS
(feet below Ground Level)

1. Conductor Pipe - 20", 129.33 lb/ft (0.625" wall), API 5LX-56, plain-end, beveled conductor set in 24" augered hole at 80' and cemented to the surface with redi-mix.

2. Surface Casing - 13$\frac{3}{8}$", 54.5 lb/ft, K-55, ST&C, set at 1,500' in a 17½" hole and cemented to the surface.

3. Annulus Fluid - injection tubing and protection casing annulus filled with 250 bbl of brine water containing a corrosion inhibitor, a bactericide and an oxygen scavenger.

4. Protection Casing - 9$\frac{5}{8}$", 47 lb/ft, N-80, LT&C set in a 12¼" hole at 10,400' with a DV Tool at 5,800' and cemented to the surface in two stages as follows:
   Stage I (5,600' - 10,400')
   Stage II (Surface - 5,800')

5. Injection Tubing - 7", 26 lb/ft, K-55, LT&C set in packer at approximately 10,300'.

6. Injection Packer - 7" x 9$\frac{5}{8}$" set at approximately 10,300'. Final depth determined by Openhole Log.

7. Open Hole - 8$\frac{1}{2}$" to 11,000'

NOTE: Final below ground well depths, configuration, specifications and volumes will be presented in the post-installation Well Construction Report.

WSP | PARSONS BRINCKERHOFF

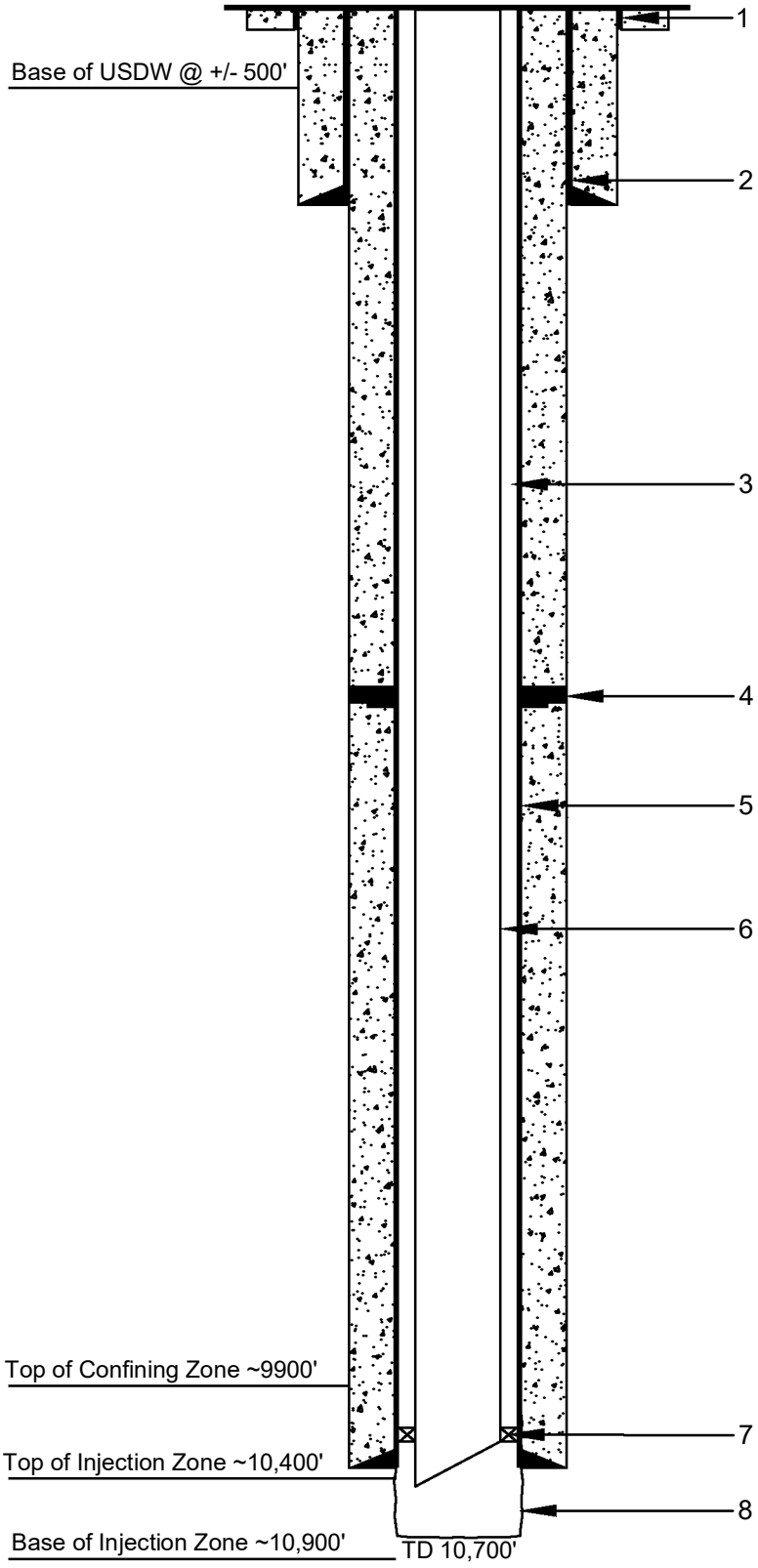
FIGURE 12

HOLLYFRONTIER NAVAJO REFINING LLC
ARTESIA, NEW MEXICO

PROPOSED BELOW GROUND
WELL SCHEMATIC

DATE: 03/02/17	CHECKED BY:	JOB NO: 50904E
DRAWN BY: WDD	APPROVED BY:	DWG. NO:

8.2 AS-BUILT WELLBORE SCHEMATIC



BELOW GROUND DETAILS

(feet below KB - KB=20' above GL)

1. Conductor Pipe - 20", 129.33 lb/ft 0.625" wall), API 5LX-56, plain-end, beveled conductor set in 24" augered hole at 80' BGL and cemented to the surface with redi-mix.

2. Surface Casing - $13\frac{3}{8}$", 54.5 lb/ft, K-55, ST&C, set at 1,680' in a 17½" hole and cemented to the surface.

3. Annulus Fluid - injection tubing and protection casing annulus filled with 263 bbl of brine water containing a corrosion inhibitor, a bactericide and an oxygen scavenger.

4. Stage Tool: $9\frac{5}{8}$" stage tool set at 5,800'

5. Protection Casing - $9\frac{5}{8}$", 47 lb/ft, N-80, LT&C set in a 12¼" hole at 10,327' with a DV Tool at 5,800' and cemented to the surface.

6. Injection Tubing - 7", 26 lb/ft, K-55, LT&C set in packer at approximately 10,265'.

7. Injection Packer - 7" x $9\frac{5}{8}$" set at approximately 10,265'.

8. Open Hole - $8\frac{1}{2}$" to 10,700'

WSP USA Inc.
16200 Park Row Ste. 200
Houston TX 77084
TEL: (281) 589-5900

FIGURE 1

FIGURE 8.2

HOLLYFRONTIER NAVAJO REFINING LLC
ARTESIA, NEW MEXICO

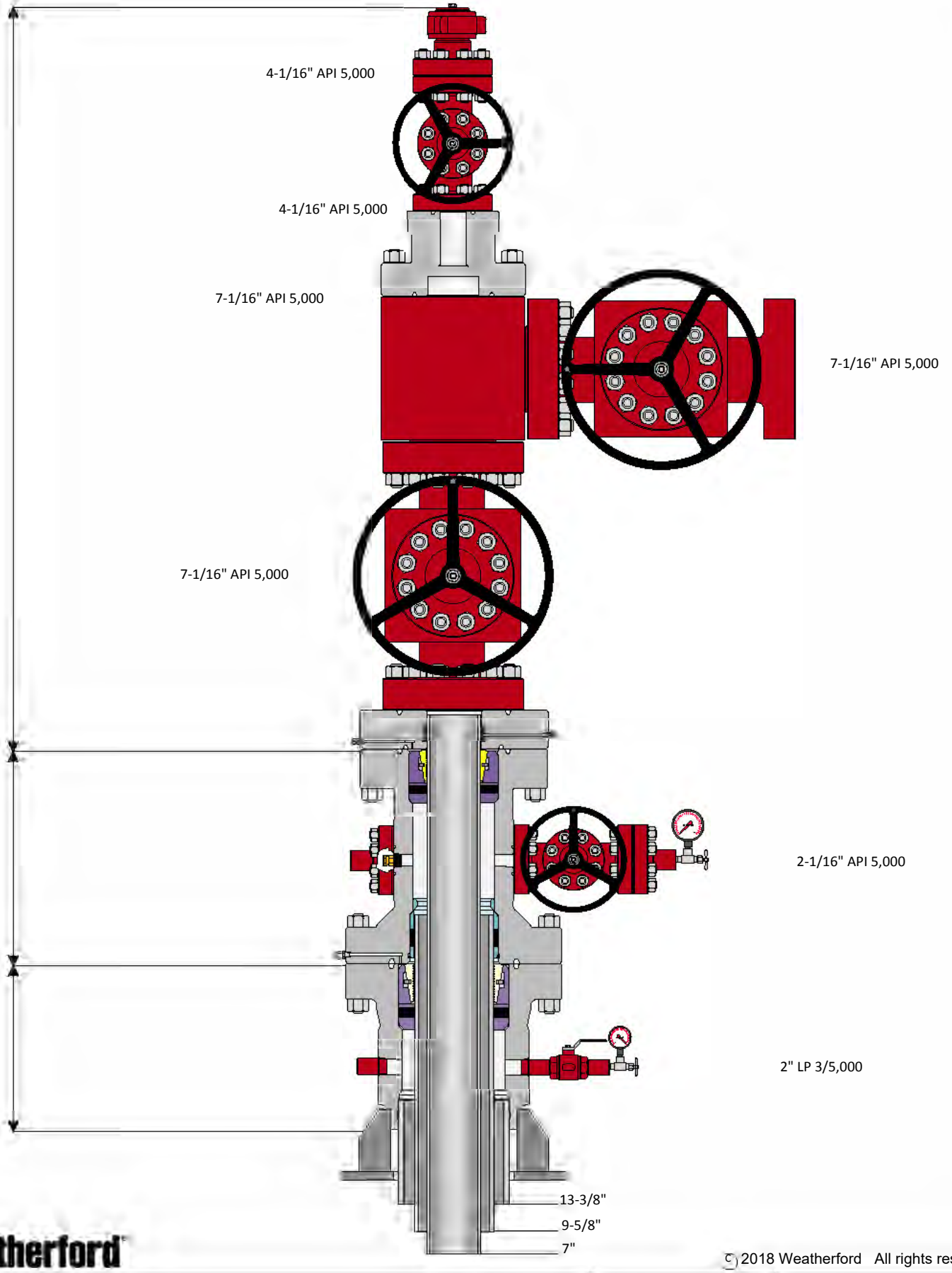
AS BUILT BELOW GROUND
WELL SCHEMATIC

DATE: 10/23/18	CHECKED BY: TJJ	JOB NO: 192080D
DRAWN BY: WDD	APPROVED BY: TJJ	DWG. NO:

8.3 AS-BUILT WELLHEAD SCHEMATIC

NOTE: THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THIS DRAWING ARE ESTIMATED DIMENSIONS AND ARE FOR REFERENCE ONLY.

FIGURE 8.3



Weatherford

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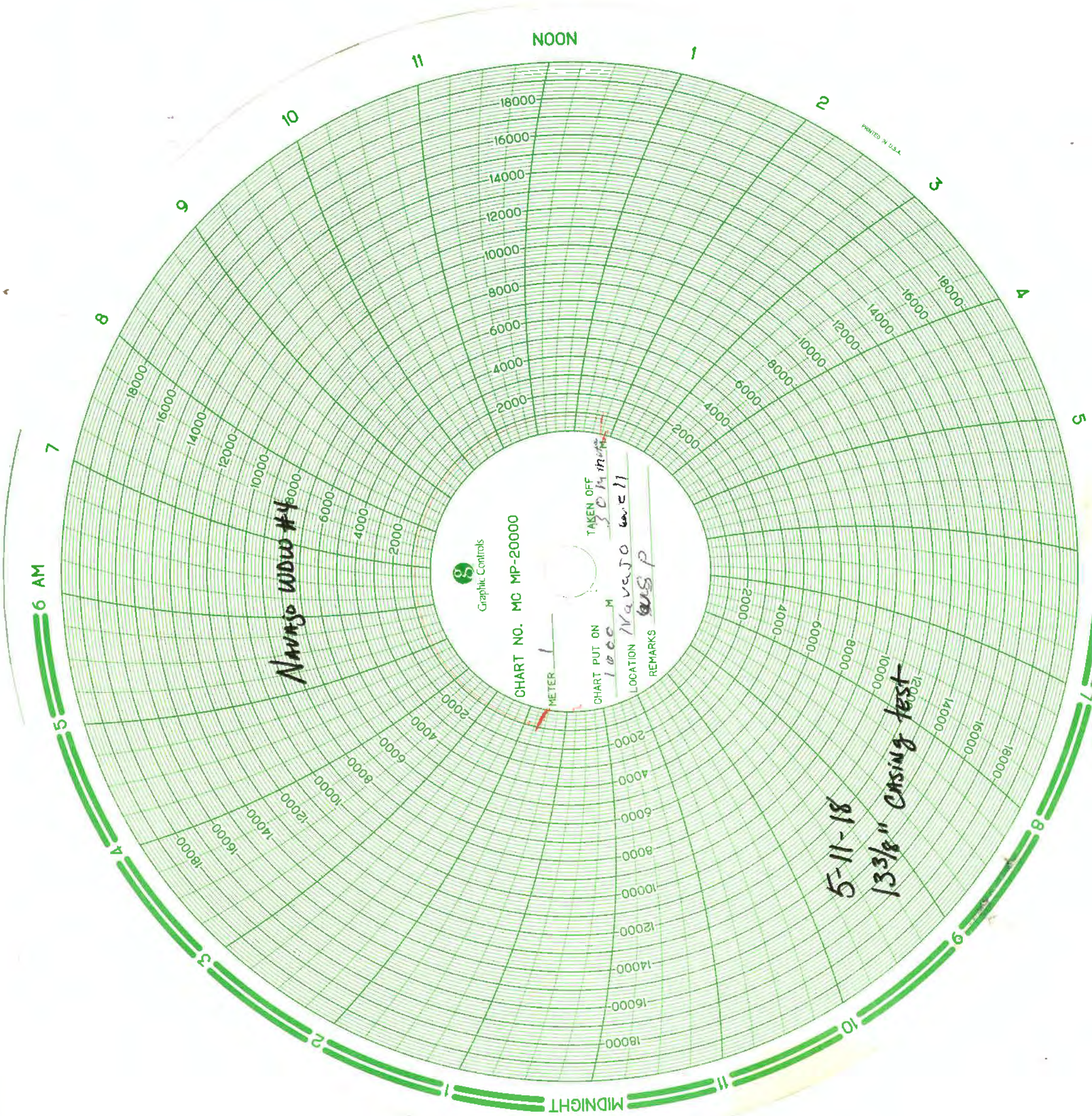
Customer: WSP USA	Project No.: 165908	Quote No.: 322264
Project Name: NAVAJO REFINING – HOLLY FRONTIER	Date: 3/09/2018	Drawn By: SS

8.4 PRESSURE TEST CHART FOR THE 13-3/8 INCH SURFACE CASING

FIGURE 8.4

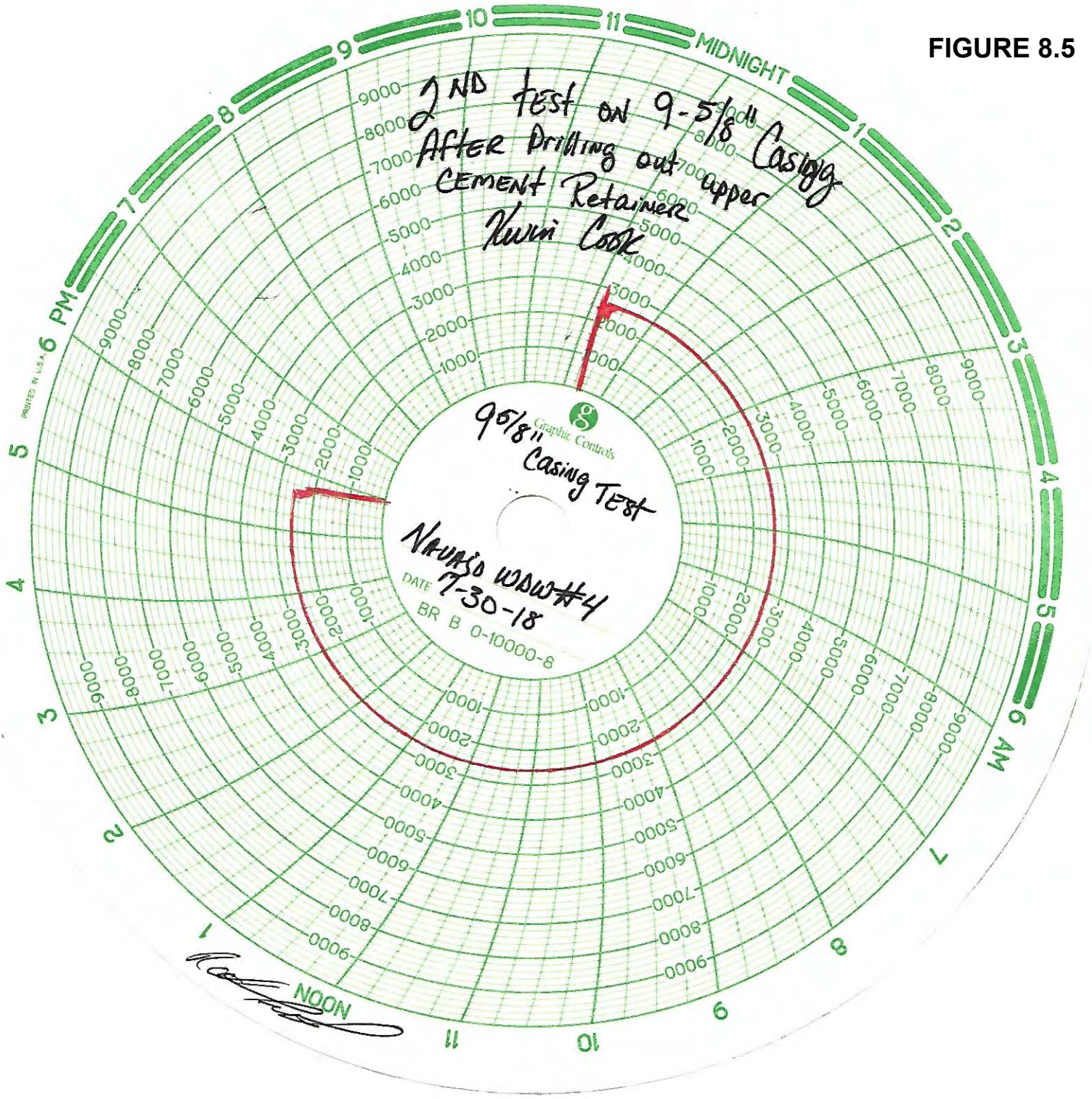
FIGURE 8.4

FIGURE 8.4



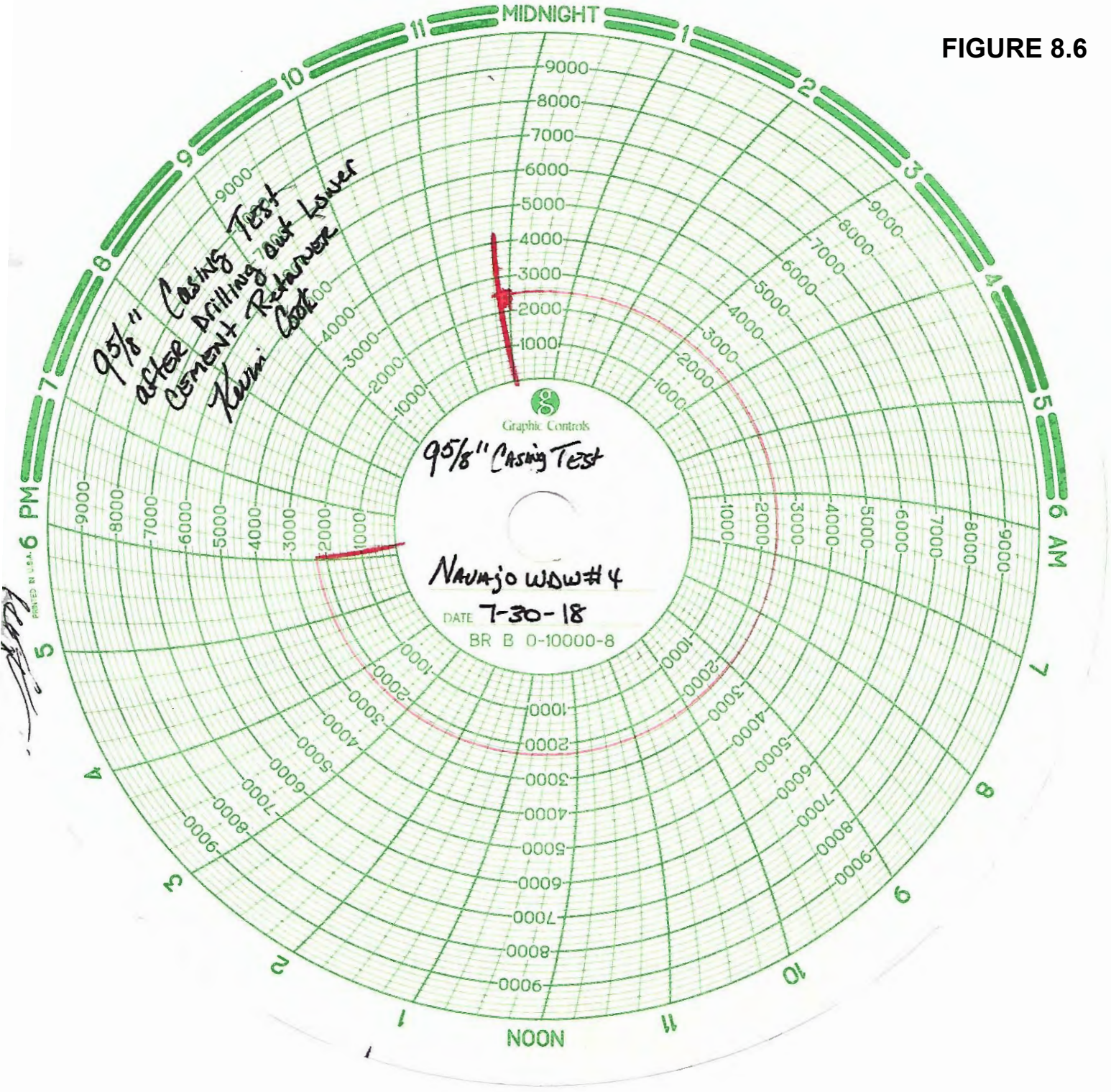
8.5 PRESSURE TEST CHART FOR THE 9-5/8 INCH LONG STRING CASING AFTER DRILLING OUT THE UPPER DV TOOL

FIGURE 8.5


2 ND test on 9-5/8 Casing
After Drilling out upper
CEMENT Retainer
Kevin Cook
9 5/8" Casing Test
Navajo WDW #4
DATE 7-30-18
BR B 0-10000-8
Graphic Controls
MIDNIGHT
NOON
AM
PM

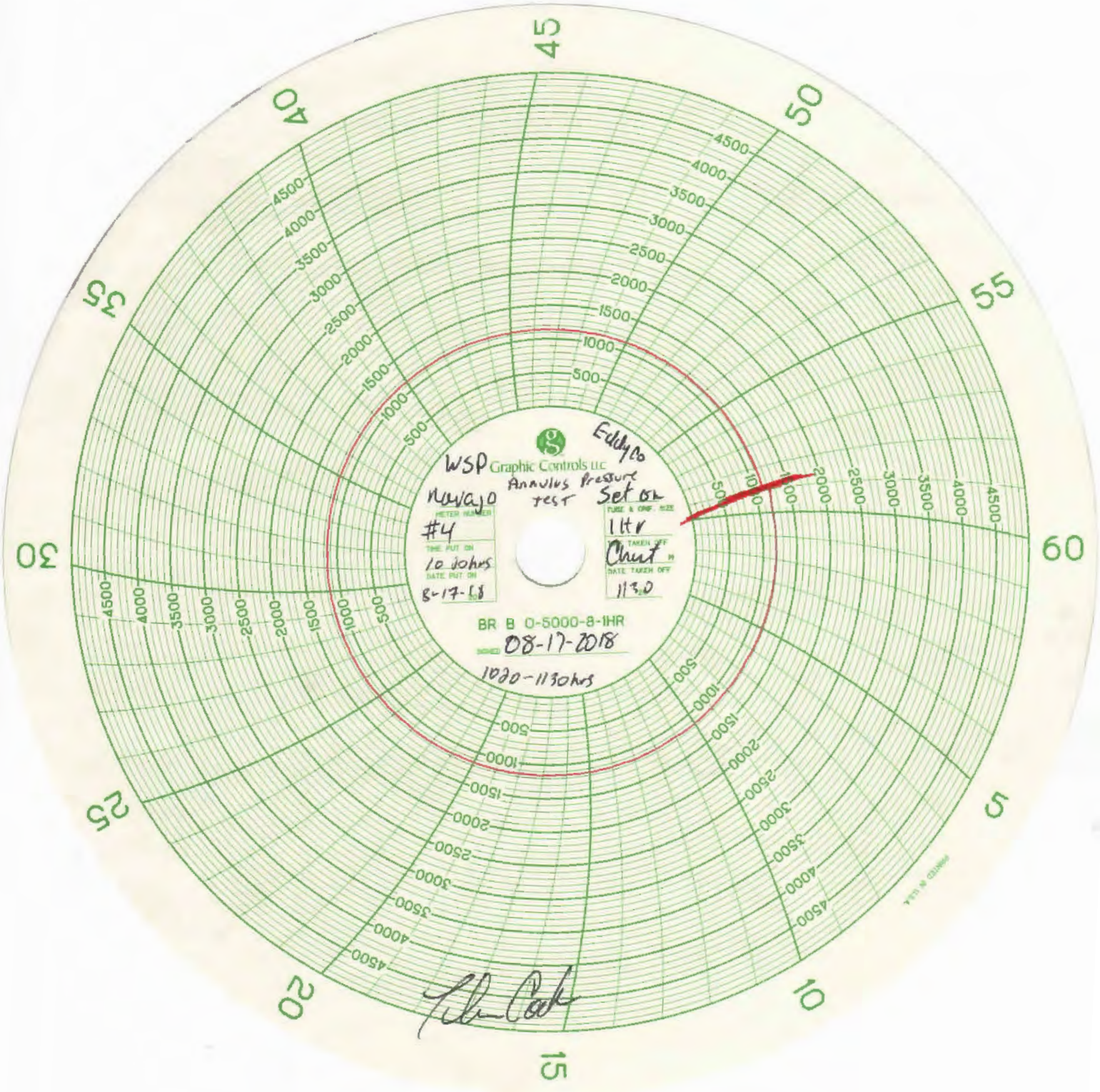
8.6 PRESSURE TEST CHART FOR THE 9-5/8 INCH LONG STRING CASING AFTER DRILLING OUT THE LOWER DV TOOL TOOL

FIGURE 8.6

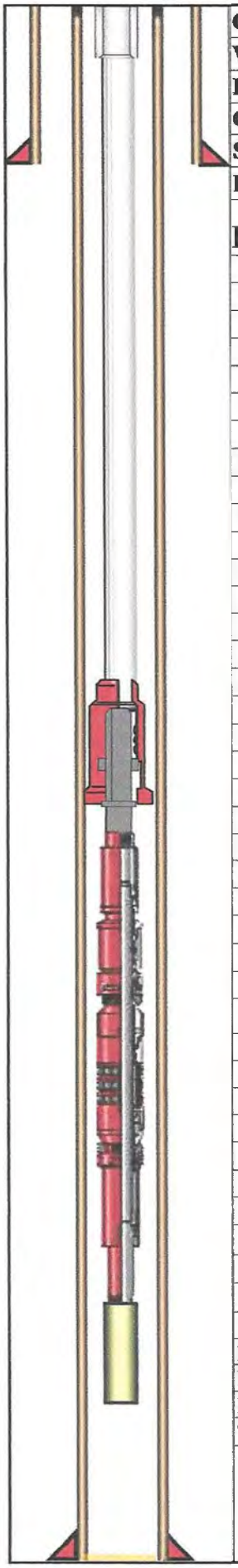

MIDNIGHT
NOON
6 PM
6 AM
Graphic Controls
95/8" Casing Test
Navajo WDW#4
DATE 7-30-18
BR B 0-10000-8
95/8" Casing Test after drilling out Lower Cement Retainer
Kevin Cook

8.7 9-5/8 INCH BY 7 INCH ANNULUS PRESSURE TEST

FIGURE 8.7


WSP
Graphic Controls LLC
Eddy Co
Annulus Pressure Test
Navajo
Set on
#4
1 Hr
10 Johns
Chart
8-17-18
11 3.0
BR B 0-5000-8-1HR
08-17-2018
1020-1130hrs

8.8 INJECTION PACKER DETAIL



COMPANY: WSP		**SURFACE CSG.**	**CASING**	**LINER**	**TUBING**
WELL NAME: Waste Disposal # 4		**SIZE:**	9 5/8		7
FIELD:		**WEIGHT:**	47		26
COUNTY: Eddy		**GRADE:**			
STATE: New Mexico		**THREAD:**			
DATE: 08-06-2018		**DEPTH:**			
DEPTH	**DESCRIPTION**		**MAX. O.D. INCHES**	**MIN. I.D. INCHES**	**LENGTH FEET**
10167.99	258 joints 7" X 28# Casing		7	6.276	10167.99
10177.12	10' 7" Pup Joint		7	6.276	9.13
10217.1	1 joint 7" casing		6.276	4.5	40.00
10225.1	8 7" Pup Joint		7	6.276	8.00
10264.47	1 joint 7" Casing		7	6.276	39.37
10265.67	7" LTC Box X 4 1/2 EU 8rd Pin		6.276	4.5	1.20
10268.08	9 5/8On/Off Tool		3.381	4.294	2.41
10276.33	9 5/8 AS1X Packer		8 2/7	3.984	8.25
10277.23	7" LTC Box X 4 1/2 EUE 8rd Box		7	6.276	0.90
10317.38	1 joint Tailpipe		7	6.276	40.15
	COMMENTS:				
	Annulur volume .0256				
	Packer set in 30,000# Compression				

PREPARED FOR:	**OFFICE:**	
Kevin Cook		
PREPARED BY:	**OFFICE:**	**PHONE:**
Tommy Daniel	Levelland	806-891-3999

WEATHERFORD

806-894-6653 FAX 806-894-8754

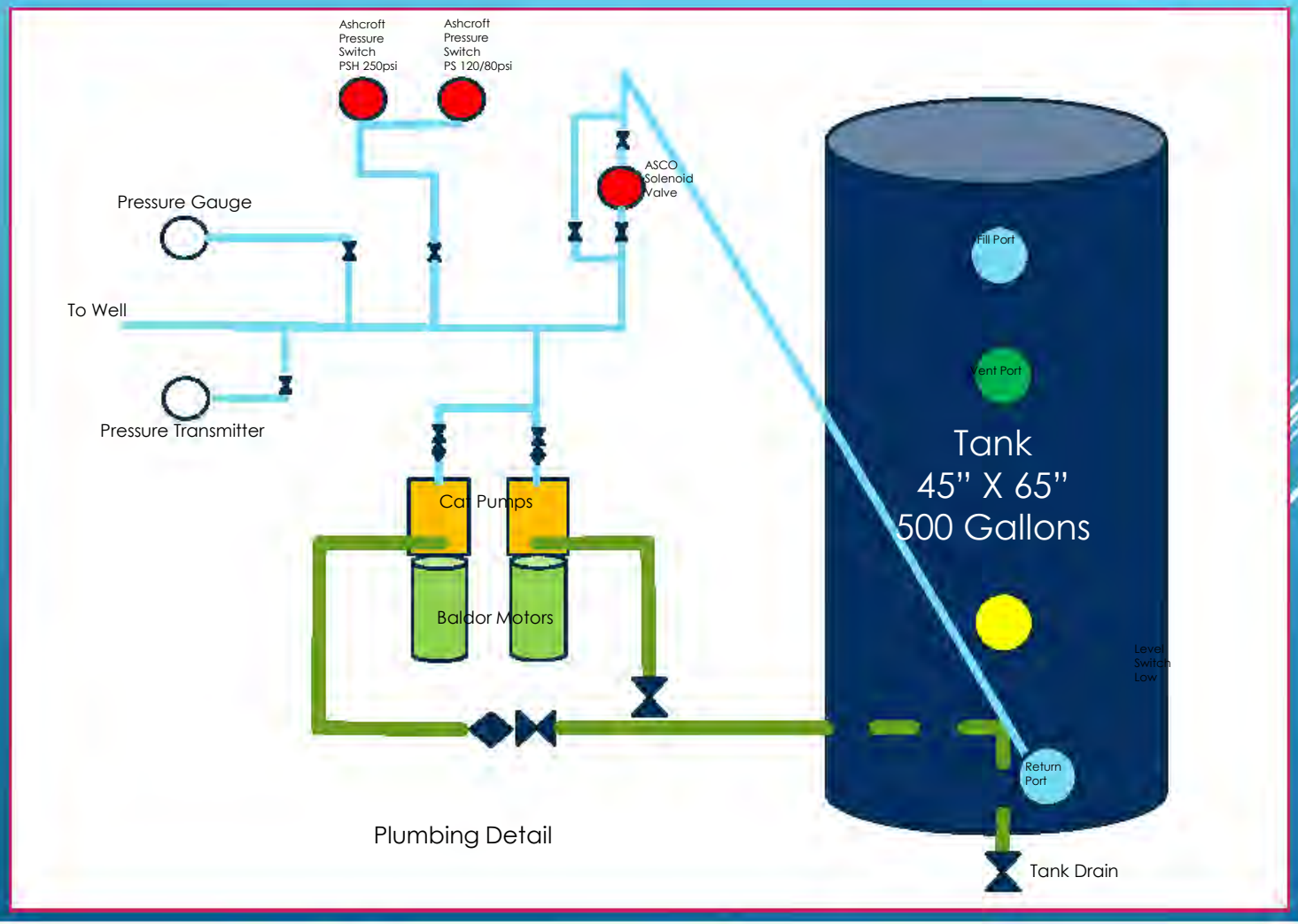
P.O BOX 1175 Levelland, Texas 79336

8.9 AS-BUILT WAMS UNIT

FIGURE 8.9

WSP USA, Inc
Navajo Refinery
WAMS Unit Drawing
July 2018

PATRIOT PRODUCTION & RENTAL SERVICES, LLC
Greg Kelley 713 553 9378 greg@patriotpetro.com



Plumbing Detail

Swagelok Ball Valve

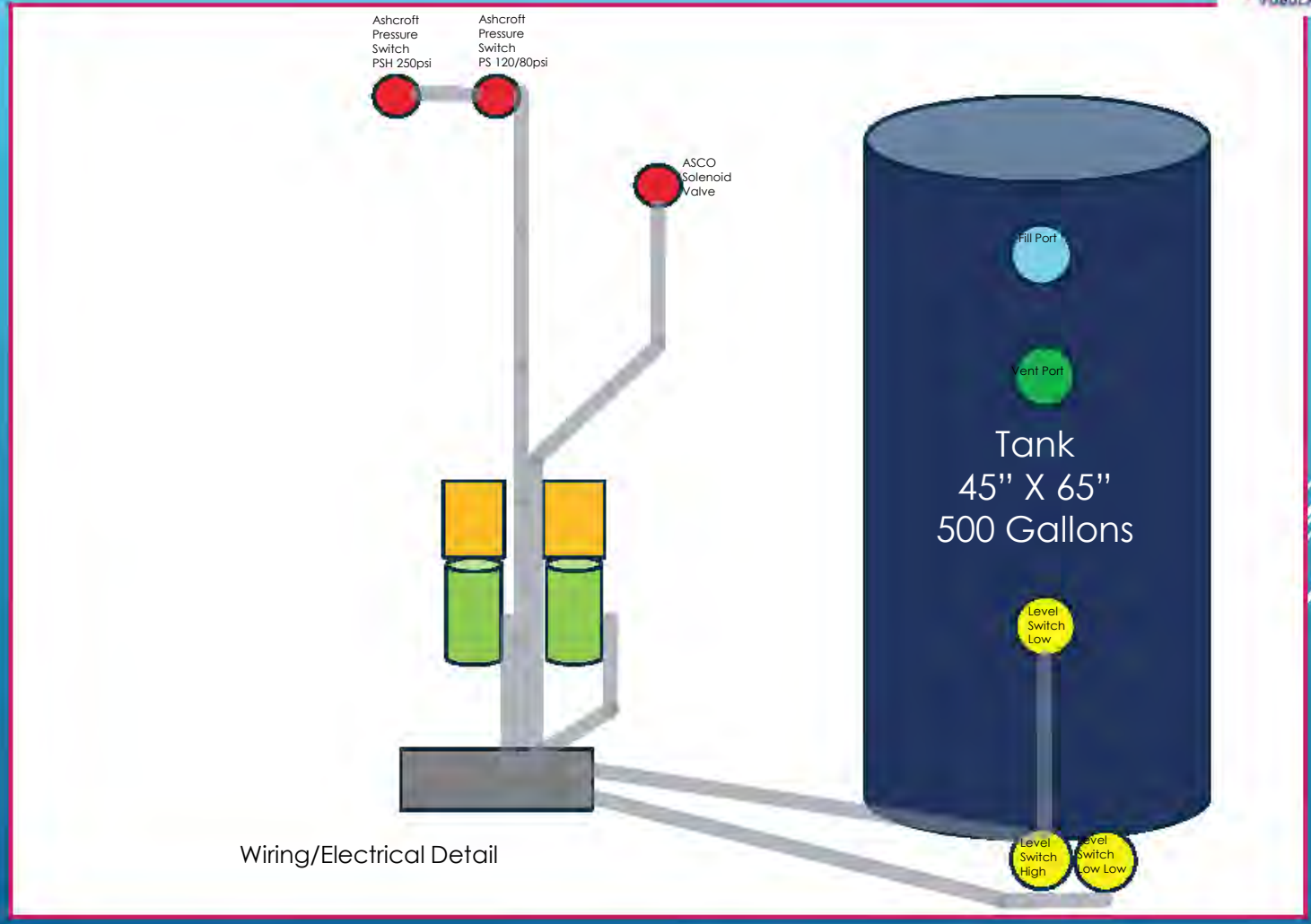
Swagelok Check Valve

High Pressure Piping ½"

Low Pressure Piping 1"

WSP USA, Inc
Navajo Refinery
WAMS Unit Drawing
July 2018

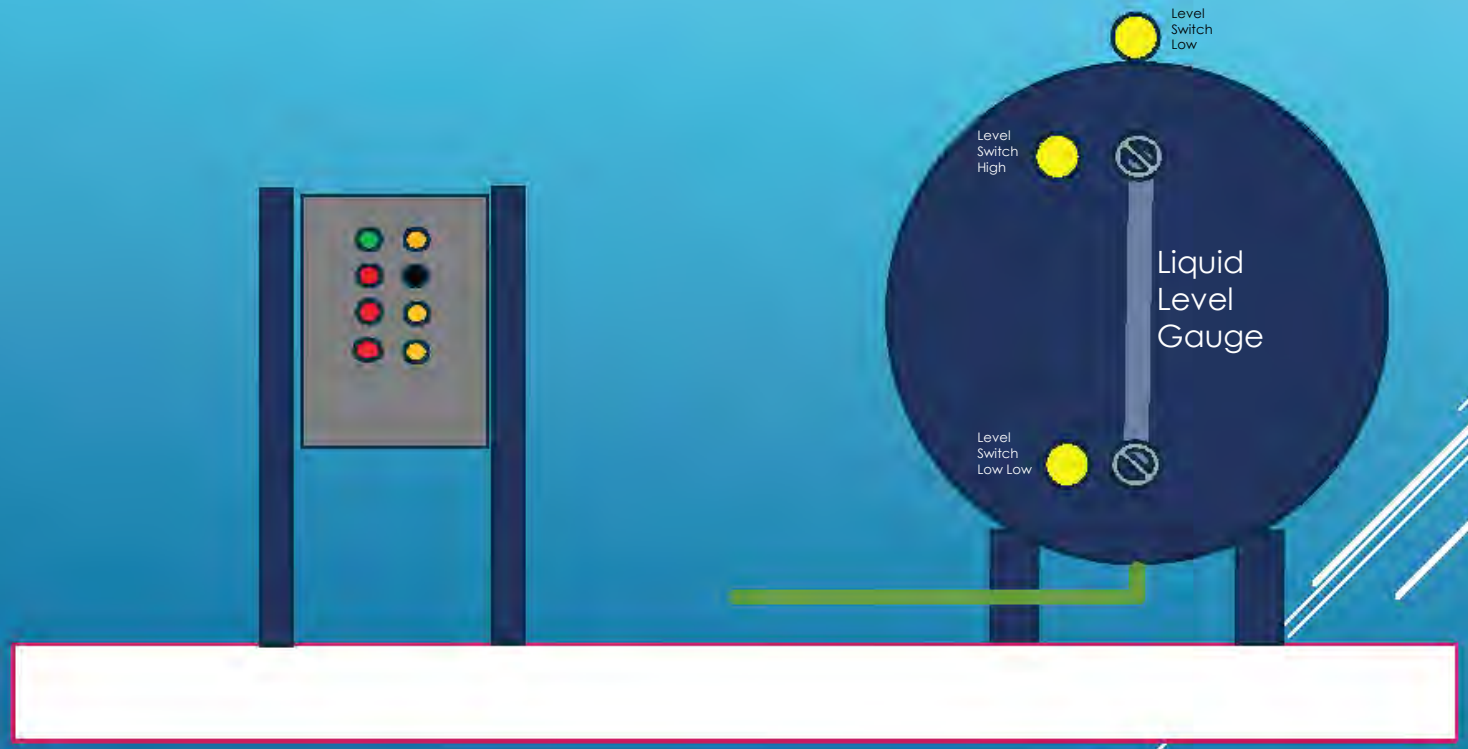
PATRIOT PRODUCTION & RENTAL SERVICES, LLC
Greg Kelley 713 553 9378 greg@patriotpetro.com



Wiring/Electrical Detail

WSP USA, Inc
Navajo Refinery
WAMS Unit Drawing
July 2018

PATRIOT PRODUCTION & RENTAL SERVICES, LLC
Greg Kelley 713 553 9378 greg@patriotpetro.com



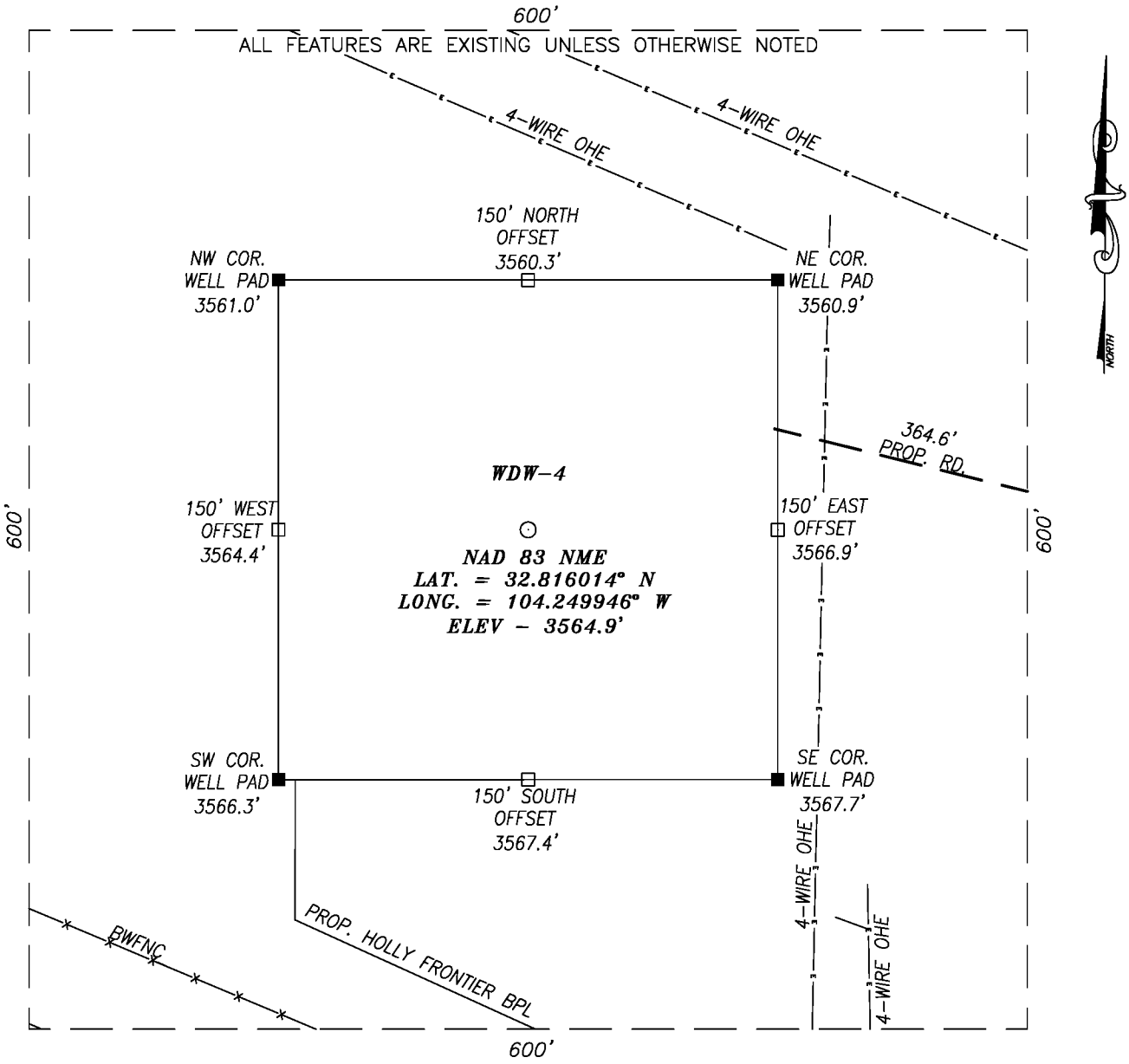
Level Gauge View/Detail

9 APPENDICES

9.1 SURVEYED WELL LOCATION

SECTION 23, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,

EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION:
BEGINNING AT THE INTERSECTION OF HWY. 82 AND CRANE RD. GO NORTHERLY ON CRANE RD. MEANDERING NORTHERLY AND EASTERLY FOR APPROX. 0.6 MI.; THEN GO LEFT (WESTERLY) ON CALICHE RD. FOR APPROX. 0.5 MI.; THEN GO LEFT (SOUTHERLY) FOR APPROX. 0.3 MI.; THE PROPOSED WELL LIES APPROX. 450 FEET TO THE WEST.

100 0 100 200 Feet

Scale:1"=100'

HARCROW SURVEYING, LLC
2314 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158 FAX: (575) 746-2158
Texas Firm No. 10194089
c.harcrow@harcrowsurveying.com

HOLLY FRONTIER NAVAJO REFINING, LLC.

WDW-4
LOCATED 1290 FEET FROM THE SOUTH LINE AND 2470 FEET FROM THE WEST LINE OF SECTION 23, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

SURVEY DATE: JANUARY 29, 2018		PAGE: 1 OF 1
DRAFTING DATE: JANUARY 30, 2018		
APPROVED BY: CH	DRAWN BY: JH	FILE: 17-1591

9.2 TOUR SHEETS

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180502_2L

APPENDIX 9.2

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/2/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/2/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY
(OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	IDLE

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	MOVE RIG AND RIG UP

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

SAFETY MEETING MOVING RIG TO NEW LOCATION

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180503_1D

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/3/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/3/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	IDLE

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	RIG UP
1800				

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180504_1H

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/4/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/4/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY =RIG UP-ORENTAION W/WSP

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	IDLE

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY=RIG UP FLOOR-ORENTATION W/ WSP

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	RIG UP

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180505_1N

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/5/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
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2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/5/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN	4.75	12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	6.25	
22.	1.0	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5 MSM

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM LIFTING HEAVY / OVER HEAD LOADS

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM / TO | DRILL REAM CORE | CORE NO. | FORMATION (SHOW RECOVERY) | ROTARY TABLE SPEED | WEIGHT ON BIT | PUMP PRESSURE | PUMP NO. 1 LINER SIZE / SPM | PUMP NO. 2 LINER SIZE / SPM | PUMP NO. 3 LINER SIZE / SPM | PUMP NO. 4 LINER SIZE / SPM | TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2245	4.75	1	FINNISH RIG UP FLOOR
2245	2345	1.00	22	HELP WELDER CUT OFF TO WELD ON FLANGE
2345	600	6.25	21	WAIT ON NEW FLANGE
				FUEL 69"
				F/W FULL

DEPTH INTERVAL FROM / TO | DRILL REAM CORE | CORE NO. | FORMATION (SHOW RECOVERY) | ROTARY TABLE SPEED | WEIGHT ON BIT | PUMP PRESSURE | PUMP NO. 1 LINER SIZE / SPM | PUMP NO. 2 LINER SIZE / SPM | PUMP NO. 3 LINER SIZE / SPM | PUMP NO. 4 LINER SIZE / SPM | TOTAL PUMP OUTPUT

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	RIG UP TOP DRIVE / WAIT ON FLANGE

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180506_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/6/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/6/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN	1.5	
2. DRILL ACTUAL		5.5
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.	9.75	6.5
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	0.75	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

SAFETY=NIPPLE UP BOP'S

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
40																

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	1	FINNISH RIG UP TOPDRIVE INSTALL BELLS & KELLY HOSE/CHG SAVER SUB
1930	2015	0.75	22	HELP WELDER MAKE FINAL CUT OFF & WELD FLANGE ON CONDUCTOR
2015	600	9.75	14	NIPPLE UP 21" B.O.P & WELD FLOW NIPPLE ON FLANGE UBOVE ANNULAR
				HOOK UP FLOW LINE & CONNECT HYDROLIC LINES F/ANNULAR-BUILD BELL NIPPLE
				FUEL 67"
				F/W FULL

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
	6" DC	
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	98.22
	WT. OF STRING	

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

SM H2S MONOITORS / SPUDDING IN / PINCH POINTS
JSA ON PICK UP BHA

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	65
SODA ASH	1
LIME	2

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
80	112															

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1230	6.50	14	NIPPLE UP B.O.P./ WAIT ON BIT SUB
1230	1630	4.00	2	MAKE UP BHA / TAG @ 80 FT
1630	1800	1.50	2	DRILL F/ 80 -112

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180507_1AQ

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/7/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/7/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.0	9.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		1.0
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	1.0	1.25
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
15	6" DC	442.78
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		541.00

WT. OF STRING

5MSM P/U DCS

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	98
TOTAL DRILLED	332
TOTAL HOURS	11

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.4	8.4	8.4
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
112	430	D			85	15	330	6.5	105							

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	185	0.2													
	304	0.2													

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2115	3.25	2	DRLG F/112 TO 217
2115	2145	0.50	10	DEVIATION SURVEY
2145	115	3.50	2	DRLG F/ 217 TO 336
115	145	0.50	10	DEVIATION SURVEY
145	600	4.25	2	DRLG F/ 336 TO 430
				DIESEL 63
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
15	6" DC	442.78
2	DRILLPIPE STANDS	190.09
1	DRILLPIPE STANDS	31.73
KELLY DOWN		
TOTAL		762.82

WT. OF STRING

5 MIN. SAFETY-P/U DC'S

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	98
TOTAL DRILLED	665
TOTAL HOURS	20.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	700	1200	1730
MUD WT	8.4	8.4	8.4
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	5 SX
LIME	1 SK

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
430	763	D		DOL-ANHY-SAND	110	15	460	6.5	105	6.5						
				60%-35%-5%												

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	422	.4				541	.1				664	.6			

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	645	0.75	10	DEVIATION SURVEY @ 422- 0.4 DEG.
645	1245	6.00	2	DRILL F/453-573
1245	1300	0.25	8	REPAIR IBOP VALVE ON TOPDRIVE
1300	1315	0.25	10	DEVIATION SURVEY@541-0.1 DEG.
1315	1400	0.75	2	DRILL F/573-604
1400	1445	0.75	8	CHANGE UNION ON #1 PUMP
1445	1600	1.25	2	DRILL F/604-668
1600	1615	0.25	10	DEVIATION SURVEY@664-0.6 DEG.
1615	1800	1.75	2	DRILL F/668-763
				SET & TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180508_1AL

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/8/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/8/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	10.5	11.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	1.5	1.0
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
15	6" DC	442.78
7	DRILLPIPE STANDS	667
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		
TOTAL		1239.71
WT. OF STRING		

5MSM WLS AND FORKLIFT OPERATIONS

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	98
TOTAL DRILLED	1141
TOTAL HOURS	31.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.4	8.4	8.4
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
DRILLING PAPER	10 SXS
LIME	1 SXS

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
763	1239	D			110	15	535	6.5	105	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
759	0.4				949	0.2				1140	0.5			
854	0.4				1044	0.3								

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	10	DEVIATION SURVEY
1815	1930	1.25	2	DRLG F/ 763 TO 858
1930	1945	0.25	10	DEVIATION SURVEY
1945	2130	1.75	2	DRLG F/ 858 TO 953
2130	2200	0.50	10	DEVIATION SURVEY DIESEL 55 1/2 F/W 3/4
2200	30	2.50	2	DRLG F/ 953 TO 1048
				TEST C-O-M
30	45	0.25	10	DEVIATION SURVEY
45	300	2.25	2	DRLG F/ 1048 TO 1144
300	315	0.25	10	DEVIATION SURVEY
315	600	2.75	2	DRLG F/ 1144 TO 1239

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
15	6" DC	442.78
10	DRILLPIPE STANDS	950.89
1	DRILLPIPE STANDS	23.71
KELLY DOWN		
TOTAL		1515.60
WT. OF STRING	83000	

5 MIN. SAFETY- STAYING HYDRATED IN HOT WEATHER

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	98
TOTAL DRILLED	1417
TOTAL HOURS	42.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1100	1730
MUD WT	8.4	8.6	8.8
GRADIENT			
FUNNEL VIS	28	28	29
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	15 SX
LIME	2 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1239	1515	D		DOLO-SAND-SHALE	120	15	624	6.5	105	6.5						
				45%-35%-20%							100					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
1236	.6				1426	.7								
1331	.4													

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	10	DEVIATION SURVEY @1236-0.6 DEG.
630	1115	4.75	2	DRILL F/1239-1334
1115	1130	0.25	10	DEVIATION SURVEY@1331-0.4 DEG.
1130	1515	3.75	2	DRILL F/1334-1429
1515	1530	0.25	10	DEVIATION SURVEY@1426
1530	1800	2.50	2	DRILL F/1429-1515
				TEST C-O-M

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180509_1Z

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/9/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	7 5/8		39	P-110			21	13940
	5 1/2		23	P-110			21	15586

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/9/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	5.0	
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.75	
6. TRIPS	2.75	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.75	
11. WIRE LINE LOGS	2.75	4.5
12. RUN CASING & CEMENT		5.0
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		2.5
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	17.25 BIT	1.5
1	BIT SUB	3.16
2	8INCH DC	56.80
1	IBS	7.09
1	8INCH DC	28.10
1	XO	1.57
15	6" DC	442.78
12	DRILLPIPE STANDS	1139
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		1680.00

WT. OF STRING 83000

5MSM AIR HOIST OPERATIONS AND TOH

BIT RECORD

BIT NO.	1
SIZE	17.25
IADC CODE	
MANUFACTURER	606S
TYPE	
SERIAL NO.	7046740
JETS	9/15
TFA	
DEPTH OUT	
DEPTH IN	98
TOTAL DRILLED	1582
TOTAL HOURS	47.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	00	TRIP
MUD WT	8.8	8.8	
GRADIENT			
FUNNEL VIS	29	29	
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1515	1680	D			120	20	660	6.5	105	6.5	105					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
1520	0.8													
1615	0.6													

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	2	DRLG F/ 1515 TO 1524
1815	1830	0.25	10	DEVIATION SURVEY
1830	2115	2.75	2	DRLG F/ 1524 TO 1619
2115	2145	0.50	10	DEVIATION SURVEY
2145	2345	2.00	2	DRLG F/ 1619 TO 1680
2345	30	0.75	5	PUMP SWEEP CIRC.
30	315	2.75	6	TOH L/D REAMER,BIT AND BITSUB
315	600	2.75	11	R/U WIRELINE AND RUN
				DIESEL 46 1/2
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
12	DRILLPIPE STANDS	1139
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		1139.00

WT. OF STRING 83000

5 MIN. SAFETY-LOGGING WELL & RUNNING CASING

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1680								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	11	WIRELINE LOGS
1030	1300	2.50	21	R/U CASING CREW & LAYDOWN MACHINE
1300	1800	5.00	12	RUN CASING
				HELD TAILGATE SAFETY MEETING W/CASERS, LAYDOWN HAND, & CO MAN

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180510_1Q

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/10/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/10/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.5	
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT	4.25	
13. WAIT ON CEMENT	2.25	12.0
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	4.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
12	DRILLPIPE STANDS	1139
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	1139.00

WT. OF STRING 83000

5MSM RIGGING UP HALIBURTON

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	5	L/D 1 JT CSG AND CIRC
1930	2345	4.25	12	R/U HALIBURTON AND CEMENT CSG
2345	345	4.00	21	HOLD PREASURE ON CMT HEAD 4 HRS
345	600	2.25	13	WAIT ON CEMENT
600				
				LEAD 1080 SX PLUG DOWN 11:45 PM
				TAIL 87 SX 140 BBLS /// 449 SKS CMT TO SURFACE
600				
				DIESEL 42 1/2
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5 MIN. SAFETY- NIPPLING DOWN BOP

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1680								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	13	WAIT ON CEMENT/WO TRUCKS TO CLEAN PITS-START CLEANING PITS @ 2:00 PM

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180511_1Q

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/11/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
LAST CASING TUBING OR LINER	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/11/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		4.25
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT	5.0	
14. NIPPLE UP B.O.P.	7.0	7.75
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5 MIN SAFTY MTG NIPPLE DN/UP

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1680								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2300	5.00	13	WAIT ON CEMENT & TRUCKS TO CLEAN PITS
2300	0600	7.00	14	NIPPLE DN 21" B.O.P/WELD ON A SECTION & N/U 13 5/8 B.O.P
				FUEL 39"
				F/W FULL

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5MSM NIPPLE UP / RUN WIRE LOGS

MUD RECORD

TIME			500
MUD WT			9.1
GRADIENT			
FUNNEL VIS			29
PV / YP			
GEL STR			
FLUID LOSS			
pH			9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1680								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1345	7.75	14	SET STACK ON WELL HEAD/ NIPPLE UP
1345	1445	1.00	11	RIG UP LOGGERS
1445	1800	3.25	11	RUN LOGS
1800				

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180512_1S

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/12/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/12/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	2.25	
6. TRIPS	3.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	0.25	
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		2.75
15. TEST B.O.P.	0.75	3.75
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		5.5
22.	5.75	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5 MIN SAFTY MTG TEST B.O.P

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5MSM NIPPLE UP AN TEST

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	11	WIRELINE LOGS
1815	1830	0.25	22	R/D WIRE LINE TRUCK
1830	2000	1.50	6	T.I.H TO DRILL SHOE TRACK
2000	2215	2.25	5	BREAK CIRCULATION & DRILL FLOAT COLLAR +30' CMT,CIRC BTM'S UP
2215	2345	1.50	6	T.O.O.H F/ DIR TOOLS
2345	0000	0.25	22	R/U TESTER
0000	0045	0.75	15	TEST CSG 1000# HELD F/30 MIN
0045	500	4.25	22	WAIT ON TESTER
500	600	1.00	22	R/U TESTER & M/U TEST PLUG ON TO D.P

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1130	5.50	21	WAIT ON WEILDER/ NIPPLE DOWN FLOW NIPPLE
1130	1515	3.75	15	TEST B.O.P. TO 3000
1515	1800	2.75	14	REPLACE 4" MANUAL VALVE

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180513_1AI

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/13/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/13/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	0.5	11.25
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	4.25	
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.	4.5	
15. TEST B.O.P.	1.25	0.5
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK	1.25	
21.	0.25	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
11	DRILLPIPE STANDS	1046
	DRILLPIPE SINGLES	
KELLY DOWN		17
TOTAL		1690.65

WT. OF STRING

5 MIN SAFTY MTG T.I.H

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	1690
DEPTH IN	1680
TOTAL DRILLED	10.00
TOTAL HOURS	.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			530
MUD WT			8.9
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1680	1690	D			25	6	750	6.5		6.5	85					420

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	14	FINNISH INSTALLING NEW MANUAL 4" VALVE & RECONNECT H.C.R
				WITH CHOKE MANIFOLD
1930	2045	1.25	15	TEST 4" MANUAL & PIPE RAMS LO 250# HI 3000#/ANNULAR LO 250# HI 1500#
				ALL TESTS HELD F/30 MIN
2045	2100	0.25	21	R/D TESTER
2100	0000	3.00	14	INSTALL FLOW NIPPLE ABOVE ANNULAR RECONNECT FLOW LINE
0000	115	1.25	20	P/U DIR TOOLS SCRIBE MTR & INSTALL M.W.D & M/U BIT
115	530	4.25	6	T.I.H DRILL CMT & SHOE
530	600	0.50	2	DRILL ACTUAL 1680-1690
				FUEL 32"
				F/W 1/2
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
14	DRILLPIPE STANDS	1331.06
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		1958.71

WT. OF STRING

5 MSM HOUSE KEEPING/ JSA 126 TH-7

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	278
TOTAL HOURS	11.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	530
MUD WT	9.1	8.7	8.7
GRADIENT			
FUNNEL VIS	32	30	30
PV / YP			
GEL STR			
FLUID LOSS			
pH	12	11	10.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1690	1958	D			80			6.5	70	6.5	70					700

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
1706	.71	355.1	1796											

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	15	FIT TEST 100 PSI HOLD 30 MIN / GOOD
630	1445	8.25	2	DRILL F/ 1690 - 1863
1445	1500	0.25	7	RIG SERVICE
1500	1800	3.00	2	DRILL F / 1863 - 1958

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour_us.alt 2ahrlt Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180514_1AG

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/14/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/14/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	4.5
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		0.5
7. LUBRICATE RIG		
8. REPAIR RIG		7.0
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
18	DRILLPIPE STANDS	1711
2	DRILLPIPE SINGLES	63.40
KELLY DOWN		13
TOTAL		2415.05

WT. OF STRING

5 MIN SAFTY MTG MAKING CONNECTIONS

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	2415
DEPTH IN	1680
TOTAL DRILLED	735.00
TOTAL HOURS	11.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	200	500
MUD WT	8.9	8.7	8.7
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SODA ASH	2 SX
GEL	65 SX
LIGNITE	4 SX

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1958	2415	D		95%DOLO 5 % SHALE	100	23	1050	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
1990	.42	359.95			2086	.49	353.60			2181	.4	351.52		
2276	.58	346.61												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRILL ACTUAL 1958- 2415
				FUEL 73"
				F/W 1/4
600				

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
	DRILLPIPE STANDS	1901.75
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		2529.40

WT. OF STRING

5MSM/ JSA 95 HOUSE KEEPING

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	849
TOTAL HOURS	28.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	9.5	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
2415	2529	D			100		1040	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
2371	.36	18.96												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	2	DRILL F/ 2415- 2529
1030	1100	0.50	6	PULL 10 STANDS
1100	1800	7.00	8	REPAIR BUSTED STAND PIPE
1800				

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180515_1AF

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/15/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/15/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	1.5	7.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.25
6. TRIPS	1.25	2.0
7. LUBRICATE RIG		0.25
8. REPAIR RIG	8.75	1.75
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.5	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
	DRILLPIPE STANDS	1923
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	2550.65

WT. OF STRING

5MSM HELPING WELDER AND PUMP REPAIRS

TRAINING DERRICK HAND & TRAINING FLOOR HANDS

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	849
TOTAL HOURS	29.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
2529	2550	D			100			6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	245	8.75	8	FIX AND REPAIR STAND PIPE AND REBUILD POP OFF ON # 1 PUMP
				TIGHTEN ALL/PRESSURE UP/CHECK FOR LEAKS
245	400	1.25	6	TIH
400	430	0.50	21	RECALIBRATE MWD TOOL
430	600	1.50	2	DRLG F/ 2532 TO 2550
				DIESEL 45 1/2
				F/W 1/4
600				

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
22	DRILLPIPE STANDS	2092.13
	DRILLPIPE STANDS	25.78
	KELLY DOWN	
	TOTAL	2745.56

WT. OF STRING 115000

5 MIN. SAFETY-AIR HOIST OPERATIONS

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	1065
TOTAL HOURS	37.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.6	8.6	8.6
GRADIENT			
FUNNEL VIS	29	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	8	8
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	3 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
2550	2745	D			100	28	1387	6.5	65	6.5	65					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
2561	0.53	14.38												
2656	0.28	25.24												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1145	5.75	2	DRILL F/2550-2719
1145	1200	0.25	7	RIG SERVICE
1200	1345	1.75	2	DRILL F/2719-2739
1345	1400	0.25	5	CIRCULATE
1400	1500	1.00	6	TRIP OUT OF HOLE 13 STANDS
1500	1645	1.75	8	REPLACE 4" VALVE BETWEEN PUMPS
1645	1745	1.00	6	TRIP IN HOLE W/13 STANDS
1745	1800	0.25	2	DRILL F/2739-2745
				SET & TEST C-O-M

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour.us.all.2shift Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180516_1AQ

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/16/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/16/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.0	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	1.0	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
26	DRILLPIPE STANDS	2473
1	DRILLPIPE SINGLES	31.63
KELLY DOWN		
TOTAL		3132.28

WT. OF STRING 119000

5MSM MIXING CHEMICALS /// PUMP REPAIRS

REPLACE POP OFF RUBBER ON # 2 PUMP

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	1452
TOTAL HOURS	48.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.6	8.6	8.6
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	8SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
2745	3132	D			100	32	1350	6.5	65	6.5	65					

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	2752	.53	5.81			2942	0.2	57.95							
	2847	.49	51.21			3037	.49	47.06							

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1945	1.75	2	DRLG F/ 2745 TO 2815
1945	2000	0.25	10	DEVIATION SURVEY @ 2715 DEV..53 AZM 5.81
2000	2230	2.50	2	DRLG F/ 2815 TO 2910
2230	2245	0.25	10	DEVIATION SURVEY @ 2847 DEV .49 AZM 51.21
2245	115	2.50	2	DRLG F/ 2910 TO 3005
115	130	0.25	10	DEVIATION SURVEY @ 2942 DEV 0.2 AZM 57.95
130	445	3.25	2	DRLG F/ 3005 TO 3100
445	500	0.25	10	DEVIATION SURVEY @ 3037 DEV .49 AZM 47.06
500	600	1.00	2	DRLG F/ 3100 TO 3132
				DIESEL 57 1/2
				F/W FULL

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
29	DRILLPIPE STANDS	2757.99
1	DRILLPIPE STANDS	31.68
KELLY DOWN		
TOTAL		3417.32

WT. OF STRING 121000

5 MIN. SAFETY-MOVING PIPE W/FORKLIFT

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	1737
TOTAL HOURS	60.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	5 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
3132	3417	D		DOLOMITE-SHALE	100	21	1070	6.5	65	6.5	65					
				85%-15%												

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	3132	0.63	38.28			3322	0.71	13.09							
	3227	0.37	19.42												

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1545	9.75	2	DRILL F/3132-3385
1545	1600	0.25	7	RIG SERVICE
1600	1800	2.00	2	DRILL F/3385-3417
				TEST C-O-M

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180517_1AD

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/17/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
3 1/2	13.3	S-135	4 3/4	IF	1
2 7/8	10.4	S-135	3 1/8	IF	

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/17/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.5	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.5	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
31	DRILLPIPE STANDS	2949
2	DRILLPIPE SINGLES	62.92
KELLY DOWN		
TOTAL		3639.57

WT. OF STRING 121000

5 MSM PREASURE WASHER AND AIR HOIST OPERATIONS

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	1959
TOTAL HOURS	71.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:OO	5:30
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	6 SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
3417	3639	D			100	21	1280	6.5	74	6.5	74					
											115					

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	3417	.68	28.70												
	3513	.42	350.27												

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2200	4.00	2	DRLG F/ 3417 TO 3480
2200	2215	0.25	10	DEVIATION SURVEY @ 3417... INC .68 AZM 28.70
2215	245	4.50	2	DRLG F/ 3480 TO 3576
245	300	0.25	10	DEVIATION SURVEY @ 3513 INC .42 AZM 350.27
300	600	3.00	2	DRLG F/ 3576 TO 3639
600				
				DIESEL 45 1/2 USED-1601 GAL
				RIG //F/W 3/4
				FRAC TANKS IN BACK YARD /// 6 FULL

TOUR 1	FROM 1800	TO 600			INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
34	DRILLPIPE STANDS	3217.35
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		3845.00

WT. OF STRING 123000

5 MIN. SAFETY-GREASING BLOCKS & CROWN

VALVE GUIDE & CLAMP CAME OFF #1 PUMP- CORRECTED THE PROBLEM

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	2165
TOTAL HOURS	83.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.5	8.5	8.6
GRADIENT			
FUNNEL VIS	28	28	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	10.5	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	140 SX
LIME	1 SK
SODA ASH	3 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
3639	3845	D		DOLOMITE-SHALE	100	21	1650	6.5	65	6.5	65					
				90%-10%												

DEVIATION RECORD	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
	3607	0.64	6.61												
	3702	0.53	21.35												

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1315	7.25	2	DRILL F/3639-3765
1315	1330	0.25	7	RIG SERVICE
1330	1800	4.50	2	DRILL F/3765-3845
				TEST C-O-M

TOUR 2	FROM 600	TO 1800			INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180518_1AK

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/18/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
3 1/2	13.3	S-135	4 3/4	IF	1	1	BREWSTER	B-1300	12
2 7/8	10.4	S-135	3 1/8	IF		2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/18/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	10.5	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.5	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
36	DRILLPIPE STANDS	3424
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		4051.65

WT. OF STRING 123000

5MSM 100% TIE OFF AND LOCK OUT TAG OUT

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	2371
TOTAL HOURS	94

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.6	8.6	8.6
GRADIENT			
FUNNEL VIS	29	30	30
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	20SX
LIME	6 SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
3845	4051	D			100	21	1900	6.5	75	6.5	75					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
3798	.66	11.51												
3893	.71	.94												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	2	DRLG F/ 3835 TO 3861
1900	1915	0.25	10	DEVIATION SURVEY @ 3798 INC .66 AZM 11.51
1915	15	5.00	2	DRLG F/ 3861 TO 3956
15	30	0.25	10	DEVIATION SURVEY@ 3893 INC .71 AZM .94
30	315	2.75	2	DRLG F/ 3956 TO 4010
315	415	1.00	21	L/D 2 WASHED TOOL JOINTS (BOX END)
415	600	1.75	2	DRLG F/ 4010 TO 4051
				DIESEL 32 USED 1776
				F/W 1/2
				FRAC TANKS IN BACK YARD 6 FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
37	DRILLPIPE STANDS	3518.51
2	DRILLPIPE STANDS	54
KELLY DOWN		
TOTAL		4200.16

WT. OF STRING 128000

5 MIN. SAFETY-PUTTING DP IN V-DOOR

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	1680
TOTAL DRILLED	2520
TOTAL HOURS	105.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.6	8.6	8.6
GRADIENT			
FUNNEL VIS	30	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	70 SX
SODA ASH	3 SX
LIME	3 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4051	4200	D			100	19	1825	6.5	75	6.5	75					
						25										

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
3988	0.51	346.04												
4083	0.29	358.64												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1500	9.00	2	DRILL F/4051-4146
1500	1515	0.25	7	RIG SERVICE
1515	1800	2.75	2	DRILL F/4146-4200
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180519_1AJ

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/19/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/19/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	7.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.75
6. TRIPS		2.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		1.75
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
39	DRILLPIPE STANDS	3708.
1	DRILLPIPE SINGLES	31.74
KELLY DOWN		17.61
TOTAL		4385.00
WT. OF STRING	131000	

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	4385
DEPTH IN	1680
TOTAL DRILLED	2705.00
TOTAL HOURS	117.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5 MIN SAFTY MTG W/ SAFTY MEN & SOLID CONTROL

J.S.A # MAINT-5,TH-20

MUD RECORD

TIME	630	200	500
MUD WT	8.7	8.7	8.6
GRADIENT			
FUNNEL VIS	29	28	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SODA ASH	2
GEL	70
LIME	4

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4200	4385	D		85 % DOLO 15 % SHALE	100	25	1850	6.5	75	6.5	75					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4178	.59	356.30			4273	.30	340.60							

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRILL ACTUAL 4200-4385
				FUEL 18" USED 1539
				F/W 1/2
600				

TOUR 1 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
39	DRILLPIPE STANDS	3708.
1	DRILLPIPE STANDS	31.74
KELLY DOWN		17.61
TOTAL		4385.00
WT. OF STRING	137000	

BIT RECORD

BIT NO.	2
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGES
TYPE	D507TX
SERIAL NO.	5280345-2
JETS	7-20
TFA	
DEPTH OUT	4480
DEPTH IN	1680
TOTAL DRILLED	2800.00
TOTAL HOURS	124.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5 MIN. SAFETY- JSA#MS-4 MIXING MUD & CHEMICALS

MUD RECORD

TIME	630	1230	1730
MUD WT	8.6	8.6	
GRADIENT			
FUNNEL VIS	28	28	
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	75 SX
SODA ASH	2 SX
LIME	2 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4385	4480	D		DOLOMITE-SHALE	100	25	1730	6.5	75	6.5	75					
				95%-5%												

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4368	0.53	11.15												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1300	7.00	2	DRILL F/4385-4480
1300	1345	0.75	5	CIR4CULATE BOTTOMS UP
1345	1615	2.50	6	TRIP OUT OF HOLE
1615	1800	1.75	21	CHANGE OUT BHA
				TEST C-O-M

TOUR 2 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180520_1AH

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/20/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/20/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	4.0	12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.25	
6. TRIPS	3.5	
7. LUBRICATE RIG		
8. REPAIR RIG	1.75	
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK	1.5	
21.		
22.	1.0	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
41	DRILLPIPE STANDS	3899.13
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	4526.78

WT. OF STRING 14000

JSA # TH-24 T.I.H

CK C.O.M OK B.G

BIT RECORD

BIT NO.	2	3
SIZE	12.25	12.25
IADC CODE		
MANUFACTURER	HUGES	HUGHES
TYPE	D507TX	TD507FTX
SERIAL NO.	5280345-2	716397
JETS	7-20	7-20
TFA		2.1476
DEPTH OUT	4480	4530
DEPTH IN	1680	4480
TOTAL DRILLED	2800.00	50.00
TOTAL HOURS	124.75	4

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	230	500
MUD WT		8.7	8.7
GRADIENT			
FUNNEL VIS		28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH		9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4480	4530	D			80	23	1380	6.5	65	6.5	65					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4464	.35	339.52												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1845	0.75	20	L/D MTR
1845	2030	1.75	8	REPAIR ELEVATORS
2030	2130	1.00	22	ATTEMPT TO INSTALL WEAR BUSHING
2130	2215	0.75	20	P/U NEW MTR & BIT
2215	145	3.50	6	T.I.H
145	200	0.25	5	BREAK CIRC.
200	600	4.00	2	DRILL ACTUAL 4480-4530
600				
				FUEL 63 1/2
				F/W 1/2
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
43	DRILLPIPE STANDS	4089.58
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	4717.23

WT. OF STRING 14000

5MSM / H2S SAFTEY JSA OP-10

Changed out swab on #1 pump #1 module

BIT RECORD

BIT NO.	3	
SIZE	12.25	
IADC CODE		
MANUFACTURER	HUGHES	
TYPE	TD507FTX	
SERIAL NO.	716397	
JETS	7-20	
TFA	2.1476	
DEPTH OUT		
DEPTH IN	4480	
TOTAL DRILLED	237	
TOTAL HOURS	15.5	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	530
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SODA ASH	2
LIME	5
GEL	105

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4350	4717				90	25	1300	6.5	62	6.5	62					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4682	.5	353.3												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL F/4530 - 4717

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour_us.alt 2ahrfl Rev. 2 02/2018

REPORT NO. PATRIO4_20180520_1AH

LEASE	WELL NO.	API WELL NUMBER	DATE
NAVAJO WDW	4	5LX-56	5/20/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

Tour 1 FROM 1800 **TO** 600

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
			5	CONDITION MUD & CIRCULATE

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180521_1AE

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/21/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/21/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	3.75	
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	1.5	4.75
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		1.75
20. DIR. WORK		
21.		
22.	6.75	5.5
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
43	DRILLPIPE STANDS	4089.58
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		4717.23

WT. OF STRING 14000

JSA # MAINT -2

CK C.O.M OK BG

BIT RECORD

BIT NO.	3
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	4812
DEPTH IN	4480
TOTAL DRILLED	332.00
TOTAL HOURS	19.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1100	530
MUD WT	8.6		
GRADIENT			
FUNNEL VIS	28		
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4717	4812	D			100	28	1400	6.5	65	6.5	665					450

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2145	3.75	2	DRILL ACTUAL 4717-4812
2145	2315	1.50	6	T.O.O.H (26 STDS & A DOUBLE) DUE TO WASH THEADS & PARTED STRING
2315	600	6.75	22	WAIT ON FISHER MAN
600				
				DEISEL 54"
				F/W 1/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
43	DRILLPIPE STANDS	4089.58
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		4717.23

WT. OF STRING 14000

5MSM / TRIPPING IN HOLE JSA # TH 4

RIG SERVICE

BIT RECORD

BIT NO.	3
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	4812
DEPTH IN	4480
TOTAL DRILLED	332.00
TOTAL HOURS	19.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4812								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1130	5.50	22	WAIT ON FISHER MAN/ RIG SERVICE
1130	1330	2.00	6	PICK UP FISHING TOOLS
1330	1430	1.00	6	TRIP IN HOLE WITH OVER SHOT AND BUMPER SUB
1430	1500	0.50	19	WORK OVER FISH
1500	1645	1.75	6	TOH
1645	1800	1.25	19	LAY DOWN FISH AN TOOLS
1800				
				CHECK C.O.M GOOD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180522_1AF

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/22/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/22/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	9.5	12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.5	
6. TRIPS	1.75	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	0.25	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
45	DRILLPIPE STANDS	4279.81
	DRILLPIPE SINGLES	
KELLY DOWN		13
TOTAL		4920.46

WT. OF STRING 142000

5 MIN SAFTY MEETING W/ DERRICK ABOUT POP OFF'S

BIT RECORD

BIT NO.	3
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	4920
DEPTH IN	4480
TOTAL DRILLED	440.00
TOTAL HOURS	28.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	2100	230	0500
MUD WT	8.6	8.6	8.6
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	2

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4812	4920	D		100%DOLO	80	22	1300	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4846	.53	350.0												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	22	TEST MTR & M.W.D
1815	2000	1.75	6	T.I.H
2000	2030	0.50	5	FILL PIPE & BREAK CIRC/TEST MTR & M.W.D
2030	600	9.50	2	DRILL ACTUAL 4812-4920
600				
				FUEL 48"
				F/W 1/8

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
47	DRILLPIPE STANDS	4469.82
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		5097.47

WT. OF STRING 142000

5MSM - WORKING ON PUMPS
CHANGE DIESEL FILTERS BOTH PUMPS
TIGHTEND LINER BOLTS / CLAMPS BOTH PUMPS CHANGED SET / VALVE AND SWAB #1 PUMP

BIT RECORD

BIT NO.	3
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	
DEPTH IN	4480
TOTAL DRILLED	617
TOTAL HOURS	38

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	8.4	8.5	8.5
GRADIENT			
FUNNEL VIS	28	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	4SX

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
4920	5097				100	33	1500	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
4968	.3	359.8												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL / F 4920-5097

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180523_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/23/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/23/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	9.75	
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	1.5	8.75
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.75	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		3.25
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
49	DRILLPIPE STANDS	4649
1	DRILLPIPE SINGLES	31.78
KELLY DOWN		
TOTAL		5308.43

WT. OF STRING 150000

5MSM PLACING DP IN V- DOOR

BIT RECORD

BIT NO.	4
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	
DEPTH IN	4480
TOTAL DRILLED	828
TOTAL HOURS	47.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.5	8.5	8.5
GRADIENT			
FUNNEL VIS	29	30	30
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	6SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
1800	5308	D			100	33	1400	6.5	115	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5036	.49	348.90			5227	.16	303.05							
5132	.39	.89												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	10	DEVIATION SURVEY @ 5036 INC .49 AZM 348.90
1815	2230	4.25	2	DRLG F/ 5097 TO 5193
2230	2245	0.25	10	DEVIATION SURVEY @ 5132 INC .39 AZM .89
2245	215	3.50	2	DRLG F/ 5193 TO 5288
215	230	0.25	10	DEVIATION SURVEY @ 5227 INC .16 AZM 303.05
230	430	2.00	2	DRLG F/ 5288 TO 5308
430	600	1.50	6	TOH
				DIESEL 34
				F/W 3/4
				FRAC TANKS IN BACK YARD///6 HALF FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	12.25 BIT	1.50
	MOTOR	27.12
	STAB	5.23
	U.B.H.O	2.91
	N.M.D.C	29.00
	N.M.D.C	29.07
	STAB	2.82
	3-8" D.C	84.81
	XO	1.57
	5 STD 6" D.C	443.62
49	DRILLPIPE STANDS	4649
1	DRILLPIPE STANDS	31.78
KELLY DOWN		
TOTAL		5308.43

WT. OF STRING 150000

5 MIN. SAFETY- TRIPPING PIPE IN & OUT OF THE HOLE

BIT RECORD

BIT NO.	4
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	716397
JETS	7-20
TFA	2.1476
DEPTH OUT	
DEPTH IN	4480
TOTAL DRILLED	828
TOTAL HOURS	47.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5308								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1245	6.75	6	TRIP OUT OF HOLE (REPLACED 10 WASHED OUT JOINTS & 6 CORKSCREWED JOINTS)
1245	1600	3.25	21	CHANGE OUT BHA
1600	1800	2.00	6	TRIP IN HOLE OPEN ENDED
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180524_1L

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/24/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8		54.50	JE	39	1700	21	1680
5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 5/24/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	10.0	12.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM TIH AND LD DP

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL / DRILL REAM CORE / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	LINER SIZE	SPM	LINER SIZE	SPM	LINER SIZE	SPM	LINER SIZE	SPM
		6.5		6.5					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1845	0.75	6	TIH
1845	400	9.25	6	L/D 150 JTS DRILL PIPE
400	600	2.00	21	CLEAN UP TOOL JOINTS ON DP AND TIH
				DIESEL 81-9171
				F/W FULL

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	627.92

WT. OF STRING

5 MIN. SAFETY- PICKING UP DRILLPIPE

BIT RECORD

BIT NO.	4
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	KMX525T
SERIAL NO.	5282914
JETS	4X18 4X20
TFA	
DEPTH OUT	
DEPTH IN	5308
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL / DRILL REAM CORE / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	LINER SIZE	SPM	LINER SIZE	SPM	LINER SIZE	SPM	LINER SIZE	SPM
5308		6.5		6.5					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	6	T,I,H PICK UP DP
				FUNCTION TEST PIPE RAMS (*OK)
				TEST C-O-M

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180525_1AC

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/25/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/25/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	7.25	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	4.5	
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.25	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD

CUMULATIVE ROTATING HOURS

DAILY MUD COST

TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
50	DRILLPIPE STANDS	4729
2	DRILLPIPE SINGLES	63.61
KELLY DOWN		
TOTAL		5420.53
WT. OF STRING		

5 MSM PICKING UP DRILL PIPE

BIT RECORD

BIT NO.	4
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	KMX525T
SERIAL NO.	5282914
JETS	4X18 4X20
TFA	
DEPTH OUT	
DEPTH IN	5308
TOTAL DRILLED	112
TOTAL HOURS	7.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	12:30	5:30
MUD WT		8.7	8.7
GRADIENT			
FUNNEL VIS		29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH		10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	3SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5308	5420	D			80	25	1600	6.5	115	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5318	.21	265.21												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2230	4.50	6	P/U DRILL PIPE AND FILL PIPE
2230	345	5.25	2	DRLG F/ 5308 TO 5381/// 80 RPM 25 WOB
345	400	0.25	10	DEVIATION SURVEY @ 5218 INC .21 AZM 265.21
400	600	2.00	2	DRLG /F 5381 TO 5420 ///80 RPM 30 WOB
				DIESEL 75-8582
				F/W 1/2
				FRAC TANKS IN BACK YARD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
53	DRILLPIPE STANDS	5038.70
2	DRILLPIPE STANDS	54.00
KELLY DOWN		
TOTAL		5720.62
WT. OF STRING		

5 MIN. SAFETY- FORKLIFT OPERATION

JSA#OP-9

BIT RECORD

BIT NO.	4
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	KMX525T
SERIAL NO.	5282914
JETS	4X18 4X20
TFA	
DEPTH OUT	
DEPTH IN	5308
TOTAL DRILLED	412
TOTAL HOURS	19

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.7	8.7	8.7
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	20 SX
SODA ASH	3 SX
LIME	2 SX

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5420	5720	D		DOLOMITE	80	35	1675	6.5	115	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5413	0.3	331.3			5603	0.53	328.30							
5508	0.2	276.8												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1445	8.75	2	DRILL F/5420-5666
1445	1500	0.25	7	RIG SERVICE
1500	1800	3.00	2	DRILL F/5666-5720
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180526_1AD

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/26/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/26/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.5	4.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		4.75
7. LUBRICATE RIG		
8. REPAIR RIG		1.5
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.5	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		1.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
55	DRILLPIPE STANDS	5221
1	DRILLPIPE SINGLES	31.74
KELLY DOWN		
TOTAL		5880.66

WT. OF STRING

5MSM LOCK OUT TAG OUT AND PUMP REPAIRS

CHANGE OUT SWAB IN # 1 PUMP MOTOR SIDE

BIT RECORD

BIT NO.	4
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	KMX525T
SERIAL NO.	5282914
JETS	4X18 4X20
TFA	
DEPTH OUT	
DEPTH IN	5308
TOTAL DRILLED	572
TOTAL HOURS	30.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	8.7	8.6	8.6
GRADIENT			
FUNNEL VIS	28	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	4SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5720	5880	D			80	35	1600	6.5	115	6.5	112					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5698	.54	319.10												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2015	2.25	2	DRLG F/ 5720 TO 5761 /// 35 WOB 80 RPM
2015	2030	0.25	10	DEVIATION SURVEY @ 5698 INC .54 AZM 319.10
2030	330	7.00	2	DRLG F/ 5761 TO 5856 //// 25 WOB 100 RPM
330	345	0.25	10	DEVIATION SURVEY@ 5793 INC .77 AZM 326.66
345	600	2.25	2	DRLG F/ 5856 TO 5880
600				
				DEISEL 61-6864
				F/W FULL
				FRAC TANKS IN BACK YARD 6 // 3/4 FULL
600				

TOUR 1	FROM 1800	TO 600			INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
55	DRILLPIPE STANDS	5221
1	DRILLPIPE STANDS	31.74
KELLY DOWN		
TOTAL		5880.66

WT. OF STRING 169000

5 MIN. SAFETY-MIXING CAUSTIC

JSA#MS-3

BIT RECORD

BIT NO.	4
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	KMX525T
SERIAL NO.	5282914
JETS	4X18 4X20
TFA	
DEPTH OUT	5904
DEPTH IN	5308
TOTAL DRILLED	596.00
TOTAL HOURS	35.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	8.8		
GRADIENT			
FUNNEL VIS	29		
PV / YP			
GEL STR			
FLUID LOSS			
pH	10		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5880	5904	D			100	25	1575	6.5	115	6.5	112					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1045	4.75	2	DRILL F/5880-5904
1045	1345	3.00	6	TRIP OUT OF HOLE
1345	1430	0.75	8	CHANGE OUT VALVE TO DRUM
1430	1515	0.75	6	TOH
1515	1600	0.75	8	UNPLUG SPEAR WATER SIDE
1600	1700	1.00	6	TOH
1700	1800	1.00	21	CHANGE OUT BITS

TOUR 2	FROM 600	TO 1800			INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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REPORT NO. PATRIO4_20180526_1AD

LEASE	WELL NO.	API WELL NUMBER	DATE
NAVAJO WDW	4	5LX-56	5/26/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

Tour 2 FROM 600 **TO** 1800

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
				TEST C-O-M

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180527_1AM

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/27/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8		54.50	JE	39	1700	21	1680
	5 1/						21	

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 5/27/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	8.75	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.25	
6. TRIPS	3.0	
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
56	DRILLPIPE STANDS	5324
1	DRILLPIPE SINGLES	31.75
KELLY DOWN		6
TOTAL		5989.67

WT. OF STRING 169000

CK C.O.M OK BG

JSA # TH-15 PLACING PIPE IN V-DOOR

BIT RECORD

BIT NO.	4	5
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HUGHES	HUGES
TYPE	KMX525T	KMX525T
SERIAL NO.	5282914	5275259
JETS	4X18 4X20	4X18 4X20
TFA		0.829
DEPTH OUT	5904	5989
DEPTH IN	5308	5904
TOTAL DRILLED	596.00	85.00
TOTAL HOURS	35.25	8.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	2130	500
MUD WT		9.1	9
GRADIENT			
FUNNEL VIS		29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH		9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	5

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5904	5989	D			60	20	1550	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5889	.59	326.89												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	6	T.I.H
2100	2115	0.25	5	FILL PIPE & BREAK CIRC
2115	600	8.75	2	DRILL ACTUAL 5904- 5989
600				
				FUEL 52" 5680
				F/W 1/2
				SOLID CONTENT 3.5
				MUD DAILY $ 441.90
				MUD CUMULATIVE $ 14,391.91

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
57	DRILLPIPE STANDS	5419.44
2	DRILLPIPE STANDS	63.38
KELLY DOWN		
TOTAL		6110.74

WT. OF STRING 169000

5MSM LOCK OU TAG OUT

#2 PUMP TIGHTEN LINER BOLTS FIX PENUT PUMP

#1 SWAB MIDLLE MOD NAILS

BIT RECORD

BIT NO.	5
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGES
TYPE	KMX525T
SERIAL NO.	5275259
JETS	4X18 4X20
TFA	0.829
DEPTH OUT	
DEPTH IN	5904
TOTAL DRILLED	206
TOTAL HOURS	18

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	9	9.1	9.1
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
5989	6110				70	20	1500	6.5	110	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
5984	.7	320	6047											

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1130	5.50	2	DRILL F / 5989 -6047
1130	1145	0.25	7	RIG SERVICE
1145	1800	6.25	2	DRILL F / 6047 -6110

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180528_1AO

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/28/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	j-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 5/28/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.75	10.5
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.25	
6. TRIPS		
7. LUBRICATE RIG		0.75
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		0.75
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
58	DRILLPIPE STANDS	5514.35
2	DRILLPIPE SINGLES	63.36
KELLY DOWN		32
TOTAL		6237.63

WT. OF STRING: 172000

CK C.O.M OK BG

JSA #TH-9

CHG SWAB ON # 1 PUMP

BIT RECORD

BIT NO.	5
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGES
TYPE	KMX525T
SERIAL NO.	5275259
JETS	4X18 4X20
TFA	0.829
DEPTH OUT	6237
DEPTH IN	5904
TOTAL DRILLED	333.00
TOTAL HOURS	32.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	615	1200	500
MUD WT	9.0	9.2	9.2
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9.5	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	10

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6110	6237	D		100% DOLO	60	20	1550	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
6079	.55	322.86												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	515	11.25	2	DRILL ACTUAL 6110-6228
515	530	0.25	5	CIRC OUT DRLG BREAK
530	600	0.50	2	DRILL ACTUAL 6228-6237
				FUEL 40"
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.30
1	STRING STABILIZER	5.23
1	U.B.H.O	2.91
2	N.M.D.C	58.07
1	STRING STABILIZER	2.82
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
60	DRILLPIPE STANDS	5704.87
2	DRILLPIPE STANDS	63.29
KELLY DOWN		
TOTAL		6396.08

WT. OF STRING: 172000

JSA BOP DRILL

BOP DRILL 5 MIN

CHANGE 2 SWABS IN #2 PUMP 1 SWAB #1 PUMP

BIT RECORD

BIT NO.	5
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGES
TYPE	KMX525T
SERIAL NO.	5275259
JETS	4X18 4X20
TFA	0.829
DEPTH OUT	
DEPTH IN	5904
TOTAL DRILLED	492
TOTAL HOURS	42.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	530
MUD WT	9.2	9.1	9.2
GRADIENT			
FUNNEL VIS	29	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	50 SKS
LIME	5 SKS

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6237	6396							6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
6147	.68	326.27												
6269	.67	318.56												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	645	0.75	7	RIG SERVICE/ BOP DRILL 5 MIN
645	915	2.50	2	DRILL F / 6237- 6265
915	1000	0.75	21	REPAIR RIG / WORK ON PUMPS
1000	1800	8.00	2	DRILL F 6265 - 6396

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180529_1AY

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/29/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 5/29/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	1.0	9.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	5.75	2.25
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.0	0.5
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK	4.25	
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	632.66

WT. OF STRING: 172000

JSA # TH-5,TH-25

CK C.O.M OK BG

BIT RECORD

BIT NO.	5	6
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HUGES	HUGHES
TYPE	KMX525T	DD507TX
SERIAL NO.	5275259	
JETS	4X18 4X20	7-20
TFA	0.829	2.1476
DEPTH OUT	6404	
DEPTH IN	5904	6404
TOTAL DRILLED	500.00	
TOTAL HOURS	43.75	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	TRIP	TRIP
MUD WT	9.2		
GRADIENT			
FUNNEL VIS	29		
PV / YP			
GEL STR			
FLUID LOSS			
pH	10		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6396	6404	D			80	17	1700	6.5		6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	2	DRILL ACTUAL 6396-6404
1900	2245	3.75	6	T.O.O.H
2245	300	4.25	20	CHG OUT B.H.A
300	500	2.00	6	T.I.H TO
500	600	1.00	9	CUT OFF DRILLING LINE
				FUEL 27"
				F/W 1/2

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
63	DRILLPIPE STANDS	5989.71
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	6622.37

WT. OF STRING: 172000

JSA TRIPPING PIPE

BIT RECORD

BIT NO.	6	
SIZE	12 1/4	
IADC CODE		
MANUFACTURER	HUGHES	
TYPE	DD507TX	
SERIAL NO.		
JETS	7-20	
TFA	2.1476	
DEPTH OUT		
DEPTH IN	6404	
TOTAL DRILLED	218	
TOTAL HOURS	8.5	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	530
MUD WT	TRIP	9.2	9.2
GRADIENT			
FUNNEL VIS		29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH		9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	5SKS

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6404	6622				90	30	1800	6.5	110	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
6369	.55	330.54												
6464	.64	316.99												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	9	CUT OFF DRILLING LINE
630	700	0.50	6	TEST MWD TOOLS
700	845	1.75	6	TIH
845	915	0.50	2	REAM TO BTM
915	1415	5.00	2	DRILL F / 6404-6527
1415	1430	0.25	7	RIG SERVICE
1430	1800	3.50	2	DRILL F / 6527- 6622
				CHECKED C.O.M GOOD
				OFF BTM PSI 1670

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180530_1AP

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/30/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 5/30/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
66	DRILLPIPE STANDS	6275.22
	DRILLPIPE SINGLES	63.52
KELLY DOWN		4
TOTAL		6975.40

WT. OF STRING: 185000

CHK C.O.M OK BG

P/U 187K S/O 183K ROT/185K

JSA # TH-14

BIT RECORD

BIT NO.	6
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	DD507TX
SERIAL NO.	
JETS	7-20
TFA	2.1476
DEPTH OUT	6975
DEPTH IN	6404
TOTAL DRILLED	571.00
TOTAL HOURS	20.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	1200	500
MUD WT	9.2	9.2	9.2
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	5

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6622	6975	D		100 % LIME STONE	90	30	1800	6.5		6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
6559	.59	312.43			6749	.54	333.59			6844	.35	8.55		

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRILL ACTUAL 6622-6975
				FUEL 75"
				F/W 1/4
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
70	DRILLPIPE STANDS	6655.64
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		7288.30

WT. OF STRING: 185000

JSA # RIG SERVICE

SEATS MIDDLE MOD #1 PUMP

SERVICED RIG

BIT RECORD

BIT NO.	6
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	DD507TX
SERIAL NO.	
JETS	7-20
TFA	2.1476
DEPTH OUT	
DEPTH IN	6404
TOTAL DRILLED	884
TOTAL HOURS	32.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	9.4	9.5	9.5
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	4SKS

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6975	7288							6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
6940	.18	298.54			7130	.35	303.56	7193						
7035	.35	338.74												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL F/ 6975- 7288
				OFF BTM 1775 PSI
				PU 190K
				SO 175K
				RO 186K

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180531_1AC

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	5/31/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 5/31/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	5.5	8.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	6.5	4.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
70	DRILLPIPE STANDS	6655.64
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		7288.30
WT. OF STRING	185000	

5 MSM TOH AND TIH

BIT RECORD

BIT NO.	6	7
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HUGHES	HUGHES
TYPE	DD507TX	VG-38 CH
SERIAL NO.		TH2262000
JETS	7-20	3-24s
TFA	2.1476	
DEPTH OUT	7335	
DEPTH IN	6404	7335
TOTAL DRILLED	931.00	
TOTAL HOURS	38	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	TRIP	TRIP
MUD WT	9.5		
GRADIENT			
FUNNEL VIS	29		
PV / YP			
GEL STR			
FLUID LOSS			
pH	9		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
7288	7335	D			90	35	2000	6.5	114	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2330	5.50	2	DRLG F/ 7288 TO 7335
2330	430	5.00	6	TOH FOR BIT
430	600	1.50	6	CHANGE OUT BIT TIH
				DEISEL 62
				FM 1/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
72	DRILLPIPE STANDS	6817.49
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		7450.15
WT. OF STRING	190000	

5 MIN. SAFETY- STAYING HYDRATED IN EXTREMELY HOT WEATHER

BIT RECORD

BIT NO.	7
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	VG-38 CH
SERIAL NO.	TH2262000
JETS	3-24s
TFA	
DEPTH OUT	
DEPTH IN	7335
TOTAL DRILLED	115
TOTAL HOURS	8

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1030	1430	1730
MUD WT	9.5	9.5	9.5
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	8.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
7335	7414	D		LIME-SHALE	100	45	2026	6.5	115	6.5						
7414	7450			50%-50%			1925				110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
7320	.18	294.74												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1000	4.00	6	TRIP IN HOLE
1000	1800	8.00	2	DRILL F/7335-7450
1800				
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180601_1AF

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/1/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/1/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.5	11.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		1.0
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY	0.5	
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
74	DRILLPIPE STANDS	6993
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		7625.66

WT. OF STRING 190000

5MSM PUMP REPAIRS CHANGE OUT SWABS AND 1 LINER ON

1 PUMP

BIT RECORD

BIT NO.	7
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	VG-38 CH
SERIAL NO.	TH2262000
JETS	3-24s
TFA	
DEPTH OUT	
DEPTH IN	7335
TOTAL DRILLED	290
TOTAL HOURS	19.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	9.5	9.5	9.4
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	3SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
7450	7625	D			100	48	1900	6.5	115	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
7415	.35	283.65												
7510	.35	263.28												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2015	2.25	2	DRLG F / 7450 TO 7478
2015	2030	0.25	10	DEVIATION SURVEY @ 7415 INC .35 AZM 283.65
2030	215	5.75	2	DRLG F/ 7478 TO 7573
215	230	0.25	10	DEVIATION SURVEY@ 7510 INC 0.35 AZM 263.28
230	600	3.50	2	DRLG F/ 7573 TO 7625
				DIESEL 51 1/2
				F/W FULL

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
75	DRILLPIPE STANDS	7131.58
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		7764.24

WT. OF STRING 194000

5 MIN. SAFETY-WORKING ON PUMPS JSA#MS-11

BIT RECORD

BIT NO.	7
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	VG-38 CH
SERIAL NO.	TH2262000
JETS	3-24s
TFA	
DEPTH OUT	7764
DEPTH IN	7335
TOTAL DRILLED	429
TOTAL HOURS	30.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1700
MUD WT	9.5	9.4	9.4
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	4 SX
GEL	50 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
7625	7764	D		SHALE-LIMESTONE	100	48	2000	6.5	115	6.5						
				80%-20%												

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
7606	.70	263.63												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1700	11.00	2	DRILL F/7625-7764
1700	1800	1.00	5	MIX SWEEP & PUMP SAME

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180602_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/2/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/2/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		11.75
3. REAMING	1.0	
4. CORING		
5. COND MUD & CIRC	2.25	
6. TRIPS	8.75	
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
2	N.M.D.C	30.41
	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
75	DRILLPIPE STANDS	7131.58
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		7764.24
WT. OF STRING	194000	

5MSM MIXING MUD AND TOH

BIT RECORD

BIT NO.	7	8
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HUGHES	HALIBURTON
TYPE	VG-38 CH	GT75DC
SERIAL NO.	TH2262000	13021147
JETS	3-24s	7 -16 s
TFA		
DEPTH OUT	7764	
DEPTH IN	7335	7764
TOTAL DRILLED	429	
TOTAL HOURS	30.5	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	1SK
SW CLAY	100 SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2015	2.25	5	PUMP SWEEP. CIRC
2015	0015	4.00	6	TOH FOR BIT
0015	500	4.75	6	M/U BIT TIH W
500	600	1.00	3	FILL PIPE WASH TO BOTTOM 30 FEET
				DIESEL 42
				FW 1/2

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
80	DRILLPIPE STANDS	7606.82
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		8239.48
WT. OF STRING	200000	

5 MIN. SAFETY- WORKING ON PUMPS

BIT RECORD

BIT NO.	8	
SIZE	12 1/4	
IADC CODE		
MANUFACTURER	HALIBURTON	
TYPE	GT75DC	
SERIAL NO.	13021147	
JETS	7 -16 s	
TFA		
DEPTH OUT		
DEPTH IN	7764	
TOTAL DRILLED	475	
TOTAL HOURS	11.75	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	9.4	9.4	9.6
GRADIENT			
FUNNEL VIS	29	29	32
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	5 SX
SW CLAY	28 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
7764	8239	D		SHALE-LIME	80	20	2135	6.5	114	6.5						
				60%-40%												

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
7796	0.5	232.5			7986	.70	218.28							
7860	0.53	226.40			8081	.88	250.11							

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1345	7.75	2	DRILL F/7664-8144
1345	1400	0.25	7	RIG SERVICE
1400	1800	4.00	2	DRILL F/8144-8239
				TEST C-O-M

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180603_1X

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/3/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/3/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	2.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		2.0
6. TRIPS		6.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		2.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
84	DRILLPIPE STANDS	7987
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		8619.66

WT. OF STRING 200000

5 MSMN PUMP REPAIRS LINERS AND SWABS AND PROPER PPE

BIT RECORD

BIT NO.	8
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT75DC
SERIAL NO.	13021147
JETS	7 -16 s
TFA	
DEPTH OUT	
DEPTH IN	7764
TOTAL DRILLED	855
TOTAL HOURS	23.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:00
MUD WT	9.6	9.6	9.4
GRADIENT			
FUNNEL VIS	32	32	31
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
8239	8619	D			80	20	2350	6.5	114	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
8271	0.9													
8366	0.7													

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRLG F/ 8239 TO 8619
				DIESEL 28
				F/W 1/2

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
85	DRILLPIPE STANDS	8022.46
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		8655.12

WT. OF STRING 200000

5 MIN. SAFETY- USE OF PIPE SPINNERS- JSA#THE-10

BIT RECORD

BIT NO.	8
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT75DC
SERIAL NO.	13021147
JETS	7 -16 s
TFA	
DEPTH OUT	8655
DEPTH IN	7764
TOTAL DRILLED	891.00
TOTAL HOURS	25.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	9.5		
GRADIENT			
FUNNEL VIS	31		
PV / YP			
GEL STR			
FLUID LOSS			
pH	9		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
8619	8655	D			80	29	2350	6.5	114	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
8557	0.5	252.9												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	800	2.00	2	DRILL F/8619-8655
800	1000	2.00	5	PUMP SWEEP
1000	1600	6.00	6	TRIP OUT OF HOLE
1600	1800	2.00	21	CHANGE OUT BIT & TOOLS

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180604_1AD

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/4/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	8	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/4/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	2.0	11.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	3.75	
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.75	
22.	4.5	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
84	DRILLPIPE STANDS	7987.27
2	DRILLPIPE SINGLES	62.26
KELLY DOWN		
TOTAL		8682.00

WT. OF STRING 200000

CK C.O.M OK BG

JSA # TH-22 P/U TOOLS F/ CATWALK

BIT RECORD

BIT NO.	8	9
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HALIBURTON	HALIBURTON
TYPE	GT75DC	GT750DC
SERIAL NO.	13021147	13021146
JETS	7 -16 s	7-16
TFA		
DEPTH OUT	8655	8682
DEPTH IN	7764	8655
TOTAL DRILLED	891.00	27.00
TOTAL HOURS	25.75	2

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	1200	500
MUD WT			9.5
GRADIENT			
FUNNEL VIS			30
PV / YP			
GEL STR			
FLUID LOSS			
pH			10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
8655	8682	D			80	25	2200	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1945	1.75	21	CHG OUT MTR & BIT
1945	2000	0.25	6	T.I.H
2000	0030	4.50	22	SHUT DOWN DUE TO LIGHTING & WIND BLOWING HOSES INTO BEAMS OF DERRICK
0030	400	3.50	6	T.I.H
400	600	2.00	2	BREAK CIRCULATION -DRLG 8655- 8682
				FUEL 76"
				F/W 1/4

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
88	DRILLPIPE STANDS	8367.80
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		9000.27

WT. OF STRING 200000

JSA WORKING ON PUMPS

CHANGED SPRING IN DISCHARGE # 1 PUMP

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	
DEPTH IN	8655
TOTAL DRILLED	345
TOTAL HOURS	13.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1800
MUD WT	9.7	9.5	9.4
GRADIENT			
FUNNEL VIS	32	32	30
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	3SKS

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
8682	9003	D			80	30	2250	6.5		6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
8651	.7	246.68	8714		8842	.53	253.35	8905						
8747	.53	259.24	8810											

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1745	11.75	2	DRILL F/ 8682 - 9003
1745	1800	0.25	7	RIG SERVICE

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180605_1AB

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/5/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/5/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.5	
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.5	3.5
6. TRIPS		8.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
90	DRILLPIPE STANDS	8567.55
	DRILLPIPE SINGLES	
KELLY DOWN		21
TOTAL		9221.02

WT. OF STRING 215000

JSA MAINT-2

CK C.O.M OK

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	9221
DEPTH IN	8655
TOTAL DRILLED	566.00
TOTAL HOURS	25.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1200	500
MUD WT	9.4	9.4	9.4
GRADIENT			
FUNNEL VIS	30	30	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	2

DRILLER BENNIE GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9003	9221	D			75	29	2200	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	530	11.50	2	DRILL ACTUAL 9003-9221
530	600	0.50	5	PUMP SWEEP TO T.O.O.H
				FUEL 62"
				F/W 1/4

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	CB YES/NO	YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
90	DRILLPIPE STANDS	8567.55
	DRILLPIPE STANDS	
KELLY DOWN		21
TOTAL		9221.02

WT. OF STRING 215000

JSA # TH-24 TRIPPING PIPE

CHECK C.O.M GOOD

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	9221
DEPTH IN	8655
TOTAL DRILLED	566.00
TOTAL HOURS	25.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600		
MUD WT	9.4		
GRADIENT			
FUNNEL VIS	32		
PV / YP			
GEL STR			
FLUID LOSS			
pH	9		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	50
LIME	4

DRILLER KEVIN DEW

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9221								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	930	3.50	5	CIRCULATE SWEEP
930	1800	8.50	6	TRIP OUT OF HOLE

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	CB YES/NO	YES/NO

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180606_1AH

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/6/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/6/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING	0.25	2.5
4. CORING		
5. COND MUD & CIRC		3.5
6. TRIPS	9.5	6.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.75	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	0.5	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
90	DRILLPIPE STANDS	8567.55
	DRILLPIPE SINGLES	
KELLY DOWN		21
TOTAL		9221.02

WT. OF STRING 215000

SAFETY=TRIPS-JSA-CUT D/L

CHECK TOPDRIVE ENGINE

BIT RECORD

BIT NO.	9	10
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HALIBURTON	HALIBURTON
TYPE	GT750DC	GT75DC
SERIAL NO.	13021146	13024221
JETS	7-16	
TFA		
DEPTH OUT	9221	
DEPTH IN	8655	9221
TOTAL DRILLED	566.00	
TOTAL HOURS	25.25	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL / DRILL REAM CORE / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9221		D			75	22		6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	6	T.O.O.H F/ BIT # 10
1915	1945	0.50	22	BREAK BIT # 9 & M/U BIT # 10
1945	2045	1.00	6	T.I.H
2045	2230	1.75	9	TEST MTR & CUT OFF DRILLING LINE
2230	145	3.25	6	FINNISH T.I.H
145	200	0.25	3	REAMING & WASH TIGHT HOLE F/ 7763-
200	600	4.00	6	WORK STUCK PIPE
				FUEL 55"
				F/W FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
90	DRILLPIPE STANDS	8567.55
	DRILLPIPE STANDS	
KELLY DOWN		21
TOTAL		9221.02

WT. OF STRING 215000

5 MSM TRIPPING PIPE

CHECK C.O.M GOOD

BIT RECORD

BIT NO.	10	
SIZE	12 1/4	
IADC CODE		
MANUFACTURER	HALIBURTON	
TYPE	GT75DC	
SERIAL NO.	13024221	
JETS		
TFA		
DEPTH OUT		
DEPTH IN	9221	
TOTAL DRILLED		
TOTAL HOURS		

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1300	1730
MUD WT	TRIP	9.3+	9.4
GRADIENT			
FUNNEL VIS		32	32
PV / YP			
GEL STR			
FLUID LOSS			
pH		9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	15SKS
LIME	2SKS

DRILLER KEVIN DEW

DEPTH INTERVAL / DRILL REAM CORE / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9221								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	930	3.50	6	WORK STUCK PIPE
930	1200	2.50	3	REAMING F / 7957-8237
1200	1300	1.00	6	TIH
1300	1430	1.50	6	WORK STUCK PIPE
1430	1800	3.50	5	CONDITION MUD & CIRCULATE / RIG SERVICE

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180607_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/7/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/7/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	3.25	
3. REAMING	0.75	
4. CORING		
5. COND MUD & CIRC	7.0	0.5
6. TRIPS	1.0	10.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		1.5
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
1	STRING STABILIZER	5.17
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE SINGLES	
KELLY DOWN		8
TOTAL		9292.47

WT. OF STRING 215000

CK C.O.M OK-SAFETY MIX MUD

JSA # TH-24 T.O.O.H

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT75DC
SERIAL NO.	13024221
JETS	7/16'S
TFA	
DEPTH OUT	9292
DEPTH IN	9221
TOTAL DRILLED	71.00
TOTAL HOURS	3.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	1200	500
MUD WT	9.4	9.4	9.4
GRADIENT			
FUNNEL VIS	32	32	32
PV / YP			
GEL STR			
FLUID LOSS			
pH	9.5	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	30
PAC	10
LIME	5

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9221	9292	D		100 % SHALE	80	20	2175	6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2345	5.75	5	CONDITION MUD & CIRCULATE
2345	0030	0.75	3	REAMING 9177-9221
0030	345	3.25	2	DRILL ACTUAL 9221- 9292
345	445	1.00	6	SET MOUSEHOLE & SINGLE STAND BACK
445	600	1.25	5	PUMP SWEEP & CIRCULATE BOTTOMS UP
600				
				FUEL 46"
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE STANDS	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING 215000

JSA # 25 TRIPPING PIPE

BIT RECORD

BIT NO.	10	11
SIZE	12 1/4	12 1/4
IADC CODE		
MANUFACTURER	HALIBURTON	HALLIBURTON
TYPE	GT75DC	GT75DC
SERIAL NO.	13024221	12972847
JETS	7/16'S	7/16S
TFA		
DEPTH OUT	9292	
DEPTH IN	9221	9292
TOTAL DRILLED	71.00	
TOTAL HOURS	3.25	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	TRIP
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	5	CIRC SWEEP
630	1530	9.00	6	TOH
1530	1700	1.50	21	WAIT ON ORDERS
1700	1800	1.00	6	MAKE UP BHA

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180608_1Z

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/8/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/8/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		6.5
4. CORING		
5. COND MUD & CIRC	5.5	2.25
6. TRIPS	1.5	1.75
7. LUBRICATE RIG		0.5
8. REPAIR RIG	2.0	1.0
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	3.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY
(OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE SINGLES	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING 215000

5 MSM TIH AND MIXING MUD

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	50 SX
LIME	7 SX
NOVA PAC R	10SX

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	6	TIH W DCs AND 13 STDS DP
1930	2130	2.00	8	CHANGE OUT RADIATOR ON # 2 FLOOR MOTOR
2130	0030	3.00	21	CHANGE DIES & SAVER SUB ON TOPDRIVE
0030	600	5.50	5	MIX MUD IN WORKING PITS//BRING UP VIS
				DIESEL=40"

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE STANDS	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING 215000

5 MIN. SAFETY-MIXING MUD JSA#MS 4

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1130	1630	1730
MUD WT	9.6	9.7	9.7
GRADIENT			
FUNNEL VIS	37	43	43
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	14 SX
XANTHAM GUM	16 SX
ISO-DRILL	1
PAC	8 SX
SW CLAY	15 SX

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
6842	8621	R			85	5	2095	6.5		6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	815	2.25	5	MIXING MUD IN PITS
815	1000	1.75	6	TRIP IN HOLE (TAGGED @6842)
1000	1415	4.25	3	REAMING F/6842-7860
1415	1445	0.50	7	RIG SERVICE
1445	1530	0.75	3	REAMING F/7860-8145
1530	1630	1.00	8	REPAIR RIG (CHANGE OUT WASHPIPE & PACKING)
1630	1800	1.50	3	REAMING F/8145-8621

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180609_1P

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/9/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/9/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING	3.0	
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		3.0
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	9.0	9.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE SINGLES	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING 215000

5MSM PREASURE WASHER

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	9.7	9.7	9.7
GRADIENT			
FUNNEL VIS	43	43	43
PV / YP			
GEL STR			
FLUID LOSS			
pH	9	9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
8621	9292	R			85			6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	3	REAM TO BOTTOM F/ 8621 TO 9285
2100	600	9.00	21	WORK STUCK PIPE
				DIESEL 33
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE STANDS	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING 215000

5 MIN. SAFETY-WORKING STUCK PIPE JSA#OP19

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	10 SX
SW CLAY	35 SX
BARITE	40 SX
XANTHAM GUM	12 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1500	9.00	21	WORK STUCK PIPE
1500	1800	3.00	11	RIG UP WIRELINE TRUCK

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour.us.all.2sht Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180610_1T

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/10/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 6/10/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	5.75	6.75
6. TRIPS		5.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	6.25	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE SINGLES	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING: 215000

5MSM AIR HOIST OPERATIONS AND OVER HEAD HAZARDS

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME		
MUD WT		
GRADIENT		
FUNNEL VIS		
PV / YP		
GEL STR		
FLUID LOSS		
pH		
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT
XAN D	8 SX
NOVA WEIGHT	100 SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	15	6.25	21	RUN IN W/ WIRE LINE AND FREE POINT AND BACK OFF @ 8880
				AND RIG DOWN
15	600	5.75	5	CONDITION MUD & CIRCULATE
				DIESEL 27
				F/W 1/2
				TANKS IN BACK YARD 6 / 1/2 FULL F/W // 1/ 1/2 MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	JUNK BASKET	6.75
1	MOTOR	27.36
1	STRING STABILIZER	5.31
1	U.B.H.O	2.89
1	N.M.D.C	30.41
1	N.M.D.C	29.74
3	8INCH DC	84.90
1	XO	1.57
15	6" DC	443.62
91	DRILLPIPE STANDS	8652
	DRILLPIPE STANDS	
KELLY DOWN		8
TOTAL		9294.05

WT. OF STRING: 215000

5 MIN. SAFETY- GOOD HOUSEKEEPING

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230
MUD WT	9.7	9.7
GRADIENT		
FUNNEL VIS	41	45
PV / YP		
GEL STR		
FLUID LOSS		
pH	9.5	9.5
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT
XAN D	10 SX
NOVA WEIGHT	100 SX
LIME	10 SX

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1245	6.75	5	CONDITION MUD & CIRCULATE
1245	1800	5.25	6	TRIP OUT OF HOLE
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180611_1O

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/11/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/11/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	8.0	8.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.5	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING	2.5	2.25
20. DIR. WORK		
21.		1.0
22.		0.5
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5MSM TOH AND CUTTING DRILLING LINE

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALLIBURTON
TYPE	GT75DC
SERIAL NO.	12972847
JETS	7/16S
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1830	0.50	6	TOH L/D 1 DC
1830	2245	4.25	6	P/U FISHING TOOLS AND 5/ 6 INCH DCS AND 5 STDS DP
2245	15	1.50	9	CUT DRILLING LINE
15	330	3.25	6	TIH 89 STDS
330	600	2.50	19	LATCH ON TO FISH AND JAR
				DIESEL 75 1/2
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5 MIN. SAFETY-TRIPPING PIPE

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	50 SX
NOVA PAC R	2 SX

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	815	2.25	19	JARRING
815	1630	8.25	6	TRIP OUT OF HOLE
1630	1730	1.00	21	LAYDOWN FISHING TOOLS, 1-DC
1730	1800	0.50	22	SERVICE TOPDRIVE (CHANGE OIL IN GENERATOR MOTOR)
				SET & TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180612_1AE

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/12/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/12/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		1.0
3. REAMING	1.75	3.5
4. CORING		
5. COND MUD & CIRC		7.5
6. TRIPS	9.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	1.25	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	BIT SUB	3.17
1	8INCH DC	28.01
1	IBS	
2	8INCH DC	56.80
1	IBS	
1	XO	1.57
18	6" DC	527.99
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	619.04

WT. OF STRING

CK C.O.M OK

JSA # TH-24 T.I.H

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	22	SERVICE TOP DRIVE
1915	2215	3.00	6	FINNISH T.O.O.H L/D DIR TOOLS
2215	245	4.50	6	TRIPS M/U BIT#9 & BIT SUB,T.I.H
245	315	0.50	3	REAM & WASH F/6325-6336
315	330	0.25	6	T.I.H
330	400	0.50	3	REAMING 6838-6905
400	445	0.75	6	TRIPS
445	530	0.75	3	REAMING 8173-8331
530	600	0.50	6	T.I.H
				FUEL 69"
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	BIT SUB	3.17
1	8INCH DC	28.01
1	IBS	
2	8INCH DC	56.80
1	IBS	
1	XO	1.57
18	6" DC	527.99
91	DRILLPIPE STANDS	8652.67
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	9271.71

WT. OF STRING

JSA #MS4 - TH24 REAMING - CONDITIONING MUD

CHECH C.O.M GOOD

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	
DEPTH IN	9292
TOTAL DRILLED	3
TOTAL HOURS	1

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	REAMING 9.7		9.8
GRADIENT			
FUNNEL VIS		42	43
PV / YP			
GEL STR			
FLUID LOSS		50	50
pH		9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9292	9295	D			90	20	1800	6.5	100	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	930	3.50	3	REAMING 8426 - 9290
930	1700	7.50	5	CONDITION MUD & CIRCULATE
1700	1800	1.00	2	DRILL F/9292- 9295

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180613_1AD

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/13/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/13/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	5.0	
3. REAMING		
4. CORING		
5. COND MUD & CIRC	5.25	
6. TRIPS	1.75	11.5
7. LUBRICATE RIG		0.5
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD

CUMULATIVE ROTATING HOURS

DAILY MUD COST

TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	BIT SUB	3.17
1	8INCH DC	28.01
1	IBS	
2	8INCH DC	56.80
1	IBS	
1	XO	1.57
18	6" DC	527.99
91	DRILLPIPE STANDS	8652.67
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		7
TOTAL		9310.42

WT. OF STRING

CK C.O.M OK

JSA #TH-25 T.O.O H

BIT RECORD

BIT NO.	9
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HALIBURTON
TYPE	GT750DC
SERIAL NO.	13021146
JETS	7-16
TFA	
DEPTH OUT	9310
DEPTH IN	9292
TOTAL DRILLED	18.00
TOTAL HOURS	6

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	0000	TRIP
MUD WT	9.8	9.87	
GRADIENT			
FUNNEL VIS	44	48	
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	9.5	
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	15
GEL	35
BARITE	60
SODA ASH	2
NOVA PAC R	5

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9295	9310	D			90	35	1700	6.5		6.5	100					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	2	DRILL ACTUAL 9295-9298
1815	1915	1.00	5	REPAIR INJECTOR LINE ON #1 PUMP & CIRC W/# 2 @ IDLE DUE TO BAD RAD.CAP
1915	0000	4.75	2	DRILL ACTUAL 9298- 9310
0000	415	4.25	5	MIX SWEEP/PUMP IT & CIRCULATE SWEEP OUT
415	600	1.75	6	T.O.O.H
				FUEL 59 1/2" F/W FULL

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		717.01

WT. OF STRING

JSA# TH-25

BIT RECORD

BIT NO.	9	10
SIZE	12 1/4	12 1/4
IADC CODE		5 4 7
MANUFACTURER	HALIBURTON	BAKER
TYPE	GT750DC	VG-38CH
SERIAL NO.	13021146	5280902
JETS	7-16	3/20S
TFA		
DEPTH OUT	9310	
DEPTH IN	9292	9310
TOTAL DRILLED	18.00	
TOTAL HOURS	6	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9310								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	6	TOH
1030	1130	1.00	6	WAIT ON ORDERS/ RIG SERVICE
1130	1200	0.50	7	RIG SERVICE
1200	1515	3.25	6	MAKE UP BHA
1515	1800	2.75	6	TIH

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180614_1AE

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/14/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/14/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	9.75	12.0
3. REAMING	0.25	
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	2.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
91	DRILLPIPE STANDS	8653.15
	DRILLPIPE SINGLES	
KELLY DOWN		18
TOTAL		9388.16
WT. OF STRING	220000	

CK C.O.M OK

JSA # TH-24 T.I.H

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	9388
DEPTH IN	9310
TOTAL DRILLED	78.00
TOTAL HOURS	9.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	2030	0000	530
MUD WT	9.8	9.8	9.8
GRADIENT			
FUNNEL VIS	48	52	51
PV / YP			
GEL STR			
FLUID LOSS	15	15	15
pH	9.5	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	10
NOVA PAC R	20
ISO-DRILL	2

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9310	9388	D		80% SHALE 20 % L.S	75	40		6.5	110	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
9307	.70	254.30												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	6	FINNISH T.I.H
2000	2015	0.25	3	REAM & WASH TO BTM 9300-9310
2015	600	9.75	2	DRILL ACTUAL 9310-9388
				FUEL 50"
				F/W1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
92	DRILLPIPE STANDS	8748.34
1	DRILLPIPE STANDS	31.70
KELLY DOWN		
TOTAL		9497.05
WT. OF STRING	220000	

JSA MS 4 / 95

PUT 7" LINERS AND SWABS #1 PUMP

CHANGED LIGHT PLANTS

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	
DEPTH IN	9310
TOTAL DRILLED	187
TOTAL HOURS	21.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	9.7	9.8	1730
GRADIENT			
FUNNEL VIS	47	46	44
PV / YP			
GEL STR			
FLUID LOSS	8	8	10
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	10 SKS
PAC	3
LIME	10
BARITE	8SKS
ISO-DRILL	10 GAL

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9388	9497				75	50	2350	6.5	110	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
9402	.07	251.88	9465											

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL F/ 9388 -9497

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180615_1AB

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/15/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	JEFFREY KENT MCCRAW

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/15/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.75	12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.25	
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
92	DRILLPIPE STANDS	8843
1	DRILLPIPE SINGLES	31.70
KELLY DOWN		20
TOTAL		9611.71

WT. OF STRING 220000

CK C.O.M OK

JSA # MAINT-2 PRESSURE WASHING

REPLACED VALVE ON # 1 PUMP (MIDDLE SUCTION)

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	9611
DEPTH IN	9310
TOTAL DRILLED	301.00
TOTAL HOURS	33.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	0000	0500
MUD WT	9.8	9.8	9.8
GRADIENT			
FUNNEL VIS	44	45	46
PV / YP			
GEL STR			
FLUID LOSS	8	8	8
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	10
GEL	60
ISO-DRILL	2

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9388	9611	D			75	50	2550	7	95	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	300	9.00	2	DRILL ACTUAL 9388-9588
300	315	0.25	5	CIRCULATE WITH # 2 PUMP & WORK STRING WHILE FIXING # 1 PUMP
315	600	2.75	2	DRILL ACTUAL 9588-9611
				FUEL 37"
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
94	DRILLPIPE STANDS	8938.66
2	DRILLPIPE STANDS	63.52
KELLY DOWN		10
TOTAL		9729.19

WT. OF STRING 220000

JSA #95 -MAINT-2

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	
DEPTH IN	9310
TOTAL DRILLED	419
TOTAL HOURS	45.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	1730
MUD WT	9.8	9.8	9.8
GRADIENT			
FUNNEL VIS	42	44	46
PV / YP			
GEL STR			
FLUID LOSS	8	9	9
pH	10	9.5	9.5
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	35SKS
WALNUT	5
ISO-DRILL	10GAL
LIME	17SKS

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9611	9730	D			75	50	2300	7	90	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
9592	.79	245.72	9655											

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL F/ 9611- 9730

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180616_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/16/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/16/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	1.75	
3. REAMING		
4. CORING		
5. COND MUD & CIRC	3.0	
6. TRIPS	6.25	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		8.0
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.0	2.0
22.		2.0
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
95	DRILLPIPE STANDS	9022
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		9739.01

WT. OF STRING 220000

5MSM MIXING MUD AND TOH

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	
DEPTH IN	9310
TOTAL DRILLED	429
TOTAL HOURS	47.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	TRIP
MUD WT	9.9	
GRADIENT		
FUNNEL VIS	44	
PV / YP		
GEL STR		
FLUID LOSS		
pH	9	
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT
NOVA WEIGHT	112 SX
SW CLAY	15 SX
ISO-DRILL	5 GAL

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9730	9739	D			75	50	2200	7	90	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1945	1.75	2	DRLG F/9730 TO 9739
1945	2245	3.00	5	PUMP SWEEP & CIRCULATE AND PUMP SLUG
2245	500	6.25	6	TOH
500	600	1.00	21	WAIT ON WIRE LINE
				DIESEL 25 1/2 2229.20 ///1449.54 USED
				F/W 1/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	8INCH DC	84.81
1	XO	1.57
18	6" DC	527.99
95	DRILLPIPE STANDS	9022
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		9739.01

WT. OF STRING 220000

5 MIN. SAFETY-RIGGING UP WIRELINE TRUCK

PUT 6.5" LINERS BACK IN #1 PUMP

BIT RECORD

BIT NO.	10
SIZE	12 1/4
IADC CODE	5 4 7
MANUFACTURER	BAKER
TYPE	VG-38CH
SERIAL NO.	5280902
JETS	3/20S
TFA	
DEPTH OUT	
DEPTH IN	9310
TOTAL DRILLED	429
TOTAL HOURS	47.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME		
MUD WT		
GRADIENT		
FUNNEL VIS		
PV / YP		
GEL STR		
FLUID LOSS		
pH		
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	800	2.00	21	WAIT ON WIRELINE
800	900	1.00	11	RIG UP LOGGING TRUCK
900	1530	6.50	11	WIRELINE LOGS
1530	1600	0.50	11	RIG DOWN LOGGING TRUCK
1600	1800	2.00	22	WAIT ON ORDERS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180617_1AI

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/17/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/17/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	3.5	2.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	4.75	5.75
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.75	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.0	2.75
22.	1.0	0.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.81
1	XO	1.57
18	6" DC	527.99
95	DRILLPIPE STANDS	9029
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		9746.01

WT. OF STRING

5 MSM TIH AND CUTTING DRILLING LINE

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	7
TOTAL HOURS	3.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	12:00	5:30
MUD WT		9.9	9.9
GRADIENT			
FUNNEL VIS		44	44
PV / YP			
GEL STR			
FLUID LOSS			
pH		9	9
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9739	9746	D			75	40	2200	6.5	115	6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	21	WAIT ON ORDERS
1900	2045	1.75	6	M/U BIT TIH W/ DCs AND 8 STDS DP
2045	2230	1.75	9	CUT OFF DRILLING LINE
2230	130	3.00	6	TIH FILL PIPE
130	230	1.00	22	DOWN LINK AND TROUBLE SHOOT MWD TOOL
230	600	3.50	2	DRLG F/ 9739 TO 9746
				DIESEL 73 8329.06
				F/W 1/2
				6 HALF FULL IN BACK YARD

TOUR 1	FROM 1800	TO 600				INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO	

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.81
1	XO	1.57
18	6" DC	527.99
95	DRILLPIPE STANDS	9029
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		9746.01

WT. OF STRING

5 MIN SAFETY- TRIPPING PIPE

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	7
TOTAL HOURS	3.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	10		
GRADIENT			
FUNNEL VIS	47		
PV / YP			
GEL STR			
FLUID LOSS			
pH	9		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
NOVA WEIGHT	10 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9746	9750	D			75	55	2185	6.5	115	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	845	2.75	2	DRILL F/9746-9750
845	1415	5.50	6	PUMP SLUG & TRIP OUT OF HOLE (HAVE AN 8" DC WASHED & CRACKED 3/4 AROUND)
1415	1700	2.75	21	WAIT ON WELDER
1700	1745	0.75	22	CLOSED HYDRILL AND WELD ON CRACKED DRILL COLLAR
1745	1800	0.25	6	LAYDOWN 2 BAD 8" DC'S
1800				
				TEST C-O-M

TOUR 2	FROM 600	TO 1800				INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO	

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180618_1AA

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/18/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/18/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		8.75
3. REAMING		0.5
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	12.0	2.75
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.81
1	XO	1.57
18	6" DC	527.99
95	DRILLPIPE STANDS	9029
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		9746.01

WT. OF STRING

SAFETY MEETING LAYING DOWN AND PICKING UP DC'S

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	7
TOTAL HOURS	3.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2130	3.50	6	TOH L/D 1 CRACKED 8 INCH DC, 1 WITH BAD THREADS,AND MOTOR (WORK BLINE RAMS)
2130	600	8.50	6	P/U MTR, BIT AND ADJUST BEND, INSPECT COLLARS TIH
				DIESEL65/1/2
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.18
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9188
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		9785.56

WT. OF STRING 221000

5MIN. SAFETY- TRIPPING IN HOLE

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	46
TOTAL HOURS	12.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	915	1330	1730
MUD WT	10	10	10
GRADIENT			
FUNNEL VIS	43	47	46
PV / YP			
GEL STR			
FLUID LOSS		6.5	10
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	25 SX
LIME	5 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9751	9784	D		SHALE-LIME	85	46	2375	6.5		6.5	108					
				95%-5%												

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	845	2.75	6	TRIP IN HOLE
845	915	0.50	3	WASH 60' TO BOTTOM
915	1800	8.75	2	DRILL F/9751-9784
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180619_1AB

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/19/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/19/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD

CUMULATIVE ROTATING HOURS

DAILY MUD COST

TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.18
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9097
1	DRILLPIPE SINGLES	31.69
KELLY DOWN		
TOTAL		9726.25

WT. OF STRING 221000

5MSM BOP PROCEDURES AND PRESURE WASHER

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	87
TOTAL HOURS	24.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	9.9	9.9	9.9
GRADIENT			
FUNNEL VIS	43	44	45
PV / YP			
GEL STR			
FLUID LOSS	22	24	32
pH	9.5	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	40 SX
LIME	3 SX

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9785	9826	D			85	46	2325	6.5		6.5	108					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
9758	1.06	244.20												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRLG F/ 9785 TO 9826
				DIESEL 53 1/2 5880.46 /// 1553.92 USED
				F/W 1/2
				TANKS IN BACK YARD 6 HALF FULL
				SPR # 2 51 STKS 570

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.18
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE STANDS	47
KELLY DOWN		
TOTAL		9868.48

WT. OF STRING 223000

SAFETY MEETING-CLEANING RIG

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	
DEPTH IN	9739
TOTAL DRILLED	129
TOTAL HOURS	36.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	10	10	9.9
GRADIENT			
FUNNEL VIS	43	50	45
PV / YP			
GEL STR			
FLUID LOSS	50	60	60
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	10 SX
LIME	11 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9826	9868	D		LIME-SHALE	85	46	2325	6.5		6.5	108					
				60%-40%												

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL F/9826-9868
				TEST C-O-M
				SPR #1-570 PSI @50 SPM 10 WT @9834
				SPR #2-560 PSI @50 SPM 10 WT @9847

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180620_1X

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/20/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 6/20/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	0.25
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.5
6. TRIPS		10.75
7. LUBRICATE RIG		0.5
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
3	3-8" D.C	84.18
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE SINGLES	63.15
KELLY DOWN		21
TOTAL		9905.63

WT. OF STRING

JSA # R/UD-4

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	9905
DEPTH IN	9739
TOTAL DRILLED	166.00
TOTAL HOURS	48.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	615	1200	500
MUD WT	9.8	9.8	
GRADIENT			
FUNNEL VIS	44	44	
PV / YP			
GEL STR			
FLUID LOSS	15	14	
pH	10.5	10	
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	12
GEL	24
ISO-DRILL	1

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9868	99.5	D			85	46	2330	6.5		6.5	110					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRILL ACTUAL 9868-9905
				FUEL 40"4073 GAL
				YESTERDAY 53 1/2 5880.46 GAL
				USED 1807.46 GAL
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
4	8INCH DC	114.98
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE STANDS	63.15
KELLY DOWN		21
TOTAL		9936.43

WT. OF STRING

SM TRIPPING PIPE

BIT RECORD

BIT NO.	11
SIZE	12 1/4
IADC CODE	5 2 7
MANUFACTURER	BAKER
TYPE	GX-20CH
SERIAL NO.	5280141
JETS	3-22s
TFA	
DEPTH OUT	9905
DEPTH IN	9739
TOTAL DRILLED	166.00
TOTAL HOURS	48.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	1200	
MUD WT	TRIP	TRIP	
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9905	9905							6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	615	0.25	2	DRILL F/ 9905- 9905
615	645	0.50	5	SLUG PIPE
645	1230	5.75	6	TOH
1230	1300	0.50	6	WAIT ON ORDERS/RIG SERVICE
1300	1330	0.50	7	RIG SERVICE
1330	1800	4.50	6	PICK UP 8" COLLARS / WAIT ON FISHER MAN

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180621_1R

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/21/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/21/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	8.5	11.25
7. LUBRICATE RIG		0.75
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING	0.5	
20. DIR. WORK		
21.	3.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
4	8INCH DC	114.98
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE SINGLES	63.15
KELLY DOWN		21
TOTAL		9936.43

WT. OF STRING 220000

JSA SM-PINCH POINTS-100% TIEOFF

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9904								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	21	WO. FISHERMAN & M/U MAGNET
2100	300	6.00	6	TIH/PU 1 STAND DP
300	330	0.50	19	CIRCULATE & TAG
330	600	2.50	6	TOH
				FW 3/4 FULL
				DEISEL 37"-3417 GAL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
4	8INCH DC	114.98
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE STANDS	63.15
KELLY DOWN		21
TOTAL		9936.43

WT. OF STRING 220000

JSA SM-HYDRATION/PPE

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9905								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	930	3.50	6	TOH
930	945	0.25	6	CLEAN MAGNET
945	1400	4.25	6	TIH
1400	1430	0.50	6	WORK FISH
1430	1515	0.75	7	RIG SERVICE
1515	1800	2.75	6	TOH
1800				
				CHECK C.O.M GOOD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180622_1AA

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/22/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/22/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	2.0	
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	7.75	9.25
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		2.5
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.25	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
4	8INCH DC	114.98
1	XO	1.57
14	6" DC	409.17
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE SINGLES	63.15
KELLY DOWN		21
TOTAL		9936.43

WT. OF STRING 220000

JSA SM-PPE/FORKLIFT OPERATIONS

BIT RECORD

BIT NO.	12
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	VG38CH
SERIAL NO.	5279313
JETS	3/22z
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER CHARLES FANNIN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9905	9908							6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	6	TOH W/REST OF CONES
2100	2300	2.00	21	WO. ORDERS-- LD MAGNET/PU MILL & JUNK BASKET
2300	300	4.00	6	-TIH/
300	500	2.00	2	MILL 9905-9908
500	515	0.25	21	SLUG PIPE
515	600	0.75	6	TOH
				FW 3/4 FULL
				DEISEL-30 1/2 INCHES=2842 GAL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	
2	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		1089.13

WT. OF STRING 220000

JSA TRIPPING PIPE

BIT RECORD

BIT NO.	12
SIZE	12.25
IADC CODE	
MANUFACTURER	HUGHES
TYPE	VG38CH
SERIAL NO.	5279313
JETS	3/22z
TFA	
DEPTH OUT	
DEPTH IN	9908
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9908								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1015	4.25	6	TOH
1015	1100	0.75	6	BREAK DOWN FISHING TOOLS
1100	1130	0.50	6	MAKE UP BHA
1130	1515	3.75	6	TIH PICK UP COLLARS / HWDP
1515	1530	0.25	7	RIG SERVICE
1530	1800	2.50	9	CUT OFF DRILLING LINE /SURFACE TEST MWD GOOD
				BHA 104 K

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180623_1AC

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/23/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/23/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	8.0	
3. REAMING	1.0	
4. CORING		
5. COND MUD & CIRC		2.0
6. TRIPS	3.0	9.5
7. LUBRICATE RIG		0.5
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12.25 BIT	1.50
1	MOTOR	27.55
1	STAB	5.38
1	U.B.H.O	2.89
2	MONEL	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
93	DRILLPIPE STANDS	8843.46
	DRILLPIPE SINGLES	
KELLY DOWN		18
TOTAL		9950.59

WT. OF STRING 240000

JSA #ES-5

CK C.O.M OK

BIT RECORD

BIT NO.	12	
SIZE	12.25	
IADC CODE		
MANUFACTURER	HUGHES	
TYPE	VG38CH	
SERIAL NO.	5279313	
JETS	3/22z	
TFA		
DEPTH OUT	9950	
DEPTH IN	9908	
TOTAL DRILLED	42.00	
TOTAL HOURS	8	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	1200	500
MUD WT		10	9.8
GRADIENT			
FUNNEL VIS		60	42
PV / YP			
GEL STR			
FLUID LOSS		8	8
pH		10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	15

DRILLER BENNIE GARCIA

DEPTH INTERVAL

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9908	9950	D			65	40	2100	6.5	100	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
9869	1.06	247.74												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	6	T.I.H
2100	2200	1.00	3	REAM& WASH F/9745-9908
2200	600	8.00	2	DRILL ACTUAL 9908-9950
				FUEL 25" 2169.64 GAL
				YESTERDAY 30 1/2" 2842 GAL
				USED 672.36 GAL
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 CORE BIT	1.34
1	STAB	3.00
1	CORE TUBE	27.00
1	STAB	3.13
1	JAR	8.23
1	XO	1.0
14	6" DC	408.97
12	H.W.D.P.	368.78
93	DRILLPIPE STANDS	8843.46
	DRILLPIPE STANDS	
KELLY DOWN		18
TOTAL		9682.91

WT. OF STRING 240000

JSA TRIPPING PIPE

BIT RECORD

BIT NO.	12	1
SIZE	12.25	8.5
IADC CODE		
MANUFACTURER	HUGHES	DF
TYPE	VG38CH	713
SERIAL NO.	5279313	1903-02
JETS	3/22z	7X14
TFA		
DEPTH OUT	9950	
DEPTH IN	9908	9950
TOTAL DRILLED	42.00	
TOTAL HOURS	8	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	600	
MUD WT	9.8	
GRADIENT		
FUNNEL VIS	41	
PV / YP		
GEL STR		
FLUID LOSS	8	
pH	10	
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER KEVIN DEW

DEPTH INTERVAL

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9950								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	800	2.00	5	PUMP SWEEP /CIRC OUT
800	1400	6.00	6	T.O.H
1400	1515	1.25	6	LAY DOWN MOTOR
1515	1545	0.50	7	RIG SERVICE
1545	1715	1.50	6	MAKE UP CORE TUBES/ 5MSM MAKE UP CORE TOOLS
1715	1800	0.75	6	TIH
				CORE BHA =824.45

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180624_1V

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/24/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/24/2018

Well Name & No. NAVAJO WDW 4

Company PATRIOT DRILLING LLC

Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	4.5	
3. REAMING		
4. CORING		1.5
5. COND MUD & CIRC	2.5	
6. TRIPS	5.0	6.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		2.0
22.		2.25
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 CORE BIT	1.34
1	STAB	3.00
1	CORE TUBE	27.00
1	STAB	3.13
1	JAR	8.23
1	XO	1.0
14	6" DC	408.97
12	H.W.D.P.	368.78
93	DRILLPIPE STANDS	8843.46
	DRILLPIPE SINGLES	
KELLY DOWN		18
TOTAL		9682.91

WT. OF STRING 240000

5MSM TIH

BIT RECORD

BIT NO.	1
SIZE	8.5
IADC CODE	
MANUFACTURER	DF
TYPE	713
SERIAL NO.	1903-02
JETS	7X14
TFA	
DEPTH OUT	
DEPTH IN	9950
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	12:00	5:30
MUD WT		10	10
GRADIENT			
FUNNEL VIS		42	42
PV / YP			
GEL STR			
FLUID LOSS			
pH		10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9950	9980	C	1		40	8	650	6.5	60	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2215	4.25	6	TIH WITH CORE BARRELS
2215	0045	2.50	5	CIRC. BOTTOMS UP
0045	515	4.50	2	DRLG// CORING F/ 9950 TO 9980
515	600	0.75	6	TOH
				DIESEL 13 1/2-- 925.72 GAL LEFT /// 1243.92 USED
				F/W 1/4
				TANKS IN BACK YARD// 6 HALF FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	IBS	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	IBS	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
93	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		1117.29

WT. OF STRING 240000

5MSM- TRIPPING OUT OF HOLE

BIT RECORD

BIT NO.	13
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	7164186
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	9980
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9980								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1015	4.25	6	TRIP OUT WITH CORE
1015	1215	2.00	21	DECROMPRESS CORE (SERVICE RIG & TOPDRIVE)
1215	1400	1.75	6	FINISH TRIP OUT W/CORE
1400	1530	1.50	4	LAYDOWN CORE & CORE BARRELS
1530	1745	2.25	22	PU/MU BHA
1745	1800	0.25	6	TRIP IN HOLE

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

tour_us.alt 2ahrlt Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180625_1AE

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/25/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/25/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	5.0	11.25
3. REAMING	1.5	
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	5.5	
7. LUBRICATE RIG		
8. REPAIR RIG		0.75
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	IBS	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	IBS	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
94	DRILLPIPE STANDS	8927
1	DRILLPIPE SINGLES	31.69
KELLY DOWN		
TOTAL		10075.98

WT. OF STRING 240000

5MSM TIH

BIT RECORD

BIT NO.	13
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	7164186
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	9980
TOTAL DRILLED	95
TOTAL HOURS	5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	TRIP	12:00	5:30
MUD WT		10	10
GRADIENT			
FUNNEL VIS		42	42
PV / YP			
GEL STR			
FLUID LOSS		16	
pH		10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
9980	10075	D			65	32	2700	6.5	110	6.5	105					

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2330	5.50	6	TIH
2330	100	1.50	3	REAM CORE SECTION F/ 9950 TO 9980
100	600	5.00	2	DRLG F/9980 TO 10075
600				
				DIESEL 64 1/2
				F/W 1/2
				TANKS IN BACK YARD 6 1/2 FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	STAB	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
94	DRILLPIPE STANDS	8927
1	DRILLPIPE STANDS	31.69
KELLY DOWN		
TOTAL		10075.98

WT. OF STRING 250000

5MSM- WORKING IN HOT WEATHER

BIT RECORD

BIT NO.	13
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	7164186
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	9980
TOTAL DRILLED	237
TOTAL HOURS	16

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1730
MUD WT	10	10	10
GRADIENT			
FUNNEL VIS	40	41	40
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	15 SX
SW CLAY	10 SX
WALNUT	10 SX

DRILLER RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10075	10217	D		LIME-SHALE	65	32	2550	6.5		6.5	105					
				98%-2%	80	12	2500		112							

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
10062	2.02	248.59												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1715	11.25	2	DRILL F/10075-10217
1715	1800	0.75	8	REPAIR RIG (CHANGE SWAB #1 PUMP) STUDS BROKE ON MODULE #2 PUMP

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180626_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/26/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/26/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.75	5.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		1.25
7. LUBRICATE RIG		0.5
8. REPAIR RIG	0.25	
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		4.5
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	STAB	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE SINGLES	63.36
KELLY DOWN		
TOTAL		10280.65

WT. OF STRING 250000

5MSM PUMP REPAIRS BROKEN BOLT ON #2 PUMP MODULE
AND SWAB ON #1 PUMP

BIT RECORD

BIT NO.	13
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	7164186
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	9980
TOTAL DRILLED	300
TOTAL HOURS	27.75

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00	12:00	5:30
MUD WT	10	10	10
GRADIENT			
FUNNEL VIS	40	40	40
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	10	10
SOLIDS			
	9100		

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10217	10280	D			80	12	2600	6.5	112	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
10157	2.3	247.1												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	8	CHANGE OUT SWAB # 1 /// CHANGING OUT BROKEN BOLTS ON MODULE # 2 PUMP
1815	600	11.75	2	DRLG F/ 10217 TO 10280
				DIESEL 51 INCHES ///5546.65
				F/W 1/2
				TANKS IN BACK YARD 6 HALF FULL
600				

TOUR 1	FROM 1800	TO 600					INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO		

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	STAB	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE STANDS	63.36
KELLY DOWN		
TOTAL		10280.65

WT. OF STRING 250000

5MSM-GREASNG THE BLOCKS

BIT RECORD

BIT NO.	13
SIZE	12 1/4
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TD507FTX
SERIAL NO.	7164186
JETS	7-20
TFA	
DEPTH OUT	
DEPTH IN	9980
TOTAL DRILLED	368
TOTAL HOURS	33.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1230	1700
MUD WT	10		
GRADIENT			
FUNNEL VIS	40		
PV / YP			
GEL STR			
FLUID LOSS			
pH	10		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LIME	16 SX
SW CLAY	60 SX
ISO-DRILL	4 CANS
LCF BLEND	5
WALNUT	10 SX

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10280		D			80	25		6.5	112	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.
10252	2.8	247.8												

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1130	5.50	2	DRILL F/10280-10341
1130	1200	0.50	7	RIG SERVICE
1200	1215	0.25	2	DRILL F/10341-10348
1215	1645	4.50	21	LOST RETURNS (WORK STUCK PIPE)
1645	1800	1.25	6	TRIP OUT OF HOLE
				TEST C-O-M OK

TOUR 2	FROM 600	TO 1800					INJURED THIS TOUR?	CB
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO		

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour_us.alt 2ahrft Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180627_1R

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/27/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/27/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		9.75
6. TRIPS	9.75	2.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	2.25	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	MOTOR	28.23
1	STAB	5.38
1	SHOCK SUB	27.48
1	U.B.H.O	2.89
1	N.M.D.C	60.15
1	STAB	5.17
7	8INCH DC	207.17
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE SINGLES	63.36
KELLY DOWN		
TOTAL		10280.65

WT. OF STRING 250000

5MSM TOH AND CUTTING DRILLING LINE

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL / DRILL REAM / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	100	7.00	6	TOH L/D 8 INCH COLLARS MWD TOOL BIT AND MTR WITH L/D LINE
100	345	2.75	6	TAKE OUT JETS IN BIT TIH 1660
345	600	2.25	9	CIRC. ///CUT OFF DRILLING LINE
				DIESEL 43
				F/W 1/2
600				

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	BIT SUB	3.16
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE STANDS	63.36
KELLY DOWN		
TOTAL		9947.34

WT. OF STRING 250000

5MSM-MIXING MUD

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
LCF BLEND	10 sx
LIME	15 sx
SW CLAY	150 sx
ISO-DRILL	6 CANS
MICA FINE	10 SX
MICA MED	10 SX
CAL-CARB	20 SX
CEDAR FIBER	10 SX

DRILLER
RICHARD W. MANN

DEPTH INTERVAL / DRILL REAM / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1515	9.25	5	CONDITION MUD & FILL PITS
1515	1645	1.50	6	TRIP OUT OF HOLE
1645	1730	0.75	6	TRIP IN HOLE OPEN ENDED (18 STD's -1712')
1730	1800	0.50	5	CONDITION MUD & WAIT ON WATER
				SET & TEST C-O-M

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180628_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/28/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date 6/28/2018
Well Name & No. NAVAJO WDW 4
Company PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.0	2.0
6. TRIPS	1.0	3.25
7. LUBRICATE RIG		
8. REPAIR RIG		6.75
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	10.0	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	BIT SUB	3.16
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE SINGLES	63.36
KELLY DOWN		
TOTAL		9947.34

WT. OF STRING 250000

CK C.O.M

JSA # TH-25 T.I.H

BIT RECORD

BIT NO.				
SIZE				
IADC CODE				
MANUFACTURER				
TYPE				
SERIAL NO.				
JETS				
TFA				
DEPTH OUT				
DEPTH IN				
TOTAL DRILLED				
TOTAL HOURS				

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME				
MUD WT				
GRADIENT				
FUNNEL VIS				
PV / YP				
GEL STR				
FLUID LOSS				
pH				
SOLIDS				

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BENNIE GARCIA

DEPTH INTERVAL / DRILL REAM / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10348								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2200	4.00	22	WAIT ON BRINE WATER
2200	2300	1.00	5	MIX L.C.M PILL
2300	500	6.00	22	STRAP 26 JNT 4 1/2" D.P & P/U TO REPLACE B.H.A
500	600	1.00	6	TIH OPEN ENDED TO 10250
600				
				DIESEL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	BIT SUB	3.16
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE STANDS	63.36
KELLY DOWN		
TOTAL		9947.34

WT. OF STRING 250000

JSA TRIPPING PIPE

BIT RECORD

BIT NO.				
SIZE				
IADC CODE				
MANUFACTURER				
TYPE				
SERIAL NO.				
JETS				
TFA				
DEPTH OUT				
DEPTH IN				
TOTAL DRILLED				
TOTAL HOURS				

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME				
MUD WT				
GRADIENT				
FUNNEL VIS				
PV / YP				
GEL STR				
FLUID LOSS				
pH				
SOLIDS				

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	50
LIME	4
MICA FINE	15
MICA MED	15
CAL CARB F/G	15

DRILLER
KEVIN DEW

DEPTH INTERVAL / DRILL REAM / CORE NO. / FORMATION (SHOW RECOVERY) / ROTARY TABLE SPEED / WEIGHT ON BIT / PUMP PRESSURE / PUMP NO. 1 / PUMP NO. 2 / PUMP NO. 3 / PUMP NO. 4 / TOTAL PUMP OUTPUT

FROM	TO	DRILL REAM	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10348								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	715	1.25	6	TIH OPEN ENDED TO 10250
715	1400	6.75	8	REPAIR RIG -WO AIR COMMPRSSER & MECHANIC
1400	1515	1.25	6	TIH OPEN ENDED TO 10250
1515	1545	0.50	5	PUMP LCM PILL
1545	1645	1.00	5	WAIT 1 HOUR ON PILL
1645	1715	0.50	5	PUMP 150 BBLS WBM
1715	1800	0.75	6	PICK UP STAND TAG @ 10348

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180629_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/29/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: CHARLES FANNIN

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 6/29/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	4.25	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	6.25	4.75
12. RUN CASING & CEMENT		7.25
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.	1.25	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	11.75	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	12 1/4 BIT	1.50
1	BIT SUB	3.16
1	XO	1.57
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9100
2	DRILLPIPE SINGLES	63.36
KELLY DOWN		
TOTAL		9947.34

WT. OF STRING: 250000

SM 100% TIEOFF

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10348								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	23	WAIT ON LIGHTING TO QUIT/SAFTY MANS ORDERS
1915	2330	4.25	6	T.O.O.H
2330	345	4.25	11	R/U LOGGERS & RUN 1ST RUN WIRELINE LOGS (LOGGER'S HOLE DEPTH 10,360')
400	600	2.00	11	START 2ND RUNWIRELINE LOGS
				F/W FULL
				FUEL 33" 3160.13 GAL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
DRILLPIPE STANDS		
DRILLPIPE STANDS		
KELLY DOWN		
TOTAL		

WT. OF STRING:

JSA RUNNING CASING

RIG SERVICE / CHECK SRT HOUSE/CHANGE LIGHT PLANTS

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	900	3.00	11	WIRELINE LOGS 2ND RUN
900	1045	1.75	11	RIG DOWN WIRE LINE
1045	1215	1.50	12	RIG UP LAYDOWN MACHAINE /RIG UP CASERS
1215	1315	1.00	12	SAFTEY MEETING / PICK UP PACKER / MAKE UP SHOE
1315	1800	4.75	12	RUN CASING 9 5/8 47

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180630_1T

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	6/30/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 6/30/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT	7.0	
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.25	
22.	1.0	
23.	2.75	12.0
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

5 MIN SAFETY MTG W/ T.P CO.MAN ,WSP SAFETY MAN

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	100	7.00	12	RUN 9 5/8 CASING
100	200	1.00	22	R/D CSG CREW & L/D MACH.
200	315	1.25	21	R/U HALIBURTON'S CMT HEAD
315	530	2.25	23	DROP & PUMPED DART TO OPEN PACKER ASSEMBLY
				LANDED DART & PRESSURED UP 1900#
530	600	0.50	23	WAIT ON PUMP TRUCK
				FUEL 19" 1486.24 GAL
				YESTERDAY 33" 3106.13 GAL
				USED 1621.89 GAL
				F/W FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

JSA CEMENTING

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1130	5.50	23	WAIT ON PUMP TRUCK
1130	1230	1.00	23	RIG UP PUMP TRUCK/ SAFTEY MEETING
1230	1500	2.50	23	PRESSURE UP TO OPEN PACKER
1500	1800	3.00	23	WAIT ON HALLABURTION

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180701_1Q

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/1/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/1/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	2.0	
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		3.25
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	10.0	8.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA #OP-3

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	22	R/U HALIBURTON'S IRON TO CMT HEAD/PRESS. TEST LINE'S TO 3000#/
1915	2115	2.00	5	TRY TO PRESS.UP & OPEN PACKER ASSEMBLY
2115	600	8.75	22	WAIT ON WIRELINE TRUCK
				FUEL 84" 9445 GAL
				YESTERDAY19"1486 GAL
				USED DONT KNOW HOW FUEL THEY BROUGHT TODAY

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA WIRE LINE # 0P -17/18

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	6:00
MUD WT	9.5
GRADIENT	
FUNNEL VIS	29
PV / YP	
GEL STR	
FLUID LOSS	
pH	9
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	715	1.25	22	WAIT ON WIRE LINE TRUCK
715	745	0.50	22	RIG UP WIRE LINE / SAFTEY MEETING
745	1015	2.50	11	WIRELINE LOGS
1015	1100	0.75	11	RIG DOWN WIRE LINE / HALIBURTION
1100	1800	7.00	22	WAIT ON ORDERS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180702_1N

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/2/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/2/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		5.5
13. WAIT ON CEMENT		3.5
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	3.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM JETTING OUT PITS

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	WAIT ON ORDERS ///HALIBURTON PUMP TRUCK AND CMT
				DIESEL 80.25 //9098.82
				F/W 1/2

TOUR 1	FROM 1800	TO 600				
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-CLEANING PITS

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	12	R/U HALLIBURTON
630	930	3.00	21	WAIT ON TRANSPORT
930	1430	5.00	12	CEMENT 9 5/8" CASING
1430	1800	3.50	13	WAIT ON CEMENT
				TAILGATE SAFETY MEETING W/ HALLIBURTON & SAFETY MAN

TOUR 2	FROM 600	TO 1800				
CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180703_1M

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/3/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/3/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		4.25
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT	12.0	7.75
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM MIXING MUD

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	50SX
FLORAGEL	50SX
ISO-DRILL	10 GAL
LIME	10SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	13	WAIT ON CEMENT
				DIESEL 73 1/2 8385.59
				F/W 1/2

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-SLIPS. TRIPS, & FALLS

SERVICED TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1345	7.75	13	WAIT ON CEMENT
1345	1500	1.25	11	R/U WIRELINE TRUCK
1500	1800	3.00	11	WIRELINE LOGS

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

tour.us.all.2ahrR Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180704_1Q

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/4/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/4/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.75	
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	1.0	
12. RUN CASING & CEMENT		0.5
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.75	8.0
22.	7.5	3.5
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM SCRUBBING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	11	WIRELINE LOGS AND RIG DOWN
1900	2045	1.75	5	R/U CIRCULATING SUB AND PUMP ON CSG (NO RETURNS)
2045	2230	1.75	21	WORK ONE JOINT OF CSG OUT OF HOLE AND L/D SECURE WELL
2230	600	7.50	22	WAIT ON ORDERS
				DIESEL 69// 7861.90
				F/W 1/2
				TANKS IN BACK YARD///3- F/W FULL///6-3/4 B/W

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-GOOD HOUSEKEEPING

SERVICED TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1400	8.00	21	WAIT ON ORDERS
1400	1430	0.50	12	R/U HALLIBURTON
1430	1800	3.50	22	WAIT ON TRANSPORT

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

tour_us.alt 2ahrfl Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180705_1S

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/5/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/5/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT	3.5	
13. WAIT ON CEMENT	6.0	12.0
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	2.5	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM SCRUBBING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2030	2.50	22	WAIT ON TRANSPORT
2030	00	3.50	12	PJSM // CMT CSG ////250 SX 16.4 WT 1.078 YIELD 4.51 GAL/ SK
00	600	6.00	13	R/D HALIBURTON ///WAIT ON CEMENT
				DIESEL 65 //7372.09
				F/W 1/2
				TANKS IN BACK YARD (3 F/W EMPTY) (6 B/W FULL)

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-WORKING IN HOT WEATHER

SERVICED TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	13	WAIT ON CEMENT
				PUMPED DOWN BACKSIDE TOOK 35 BBL TO FILL ANNULUS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180706_1S

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/6/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 432

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/6/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT	2.0	
14. NIPPLE UP B.O.P.		7.0
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	8.5	5.0
23.	1.5	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA #MAINT-3 CLEAN RIG

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	13	WAIT ON CEMENT
2000	2100	1.00	22	R/U WIRELINE TRUCK
2100	2230	1.50	23	RUN TEMP SURVEY
2230	2245	0.25	22	R/D WIRELINE TRUCK
2245	600	7.25	22	W.O.O.
				F/W FULL
				FUEL 61" 6864 GAL
				YESTERDAY 65" 7372 GAL
				USED 508 GAL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA #3 MAINT - CHANGEING OIL N MOTORS
CHANGE OIL # 2 LIGHT PLANT
CHANGE OIL # 2 FLOOR MOTOR
CHANGE OIL #1 FLOOR MOTOR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1100	5.00	22	W.O.O
1100	1500	4.00	14	NIPPLE DOWN B.O.P.
1500	1630	1.50	14	W.O.SLIP HAND
1630	1645	0.25	14	SAFTEY MEETING
1645	1800	1.25	14	HANG STACK / SET SLIPS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour.us.all.2shift Rev. 2 02/2018

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180707_1AF

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/7/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 708

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/7/2018

Well Name & No.: NAVAJO WDW 4

Company: PATRIOT DRILLING LLC

Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		1.25
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	2.5	8.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.	5.5	
15. TEST B.O.P.		
16. DRILL STEM TEST		0.5
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.5	
22.	1.5	
23.	1.0	2.0
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA # TH-24

CK C.O.M OK

BIT RECORD

BIT NO.	14
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TH2238800
SERIAL NO.	5281449
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1830	0.50	22	REMOVE BELL EXT.& INSTALL D.P ELEVARORS P/U 1 STAND & USE TO PUSH PLUG BELOW
				B-SECTION
1830	1930	1.00	23	CUT OFF 9 5/8 CSG & BEVLE
1930	2030	1.00	14	SET B.O.P DOWN ON B SECTION & NIPPLE UP B.O.P.
2030	2130	1.00	22	SHUT DOWN DUE TO LIGHTING
2130	200	4.50	14	NIPPLE UP B.O.P. (INSTALL H.C.R & CONNECT BACK TO CHOKE MANIFOLD,
				INSTALL 2" ON KILL SIDE,DRESSER SLEEVE FLOWLINE TO B.O.P,
				CONNECT HYDROLIC LINES & FILL UP LINE,CENTER B.O.P W/TURNBUCKELS
				FUNCTION TEST ON B.O.P, PUT FLOOR PLATE BACK & MOUSE HOLE,
				PREPAIR FLOOR TO T.I.H)
200	430	2.50	6	T.I.H OPEN ENDED
430	600	1.50	21	CLOSE UPPER D.V. TOOL
				DIESEL- 58"

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	782.60

WT. OF STRING

JSA TRIPPING PIPE

BIT RECORD

BIT NO.	14
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TH2238800
SERIAL NO.	5281449
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	845	2.75	6	TOH
845	1000	1.25	6	MAKE UP BIT TIH
1000	1200	2.00	23	SHUT DOWN FOR LIGHTING
1200	1430	2.50	6	TIH
1430	1545	1.25	2	DRILL PLUG @ 5864 /RUN 2 STANDS
1545	1615	0.50	16	TEST CSG 250 PSI GOOD
1615	1800	1.75	6	T.I.H

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180708_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/8/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 719

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/8/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		12.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC	0.25	
6. TRIPS	0.25	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	11.5	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
95	DRILLPIPE STANDS	9033.92
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		9816.52

WT. OF STRING: 215000

JSA # TH-25 T.I.H

CK C.O.M OK

BIT RECORD

BIT NO.	14
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TH2238800
SERIAL NO.	5281449
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	11.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1200	0500
MUD WT	9.5	9.5	9.5
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS			
pH	10	12	12
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	50
SODA ASH	4

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D			45	5	920	6.5	80	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1815	0.25	6	TRIPS
1815	1830	0.25	5	BREAK CIRCULATION
1830	600	11.50	22	TAG CMT @ 9450' DRILL CMT 9450- 9816
				FUEL 53 1/4" 5847 GAL
				YESTERDAY 58" 6475 GAL
				USED 628 GAL
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9160.66
	DRILLPIPE STANDS	
KELLY DOWN		60
TOTAL		10003.26

WT. OF STRING: 215000

JSA HOUSE KEEPING

BIT RECORD

BIT NO.	14
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TH2238800
SERIAL NO.	5281449
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	23.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	700		
MUD WT	9		
GRADIENT			
FUNNEL VIS	29		
PV / YP			
GEL STR			
FLUID LOSS			
pH	14		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	275 SKS
SODA ASH	12
ISO-DRILL	15GAL

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360					44	5	1280	6.5	95	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	2	DRILL CEMENT FROM /9816 -9950

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180709_1Z

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/9/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1025

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/9/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	12.0	0.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		1.0
6. TRIPS		8.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22. LIGHTNING		2.0
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE SINGLES	63.58
KELLY DOWN		
TOTAL		10070.10

WT. OF STRING: 215000

CK C.O.M OK

JSA # MAINT-2

BIT RECORD

BIT NO.	14
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	TH2238800
SERIAL NO.	5281449
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	35.5

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1900	000	500
MUD WT	9.1	9.1	9.1
GRADIENT			
FUNNEL VIS	29	32	32
PV / YP			
GEL STR			
FLUID LOSS	12	12	12
pH	12	12	12
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
GEL	125

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D		CEMENT	45	4	1250	6.5	90	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	2	DRLG CMT F/- 9950- 10070
				FUEL 44" 4607 GAL
				YESTERDAY 53 1/4" 5847 GAL
				USED 1240 GAL
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
97	DRILLPIPE STANDS	9223.92
2	DRILLPIPE STANDS	63.58
KELLY DOWN		
TOTAL		10070.10

WT. OF STRING: 215000

JSA TRIPPING PIPE

CHECK C.O.M GOOD

BIT RECORD

BIT NO.	14	15
SIZE	8 1/2	8 1\2
IADC CODE		
MANUFACTURER	HUGHES	HUGHES
TYPE	TH2238800	GX117
SERIAL NO.	5281449	5282954
JETS	3-22	3 X22
TFA		
DEPTH OUT	10360	
DEPTH IN	10360	10360
TOTAL DRILLED	0.00	
TOTAL HOURS	40.25	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D			47	5	1200	6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	645	0.75	2	DRILL CEMENT F/10070- 10077
645	745	1.00	5	CIRC BTMS UP
745	1145	4.00	6	TOH
1145	1215	0.50	6	MAKE UP BIT
1215	1300	0.75	6	TIH
1300	1500	2.00	22	SHUT DOWN F/ LIGHTING
1500	1800	3.00	6	TIH

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180710_1AL

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/10/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1025

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/10/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	11.25	0.75
3. REAMING		
4. CORING		
5. COND MUD & CIRC		2.5
6. TRIPS	0.75	6.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		2.25
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		
TOTAL		10316.31

WT. OF STRING: 215000

5MSM MIXING MUD

BIT RECORD

BIT NO.	15
SIZE	8 1\2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	GX117
SERIAL NO.	5282954
JETS	3 X22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	11.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	7:30	12:00	5:30
MUD WT	9.1	9.1	9.1
GRADIENT			
FUNNEL VIS	33	33	33
PV / YP			
GEL STR			
FLUID LOSS			
pH	12	12	12
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
FW GEL	43
LIME	2 SX
SODA ASH	2 SX
CAL 200	40 SX
CAL 400	40 SX
CEDAR FIBER	25 SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10077	10312				40	5	1440	6.5	100	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1845	0.75	6	TIH
1845	600	11.25	2	DRLG CMT F/ 10077 TO 10304 // PACKER AND SHOE 10327
				DIESEL 39
				F/W 3/4
				TANKS IN BACK YARD 4 F/W FULL////6 B/W 1/2 FULL
600				

TOUR 1 — FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE STANDS	31.71
KELLY DOWN		
TOTAL		10316.31

WT. OF STRING: 215000

5MSM-TRIPPING OUT OF HOLE

BIT RECORD

BIT NO.	15
SIZE	8 1\2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	GX117
SERIAL NO.	5282954
JETS	3 X22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	11.50

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	630	1130	1730
MUD WT	9.1	TRIP	TRIP
GRADIENT			
FUNNEL VIS	33		
PV / YP			
GEL STR			
FLUID LOSS			
pH	11		
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
FW GEL	45 SX
LIME	4 SX
SODA ASH	2 SX
CAL 200	20 SX
CEDAR FIBER	20 SX

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10312		D			45	8		6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	615	0.25	2	DRILLING PACKER & SHOE F/10312-10314
615	700	0.75	5	CIRCULATE BOTTOMS UP
700	730	0.50	15	PRESSURE UP ON CASING
730	915	1.75	15	PRESSURE TEST CASING @1500 PSI
915	945	0.50	2	DRILL CEMENT F/10314-10327(LOST RETURNS @10327)
945	1615	6.50	6	TRIP OUT OF HOLE
1615	1700	0.75	5	CLOSED BLINDS RAMS & R/U & PUMP 110 BBLS FRESH WATER
1700	1800	1.00	5	FINISH BUILDING LCM SWEEP

TOUR 2 — FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180711_1AC

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/11/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1025

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/11/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	4.75	
6. TRIPS	4.75	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.25	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		4.0
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.25	7.25
22.		0.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		
TOTAL		10316.31
WT. OF STRING	215000	

5MSM TIH AND CUTTING DRILLING LINE

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
FW GEL	50 SX
LIME	2 SX
SODA ASH	2 SX
CAL 200	20 SX
CAL 400	20 SX
CEDAR FIBER	25 SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	21	MIX UP LOST CIRCULATION PILL
1915	2030	1.25	6	TIH W HEAVY WEIGHT AND 10 STDS
2030	2145	1.25	9	CUT DRILLING LINE
2145	115	3.50	6	TIH
115	600	4.75	5	BUILD AND PUMP// 3// 50 BBL LOST CIRC PILLS
				DIESEL 31
				F/W 1/4
				FRAC TANKS IN BACK YARD 4 F/W FULL 6 B/W 1/2
				BOP DRILL (2 MIN)

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE STANDS	31.71
KELLY DOWN		
TOTAL		10316.31
WT. OF STRING	215000	

5MSM- ADJUSTING BRAKES

SERVICE TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	65 SX
CAL 200	40 SX
CAL 400	40 SX
CEDAR FIBER	15 SX

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1100	5.00	21	WAIT ON ORDERS
1100	1200	1.00	11	R/U WIRELINE TRUCK
1200	1500	3.00	11	WIRELINE LOGS
1500	1545	0.75	22	DUMP 5 BUCKETS PEA GRAVEL & 2 SACKS BLAST SAND DOWN INSIDE DP & PUMP 100 BBL'S
				FW BEHIND IT
1545	1800	2.25	21	WAIT TO SEE IF GRAVEL HELPED SEAL OFF LOSS ZONE
				SET & TEST C-O-M
				BOP DRILL

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180712_1AH

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/12/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10319

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1025

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/12/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	7.5	5.75
6. TRIPS	1.0	1.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.75	3.25
22.	0.75	1.5
23.	2.0	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		
TOTAL		10316.31

WT. OF STRING: 215000

5MSM MIXING MUD AND CHIPPING PAINT

BIT RECORD

BIT NO.			
SIZE			
IADC CODE			
MANUFACTURER			
TYPE			
SERIAL NO.			
JETS			
TFA			
DEPTH OUT			
DEPTH IN			
TOTAL DRILLED			
TOTAL HOURS			

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME		12:00	5:30
MUD WT	9	9	9
GRADIENT			
FUNNEL VIS	30	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	11	11	11
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
CEDAR FIBER	50 SX

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1830	0.50	6	TIH 3 STDS AND A SINGLE TAG 10358
1830	1915	0.75	21	WAIT ON ORDER
1915	2000	0.75	22	DUMP 10 BUCKETS PEA GRAVEL 1 SACK SAND PUMP 100 BBLS FW
2000	2200	2.00	23	WAIT 2 HOURS TO TAG
2200	2230	0.50	6	TIH 2 STDS TAG AT 10347
2230	600	7.50	5	PUMPED 78 BBLS F/W GOT RETURNS//CIRC THROUGH STEEL PITS
				DIESEL 85
				F/W 3/4
				FRAC TANKS IN BACK YARD 4 F/W FULL /// 6 B/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE STANDS	31.71
KELLY DOWN		
TOTAL		10316.31

WT. OF STRING: 215000

5MSM-SERVICE RIG

SERVICE TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO.			
SIZE			
IADC CODE			
MANUFACTURER			
TYPE			
SERIAL NO.			
JETS			
TFA			
DEPTH OUT			
DEPTH IN			
TOTAL DRILLED			
TOTAL HOURS			

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1000	4.00	5	CIRCULATE & ATTEMPT TO PUMP DOWN BACKSIDE OF 9 5/8" CASING
1000	1030	0.50	6	TRIP IN & TAG @ 10359
1030	1045	0.25	22	DUMP 10 BUCKETS PEA GRAVEL & 1 BAG SAND PUMP 100 BBL'S FRESH WATER
1045	1215	1.50	21	WAIT 1 1/2 HOURS TO TAG
1215	1230	0.25	6	TRIP IN & TAG @10350
1230	1300	0.50	22	DUMP 10 BUCKETS PEA GRAVEL & 2 BAGS SAND PUMP 100 BBL'S FRESH WATER
1300	1400	1.00	21	WAIT 1 HOUR TO TAG
1400	1415	0.25	6	TRIP IN & TAG @10359
1415	1445	0.50	22	DUMP 15 BUCKETS PEA GRAVEL & 2 BAGS SAND PUMP 100 BBL'S FRESH WATER
1445	1530	0.75	21	WAIT TO TAG
1530	1600	0.50	6	TRIP IN & TAG @10350
1600	1615	0.25	22	DUMP 10 BUCKETS PEA GRAVEL & 1 BAG SAND PUMP 100 BBL'S FRESH WATER
1615	1800	1.75	5	CIRCULATE (GOT RETURNS BACK)

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180713_1Y

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/13/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1025

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/13/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	7.25	
6. TRIPS	0.5	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT	1.25	
13. WAIT ON CEMENT	2.5	12.0
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.5	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.0
1	BIT SUB	3.85
14	6" DC	408.97
12	H.W.D.P.	368.78
100	DRILLPIPE STANDS	9502
1	DRILLPIPE SINGLES	31.71
KELLY DOWN		
TOTAL		10316.31
WT. OF STRING	215000	

5 MSM SCRUBBING AND CHECKING FLUID IN RADIATORS

BIT RECORD

BIT NO.			
SIZE			
IADC CODE			
MANUFACTURER			
TYPE			
SERIAL NO.			
JETS			
TFA			
DEPTH OUT			
DEPTH IN			
TOTAL DRILLED			
TOTAL HOURS			

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	115	7.25	5	CIRCULATE STEEL PITS ///SERVICE TOP DRIVE
115	230	1.25	12	PJSM R/U HALIBURTON AND PUMP CEMENT PLUG
230	300	0.50	6	TOH 4 STDS CIRC 5 MIN CLEAN OUT PIPE
300	330	0.50	21	CLOSE HYDRILL PREASURE UP TO 250 PSI
330	600	2.50	13	WAIT ON CEMENT 100 SACKS CMT
600				
				DIESEL 78 1/2
				F/W 1/4
				FRAC TANKS IN BACK YARD 4 F/W FULL /// 6 B/W 1/2
600				

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
KELLY DOWN		
TOTAL		
WT. OF STRING		

5MSM-PUTTING FAN BELTS ON FLOOR MOTORS

SERVICE TOPDRIVE GEN. MOTOR

BIT RECORD

BIT NO.			
SIZE			
IADC CODE			
MANUFACTURER			
TYPE			
SERIAL NO.			
JETS			
TFA			
DEPTH OUT			
DEPTH IN			
TOTAL DRILLED			
TOTAL HOURS			

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	13	WAIT ON CEMENT
				CLEAN OUT AIR FILTERS & RADIATOR ON TOPDRIVE MOTOR

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180714_1Z

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/14/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 277

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/14/2018

Well Name & No.: NAVAJO WDW 4

Company: PATRIOT DRILLING LLC

Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	0.5	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		10.5
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT	3.25	
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.25	
22.	8.0	1.5
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

CK C.O.M OK

JSA OP-19,OP-17

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1945	1.75	13	WAIT ON CEMENT
1945	2000	0.25	22	BLEAD OFF PRESSURE ON CSG
2000	2130	1.50	13	WAIT ON CEMENT
2130	2200	0.50	6	ATTEMPT TO T.I.H M/U SINGLE F/ MOUSEHOLE ON TO STRING
				& PULLED TIGHT
2200	2215	0.25	21	TRIED TO PUMP THROUGH SRING & PRESSUERED UP RELEASE
				PRESSURE & ATTEMPT TO WORK STUCK PIPE
2215	2300	0.75	22	HOOK UP FILL UP LINE ON KILL SIDE CLOSE ANNULAR & PUT
				350 PSI ON BACK SIDE & MONITORED PRESSURE
			22	BLEAD OFF PRESS. THOUGH CHOKE MANIFOLD
2300	600	7.00	22	ATTEMPT TO WORK STUCK SRTING
				FUEL 74" 8441 GAL
				YESTERDAY 78 1/2" 8923 GAL
				USED 482 GAL
				F/W 1/4

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA RIG SERVICE

CHANGE OIL #1 LIGHT PLANT

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: KEVIN DEW

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	730	1.50	22	WAIT ON WIRE LINE/ RIG SERVICE
730	1000	2.50	11	LAYDOWN 1 JOINT DP / RIG UP WIRE LINE
1000	1230	2.50	11	RUN TEMP SURVEY
1230	1245	0.25	11	RIG DOWN BAKER
1245	1430	1.75	11	WAIT ON WIRE LINE
1430	1600	1.50	11	RIG UP RENAGADE \SAFTEY MEETING
1600	1800	2.00	11	RUN FREE POINT

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

tour_us.alt 2ahrfl Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180715_1AC

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/15/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 578

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/15/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	1.5	4.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	5.0	4.75
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		1.5
20. DIR. WORK		
21.		1.25
22.	4.0	0.5
23.	1.5	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

CH C.O.M OK

JSA #OP-12

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	22	FINNISH R/D FREE POINT WIRELINE TRUCK &
				R/U WEATHERFORD WIRELINE TRUCK
1930	0030	5.00	11	WIRELINE LOGS
0030	0130	1.00	22	R/D WEATHERFORD & R/U FREE POINT TRUCK
0130	245	1.25	23	WAIT ON WIRE LINE HANDS TO M/U THE CHARGE
245	300	0.25	23	RUN CHARGE DOWN D.P
300	345	0.75	22	ATTEMPT TO FREE POINT
345	400	0.25	22	R/D WIRE LINE TRUCK
400	430	0.50	22	INSTALL PLUG BACK IN GOOSE NECK
430	600	1.50	6	T.O.O.H
				FUEL 70"
				YESTERDAY 74" 8441 GAL
				USED
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM- TRIPPING PIPE JSA#TH-25

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	815	2.25	6	TRIP OUT OF HOLE (LAYED DOWN 2 JT'S HWDP)
815	930	1.25	21	WAIT ON WIRELINE TRUCK
930	1030	1.00	11	R/U WIRELINE TRUCK
1030	1415	3.75	11	RUN WIRELINE IN HOLE & RETRIEVE WIRELINE OUT OF HOLE
1415	1530	1.25	19	P/U & M/U FISHING TOOLS
1530	1600	0.50	22	SHUT DOWN FOR LIGHTNING
1600	1615	0.25	19	P/U & M/U FISHING TOOLS
1615	1800	1.75	6	TRIP IN HOLE W/FISHING TOOLS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180716_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/16/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 277

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/16/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		1.0
6. TRIPS	11.5	7.75
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		1.5
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.	0.5	1.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

CK C.O.M OK

JSA #

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	6	T.I.H
2000	2030	0.50	22	SCREW INTO FISH
2030	600	9.50	6	JAR ON FISH
				FUEL 64" 7246 GAL
				YESTERDAY 70" 7981 GAL
				USED 735
				F/W 3/4

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-BACKOFF OUT OF FISH JSA#OP-19

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
NOVA WEIGHT	50 SX

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	DEPTH INTERVAL TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	700	1.00	6	JAR ON FISH
700	845	1.75	22	REMOVE PLUG ON GOOSE NECK & R/U FREE POINT TRUCK
845	1015	1.50	11	RUN BACKOFF IN HOLE & BACKOFF FISH
1015	1500	4.75	6	TRIP OUT OF HOLE
1500	1700	2.00	6	LAY DOWN JARS / PICK UP WASHPIPE
1700	1800	1.00	5	MIX 10# SLUG
1800				

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180717_1AJ

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/17/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE	SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
ronnie cook	TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 205

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/17/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.25	
6. TRIPS	6.25	8.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		1.75
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		2.0
20. DIR. WORK		
21.	0.5	
22.	4.0	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	WASHPIPE	219.50
100	DRILLPIPE STANDS	9477
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	9696.50

WT. OF STRING: 195000

CK C.O.M OK

JSA #TH-25 TH-24

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		R			80	10	900	6.5	80	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1830	0.50	5	FINNISH MIXING SLUG
1830	1845	0.25	6	T.I.H 10 STANDS
1845	1900	0.25	5	PUMP SLUG
1900	2130	2.50	6	T.I.H TAG @ 9634'
2130	2145	0.25	5	BREAK CIRC
2145	2215	0.50	21	WASH DOWN TO FISH
2215	130	3.25	22	WASH OVER FISH 9634'-10057
130	145	0.25	5	PUMED SLUG TO DRY PIPE
145	515	3.50	6	T.O.O.H
515	600	0.75	22	L/D WASH PIPE
				FUEL 60" 6735 GAL
				YESTERDAY 64" 7246 GAL
				USED 511 GAL
				F/W FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING:

5MSM- TRIPPING IN HOLE

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	715	1.25	6	LAYDOWN WASHOVER PIPE
715	900	1.75	19	P/U FISHING TOOLS
900	1200	3.00	6	TRIP IN HOLE W/OVERSHOT
1200	1345	1.75	9	CUT OFF DRILLING LINE
1345	1500	1.25	6	TRIP IN HOLE
1500	1515	0.25	19	WORK OVERSHOT OVER FISH
1515	1800	2.75	6	TRIP OUT W/ FISH
				SET & TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180718_1AG

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/18/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 205

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/18/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		5.5
3. REAMING		
4. CORING		
5. COND MUD & CIRC		3.0
6. TRIPS	12.0	0.75
7. LUBRICATE RIG		0.5
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		1.75
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		0.5
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	FISHING TOOLS MILL B	31.03
13	6" DC	379.01
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	410.04

WT. OF STRING
5 MSM TOH

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						0

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2300	5.00	6	TOH W/ BACK OUT FISH/// L/D HW DRILL PIPE
2300	2330	0.50	6	BREAK AND L/D OVERSHOT
2330	300	3.50	6	P/U BIT SUB X-O AND MILL BIT // INSPECT DCS TIH// L/D 1 BAD DC
300	600	3.00	6	TIH

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	FISHING TOOLS MILL B	31.03
13	6" DC	379.01
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	410.04

WT. OF STRING
5MSM-USE OF SPINNING CHAIN

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	10.00	13.00	16.00
MUD WT	8.9	8.9	8.9
GRADIENT			
FUNNEL VIS	29	29	29
PV / YP			
GEL STR			
FLUID LOSS			
pH	12	12	12
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	90 SX
ISO-DRILL	20 GALS
NOVA WEIGHT	57 SX

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10171	10310	D		CEMENT	80	10	730	6.5	72	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	6	FINISH TRIP IN HOLE (STOPPED @10107 TO TEST CASING)
630	700	0.50	21	WAIT ON TESTER
700	730	0.50	15	R/U TESTER
730	845	1.25	15	TEST CASING TO 1500 PSI
845	900	0.25	6	TRIP IN & TAG @10171
900	1415	5.25	2	DRILL CEMENT & SHOT ROD F/10171-10299
1415	1445	0.50	7	RIG SERVICE
1445	1500	0.25	2	DRILL CEMENT F/10299-10310
1500	1800	3.00	5	CIRCULATE
1800				
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180719_1O

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/19/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 205

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/19/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	3.0	
6. TRIPS	5.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		11.0
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	4.0	1.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	FISHING TOOLS MILL B	31.03
13	6" DC	379.01
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	410.04

WT. OF STRING

5 MSM ADJUSTING BRAKES AND TOH

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-RIGGING UP LOGGING TRUCK

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	5	CIRCULATE
2100	200	5.00	6	TOH L/D FISHING TOOLS
200	600	4.00	21	WAIT ON LOGGING TRUCK
				DIESEL 50
				F/W FULL
				TANKS IN BACK YARD 4// F/W 3/4 // B/W 6// 1/2

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	700	1.00	21	WAIT ON LOGGING TRUCK
700	800	1.00	11	R/U LOGGING TRUCK
800	1700	9.00	11	WIRELINE LOGS
1700	1800	1.00	11	R/D LOGGING TRUCK
				TEST C-O-M

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180720_1Q

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/20/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 205

CUMULATIVE WEAR OR TRIPS

DRILLING CREW PAYROLL DATA

Date: 7/20/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	9.25	
6. TRIPS		8.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.75	1.25
22.		2.0
23.		0.75
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5 MSM SCRUBBING

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2045	2.75	21	PJSM R/U WIRE LINE TRUCK AND PERFORATE CASING R/D
2045	600	9.25	5	ATTEMT TO CIRCULATE THROUGH BACK SIDE OF CASING
				PREASURE UP TO 1350 PSI AND BLEED OFF EVERY 15 MIN
				DIESEL 45 1/2
				F/W 3/4
				FRAC TANKS IN BACK YARD 4 F/W 1/2/// 6 B/W 1/2

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-PICKIBNG UP PACKER OFF TRUCK

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	715	1.25	21	P/U & M/U PACKER ASSEMBLY
715	1215	5.00	6	TRIP IN HOLE 7 SET PACKER @ 10086
1215	1415	2.00	22	R/U HALLIBURTON & TRY TO GET INJECTION RATE
1415	1500	0.75	23	WAIT ON ORDERS
1500	1800	3.00	6	TRIP OUT W/PACKER
				TEST C-O-M

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180721_1R

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE	FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
NAVAJO WDW	4	5LX-56	0	7/21/2018	TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE:

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF:

PRESENT LENGTH:

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS:

DRILLING CREW PAYROLL DATA

Date: 7/21/2018

Well Name & No.: NAVAJO WDW 4

Company: PATRIOT DRILLING LLC

Toolpusher:

Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	1.75	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		6.25
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	9.0	5.75
22.	1.25	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

TOUR 1 (FROM 1800 TO 600)

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		
WT. OF STRING		

5MSM GREASING TOP DRIVE

BIT RECORD: BIT NO. / SIZE / IADC CODE / MANUFACTURER / TYPE / SERIAL NO. / JETS / TFA / DEPTH OUT / DEPTH IN / TOTAL DRILLED / TOTAL HOURS

CUTTING STRUCTURE: INNER / OUTER / DULL CHAR / LOCATION / BRG / SEALS / GAGE / OTHER DULL / REASON

MUD RECORD: TIME / MUD WT / GRADIENT / FUNNEL VIS / PV / YP / GEL STR / FLUID LOSS / pH / SOLIDS

MUD & CHEMICALS ADDED: TYPE / AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	SPM	PUMP NO. 2 LINER SIZE	SPM	PUMP NO. 3 LINER SIZE	SPM	PUMP NO. 4 LINER SIZE	SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD: DEPTH / DEV. / DIR. / TVD / HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1945	1.75	6	T.O.H LAY DOWN PACKER
1945	2130	1.75	21	ATTEMPT TO CIRCULATE THROUGH BACK SIDE OF CASING
				PREASURE UP TO 1350 PSI BLEED OFF EVERY 15 MIN
2130	2245	1.25	22	R/U PUMP TRUCK
2245	600	7.25	21	PREASURE UP ON CASING ATTEMPT TO CIRCULATE
				DIESEL 41
				F/W 1/2
				FRAC TANKS IN BACK YARD 4 F/W 1/2 //// 6 B/W 1/2

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT:

OIL BASED MUD:

TOUR 2 (FROM 600 TO 1800)

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		
WT. OF STRING		

5MSM-R/U WIRELINE TRUCK

BIT RECORD: BIT NO. / SIZE / IADC CODE / MANUFACTURER / TYPE / SERIAL NO. / JETS / TFA / DEPTH OUT / DEPTH IN / TOTAL DRILLED / TOTAL HOURS

CUTTING STRUCTURE: INNER / OUTER / DULL CHAR / LOCATION / BRG / SEALS / GAGE / OTHER DULL / REASON

MUD RECORD: TIME / MUD WT / GRADIENT / FUNNEL VIS / PV / YP / GEL STR / FLUID LOSS / pH / SOLIDS

MUD & CHEMICALS ADDED: TYPE / AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	SPM	PUMP NO. 2 LINER SIZE	SPM	PUMP NO. 3 LINER SIZE	SPM	PUMP NO. 4 LINER SIZE	SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD: DEPTH / DEV. / DIR. / TVD / HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1145	5.75	21	PRESSURE UP ON CASING & ATTEMPT TO CIRCULATE
1145	1800	6.25	11	R/U WIRELINE TRUCK & RUN TEMP. SURVEY
				SAFETY MEETING W/BAKER HUGHES

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT:

OIL BASED MUD:

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180722_1U

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/22/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 796

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/22/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher:
Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	4.5	1.0
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	7.5	
22.		3.5
23.		7.25
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY MEETING - WIRELINE RIG UP / RIG DOWN

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2200	4.00	11	RUN TEMP SURVEY/RIG DOWN CEMENTERS
2200	2230	0.50	11	RIG DOWN WIRELINE 0TRUCK
2230	0600	7.50	21	WAITING ON ORDER
				DIESEL 47" FRESH WATER 1/4 BRINE WATER1/2

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

JSA # TH-24 T.I.H
CK C.O.M OK

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	900	3.00	23	W.O.O.
900	1000	1.00	11	R/U WIRE LINE & RUN LINE IN THE HOLE TO SHOOT PERFS
1000	1015	0.25	23	R/D WIRE LINE
1015	1130	1.25	22	CLOSE BLINDS & PRESSURE UP TO 1500# W/2" OPEN ON
				WELL HEAD ATTEMPTING TO CIRC THROUGH PERFS
1130	1330	2.00	23	MONITOR PRESSURE (BLEAD OFF PRESS. THROUGH CHOKE MANIFOLD)
1330	1445	1.25	22	R/U PAR FIVES IRON TO FLOOR
1445	1500	0.25	7	RIG SERVICE
1500	1600	1.00	22	R/U PAR FIVE ON KILL LINE & CLOSE BLINDS
1600	1700	1.00	23	HELD SAFTY MTG W/PAR FIVE T/P & CO MAN/PRESS TEST LINE TO 3000# & RELEASED PRESS
1700	1800	1.00	23	ATTEMPT TO BREAK CIRC W/PAR FIVE

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180723_1W

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/23/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/23/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		4.5
6. TRIPS	3.75	4.25
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		0.5
22.		2.5
23.	8.25	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	PACKER	7
106	DRILLPIPE STANDS	10079
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		10086.00

WT. OF STRING: 195000

SAFETY MEETING WITH PAR 5

JSA # TH-24

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10348								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	23	ATTEMPT TO BREAK CIRC/ WITH PAR 5
2000	2345	3.75	6	P/UP PACKER AND TIH TO 10086
2345	0600	6.25	23	RIG UP PAR 5 AND ATTEMPT TO BREAK CIRC
0600				
				DIESEL 81 RIG FRESH WATER 1/4BRINE WATER 1/2 FRESH WATER 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		

WT. OF STRING:

CK C.O.M

JSA # OP-1,MAINT -11

FUNCTION TEST ON B.O.P

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	5	TRING TO ESTABLISH CIRC. W/PAR FIVE
1030	1045	0.25	21	BLEAD OFF PRESS ON BACK SIDE THROUGH CHOKE MANIFOLD & R/D
1045	1100	0.25	21	PAR FIVES IRON
1100	1115	0.25	7	RIG SERVICE
1115	1500	3.75	6	TRIPS
1500	1600	1.00	22	R/U WIRELINE TRUCK & PERFERATE 9 5/8 CSG
1600	1615	0.25	22	R/D WIRE LINE TRUCK
1615	1645	0.50	6	P/U PACKER & T.I.H W/2 STANDS
1645	1730	0.75	22	R/U PAR FIVES IRON SHUT PIPE RAMS & PRESS. UP TO 1250 PSI
1730	1800	0.50	22	BLEAD OFF PRESS & R/D PAR FIVES IRON

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour.us.all.2ahrfl Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180724_1P

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/24/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/24/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		12.0
6. TRIPS	3.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.	9.0	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	PACKER	7
105	DRILLPIPE STANDS	9984
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		9991.00

WT. OF STRING: 195000

TH-24 T

SAFETY MEETING WITH PAR 5

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2100	3.00	6	TIH SET PACKER
2100	0600	9.00	23	RIG UP PAR 5 AND ATTEMPPT TO BREAK CIRC.
				DIESEL 75 FRESH WATER 1/2 BRINE WATER 1/2 FRESH WATER 3/4

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		

WT. OF STRING:

CK C.O.M OK

JSA # MAINT-14

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	730	1.50	5	CONTINUE TO PUMP THROUGH STRING & PERFS @ 10180 TRING TO ESTABLISH
				CIRCULATION
730	1800	10.50	5	R/U PAR FIVE ON KILL SIDE & CLOSE PIPE RAMS PUMP THROUGH MUD CROSS
				DOWN BACKSIDE OF D.P & 9 5/8 CSG ESTABLISHED RETURND ON BACKSIDE

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180725_1R

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/25/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/25/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		8.75
6. TRIPS	11.0	0.25
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		2.5
22.		0.25
23.	1.0	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	CEMENT RETAINER	7
70	DRILLPIPE STANDS	6655
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		6662.00
WT. OF STRING		

SAFWTY MEETING WITH PAR 5

JSA TH-25

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	CEMENT RETAINER	7
70	DRILLPIPE STANDS	6655
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		6662.00
WT. OF STRING	185000	

P/U 187K S/O 180K

JSA # OP-11,

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL / FORMATION (SHOW RECOVERY)

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	23	RIG UP PAR 5 ON THE PIPE TRY AND BREAK CIRC
1900	0000	5.00	6	RIG DOWN PAR 5 AND TRIP OUT OF HOLE WITH PACKER
0000	0130	1.50	6	LAY DOWN PACKER AND PICK UP CEMENT RETAINER
0130	600	4.50	6	TIH WITH CEMENT RETAINER
				DIESEL 71 RIG FW FULL BRINE 1/4 FRESH WATER 3/4

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DEPTH INTERVAL / FORMATION (SHOW RECOVERY)

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	615	0.25	6	TRIPS
615	845	2.50	21	R/U PAR FIVES IRON PUMP 160 BB
845	900	0.25	22	SHUT DN PAR FIVE & OPEN PACKER & 9798'
900	1745	8.75	5	R/U PAR FIVES IRON ON DRILL STRING & PUMP SYSTEM FLUID TO MAINTAINE CIRC
1745	1800	0.25	7	RIG SERVICE

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180726_1AB

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/26/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/26/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.5	0.75
6. TRIPS	5.0	1.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		1.25
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		4.0
12. RUN CASING & CEMENT	2.0	
13. WAIT ON CEMENT	3.5	3.5
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		1.5
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	CEMENT RETAINER	7
70	DRILLPIPE STANDS	6655
	DRILLPIPE SINGLES	
KELLY DOWN		
TOTAL		6662.00

WT. OF STRING: 185000

5 MSM TOH

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1930	1.50	5	CIRCULATE BACK SIDE OF CASING
1930	2015	0.75	12	R/D PAR 5 AND R/U HALIBURTON
2015	2130	1.25	12	CEMENT CSG
2130	2300	1.50	6	TOH 10 STDS REVERSE OUT CIRC BACK SIDE THROUGH DP
2300	230	3.50	6	TOH
230	600	3.50	13	W O C
				DIESEL 66 1/20
				F/W 1/4
				FRAC TANKS IN BACK YARD// 4 F/W 3/4 /// 6 B/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
KELLY DOWN		
TOTAL		

WT. OF STRING:

5MSM-R/U WIRELINE TRUCK

BIT RECORD

BIT NO.	
SIZE	-
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	930	3.50	13	WAIT ON CEMENT
930	1230	3.00	11	RUN TEMP. SURVEY
1230	1400	1.50	21	SWAP OUT WIRELINE TRUCKS
1400	1500	1.00	11	RUN PERFERATING GUN
1500	1545	0.75	5	CIRCULATE
1545	1615	0.50	6	TRIP IN W/CEMENT RETAINER
1615	1730	1.25	9	SLIP & CUT DRILLING LINE
1730	1800	0.50	6	TRIP IN W/CEMENT RETAINER

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

tour.us.all.2ahrfl Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180727_1L

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/27/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/27/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher:
Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC	1.0	
6. TRIPS	5.0	
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		2.0
12. RUN CASING & CEMENT	5.0	
13. WAIT ON CEMENT	1.0	9.0
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		1.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING
5MSM TOH

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2030	2.50	6	TIH AND SET TOOL @ 67 STDS 6380
2030	2315	2.75	12	PJSM R/U HALIBURTON TEST LINES
2315	130	2.25	12	CEMENT CASING
130	215	0.75	6	R/D HALIBUTON TOH 10 STDS
215	315	1.00	5	R/U HALIBURTON STEEL LINES AND REVERSE CIRCULATE
315	500	1.75	6	FINNISH TOH
500	600	1.00	13	WAIT ON CEMENT
				DIESEL 62.5
				F/W 1/2
600				

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING
5MSM-FORKLIFT OPERATIONS

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1500	9.00	13	WAIT ON CEMENT
1500	1700	2.00	11	RUN TEMP. SURVEY
1700	1800	1.00	21	WAIT ON CEMENT

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180728_1K

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/28/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/28/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher:
Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.5
6. TRIPS		2.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT	12.0	9.0
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5 MSM SCRUBBING AND PAINTING

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	13	WAIT ON CEMENT // SERVICE TOP DRIVE
				DIESEL 59
				F/W FULL
				FRAC TANKS IN BACK YARD 4 F/W FULL /// 6 B/W 1/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5MSM-GOOD HOUSEKEEPING

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT
SW CLAY	61 SX
LIME	3 SX
ISO-DRILL	5 GAL.

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1500	9.00	13	WAIT ON CEMENT
1500	1730	2.50	6	TRIP IN HOLE (TAGGED @5402)
1730	1800	0.50	5	CIRCULATE
				TEST C-O-M

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180729_1U

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/29/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 1012

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/29/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher
Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	2.5	1.25
3. REAMING		
4. CORING		
5. COND MUD & CIRC	6.0	10.75
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.5	
22.	1.0	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING
5MSM TIH

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2030	2.50	5	CIRCULATE // WAIT ON TESTER
2030	2130	1.00	21	R/U TESTER AND TEST 2500 PSI // DID NOT HOLD PSI
2130	2200	0.50	22	TIGHTEN BOLTS ON BOTTOM FLANGE
2200	2230	0.50	21	PREASURE UP TO 2500 PSI ///DID NOT HOLD PSI
2230	2300	0.50	22	TIGHTEN BOLTS ON 4 INCH MANUAL VALVE
2300	00	1.00	21	PREASURE UP TO 2500 PSI (OK)
00	230	2.50	2	TAG AND DRILL OUT
230	600	3.50	5	CIRC///TOP DRIVE NOT WORKING WAIT ON TOP DRIVE HAND
				DIESEL 55 1/2
				F/W 3/4
				FRAC TANKS IN BACK YARD 4 F/W FULL /// 6 B/W 1/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING
5MSM-WORKING IN THE HEAT

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
					40	5	650	6.5	84	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	800	2.00	5	CIRCULATE & WAIT ON TOPDRIVE MECHANIC
800	1645	8.75	5	CIRCULATE & WORK ON TOPDRIVE
1645	1800	1.25	2	DRILL CEMENT

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180730_1AA

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/30/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 400

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/30/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	6.25	
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.25
6. TRIPS	3.75	2.75
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		1.0
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.0	1.0
22.		6.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD

CUMULATIVE ROTATING HOURS

DAILY MUD COST

TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5 MSM TRIPPING OUT OF HOLE

BIT RECORD

BIT NO.	15
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHES
TYPE	GX117
SERIAL NO.	5282954
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	15	6.25	2	DRILL CEMENT AND RETAINER
15	400	3.75	6	TOH
0400	0600	2.00	21	WAIT ON MILL
				DIESEL-50"
				F/W TANK FULL B/W TANK 1/4 RIG F/W TANK 3/4

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING: 152000

CK C.O.M OK

JSA # TH-24

BIT RECORD

BIT NO.	16
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHE
TYPE	GX117
SERIAL NO.	5282954
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D			65	23	730	6.5	90	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	700	1.00	21	WAIT ON BIT
700	945	2.75	6	P/U MILL BIT & T.I.H
945	1000	0.25	5	BREAK CIRCULATION
1000	1630	6.50	22	DRILL CMT 6376-6563
1630	1645	0.25	7	RIG SERVICE
1645	1700	0.25	22	DRILL CMT 6563-6610
1700	1800	1.00	15	TEST CSG 2500#

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180731_1AA

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	7/31/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 573

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 7/31/2018

Well Name & No.: NAVAJO WDW 4

Company: PATRIOT DRILLING LLC

Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	2.75	
3. REAMING		
4. CORING		
5. COND MUD & CIRC	4.5	
6. TRIPS	2.0	6.25
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		4.5
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.	2.75	0.5
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		0.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	2.3
1	BIT SUB	6.15
13	6" DC	376.71
104	DRILLPIPE STANDS	9889.04
1	DRILLPIPE SINGLES	31.66
KELLY DOWN		
TOTAL		10305.86

WT. OF STRING: 152000

JSA TH-24

SAFETY MEETING WITH MANN WELDING

BIT RECORD

BIT NO.	16
SIZE	8 1/2
IADC CODE	
MANUFACTURER	HUGHE
TYPE	GX117
SERIAL NO.	5282954
JETS	3-22
TFA	
DEPTH OUT	
DEPTH IN	10360
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1915	1.25	15	TEST CSG TO 2500#
1915	2045	1.50	6	RIG DOWN MANN WELDING TIH TO 9800 TAG CEMENT
2045	2330	2.75	2	DRILL CEMENT RETAINER/CEMENT FR9800-9920
2330	0000	0.50	6	TIH TAG CEMENT @10306
0000	0430	4.50	5	PUMP 2 HIGH VISC SWEEPS TO CLEAN HOLE
0430	0600	1.50	15	RIG UP MANN WELDING TEST CSG TO 2500 #
				DIESEL 45
				F/W FULL B/W 1/4 RIG F/W FULL

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	2.3
1	BIT SUB	6.15
13	6" DC	376.71
104	DRILLPIPE STANDS	9889.04
1	DRILLPIPE STANDS	31.66
KELLY DOWN		
TOTAL		10305.86

WT. OF STRING: 220000

JSA # TH-25 T.O.O.H

CK C.O.M OK

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360		D						6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	15	TEST CSG 2500#
630	645	0.25	22	BLEED OOF PRESS & R/D TESTER
645	1300	6.25	6	T.O.O.H
1300	1330	0.50	22	R/U WEATHERFORD WIRELINE
1330	1800	4.50	11	WIRELINE LOGS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180801_1U

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/1/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/1/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		0.25
3. REAMING		
4. CORING		
5. COND MUD & CIRC		0.25
6. TRIPS		3.5
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	4.0	
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	8.0	
22.		6.25
23.		1.5
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD

CUMULATIVE ROTATING HOURS

DAILY MUD COST

TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA OP-17 RUNNING WIRELINE

SAFETY MEETING W/ WEATHERFORD

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	0000	0500
MUD WT	8.8	8.8	8.8
GRADIENT			
FUNNEL VIS	28	28	28
PV / YP			
GEL STR			
FLUID LOSS	15	15	15
pH	10	10	10
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA # TH-24

CK C.O.M OK

BIT RECORD

BIT NO.	17
SIZE	8.5
IADC CODE	
MANUFACTURER	
TYPE	MILL
SERIAL NO.	KF97039
JETS	
TFA	
DEPTH OUT	10362
DEPTH IN	10360
TOTAL DRILLED	2.00
TOTAL HOURS	.25

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME			
MUD WT			
GRADIENT			
FUNNEL VIS			
PV / YP			
GEL STR			
FLUID LOSS			
pH			
SOLIDS			

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10360	10362	D			45	13	850	6.5	90	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	615	0.25	7	RIG SERVICE
615	830	2.25	22	W.O.O
830	1200	3.50	6	T.I.H
1200	1215	0.25	5	BREAK CIRC
1215	1615	4.00	22	W.O.O
1615	1745	1.50	23	TAG @ 10309' DRILL OUT THROUGH PACKER & 9 5/8 CSG
1745	1800	0.25	2	DRILL ACTUAL 10360-10362

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

tour.us.all.2ahrft Rev. 2 02/2018

REPORT NO. PATRIO4_20180801_1U

LEASE	WELL NO.	API WELL NUMBER	DATE
NAVAJO WDW	4	5LX-56	8/1/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

Tour 1 FROM 1800 **TO** 600

TIME LOG FROM	TIME LOG TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2130	3.50	11	WIRELINE LOGS
2130	2200	0.50	11	RIG DOWN WIRELKINE TRUCK
2200	0600	8.00	21	WAIT ON ORDERS
				DIESEL 84
				F/W FULL B/W 1/4 RIG F/W 3/4

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180802_1M

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/2/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/2/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL	1.0	8.0
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	11.0	4.0
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
1	8.5 BIT	1.8
1	BIT SUB	3.85
13	6" DC	379.01
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	384.66

WT. OF STRING: JSA TH-25

BIT RECORD

BIT NO.	17	18
SIZE	8.5	8.5
IADC CODE		
MANUFACTURER		HUGHES
TYPE	MILL	D507TX
SERIAL NO.	KF97039	5280089
JETS		7 X 16
TFA		
DEPTH OUT	10378	
DEPTH IN	10360	10378
TOTAL DRILLED	18.00	
TOTAL HOURS	.25	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	1800	
MUD WT	8.9	
GRADIENT		
FUNNEL VIS	28	
PV / YP		
GEL STR		
FLUID LOSS	15	
pH	10	
SOLIDS		

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10362	10378				45	15	150	6.5	55	6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1900	1.00	2	DRILL F/10362-10378
1900	0045	5.75	6	TRIP OUT OF HOLE TO PICK UP PDC
0045	0130	0.75	6	LAY DOWN MILL PICK UP PDC
0130	0600	4.50	6	TRIP IN THE HOLE WITH PDC
				DIESEL 78
				F/W FULL B/W 1/2 RIG F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING:

SAFETY MEETING - TOH

BIT RECORD

BIT NO.	18
SIZE	8.5
IADC CODE	
MANUFACTURER	HUGHES
TYPE	D507TX
SERIAL NO.	5280089
JETS	7 X 16
TFA	
DEPTH OUT	10700
DEPTH IN	10378
TOTAL DRILLED	322.00
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10378	10700							6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1400	8.00	2	DRILL ACTUAL 10378-10700
1400	1500	1.00	6	SHORT TRIP INTO 9 5/8
1500	1800	3.00	6	T.O.O.H

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180803_1P

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/3/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/3/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		0.75
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS	11.5	4.5
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		6.75
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.5	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM TOH AND LAYING DOWN D/P

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	6	TOH
2000	45	4.75	6	M/U CASING SCRAPPER AND BIT TIH
45	115	0.50	21	R/U L/D MACHINE
115	600	4.75	6	L/D DRILL PIPE
				DIESEL 72
				F/W 1/2

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-LAYING DOWN DRILLPIPE

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	6	LAYDOWN DRILLSTRING
1030	1115	0.75	1	RIG DOWN LAYDOWN MACHINE
1115	1800	6.75	11	R/U LOGGING TRUCK & LOG WELL
				SAFETY MEETING W/LOGGERS

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180804_1O

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/4/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/4/2018

Well Name & No.: NAVAJO WDW 4

Company: PATRIOT DRILLING LLC

Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE	1.75	
10. DEVIATION SURVEY		
11. WIRE LINE LOGS	6.0	9.75
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		2.25
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	1.5	
22.	2.75	
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM SLIPPING DRILLING LINE

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	11	WIRELINE LOGS
2000	2100	1.00	9	SLIP DRILLING LINE
2100	2230	1.50	21	SHUT DOWN DUE TO LIGHTNING
2230	2315	0.75	9	FINNISH SLIPPING DRILLING LINE
2315	200	2.75	22	WAIT ON LOGGING TOOL
200	600	4.00	11	R/U LOGGING TOOL AND RCOR
				DIESEL 68
				F/W 1/2
600				

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-UNLOADING & RACKING CASING

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1545	9.75	11	LOGGING (GET CORE SAMPLES)
1545	1800	2.25	14	NIPPLE DOWN BOP

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180805_1T

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/5/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/5/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher:
Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		4.5
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.	7.5	4.5
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		3.0
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	7.50	12.00

DAYWORK TIME SUMMARY
(OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5 MSM NIPPLING DOWN AND UP

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2130	3.50	14	NIPPLE DOWN B.O.P. DRESS CSG/ NIPPLE UP // RUBBER DID NOT HOLD PREASURE
2130			14	NIPPLE UP DSA AND SET BOP BACK DOWN AND TAKE OFF HYDRILL,RAM SECTION AND 4 INCH
	200			2 INCH
200	600	4.00	14	NIPPLE UP B SECTION, DSA # 2, HYDRILL AND FLOW NIPPLE/TEST 3000 PSI (15 MIN) OK

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5MSM-NIPPLING UP BOP

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER
RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1030	4.50	14	NIPPLE UP B.O.P.
1030	1130	1.00	21	ROLL CASING & TALLY SAME
1130	1430	3.00	12	R/U CASING CREW & LAYDOWN MACHINE
1430	1600	1.50	12	RUN CASING
1600	1800	2.00	21	WORK ON GATORHAWK UNIT
1800				HELD SAFETY MEETING W/CO. MAN, SAFETYMAN, & TOOLPUSHER

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180806_1O

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/6/2018

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 795

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/6/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		5.75
12. RUN CASING & CEMENT	9.5	1.25
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		2.5
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	0.5	0.75
22.	2.0	1.75
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5 MSM RUNNING CASING

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	1830	0.50	21	R/D GATOR HAWK
1830	400	9.50	12	RUN CASING
400	600	2.00	22	R/D L/D TRUCK// WAIT ON WIRE LINE TRUCK
				DIESEL 60 1/2
				F/W 3/4

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

5MSM-RIGGING UP WIRELINE TRUCK

BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | TFA | DEPTH OUT | DEPTH IN | TOTAL DRILLED | TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME | MUD WT | GRADIENT | FUNNEL VIS | PV / YP | GEL STR | FLUID LOSS | pH | SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	745	1.75	22	WAIT ON WIRELINE TRUCK
745	830	0.75	11	R/U WIRELINE TRUCK
830	1330	5.00	11	WIRELINE LOGS
1330	1445	1.25	12	RUN CASING (SET PACKER @10269)
1445	1645	2.00	14	NIPPLE DOWN BOP
1645	1730	0.75	21	SET SLIPS & CUT OFF
1730	1800	0.50	14	LAYDOWN BOP

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180807_1L

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/7/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/7/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.	3.5	0.5
15. TEST B.O.P.	8.5	11.25
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		0.25
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY MEETIN G WITH MANN WELDING

JSA # RUD-1

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2130	3.50	14	NIPPLE UP WELL HEAD AND TEST VOID TO 3200 FOR 15 MIN
2130	0600	8.50	15	RIG UP MANN WEKLDING AND TEST CASING TO 2200 FOR 24 HRS
				DIESEL 56
				RIG F/W 1/2 ALL RED TANKS FULL

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

JSA # MAINT-11

DRILLER: BENNIE GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10700								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1115	5.25	15	HELD PRESS. ON BACK SIDE OF 7"CSG
1115	1130	0.25	22	BLEED OF PRESS & CHECK FLANGES FOR LEAKS
1130	1200	0.50	14	REMOVE TOP OF TUBING HEAD & PRESS UP ON BACK SIDE
1200	1800	6.00	15	TEST CSG

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180808_1L

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/8/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/8/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		1.5
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		0.5
15. TEST B.O.P.	4.0	
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	8.0	0.5
22.		8.5
23.		1.0
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		

NO. DAYS FROM SPUD
CUMULATIVE ROTATING HOURS
DAILY MUD COST
TOTAL MUD COST

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY MEETING WITH MANN WELDING
JSA RUD-9

DRILLER: ANTONIO GARCIA

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

JSA#OP-11

DRILLER: BENNIE GARCIA

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2200	4.00	15	TEST CASING
2200	0600	8.00	21	WAIT ON FLANGE
				DIESEL 54
				RIG F/W 1/2 RED TANKS FULL

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT
OIL BASED MUD

DEPTH INTERVAL / FORMATION

FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	630	0.50	21	WAIT ON FLANGE
630	700	0.50	14	NIPPLE UP FLANGE ON TUBING HEAD & CONN FILL UP HOSE
700	830	1.50	5	PUMP FLUID IN STEAL PITS DN HOLE
830	1700	8.50	22	R/D SERVICE LOOP /TOP DRIVE & TRACK
1700	1800	1.00	23	SHUT DN DUE TO LIGHTING

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT
OIL BASED MUD

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180809_1K

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/9/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.
4 1/2	16.60	X-95	6 1/4	X HOLE	1

PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
1	BREWSTER	B-1300	12
2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER

SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
13 3/8	ST & C	54.50	J-55	39	1700	21	1680
9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/9/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN	12.0	1.5
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		0.25
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		10.25
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

JSA RUD-9

SAFETY MEETING WITH C&C TRANSPORT

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	0600	12.00	1	RIG UP AND TEAR DOWN JET PITTS
				DIESEL 51.5
				RIG FW 1/3 FRAC TANKS FULL

TOUR 1	FROM 1800	TO 600	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	

WT. OF STRING

SAFETY MEETING - R/D TORQUE BEAMS

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
10700								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	730	1.50	1	FINNISH R/D I BEAMS FOR TOP DRIVE
730	745	0.25	7	RIG SERVICE
745	1800	10.25	21	RIG UP HOSES AND PUMP FLUID DOWN HOLE F/ FRAC TANKS
				(BRIDLED UP WHILE PUMPING FLUID DOWN HOLE

TOUR 2	FROM 600	TO 1800	INJURED THIS TOUR?	CB

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	YES/NO	YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180810_1P

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/10/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
TERRY EVANS

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/10/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN	10.0	12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	2.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.	
HOURS W /OPR. D.P.	
HOURS WITHOUT D.P.	
HOURS STANDBY	
TOTAL DAYWORK	
NO. DAYS FROM SPUD	
CUMULATIVE ROTATING HOURS	
DAILY MUD COST	
TOTAL MUD COST	

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

SAFETY MEETING WITH C&C TRANSPORT

JSA RUD--9

DRILLER: ANTONIO GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	2000	2.00	21	PUMP FLUID FROM FRAC TANKS DOWN HOLE
2000	0600	10.00	1	RIG DOWN PUMPS AND BACK YARD
				DIESEL 49
				RIG F/W 1/4 1 RED FRAC TANK FULL F/W

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

RU/D-7 CHANGING LINNERS AND SWABS IN PUMP # 1

DRILLER: BENNIE GARCIA

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	FINNISH R/D (WAITING ON TRUCKS)
				CHANGED LINERS & SWABS #1 PUMP 6"

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INJURED THIS TOUR? INITIAL	YES/NO	CB YES/NO

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180811_1J

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/11/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/11/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher:
Rig No.: 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.		
22.		
23.	12.0	
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: TERRY EVANS

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	23	RIG WATCH
				DIESEL - 48"

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5 MSM CHANGING LINERS AND SWABS # 2 PUMP

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	WORK ON RIG/WAIT ON TRUCKS

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

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FORM REPRODUCED UNDER LICENCE FROM IADC (PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180812_1I

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/12/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE: HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/12/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: HEATH NOACK

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	RIG WATCH
				DIESEL 46.5

TOUR 1

FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	
	5 MSM RIGGING DOWN	

BIT RECORD

BIT NO., SIZE, IADC CODE, MANUFACTURER, TYPE, SERIAL NO., JETS, TFA, DEPTH OUT, DEPTH IN, TOTAL DRILLED, TOTAL HOURS

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME, MUD WT, GRADIENT, FUNNEL VIS, PV / YP, GEL STR, FLUID LOSS, pH, SOLIDS

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	RIG DOWN SET RIG OFF TO THE SIDE

TOUR 2

FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT | OIL BASED MUD

tour.us.all.2ahrR Rev. 2 02/2018

FORM REPRODUCED UNDER
LICENCE FROM IADC
(PASON SYSTEMS CORP. EXPIRES 31 DEC 2018)

DAILY DRILLING REPORT

REPORT NO. PATRIO4_20180813_1H

LEASE	WELL NO.	API WELL NUMBER	WATER DEPTH	DATE
NAVAJO WDW	4	5LX-56	0	8/13/2018

OPERATOR	CONTRACTOR	RIG NO.
WSP USA INC.	PATRIOT DRILLING LLC	4

SIGNATURE OF OPERATOR'S REPRESENTATIVE

SIGNATURE OF CONTRACTOR'S REPRESENTATIVE
HEATH NOACK

D.P. SIZE	WEIGHT	GRADE	TOOL JT OD	TYPE	STRING NO.	PUMP NO.	PUMP MANUFACTURER	TYPE	STROKE LENGTH
4 1/2	16.60	X-95	6 1/4	X HOLE	1	1	BREWSTER	B-1300	12
						2	BREWSTER	B-1300	12

FIELD OR DISTRICT	COUNTY	STATE/COUNTRY
TURKEY TRACK RANCH	Eddy	NM/U.S.

LAST CASING TUBING OR LINER	SIZE	MAKE	WEIGHT	GRADE	NO. JOINTS	LENGTH	RKB TO CSG HD.	SET AT
	13 3/8	ST & C	54.50	J-55	39	1700	21	1680
	9 5/8	LTC	47	L-80HC	244	10323.44	21	10327

WIRE LINE RECORD REEL NO.

SIZE	NO. LINES	LENGTH SLIPPED
1 1/4	10	

LENGTH CUT OFF | PRESENT LENGTH

WEAR OR TRIPS SINCE LAST CUT: 628

CUMULATIVE WEAR OR TRIPS: 26123

DRILLING CREW PAYROLL DATA

Date: 8/13/2018
Well Name & No.: NAVAJO WDW 4
Company: PATRIOT DRILLING LLC
Toolpusher: Rig No. 4

TIME DISTRIBUTION - HOURS

CODE No. - OPERATION	TOUR 1	TOUR 2
1. RIG UP & TEAR DOWN		12.0
2. DRILL ACTUAL		
3. REAMING		
4. CORING		
5. COND MUD & CIRC		
6. TRIPS		
7. LUBRICATE RIG		
8. REPAIR RIG		
9. CUT OFF DRILL LINE		
10. DEVIATION SURVEY		
11. WIRE LINE LOGS		
12. RUN CASING & CEMENT		
13. WAIT ON CEMENT		
14. NIPPLE UP B.O.P.		
15. TEST B.O.P.		
16. DRILL STEM TEST		
17. PLUG BACK		
18. SQUEEZE CEMENT		
19. FISHING		
20. DIR. WORK		
21.	12.0	
22.		
23.		
COMPLETION A. PERFORATING		
B. TUBING TRIPS		
C. TREATING		
D. SWABBING		
E. TESTING		
F.		
G.		
H.		
TOTALS	12.00	12.00

DAYWORK TIME SUMMARY (OFFICE USE ONLY)

HOURS W /CONTR. D.P.		
HOURS W /OPR. D.P.		
HOURS WITHOUT D.P.		
HOURS STANDBY		
TOTAL DAYWORK		
NO. DAYS FROM SPUD		
CUMULATIVE ROTATING HOURS		
DAILY MUD COST		
TOTAL MUD COST		

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE SINGLES	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5 MSM RIGGING DOWN

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: BRYAN BRISCOE

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
1800	600	12.00	21	RIG WATCH /// RIG DOWN

TOUR 1 FROM 1800 TO 600

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

DRILLLING ASSEMBLY (At end of tour)

NO.	ITEM	LENGTH
	DRILLPIPE STANDS	
	DRILLPIPE STANDS	
	KELLY DOWN	
	TOTAL	
	WT. OF STRING	

5MSM RIGGING DOWN

BIT RECORD

BIT NO.	
SIZE	
IADC CODE	
MANUFACTURER	
TYPE	
SERIAL NO.	
JETS	
TFA	
DEPTH OUT	
DEPTH IN	
TOTAL DRILLED	
TOTAL HOURS	

CUTTING STRUCTURE

INNER	OUTER	DULL CHAR	LOCATION

BRG / SEALS	GAGE	OTHER DULL	REASON

MUD RECORD

TIME	
MUD WT	
GRADIENT	
FUNNEL VIS	
PV / YP	
GEL STR	
FLUID LOSS	
pH	
SOLIDS	

MUD & CHEMICALS ADDED

TYPE	AMOUNT

DRILLER: RICHARD W. MANN

DEPTH INTERVAL FROM	TO	DRILL REAM CORE	CORE NO.	FORMATION (SHOW RECOVERY)	ROTARY TABLE SPEED	WEIGHT ON BIT	PUMP PRESSURE	PUMP NO. 1 LINER SIZE	PUMP NO. 1 SPM	PUMP NO. 2 LINER SIZE	PUMP NO. 2 SPM	PUMP NO. 3 LINER SIZE	PUMP NO. 3 SPM	PUMP NO. 4 LINER SIZE	PUMP NO. 4 SPM	TOTAL PUMP OUTPUT
								6.5		6.5						

DEVIATION RECORD

DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.	DEPTH	DEV.	DIR.	TVD	HORIZ. DISPL.

TIME LOG

FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS
600	1800	12.00	1	RIG DOWN

TOUR 2 FROM 600 TO 1800

CREW	EMPL. ID NO.	NAME	HOURS	INITIAL	INJURED THIS TOUR? YES/NO	CB YES/NO

NO. OF DAYS SINCE LOST TIME ACCIDENT

OIL BASED MUD

9.3 SURFACE CASING MILL CERTIFICATIONS

APPENDIX 9.3

CERTIFICATE No. : 170524-05 page : 1 of 18

CONTACT(P/O) No. : 5090

ISSUED DATE : 2017-05-24

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

ORIGINAL

NEXTEEL CO.,LTD.
HEAD OFFICE : 195, 768 Songdeok-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END ①	NOMINAL SIZE	Dimension (O.D x Thick. x Length) ② ③	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B ④	TENSILE STRENGTH psi (MPa) W ④	EL (%)	⑤	C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	V -3	Sol-Al -3	Ti -4	B -4	Nb -4	Ceq. ⑦	HYDRO-STATIC TEST T.P (PSI) ⑧	HYDRO-STATIC TEST RE SULT ⑨	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HRB	HARDNESS TEST HV	Corrosion TEST HIC	Corrosion TEST SSCC	REMARK
1	BPE	13-3/8	13.375 x 0.380 x 42	13	13,074	1721958	66,000	84,800		38	H	1,600	110	860	150	40	32	1	0	0	3	26	200		250		1,900	G							
							71,800	87,900		39	P	1,657	93	817	145	33	33	1	6	0	0	15	157	2	200									
											P	1,659	97	823	151	34	33	1	7	0	0	17	166	1	197									
				38	38,216	1731981	67,900	85,300		35	H	1,600	100	880	120	40	36	1	10	0	4	24	170		230		1,900	G							
							66,700	83,100		39	P	1,719	92	824	132	34	34	1	8	0	0	15	146	2	202									
											P	1,706	92	824	127	32	34	1	8	0	0	15	137	2	191									
				14	14,080	1731994	64,700	85,300		38	H	1,600	100	880	150	30	34	1	0	0	3	25	230		250		1,900	G							
							69,000	85,000		38	P	1,681	90	824	142	32	34	Tr	7	0	0	15	165	2	201									
											P	1,685	91	831	148	34	34	Tr	7	0	0	16	175	2	221									
			** SUB TOTAL **	65	65,370																														

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

NOTE

① BPE: BLACK PLAIN END, BSE: BLACK BEVELLED END, BTE: BLACK THREADED END, BTC: BLACK THREADED & COUPLED, GPE: GALVANIZED PLAIN END,

② O.D: OUTSIDE DIAMETER Thick.: Wall Thickness (Unit : Inch)

③ Length (Unit : Feet)

④ B: BASE METAL, W: WELD SEAM

⑤ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS

⑥ Chemical Composition Unit:-4: × 1/10000,-3: × 1/1000,-2: × 1/100(The test value less than each unit is regarded as Tr)

⑦ Carbon Equivalent: 1.C≤0.12%, CE(Pcm)= C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
2.C>0.12%, CE(IIW)= C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5

⑧ T.P:TEST PRESSURE

⑨ G : Good

⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

※ G : Good

※ Tr: Trace element

* Tensile Test(Strip Type Specimen:Width)
: ≤ 3-1/2"→19mm, 4"~7-5/8"→25mm, 8-5/8 ≤→38mm
: Specimen Orientation : L90
* Reference Indicator for NDE : N10 3.2mm(0.125")
* Min.temperature for Heat Treatment : Min. 850℃

SIGNATURE

SURVEYOR TO :

WE HEREBY CERTIFY THAT THE PRODUCTS HERE IN HAVE BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ORDER.

SIGNATURE S. Y. Choi.

MANAGER OF QUALITY ASSURANCE TEAM

5090_GH CITATION_13.375 52.79 J PE NEXTEEL

CERTIFICATE No. : 170524-05 page : 2 of 18

CONTACT(P/O) No. : 5090

ISSUED DATE : 2017-05-24

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

NEXTEEL CO.,LTD.

ORIGINAL

HEAD OFFICE : 195, 768 Songdeok-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END ①	NOMINAL SIZE	Dimension {O.D x Thick. x Length} ② ③	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B ④	TENSILE STRENGTH psi (MPa) W ④	EL (%)	⑤	CHEMICAL COMPOSITION(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	V -3	Sol-Al -3	Ti -4	B -4	Nb -4	⑥	Ceq. ⑦	HYDRO-STATIC TEST T.P (PSI) ⑧	HYDRO-STATIC TEST RE SULT ⑨	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HRB	HARDNESS TEST HV	Corrosion TEST HIC	Corrosion TEST SSCC	REMARK
1	BPE	13-3/8	13.375 x 0.380 x 42	65	65,370	1731996	62,600	82,400		38	H	1,600	100	880	130	10	38	1	0	0	4	20	160		250		1,900	G								
							65,400	81,900		37	P	1,706	88	845	147	22	35	1	6	0	0	11	138	1	201										
											P	1,666	88	838	144	23	35	1	6	0	0	12	133	1	198										
				34	34,194	1731997	59,700	81,300		36	H	1,700	90	880	140	20	39	1	0	0	4	25	160		250		1,900	G								
							67,900	83,500		37	P	1,726	84	825	136	29	38	1	6	Tr	0	16	140	2	213										
											P	1,739	82	823	133	27	38	1	6	Tr	0	15	136	1	195										
				33	33,188	1732033	66,000	85,000		33	H	1,700	110	900	160	20	37	1	0	0	4	24	160		270		1,900	G								
							65,800	82,700		38	P	1,750	91	833	130	36	32	Tr	7	0	0	17	113	2	206										
											P	1,776	92	839	134	39	32	Tr	7	0	0	19	120	2	230										
			** SUB TOTAL **	132	132,752																															

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

NOTE

① BPE: BLACK PLAIN END, BSE: BLACK BEVELLED END, BTE: BLACK THREADED END, BTC: BLACK THREADED & COUPLED, GPE: GALVANIZED PLAIN END,

② O.D: OUTSIDE DIAMETER Thick.: Wall Thickness (Unit : Inch)

③ Length (Unit : Feet)

④ B: BASE METAL, W: WELD SEAM

⑤ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS

⑥ Chemical Composition Unit:-4: × 1/10000,-3: × 1/1000,-2: × 1/100(The test value less than each unit is regarded as Tr)

⑦ Carbon Equivalent: 1.C≤0.12%, CE(Pcm)= C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
2.C>0.12%, CE(IIW)= C+Mn/6(Ni+Cu)/15+(Cr+Mo+V)/5

⑧ T.P:TEST PRESSURE

⑨ G : Good

⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

※ G : Good

※ Tr : Trace element

* Tensile Test(Strip Type Specimen:Width)
: ≤ 3-1/2" →19mm, 4"~7-5/8"→25mm, 8-5/8 ≤ →38mm
: Specimen Orientation : L90
* Reference Indicator for NDE : N10 3.2mm(0.125")
* Min.temperature for Heat Treatment : Min. 850℃

SIGNATURE

SURVEYOR TO :

WE HEREBY CERTIFY THAT THE PRODUCTS HERE IN HAVE BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ORDER.

SIGNATURE S. Y. Lim.

MANAGER OF QUALITY ASSURANCE TEAM

5090_GH CITATION_13.375 52.79 J PE NEXTEEL

CERTIFICATE No. : 170524-05 page : 3 of 18

CONTACT(P/O) No. : 5090

ISSUED DATE : 2017-05-24

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

NEXTEEL CO.,LTD.

ORIGINAL

HEAD OFFICE : 195, 768 Songdeok-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END ①	NOMINAL SIZE	Dimension (O.D x Thick. x Length) ② ③	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B ④	TENSILE STRENGTH psi (MPa) W ④	EL (%)	⑤	CHEMICAL COMPOSITION(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	V -3	Sol-Al -3	Ti -4	B -4	Nb -4	Ceq. ⑦	HYDRO-STATIC TEST T.P (PSI) ⑧	HYDRO-STATIC TEST RE SULT ⑨	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HRB	HARDNESS TEST HV	Corrosion TEST HIC	Corrosion TEST SSCC	REMARK
:	BPE	13-3/8	13.375 x 0.380 x 42	34	34,194	1741822	64,200	84,000		40	H	1,700	100	880	120	40	33	1	0	0	4	28	190		230		1,900	G							
							73,200	86,600		34	P	1,794	68	832	120	28	33	Tr	7	0	0	17	147	2	189									
											P	1,794	90	846	123	28	33	Tr	7	0	0	17	153	2	203									
				27	27,154	1741832	62,100	80,600		38	H	1,600	90	880	130	20	33	1	0	0	4	27	200		220		1,900	G							
							70,000	85,000		35	P	1,687	80	821	123	25	32	1	8	0	0	19	162	1	179									
											P	1,680	80	814	122	24	32	Tr	7	0	0	19	160	1	175									
				85	85,484	1741835	66,700	85,400		35	H	1,600	110	890	90	10	32	1	0	0	4	20	160		230		1,900	G							
							70,000	86,600		37	P	1,648	105	836	94	24	31	1	7	0	0	12	121	1	167									
											P	1,465	103	830	97	25	31	Tr	7	0	0	12	118	1	181									
			** SUB TOTAL **	146	146,832																															

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

NOTE

① BPE: BLACK PLAIN END, BBE: BLACK BEVELLED END, BTE: BLACK THREADED END, BTC: BLACK THREADED & COUPLED, GPE: GALVANIZED PLAIN END,

② O.D: OUTSIDE DIAMETER Thick.: Wall Thickness (Unit : Inch)

③ Length (Unit : Feet)

④ B: BASE METAL, W: WELD SEAM

⑤ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS

⑥ Chemical Composition Unit:-4: × 1/10000,-3: × 1/1000,-2: × 1/100(The test value less than each unit is regarded as Tr)

⑦ Carbon Equivalent: 1.C≤0.12%, CE(Pcm)= C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
2.C>0.12%, CE(IIW)= C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5

⑧ T.P:TEST PRESSURE

⑨ G : Good

⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

※ G : Good

※ Tr: Trace element

* Tensile Test(Strip Type Specimen:Width)
: ≤ 3-1/2"→19mm, 4"~7-5/8"→25mm, 8-5/8 ≤→38mm
: Specimen Orientation : L90
* Reference Indicator for NDE : N10 3.2mm(0.125")
* Min.temperature for Heat Treatment : Min. 850℃

SIGNATURE

SURVEYOR TO :

WE HEREBY CERTIFY THAT THE PRODUCTS HERE IN HAVE BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ORDER.

SIGNATURE S. Y. Lim.

MANAGER OF QUALITY ASSURANCE TEAM

5058_CENTENARIO BLU_13.375 52.79 J PE NEXTEEL

CERTIFICATE No. : 170410-03 page : 1 of 5

CONTACT(P/O) No. : 5058

ISSUED DATE : 2017-04-10

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

NEXTEEL CO.,LTD. NEXTEEL CO., LTD.
HEAD OFFICE : 195, 768 Songdeck-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END	NOMINAL SIZE	Dimension (O.D x Thick. x Length)	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B	TENSILE STRENGTH psi (MPa) W	EL (%)	CHEMICAL COMPOSITION(%)	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Sol-Al	Ti	B	Nb	Ceq.	HYDRO-STATIC TEST T.P (PSI)	HYDRO-STATIC TEST RE SULT	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HRB	HARDNESS TEST HV	Corrosion TEST HIC	Corrosion TEST SSCC	RE MARK
	①		② ③					④			⑤	-4	-3		-4		-2		-3	-2	-3		-4			⑦	⑧	⑨							
1	BPE	13-3/8	13.375 x 0.380 x 42	91	91,518	SP79154	59,500	91,100		34	H	2.587	210	1.396	136	12	2	1	16	Tr	3	28	247	17	100		1,900	G							
							69,600	89,300		33	P	2.482	195	1.390	123	10	1	1	16	0	1	28	242	17	99									
											P	2.493	197	1.378	125	10	1	1	17	0	1	25	239	15	97									
				99	99,563	SP79156	59,300	92,100		33	H	2.588	203	1.391	120	12	2	1	19	Tr	4	24	246	18	100		1,900	G							
							67,700	87,000		28	P	2.465	199	1.333	114	22	2	1	18	0	0	20	232	18	73									
											P	2.522	204	1.349	119	23	2	1	18	0	0	20	240	18	79									
				98	98,558	SP79158	60,200	91,600		34	H	2.603	201	1.394	122	10	2	2	15	Tr	3	25	253	16	90		1,900	G							
							66,700	85,600		34	P	2.447	199	1.337	123	22	2	Tr	11	0	0	24	242	18	87									
											P	2.503	200	1.348	133	23	2	Tr	12	0	0	24	251	19	92									
			** SUB TOTAL **	288	289,639																															

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

NOTE

① BPE: BLACK PLAIN END,
BBE: BLACK BEVELLED END,
BTE: BLACK THREADED END,
BTC: BLACK THREADED & COUPLED,
GPE: GALVANIZED PLAIN END.

② O.D: OUTSIDE DIAMETER
Thick.: Wall Thickness
(Unit : Inch)

③ Length (Unit : Feet)

④ B: BASE METAL, W: WELD SEAM

⑤ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS

⑥ Chemical Composition Unit:-4: × 1/10000,-3: × 1/1000,-2: × 1/100(The test value less than each unit is regarded as Tr)

⑦ Carbon Equivalent: 1.C≤0.12%, CE(Pcm)= C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
2.C>0.12%, CE(IIW)= C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5

⑧ T.P:TEST PRESSURE

⑨ G : Good

⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

※ G : Good
※ Tr: Trace element

• Tensile Test(Strip Type Specimen:Width)
: ≤ 3-1/2"→19mm, 4"~7-5/8"→25mm, 8-5/8 ≤→38mm
: Specimen Orientation : L90
• Reference Indicator for NDE : N10 3.2mm(0.125")
• Min.temperature for Heat Treatment : Min. 850℃

SIGNATURE

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SURVEYOR TO :

SIGNATURE S. Y. Lim.

MANAGER OF QUALITY ASSURANCE TEAM

5058_CENTENARIO BLU_13.375 52.79 J PE NEXTEEL

CERTIFICATE No. : 170410-03 page : 2 of 5

CONTACT(P/O) No. : 5058

ISSUED DATE : 2017-04-10

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

ORIGINAL

NEXTEEL CO.,LTD. NEXTEEL CO., LTD.
HEAD OFFICE : 195, 768 Songdeok-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END	NOMINAL SIZE	Dimension (O.D x Thick. x Length)	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B	TENSILE STRENGTH psi (MPa) W	EL (%)		CHEMICAL COMPOSITION(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -3	Cu -2	Mo -3	V -2	Sol-Al -3	Ti -4	B -4	Nb -4	Ceq. ⑦	HYDRO-STATIC TEST T.P (PSI)	HYDRO-STATIC TEST RE SULT	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HRB	HV	Corrosion TEST HIC	SSCC	RE MARK
	①		② ③					④			⑤	⑥														⑧	⑨								
1	BPE	13-3/8	13.375 x 0.380 x 42	47	47,267	SP79165	57,600	90,900		33	H	2,665	205	1,396	110	10	2	1	15	Tr	4	27	263	18	100		1,900	G							
							67,400	86,100		34	P	2,547	208	1,361	108	20	2	1	14	Tr	0	25	254	18	76									
											P	2,594	206	1,358	109	21	2	Tr	14	Tr	0	26	253	19	78									
				85	85,484	SP79168	59,300	91,600		32	H	2,544	207	1,394	136	11	3	1	19	Tr	4	31	260	17	100		1,900	G							
							70,000	89,200		33	P	2,454	202	1,338	124	20	3	1	17	0	0	28	243	18	70									
											P	2,443	207	1,360	138	21	3	Tr	17	0	0	29	266	19	86									
				94	94,535	SP79723	57,400	88,900		33	H	2,617	187	1,392	121	20	2	1	11	Tr	3	31	240	20	100		1,900	G							
							65,800	84,100		35	P	2,473	186	1,346	130	27	2	Tr	9	0	0	27	245	22	100									
											P	2,494	190	1,358	130	28	2	Tr	10	0	0	27	239	22	91									
			** SUB TOTAL **	226	227,286																														

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

NOTE

① BPE: BLACK PLAIN END,
BBE: BLACK BEVELLED END,
BTE: BLACK THREADED END,
BTC: BLACK THREADED & COUPLED,
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② O.D: OUTSIDE DIAMETER
Thick.: Wall Thickness
(Unit : Inch)

③ Length (Unit : Feet)

④ B: BASE METAL, W: WELD SEAM

⑤ H: HEAT(LADLE) ANALYSIS, P: PRODUCT ANALYSIS

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2.C>0.12%, CE(IIW)= C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5

⑧ T.P:TEST PRESSURE

⑨ G : Good

⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

※ G : Good
※ Tr: Trace element

* Tensile Test(Strip Type Specimen:Width)
: ≤ 3-1/2" → 19mm, 4"~7-5/8" → 25mm, 8-5/8 ≤ → 38mm
: Specimen Orientation : L90
* Reference Indicator for NDE : N10 3.2mm(0.125")
* Min.temperature for Heat Treatment : Min. 850℃

SIGNATURE

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SURVEYOR TO :

SIGNATURE S. Y. Lim.

MANAGER OF QUALITY ASSURANCE TEAM

5058_CENTENARIO BLU_13.375 52.79 J PE NEXTEEL

CERTIFICATE No. : 170410-03 page : 3 of 5

CONTACT(P/O) No. : 5058

ISSUED DATE : 2017-04-10

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5CT J55
API 5CT 9TH EDITION : 2011

MILL TEST REPORT

EN10204 TYPE 3.1:2004

CUSTOMER :

NEXTEEL CO.,LTD. NEXTEEL CO., LTD.

ORIGINAL

HEAD OFFICE : 195, 768 Songdeck-ro 212beon-gil, Daesong-myeon, Nam-gu, Pohang-si, Gyeongsangbuk-do

ITEM NO.	TYPE OF PIPE END ①	NOMINAL SIZE	Dimension (O.D x Thick. x Length) ② ③	QUANTITY (PCS)	TOTAL WEIGHT (kg)	HEAT NO.	(Gauge Length: 2 INCH) YIELD STRENGTH psi (MPa)	TENSILE STRENGTH psi (MPa) B ④	TENSILE STRENGTH psi (MPa) W ④	EL (%)		CHEMICAL COMPOSITION(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -3	Cu -3	Mo -2	V -3	Sol-Al -4	Ti -4	B -4	Nb -4	Ceq ⑦	HYDRO-STATIC TEST T.P (PSI) ⑧	HYDRO-STATIC TEST RE SULT ⑨	IMPACT TEST A.ENERGY (J) (21)℃	IMPACT TEST SHEAR AREA (J) (21)℃	HARDNESS TEST HAB	HARDNESS TEST HV	Corrosion TEST HIC	Corrosion TEST SSCC	RE MARK
1	BPE	13-3/8	13.375 x 0.380 x 42	48	48,273	SP79746	59,500	90,200		33	H	2,564	196	1,374	132	18	3	2	24	Tr	2	26	237	19	100		1,900	G							
							67,100	87,000		32	P	2,412	201	1,341	125	25	2	1	28	0	0	26	238	23	96									
											P	2,374	196	1,325	112	24	2	Tr	27	0	0	26	216	23	82									
				4	4,023	SU6732B	63,400	93,700		33	H	2,591	193	1,407	106	12	2	1	10	Tr	3	28	260	18	110		1,900	G							
							68,900	89,600		34	P	2,440	197	1,364	111	25	2	Tr	10	0	0	27	253	18	129									
											P	2,465	199	1,366	106	24	2	Tr	11	0	0	28	242	18	131									
2	BPE	13-3/8	13.375 x 0.380 x 38	4	3,639	SP79154	59,500	91,100		34	H	2,587	210	1,396	136	12	2	1	16	Tr	3	28	247	17	100		1,900	G							
							69,600	89,300		33	P	2,482	195	1,390	123	10	1	1	16	0	1	28	242	17	99									
											P	2,493	197	1,378	125	10	1	1	17	0	1	25	239	15	97									
			** SUB TOTAL **	56	55,935																														

HEAT TREATMENT (WELD SEAM)	VISUAL & DIMENSION	FLATTENING, BEND, GUIDED BEND TEST	REVERSE FLATTENING TEST	WELD DUCTILITY TEST	FLARING TEST	RESIDUAL MAGNETISM TEST	CRUSH TEST	STRAIGHTNESS	DRIFT TEST	NONDESTRUCTIVE TEST(NDT) U.T SEAM	NONDESTRUCTIVE TEST(NDT) U.T FULL BODY	NONDESTRUCTIVE TEST(NDT) M.T
G	G	G						G	G	G		G

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⑩ NDT:NONDESTRUCTIVE TEST, E.T:EDDYCURRENT TEST, U.T:ULTRASONIC TEST, M.T:MAGNETIC PARTICLE TEST(Special End Area Test)

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: Specimen Orientation : L90
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* Min.temperature for Heat Treatment : Min. 850℃

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SIGNATURE S. Y. Lim

SURVEYOR TO :

MANAGER OF QUALITY ASSURANCE TEAM

9.4 SURFACE CASING TALLY

APPENDIX 9.4

wsp

Datum: KB **Reference Depth:** GL **Footage from Reference Depth to Datum:** -20.00

All Depths Shown Below are from Reference Depth

Column:	1			2			3			4			5			6		
Joint #	Length (ft)	Depth (ft)	Joint #	Length (ft)	Depth (ft)	Joint #	Length (ft)	Depth (ft)	Joint #	Length (ft)	Depth (ft)	Joint #	Length (ft)	Depth (ft)	Joint #	Length (ft)	Depth (ft)	CASING TALLY NOTES
1	43.83	1661.22	31	41.97	399.80													
2	41.98	1617.39	32	41.95	357.83													Float collar 1'
3	41.98	1575.41	33	41.98	315.88													Float Shoe .85
4	41.98	1533.43	34	41.98	273.90													Shoe track joint = 43.83
5	41.98	1491.45	35	42.00	231.92													
6	41.99	1449.47	36	41.98	189.92													
7	42.00	1407.48	37	42.01	147.94													Franks Casing made up each connection to optimum
8	41.98	1365.48	38	41.98	105.93													torque of 5140 ft-lbs.
9	41.99	1323.50	39	41.95	63.95													
10	41.97	1281.51	40	42.00	22.00													
Sub Total	**421.68**			**419.80**			**0.00**			**0.00**			**0.00**			**0.00**		
11	42.02	1239.54																
12	41.98	1197.52																
13	42.00	1155.54																
14	42.00	1113.54																
15	41.98	1071.54																
16	42.02	1029.56																
17	41.98	987.54																
18	42.00	945.56																
19	42.00	903.56																
20	41.95	861.56																
Sub Total	**419.93**			**0.00**			**0.00**			**0.00**			**0.00**			**0.00**		
21	41.98	819.61																
22	41.98	777.63																
23	42.00	735.65																
24	42.00	693.65																
25	41.97	651.65																
26	41.96	609.68																
27	41.98	567.72																
28	41.98	525.74																
29	41.98	483.76																
30	41.98	441.78																
Sub Total	**419.81**			**0.00**			**0.00**			**0.00**			**0.00**			**0.00**		
GRAND TOTAL	**1261.42**			**419.80**			**0.00**			**0.00**			**0.00**			**0.00**		

(USE DIFFERENT COLUMNS FOR EACH CASING OF DIFFERENT WEIGHT & GRADE)

SUMMARY

OPERATOR:	Navajo Holly Frontier				**COL.**			**O.D.**			**#/FT**				**GR.**			**RANGE**	**THREAD**	**Cond**	**FEET**
COUNTY:	Eddy				1			13-3/8			54.5 #							1	STC	NEW	**1261.42**
FIELD:					2			13-3/8			54.5 #							1	STC	NEW	**419.80**
LEASE:					3																**0.00**
WELL NO:	WDW #4				4																**0.00**
PROJ. NO:	192080D				5																**0.00**
DATE:	5/6/2018				6																**0.00**
TALLY BY:	Kevin Cook																				

GRAND TOTAL	**1681.22**
CORR. FROM BHF	**-20.00**
DEPTH FROM BHF	**1661.22**

9.5 SURFACE CASING CEMENTING REPORT

APPENDIX 9.5

POST JOB REPORT

FO-GL-HAL-CMT-2100 REV1

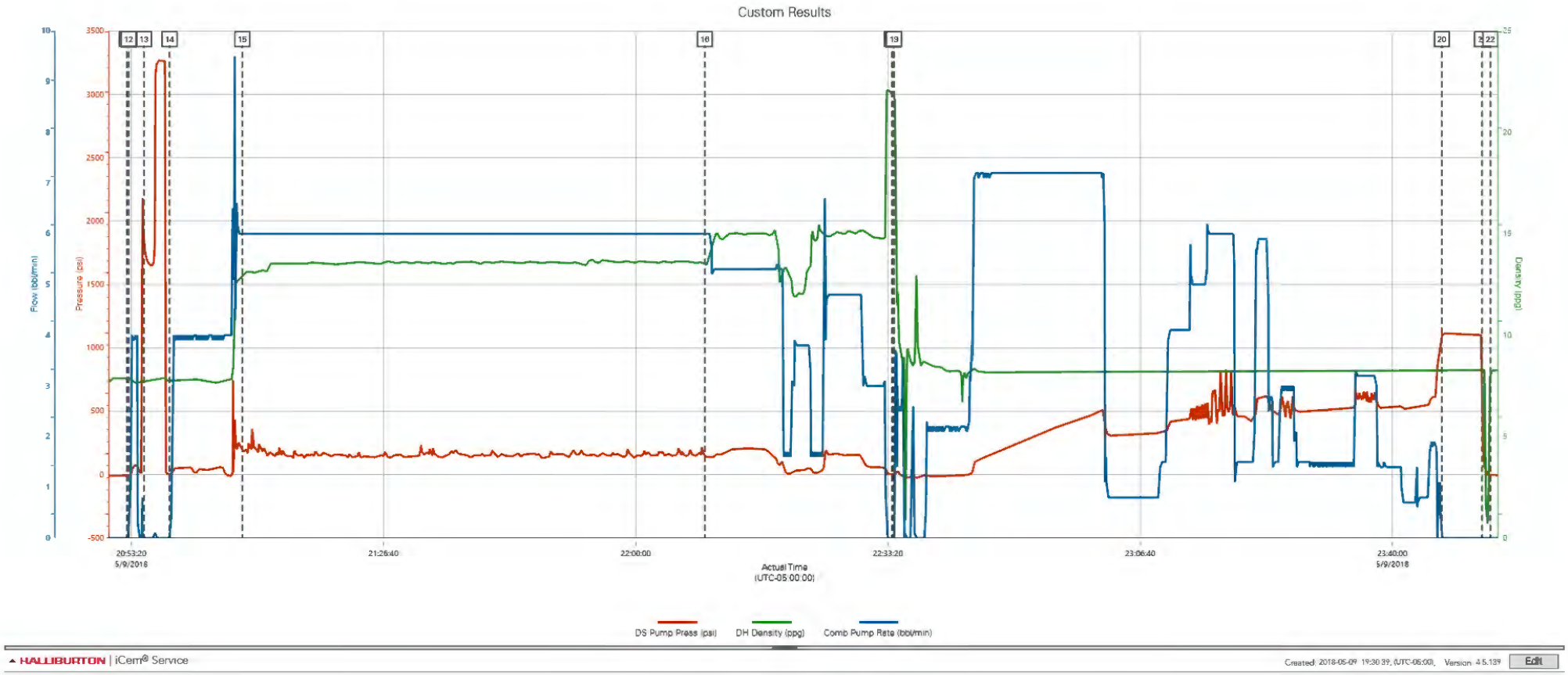
HALLIBURTON

Customer Name:	**WSP USA Inc.**
Halliburton Representative:	**Victor Villegas**
Date:	**05/10/2018**
Well Name:	**Waste Disposal Well #4**
Job:	**Surface Casing**
Rig:	**Patriot 4**
Country/District:	**Eddy**
SO#:	**0904846276**

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. Accordingly, HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Real Time Graph

1st Stage:



Appendix

Real Time Graph 2
Appendix 3
Real-Time Job Log 4
1.1 Job Event Log 4
Fluid Data 6

Real-Time Job Log

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	5/9/2018	03:00:00	USER				JOB TIME @ 09:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/9/2018	05:00:00	USER				
Event	3	Crew Leave Yard	Crew Leave Yard	5/9/2018	05:30:00	USER				
Event	4	Arrive at Rig	Arrive at Rig	5/9/2018	06:00:00	USER				RIG SITTING UP TO RUN WIRELINE TO LOG
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	5/9/2018	06:30:00	USER				
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/9/2018	06:45:00	USER				
Event	7	Rig-Up Equipment	Rig-Up Equipment	5/9/2018	07:00:00	USER				
Event	8	Rig-Up Completed	Rig-Up Completed	5/9/2018	08:00:00	USER				
Event	9	Other	Other	5/9/2018	18:30:00	USER				RIG ON BOTTOM
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/9/2018	19:30:00	USER				
Event	11	Start Job	Start Job	5/9/2018	20:52:44	COM4	-8.00	7.88	0.00	
Event	12	Pump Spacer 1	Pump Spacer 1	5/9/2018	20:52:59	COM4	-8.00	7.89	0.00	PUMPED 3 BBLS TO FILL LINES
Event	13	Test Lines	Test Lines	5/9/2018	20:55:00	USER	1841.00	7.74	0.00	TESTED LINES TO 1645 PSI FOR LOW TEST AND 3265 PSI FOR HIGH TEST
Event	14	Pump Spacer 1	Pump Spacer 1	5/9/2018	20:58:24	COM4	2.00	7.75	0.00	PUMPED 20 BBLS OF GEL WITH RED DYE
Event	15	Pump Lead Cement	Pump Lead Cement	5/9/2018	21:08:00	COM4	183.00	12.89	6.00	PUMPED 336 BBLS/ 1080 SKS @ 13.5 PPG, 1.747 FT3,

										9.06 GAL/SKS
Event	16	Pump Tail Cement	Pump Tail Cement	5/9/2018	22:09:08	COM4	156.00	13.46	6.00	PUMPED 87 BBLS/ 365 SKS @ 14.8 PPG, 1332 FT3, 6.42 GAL/SKS
Event	17	Shutdown	Shutdown	5/9/2018	22:33:53	COM4	0.00	21.88	0.00	
Event	18	Drop Top Plug	Drop Top Plug	5/9/2018	22:34:04	COM4	-1.00	21.82	0.00	DROP (HALLIBURTON) TOP PLUG
Event	19	Pump Displacement	Pump Displacement	5/9/2018	22:34:09	COM4	-1.00	21.83	0.00	PUMPED 260 BBLS OF FRESH WATER FOR DISPLACEMENT
Event	20	Bump Plug	Bump Plug	5/9/2018	23:46:31	COM4	1097.00	8.31	0.00	LANDED PLUG @ 580 PSI PRESSURED UP TO 1115 PSI
Event	21	Other	Other	5/9/2018	23:51:52	COM4	572.00	8.30	0.00	CHECK FLOATS GOT BACK 2 BBLS BACK TO PUMP TRUCK
Event	22	End Job	End Job	5/9/2018	23:52:57	COM4	-8.00	8.17	0.00	CIRCULATED 120 BBLS/ 449 SKS BACK TO SURFACE
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	5/10/2018	00:30:00	USER				
Event	24	Rig-Down Completed	Rig-Down Completed	5/10/2018	00:45:00	USER				
Event	25	Rig-Down Equipment	Rig-Down Equipment	5/10/2018	01:45:00	USER				
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/10/2018	02:00:00	USER				LEAVE LOCATION @ 2:30

Fluid Data

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Gel Spacer w/Red Dye	Gel Spacer w/Red Dye	20	bbl	8.4				
2.50 lbm/bbl		WG-36, 50 LB BAG (101627238)							
0.10 lbm/bbl		RHODAMINE RED LIQUID DYE # 2 (101201084)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	ExtendaCem™ C	EXTENDACEM (TM) SYSTEM	1080	sack	13.5	1.747		5	9.06
0.1250 lbm		POLY-E-FLAKE (101216940)							
3 lbm		KOL-SEAL, 50 LB BAG (100064232)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	HalCem™ C	HALCEM (TM) SYSTEM	365	sack	14.8	1.332		5	6.42
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	260	bbl	8.4				

Cement Left In Pipe	Amount	80 ft	Reason		Shoe Joint
Mix Water:	pH ##	Mix Water Chloride:	## ppm	Mix Water Temperature:	## °F °C
Cement Temperature:	## °F °C	Plug Displaced by:	## lb/gal kg/m3 XXXX	Disp. Temperature:	## °F °C
Plug Bumped?	Yes/No	Bump Pressure:	#### psi MPa	Floats Held?	Yes/No
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C
Comment					

9.6 PROTECTION CASING MILL CERTIFICATIONS

APPENDIX 9.1
APPENDIX 9.6

CERTIFICATE NO(성적서 번호) : BA04493 Page 1 of 2
DATE OF ISSUE(발행일자) : 2017-10-20
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYU80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure	Hydrostatic Test Time	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	E.L %	Hardness Test ※3	Hardness Test Max. Value HRC	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
							PSI	SEC	Min.		95000		80000		19												
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 42.000 F	128	112,627	5,376	SU97318	6300	5		L	102410		85330		32	OW	18										
																MW	16										
																W	15										

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	2:×100 3:×1000 4:×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Result	HIC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4					psi	%	%	%	
		Min.																							
		Max.		43	45	190	30	30	35	25															
1	SU97318		H	25	20	139	10	1													6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1									
			P	24	19	142	9	3	1	1	3	4	2	2	9	1									

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test				
GOOD	GOOD	GOOD	GOOD	GOOD				

SURVEYOR

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H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA04493
DATE OF ISSUE(발행일자) : 2017-10-20
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT H-YL80+HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure (PSI)	Hydrostatic Test Time (SEC)	Spec.	Tensile Properties(Gage Length : 2 inch) ※2 Tensile Strength Base (PSI)	Tensile Strength Weld (PSI)	Yield Strength (PSI)	Y/R Rate (%)	E.L (%)	Hardness Test ※3 Max. Value (HRC)	Hardness Test & CVN Impact Test ※2 ※3 Specimen size	CVN Impact Test(℃) Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.	95000		80000		19			Criteria : In the case of 10×10							
									Max.			95000			23										
		TOTAL	128	112,627	5,376																			

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	2 :×100 3 :×1000 4 :×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Result	HC-Test Collapse Pressure (psi)	H.I.C Test CLR (%)	CTR (%)	CSR (%)	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4									
		Min.																							
		Max.		43	45	190	30	30	35	25															

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test				
GOOD	GOOD	GOOD	GOOD	GOOD				

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SURVEYOR

H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA04494 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-10-20
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	EL %	※3	Hardness Test Max. Value HRC	※2 ※3	Hardness Test & CVN Impact Test CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
							PSI	SEC	Min.		95000		80000		19												
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 42.000 F	36	31,676	1,512	SU97318	6300	5		L	102410		85330		32	OW	18										
																MW	16										
																W	15										
		TOTAL	36	31,676	1,512																						

No.	Heat No.	Spec.	※4	C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4				psi	%	%	%	
		Min.																						
		Max.		43	45	190	30	30	35	25														
1	SU97318		H	25	20	139	10	1												6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1								
			P	24	19	142	9	3	1	1	3	4	2	2	9	1								

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

SURVEYOR

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H.K. CHOI
QA Manager

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DATE OF ISSUE(발행일자) : 2017-10-20
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	EL %	Hardness Test ※3	Hardness Test Max. Value HRC	Hardness Test & CVN Impact Test ※2 ※3	D.W.T Test(℃) Shear Area(%)
									Min.		95000		80000					Specimen size	
							PSI	SEC	Max.				95000				23	Criteria : In the case of 10×10	
1	EA PE	9-5/8" X 0.472 " X 42.000 F	36	31,676	1,512	SU97309	6300	5		L	103180		86400		33	OW	16		
																MW	16		
																IW	11		
2	EA PE	9-5/8" X 0.472 " X 42.000 F	28	24,637	1,176	SU97318	6300	5		L	102410		85330		32	OW	18		
																MW	16		
																IW	15		
		TOTAL	64	56,313	2,688														

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2:×100 3:×1000 4:×10000																				
		Min.																						
		Max.		43	45	190	30	30	35	25										psi	%	%	%	
1	SU97309		H	25	20	140	13	1												6716				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1								
			P	24	19	143	10	2	1	1	3	4	2	2	10	2								
2	SU97318		H	25	20	139	10	1												6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1								
			P	24	19	142	9	3	1	1	3	4	2	2	9	1								

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test				
GOOD	GOOD	GOOD	GOOD	GOOD				

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SURVEYOR

H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA08021
DATE OF ISSUE(발행일자) : 2017-10-30
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure (PSI)	Hydrostatic Test Time (SEC)	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base (PSI)	Tensile Strength Weld (PSI)	Yield Strength (PSI)	Y/R Rate (%)	EL (%)	Hardness Test ※3	Hardness Test Max. Value (HRC)	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		95000		80000														
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 42.000 F	46	40,475	1,932	SU97305	6300	5		L	106490		90230		32	OW	18										
																MW	16										
																W	15										
2	EA PE	9-5/8" X 0.472 " X 42.000 F	107	94,149	4,494	SU97309	6300	5		L	103180		86400		33	OW	16										
																MW	16										
																W	11										
3	EA PE	9-5/8" X 0.472 " X 42.000 F	14	12,319	588	SU97318	6300	5		L	102410		85330		32	OW	18										
																MW	16										
																W	15										
		TOTAL	167	146,943	7,014																						

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	2:×100 3:×1000 4:×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
		Min.																							
		Max.		43	45	190	30	30	35	25															
				2	2	2	3	3	2	2	2	3	3	3	3	4					psi	%	%	%	
1	SU97305		H	24	19	139	12	1													6553				
			P	24	19	140	9	2	1	1	3	4	2	2	9	1									
			P	24	18	141	9	3	1	1	3	4	2	2	9	1									
2	SU97309		H	25	20	140	13	1													6716				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1									
			P	24	19	143	10	2	1	1	3	4	2	2	10	2									
3	SU97318		H	25	20	139	10	1													6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1									
			P	24	19	142	9	3	1	1	3	4	2	2	9	1									

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

SURVEYOR

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H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA02907 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-10-18
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure (PSI)	Hydrostatic Test Time (SEC)	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base (PSI)	Tensile Strength Weld (PSI)	Yield Strength (PSI)	Y/R Rate (%)	EL (%)	Hardness Test ※3	Hardness Test Max. Value (HRC)	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		95000		80000		19			Specimen size								
									Max.				95000				23		Criteria : In the case of 10×10							
1	EA PE	9-5/8" X 0.472 " X 42.000 F	52	45,755	2,184	SU97305	6300	5		L	106490		90230		32	OW	18									
																MW	16									
																W	15									
		TOTAL	52	45,755	2,184																					

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2 :×100 3 :×1000 4 :×10000																				
		Min.		2	2	2	3	3	2	2	2	3	3	3	3	4				psi	%	%	%	
		Max.		43	45	190	30	30	35	25														
1	SU97305		H	24	19	139	12	1												6553				
			P	24	19	140	9	2	1	1	3	4	2	2	9	1								
			P	24	18	141	9	3	1	1	3	4	2	2	9	1								

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test				
GOOD	GOOD	GOOD	GOOD	GOOD				

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SURVEYOR

H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA07990 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-10-30
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	EL %	Hardness Test ※3	Hardness Test Max. Value HRC	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		95000		80000														
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 42.000 F	4	3,520	168	SU97305	6300	5		L	106490		90230		32	OW	18										
																MW	16										
																W	15										
2	EA PE	9-5/8" X 0.472 " X 42.000 F	36	31,676	1,512	SU97318	6300	5		L	102410		85330		32	OW	18										
																MW	16										
																W	15										
		TOTAL	40	35,196	1,680																						

No.	Heat No.	Spec.	※4	Chemical Composition(%) 2:×100 3:×1000 4:×10000 C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4				psi	%	%	%	
		Min.																						
		Max.		43	45	190	30	30	35	25														
1	SU97305		H	24	19	139	12	1												6553				
			P	24	19	140	9	2	1	1	3	4	2	2	9	1								
			P	24	18	141	9	3	1	1	3	4	2	2	9	1								
2	SU97318		H	25	20	139	10	1												6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1								
			P	24	19	142	9	3	1	1	3	4	2	2	9	1								

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattering / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

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SURVEYOR

H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BB00352 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-11-02
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure (PSI)	Hydrostatic Test Time (SEC)	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base (PSI)	Tensile Strength Weld (PSI)	Yield Strength (PSI)	Y/R Rate (%)	E.L (%)	Hardness Test ※3	Hardness Test Max. Value (HRC)	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
									Min.		95000		80000		19												
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 41.000 F	4	3,436	164	SQ48179	6300	5		L	104210		89580		31	OW	15										
																MW	16										
																W	15										
		TOTAL	4	3,436	164																						

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	2:×100 3:×1000 4:×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HIC-Test Colapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
		Min.		2	2	2	3	3	2	2	2	3	3	3	3	4					psi	%	%	%	
		Max.		43	45	190	30	30	35	25															
1	SQ48179		H	24	20	138	12	1													6983				
			P	23	22	146	12	2	1	1	3	3	1	2	10	2									
			P	23	22	146	12	2	1	1	3	3	1	2	10	2									

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I.H.U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

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H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BA06216
DATE OF ISSUE(발행일자) : 2017-10-25
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	EL %	Hardness Test ※3	Hardness Test Max. Value HRC	Hardness Test & CVN Impact Test ※2 ※3	CVN Impact Test(℃) Specimen size	CVN Impact Test(℃) Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test(℃) Shear Area(%) 1	2	avg
							PSI	SEC	Min.		95000		80000														
									Max.				95000				23		Criteria : In the case of 10×10								
1	EA PE	9-5/8" X 0.472 " X 39.000 F	3	2,451	117	SU97305	6300	5		L	106490		90230		32	CW	18										
																MW	16										
																W	15										
2	EA PE	9-5/8" X 0.472 " X 39.000 F	1	817	39	SU97318	6300	5		L	102410		85330		32	CW	18										
																MW	16										
																W	15										
		TOTAL	4	3,268	156																						

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	2:×100 3:×1000 4:×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4					psi	%	%	%	
		Min.																							
		Max.		43	45	190	30	30	35	25															
1	SU97305		H	24	19	139	12	1													6553				
			P	24	19	140	9	2	1	1	3	4	2	2	9	1									
			P	24	18	141	9	3	1	1	3	4	2	2	9	1									
2	SU97318		H	25	20	139	10	1													6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1									
			P	24	19	142	9	3	1	1	3	4	2	2	9	1									

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

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SURVEYOR

H.K. CHOI
QA Manager

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CERTIFICATE NO(성적서 번호) : BB00355 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-11-02
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80-HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base PSI	Tensile Strength Weld PSI	Yield Strength PSI	Y/R Rate %	E.L %	Hardness Test ※3	Hardness Test Max. Value HRC	Hardness Test & CVN Impact Test ※2 ※3	D.W.T Test(℃) Shear Area(%)
									Min.		95000		80000		19			Specimen size	
									Max.				95000				23	Criteria : In the case of 10×10	
1	EA PE	9-5/8" X 0.472 " X 41.000 F	3	2,577	123	SQ48179	6300	5		L	104210		89580		31	OW	15		
																MW	16		
																W	15		
		TOTAL	3	2,577	123														

CVN Impact Test(℃) Absorbed Energy(Joule): 1 | 2 | 3 | avg | Shear Area (%)
D.W.T Test(℃) Shear Area(%): 1 | 2 | avg

No.	Heat No.	Spec.	※4	C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test: Zn Coating	Copper Sulfate Test: Time	Copper Sulfate Test: Result	HIC-Test Collapse Pressure	H.I.C Test: CLR	H.I.C Test: CTR	H.I.C Test: CSR	S.S.C.C Test
				2	2	2	3	3	2	2	2	3	3	3	3	4				psi	%	%	%	
		Min.																						
		Max.		43	45	190	30	30	35	25														
1	SQ48179		H	24	20	138	12	1												6983				
			P	23	22	146	12	2	1	1	3	3	1	2	10	2								
			P	23	22	146	12	2	1	1	3	3	1	2	10	2								

2 : ×100 3 : ×1000 4 : ×10000

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I-U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

SURVEYOR

본 제품은 관련 규격에 합격되었음을 보증합니다.
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H.K. CHOI
QA Manager

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* This Mill Test Certificate is a copy that has been printed from original electronic document(with digital signing).
You are able to check an original electronic document at hyundaisteel's customer portal.(http://sm.hyundai-steel.com/cs/cm/login.jsp) * QRcode scanner App : 'QReal'

CERTIFICATE NO(성적서 번호) : BA08602
DATE OF ISSUE(발행일자) : 2017-10-31
CONTRACT(P/O) NO.(계약번호) : HSUOP-17048
PR NO.(주문서번호) : E170800240
COMMODITY(제품명) : E.R.W. STEEL PIPE
SPECIFICATION(제품규격) : API 5CT HYL80+HC

검사증명서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

CUSTOMER(고객사): Hyundai Steel USA, Inc

HYUNDAI STEEL
울산공장 : 울산광역시 북구 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure (PSI)	Hydrostatic Test Time (SEC)	Spec.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base (PSI)	Tensile Strength Weld (PSI)	Yield Strength (PSI)	Y/R Rate (%)	E.L (%)	Hardness Test ※3	Hardness Test Max. Value (HRC)	※2 ※3	Hardness Test & CVN Impact Test	D.W.T Test(℃)
									Min.		95000		80000		19					
									Max.				95000				23			
1	EA PE	9-5/8" X 0.472 " X 39.000 F	4	3,268	156	SU97318	6300	5		L	102410		85330		32	OW	18			
																MW	16			
																IW	15			
		TOTAL	4	3,268	156															

Hardness Test & CVN Impact Test: CVN Impact Test(℃) — Absorbed Energy(Joule): Specimen size | 1 | 2 | 3 | avg | Shear Area (%)
Criteria : In the case of 10×10

D.W.T Test(℃): Shear Area(%) | 1 | 2 | avg

No.	Heat No.	Spec.	※4	Chemical Composition(%) 2:×100 3:×1000 4:×10000 C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	Zn-Coating Test: Zn Coating	Copper Sulfate Test: Time	Copper Sulfate Test: Result	HC-Test Collapse Pressure	H.I.C Test: CLR	CTR	CSR	S.S.C.C Test
		Min.		2	2	2	3	3	2	2	2	3	3	3	3	4				psi	%	%	%	
		Max.		43	45	190	30	30	35	25														
1	SU97318		H	25	20	139	10	1												6739				
			P	24	19	141	9	2	1	1	3	4	2	2	9	1								
			P	24	19	142	9	3	1	1	3	4	2	2	9	1								

Remark
※1) Type of pipe end(관종)
EA:ERW Annealing PE:Plain End
※2) L: Longitudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) Analysis, P: Product Analysis
※ Special drift test : 8.625" for 9-5/8" X 0.472"

Heat Treatment	Non-Destructive Test (E.M.I+U.T+S.E.A)	Flattening / Bending Test	Visual & Dimension	Special Drift Test
GOOD	GOOD	GOOD	GOOD	GOOD

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SURVEYOR

H.K. CHOI
QA Manager

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9.7 PROTECTION CASING TALLY

FINAL CASING TALLY

APPENDIX 9.7

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
2	42.36		74.66	6.72	5.5	10,285	246
3	42.26		116.92	10.53	8.6	10,243	245
4	42.38		159.30	14.34	11.7	10,201	244
5	42.39		201.69	18.16	14.8	10,158	243
6	42.35		244.04	21.97	17.9	10,116	242
7	42.39		286.43	25.79	21.0	10,074	241
8	42.38		328.81	29.60	24.1	10,031	240
9	42.38		371.19	33.42	27.2	9,989	239
10	42.35		413.54	37.23	30.3	9,946	238
11	42.40	423.64	455.94	41.05	33.4	9,904	237
12	42.29		498.23	44.86	36.5	9,862	236
13	42.33		540.56	48.67	39.6	9,819	235
14	42.35		582.91	52.48	42.7	9,777	234
15	42.3		625.21	56.29	45.8	9,735	233
16	42.3		667.51	60.10	48.9	9,692	232
17	42.4		709.91	63.91	52.0	9,650	231
18	42.35		752.26	67.73	55.1	9,608	230
19	42.34		794.60	71.54	58.2	9,565	229
20	42.35		836.95	75.35	61.3	9,523	228
21	42.32	423.33	879.27	79.16	64.4	9,481	227
22	42.36		921.63	82.97	67.5	9,438	226
23	42.35		963.98	86.79	70.6	9,396	225
24	42.38		1,006.36	90.60	73.7	9,354	224
25	42.34		1,048.70	94.41	76.8	9,311	223
26	42.34		1,091.04	98.23	79.9	9,269	222
27	42.45		1,133.49	102.05	83.0	9,227	221
28	42.4		1,175.89	105.87	86.1	9,184	220
29	42.4		1,218.29	109.68	89.2	9,142	219
30	42.38		1,260.67	113.50	92.3	9,099	218
31	42.40	423.80	1,303.07	117.32	95.4	9,057	217
32	42.42		1,345.49	121.13	98.5	9,015	216
33	42.41		1,387.90	124.95	101.6	8,972	215
34	42.41		1,430.31	128.77	104.8	8,930	214
35	42.42		1,472.73	132.59	107.9	8,887	213
36	42.32		1,515.05	136.40	111.0	8,845	212
37	42.39		1,557.44	140.22	114.1	8,803	211
38	42.41		1,599.85	144.03	117.2	8,760	210
39	42.30		1,642.15	147.84	120.3	8,718	209

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
40	42.35		1,684.50	151.66	123.4	8,676	208
41	42.41	423.84	1,726.91	155.47	126.5	8,633	207
42	42.38		1,769.29	159.29	129.6	8,591	206
43	42.39		1,811.68	163.11	132.7	8,548	205
44	42.39		1,854.07	166.92	135.8	8,506	204
45	42.36		1,896.43	170.74	138.9	8,464	203
46	42.34		1,938.77	174.55	142.0	8,421	202
47	42.35		1,981.12	178.36	145.1	8,379	201
48	42.38		2,023.50	182.18	148.2	8,337	200
49	42.42		2,065.92	185.99	151.3	8,294	199
50	42.38		2,108.30	189.81	154.4	8,252	198
51	42.40	423.79	2,150.70	193.63	157.5	8,209	197
52	42.39		2,193.09	197.44	160.6	8,167	196
53	42.40		2,235.49	201.26	163.7	8,125	195
54	42.43		2,277.92	205.08	166.8	8,082	194
55	42.40		2,320.32	208.90	169.9	8,040	193
56	42.33		2,362.65	212.71	173.0	7,997	192
57	42.38		2,405.03	216.52	176.1	7,955	191
58	42.38		2,447.41	220.34	179.2	7,913	190
59	42.40		2,489.81	224.16	182.3	7,870	189
60	42.36		2,532.17	227.97	185.4	7,828	188
61	42.37	423.84	2,574.54	231.79	188.5	7,785	187
62	42.36		2,616.90	235.60	191.7	7,743	186
63	42.40		2,659.30	239.42	194.8	7,701	185
64	42.30		2,701.60	243.22	197.9	7,658	184
65	42.36		2,743.96	247.04	201.0	7,616	183
66	42.35		2,786.31	250.85	204.1	7,574	182
67	42.38		2,828.69	254.67	207.2	7,531	181
68	42.39		2,871.08	258.48	210.3	7,489	180
69	42.21		2,913.29	262.28	213.4	7,447	179
70	42.33		2,955.62	266.09	216.5	7,404	178
71	42.41	423.49	2,998.03	269.91	219.6	7,362	177
72	42.40		3,040.43	273.73	222.7	7,320	176
73	42.39		3,082.82	277.55	225.8	7,277	175
74	42.35		3,125.17	281.36	228.9	7,235	174
75	42.42		3,167.59	285.18	232.0	7,192	173
76	41.90		3,209.49	288.95	235.0	7,151	172
77	42.35		3,251.84	292.76	238.2	7,108	171

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
78	42.36		3,294.20	296.58	241.3	7,066	170
79	42.36		3,336.56	300.39	244.4	7,023	169
80	41.96		3,378.52	304.17	247.4	6,981	168
81	42.35	422.84	3,420.87	307.98	250.5	6,939	167
82	42.35		3,463.22	311.79	253.6	6,897	166
83	42.41		3,505.63	315.61	256.7	6,854	165
84	42.40		3,548.03	319.43	259.8	6,812	164
85	42.41		3,590.44	323.25	262.9	6,770	163
86	42.43		3,632.87	327.07	266.1	6,727	162
87	42.37		3,675.24	330.88	269.2	6,685	161
88	42.40		3,717.64	334.70	272.3	6,642	160
89	42.39		3,760.03	338.51	275.4	6,600	159
90	42.37		3,802.40	342.33	278.5	6,558	158
91	42.38	423.91	3,844.78	346.14	281.6	6,515	157
92	42.43		3,887.21	349.96	284.7	6,473	156
93	42.32		3,929.53	353.77	287.8	6,430	155
94	41.93		3,971.46	357.55	290.9	6,389	154
95	42.41		4,013.87	361.37	294.0	6,346	153
96	42.43		4,056.30	365.19	297.1	6,304	152
97	42.36		4,098.66	369.00	300.2	6,261	151
98	42.35		4,141.01	372.81	303.3	6,219	150
99	42.37		4,183.38	376.63	306.4	6,177	149
100	42.40		4,225.78	380.45	309.5	6,134	148
101	42.45	423.45	4,268.23	384.27	312.6	6,092	147
102	42.32		4,310.55	388.08	315.7	6,049	146
103	42.38		4,352.93	391.89	318.8	6,007	145
104	42.38		4,395.31	395.71	321.9	5,965	144
105	42.39		4,437.70	399.53	325.0	5,922	143
106	42.40		4,480.10	403.34	328.1	5,880	142
107	42.45		4,522.55	407.16	331.2	5,837	141
108	42.37		4,564.92	410.98	334.3	5,795	140
109	42.40		4,607.32	414.80	337.4	5,753	139
110	42.38		4,649.70	418.61	340.5	5,710	138
111	42.38	423.85	4,692.08	422.43	343.6	5,668	137
112	42.37		4,734.45	426.24	346.7	5,626	136
113	42.40		4,776.85	430.06	349.8	5,583	135
114	42.36		4,819.21	433.87	352.9	5,541	134
115	42.35		4,861.56	437.69	356.0	5,498	133

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
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	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
116	42.33		4,903.89	441.50	359.1	5,456	132
117	42.36		4,946.25	445.31	362.2	5,414	131
118	42.33		4,988.58	449.12	365.3	5,371	130
119	42.34		5,030.92	452.93	368.4	5,329	129
120	42.35		5,073.27	456.75	371.5	5,287	128
121	42.34	423.53	5,115.61	460.56	374.6	5,244	127
122	42.36		5,157.97	464.37	377.7	5,202	126
123	42.41		5,200.38	468.19	380.9	5,160	125
124	42.31		5,242.69	472.00	384.0	5,117	124
125	42.40		5,285.09	475.82	387.1	5,075	123
126	42.40		5,327.49	479.63	390.2	5,033	122
127	42.35		5,369.84	483.45	393.3	4,990	121
128	42.40		5,412.24	487.26	396.4	4,948	120
129	42.38		5,454.62	491.08	399.5	4,905	119
130	42.36		5,496.98	494.89	402.6	4,863	118
131	42.40	423.77	5,539.38	498.71	405.7	4,821	117
132	42.35		5,581.73	502.52	408.8	4,778	116
133	42.39		5,624.12	506.34	411.9	4,736	115
134	42.43		5,666.55	510.16	415.0	4,693	114
135	42.39		5,708.94	513.97	418.1	4,651	113
136	42.35		5,751.29	517.79	421.2	4,609	112
137	42.35		5,793.64	521.60	424.3	4,566	111
138	42.35		5,835.99	525.41	427.4	4,524	110
139	42.33		5,878.32	529.22	430.5	4,482	109
140	42.40		5,920.72	533.04	433.6	4,439	108
141	42.43	423.77	5,963.15	536.86	436.7	4,397	107
142	42.38		6,005.53	540.68	439.8	4,354	106
143	41.98		6,047.51	544.46	442.9	4,312	105
144	42.40		6,089.91	548.27	446.0	4,270	104
145	42.38		6,132.29	552.09	449.1	4,228	103
146	42.40		6,174.69	555.91	452.2	4,185	102
147	42.38		6,217.07	559.72	455.3	4,143	101
148	42.35		6,259.42	563.53	458.4	4,101	100
149	42.42		6,301.84	567.35	461.5	4,058	99
150	42.41		6,344.25	571.17	464.6	4,016	98
151	42.40	423.50	6,386.65	574.99	467.7	3,973	97
152	42.40		6,429.05	578.81	470.8	3,931	96
153	42.38		6,471.43	582.62	473.9	3,889	95

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
154	42.40		6,513.83	586.44	477.0	3,846	94
155	42.35		6,556.18	590.25	480.1	3,804	93
156	42.31		6,598.49	594.06	483.2	3,762	92
157	42.39		6,640.88	597.88	486.4	3,719	91
158	42.43		6,683.31	601.70	489.5	3,677	90
159	42.40		6,725.71	605.51	492.6	3,634	89
160	42.40		6,768.11	609.33	495.7	3,592	88
161	42.40	423.86	6,810.51	613.15	498.8	3,549	87
162	42.38		6,852.89	616.96	501.9	3,507	86
163	42.40		6,895.29	620.78	505.0	3,465	85
164	42.41		6,937.70	624.60	508.1	3,422	84
165	42.39		6,980.09	628.42	511.2	3,380	83
166	42.42		7,022.51	632.23	514.3	3,337	82
167	42.35		7,064.86	636.05	517.4	3,295	81
168	42.30		7,107.16	639.86	520.5	3,253	80
169	42.43		7,149.59	643.68	523.6	3,210	79
170	42.35		7,191.94	647.49	526.7	3,168	78
171	42.42	423.85	7,234.36	651.31	529.8	3,126	77
172	42.38		7,276.74	655.12	532.9	3,083	76
173	42.35		7,319.09	658.94	536.0	3,041	75
174	42.40		7,361.49	662.75	539.1	2,999	74
175	42.45		7,403.94	666.57	542.2	2,956	73
176	42.34		7,446.28	670.39	545.3	2,914	72
177	42.35		7,488.63	674.20	548.4	2,871	71
178	42.32		7,530.95	678.01	551.5	2,829	70
179	42.36		7,573.31	681.82	554.6	2,787	69
180	42.32		7,615.63	685.63	557.7	2,744	68
181	42.40	423.67	7,658.03	689.45	560.8	2,702	67
182	42.39		7,700.42	693.27	563.9	2,660	66
183	42.40		7,742.82	697.08	567.1	2,617	65
184	42.35		7,785.17	700.90	570.2	2,575	64
185	42.30		7,827.47	704.71	573.3	2,533	63
186	42.33		7,869.80	708.52	576.4	2,490	62
187	42.39		7,912.19	712.33	579.5	2,448	61
188	42.33		7,954.52	716.14	582.6	2,405	60
189	42.35		7,996.87	719.96	585.7	2,363	59
190	42.35		8,039.22	723.77	588.8	2,321	58
191	42.43	423.62	8,081.65	727.59	591.9	2,278	57

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
192	42.35		8,124.00	731.40	595.0	2,236	56
193	42.30		8,166.30	735.21	598.1	2,194	55
194	42.25		8,208.55	739.01	601.2	2,151	54
195	42.48		8,251.03	742.84	604.3	2,109	53
196	42.40		8,293.43	746.66	607.4	2,067	52
197	42.35		8,335.78	750.47	610.5	2,024	51
198	42.40		8,378.18	754.29	613.6	1,982	50
199	42.41		8,420.59	758.10	616.7	1,939	49
200	42.35		8,462.94	761.92	619.8	1,897	48
201	42.38	423.67	8,505.32	765.73	622.9	1,855	47
202	42.37		8,547.69	769.55	626.0	1,812	46
203	42.34		8,590.03	773.36	629.1	1,770	45
204	42.33		8,632.36	777.17	632.2	1,728	44
205	42.34		8,674.70	780.98	635.3	1,685	43
206	42.42		8,717.12	784.80	638.4	1,643	42
207	42.33		8,759.45	788.61	641.5	1,601	41
208	42.42		8,801.87	792.43	644.6	1,558	40
209	42.35		8,844.22	796.24	647.7	1,516	39
210	42.38		8,886.60	800.06	650.8	1,473	38
211	42.00	423.28	8,928.60	803.84	653.9	1,431	37
212	42.35		8,970.95	807.65	657.0	1,389	36
213	42.37		9,013.32	811.47	660.1	1,347	35
214	42.36		9,055.68	815.28	663.2	1,304	34
215	42.35		9,098.03	819.09	666.3	1,262	33
216	42.40		9,140.43	822.91	669.4	1,220	32
217	42.37		9,182.80	826.73	672.5	1,177	31
218	42.42		9,225.22	830.54	675.6	1,135	30
219	42.38		9,267.60	834.36	678.7	1,092	29
220	42.36		9,309.96	838.17	681.8	1,050	28
221	42.32	423.68	9,352.28	841.98	684.9	1,008	27
222	42.34		9,394.62	845.80	688.0	965	26
223	42.23		9,436.85	849.60	691.1	923	25
224	42.40		9,479.25	853.41	694.2	881	24
225	42.33		9,521.58	857.23	697.3	838	23
226	42.30		9,563.88	861.03	700.4	796	22
227	42.42		9,606.30	864.85	703.5	754	21
228	42.36		9,648.66	868.67	706.6	711	20
229	42.38		9,691.04	872.48	709.7	669	19

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole
230	42.40		9,733.44	876.30	712.8	627	18
231	42.41	423.57	9,775.85	880.12	715.9	584	17
232	42.30		9,818.15	883.93	719.0	542	16
233	42.43		9,860.58	887.75	722.1	499	15
234	42.45		9,903.03	891.57	725.3	457	14
235	42.32		9,945.35	895.38	728.4	415	13
236	42.36		9,987.71	899.19	731.5	372	12
237	42.32		10,030.03	903.00	734.6	330	11
238	42.38		10,072.41	906.82	737.7	288	10
239	42.40		10,114.81	910.63	740.8	245	9
240	42.35		10,157.16	914.45	743.9	203	8
241	42.38	423.69	10,199.54	918.26	747.0	160	7
242	42.37		10,241.91	922.08	750.1	118	6
243	42.40		10,284.31	925.89	753.2	76	5
244	42.43		10,326.74	929.71	756.3	33	4

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole

FINAL CASING TALLY

Company:	Holly Frontier Navajo	Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4	Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico	Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat	Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook	Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4	I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511	Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755 Mud Wt. 9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107	Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole

FINAL CASING TALLY

Company:	Holly Frontier Navajo			Well TVD:		Talley Date:	6/28/2018
Well Name:	WDW #4			Well MD:	10,360	On Location Jt Count:	248
Co. & State:	Eddy County, New Mexico			Guide Shoe, Float Collar & DV Tools:	6.90	Running Jt. Count	244
Field Name:	Wildcat			Casing Size:	9.625	Running Jt. Avg.:	42.36
Talley By:	Kevin Cook			Weight:	47	Hook Load:	486,920
Rig:	Patriot Rig #4			I.D.:	8.681	Buoyed Wt.:	417,534
Hole Cap.:	1,511			Grade:	L-80HC	Shoe Joint:	25.40
Casing Cap.:	755	Mud Wt.	9.5	Thread:	LTC	Annular Cap.:	578
	DV TOOL set between #106 & #107			Csg. Disp'mt:	933	Hole Size:	1/12/1900

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + GS,FC, SJ & DV	Casing Disp'mt BBLS	Casing Capacity BBLS	Distance to Bottom	No. Jts Out Hole

9.8 SODIUM SILICATE PLUG REPORT

APPENDIX 9.8

POST JOB REPORT

FO-GL-HAL-CMT-2100 REV1

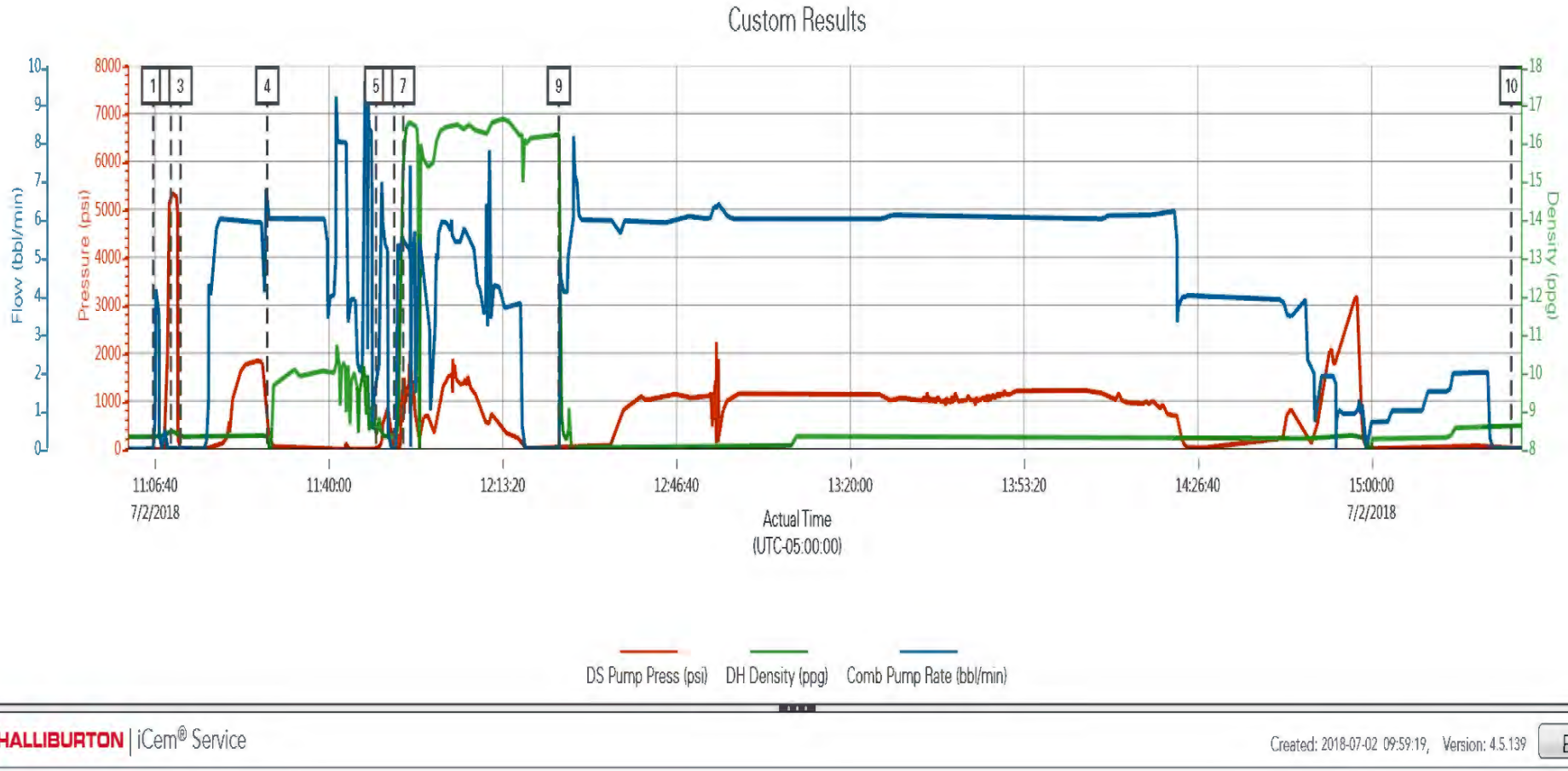
HALLIBURTON

Customer Name:	**WSP**
Halliburton Representative:	**Victor Villegas**
Date:	**07/02/2018**
Well Name:	**Waste Disposal 004**
Job:	**Squeeze #1**
Rig:	**Patriot 4**
Country/District:	**Lea**
SO#:	**0904953083**

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Real Time Graph

1st Stage:



Appendix

Real Time Graph 2
Appendix 3
Real-Time Job Log 4
1.1 Job Event Log 4
Fluid Data 6

Real-Time Job Log

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	7/2/2018	01:00:00	USER				requested on location 0700
Event	2	Arrive At Loc	Arrive At Loc	7/2/2018	06:00:00	USER				arrived at 0600
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	7/2/2018	06:15:00	USER				customer hooked up to through swage - currently not pumping because they have no returns, when we opened it up well was on a vacuum
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/2/2018	06:30:00	USER				
Event	5	Rig-Up Equipment	Rig-Up Equipment	7/2/2018	06:45:00	USER				
Event	6	Rig-Up Completed	Rig-Up Completed	7/2/2018	08:00:00	USER				HES ready - waiting on transport to arrive
Event	7	Wait on HES or HES Sub-Contractor Equipment - Start Time	Wait on HES or HES Sub-Contractor Equipment - Start Time	7/2/2018	08:05:00	USER				waiting on transport to arrive to location,
Event	8	Wait on HES or HES Sub-Contractor Equipment - End Time	Wait on HES or HES Sub-Contractor Equipment - End Time	7/2/2018	10:00:00	USER				transport arrives to location - spot in - muster for safety meeting
Event	9	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/2/2018	10:15:00	USER	-16.00	8.31	0.00	discuss job procedures and potential hazards
Event	10	Start Job	Start Job	7/2/2018	11:06:15	COM4	-19.00	8.31	0.00	prime lines with 2 bls fresh water
Event	11	Test Lines	Test Lines	7/2/2018	11:09:41	COM4	5369.00	8.47	0.00	500 low - 5000 high - successful test

Event	12	Pump Spacer 2	Fresh water	7/2/2018	11:11:31	COM4	-8.00	8.32	0.00	20 bls fresh water to establish injection rate, once pipe was filled psi leveled out at 1820psi at 6bpm
Event	13	Pump Spacer 1	Super flush	7/2/2018	11:28:10	COM4	621.00	8.32	6.00	48 bls super flush, 455psi at 4bpm, lost prime so we lost the psi, pumped the 2000gals that was loaded
Event	14	Pump Spacer 2	Fresh water	7/2/2018	11:49:02	COM4	2.00	8.50	1.70	10 bls fresh water, 2bpm getting cmt to weight
Event	15	Pump Cement	Pump Cement	7/2/2018	11:52:30	COM4	29.00	8.30	0.00	16.4# primary cement - 101 bls - 525 sks, 6bpm at 1450psi
Event	16	Check Weight	Check Weight	7/2/2018	11:54:15	COM4	931.00	15.38	5.40	verified wieght with mud scales
Event	17	Drop Top Plug	Drop Plug	7/2/2018	12:24:04	COM4	11.00	16.21	0.00	drop HES closing plug - verified by company man and tool hand - clean pumps and lines on top of plug per customer
Event	18	Pump Displacement	Pump Displacement	7/2/2018	12:24:07	COM4	10.00	16.22	0.00	755 total bbls fresh water, psi stayed steady around 1100psi at 6bpm, got up to 3200psi at 1bpm with approx. 30bbls left to bump, psi fell off and we never bumped plug.
Event	19	End Job	End Job	7/2/2018	15:26:46	COM4	22.00	8.61	0.00	we shut down and shut cement head in and wait on cement, cement trucks released
Event	20	Safety Meeting	Safety Meeting	7/2/2018	17:00:00	USER				pre-rig down meeting
Event	21	Rig Down Lines	Rig Down Lines	7/2/2018	17:10:00	USER				

Fluid Data

Stage/Plug #: **1**

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
1	Super Flush 101		47.6	bbl	10					
Fluid Loss										
iFacts Test id #										

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
2	Water Spacer		10	bbl	8.4					
Fluid Loss										
iFacts Test id #										

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr
3	HalCem™ H	HALCEM (TM) SYSTEM	525	sack	16.4	1.078	4.51		4.51	
0.30 %		Halad(R)-9 Pre-Mix Dry								
0.20 %		CFR-3 Pre-Mix Dry								
0.20 %		HR-601 Pre-Mix Dry								
iFacts Test id #										

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
4	Displacement		748	bbl	8.4					
Fluid Loss										
iFacts Test id #										

9.9 PEA GRAVEL CEMENT PLUG REPORT

APPENDIX 9.9

POST JOB REPORT

FO-GL-HAL-CMT-2100 REV1

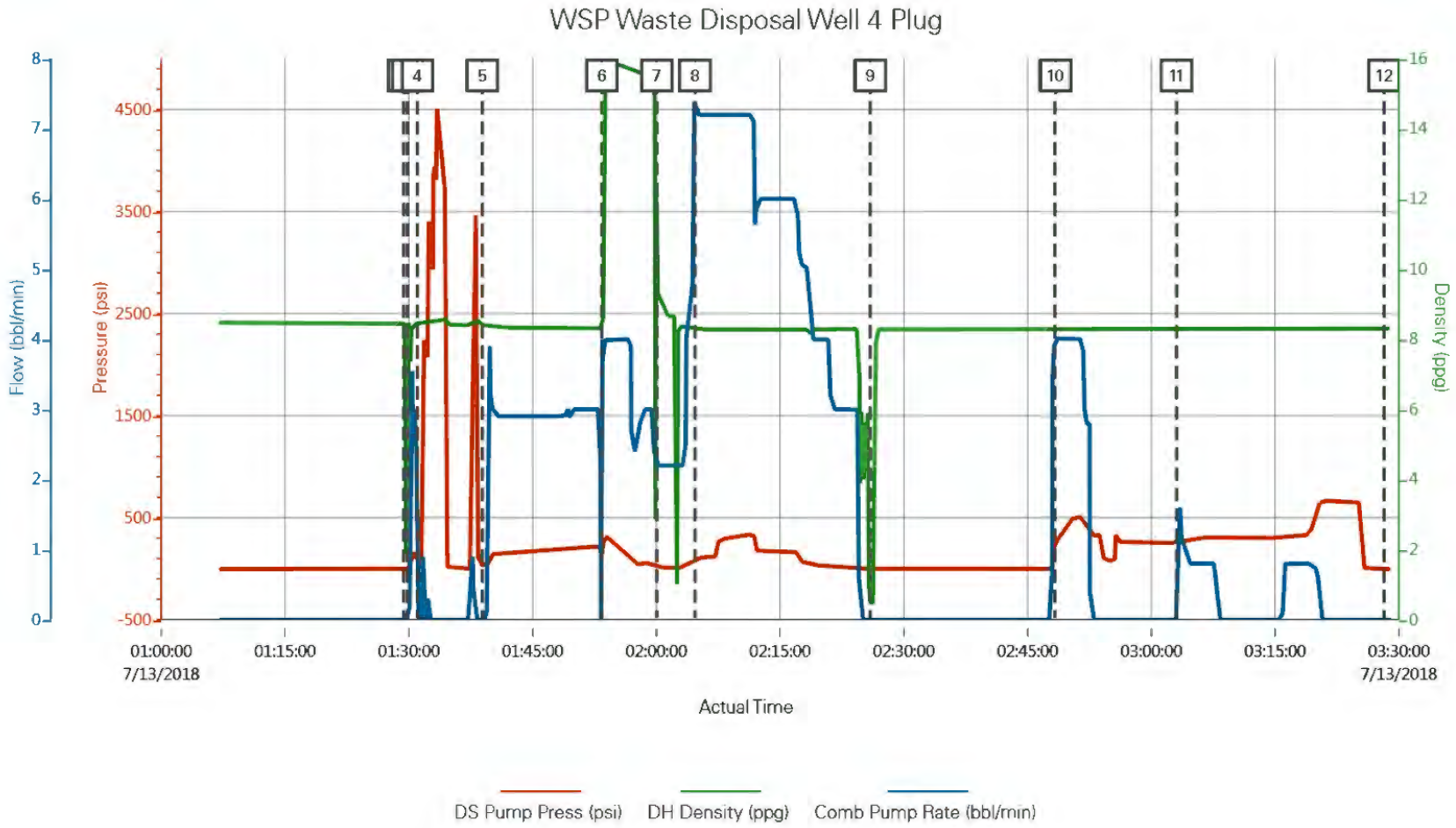
HALLIBURTON

Customer Name:	**WSP**
Halliburton Representative:	**Victor Villegas**
Date:	**07/12/2018**
Well Name:	**Waste Disposal Well 004**
Job:	**Squeeze #1**
Rig:	**Patriot #4**
Country/District:	**Eddy**
SO#:	**0904994811**

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Real Time Graph

1st Stage:



Appendix

Real Time Graph 2
Appendix 3
Real-Time Job Log 4
1.1 Job Event Log 4
Fluid Data 7

Real-Time Job Log

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	7/12/2018	18:48:00	USER				Called out while on meal break..
Event	2	Safety Meeting	Safety Meeting	7/12/2018	20:00:00	USER				Safety meeting in yard to assess fitnes for duty and available DOT hours. Review driving safety and route. Tested equipment and assembled materials for job,
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/12/2018	21:00:00	USER				Left yard in convoy.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/12/2018	22:00:00	USER				Arrived at location. Rig was on bottom and waiting for us.
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	7/12/2018	22:10:00	USER				Walked location to assess hazards. Spotted equipment and tested water.
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/12/2018	22:20:00	USER				Huddle with crew and review JSA, site-specific hazards, objectives and rig up safety.
Event	7	Rig-Up Equipment	Rig-Up Equipment	7/12/2018	22:45:00	USER				Rig up all product, water, and iron lines on ground and floor.
Event	8	Other	Other	7/12/2018	23:00:00	USER				Driver of bulk truck was injured while rigging up. Sevice leader contacted and Axiom notified. Finger injury was bandaged on location

										and employee was transpoted to a medical facility by Service Leader.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/13/2018	01:11:00	USER	-5.00	8.47	0.00	Review JSA, site-specific concerns and job procedures with all presonnel working at location.
Event	10	Start Job	Start Job	7/13/2018	01:29:23	COM1	0.00	8.47	0.00	Begin half-in, half-out plug and squeeze job in 9.625" casing and 12.25" open hole via 10,322' of 4.5" drill pipe.
Event	11	Prime Pumps	Prime Lines	7/13/2018	01:29:51	COM1	-3.00	8.47	0.00	Pump 2 bbls ahead to prime lines.
Event	12	Test Lines	Test Lines	7/13/2018	01:31:02	COM1	67.00	8.42	0.00	Lines tested successfully to 3,000 psi.
Event	13	Pump Spacer 1	Pump Spacer 1	7/13/2018	01:38:55	COM1	28.00	8.40	0.00	Pump 40 bbl water spacer ahead.
Event	14	Pump Cement	Pump Cement	7/13/2018	01:53:23	COM1	132.00	8.26	4.00	Mix and pump 100 sacks (21 bbls) HalCem Class H Cement at 15.6 ppg, 1.195 yield, and with 5.42 gal/sack of water.
Event	15	Pump Spacer 2	Pump Spacer 2	7/13/2018	02:00:03	COM1	31.00	11.67	2.20	Pump 10 bbl water spacer behind.
Event	16	Pump Displacement	Pump Displacement	7/13/2018	02:04:42	COM1	104.00	8.42	6.00	Pump 132 bbls displacement.
Event	17	Other	Other	7/13/2018	02:25:55	COM1	0.00	0.00	0.00	Shut down and stand by as rig pulls 4 stands.
Event	18	Circulate Well	Circulate Well	7/13/2018	02:48:19	COM1	312.00	8.31	3.00	Circulated well for 5 minutes to clean drill pipe.
Event	19	Other	Other	7/13/2018	03:03:03	COM1	252.00	8.31	0.00	Perform squeeze, 4 bbls pumped followed by a 10 minute hesitation. We then pumped 3.5 additional bbls and shut down as pressure

							climbed. Compnay Rep advised to shut in well.
Event	20	End Job	End Job	7/13/2018	03:28:12	COM1	End cement job.
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/13/2018	04:00:00	USER	Huddle with crew and hydrate. Review JSA and practices for a safe rig down.
Event	22	Rig-Down Equipment	Rig-Down Equipment	7/13/2018	04:30:00	USER	Rig down all water, product and iron lines on both ground and rig floor.
Event	23	Rig-Down Completed	Rig-Down Completed	7/13/2018	06:30:00	USER	All HES equipment safely returned to service.
Event	24	Depart Location Safety Meeting	Depart Location Safety Meeting	7/13/2018	07:00:00	USER	Assess fitness for duty of crew and their available DOT hours. Review driving safety and establish travel plans.
Event	25	Depart Location	Depart Location	7/13/2018	08:00:00	USER	All HES personnel off location.

Fluid Data

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	HalCem™ H	HALCEM (TM) SYSTEM	100	sack	15.6	1.195		3	5.42
	0.30 %	HR-601, 50 LB BAG (101328348)							

Cement Left In Pipe	Amount		Reason	Shoe Joint

Comment

9.10 LONG STRING CASING CEMENTING REPORT

APPENDIX 9.10

POST JOB REPORT

FO-GL-HAL-CMT-2100 REV1

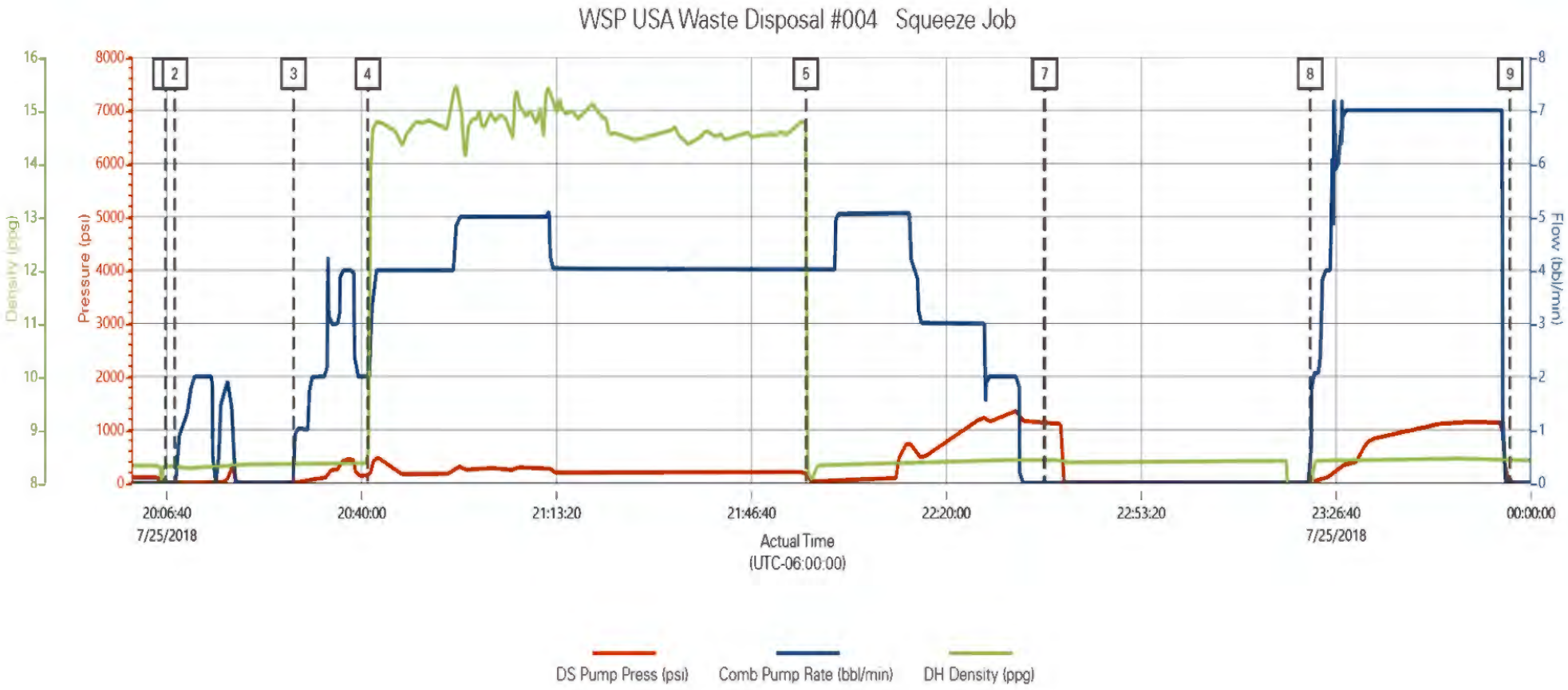
HALLIBURTON

Customer Name:	**WSP**
Halliburton Representative:	**Victor Villegas**
Date:	**07/02/2018**
Well Name:	**Waste Disposal 004**
Job:	**Squeeze #3**
Rig:	**Patriot 4**
Country/District:	**Lea**
SO#:	**0905021415**

All information in this report is provided subject to the terms and conditions which govern the services provided by Halliburton. Halliburton personnel use their best efforts in gathering information and their best judgment in interpreting it, but any interpretation, research, analysis or recommendation furnished by Halliburton are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and empirical relationships and assumptions are not infallible, and with respect to which professionals in the industry may differ. Accordingly, HALLIBURTON IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, OR JOB RECOMMENDATION and any interpretation or recommendation is not for use of or reliance upon by any third party. The customer has full responsibility for any of its decisions which are based on the information provided in this report.

Real Time Graph

1st Stage:



Appendix

Real Time Graph 2
Appendix 3
Real-Time Job Log 4
1.1 Job Event Log 4
Fluid Data 6

Real-Time Job Log

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	DH Density (ppg)	Comments
Event	1	Call Out	Call out	7/25/2018	11:00:00	USER				Job call out.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/25/2018	14:15:00	USER				Hold pre-job meeting with all halliburton employees and discuss road hazards and hazard mitigation.
Event	3	Depart Shop for Location	Depart Shop for Location	7/25/2018	14:30:00	USER				Depart shop and convoy safely to location.
Event	4	Arrive At Loc	Arrive At Loc	7/25/2018	15:30:00	USER				Safely arrived at location.
Event	5	Other	Other	7/25/2018	15:40:00	USER				Rig on bottom with drill pipe circulating with par-five.
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/25/2018	15:45:00	USER				Conduct safety meeting with Halliburton employees and discuss rig up site specefic safety hazards and hazard mitigation. Discuss use of proper PPE required.
Event	7	Rig-Up Equipment	Rig-Up Equipment	7/25/2018	16:00:00	USER				Safely complete rig-up of Halliburton equipment on location.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/25/2018	19:30:00	USER				Conduct safety meeting with Halliburton employees, company rep., and all rig crew involved. Discuss job details, individual job roles, job hazards and hazard mitigation.
Event	9	Start Job	Start Job	7/25/2018	20:06:26	COM4	9.00	0.00	8.32	Start cement job.

Event	10	Pressure Up Well	Pressure Up Well	7/25/2018	20:08:02	COM4	-2.00	0.00	8.34	Pressure up backside to 380 psi.
Event	11	Circulate Well	Circulate Well	7/25/2018	20:28:20	COM4	2.00	0.00	8.37	Establish injection rate. 1 bpm @ 25 psi, 2 bpm @ 100 psi., 3 bpm @ 260 psi., 4 bpm @ 450 psi.
Event	12	Pump Tail Cement	Pump Tail Cement	7/25/2018	20:41:01	COM4	137.00	2.00	8.38	Pump Tail Versacem 1400 sks / 306 bbl at 14.5 ppg, 1.226 yld, 5.57 gal/sk. 4 bpm @ 300 psi
Event	13	Pump Displacement	Pump Displacement	7/25/2018	21:55:59	COM4	210.00	4.10	14.53	Pump 132 bbls of fresh water displacement. 3 bpm @ 1340 psi.
Event	14	Shutdown	Shutdown	7/25/2018	22:36:41	COM4	1134.00	0.00	8.43	Shutdown
Event	15	Sting out	Sting out	7/25/2018	22:36:51	COM4	1133.00	0.00	8.43	Sting out of cement retainer and pull 10 stands.
Event	16	Reverse Circ Well	Reverse Circ Well	7/25/2018	23:22:13	COM4	5.00	0.00	0.10	Reverse circulate 210 bbls of fresh water. 7 bpm @ 1130 psi
Event	17	Shutdown	Shutdown	7/25/2018	23:56:26	COM4	16.00	0.00	8.42	
Event	18	End Job	End Job	7/25/2018	23:57:00	USER	3.00	0.00	8.42	End of cement job.
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/26/2018	00:45:00	USER				Conduct safety meeting with Halliburton employees and discuss rig down site specefic safety hazards and hazard mitigation. Discuss use of proper PPE required.
Event	20	Rig-Down Equipment	Rig-Down Equipment	7/26/2018	01:00:00	USER				Safely complete rig-down of Halliburton equipment on location.
Event	21	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/26/2018	01:45:00	USER				Hold pre-job meeting with all halliburton employees and discuss road hazards and hazard mitigation.
Event	22	Depart Location	Depart Location	7/26/2018	02:00:00	USER				Depart customer location.

Fluid Data

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Water Spacer	Water Spacer	20	bbl	8.4				

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	VersaCem™ H	VERSACEM (TM) SYSTEM	1400	sack	14.5	1.226		3	5.57
0.40 %		HALAD(R)-344, 50 LB (100003670)							
0.25 lbm		D-AIR 5000, 50 LB SACK (102068797)							
0.30 %		HR-601, 50 LB BAG (101328348)							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	EconoCem HLC	Premium Plus Cement	1625	sack	12.9	1.739		5	9.24
25.90 lbm		POZMIX A - CLASS C, BULK (101009439)							
0.25 %		HR-800, 50 LB SACK (101619742)							
61.10 lbm		CMT - PREMIUM PLUS - CLASS C REG OR TYPE III, BULK (100012205)							
9.24 Gal		FRESH WATER							
6 %		BENTONITE, BULK (100003682)							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	HalCem C	Premium Plus Cement	200	sack	14.8	1.329		5	6.34
6.34 Gal		FRESH WATER							
94 lbm		CMT - PREMIUM PLUS - CLASS C REG OR TYPE III, BULK (100012205)							
0.40 %		HR-800, 50 LB SACK (101619742)							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
5	Displacement	Displacement	0	bbl	8.4				

Cement Left In Pipe	Amount	ft	Reason		Shoe Joint
Mix Water:	pH ##	Mix Water Chloride:	## ppm	Mix Water Temperature:	## °F °C
Cement Temperature:	## °F °C	Plug Displaced by:	## lb/gal kg/m3 XXXX	Disp. Temperature:	## °F °C
Plug Bumped?	Yes/No	Bump Pressure:	#### psi MPa	Floats Held?	Yes/No
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

Comment

9.11 INJECTION STRING MILL CERTIFICATIONS

APPENDIX 9.11

TENSION STEEL INDUSTRIES CO., LTD

9F, NO. 127 SEC 2 CHIEN KUO N. ROAD, TAIPEI. TAIWAN, R.O.C.
TEL:(02)2500-6206 FAX:(02)2508-0398

MILL TEST CERTIFICATE

		CERTIFICATE NO.	17072501	ISSUE DATE	JUL.25.2017
COMMODITY	PRIME NEWLY PRODUCED ERW STEEL PIPE, BLACK, PLAIN END	CONTRACT NO.	TPE17021561	SHIPPING DATE	AUG.11.2017
SPECIFICATION	API 5CT-9⅝" J55 PSL1	PO NUMBER	2613-17S	INVOICE NO.	TPE2017072501

LOT NO.	HEAT NO.	MATERIAL DESCRIPTION O.D.×THICKNESS×LENGTH	QUANTITY PCS/T	TENSILE ※1 Y.S.	T.S. BODY	T.S. WELD	EL.	HYDROSTATIC TEST 6SEC	OTHER TEST ※2	CHEMICAL COMPOSITION % C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al	Nb	V	Ti	P+S	C.E. ※3	REMARK
				MPa				MPa		x10⁻²	x10⁻²	x10⁻²	x10⁻³	x10⁻³	x10⁻²				x10⁻²						
D170714008-001	NW736	7"×0.362"×42'	105 51.345	485	557	—	30.8	31.5	GOOD	16	98	12	12	2									14		
										15	97	12	12	3									15		
D170714008-001	NW737	7"×0.362"×42'	392 191.688	477	544	—	30.4	31.5	GOOD	16	97	12	17	4									21		
				500	567	—	29.0			16	98	12	17	3									20		
D170714008-001	NW738	7"×0.362"×42'	354 173.106	443	526	—	29.2	31.5	GOOD	16	98	12	15	4									19		
				442	524	—	30.0			16	98	12	14	3									17		
		TOTAL	851 416.139																						

※2 DESCRIPTION OF TEST	VISUAL	DRIFT TEST	METALLO-GRAPHIC EXAM	FLATTENNING TEST	ULTRASONIC TEST	LOCATION OF TENSIL	THREADS	CHARPY V-NOTCH (23℃) LONGITUDINAL ※5-C2 NW736	NW737	NW738	DIMENSION A	B	R
RESULT	GOOD	GOOD	F+P ※4	GOOD	GOOD	■L □T □W	-	138J	140J	141J	178.3	178.9	0.5

NOTES
HEAT TREATMENT / DELIVERY CONDITION : WELD SEAM HEAT TREATMENT
※1 TENSILE TEST - ELONGATION RESULT SPECIMEN TYPE: STRIP WIDTH: 38.10MM
※3-C.E. : CARBON EQUIVLENT ※4-F+P:F-FERRITE P-PEARLITE ※5-IMPACT : C1-10×10×55 C2-10×7.5×55 C3-10×5×55

SURVEYOR TO

WE HEREBY CERRTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF EN 10204 & ISO 10474. THE PIPES COVERED IN THE ABOVE CERTIFICATE COMPLY TO APPENDIX B, MATERIAL REQUIREMENTS FOR SOUR WELLS, OF DIRECTIVE 10 IN CANADA .

QUALITY ASSURANCE DEP.

TENSION STEEL INDUSTRIES CO., LTD
9F, NO. 127 SEC 2 CHIEN KUO N. ROAD, TAIPEI. TAIWAN, R.O.C.
TEL:(02)2500-6206 FAX:(02)2508-0398

MILL TEST CERTIFICATE

COMMODITY	PRIME NEWLY PRODUCED ERW STEEL PIPE, BLACK, PLAIN END	CERTIFICATE NO.	17072502	ISSUE DATE	JUL.25.2017
SPECIFICATION	API 5CT-8th J55 PSL1	CONTRACT NO.	TPE17021501	SHIPPING DATE	AUG.11.2017
		PO NUMBER	2613-17S	INVOICE NO.	TPE2017072501

LOT NO.	HEAT NO	MATERIAL DESCRIPTION O.D.×THICKNESS×LENGTH	QUANTITY PCS/T	TENSILE ※1 Y.S.	T.S. BODY	T.S. WELD	EL.	HYDROSTATIC TEST 6SEC	OTHER TEST ※2	CHEMICAL COMPOSITION % C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al	Nb	V	Ti	P+S	C.E. ※3	REMARK
				MPa				MPa		x10²	x10²	x10²	x10³	x10³	x10²				x10³						
D170714008-001	NW736	7"×0.362"×35'	1 0.408	485	557	—	30.7	31.5	GOOD	16	98	12	12	2									14		
										15	97	12	12	3									15		
D170714008-001	NW737	7"×0.362"×35'	3 1.223	477	544	—	30.4	31.5	GOOD	16	97	12	17	4									21		
										16	96	12	17	3									20		
D170714008-001	NW738	7"×0.362"×35'	4 1.630	443	526	—	29.2	31.5	GOOD	16	98	12	15	4									19		
										16	98	12	14	3									17		
		TOTAL	8 3.261																						

※2 DESCRIPTION OF TEST	VISUAL	DRIFT TEST	METALLOGRAPHIC EXAM	FLATTENNING TEST	ULTRASONIC TEST	LOCATION OF TENSIL	THREADS	CHARPY V-NOTCH (23℃) LONGITUDINAL ※5-C3							DIMENSION			REMARK
								NW736	NW737	NW738					A mm	B mm	R	
RESULT	GOOD	GOOD	F+P ※4	GOOD	GOOD	■L □T □W	-	138J	140J	141J					178.3	178.9	0.5	

NOTES
HEAT TREATMENT / DELIVERY CONDITION : WELD SEAM HEAT TREATMENT
※1 TENSILE TEST – ELONGATION RESULT SPECIMEN TYPE: STRIP WIDTH: 38.10MM
※3–C.E. : CARBON EQUIVLENT ※4–F+P:F–FERRITE P–PEARLITE ※5–IMPACT : C1–10×10×55 C2–10×7.5×55 C3–10×5×55

SURVEYOR TO

WE HEREBY CERRTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF EN 10204 & ISO 10474.
THE PIPES COVERED IN THE ABOVE CERTIFICATE COMPLY TO APPENDIX B, MATERIAL REQUIREMENTS FOR SOUR WELLS, OF DIRECTIVE 10 IN CANADA .

QUALITY ASSURANCE DEP.

TENSION STEEL INDUSTRIES CO., LTD

9F, NO. 127 SEC 2 CHIEN KUO N. ROAD, TAIPEI. TAIWAN. R.O.C.
TEL:(02)2500-6206 FAX:(02)2508-0396

MILL TEST CERTIFICATE

		CERTIFICATE NO.	17080301	ISSUE DATE	AUG.03.2017
COMMODITY	PRIME NEWLY PRODUCED ERW STEEL PIPE, BLACK, PLAIN END	CONTRACT NO.	TPE17021501	SHIPPING DATE	AUG.11.2017
SPECIFICATION	API 5CT-9TH J55 PSL1	PO NUMBER	2613-17S	INVOICE NO.	TPE2017080201

LOT NO.	HEAT NO.	MATERIAL DESCRIPTION O.D.xTHICKNESSxLENGTH	QUANTITY PCS/T	TENSILE ※1 Y.S.	T.S. BODY	T.S. WELD	EL.	HYDROSTATIC TEST 6SEC	OTHER TEST ※2	CHEMICAL COMPOSITION % C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al	Nb	V	Ti	P+S	C.E. ※3	REMARK
				MPa				MPa		x10^2	x10^2	x10^2	x10^3	x10^3	x10^2				x10^2						
0170714008-002	LQ597	7"×0.362"×39'	31 14.094	473	638	—	34.0	31.5	GOOD	23	128	20	12	4									16		
										24	128	21	12	4									16		
		TOTAL	31 14.094																						

※2 DESCRIPTION OF TEST	VISUAL	DRIFT TEST	METALLOGRAPHIC EXAM	FLATTENNING TEST	ULTRASONIC TEST	LOCATION OF TENSIL	THREADS	CHARPY V-NOTCH (23℃) LONGITUDINAL ※5-C2							DIMENSION A	B	R
								LQ597									
RESULT	GOOD	GOOD	F+P ※4	GOOD	GOOD	■L □T □W	–	132J							178.1	178.7	0.6

NOTES
HEAT TREATMENT / DELIVERY CONDITION : WELD SEAM HEAT TREATMENT
※1 TENSILE TEST – ELONGATION RESULT SPECIMEN TYPE: STRIP WIDTH: 38.10MM
※3 – C.E. : CARBON EQUIVLENT ※4 – F+P.F–FERRITE P–PEARLITE ※5 – IMPACT : C1–10×10×55 C2–10×7.5×55 C3–10×5×55

SURVEYOR TO

WE HEREBY CERRTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF EN 10204 & ISO 10474.
THE PIPES COVERED IN THE ABOVE CERTIFICATE COMPLY TO APPENDIX B, MATERIAL REQUIREMENTS FOR SOUR WELLS, DF DIRECTIVE 10 IN CANADA .

QUALITY ASSURANCE DEP.

9.12 INJECTION STRING CASING TALLY

WSP Tubing Tally

APPENDIX 9.12

Company:	Navajo		Csg. ID:	8.681	Talley Date:	8/5/18	Slack Off in Inches:
Well Name:	WDW #4		Grade:	L-80	On RIG Jt Count:	262	0
Co. & State:	Eddy County New Mexico		Tub. Thread:	LTC	Running Jt. Count:	262	Weight on Packer:
Field Name:	Wildcat		Tubing Size:	7	Running Jt. Avg.:	39.18	
Talley By:	Kevin Cook/Packer Hand/Rig Crew		Tub. Weight:	26	Hook Load:	278,200	Pipe Condition:
Rig:	Patriot Rig #4		Tub. Grade	J-55	Buoyed Wt.:	243,147	NEW
Well TVD:	10,700	Mud Wt.: 8.4	Tub. ID:	6.276	Annular Cap.:	274	Pipe Mfg.:
Well LinerTop :		RKB: 20	Capacity:	0.03830	TOP OF PKR	10,265	
W/LMEASURE	0	Csg. Size: 9.625	Tub. Disp'mt	0.0093	Bottom Perf:		Trip #
W/O Rig KB:	0.00	Csg. WT.: 47.0	BHA Length:	12.76	KB Difference:		

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
1	40.42		53.18	-53	10,212	-53	261	40.42
2	40.15		93.33	-93	10,172	-93	260	80.57
3	38.31		131.64	-132	10,133	-132	259	118.88
4	38.52		170.16	-170	10,095	-170	258	157.40
5	40.61		210.77	-211	10,054	-211	257	198.01
6	40.00		250.77	-251	10,014	-251	256	238.01
7	37.85		288.62	-289	9,976	-289	255	275.86
8	39.06		327.68	-328	9,937	-328	254	314.92
9	39.02		366.70	-367	9,898	-367	253	353.94
10	40.56	394.50	407.26	-407	9,858	-407	252	394.50
11	40.42		447.68	-448	9,817	-448	251	434.92
12	39.30		486.98	-487	9,778	-487	250	474.22
13	38.71		525.69	-526	9,739	-526	249	512.93
14	40.08		565.77	-566	9,699	-566	248	553.01
15	38.87		604.64	-605	9,660	-605	247	591.88
16	39.06		643.70	-644	9,621	-644	246	630.94
17	38.56		682.26	-682	9,583	-682	245	669.50
18	40.03		722.29	-722	9,543	-722	244	709.53
19	42.12		764.41	-764	9,501	-764	243	751.65
20	42.12	399.27	806.53	-807	9,458	-807	242	793.77
21	42.11		848.64	-849	9,416	-849	241	835.88
22	42.11		890.75	-891	9,374	-891	240	877.99
23	42.15		932.90	-933	9,332	-933	239	920.14
24	42.12		975.02	-975	9,290	-975	238	962.26
25	37.12		1,012.14	-1,012	9,253	-1,012	237	999.38
26	39.02		1,051.16	-1,051	9,214	-1,051	236	1,038.40
27	41.74		1,092.90	-1,093	9,172	-1,093	235	1,080.14
28	41.72		1,134.62	-1,135	9,130	-1,135	234	1,121.86
29	41.71		1,176.33	-1,176	9,089	-1,176	233	1,163.57
30	42.12	411.92	1,218.45	-1,218	9,047	-1,218	232	1,205.69
31	42.13		1,260.58	-1,261	9,004	-1,261	231	1,247.82
32	40.65		1,301.23	-1,301	8,964	-1,301	230	1,288.47
33	37.43		1,338.66	-1,339	8,926	-1,339	229	1,325.90
34	38.94		1,377.60	-1,378	8,887	-1,378	228	1,364.84
35	40.23		1,417.83	-1,418	8,847	-1,418	227	1,405.07
36	39.37		1,457.20	-1,457	8,808	-1,457	226	1,444.44
37	39.52		1,496.72	-1,497	8,768	-1,497	225	1,483.96
38	39.10		1,535.82	-1,536	8,729	-1,536	224	1,523.06
39	39.94		1,575.76	-1,576	8,689	-1,576	223	1,563.00
40	39.45	396.76	1,615.21	-1,615	8,650	-1,615	222	1,602.45
41	38.05		1,653.26	-1,653	8,612	-1,653	221	1,640.50
42	38.86		1,692.12	-1,692	8,573	-1,692	220	1,679.36
43	38.75		1,730.87	-1,731	8,534	-1,731	219	1,718.11
44	40.10		1,770.97	-1,771	8,494	-1,771	218	1,758.21
45	40.34		1,811.31	-1,811	8,454	-1,811	217	1,798.55
46	39.56		1,850.87	-1,851	8,414	-1,851	216	1,838.11
47	38.62		1,889.49	-1,889	8,376	-1,889	215	1,876.73
48	38.97		1,928.46	-1,928	8,337	-1,928	214	1,915.70
49	39.43		1,967.89	-1,968	8,297	-1,968	213	1,955.13

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
50	39.32	**392.00**	2,007.21	-2,007	8,258	-2,007	212	1,994.45
51	40.02		2,047.23	-2,047	8,218	-2,047	211	2,034.47
52	39.72		2,086.95	-2,087	8,178	-2,087	210	2,074.19
53	40.12		2,127.07	-2,127	8,138	-2,127	209	2,114.31
54	39.61		2,166.68	-2,167	8,098	-2,167	208	2,153.92
55	39.15		2,205.83	-2,206	8,059	-2,206	207	2,193.07
56	37.46		2,243.29	-2,243	8,022	-2,243	206	2,230.53
57	39.62		2,282.91	-2,283	7,982	-2,283	205	2,270.15
58	39.90		2,322.81	-2,323	7,942	-2,323	204	2,310.05
59	38.53		2,361.34	-2,361	7,904	-2,361	203	2,348.58
60	39.68	**393.81**	2,401.02	-2,401	7,864	-2,401	202	2,388.26
61	39.78		2,440.80	-2,441	7,824	-2,441	201	2,428.04
62	38.77		2,479.57	-2,480	7,785	-2,480	200	2,466.81
63	37.95		2,517.52	-2,518	7,747	-2,518	199	2,504.76
64	38.83		2,556.35	-2,556	7,709	-2,556	198	2,543.59
65	39.42		2,595.77	-2,596	7,669	-2,596	197	2,583.01
66	34.98		2,630.75	-2,631	7,634	-2,631	196	2,617.99
67	39.22		2,669.97	-2,670	7,595	-2,670	195	2,657.21
68	38.63		2,708.60	-2,709	7,556	-2,709	194	2,695.84
69	39.26		2,747.86	-2,748	7,517	-2,748	193	2,735.10
70	38.38	**385.22**	2,786.24	-2,786	7,479	-2,786	192	2,773.48
71	39.05		2,825.29	-2,825	7,440	-2,825	191	2,812.53
72	39.86		2,865.15	-2,865	7,400	-2,865	190	2,852.39
73	39.95		2,905.10	-2,905	7,360	-2,905	189	2,892.34
74	39.64		2,944.74	-2,945	7,320	-2,945	188	2,931.98
75	40.72		2,985.46	-2,985	7,280	-2,985	187	2,972.70
76	40.15		3,025.61	-3,026	7,239	-3,026	186	3,012.85
77	40.13		3,065.74	-3,066	7,199	-3,066	185	3,052.98
78	38.73		3,104.47	-3,104	7,161	-3,104	184	3,091.71
79	39.93		3,144.40	-3,144	7,121	-3,144	183	3,131.64
80	40.42	**398.58**	3,184.82	-3,185	7,080	-3,185	182	3,172.06
81	38.23		3,223.05	-3,223	7,042	-3,223	181	3,210.29
82	39.15		3,262.20	-3,262	7,003	-3,262	180	3,249.44
83	38.93		3,301.13	-3,301	6,964	-3,301	179	3,288.37
84	40.23		3,341.36	-3,341	6,924	-3,341	178	3,328.60
85	39.12		3,380.48	-3,380	6,885	-3,380	177	3,367.72
86	39.02		3,419.50	-3,420	6,846	-3,420	176	3,406.74
87	39.43		3,458.93	-3,459	6,806	-3,459	175	3,446.17
88	39.62		3,498.55	-3,499	6,766	-3,499	174	3,485.79
89	39.87		3,538.42	-3,538	6,727	-3,538	173	3,525.66
90	39.85	**393.45**	3,578.27	-3,578	6,687	-3,578	172	3,565.51
91	39.87		3,618.14	-3,618	6,647	-3,618	171	3,605.38
92	39.28		3,657.42	-3,657	6,608	-3,657	170	3,644.66
93	39.15		3,696.57	-3,697	6,568	-3,697	169	3,683.81
94	39.90		3,736.47	-3,736	6,529	-3,736	168	3,723.71
95	39.78		3,776.25	-3,776	6,489	-3,776	167	3,763.49
96	39.72		3,815.97	-3,816	6,449	-3,816	166	3,803.21
97	40.62		3,856.59	-3,857	6,408	-3,857	165	3,843.83
98	38.95		3,895.54	-3,896	6,369	-3,896	164	3,882.78
99	38.38		3,933.92	-3,934	6,331	-3,934	163	3,921.16
100	40.08	**395.73**	3,974.00	-3,974	6,291	-3,974	162	3,961.24
101	40.05		4,014.05	-4,014	6,251	-4,014	161	4,001.29
102	38.58		4,052.63	-4,053	6,212	-4,053	160	4,039.87
103	37.97		4,090.60	-4,091	6,174	-4,091	159	4,077.84
104	39.75		4,130.35	-4,130	6,135	-4,130	158	4,117.59
105	39.40		4,169.75	-4,170	6,095	-4,170	157	4,156.99
106	38.81		4,208.56	-4,209	6,056	-4,209	156	4,195.80
107	40.45		4,249.01	-4,249	6,016	-4,249	155	4,236.25
108	38.82		4,287.83	-4,288	5,977	-4,288	154	4,275.07
109	40.02		4,327.85	-4,328	5,937	-4,328	153	4,315.09
110	37.74	**391.59**	4,365.59	-4,366	5,899	-4,366	152	4,352.83
111	40.15		4,405.74	-4,406	5,859	-4,406	151	4,392.98
112	38.68		4,444.42	-4,444	5,821	-4,444	150	4,431.66

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
113	39.38		4,483.80	-4,484	5,781	-4,484	149	4,471.04
114	39.90		4,523.70	-4,524	5,741	-4,524	148	4,510.94
115	39.46		4,563.16	-4,563	5,702	-4,563	147	4,550.40
116	39.53		4,602.69	-4,603	5,662	-4,603	146	4,589.93
117	39.58		4,642.27	-4,642	5,623	-4,642	145	4,629.51
118	40.17		4,682.44	-4,682	5,583	-4,682	144	4,669.68
119	39.90		4,722.34	-4,722	5,543	-4,722	143	4,709.58
120	40.42	**397.17**	4,762.76	-4,763	5,502	-4,763	142	4,750.00
121	39.78		4,802.54	-4,803	5,462	-4,803	141	4,789.78
122	40.05		4,842.59	-4,843	5,422	-4,843	140	4,829.83
123	39.38		4,881.97	-4,882	5,383	-4,882	139	4,869.21
124	38.07		4,920.04	-4,920	5,345	-4,920	138	4,907.28
125	39.86		4,959.90	-4,960	5,305	-4,960	137	4,947.14
126	39.78		4,999.68	-5,000	5,265	-5,000	136	4,986.92
127	39.91		5,039.59	-5,040	5,225	-5,040	135	5,026.83
128	39.04		5,078.63	-5,079	5,186	-5,079	134	5,065.87
129	38.36		5,116.99	-5,117	5,148	-5,117	133	5,104.23
130	39.23	**393.46**	5,156.22	-5,156	5,109	-5,156	132	5,143.46
131	39.38		5,195.60	-5,196	5,069	-5,196	131	5,182.84
132	39.45		5,235.05	-5,235	5,030	-5,235	130	5,222.29
133	38.88		5,273.93	-5,274	4,991	-5,274	129	5,261.17
134	38.97		5,312.90	-5,313	4,952	-5,313	128	5,300.14
135	40.15		5,353.05	-5,353	4,912	-5,353	127	5,340.29
136	38.00		5,391.05	-5,391	4,874	-5,391	126	5,378.29
137	40.25		5,431.30	-5,431	4,834	-5,431	125	5,418.54
138	40.10		5,471.40	-5,471	4,794	-5,471	124	5,458.64
139	37.73		5,509.13	-5,509	4,756	-5,509	123	5,496.37
140	39.93	**392.84**	5,549.06	-5,549	4,716	-5,549	122	5,536.30
141	40.27		5,589.33	-5,589	4,676	-5,589	121	5,576.57
142	39.98		5,629.31	-5,629	4,636	-5,629	120	5,616.55
143	39.20		5,668.51	-5,669	4,596	-5,669	119	5,655.75
144	39.90		5,708.41	-5,708	4,557	-5,708	118	5,695.65
145	40.63		5,749.04	-5,749	4,516	-5,749	117	5,736.28
146	39.70		5,788.74	-5,789	4,476	-5,789	116	5,775.98
147	39.92		5,828.66	-5,829	4,436	-5,829	115	5,815.90
148	40.00		5,868.66	-5,869	4,396	-5,869	114	5,855.90
149	39.03		5,907.69	-5,908	4,357	-5,908	113	5,894.93
150	37.82	**396.45**	5,945.51	-5,946	4,319	-5,946	112	5,932.75
151	40.20		5,985.71	-5,986	4,279	-5,986	111	5,972.95
152	39.15		6,024.86	-6,025	4,240	-6,025	110	6,012.10
153	38.28		6,063.14	-6,063	4,202	-6,063	109	6,050.38
154	40.35		6,103.49	-6,103	4,162	-6,103	108	6,090.73
155	39.23		6,142.72	-6,143	4,122	-6,143	107	6,129.96
156	39.80		6,182.52	-6,183	4,082	-6,183	106	6,169.76
157	39.60		6,222.12	-6,222	4,043	-6,222	105	6,209.36
158	38.75		6,260.87	-6,261	4,004	-6,261	104	6,248.11
159	39.65		6,300.52	-6,301	3,964	-6,301	103	6,287.76
160	40.32	**395.33**	6,340.84	-6,341	3,924	-6,341	102	6,328.08
161	39.87		6,380.71	-6,381	3,884	-6,381	101	6,367.95
162	40.42		6,421.13	-6,421	3,844	-6,421	100	6,408.37
163	39.44		6,460.57	-6,461	3,804	-6,461	99	6,447.81
164	40.07		6,500.64	-6,501	3,764	-6,501	98	6,487.88
165	39.62		6,540.26	-6,540	3,725	-6,540	97	6,527.50
166	39.80		6,580.06	-6,580	3,685	-6,580	96	6,567.30
167	38.68		6,618.74	-6,619	3,646	-6,619	95	6,605.98
168	39.55		6,658.29	-6,658	3,607	-6,658	94	6,645.53
169	38.82		6,697.11	-6,697	3,568	-6,697	93	6,684.35
170	38.88	**395.15**	6,735.99	-6,736	3,529	-6,736	92	6,723.23
171	40.13		6,776.12	-6,776	3,489	-6,776	91	6,763.36
172	40.10		6,816.22	-6,816	3,449	-6,816	90	6,803.46
173	39.17		6,855.39	-6,855	3,410	-6,855	89	6,842.63
174	37.15		6,892.54	-6,893	3,372	-6,893	88	6,879.78
175	37.60		6,930.14	-6,930	3,335	-6,930	87	6,917.38

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
176	40.10		6,970.24	-6,970	3,295	-6,970	86	6,957.48
177	40.45		7,010.69	-7,011	3,254	-7,011	85	6,997.93
178	39.88		7,050.57	-7,051	3,214	-7,051	84	7,037.81
179	39.97		7,090.54	-7,091	3,174	-7,091	83	7,077.78
180	39.25	**393.80**	7,129.79	-7,130	3,135	-7,130	82	7,117.03
181	37.78		7,167.57	-7,168	3,097	-7,168	81	7,154.81
182	40.15		7,207.72	-7,208	3,057	-7,208	80	7,194.96
183	37.85		7,245.57	-7,246	3,019	-7,246	79	7,232.81
184	39.75		7,285.32	-7,285	2,980	-7,285	78	7,272.56
185	40.00		7,325.32	-7,325	2,940	-7,325	77	7,312.56
186	38.50		7,363.82	-7,364	2,901	-7,364	76	7,351.06
187	39.92		7,403.74	-7,404	2,861	-7,404	75	7,390.98
188	39.15		7,442.89	-7,443	2,822	-7,443	74	7,430.13
189	39.65		7,482.54	-7,483	2,782	-7,483	73	7,469.78
190	38.46	**391.21**	7,521.00	-7,521	2,744	-7,521	72	7,508.24
191	39.15		7,560.15	-7,560	2,705	-7,560	71	7,547.39
192	39.48		7,599.63	-7,600	2,665	-7,600	70	7,586.87
193	39.94		7,639.57	-7,640	2,625	-7,640	69	7,626.81
194	37.98		7,677.55	-7,678	2,587	-7,678	68	7,664.79
195	39.80		7,717.35	-7,717	2,548	-7,717	67	7,704.59
196	38.70		7,756.05	-7,756	2,509	-7,756	66	7,743.29
197	40.13		7,796.18	-7,796	2,469	-7,796	65	7,783.42
198	39.98		7,836.16	-7,836	2,429	-7,836	64	7,823.40
199	40.03		7,876.19	-7,876	2,389	-7,876	63	7,863.43
200	39.45	**394.64**	7,915.64	-7,916	2,349	-7,916	62	7,902.88
201	40.08		7,955.72	-7,956	2,309	-7,956	61	7,942.96
202	39.65		7,995.37	-7,995	2,270	-7,995	60	7,982.61
203	38.75		8,034.12	-8,034	2,231	-8,034	59	8,021.36
204	37.88		8,072.00	-8,072	2,193	-8,072	58	8,059.24
205	38.53		8,110.53	-8,111	2,154	-8,111	57	8,097.77
206	39.88		8,150.41	-8,150	2,115	-8,150	56	8,137.65
207	37.85		8,188.26	-8,188	2,077	-8,188	55	8,175.50
208	38.31		8,226.57	-8,227	2,038	-8,227	54	8,213.81
209	38.93		8,265.50	-8,265	2,000	-8,265	53	8,252.74
210	39.08	**388.94**	8,304.58	-8,305	1,960	-8,305	52	8,291.82
211	38.65		8,343.23	-8,343	1,922	-8,343	51	8,330.47
212	40.10		8,383.33	-8,383	1,882	-8,383	50	8,370.57
213	38.75		8,422.08	-8,422	1,843	-8,422	49	8,409.32
214	40.46		8,462.54	-8,463	1,802	-8,463	48	8,449.78
215	39.40		8,501.94	-8,502	1,763	-8,502	47	8,489.18
216	40.00		8,541.94	-8,542	1,723	-8,542	46	8,529.18
217	38.92		8,580.86	-8,581	1,684	-8,581	45	8,568.10
218	39.40		8,620.26	-8,620	1,645	-8,620	44	8,607.50
219	39.63		8,659.89	-8,660	1,605	-8,660	43	8,647.13
220	40.13	**395.44**	8,700.02	-8,700	1,565	-8,700	42	8,687.26
221	39.95		8,739.97	-8,740	1,525	-8,740	41	8,727.21
222	39.85		8,779.82	-8,780	1,485	-8,780	40	8,767.06
223	39.70		8,819.52	-8,820	1,445	-8,820	39	8,806.76
224	39.20		8,858.72	-8,859	1,406	-8,859	38	8,845.96
225	40.88		8,899.60	-8,900	1,365	-8,900	37	8,886.84
226	38.90		8,938.50	-8,938	1,327	-8,938	36	8,925.74
227	40.43		8,978.93	-8,979	1,286	-8,979	35	8,966.17
228	39.24		9,018.17	-9,018	1,247	-9,018	34	9,005.41
229	39.50		9,057.67	-9,058	1,207	-9,058	33	9,044.91
230	38.58	**396.23**	9,096.25	-9,096	1,169	-9,096	32	9,083.49
231	38.26		9,134.51	-9,135	1,130	-9,135	31	9,121.75
232	39.13		9,173.64	-9,174	1,091	-9,174	30	9,160.88
233	37.46		9,211.10	-9,211	1,054	-9,211	29	9,198.34
234	39.05		9,250.15	-9,250	1,015	-9,250	28	9,237.39
235	39.60		9,289.75	-9,290	975	-9,290	27	9,276.99
236	37.28		9,327.03	-9,327	938	-9,327	26	9,314.27
237	39.25		9,366.28	-9,366	899	-9,366	25	9,353.52
238	39.14		9,405.42	-9,405	860	-9,405	24	9,392.66

Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
239	37.20		9,442.62	-9,443	822	-9,443	23	9,429.86
240	39.57	**385.94**	9,482.19	-9,482	783	-9,482	22	9,469.43
241	37.35		9,519.54	-9,520	745	-9,520	21	9,506.78
242	39.80		9,559.34	-9,559	706	-9,559	20	9,546.58
243	36.85		9,596.19	-9,596	669	-9,596	19	9,583.43
244	39.58		9,635.77	-9,636	629	-9,636	18	9,623.01
245	40.04		9,675.81	-9,676	589	-9,676	17	9,663.05
246	39.93		9,715.74	-9,716	549	-9,716	16	9,702.98
247	39.12		9,754.86	-9,755	510	-9,755	15	9,742.10
248	39.58		9,794.44	-9,794	471	-9,794	14	9,781.68
249	34.84		9,829.28	-9,829	436	-9,829	13	9,816.52
250	39.78	**386.87**	9,869.06	-9,869	396	-9,869	12	9,856.30
251	39.30		9,908.36	-9,908	357	-9,908	11	9,895.60
252	37.85		9,946.21	-9,946	319	-9,946	10	9,933.45
253	37.73		9,983.94	-9,984	281	-9,984	9	9,971.18
254	38.65		10,022.59	-10,023	242	-10,023	8	10,009.83
255	39.78		10,062.37	-10,062	203	-10,062	7	10,049.61
256	38.60		10,100.97	-10,101	164	-10,101	6	10,088.21
257	39.23		10,140.20	-10,140	125	-10,140	5	10,127.44
258	40.40		10,180.60	-10,181	84	-10,181	4	10,167.84
259	9.13		10,189.73	-10,190	75	-10,190	3	10,176.97
260	40.00	**360.67**	10,229.73	-10,230	35	-10,230	2	10,216.97
261	8.00		10,237.73	-10,238	27	-10,238	1	10,224.97
262	39.38		10,277.11	-10,277	-12	-10,277	0	10,264.35
263								
264								
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Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
302								
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Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
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Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
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Jt. #	Fill in Jts. Length Only	Ten Jt Subtotals	Running Total + KB & Tools	W/L MEASURE	TOP OF PACKER	Dist. To Liner Top	No. Jts Out Hole	Runnig total Tub. Only
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9.13 INJECTION STRING TORQUE TURN REPORT

Data-Trek ADVANTAGE

FRANK'S C.A.M. DEPARTMENT

Monday, August 06, 2018

COMPANY NAME: WSP USA INC

COMPANY REPRESENTATIVE: MR. KEVIN

WELL NUMBER: 4

ETM JOB NUMBER: 109925

LOCATION: ARTESIA, NM

LEASE NAME: NAVAHO WDW

CONTRACTOR/RIG NO.: PATRIOT 4

INSPECTOR:

CAM TECH 1: JOSE ZUNIGA

CAM TECH 2: JOEY CASAS

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JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
1	LOT 01	SPECIAL	3:56 PM	Sun, Aug 05, 2018	3739	----------	----------	0.295	----------	----------	JC.. DEAD STICK DUMP TEST
2	LOT 01	SPECIAL	4:00 PM	Sun, Aug 05, 2018	27	----------	----------	0.000	----------	----------	JC.. DUMMY GRAPH. NO SHOE. TAIL PIPE LOWERED INTO HOLE.
3	LOT 01	SPECIAL	4:04 PM	Sun, Aug 05, 2018	3640	----------	----------	5.889	----------	----------	JC.. 7 TO 4-1/2 CROSSOVER PIPE MADE UP TO TAIL PIPE.
4	LOT 01	ACCEPT	4:18 PM	Sun, Aug 05, 2018	3528	----------	----------	7.619	----------	----------	JC.. CONNECTION OK. JOINT # 1 MADE UP TO 4-1/2 TO 7 CROSSOVER
5	LOT 02	SPECIAL	4:46 PM	Sun, Aug 05, 2018	1874	----------	----------	5.771	----------	----------	JC.. 4-1/2 PIPE BETWEEN TAIL PIPE AND JOINT # 1. CONNECTION OK BY MANAGER
6	LOT 01	ACCEPT	4:55 PM	Sun, Aug 05, 2018	3603	----------	----------	15.668	----------	----------	JC.. CONNECTION OK. JOINT # 2
7	LOT 01	ACCEPT	7:52 PM	Sun, Aug 05, 2018	3624	----------	----------	18.931	----------	----------	JC.. CONNECTION OK. JOINT # 3
8	LOT 01	ACCEPT	7:56 PM	Sun, Aug 05, 2018	3624	----------	----------	16.703	----------	----------	JC.. CONNECTION OK. JOINT # 4
9	LOT 01	ACCEPT	7:59 PM	Sun, Aug 05, 2018	3592	----------	----------	18.109	----------	----------	JC.. TORQUE SPIKE. CONNECTION OK. JOINT # 5
10	LOT 01	ACCEPT	8:02 PM	Sun, Aug 05, 2018	3629	----------	----------	18.397	----------	----------	JC.. CONNECTION OK. JOINT # 6
11	LOT 01	ACCEPT	8:05 PM	Sun, Aug 05, 2018	3596	----------	----------	18.518	----------	----------	JC.. CONNECTION OK. JOINT # 7
12	LOT 01	ACCEPT	8:08 PM	Sun, Aug 05, 2018	3620	----------	----------	17.952	----------	----------	JC.. CONNECTION OK. JOINT # 8
13	LOT 01	ACCEPT	8:11 PM	Sun, Aug 05, 2018	3545	----------	----------	18.297	----------	----------	JC.. CONNECTION OK. JOINT # 9
14	LOT 01	ACCEPT	8:14 PM	Sun, Aug 05, 2018	3631	----------	----------	18.451	----------	----------	JC.. CONNECTION OK. JOINT # 10
15	LOT 01	ACCEPT	8:17 PM	Sun, Aug 05, 2018	3537	----------	----------	17.677	----------	----------	JC.. CONNECTION OK. JOINT # 11
16	LOT 01	ACCEPT	8:20 PM	Sun, Aug 05, 2018	3627	----------	----------	18.914	----------	----------	JC.. CONNECTION OK. JOINT # 12
17	LOT 01	ACCEPT	8:23 PM	Sun, Aug 05, 2018	3656	----------	----------	17.851	----------	----------	JC.. CONNECTION OK. JOINT # 13
18	LOT 01	ACCEPT	8:26 PM	Sun, Aug 05, 2018	3649	----------	----------	18.500	----------	----------	JC.. CONNECTION OK. JOINT # 14
19	LOT 01	ACCEPT	8:29 PM	Sun, Aug 05, 2018	3654	----------	----------	18.451	----------	----------	JC.. CONNECTION OK. JOINT # 15
20	LOT 01	ACCEPT	8:32 PM	Sun, Aug 05, 2018	3607	----------	----------	17.419	----------	----------	JC.. CONNECTION OK. JOINT # 16
21	LOT 01	ACCEPT	8:35 PM	Sun, Aug 05, 2018	3527	----------	----------	17.821	----------	----------	JC.. CONNECTION OK. JOINT # 17
22	LOT 01	ACCEPT	8:38 PM	Sun, Aug 05, 2018	3638	----------	----------	18.846	----------	----------	JC.. CONNECTION OK. JOINT # 18
23	LOT 01	ACCEPT	8:41 PM	Sun, Aug 05, 2018	3742	----------	----------	17.972	----------	----------	JC.. CONNECTION OK. JOINT # 19
24	LOT 01	ACCEPT	8:45 PM	Sun, Aug 05, 2018	3588	----------	----------	17.556	----------	----------	JC.. CONNECTION OK. RETORQUE BUMP OK. JOINT # 20
25	LOT 01	ACCEPT	8:49 PM	Sun, Aug 05, 2018	3598	----------	----------	18.959	----------	----------	JC.. CONNECTION OK. JOINT # 21
26	LOT 01	ACCEPT	8:51 PM	Sun, Aug 05, 2018	3535	----------	----------	19.165	----------	----------	JC.. CONNECTION OK. JOINT # 22
27	LOT 01	ACCEPT	8:53 PM	Sun, Aug 05, 2018	3548	----------	----------	18.400	----------	----------	JC.. CONNECTION OK. JOINT # 23
28	LOT 01	ACCEPT	8:55 PM	Sun, Aug 05, 2018	3623	----------	----------	19.194	----------	----------	JC.. CONNECTION OK. JOINT # 24
29	LOT 01	ACCEPT	8:57 PM	Sun, Aug 05, 2018	3642	----------	----------	18.781	----------	----------	JC.. CONNECTION OK. JOINT # 25
30	LOT 01	ACCEPT	8:58 PM	Sun, Aug 05, 2018	4083	----------	----------	19.135	----------	----------	JC.. CONNECTION OK. BUMP TEST OK. JOINT # 26
31	LOT 01	ACCEPT	9:00 PM	Sun, Aug 05, 2018	3548	----------	----------	18.417	----------	----------	JC.. CONNECTION OK. JOINT # 27
32	LOT 01	ACCEPT	9:02 PM	Sun, Aug 05, 2018	3628	----------	----------	17.531	----------	----------	JC.. CONNECTION OK. JOINT # 28
33	LOT 01	ACCEPT	9:04 PM	Sun, Aug 05, 2018	3581	----------	----------	18.306	----------	----------	JC.. CONNECTION OK. JOINT # 29
34	LOT 01	ACCEPT	9:06 PM	Sun, Aug 05, 2018	3606	----------	----------	18.943	----------	----------	JC.. CONNECTION OK. JOINT # 30
35	LOT 01	ACCEPT	9:08 PM	Sun, Aug 05, 2018	3593	----------	----------	14.925	----------	----------	JC.. CONNECTION OK. JOINT # 31
36	LOT 01	ACCEPT	9:10 PM	Sun, Aug 05, 2018	3638	----------	----------	17.649	----------	----------	JC.. CONNECTION OK. JOINT # 32
37	LOT 01	ACCEPT	9:12 PM	Sun, Aug 05, 2018	3580	----------	----------	15.289	----------	----------	JC.. CONNECTION OK. JOINT # 33
38	LOT 01	ACCEPT	9:14 PM	Sun, Aug 05, 2018	3515	----------	----------	16.399	----------	----------	JC.. CONNECTION OK. JOINT # 34
39	LOT 01	ACCEPT	9:15 PM	Sun, Aug 05, 2018	3503	----------	----------	16.379	----------	----------	JC.. CONNECTION OK. JOINT # 35
40	LOT 01	ACCEPT	9:17 PM	Sun, Aug 05, 2018	3668	----------	----------	16.007	----------	----------	JC.. CONNECTION OK. JOINT # 36
41	LOT 01	ACCEPT	9:19 PM	Sun, Aug 05, 2018	3530	----------	----------	17.242	----------	----------	JC.. CONNECTION OK. JOINT # 37
42	LOT 01	ACCEPT	9:21 PM	Sun, Aug 05, 2018	3659	----------	----------	16.189	----------	----------	JC.. CONNECTION OK. JOINT # 38
43	LOT 01	ACCEPT	9:24 PM	Sun, Aug 05, 2018	3662	----------	----------	16.351	----------	----------	JC.. CONNECTION OK. JOINT # 39
44	LOT 01	ACCEPT	9:26 PM	Sun, Aug 05, 2018	3681	----------	----------	16.117	----------	----------	JC.. CONNECTION OK. JOINT # 40
45	LOT 01	ACCEPT	9:27 PM	Sun, Aug 05, 2018	3599	----------	----------	16.347	----------	----------	JC.. CONNECTION OK. JOINT # 41

JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
46	LOT 01	ACCEPT	9:29 PM	Sun, Aug 05, 2018	3661	----------	----------	17.088	----------	----------	JC.. CONNECTION OK. JOINT # 42
47	LOT 01	ACCEPT	9:31 PM	Sun, Aug 05, 2018	3655	----------	----------	16.842	----------	----------	JC.. CONNECTION OK. JOINT # 43
48	LOT 01	ACCEPT	9:33 PM	Sun, Aug 05, 2018	3635	----------	----------	15.950	----------	----------	JC.. CONNECTION OK. JOINT # 44
49	LOT 01	ACCEPT	9:35 PM	Sun, Aug 05, 2018	3618	----------	----------	16.691	----------	----------	JC.. CONNECTION OK. JOINT # 45
50	LOT 01	ACCEPT	9:48 PM	Sun, Aug 05, 2018	3549	----------	----------	16.387	----------	----------	JC.. CONNECTION OK. JOINT # 46
51	LOT 01	ACCEPT	9:50 PM	Sun, Aug 05, 2018	3635	----------	----------	17.814	----------	----------	JC.. CONNECTION OK. JOINT # 47
52	LOT 01	ACCEPT	9:52 PM	Sun, Aug 05, 2018	3611	----------	----------	18.176	----------	----------	JC.. CONNECTION OK. JOINT # 48
53	LOT 01	ACCEPT	9:54 PM	Sun, Aug 05, 2018	3618	----------	----------	16.322	----------	----------	JC.. CONNECTION OK. JOINT # 49
54	LOT 01	ACCEPT	9:56 PM	Sun, Aug 05, 2018	3520	----------	----------	16.308	----------	----------	JC.. CONNECTION OK. JOINT # 50
55	LOT 01	ACCEPT	9:58 PM	Sun, Aug 05, 2018	3614	----------	----------	18.120	----------	----------	JC.. CONNECTION OK. JOINT # 51
56	LOT 01	ACCEPT	10:00 PM	Sun, Aug 05, 2018	3620	----------	----------	16.809	----------	----------	JC.. CONNECTION OK. JOINT # 52
57	LOT 01	ACCEPT	10:01 PM	Sun, Aug 05, 2018	3643	----------	----------	16.152	----------	----------	JC.. CONNECTION OK. JOINT # 53
58	LOT 01	ACCEPT	10:03 PM	Sun, Aug 05, 2018	3601	----------	----------	17.823	----------	----------	JC.. CONNECTION OK. JOINT # 54
59	LOT 01	ACCEPT	10:05 PM	Sun, Aug 05, 2018	3658	----------	----------	16.253	----------	----------	JZ.. CONNECTION OK. JOINT # 55
60	LOT 01	ACCEPT	10:08 PM	Sun, Aug 05, 2018	3631	----------	----------	16.584	----------	----------	JZ.. CONNECTION OK. JOINT # 56
61	LOT 01	ACCEPT	10:09 PM	Sun, Aug 05, 2018	3612	----------	----------	16.933	----------	----------	JZ.. CONNECTION OK. JOINT # 57
62	LOT 01	ACCEPT	10:11 PM	Sun, Aug 05, 2018	3614	----------	----------	17.254	----------	----------	JZ.. CONNECTION OK. JOINT # 58
63	LOT 01	ACCEPT	10:13 PM	Sun, Aug 05, 2018	3698	----------	----------	16.836	----------	----------	JZ.. CONNECTION OK. JOINT # 59
64	LOT 01	ACCEPT	10:15 PM	Sun, Aug 05, 2018	3592	----------	----------	17.855	----------	----------	JZ.. CONNECTION OK. JOINT # 60
65	LOT 01	ACCEPT	10:17 PM	Sun, Aug 05, 2018	3608	----------	----------	17.309	----------	----------	JZ.. CONNECTION OK. JOINT # 61
66	LOT 01	ACCEPT	10:18 PM	Sun, Aug 05, 2018	3668	----------	----------	17.106	----------	----------	JZ.. CONNECTION OK. JOINT # 62
67	LOT 01	ACCEPT	10:20 PM	Sun, Aug 05, 2018	3637	----------	----------	16.993	----------	----------	JZ.. CONNECTION OK. JOINT # 63
68	LOT 01	ACCEPT	10:22 PM	Sun, Aug 05, 2018	3618	----------	----------	16.136	----------	----------	JZ.. CONNECTION OK. JOINT # 64
69	LOT 01	ACCEPT	10:24 PM	Sun, Aug 05, 2018	3574	----------	----------	17.264	----------	----------	JZ.. CONNECTION OK. JOINT # 65
70	LOT 01	ACCEPT	10:26 PM	Sun, Aug 05, 2018	3658	----------	----------	17.045	----------	----------	JZ.. CONNECTION OK. JOINT # 66
71	LOT 01	ACCEPT	10:28 PM	Sun, Aug 05, 2018	3585	----------	----------	16.179	----------	----------	JZ.. CONNECTION OK. JOINT # 67
72	LOT 01	ACCEPT	10:30 PM	Sun, Aug 05, 2018	3577	----------	----------	16.634	----------	----------	JZ.. CONNECTION OK. JOINT # 68
73	LOT 01	ACCEPT	10:32 PM	Sun, Aug 05, 2018	3617	----------	----------	17.121	----------	----------	JZ.. CONNECTION OK. JOINT # 69
74	LOT 01	ACCEPT	10:34 PM	Sun, Aug 05, 2018	3607	----------	----------	16.701	----------	----------	JZ.. CONNECTION OK. JOINT # 70
75	LOT 01	ACCEPT	10:36 PM	Sun, Aug 05, 2018	3629	----------	----------	17.113	----------	----------	JZ.. CONNECTION OK. JOINT # 71
76	LOT 01	ACCEPT	10:38 PM	Sun, Aug 05, 2018	3634	----------	----------	16.245	----------	----------	JZ.. CONNECTION OK. JOINT # 72
77	LOT 01	ACCEPT	10:40 PM	Sun, Aug 05, 2018	3600	----------	----------	17.756	----------	----------	JZ.. CONNECTION OK. JOINT # 73
78	LOT 01	ACCEPT	10:42 PM	Sun, Aug 05, 2018	3598	----------	----------	16.701	----------	----------	JZ.. CONNECTION OK. JOINT # 74
79	LOT 01	ACCEPT	10:44 PM	Sun, Aug 05, 2018	3517	----------	----------	17.539	----------	----------	JZ.. CONNECTION OK. JOINT # 75
80	LOT 01	ACCEPT	10:46 PM	Sun, Aug 05, 2018	3464	----------	----------	16.266	----------	----------	JZ.. CONNECTION OK. JOINT # 76
81	LOT 01	ACCEPT	10:48 PM	Sun, Aug 05, 2018	3644	----------	----------	17.267	----------	----------	JZ.. CONNECTION OK. JOINT # 77
82	LOT 01	ACCEPT	10:50 PM	Sun, Aug 05, 2018	3559	----------	----------	16.551	----------	----------	JZ.. CONNECTION OK. JOINT # 78
83	LOT 01	ACCEPT	10:52 PM	Sun, Aug 05, 2018	3590	----------	----------	17.301	----------	----------	JZ.. CONNECTION OK. JOINT # 79
84	LOT 01	ACCEPT	10:54 PM	Sun, Aug 05, 2018	3583	----------	----------	18.047	----------	----------	JZ.. CONNECTION OK. JOINT # 80
85	LOT 01	ACCEPT	10:56 PM	Sun, Aug 05, 2018	3613	----------	----------	16.360	----------	----------	JZ.. CONNECTION OK. JOINT # 81
86	LOT 01	ACCEPT	10:58 PM	Sun, Aug 05, 2018	3628	----------	----------	17.089	----------	----------	JZ.. CONNECTION OK. JOINT # 82
87	LOT 01	ACCEPT	11:00 PM	Sun, Aug 05, 2018	3593	----------	----------	16.390	----------	----------	JZ.. CONNECTION OK. JOINT # 83
88	LOT 01	ACCEPT	11:02 PM	Sun, Aug 05, 2018	3552	----------	----------	13.364	----------	----------	JZ.. CONNECTION OK. JOINT # 84
89	LOT 01	ACCEPT	11:04 PM	Sun, Aug 05, 2018	3614	----------	----------	17.151	----------	----------	JZ.. CONNECTION OK. JOINT # 85
90	LOT 01	ACCEPT	11:06 PM	Sun, Aug 05, 2018	3541	----------	----------	17.706	----------	----------	JZ.. CONNECTION OK. JOINT # 86

JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
91	LOT 01	ACCEPT	11:08 PM	Sun, Aug 05, 2018	3550	----------	----------	17.175	----------	----------	JZ.. CONNECTION OK. JOINT # 87
92	LOT 01	ACCEPT	11:10 PM	Sun, Aug 05, 2018	3580	----------	----------	17.530	----------	----------	JZ.. CONNECTION OK. JOINT # 88
93	LOT 01	ACCEPT	11:12 PM	Sun, Aug 05, 2018	3616	----------	----------	16.721	----------	----------	JZ.. CONNECTION OK. JOINT # 89
94	LOT 01	ACCEPT	11:14 PM	Sun, Aug 05, 2018	3589	----------	----------	18.018	----------	----------	JZ.. CONNECTION OK. JOINT # 90
95	LOT 01	ACCEPT	11:16 PM	Sun, Aug 05, 2018	3607	----------	----------	15.760	----------	----------	JZ.. CONNECTION OK. JOINT # 91
96	LOT 01	ACCEPT	11:18 PM	Sun, Aug 05, 2018	3554	----------	----------	16.551	----------	----------	JZ.. CONNECTION OK. JOINT # 92
97	LOT 01	ACCEPT	11:20 PM	Sun, Aug 05, 2018	3627	----------	----------	16.092	----------	----------	JZ.. CONNECTION OK. JOINT # 93
98	LOT 01	ACCEPT	11:22 PM	Sun, Aug 05, 2018	3640	----------	----------	17.155	----------	----------	JZ.. CONNECTION OK. JOINT # 94
99	LOT 01	ACCEPT	11:24 PM	Sun, Aug 05, 2018	3578	----------	----------	16.243	----------	----------	JZ.. CONNECTION OK. JOINT # 95
100	LOT 01	ACCEPT	11:26 PM	Sun, Aug 05, 2018	3600	----------	----------	16.792	----------	----------	JZ.. CONNECTION OK. JOINT # 96
101	LOT 01	ACCEPT	11:27 PM	Sun, Aug 05, 2018	3592	----------	----------	15.496	----------	----------	JZ.. CONNECTION OK. JOINT # 97
102	LOT 01	ACCEPT	11:30 PM	Sun, Aug 05, 2018	3534	----------	----------	16.538	----------	----------	JZ.. CONNECTION OK. JOINT # 98
103	LOT 01	ACCEPT	11:32 PM	Sun, Aug 05, 2018	3630	----------	----------	17.128	----------	----------	JZ.. CONNECTION OK. JOINT # 99
104	LOT 01	ACCEPT	11:33 PM	Sun, Aug 05, 2018	3574	----------	----------	16.622	----------	----------	JZ.. CONNECTION OK. JOINT # 100
105	LOT 01	ACCEPT	11:35 PM	Sun, Aug 05, 2018	3592	----------	----------	17.367	----------	----------	JZ.. CONNECTION OK. JOINT # 101
106	LOT 01	ACCEPT	11:37 PM	Sun, Aug 05, 2018	3554	----------	----------	16.525	----------	----------	JZ.. CONNECTION OK. JOINT # 102
107	LOT 01	ACCEPT	11:39 PM	Sun, Aug 05, 2018	3609	----------	----------	15.968	----------	----------	JZ.. CONNECTION OK. JOINT # 103
108	LOT 01	ACCEPT	11:41 PM	Sun, Aug 05, 2018	3680	----------	----------	16.800	----------	----------	JZ.. CONNECTION OK. JOINT # 104
109	LOT 01	ACCEPT	11:43 PM	Sun, Aug 05, 2018	3549	----------	----------	16.757	----------	----------	JZ.. CONNECTION OK. JOINT # 105
110	LOT 01	ACCEPT	11:45 PM	Sun, Aug 05, 2018	3637	----------	----------	17.944	----------	----------	JZ.. CONNECTION OK. JOINT # 106
111	LOT 01	ACCEPT	11:47 PM	Sun, Aug 05, 2018	3620	----------	----------	16.358	----------	----------	JZ.. CONNECTION OK. JOINT # 107
112	LOT 01	ACCEPT	11:49 PM	Sun, Aug 05, 2018	3530	----------	----------	17.762	----------	----------	JZ.. CONNECTION OK. JOINT # 108
113	LOT 01	ACCEPT	11:50 PM	Sun, Aug 05, 2018	3607	----------	----------	17.150	----------	----------	JZ.. CONNECTION OK. JOINT # 109
114	LOT 01	ACCEPT	11:53 PM	Sun, Aug 05, 2018	4523	----------	----------	17.488	----------	----------	JZ.. CONNECTION OK. JOINT # 110. TONG SPICKE, RETORQUE ON SAME GRAPH.
115	LOT 01	ACCEPT	11:54 PM	Sun, Aug 05, 2018	3626	----------	----------	12.601	----------	----------	JZ.. CONNECTION OK. JOINT # 111
116	LOT 01	ACCEPT	11:57 PM	Sun, Aug 05, 2018	3564	----------	----------	16.961	----------	----------	JZ.. CONNECTION OK. JOINT # 112
117	LOT 01	ACCEPT	11:59 PM	Sun, Aug 05, 2018	3644	----------	----------	16.252	----------	----------	JZ.. CONNECTION OK. JOINT # 113
118	LOT 01	ACCEPT	12:01 AM	Mon, Aug 06, 2018	3535	----------	----------	16.639	----------	----------	JZ.. CONNECTION OK. JOINT # 114
119	LOT 01	ACCEPT	12:03 AM	Mon, Aug 06, 2018	3601	----------	----------	17.196	----------	----------	JZ.. CONNECTION OK. JOINT # 115
120	LOT 01	ACCEPT	12:05 AM	Mon, Aug 06, 2018	3617	----------	----------	17.226	----------	----------	JZ.. CONNECTION OK. JOINT # 116
121	LOT 01	ACCEPT	12:07 AM	Mon, Aug 06, 2018	3689	----------	----------	17.151	----------	----------	JZ.. CONNECTION OK. JOINT # 117
122	LOT 01	ACCEPT	12:09 AM	Mon, Aug 06, 2018	3635	----------	----------	16.990	----------	----------	JZ.. CONNECTION OK. JOINT # 118
123	LOT 01	ACCEPT	12:11 AM	Mon, Aug 06, 2018	3603	----------	----------	17.405	----------	----------	JZ.. CONNECTION OK. JOINT # 119
124	LOT 01	ACCEPT	12:13 AM	Mon, Aug 06, 2018	3612	----------	----------	16.980	----------	----------	JZ.. CONNECTION OK. JOINT # 120
125	LOT 01	ACCEPT	12:15 AM	Mon, Aug 06, 2018	3577	----------	----------	17.466	----------	----------	JZ.. CONNECTION OK. JOINT # 121
126	LOT 01	ACCEPT	12:46 AM	Mon, Aug 06, 2018	3637	----------	----------	16.080	----------	----------	JZ.. CONNECTION OK. JOINT # 122
127	LOT 01	ACCEPT	12:49 AM	Mon, Aug 06, 2018	3566	----------	----------	16.625	----------	----------	JZ.. CONNECTION OK. JOINT # 123
128	LOT 01	ACCEPT	12:51 AM	Mon, Aug 06, 2018	3619	----------	----------	16.110	----------	----------	JZ.. CONNECTION OK. JOINT # 124
129	LOT 01	ACCEPT	12:53 AM	Mon, Aug 06, 2018	3598	----------	----------	16.971	----------	----------	JZ.. CONNECTION OK. JOINT # 125
130	LOT 01	ACCEPT	12:55 AM	Mon, Aug 06, 2018	3574	----------	----------	16.962	----------	----------	JZ.. CONNECTION OK. JOINT # 126
131	LOT 01	ACCEPT	12:57 AM	Mon, Aug 06, 2018	3618	----------	----------	17.118	----------	----------	JZ.. CONNECTION OK. JOINT # 127
132	LOT 01	ACCEPT	12:59 AM	Mon, Aug 06, 2018	3670	----------	----------	16.058	----------	----------	JZ.. CONNECTION OK. JOINT # 128
133	LOT 01	ACCEPT	1:01 AM	Mon, Aug 06, 2018	3603	----------	----------	16.118	----------	----------	JZ.. CONNECTION OK. JOINT # 129
134	LOT 01	ACCEPT	1:03 AM	Mon, Aug 06, 2018	3605	----------	----------	16.204	----------	----------	JZ.. CONNECTION OK. JOINT # 130
135	LOT 01	ACCEPT	1:05 AM	Mon, Aug 06, 2018	3670	----------	----------	16.905	----------	----------	JZ.. CONNECTION OK. JOINT # 131

JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
136	LOT 01	ACCEPT	1:06 AM	Mon, Aug 06, 2018	3565	----------	----------	17.750	----------	----------	JZ.. CONNECTION OK. JOINT # 132
137	LOT 01	ACCEPT	1:08 AM	Mon, Aug 06, 2018	3607	----------	----------	16.186	----------	----------	JZ.. CONNECTION OK. JOINT # 133
138	LOT 01	ACCEPT	1:10 AM	Mon, Aug 06, 2018	3596	----------	----------	16.427	----------	----------	JZ.. CONNECTION OK. JOINT # 134
139	LOT 01	ACCEPT	1:19 AM	Mon, Aug 06, 2018	3597	----------	----------	17.443	----------	----------	JZ.. CONNECTION OK. JOINT # 135
140	LOT 01	ACCEPT	1:22 AM	Mon, Aug 06, 2018	3609	----------	----------	17.342	----------	----------	JZ.. CONNECTION OK. JOINT # 136
141	LOT 01	ACCEPT	1:25 AM	Mon, Aug 06, 2018	3599	----------	----------	16.533	----------	----------	JZ.. CONNECTION OK. JOINT # 137
142	LOT 01	ACCEPT	1:27 AM	Mon, Aug 06, 2018	3565	----------	----------	14.353	----------	----------	JZ.. CONNECTION OK. JOINT # 138
143	LOT 01	ACCEPT	1:29 AM	Mon, Aug 06, 2018	3565	----------	----------	16.425	----------	----------	JZ.. CONNECTION OK. JOINT # 139
144	LOT 01	ACCEPT	1:30 AM	Mon, Aug 06, 2018	3583	----------	----------	16.613	----------	----------	JZ.. CONNECTION OK. JOINT # 140
145	LOT 01	ACCEPT	1:32 AM	Mon, Aug 06, 2018	3620	----------	----------	16.680	----------	----------	JZ.. CONNECTION OK. JOINT # 141
146	LOT 01	ACCEPT	1:34 AM	Mon, Aug 06, 2018	3627	----------	----------	16.814	----------	----------	JZ.. CONNECTION OK. JOINT # 142
147	LOT 01	ACCEPT	1:37 AM	Mon, Aug 06, 2018	3569	----------	----------	16.421	----------	----------	JZ.. CONNECTION OK. JOINT # 143
148	LOT 01	ACCEPT	1:38 AM	Mon, Aug 06, 2018	3607	----------	----------	16.464	----------	----------	JZ.. CONNECTION OK. JOINT # 144
149	LOT 01	ACCEPT	1:40 AM	Mon, Aug 06, 2018	3574	----------	----------	16.385	----------	----------	JZ.. CONNECTION OK. JOINT # 145
150	LOT 01	ACCEPT	1:42 AM	Mon, Aug 06, 2018	3576	----------	----------	16.541	----------	----------	JZ.. CONNECTION OK. JOINT # 146
151	LOT 01	ACCEPT	1:44 AM	Mon, Aug 06, 2018	3643	----------	----------	15.816	----------	----------	JZ.. CONNECTION OK. JOINT # 147
152	LOT 01	ACCEPT	1:46 AM	Mon, Aug 06, 2018	3614	----------	----------	16.232	----------	----------	JZ.. CONNECTION OK. JOINT # 148
153	LOT 01	ACCEPT	1:48 AM	Mon, Aug 06, 2018	3595	----------	----------	17.991	----------	----------	JZ.. CONNECTION OK. JOINT # 149
154	LOT 01	ACCEPT	1:50 AM	Mon, Aug 06, 2018	3614	----------	----------	17.015	----------	----------	JZ.. CONNECTION OK. JOINT # 150
155	LOT 01	ACCEPT	1:52 AM	Mon, Aug 06, 2018	3701	----------	----------	15.964	----------	----------	JZ.. CONNECTION OK. JOINT # 151
156	LOT 01	ACCEPT	1:54 AM	Mon, Aug 06, 2018	3682	----------	----------	15.358	----------	----------	JZ.. CONNECTION OK. JOINT # 152
157	LOT 01	ACCEPT	1:56 AM	Mon, Aug 06, 2018	3590	----------	----------	15.852	----------	----------	JZ.. CONNECTION OK. JOINT # 153
158	LOT 01	ACCEPT	1:58 AM	Mon, Aug 06, 2018	3626	----------	----------	15.536	----------	----------	JZ.. CONNECTION OK. JOINT # 154
159	LOT 01	ACCEPT	2:00 AM	Mon, Aug 06, 2018	3612	----------	----------	15.335	----------	----------	JZ.. CONNECTION OK. JOINT # 155
160	LOT 01	ACCEPT	2:03 AM	Mon, Aug 06, 2018	3588	----------	----------	16.584	----------	----------	JZ.. CONNECTION OK. JOINT # 156
161	LOT 01	ACCEPT	2:05 AM	Mon, Aug 06, 2018	3628	----------	----------	16.223	----------	----------	JZ.. CONNECTION OK. JOINT # 157
162	LOT 01	ACCEPT	2:07 AM	Mon, Aug 06, 2018	3613	----------	----------	17.032	----------	----------	JZ.. CONNECTION OK. JOINT # 158
163	LOT 01	ACCEPT	2:09 AM	Mon, Aug 06, 2018	3636	----------	----------	16.117	----------	----------	JZ.. CONNECTION OK. JOINT # 159
164	LOT 01	ACCEPT	2:12 AM	Mon, Aug 06, 2018	3669	----------	----------	16.242	----------	----------	JZ.. CONNECTION OK. JOINT # 160
165	LOT 01	ACCEPT	2:14 AM	Mon, Aug 06, 2018	3649	----------	----------	16.927	----------	----------	JZ.. CONNECTION OK. JOINT # 161
166	LOT 01	ACCEPT	2:16 AM	Mon, Aug 06, 2018	3583	----------	----------	17.058	----------	----------	JZ.. CONNECTION OK. JOINT # 162
167	LOT 01	ACCEPT	2:18 AM	Mon, Aug 06, 2018	3708	----------	----------	16.706	----------	----------	JZ.. CONNECTION OK. JOINT # 163
168	LOT 01	ACCEPT	2:20 AM	Mon, Aug 06, 2018	3588	----------	----------	17.371	----------	----------	JZ.. CONNECTION OK. JOINT # 164
169	LOT 01	ACCEPT	2:22 AM	Mon, Aug 06, 2018	3622	----------	----------	16.092	----------	----------	JZ.. CONNECTION OK. JOINT # 165
170	LOT 01	ACCEPT	2:23 AM	Mon, Aug 06, 2018	3499	----------	----------	15.576	----------	----------	JZ.. CONNECTION OK. JOINT # 166
171	LOT 01	ACCEPT	2:25 AM	Mon, Aug 06, 2018	3673	----------	----------	16.329	----------	----------	JZ.. CONNECTION OK. JOINT # 167
172	LOT 01	ACCEPT	2:27 AM	Mon, Aug 06, 2018	3633	----------	----------	17.156	----------	----------	JZ.. CONNECTION OK. JOINT # 168
173	LOT 01	ACCEPT	2:29 AM	Mon, Aug 06, 2018	3649	----------	----------	16.508	----------	----------	JZ.. CONNECTION OK. JOINT # 169
174	LOT 01	ACCEPT	2:31 AM	Mon, Aug 06, 2018	3650	----------	----------	15.858	----------	----------	JZ.. CONNECTION OK. JOINT # 170
175	LOT 01	ACCEPT	2:33 AM	Mon, Aug 06, 2018	3681	----------	----------	16.486	----------	----------	JZ.. CONNECTION OK. JOINT # 171
176	LOT 01	ACCEPT	2:35 AM	Mon, Aug 06, 2018	3640	----------	----------	16.092	----------	----------	JZ.. CONNECTION OK. JOINT # 172
177	LOT 01	ACCEPT	2:38 AM	Mon, Aug 06, 2018	3615	----------	----------	17.821	----------	----------	JZ.. CONNECTION OK. JOINT # 173. RETORQUE TO REACH TORQUE
178	LOT 01	ACCEPT	2:40 AM	Mon, Aug 06, 2018	3617	----------	----------	17.169	----------	----------	JZ.. CONNECTION OK. JOINT # 174
179	LOT 01	ACCEPT	2:42 AM	Mon, Aug 06, 2018	3663	----------	----------	17.100	----------	----------	JZ.. CONNECTION OK. JOINT # 175
180	LOT 01	ACCEPT	2:44 AM	Mon, Aug 06, 2018	3618	----------	----------	17.422	----------	----------	JZ.. CONNECTION OK. JOINT # 176

JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
181	LOT 01	ACCEPT	2:46 AM	Mon, Aug 06, 2018	3574	----------	----------	16.665	----------	----------	JZ.. CONNECTION OK. JOINT # 177
182	LOT 01	ACCEPT	2:48 AM	Mon, Aug 06, 2018	3609	----------	----------	16.499	----------	----------	JZ.. CONNECTION OK. JOINT # 178
183	LOT 01	ACCEPT	2:50 AM	Mon, Aug 06, 2018	3667	----------	----------	16.991	----------	----------	JZ.. CONNECTION OK. JOINT # 179
184	LOT 01	ACCEPT	2:52 AM	Mon, Aug 06, 2018	3615	----------	----------	16.913	----------	----------	JZ.. CONNECTION OK. JOINT # 180
185	LOT 01	ACCEPT	2:54 AM	Mon, Aug 06, 2018	3606	----------	----------	16.523	----------	----------	JZ.. CONNECTION OK. JOINT # 181
186	LOT 01	ACCEPT	2:56 AM	Mon, Aug 06, 2018	3647	----------	----------	15.998	----------	----------	JZ.. CONNECTION OK. JOINT # 182
187	LOT 01	ACCEPT	2:58 AM	Mon, Aug 06, 2018	3652	----------	----------	17.517	----------	----------	JZ.. CONNECTION OK. JOINT # 183
188	LOT 01	ACCEPT	3:00 AM	Mon, Aug 06, 2018	3552	----------	----------	16.581	----------	----------	JZ.. CONNECTION OK. JOINT # 184
189	LOT 01	ACCEPT	3:02 AM	Mon, Aug 06, 2018	3637	----------	----------	15.854	----------	----------	JZ.. CONNECTION OK. JOINT # 185
190	LOT 01	ACCEPT	3:04 AM	Mon, Aug 06, 2018	3597	----------	----------	17.104	----------	----------	JZ.. CONNECTION OK. JOINT # 186
191	LOT 01	ACCEPT	3:06 AM	Mon, Aug 06, 2018	3549	----------	----------	16.444	----------	----------	JZ.. CONNECTION OK. JOINT # 187
192	LOT 01	ACCEPT	3:08 AM	Mon, Aug 06, 2018	3676	----------	----------	17.274	----------	----------	JZ.. CONNECTION OK. JOINT # 188
193	LOT 01	ACCEPT	3:09 AM	Mon, Aug 06, 2018	3634	----------	----------	16.812	----------	----------	JZ.. CONNECTION OK. JOINT # 189
194	LOT 01	ACCEPT	3:11 AM	Mon, Aug 06, 2018	3624	----------	----------	15.802	----------	----------	JZ.. CONNECTION OK. JOINT # 190
195	LOT 01	ACCEPT	3:13 AM	Mon, Aug 06, 2018	3624	----------	----------	16.388	----------	----------	JC.. CONNECTION OK. JOINT # 191
196	LOT 01	ACCEPT	3:15 AM	Mon, Aug 06, 2018	3656	----------	----------	16.497	----------	----------	JC.. CONNECTION OK. JOINT # 192
197	LOT 01	ACCEPT	3:17 AM	Mon, Aug 06, 2018	3664	----------	----------	18.083	----------	----------	JC.. CONNECTION OK. JOINT # 193
198	LOT 01	ACCEPT	3:19 AM	Mon, Aug 06, 2018	3623	----------	----------	16.381	----------	----------	JC.. CONNECTION OK. JOINT # 194
199	LOT 01	ACCEPT	3:20 AM	Mon, Aug 06, 2018	3664	----------	----------	17.235	----------	----------	JC.. CONNECTION OK. JOINT # 195
200	LOT 01	ACCEPT	3:22 AM	Mon, Aug 06, 2018	3675	----------	----------	16.972	----------	----------	JC.. CONNECTION OK. JOINT # 196
201	LOT 01	ACCEPT	3:25 AM	Mon, Aug 06, 2018	3581	----------	----------	17.960	----------	----------	JC.. CONNECTION OK. JOINT # 197
202	LOT 01	ACCEPT	3:26 AM	Mon, Aug 06, 2018	3553	----------	----------	17.236	----------	----------	JC.. CONNECTION OK. JOINT # 198
203	LOT 01	ACCEPT	3:28 AM	Mon, Aug 06, 2018	4437	----------	----------	16.779	----------	----------	JC.. CONNECTION OK. BUMP TEST OK. JOINT # 199
204	LOT 01	ACCEPT	3:30 AM	Mon, Aug 06, 2018	3459	----------	----------	17.431	----------	----------	JC.. CONNECTION OK. JOINT # 200
205	LOT 01	ACCEPT	3:32 AM	Mon, Aug 06, 2018	3554	----------	----------	17.544	----------	----------	JC.. CONNECTION OK. JOINT # 201
206	LOT 01	ACCEPT	3:34 AM	Mon, Aug 06, 2018	3559	----------	----------	17.573	----------	----------	JC.. CONNECTION OK. JOINT # 202
207	LOT 01	ACCEPT	3:35 AM	Mon, Aug 06, 2018	3561	----------	----------	16.807	----------	----------	JC.. CONNECTION OK. JOINT # 203
208	LOT 01	ACCEPT	3:37 AM	Mon, Aug 06, 2018	3594	----------	----------	16.674	----------	----------	JC.. CONNECTION OK. JOINT # 204
209	LOT 01	ACCEPT	3:38 AM	Mon, Aug 06, 2018	3647	----------	----------	15.921	----------	----------	JC.. CONNECTION OK. JOINT # 205
210	LOT 01	ACCEPT	3:40 AM	Mon, Aug 06, 2018	3529	----------	----------	16.260	----------	----------	JC.. CONNECTION OK. JOINT # 206
211	LOT 01	ACCEPT	3:42 AM	Mon, Aug 06, 2018	3624	----------	----------	16.232	----------	----------	JC.. CONNECTION OK. JOINT # 207
212	LOT 01	ACCEPT	3:43 AM	Mon, Aug 06, 2018	3684	----------	----------	18.136	----------	----------	JC.. CONNECTION OK. JOINT # 208
213	LOT 01	ACCEPT	3:45 AM	Mon, Aug 06, 2018	3614	----------	----------	16.493	----------	----------	JC.. CONNECTION OK. JOINT # 209
214	LOT 01	ACCEPT	3:47 AM	Mon, Aug 06, 2018	4895	----------	----------	16.773	----------	----------	JC.. CONNECTION OK. JOINT # 210
215	LOT 01	ACCEPT	3:48 AM	Mon, Aug 06, 2018	3708	----------	----------	16.090	----------	----------	JC.. CONNECTION OK. JOINT # 211
216	LOT 01	ACCEPT	3:50 AM	Mon, Aug 06, 2018	3420	----------	----------	17.613	----------	----------	JC.. CONNECTION OK. JOINT # 212
217	LOT 01	ACCEPT	3:52 AM	Mon, Aug 06, 2018	3736	----------	----------	16.860	----------	----------	JC.. CONNECTION OK. JOINT # 213
218	LOT 01	ACCEPT	3:54 AM	Mon, Aug 06, 2018	3681	----------	----------	17.393	----------	----------	JC.. CONNECTION OK. JOINT # 214
219	LOT 01	ACCEPT	3:56 AM	Mon, Aug 06, 2018	3723	----------	----------	17.205	----------	----------	JC.. CONNECTION OK. JOINT # 215
220	LOT 01	ACCEPT	3:57 AM	Mon, Aug 06, 2018	3520	----------	----------	17.418	----------	----------	JC.. CONNECTION OK. JOINT # 216
221	LOT 01	ACCEPT	3:59 AM	Mon, Aug 06, 2018	3573	----------	----------	16.770	----------	----------	JC.. CONNECTION OK. JOINT # 217
222	LOT 01	ACCEPT	4:01 AM	Mon, Aug 06, 2018	3842	----------	----------	17.509	----------	----------	JC.. CONNECTION OK. JOINT # 218
223	LOT 01	ACCEPT	4:02 AM	Mon, Aug 06, 2018	3623	----------	----------	18.219	----------	----------	JC.. CONNECTION OK. JOINT # 219
224	LOT 01	ACCEPT	4:04 AM	Mon, Aug 06, 2018	3698	----------	----------	17.970	----------	----------	JC.. CONNECTION OK. JOINT # 220
225	LOT 01	ACCEPT	4:05 AM	Mon, Aug 06, 2018	3587	----------	----------	16.515	----------	----------	JC.. CONNECTION OK. JOINT # 221

JOINT TABLE

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

Number Of Joints: 266

File ID	Lot Name	Joint Status	Joint Time	Joint Date	Peak Torque	Shoulder Torque	Delta Torque	Total Turns	Shoulder Turns	Delta Turns	Joint Comments
226	LOT 01	ACCEPT	4:07 AM	Mon, Aug 06, 2018	3458	----------	----------	17.723	----------	----------	JC.. CONNECTION OK. JOINT # 222
227	LOT 01	ACCEPT	4:08 AM	Mon, Aug 06, 2018	3625	----------	----------	16.647	----------	----------	JC.. CONNECTION OK. JOINT # 223
228	LOT 01	ACCEPT	4:10 AM	Mon, Aug 06, 2018	3686	----------	----------	17.581	----------	----------	JC.. CONNECTION OK. JOINT # 224
229	LOT 01	ACCEPT	4:12 AM	Mon, Aug 06, 2018	3620	----------	----------	17.049	----------	----------	JC.. CONNECTION OK. JOINT # 225
230	LOT 01	ACCEPT	4:13 AM	Mon, Aug 06, 2018	3664	----------	----------	17.358	----------	----------	JC.. CONNECTION OK. JOINT # 226
231	LOT 01	ACCEPT	4:15 AM	Mon, Aug 06, 2018	3712	----------	----------	18.158	----------	----------	JC.. CONNECTION OK. JOINT # 227
232	LOT 01	ACCEPT	4:17 AM	Mon, Aug 06, 2018	3576	----------	----------	16.583	----------	----------	JC.. CONNECTION OK. JOINT # 228
233	LOT 01	ACCEPT	4:18 AM	Mon, Aug 06, 2018	3520	----------	----------	16.552	----------	----------	JC.. CONNECTION OK. JOINT # 229
234	LOT 01	ACCEPT	4:20 AM	Mon, Aug 06, 2018	3619	----------	----------	17.557	----------	----------	JC.. CONNECTION OK. JOINT # 230
235	LOT 01	ACCEPT	4:21 AM	Mon, Aug 06, 2018	3637	----------	----------	15.945	----------	----------	JC.. CONNECTION OK. JOINT # 231
236	LOT 01	ACCEPT	4:23 AM	Mon, Aug 06, 2018	3585	----------	----------	17.524	----------	----------	JC.. CONNECTION OK. JOINT # 232
237	LOT 01	ACCEPT	4:26 AM	Mon, Aug 06, 2018	3530	----------	----------	16.431	----------	----------	JC.. CONNECTION OK. JOINT # 233
238	LOT 01	ACCEPT	4:28 AM	Mon, Aug 06, 2018	3615	----------	----------	18.242	----------	----------	JC.. CONNECTION OK. JOINT # 234
239	LOT 01	ACCEPT	4:32 AM	Mon, Aug 06, 2018	3608	----------	----------	17.253	----------	----------	JC.. CONNECTION OK. JOINT # 235
240	LOT 01	ACCEPT	4:33 AM	Mon, Aug 06, 2018	3584	----------	----------	16.522	----------	----------	JC.. CONNECTION OK. JOINT # 236
241	LOT 01	ACCEPT	4:35 AM	Mon, Aug 06, 2018	3530	----------	----------	16.586	----------	----------	JC.. CONNECTION OK. JOINT # 237
242	LOT 01	ACCEPT	4:37 AM	Mon, Aug 06, 2018	3497	----------	----------	17.772	----------	----------	JC.. CONNECTION OK. JOINT # 238
243	LOT 01	ACCEPT	4:38 AM	Mon, Aug 06, 2018	3345	----------	----------	17.690	----------	----------	JC.. CONNECTION OK. JOINT # 239
244	LOT 01	ACCEPT	4:40 AM	Mon, Aug 06, 2018	3521	----------	----------	17.120	----------	----------	JC.. CONNECTION OK. JOINT # 240
245	LOT 01	ACCEPT	4:42 AM	Mon, Aug 06, 2018	3416	----------	----------	17.746	----------	----------	JC.. CONNECTION OK. JOINT # 241
246	LOT 01	ACCEPT	4:43 AM	Mon, Aug 06, 2018	3564	----------	----------	16.901	----------	----------	JC.. CONNECTION OK. JOINT # 242
247	LOT 01	ACCEPT	4:45 AM	Mon, Aug 06, 2018	3622	----------	----------	17.526	----------	----------	JC.. CONNECTION OK. JOINT # 243
248	LOT 01	ACCEPT	4:47 AM	Mon, Aug 06, 2018	3625	----------	----------	18.420	----------	----------	JC.. CONNECTION OK. JOINT # 244
249	LOT 01	ACCEPT	4:49 AM	Mon, Aug 06, 2018	3491	----------	----------	16.753	----------	----------	JC.. CONNECTION OK. JOINT # 245
250	LOT 01	ACCEPT	4:51 AM	Mon, Aug 06, 2018	3592	----------	----------	18.409	----------	----------	JC.. CONNECTION OK. JOINT # 246
251	LOT 01	ACCEPT	4:52 AM	Mon, Aug 06, 2018	3708	----------	----------	17.402	----------	----------	JC.. CONNECTION OK. JOINT # 247
252	LOT 01	ACCEPT	4:54 AM	Mon, Aug 06, 2018	3646	----------	----------	17.463	----------	----------	JC.. CONNECTION OK. JOINT # 248
253	LOT 01	ACCEPT	4:55 AM	Mon, Aug 06, 2018	3647	----------	----------	17.739	----------	----------	JC.. CONNECTION OK. JOINT # 249
254	LOT 01	ACCEPT	4:57 AM	Mon, Aug 06, 2018	3543	----------	----------	17.755	----------	----------	JC.. CONNECTION OK. JOINT # 250
255	LOT 01	ACCEPT	4:58 AM	Mon, Aug 06, 2018	3352	----------	----------	16.585	----------	----------	JC.. CONNECTION OK. JOINT # 251
256	LOT 01	ACCEPT	5:00 AM	Mon, Aug 06, 2018	3688	----------	----------	16.303	----------	----------	JC.. CONNECTION OK. JOINT # 252
257	LOT 01	ACCEPT	5:04 AM	Mon, Aug 06, 2018	3623	----------	----------	16.086	----------	----------	JC.. CONNECTION OK. JOINT # 253
258	LOT 01	ACCEPT	5:06 AM	Mon, Aug 06, 2018	3600	----------	----------	18.094	----------	----------	JC.. CONNECTION OK. JOINT # 254
259	LOT 01	ACCEPT	5:08 AM	Mon, Aug 06, 2018	3457	----------	----------	16.577	----------	----------	JC.. CONNECTION OK. JOINT # 255
260	LOT 01	ACCEPT	5:10 AM	Mon, Aug 06, 2018	3858	----------	----------	18.099	----------	----------	JC.. CONNECTION OK. JOINT # 256
261	LOT 01	ACCEPT	5:11 AM	Mon, Aug 06, 2018	3486	----------	----------	18.229	----------	----------	JC.. CONNECTION OK. JOINT # 257
262	LOT 01	ACCEPT	5:14 AM	Mon, Aug 06, 2018	3558	----------	----------	18.526	----------	----------	JC.. CONNECTION OK. JOINT # 258
263	LOT 01	SPECIAL	2:59 PM	Mon, Aug 06, 2018	3574	----------	----------	12.743	----------	----------	JC.. CONNECTION OK. PUP JOINT
264	LOT 01	ACCEPT	3:04 PM	Mon, Aug 06, 2018	3523	----------	----------	19.354	----------	----------	JC.. CONNECTION OK. JOINT # 259
265	LOT 01	SPECIAL	3:08 PM	Mon, Aug 06, 2018	3611	----------	----------	14.972	----------	----------	JC.. CONNECTION OK. PUP JOINT
266	LOT 01	ACCEPT	3:12 PM	Mon, Aug 06, 2018	3643	----------	----------	18.396	----------	----------	JC.. CONNECTION OK. JOINT # 260

SYSTEM SETUP

LOT 01

COMPANY INFORMATION

Company Name:	WSP USA INC	Lease Name:	NAVAHO WDW
Company Rep.:	MR. KEVIN	Contractor/Rig NO.:	PATRIOT 4
Well Number:	4	Inspector:	
ETM Job Number:	109925	Cam Tech 1:	JOSE ZUNIGA
Location:	ARTESIA, NM	Cam Tech 2:	JOEY CASAS

PIPE INFORMATION

Pipe Size:	7	Maximum Torque:	4590
Pipe Weight:	26.00#	Optimum Torque:	3670
Pipe Grade:	J55	Minimum Torque:	2750
Pipe Manufacturer:		Maximum Shoulder Torque:	3670
Pin Coating:		Minimum Shoulder Torque:	0
Coupling Coating:		High Gear RPM:	0
Pipe Connection:	LTC (8rd)	Low Gear RPM:	0
Thread Compound:	BESTOLIFE 2000	Hold Time:	0
		Delta Torque:	0

DATA ACQUISITION SYSTEM INFORMATION

Load Cell Rating:	10000	Safety Dump Torque:	3670
Load Cell ID:	003990823	Shoulder Detect Slope:	18
Shunt Callibration:	8658	Maximum Turns:	2147483583
Tong Arm Length:	39.000	ICS Ramp Rate:	110
Tong ID:	F-652	Gear Change Torque:	0
Bottom Counts/Turn:	0		
Top Counts/Turn:	1000		
Alt. Sensor ID:			

Encoder:	◉	Safety Dump:	◉
Proximity:	○	Delta Turns:	○
ICS:	○	Shoulder Detect:	○
Dump Valve:	◉	Shoulder Box:	○
Alternate Torque Sensor:	○	High Shoulder Dump:	○
		ICS Backout:	○
		ICS/Dump Gear Change:	○
		ICS Reverse Encoder Direction:	○
		Position Makeup:	○

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SYSTEM SETUP

LOT 02

COMPANY INFORMATION

Company Name:	WSP USA INC	Lease Name:	NAVAHO WDW
Company Rep.:	MR. KEVIN	Contractor/Rig NO.:	PATRIOT 4
Well Number:	4	Inspector:	
ETM Job Number:	109925	Cam Tech 1:	JOSE ZUNIGA
Location:	ARTESIA, NM	Cam Tech 2:	JOEY CASAS

PIPE INFORMATION

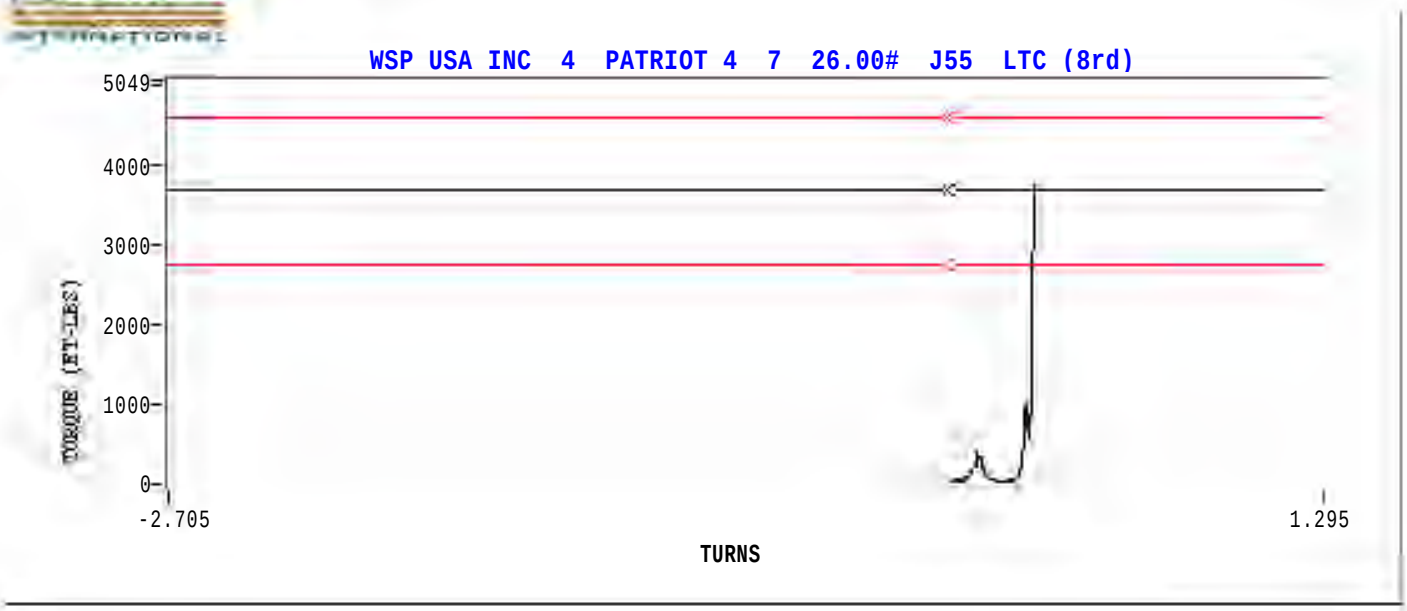
Pipe Size:	7	Maximum Torque:	4590
Pipe Weight:	26.00#	Optimum Torque:	1600
Pipe Grade:	J55	Minimum Torque:	1000
Pipe Manufacturer:		Maximum Shoulder Torque:	1600
Pin Coating:		Minimum Shoulder Torque:	0
Coupling Coating:		High Gear RPM:	0
Pipe Connection:	LTC (8rd)	Low Gear RPM:	0
Thread Compound:	BESTOLIFE 2000	Hold Time:	0
		Delta Torque:	0

DATA ACQUISITION SYSTEM INFORMATION

Load Cell Rating:	10000	Safety Dump Torque:	1600
Load Cell ID:	003990823	Shoulder Detect Slope:	18
Shunt Callibration:	8658	Maximum Turns:	2147483583
Tong Arm Length:	39.000	ICS Ramp Rate:	110
Tong ID:	F-652	Gear Change Torque:	0
Bottom Counts/Turn:	0		
Top Counts/Turn:	1000		
Alt. Sensor ID:			

Encoder:	◉	Safety Dump:	◉
Proximity:	○	Delta Turns:	○
ICS:	○	Shoulder Detect:	○
Dump Valve:	◉	Shoulder Box:	○
Alternate Torque Sensor:	○	High Shoulder Dump:	○
		ICS Backout:	○
		ICS/Dump Gear Change:	○
		ICS Reverse Encoder Direction:	○
		Position Makeup:	○

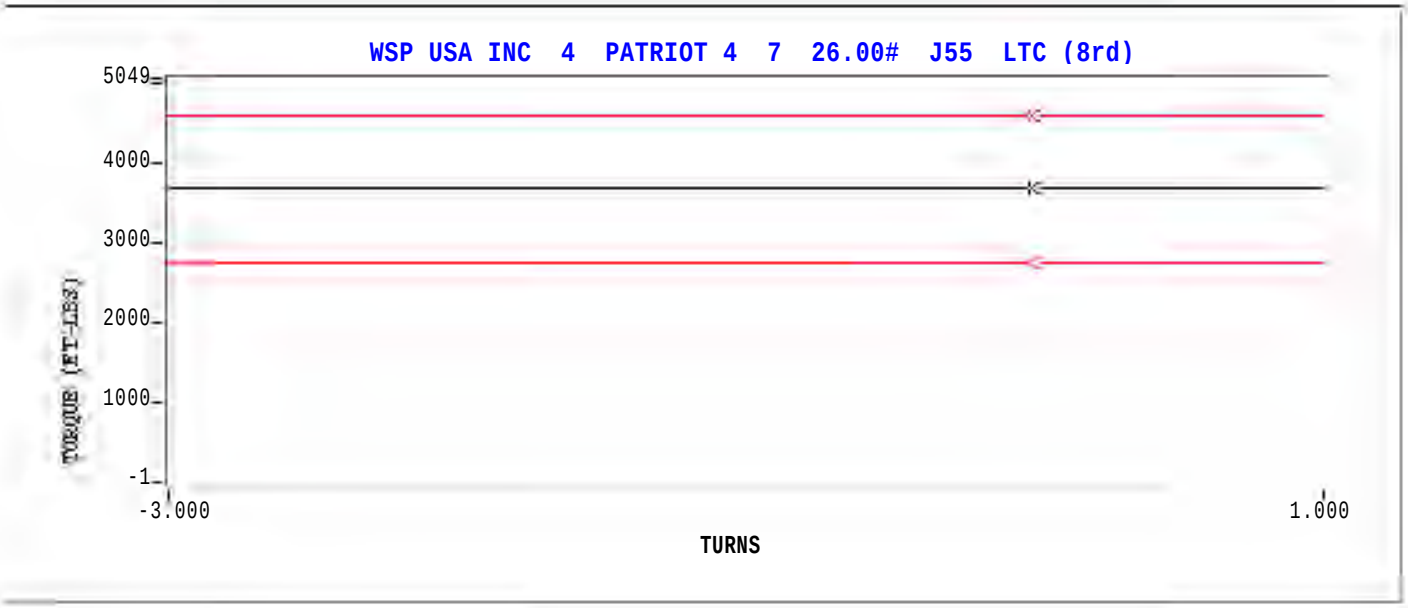
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TIME OF MAKE UP :	3:56 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3739 FT-LBS	MAXIMUM TURNS :	0.295 TURNS

FILE NUMBER : ----------->> **1** JOINT STATUS : SPECIAL

JC.. DEAD STICK DUMP TEST

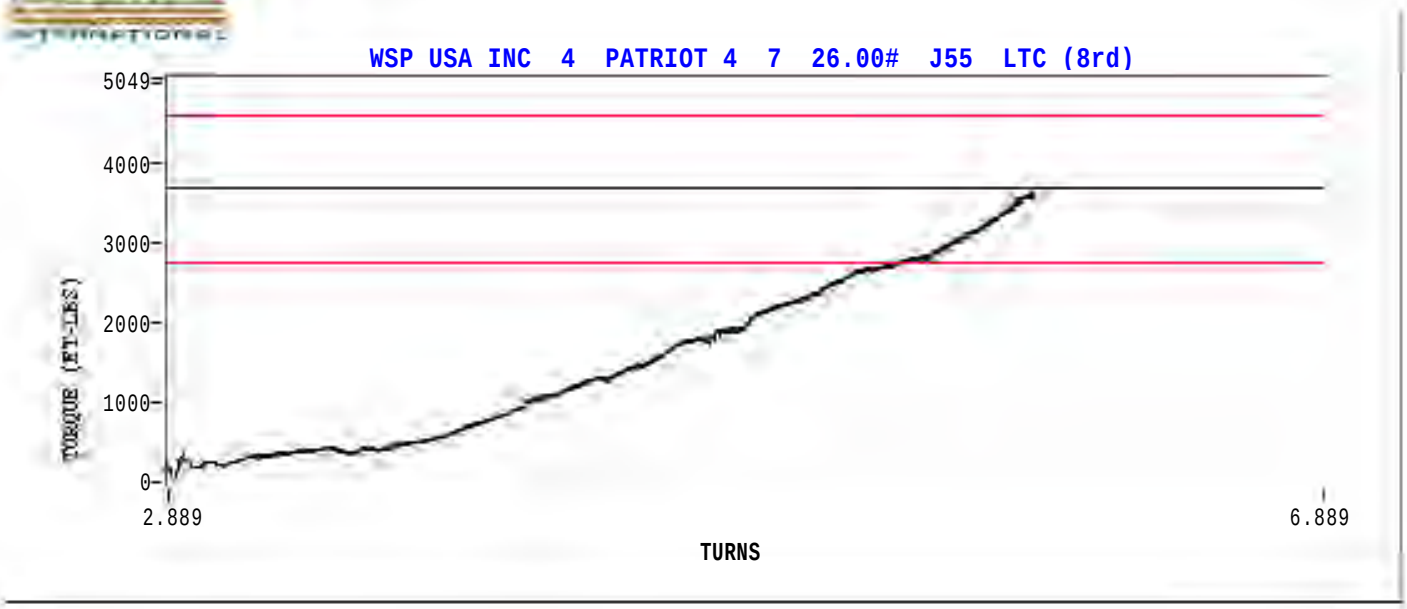


TIME OF MAKE UP :	4:00 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	27 FT-LBS	MAXIMUM TURNS :	0.000 TURNS

FILE NUMBER : ----------->> **2** JOINT STATUS : SPECIAL

JC.. DUMMY GRAPH. NO SHOE. TAIL PIPE LOWERED INTO HOLE.

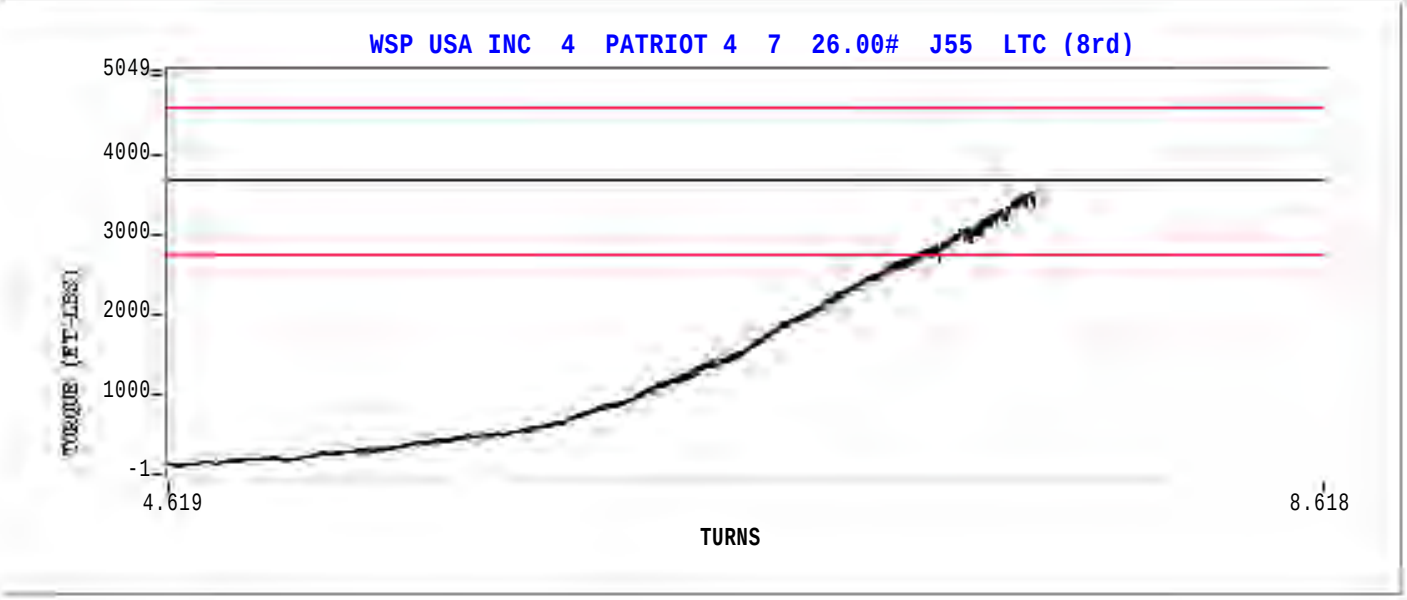
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TIME OF MAKE UP :	4:04 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3640 FT-LBS	MAXIMUM TURNS :	5.889 TURNS

FILE NUMBER : ----------->> **3** JOINT STATUS : SPECIAL

JC.. 7 TO 4-1/2 CROSSOVER PIPE MADE UP TO TAIL PIPE.

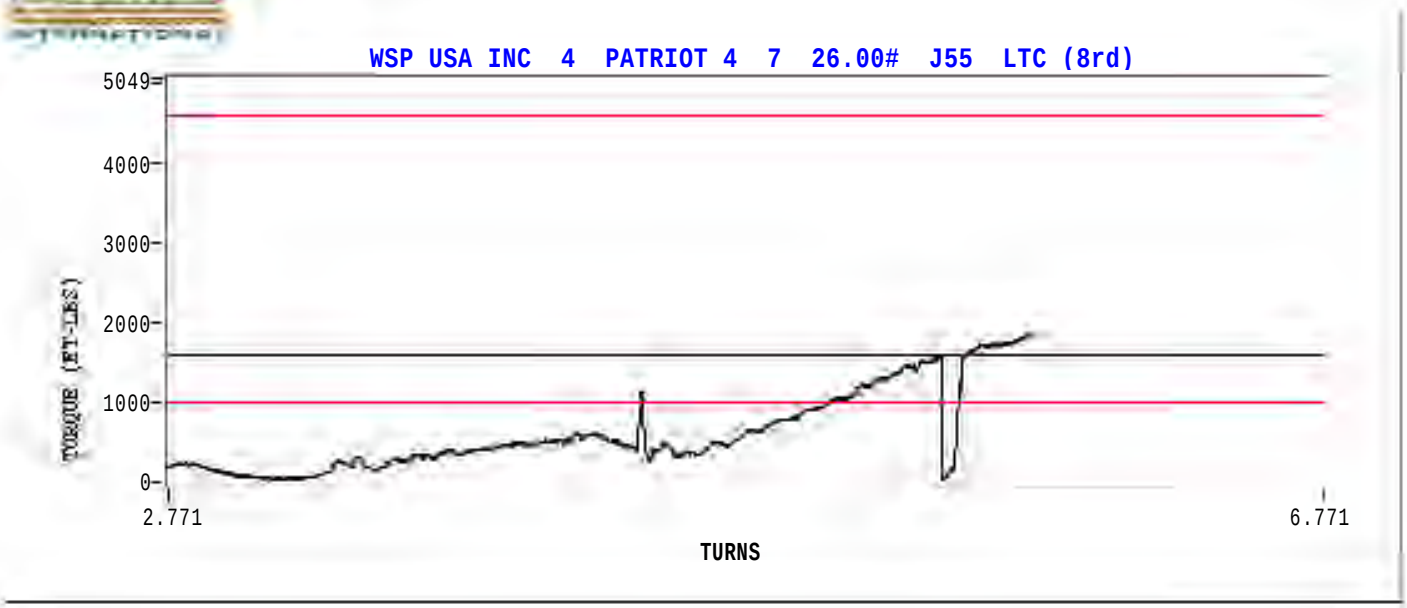


TIME OF MAKE UP :	4:18 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3528 FT-LBS	MAXIMUM TURNS :	7.619 TURNS

FILE NUMBER : ----------->> **4** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 1 MADE UP TO 4-1/2 TO 7 CROSSOVER

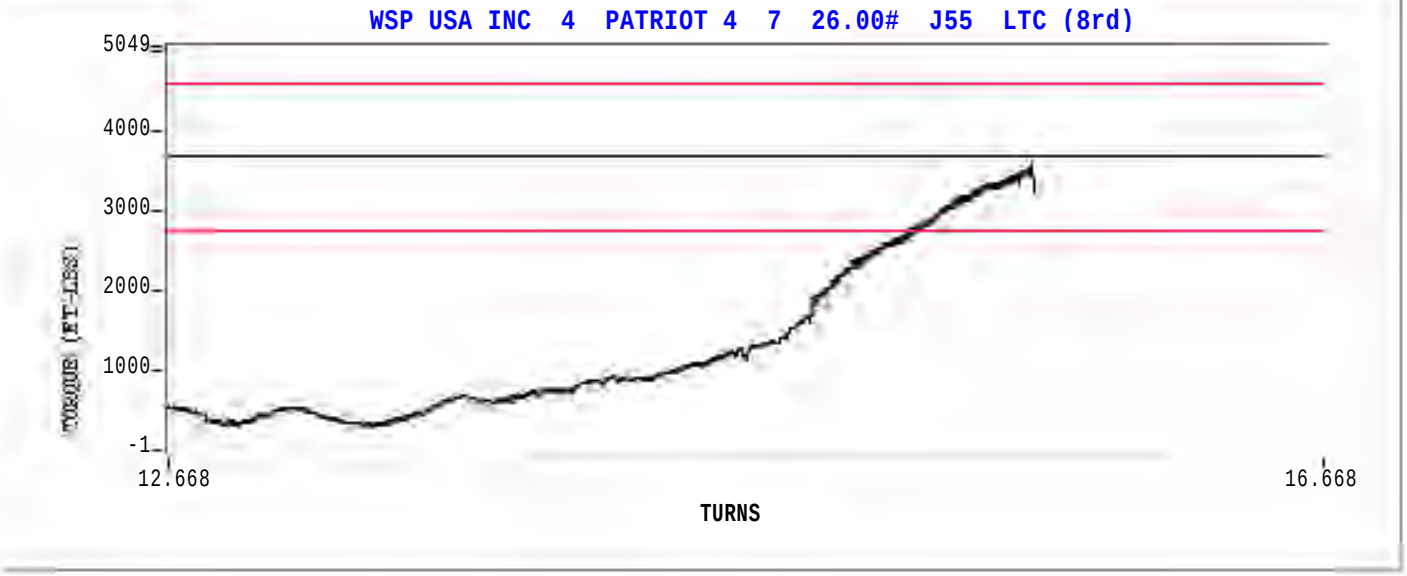
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TIME OF MAKE UP :	4:46 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	1874 FT-LBS	MAXIMUM TURNS :	5.771 TURNS

FILE NUMBER : ----------->> **5** JOINT STATUS : SPECIAL

JC.. 4-1/2 PIPE BETWEEN TAIL PIPE AND JOINT # 1. CONNECTION OK BY MANAGER

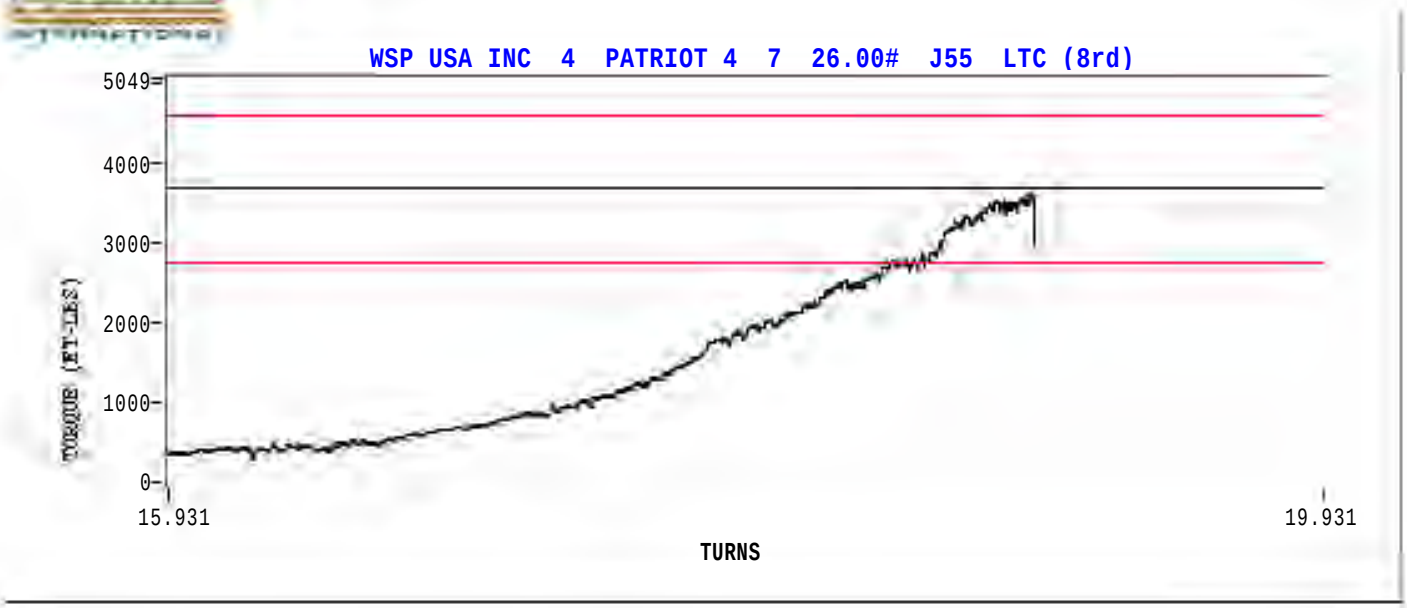


TIME OF MAKE UP :	4:55 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3603 FT-LBS	MAXIMUM TURNS :	15.668 TURNS

FILE NUMBER : ----------->> **6** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 2

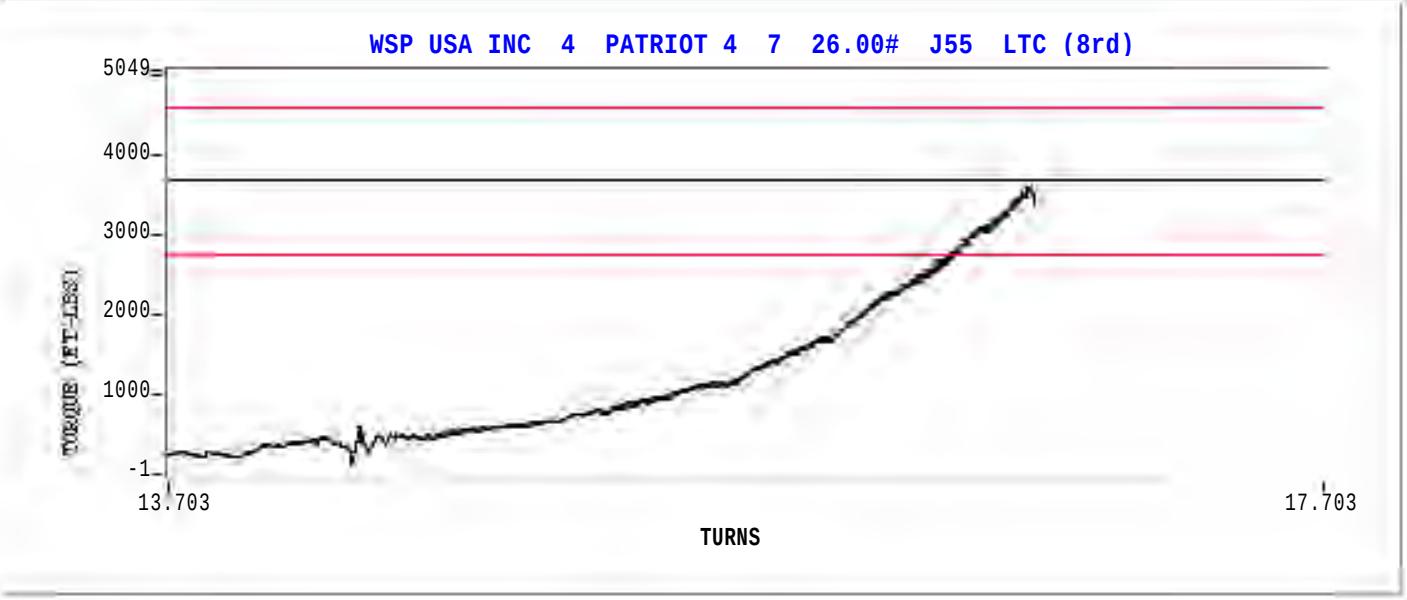
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TIME OF MAKE UP :	7:52 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3624 FT-LBS	MAXIMUM TURNS :	18.931 TURNS

FILE NUMBER : ----------->> **7** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 3

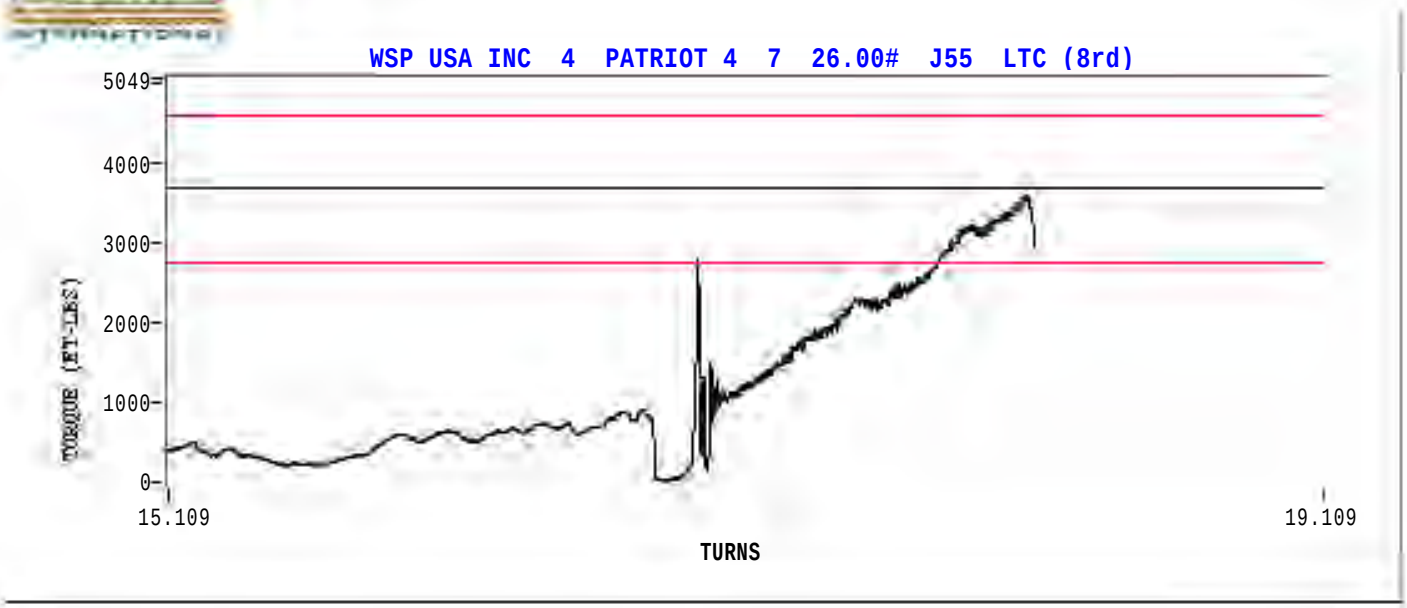


TIME OF MAKE UP :	7:56 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3624 FT-LBS	MAXIMUM TURNS :	16.703 TURNS

FILE NUMBER : ----------->> **8** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 4

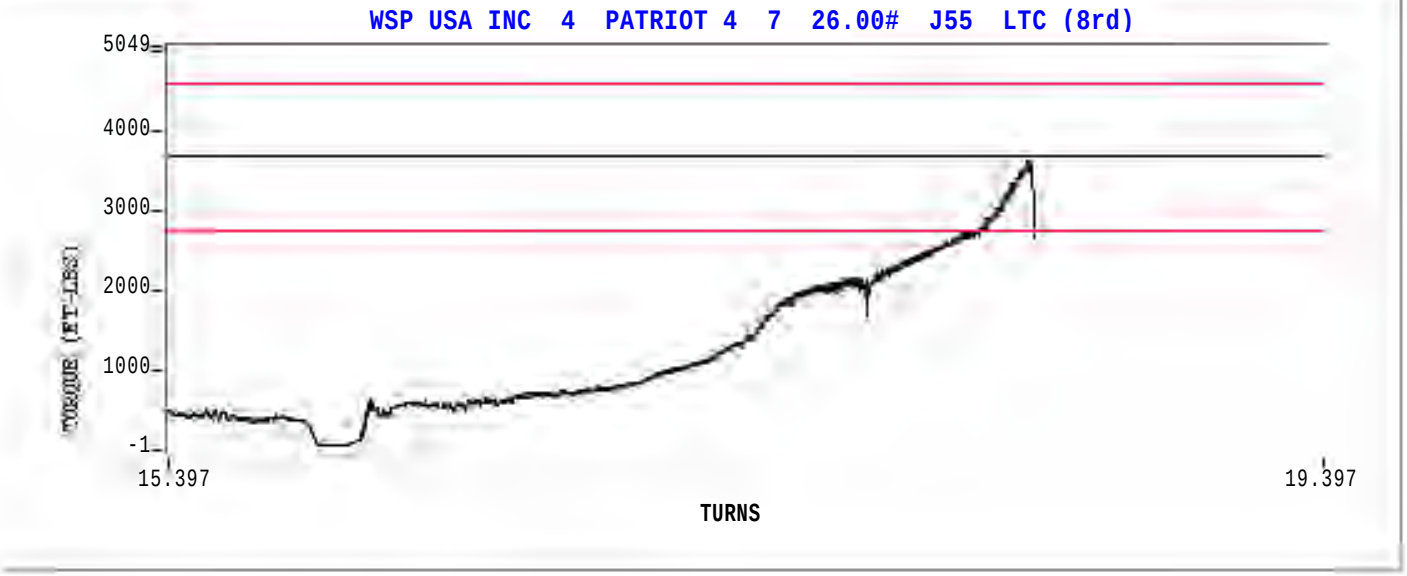
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TIME OF MAKE UP :	7:59 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3592 FT-LBS	MAXIMUM TURNS :	18.109 TURNS

FILE NUMBER : ----------->> **9** JOINT STATUS : ACCEPT

JC.. TORQUE SPIKE. CONNECTION OK. JOINT # 5

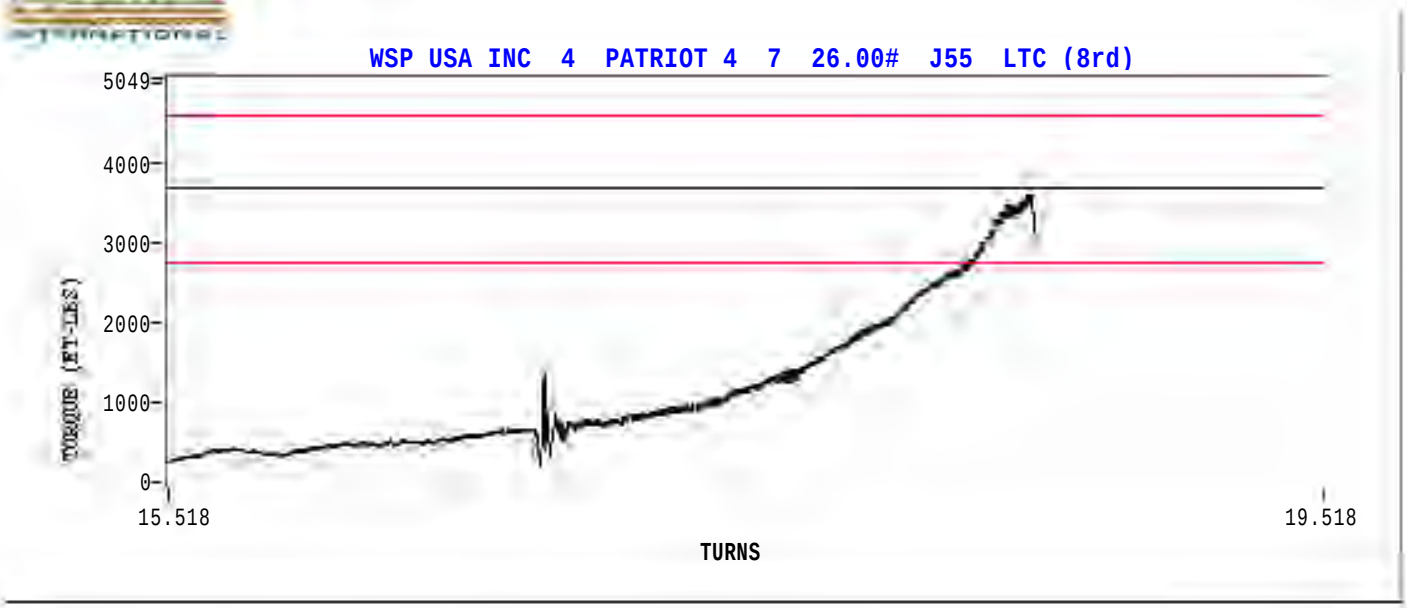


TIME OF MAKE UP :	8:02 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3629 FT-LBS	MAXIMUM TURNS :	18.397 TURNS

FILE NUMBER : ----------->> **10** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 6

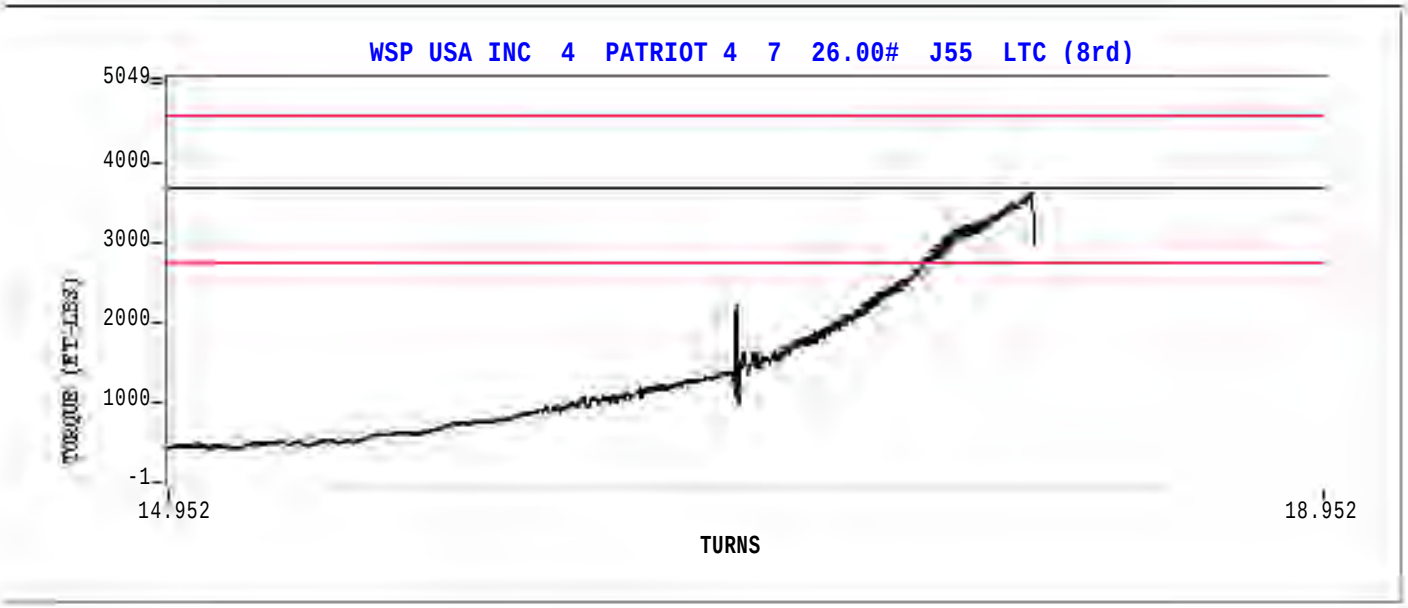
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TIME OF MAKE UP :	8:05 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3596 FT-LBS	MAXIMUM TURNS :	18.518 TURNS

FILE NUMBER : ----------->> **11** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 7

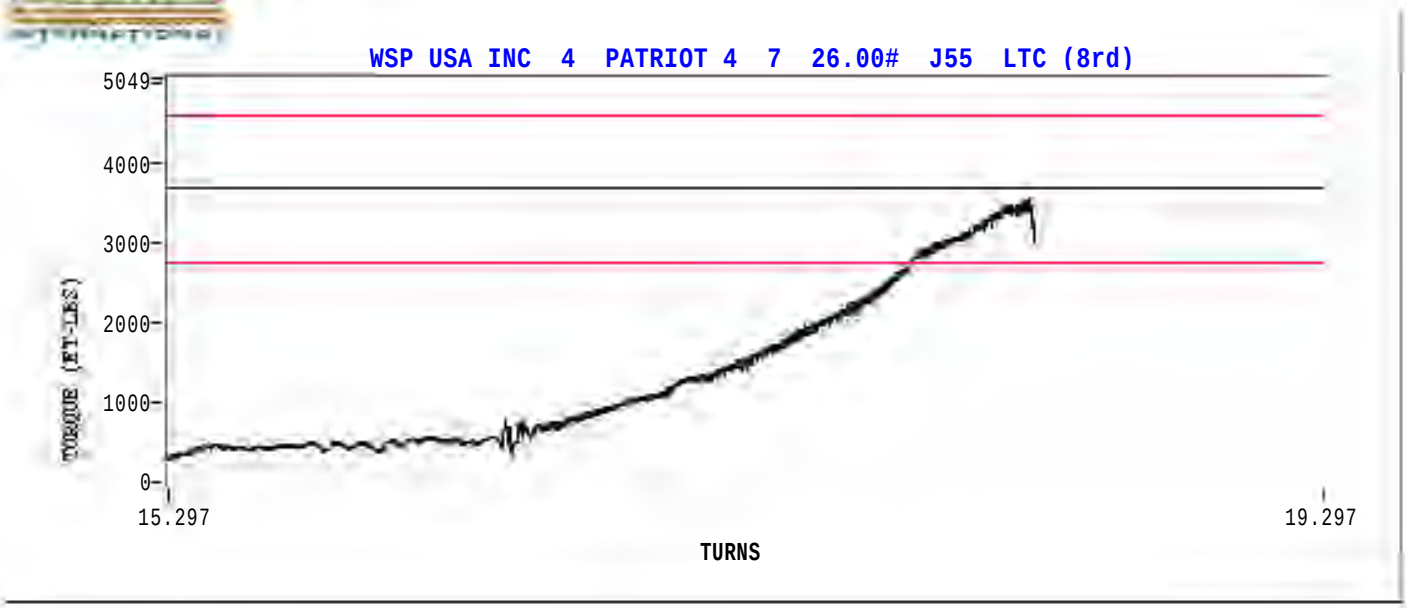


TIME OF MAKE UP :	8:08 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3620 FT-LBS	MAXIMUM TURNS :	17.952 TURNS

FILE NUMBER : ----------->> **12** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 8

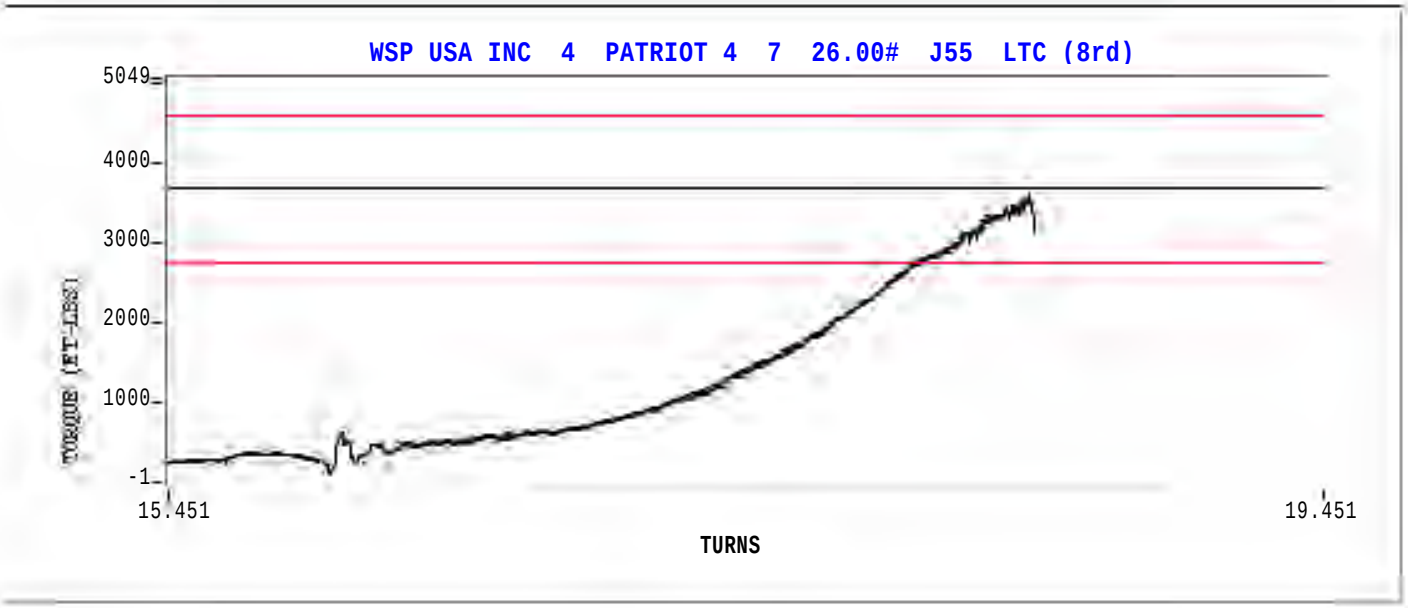
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TIME OF MAKE UP :	8:11 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3545 FT-LBS	MAXIMUM TURNS :	18.297 TURNS

FILE NUMBER : ----------->> **13** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 9

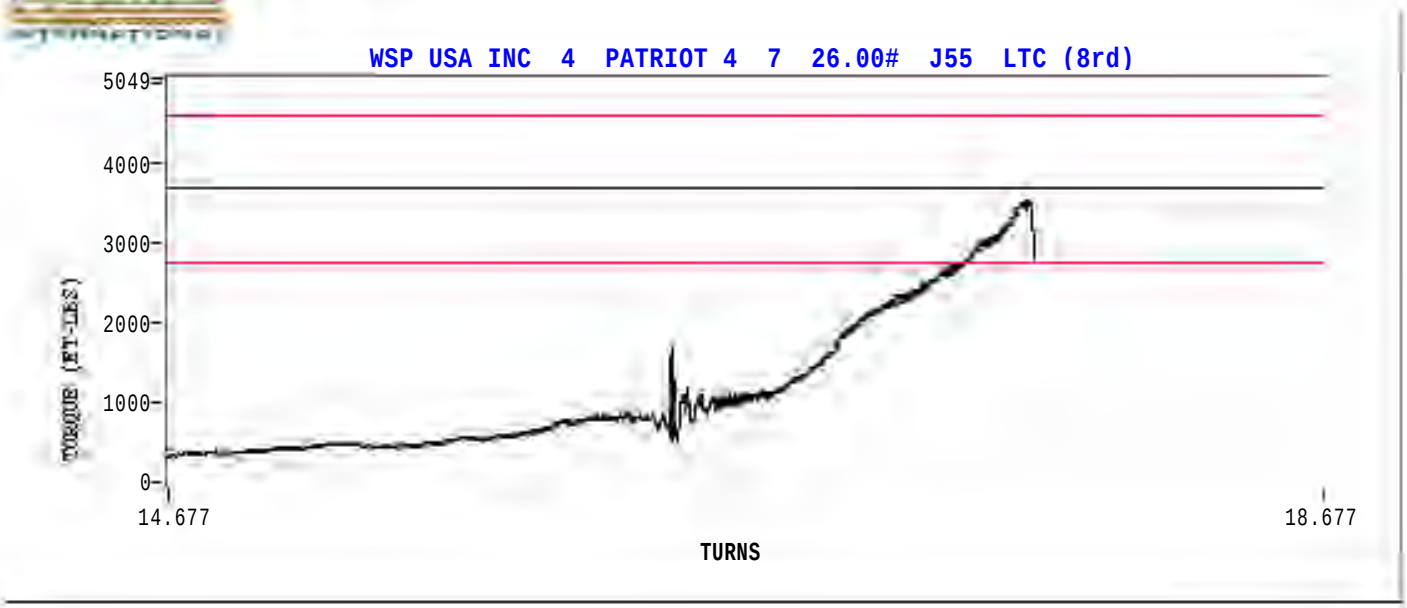


TIME OF MAKE UP :	8:14 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3631 FT-LBS	MAXIMUM TURNS :	18.451 TURNS

FILE NUMBER : ----------->> **14** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 10

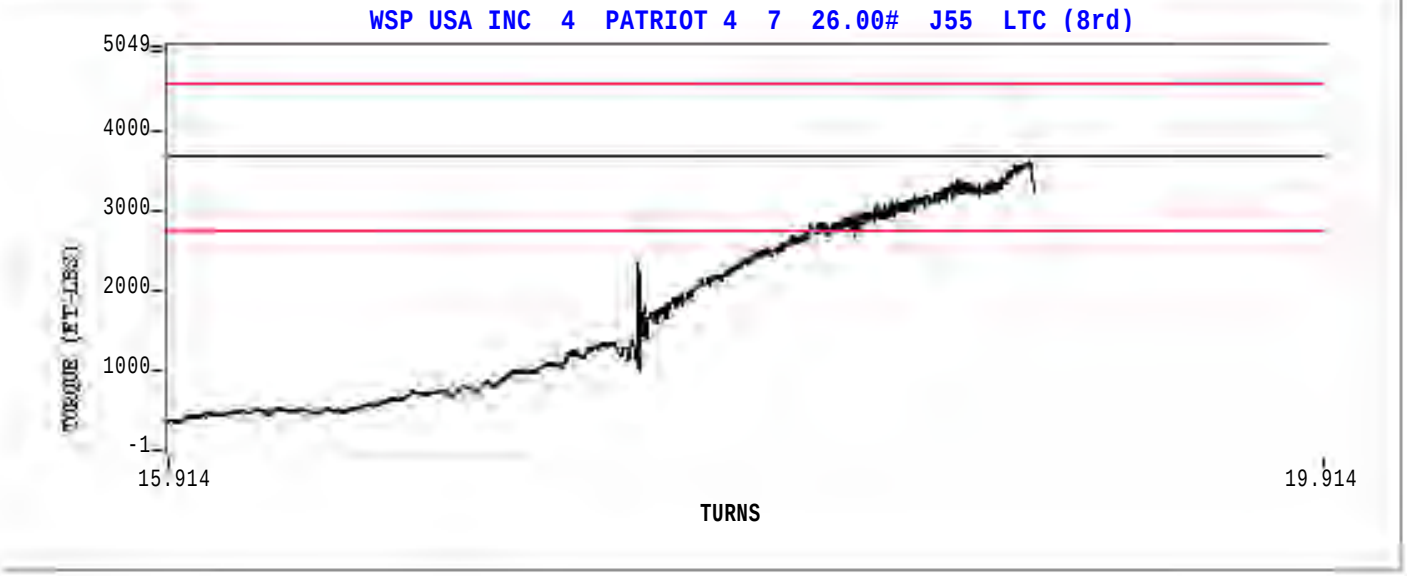
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TIME OF MAKE UP :	8:17 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3537 FT-LBS	MAXIMUM TURNS :	17.677 TURNS

FILE NUMBER : ----------->> **15** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 11

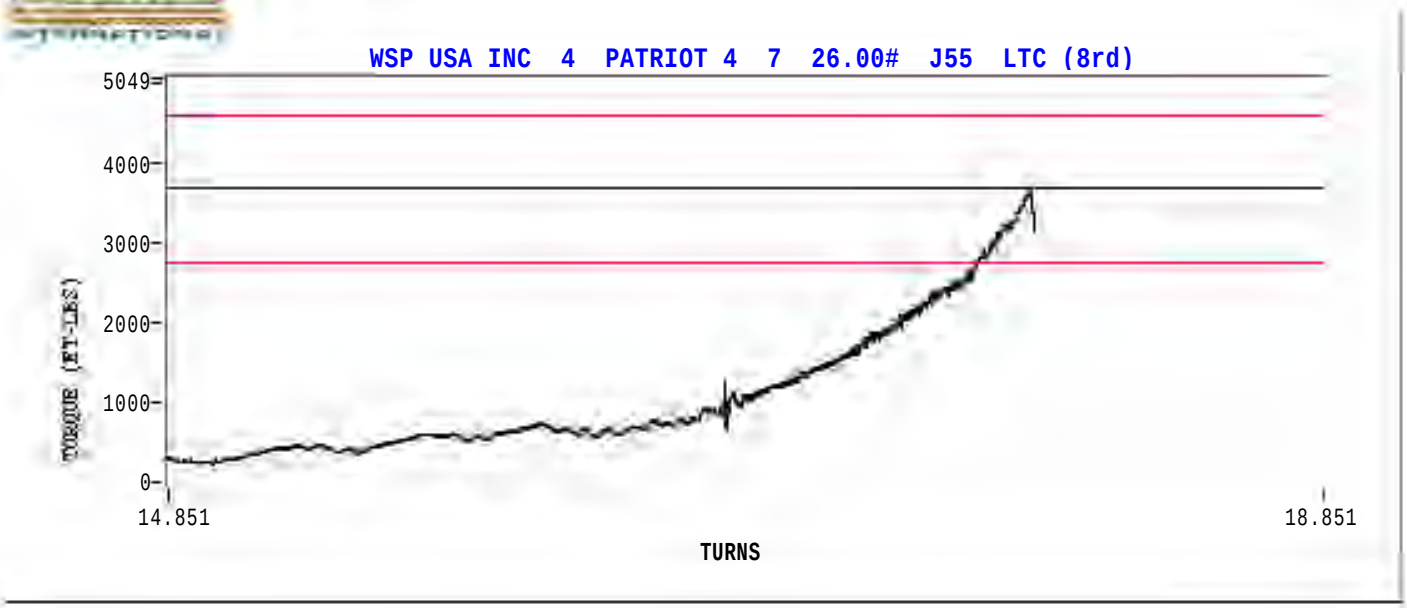


TIME OF MAKE UP :	8:20 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3627 FT-LBS	MAXIMUM TURNS :	18.914 TURNS

FILE NUMBER : ----------->> **16** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 12

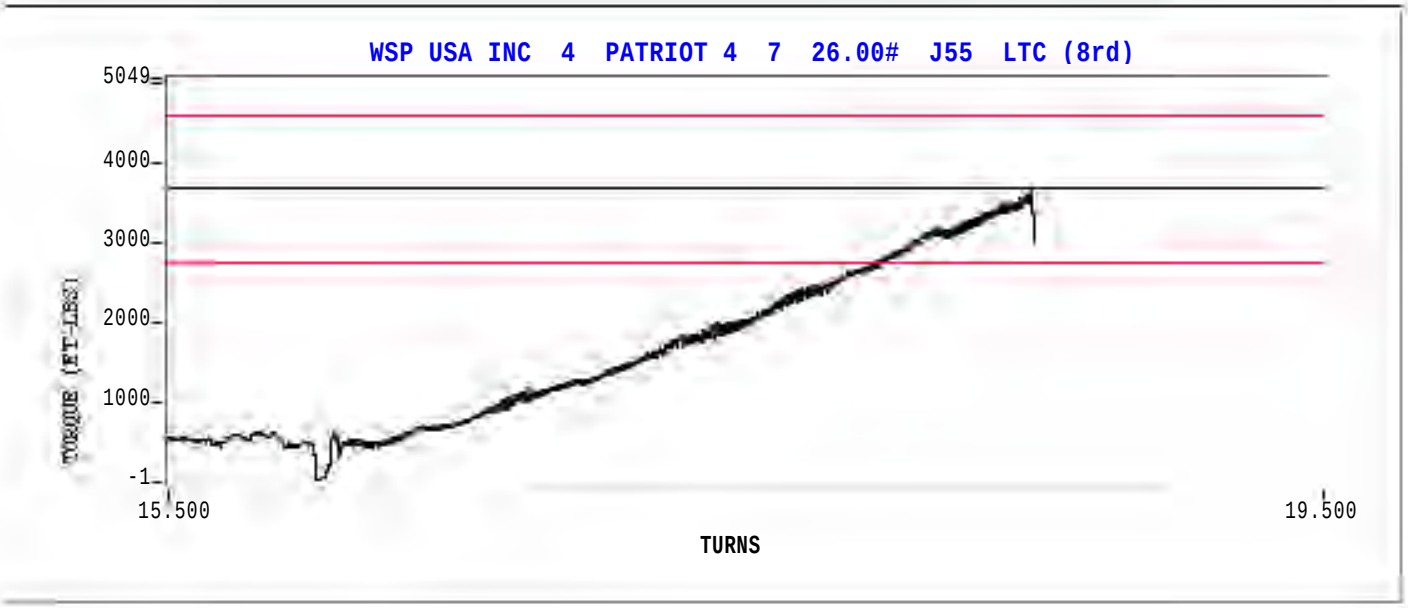
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TIME OF MAKE UP :	8:23 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3656 FT-LBS	MAXIMUM TURNS :	17.851 TURNS

FILE NUMBER : ----------->> **17** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 13

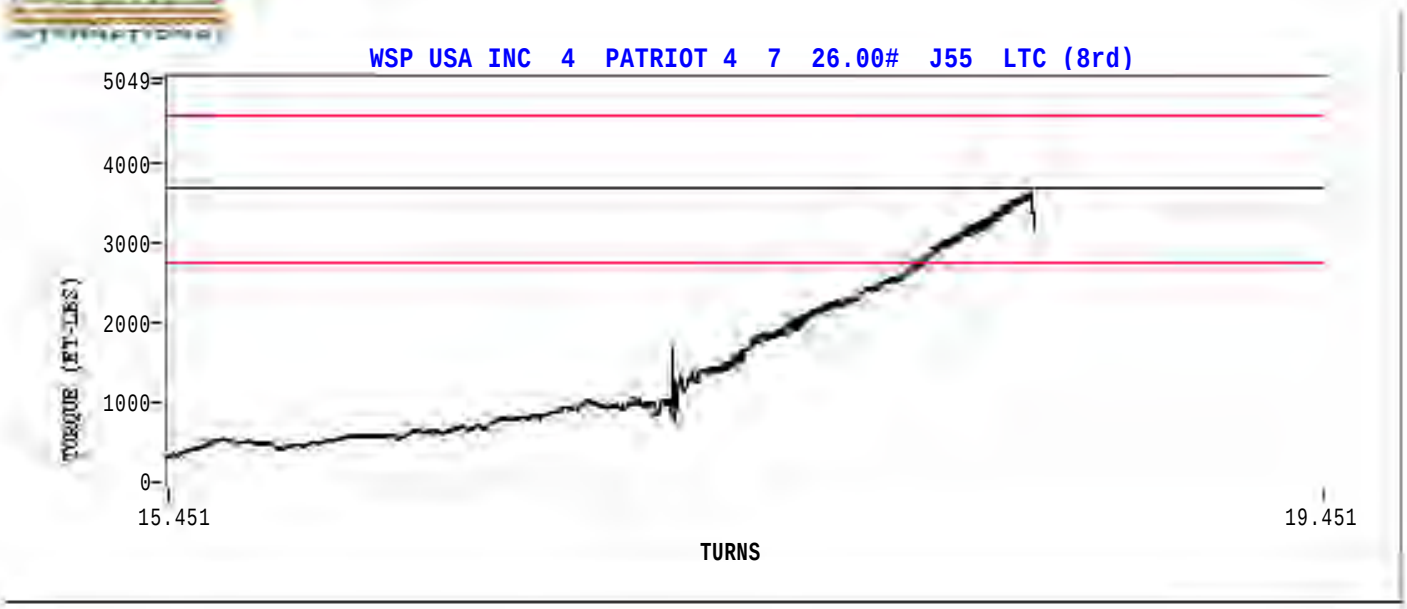


TIME OF MAKE UP :	8:26 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3649 FT-LBS	MAXIMUM TURNS :	18.500 TURNS

FILE NUMBER : ----------->> **18** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 14

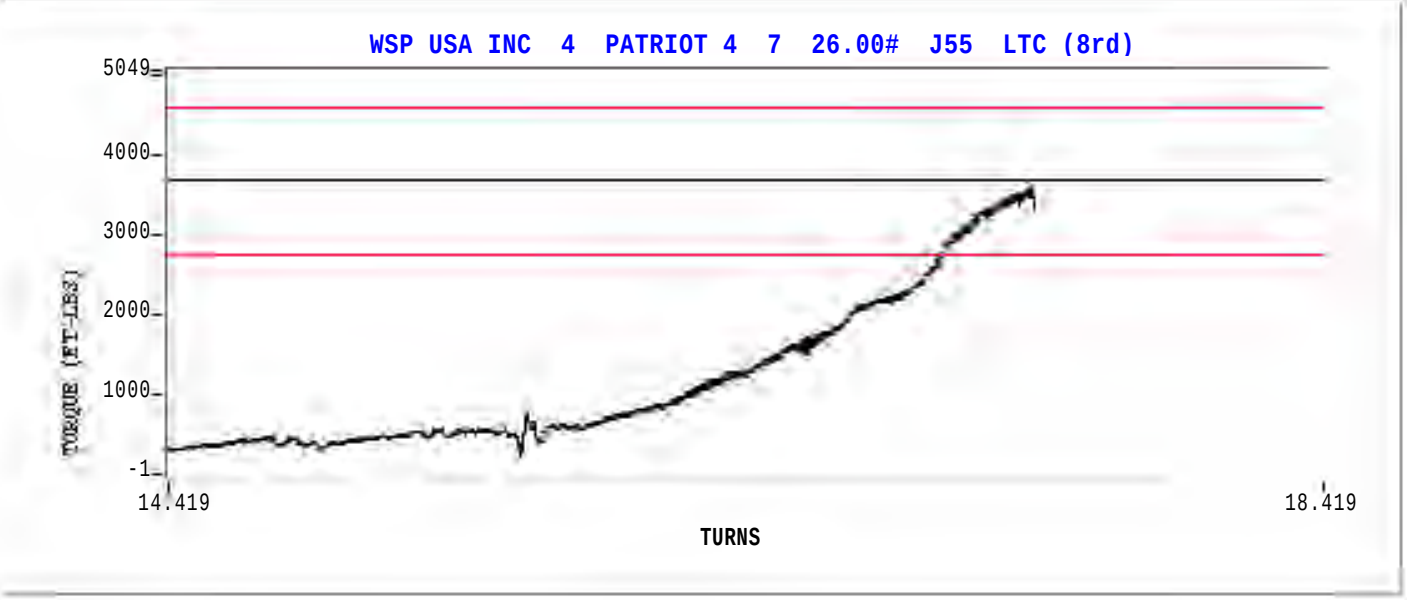
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TIME OF MAKE UP :	8:29 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3654 FT-LBS	MAXIMUM TURNS :	18.451 TURNS

FILE NUMBER : ----------->> **19** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 15

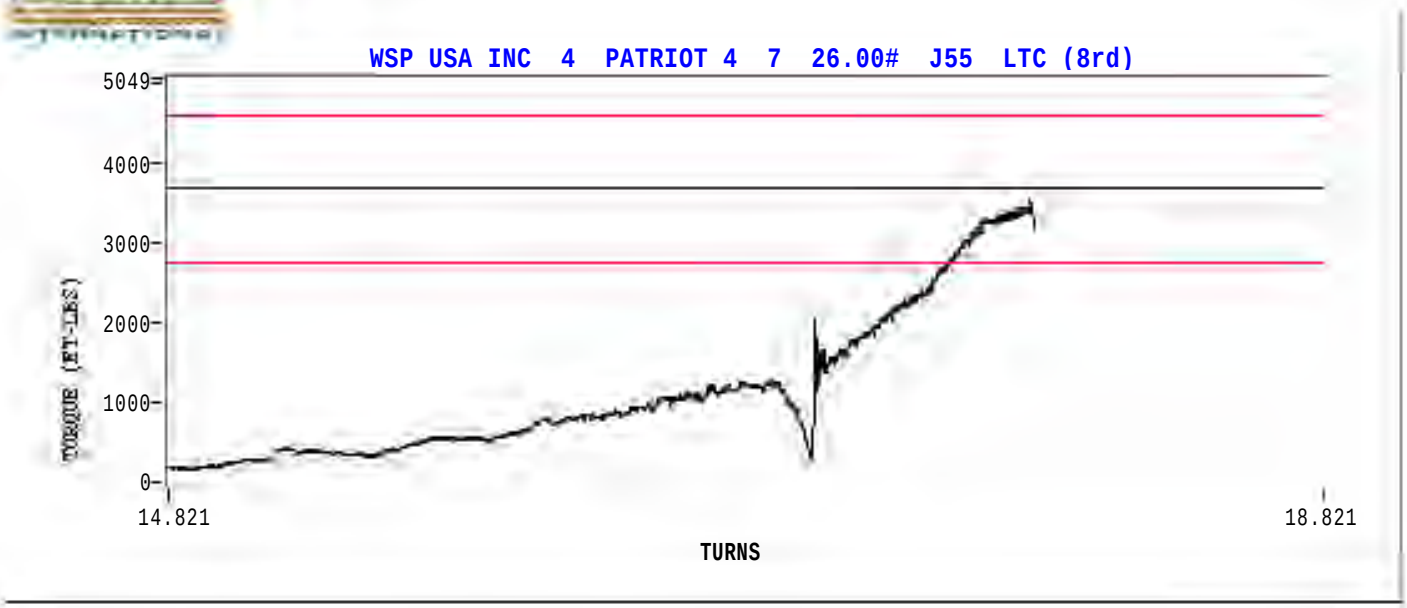


TIME OF MAKE UP :	8:32 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	17.419 TURNS

FILE NUMBER : ----------->> **20** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 16

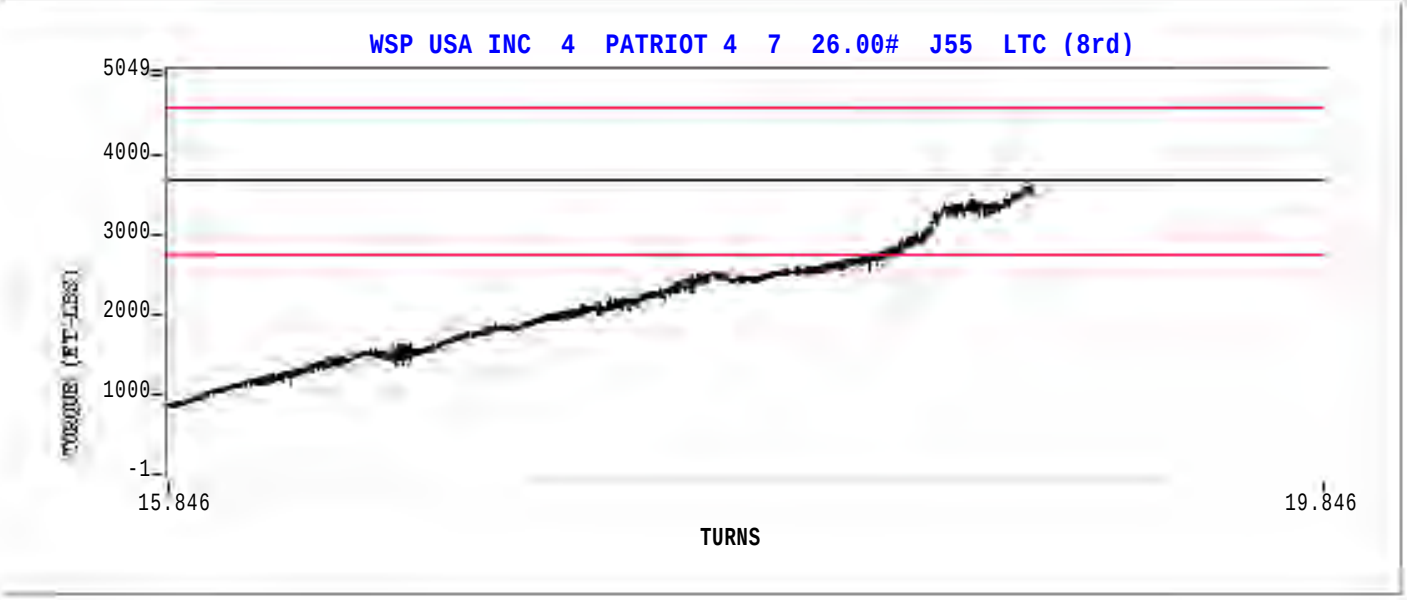
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TIME OF MAKE UP :	8:35 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3527 FT-LBS	MAXIMUM TURNS :	17.821 TURNS

FILE NUMBER : ----------->> **21** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 17

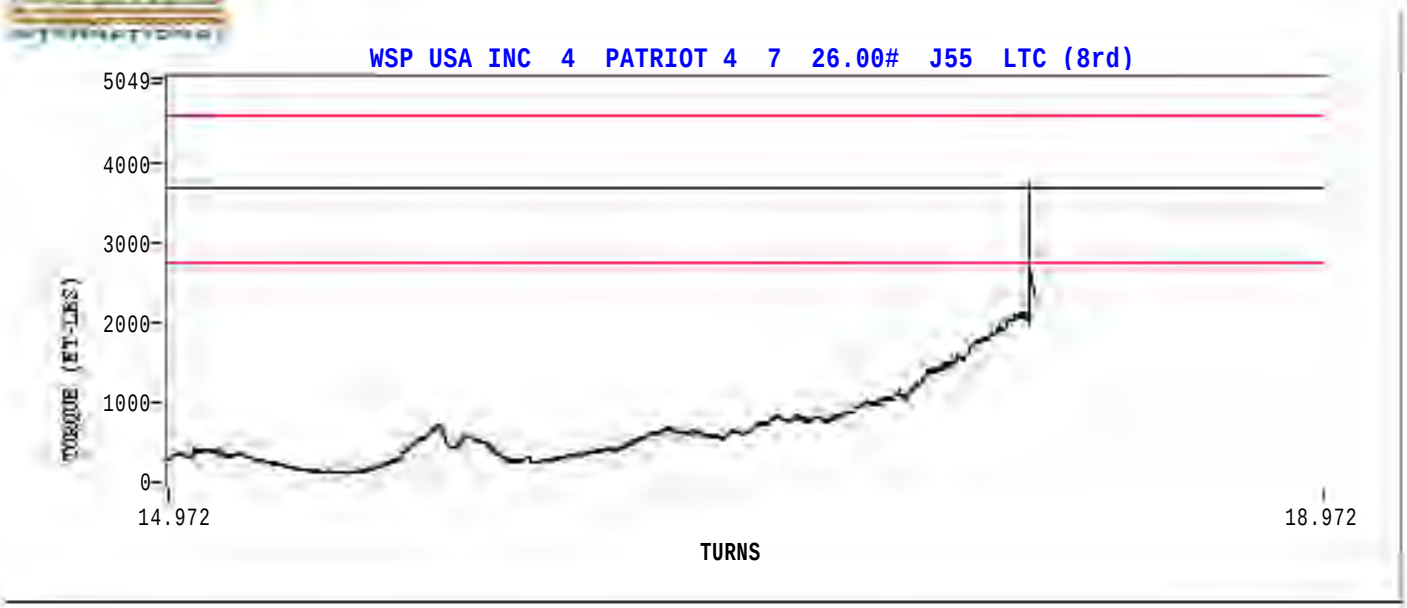


TIME OF MAKE UP :	8:38 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3638 FT-LBS	MAXIMUM TURNS :	18.846 TURNS

FILE NUMBER : ----------->> **22** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 18

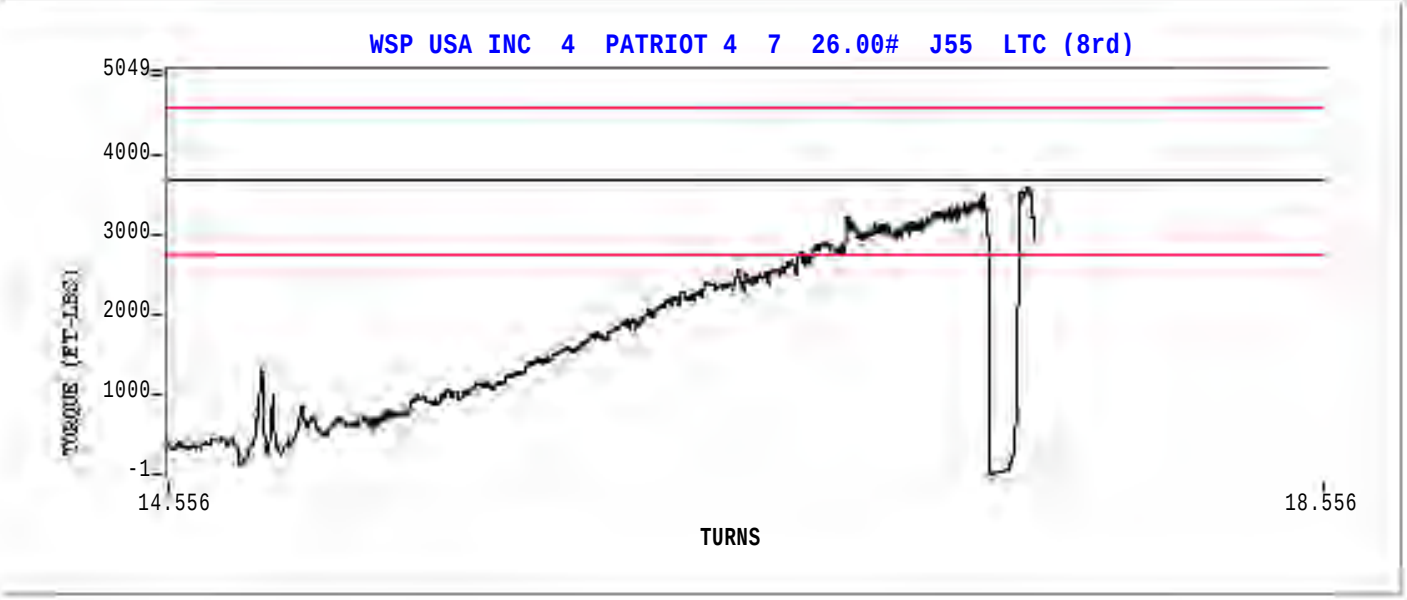
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TIME OF MAKE UP :	8:41 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3742 FT-LBS	MAXIMUM TURNS :	17.972 TURNS

FILE NUMBER : ----------->> **23** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 19

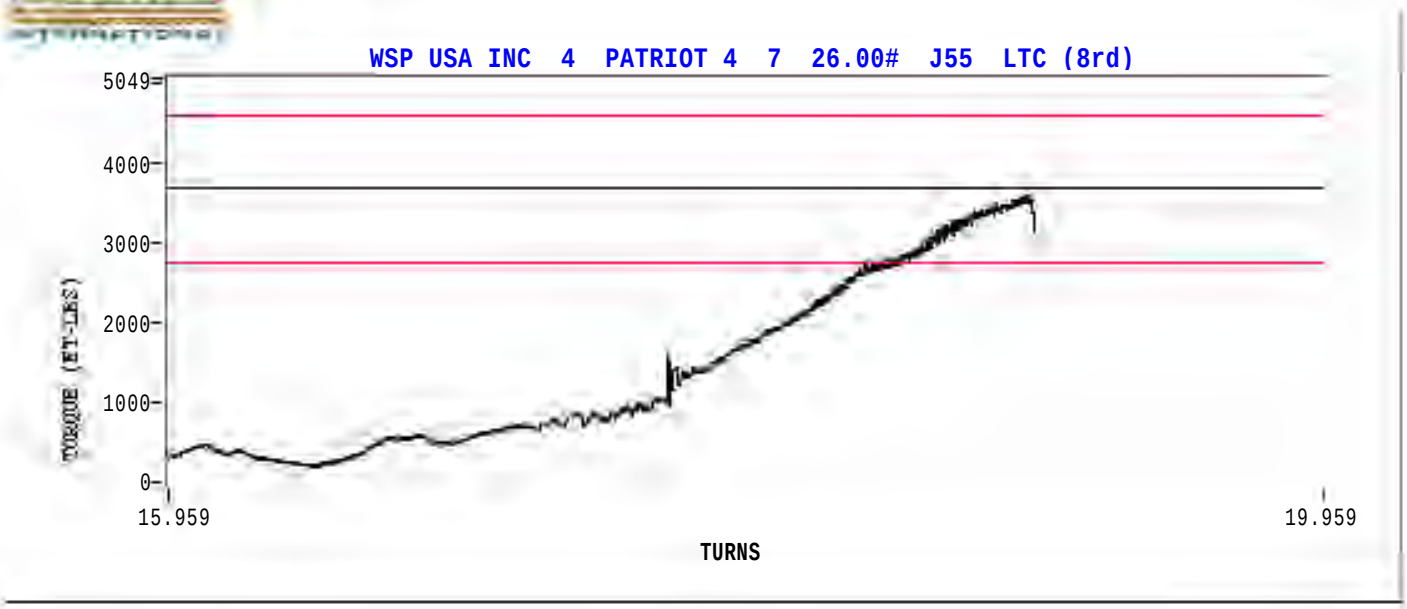


TIME OF MAKE UP :	8:45 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3588 FT-LBS	MAXIMUM TURNS :	17.556 TURNS

FILE NUMBER : ----------->> **24** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. RETORQUE BUMP OK. JOINT # 20

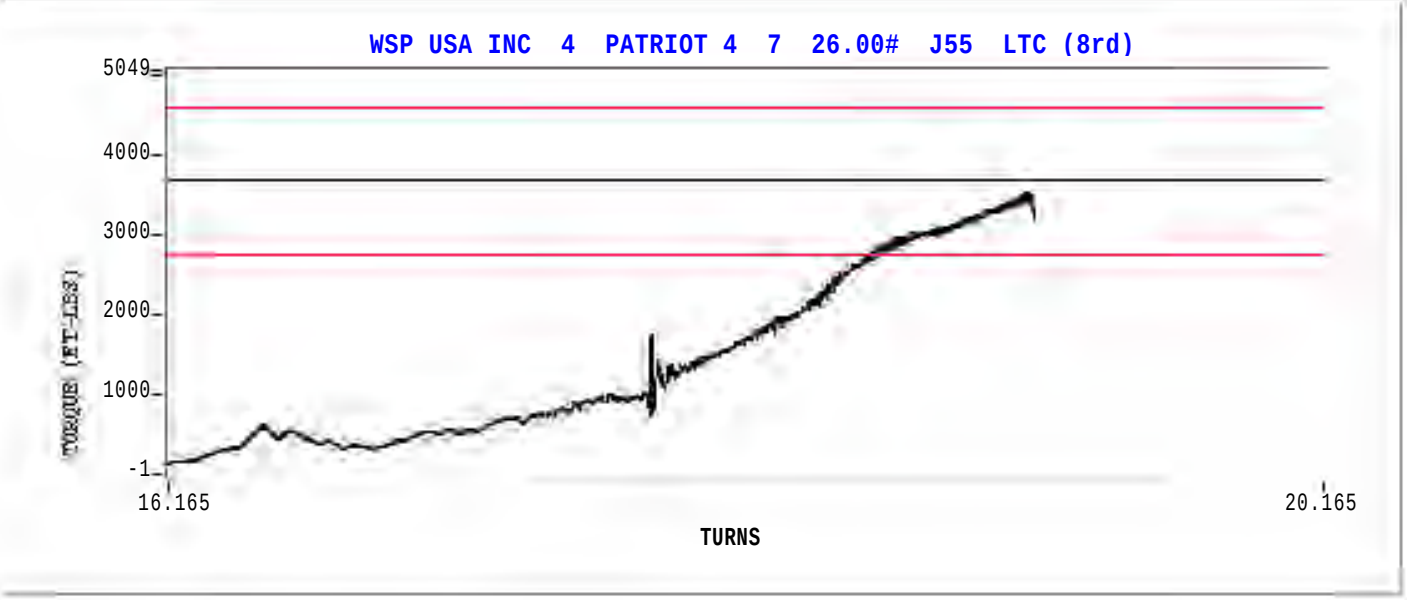
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TIME OF MAKE UP :	8:49 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3598 FT-LBS	MAXIMUM TURNS :	18.959 TURNS

FILE NUMBER : ----------->> **25** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 21

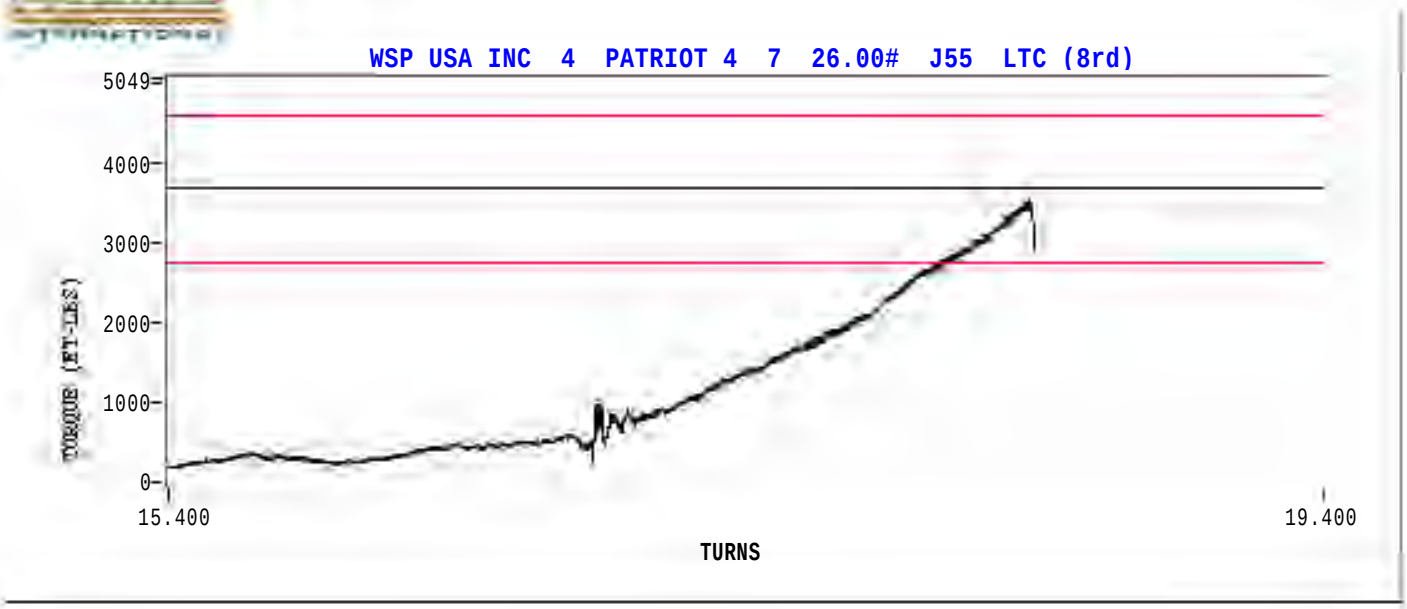


TIME OF MAKE UP :	8:51 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3535 FT-LBS	MAXIMUM TURNS :	19.165 TURNS

FILE NUMBER : ----------->> **26** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 22

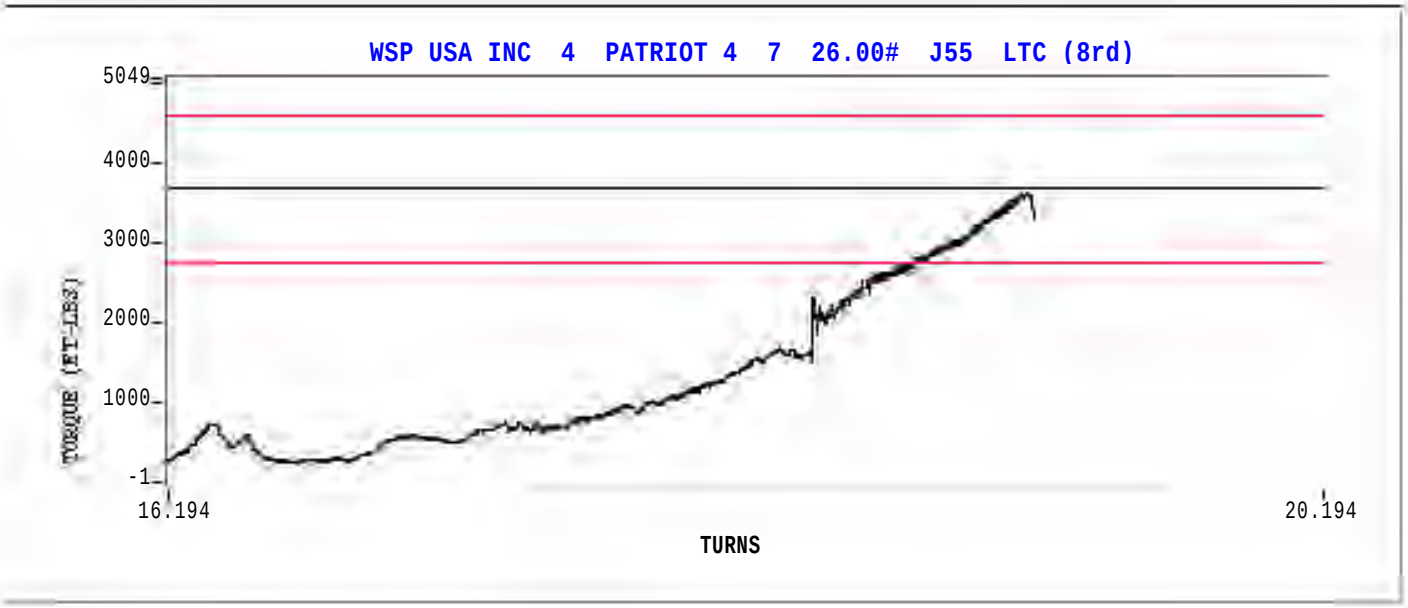
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TIME OF MAKE UP :	8:53 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3548 FT-LBS	MAXIMUM TURNS :	18.400 TURNS

FILE NUMBER : ----------->> **27** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 23

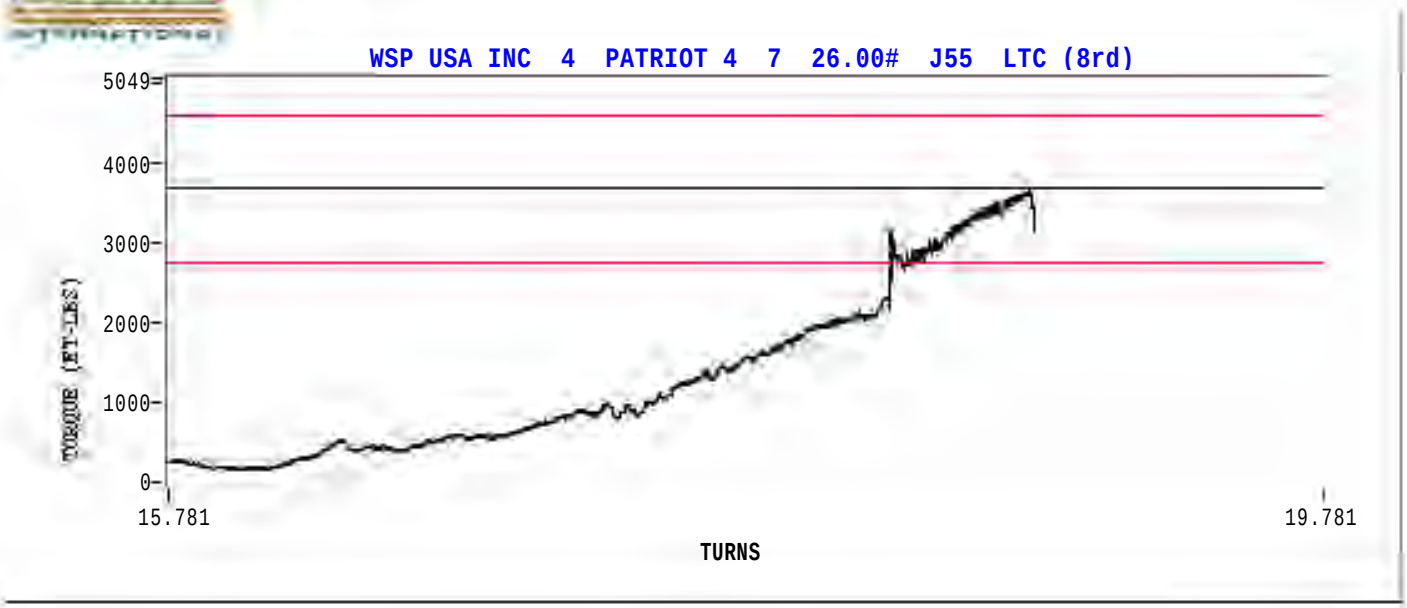


TIME OF MAKE UP :	8:55 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3623 FT-LBS	MAXIMUM TURNS :	19.194 TURNS

FILE NUMBER : ----------->> **28** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 24

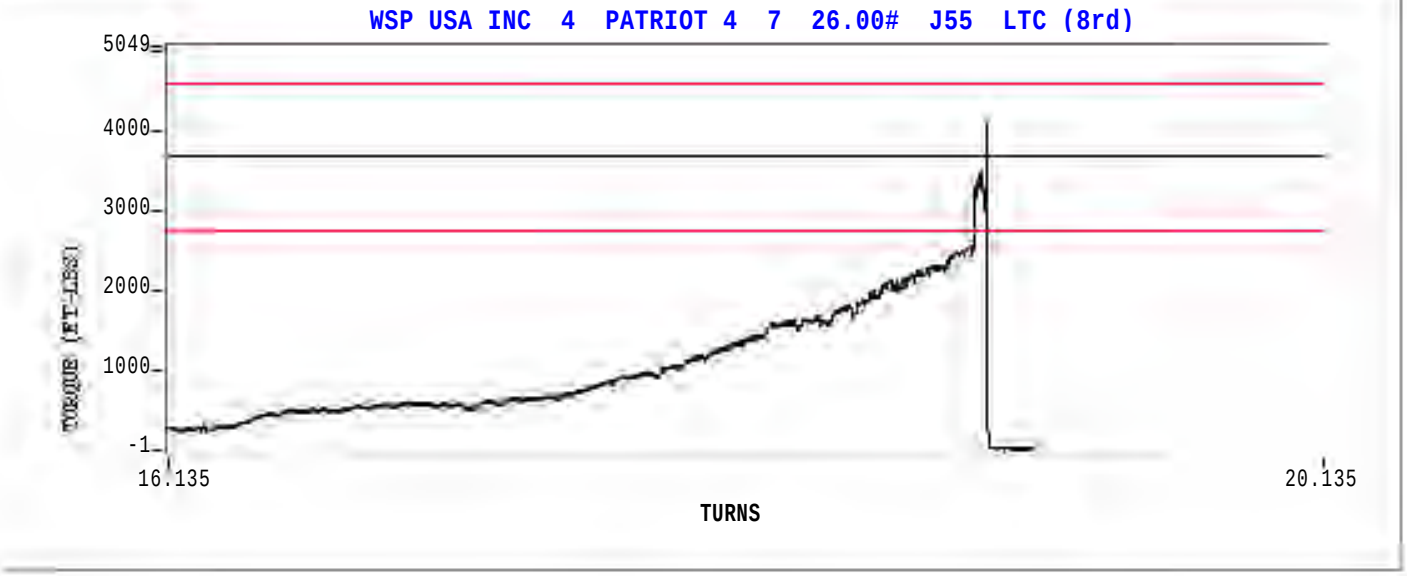
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TIME OF MAKE UP :	8:57 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3642 FT-LBS	MAXIMUM TURNS :	18.781 TURNS

FILE NUMBER : ----------->> **29** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 25

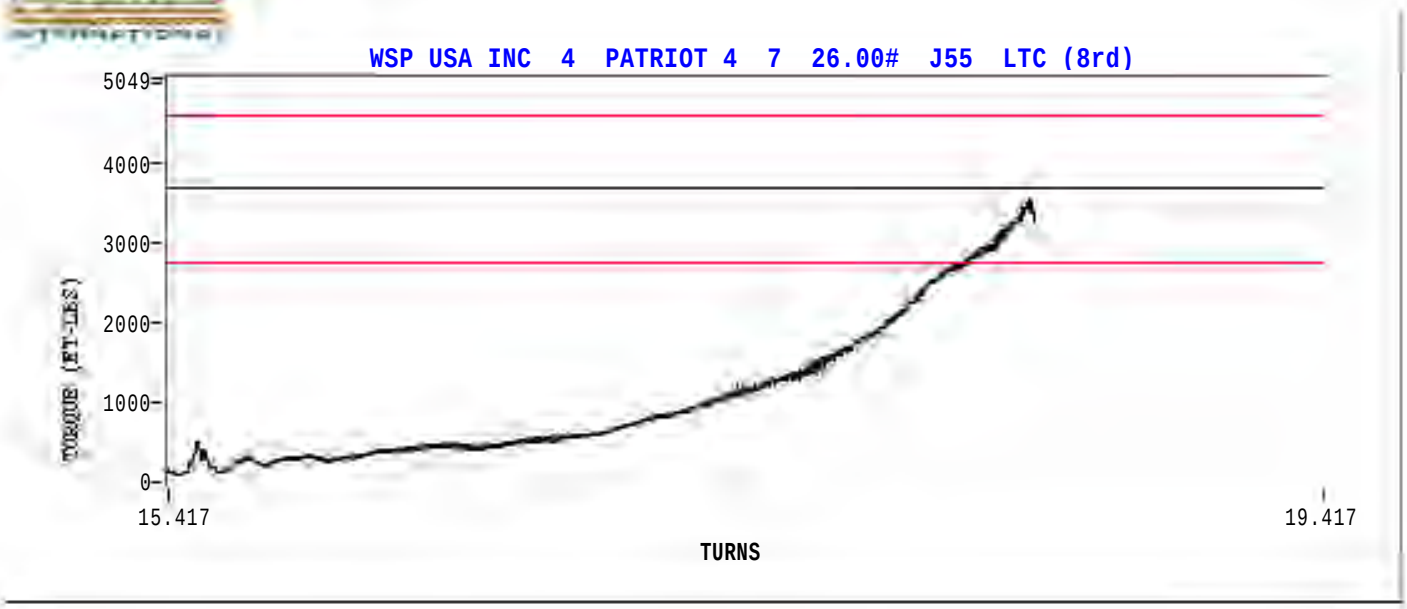


TIME OF MAKE UP :	8:58 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	4083 FT-LBS	MAXIMUM TURNS :	19.135 TURNS

FILE NUMBER : ----------->> **30** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. BUMP TEST OK. JOINT # 26

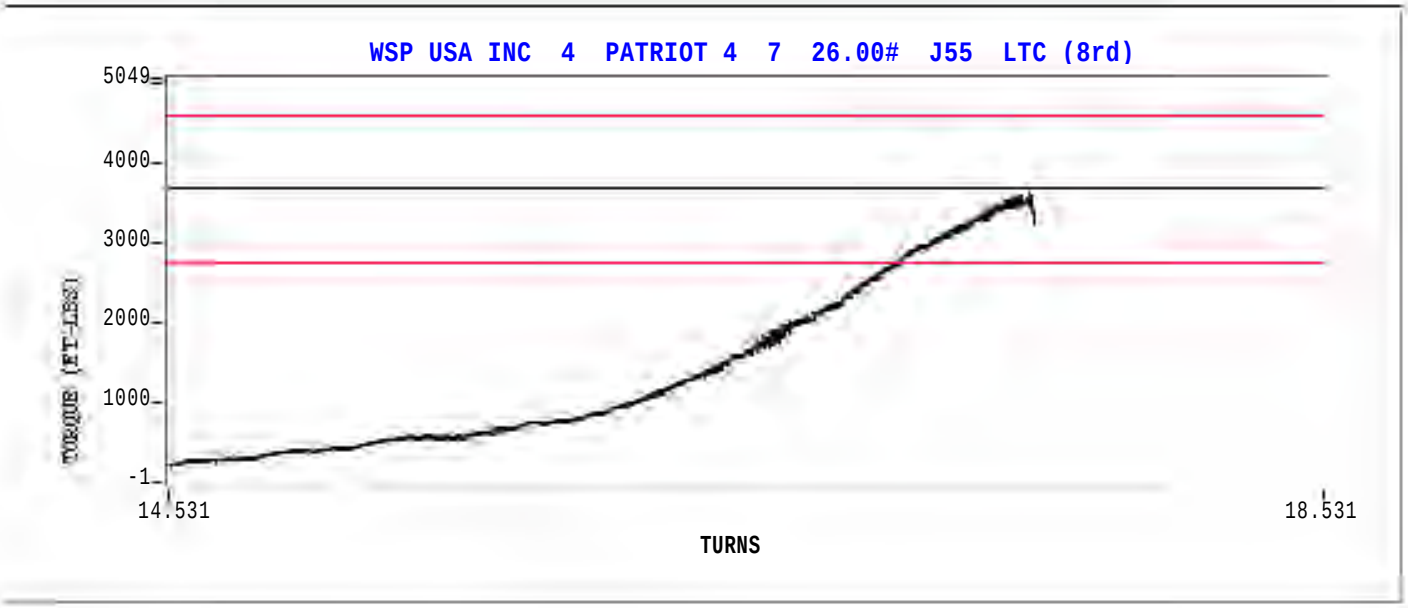
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TIME OF MAKE UP :	9:00 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3548 FT-LBS	MAXIMUM TURNS :	18.417 TURNS

FILE NUMBER : ----------->> **31** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 27

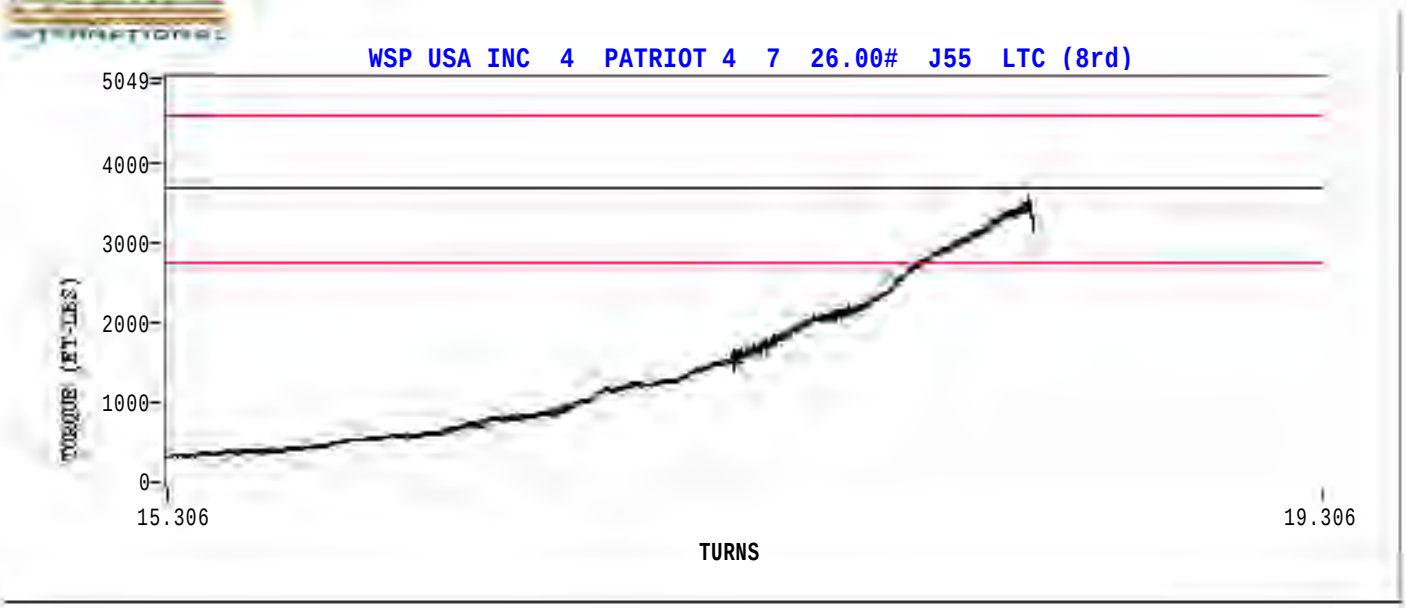


TIME OF MAKE UP :	9:02 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3628 FT-LBS	MAXIMUM TURNS :	17.531 TURNS

FILE NUMBER : ----------->> **32** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 28

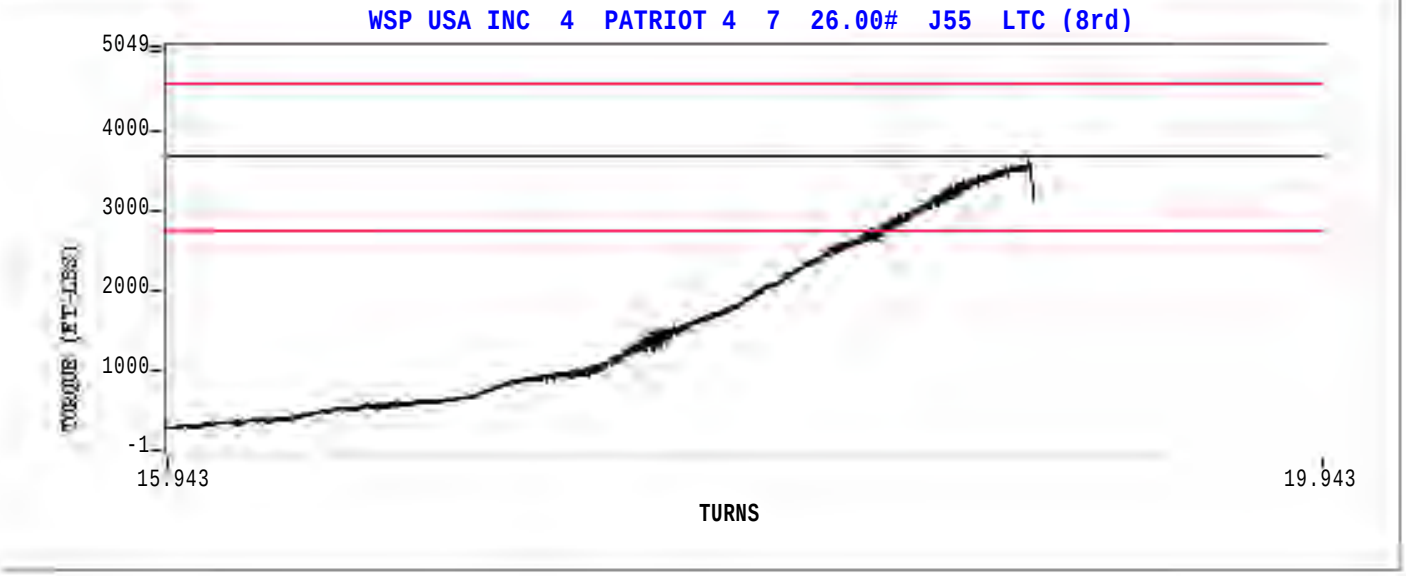
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TIME OF MAKE UP :	9:04 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3581 FT-LBS	MAXIMUM TURNS :	18.306 TURNS

FILE NUMBER : ----------->> **33** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 29

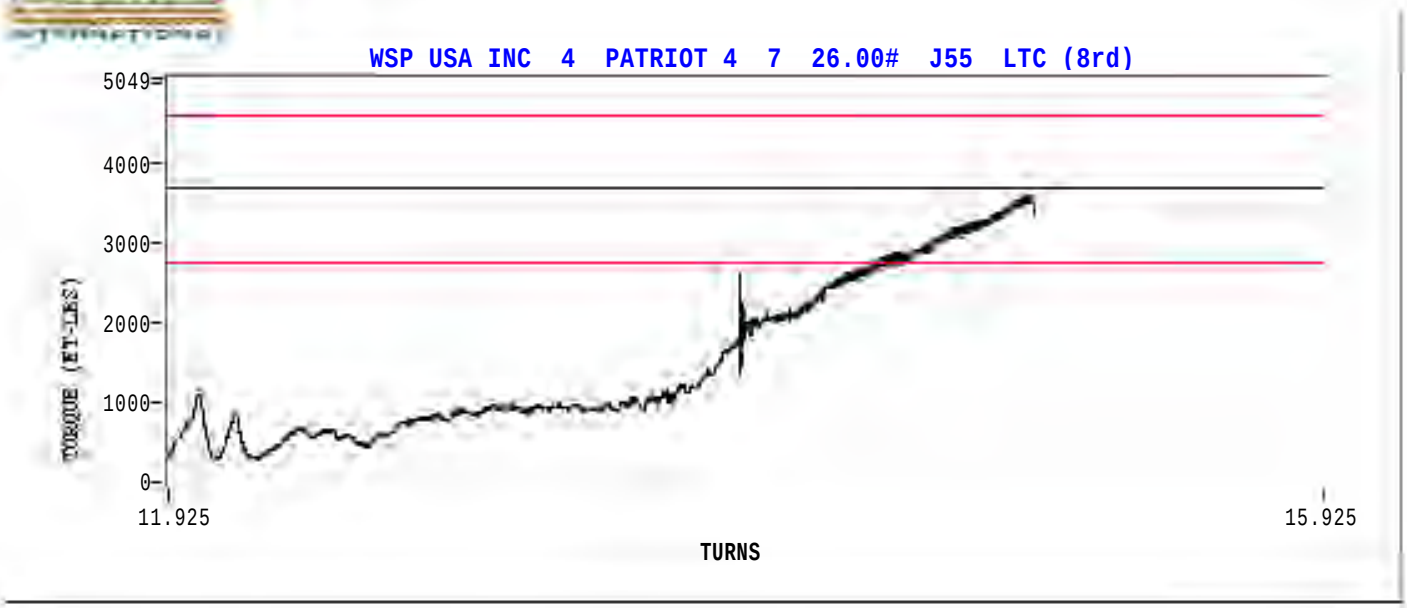


TIME OF MAKE UP :	9:06 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3606 FT-LBS	MAXIMUM TURNS :	18.943 TURNS

FILE NUMBER : ----------->> **34** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 30

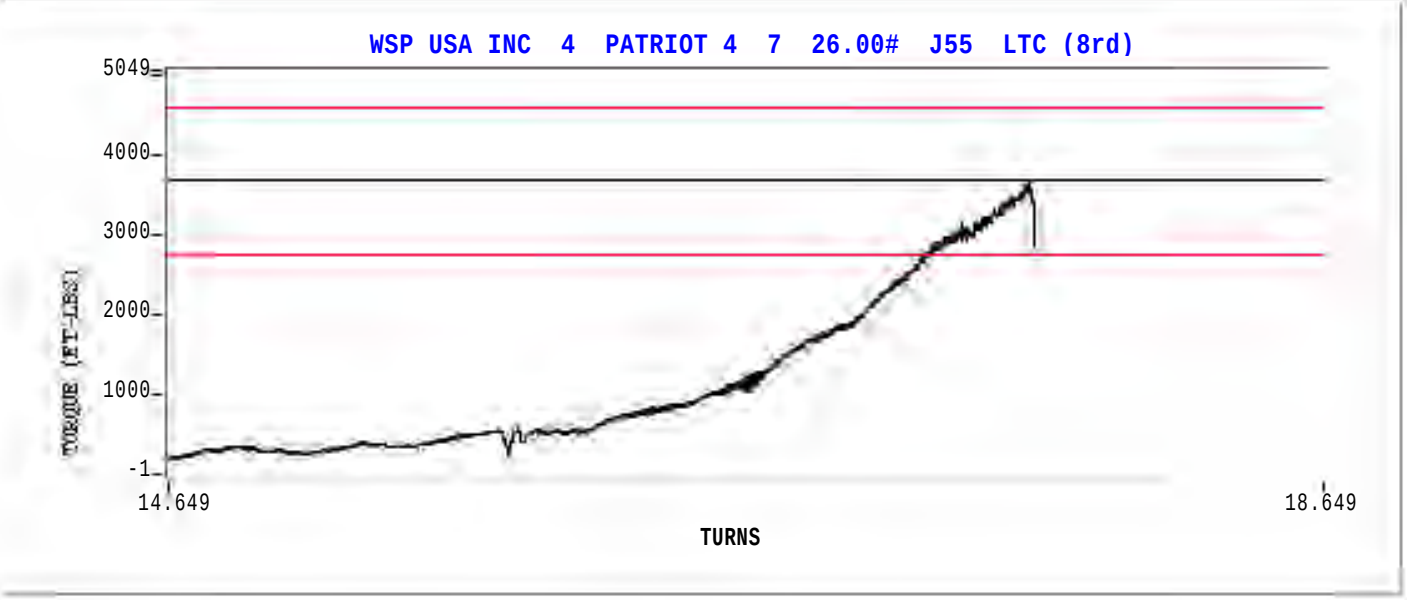
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TIME OF MAKE UP :	9:08 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3593 FT-LBS	MAXIMUM TURNS :	14.925 TURNS

FILE NUMBER : ----------->> **35** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 31

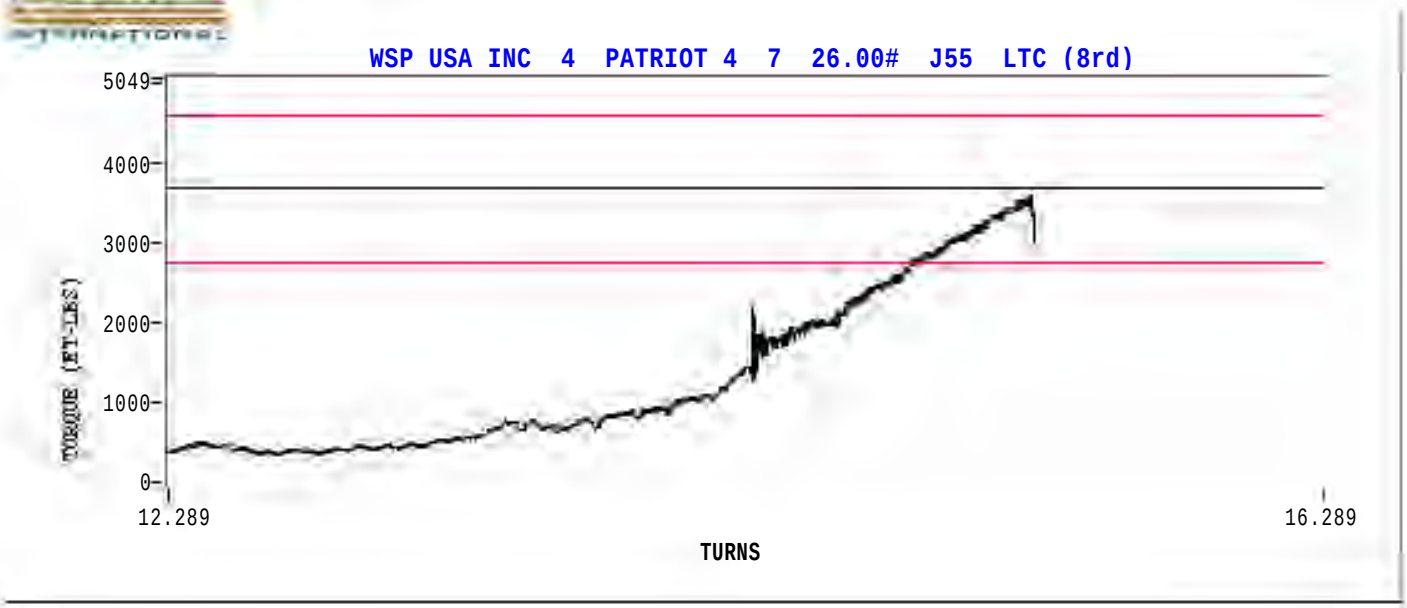


TIME OF MAKE UP :	9:10 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3638 FT-LBS	MAXIMUM TURNS :	17.649 TURNS

FILE NUMBER : ----------->> **36** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 32

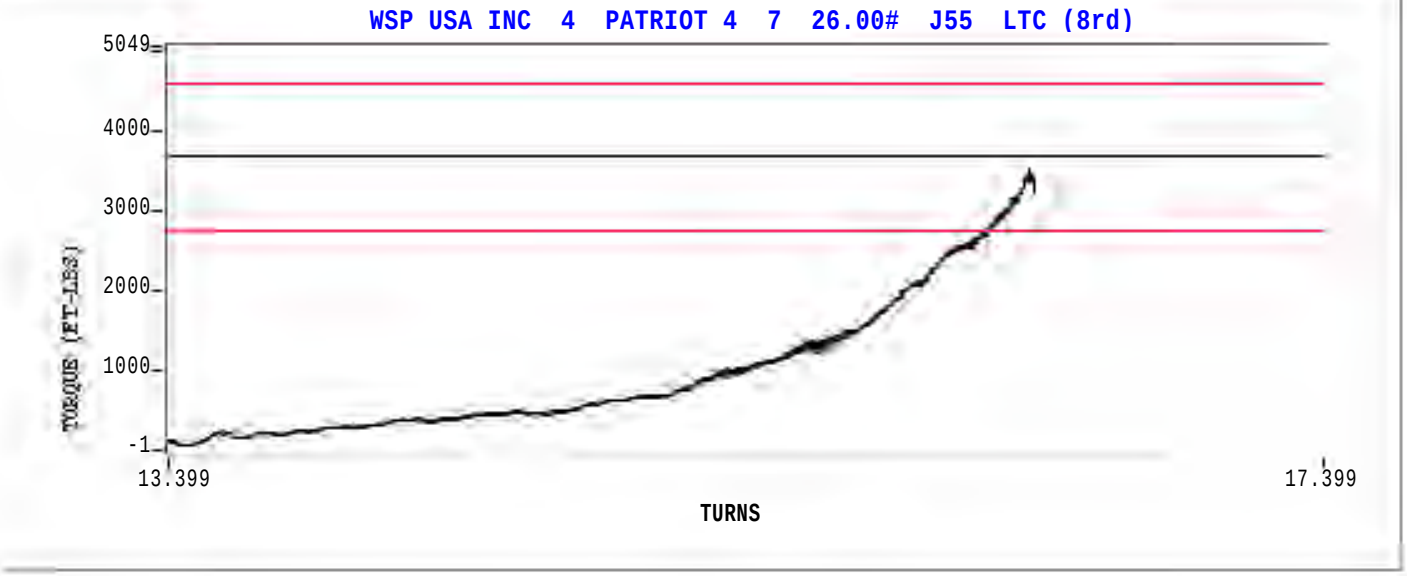
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TIME OF MAKE UP :	9:12 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3580 FT-LBS	MAXIMUM TURNS :	15.289 TURNS

FILE NUMBER : ----------->> **37** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 33

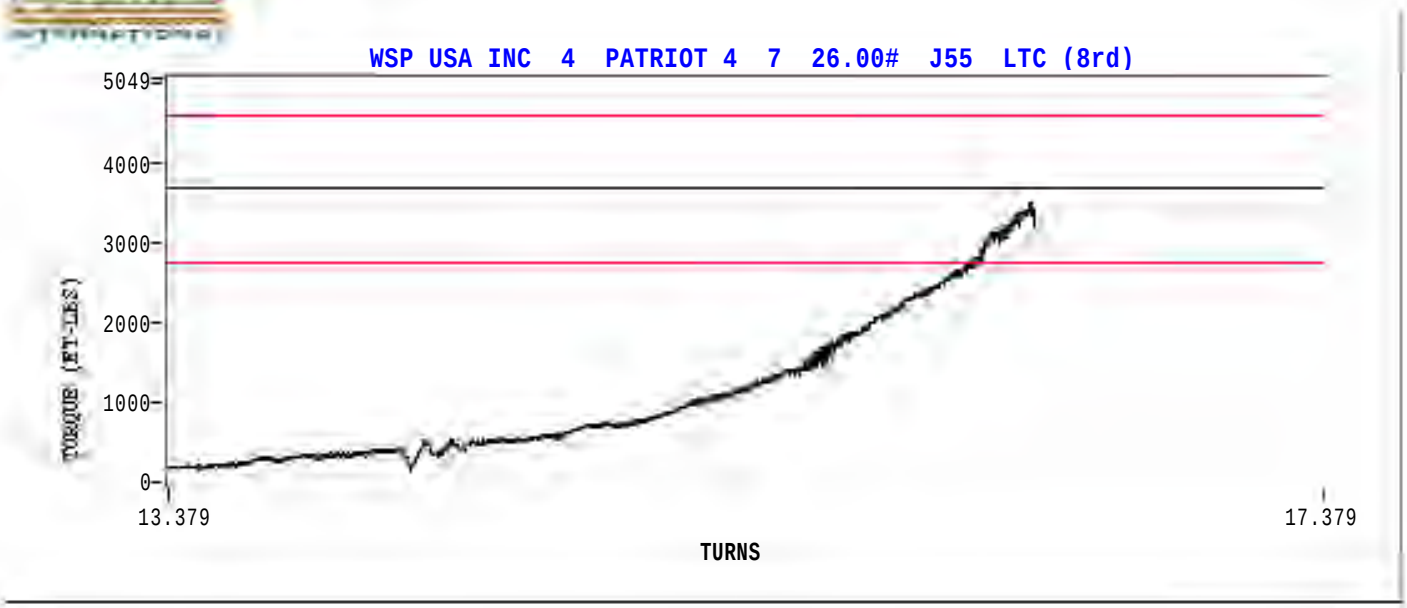


TIME OF MAKE UP :	9:14 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3515 FT-LBS	MAXIMUM TURNS :	16.399 TURNS

FILE NUMBER : ----------->> **38** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 34

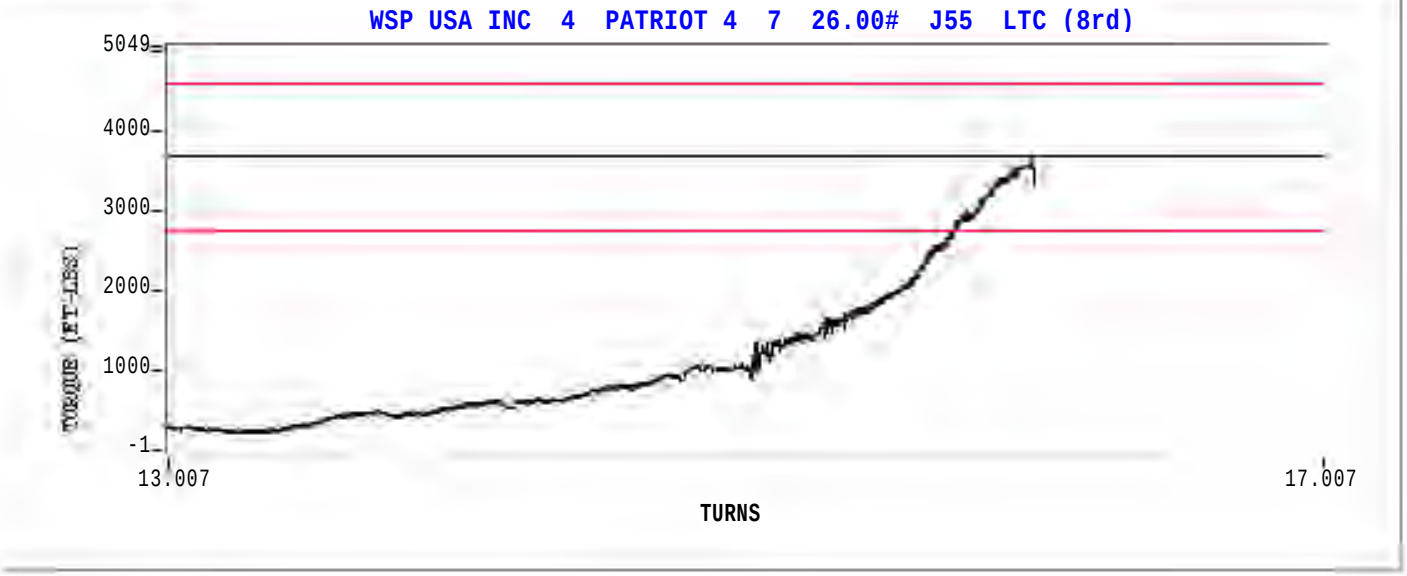
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TIME OF MAKE UP :	9:15 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3503 FT-LBS	MAXIMUM TURNS :	16.379 TURNS

FILE NUMBER : ----------->> **39** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 35

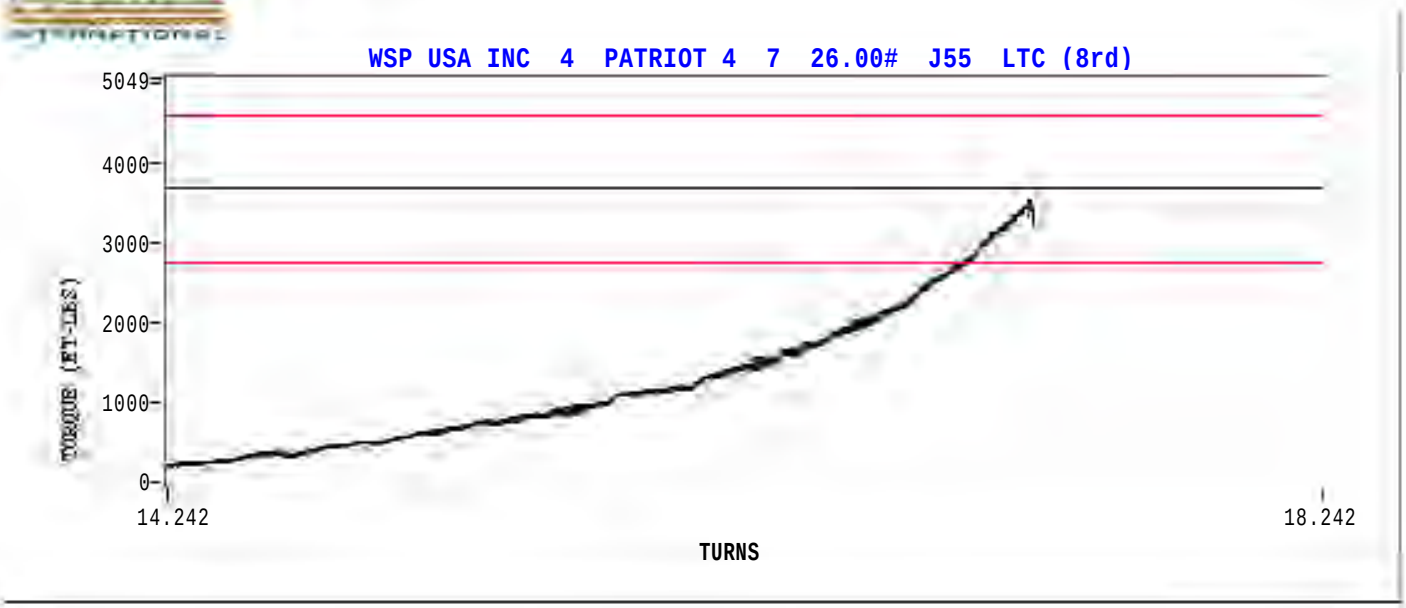


TIME OF MAKE UP :	9:17 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3668 FT-LBS	MAXIMUM TURNS :	16.007 TURNS

FILE NUMBER : ----------->> **40** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 36

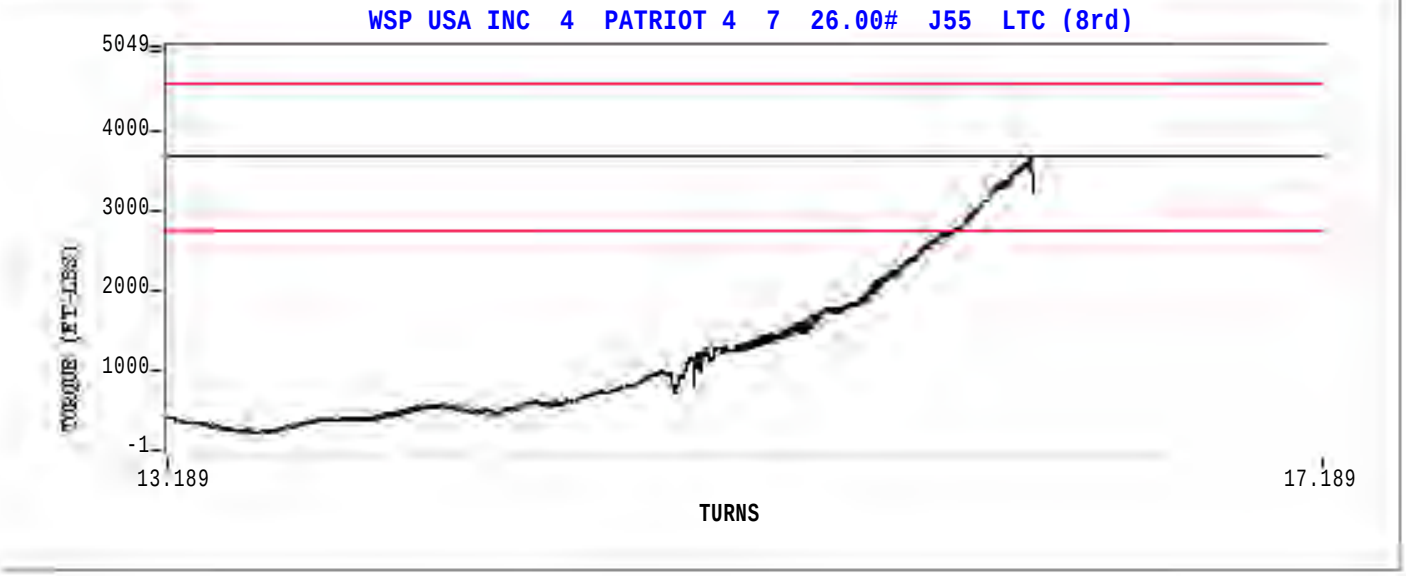
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TIME OF MAKE UP :	9:19 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3530 FT-LBS	MAXIMUM TURNS :	17.242 TURNS

FILE NUMBER : ----------->> **41** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 37

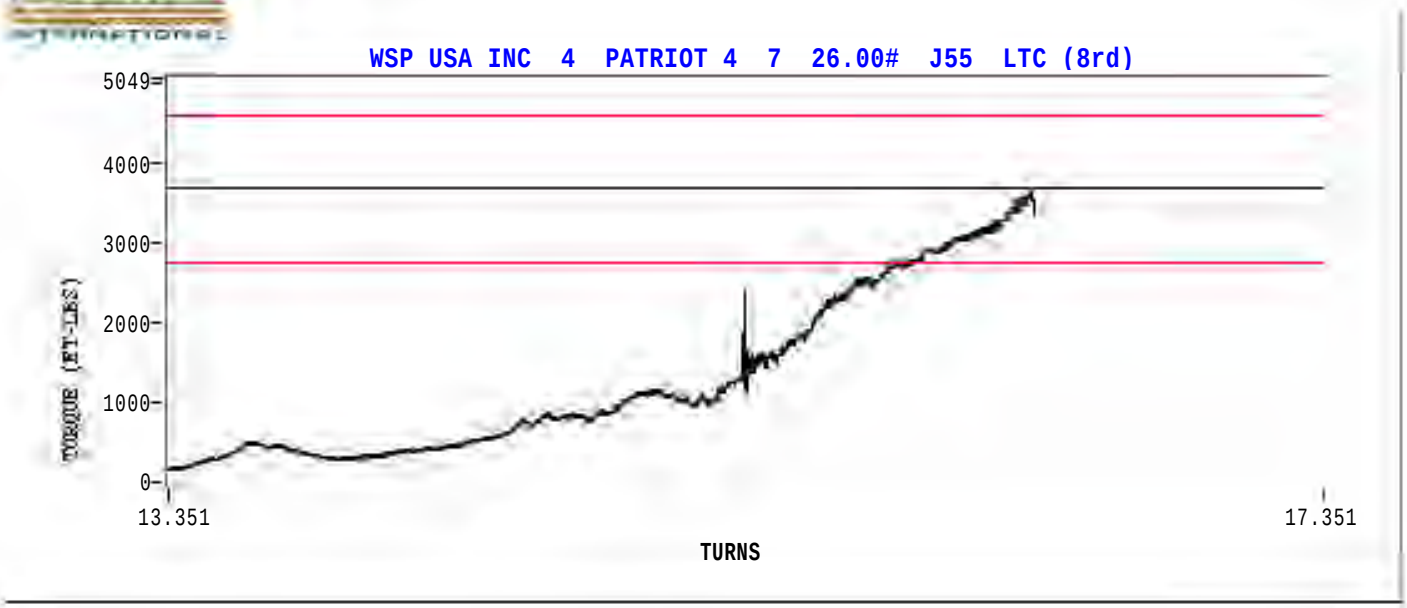


TIME OF MAKE UP :	9:21 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3659 FT-LBS	MAXIMUM TURNS :	16.189 TURNS

FILE NUMBER : ----------->> **42** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 38

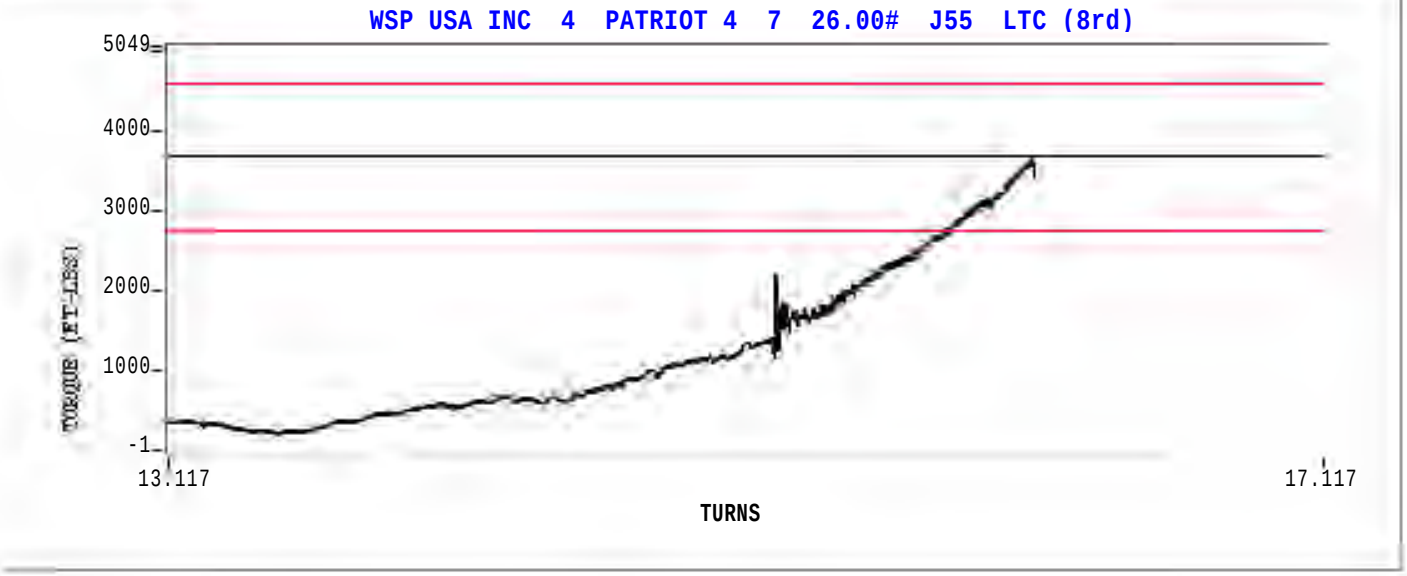
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TIME OF MAKE UP :	9:24 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3662 FT-LBS	MAXIMUM TURNS :	16.351 TURNS

FILE NUMBER : ----------->> **43** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 39

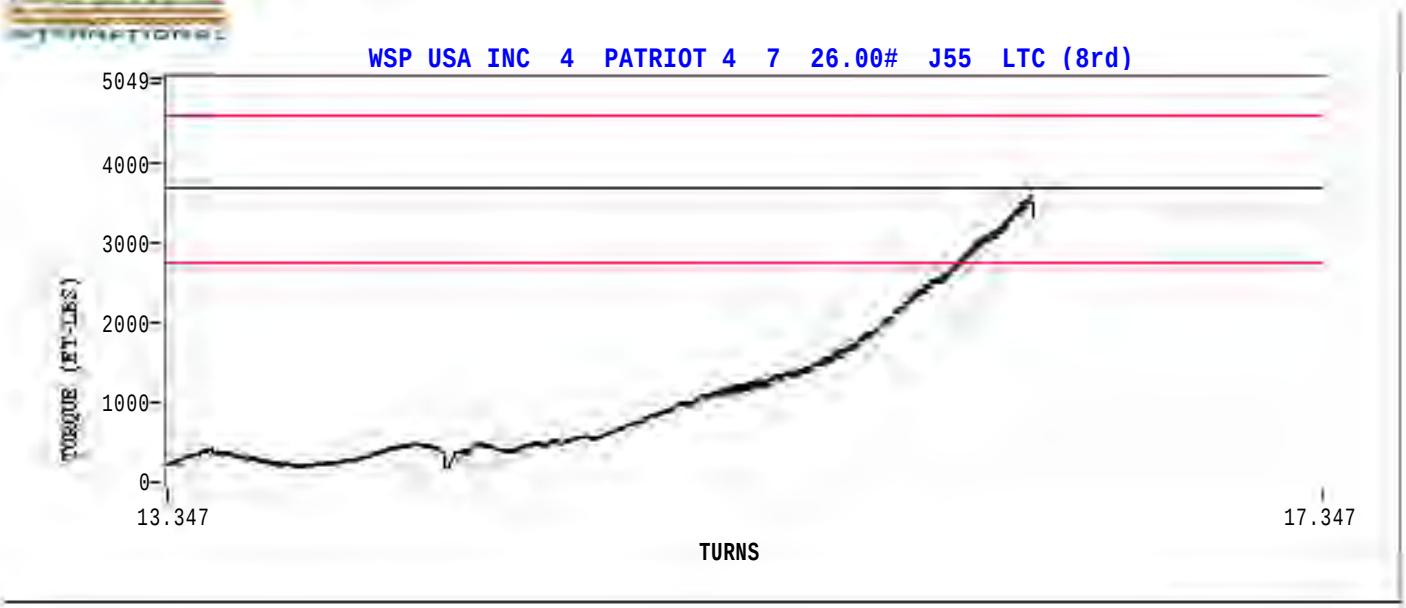


TIME OF MAKE UP :	9:26 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3681 FT-LBS	MAXIMUM TURNS :	16.117 TURNS

FILE NUMBER : ----------->> **44** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 40

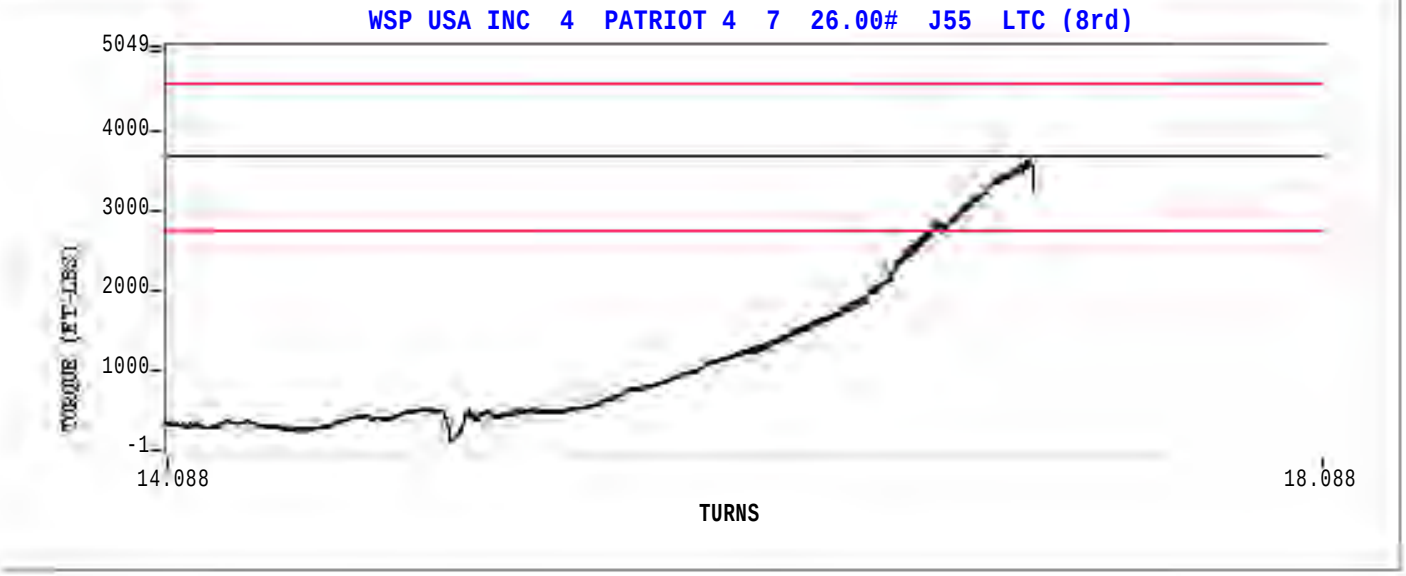
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TIME OF MAKE UP :	9:27 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3599 FT-LBS	MAXIMUM TURNS :	16.347 TURNS

FILE NUMBER : ----------->> **45** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 41

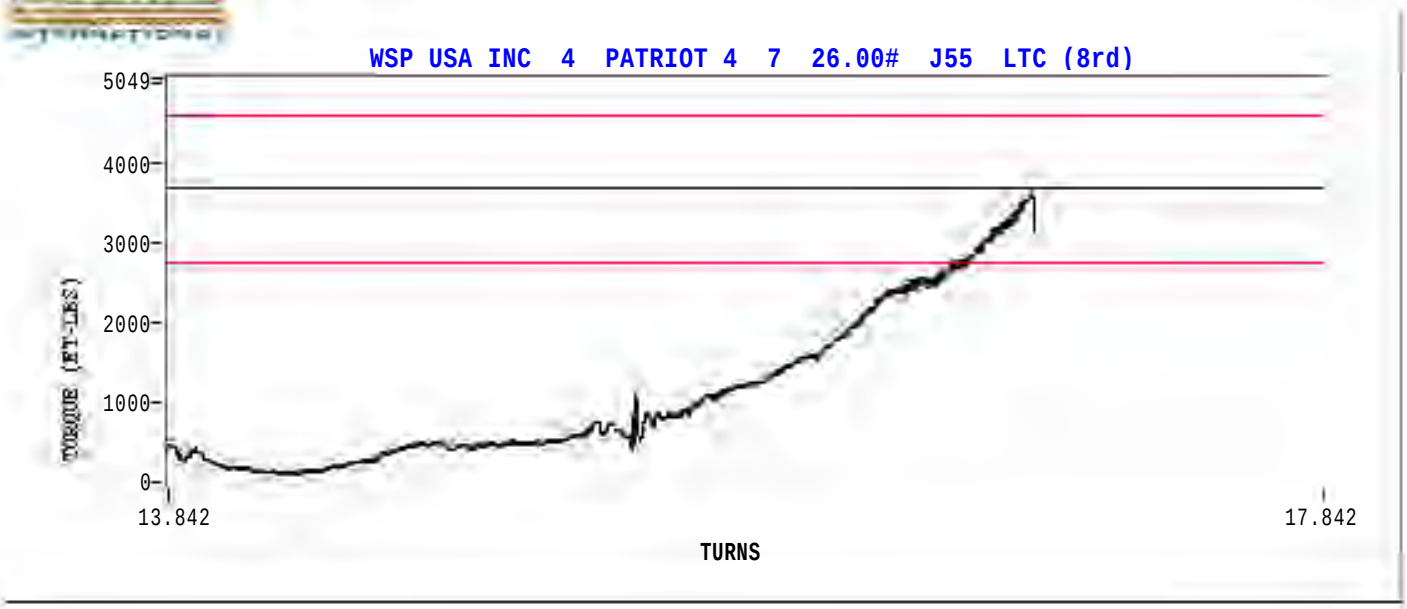


TIME OF MAKE UP :	9:29 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3661 FT-LBS	MAXIMUM TURNS :	17.088 TURNS

FILE NUMBER : ----------->> **46** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 42

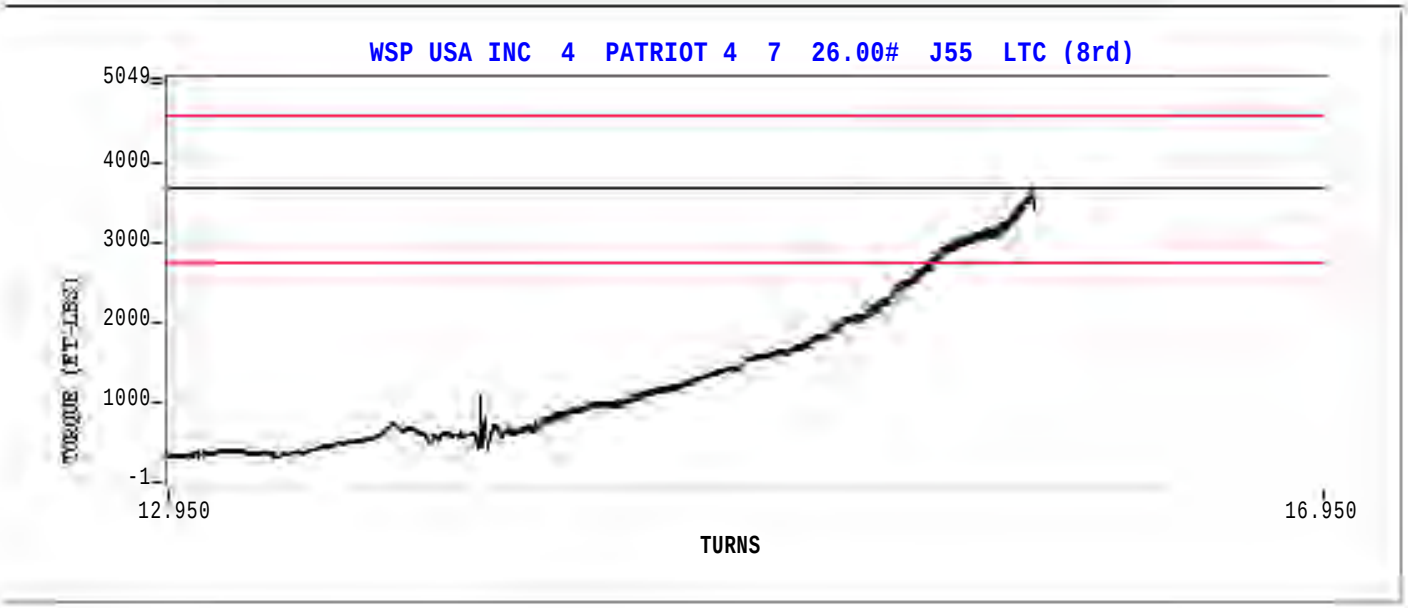
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TIME OF MAKE UP :	9:31 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3655 FT-LBS	MAXIMUM TURNS :	16.842 TURNS

FILE NUMBER : ----------->> **47** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 43

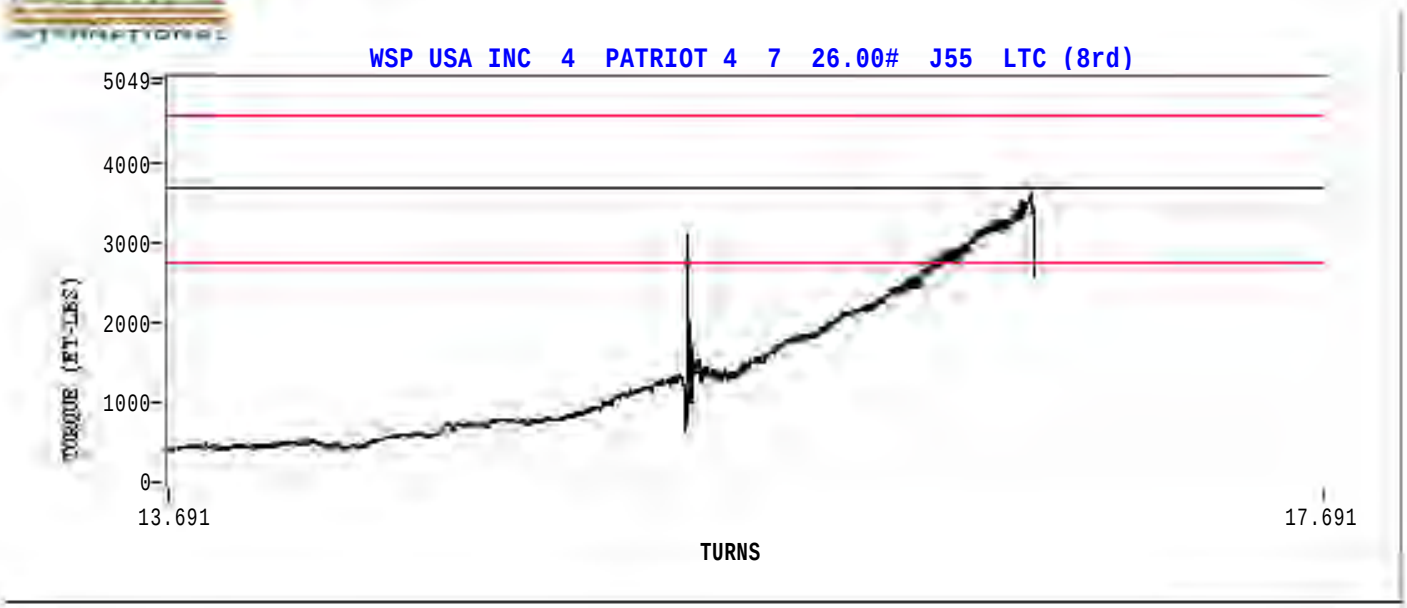


TIME OF MAKE UP :	9:33 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3635 FT-LBS	MAXIMUM TURNS :	15.950 TURNS

FILE NUMBER : ----------->> **48** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 44

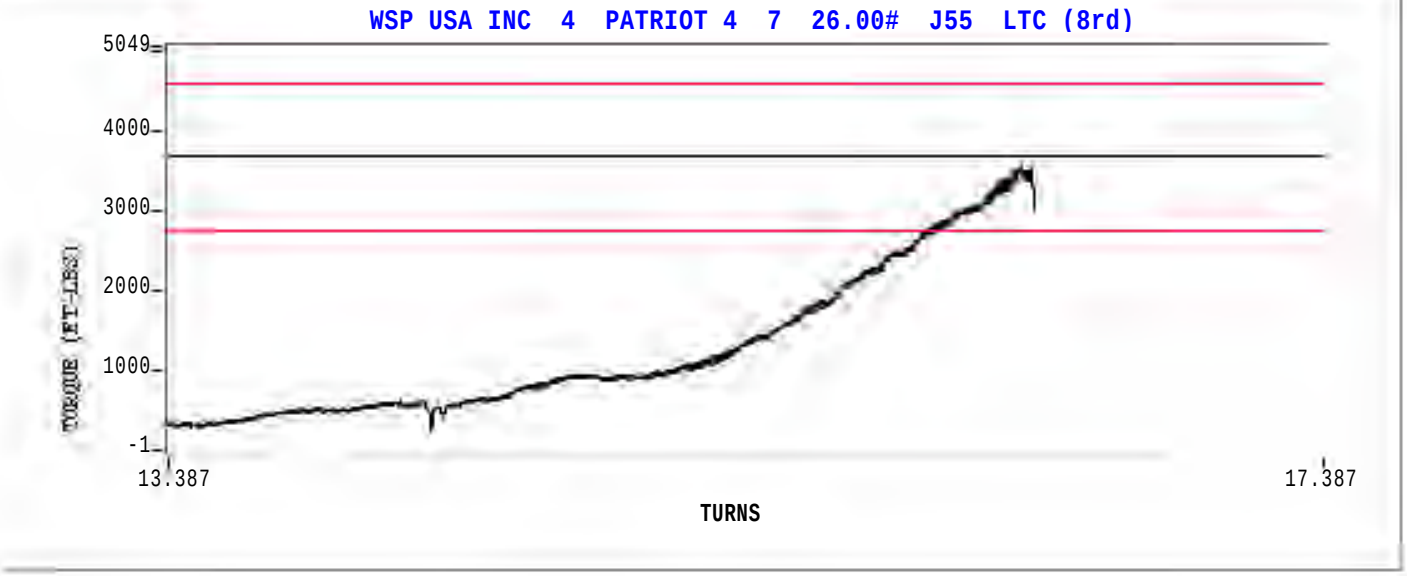
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TIME OF MAKE UP :	9:35 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3618 FT-LBS	MAXIMUM TURNS :	16.691 TURNS

FILE NUMBER : ----------->> **49** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 45

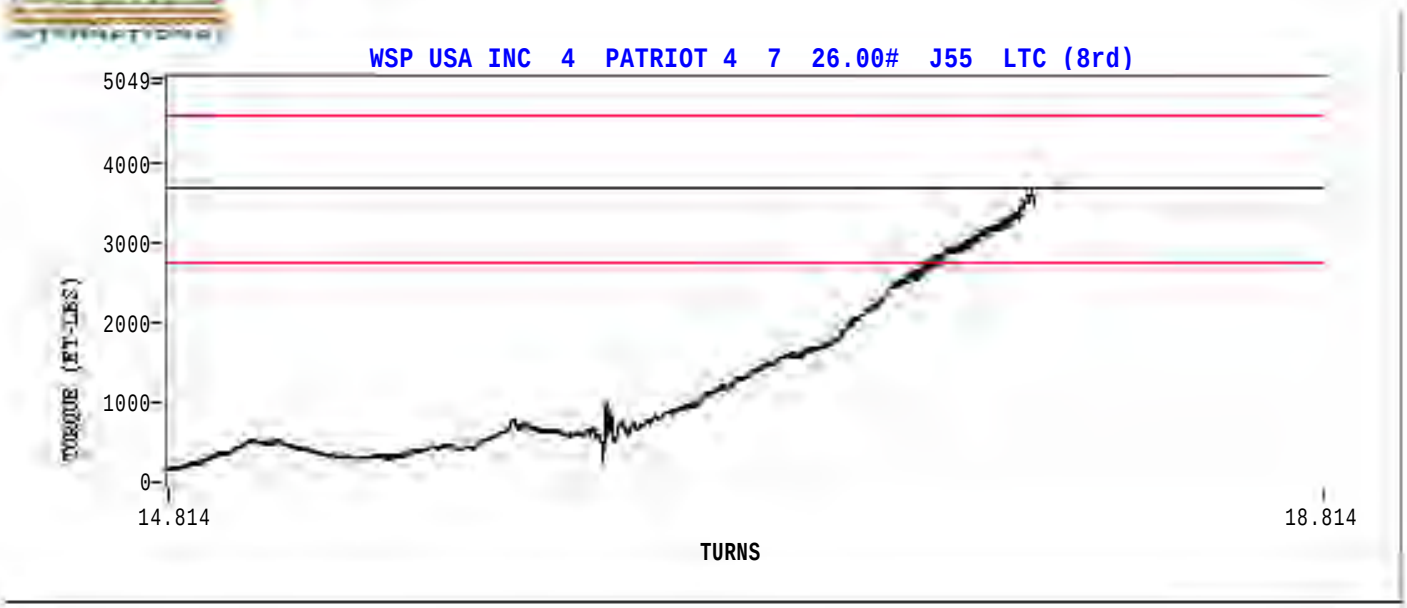


TIME OF MAKE UP :	9:48 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3549 FT-LBS	MAXIMUM TURNS :	16.387 TURNS

FILE NUMBER : ----------->> **50** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 46

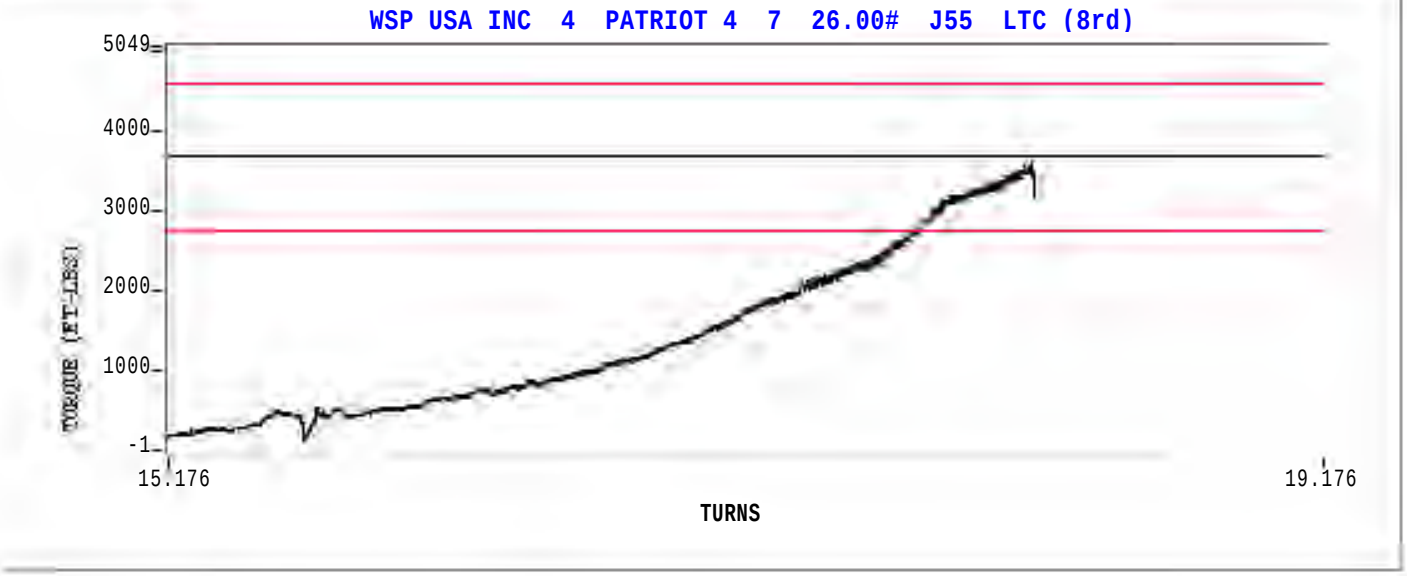
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TIME OF MAKE UP :	9:50 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3635 FT-LBS	MAXIMUM TURNS :	17.814 TURNS

FILE NUMBER : ----------->> **51** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 47

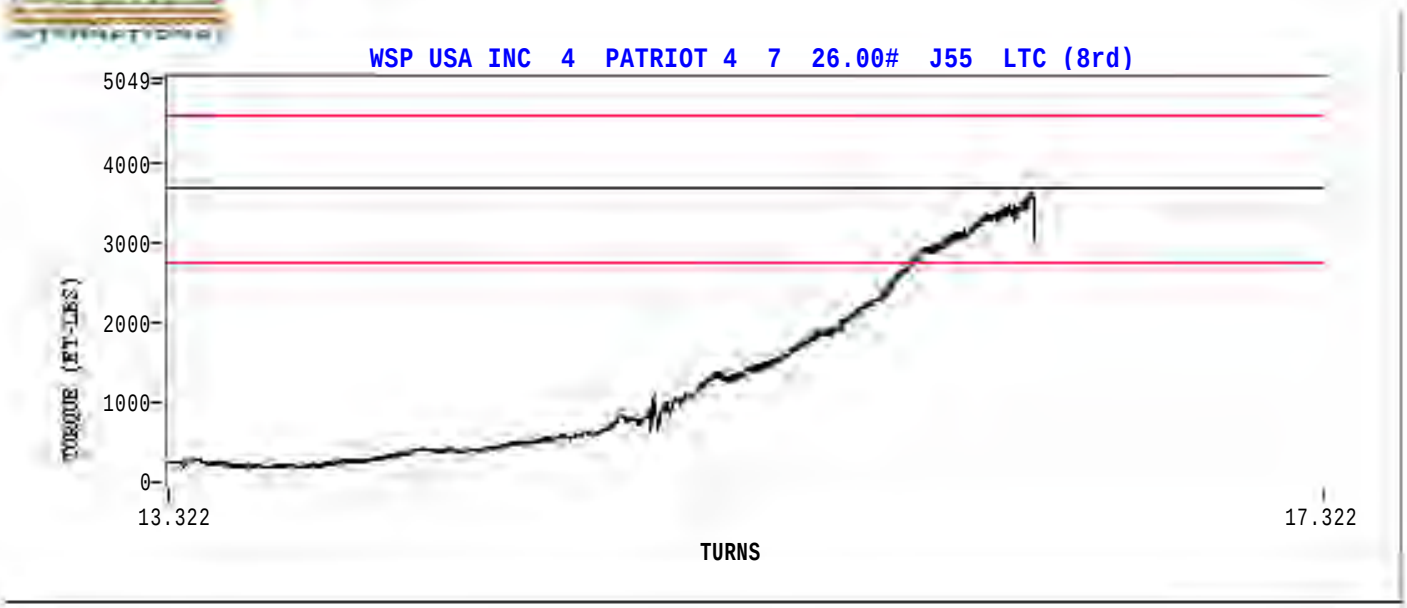


TIME OF MAKE UP :	9:52 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3611 FT-LBS	MAXIMUM TURNS :	18.176 TURNS

FILE NUMBER : ----------->> **52** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 48

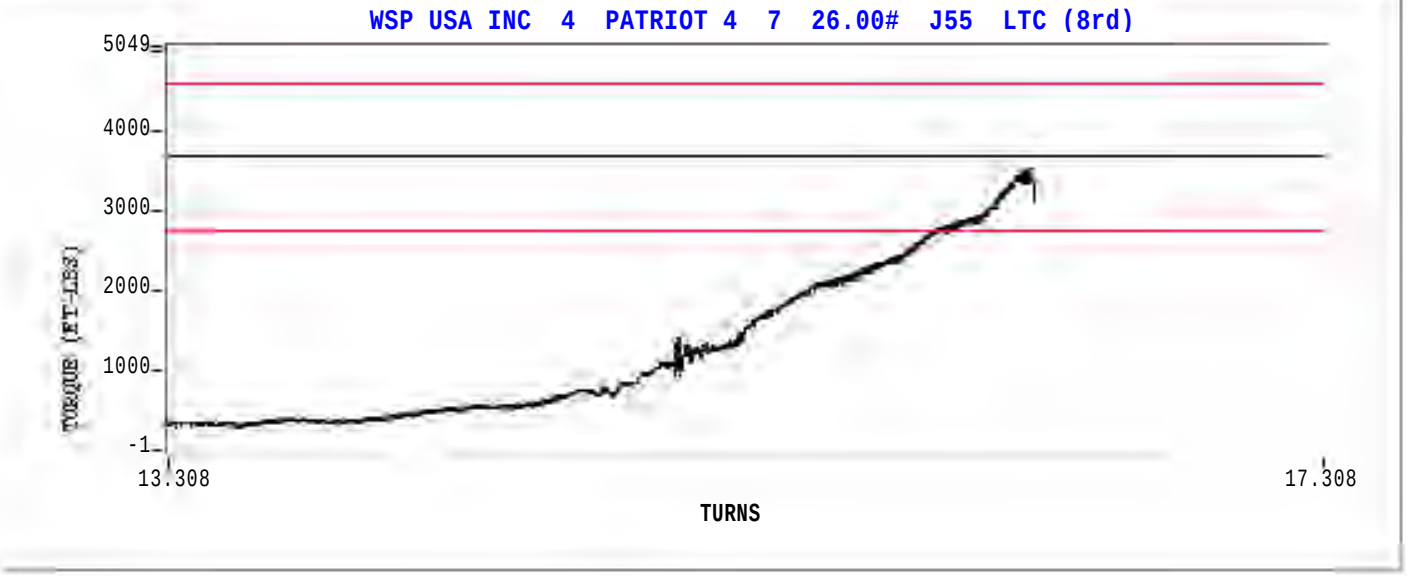
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TIME OF MAKE UP :	9:54 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3618 FT-LBS	MAXIMUM TURNS :	16.322 TURNS

FILE NUMBER : ----------->> **53** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 49

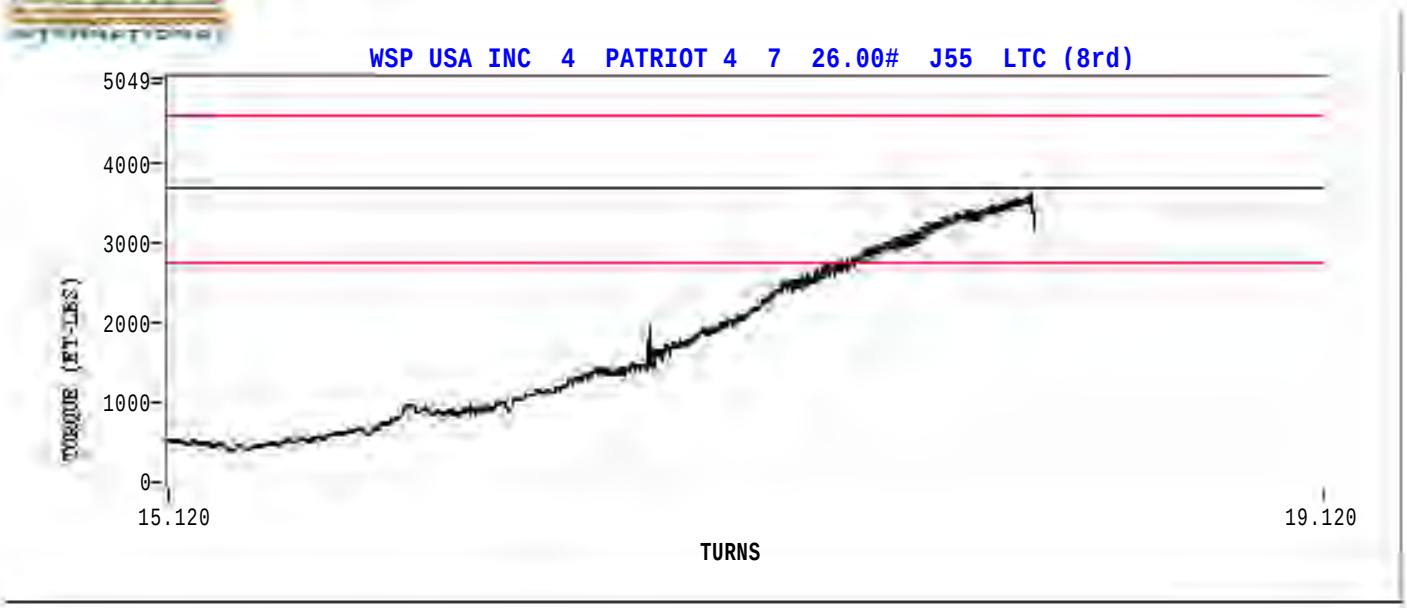


TIME OF MAKE UP :	9:56 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3520 FT-LBS	MAXIMUM TURNS :	16.308 TURNS

FILE NUMBER : ----------->> **54** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 50

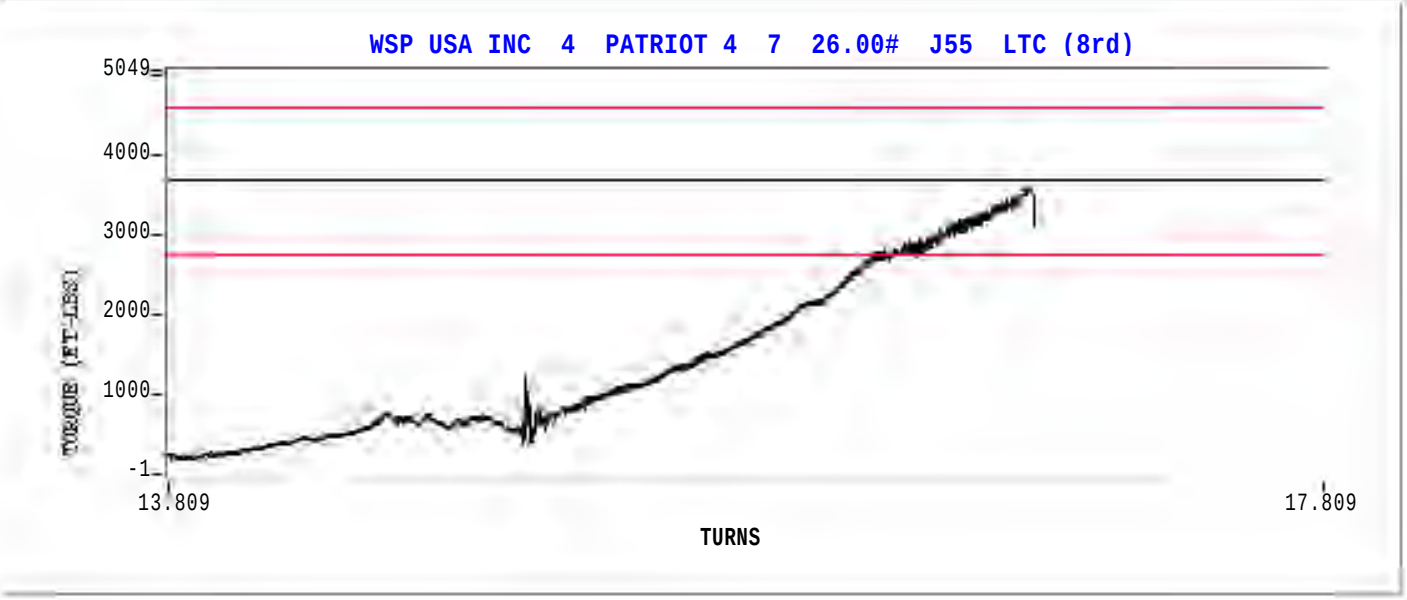
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TIME OF MAKE UP :	9:58 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	18.120 TURNS

FILE NUMBER : ----------->> **55** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 51

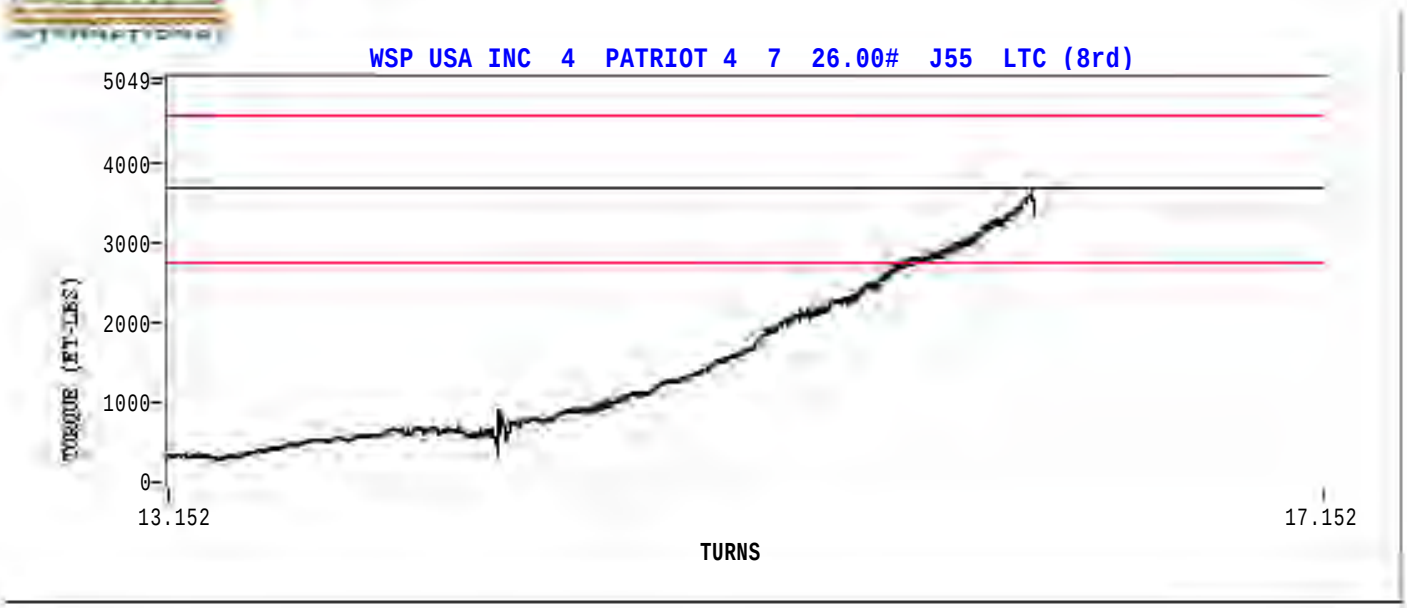


TIME OF MAKE UP :	10:00 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3620 FT-LBS	MAXIMUM TURNS :	16.809 TURNS

FILE NUMBER : ----------->> **56** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 52

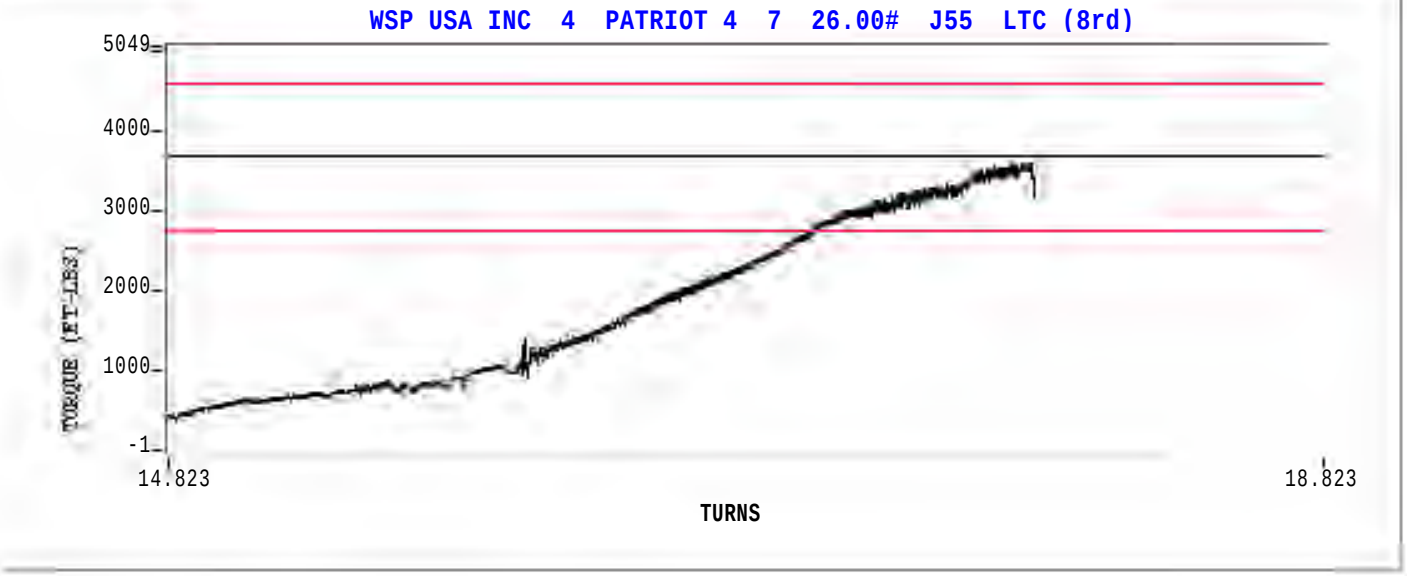
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TIME OF MAKE UP :	10:01 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3643 FT-LBS	MAXIMUM TURNS :	16.152 TURNS

FILE NUMBER : ----------->> **57** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 53

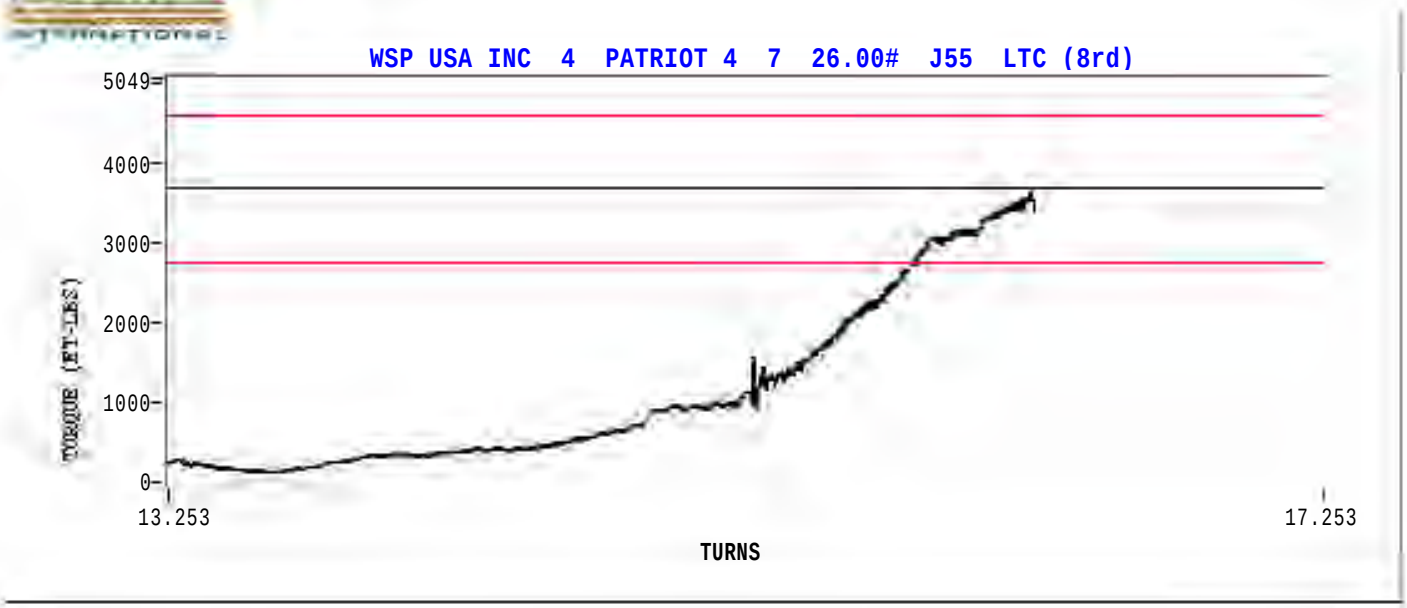


TIME OF MAKE UP :	10:03 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3601 FT-LBS	MAXIMUM TURNS :	17.823 TURNS

FILE NUMBER : ----------->> **58** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 54

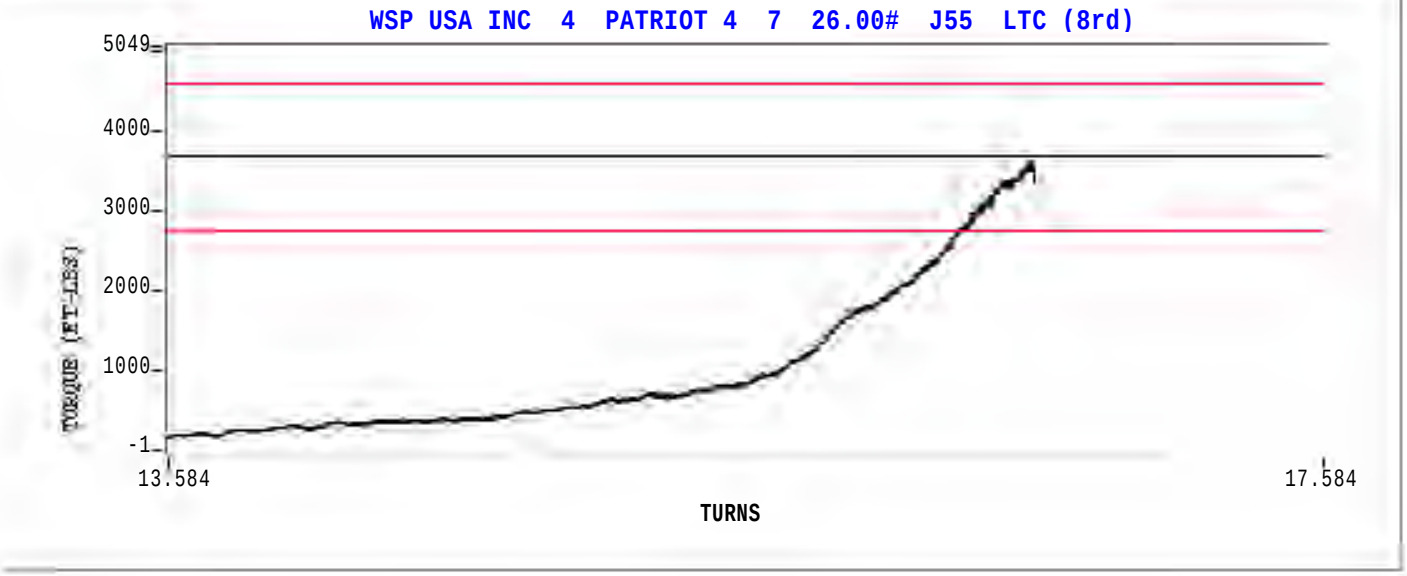
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TIME OF MAKE UP :	10:05 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3658 FT-LBS	MAXIMUM TURNS :	16.253 TURNS

FILE NUMBER : ----------->> **59** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 55

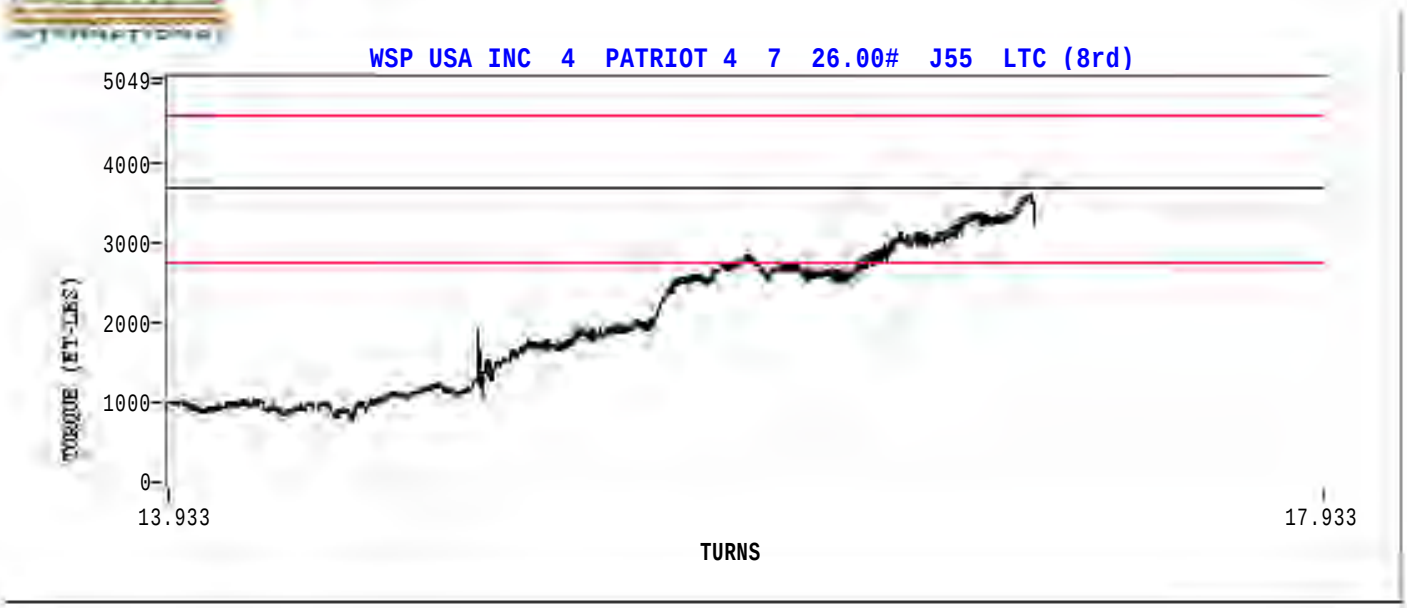


TIME OF MAKE UP :	10:08 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3631 FT-LBS	MAXIMUM TURNS :	16.584 TURNS

FILE NUMBER : ----------->> **60** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 56

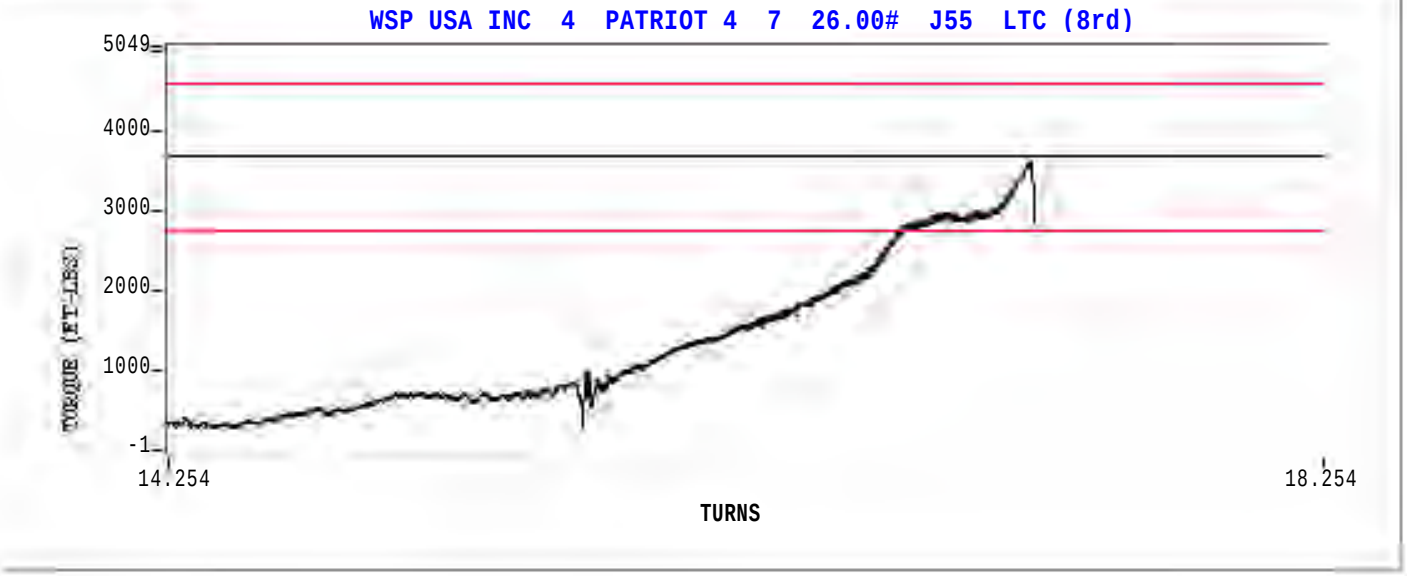
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TIME OF MAKE UP :	10:09 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3612 FT-LBS	MAXIMUM TURNS :	16.933 TURNS

FILE NUMBER : ----------->> **61** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 57

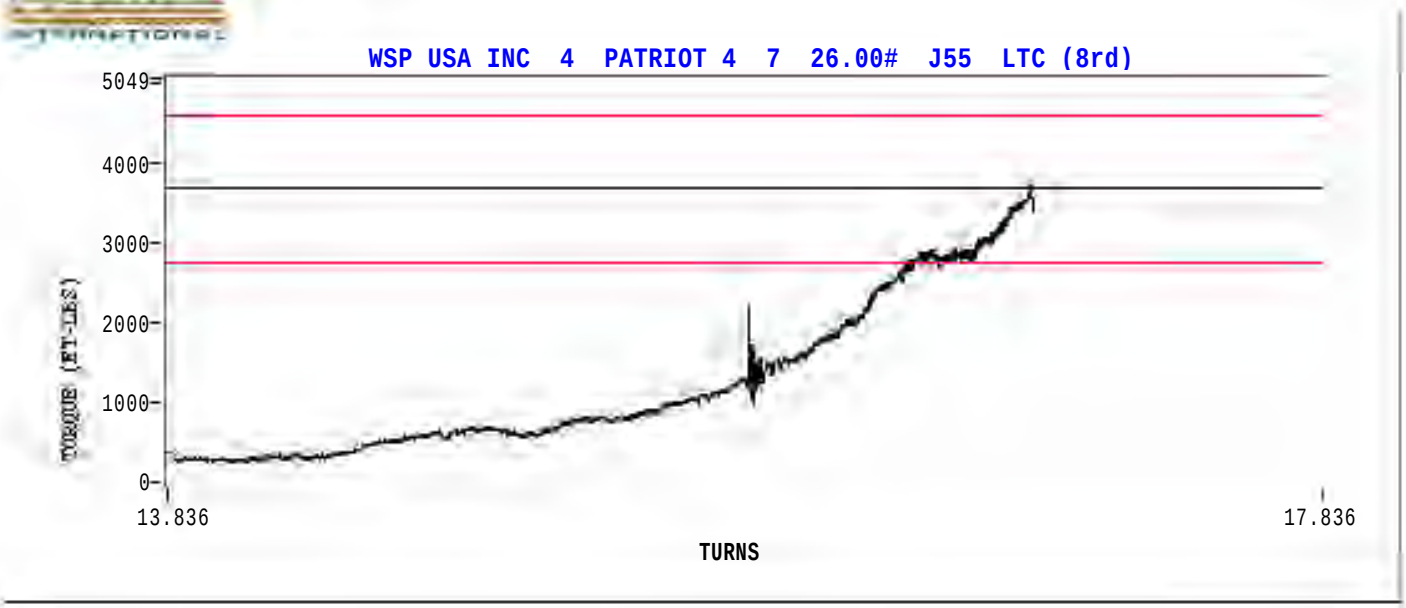


TIME OF MAKE UP :	10:11 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	17.254 TURNS

FILE NUMBER : ----------->> **62** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 58

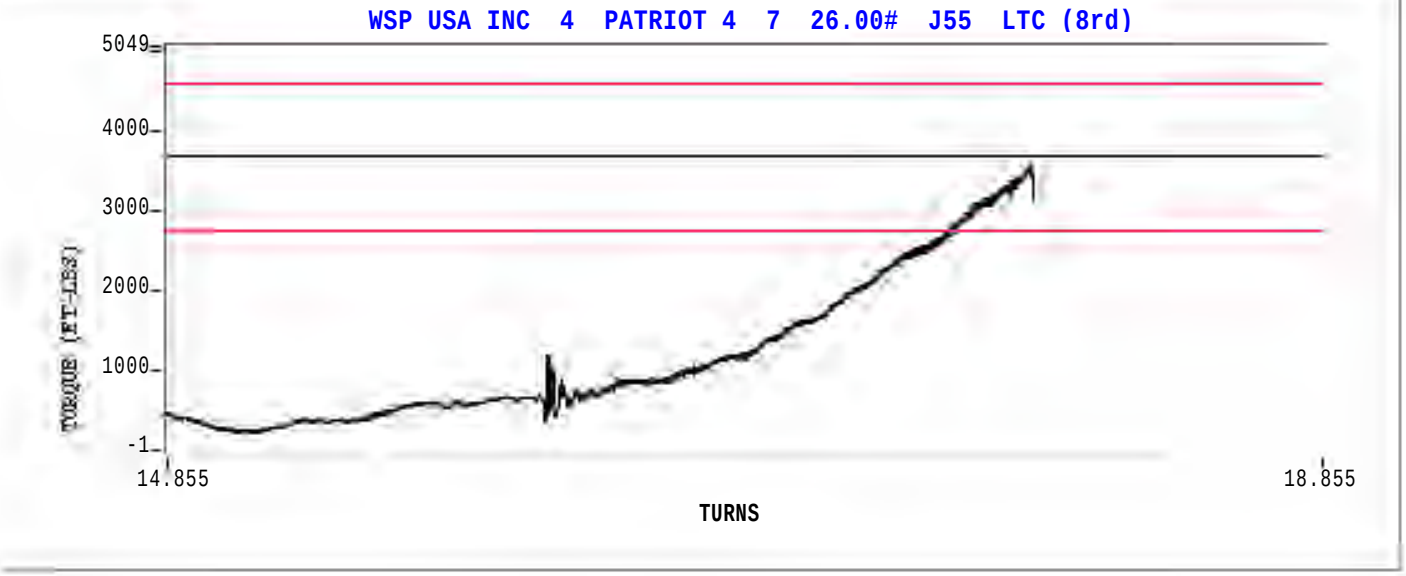
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TIME OF MAKE UP :	10:13 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3698 FT-LBS	MAXIMUM TURNS :	16.836 TURNS

FILE NUMBER : ----------->> **63** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 59

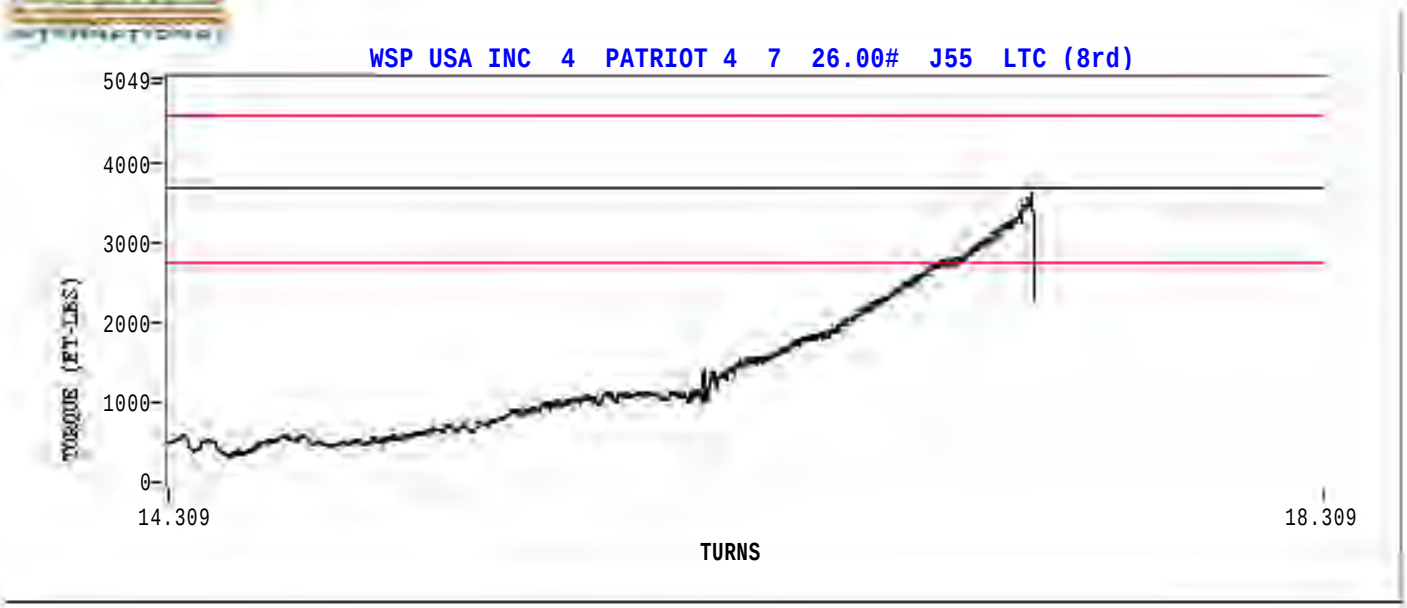


TIME OF MAKE UP :	10:15 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3592 FT-LBS	MAXIMUM TURNS :	17.855 TURNS

FILE NUMBER : ----------->> **64** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 60

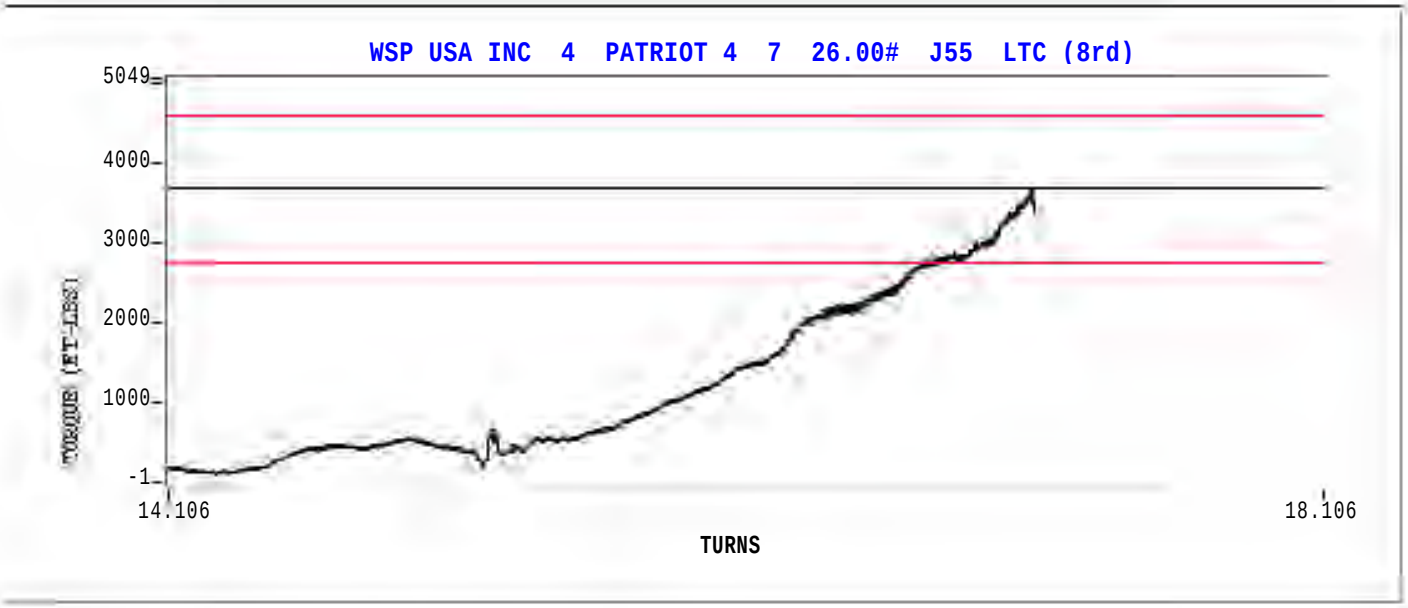
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TIME OF MAKE UP :	10:17 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3608 FT-LBS	MAXIMUM TURNS :	17.309 TURNS

FILE NUMBER : ----------->> **65** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 61



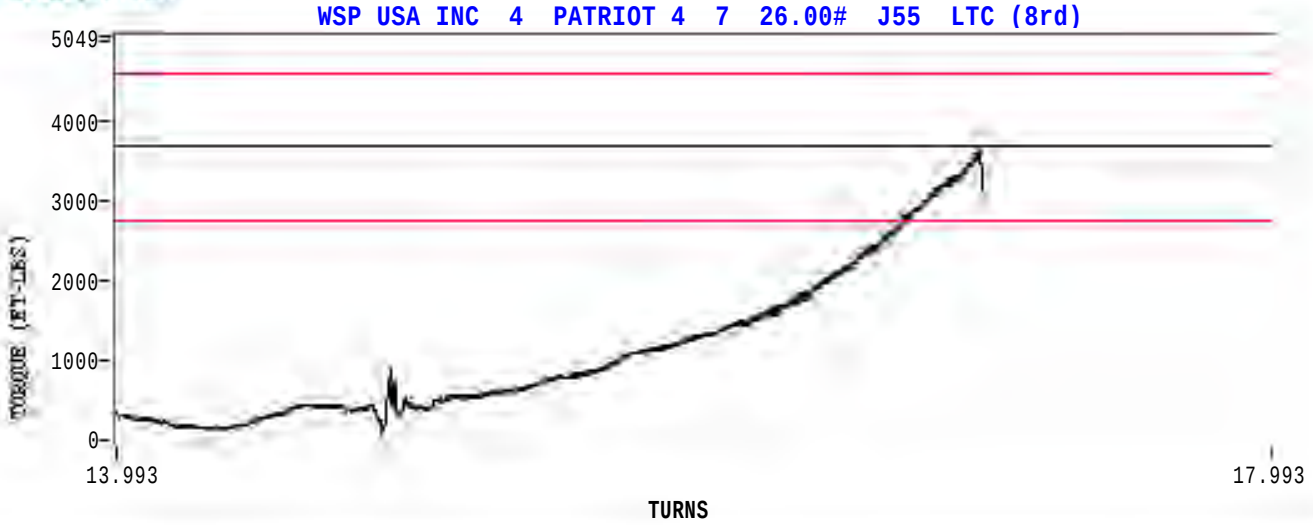
TIME OF MAKE UP :	10:18 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3668 FT-LBS	MAXIMUM TURNS :	17.106 TURNS

FILE NUMBER : ----------->> **66** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 62

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

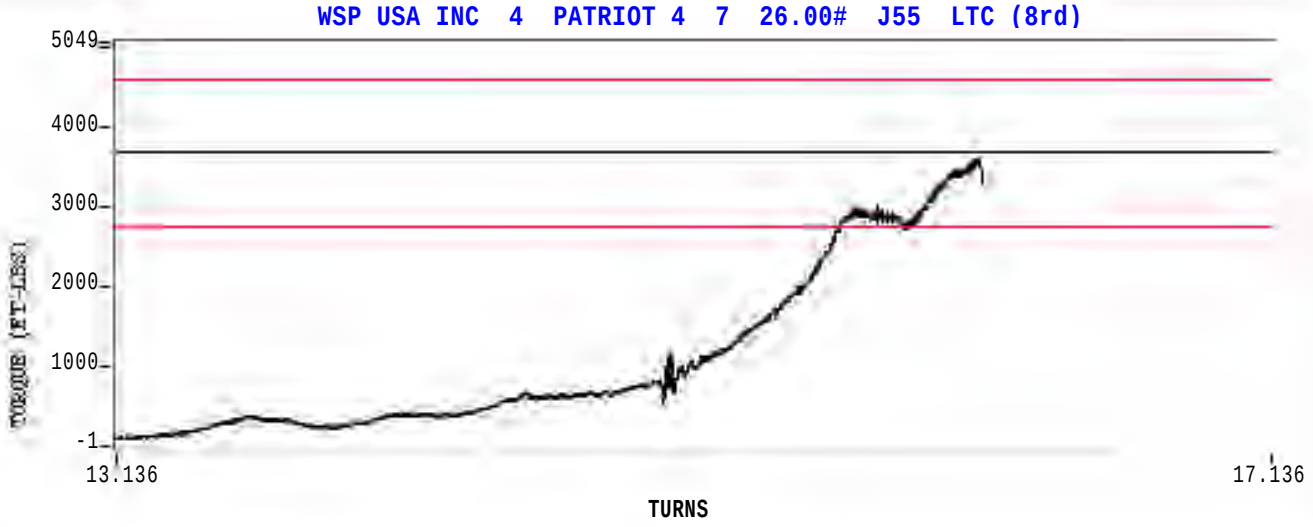


TIME OF MAKE UP :	10:20 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3637 FT-LBS	MAXIMUM TURNS :	16.993 TURNS

FILE NUMBER : ----------->> **67** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 63

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

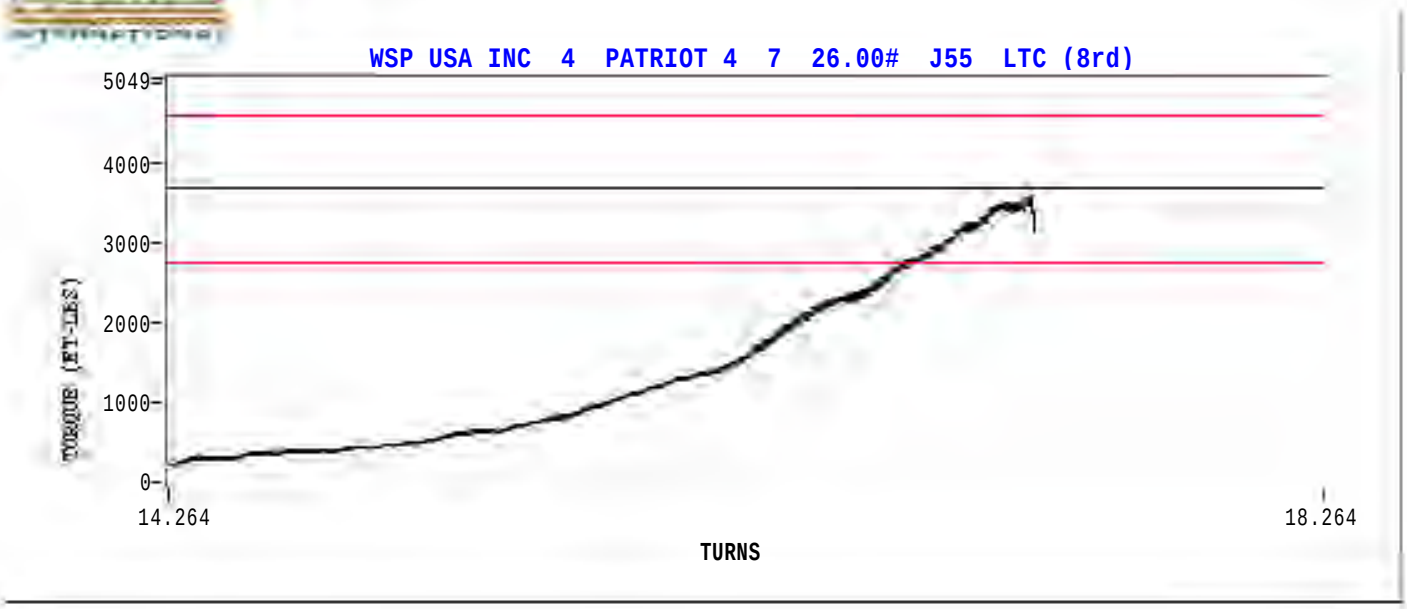


TIME OF MAKE UP :	10:22 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3618 FT-LBS	MAXIMUM TURNS :	16.136 TURNS

FILE NUMBER : ----------->> **68** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 64

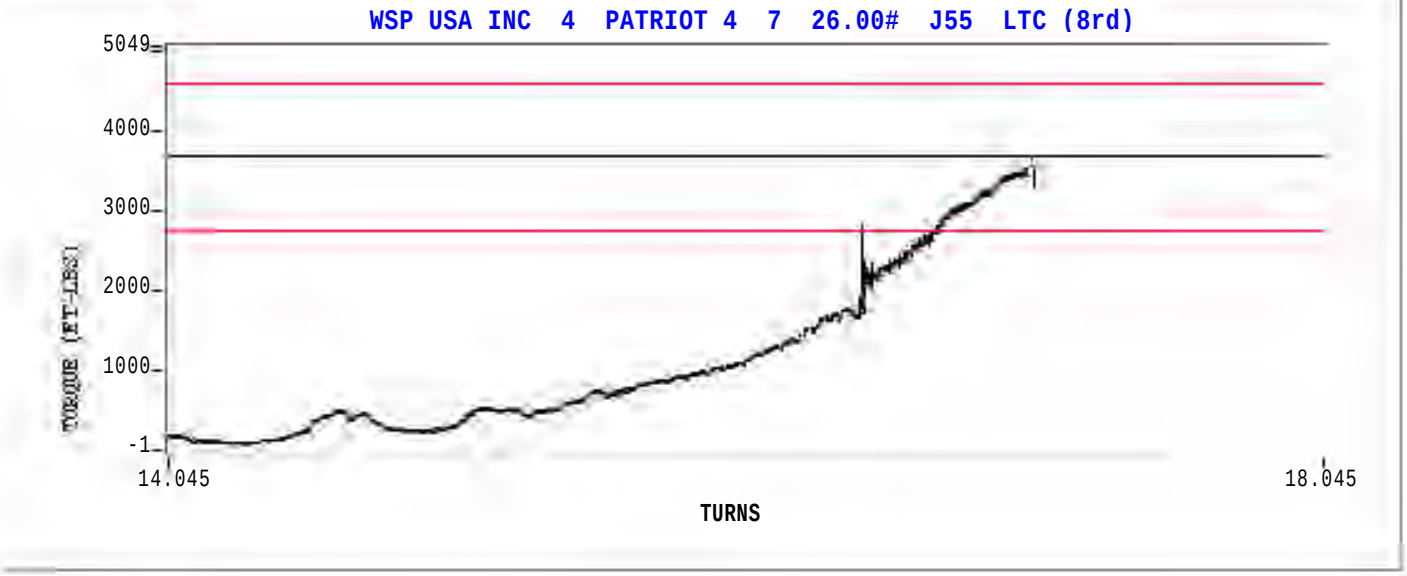
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TIME OF MAKE UP :	10:24 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	17.264 TURNS

FILE NUMBER : ----------->> **69** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 65

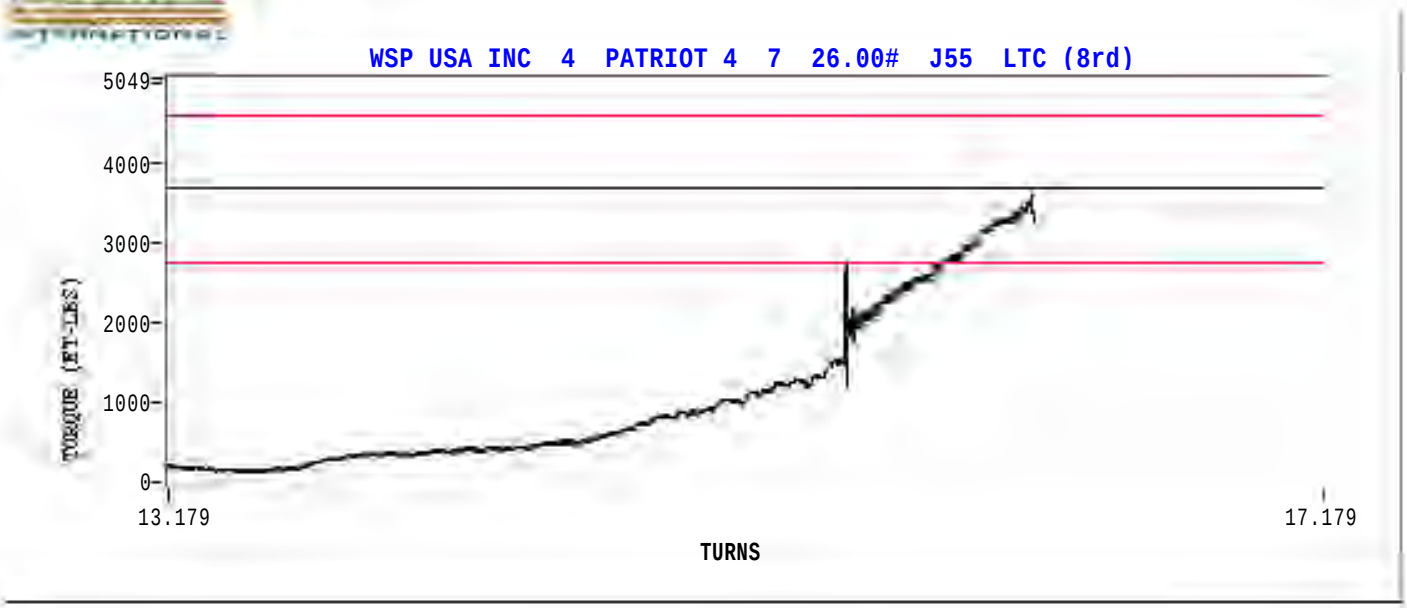


TIME OF MAKE UP :	10:26 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3658 FT-LBS	MAXIMUM TURNS :	17.045 TURNS

FILE NUMBER : ----------->> **70** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 66

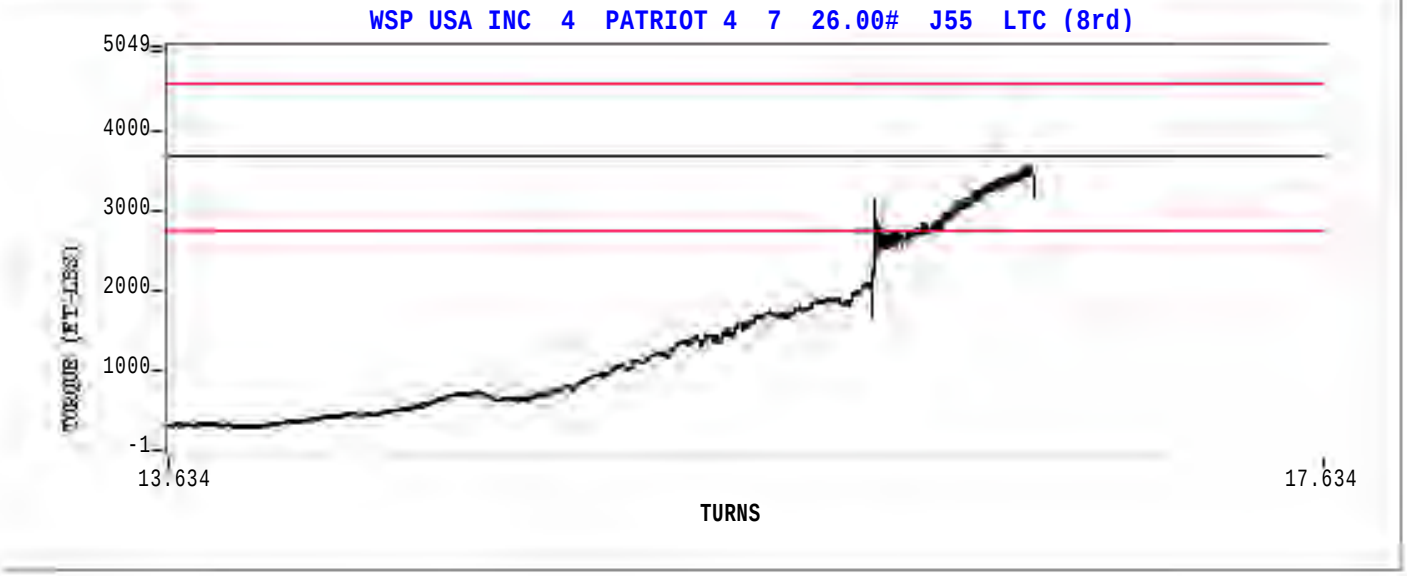
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TIME OF MAKE UP :	10:28 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3585 FT-LBS	MAXIMUM TURNS :	16.179 TURNS

FILE NUMBER : ----------->> **71** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 67

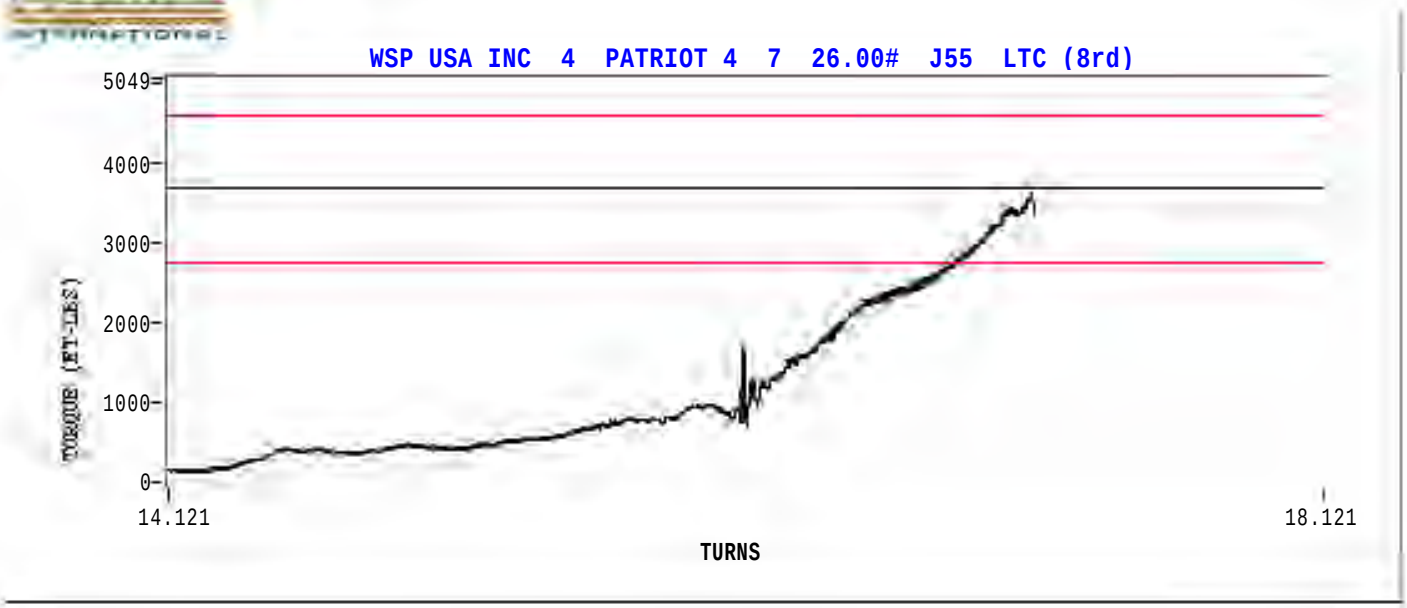


TIME OF MAKE UP :	10:30 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3577 FT-LBS	MAXIMUM TURNS :	16.634 TURNS

FILE NUMBER : ----------->> **72** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 68

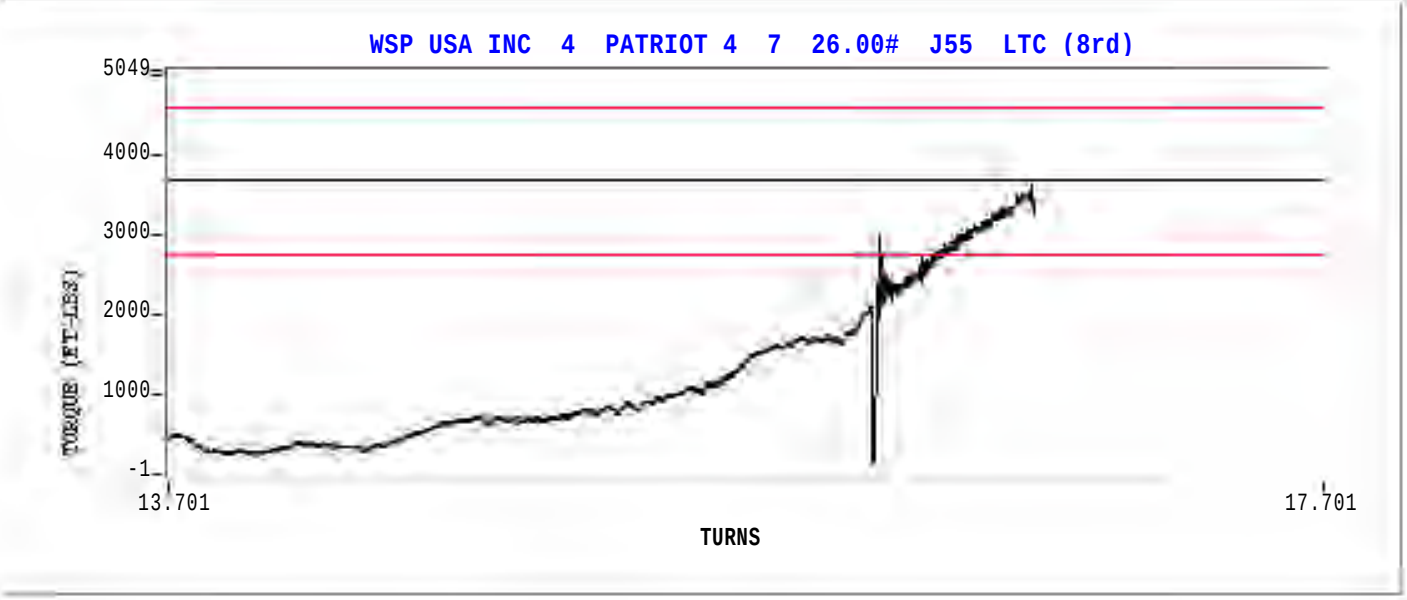
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TIME OF MAKE UP :	10:32 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3617 FT-LBS	MAXIMUM TURNS :	17.121 TURNS

FILE NUMBER : ----------->> **73** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 69

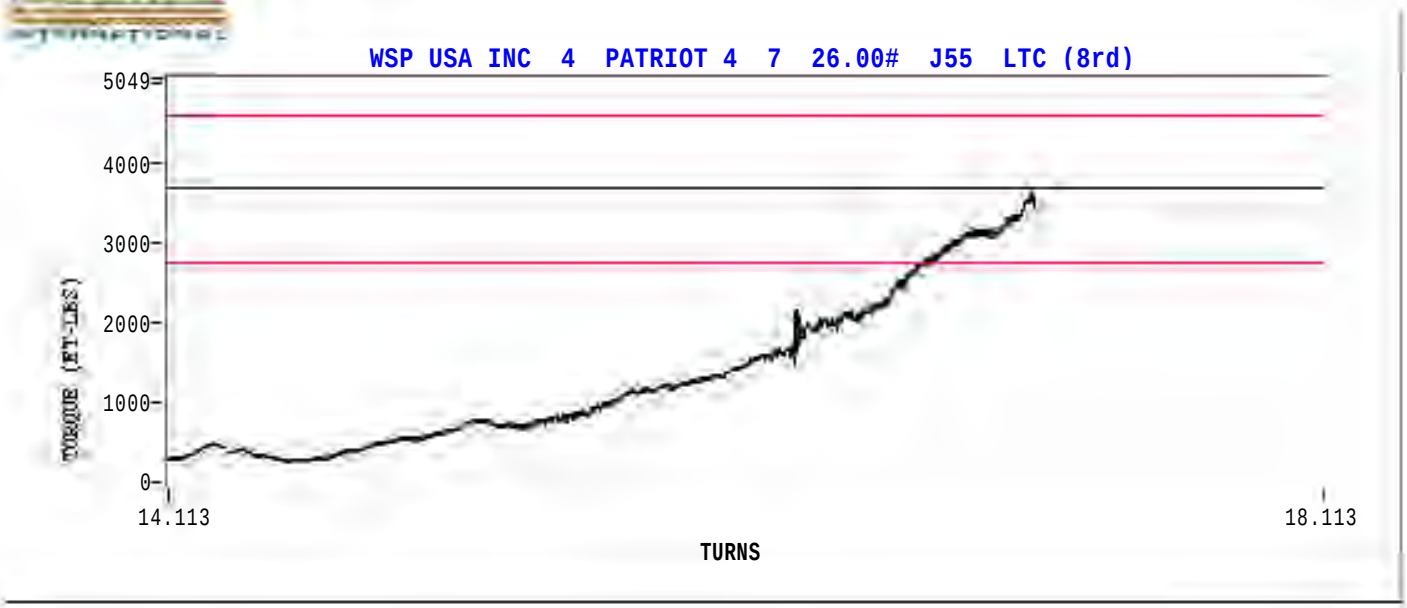


TIME OF MAKE UP :	10:34 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	16.701 TURNS

FILE NUMBER : ----------->> **74** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 70

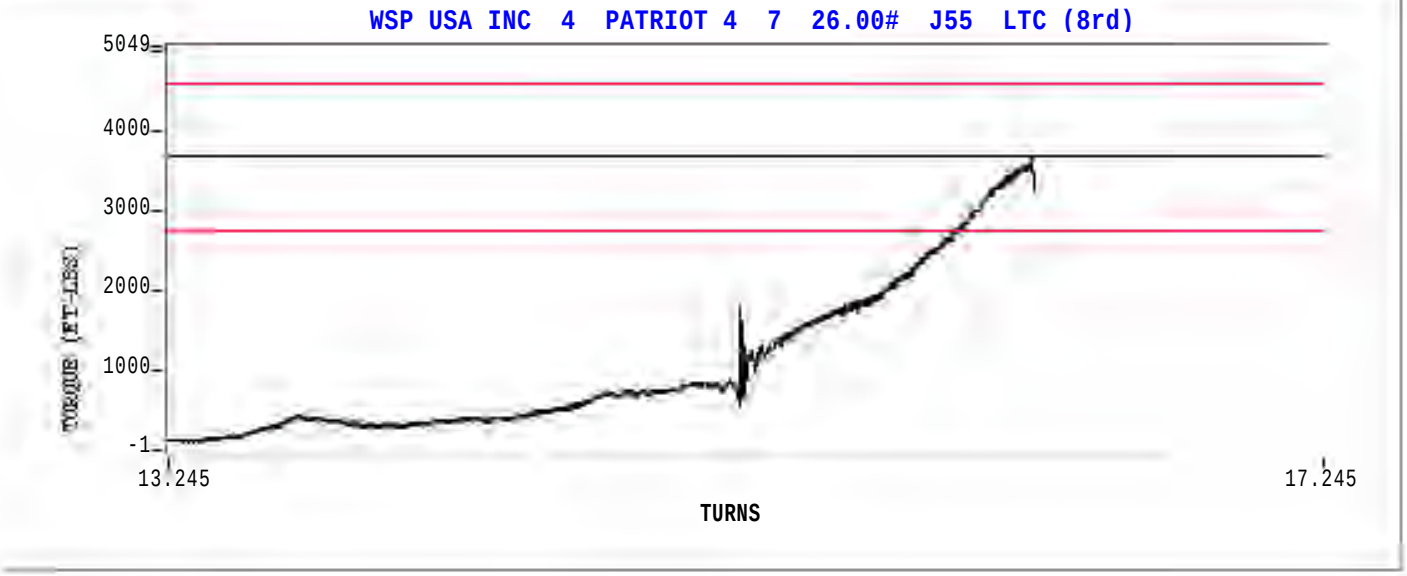
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TIME OF MAKE UP :	10:36 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3629 FT-LBS	MAXIMUM TURNS :	17.113 TURNS

FILE NUMBER : ----------->> **75** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 71

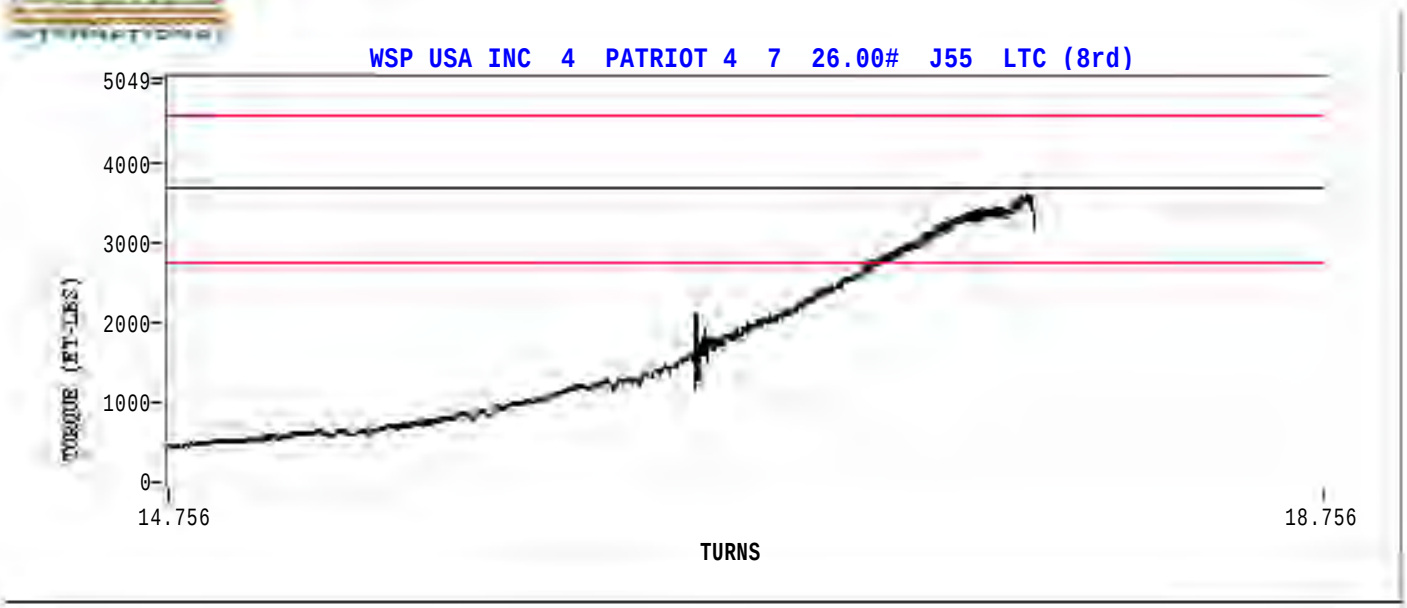


TIME OF MAKE UP :	10:38 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3634 FT-LBS	MAXIMUM TURNS :	16.245 TURNS

FILE NUMBER : ----------->> **76** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 72

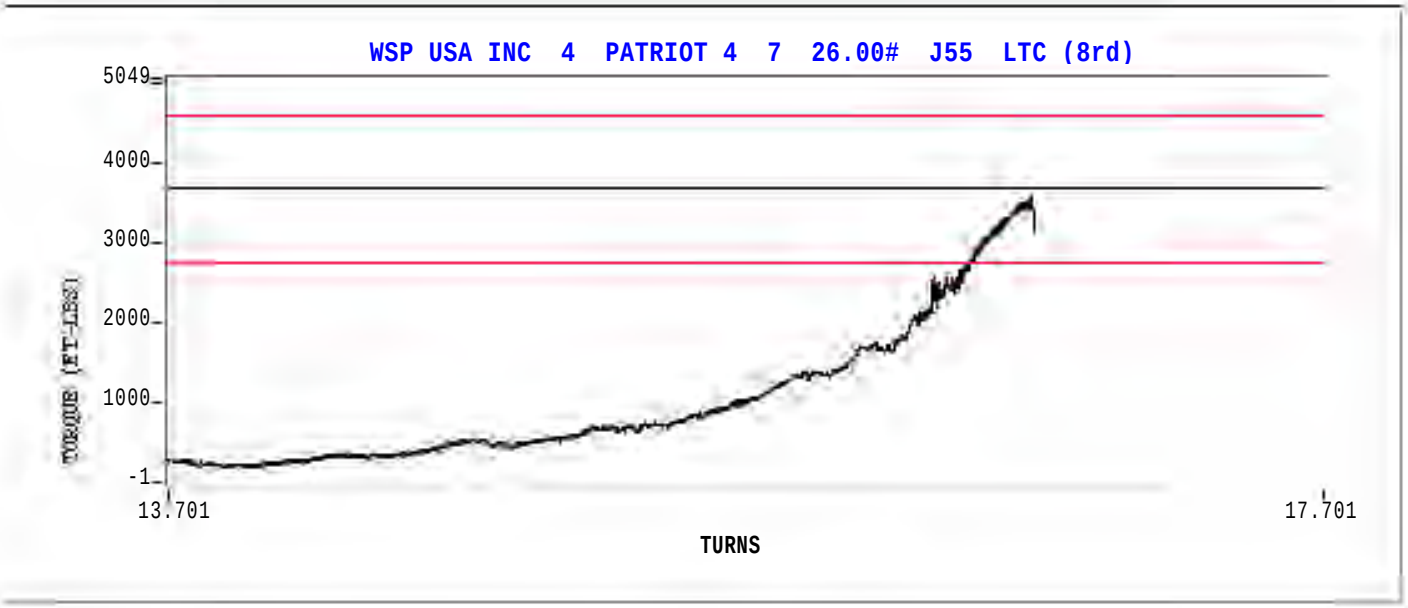
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TIME OF MAKE UP :	10:40 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3600 FT-LBS	MAXIMUM TURNS :	17.756 TURNS

FILE NUMBER : ----------->> **77** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 73



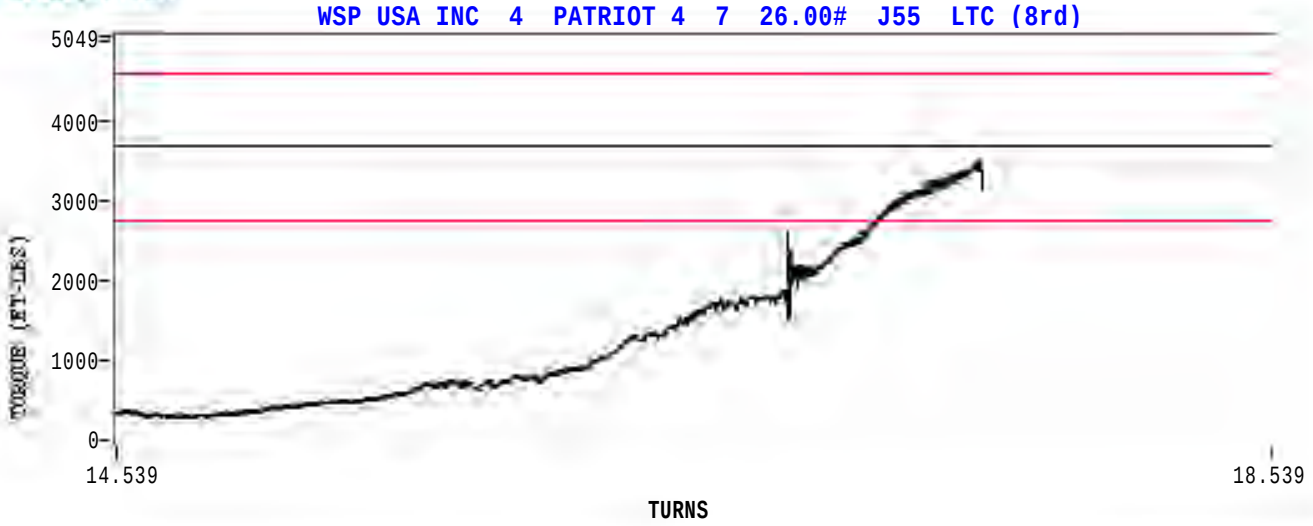
TIME OF MAKE UP :	10:42 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3598 FT-LBS	MAXIMUM TURNS :	16.701 TURNS

FILE NUMBER : ----------->> **78** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 74

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

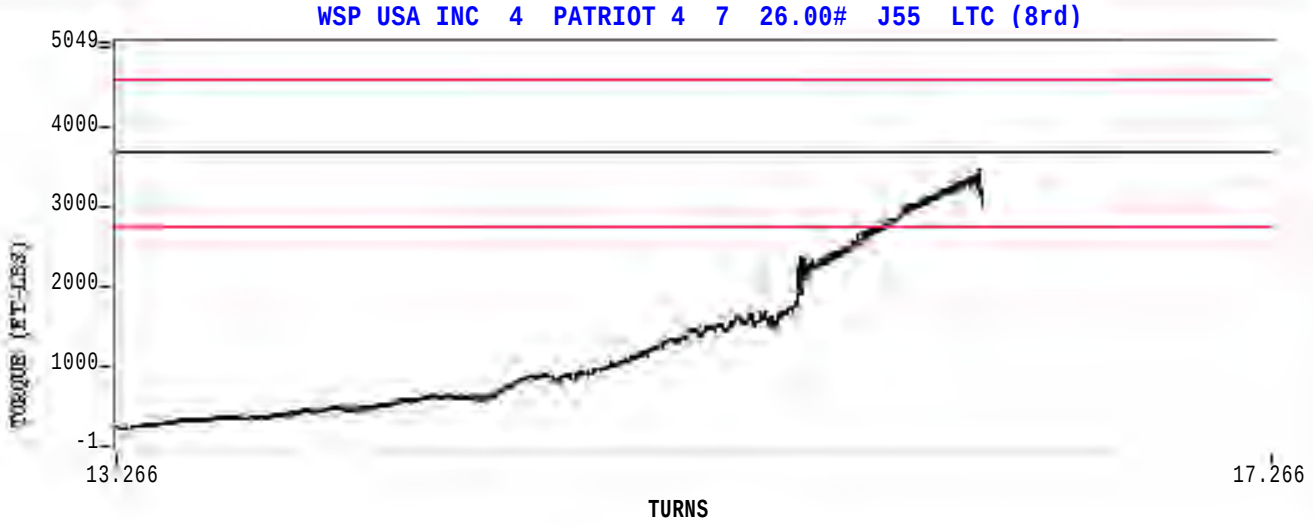


TIME OF MAKE UP :	10:44 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3517 FT-LBS	MAXIMUM TURNS :	17.539 TURNS

FILE NUMBER : ---------->> 79 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 75

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

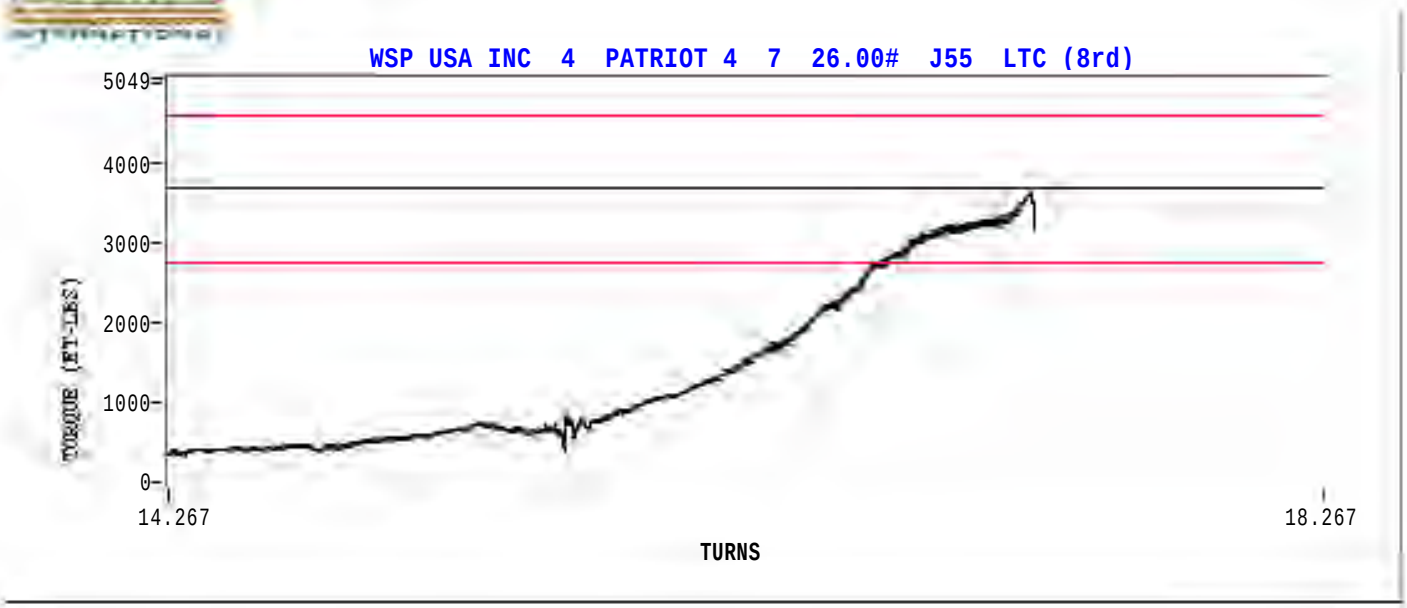


TIME OF MAKE UP :	10:46 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3464 FT-LBS	MAXIMUM TURNS :	16.266 TURNS

FILE NUMBER : ---------->> 80 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 76

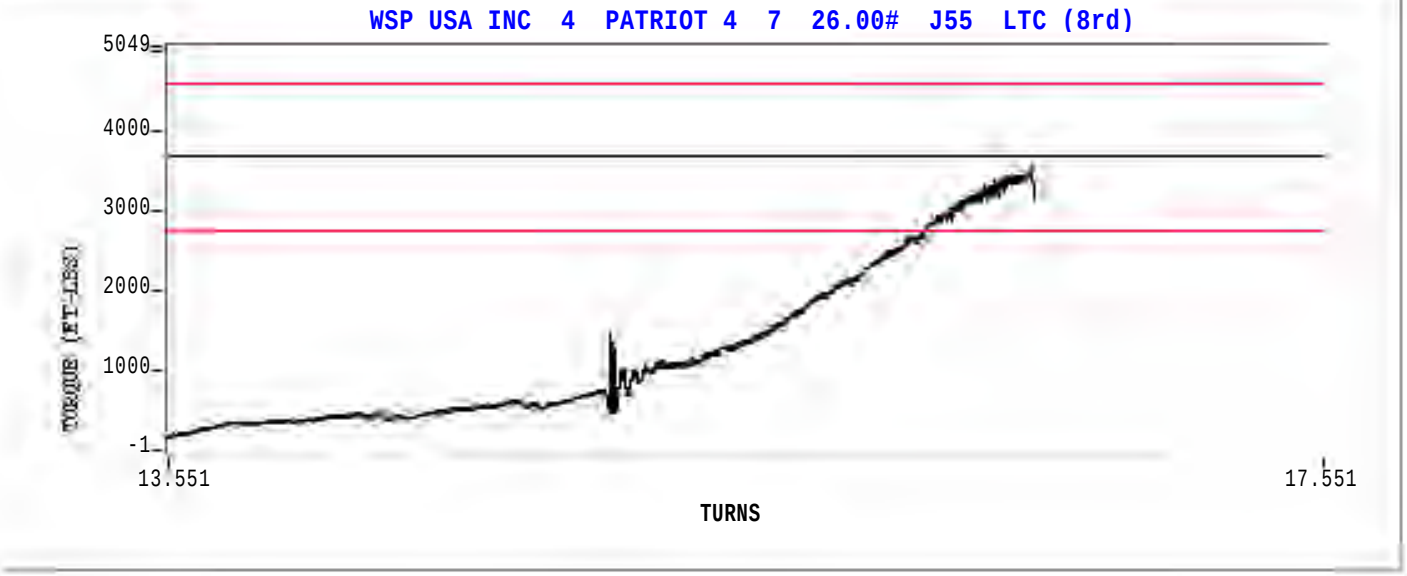
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TIME OF MAKE UP :	10:48 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3644 FT-LBS	MAXIMUM TURNS :	17.267 TURNS

FILE NUMBER : ----------->> **81** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 77

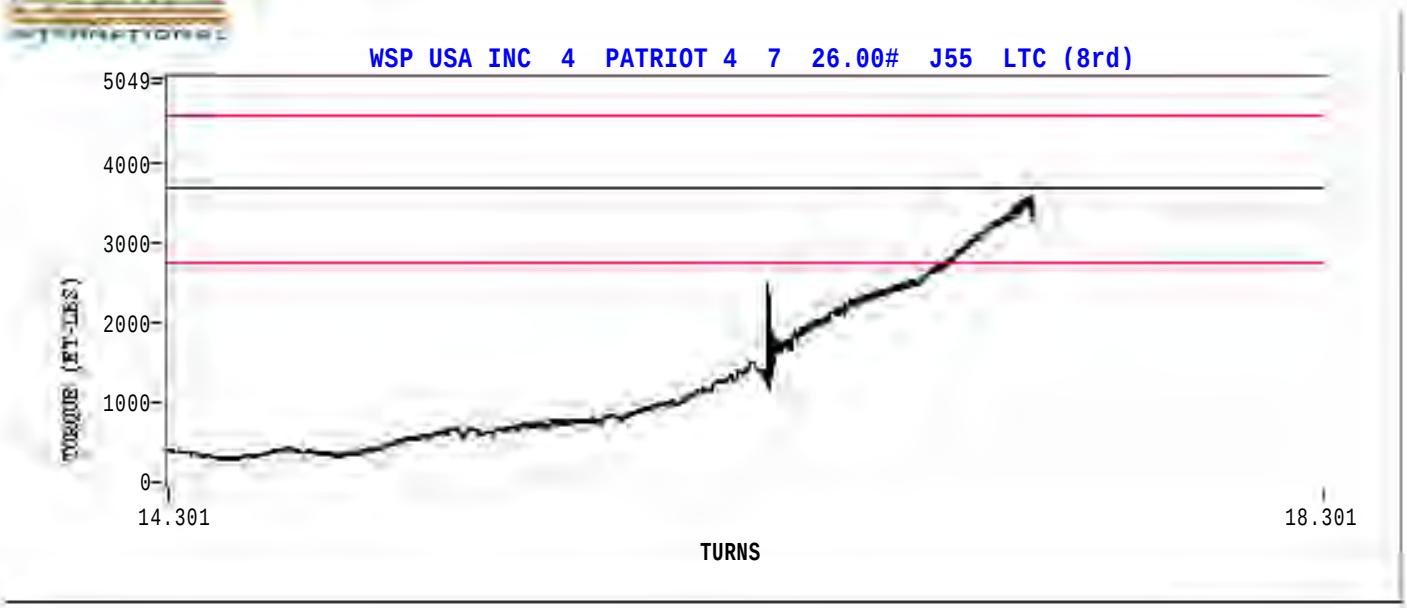


TIME OF MAKE UP :	10:50 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3559 FT-LBS	MAXIMUM TURNS :	16.551 TURNS

FILE NUMBER : ----------->> **82** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 78

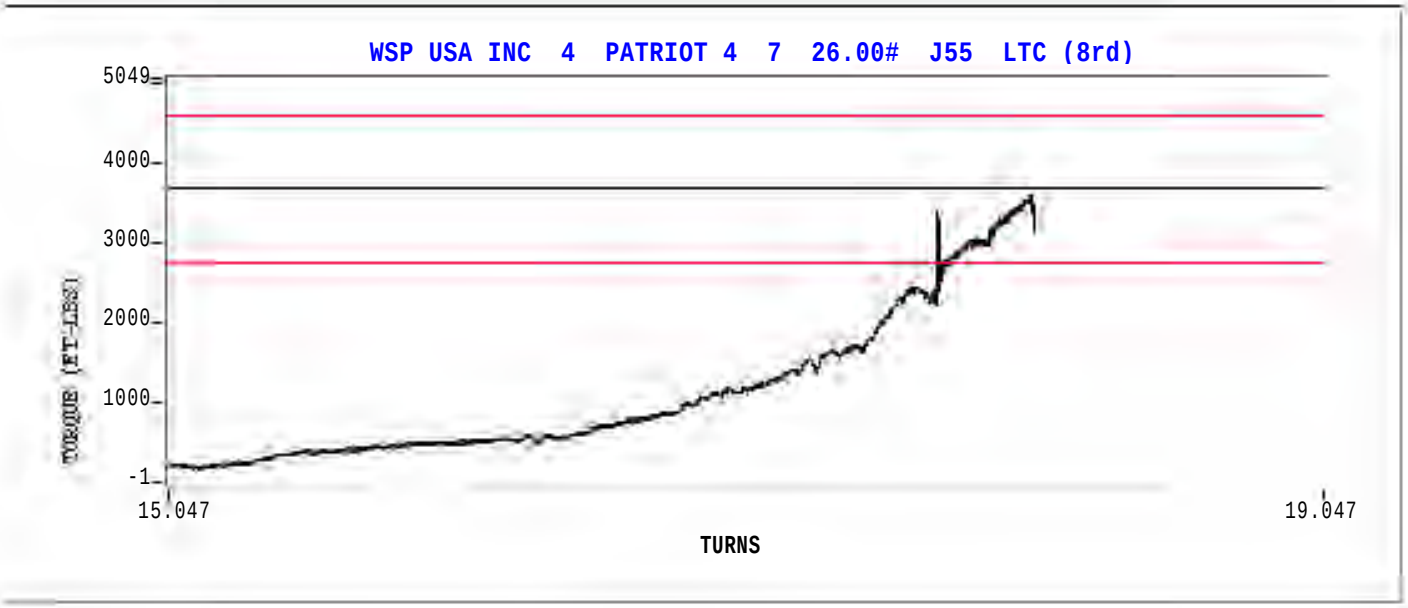
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TIME OF MAKE UP :	10:52 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3590 FT-LBS	MAXIMUM TURNS :	17.301 TURNS

FILE NUMBER : ----------->> **83** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 79

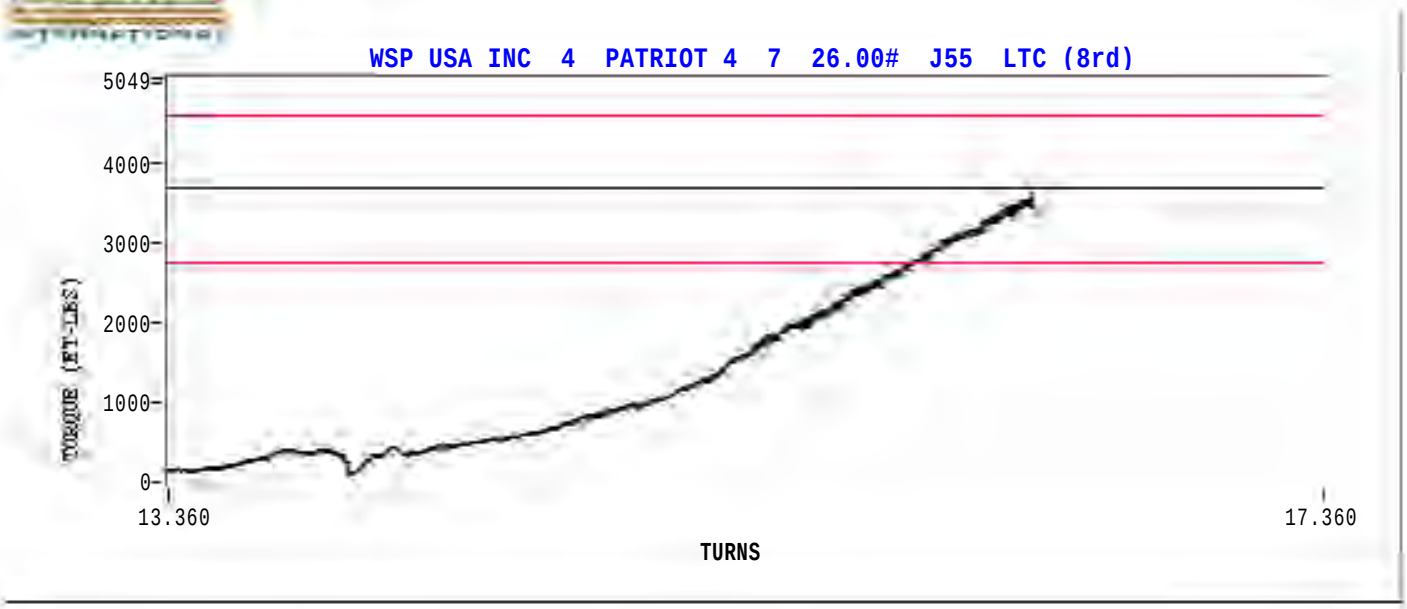


TIME OF MAKE UP :	10:54 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3583 FT-LBS	MAXIMUM TURNS :	18.047 TURNS

FILE NUMBER : ----------->> **84** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 80

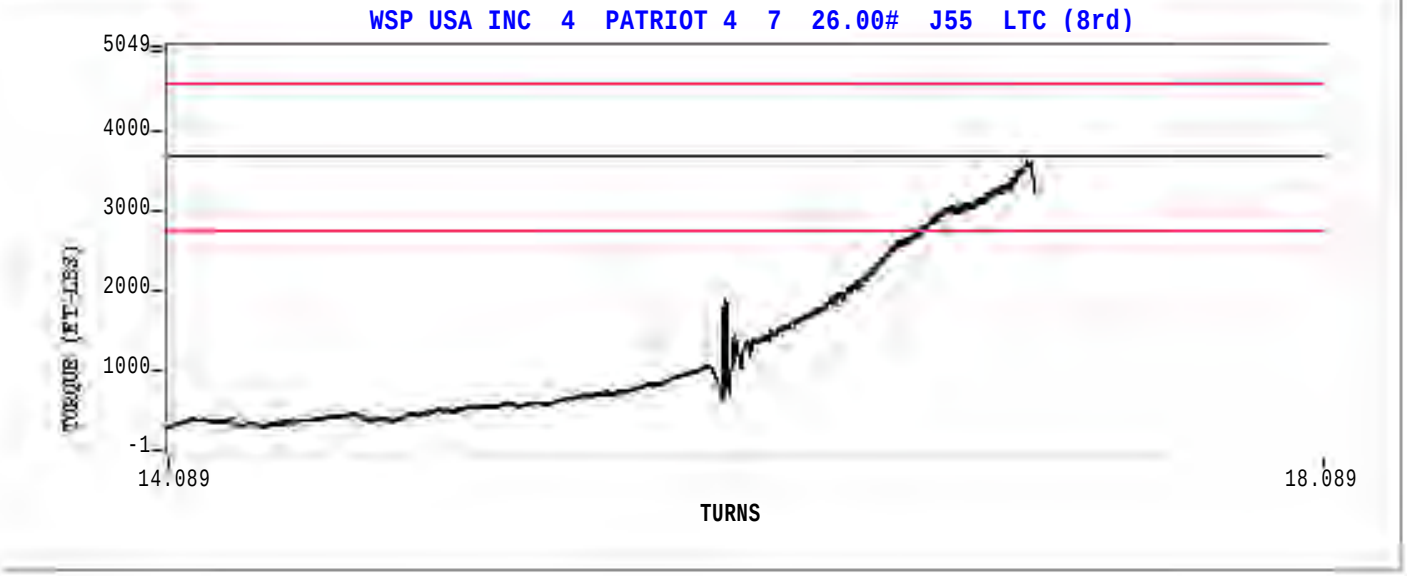
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TIME OF MAKE UP :	10:56 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3613 FT-LBS	MAXIMUM TURNS :	16.360 TURNS

FILE NUMBER : ----------->> **85** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 81

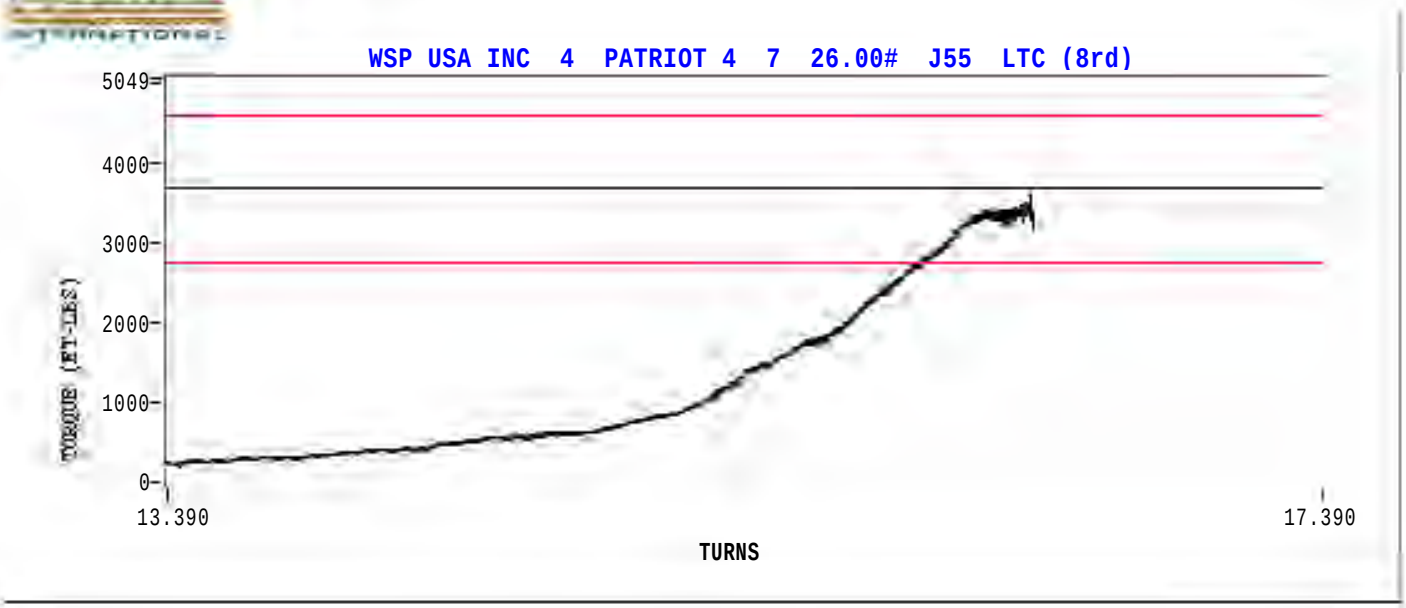


TIME OF MAKE UP :	10:58 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3628 FT-LBS	MAXIMUM TURNS :	17.089 TURNS

FILE NUMBER : ----------->> **86** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 82

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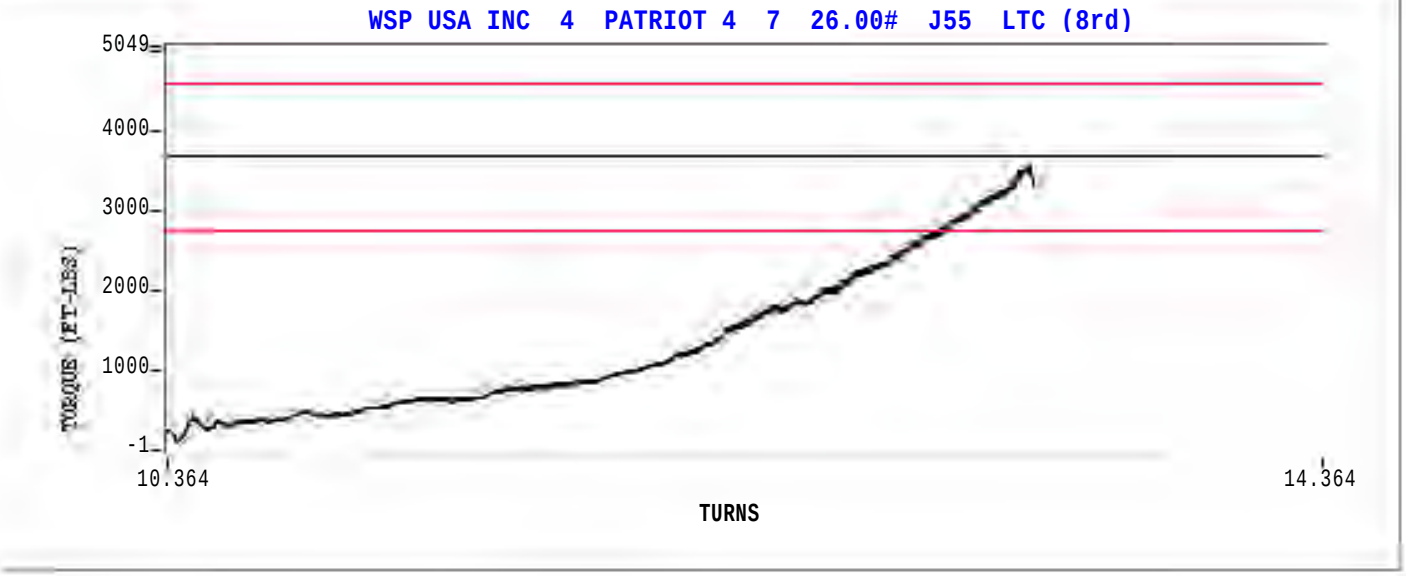


TIME OF MAKE UP : 11:00 PM DATE OF MAKE UP : Sun, Aug 05, 2018

MAXIMUM TORQUE : 3593 FT-LBS MAXIMUM TURNS : 16.390 TURNS

FILE NUMBER : ---------->> 87 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 83



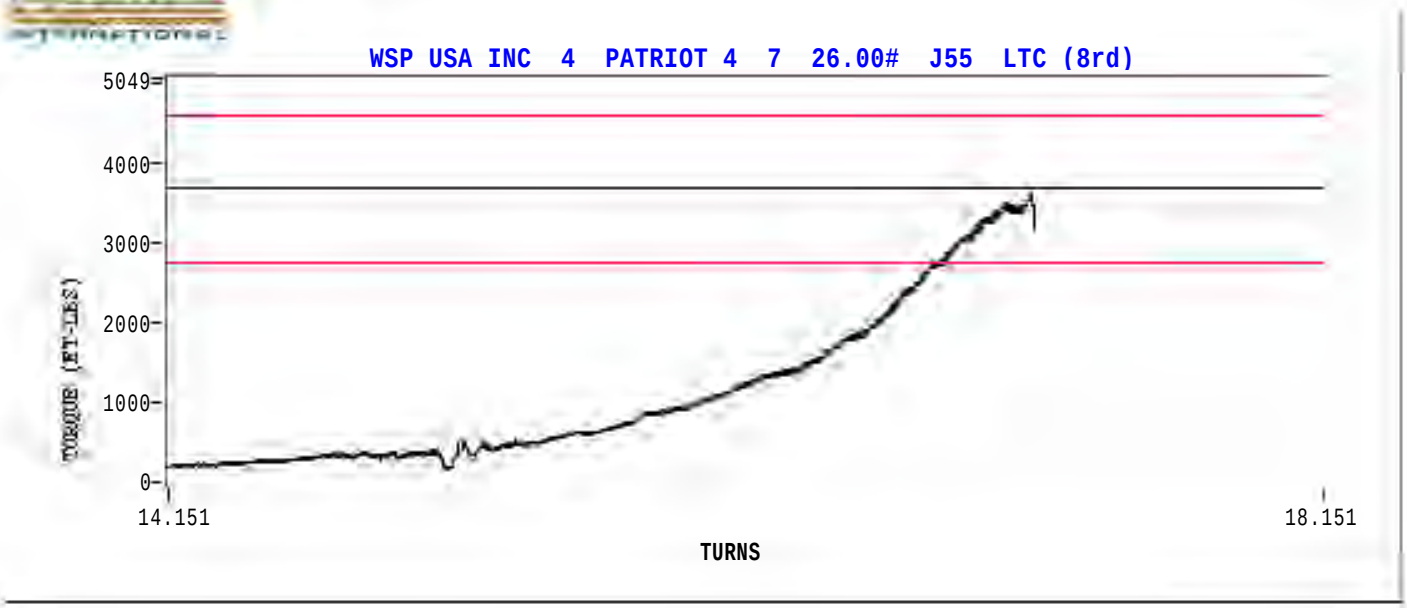
TIME OF MAKE UP : 11:02 PM DATE OF MAKE UP : Sun, Aug 05, 2018

MAXIMUM TORQUE : 3552 FT-LBS MAXIMUM TURNS : 13.364 TURNS

FILE NUMBER : ---------->> 88 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 84

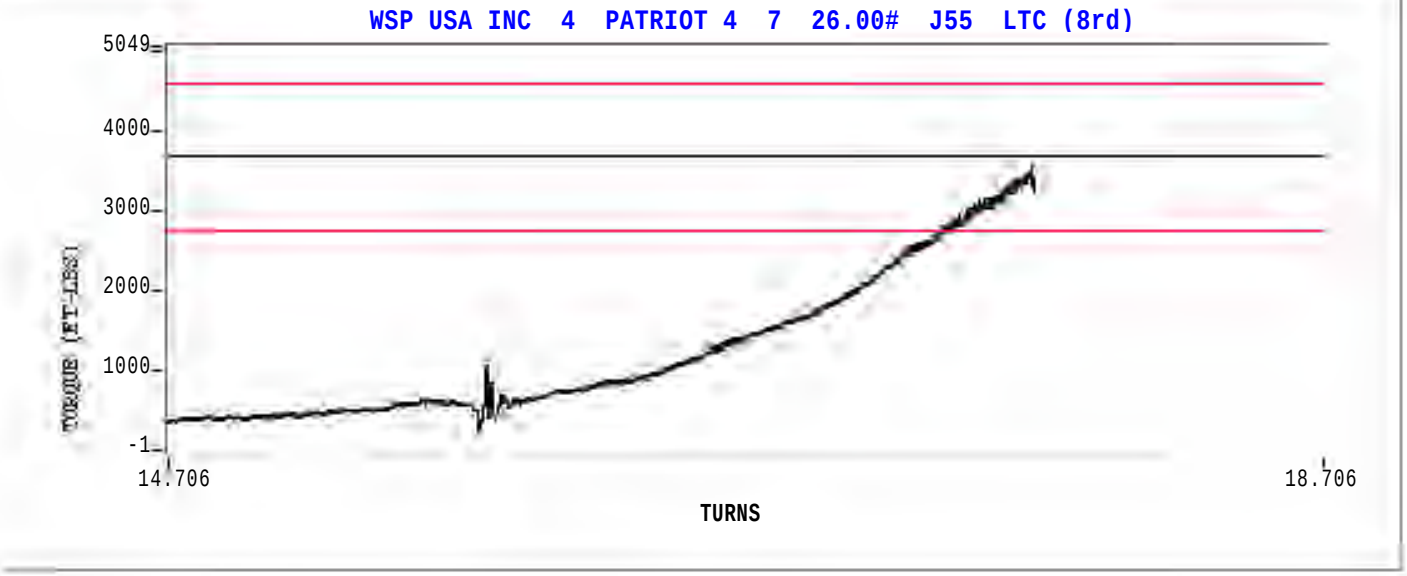
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TIME OF MAKE UP :	11:04 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	17.151 TURNS

FILE NUMBER : ----------->> **89** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 85

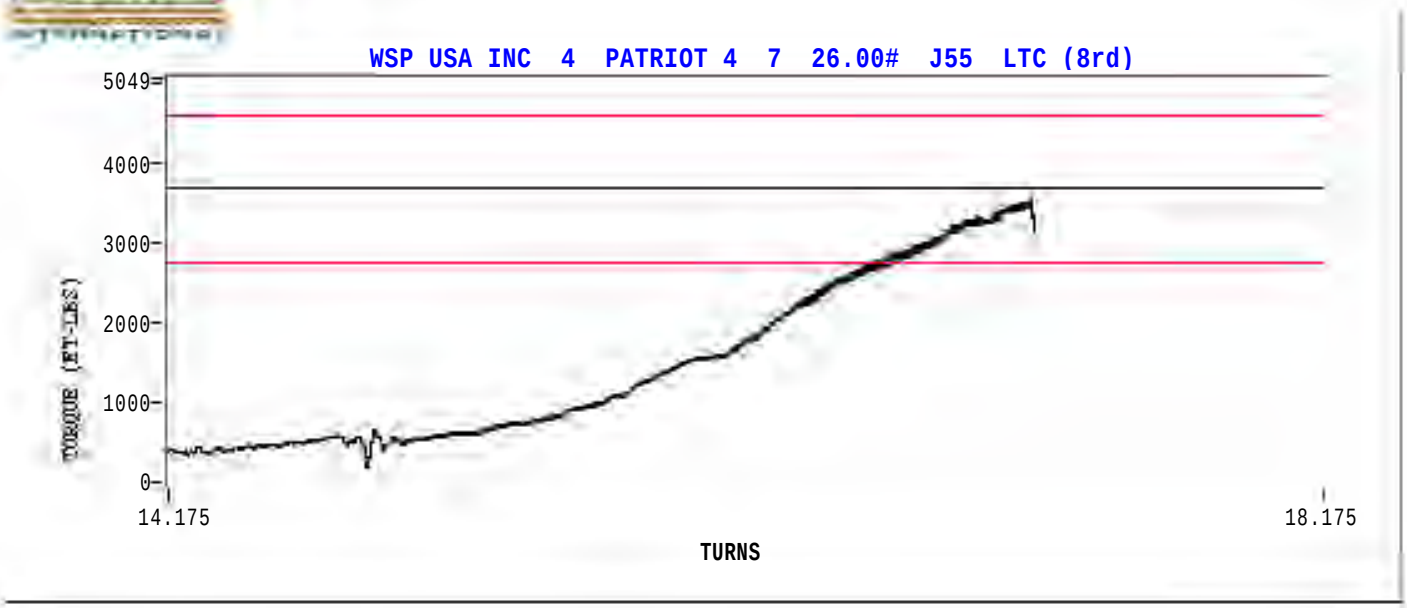


TIME OF MAKE UP :	11:06 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3541 FT-LBS	MAXIMUM TURNS :	17.706 TURNS

FILE NUMBER : ----------->> **90** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 86

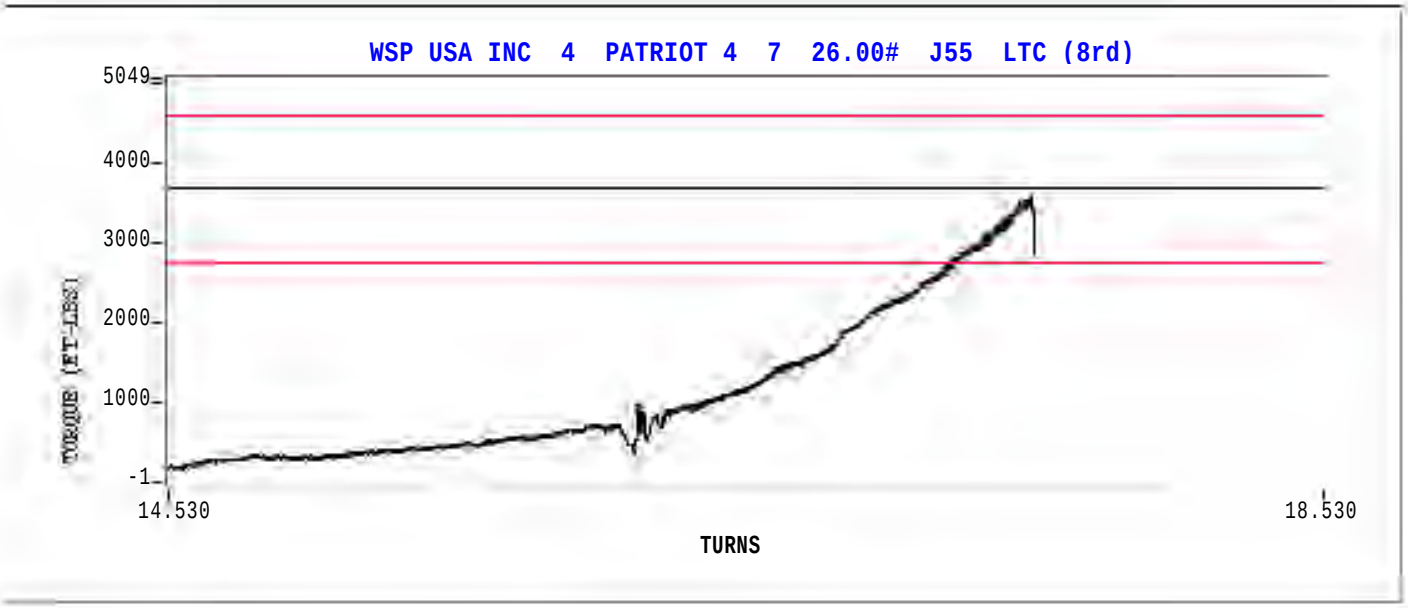
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TIME OF MAKE UP :	11:08 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3550 FT-LBS	MAXIMUM TURNS :	17.175 TURNS

FILE NUMBER : ----------->> **91** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 87

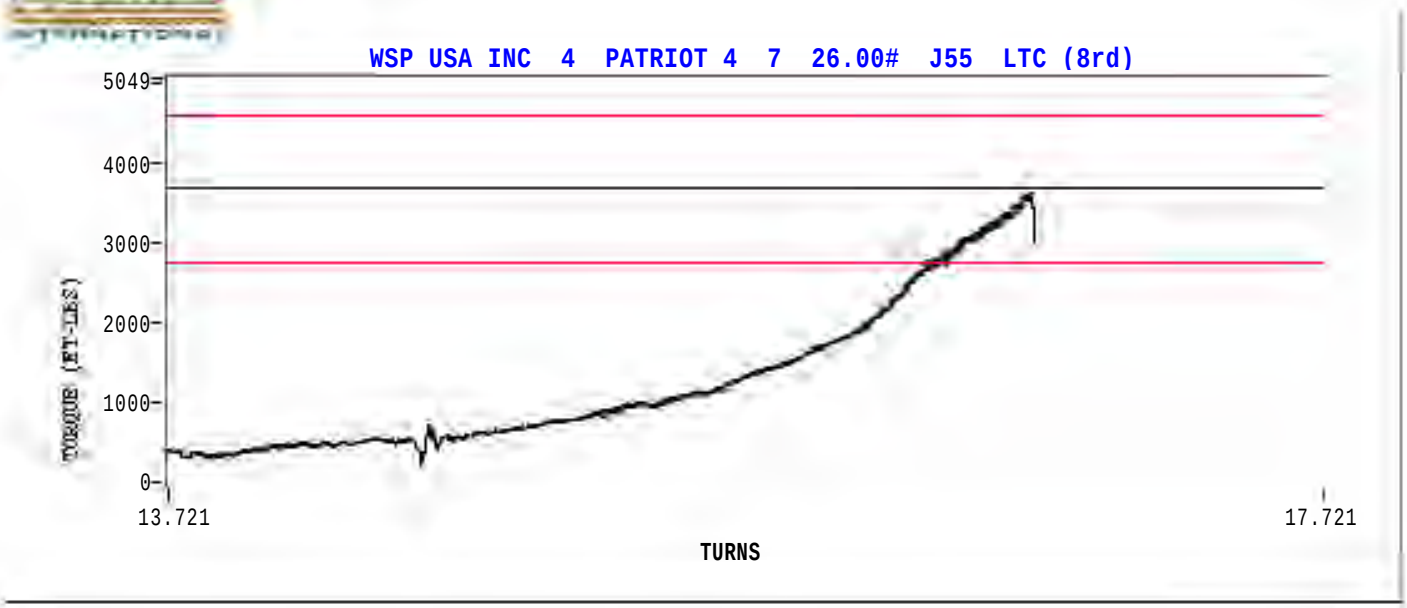


TIME OF MAKE UP :	11:10 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3580 FT-LBS	MAXIMUM TURNS :	17.530 TURNS

FILE NUMBER : ----------->> **92** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 88

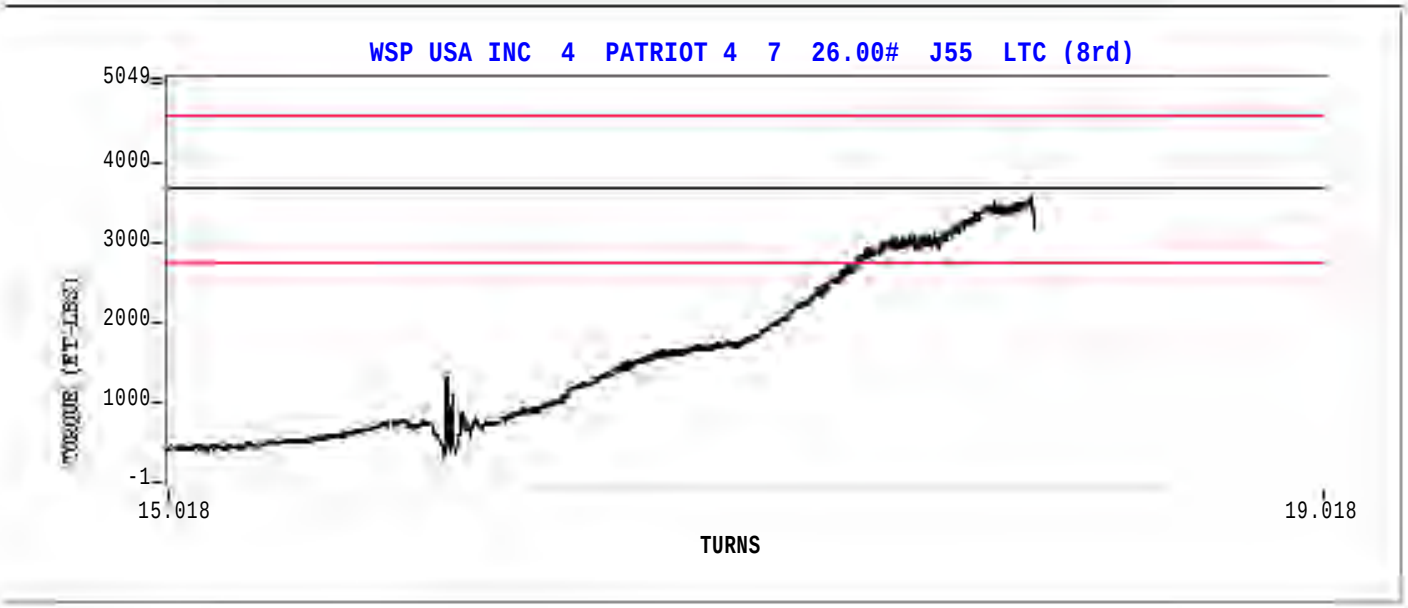
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TIME OF MAKE UP :	11:12 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3616 FT-LBS	MAXIMUM TURNS :	16.721 TURNS

FILE NUMBER : ----------->> **93** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 89

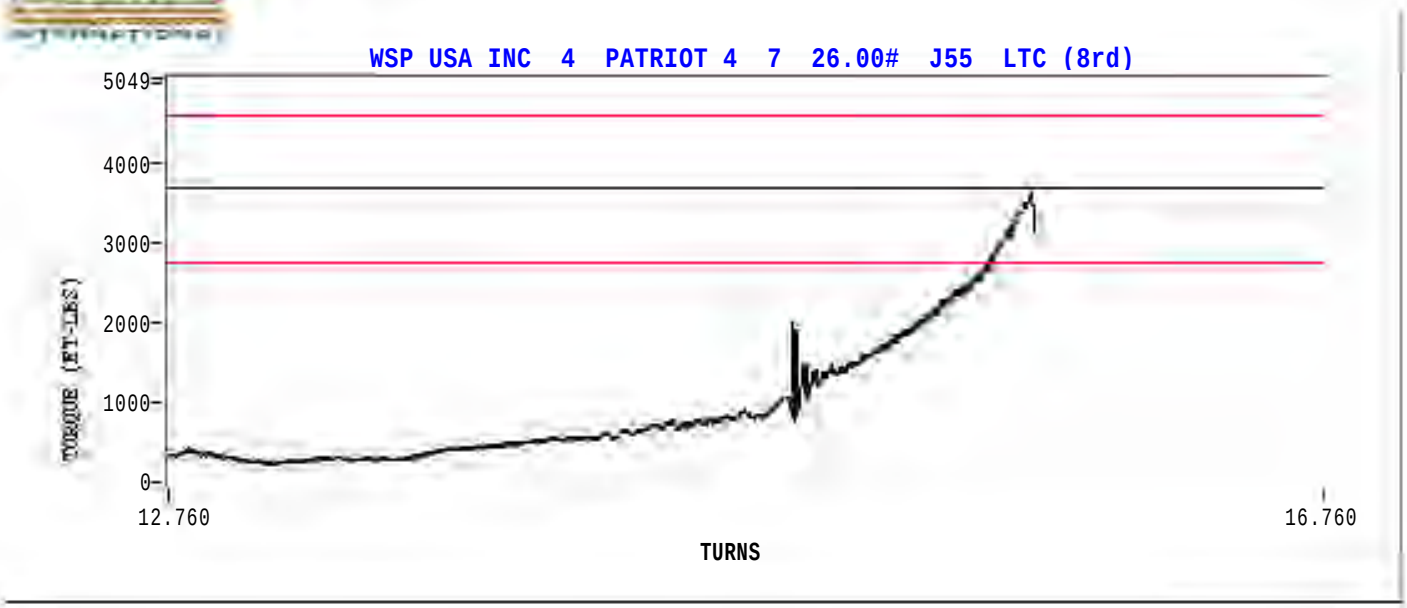


TIME OF MAKE UP :	11:14 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3589 FT-LBS	MAXIMUM TURNS :	18.018 TURNS

FILE NUMBER : ----------->> **94** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 90

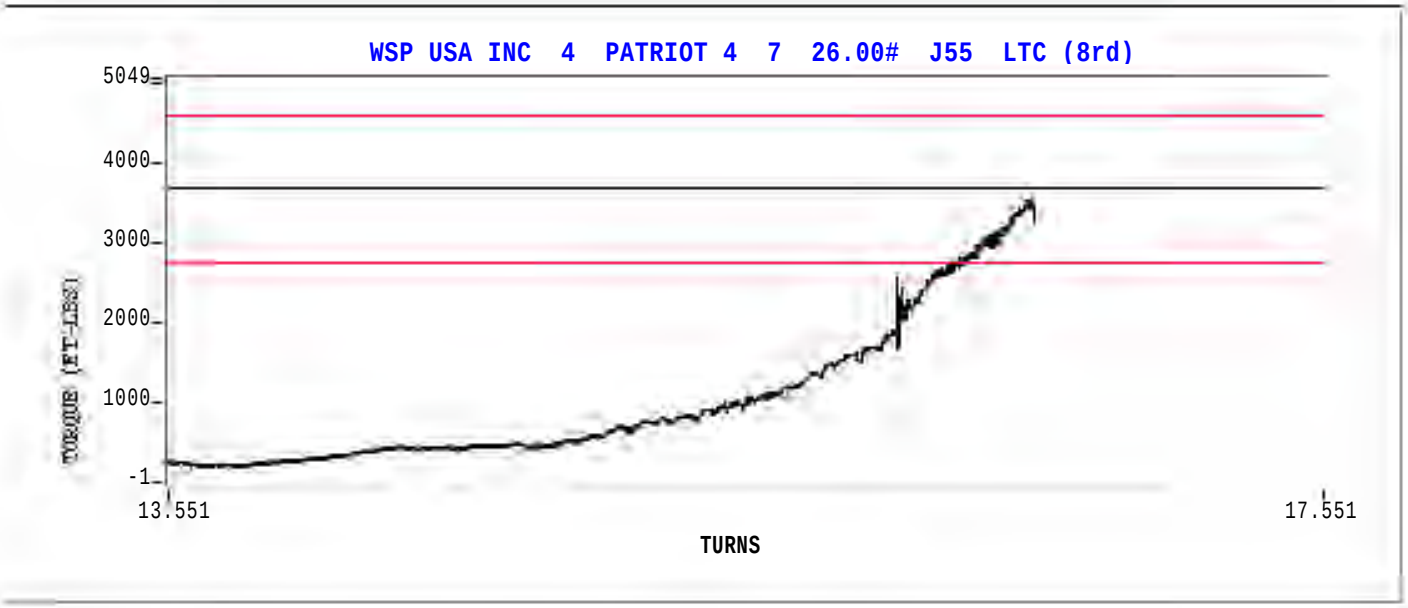
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TIME OF MAKE UP :	11:16 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	15.760 TURNS

FILE NUMBER : ----------->> **95** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 91

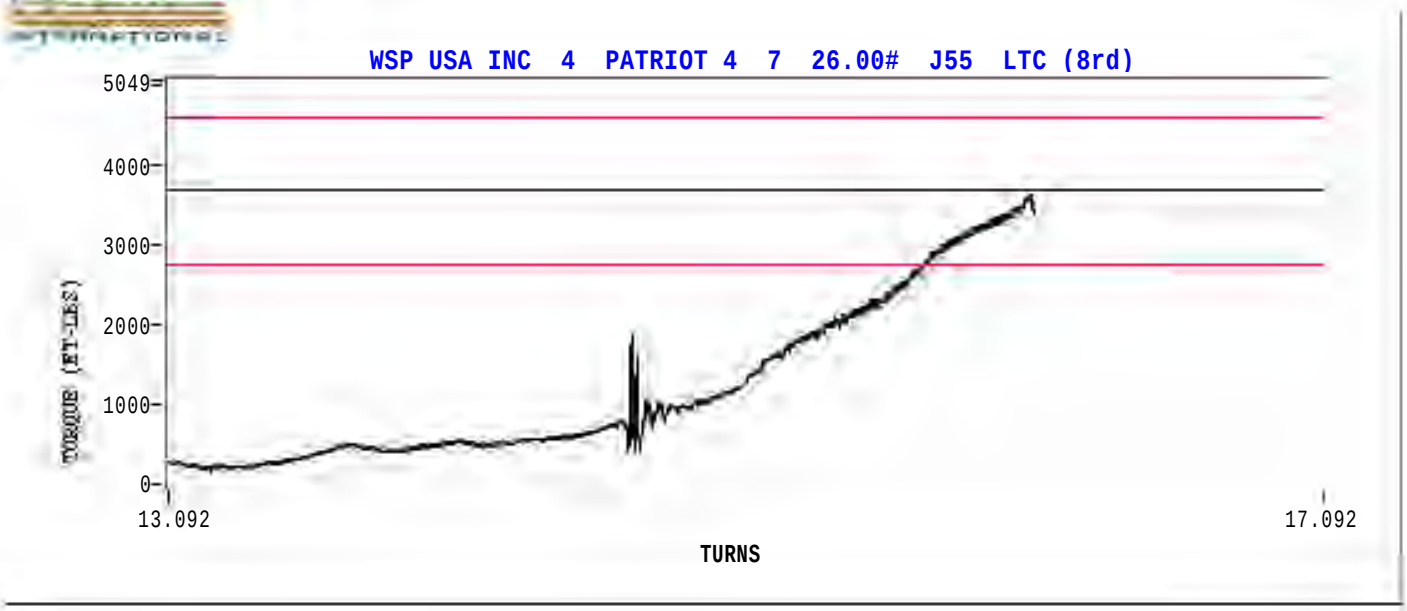


TIME OF MAKE UP :	11:18 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3554 FT-LBS	MAXIMUM TURNS :	16.551 TURNS

FILE NUMBER : ----------->> **96** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 92

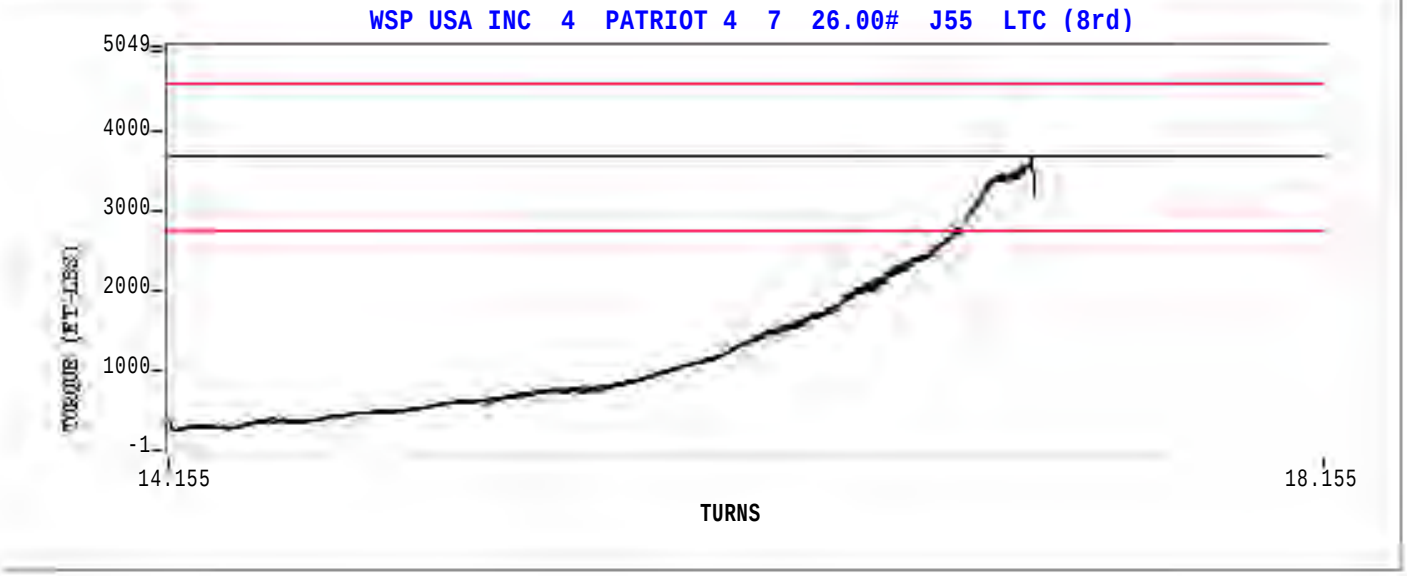
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TIME OF MAKE UP :	11:20 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3627 FT-LBS	MAXIMUM TURNS :	16.092 TURNS

FILE NUMBER : ----------->> **97** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 93

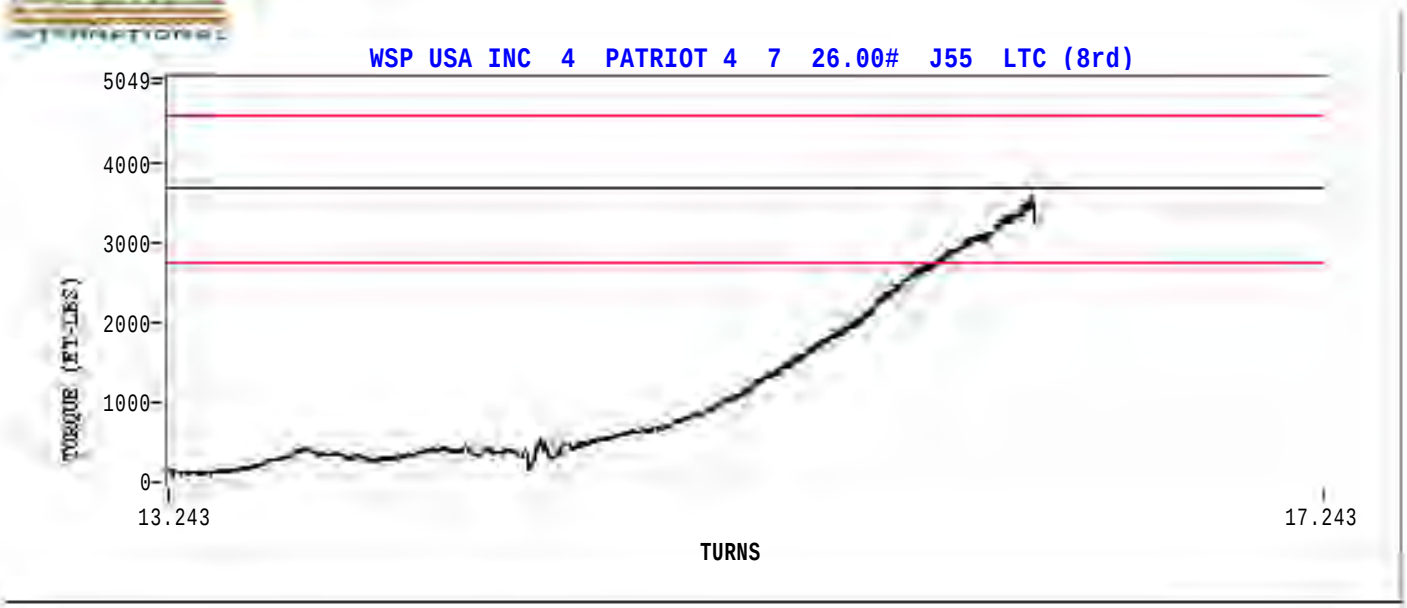


TIME OF MAKE UP :	11:22 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3640 FT-LBS	MAXIMUM TURNS :	17.155 TURNS

FILE NUMBER : ----------->> **98** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 94

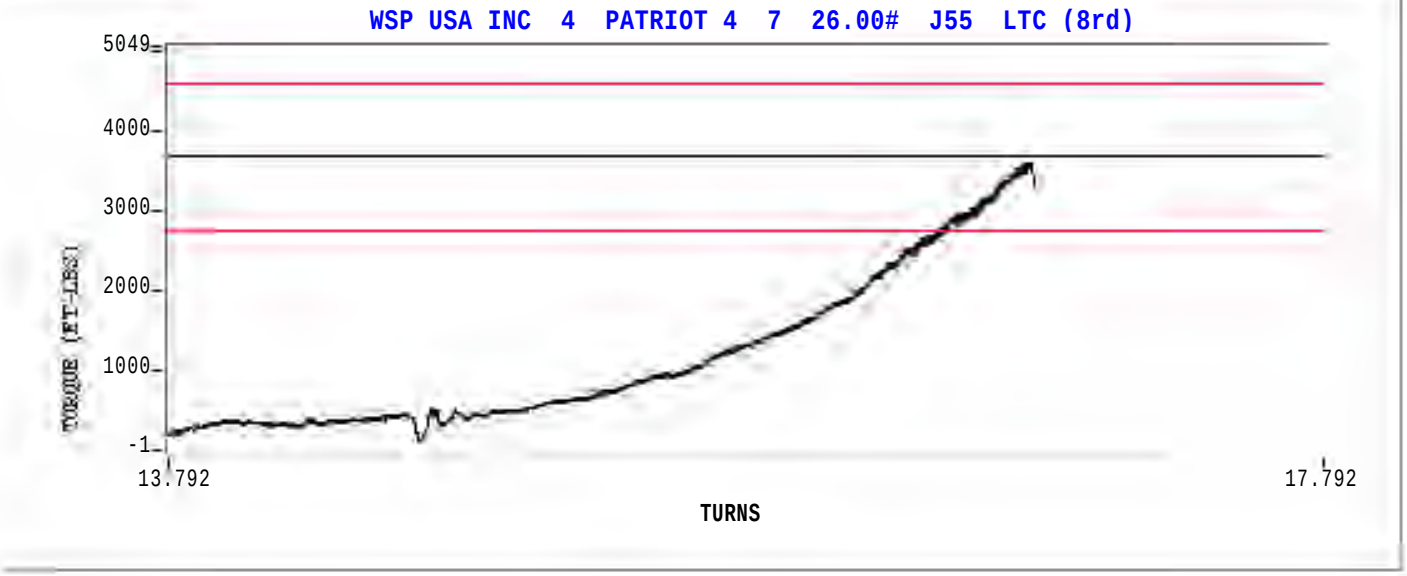
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TIME OF MAKE UP :	11:24 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3578 FT-LBS	MAXIMUM TURNS :	16.243 TURNS

FILE NUMBER : ----------->> **99** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 95

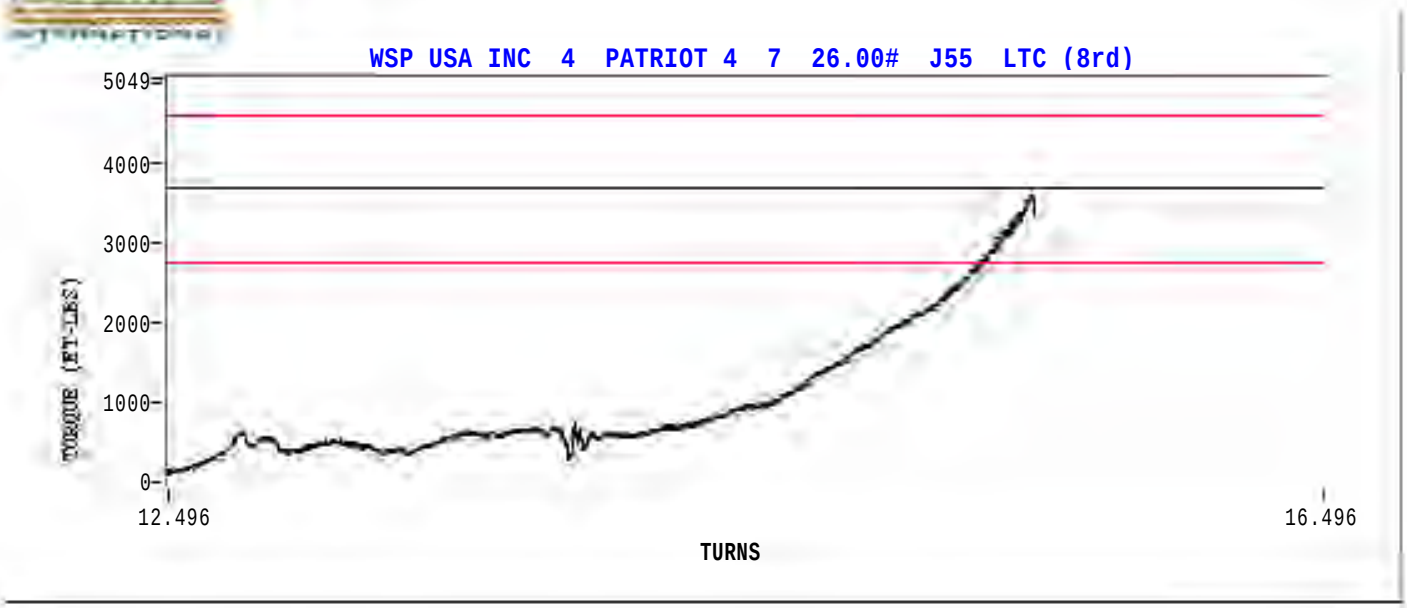


TIME OF MAKE UP :	11:26 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3600 FT-LBS	MAXIMUM TURNS :	16.792 TURNS

FILE NUMBER : ----------->> **100** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 96

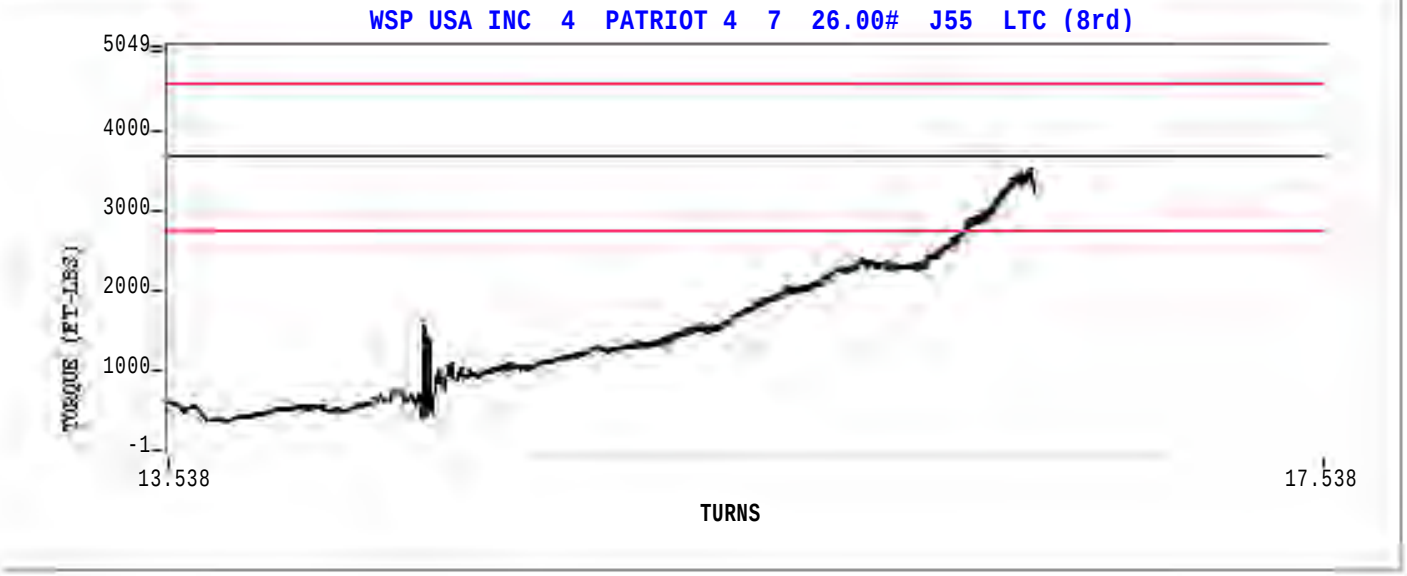
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TIME OF MAKE UP :	11:27 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3592 FT-LBS	MAXIMUM TURNS :	15.496 TURNS

FILE NUMBER : ----------->> **101** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 97

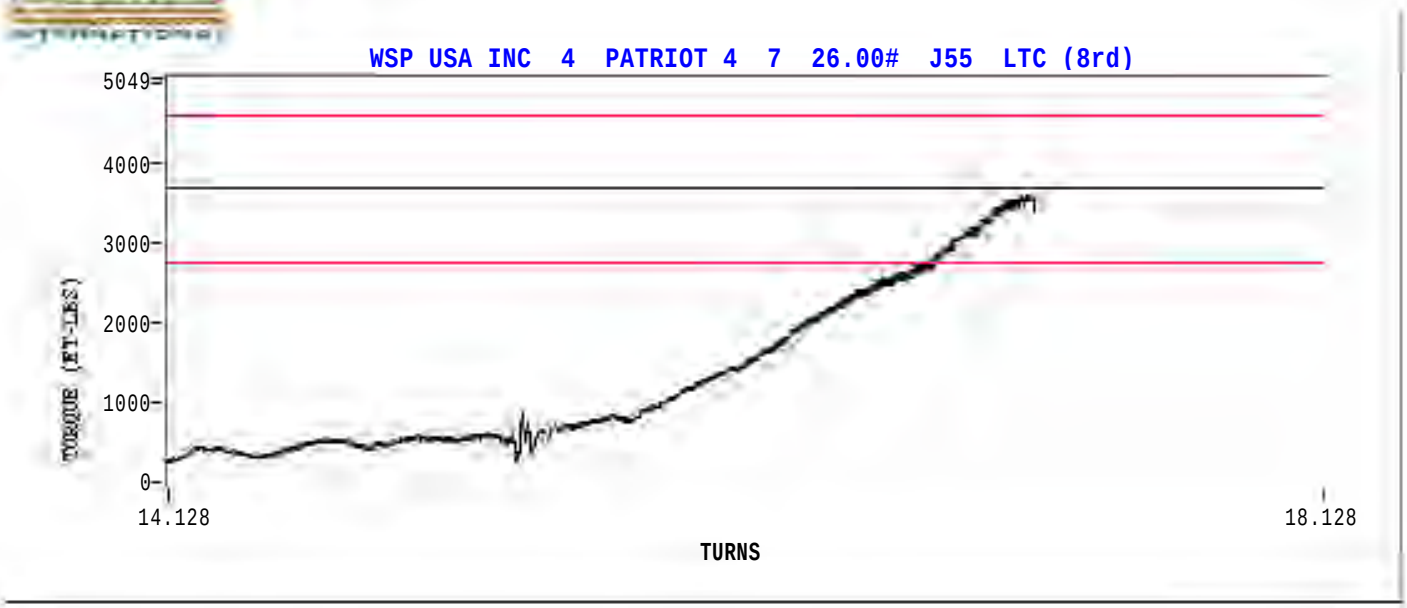


TIME OF MAKE UP :	11:30 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3534 FT-LBS	MAXIMUM TURNS :	16.538 TURNS

FILE NUMBER : ----------->> **102** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 98

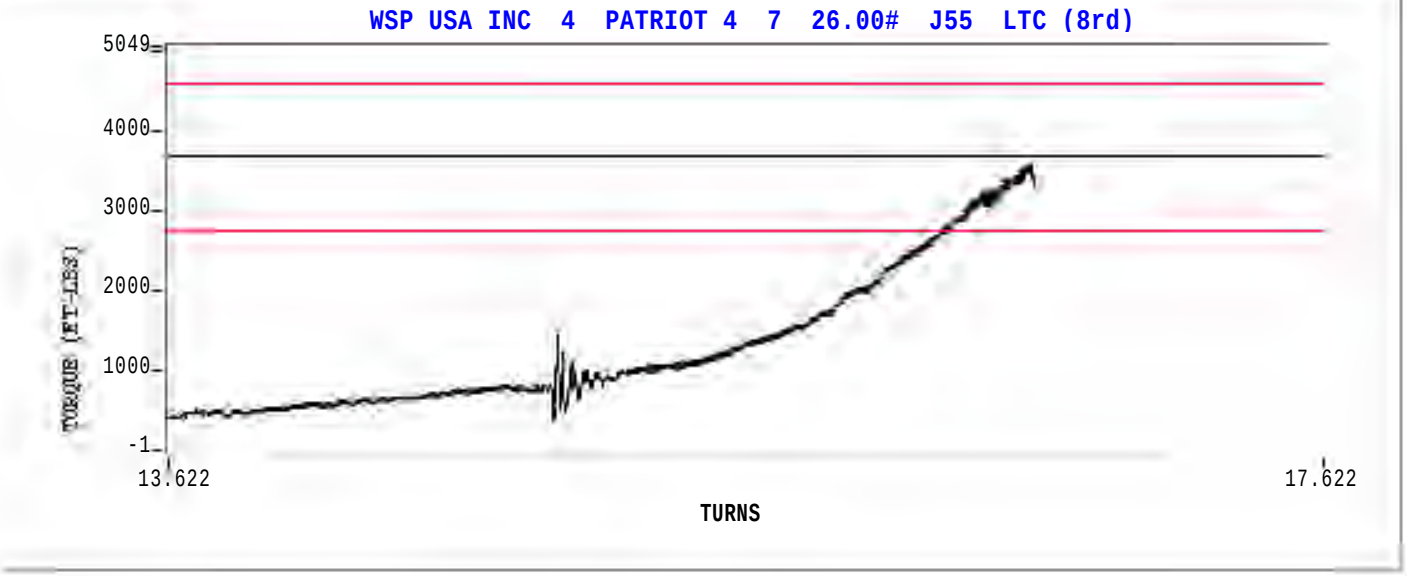
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TIME OF MAKE UP :	11:32 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3630 FT-LBS	MAXIMUM TURNS :	17.128 TURNS

FILE NUMBER : ----------->> **103** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 99

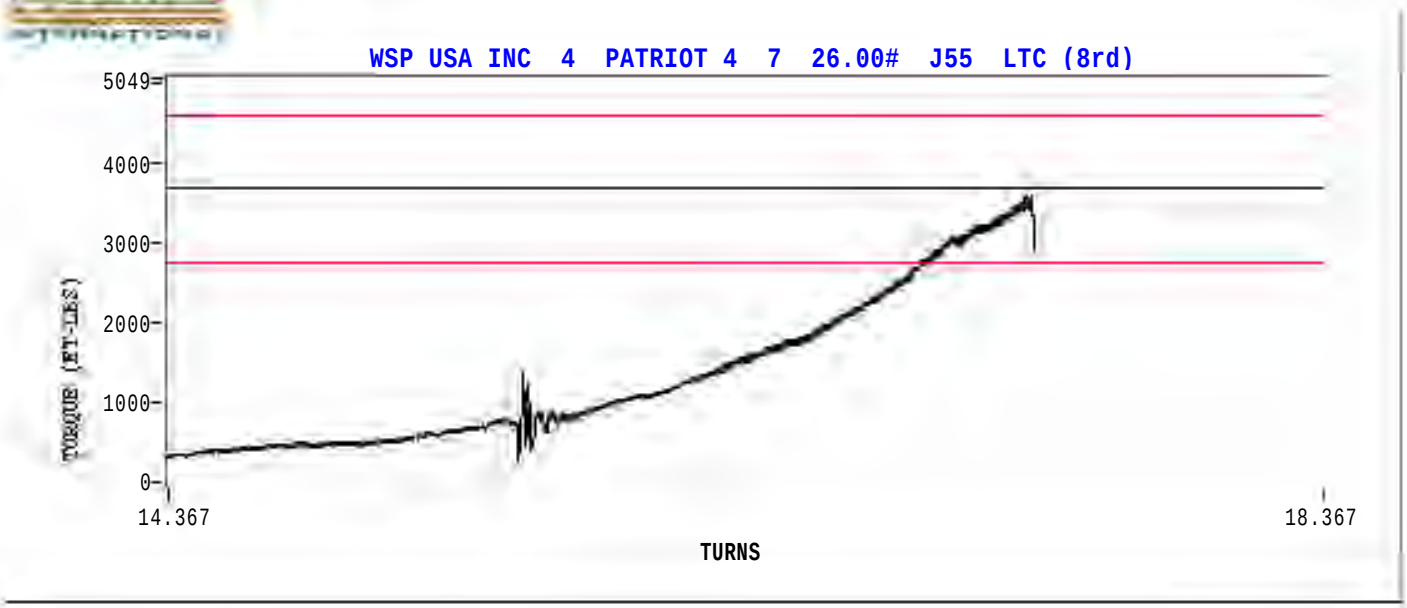


TIME OF MAKE UP :	11:33 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	16.622 TURNS

FILE NUMBER : ----------->> **104** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 100

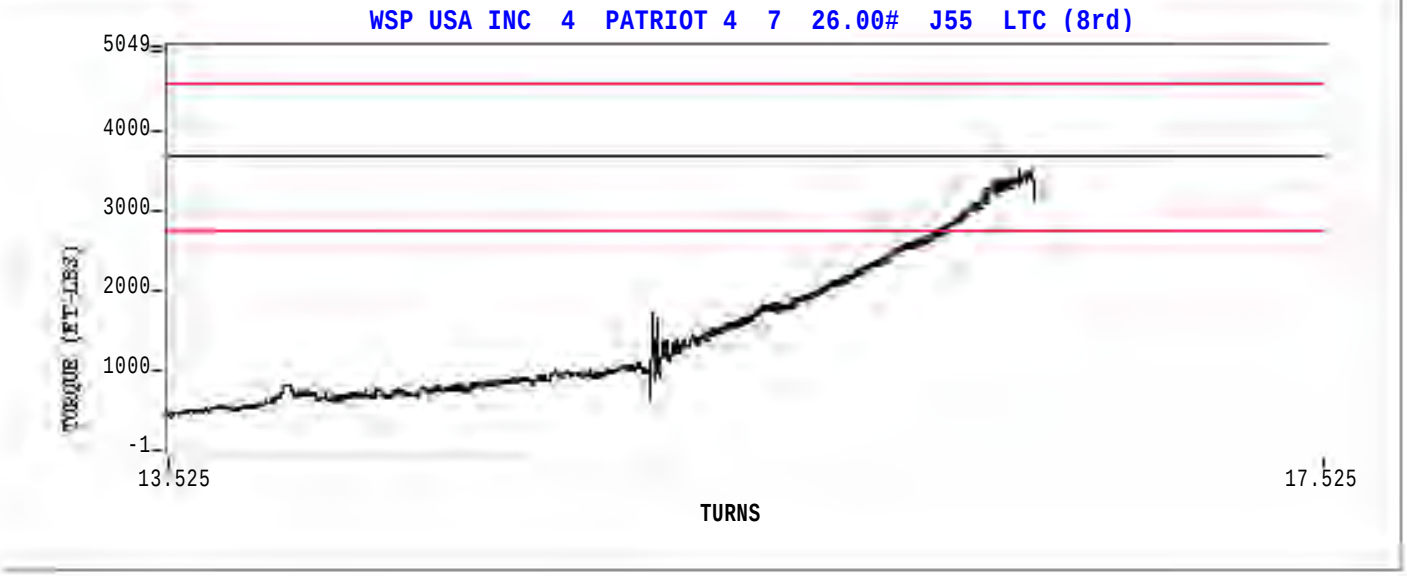
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TIME OF MAKE UP :	11:35 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3592 FT-LBS	MAXIMUM TURNS :	17.367 TURNS

FILE NUMBER : ----------->> **105** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 101

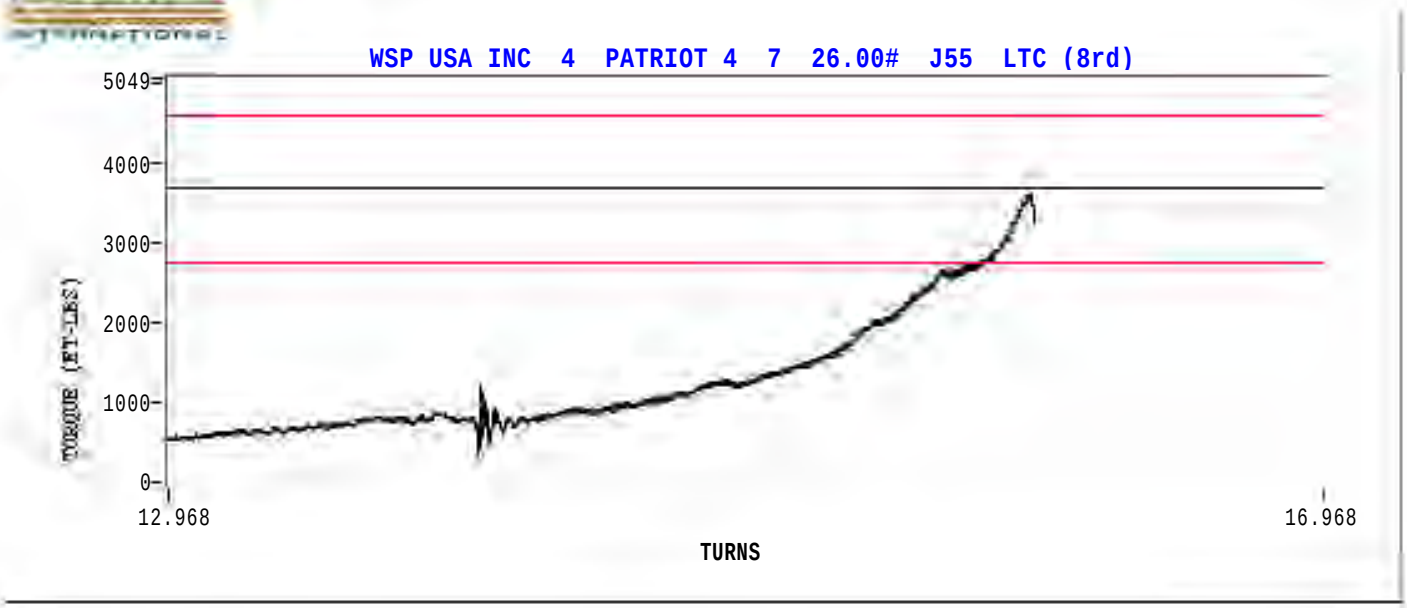


TIME OF MAKE UP :	11:37 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3554 FT-LBS	MAXIMUM TURNS :	16.525 TURNS

FILE NUMBER : ----------->> **106** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 102

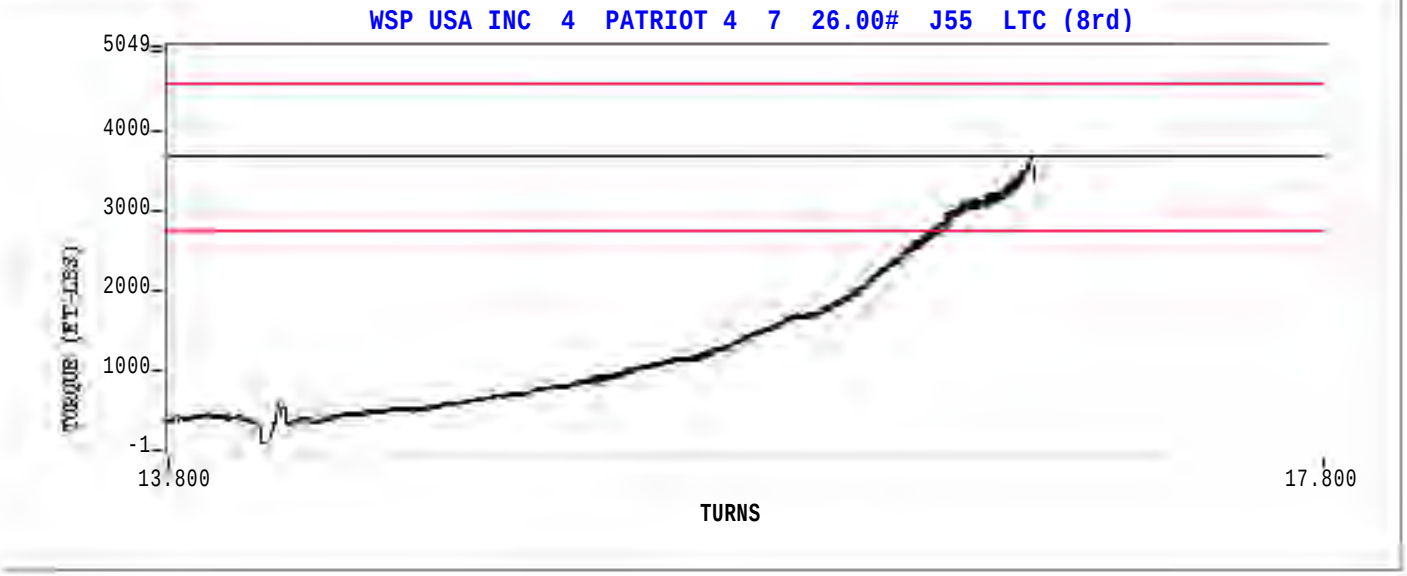
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TIME OF MAKE UP :	11:39 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3609 FT-LBS	MAXIMUM TURNS :	15.968 TURNS

FILE NUMBER : ----------->> **107** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 103

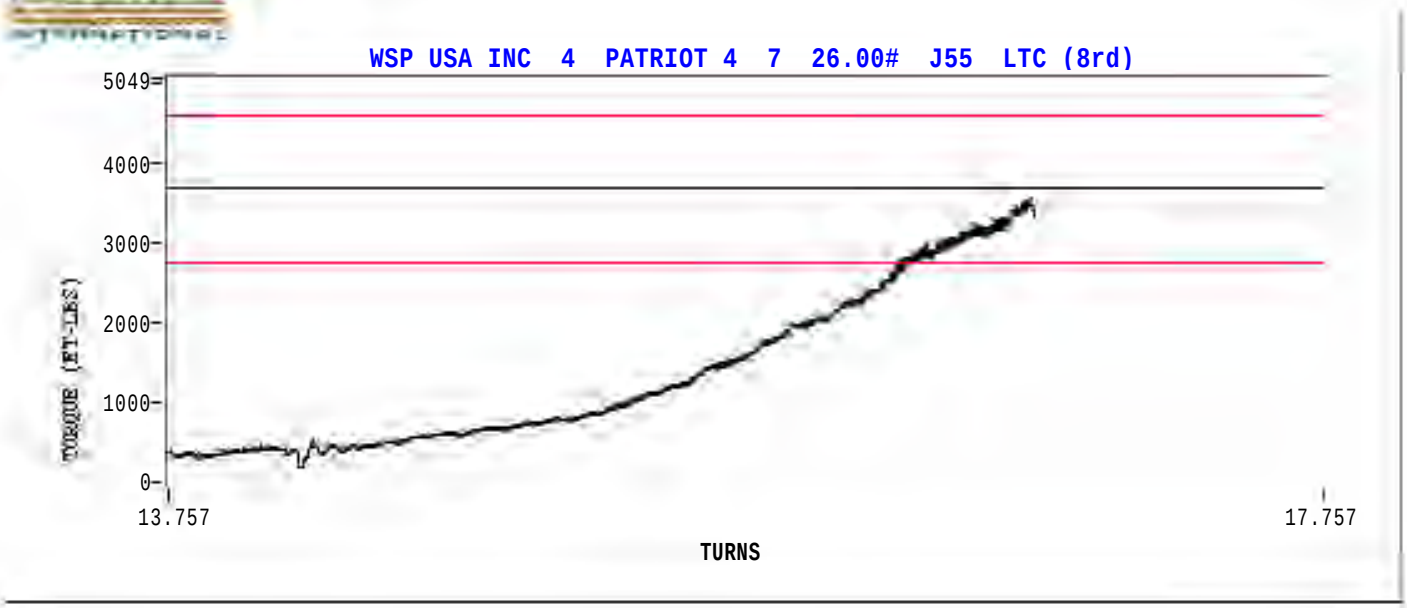


TIME OF MAKE UP :	11:41 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3680 FT-LBS	MAXIMUM TURNS :	16.800 TURNS

FILE NUMBER : ----------->> **108** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 104

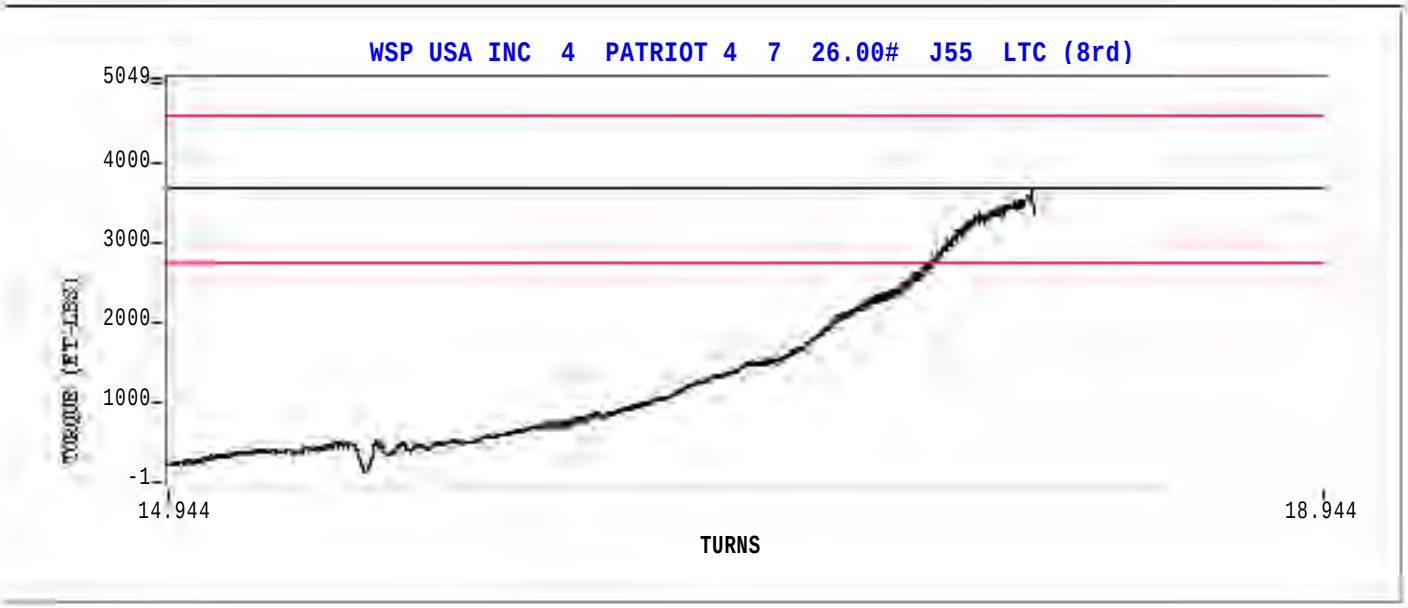
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TIME OF MAKE UP :	11:43 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3549 FT-LBS	MAXIMUM TURNS :	16.757 TURNS

FILE NUMBER : ----------->> **109** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 105

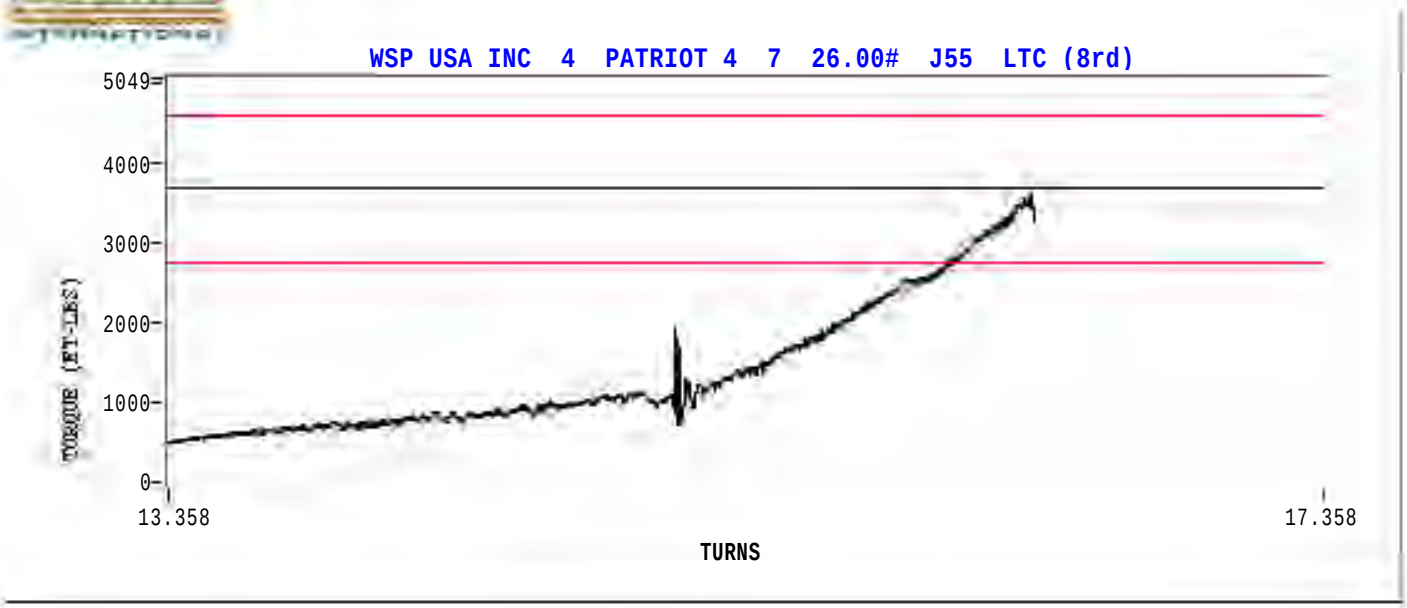


TIME OF MAKE UP :	11:45 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3637 FT-LBS	MAXIMUM TURNS :	17.944 TURNS

FILE NUMBER : ----------->> **110** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 106

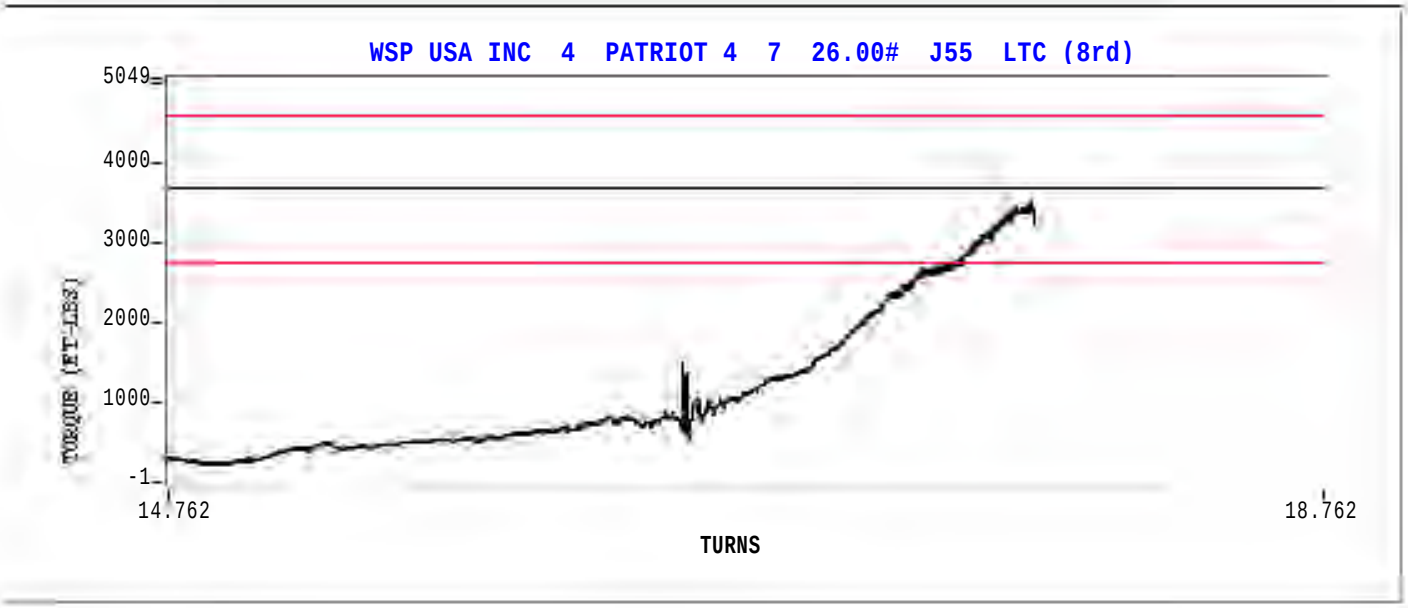
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TIME OF MAKE UP :	11:47 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3620 FT-LBS	MAXIMUM TURNS :	16.358 TURNS

FILE NUMBER : ----------->> **111** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 107

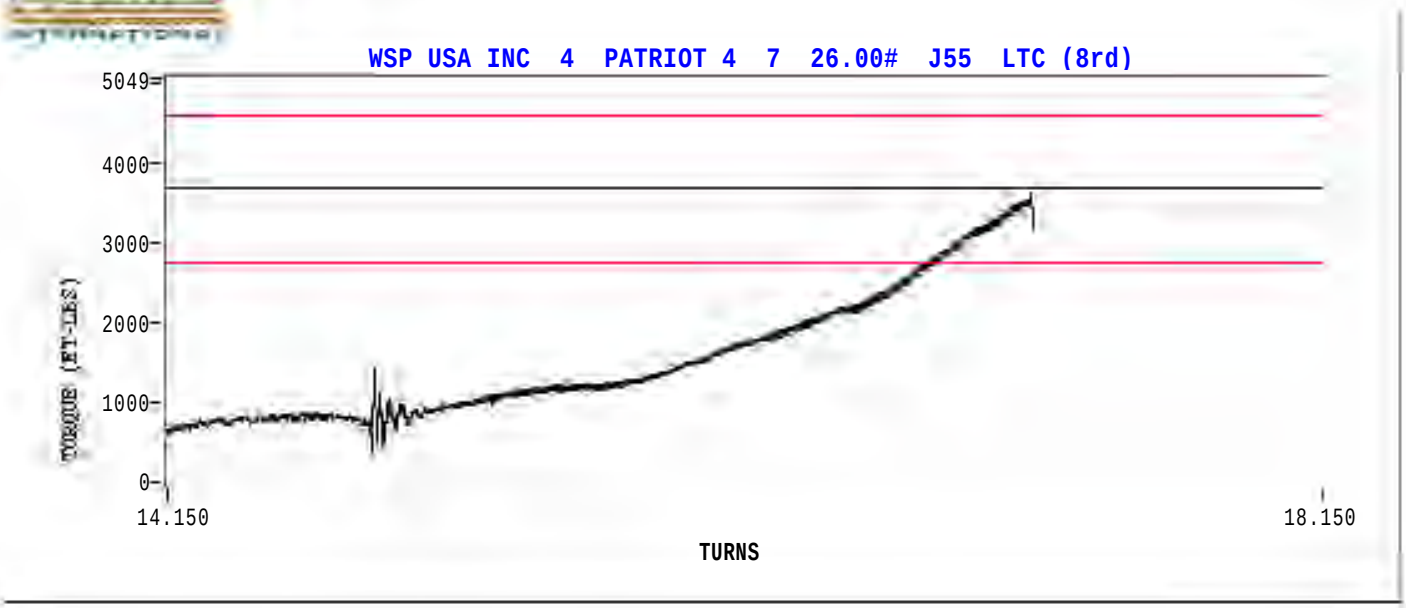


TIME OF MAKE UP :	11:49 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3530 FT-LBS	MAXIMUM TURNS :	17.762 TURNS

FILE NUMBER : ----------->> **112** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 108

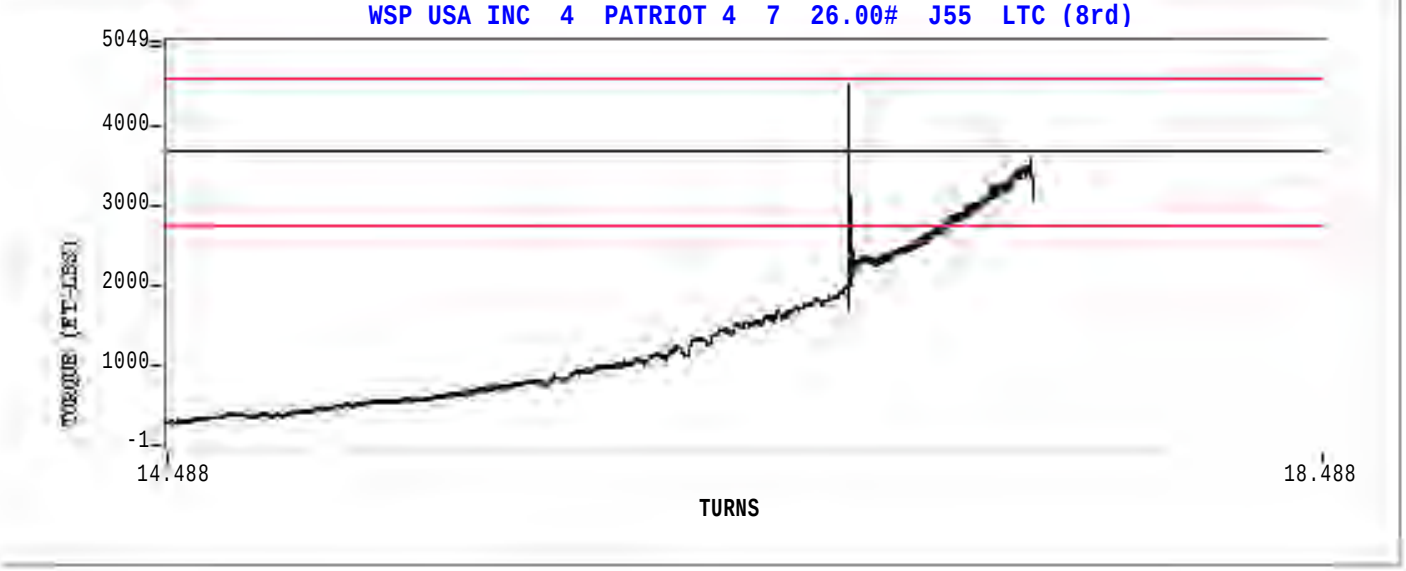
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TIME OF MAKE UP :	11:50 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	17.150 TURNS

FILE NUMBER : ----------->> **113** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 109

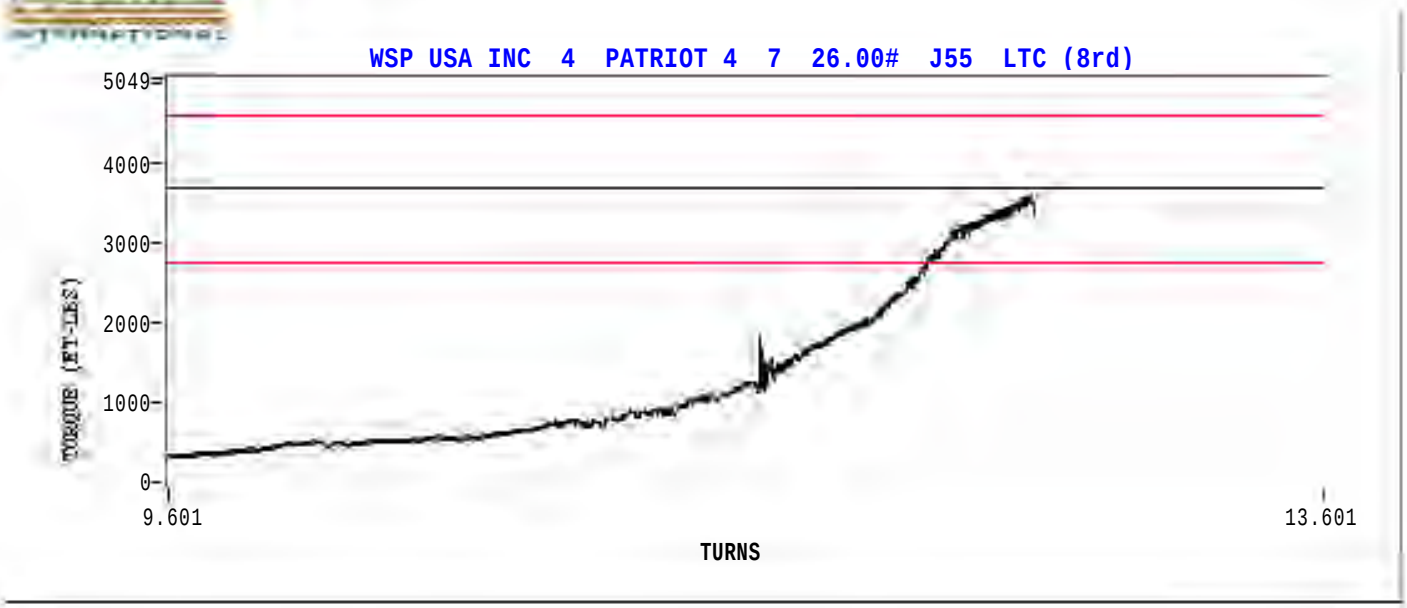


TIME OF MAKE UP :	11:53 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	4523 FT-LBS	MAXIMUM TURNS :	17.488 TURNS

FILE NUMBER : ----------->> **114** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 110. TONG SPICKE, RETORQUE ON SAME GRAPH.

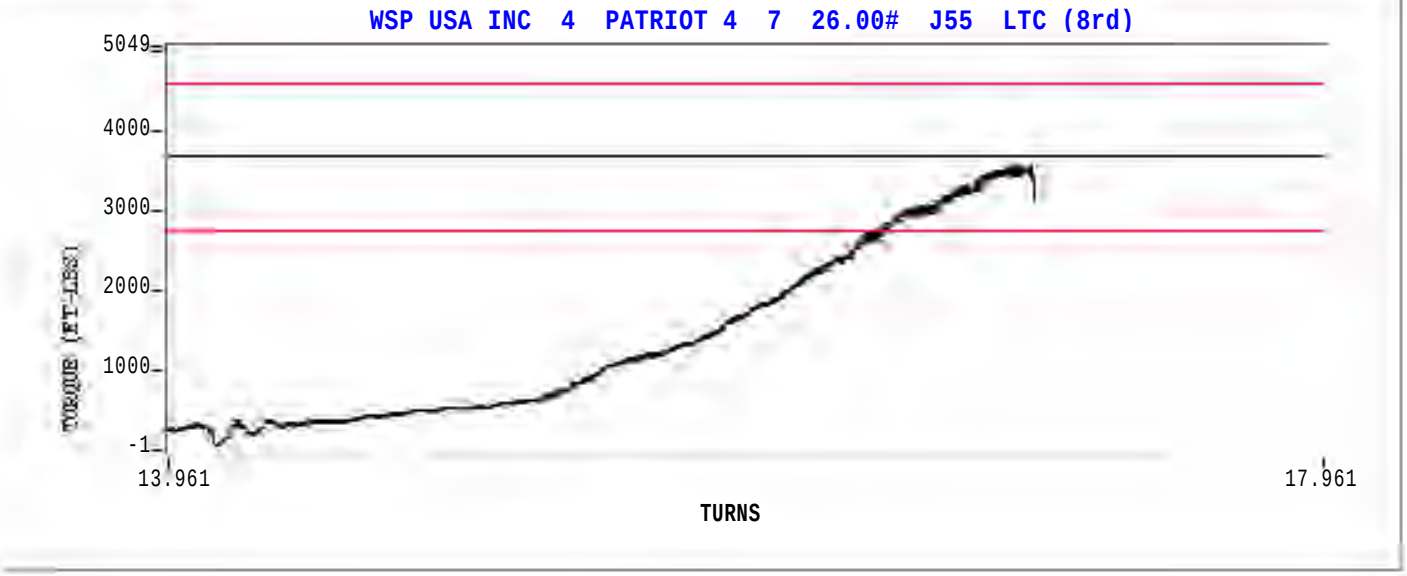
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TIME OF MAKE UP :	11:54 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3626 FT-LBS	MAXIMUM TURNS :	12.601 TURNS

FILE NUMBER : ----------->> **115** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 111

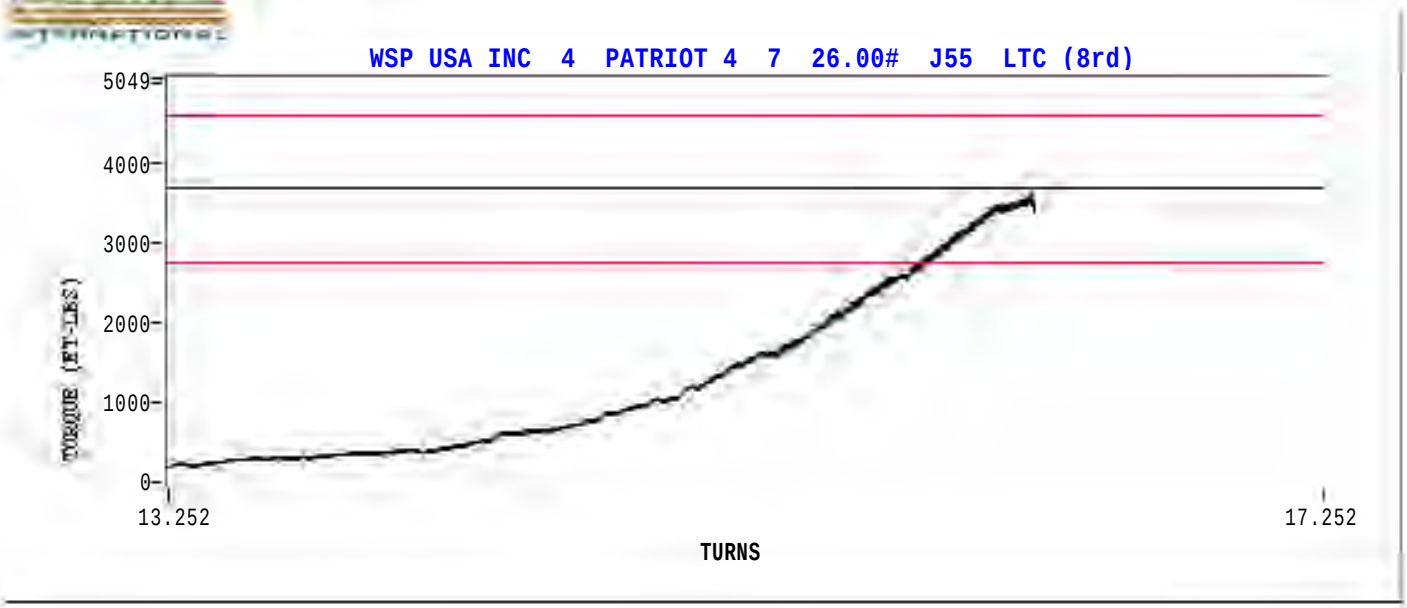


TIME OF MAKE UP :	11:57 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3564 FT-LBS	MAXIMUM TURNS :	16.961 TURNS

FILE NUMBER : ----------->> **116** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 112

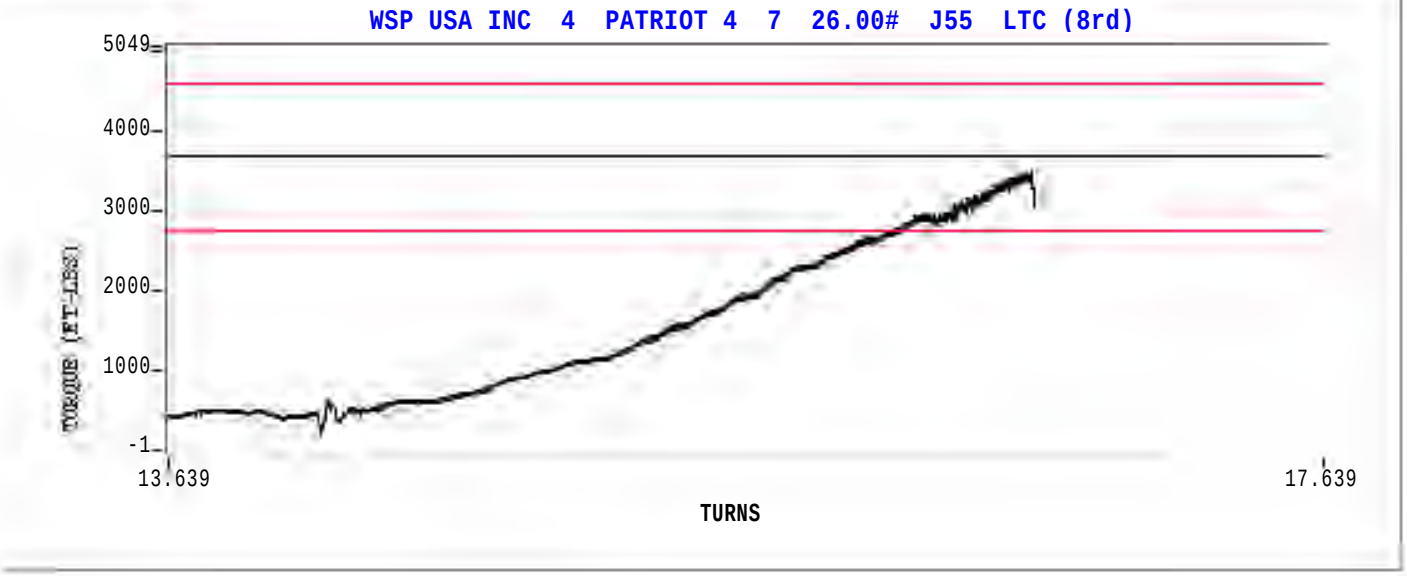
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TIME OF MAKE UP :	11:59 PM	DATE OF MAKE UP :	Sun, Aug 05, 2018
MAXIMUM TORQUE :	3644 FT-LBS	MAXIMUM TURNS :	16.252 TURNS

FILE NUMBER : ----------->> **117** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 113

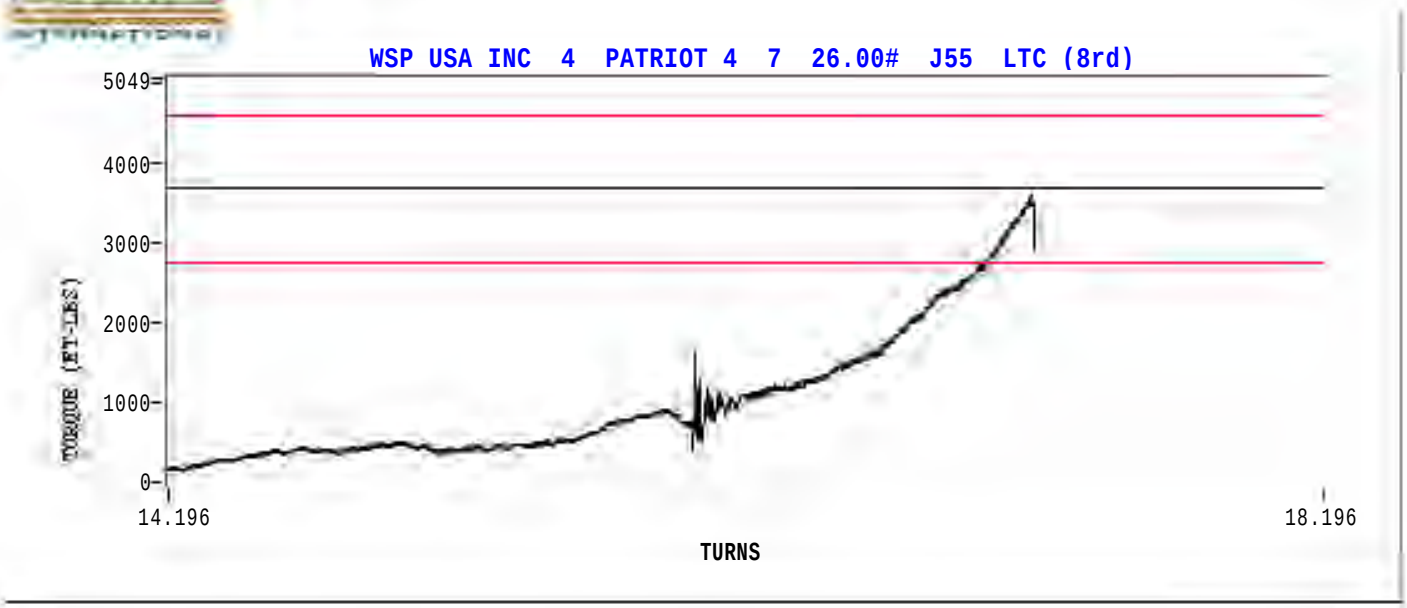


TIME OF MAKE UP :	12:01 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3535 FT-LBS	MAXIMUM TURNS :	16.639 TURNS

FILE NUMBER : ----------->> **118** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 114

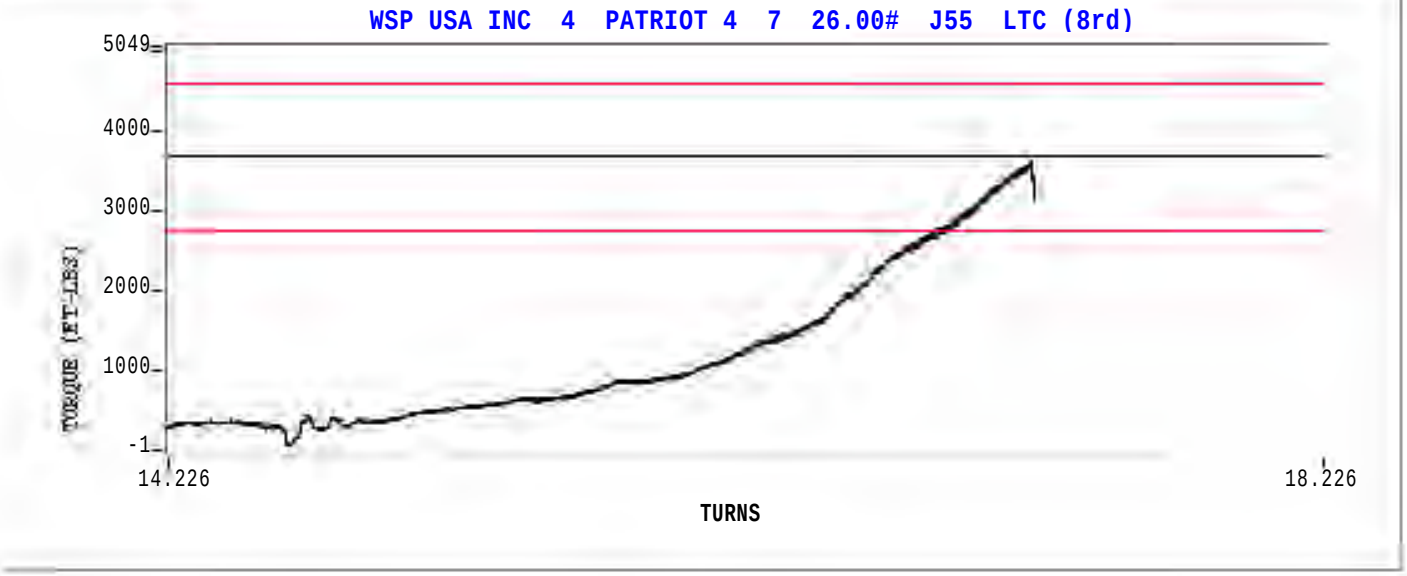
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TIME OF MAKE UP :	12:03 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3601 FT-LBS	MAXIMUM TURNS :	17.196 TURNS

FILE NUMBER : ----------->> **119** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 115

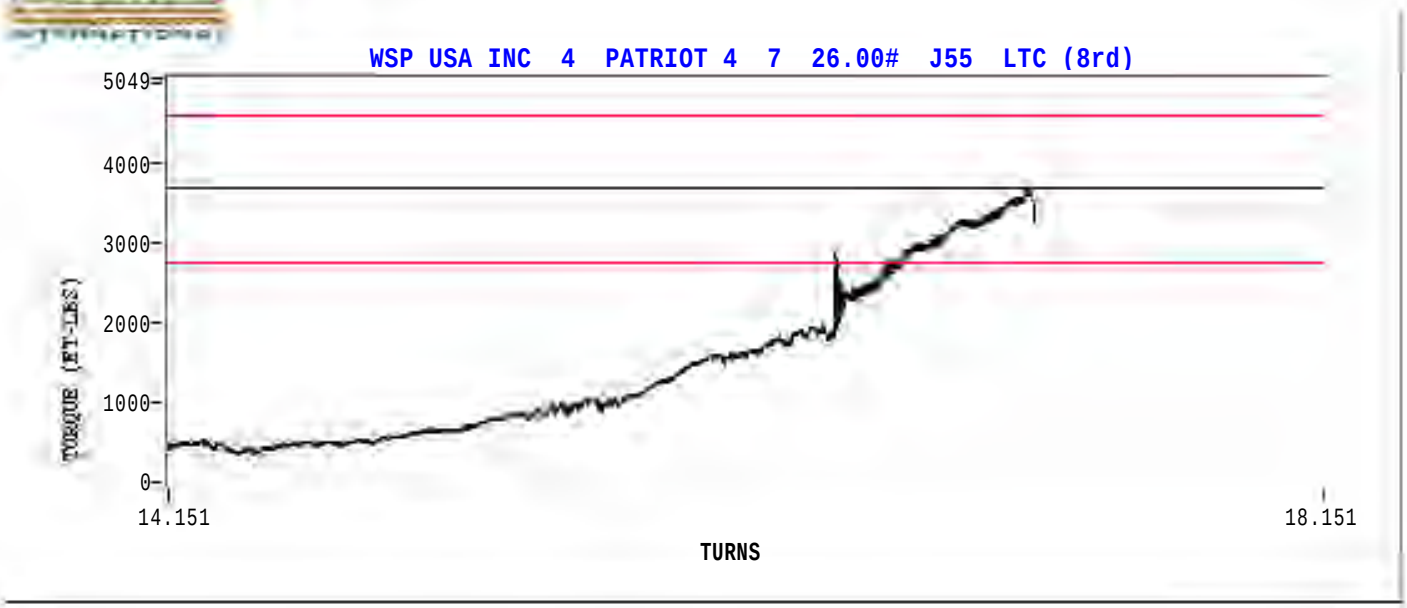


TIME OF MAKE UP :	12:05 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3617 FT-LBS	MAXIMUM TURNS :	17.226 TURNS

FILE NUMBER : ----------->> **120** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 116

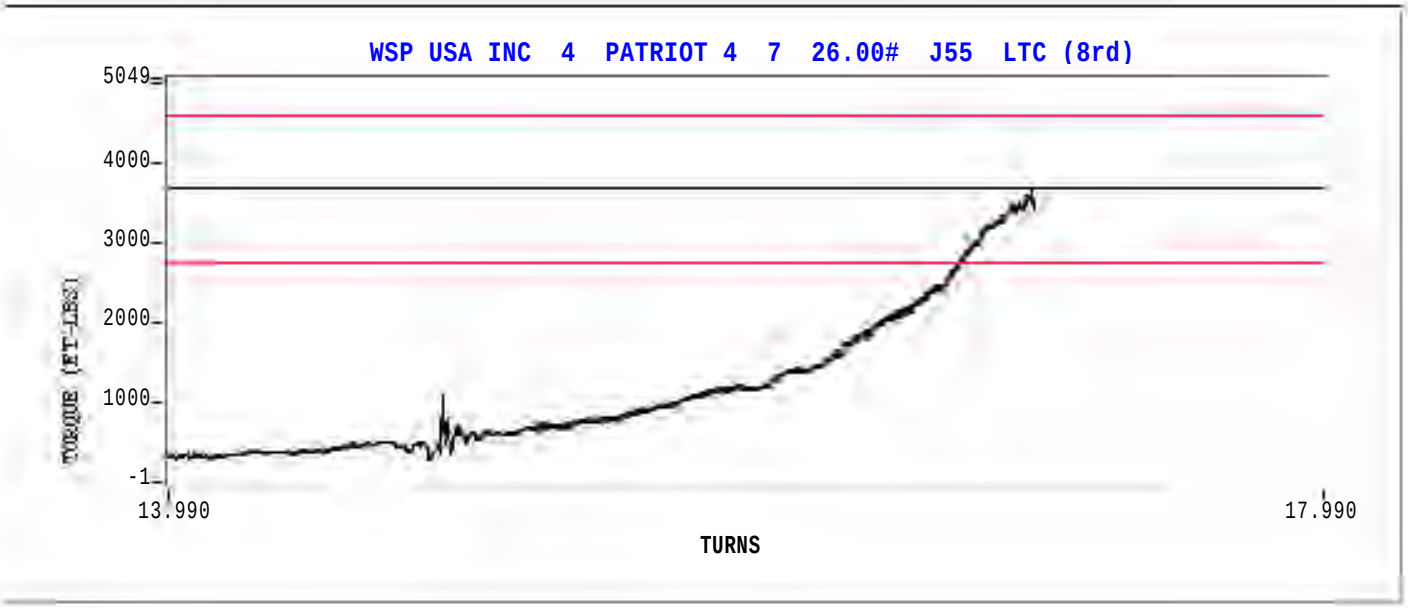
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TIME OF MAKE UP :	12:07 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3689 FT-LBS	MAXIMUM TURNS :	17.151 TURNS

FILE NUMBER : ----------->> **121** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 117

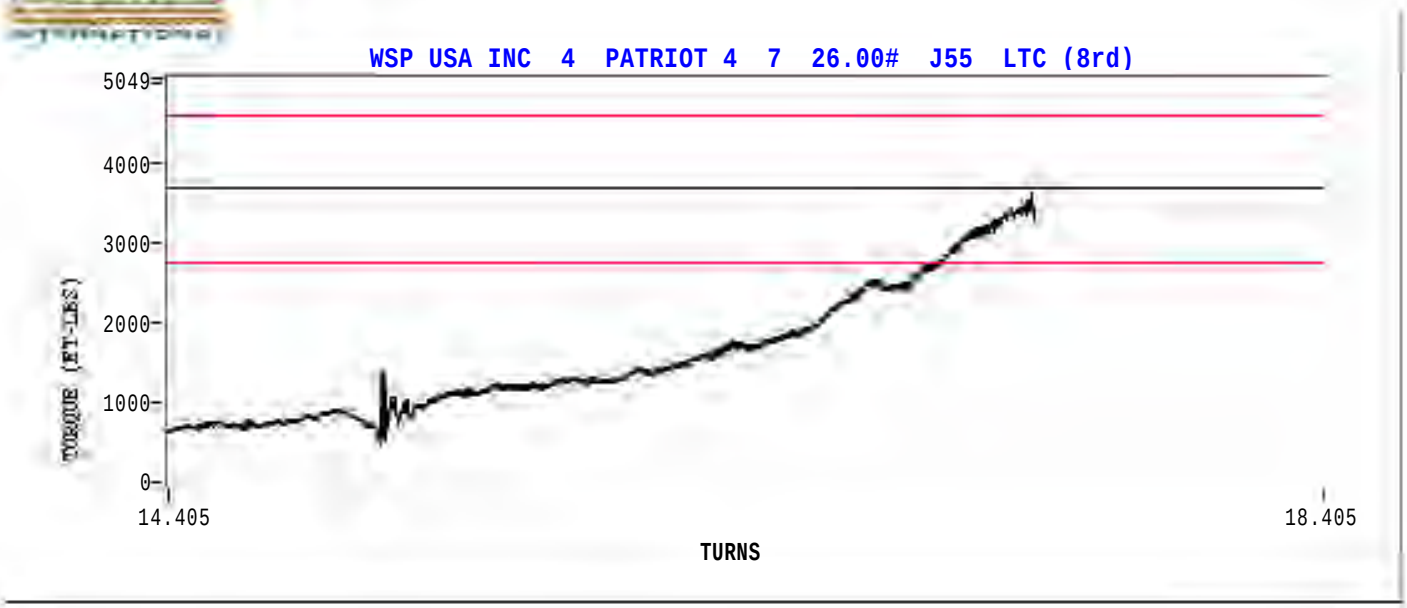


TIME OF MAKE UP :	12:09 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3635 FT-LBS	MAXIMUM TURNS :	16.990 TURNS

FILE NUMBER : ----------->> **122** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 118

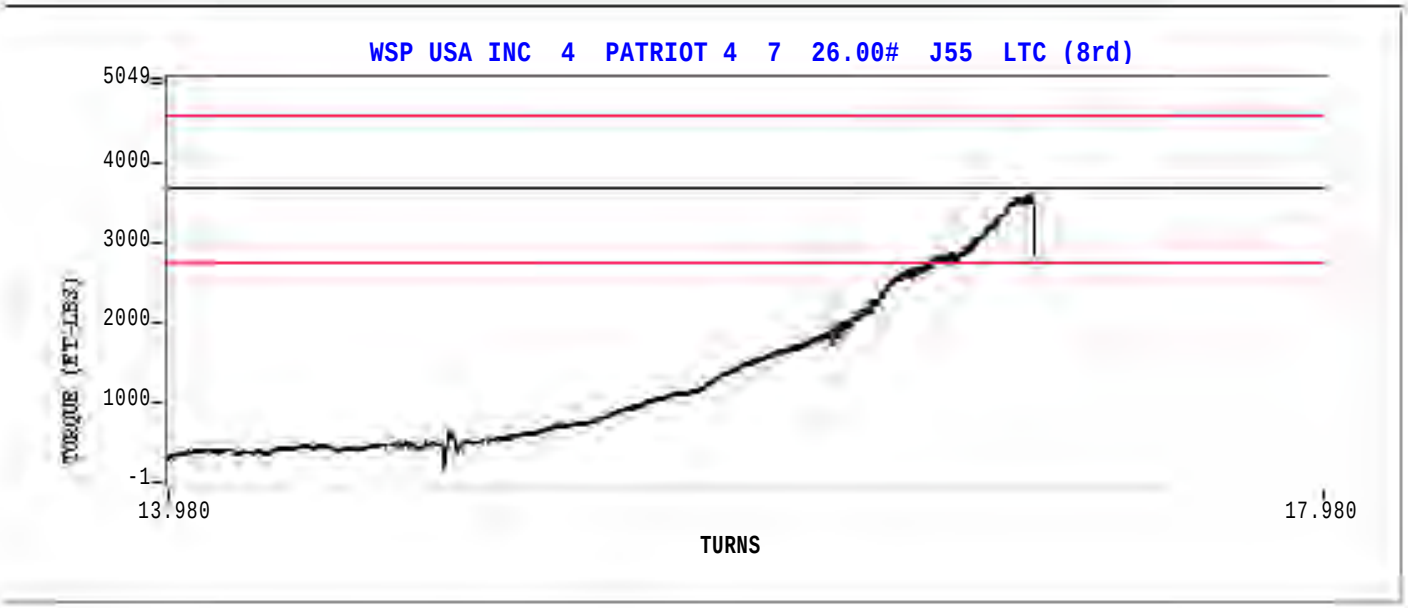
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TIME OF MAKE UP :	12:11 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3603 FT-LBS	MAXIMUM TURNS :	17.405 TURNS

FILE NUMBER : ----------->> **123** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 119



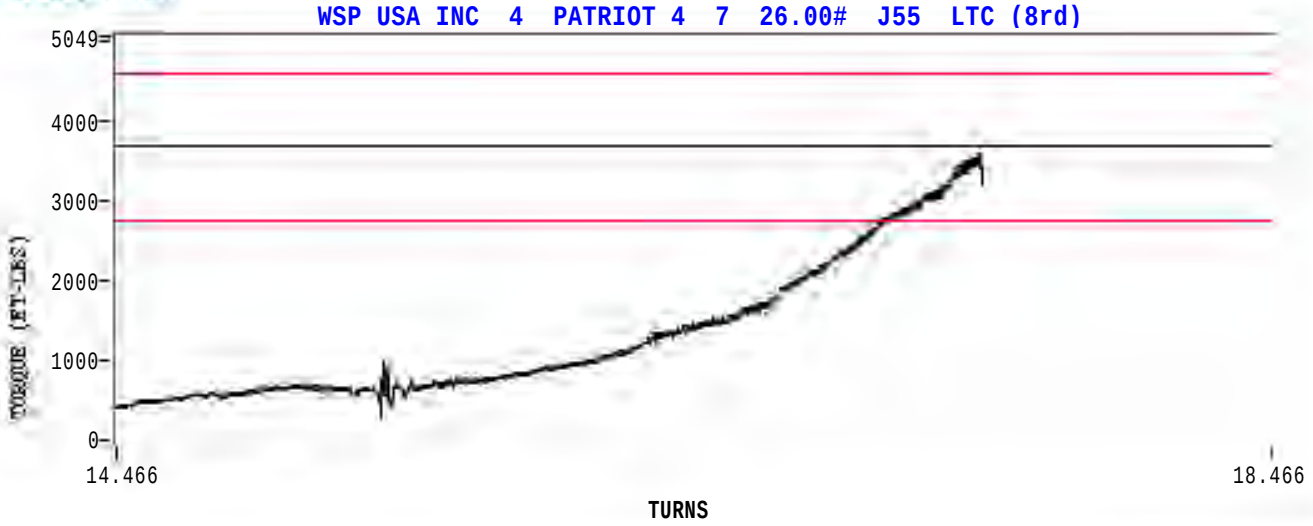
TIME OF MAKE UP :	12:13 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3612 FT-LBS	MAXIMUM TURNS :	16.980 TURNS

FILE NUMBER : ----------->> **124** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 120

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

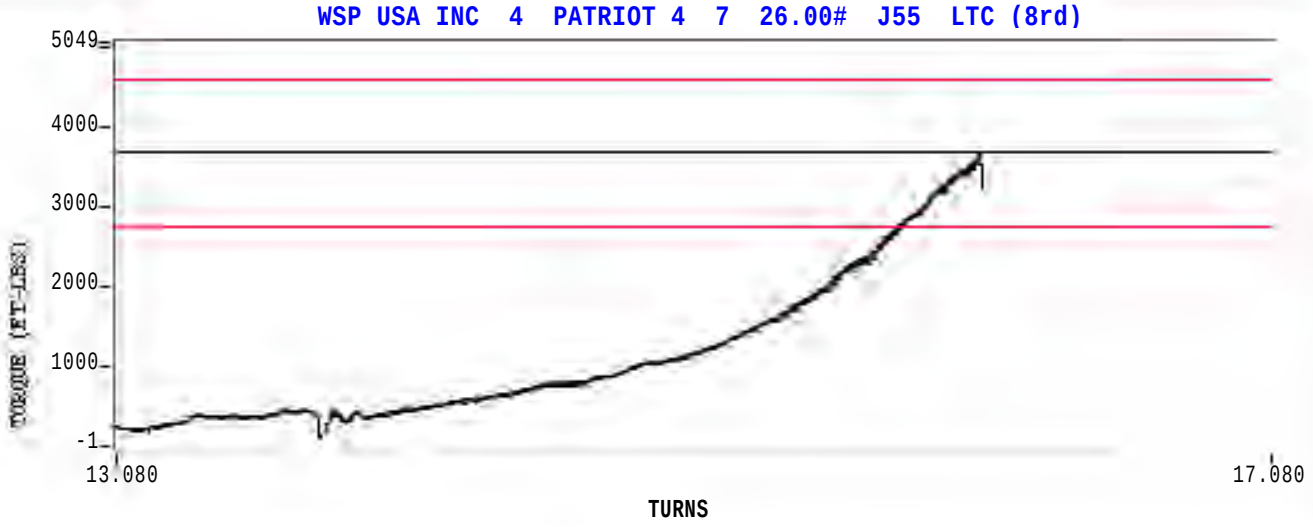


TIME OF MAKE UP :	12:15 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3577 FT-LBS	MAXIMUM TURNS :	17.466 TURNS

FILE NUMBER : ---------->> 125 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 121

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

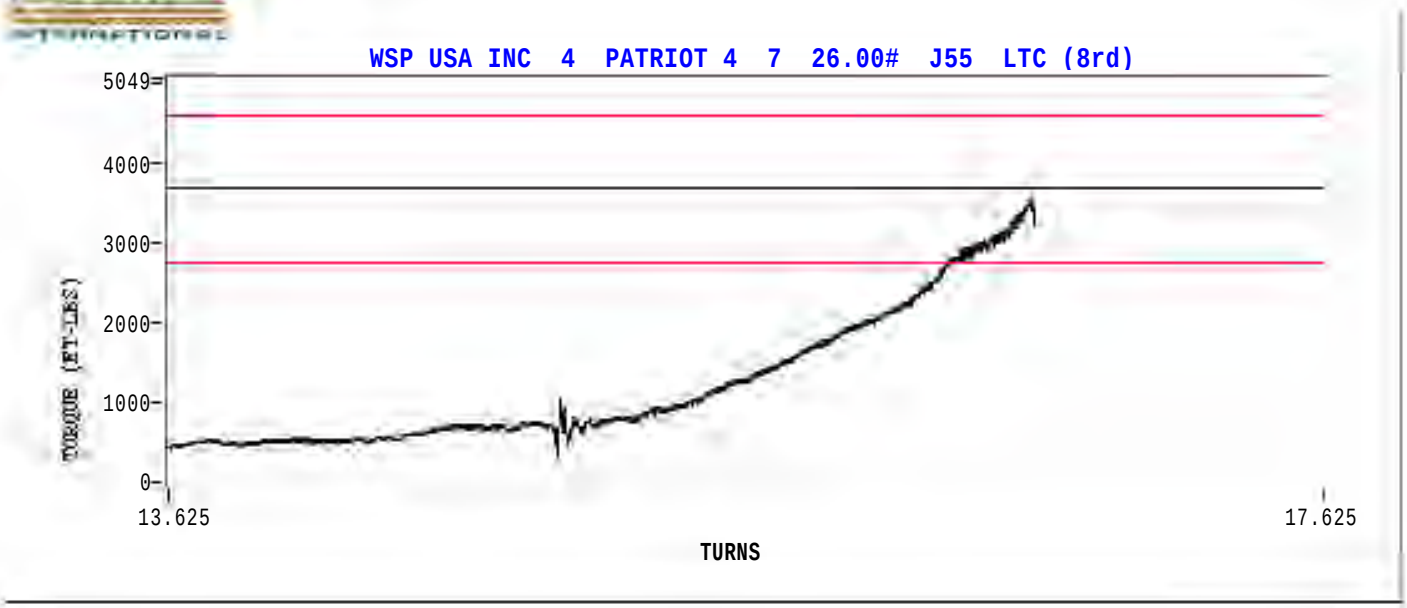


TIME OF MAKE UP :	12:46 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3637 FT-LBS	MAXIMUM TURNS :	16.080 TURNS

FILE NUMBER : ---------->> 126 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 122

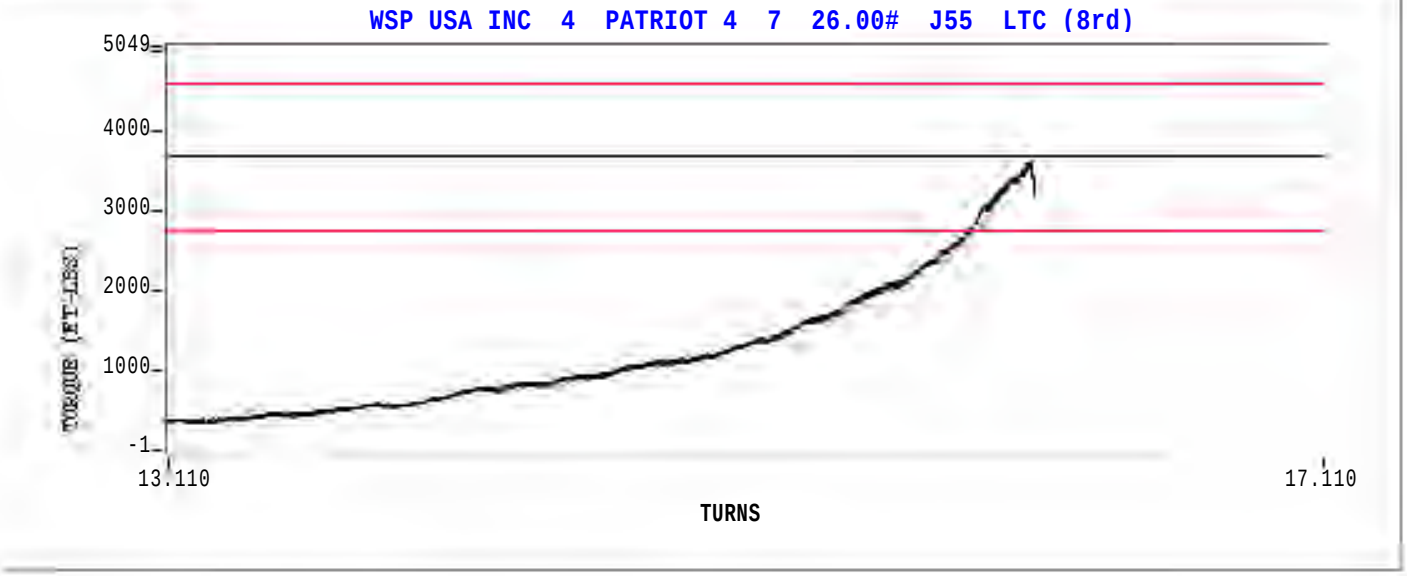
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TIME OF MAKE UP :	12:49 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3566 FT-LBS	MAXIMUM TURNS :	16.625 TURNS

FILE NUMBER : ----------->> **127** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 123

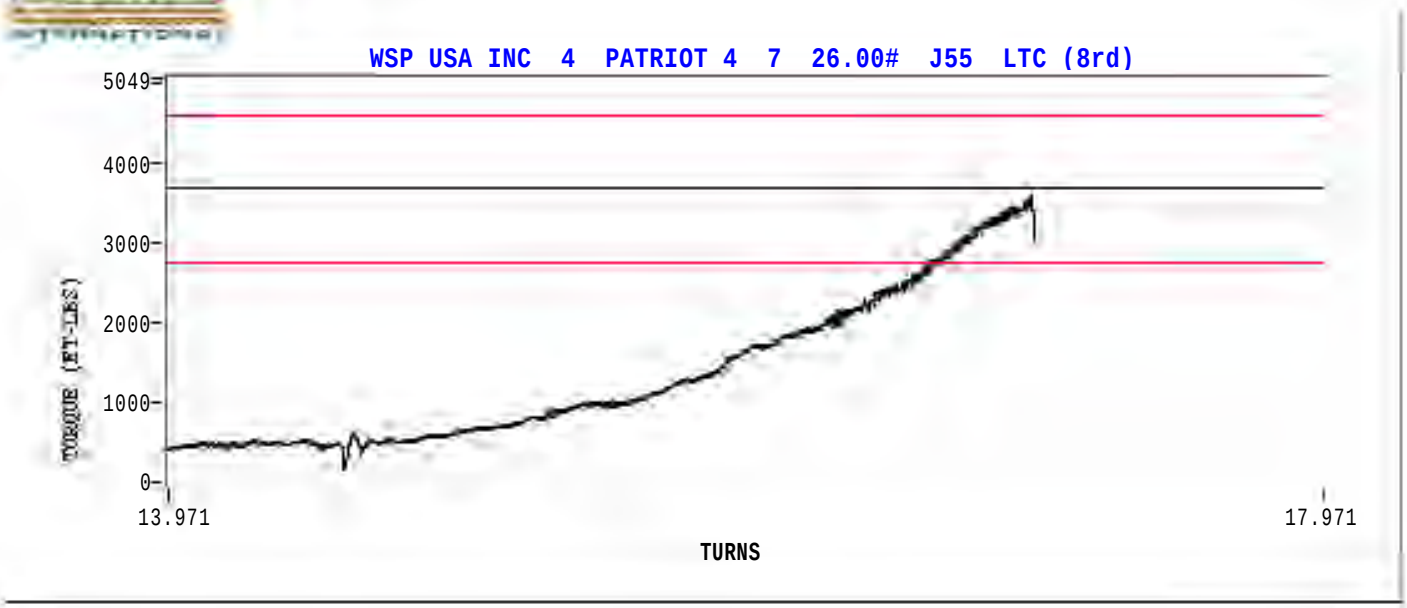


TIME OF MAKE UP :	12:51 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3619 FT-LBS	MAXIMUM TURNS :	16.110 TURNS

FILE NUMBER : ----------->> **128** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 124

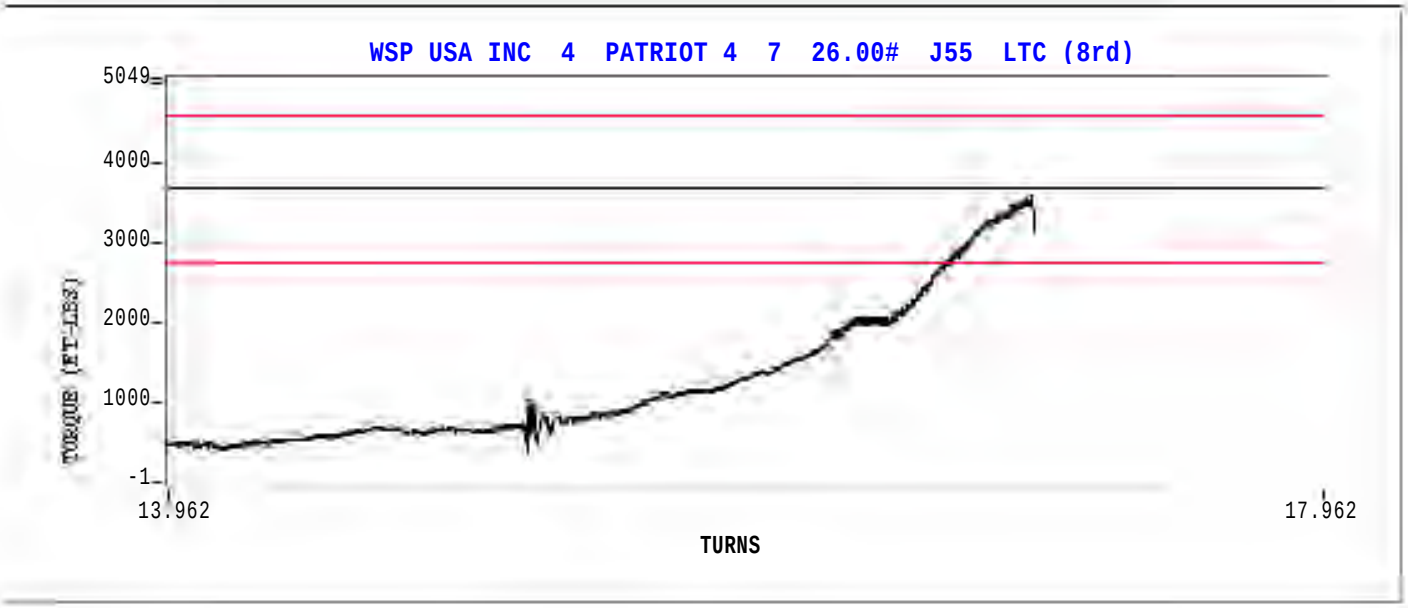
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TIME OF MAKE UP :	12:53 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3598 FT-LBS	MAXIMUM TURNS :	16.971 TURNS

FILE NUMBER : ----------->> **129** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 125



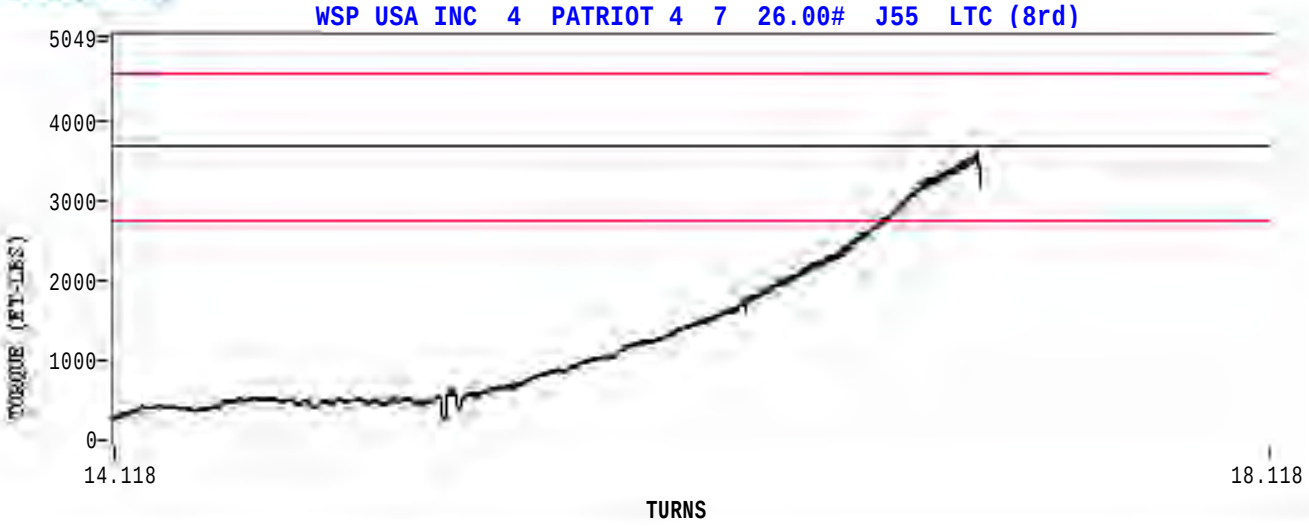
TIME OF MAKE UP :	12:55 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	16.962 TURNS

FILE NUMBER : ----------->> **130** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 126

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

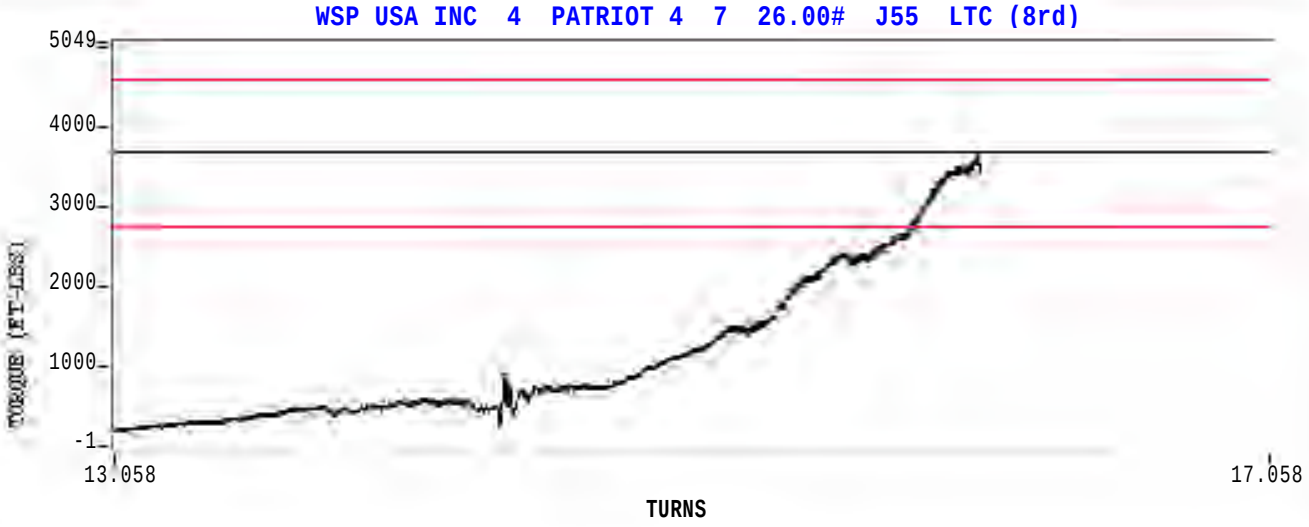


TIME OF MAKE UP :	12:57 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3618 FT-LBS	MAXIMUM TURNS :	17.118 TURNS

FILE NUMBER : ----------->> **131** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 127

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

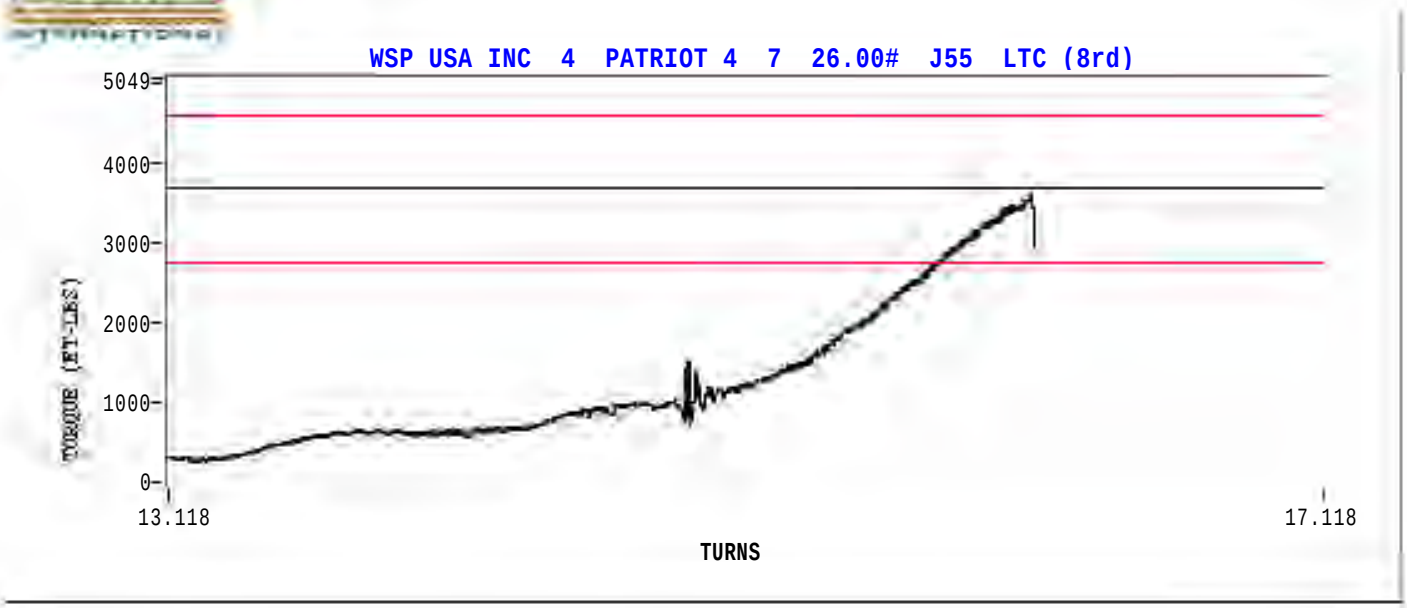


TIME OF MAKE UP :	12:59 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3670 FT-LBS	MAXIMUM TURNS :	16.058 TURNS

FILE NUMBER : ----------->> **132** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 128

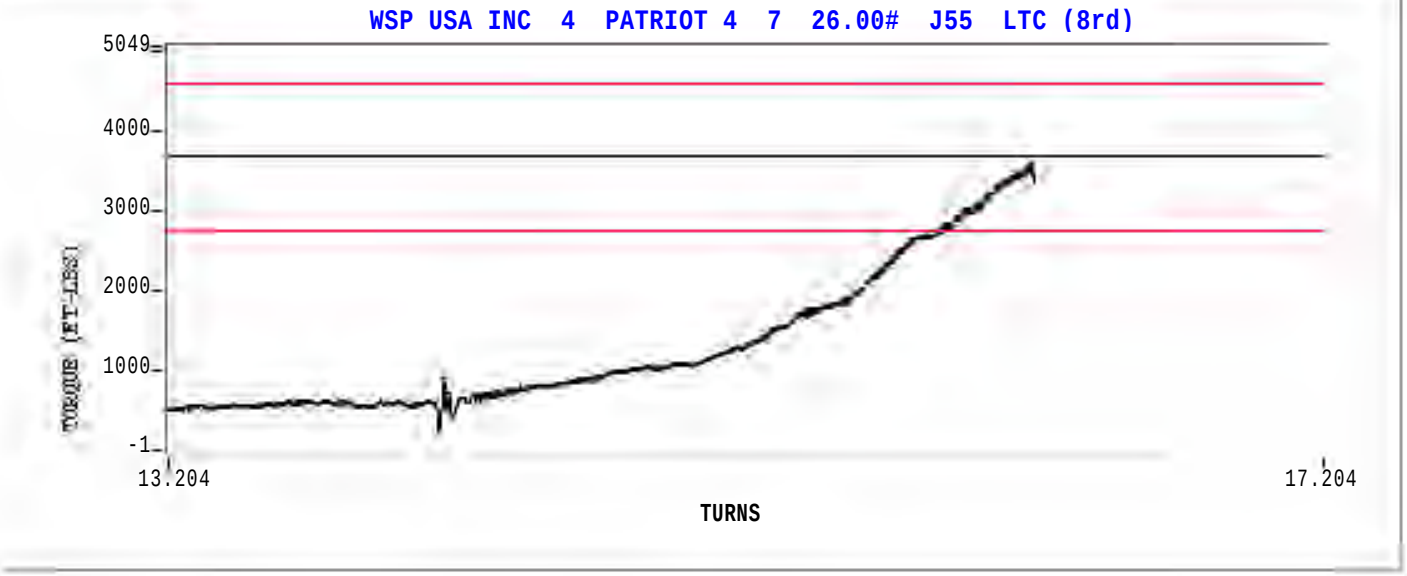
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TIME OF MAKE UP :	1:01 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3603 FT-LBS	MAXIMUM TURNS :	16.118 TURNS

FILE NUMBER : ----------->> **133** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 129

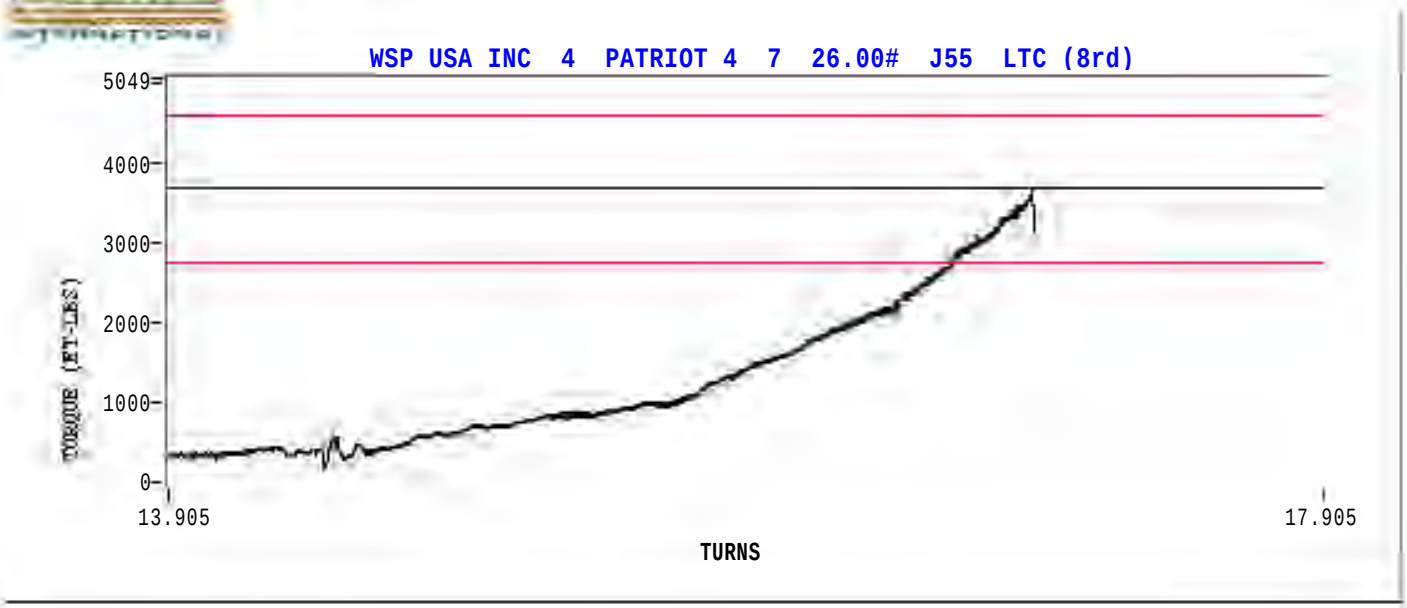


TIME OF MAKE UP :	1:03 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3605 FT-LBS	MAXIMUM TURNS :	16.204 TURNS

FILE NUMBER : ----------->> **134** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 130

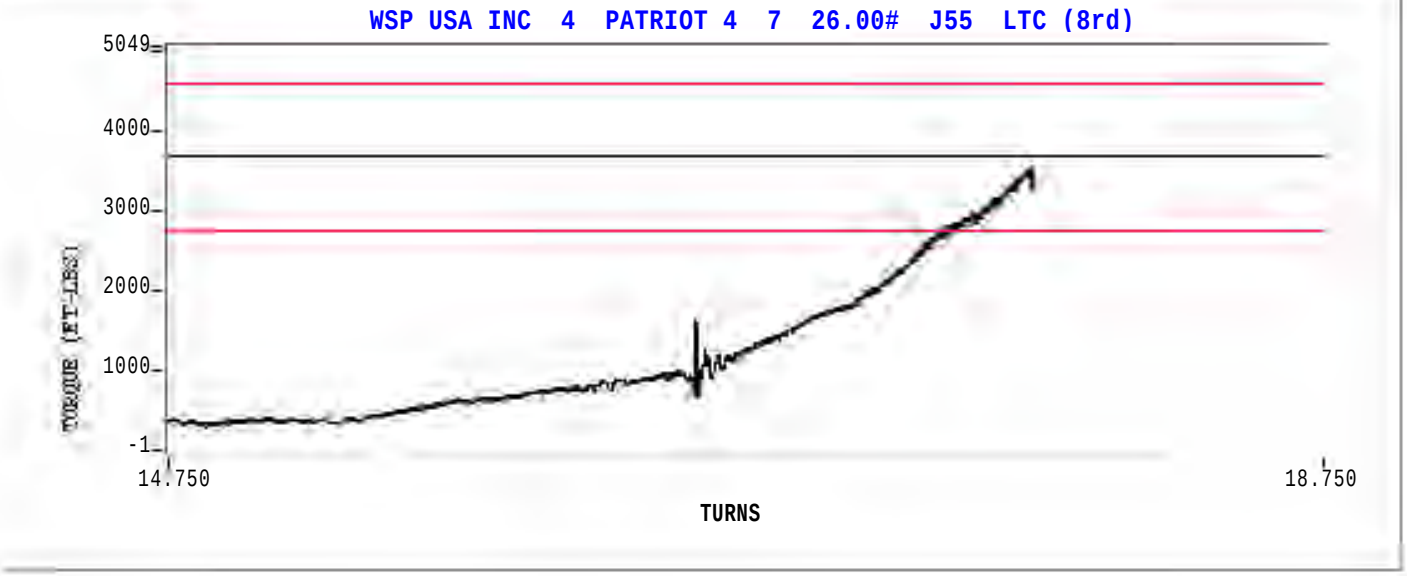
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TIME OF MAKE UP :	1:05 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3670 FT-LBS	MAXIMUM TURNS :	16.905 TURNS

FILE NUMBER : ----------->> **135** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 131

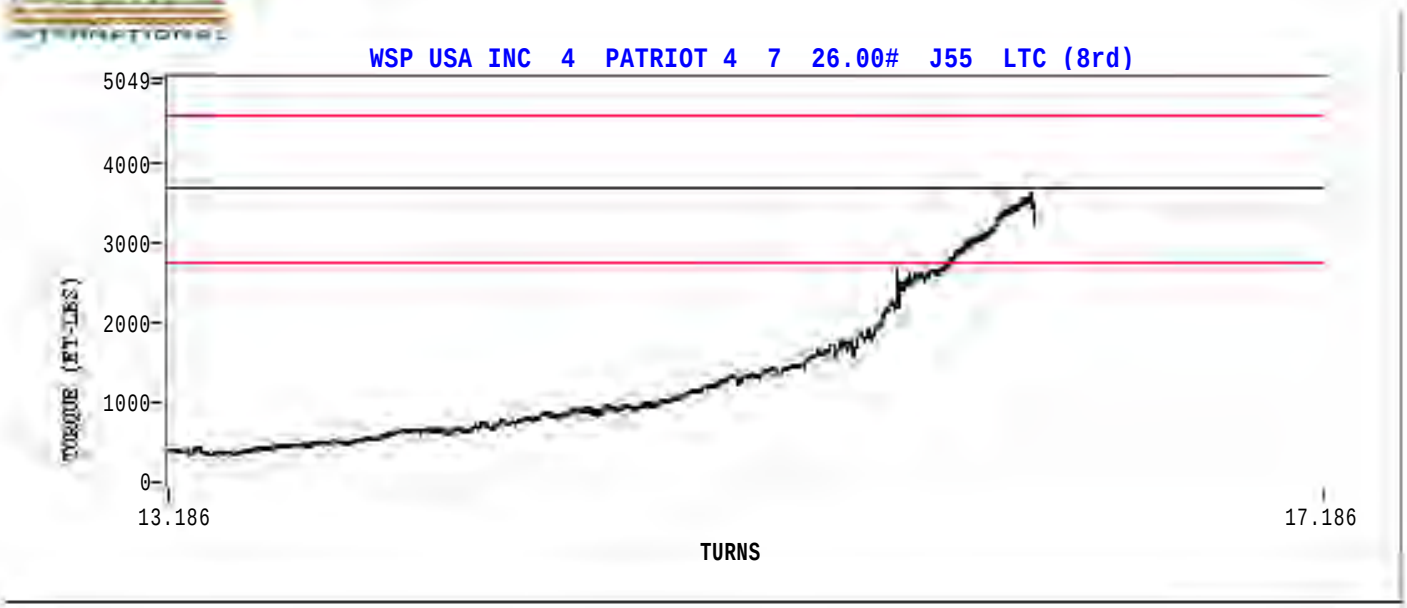


TIME OF MAKE UP :	1:06 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3565 FT-LBS	MAXIMUM TURNS :	17.750 TURNS

FILE NUMBER : ----------->> **136** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 132

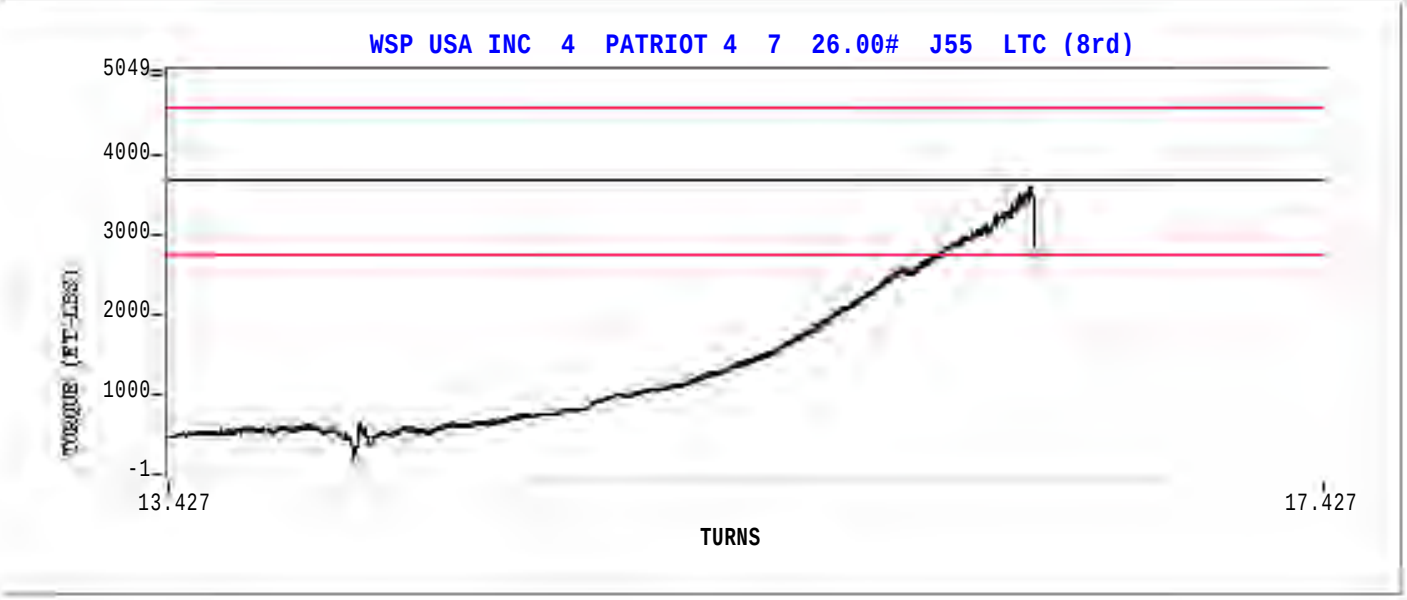
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TIME OF MAKE UP :	1:08 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	16.186 TURNS

FILE NUMBER : ----------->> **137** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 133

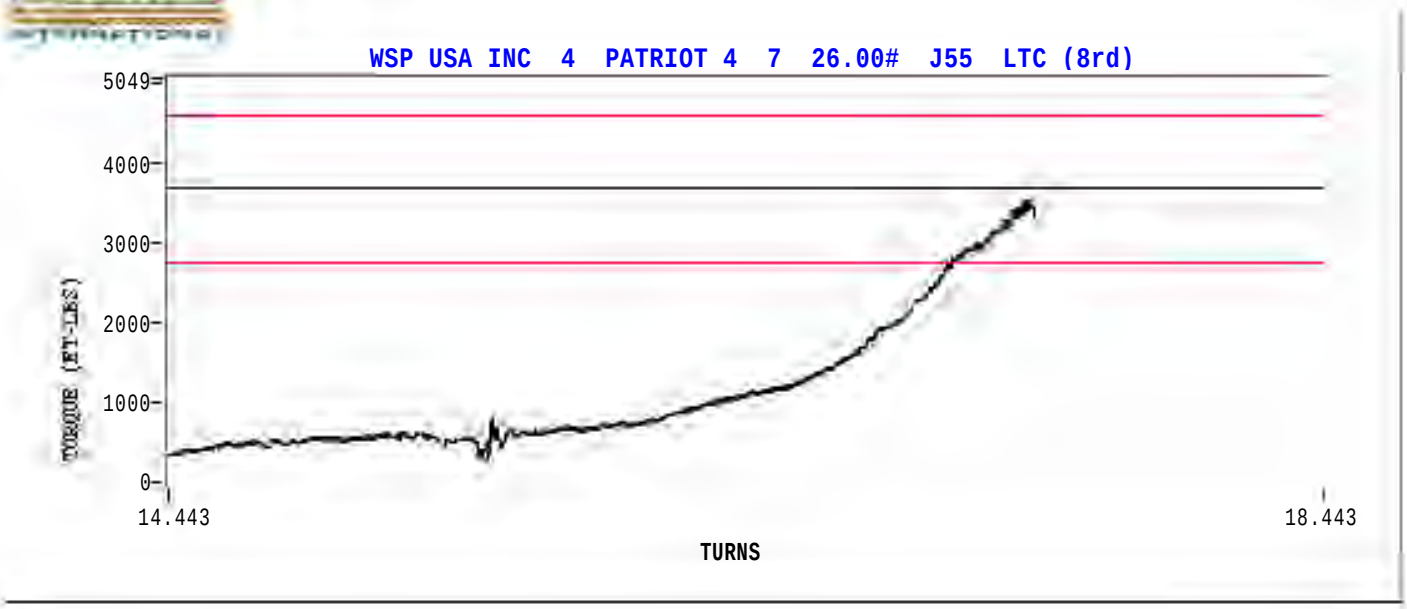


TIME OF MAKE UP :	1:10 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3596 FT-LBS	MAXIMUM TURNS :	16.427 TURNS

FILE NUMBER : ----------->> **138** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 134

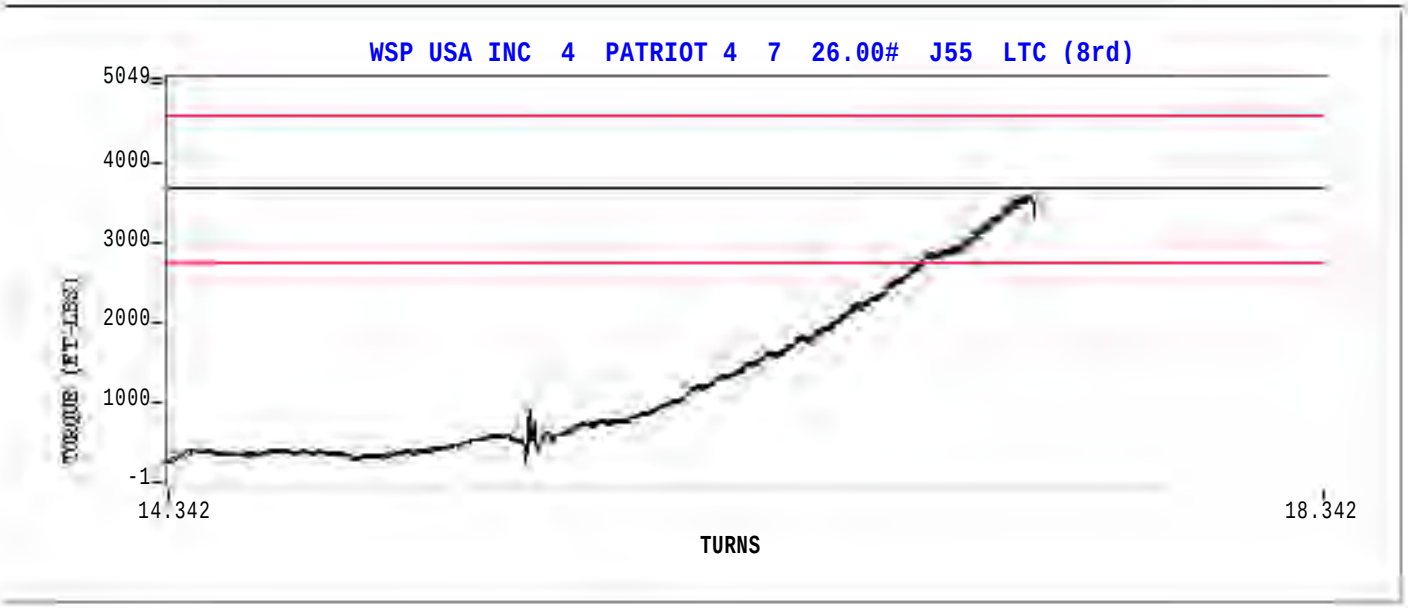
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TIME OF MAKE UP :	1:19 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3597 FT-LBS	MAXIMUM TURNS :	17.443 TURNS

FILE NUMBER : ----------->> **139** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 135

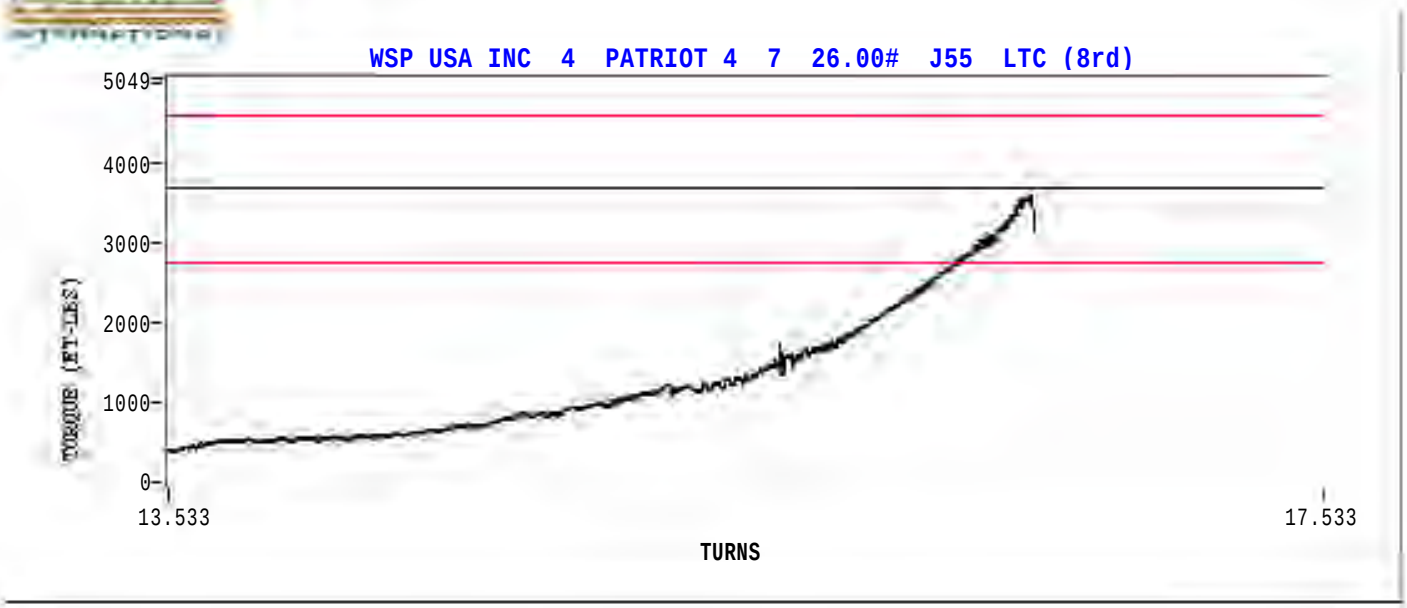


TIME OF MAKE UP :	1:22 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3609 FT-LBS	MAXIMUM TURNS :	17.342 TURNS

FILE NUMBER : ----------->> **140** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 136

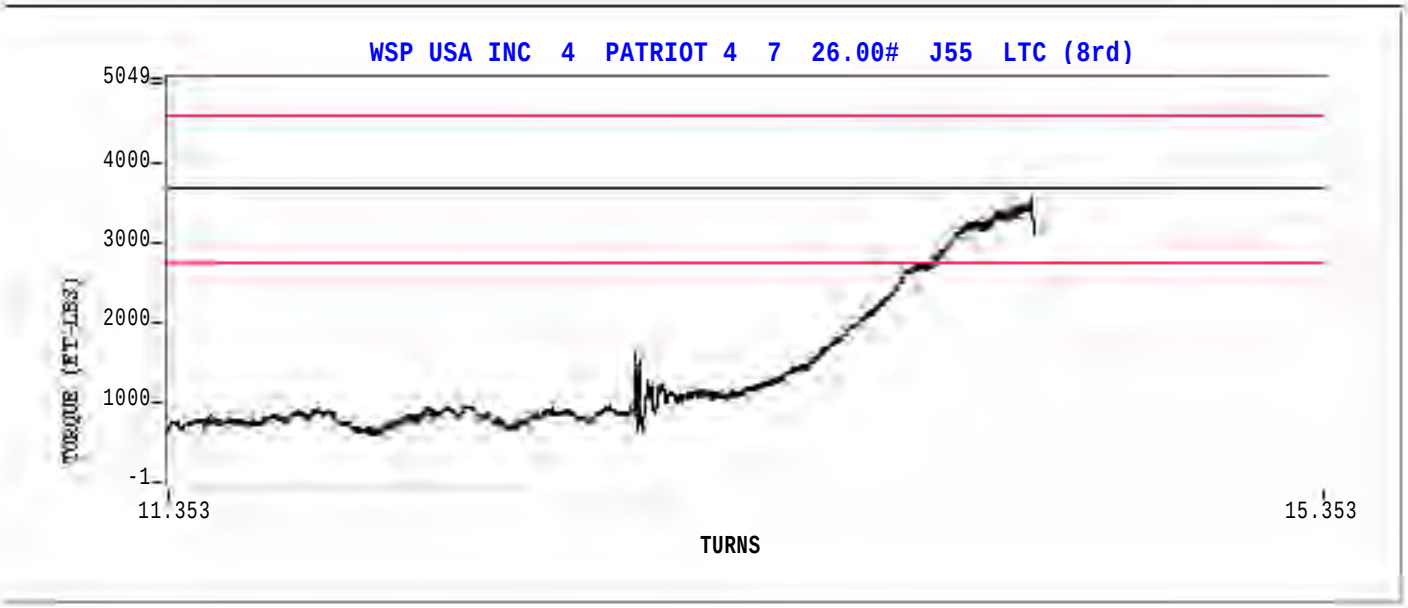
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TIME OF MAKE UP :	1:25 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3599 FT-LBS	MAXIMUM TURNS :	16.533 TURNS

FILE NUMBER : ----------->> **141** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 137



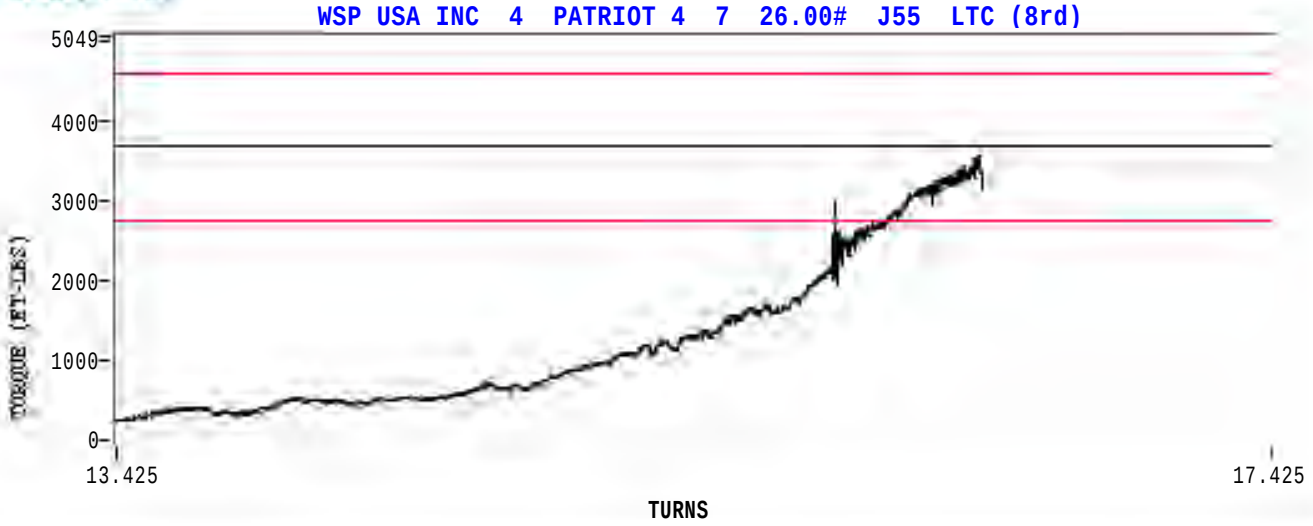
TIME OF MAKE UP :	1:27 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3565 FT-LBS	MAXIMUM TURNS :	14.353 TURNS

FILE NUMBER : ----------->> **142** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 138

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

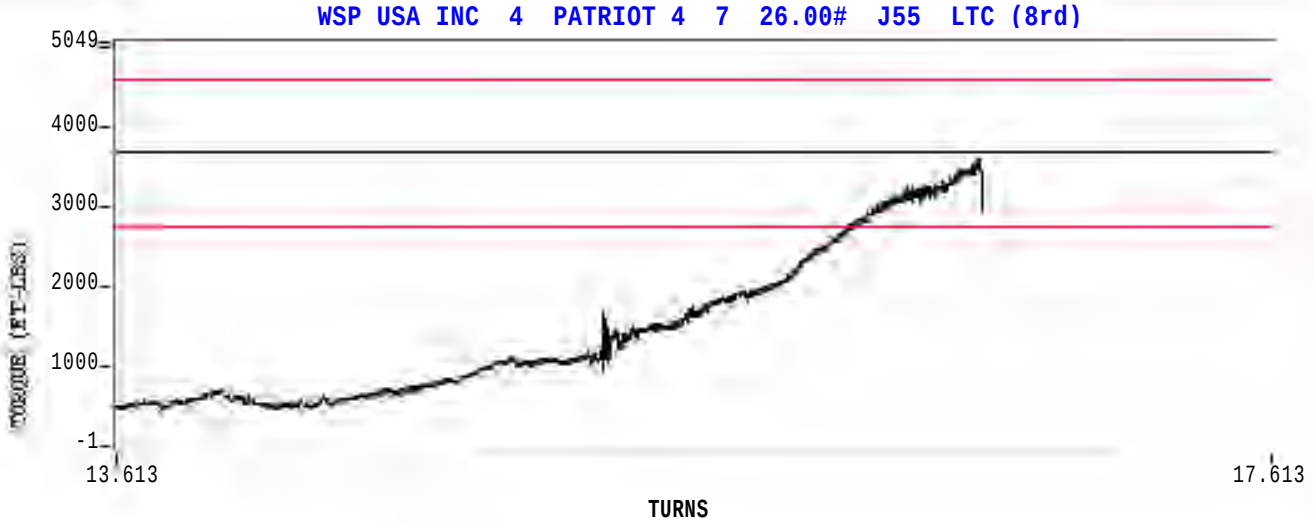


TIME OF MAKE UP :	1:29 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3565 FT-LBS	MAXIMUM TURNS :	16.425 TURNS

FILE NUMBER : ----------->> **143** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 139

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

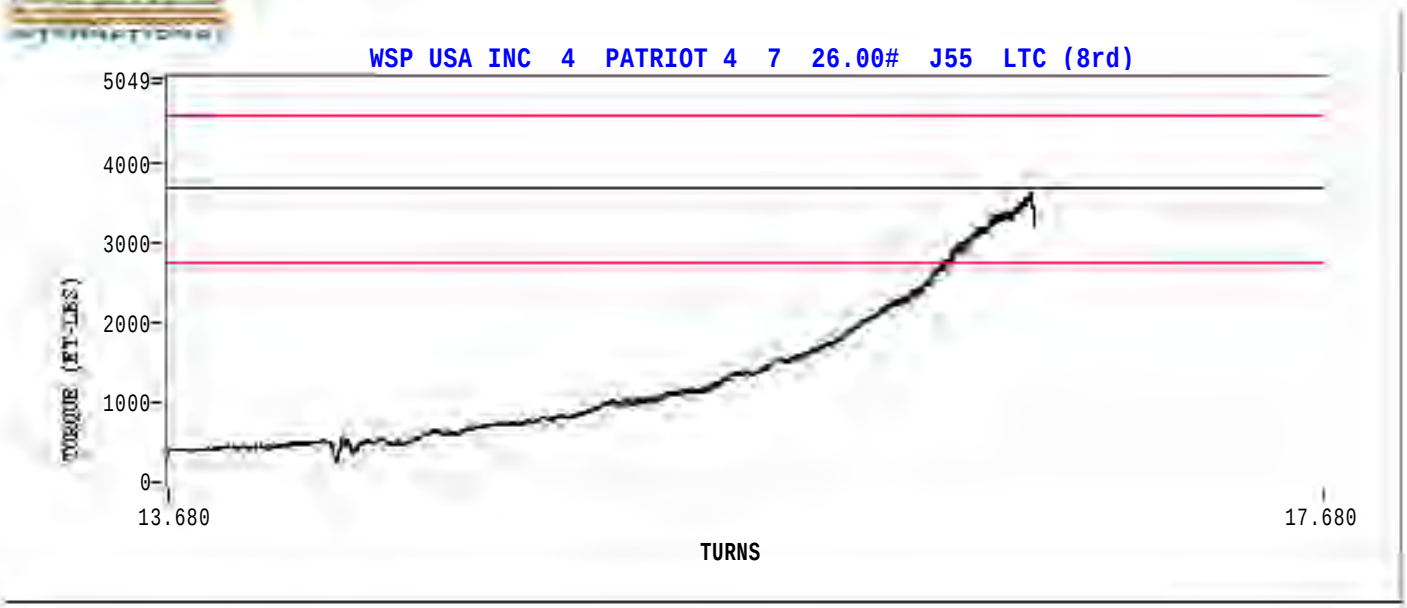


TIME OF MAKE UP :	1:30 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3583 FT-LBS	MAXIMUM TURNS :	16.613 TURNS

FILE NUMBER : ----------->> **144** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 140

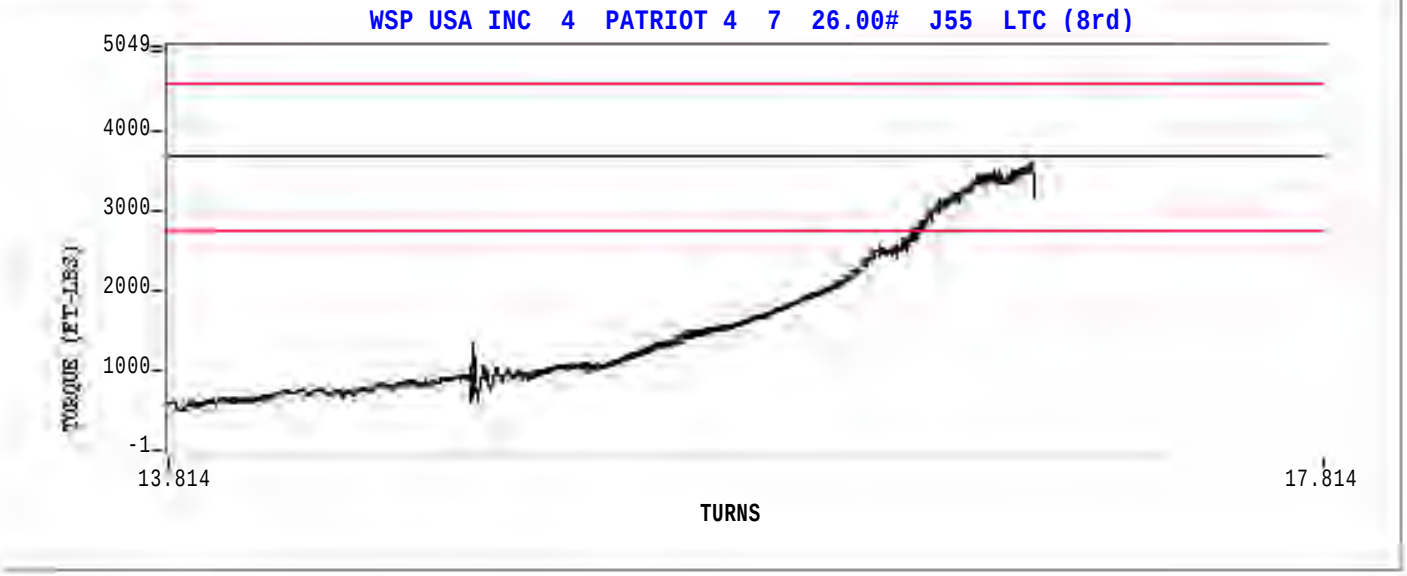
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TIME OF MAKE UP :	1:32 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3620 FT-LBS	MAXIMUM TURNS :	16.680 TURNS

FILE NUMBER : ----------->> **145** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 141

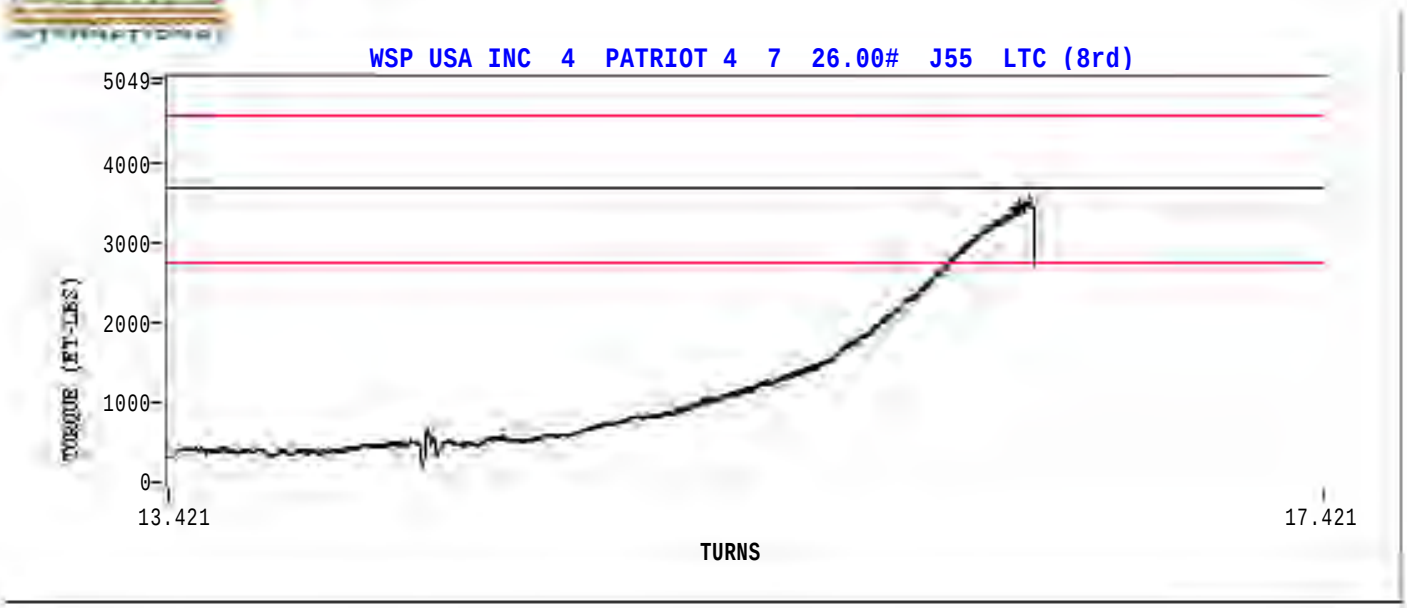


TIME OF MAKE UP :	1:34 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3627 FT-LBS	MAXIMUM TURNS :	16.814 TURNS

FILE NUMBER : ----------->> **146** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 142

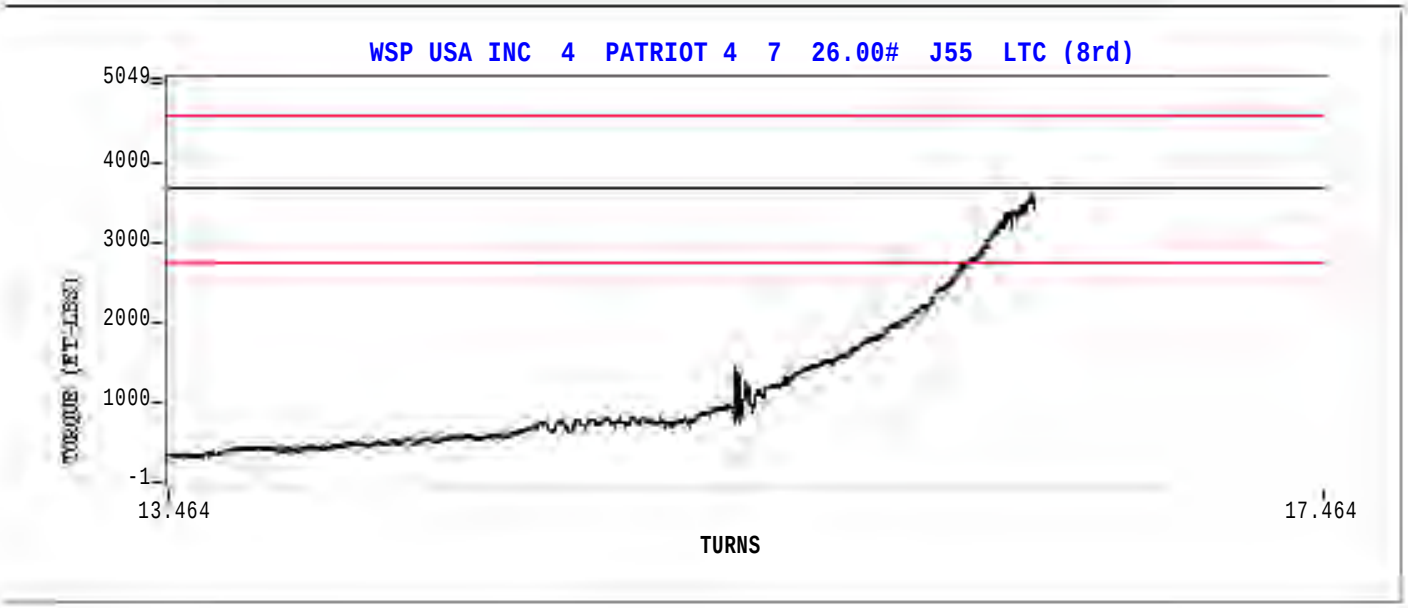
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TIME OF MAKE UP :	1:37 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3569 FT-LBS	MAXIMUM TURNS :	16.421 TURNS

FILE NUMBER : ----------->> **147** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 143

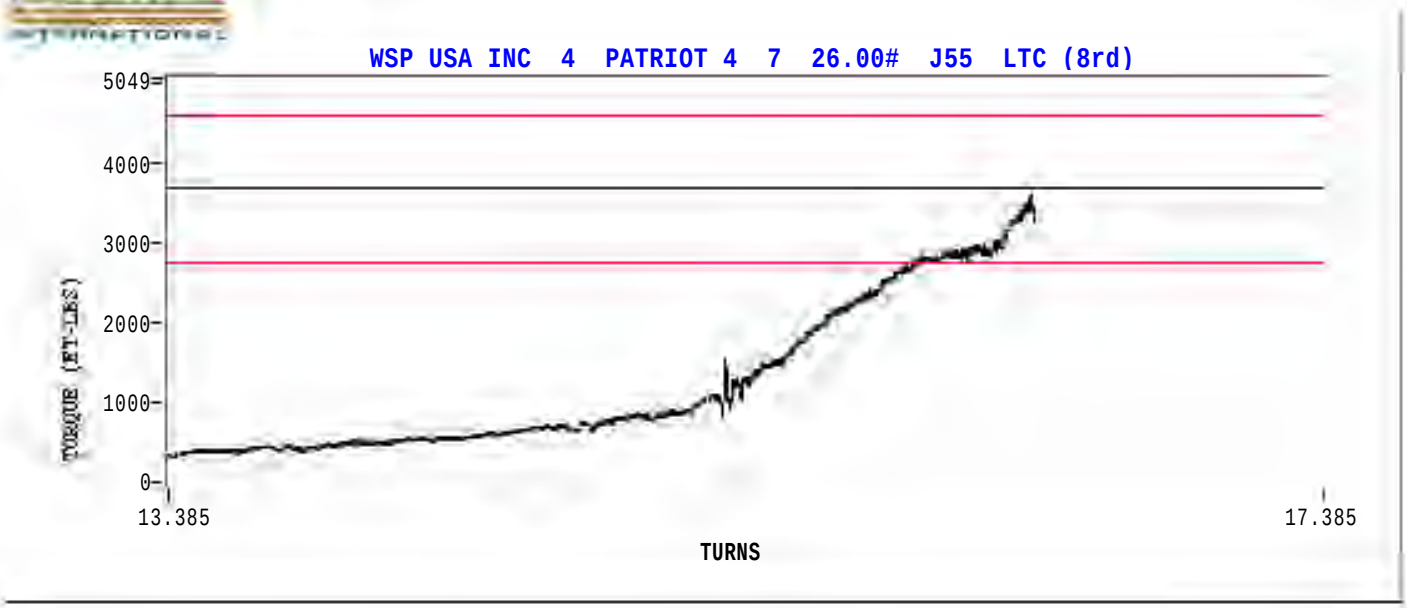


TIME OF MAKE UP :	1:38 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3607 FT-LBS	MAXIMUM TURNS :	16.464 TURNS

FILE NUMBER : ----------->> **148** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 144

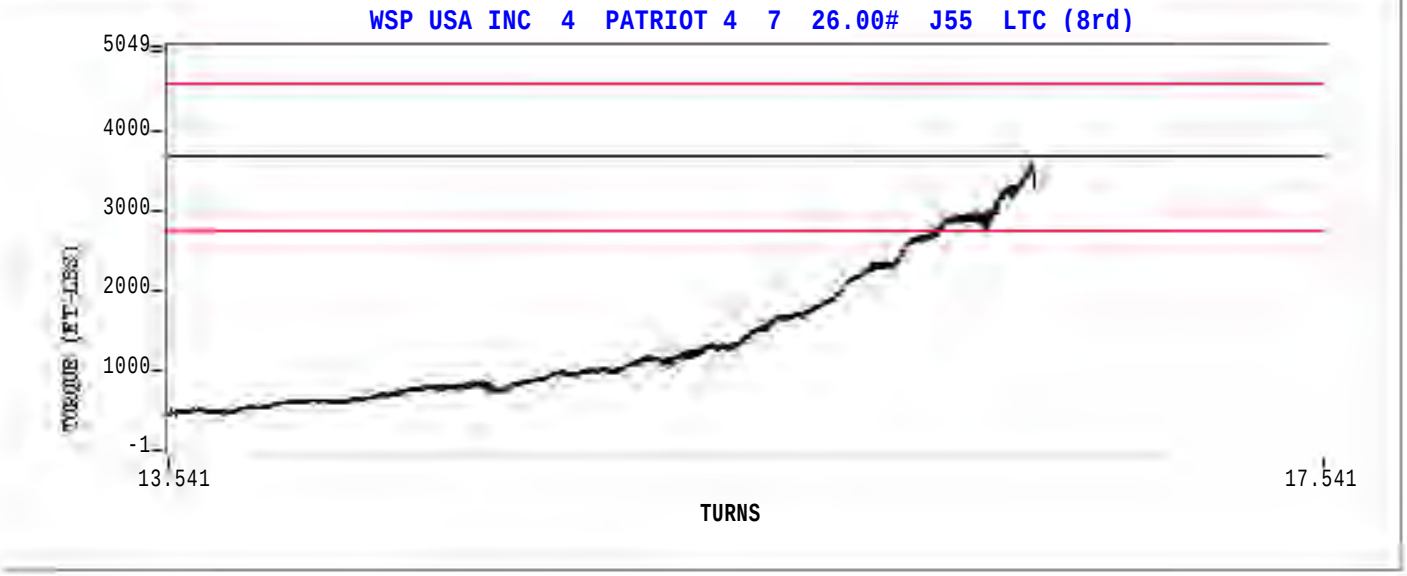
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TIME OF MAKE UP :	1:40 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	16.385 TURNS

FILE NUMBER : ----------->> **149** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 145

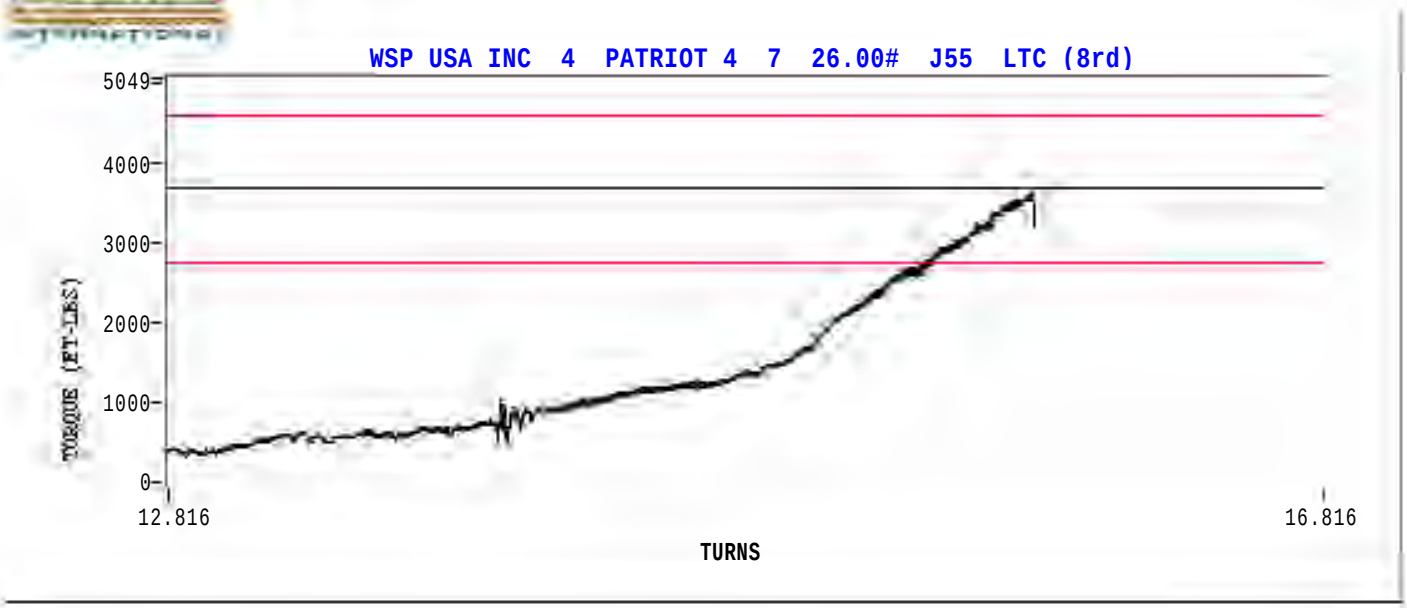


TIME OF MAKE UP :	1:42 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3576 FT-LBS	MAXIMUM TURNS :	16.541 TURNS

FILE NUMBER : ----------->> **150** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 146

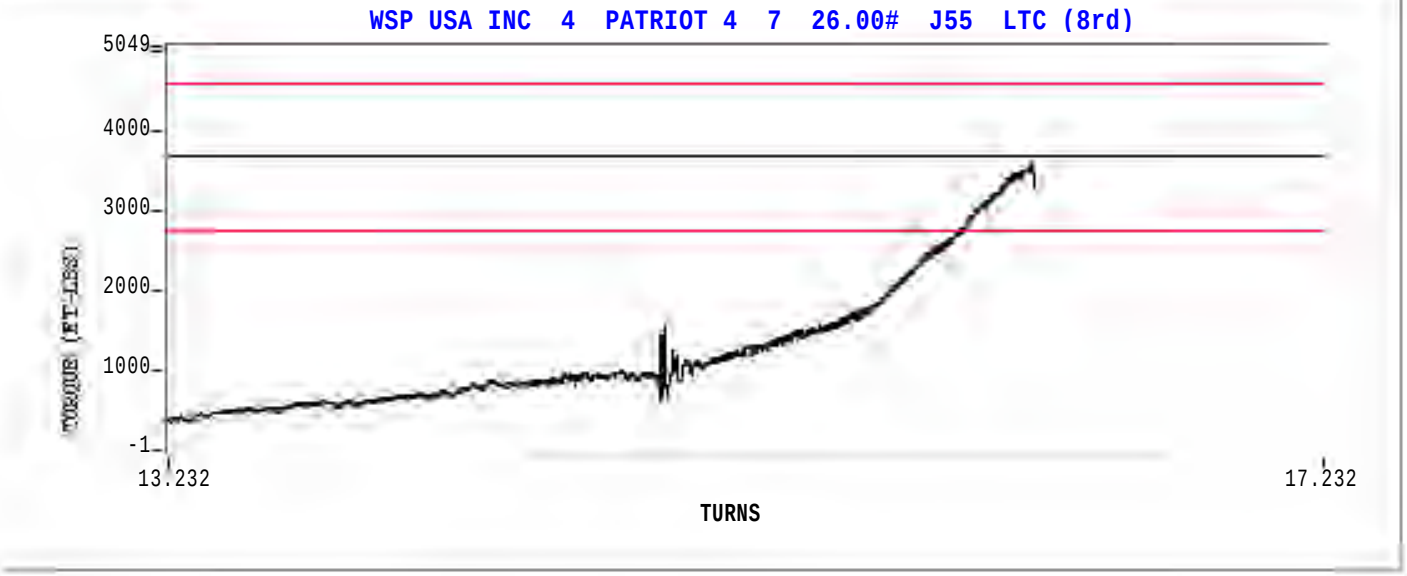
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TIME OF MAKE UP :	1:44 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3643 FT-LBS	MAXIMUM TURNS :	15.816 TURNS

FILE NUMBER : ----------->> **151** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 147

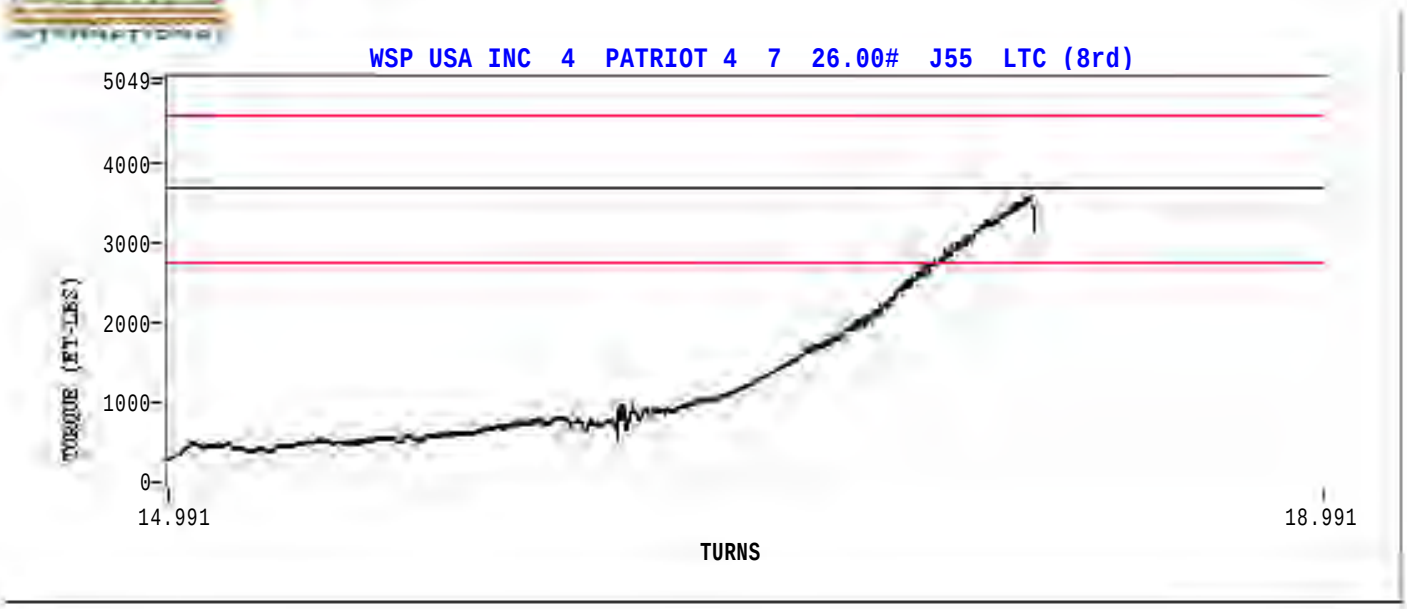


TIME OF MAKE UP :	1:46 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	16.232 TURNS

FILE NUMBER : ----------->> **152** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 148

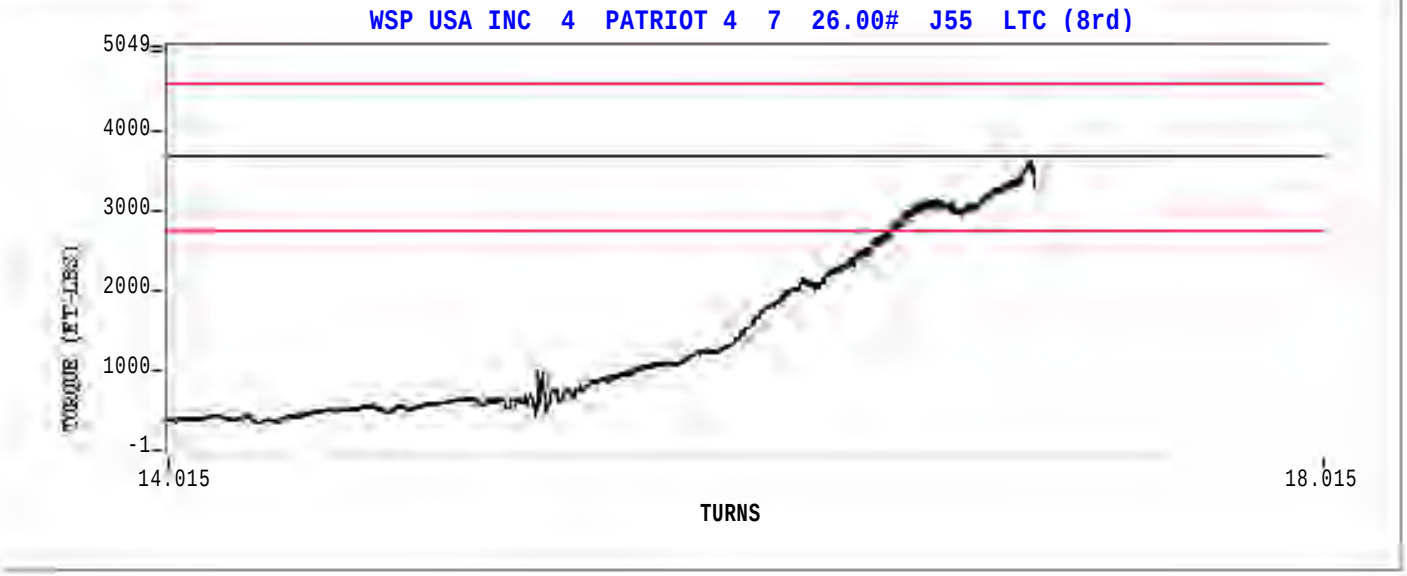
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TIME OF MAKE UP :	1:48 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3595 FT-LBS	MAXIMUM TURNS :	17.991 TURNS

FILE NUMBER : ----------->> **153** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 149

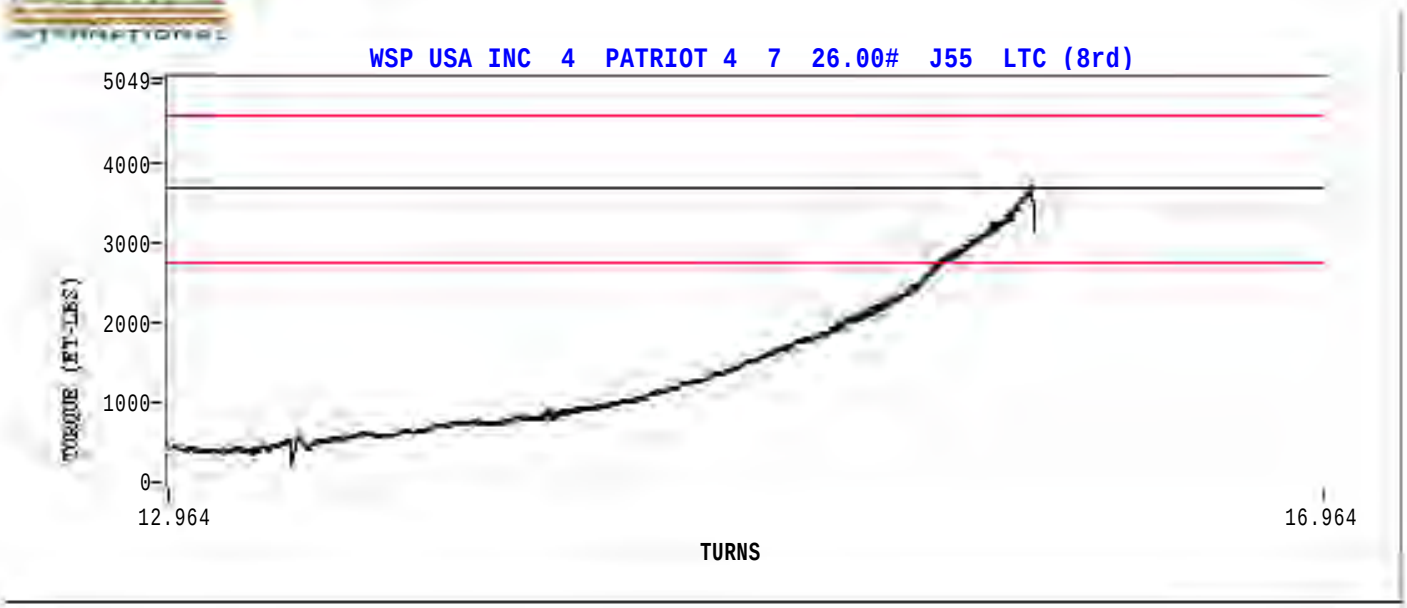


TIME OF MAKE UP :	1:50 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	17.015 TURNS

FILE NUMBER : ----------->> **154** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 150

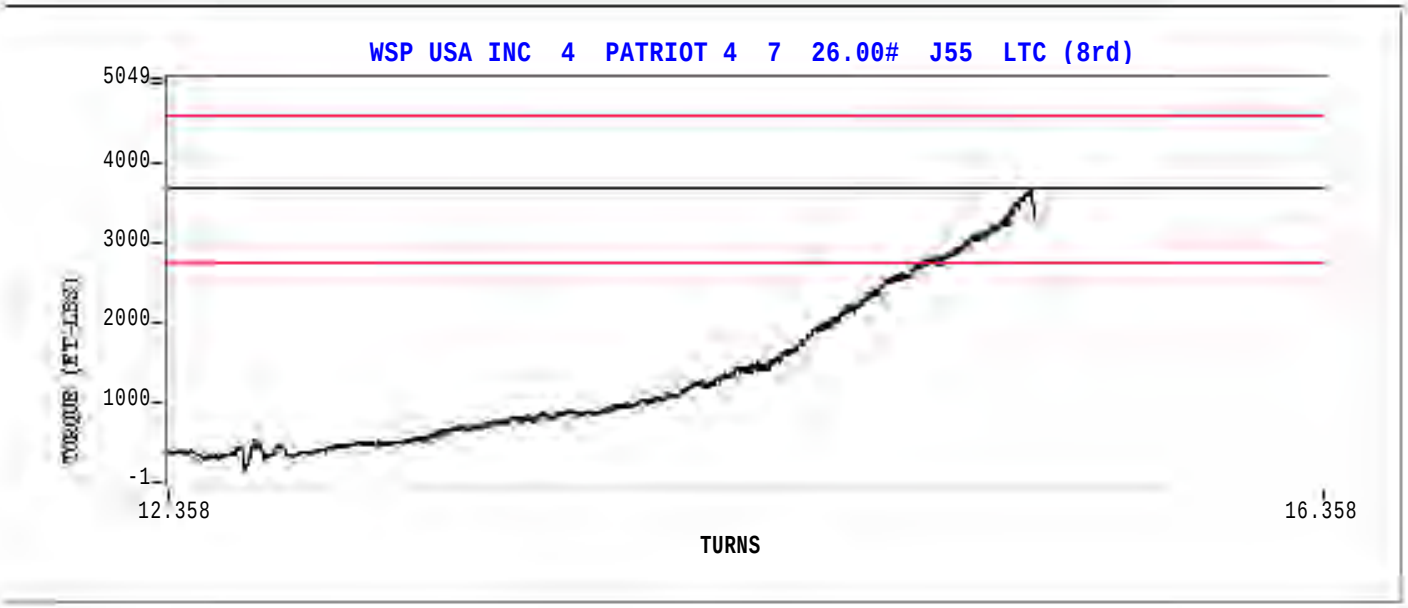
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TIME OF MAKE UP :	1:52 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3701 FT-LBS	MAXIMUM TURNS :	15.964 TURNS

FILE NUMBER : ----------->> **155** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 151

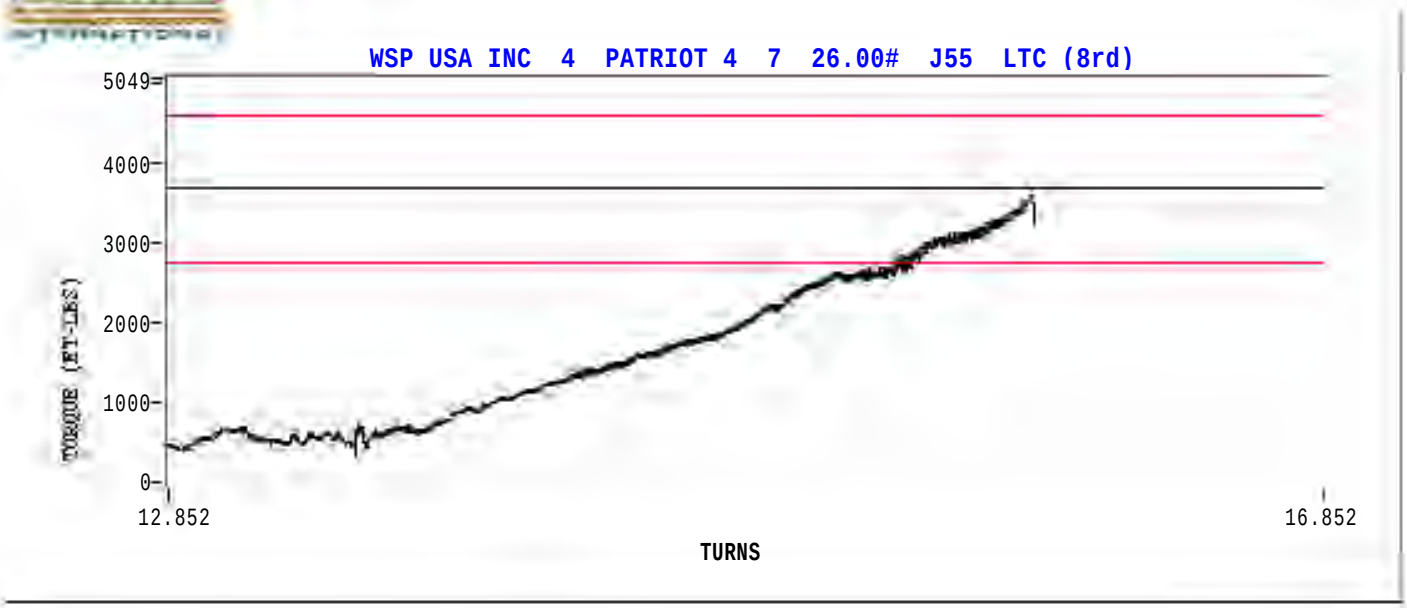


TIME OF MAKE UP :	1:54 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3682 FT-LBS	MAXIMUM TURNS :	15.358 TURNS

FILE NUMBER : ----------->> **156** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 152

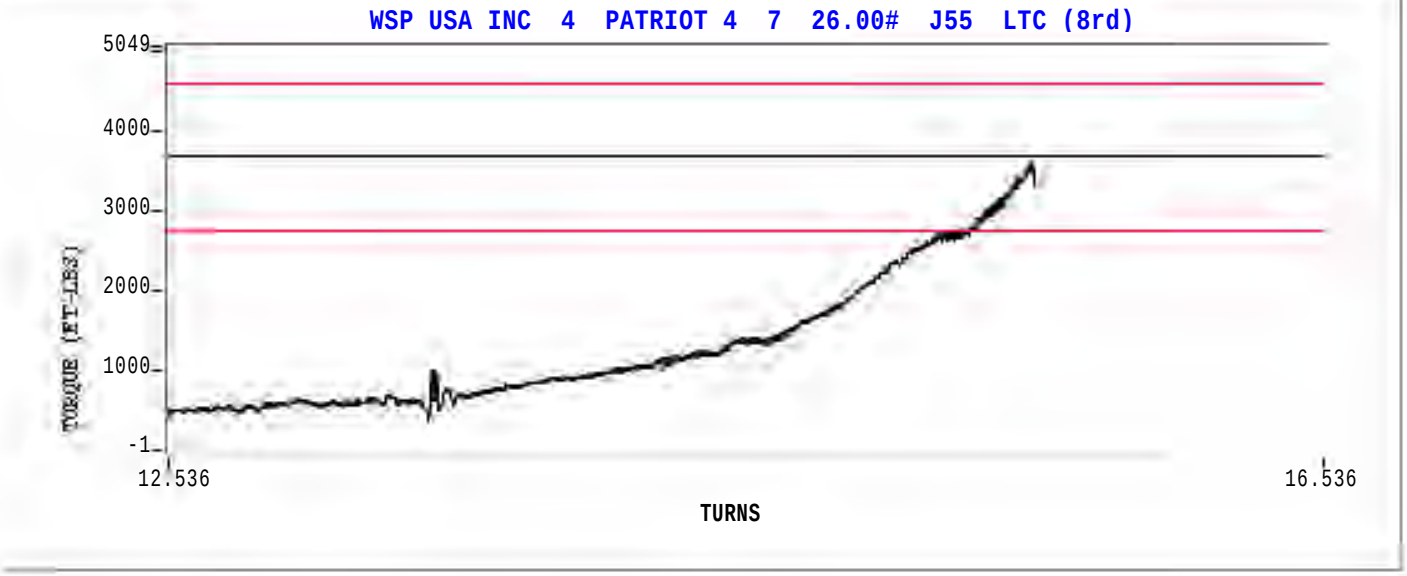
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TIME OF MAKE UP :	1:56 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3590 FT-LBS	MAXIMUM TURNS :	15.852 TURNS

FILE NUMBER : ----------->> **157** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 153

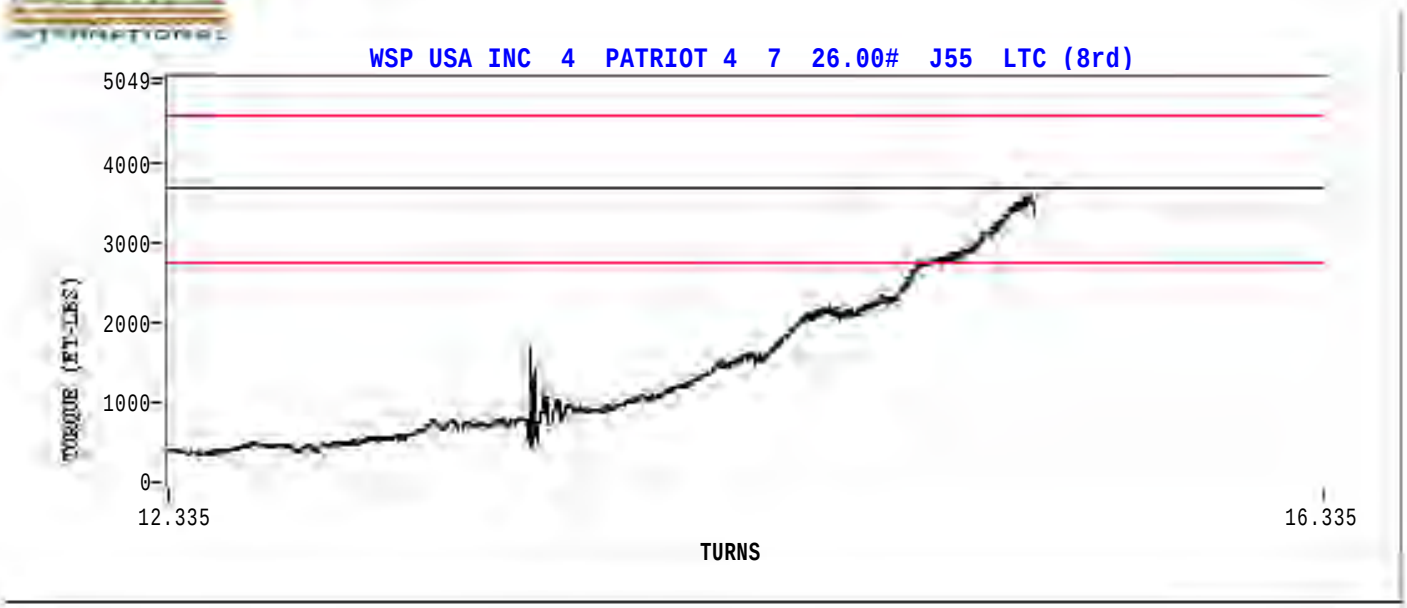


TIME OF MAKE UP :	1:58 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3626 FT-LBS	MAXIMUM TURNS :	15.536 TURNS

FILE NUMBER : ----------->> **158** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 154

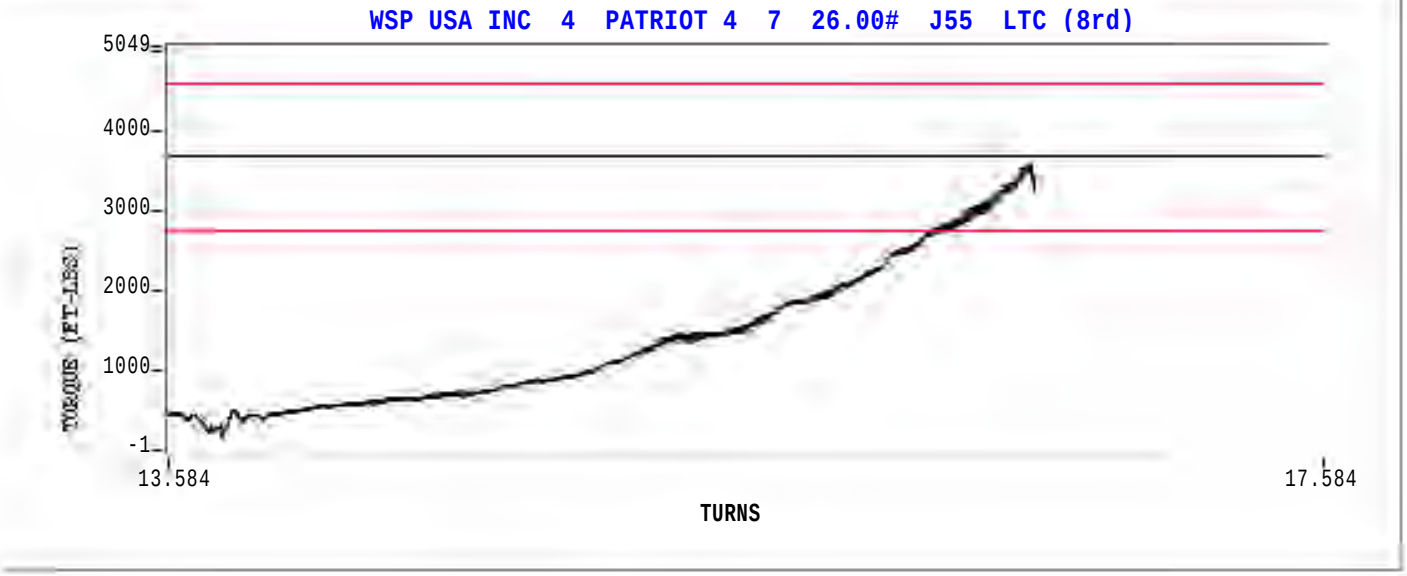
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TIME OF MAKE UP :	2:00 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3612 FT-LBS	MAXIMUM TURNS :	15.335 TURNS

FILE NUMBER : ----------->> **159** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 155



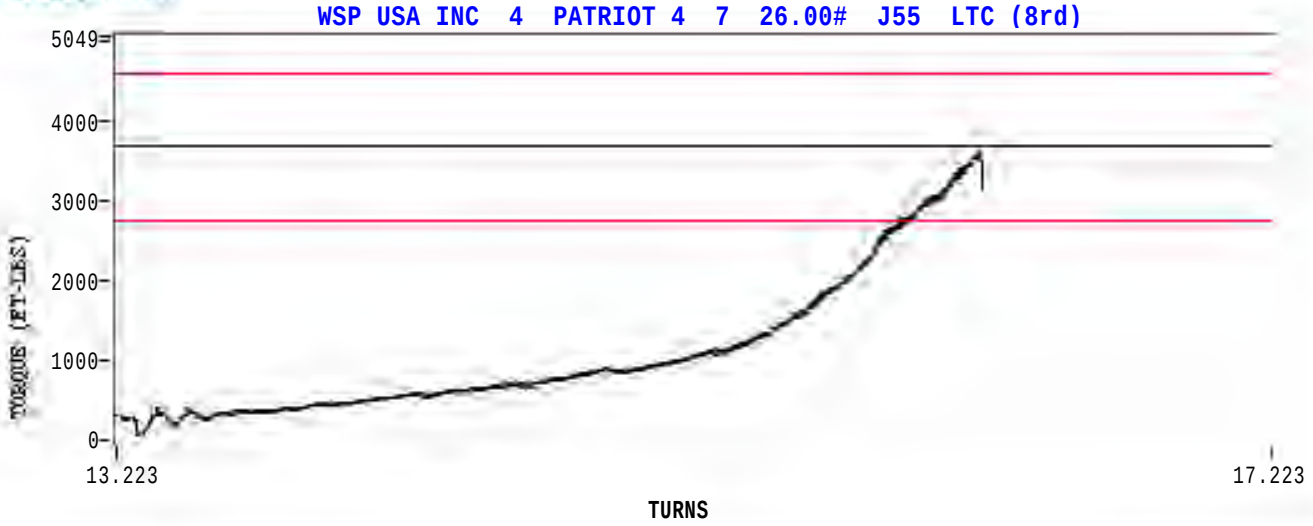
TIME OF MAKE UP :	2:03 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3588 FT-LBS	MAXIMUM TURNS :	16.584 TURNS

FILE NUMBER : ----------->> **160** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 156

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

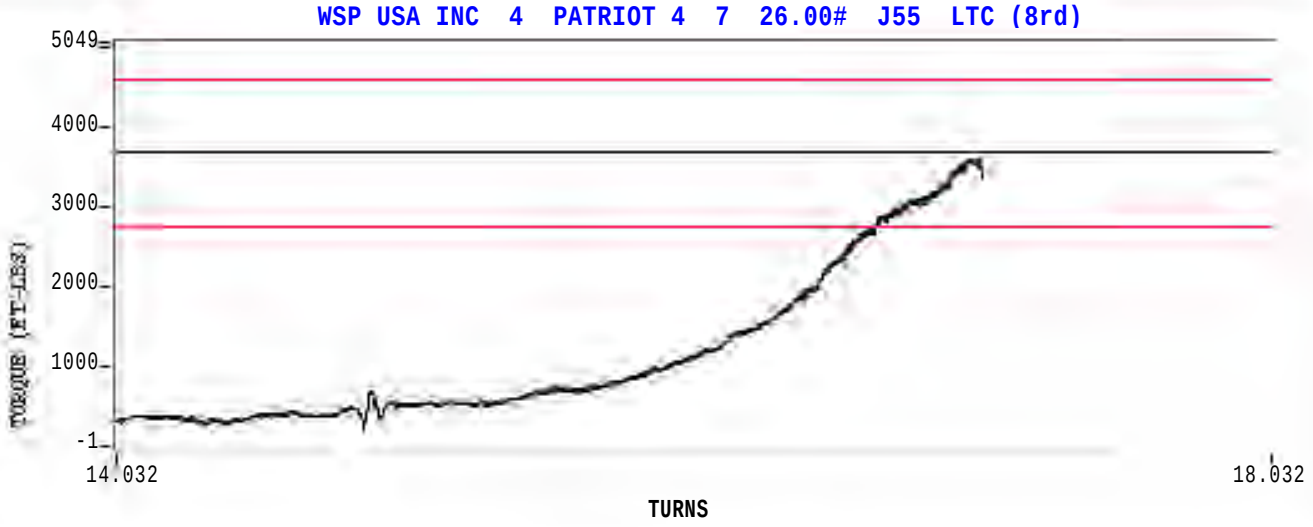


TIME OF MAKE UP :	2:05 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3628 FT-LBS	MAXIMUM TURNS :	16.223 TURNS

FILE NUMBER : ----------->> **161** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 157

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

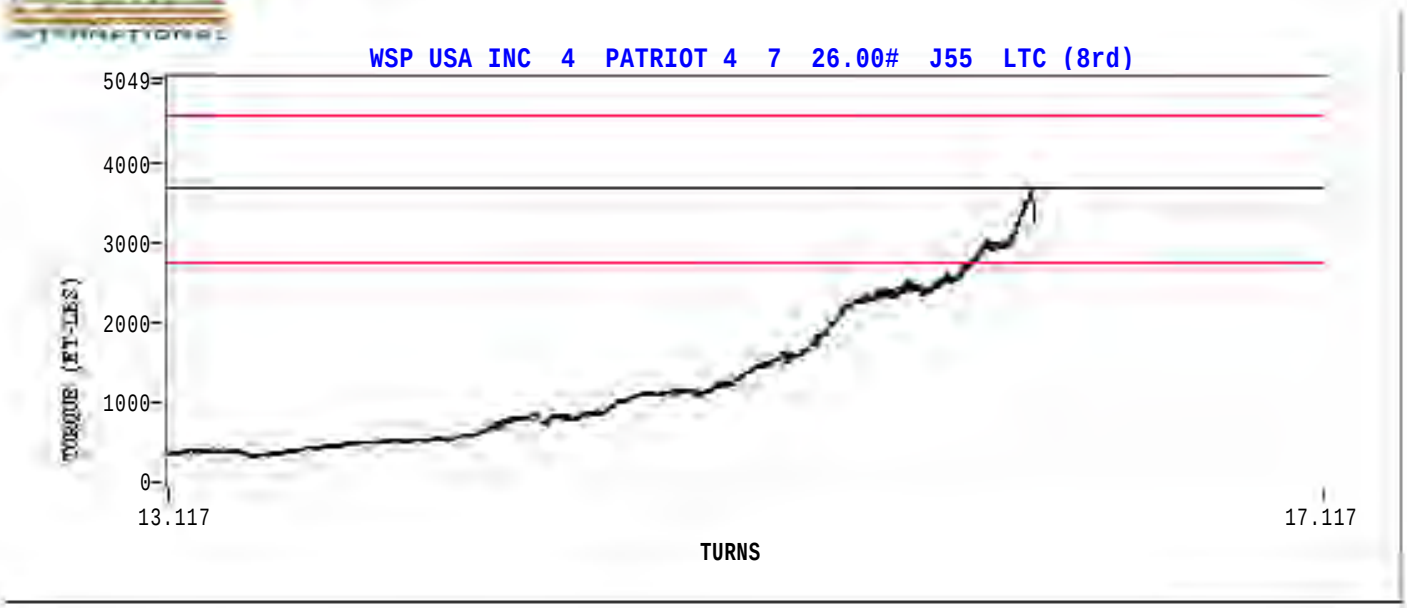


TIME OF MAKE UP :	2:07 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3613 FT-LBS	MAXIMUM TURNS :	17.032 TURNS

FILE NUMBER : ----------->> **162** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 158

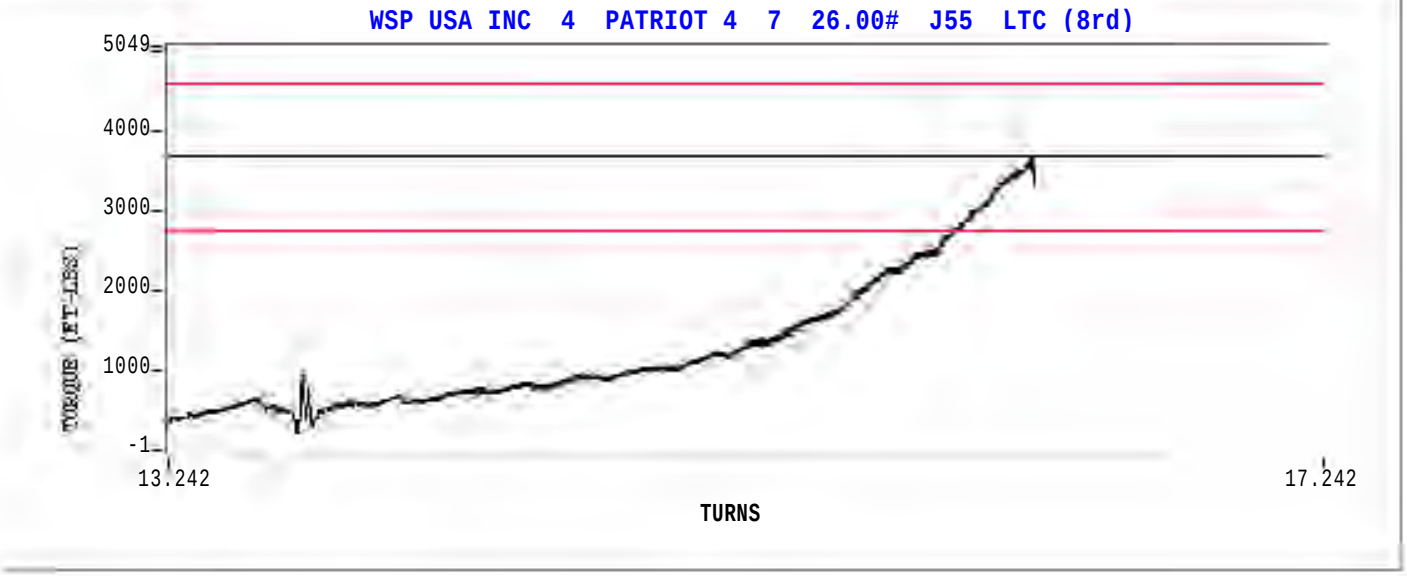
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TIME OF MAKE UP :	2:09 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3636 FT-LBS	MAXIMUM TURNS :	16.117 TURNS

FILE NUMBER : ----------->> **163** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 159

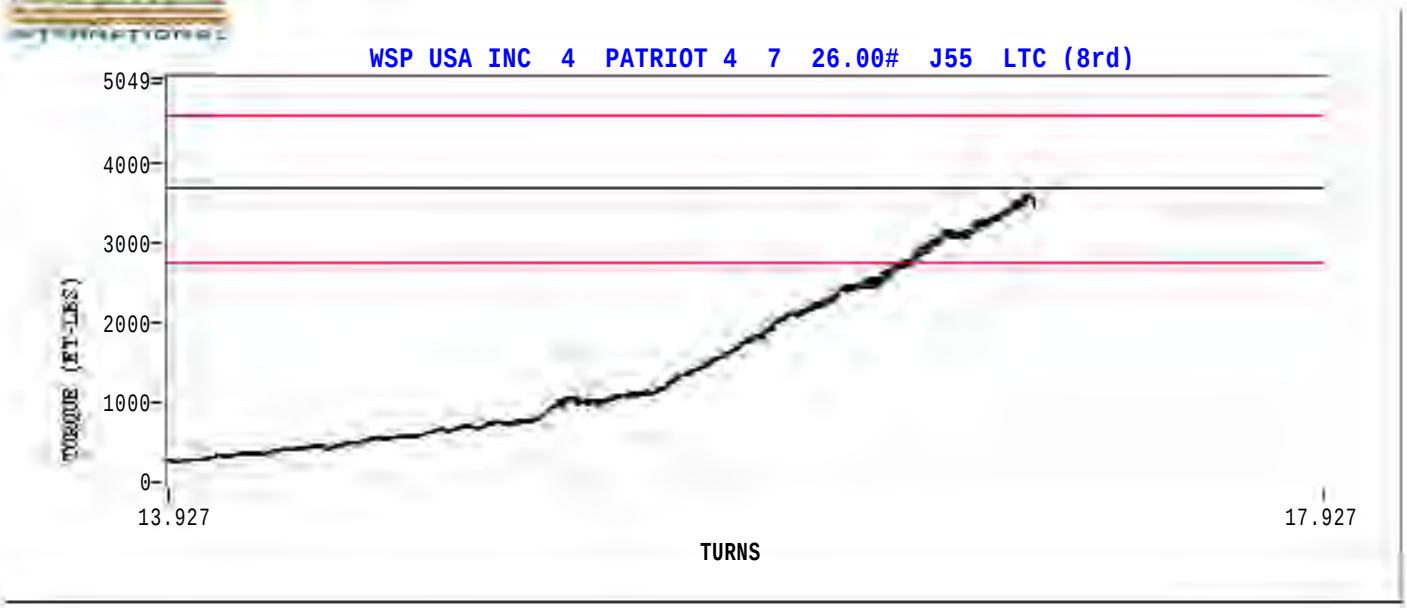


TIME OF MAKE UP :	2:12 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3669 FT-LBS	MAXIMUM TURNS :	16.242 TURNS

FILE NUMBER : ----------->> **164** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 160

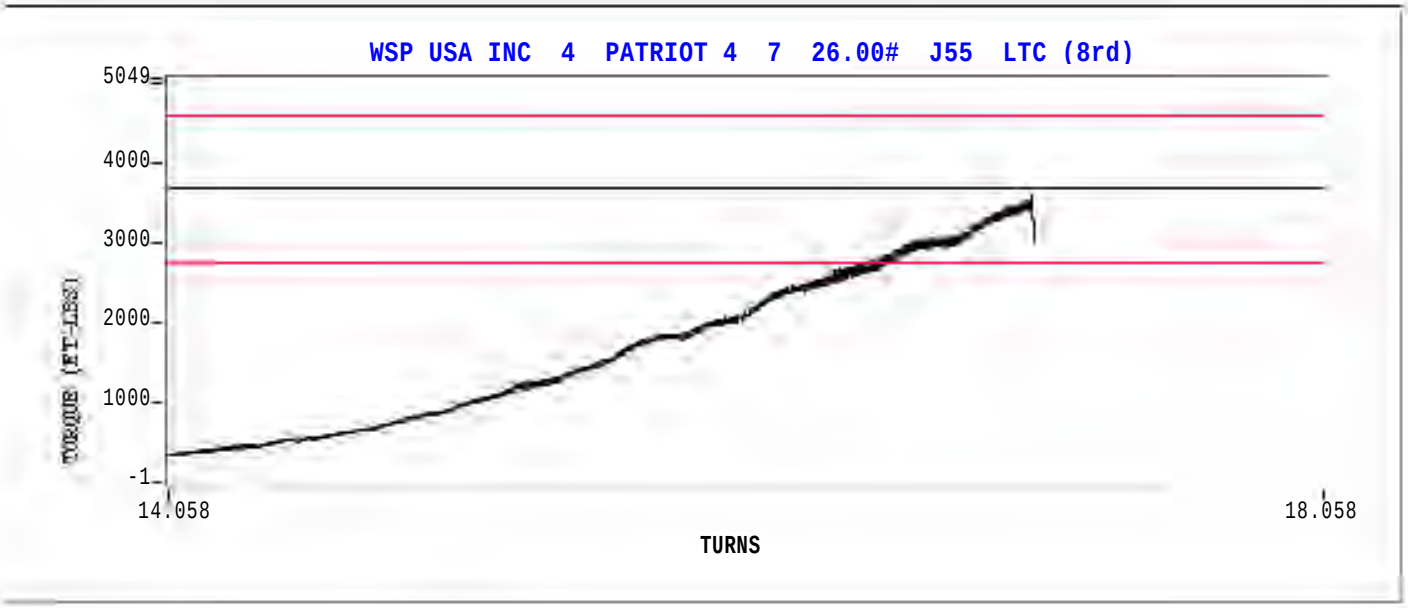
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TIME OF MAKE UP :	2:14 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3649 FT-LBS	MAXIMUM TURNS :	16.927 TURNS

FILE NUMBER : ----------->> **165** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 161

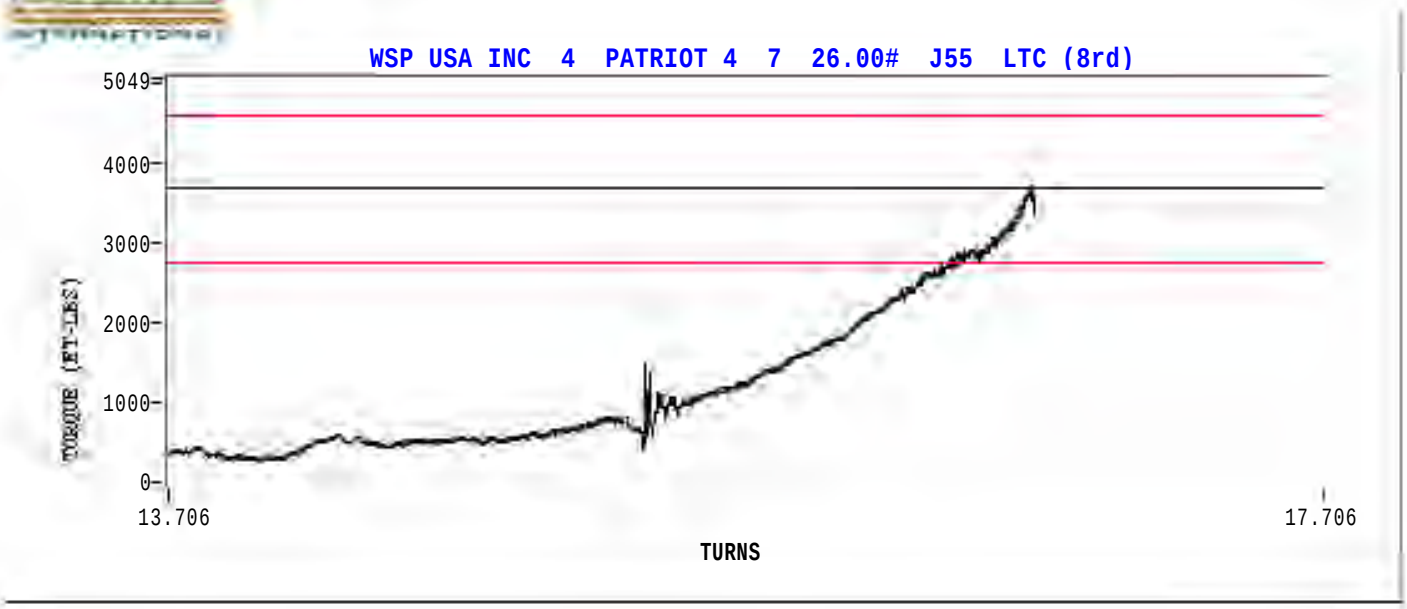


TIME OF MAKE UP :	2:16 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3583 FT-LBS	MAXIMUM TURNS :	17.058 TURNS

FILE NUMBER : ----------->> **166** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 162

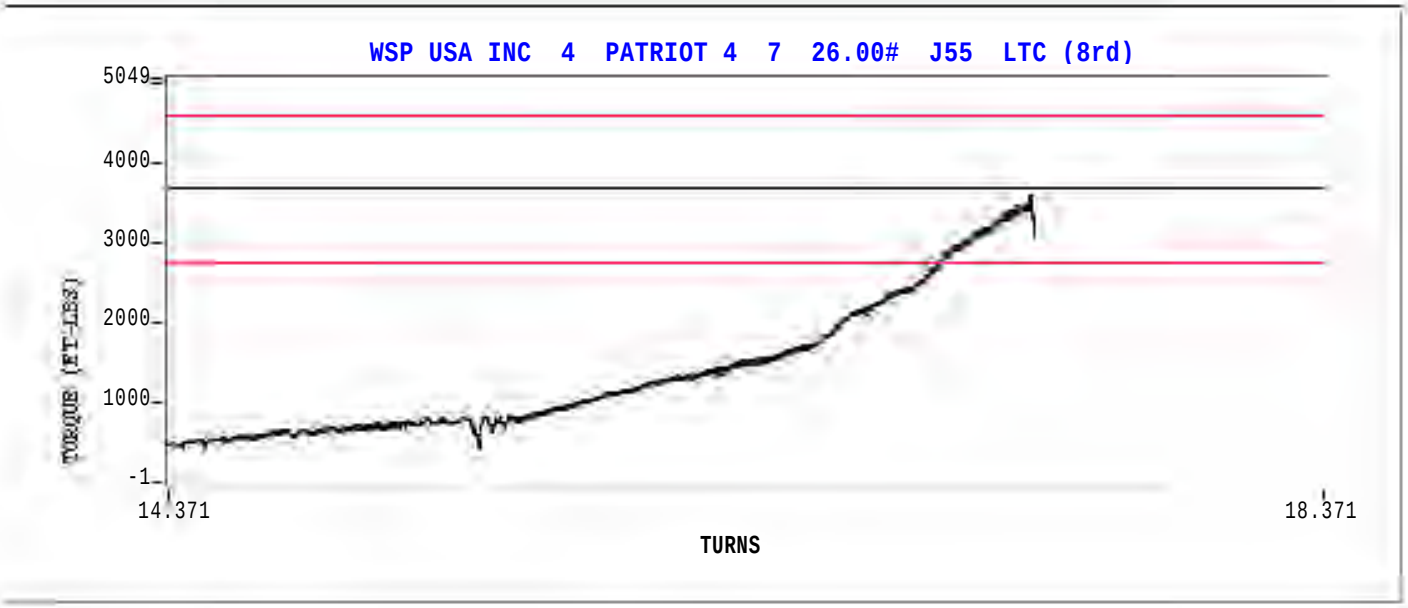
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TIME OF MAKE UP :	2:18 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3708 FT-LBS	MAXIMUM TURNS :	16.706 TURNS

FILE NUMBER : ----------->> **167** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 163

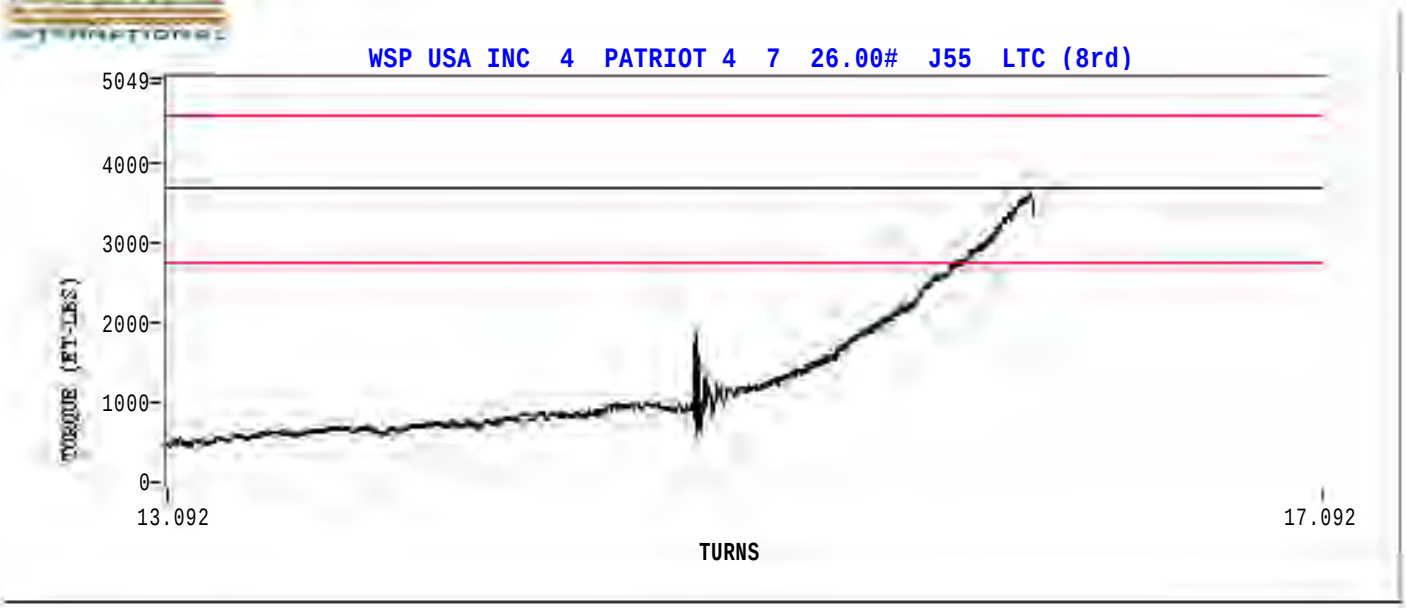


TIME OF MAKE UP :	2:20 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3588 FT-LBS	MAXIMUM TURNS :	17.371 TURNS

FILE NUMBER : ----------->> **168** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 164

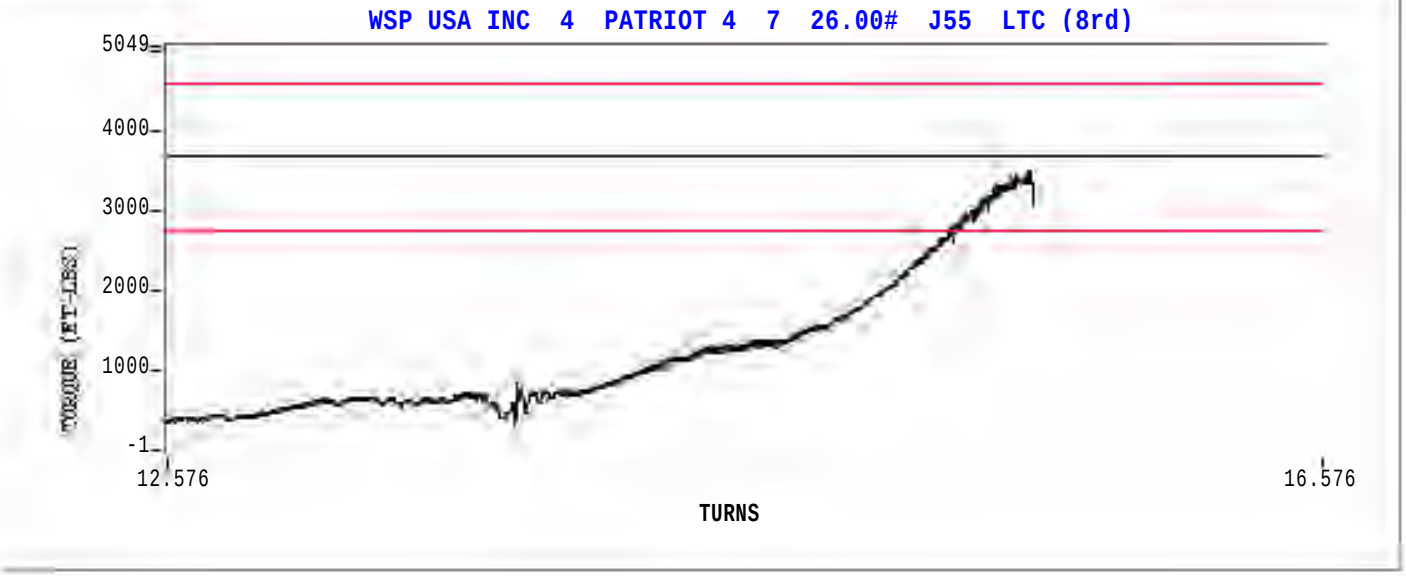
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TIME OF MAKE UP :	2:22 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3622 FT-LBS	MAXIMUM TURNS :	16.092 TURNS

FILE NUMBER : ---------->> 169 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 165

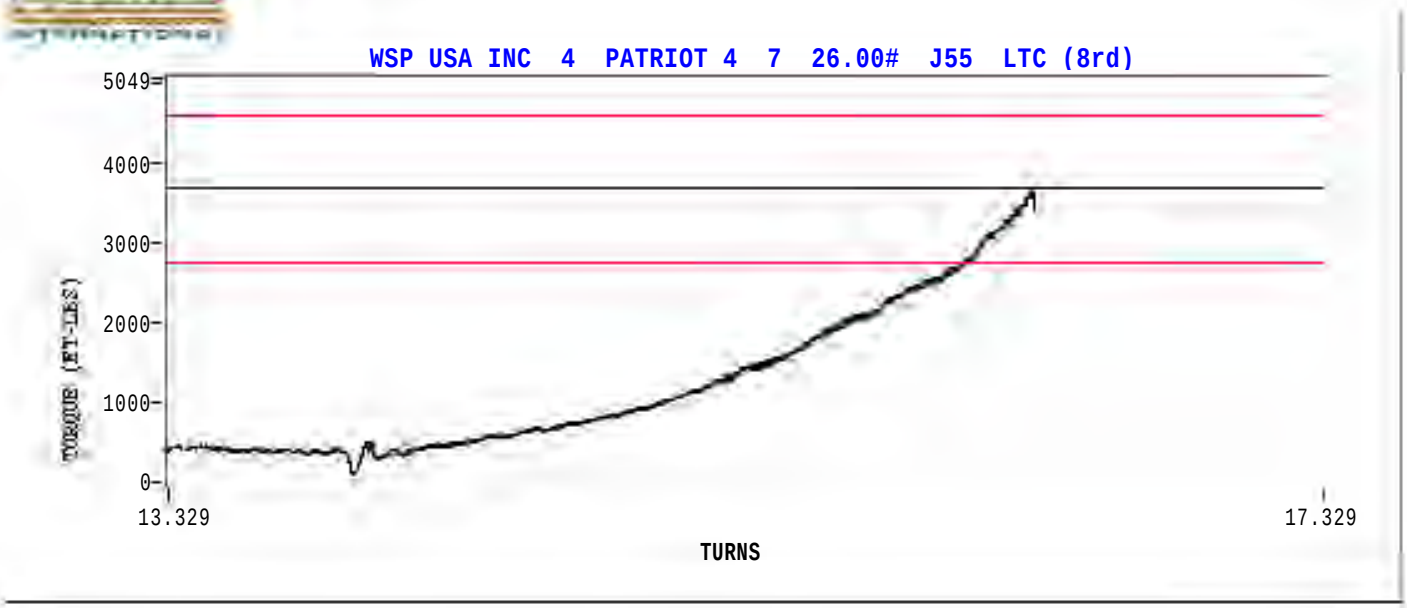


TIME OF MAKE UP :	2:23 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3499 FT-LBS	MAXIMUM TURNS :	15.576 TURNS

FILE NUMBER : ---------->> 170 JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 166

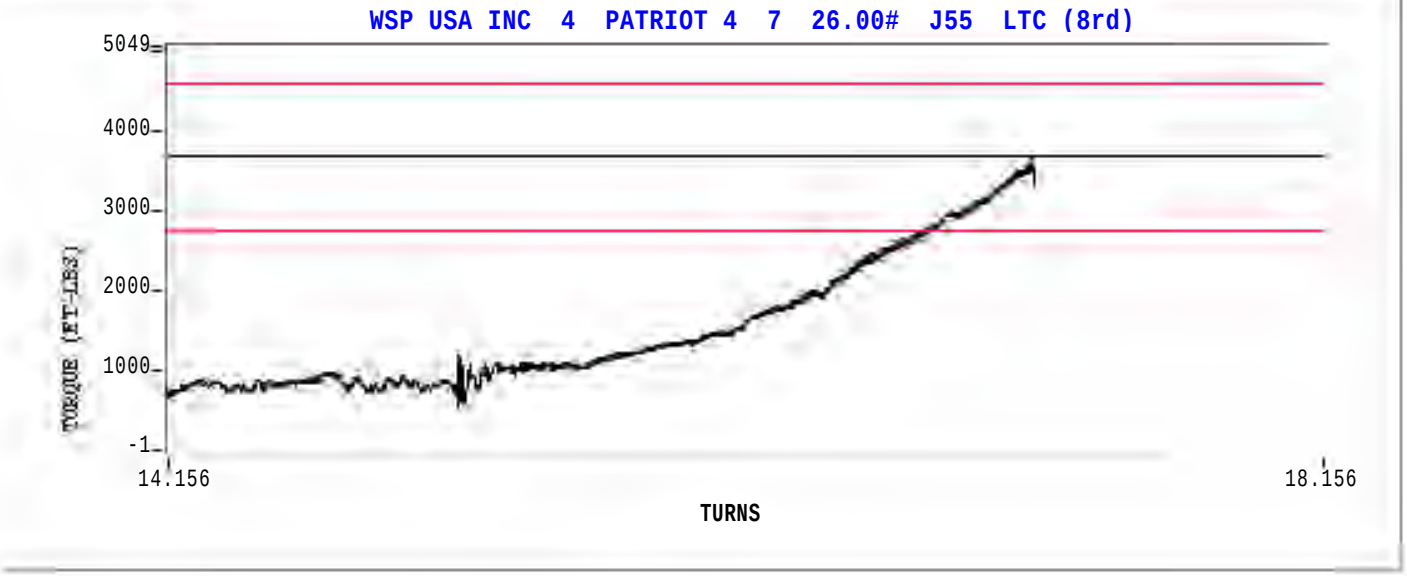
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TIME OF MAKE UP :	2:25 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3673 FT-LBS	MAXIMUM TURNS :	16.329 TURNS

FILE NUMBER : ----------->> **171** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 167

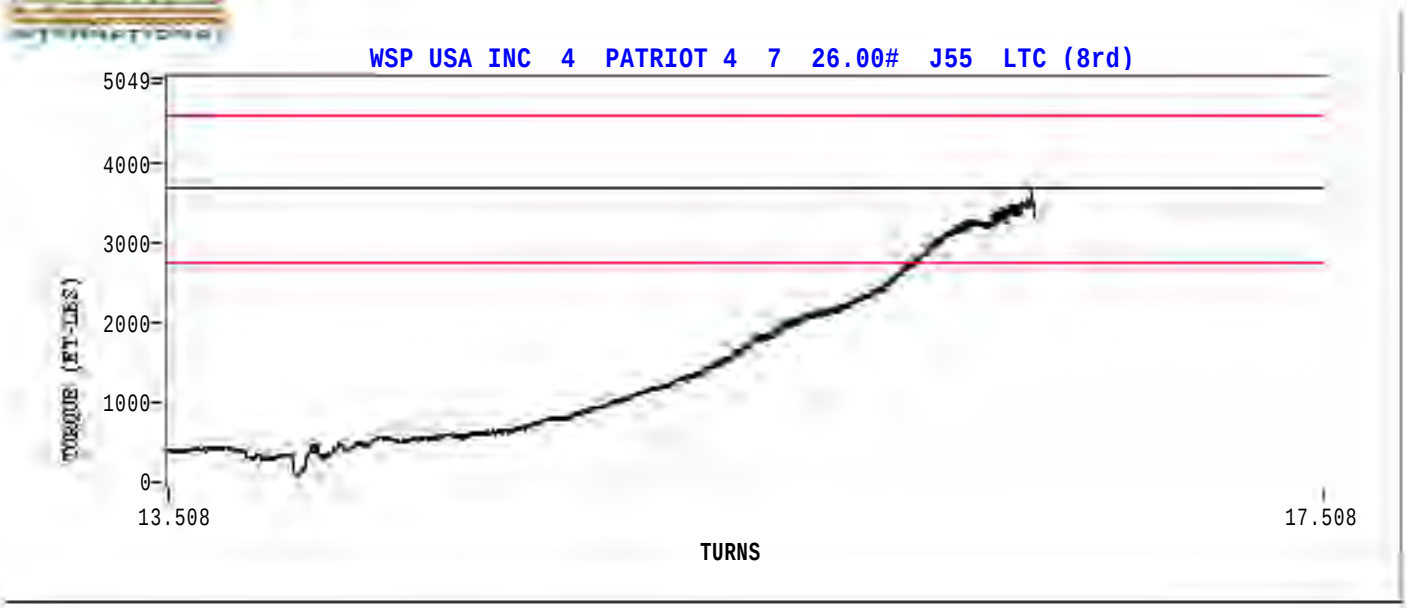


TIME OF MAKE UP :	2:27 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3633 FT-LBS	MAXIMUM TURNS :	17.156 TURNS

FILE NUMBER : ----------->> **172** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 168

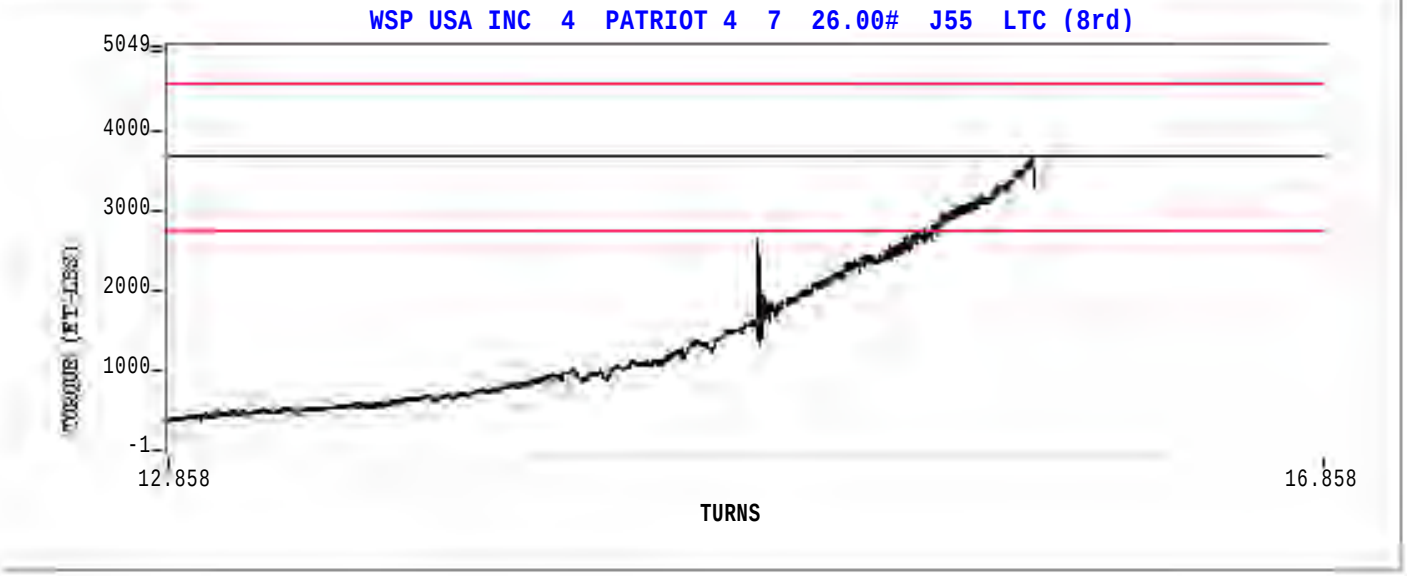
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TIME OF MAKE UP :	2:29 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3649 FT-LBS	MAXIMUM TURNS :	16.508 TURNS

FILE NUMBER : ----------->> **173** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 169

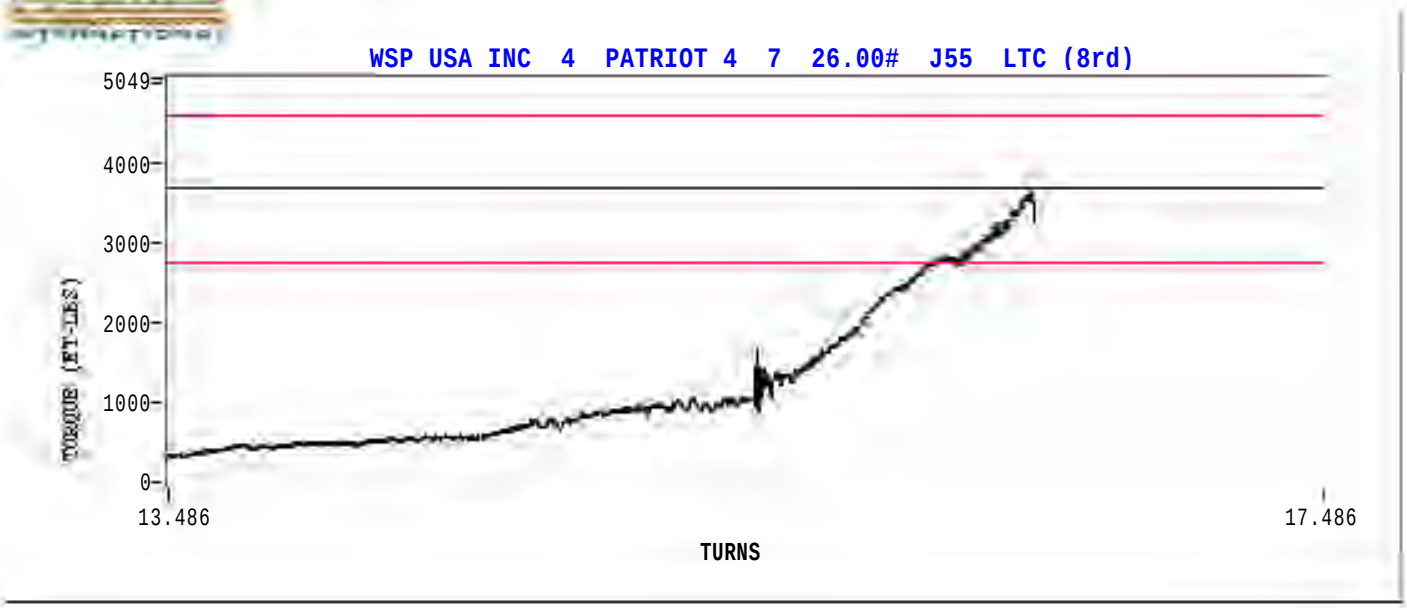


TIME OF MAKE UP :	2:31 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3650 FT-LBS	MAXIMUM TURNS :	15.858 TURNS

FILE NUMBER : ----------->> **174** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 170

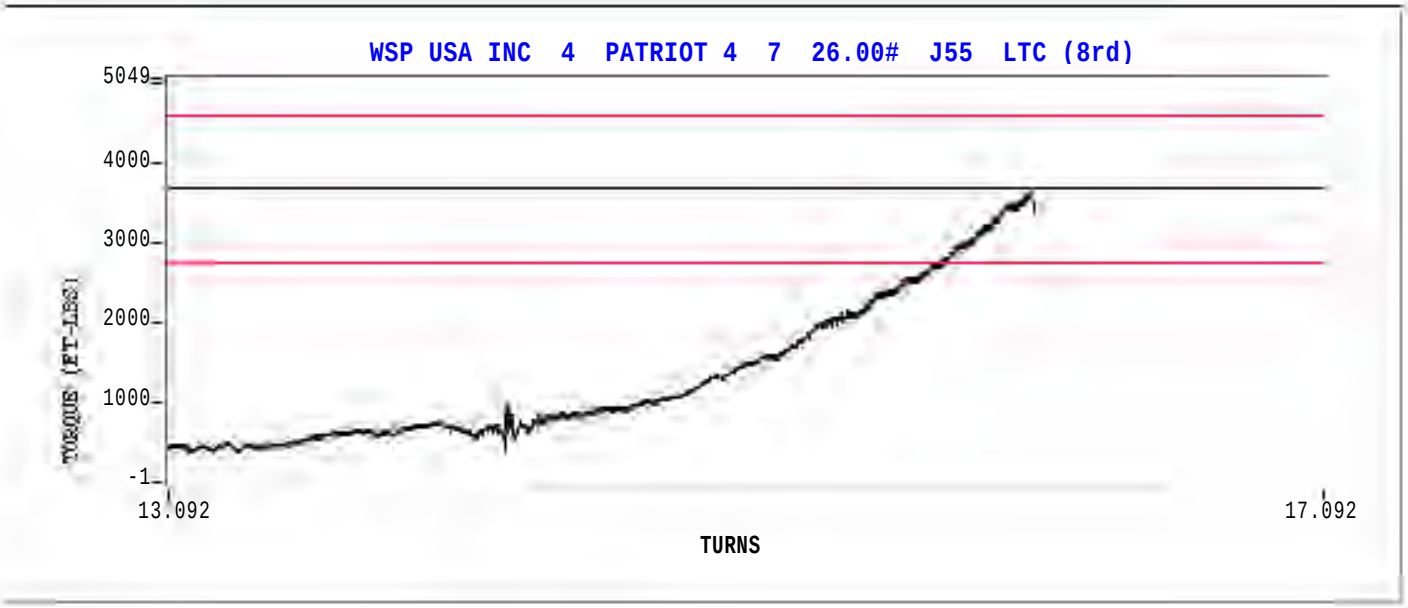
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TIME OF MAKE UP :	2:33 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3681 FT-LBS	MAXIMUM TURNS :	16.486 TURNS

FILE NUMBER : ----------->> **175** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 171

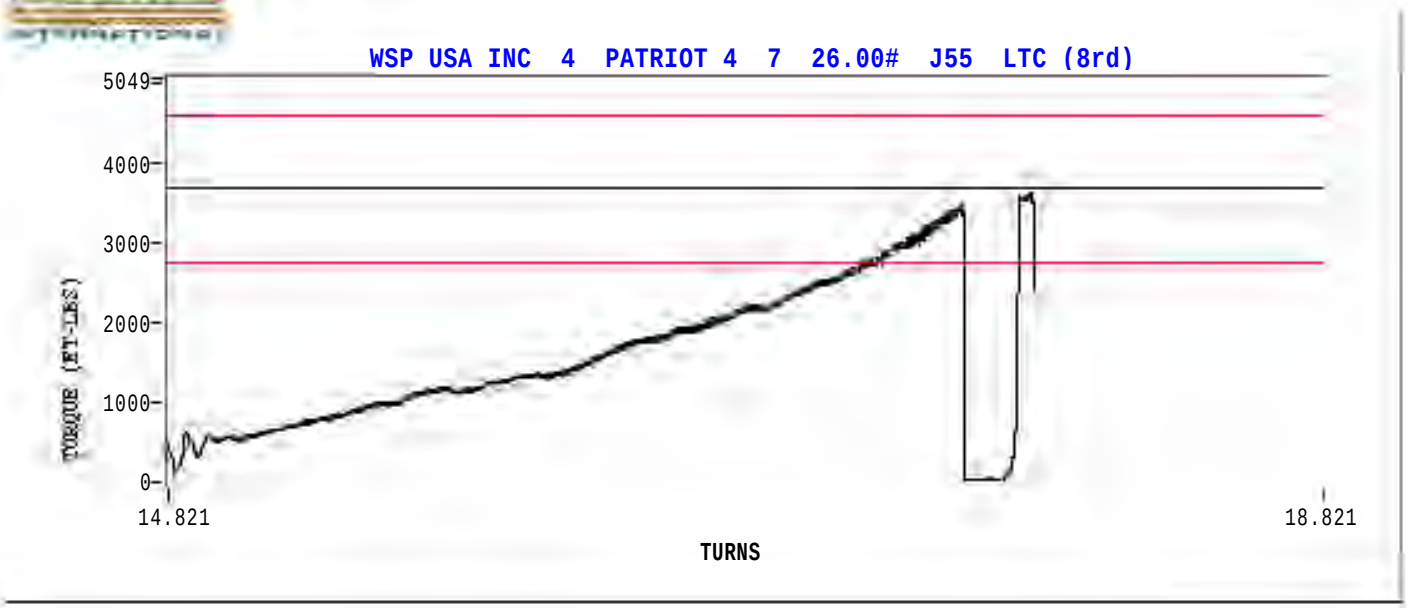


TIME OF MAKE UP :	2:35 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3640 FT-LBS	MAXIMUM TURNS :	16.092 TURNS

FILE NUMBER : ----------->> **176** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 172

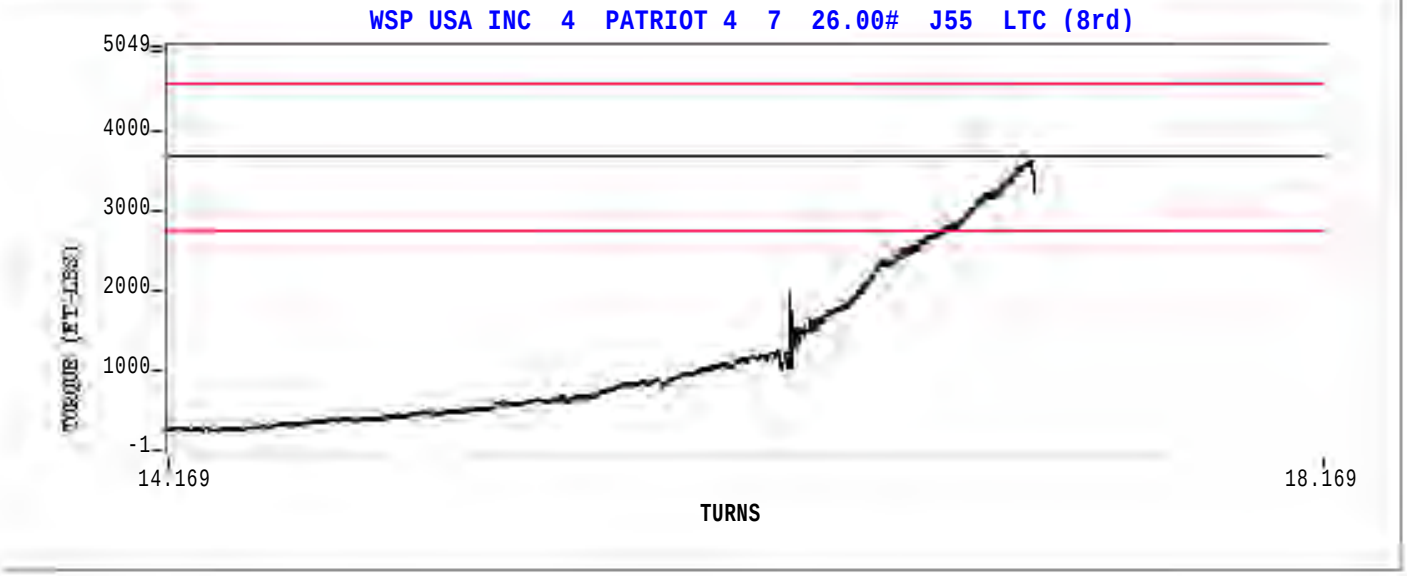
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TIME OF MAKE UP :	2:38 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3615 FT-LBS	MAXIMUM TURNS :	17.821 TURNS

FILE NUMBER : ----------->> **177** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 173. RETORQUE TO REACH TORQUE

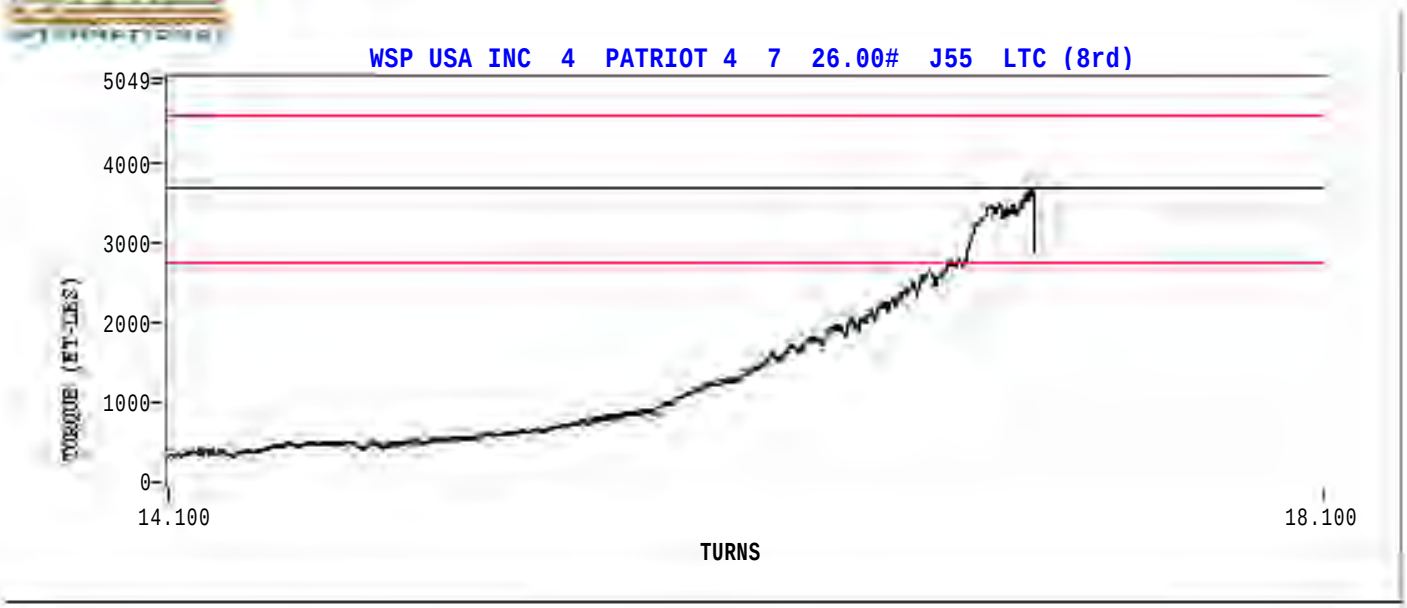


TIME OF MAKE UP :	2:40 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3617 FT-LBS	MAXIMUM TURNS :	17.169 TURNS

FILE NUMBER : ----------->> **178** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 174

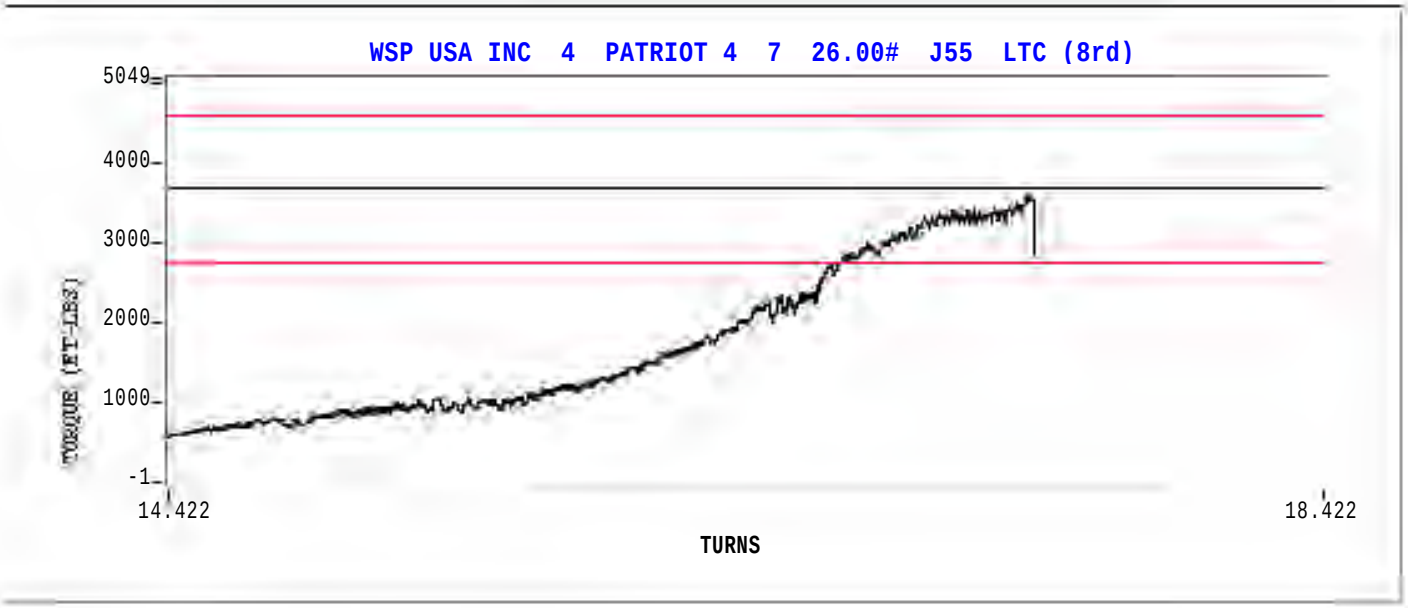
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TIME OF MAKE UP :	2:42 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3663 FT-LBS	MAXIMUM TURNS :	17.100 TURNS

FILE NUMBER : ----------->> **179** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 175

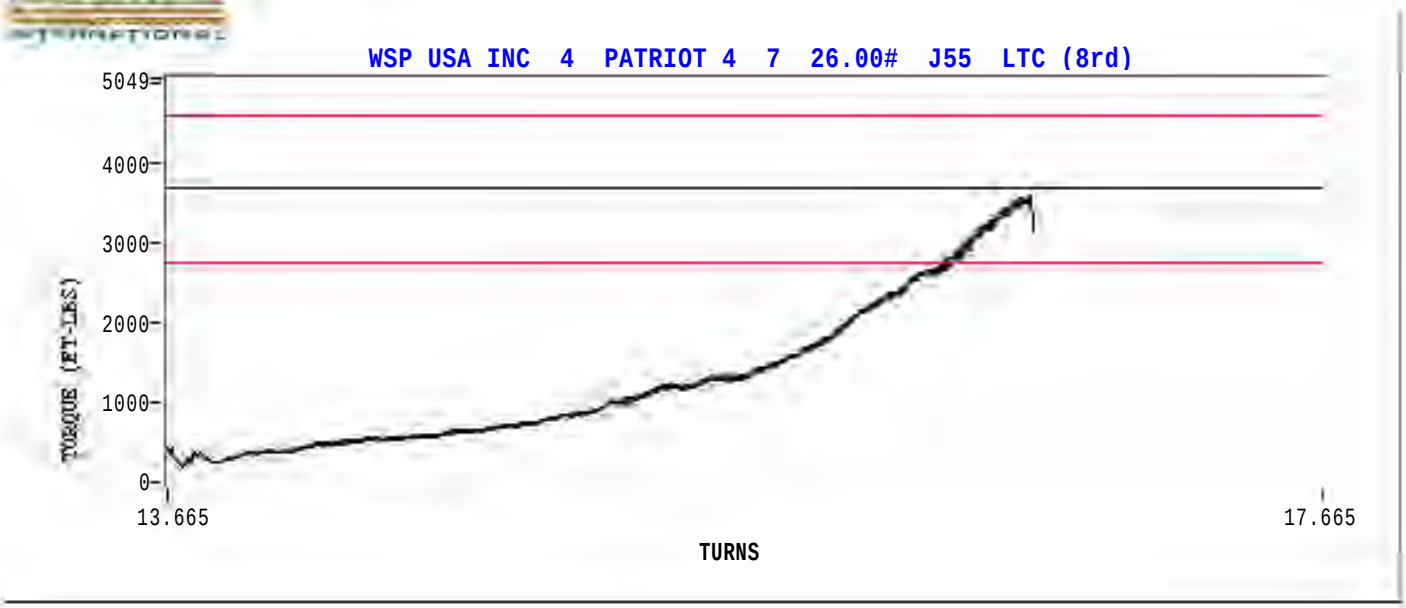


TIME OF MAKE UP :	2:44 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3618 FT-LBS	MAXIMUM TURNS :	17.422 TURNS

FILE NUMBER : ----------->> **180** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 176

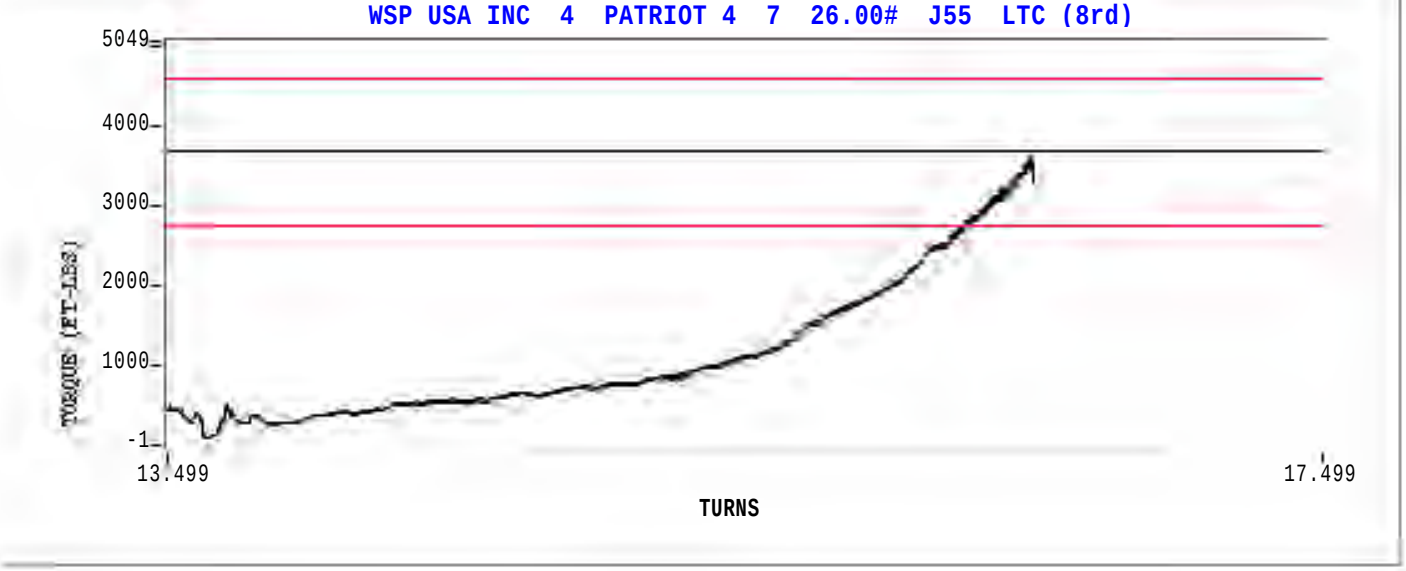
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TIME OF MAKE UP :	2:46 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	16.665 TURNS

FILE NUMBER : ----------->> **181** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 177

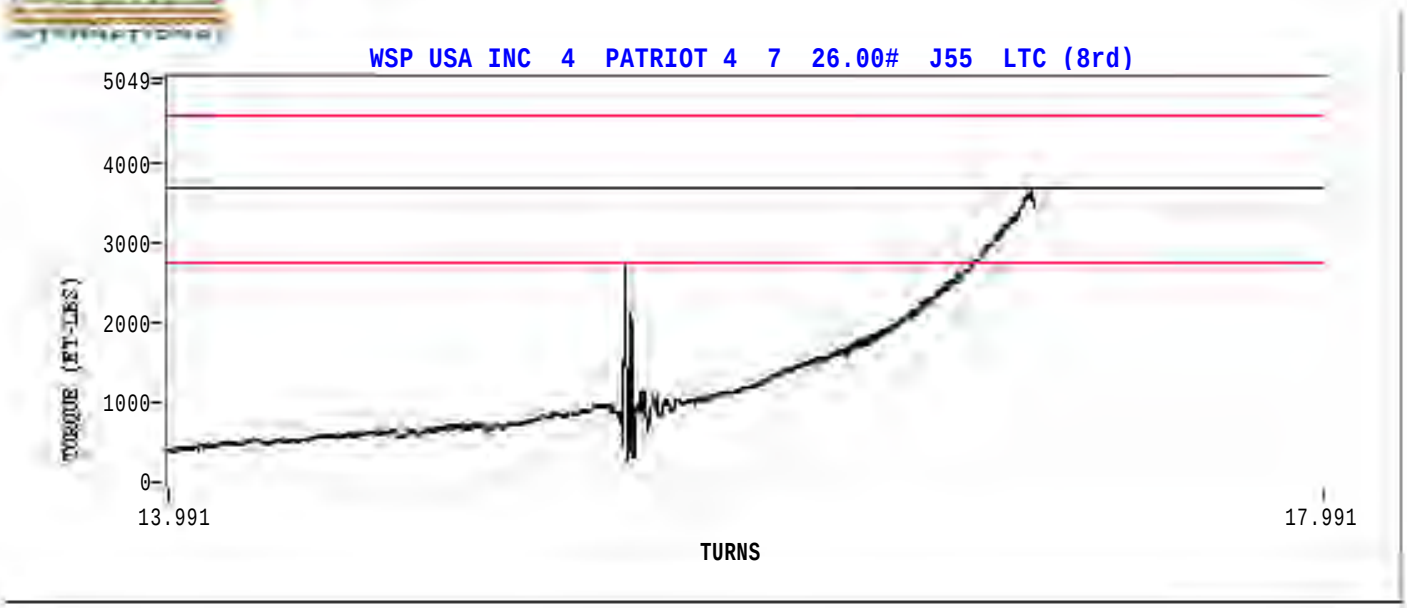


TIME OF MAKE UP :	2:48 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3609 FT-LBS	MAXIMUM TURNS :	16.499 TURNS

FILE NUMBER : ----------->> **182** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 178

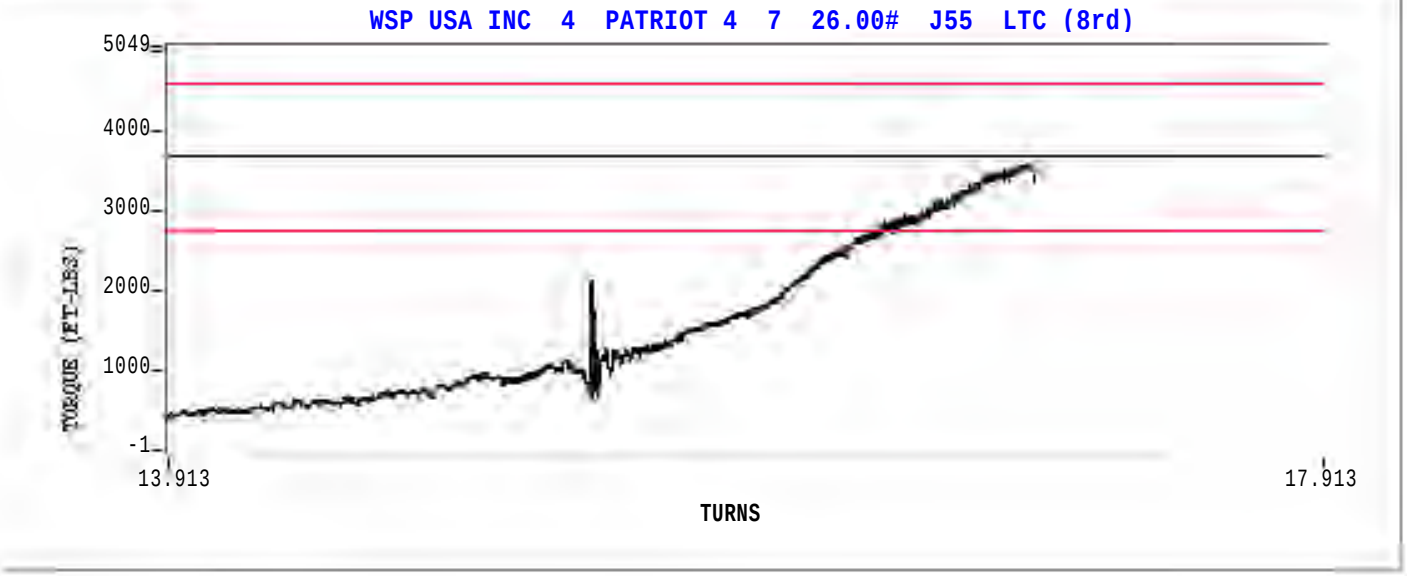
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TIME OF MAKE UP :	2:50 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3667 FT-LBS	MAXIMUM TURNS :	16.991 TURNS

FILE NUMBER : ----------->> **183** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 179

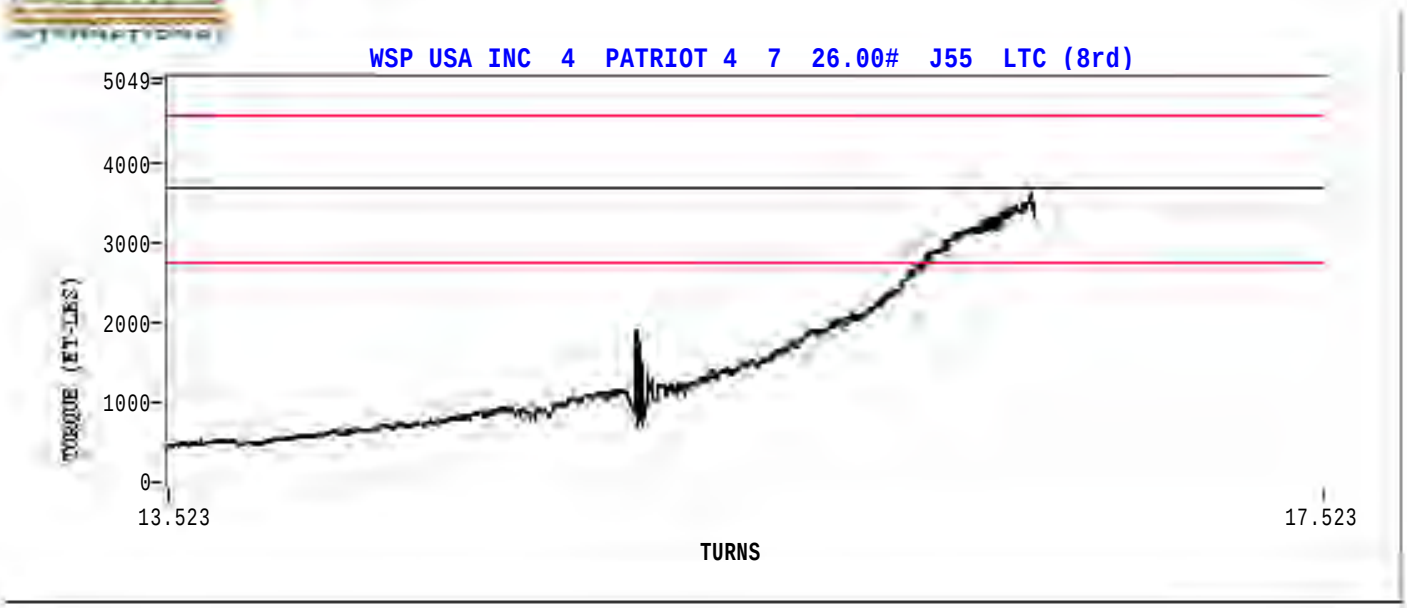


TIME OF MAKE UP :	2:52 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3615 FT-LBS	MAXIMUM TURNS :	16.913 TURNS

FILE NUMBER : ----------->> **184** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 180

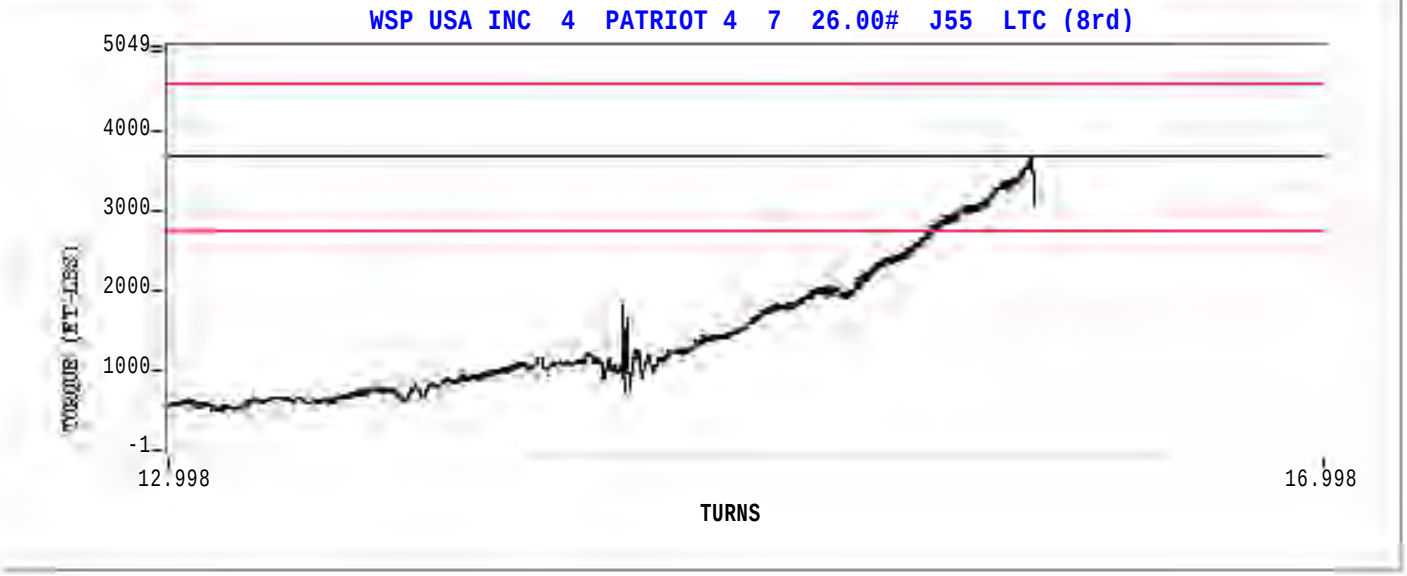
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TIME OF MAKE UP :	2:54 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3606 FT-LBS	MAXIMUM TURNS :	16.523 TURNS

FILE NUMBER : ----------->> **185** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 181

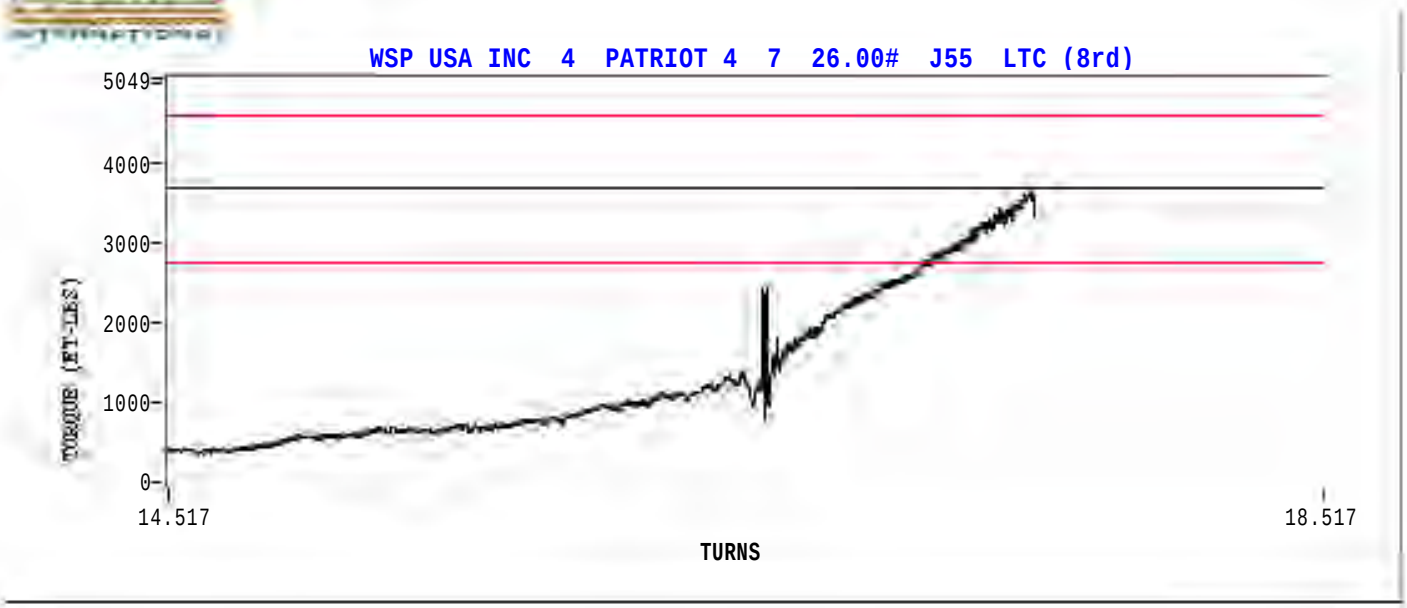


TIME OF MAKE UP :	2:56 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3647 FT-LBS	MAXIMUM TURNS :	15.998 TURNS

FILE NUMBER : ----------->> **186** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 182

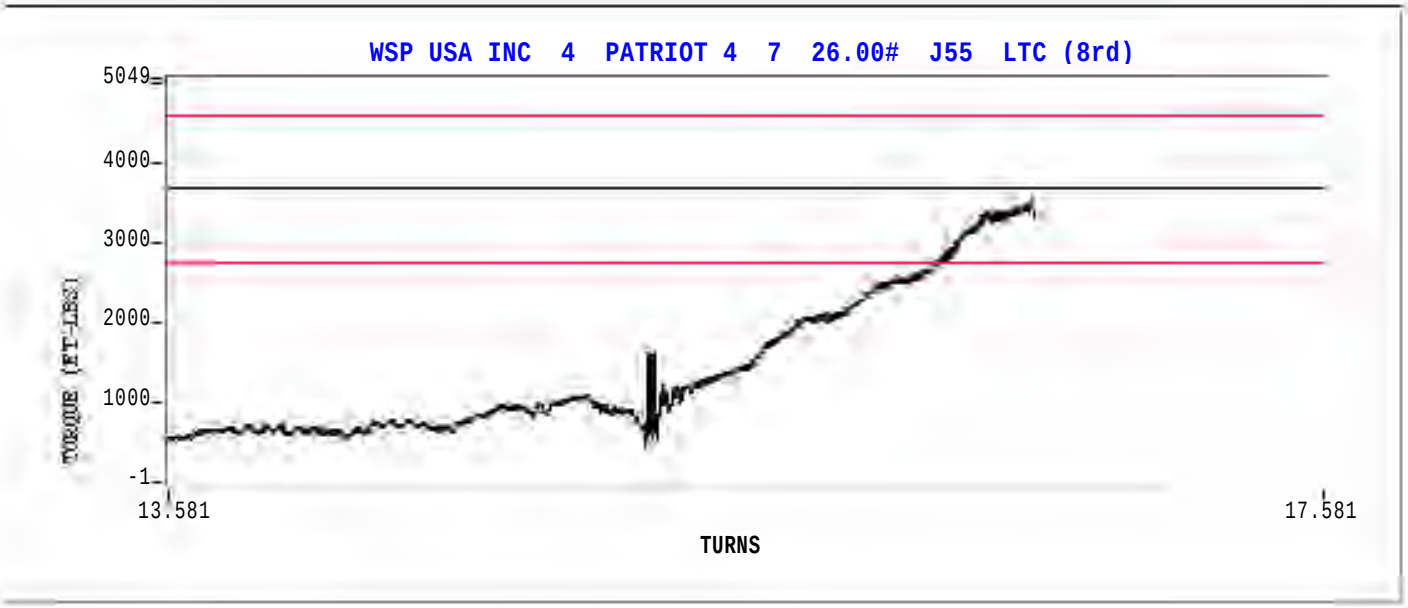
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TIME OF MAKE UP :	2:58 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3652 FT-LBS	MAXIMUM TURNS :	17.517 TURNS

FILE NUMBER : ----------->> **187** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 183

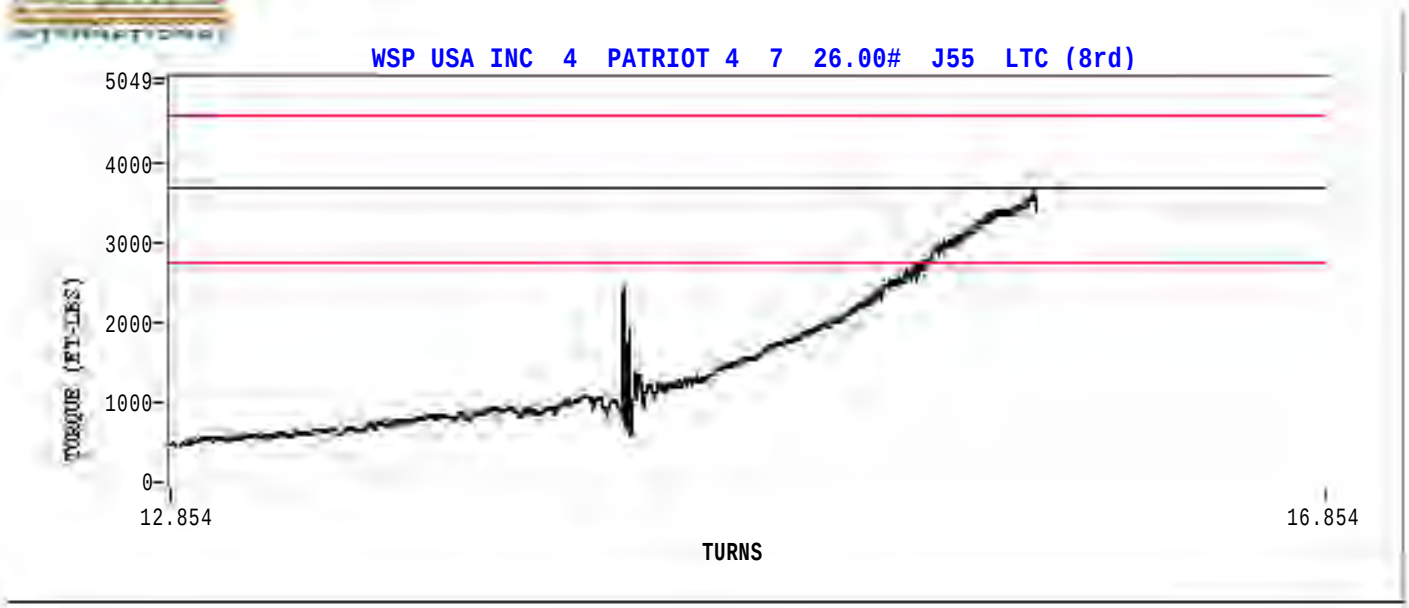


TIME OF MAKE UP :	3:00 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3552 FT-LBS	MAXIMUM TURNS :	16.581 TURNS

FILE NUMBER : ----------->> **188** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 184

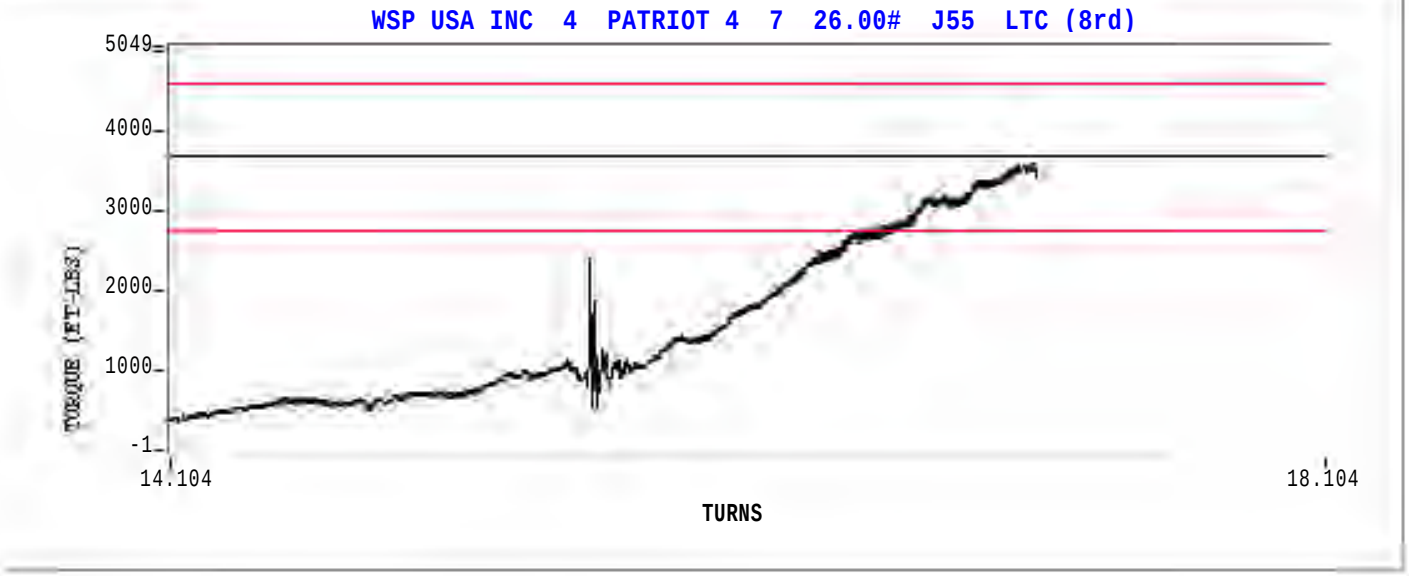
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TIME OF MAKE UP :	3:02 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3637 FT-LBS	MAXIMUM TURNS :	15.854 TURNS

FILE NUMBER : ----------->> **189** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 185

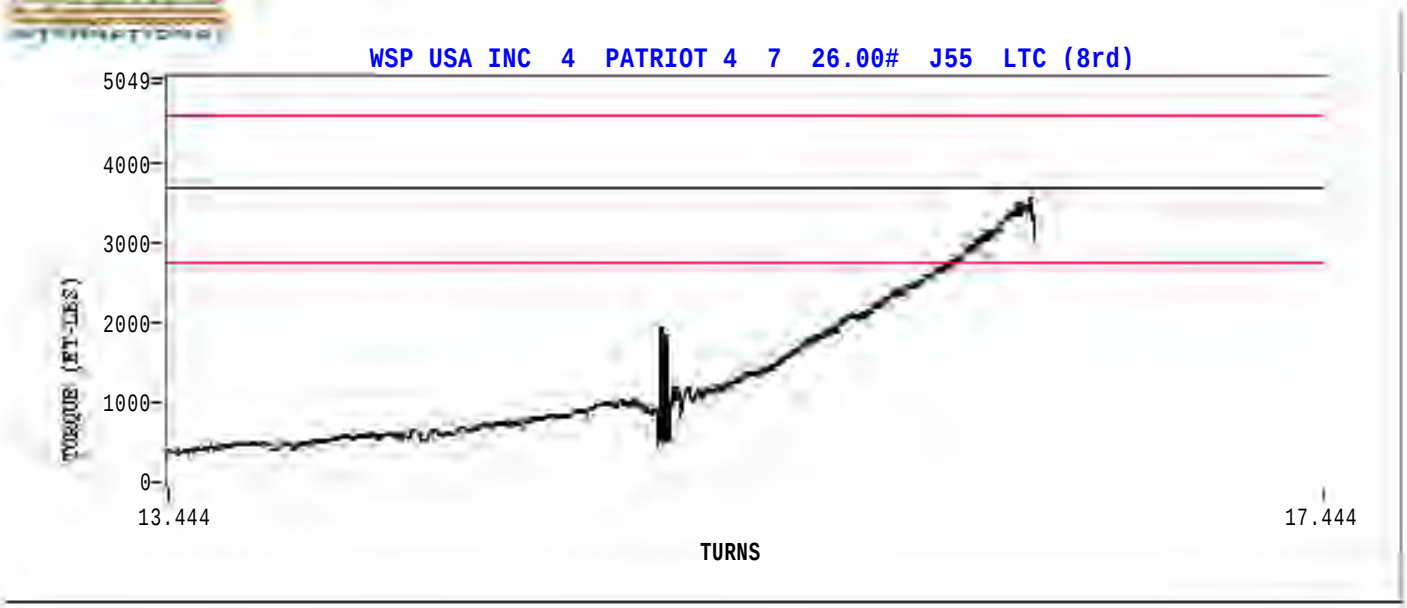


TIME OF MAKE UP :	3:04 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3597 FT-LBS	MAXIMUM TURNS :	17.104 TURNS

FILE NUMBER : ----------->> **190** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 186

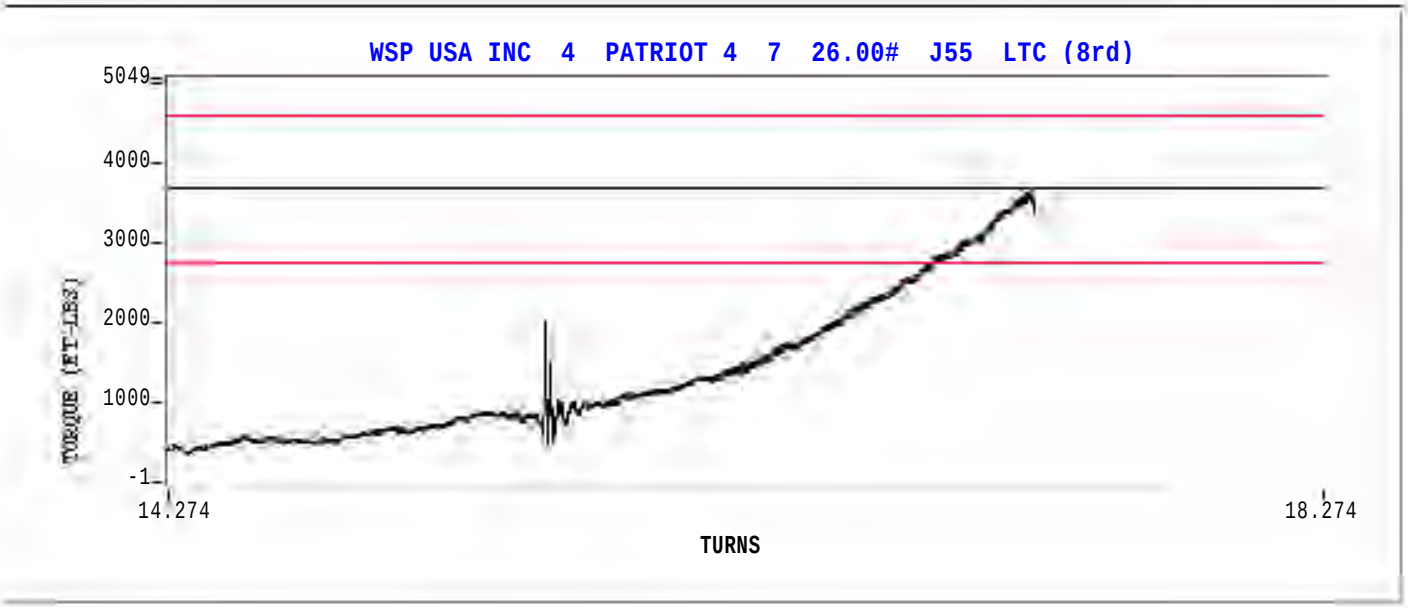
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TIME OF MAKE UP :	3:06 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3549 FT-LBS	MAXIMUM TURNS :	16.444 TURNS

FILE NUMBER : ----------->> **191** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 187

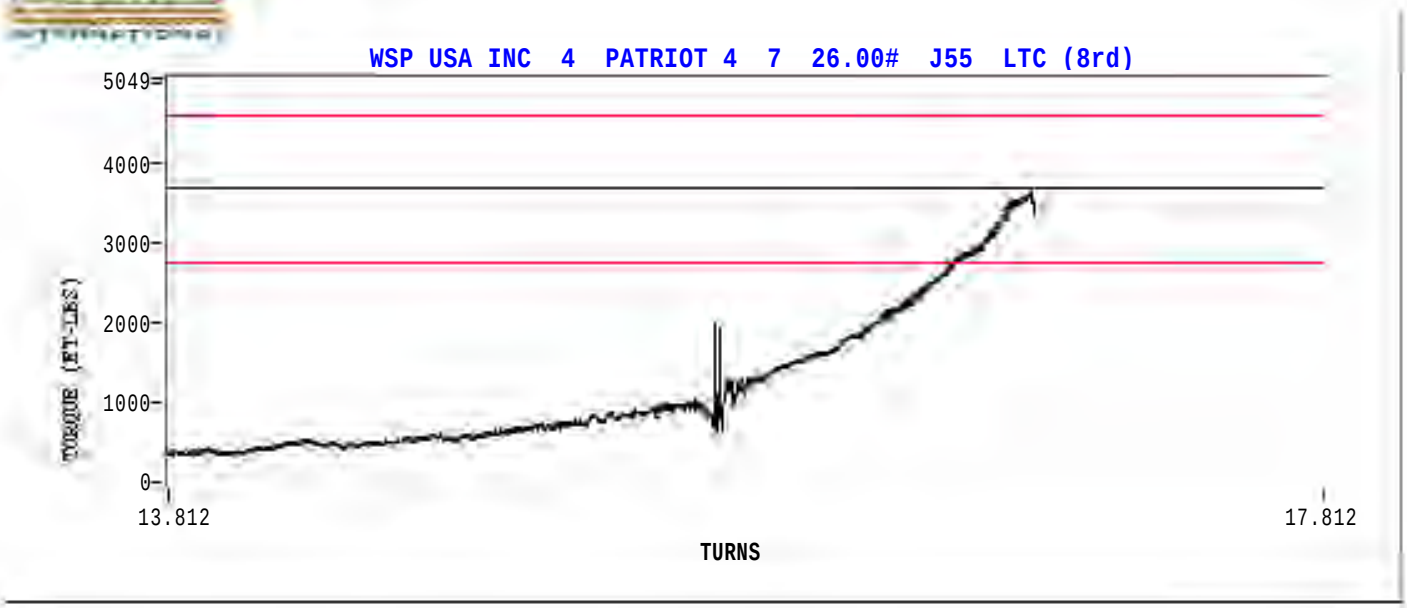


TIME OF MAKE UP :	3:08 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3676 FT-LBS	MAXIMUM TURNS :	17.274 TURNS

FILE NUMBER : ----------->> **192** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 188

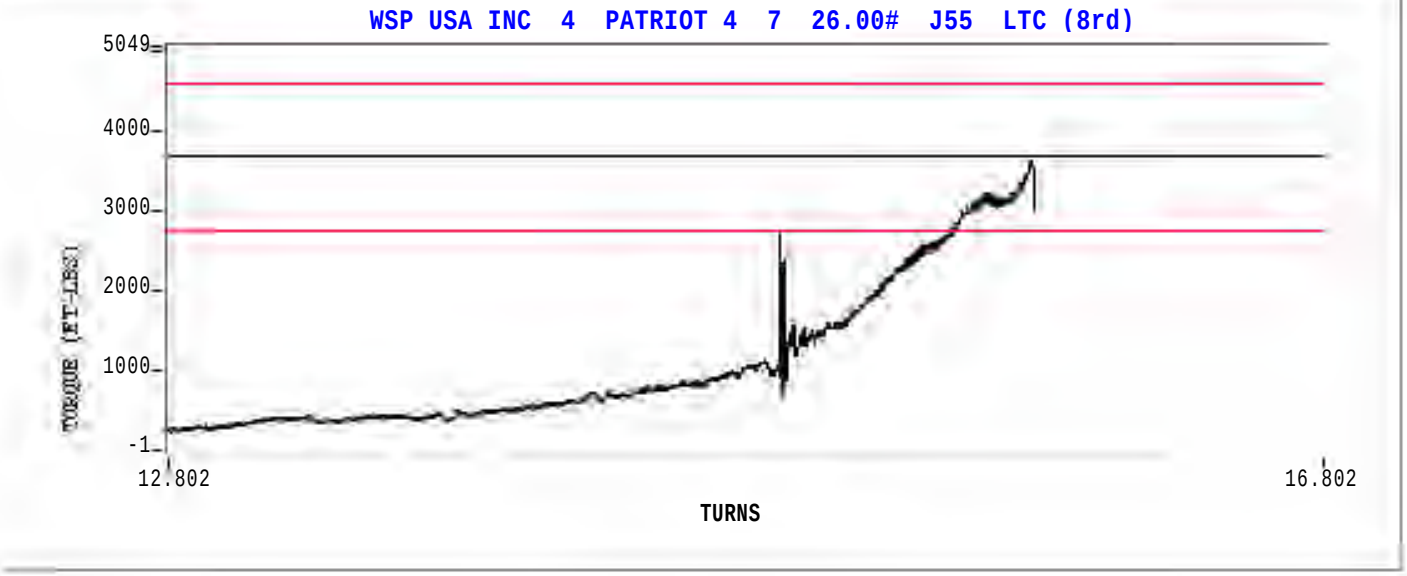
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TIME OF MAKE UP :	3:09 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3634 FT-LBS	MAXIMUM TURNS :	16.812 TURNS

FILE NUMBER : ----------->> **193** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 189

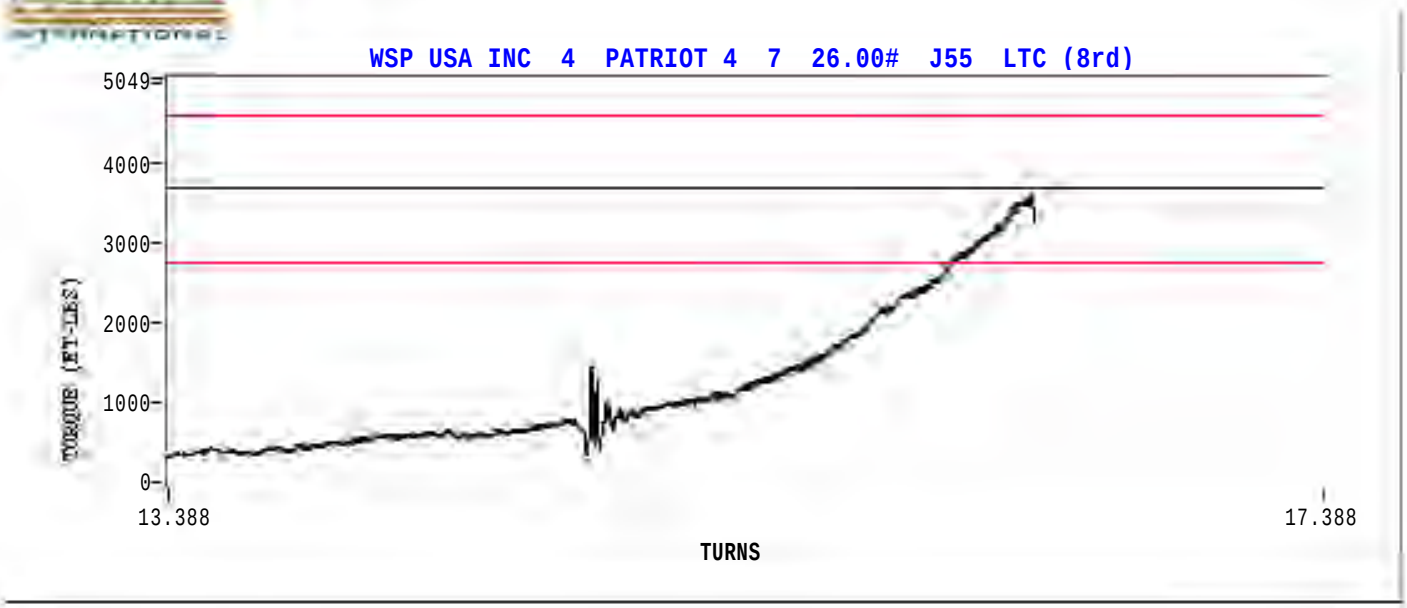


TIME OF MAKE UP :	3:11 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3624 FT-LBS	MAXIMUM TURNS :	15.802 TURNS

FILE NUMBER : ----------->> **194** JOINT STATUS : ACCEPT

JZ.. CONNECTION OK. JOINT # 190

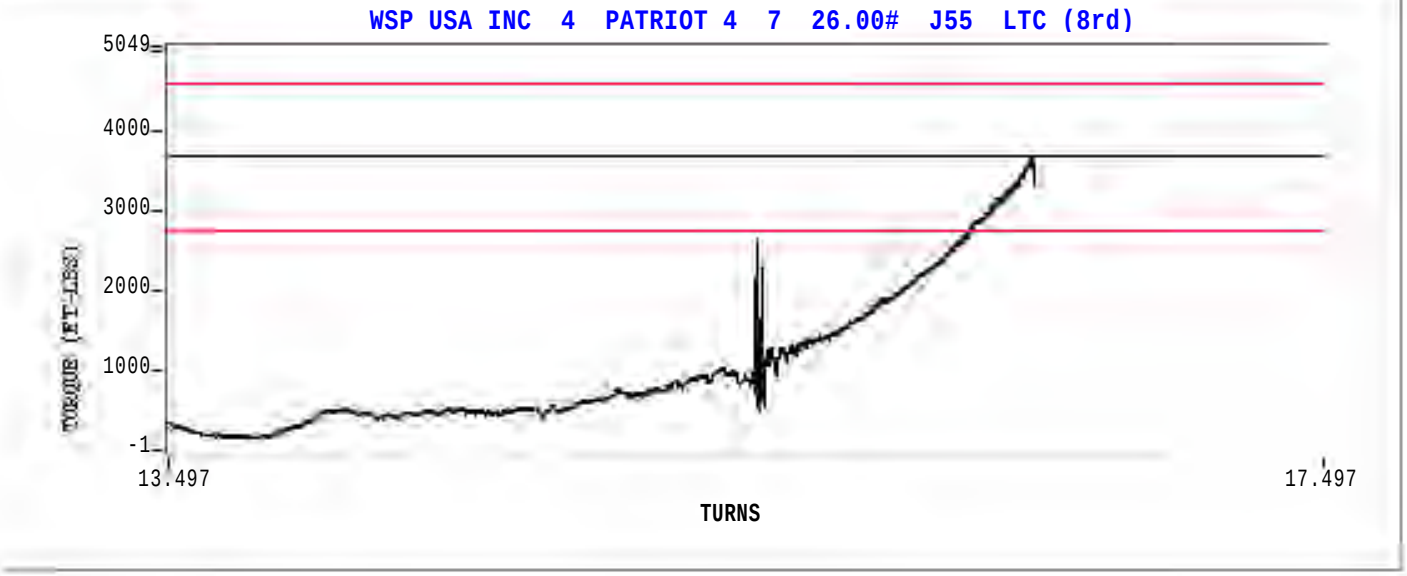
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TIME OF MAKE UP :	3:13 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3624 FT-LBS	MAXIMUM TURNS :	16.388 TURNS

FILE NUMBER : ----------->> **195** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 191



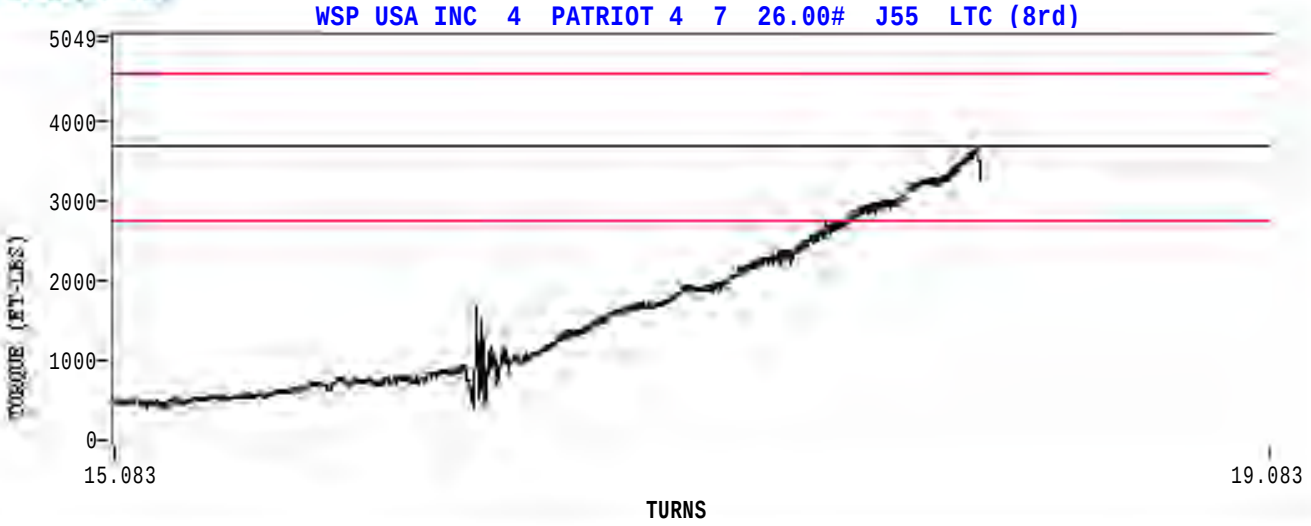
TIME OF MAKE UP :	3:15 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3656 FT-LBS	MAXIMUM TURNS :	16.497 TURNS

FILE NUMBER : ----------->> **196** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 192

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

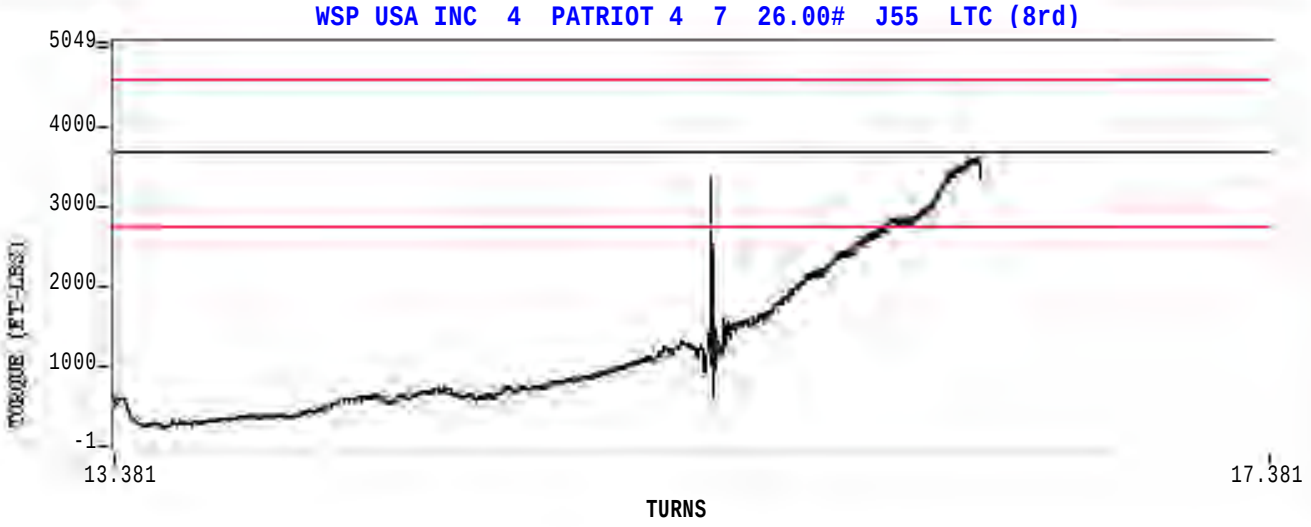


TIME OF MAKE UP :	3:17 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3664 FT-LBS	MAXIMUM TURNS :	18.083 TURNS

FILE NUMBER : ---------->> 197 JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 193

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

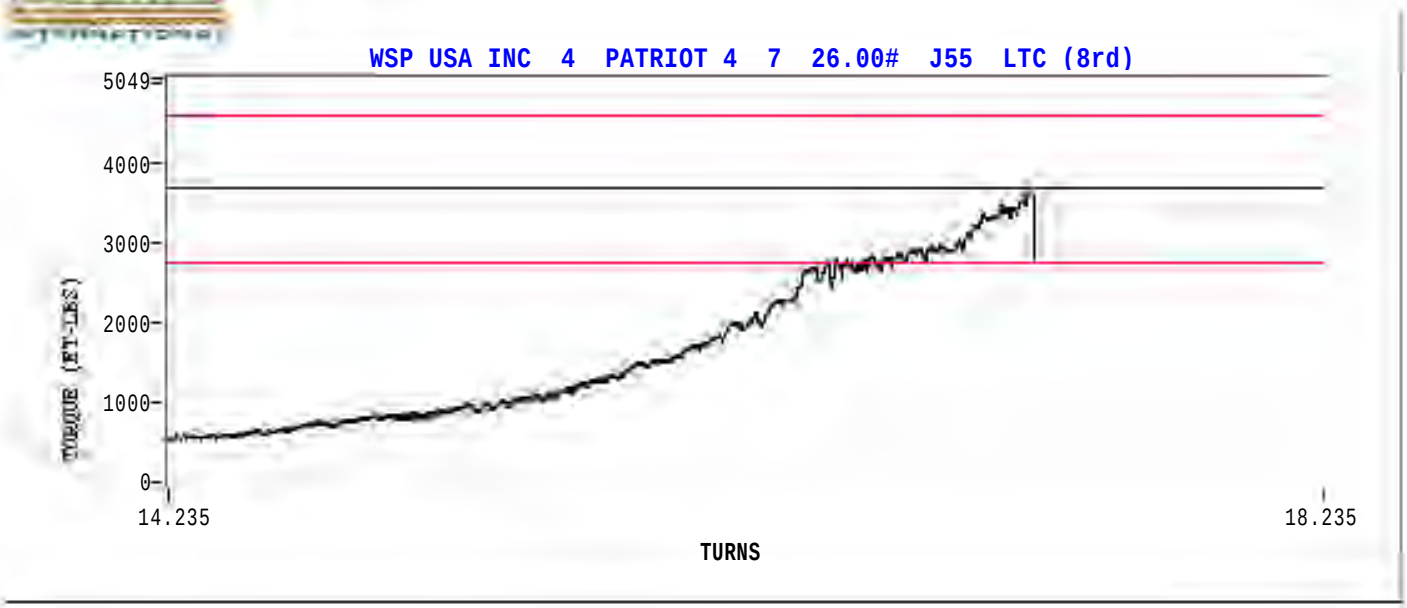


TIME OF MAKE UP :	3:19 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3623 FT-LBS	MAXIMUM TURNS :	16.381 TURNS

FILE NUMBER : ---------->> 198 JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 194

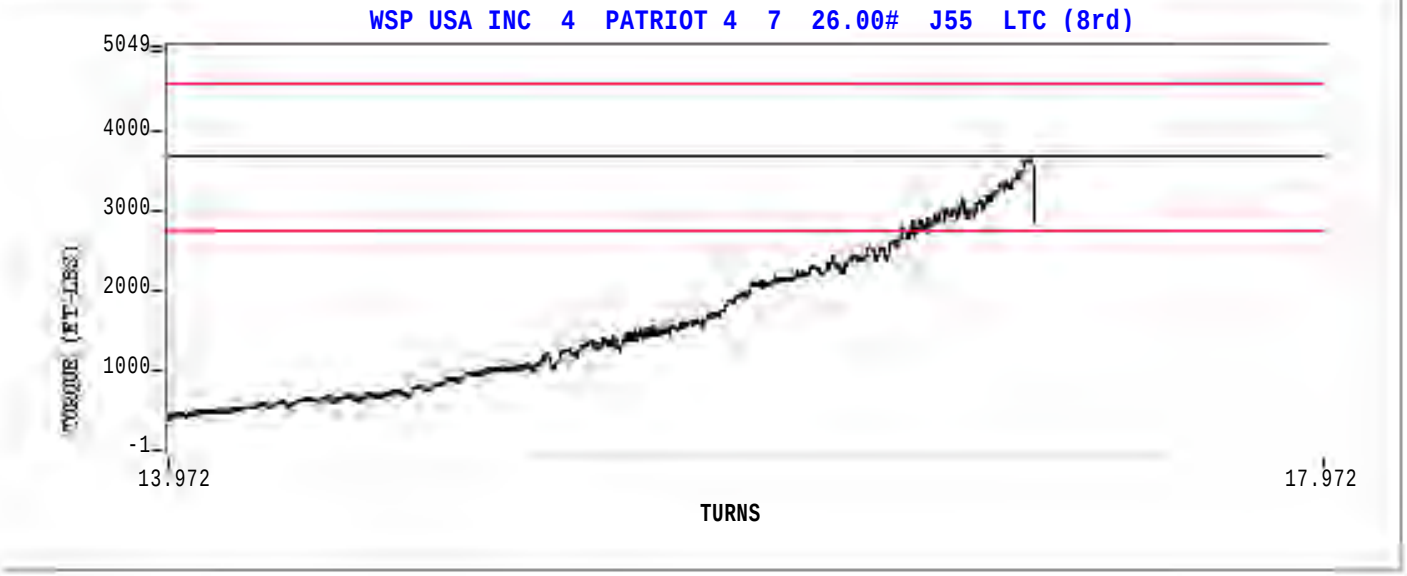
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TIME OF MAKE UP :	3:20 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3664 FT-LBS	MAXIMUM TURNS :	17.235 TURNS

FILE NUMBER : ----------->> **199** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 195

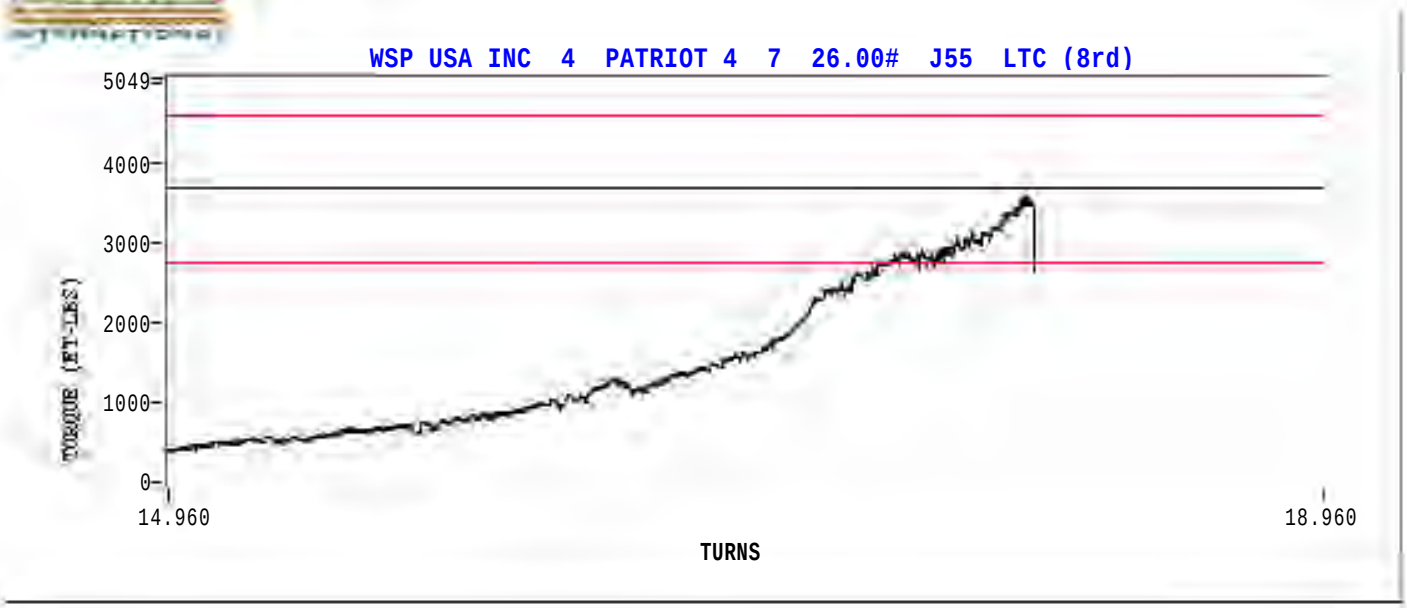


TIME OF MAKE UP :	3:22 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3675 FT-LBS	MAXIMUM TURNS :	16.972 TURNS

FILE NUMBER : ----------->> **200** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 196

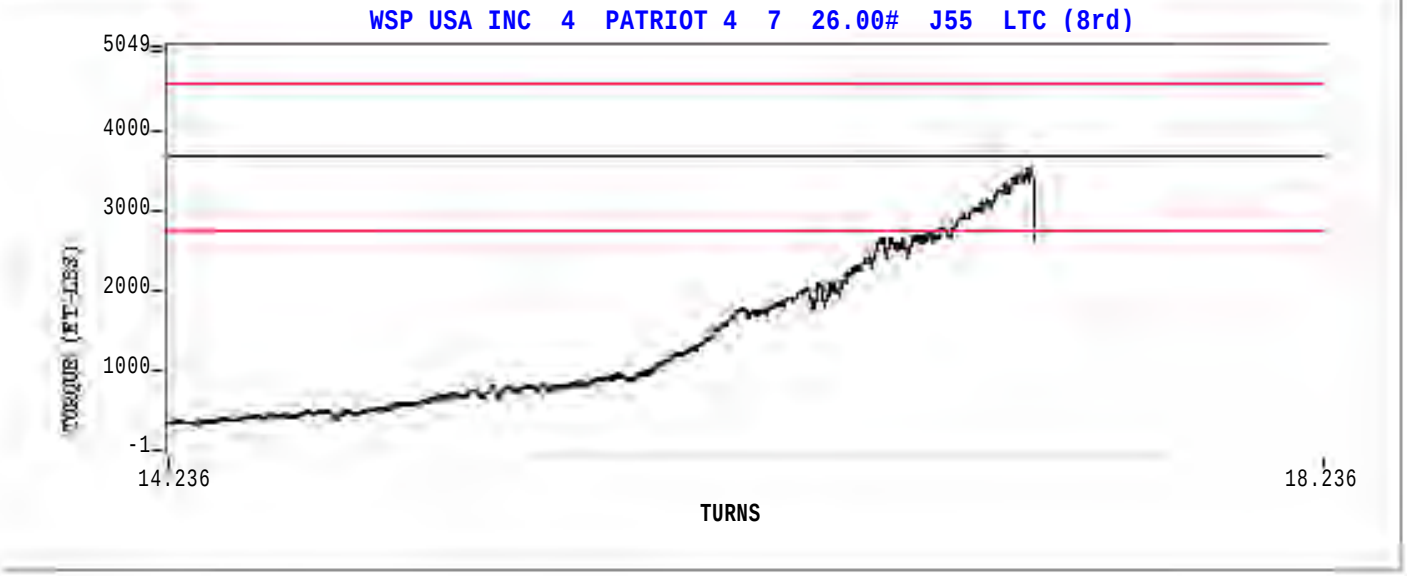
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TIME OF MAKE UP :	3:25 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3581 FT-LBS	MAXIMUM TURNS :	17.960 TURNS

FILE NUMBER : ----------->> **201** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 197

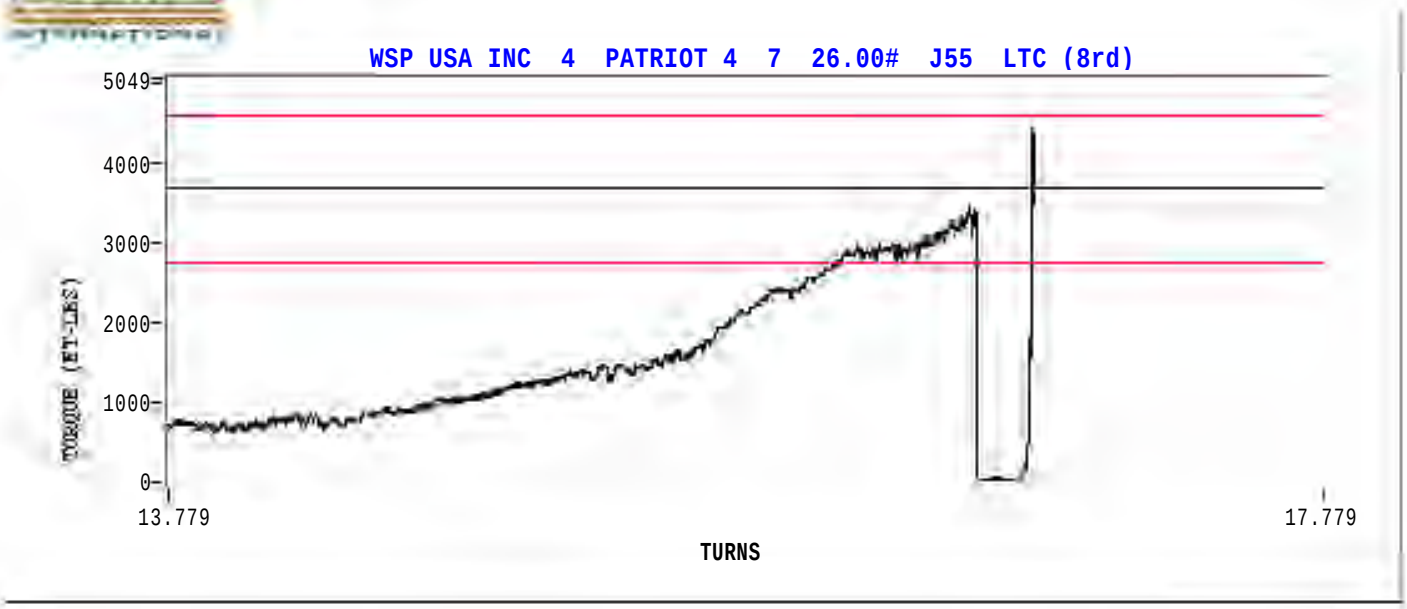


TIME OF MAKE UP :	3:26 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3553 FT-LBS	MAXIMUM TURNS :	17.236 TURNS

FILE NUMBER : ----------->> **202** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 198

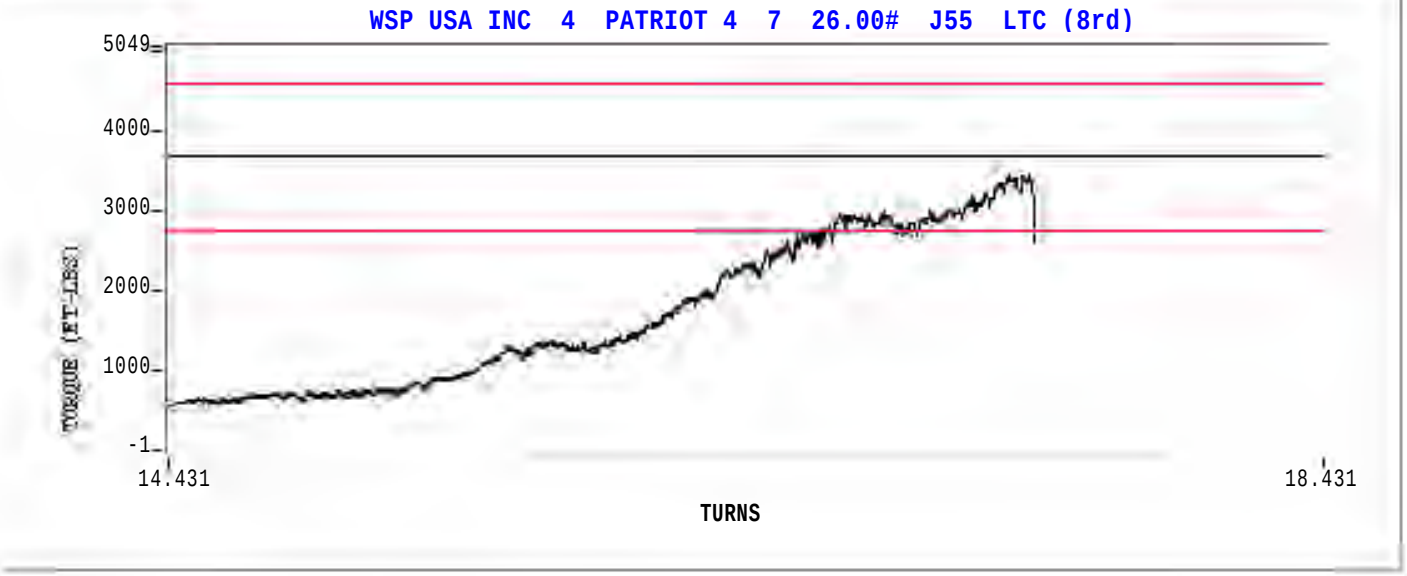
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TIME OF MAKE UP :	3:28 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	4437 FT-LBS	MAXIMUM TURNS :	16.779 TURNS

FILE NUMBER : ----------->> **203** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. BUMP TEST OK. JOINT # 199

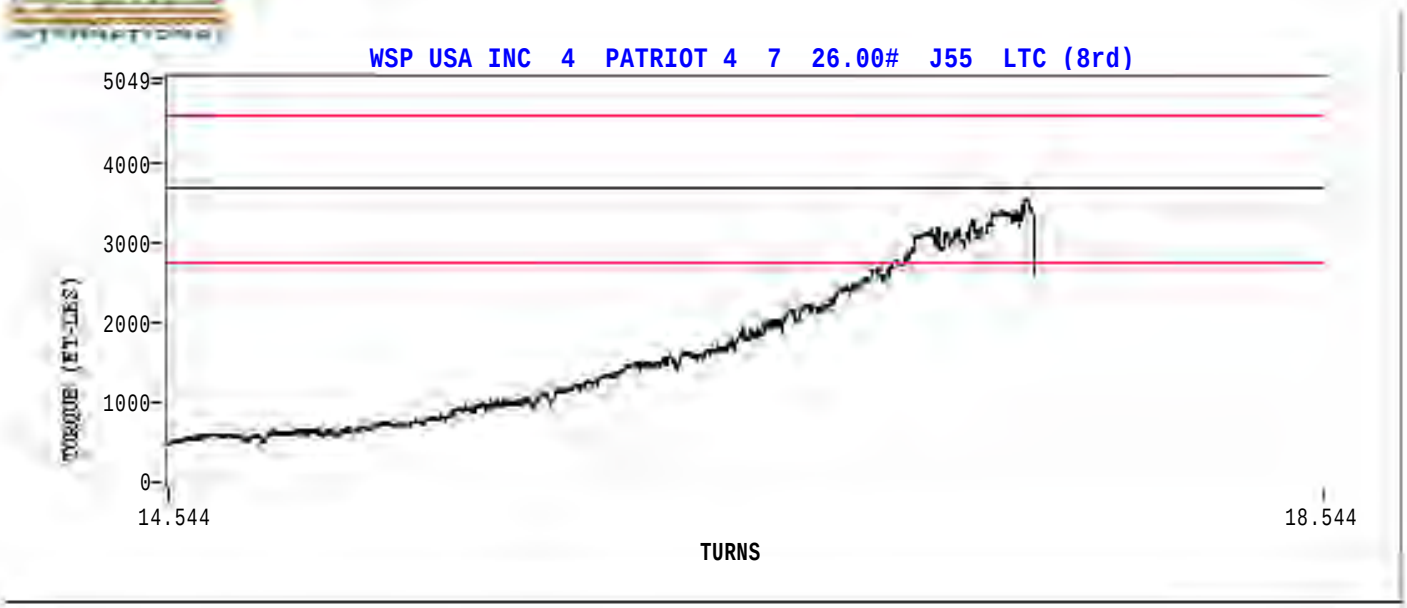


TIME OF MAKE UP :	3:30 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3459 FT-LBS	MAXIMUM TURNS :	17.431 TURNS

FILE NUMBER : ----------->> **204** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 200

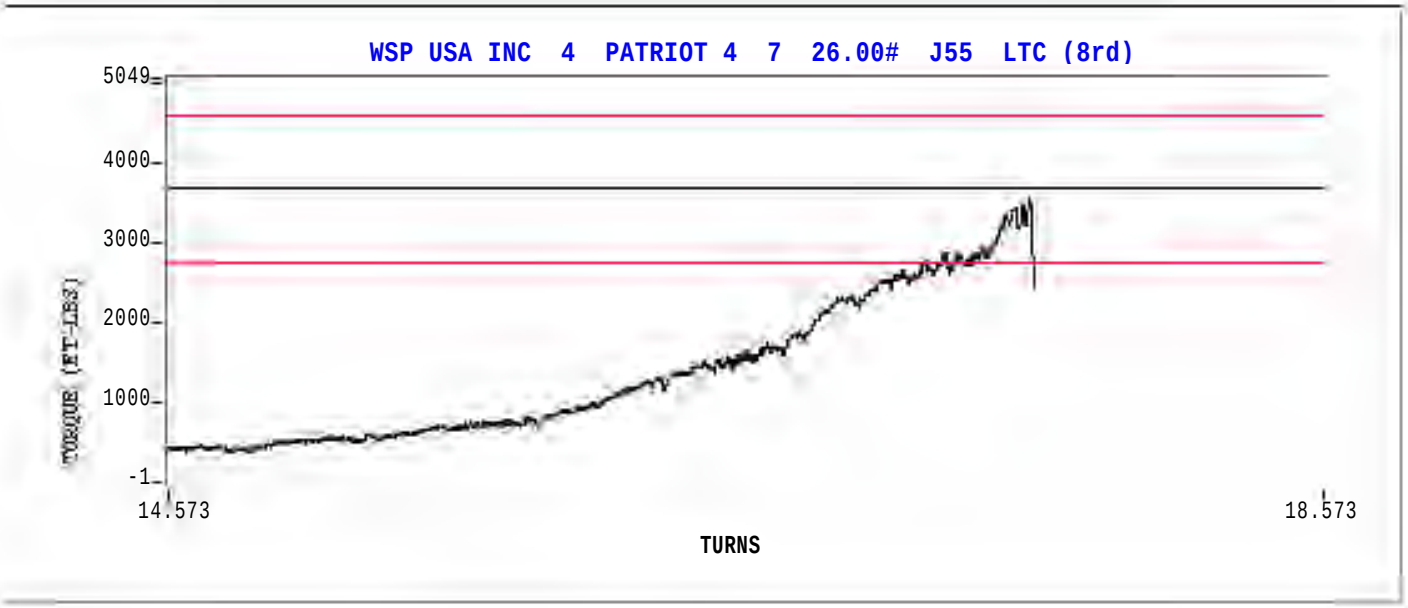
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TIME OF MAKE UP :	3:32 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3554 FT-LBS	MAXIMUM TURNS :	17.544 TURNS

FILE NUMBER : ----------->> **205** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 201

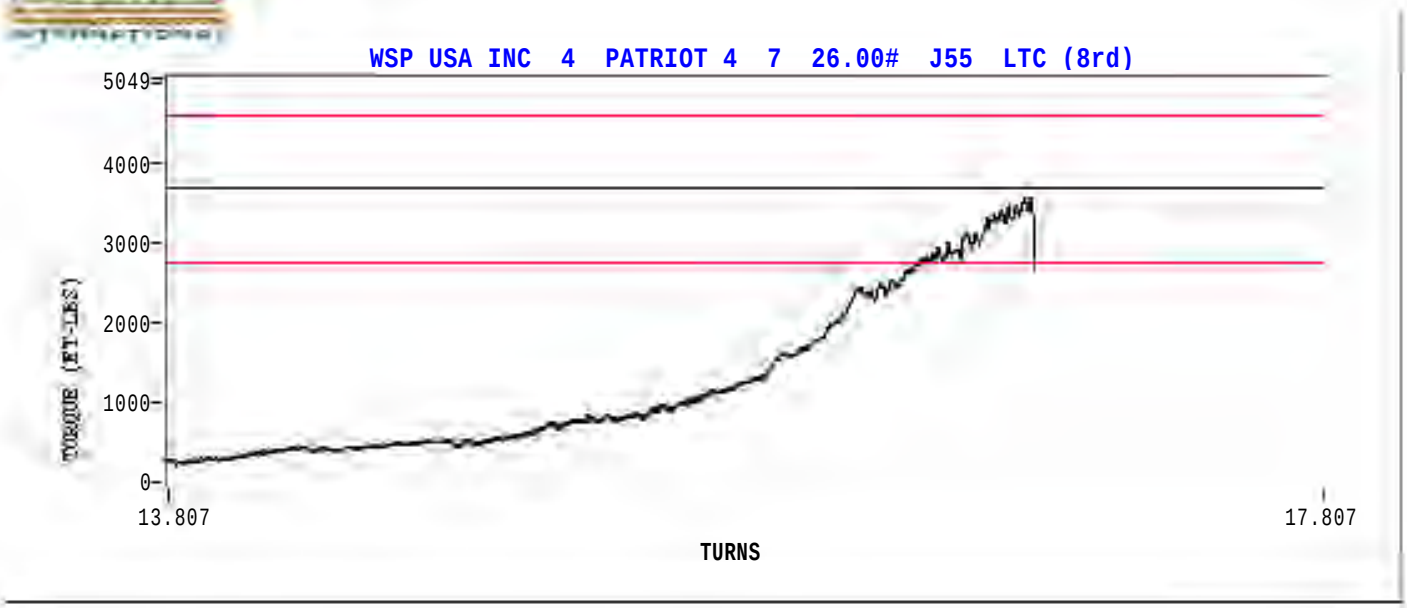


TIME OF MAKE UP :	3:34 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3559 FT-LBS	MAXIMUM TURNS :	17.573 TURNS

FILE NUMBER : ----------->> **206** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 202

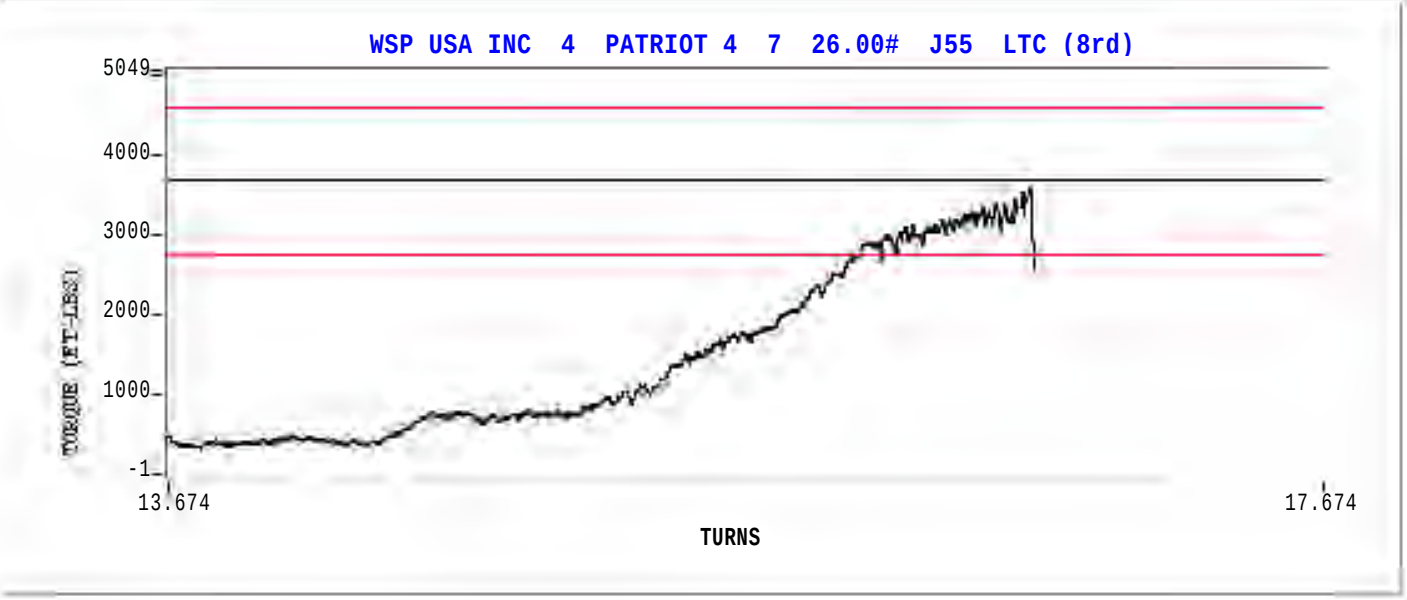
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TIME OF MAKE UP :	3:35 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3561 FT-LBS	MAXIMUM TURNS :	16.807 TURNS

FILE NUMBER : ----------->> **207** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 203

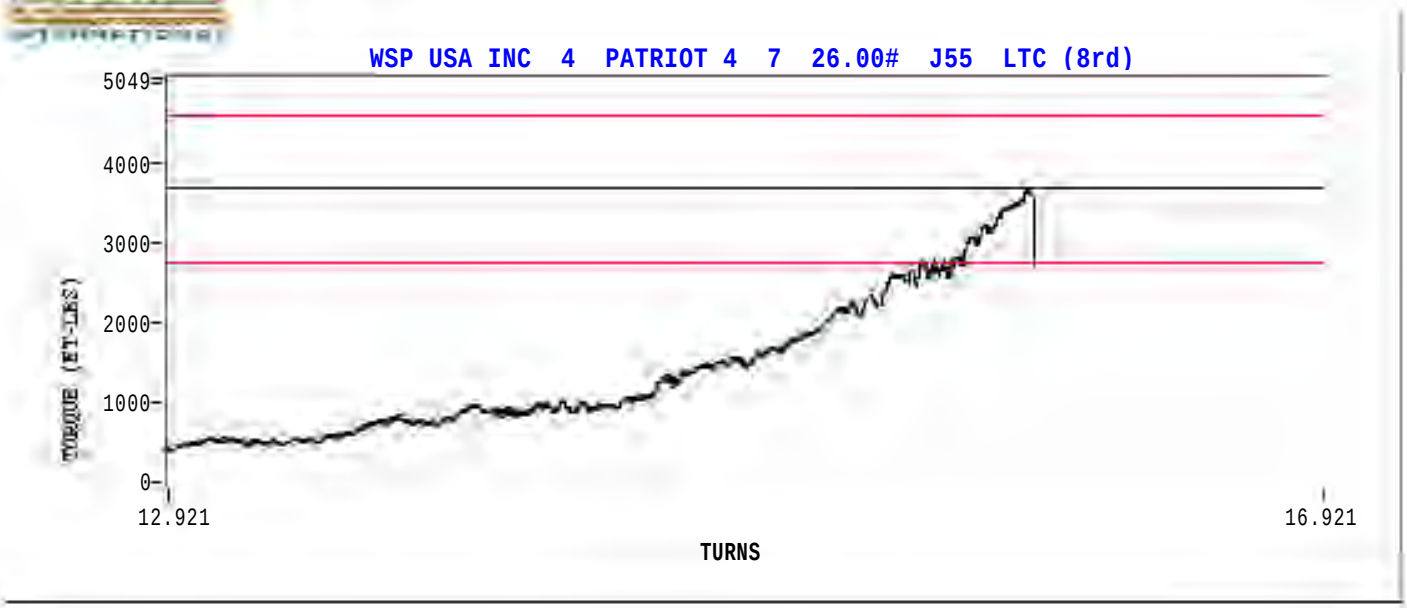


TIME OF MAKE UP :	3:37 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3594 FT-LBS	MAXIMUM TURNS :	16.674 TURNS

FILE NUMBER : ----------->> **208** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 204

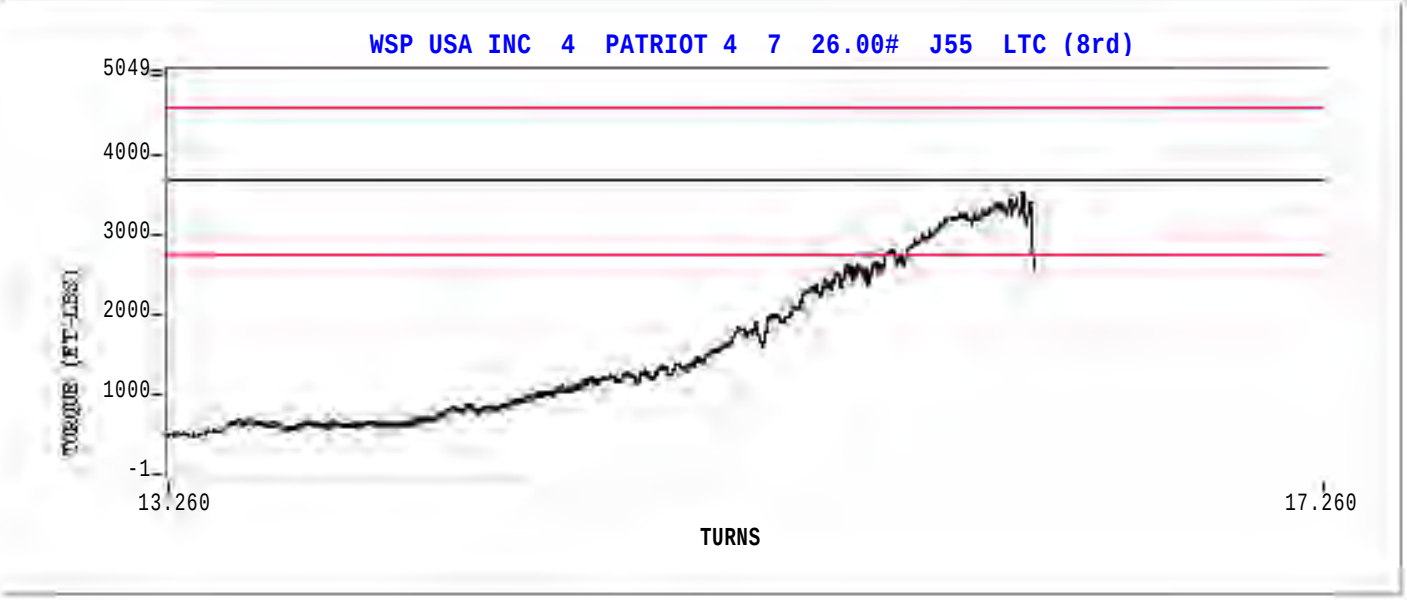
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TIME OF MAKE UP :	3:38 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3647 FT-LBS	MAXIMUM TURNS :	15.921 TURNS

FILE NUMBER : ----------->> **209** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 205

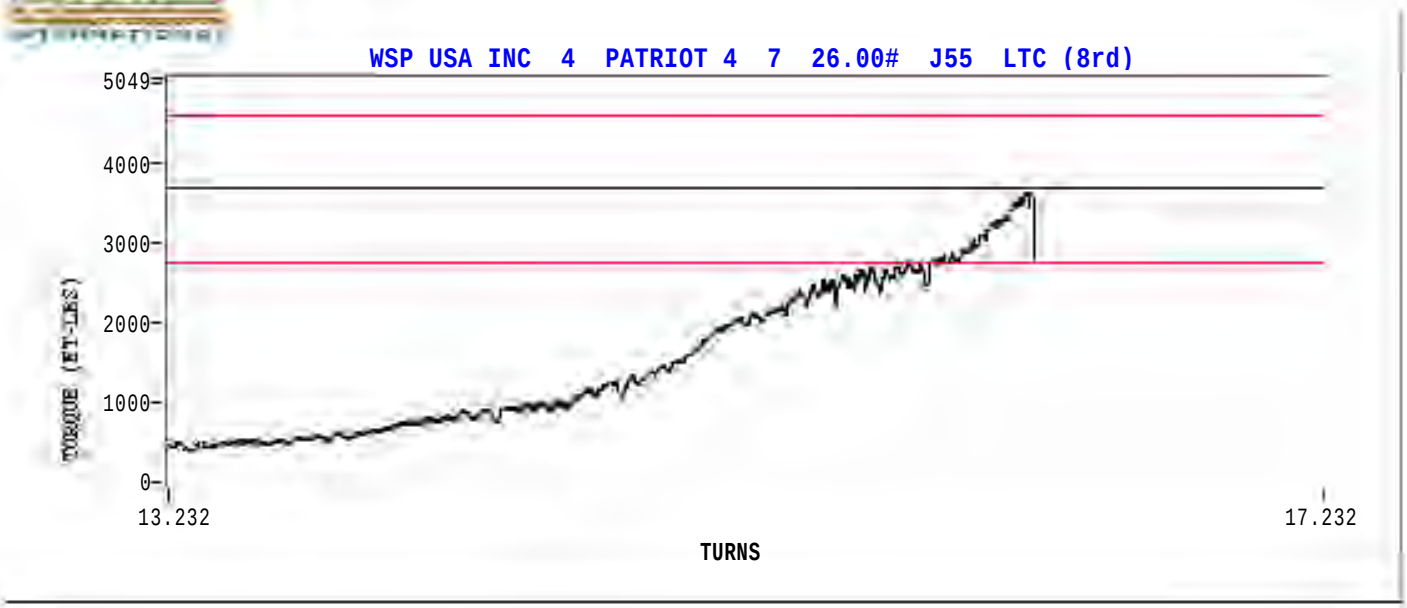


TIME OF MAKE UP :	3:40 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3529 FT-LBS	MAXIMUM TURNS :	16.260 TURNS

FILE NUMBER : ----------->> **210** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 206

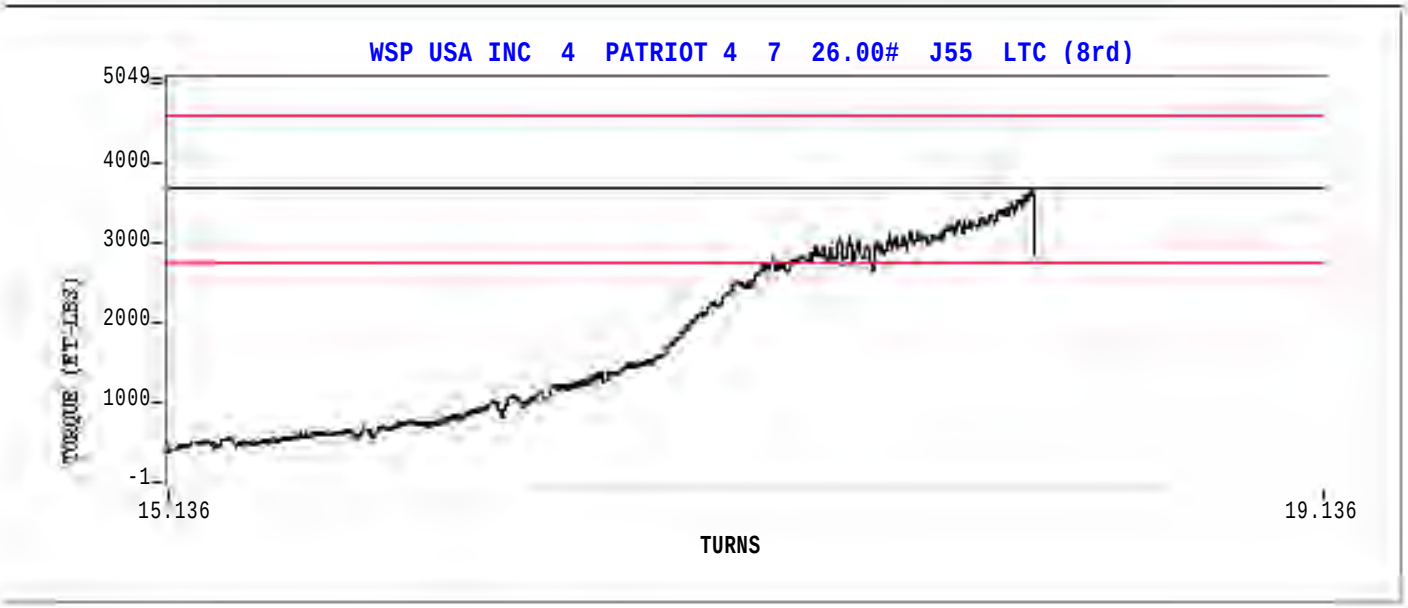
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TIME OF MAKE UP :	3:42 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3624 FT-LBS	MAXIMUM TURNS :	16.232 TURNS

FILE NUMBER : ----------->> **211** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 207

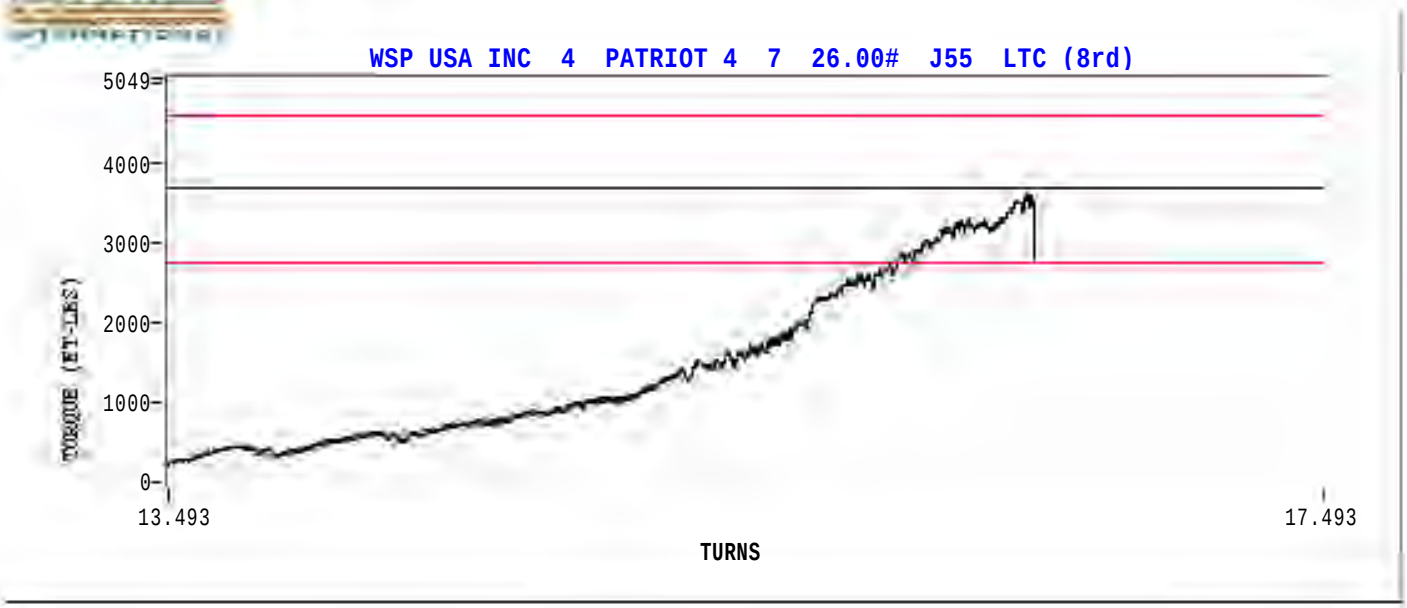


TIME OF MAKE UP :	3:43 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3684 FT-LBS	MAXIMUM TURNS :	18.136 TURNS

FILE NUMBER : ----------->> **212** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 208

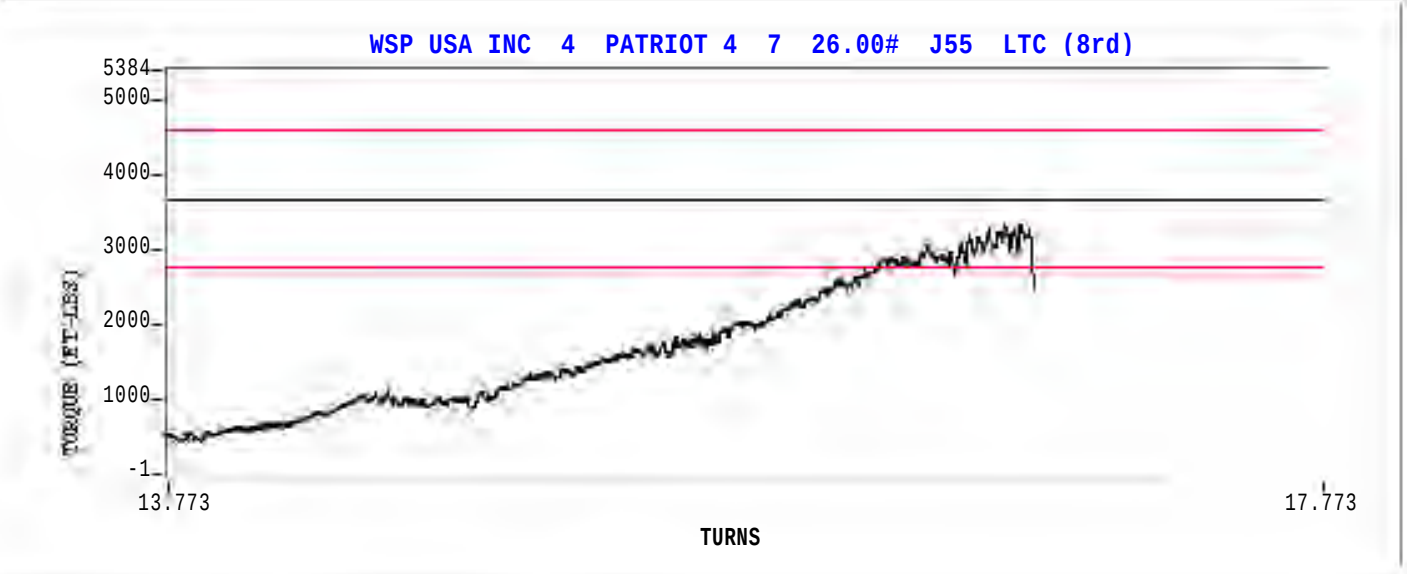
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TIME OF MAKE UP :	3:45 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3614 FT-LBS	MAXIMUM TURNS :	16.493 TURNS

FILE NUMBER : ----------->> **213** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 209

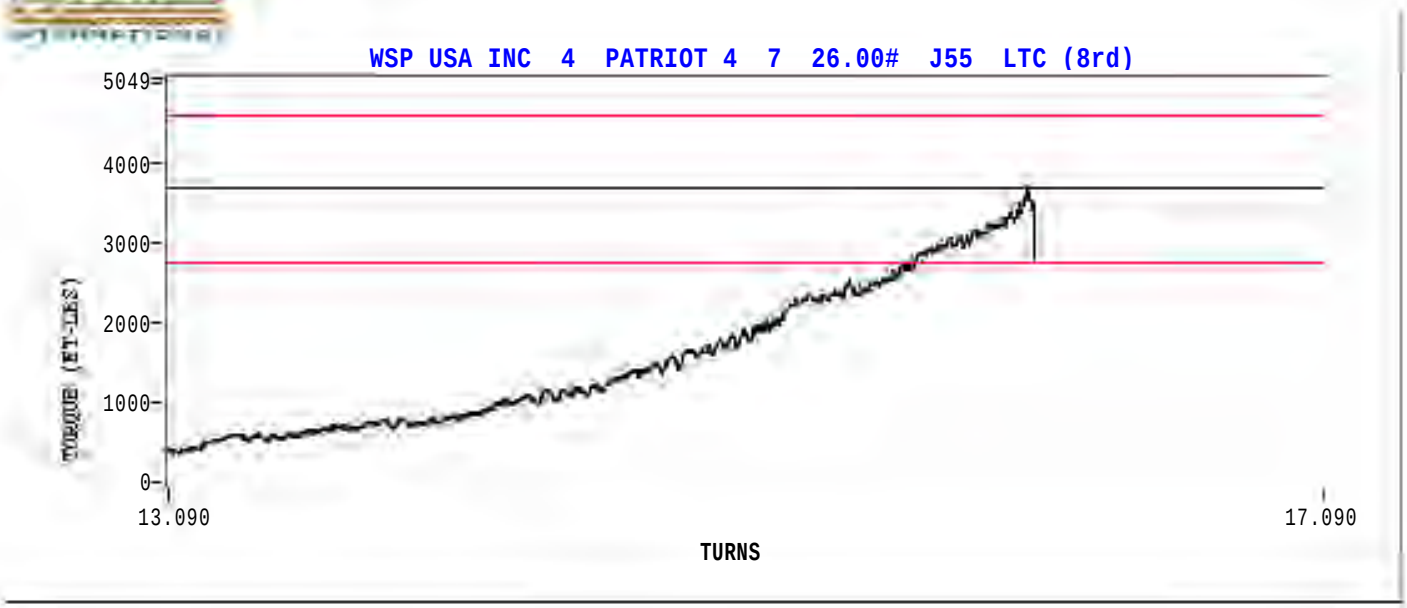


TIME OF MAKE UP :	3:47 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	4895 FT-LBS	MAXIMUM TURNS :	16.773 TURNS

FILE NUMBER : ----------->> **214** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 210

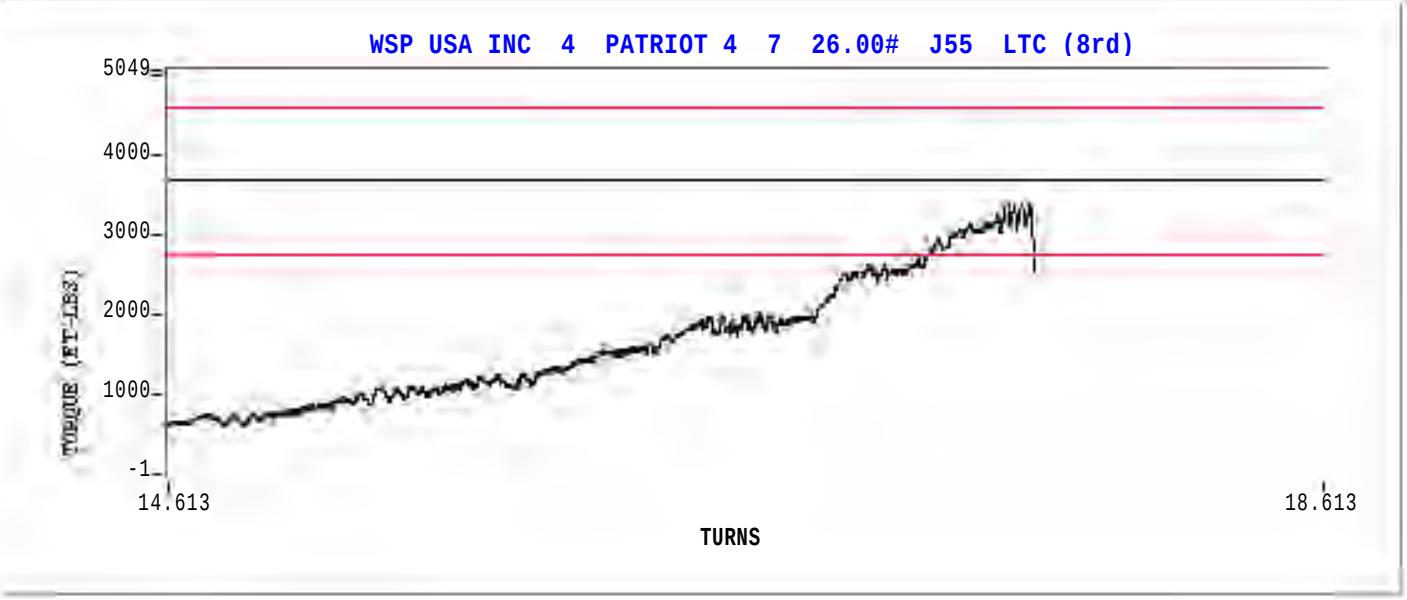
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TIME OF MAKE UP :	3:48 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3708 FT-LBS	MAXIMUM TURNS :	16.090 TURNS

FILE NUMBER : ----------->> **215** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 211

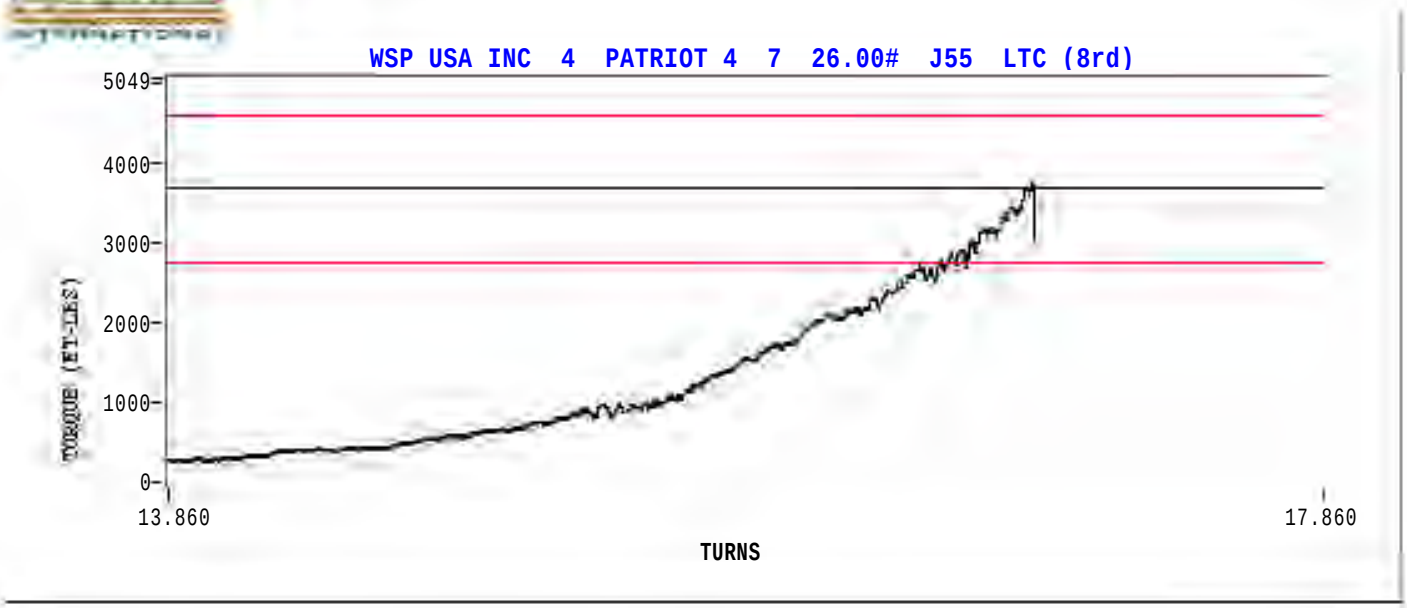


TIME OF MAKE UP :	3:50 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3420 FT-LBS	MAXIMUM TURNS :	17.613 TURNS

FILE NUMBER : ----------->> **216** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 212

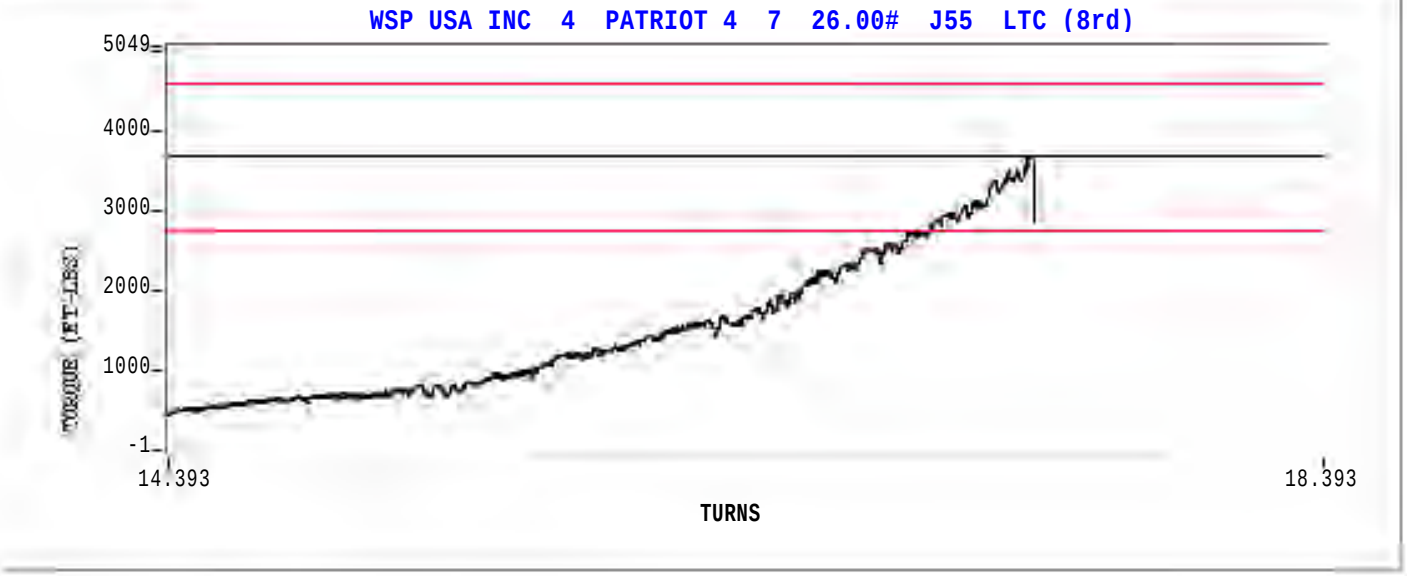
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TIME OF MAKE UP :	3:52 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3736 FT-LBS	MAXIMUM TURNS :	16.860 TURNS

FILE NUMBER : ----------->> **217** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 213

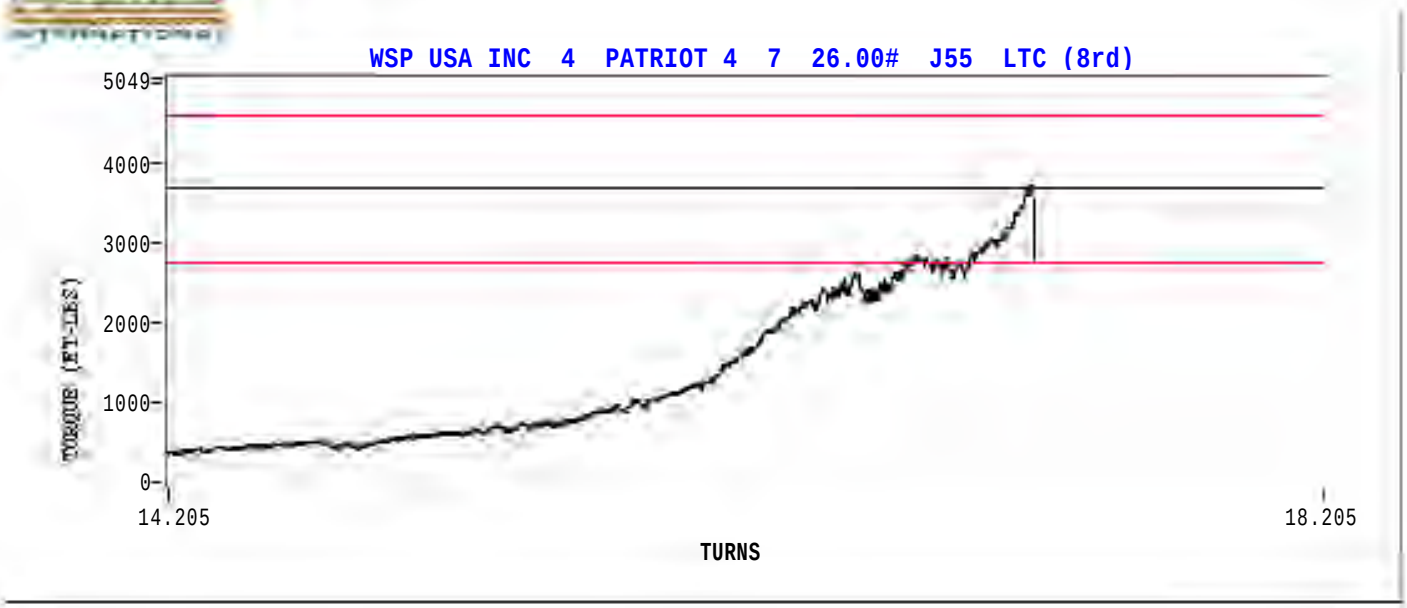


TIME OF MAKE UP :	3:54 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3681 FT-LBS	MAXIMUM TURNS :	17.393 TURNS

FILE NUMBER : ----------->> **218** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 214

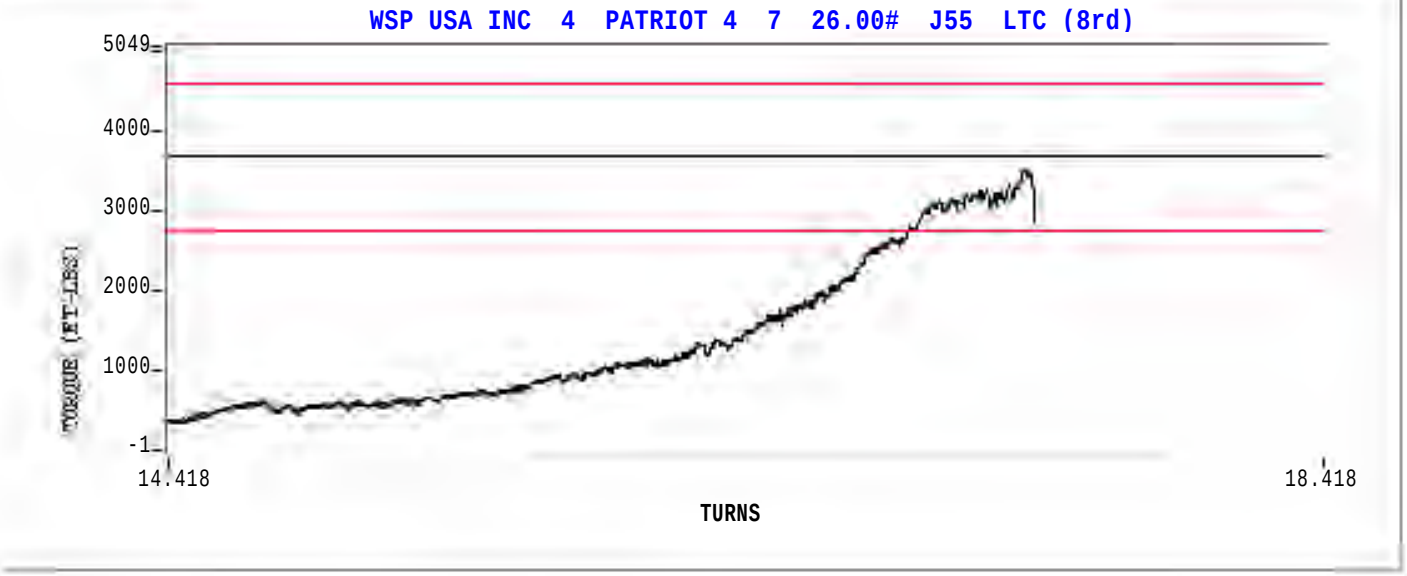
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TIME OF MAKE UP :	3:56 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3723 FT-LBS	MAXIMUM TURNS :	17.205 TURNS

FILE NUMBER : ---------->> 219 JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 215

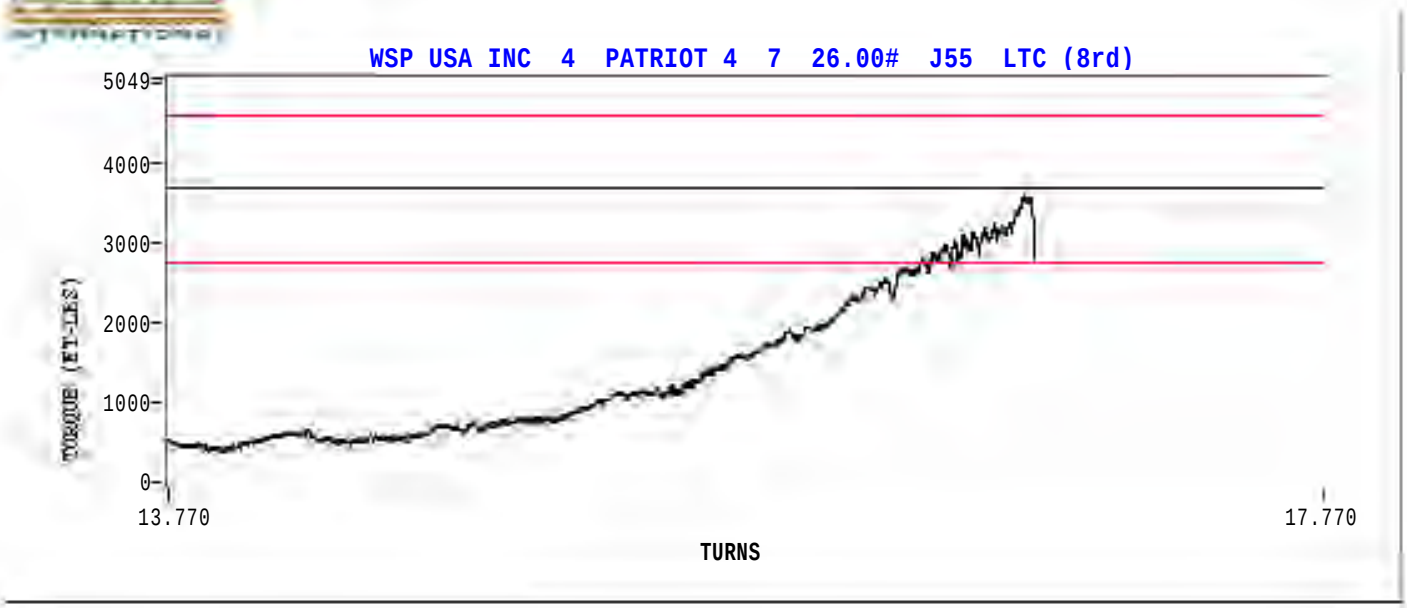


TIME OF MAKE UP :	3:57 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3520 FT-LBS	MAXIMUM TURNS :	17.418 TURNS

FILE NUMBER : ---------->> 220 JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 216

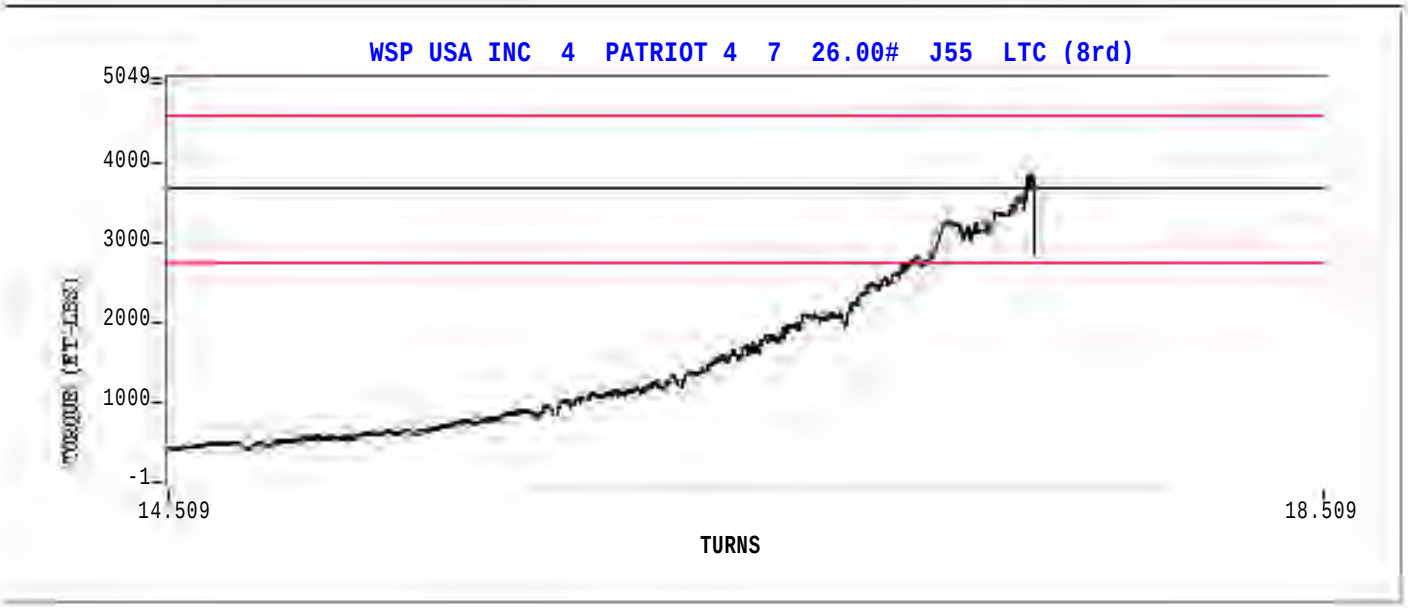
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TIME OF MAKE UP :	3:59 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3573 FT-LBS	MAXIMUM TURNS :	16.770 TURNS

FILE NUMBER : ----------->> **221** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 217

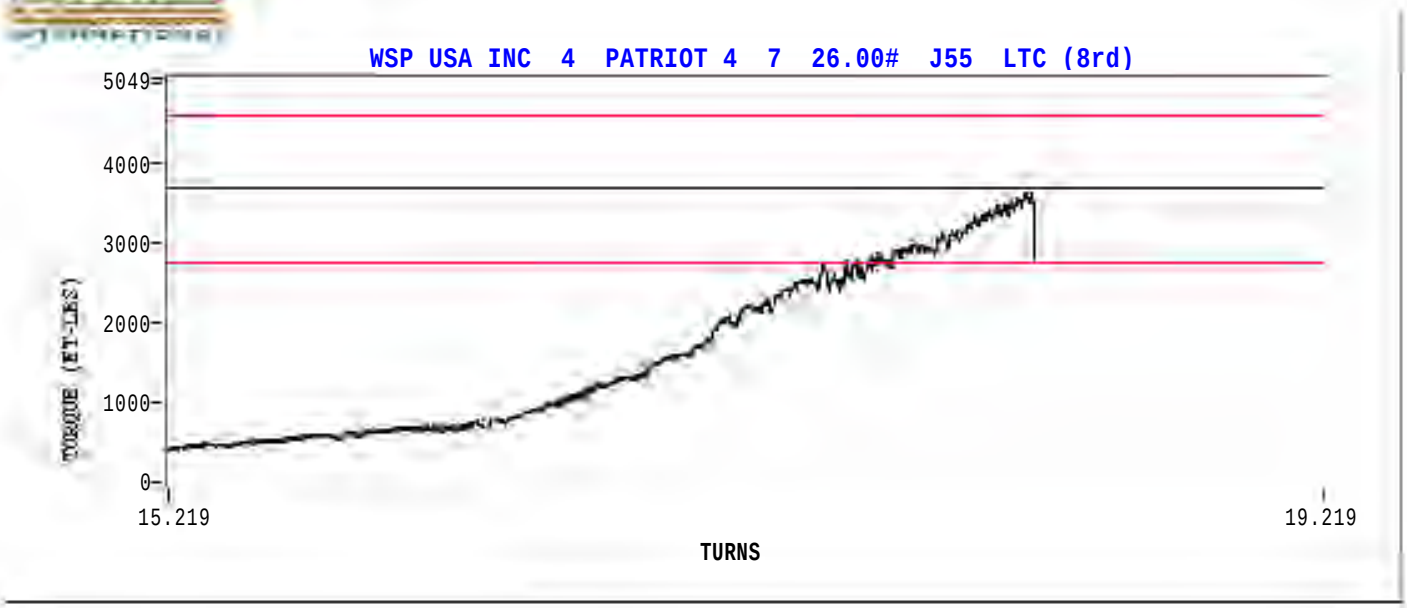


TIME OF MAKE UP :	4:01 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3842 FT-LBS	MAXIMUM TURNS :	17.509 TURNS

FILE NUMBER : ----------->> **222** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 218

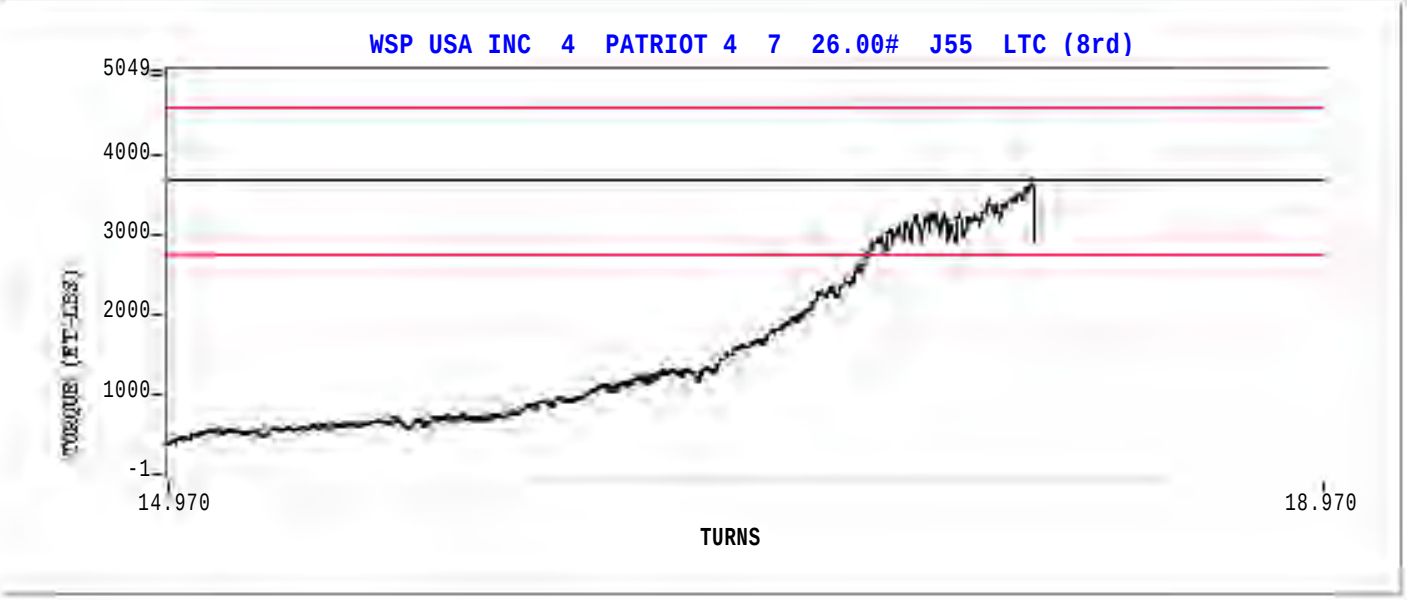
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TIME OF MAKE UP :	4:02 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3623 FT-LBS	MAXIMUM TURNS :	18.219 TURNS

FILE NUMBER : ----------->> **223** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 219

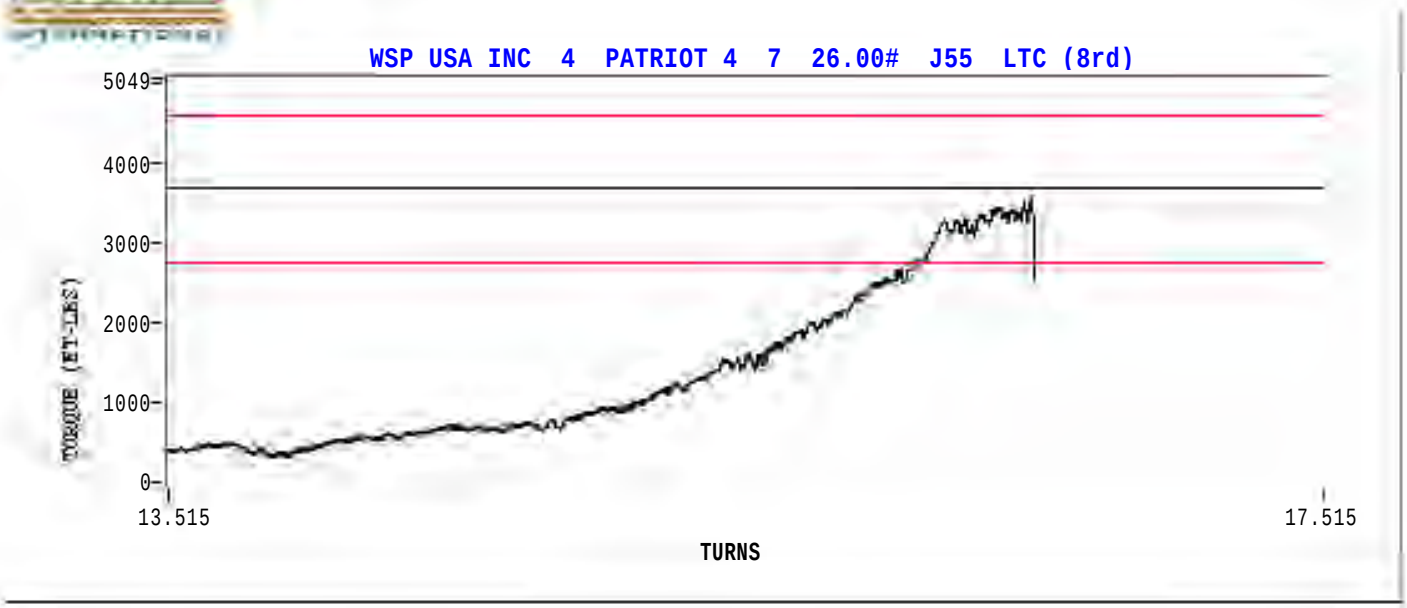


TIME OF MAKE UP :	4:04 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3698 FT-LBS	MAXIMUM TURNS :	17.970 TURNS

FILE NUMBER : ----------->> **224** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 220

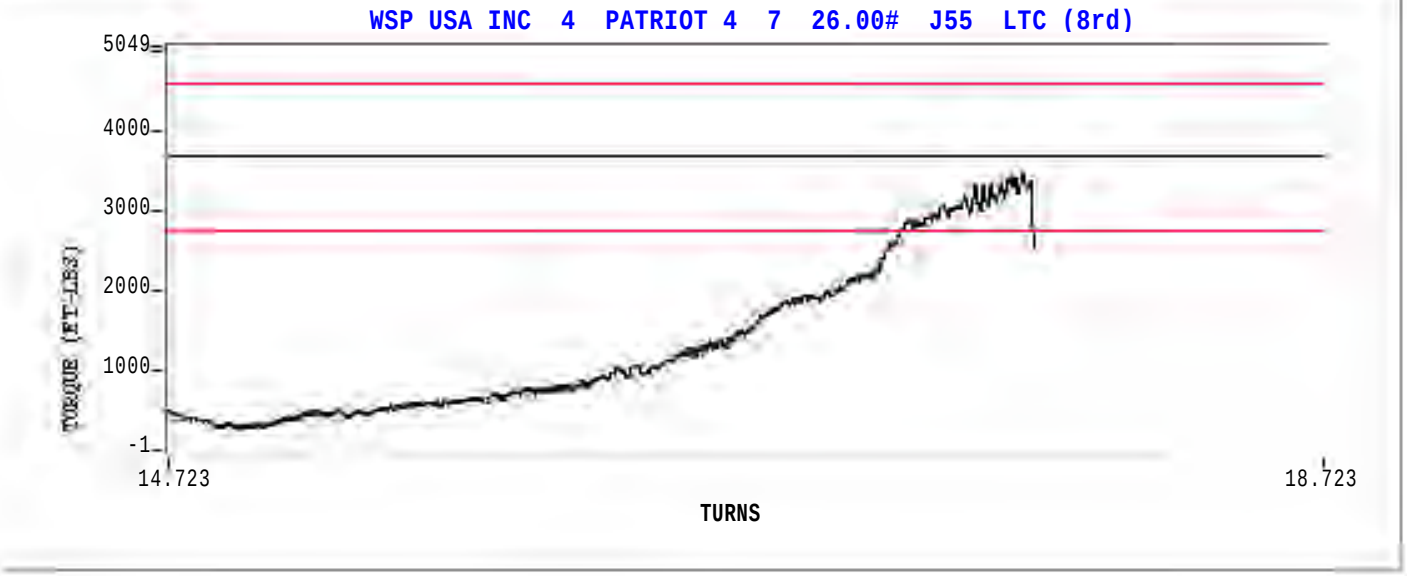
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TIME OF MAKE UP :	4:05 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3587 FT-LBS	MAXIMUM TURNS :	16.515 TURNS

FILE NUMBER : ----------->> **225** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 221

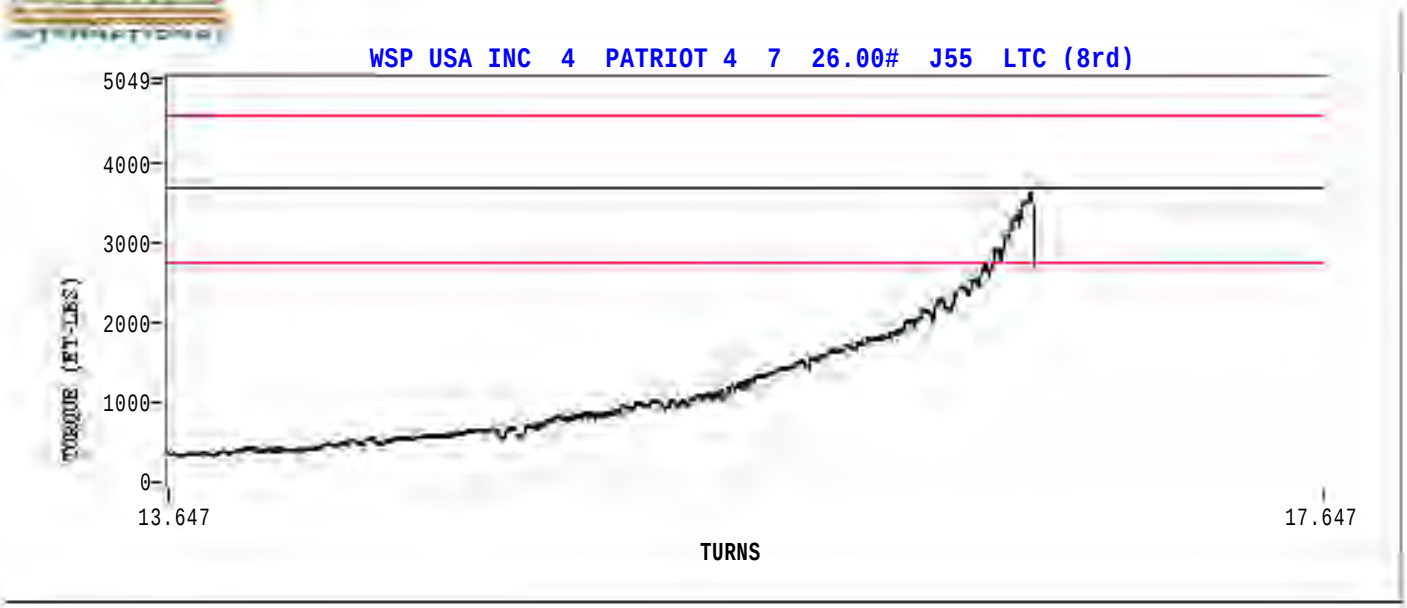


TIME OF MAKE UP :	4:07 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3458 FT-LBS	MAXIMUM TURNS :	17.723 TURNS

FILE NUMBER : ----------->> **226** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 222

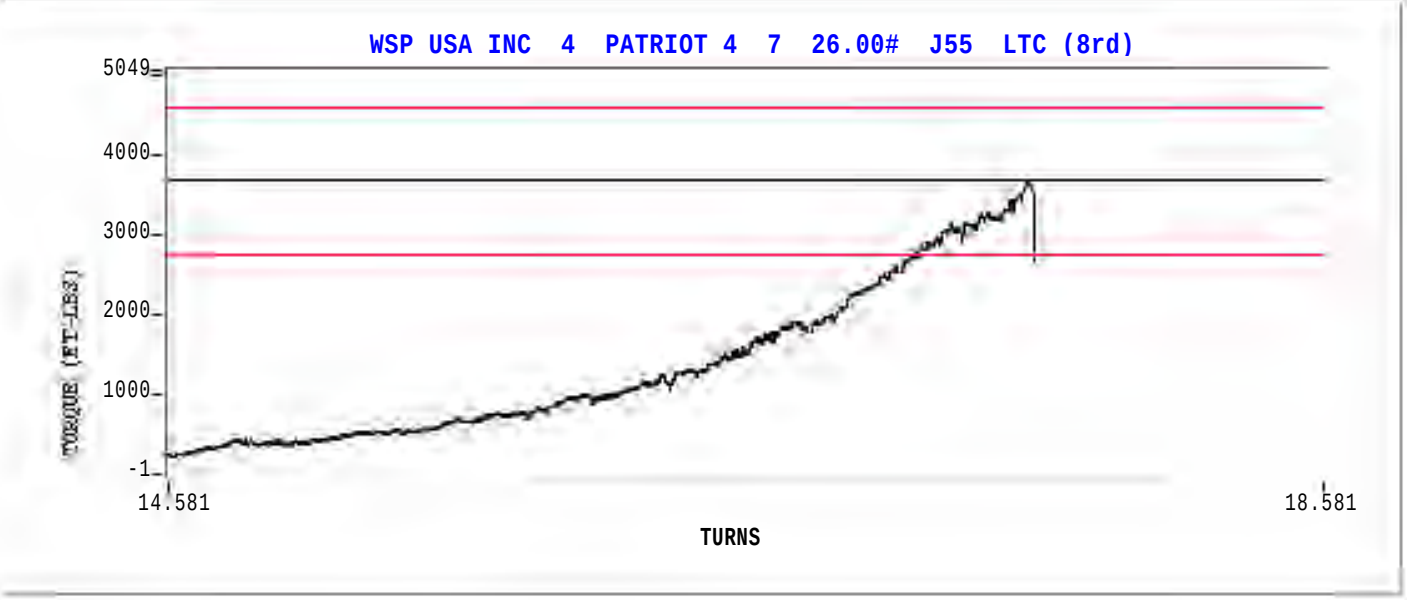
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TIME OF MAKE UP :	4:08 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3625 FT-LBS	MAXIMUM TURNS :	16.647 TURNS

FILE NUMBER : ----------->> **227** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 223

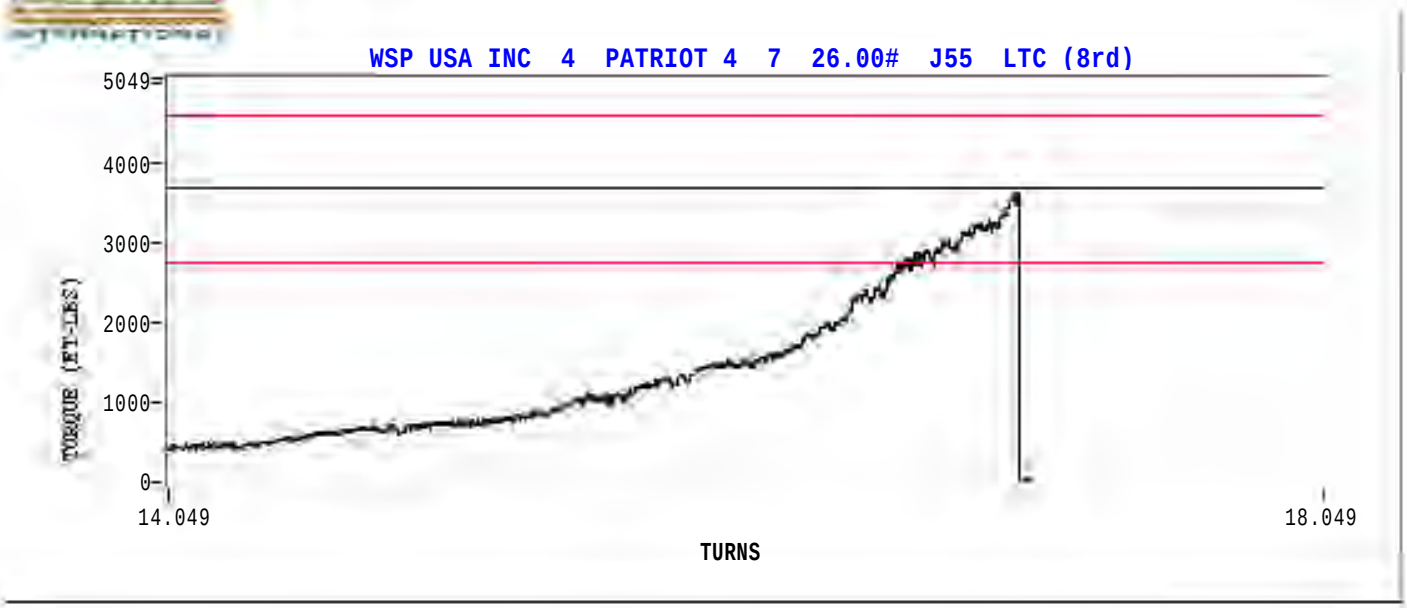


TIME OF MAKE UP :	4:10 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3686 FT-LBS	MAXIMUM TURNS :	17.581 TURNS

FILE NUMBER : ----------->> **228** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 224

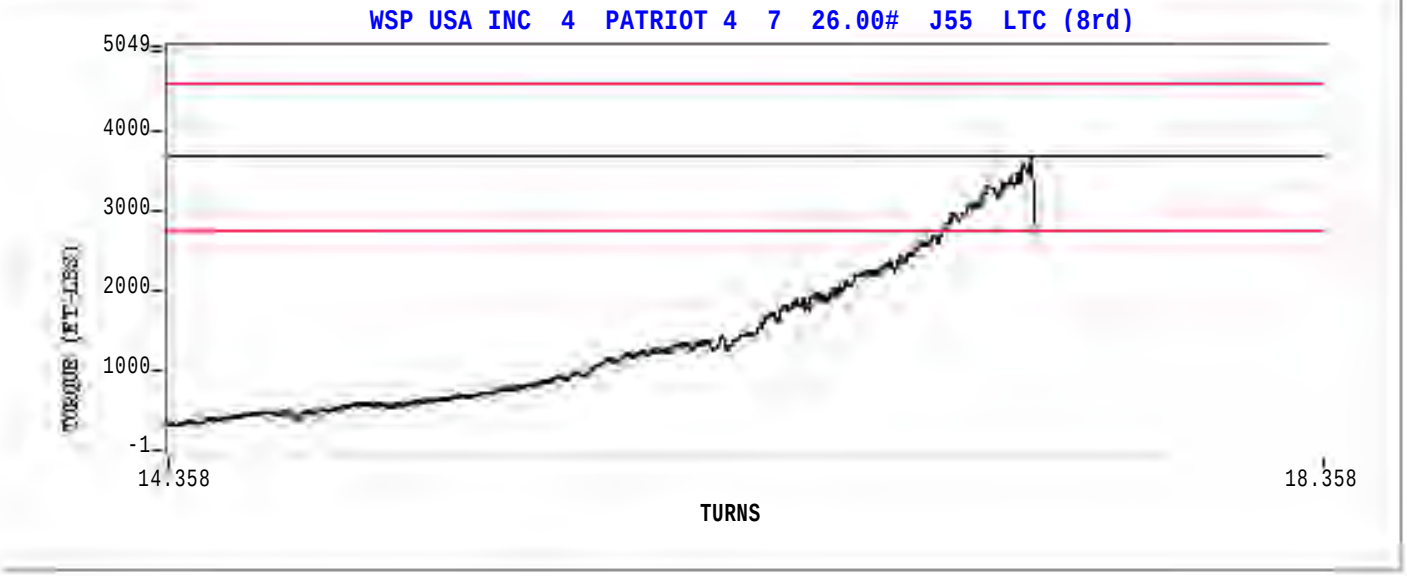
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TIME OF MAKE UP :	4:12 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3620 FT-LBS	MAXIMUM TURNS :	17.049 TURNS

FILE NUMBER : ----------->> **229** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 225

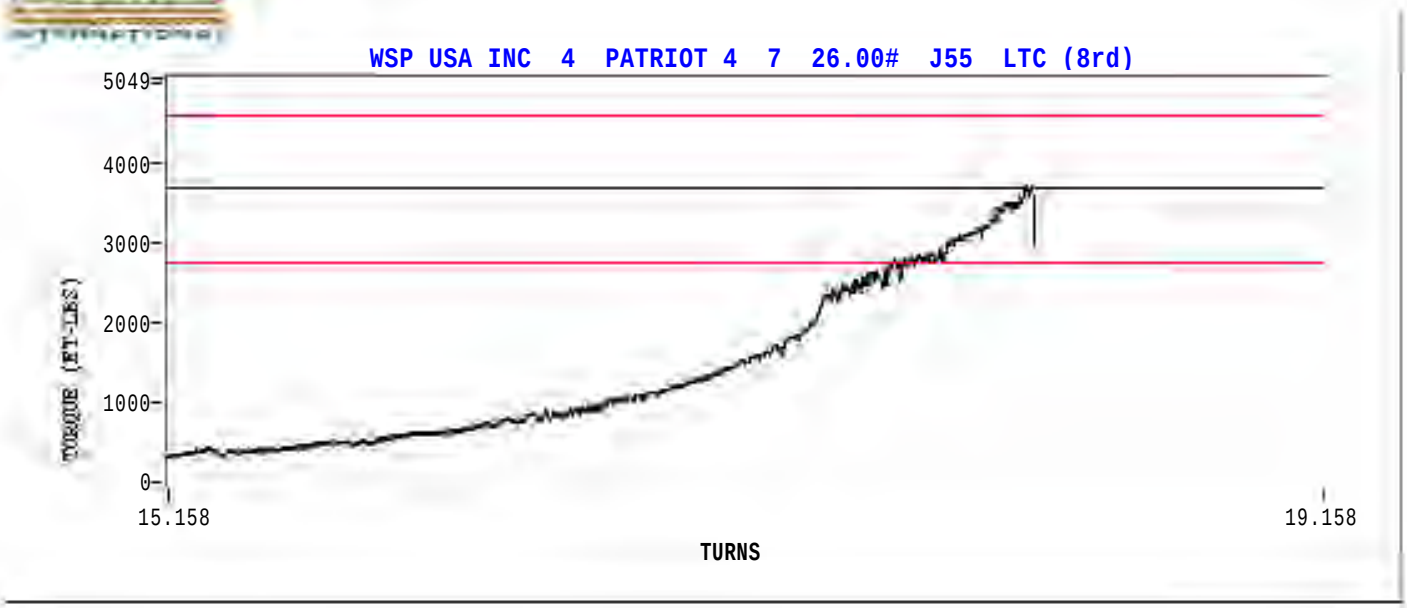


TIME OF MAKE UP :	4:13 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3664 FT-LBS	MAXIMUM TURNS :	17.358 TURNS

FILE NUMBER : ----------->> **230** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 226

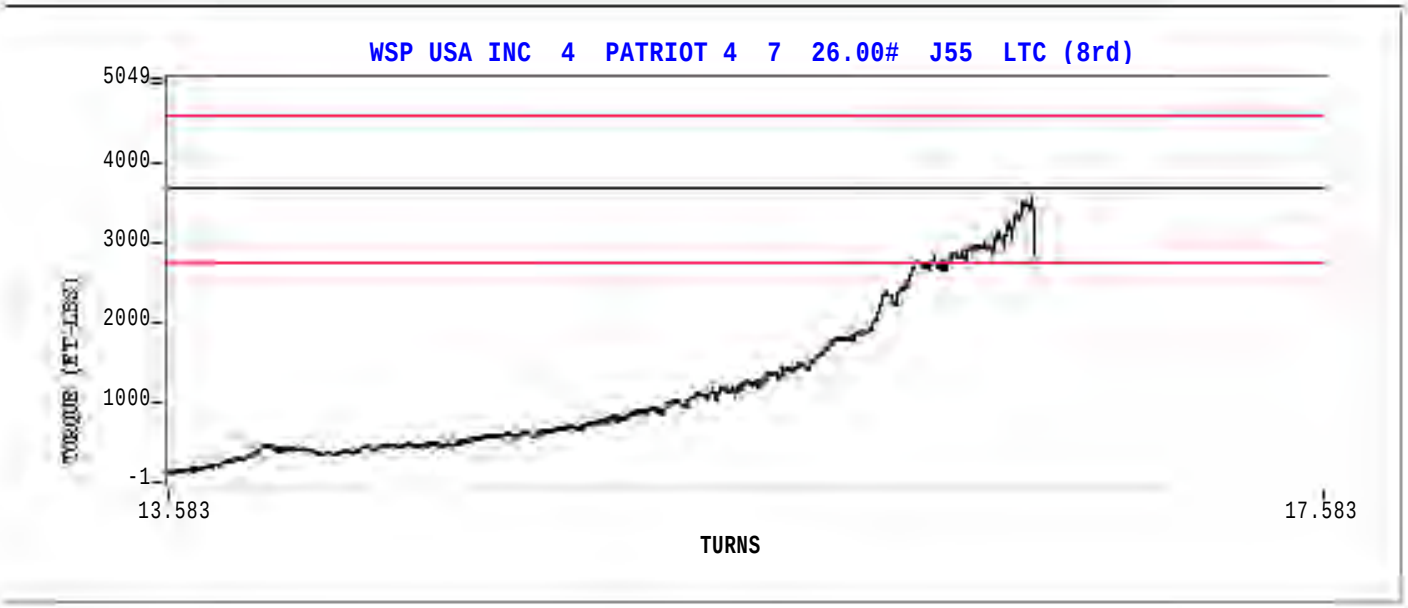
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TIME OF MAKE UP :	4:15 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3712 FT-LBS	MAXIMUM TURNS :	18.158 TURNS

FILE NUMBER : ----------->> **231** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 227



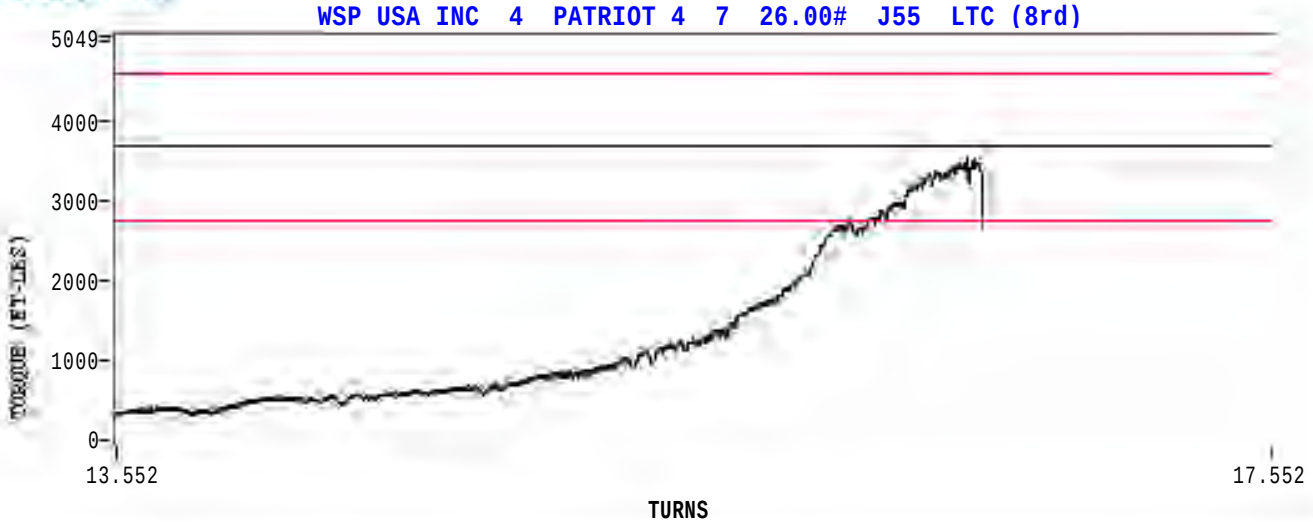
TIME OF MAKE UP :	4:17 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3576 FT-LBS	MAXIMUM TURNS :	16.583 TURNS

FILE NUMBER : ----------->> **232** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 228

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

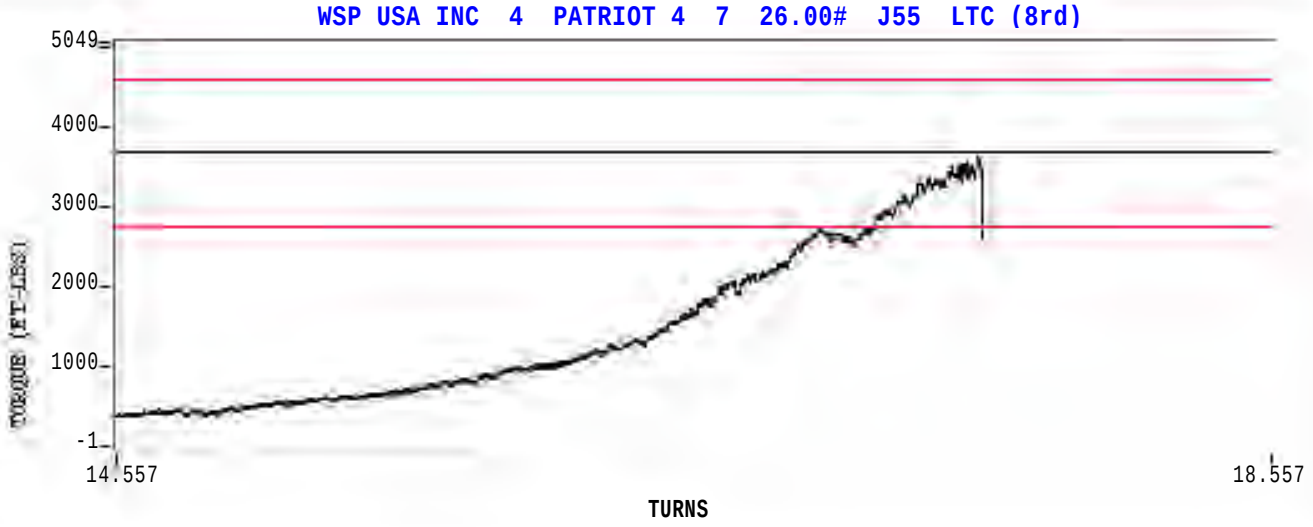


TIME OF MAKE UP :	4:18 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3520 FT-LBS	MAXIMUM TURNS :	16.552 TURNS

FILE NUMBER : ----------->> **233** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 229

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

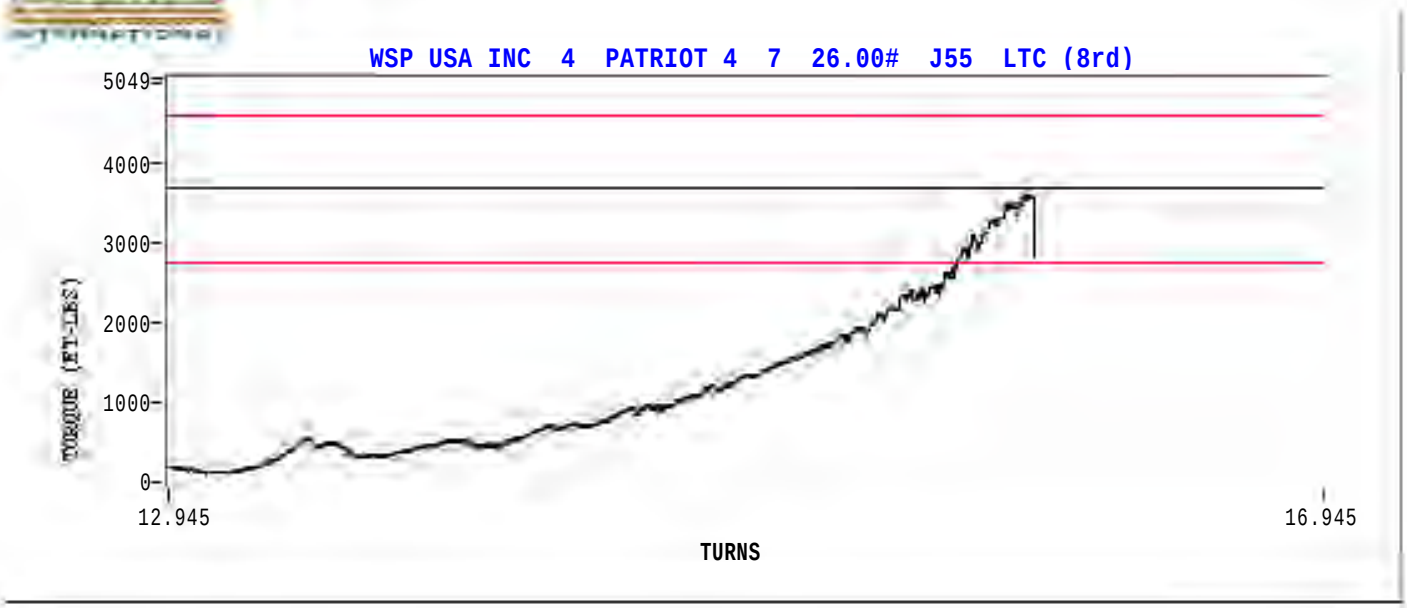


TIME OF MAKE UP :	4:20 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3619 FT-LBS	MAXIMUM TURNS :	17.557 TURNS

FILE NUMBER : ----------->> **234** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 230

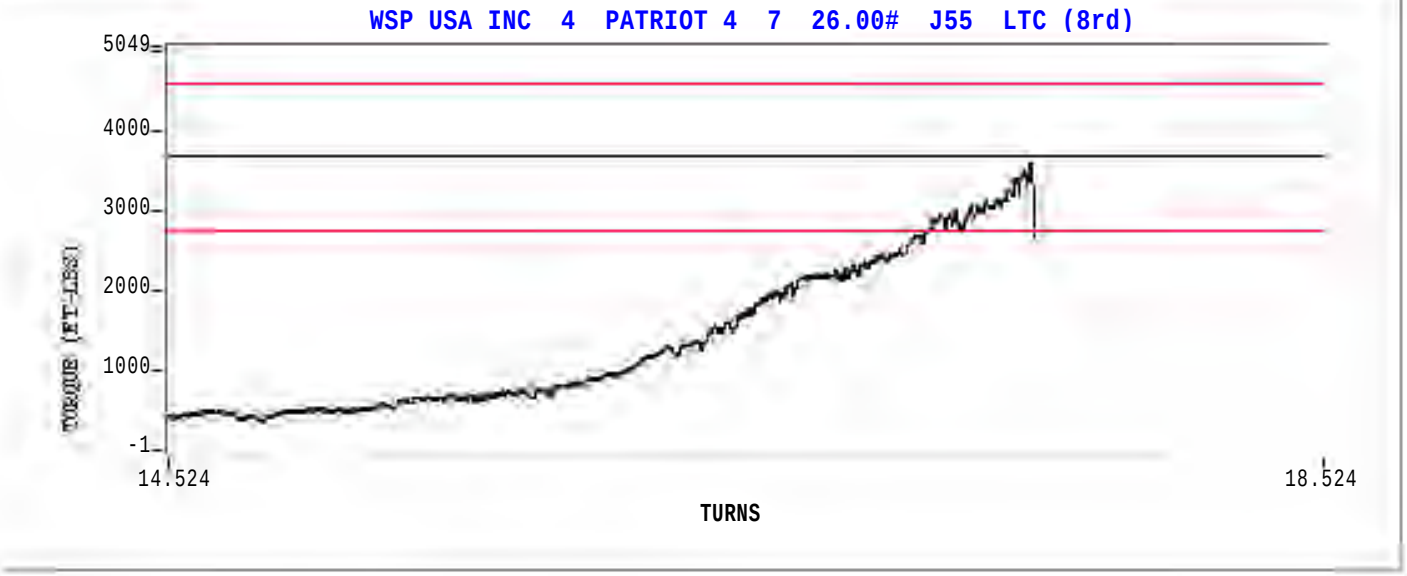
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TIME OF MAKE UP :	4:21 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3637 FT-LBS	MAXIMUM TURNS :	15.945 TURNS

FILE NUMBER : ----------->> **235** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 231

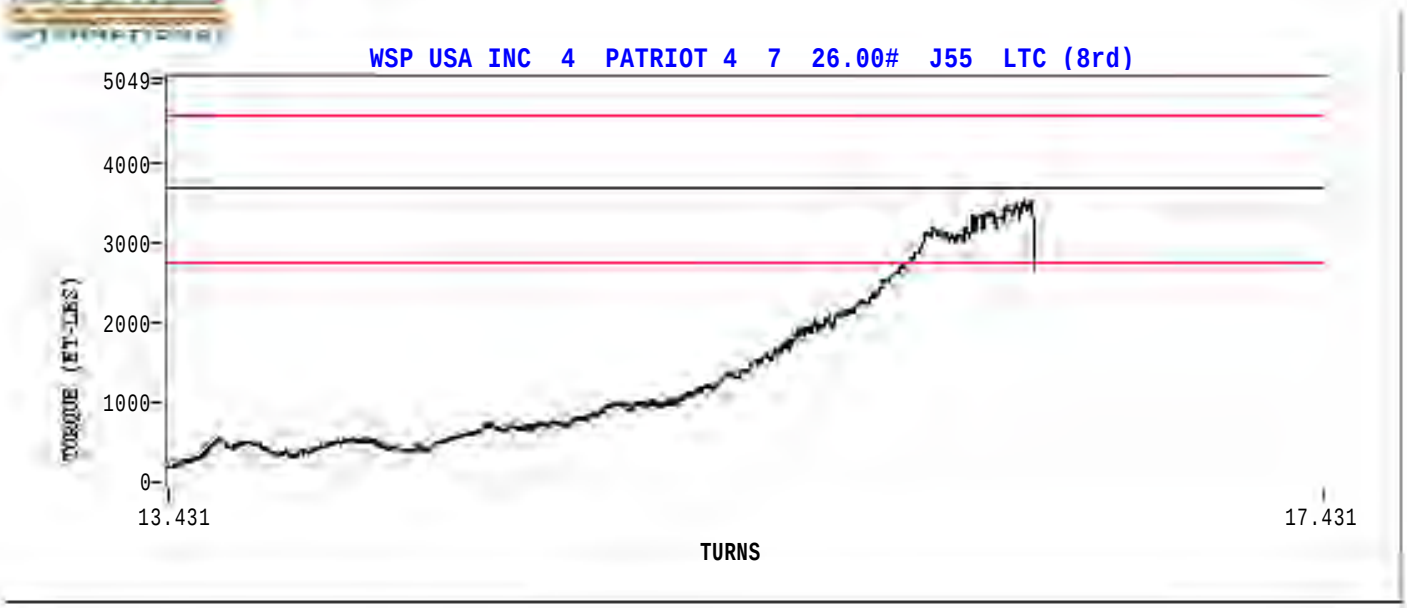


TIME OF MAKE UP :	4:23 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3585 FT-LBS	MAXIMUM TURNS :	17.524 TURNS

FILE NUMBER : ----------->> **236** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 232

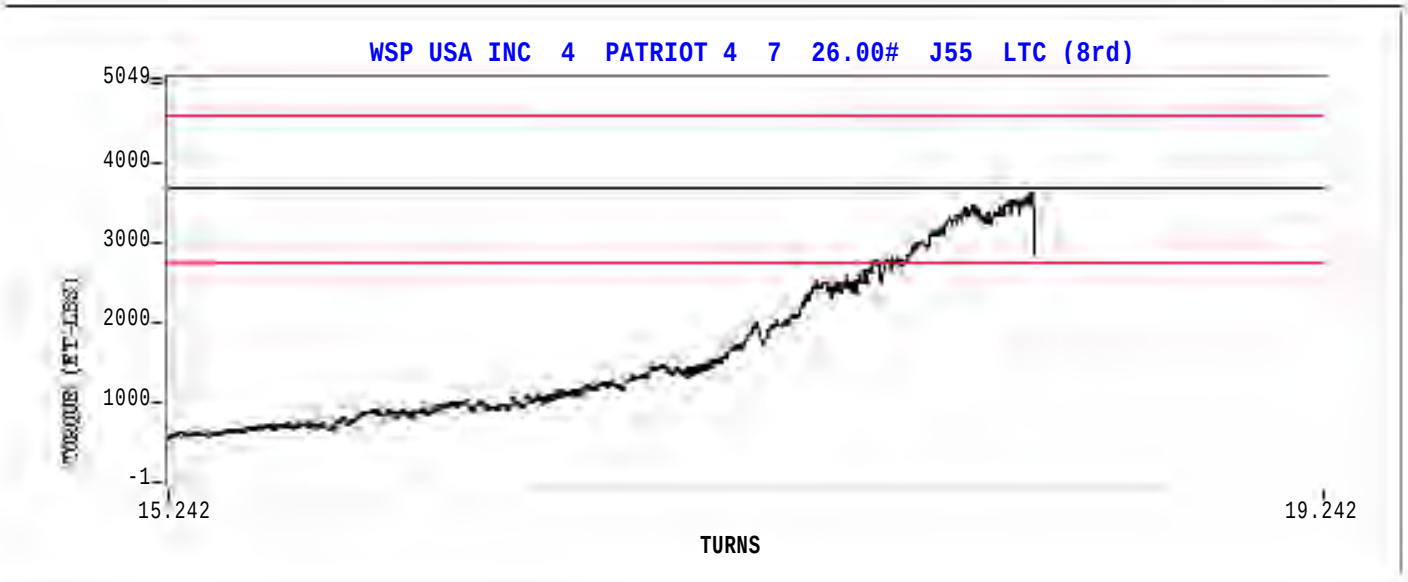
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TIME OF MAKE UP :	4:26 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3530 FT-LBS	MAXIMUM TURNS :	16.431 TURNS

FILE NUMBER : ----------->> **237** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 233

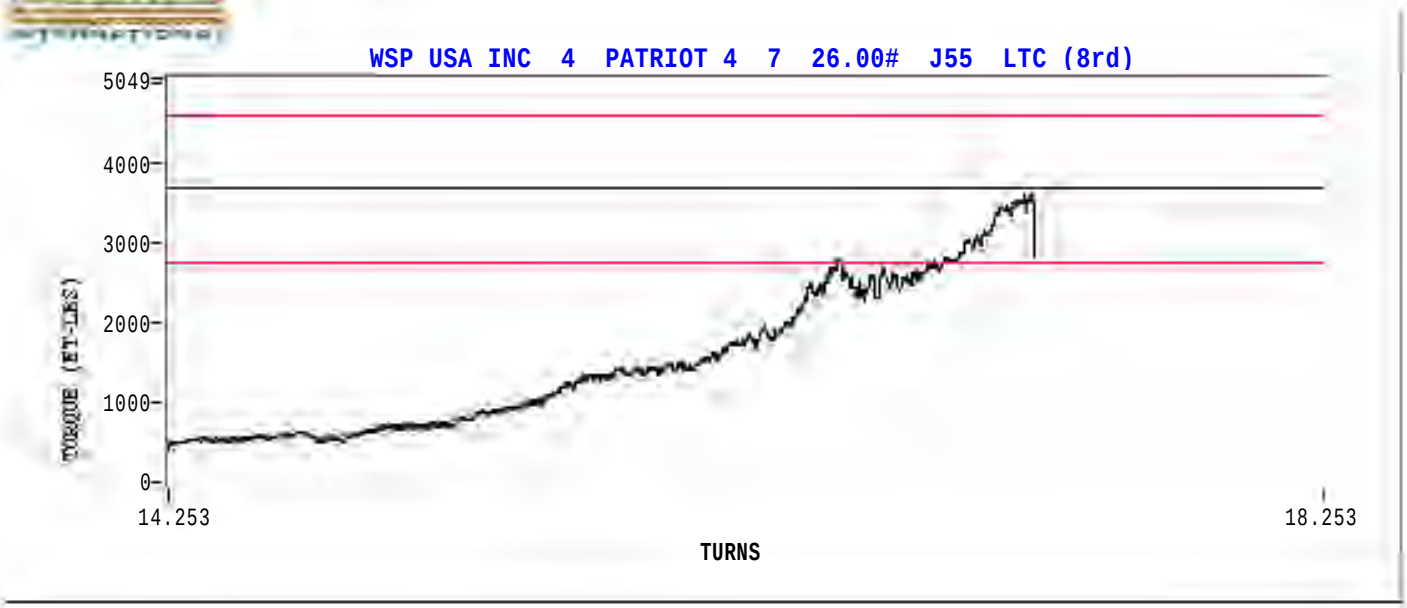


TIME OF MAKE UP :	4:28 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3615 FT-LBS	MAXIMUM TURNS :	18.242 TURNS

FILE NUMBER : ----------->> **238** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 234

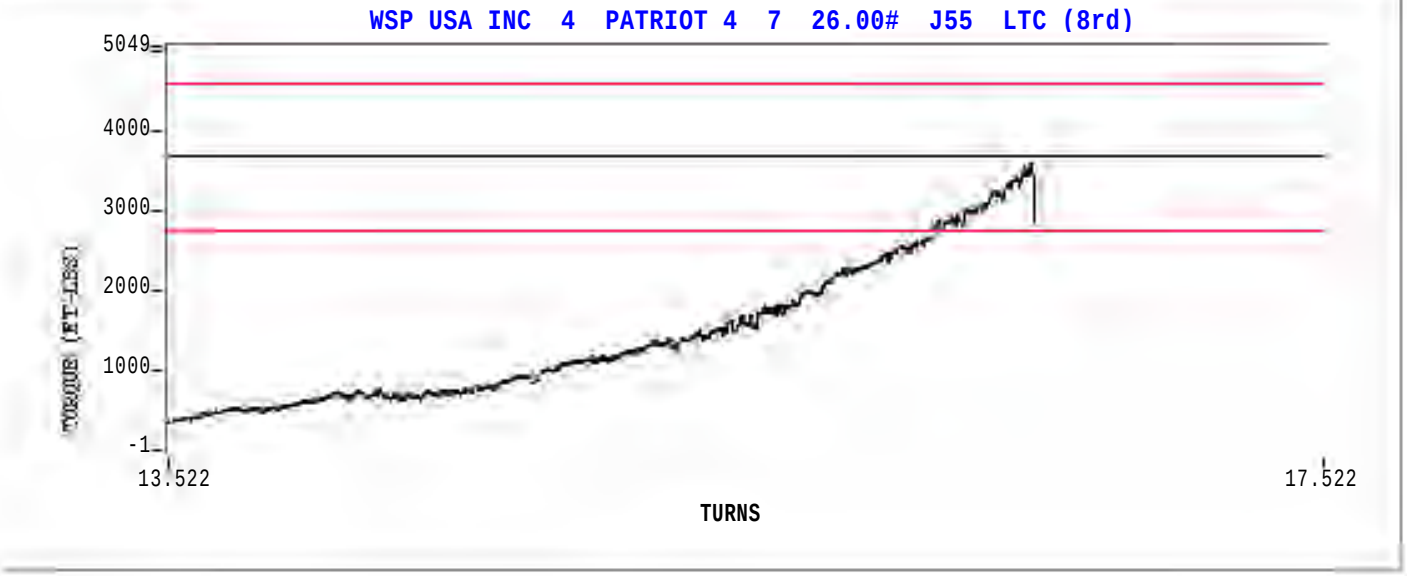
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TIME OF MAKE UP :	4:32 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3608 FT-LBS	MAXIMUM TURNS :	17.253 TURNS

FILE NUMBER : ----------->> **239** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 235

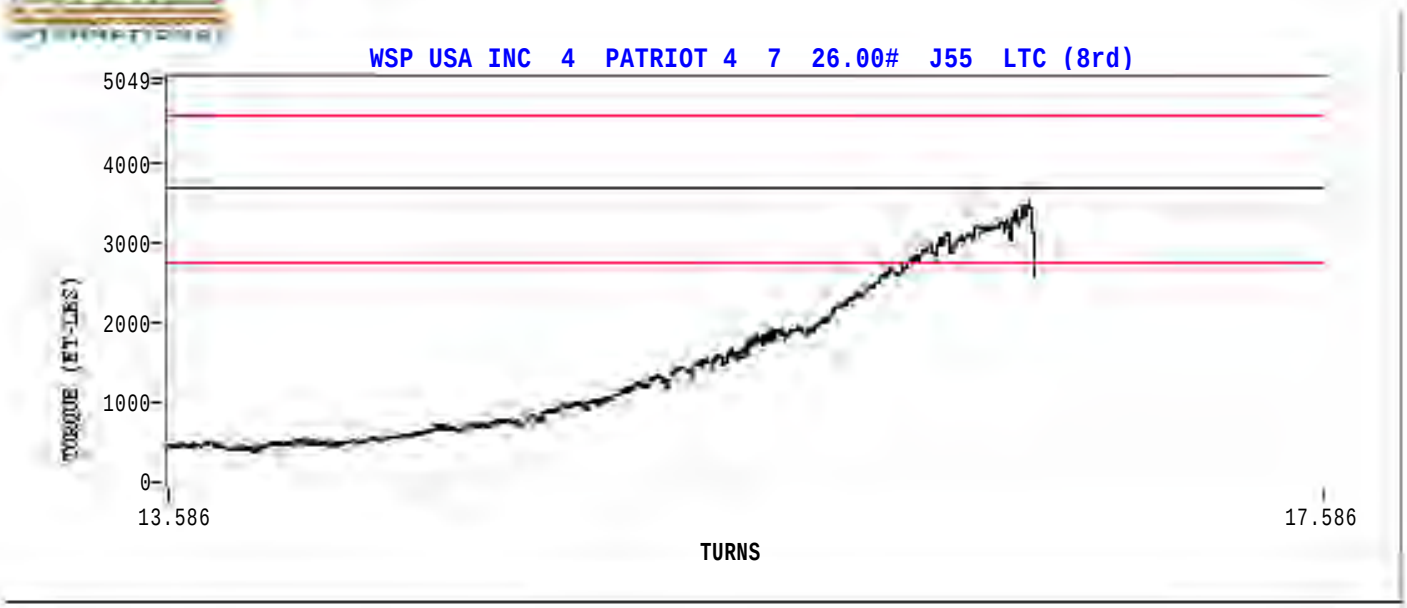


TIME OF MAKE UP :	4:33 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3584 FT-LBS	MAXIMUM TURNS :	16.522 TURNS

FILE NUMBER : ----------->> **240** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 236

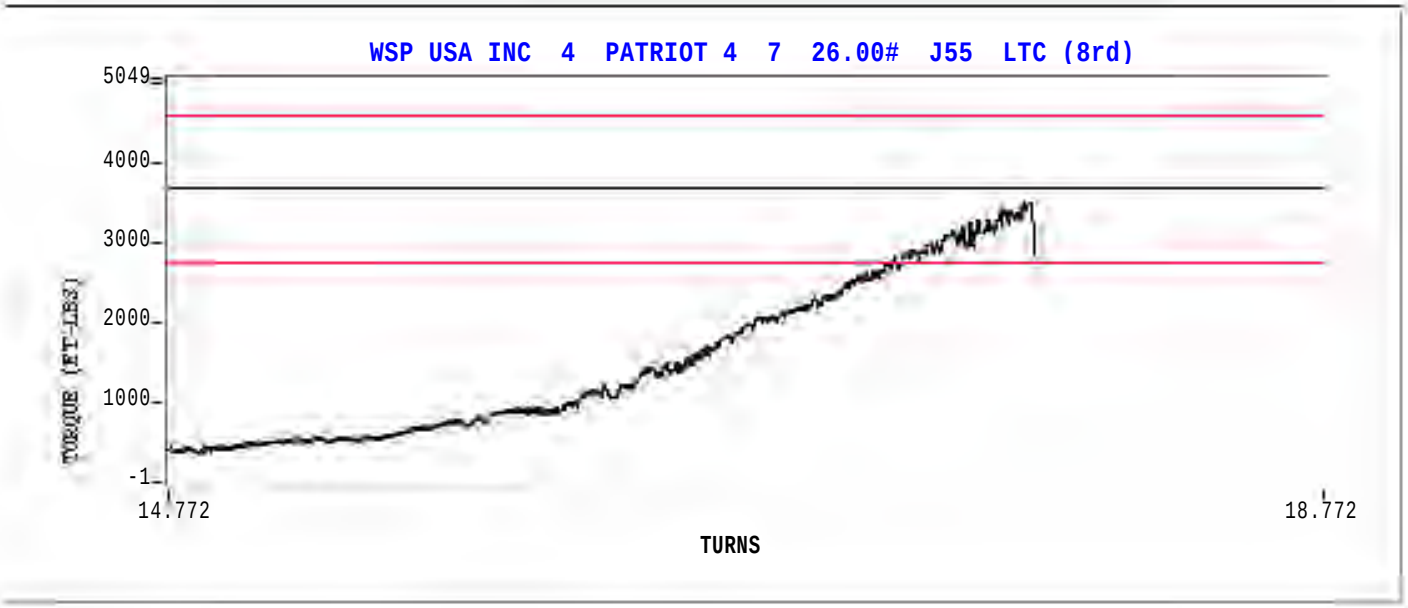
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TIME OF MAKE UP :	4:35 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3530 FT-LBS	MAXIMUM TURNS :	16.586 TURNS

FILE NUMBER : ----------->> **241** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 237

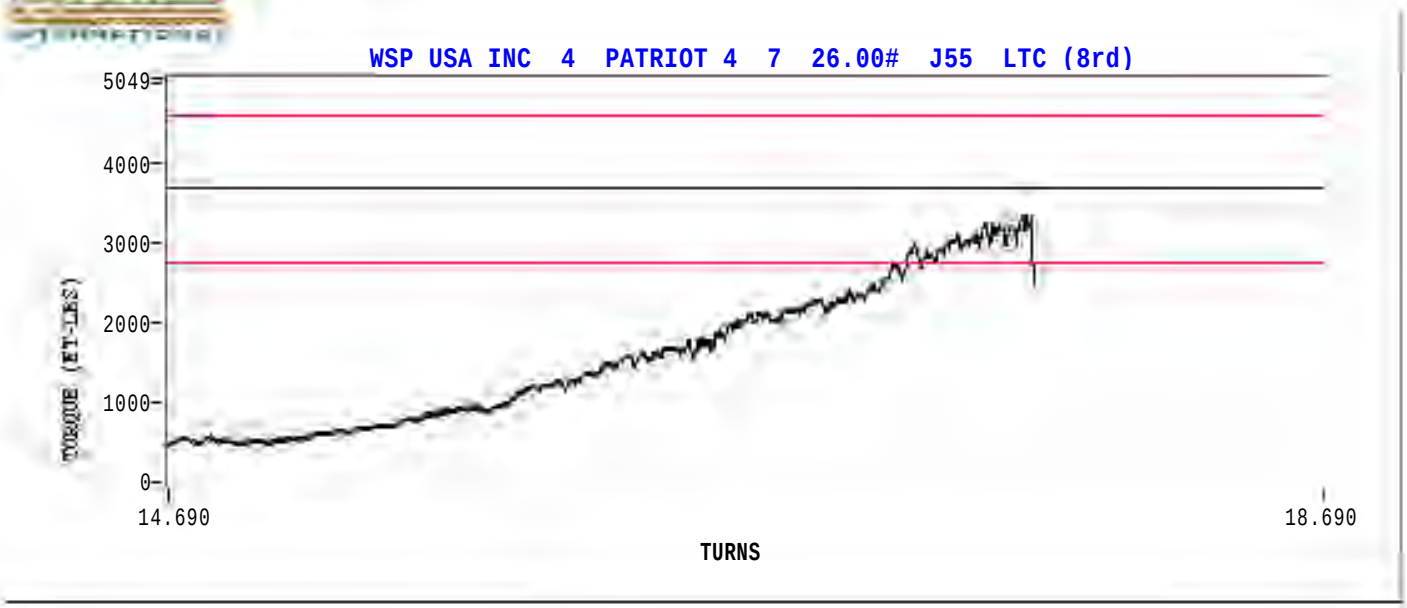


TIME OF MAKE UP :	4:37 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3497 FT-LBS	MAXIMUM TURNS :	17.772 TURNS

FILE NUMBER : ----------->> **242** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 238

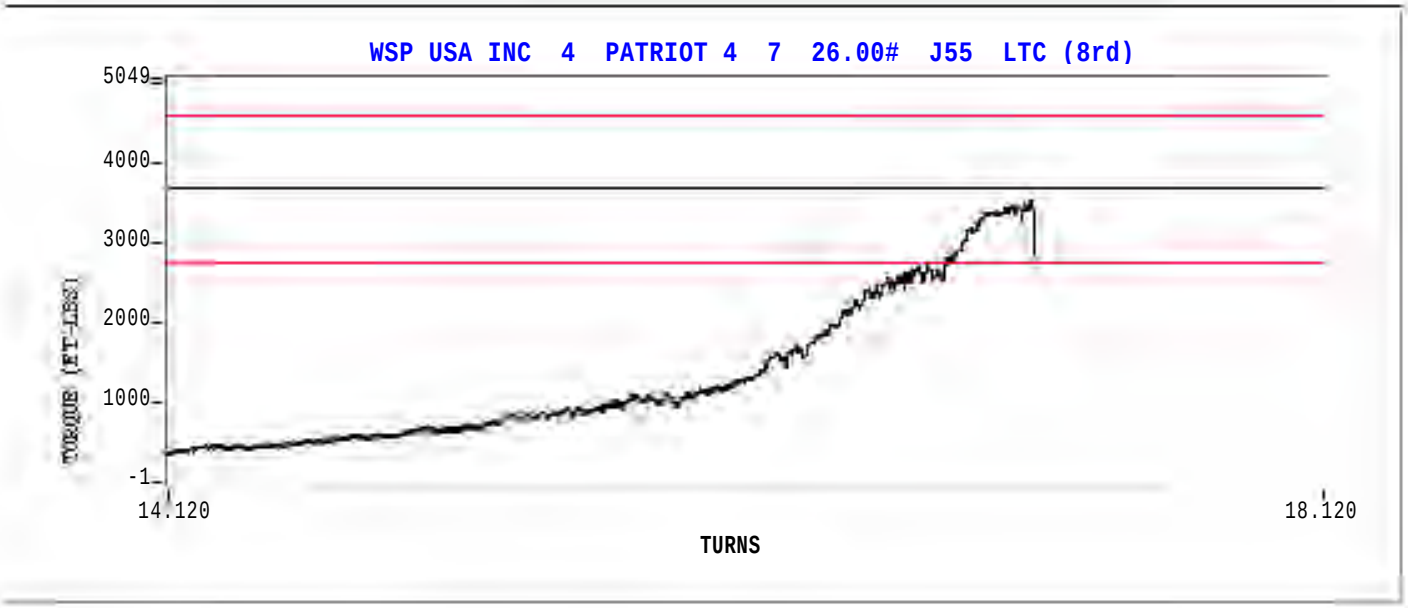
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TIME OF MAKE UP :	4:38 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3345 FT-LBS	MAXIMUM TURNS :	17.690 TURNS

FILE NUMBER : ----------->> **243** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 239



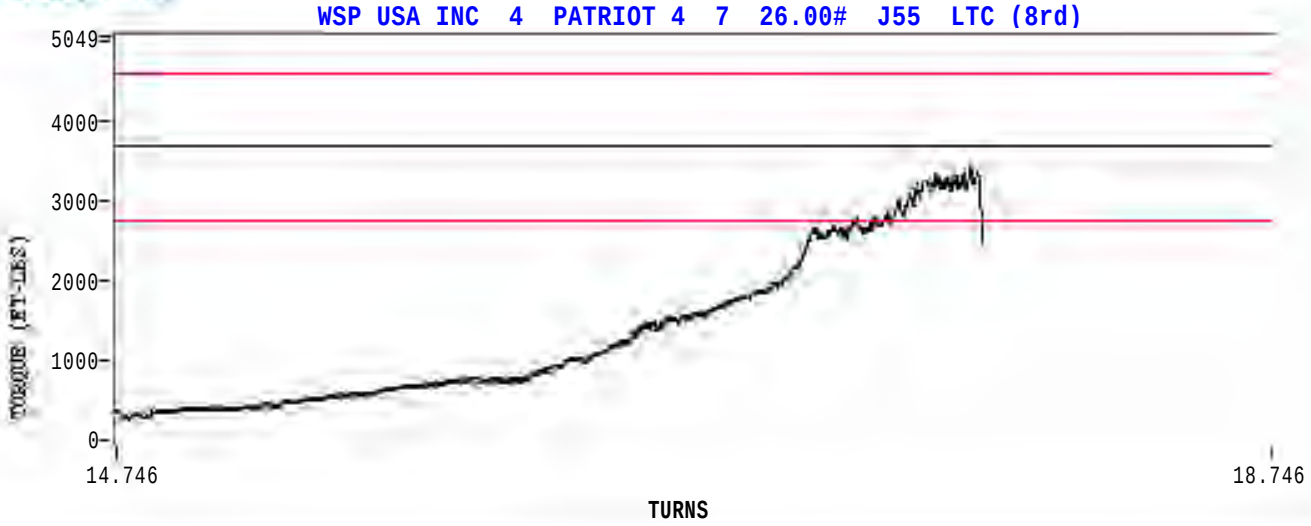
TIME OF MAKE UP :	4:40 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3521 FT-LBS	MAXIMUM TURNS :	17.120 TURNS

FILE NUMBER : ----------->> **244** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 240

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

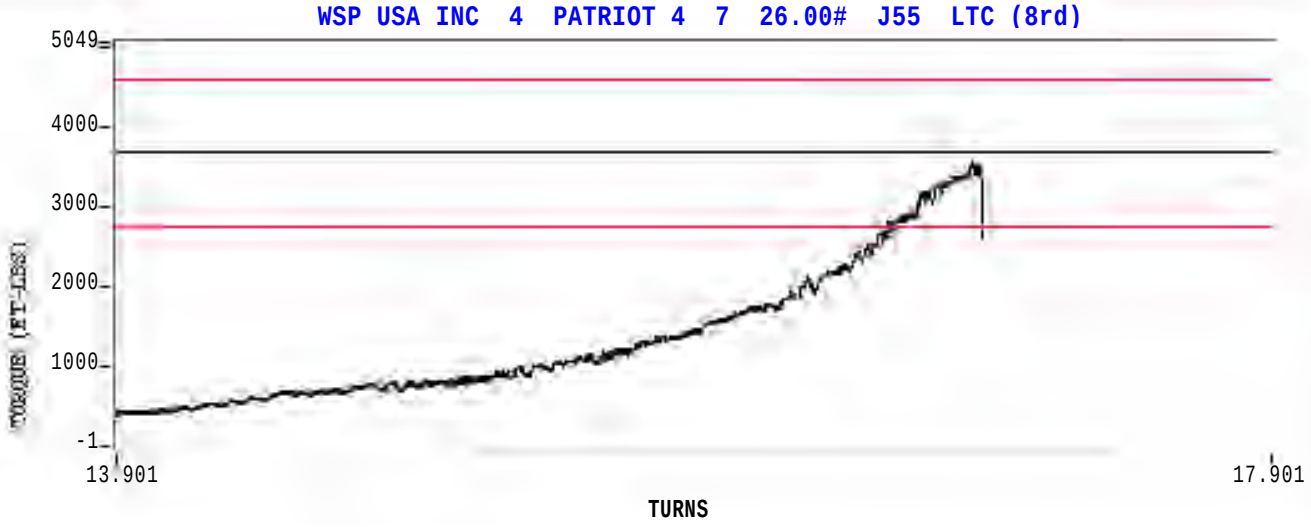


TIME OF MAKE UP :	4:42 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3416 FT-LBS	MAXIMUM TURNS :	17.746 TURNS

FILE NUMBER : ----------->> **245** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 241

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

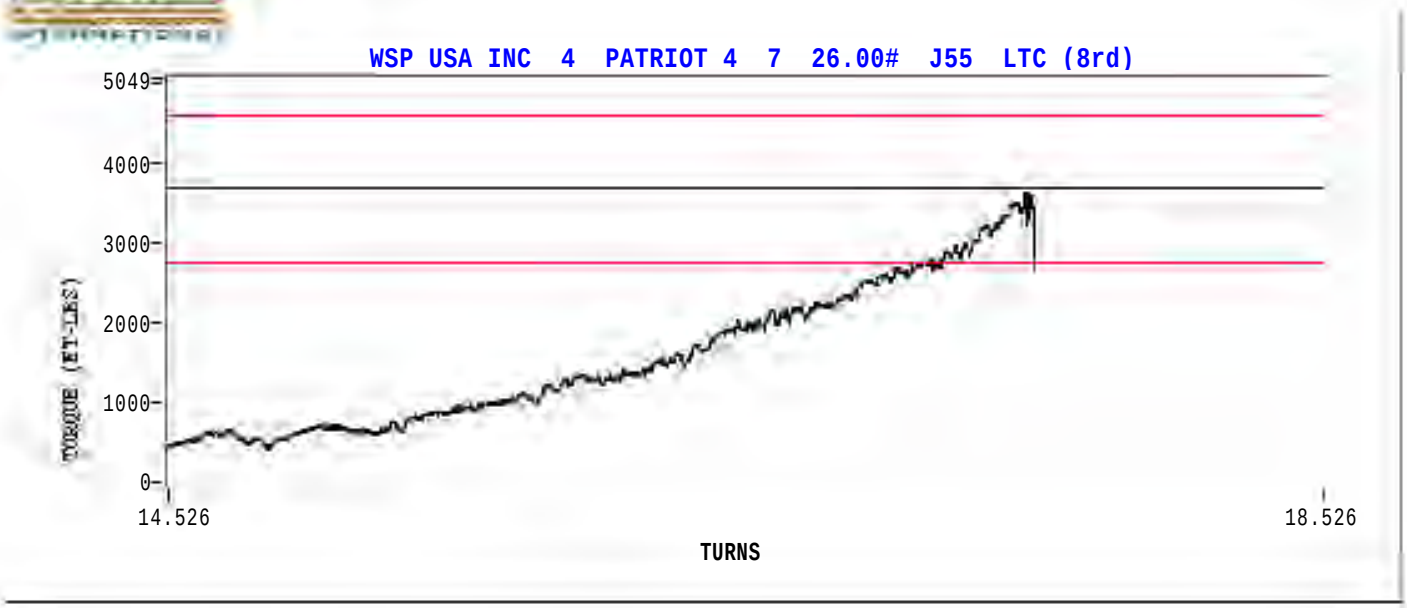


TIME OF MAKE UP :	4:43 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3564 FT-LBS	MAXIMUM TURNS :	16.901 TURNS

FILE NUMBER : ----------->> **246** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 242

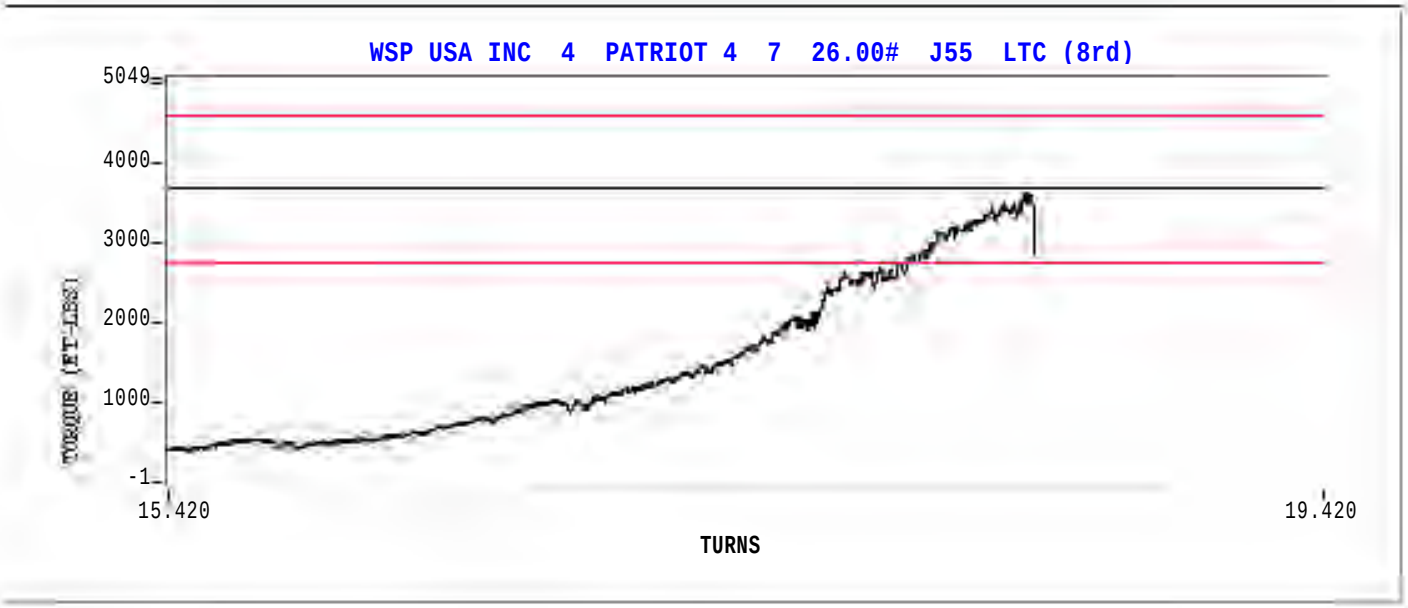
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TIME OF MAKE UP :	4:45 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3622 FT-LBS	MAXIMUM TURNS :	17.526 TURNS

FILE NUMBER : ----------->> **247** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 243

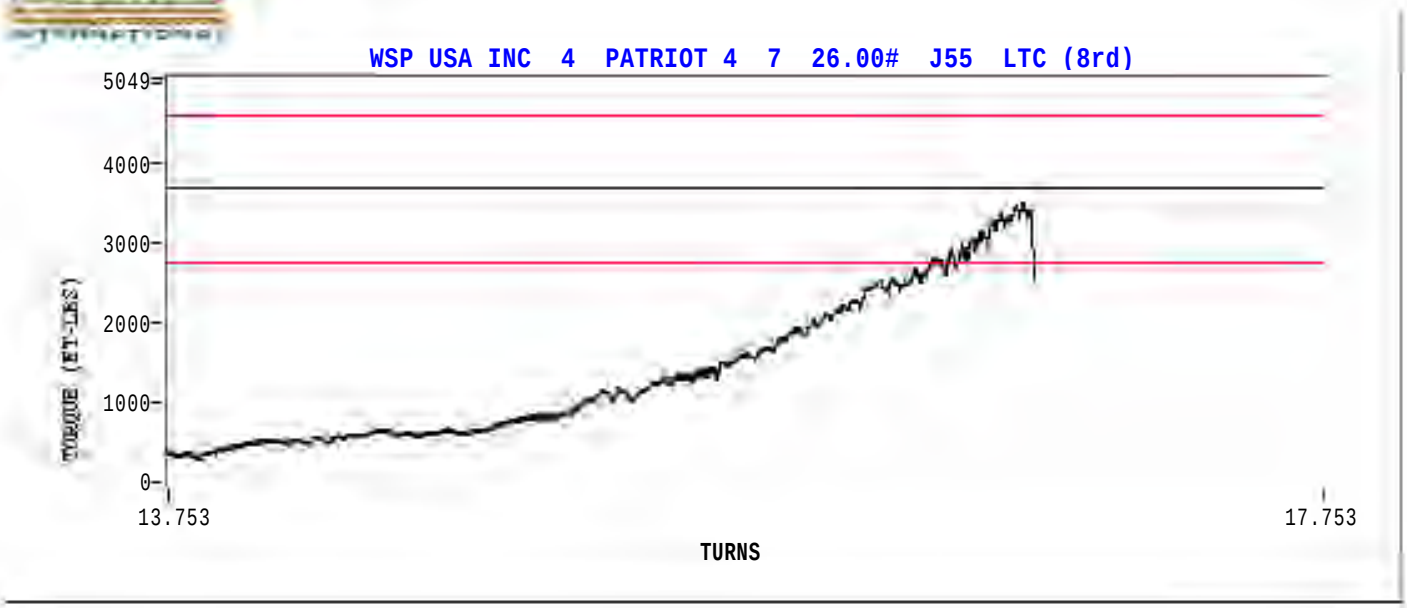


TIME OF MAKE UP :	4:47 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3625 FT-LBS	MAXIMUM TURNS :	18.420 TURNS

FILE NUMBER : ----------->> **248** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 244

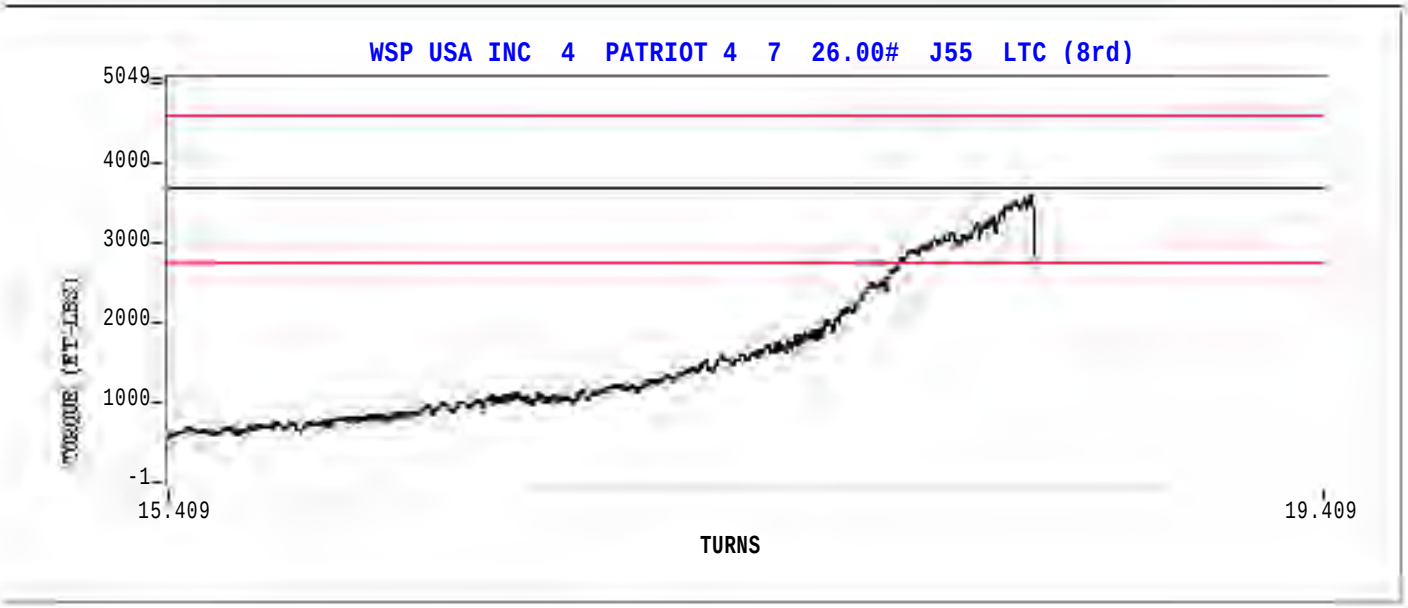
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TIME OF MAKE UP :	4:49 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3491 FT-LBS	MAXIMUM TURNS :	16.753 TURNS

FILE NUMBER : ----------->> **249** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 245

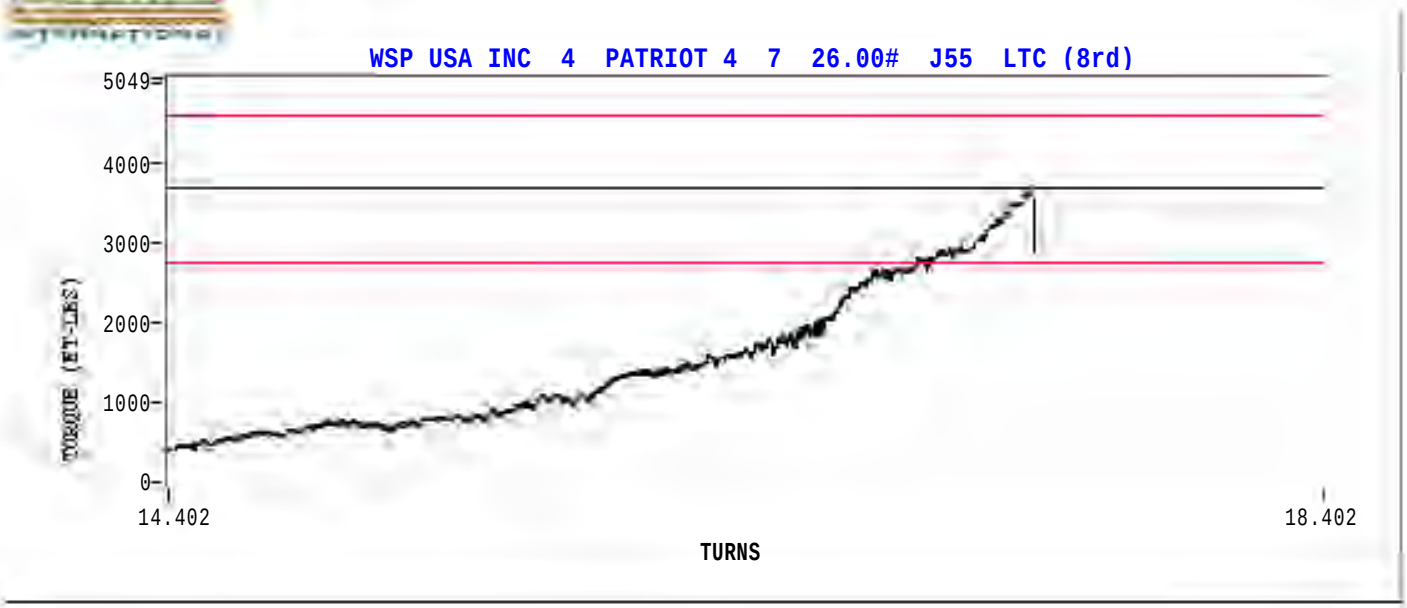


TIME OF MAKE UP :	4:51 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3592 FT-LBS	MAXIMUM TURNS :	18.409 TURNS

FILE NUMBER : ----------->> **250** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 246

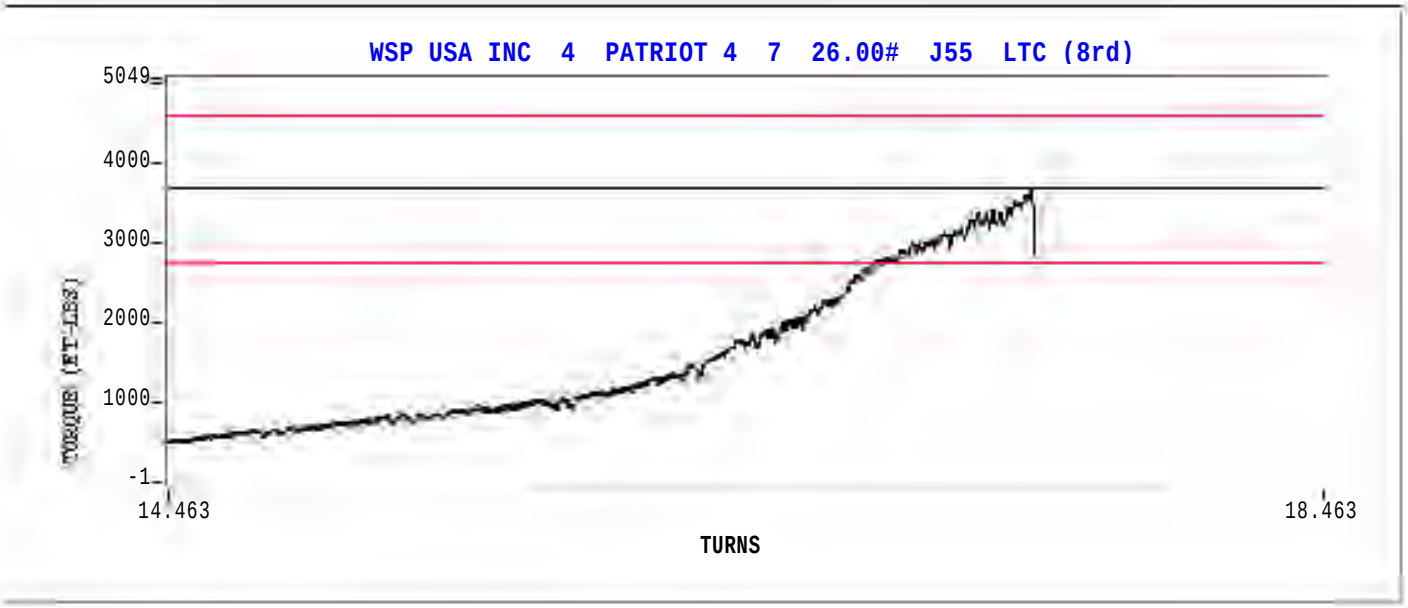
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TIME OF MAKE UP :	4:52 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3708 FT-LBS	MAXIMUM TURNS :	17.402 TURNS

FILE NUMBER : ----------->> **251** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 247

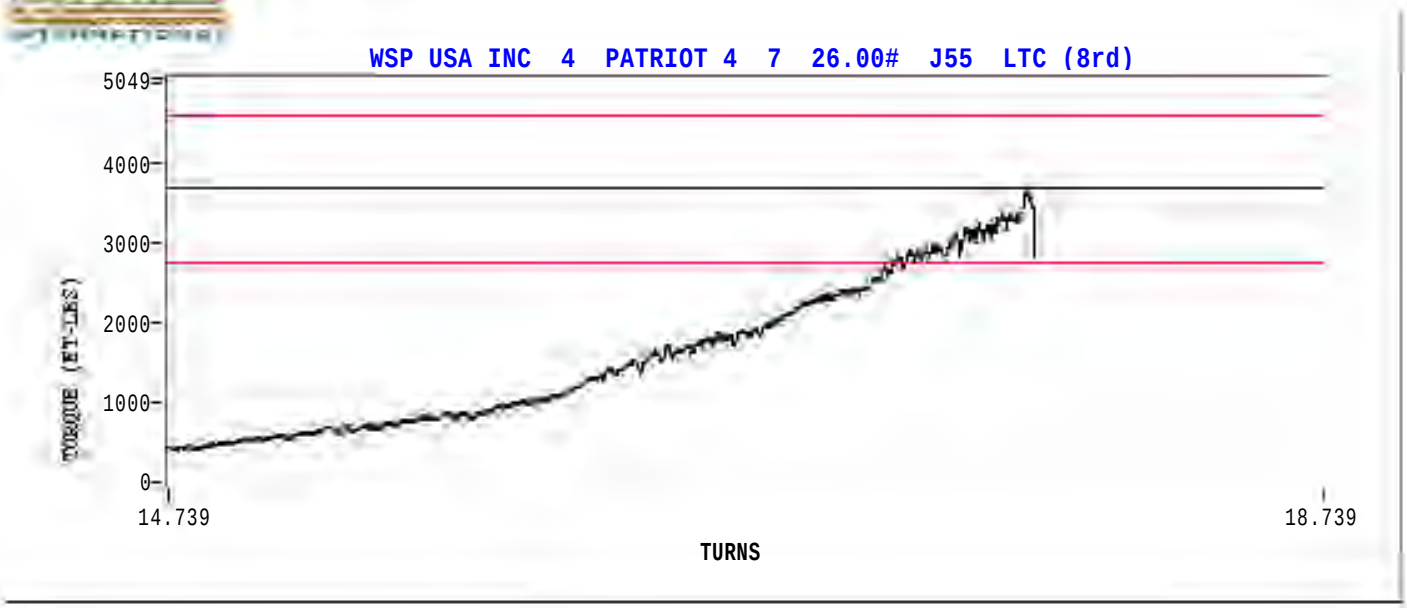


TIME OF MAKE UP :	4:54 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3646 FT-LBS	MAXIMUM TURNS :	17.463 TURNS

FILE NUMBER : ----------->> **252** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 248

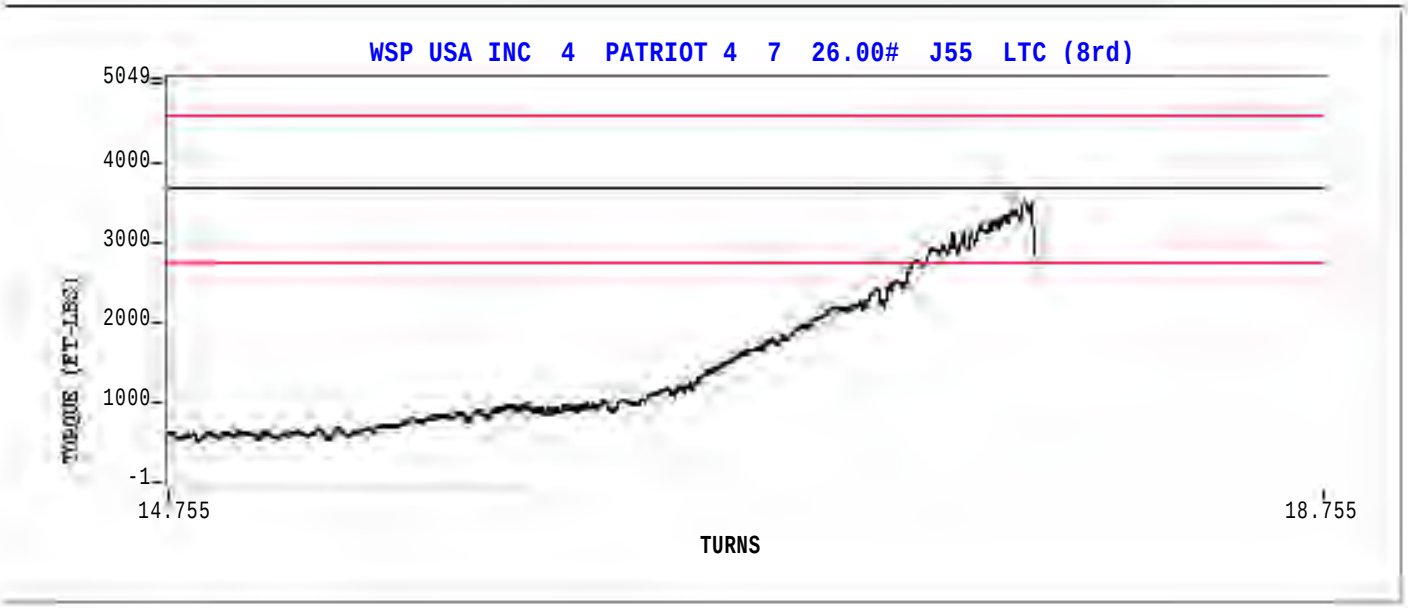
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TIME OF MAKE UP :	4:55 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3647 FT-LBS	MAXIMUM TURNS :	17.739 TURNS

FILE NUMBER : ----------->> **253** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 249



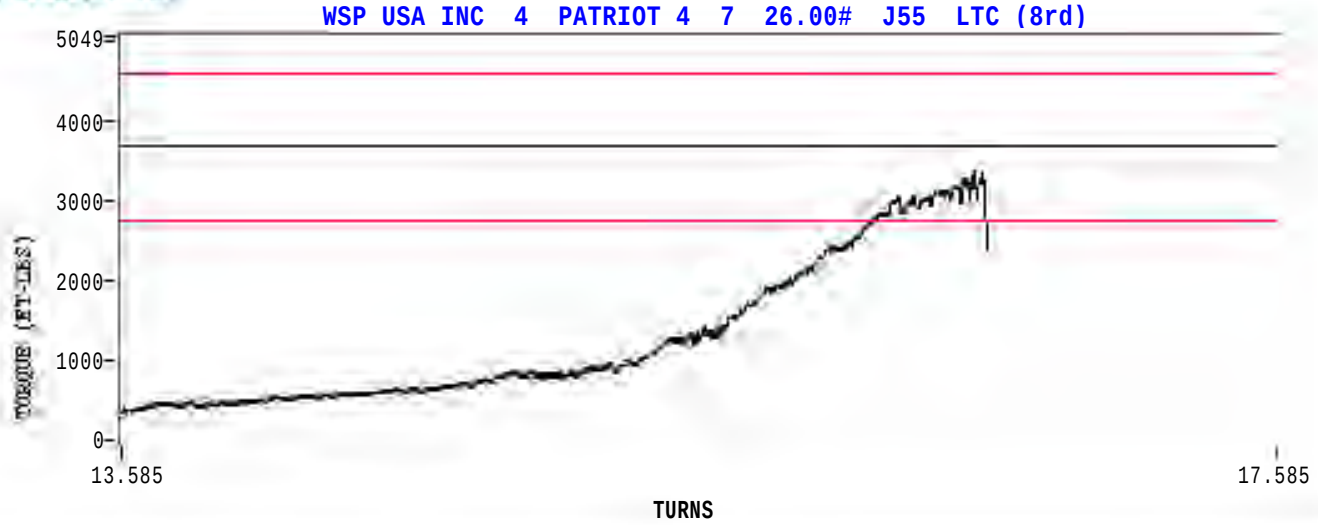
TIME OF MAKE UP :	4:57 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3543 FT-LBS	MAXIMUM TURNS :	17.755 TURNS

FILE NUMBER : ----------->> **254** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 250

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WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

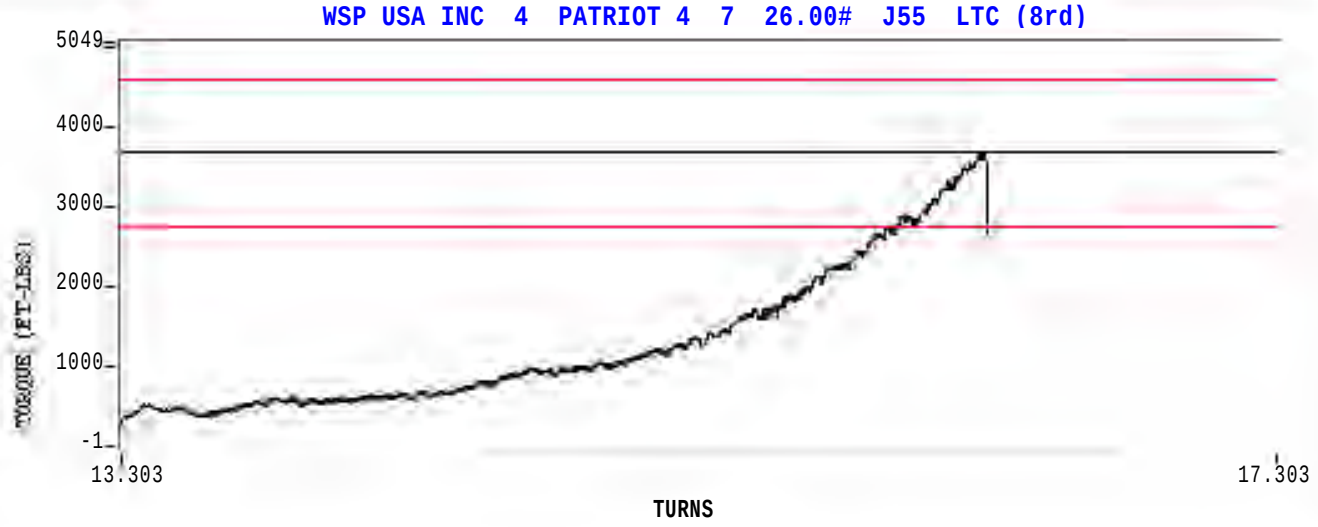


TIME OF MAKE UP :	4:58 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3352 FT-LBS	MAXIMUM TURNS :	16.585 TURNS

FILE NUMBER : ----------->> **255** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 251

WSP USA INC 4 PATRIOT 4 7 26.00# J55 LTC (8rd)

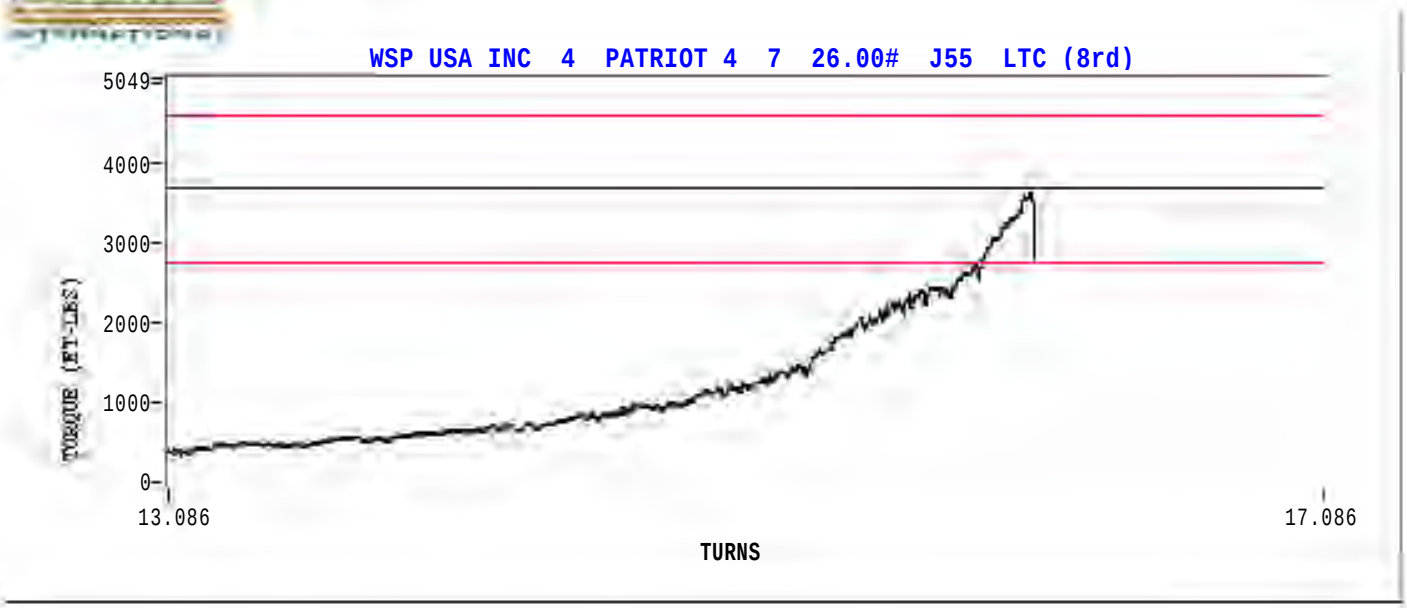


TIME OF MAKE UP :	5:00 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3688 FT-LBS	MAXIMUM TURNS :	16.303 TURNS

FILE NUMBER : ----------->> **256** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 252

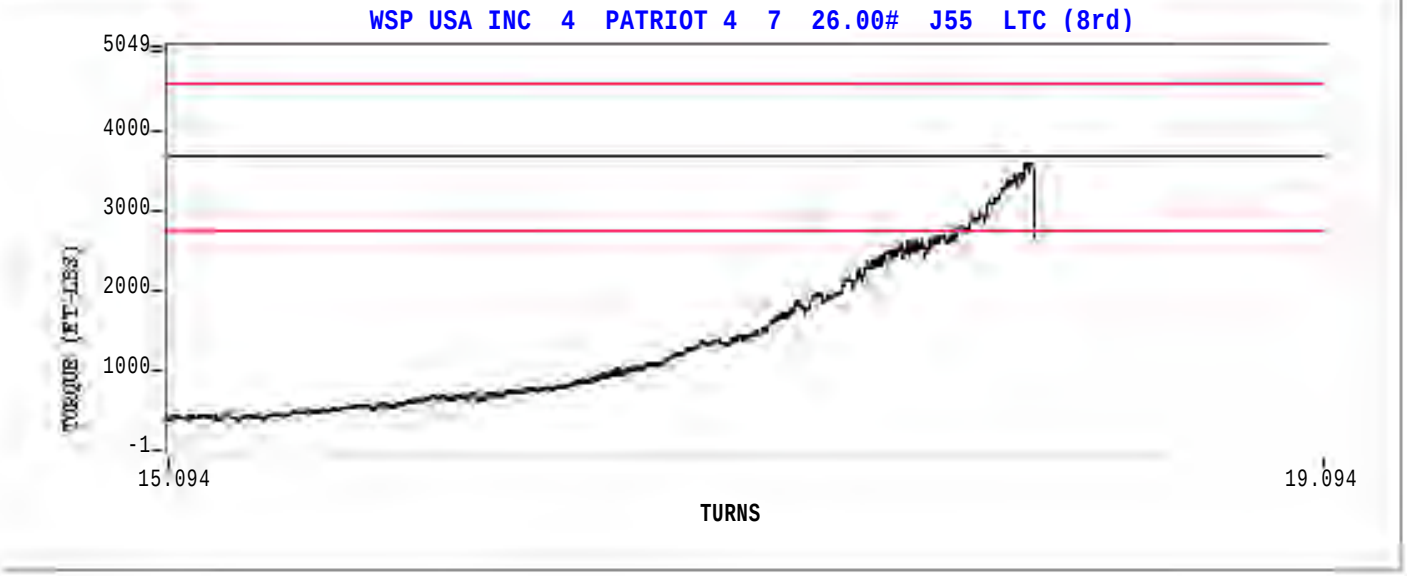
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TIME OF MAKE UP :	5:04 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3623 FT-LBS	MAXIMUM TURNS :	16.086 TURNS

FILE NUMBER : ----------->> **257** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 253

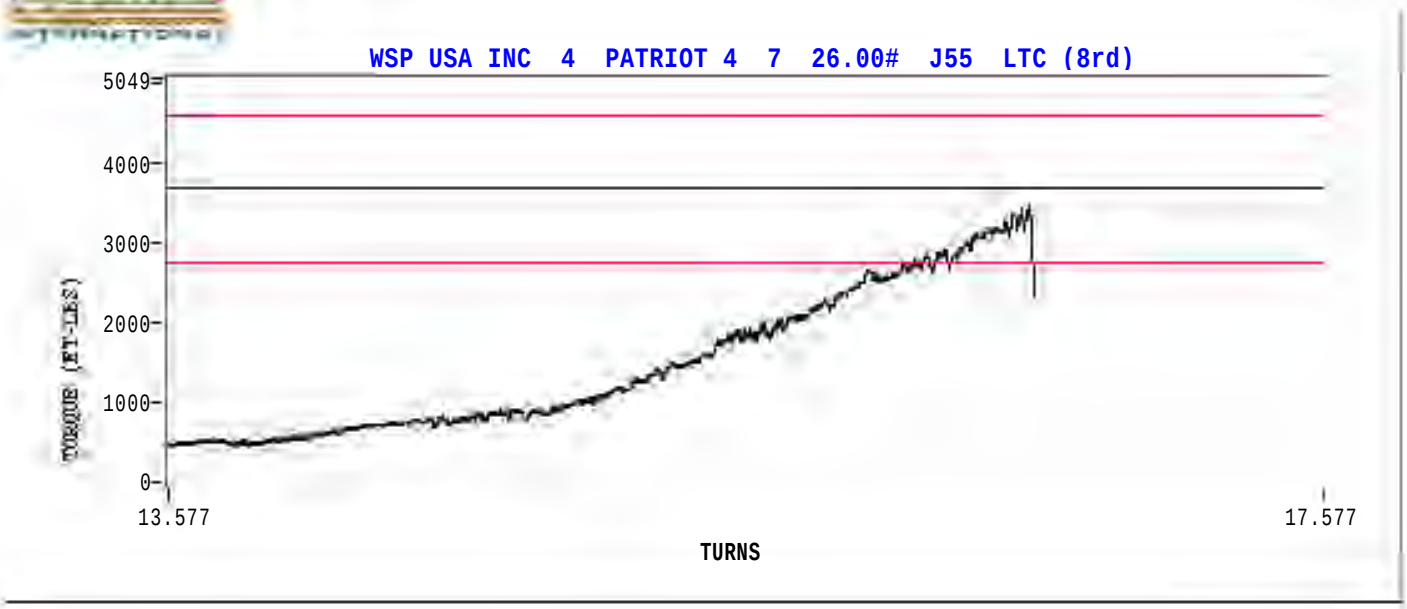


TIME OF MAKE UP :	5:06 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3600 FT-LBS	MAXIMUM TURNS :	18.094 TURNS

FILE NUMBER : ----------->> **258** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 254

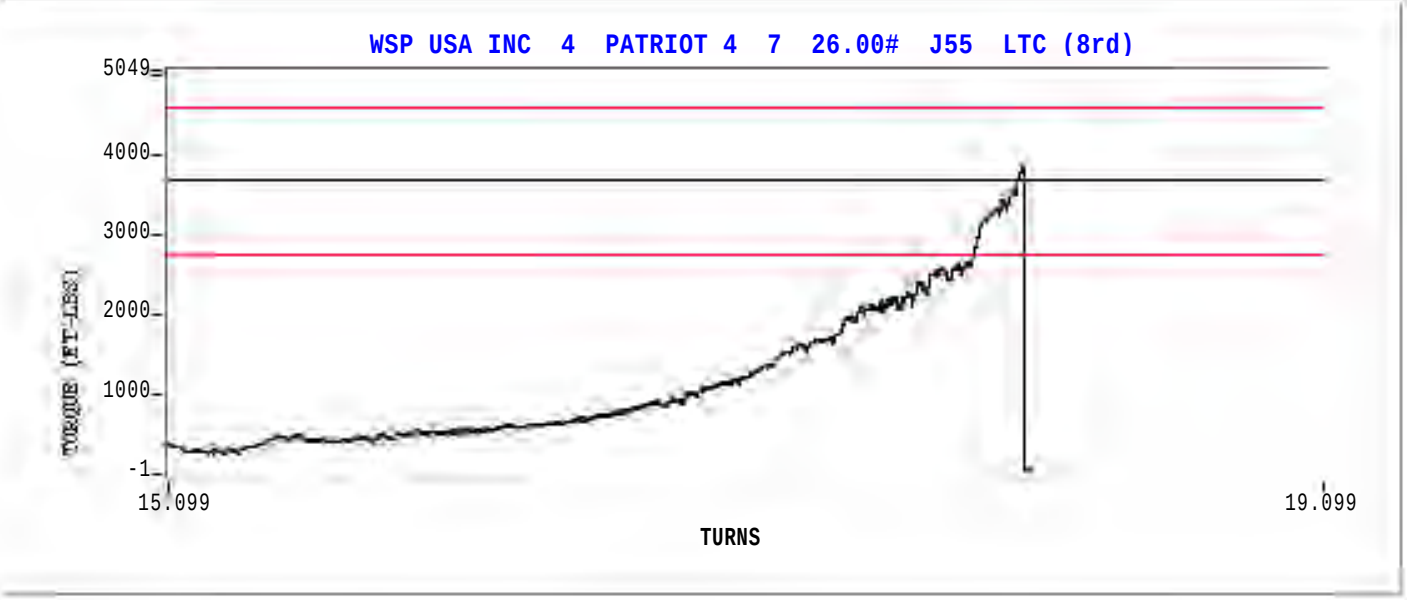
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TIME OF MAKE UP :	5:08 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3457 FT-LBS	MAXIMUM TURNS :	16.577 TURNS

FILE NUMBER : ----------->> **259** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 255

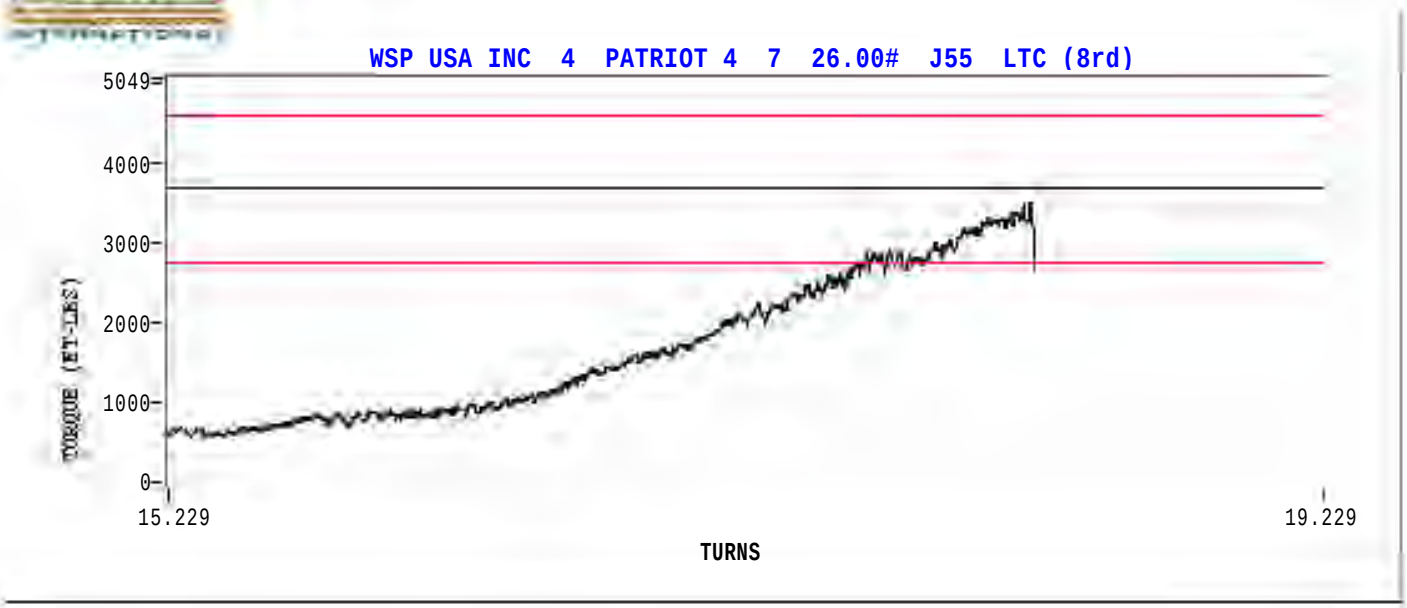


TIME OF MAKE UP :	5:10 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3858 FT-LBS	MAXIMUM TURNS :	18.099 TURNS

FILE NUMBER : ----------->> **260** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 256

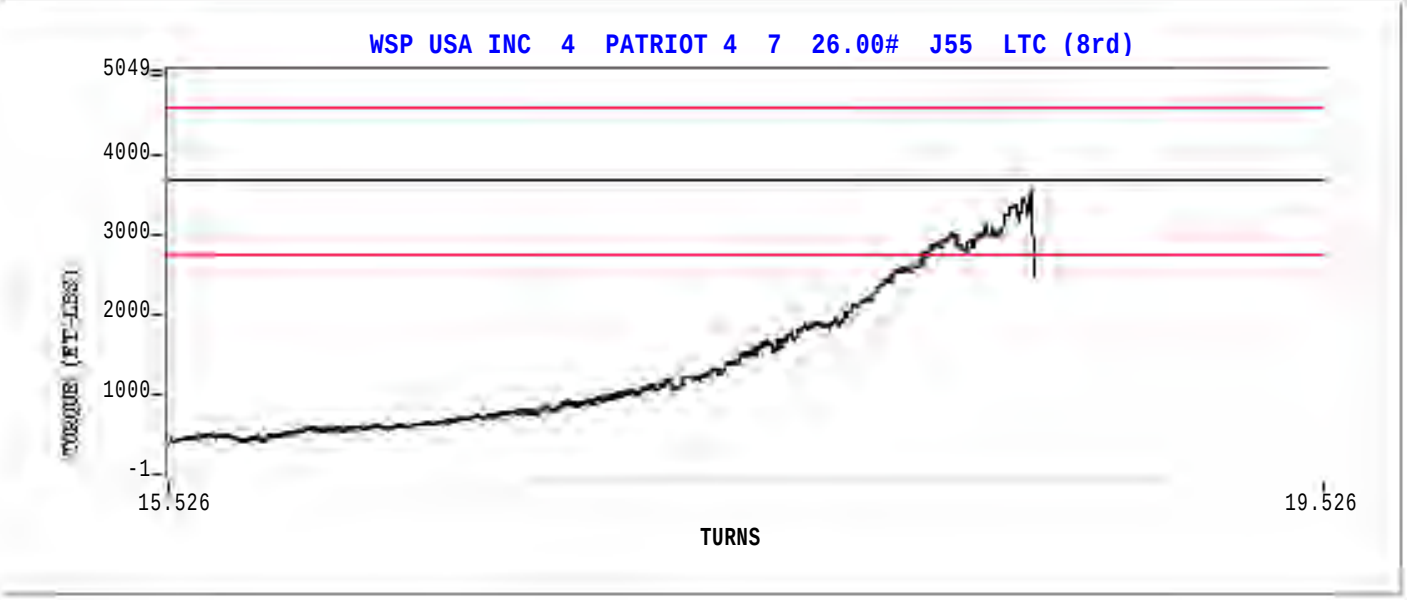
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TIME OF MAKE UP :	5:11 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3486 FT-LBS	MAXIMUM TURNS :	18.229 TURNS

FILE NUMBER : ----------->> **261** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 257

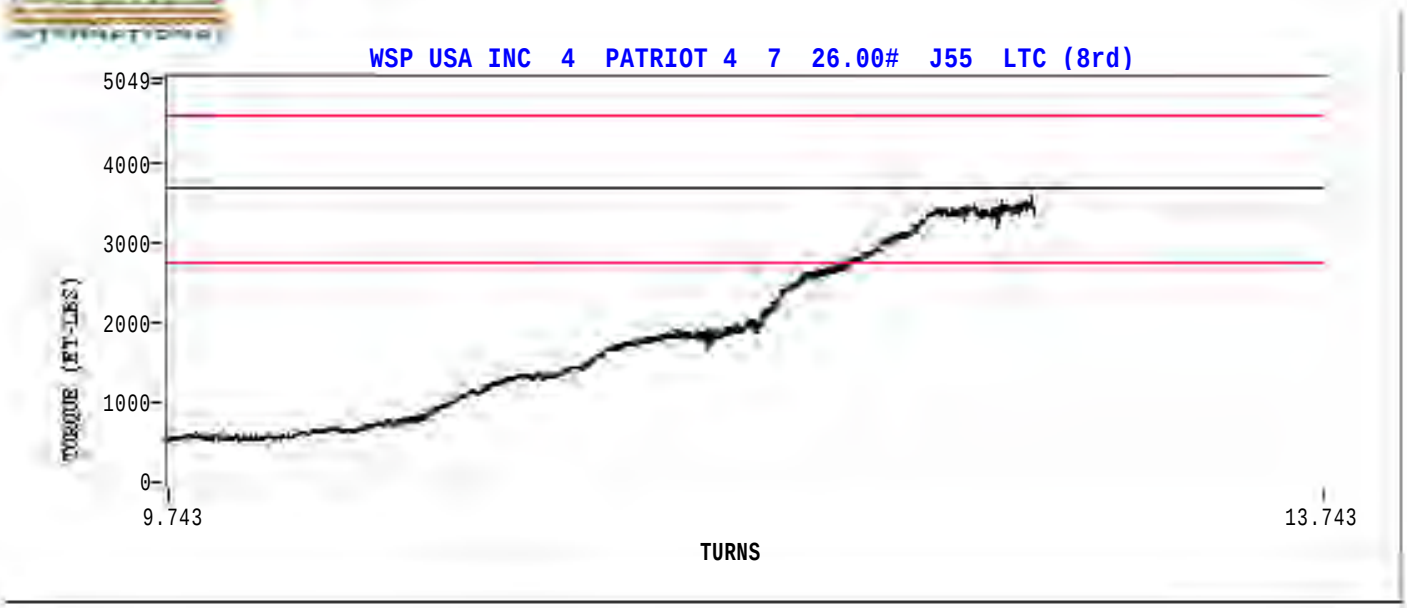


TIME OF MAKE UP :	5:14 AM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3558 FT-LBS	MAXIMUM TURNS :	18.526 TURNS

FILE NUMBER : ----------->> **262** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 258

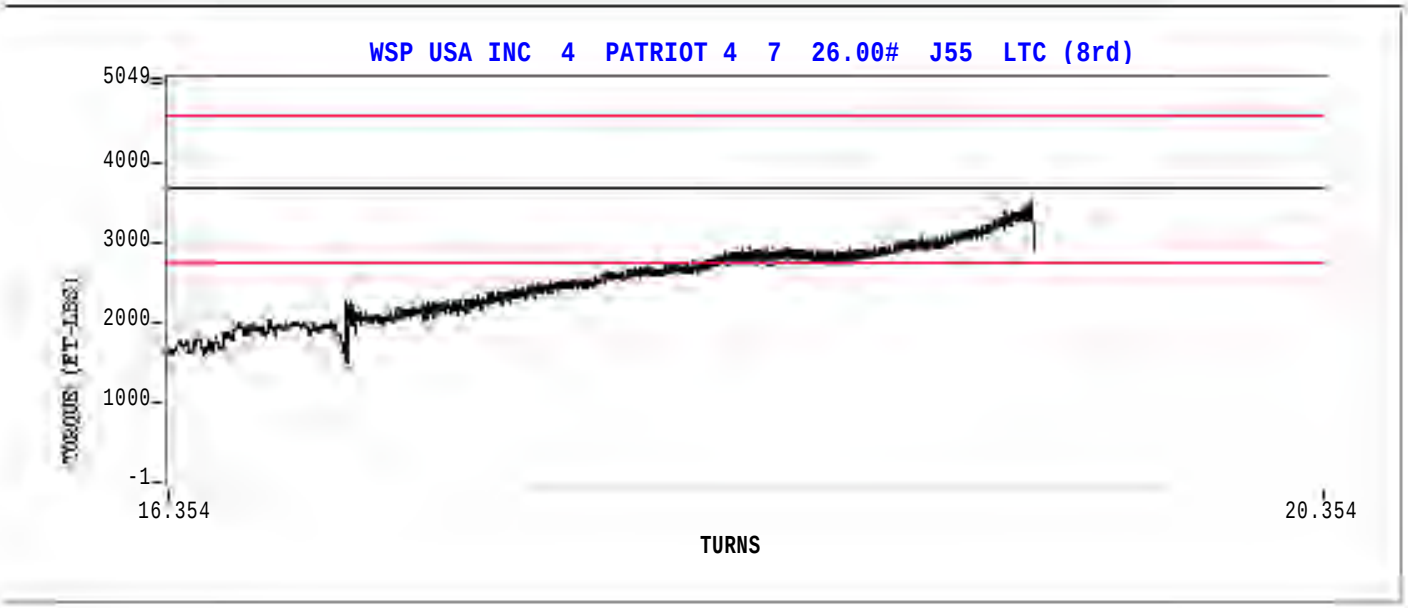
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TIME OF MAKE UP :	2:59 PM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3574 FT-LBS	MAXIMUM TURNS :	12.743 TURNS

FILE NUMBER : ----------->> **263** JOINT STATUS : SPECIAL

JC.. CONNECTION OK. PUP JOINT

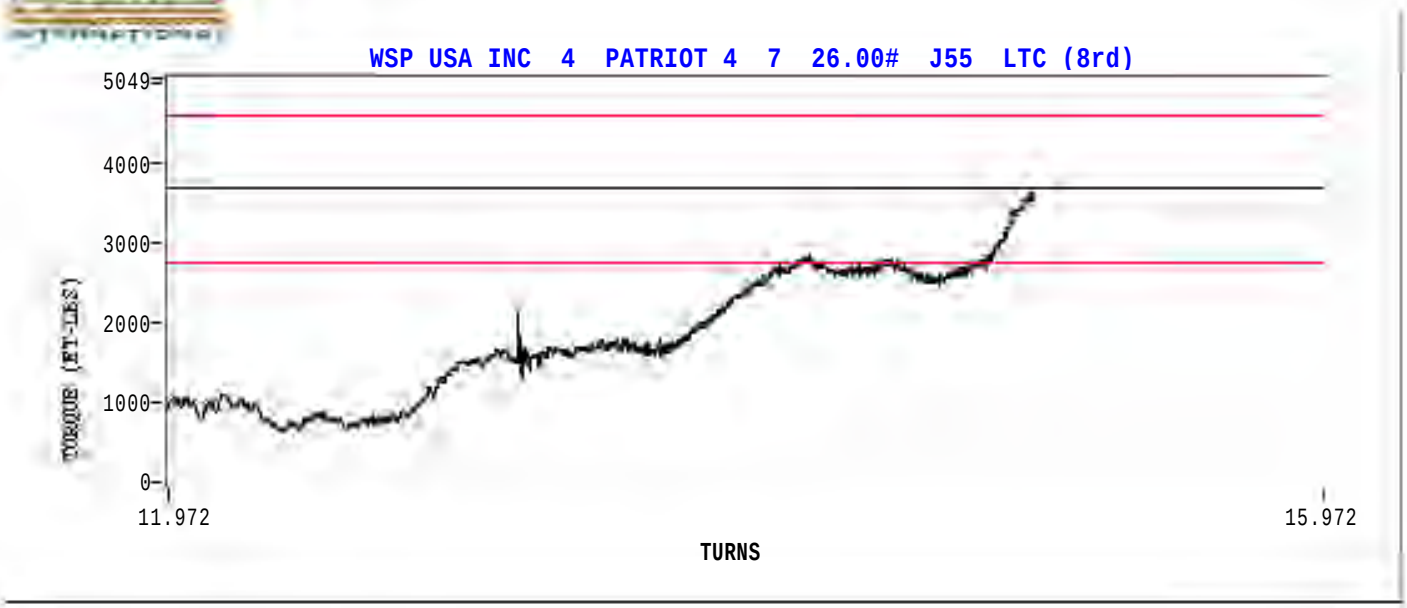


TIME OF MAKE UP :	3:04 PM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3523 FT-LBS	MAXIMUM TURNS :	19.354 TURNS

FILE NUMBER : ----------->> **264** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 259

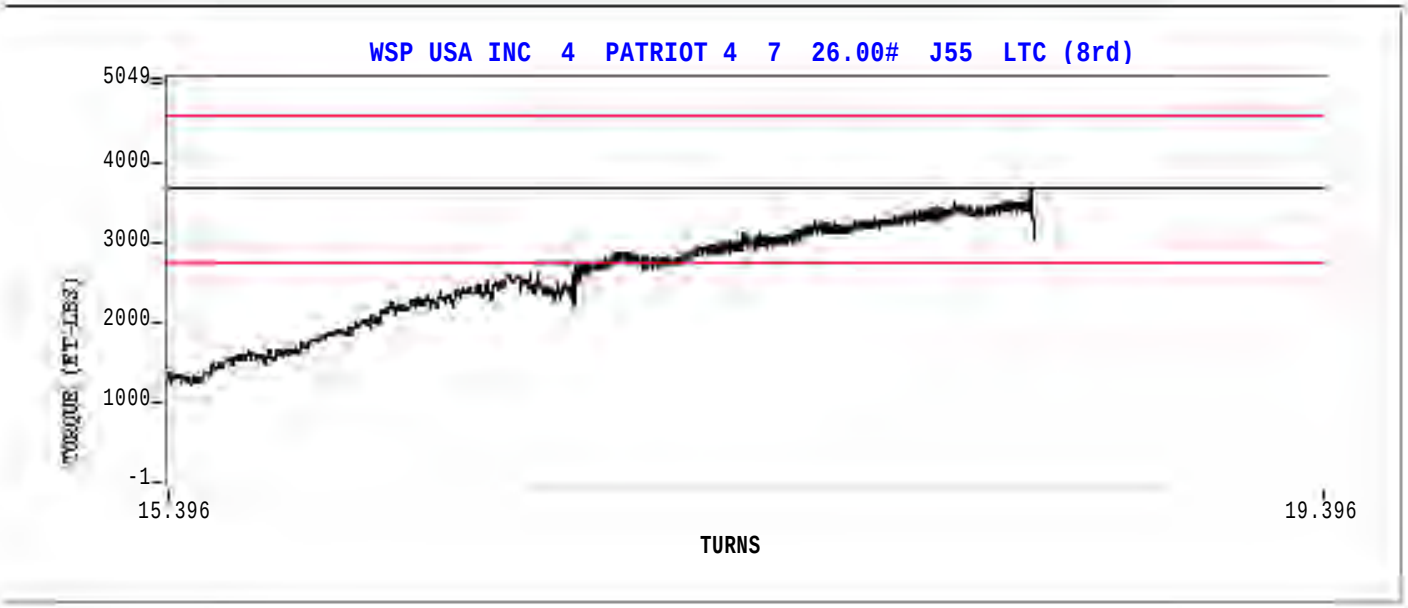
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TIME OF MAKE UP :	3:08 PM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3611 FT-LBS	MAXIMUM TURNS :	14.972 TURNS

FILE NUMBER : ----------->> **265** JOINT STATUS : SPECIAL

JC.. CONNECTION OK. PUP JOINT



TIME OF MAKE UP :	3:12 PM	DATE OF MAKE UP :	Mon, Aug 06, 2018
MAXIMUM TORQUE :	3643 FT-LBS	MAXIMUM TURNS :	18.396 TURNS

FILE NUMBER : ----------->> **266** JOINT STATUS : ACCEPT

JC.. CONNECTION OK. JOINT # 260

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9.14 CHART RECORDER CALIBRATION

APPENDIX 9.14

CHARTS ltd.

GAS MEASUREMENT

CALIBRATION CERTIFICATE

Cert Date:	9/26/2018
Due Date:	9/26/2019

Customer: MAN WELDING
Model: TECHCAL 8"
Serial: 03786

This is to verify that this instrument has been inspected and tested against Additel Digital Guage ADT GP20K, Serial#21817080004 Calibrated (6/16/17). Reference Standard Serial#11-218 Certified Traceable to NIST. Calibrated in accordance with ISO9000Quality Standards

This instrument is cerified to be accurate within +/- 1% of Full Scale

Input Type/Range: 10,000# **Color: RED**
Pen Number: 2

Ascending Applied:	Reading	Descending Applied:	Reading:
0	0	10043	10000
2004	2000	8047	8000
5014	5000	5036	5000
8048	8000	2004	2000
10043	10000	0	0

Input Type/ Range: **Color:**
Pen Number:

Ascending Applied:	Reading:	Descending: Applied:	Reading:

Input Type/Range:
Pen Number:

Appiled:	Reading:	Descending Applied:	Reading:

2031 TRADE DR.
MIDLAND, TX 79706
(432) 697-7801 (432) 520-3564Fax

Technician: Luciana Lopez

9.15 PRESSURE FALLOFF ANALYSIS REPORT

APPENDIX 9.15

2018 PRESSURE FALLOFF TEST REPORT
NAVAJO REFINING, LLC

WASTE DISPOSAL WELL WDW-4
Artesia, NM

October 2018

Houston, TX

Project No. 192080D

Prepared by Larry R. McDonald Reviewed by Tim J. Jones

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APPENDICES

A. PANSYSTEM© ANALYSIS OF FALLOFF TEST
B. GAUGE CALIBRATION CERTIFICATES

ATTACHMENT

CD CONTAINING RAW PRESSURE AND TEMPERATURE DATA

CERTIFICATION STATEMENT

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Client:	Navajo Refining LLC.
Well Name:	WDW-1
Test Dates:	August 15, 2018 to August 16, 2018

Name: Ted L. Jose

Title: Project Engineer

Phone Number: 281-589-5900

Signature _____ Date Signed _____

Texas Professional Engineer

License No. 121609

WSP USA Inc.

Texas Engineering Firm F-2263

EXECUTIVE SUMMARY

WSP USA Inc. (WSP) performed the initial pressure falloff test on Navajo Refining , LLC's (Navajo) newly drilled and completed Waste Disposal Well No. 4 (WDW-4) from August 15, 2018 to August 16, 2018.

Because the "Post Construction" parameters exceed the parameters of the reservoir model used in the permit application, the cone of influence and pressure buildup were not recalculated because the reservoir model in the permit application is sufficient. The "Post Construction" parameters that exceed the reservoir model will result in a lower injection pressure and therefore a smaller cone of influence and lower pressure buildup as calculated in the permit application.

1.0 INTRODUCTION

WSP conducted the initial pressure falloff test on WDW-4 as part of the well testing operations during the installation of the well. The 2018 pressure falloff testing was conducted in accordance with the pressure falloff testing procedure outlined in the approved Permit Application.

2.0 REPORT OF FIELD OPERATIONS

All depths in this report are referenced to the drilling rig rotary kelly bushing (RKB), which is 20 feet above ground level. The as-built wellbore schematic is presented in Figure 1.

Field operations began on August 15, 2018. Renegade Wireline Services (Renegade) rigged up on and ran downhole memory gauges to 10,327 feet RKB. Cudd was rigged up and pumped 4783 barrels of 8.9 ppg fluid into the well at a rate of 420 gpm for approximately nine hours. The well was shut in and the pressure falloff was monitored for 24 hours.

On August 16, 2018, the bottom-hole pressure gauges were pulled out of the well and static pressure gradient stops were made at 1000-foot intervals while pulling the gauges out of the well. The gauge calibration certificates are presented in Appendix A.

3.0 PRESSURE FALLOFF ANALYSIS

Pressure falloff testing was conducted on WDW-4 from August 15, 2018 to August 16, 2018. WDW-4 was shut in at 1700 hours on August 15, 2018 and the falloff data were recorded for 24 hours. Pertinent pre-test information is presented in Table 1.

Injection Period

The injection period used in the analysis was based on the injection period on August 15, 2018 where 4783 barrels of 8.9 ppg fluid into the well at a rate of 10 bpm or 420 gpm for approximately nine hours. Pertinent data relevant to the injection period are presented in Table 2.

Falloff Period

WDW-4 was shut in at 1700 hours on August 15, 2018 and remained shut-in for 24 hours while bottom-hole pressure and temperature were recorded. The pressure and temperature data recorded during the pressure falloff test are included in Attachment A. Pertinent data relevant to the falloff period are presented in Table 3.

Analysis of Falloff Test

The pressure data obtained during the falloff test were analyzed utilizing the commercially available pressure transient analysis software program PanSystem®. Figure 2 shows the pressure response recorded by the surface pressure tool from the time the tool was in place through the 24-hour shut-in period. Figure 3 is a Cartesian plot of the pressure data recorded during the falloff period. The superposition time function was used to account for rate changes occurring during the injection period.

Figure 4 is a log-log diagnostic plot of the falloff data, showing change in pressure and pressure derivative versus elapsed shut-in time. Radial flow begins to appear at an elapsed shut-in time of 0.108 hours and continues until 0.996 hours.

The reservoir permeability was determined from the radial flow region of the superposition Horner plot (Figure 5). The radial flow regime begins at a superposition Horner time of 69.68 and continues to 7.44. Figure 6 shows an expanded view of the superposition Horner plot. The slope of the radial flow period was determined to be 0.6089 psi/cycle.

An estimate of mobility-thickness, kh/μ, for the reservoir was determined from the following equation:

$$\frac{k\ h}{\mu} = 162.6\frac{q\ B}{m}$$

where,

kh/μ = formation mobility-thickness, millidarcy-feet/centipoise

q = rate prior to shut-in, BPD
B = formation volume factor, reservoir volume/surface volume
m = slope radial flow period, psi/cycle

With the following values, the mobility-thickness was found to be 3,845,360 md-ft/cp:

q = 420 gpm = 14,400 barrels/day
m = 0.6089 psi/cycle
B = 1.0 reservoir barrel/surface barrel

$$\frac{k\,h}{\mu} = 162.6\frac{(14{,}400)(1.0)}{0.6089}$$

$$= 3{,}845{,}360 \text{ md-ft/cp}$$

The permeability-thickness, kh, was determined to be 2,191,855 md-ft by multiplying the mobility-thickness, kh/μ, by the viscosity of the reservoir fluid, μ_{res}, of 0.57 centipoise:

$$k\,h = \left(\frac{k\,h}{\mu}\right)\mu_{res}$$

$$= 3{,}845{,}360 \times 0.57$$

$$= 2{,}191{,}855 \text{ md-ft}$$

The average reservoir permeability using the total sand thickness of 330 feet was determined to be 6642 md:

$$k = \frac{(kh)}{h}$$

$$= \frac{2{,}191{,}855}{330}$$

$$= 6642 \text{ md}$$

The skin factor was determined from the following equation:

$$s = 1.151\left[\frac{P_{wf} - P_{1\,hr}}{m} - \log\left(\frac{k}{\phi\,\mu\,c_t\,r_w^2}\right) + 3.23\right]$$

where,

s	=	formation skin damage at open perforations, dimensionless
1.151	=	constant
p_{wf}	=	flowing pressure immediately prior to shut-in, psia
p_{1hr}	=	pressure determined by extrapolating the radial flow semi-log line to a Δt of one hour, psi
m	=	slope of the radial flow semi-log line, psi/cycle
k	=	permeability of the formation, md
ϕ	=	porosity of the injection interval, fraction
μ	=	viscosity of the fluid the pressure transient is traveling through, centipoise
c_t	=	total compressibility of the formation plus fluid, psi^{-1}
r_w	=	radius of the wellbore, feet
3.23	=	constant

The final flowing pressure was 4523.64 psia. The pressure determined by extrapolating the radial flow semi-log line to a Δt of one hour, p_{1hr}, was 4520.96 psia. The porosity of the injection interval, ϕ, is 0.25 and the total compressibility, c_t, is 8.4×10^{-6} psi^{-1}. The wellbore radius, r_w, is 0.3532 feet. Using these values in addition to the previously determined parameters, m and k, results in a skin of -3.47:

$$s = 1.151 \left[\frac{4523.64 - 4520.96}{0.6089} - \log \left(\frac{6642}{(0.25)(0.57)(8.4 \times 10^{-6})(0.3532)^2} \right) + 3.23 \right]$$

$$= -3.47$$

The results of the pressure falloff analysis are summarized in Table 4. The output from the PanSystem analysis software is presented as Appendix A.

4.0 BOTTOM-HOLE PRESSURE MEASUREMENT AND STATIC GRADIENT SURVEY

On August 16, 2018, the downhole pressure memory tools were pulled out of WDW-4, and a static pressure gradient survey was performed at 1000-foot intervals to the surface. The bottom-hole pressure and temperature, after 24 hours of shut-in at 10,327 feet, were 4519.13 psia and 165.44°F, respectively. The pressure and temperature data recorded during the static pressure gradient survey are included in Attachment A. A tabulation of the survey results is provided as Table 5. The data are depicted graphically in Figure 7.

The bottom-hole pressure gauge calibration certificate is presented in Appendix B and shows the gauge has been calibrated as specified by the gauge manufacturer.

5.0 COMPARISON TO APPROVED PERMIT

WSP performed the initial pressure falloff test on WDW-4 from August 15, 2018 to August 16, 2018. The results of the pressure falloff analysis indicate a reservoir mobility-thickness, kh/μ of 3,844,211 md-ft/cp and a permeability, k, of 6642 md. Analysis of logs indicates the average porosity of the injection interval is 25%. The net open-hole thickness is 330 feet.

The following table compares the parameters used in the permit application to the parameters determined following construction of the well:

Parameter	Permit Application	Post Construction
Permeability, md	32	6642
Thickness, feet	75	330
Porosity, percent	8.5	25
Temperature, °F	141*	141
Viscosity, cp	0.57	0.57

*BHT just below the at top of injection interval at 10,320 feet KB

Because the "Post Construction" parameters exceed the parameters of the reservoir model used in the permit application, the cone of influence and pressure buildup were not recalculated because the reservoir model in the permit application is sufficient. The "Post Construction" parameters that exceed the reservoir model will result in a lower injection pressure and therefore a smaller cone of influence and lower pressure buildup as calculated in the permit application.

TABLE 1

PRE-TEST PERIOD

PRE-TEST PERIOD	
Date of Test	August 15, 2018 to August 16, 2018
Shut-in Time Prior to Test	New Well
Stabilized Pressure Prior to Test	4517.25 psia
Stabilized Temperature Prior to Test	140.59°F
Cumulative Injection Into Completed Interval	200,886 gallons
Wellbore Radius	0.3532 feet
Completed Interval	10,327 feet to 10,700 feet
Type of Completion	Open-Hole
Formation Fluid Viscosity	0.57 centipoise
Porosity	0.25
Total Compressibility	8.4×10^{-6} psi $^{-1}$
Formation Volume Factor	1 RB/STB
Initial Bottom-Hole Pressure	4517.25 at 10,327 feet
Initial Bottom-Hole Temperature	140.59°F at 10,327 feet

TABLE 2

INJECTION PERIOD

INJECTION PERIOD	
Time of Injection Period	8.58 hours
Test Fluid	8.9 ppg brine water
Injection Rate	420 gpm
Final Injection Pressure	4523.64 psia
Final Injection Temperature	90.67°F
Gauge Type	Spartek Systems
Gauge Serial No.	79513
Accuracy	0.03% of Full Scale
Resolution	0.01% of Full Scale
Gauge Depth	10,327 feet RKB

TABLE 3

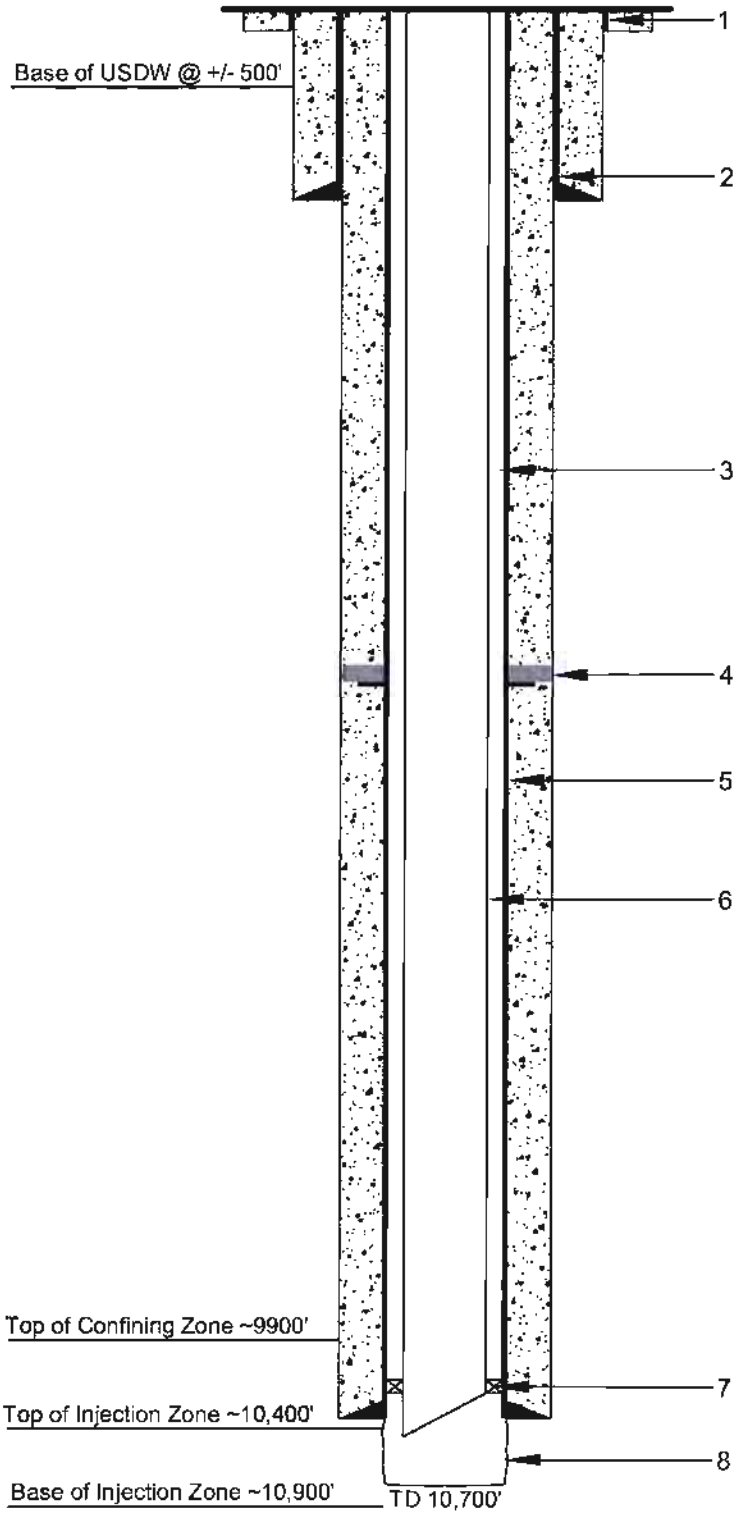
FALLOFF PERIOD

FALLOFF PERIOD	
Total Shut-in Time	24 hours
Final Shut-in Pressure	4519.13 psia at 10,327 feet RKB
Final Shut-in Temperature	165.44°F @ 10,327 feet RKB

TABLE 4

SUMMARY OF RESULTS

LOG-LOG AND DERIVATIVE INFORMATION		
Total Shut-in Time	$t_{Shut\text{-}in}$	24 hours
Elapsed Shut-in Time to Start of Semi-Log Straight Line	$t_{semi\text{-}log}$	0.108 hours
Horner Time at Start of Semi-Log Straight Line	$t_{h\ semi\text{-}log}$	69.68
INFORMATION FROM HORNER PLOT		
Slope of Semi-Log Straight Line	m	0.6089 psi/cycle
Pressure at Infinite Shut-in Time from Extrapolation of Semi-Log Straight Line	p^*	4520.40 psia
Pressure at 1-Hour Shut-in Time From Extrapolation of Semi-Log Straight Line	$p_{1\text{-}hr}$	4520.96 psia
HORNER ANALYSIS		
Mobility-Thickness	kh/μ	3,845,360 md-ft/cp
Viscosity of the Reservoir Fluid	μ	0.57 cp
Permeability-Thickness	kh	2,191,855 md-ft
Permeability	k	6642 md
Formation Skin Damage	s	-3.47



BELOW GROUND DETAILS

(feet below KB - KB=20' above GL)

1. Conductor Pipe - 20", 129.33 lb/ft 0.625" wall), API 5LX-56, plain-end, beveled conductor set in 24" augered hole at 80' BGL and cemented to the surface with redi-mix.

2. Surface Casing - 13$\frac{3}{8}$", 54.5 lb/ft, K-55, ST&C, set at 1,680' in a 17½" hole and cemented to the surface.

3. Annulus Fluid - injection tubing and protection casing annulus filled with 263 bbl of brine water containing a corrosion inhibitor, a bactericide and an oxygen scavenger.

4. Stage Tool: 9$\frac{5}{8}$" stage tool set at 5,800'

5. Protection Casing - 9$\frac{5}{8}$", 47 lb/ft, N-80, LT&C set in a 12¼" hole at 10,327' with a DV Tool at 5,800' and cemented to the surface.

6. Injection Tubing - 7", 26 lb/ft, K-55, LT&C set in packer at approximately 10,265'.

7. Injection Packer - 7" x 9$\frac{5}{8}$" set at approximately 10,265'.

8. Open Hole - 8$\frac{1}{2}$" to 10,700'

WSP USA Inc
16200 Park Row Ste. 200
Houston TX 77084
TEL: (281) 589-5900

FIGURE 1

HOLLYFRONTIER NAVAJO REFINING LLC
ARTESIA, NEW MEXICO

AS BUILT BELOW GROUND WELL SCHEMATIC

DATE: 10/23/18	CHECKED BY: TJJ	JOB NO: 192080D
DRAWN BY: WDD	APPROVED BY: TJJ	DWG. NO:

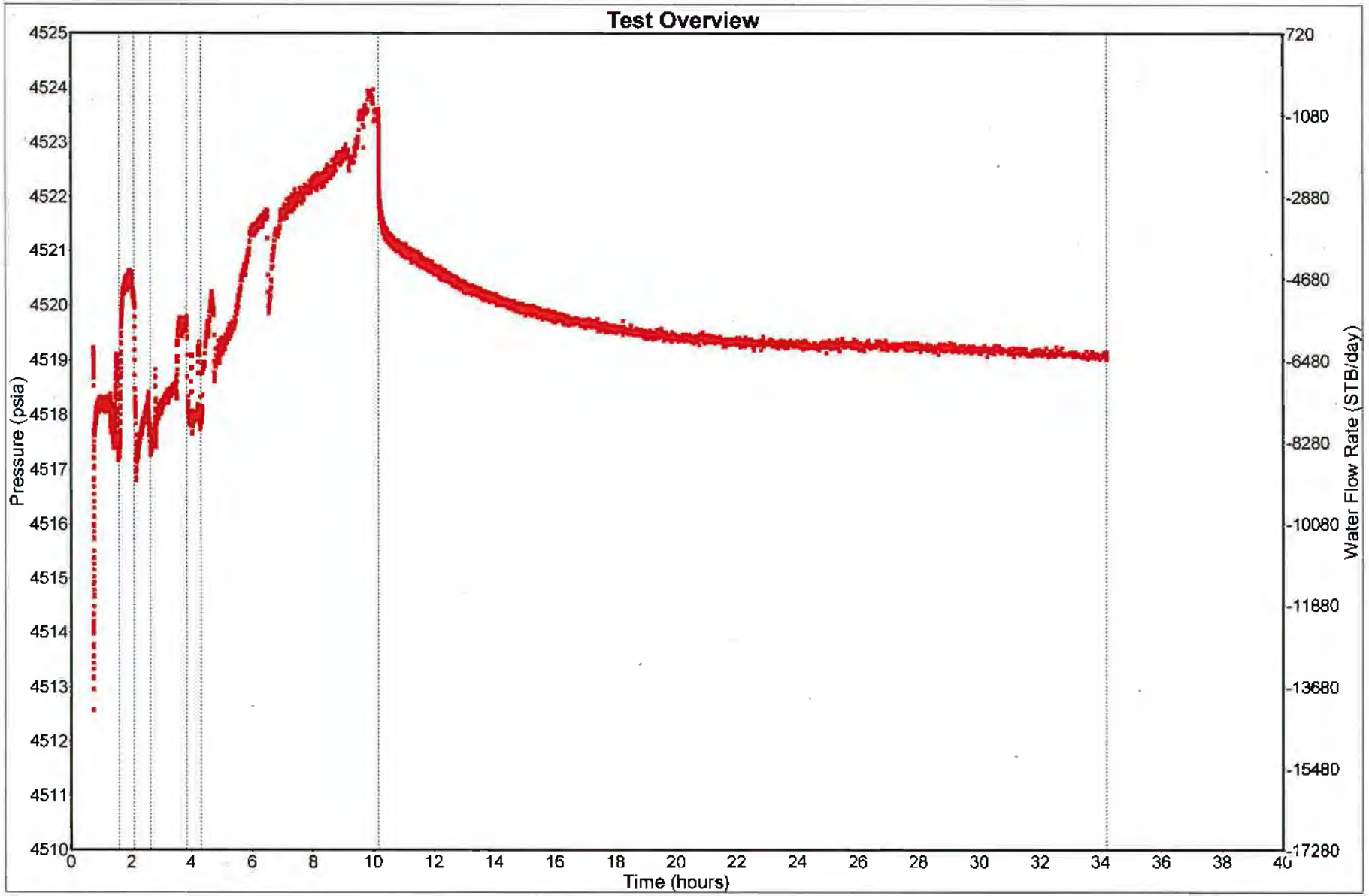

Test Overview
Pressure (psia)
4525
4524
4523
4522
4521
4520
4519
4518
4517
4516
4515
4514
4513
4512
4511
4510
720
-1080
-2880
-4680
-6480
-8280
-10080
-11880
-13680
-15480
-17280
Water Flow Rate (STB/day)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
Time (hours)

FIGURE 2

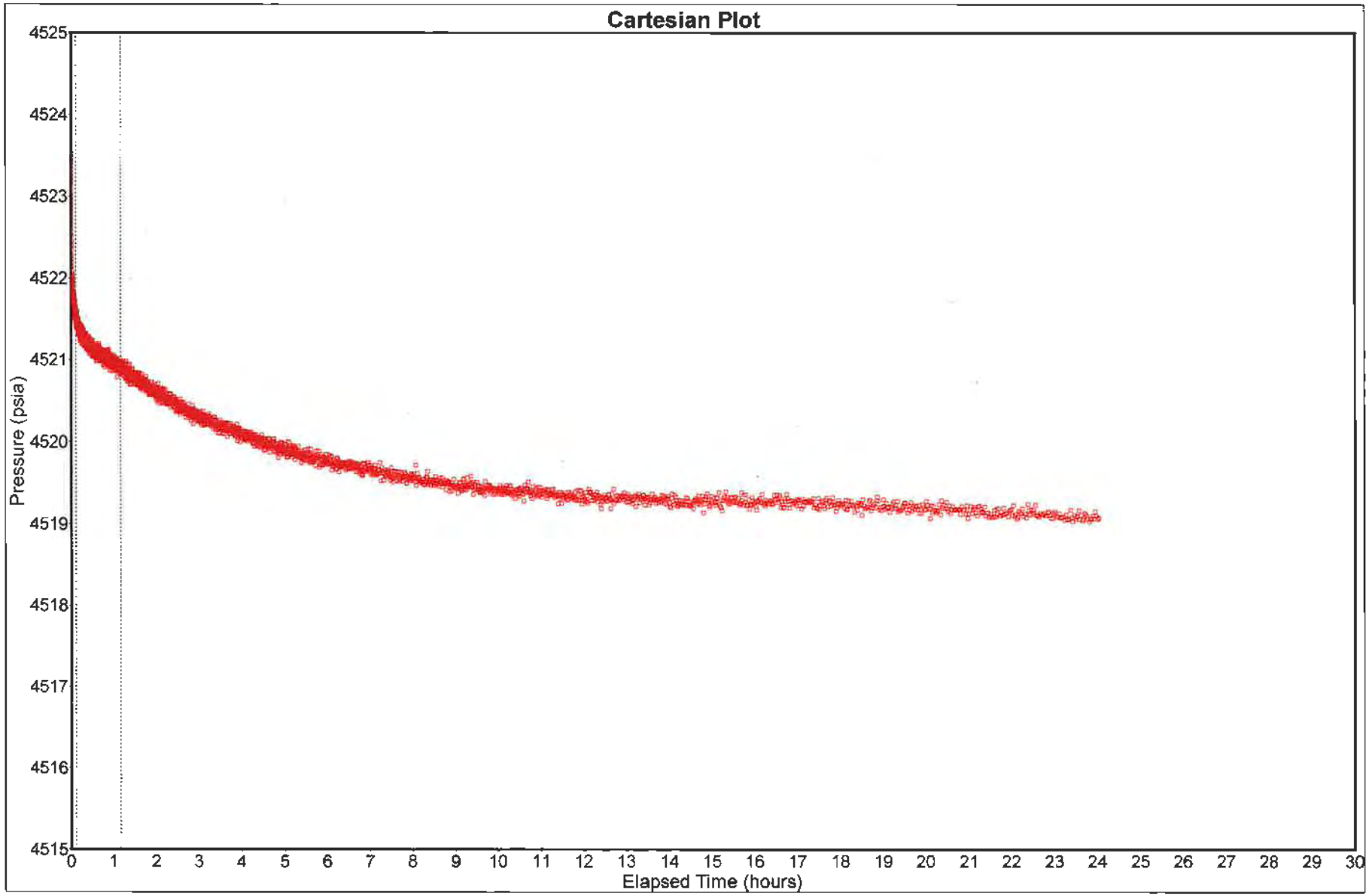

Cartesian Plot
Pressure (psia)
4525
4524
4523
4522
4521
4520
4519
4518
4517
4516
4515
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Elapsed Time (hours)

FIGURE 3

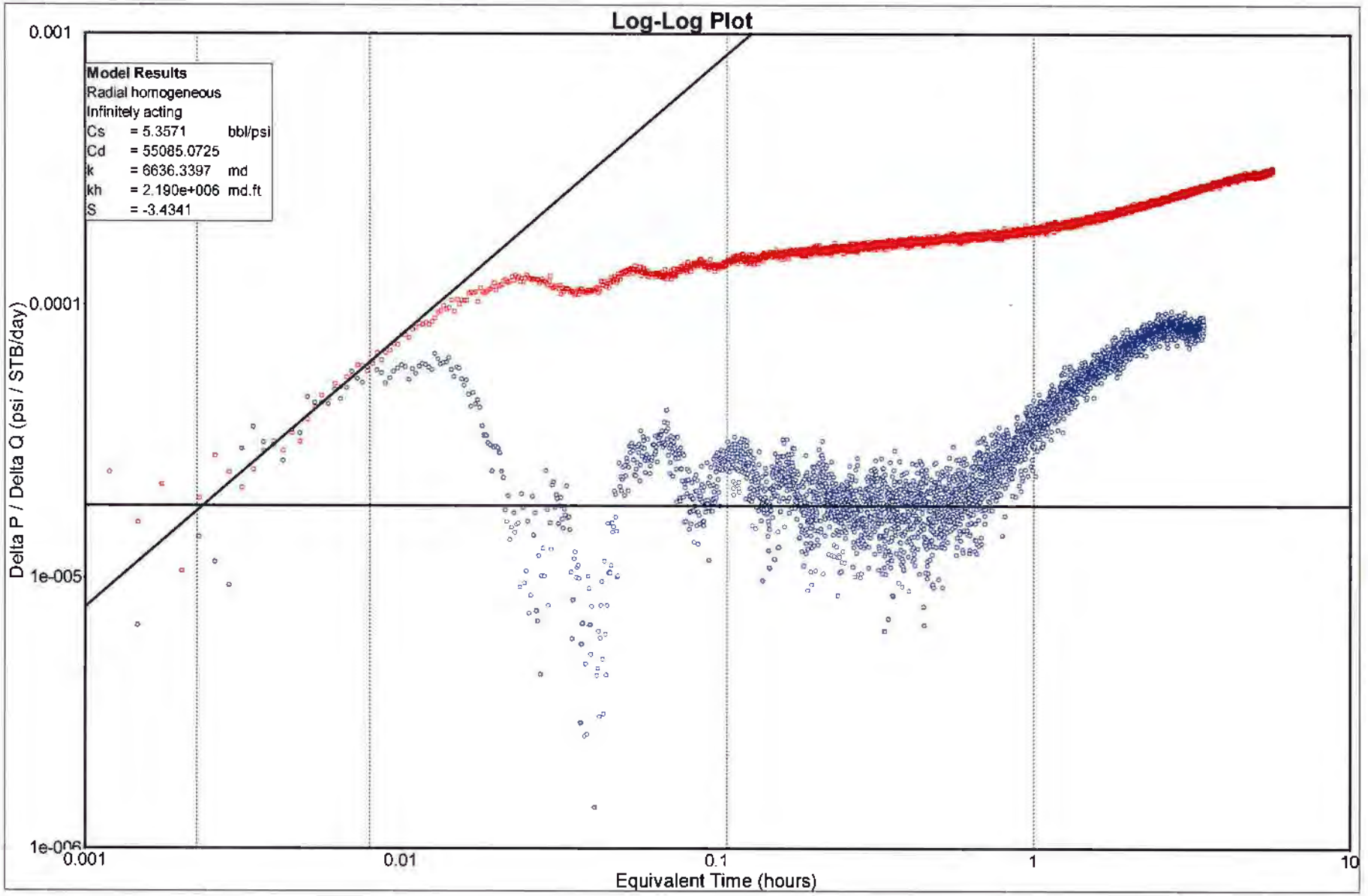

Log-Log Plot
Model Results
Radial homogeneous
Infinitely acting
Cs = 5.3571 bbl/psi
Cd = 55085.0725
k = 6636.3397 md
kh = 2.190e+006 md.ft
S = -3.4341
Delta P / Delta Q (psi / STB/day)
0.001
0.0001
1e-005
1e-006
0.001
0.01
0.1
1
10
Equivalent Time (hours)

FIGURE 4

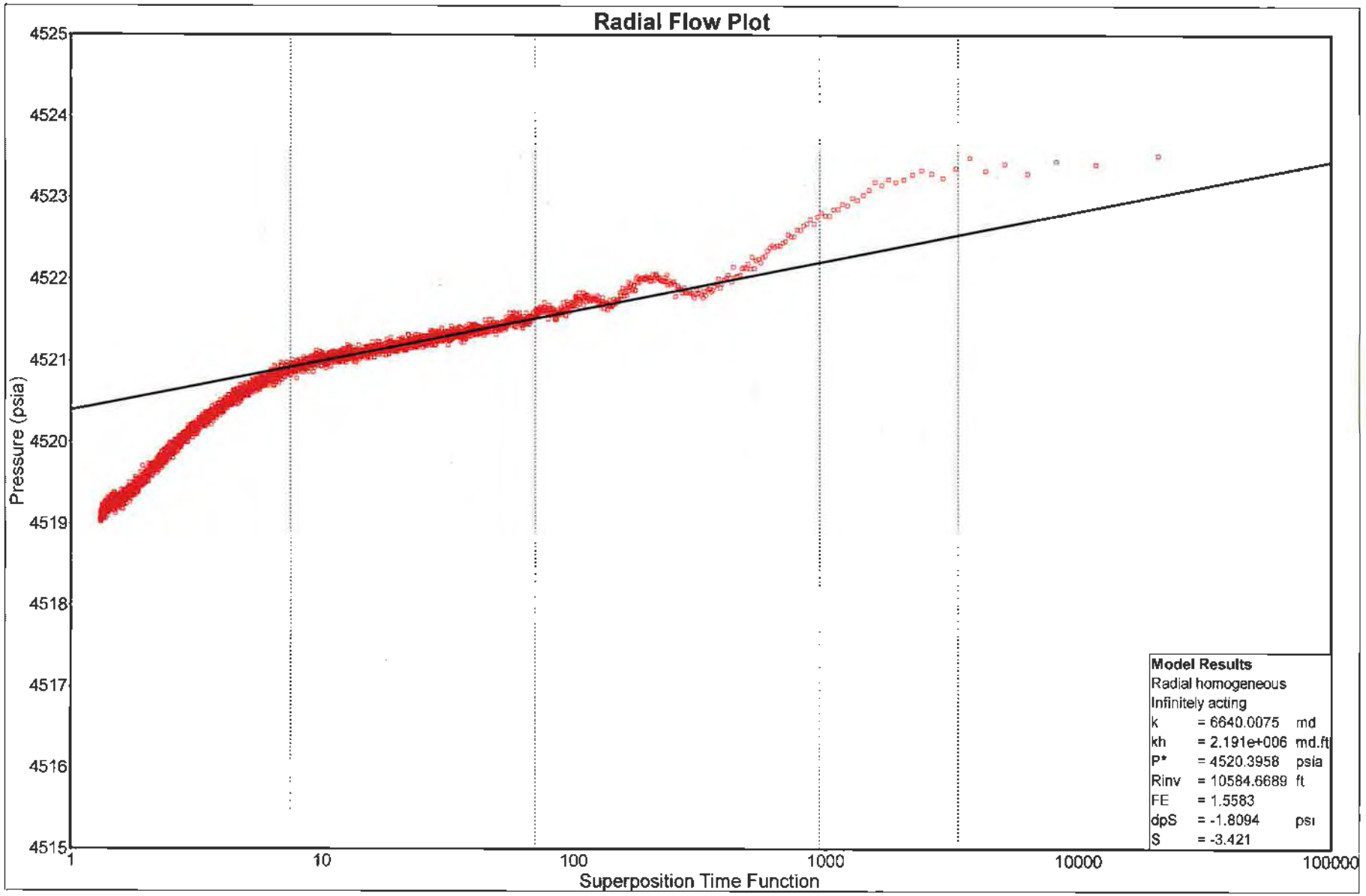

Radial Flow Plot
4525
4524
4523
4522
4521
4520
4519
4518
4517
4516
4515
Pressure (psia)
1
10
100
1000
10000
100000
Superposition Time Function
Model Results
Radial homogeneous
Infinitely acting
k = 6640.0075 md
kh = 2.191e+006 md.ft
P* = 4520.3958 psia
Rinv = 10584.6689 ft
FE = 1.5583
dpS = -1.8094 psi
S = -3.421

FIGURE 5

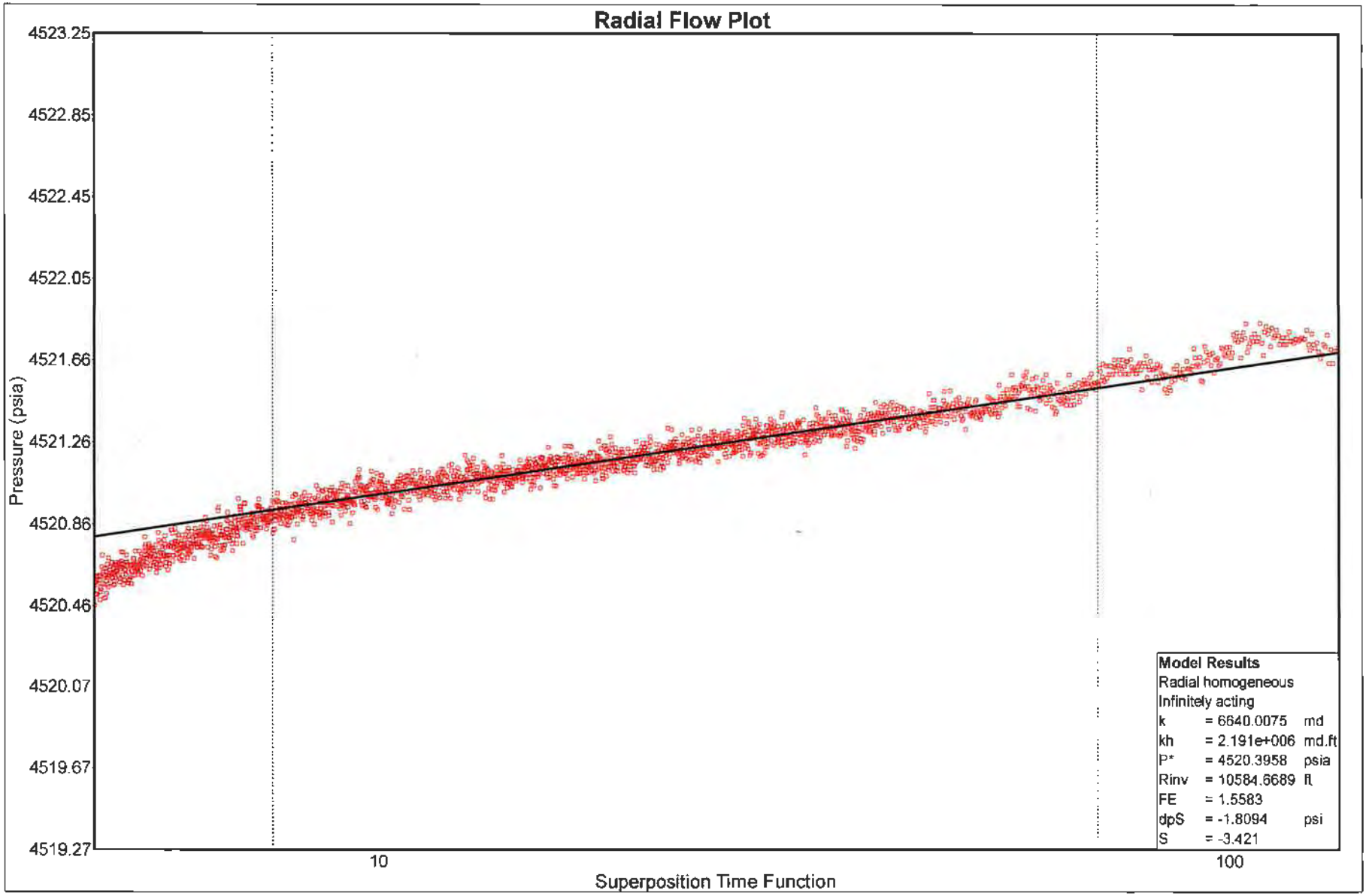

Radial Flow Plot
4523.25
4522.85
4522.45
4522.05
4521.66
4521.26
4520.86
4520.46
4520.07
4519.67
4519.27
Pressure (psia)
10
100
Superposition Time Function
Model Results
Radial homogeneous
Infinitely acting
k = 6640.0075 md
kh = 2.191e+006 md.ft
P* = 4520.3958 psia
Rinv = 10584.6689 ft
FE = 1.5583
dpS = -1.8094 psi
S = -3.421

FIGURE 6

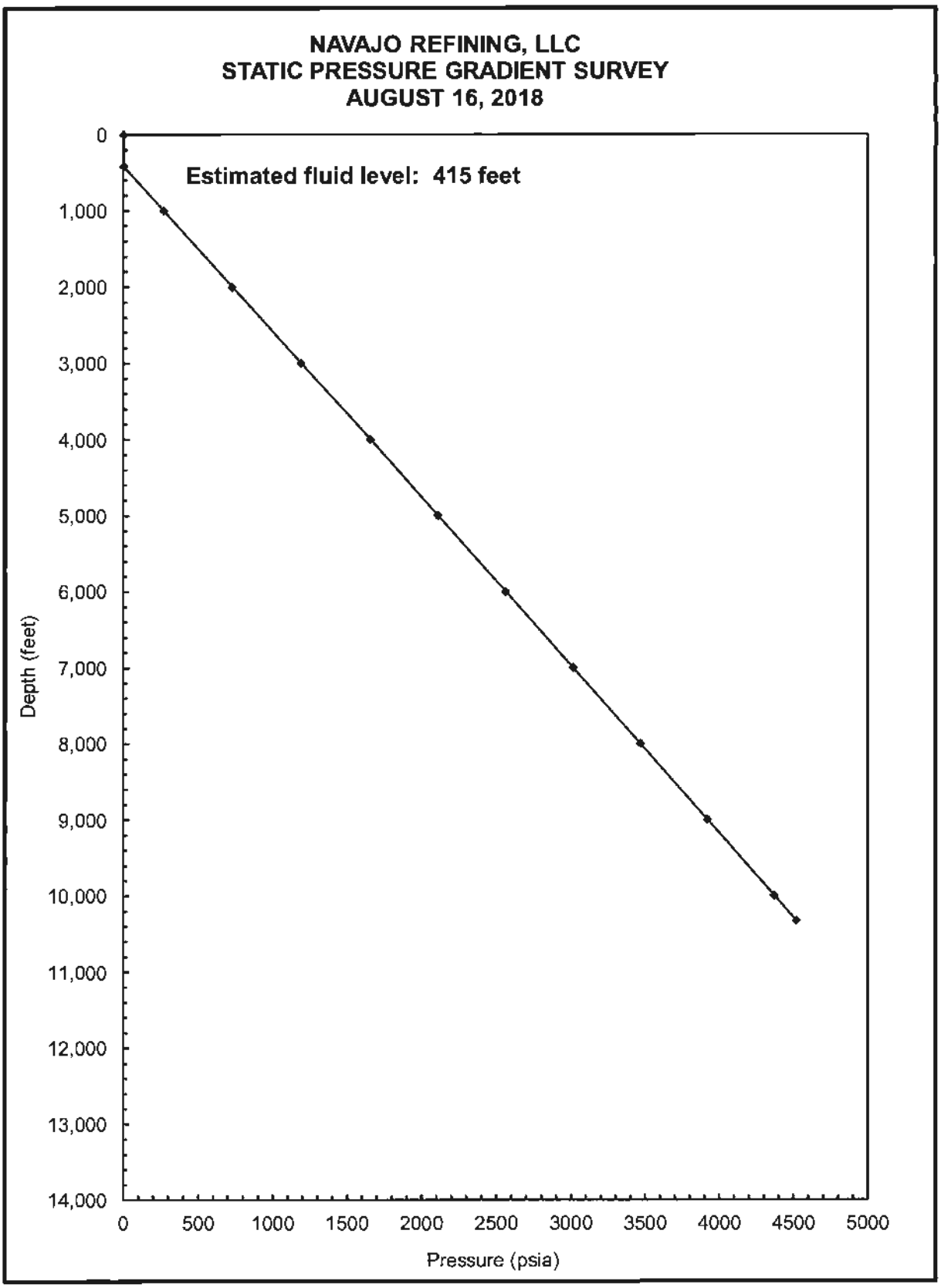

NAVAJO REFINING, LLC
STATIC PRESSURE GRADIENT SURVEY
AUGUST 16, 2018
Estimated fluid level: 415 feet
Depth (feet)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000
12,000
13,000
14,000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Pressure (psia)

FIGURE 7

Company	Navajo Refinery LLC.
Well	Waste Disposal Well No. 4
Location	Artesia, NM
Type Test	Pressure Buildup/Pressure Falloff
Test Dates	August 15, 2018 to August 16, 2018
Gauge Depth	10,327 feet
Completion Type	Open-Hole
Completion Interval	10,320 feet to 10,700 feet
Analyst	LKM
WSP USA Project No.	192080D

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Reservoir Description
Fluid type : Water
Well orientation : Vertical
Number of wells : 1
Number of layers : 1

Layer Parameters Data

	Layer 1
Formation thickness	330.0000 ft
Average formation porosity	0.2500
Water saturation	0.0000
Gas saturation	0.0000
Formation compressibility	0.000000 psi-1
Total system compressibility	8.4000e-6 psi-1
Layer pressure	4520.395793 psia
Temperature	140.590000 deg F

Well Parameters Data

	WDW-4
Well radius	0.3542 ft
Distance from observation to active well	0.000000 ft
Wellbore storage coefficient	5.357063 bbl/psi
Storage Amplitude	0.000000 psi
Storage Time Constant	0.000000 hr
Second Wellbore Storage	0.000000 bbl/psi
Time Change for Second Storage	0.000000 hr
Well offset - x direction	0.0000 ft
Well offset - y direction	0.0000 ft

Fluid Parameters Data

	Layer 1
Oil gravity	0.000000 API
Gas gravity	0.000000 sp grav
Gas-oil ratio (produced)	0.000000 scf/STB
Water cut	0.000000
Water salinity	0.000000 ppm
Check Pressure	4517.294000 psia
Check Temperature	140.590000 deg F
Gas-oil ratio (solution)	0.000000 scf/STB
Bubble-point pressure	0.000000 psia
Oil density	0.000 lb/ft3

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Fluid Parameters Data (cont)

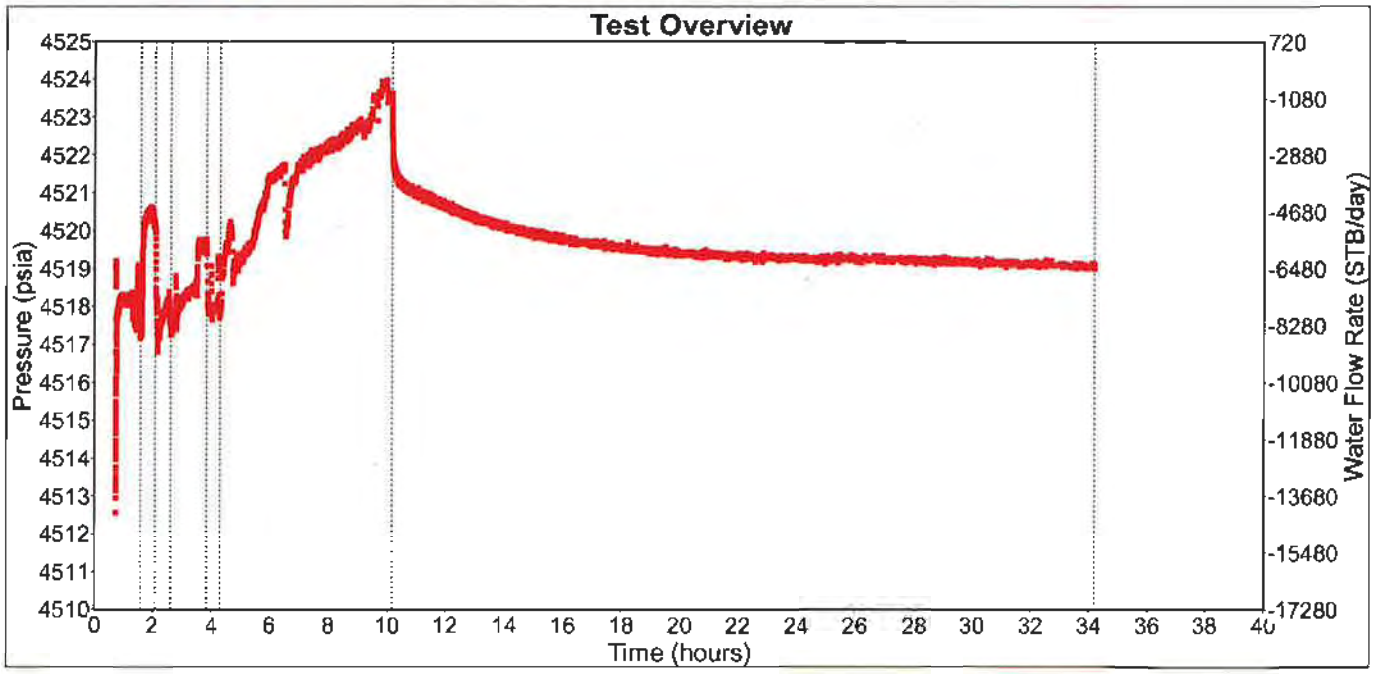
	Layer 1
Oil viscosity	0.000 cp
Oil formation volume factor	0.000 RB/STB
Gas density	0.000 lb/ft3
Gas viscosity	0.0 cp
Gas formation volume factor	0.000 ft3/scf
Water density	0.000 lb/ft3
Water viscosity	0.570 cp
Water formation volume factor	1.000 RB/STB
Oil compressibility	0.000000 psi-1
Initial Gas compressibility	0.000000 psi-1
Water compressibility	0.000000 psi-1

Layer 1 Correlations
Not Used

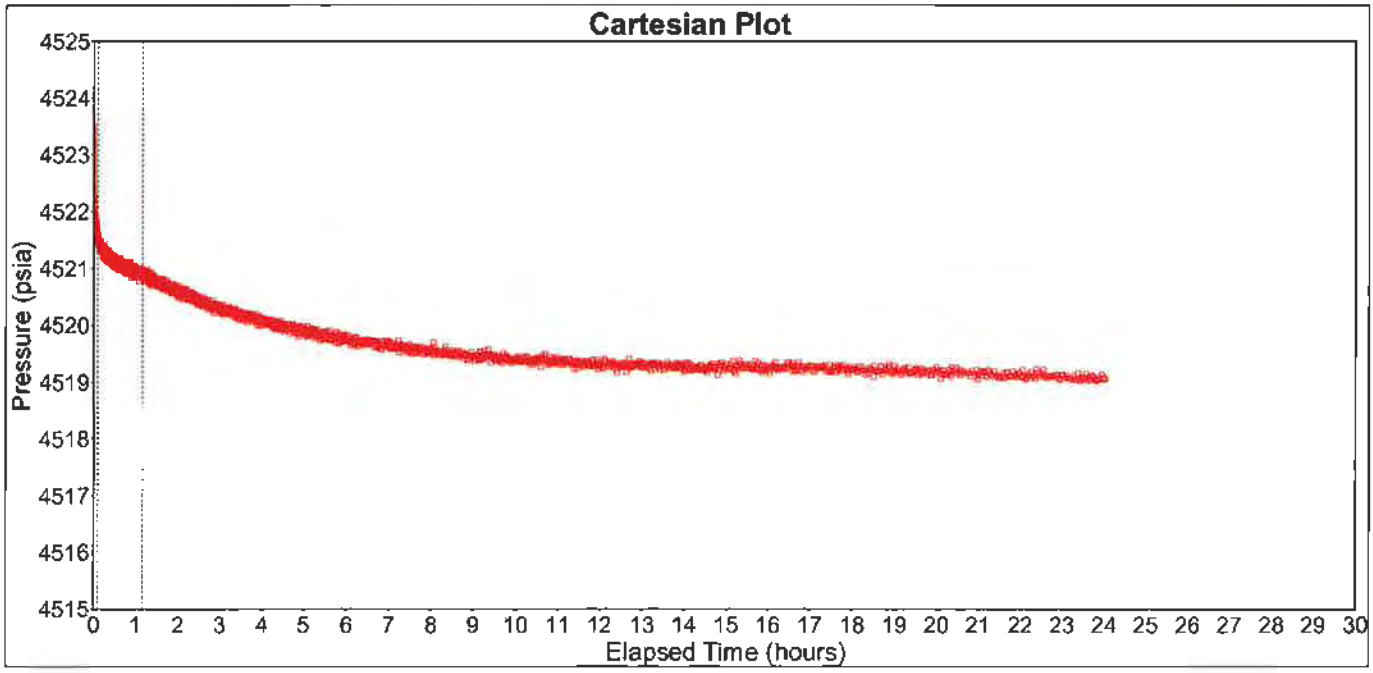
Rate Change Data

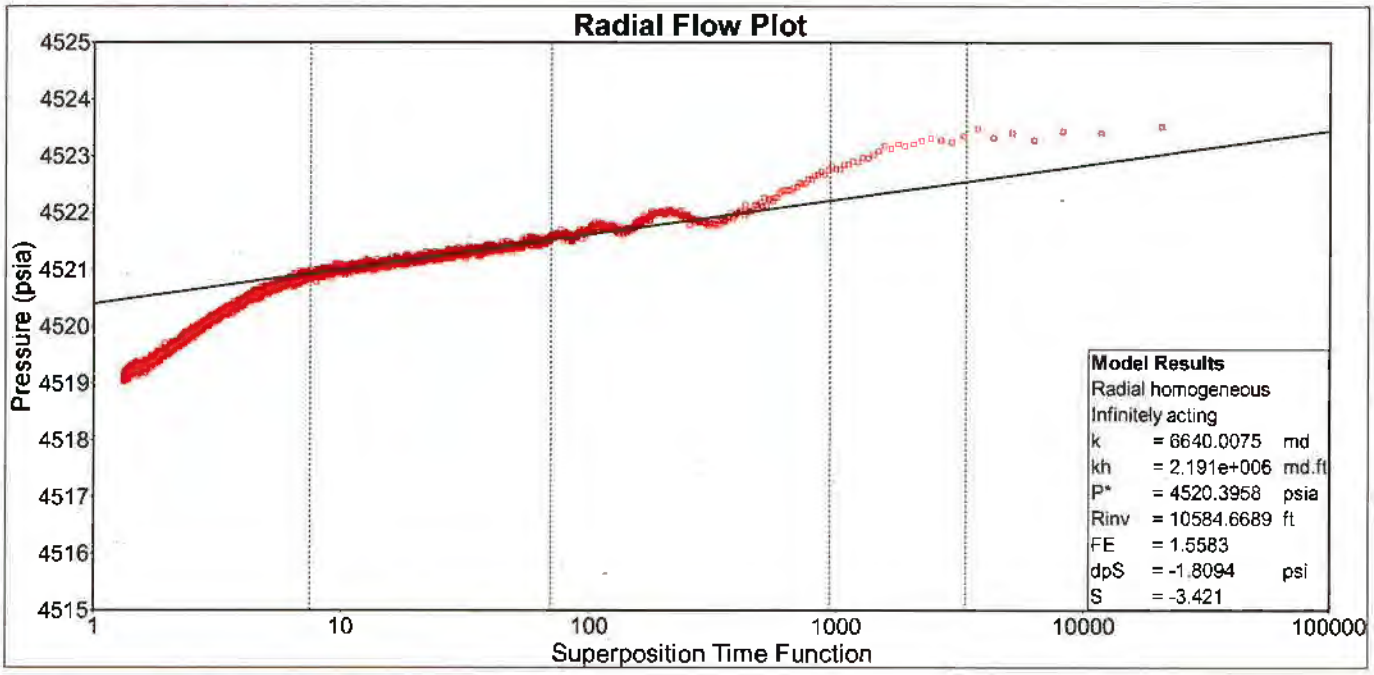
Time Hours	Pressure psia	Rate STB/day
1.594167	4517.294000	0.000000
2.090278	4520.182000	-1.7280e4
2.625278	4517.274000	0.000000
3.836389	4519.786000	-1.4400e4
4.294167	4517.774000	0.000000
10.170470	4523.637000	-1.4400e4
34.185556	4519.066000	0.000000

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Cartesian Plot
Pressure (psia)
4525
4524
4523
4522
4521
4520
4519
4518
4517
4516
4515
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Elapsed Time (hours)



Radial Flow Plot Model Results
Radial homogeneous - Infinitely acting

Classic Wellbore Storage

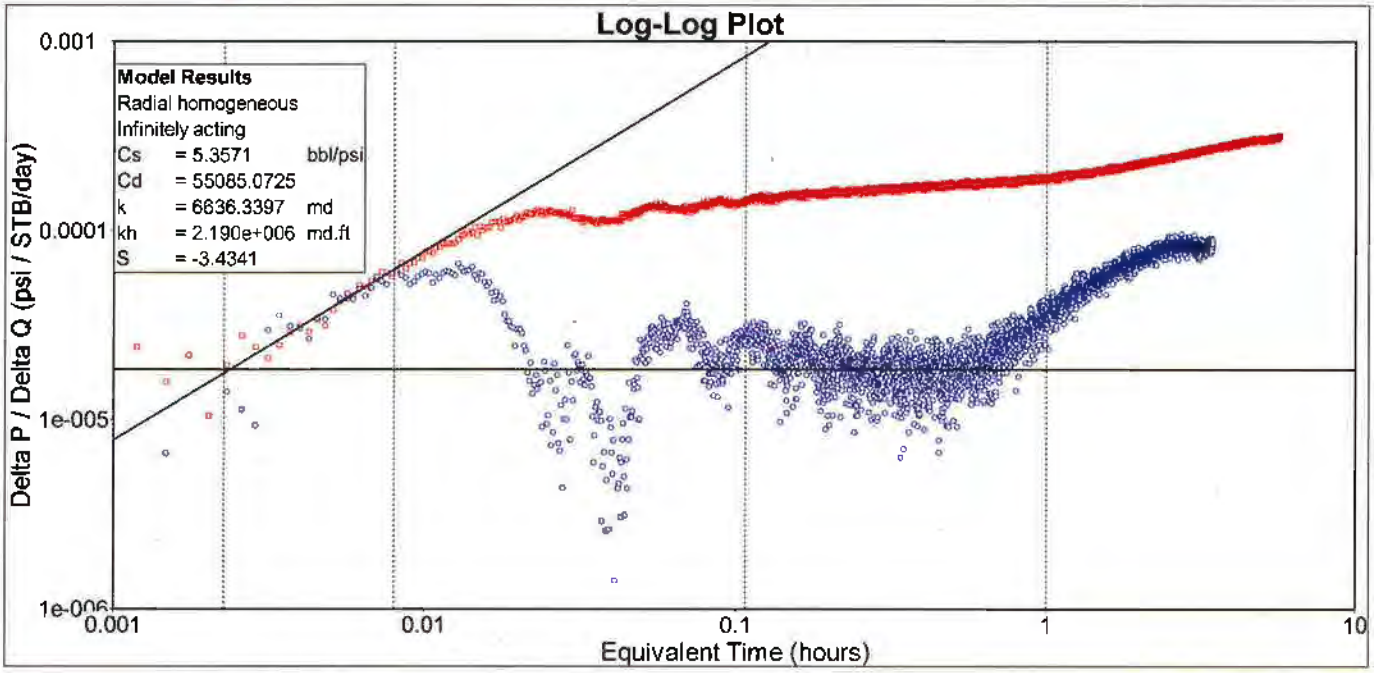
	Value
Permeability	6640.007534 md
Permeability-thickness	2.1912e6 md.ft
Extrapolated pressure	4520.395793 psia
Radius of investigation	1.0585e4 ft
Flow efficiency	1.558264
dP skin (constant rate)	-1.809449 psi
Skin factor	-3.421029

Radial Flow Plot Line Details
Line type : Radial flow
Slope : 0.608941
Intercept : 4520.4
Coefficient of Determination : 0.940054

	Radial flow
Extrapolated pressure	4520.395793 psia
Pressure at dt = 1 hour	4520.962337 psia

Number of Intersections = 0

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Log-Log Plot Model Results
Radial homogeneous - Infinitely acting

Classic Wellbore Storage

	Value
Wellbore storage coefficient	5.357063 bbl/psi
Dimensionless wellbore storage	5.5085e4
Permeability	6636.339684 md
Permeability-thickness	2.1900e6 md.ft
Skin factor	-3.434096

Log-Log Plot Line Details
Line type : Wellbore storage
Slope : 1
Intercept : 0.00777789
Coefficient of Determination : Not Used

Line type : Radial flow
Slope : 0
Intercept : 1.83754e-005
Coefficient of Determination : Not Used

Number of Intersections = 0

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APPENDIX B

SPARTEK SYSTEMS
GEOPHYSICAL INSTRUMENTATION
"Providing our customers with Best in Class Technology"

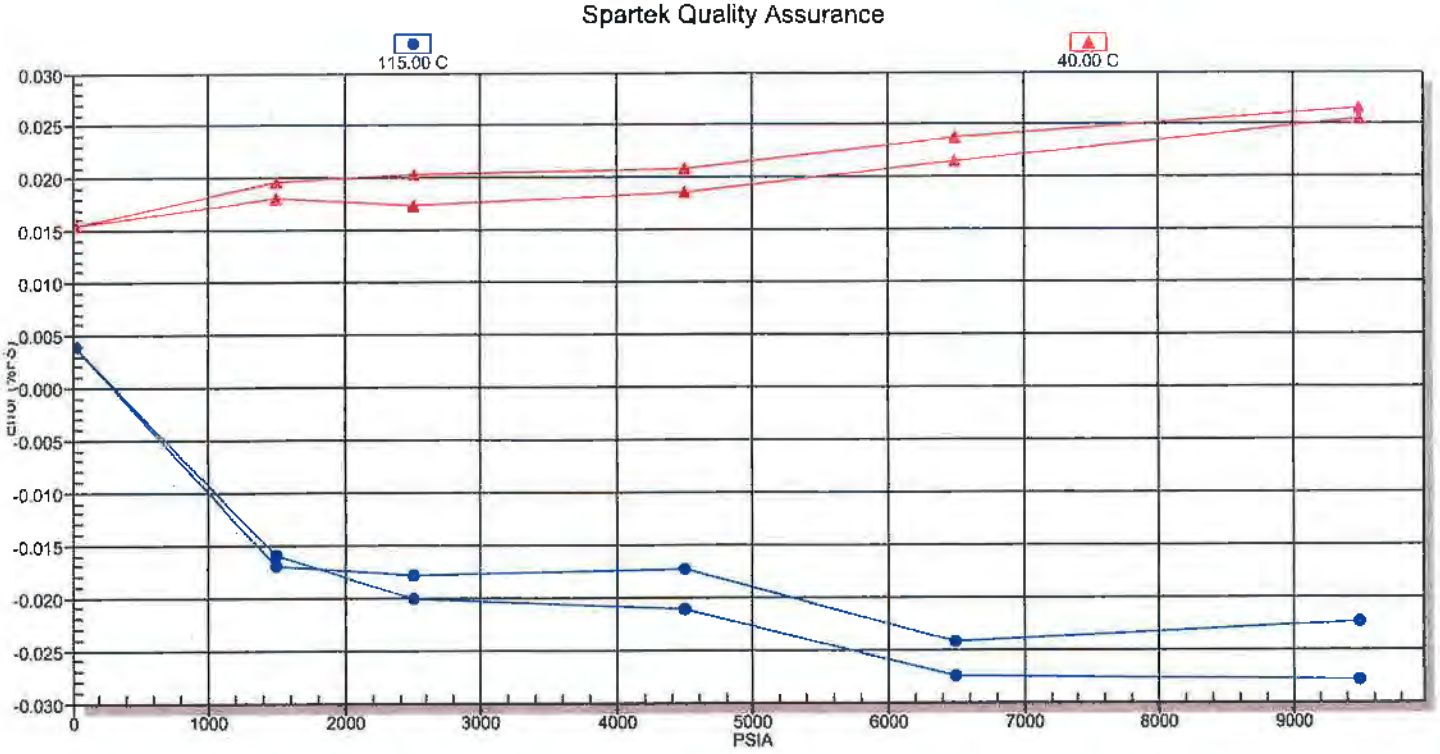
#1 Thevenaz Industrial Trail
Sylvan Lake, AB, Ca, T4S 2J6
Phone (403) 887-2443
Fax (403) 887-4050
www.sparteksystems.com

Pressure Gauge Certificate of Conformance

SERIAL NUMBER	79513	CALIBRATION DATE	MAY 06/15
MODEL NUMBER	1139 FF8	TRACEABILITY DOC.	CAL-STANDARD-001
PRESSURE RANGE	15.30 - 10000.00 psi	PRESSURE REFERENCE	NIST Traceable
TEMP. RANGE	25.00 - 135.00 °C	TEMP. REFERENCE	NIST Traceable

Testing and Verification Completed on APR 30/15. The instrument response is within the stated specifications for this type of pressure gauge.

As shown in the graph below, this Spartek Gauge conformed to within +/- 0.030 %F.S. of the pressure standard used in calibration, which is accurate to within +/- 0.01% of reading. This gives an overall accuracy of +/-(0.030%F.S. + 0.01% of reading)



Accepted By: _____

SPARTEK SYSTEMS INC. Corporate SEAL

Date: MAY 06/15

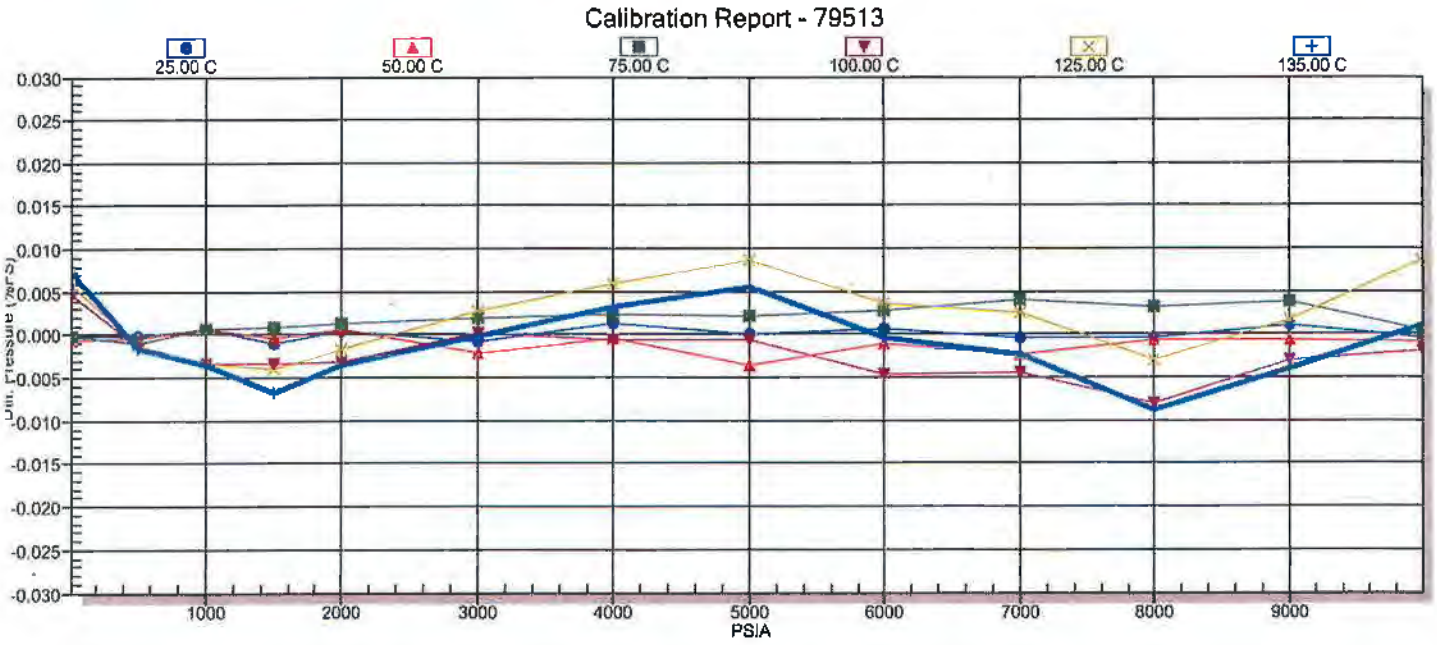
Ramp report: Serial # 79513
Gauge range = 10000.000 PSI, Max, DIFF. = 3.000
Ramp check result: PASS, Max Err = 0.028% F.S.

DW Pressure	Gauge Pressure	RPM4 Pressure	Differential	%F.S.	Oven Temp.	Gauge Temp.
9500.00	9497.21	9500.49	-2.79	0.0279	115.00	115.06
6500.00	6497.25	6500.61	-2.75	0.0275	115.00	114.71
4500.00	4497.89	4500.50	-2.11	0.0211	115.00	114.62
2500.00	2498.00	2500.39	-2.00	0.0200	115.00	114.68
1500.00	1498.40	1500.30	-1.60	0.0160	115.00	114.79
15.40	15.79	15.42	0.39	0.0039	115.00	114.95
1500.00	1498.31	1500.28	-1.69	0.0169	115.00	114.82
2500.00	2498.22	2500.35	-1.78	0.0178	115.00	114.74
4500.00	4498.27	4500.44	-1.73	0.0173	115.00	114.70
6500.00	6497.57	6500.44	-2.43	0.0243	115.00	114.77
9500.00	9497.78	9500.39	-2.22	0.0222	115.00	115.12
9500.00	9502.66	9500.31	2.66	0.0266	40.00	40.60
6500.00	6502.38	6500.53	2.38	0.0238	40.00	39.93
4500.00	4502.09	4500.40	2.09	0.0209	40.00	39.74
2500.00	2502.04	2500.34	2.04	0.0204	40.00	39.76
1500.00	1501.97	1500.22	1.97	0.0197	40.00	39.82
15.30	16.85	15.10	1.55	0.0155	40.00	39.98
1500.00	1501.81	1500.10	1.81	0.0181	40.00	39.83
2500.00	2501.75	2500.24	1.75	0.0175	40.00	39.77
4500.00	4501.87	4500.25	1.87	0.0187	40.00	39.79
6500.00	6502.17	6500.39	2.17	0.0217	40.00	39.99
9500.00	9502.55	9500.30	2.55	0.0255	40.00	40.65

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#1 Thevenaz Industrial Trail
Sylvan Lake, AB, Ca, T4S 2J8
Phone (403) 887-2443
Fax (403) 887-4050
www.sparteksystems.com

Pressure Gauge Certificate of Calibration



GAUGE NUMBER: 79513

2-D POLYNOMIAL LMS CURVEFIT

Source of f:	Pres	Temp	Pressure Equation:
Fit Order:	3	4	Pressure (PSI) = A + xp(B + xp(C + xp(D)))
Prescale:	xp = m * (fp - fp0)	xt = m * (ft - ft0)	
m:	0.01	0.01	Temperature Compenstation:
	fp0 = 693601	ft0 = 162819	A = A0 + xt(A1 + xt(A2 + xt(A3 + xt(A4))))
			B = B0 + xt(B1 + xt(B2 + xt(B3 + xt(B4))))
			C = C0 + xt(C1 + xt(C2 + xt(C3 + xt(C4))))
			D = D0 + xt(D1 + xt(D2 + xt(D3 + xt(D4))))

0	1	2	3	4
Pressure (psi) STANDARD FIT COEFFICIENTS:				
A 15.28452883	0.1150484485	0.0001388226785	-8.430123952E-07	-4.122388758E-09
B 2.529418986	-0.002048668411	-1.005399787E-06	-4.083499483E-09	1.347698503E-12
C 5.940630886E-06	2.986010317E-08	6.621728793E-10	3.152163479E-12	3.065423199E-15
D 2.512759017E-10	-8.927226156E-12	-1.507972208E-13	-7.808240201E-16	-9.863655329E-19

Temperature (C) STANDARD FIT COEFFICIENTS

A 24.9971515

B -0.3595287142

C -7.543271929E-05

D -3.371885395E-07

Error File: Gauge # 79513

Pressure psi	Temperature Deg. C	Count (Pres)	Count (Temp)	DIFF (press) psi
15.30	25.00	693601.50	162819.63	0.00
500.00	25.00	712758.00	162844.38	-0.01
1000.00	25.00	732509.67	162862.00	0.07
1500.00	25.00	752237.67	162877.88	-0.09
2000.00	25.00	771967.33	162900.88	0.06
3000.00	25.00	811326.33	162896.88	-0.07
4000.00	25.00	850632.50	162909.13	0.13
5000.00	25.00	889771.67	162870.88	0.02
5999.95	25.00	928843.00	162854.75	0.07
7000.00	25.00	967701.83	162787.50	-0.03
8000.00	25.00	1006463.00	162735.38	-0.03
9000.00	25.00	1044991.67	162643.88	0.11
10000.00	25.00	1083382.33	162562.75	-0.03
15.30	50.00	693869.17	155802.00	-0.05
500.00	50.00	712019.83	155816.63	-0.02
1000.00	50.00	730735.33	155839.38	0.07
1500.00	50.00	749424.50	155839.88	-0.03
2000.00	50.00	768123.33	155877.50	0.08
3000.00	50.00	805410.67	155866.63	-0.20
4000.00	50.00	842667.67	155888.38	-0.03
5000.00	50.00	879767.33	155857.50	-0.34
6000.00	50.00	916824.67	155849.88	-0.10
7000.00	50.00	953685.83	155794.63	-0.23
8000.00	50.00	990489.17	155763.38	-0.05
9000.00	50.00	1027053.17	155682.13	-0.04
10000.00	50.00	1063543.83	155626.63	-0.08
15.30	75.00	694054.33	148712.63	-0.01
500.00	75.00	711292.33	148736.13	-0.09
1000.00	75.00	729071.33	148755.13	0.06
1500.00	75.00	746830.17	148763.00	0.11
2000.00	75.00	764581.33	148787.75	0.13
3000.00	75.00	800012.17	148786.88	0.19
4000.00	75.00	835384.33	148801.00	0.25
5000.00	75.00	870648.00	148785.88	0.21
6000.00	75.00	905843.00	148779.25	0.29
7000.05	75.00	940885.83	148731.63	0.42
8000.00	75.00	975866.17	148711.63	0.32
9000.00	75.00	1010652.00	148643.88	0.39
10000.00	75.00	1045363.83	148600.50	0.05
15.35	100.00	694234.67	141882.25	0.47
500.05	100.00	710616.50	141901.88	-0.14
1000.00	100.00	727521.83	141920.88	-0.33
1500.00	100.00	744423.33	141926.75	-0.32
2000.00	100.00	761314.33	141934.50	-0.30
3000.00	100.00	795069.17	141950.88	0.03
4000.00	100.00	828751.00	141961.38	-0.05
5000.00	100.00	862348.00	141950.50	-0.05
6000.00	100.00	895872.67	141953.38	-0.46
7000.00	100.00	929276.17	141921.00	-0.44
8000.00	100.00	962589.83	141899.75	-0.79
9000.05	100.00	995763.33	141844.88	-0.28
10000.00	100.00	1028842.00	141807.75	-0.19
15.35	125.00	694496.33	135316.75	0.59
500.00	125.00	710061.33	135336.25	-0.12
999.95	125.00	726137.50	135354.25	-0.34
1500.00	125.00	742220.17	135361.63	-0.40
2000.00	125.00	758317.50	135389.13	-0.16
3000.00	125.00	790471.67	135384.88	0.29
4000.00	125.00	822610.33	135409.38	0.60
5000.00	125.00	854658.17	135387.88	0.87
6000.00	125.00	886649.17	135392.63	0.37
7000.00	125.00	918531.33	135364.75	0.27
8000.00	125.00	950343.17	135357.50	-0.29
9000.05	125.00	981997.83	135304.63	0.17
9999.95	125.00	1013597.50	135281.63	0.88
15.40	135.00	694655.33	132826.75	0.72
500.00	135.00	709896.67	132841.25	-0.16
1000.00	135.00	725653.67	132860.75	-0.34
1500.00	135.00	741406.67	132860.50	-0.67
2000.00	135.00	757192.33	132867.25	-0.36

3000.00	135.00	788728.00	132883.50	-0.02
4000.00	135.00	820267.00	132907.75	0.32
5000.00	135.00	851729.33	132889.50	0.56
6000.00	135.00	883153.00	132903.75	-0.04
7000.00	135.00	914457.00	132871.50	-0.22
8000.00	135.00	945708.33	132868.25	-0.88
9000.00	135.00	976818.33	132824.00	-0.40
10000.00	135.00	1007858.67	132802.50	0.11

9.16 FULL BORE CORE REPORT

APPENDIX 9.16

CORE ANALYSIS REPORT

WSP USA

Navajo WDW 4

Eddy County, Texas

July 25, 2018

DISCLAIMER

These analysis, opinions or interpretations are based on observations and materials supplied by the client to whom; and for whose exclusive and confidential use; this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories (all errors and omissions excepted); but Core Laboratories and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness or any oil, gas or other mineral well or formation in connection with which such report is used or relied upon.

201802274

Company: WSP USA
Well Name Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid:
Elevation:

File Number 201802274
July 25, 2018
API Number:

Sample Number	Top Depth (ft)	Bottom Depth (ft)	Plug Depth (ft)	Perm Air (md)		POR (He) (% of BV)	GD (gm/cc)	So (% of PV)	Sw (% of PV)	Description
1	9950	9951	9950.3	<0.001		1.0	2.71			Lim, v/slty, 0% flu tr cut
2	9951	9952	9951.3	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
3	9952	9953	9952.3	<0.001		0.4	2.69			Lim, v/slty, 0% flu tr cut
4	9953	9954	9953.4	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
5	9954	9955	9954.4	<0.001		0.9	2.70			Lim, v/slty slt lam, 0% flu tr cut
6	9955	9956	9955.3	0.015		0.1	2.70			Lim, sl slty, 0% flu tr cut
7	9956	9957	9956.8	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
8	9957	9958	9957.6	0.003		0.6	2.70			Lim, v/slty, 0% flu tr cut
9	9958	9959	9958.7	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
10	9959	9960	9959.2	0.002		0.1	2.70			Lim, slty, 0% flu tr cut
11	9960	9961	9960.7	<0.001		0.6	2.70			Lim, v/slty, 0% flu tr cut
12	9961	9962	9961.2	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
13	9962	9963	9962.2	<0.001		0.2	2.70			Lim, sl slty, 0% flu tr cut
14	9963	9964	9963.1	0.004		0.2	2.70			Lim, slty, 0% flu tr cut
15	9964	9965	9964.4	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
16	9965	9966	9965.4	0.007		1.1	2.71			Lim, v/slty, 0% flu tr cut
17	9966	9967	9966.9	0.003		0.2	2.70			Lim, sl slty, 0% flu tr cut
18	9967	9968	9967.9	0.010		1.3	2.72			Lim, v/slty, 0% flu tr cut
19	9968	9969	9968.8	0.002		0.2	2.70			Lim, sl slty, 0% flu tr cut
20	9969	9970	9969.3	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
21	9970	9971	9970.1	<0.001		0.2	2.69			Lim, sl slty, foss, 0% flu tr cut
22	9971	9972	9971.8	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
23	9972	9973	9972.9	<0.001		0.1	2.70			Lim, sl slty, 0% flu tr cut
24	9973	9974	9973.6	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
25	9974	9975	9974.1	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
26	9975	9976	9975.8	<0.001		0.2	2.70			Lim, sl slty, 0% flu tr cut
27	9976	9977	9976.8	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
28	9977	9978	9977.5	<0.001		0.2	2.70			Lim, slty, 0% flu tr cut
29	9978	9979	9978.3	<0.001		0.2	2.70			Lim, sl slty, 0% flu tr cut

Raw Gamma Dat

Company: WSP USA
Well Name: Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid
Elevation:

File Number 201802274
Date: July 25, 2018
API Number:

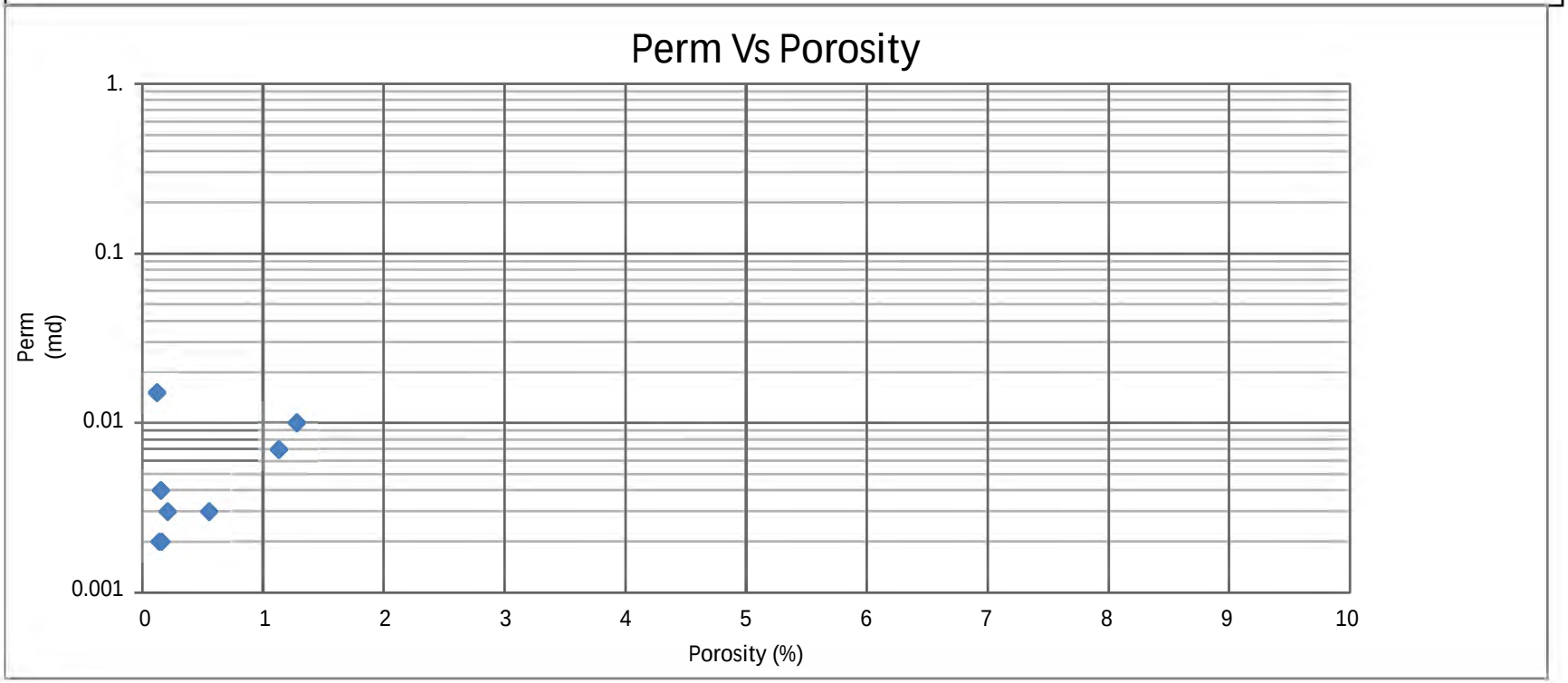
Depth	K Frac	U PPM	Th PPM	Total API	U Free API	Core Number					
9950.05	0	0	0	24.87	0	1					
9950.22	0	0	0	24.18	0	1					
9950.38	0	0	0	22.51	0	1					
9950.55	0	0	0	21.6	0	1					
9950.72	0	0	0	20.97	0	1					
9950.88	0	0	0	21.25	0	1					
9951.05	0	0	0	22.65	0	1					
9951.22	0	0	0	22.39	0	1					
9951.38	0	0	0	22.04	0	1					
9951.55	0	0	0	20.53	0	1					
9951.72	0	0	0	19.39	0	1					
9951.88	0	0	0	19.73	0	1					
9952.05	0	0	0	20.03	0	1					
9952.22	0	0	0	20.08	0	1					
9952.38	0	0	0	18.84	0	1					
9952.55	0	0	0	19.8	0	1					
9952.72	0	0	0	19.59	0	1					
9952.88	0	0	0	19.74	0	1					
9953.05	0	0	0	19.43	0	1					
9953.22	0	0	0	18.32	0	1					
9953.38	0	0	0	19.48	0	1					
9953.55	0	0	0	18.3	0	1					
9953.72	0	0	0	18.41	0	1					
9953.88	0	0	0	18.5	0	1					
9954.05	0	0	0	16.83	0	1					
9954.22	0	0	0	16.25	0	1					
9954.38	0	0	0	16.53	0	1					
9954.55	0	0	0	18.05	0	1					
9954.72	0	0	0	18.43	0	1					
9954.88	0	0	0	19.8	0	1					
9955.05	0	0	0	20.43	0	1					
9955.22	0	0	0	21.06	0	1					
9955.38	0	0	0	20.55	0	1					
9955.55	0	0	0	19.33	0	1					
9955.72	0	0	0	18.55	0	1					
9955.88	0	0	0	17.46	0	1					
9956.05	0	0	0	17.72	0	1					
9956.22	0	0	0	18.78	0	1					
9956.38	0	0	0	18.69	0	1					
9956.55	0	0	0	18.58	0	1					
9956.55	0	0	0	18.58	0	1					
9956.72	0	0	0	18.46	0	1					
9956.88	0	0	0	18.46	0	1					
9957.05	0	0	0	17.8	0	1					
9957.22	0	0	0	17.96	0	1					
9957.38	0	0	0	17.85	0	1					
9957.55	0	0	0	18.21	0	1					
9957.72	0	0	0	17.94	0	1					
9957.88	0	0	0	19.28	0	1					
9958.05	0	0	0	19.69	0	1					
9958.22	0	0	0	19.98	0	1					
9958.38	0	0	0	21.21	0	1					
9958.55	0	0	0	22.92	0	1					
9958.72	0	0	0	23.71	0	1					
9958.88	0	0	0	23.11	0	1					
9959.05	0	0	0	22.36	0	1					

9959.22	0	0	0	22.26	0	1					
9959.38	0	0	0	21.99	0	1					
9959.55	0	0	0	22.05	0	1					
9959.72	0	0	0	22.2	0	1					
9959.88	0	0	0	23.03	0	1					
9960.05	0	0	0	22.41	0	1					
9960.22	0	0	0	22.29	0	1					
9960.38	0	0	0	23.05	0	1					
9960.55	0	0	0	22.09	0	1					
9960.72	0	0	0	20.24	0	1					
9960.88	0	0	0	20.79	0	1					
9961.05	0	0	0	21.43	0	1					
9961.22	0	0	0	21.78	0	1					
9961.38	0	0	0	22.26	0	1					
9961.55	0	0	0	21.59	0	1					
9961.72	0	0	0	21.2	0	1					
9961.88	0	0	0	20.68	0	1					
9962.05	0	0	0	20.67	0	1					
9962.22	0	0	0	21.02	0	1					
9962.38	0	0	0	20.63	0	1					
9962.55	0	0	0	20.72	0	1					
9962.72	0	0	0	22.28	0	1					
9962.88	0	0	0	23.95	0	1					
9963.05	0	0	0	23.51	0	1					
9963.22	0	0	0	23.14	0	1					
9963.38	0	0	0	23.44	0	1					
9963.55	0	0	0	23.05	0	1					
9963.72	0	0	0	22.39	0	1					
9963.88	0	0	0	21.52	0	1					
9964.05	0	0	0	21.5	0	1					
9964.22	0	0	0	21.36	0	1					
9964.38	0	0	0	21.23	0	1					
9964.55	0	0	0	21.92	0	1					
9964.72	0	0	0	21.78	0	1					
9964.88	0	0	0	20.87	0	1					
9965.05	0	0	0	21.68	0	1					
9965.22	0	0	0	21.2	0	1					
9965.38	0	0	0	22.34	0	1					
9965.55	0	0	0	22.41	0	1					
9965.72	0	0	0	22.72	0	1					
9965.88	0	0	0	23.85	0	1					
9966.05	0	0	0	24.41	0	1					
9966.22	0	0	0	24.53	0	1					
9966.38	0	0	0	24.21	0	1					
9966.55	0	0	0	25.26	0	1					
9966.72	0	0	0	25.16	0	1					
9966.88	0	0	0	24.31	0	1					
9967.05	0	0	0	24.12	0	1					
9967.22	0	0	0	23.27	0	1					
9967.38	0	0	0	24.17	0	1					
9967.55	0	0	0	23.82	0	1					
9967.72	0	0	0	24.28	0	1					
9967.88	0	0	0	24.64	0	1					
9968.05	0	0	0	24.21	0	1					
9968.22	0	0	0	24.5	0	1					
9968.38	0	0	0	24.15	0	1					
9968.55	0	0	0	24.68	0	1					
9968.72	0	0	0	25.03	0	1					
9968.88	0	0	0	25.34	0	1					
9969.05	0	0	0	25.73	0	1					
9969.22	0	0	0	25.61	0	1					
9969.38	0	0	0	25.37	0	1					
9969.55	0	0	0	24.81	0	1					
9969.72	0	0	0	24.31	0	1					
9969.88	0	0	0	24.03	0	1					
9970.05	0	0	0	23.89	0	1					
9970.22	0	0	0	23.94	0	1					
9970.38	0	0	0	24.03	0	1					

9970.55	0	0	0	25.26	0	1					
9970.72	0	0	0	25.93	0	1					
9970.88	0	0	0	24.52	0	1					
9971.05	0	0	0	24.28	0	1					
9971.22	0	0	0	23.33	0	1					
9971.38	0	0	0	23.54	0	1					
9971.55	0	0	0	21.9	0	1					
9971.72	0	0	0	21.48	0	1					
9971.88	0	0	0	21.2	0	1					
9972.05	0	0	0	19.71	0	1					
9972.22	0	0	0	18.47	0	1					
9972.38	0	0	0	18.96	0	1					
9972.55	0	0	0	19.04	0	1					
9972.72	0	0	0	18.94	0	1					
9972.88	0	0	0	18.16	0	1					
9973.05	0	0	0	17.57	0	1					
9973.22	0	0	0	17.25	0	1					
9973.38	0	0	0	17.83	0	1					
9973.55	0	0	0	17.89	0	1					
9973.72	0	0	0	19.58	0	1					
9973.88	0	0	0	20.32	0	1					
9974.05	0	0	0	21.36	0	1					
9974.22	0	0	0	23.16	0	1					
9974.38	0	0	0	24.03	0	1					
9974.55	0	0	0	24.43	0	1					
9974.72	0	0	0	24.08	0	1					
9974.88	0	0	0	23.82	0	1					
9975.05	0	0	0	22.92	0	1					
9975.22	0	0	0	23.33	0	1					
9975.38	0	0	0	23.7	0	1					
9975.55	0	0	0	23.58	0	1					
9975.72	0	0	0	23.08	0	1					
9975.88	0	0	0	22.45	0	1					
9976.05	0	0	0	22.24	0	1					
9976.22	0	0	0	21.28	0	1					
9976.38	0	0	0	19.47	0	1					
9976.55	0	0	0	18.96	0	1					
9976.72	0	0	0	18.36	0	1					
9976.88	0	0	0	18.34	0	1					
9977.05	0	0	0	17.82	0	1					
9977.22	0	0	0	17.68	0	1					
9977.38	0	0	0	17.92	0	1					
9977.55	0	0	0	17.92	0	1					
9977.72	0	0	0	18.19	0	1					
9977.88	0	0	0	18.23	0	1					
9978.05	0	0	0	18.18	0	1					
9978.22	0	0	0	17.17	0	1					
9978.38	0	0	0	17.01	0	1					
9978.55	0	0	0	18.15	0	1					

Perm Vs Porosity

Company: WSP USA	**Field:**	**File Numbe 201802274**
Well Name Navajo WDW 4	**Formation:**	**Date: ##########**
Location:	**Coring Fluic**	**API Numbe**
Co. & St.: Eddy County, Texas	**Elevation:**	



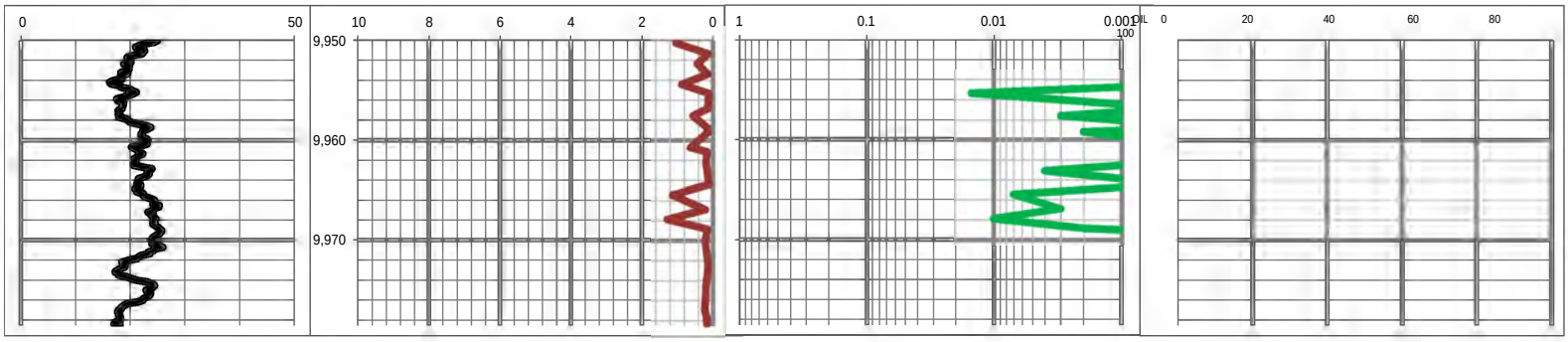
CoreGraph

Company: WSP USA
Well Name Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluic
Elevation:

File Number: 201802274
Date: July 25, 2018
API Number:

Total Gamma | Porosity | Permeability | Saturations



ABBREVIATIONS

Core Description

abund	Abundant	**incl**	Inclusion	**SA**	Sieve Analysis
anhy	Anhydrite	**ixp**	Intercrystalline Porosity	**SCAL**	Removed For SCAL Work
AST	Appears Similar To	**lam**	Laminations	**sd / sdy**	Sand / Sandy
bk	Break	**lim**	Limestone	**silica**	Silica
bldr	Boulder	**lmy**	Limey	**snd / sndy**	Sand / Sandy
c / crs	Coarse	**LPSA**	Laser Particle Size Anal	**SEM**	Scanning Electron Micoscope Analysis
calc	Calcite	**ls**	Limestone	**sh / shly**	Shale / Shaly
carb	Carbonaceous	**lv**	Large vug	**sl**	Slight
cbl	Cobble	**m**	Medium	**slt / slty**	Silt / Silty
CEC	Cation Exchange Cap	**mi**	Mud Invaded	**styl**	Stylolite (itic)
cem	Cemented	**mic**	Micaceous	**sulf**	Sulfur
cgl	Conglomerate	**mold**	Moldic	**sv**	Small Vug
chlor	Chlorite	**mv**	Medium Vug	**tr**	Trace
cht	Chert	**N/A**	Not Available/Analyzed	**TS**	Thin Section
coal	Coal	**NP**	No Perm Measurement	**uncons**	Unconsolidated
dol	Dolomite	**NR**	Not Received	**v**	Very
f	Fine	**ool**	Oolitic	**v frac**	Vertical Frac
fest	Ironstone	**OB**	Overburden	**vf**	Very Fine
foss	Fossil (iferous)	**P**	Preserved	**VOB**	Vertical Overburden
frac	Fracture	**pbl**	Pebble	**vug**	Vuggy (ular)
fri	Friable	**PET**	Petrographic Analysis	**ws**	Water Sand
glauc	Glauconite	**POA**	Removed For Oil Analys	**XRD**	X-ray Diffraction
grnl	Granule	**poro stk**	Porosity Streak		
gyp	Gypsum	**pp**	Pin Point	**cpl**	Continuous Planar Lams
h frac	Horizontal Frac	**ppm**	Pin Point Moldic	**cwl**	Continuous Wavy Lams
hal	Halite	**PSA**	Particle Size Analysis	**dpl**	Discontinuous Planar Lams
igp	Intergranular Porosity	**pyr**	Pyrite	**dwl**	Discontinuous Wavy Lams

Fluorescence

Color:

yel	Yellow
ora	Orange
gld	Gold
wht	White

Adjectives:

br	Bright
dul	Dul
cont	Contaminated
tif	Trace In Frac

Company:	**WSP USA**	**CL File No.:**	**201802274**
Well Name:	**Navajo WDW 4**	**Date:**	**7/25/2018**
Location:	**0.00**	**Analyst(s):**	**JS, SO**
Co. & St.:	**Eddy County, Texas**		

DEAN STARK ANALYSIS PROTOCOL

Sample Preparation

Core extruded from aluminum liner.
A Total core gamma log was acquired.
A brief description was taken on a per foot interval.
Plugs were acquired one per foot. Water was used as the drill bit lubricant.
Samples were trimmed, weighed, bulked and described..

Core Extraction

Saturations were not requested.
Plug samples selected for routine core analysis were placed in solvent extraction to remove hydrocarbons.
Plug samples were leached in methanol to remove salts.

Sample Drying

Plug samples were oven dried at 240° F to weight equilibrium (+/- 0.001 g).

Porosity

Porosity was determined using Boyle's Law technique by measuring grain volume at ambient conditions.

Grain Density

Grain density values were calculated by direct measurement of grain volume and weight on dried plug samples.
Grain volume was measured by Boyle's Law technique.

Permeability

Permeability to air was measured on each sample using steady-state air method at indicated 400 psi NCS.

Brief Description

Company: WSP USA
Well Name VAJO WDW 4
Location:
Co. & St.: UNTY, NEW MEXICO

Field:
Formation:
Coring Fluid:
Elevation:

File Number 201802274
Date: 6/26/18
API Number:

Sample Number	Top Depth ft	Bottom Depth ft	Lime %	Shale %	Fluoescence %
1	9950	9951	85	15	0
2	9951	9952	99	1	0
3	9952	9953	90	10	0
4	9953	9954	99	1	0
5	9954	9955	95	5	0
6	9955	9956	90	10	0
7	9956	9957	99	1	0
8	9957	9958	99	1	0
9	9958	9959	95	5	0
10	9959	9960	99	1	0
11	9960	9961	85	15	0
12	9961	9962	98	2	0
13	9962	9963	95	5	0
14	9963	9964	95	5	0
15	9964	9965	98	2	0
16	9965	9966	90	10	0
17	9966	9967	95	5	0
18	9967	9968	95	5	0
19	9968	9969	95	5	0
20	9969	9970	95	5	0
21	9970	9971	98	2	0
22	9971	9972	90	10	0
23	9972	9973	99	1	0
24	9973	9974	90	10	0
25	9974	9975	95	5	0
26	9975	9976	98	2	0
27	9976	9977	98	2	0
28	9977	9978	98	2	0
29	9978	9979	99	1	0

9.17 SIDEWALL CORE REPORT

APPENDIX 9.17

CORE ANALYSIS REPORT

WSP USA

Navajo WDW 4

Eddy County, Texas

08/17/2018

DISCLAIMER

These analysis, opinions or interpretations are based on observations and materials supplied by the client to whom; and for whose exclusive and confidential use; this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories (all errors and omissions excepted); but Core Laboratories and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness or any oil, gas or other mineral well or formation in connection with which such report is used or relied upon.

201802772

SIDEWALL CORE ANALYSIS

Company: WSP USA
Well Name: Navajo WDW 4
Location:
Co. & St.: Eddy County, Texas

Field:
Formation:
Coring Fluid:
Elevation:

File Number: 201802772
Date: 08/17/2018
API Number:
Analyst: JS, SO

Sample Number	Sample Depth ft	Sample Received in	Permeability (Horizontal) Kair md	Porosity Helium % of BV	Saturation Oil % of PV	Saturation Water % of PV	Oil Bulk % of BV	Gas Bulk % of BV	Grain Density gm/cc	Gas Detector Units (0-250)	Description
1	10630.0	1.9	0.003	3.5	0.1	42.4	0.0	2.0	2.83	0	Dol, sl vug, 0% flu no cut
2	10625.0	2.0	0.056	2.5	0.3	68.2	0.0	0.8	2.85	0	Dol, tr vug, 0% flu no cut
3	10620.0	1.0	0.538	1.5	0.9	97.5	0.0	0.0	2.82	0	Dol, tr vug, 0% flu no cut
4	10615.0	1.1	1,570	3.8	0.4	50.0	0.0	1.9	2.84	1	Dol, sl vug, 0% flu no cut
5	10605.0	1.8	0.001	2.5	0.8	49.6	0.0	1.3	2.84	2	Dol, sl vug, 0% flu no cut
6	10500.0	1.5	162	6.2	0.3	45.7	0.0	3.3	2.85	1	Dol, tr cht, tr sul, sl vug, 0% flu no cut
7	10495.0	1.8	1.08	9.8	0.2	96.9	0.0	0.3	2.71	0	Cht, sul, dol, sl vug, 0% flu no cut
8	10490.0	1.9	1.20	6.2	0.4	95.2	0.0	0.3	2.68	0	Cht, sl dol,tr vug, 0% flu no cut
9	10485.0	1.8	62.8	11.1	0.8	96.4	0.1	0.3	2.55	1	Cht, sul, sl dol, sl vug, 0% flu no cut
10	10480.0	1.0	1.10	8.2	2.9	72.8	0.2	2.0	2.65	0	Cht, tr dol, sl vug, 0% flu no cut
11	10475.0	1.3	194	8.4	0.5	44.6	0.0	4.6	2.84	4	Dol, sl vug, 0% flu no cut
12	10470.0	1.1	0.001	9.5	0.1	23.0	0.0	7.3	2.83	1	Dol, sl vug, 0% flu no cut
13	10465.0	2.2	0.337	2.1	0.7	87.8	0.0	0.2	2.81	0	Dol, tr vug, 0% flu no cut
14	10460.0	1.8	133	4.6	0.5	52.3	0.0	2.2	2.84	23	Dol, sl vug, 0% flu no cut
15	10455.0	1.5	0.694	3.6	0.4	44.6	0.0	2.0	2.84	5	Dol, sl vug, 0% flu no cut
16	10450.0	2.5	6,510	12.3	0.1	43.3	0.0	7.0	2.83	4	Dol, vug, 0% flu no cut

ABBREVIATIONS

Core Description

abund	Abundant	**incl**	Inclusion	**SA**	Sieve Analysis
anhy	Anhydrite	**ixp**	Intercrystalline Porosity	**SCAL**	Removed For SCAL Work
AST	Appears Similar To	**lam**	Laminations	**sd / sdy**	Sand / Sandy
bk	Break	**lim**	Limestone	**silica**	Silica
bldr	Boulder	**lmy**	Limey	**snd / sndy**	Sand / Sandy
c / crs	Coarse	**LPSA**	Laser Particle Size Anal	**SEM**	Scanning Electron Micoscope Analysis
calc	Calcite	**ls**	Limestone	**sh / shly**	Shale / Shaly
carb	Carbonaceous	**lv**	Large vug	**sl**	Slight
cbl	Cobble	**m**	Medium	**slt / slty**	Silt / Silty
CEC	Cation Exchange Cap	**mi**	Mud Invaded	**styl**	Stylolite (itic)
cem	Cemented	**mic**	Micaceous	**sulf**	Sulfur
cgl	Conglomerate	**mold**	Moldic	**sv**	Small Vug
chlor	Chlorite	**mv**	Medium Vug	**tr**	Trace
cht	Chert	**N/A**	Not Available/Analyzed	**TS**	Thin Section
coal	Coal	**NP**	No Perm Measurement	**uncons**	Unconsolidated
dol	Dolomite	**NR**	Not Received	**v**	Very
f	Fine	**ool**	Oolitic	**v frac**	Vertical Frac
fest	Ironstone	**OB**	Overburden	**vf**	Very Fine
foss	Fossil (iferous)	**P**	Preserved	**VOB**	Vertical Overburden
frac	Fracture	**pbl**	Pebble	**vug**	Vuggy (ular)
fri	Friable	**PET**	Petrographic Analysis	**ws**	Water Sand
glauc	Glauconite	**POA**	Removed For Oil Analys	**XRD**	X-ray Diffraction
grnl	Granule	**poro stk**	Porosity Streak		
gyp	Gypsum	**pp**	Pin Point	**cpl**	Continuous Planar Lams
h frac	Horizontal Frac	**ppm**	Pin Point Moldic	**cwl**	Continuous Wavy Lams
hal	Halite	**PSA**	Particle Size Analysis	**dpl**	Discontinuous Planar Lams
igp	Intergranular Porosity	**pyr**	Pyrite	**dwl**	Discontinuous Wavy Lams

Fluorescence

Color:

yel	Yellow
ora	Orange
gld	Gold
wht	White

Adjectives:

br	Bright
dul	Dul
cont	Contaminated
tif	Trace In Frac

Company:	**WSP USA**	**CL File No.:**	**201802772**
Well Name:	**Navajo WDW 4**	**Date:**	**08/17/2018**
Location:		**Analyst(s):**	**JS, SO**
Co. & St.:	**Eddy County, Texas**		

DEAN STARK SIDEWALL ANALYSIS PROTOCOL

Sample Preparation

Sidewall were gassed, length measured, trimmed, weighed, visual fluorescence, bulk volume on teflon sealed samples me
Archimedes principle and calipers and brief rock description.

Core Extraction

Plugs for routine core analysis were placed in Dean Stark equipment using toluene for water extraction.
Plug batch cleaning in toluene to remove remaining oil.
Plug samples were leached in methanol to remove salts.
Sample # 7 and # 9 contained sulfur.
Sulfur is removed during cleaning. Sulfur weight was added to dry weight. Sulfur volume to was added to the measured gr
Grain density and porosity were corrected using the data above.

Sample Drying

Samples were oven dried at 240° F to weight equilibrium (+/- 0.001 g).

Porosity

Porosity was determined using Boyle's Law technique by measuring grain volume at ambient conditions.

Grain Density

Grain density values were calculated by direct measurement of grain volume and weight on dried plug samples.
Grain volume was measured by Boyle's Law technique.

Permeability

Permeability to air was measured on each sample using steady-state air method at indicated 400 psi NCS.
Sample # 7 and # 9 contained sulfur. Samples were low temperatured dried at 125° F then permeability was measured be
extraction. Permeability reported for # 7 an # 9 represents samples' permeability before removal of sulfur.

9.18 INCLINATION SURVEY

PHOENIX TECHNOLOGY SERVICES

Job Number: 62575
Company: WSP USA Inc.
Lease/Well: Navajo WDW 4
Location: Eddy County
Rig Name: Patriot Rig 4
RKB:
G.L. or M.S.L.:

State/Country: New Mexico
Declination:
Grid:
File name: C:\WINSERVE\62575.SVY
Date/Time: 29-Jun-18 / 13:35
Curve Name: Navajo WDW 4

Scientific Drilling

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane .00
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1615.00	.60	.00	1614.95	-1614.95	10.75	.00	10.75	10.75	.00	.00
First Phoenix Survey										
1706.00	.71	355.10	1705.94	-1705.94	11.79	-.05	11.79	11.79	359.77	.14
1800.00	.77	16.24	1799.94	-1799.94	12.97	.08	12.97	12.98	.35	.30
1895.00	.57	352.28	1894.93	-1894.93	14.06	.19	14.06	14.06	.79	.36
1990.00	.42	359.95	1989.93	-1989.93	14.87	.13	14.87	14.87	.50	.17
2086.00	.49	353.60	2085.92	-2085.92	15.63	.08	15.63	15.63	.31	.09
2181.00	.40	351.52	2180.92	-2180.92	16.36	-.01	16.36	16.36	359.96	.10
2276.00	.58	346.61	2275.92	-2275.92	17.16	-.17	17.16	17.16	359.43	.19
2371.00	.36	18.96	2370.91	-2370.91	17.91	-.18	17.91	17.91	359.41	.35
2466.00	.34	339.99	2465.91	-2465.91	18.46	-.18	18.46	18.46	359.43	.25
2561.00	.53	14.38	2560.91	-2560.91	19.15	-.17	19.15	19.15	359.49	.33
2656.00	.28	25.24	2655.91	-2655.91	19.78	.04	19.78	19.78	.11	.27
2752.00	.53	5.81	2751.90	-2751.90	20.44	.18	20.44	20.44	.51	.29
2847.00	.49	51.21	2846.90	-2846.90	21.13	.54	21.13	21.14	1.47	.42
2942.00	.20	57.95	2941.90	-2941.90	21.47	1.00	21.47	21.49	2.67	.31
3037.00	.49	47.06	3036.90	-3036.90	21.84	1.44	21.84	21.88	3.77	.31
3132.00	.63	38.28	3131.89	-3131.89	22.52	2.06	22.52	22.62	5.22	.17
3227.00	.37	19.42	3226.89	-3226.89	23.22	2.48	23.22	23.35	6.11	.32
3322.00	.71	13.09	3321.89	-3321.89	24.08	2.72	24.08	24.24	6.44	.36
3417.00	.68	28.70	3416.88	-3416.88	25.15	3.12	25.15	25.35	7.08	.20
3513.00	.42	350.27	3512.87	-3512.87	26.00	3.34	26.00	26.21	7.32	.46
3607.00	.64	6.61	3606.87	-3606.87	26.86	3.34	26.86	27.07	7.09	.28
3702.00	.53	21.35	3701.87	-3701.87	27.80	3.56	27.80	28.02	7.30	.20
3798.00	.66	11.51	3797.86	-3797.86	28.75	3.83	28.75	29.01	7.59	.17

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
3893.00	.71	.94	3892.85	-3892.85	29.88	3.95	29.88	30.14	7.53	.14
3988.00	.51	346.04	3987.85	-3987.85	30.87	3.86	30.87	31.11	7.12	.27
4083.00	.29	358.64	4082.85	-4082.85	31.53	3.75	31.53	31.75	6.79	.25
4178.00	.59	356.30	4177.84	-4177.84	32.25	3.71	32.25	32.47	6.57	.32
4273.00	.30	340.61	4272.84	-4272.84	32.98	3.60	32.98	33.17	6.23	.33
4368.00	.53	11.15	4367.84	-4367.84	33.64	3.60	33.64	33.83	6.11	.33
4466.00	.39	339.52	4465.83	-4465.83	34.40	3.57	34.40	34.58	5.93	.29
4561.00	.53	345.23	4560.83	-4560.83	35.13	3.35	35.13	35.29	5.44	.15
4656.00	.54	354.02	4655.83	-4655.83	36.00	3.19	36.00	36.14	5.06	.09
4751.00	.53	336.73	4750.82	-4750.82	36.85	2.97	36.85	36.97	4.61	.17
4846.00	.53	350.02	4845.82	-4845.82	37.68	2.72	37.68	37.78	4.13	.13
4941.00	.35	.23	4940.82	-4940.82	38.41	2.64	38.41	38.50	3.94	.21
5036.00	.49	348.90	5035.81	-5035.81	39.09	2.57	39.09	39.18	3.76	.17
5132.00	.39	.89	5131.81	-5131.81	39.82	2.49	39.82	39.90	3.58	.14
5227.00	.16	303.05	5226.81	-5226.81	40.22	2.39	40.22	40.29	3.40	.35
5318.00	.21	265.21	5317.81	-5317.81	40.27	2.11	40.27	40.33	3.01	.14
5413.00	.30	330.60	5412.81	-5412.81	40.48	1.82	40.48	40.52	2.57	.30
5508.00	.20	276.80	5507.81	-5507.81	40.71	1.53	40.71	40.74	2.16	.26
5603.00	.53	328.30	5602.81	-5602.81	41.11	1.14	41.11	41.12	1.58	.46
5698.00	.54	319.10	5697.80	-5697.80	41.82	.61	41.82	41.82	.84	.09
5793.00	.77	326.66	5792.80	-5792.80	42.69	-.03	42.69	42.69	359.96	.26
5889.00	.59	326.89	5888.79	-5888.79	43.64	-.66	43.64	43.65	359.14	.19
5984.00	.70	320.20	5983.78	-5983.78	44.50	-1.29	44.50	44.52	358.33	.14
6079.00	.55	322.86	6078.78	-6078.78	45.31	-1.94	45.31	45.35	357.55	.16
6174.00	.68	326.27	6173.77	-6173.77	46.14	-2.53	46.14	46.21	356.86	.14
6269.00	.67	318.56	6268.76	-6268.76	47.03	-3.21	47.03	47.13	356.10	.10
6369.00	.55	330.54	6368.76	-6368.76	47.88	-3.83	47.88	48.03	355.42	.17
6464.00	.64	316.99	6463.75	-6463.75	48.67	-4.42	48.67	48.87	354.81	.18
6559.00	.59	312.43	6558.75	-6558.75	49.38	-5.14	49.38	49.65	354.06	.07
6654.00	.45	308.88	6653.74	-6653.74	49.95	-5.79	49.95	50.28	353.38	.15
6749.00	.54	333.59	6748.74	-6748.74	50.58	-6.28	50.58	50.97	352.92	.24
6844.00	.35	8.55	6843.74	-6843.74	51.27	-6.44	51.27	51.67	352.84	.34
6940.00	.18	298.54	6939.74	-6939.74	51.63	-6.53	51.63	52.04	352.79	.35
7035.00	.35	338.74	7034.74	-7034.74	51.98	-6.76	51.98	52.41	352.59	.25
7130.00	.35	303.56	7129.74	-7129.74	52.41	-7.11	52.41	52.89	352.27	.22
7225.00	.35	251.75	7224.73	-7224.73	52.48	-7.63	52.48	53.03	351.73	.32
7320.00	.18	294.74	7319.73	-7319.73	52.45	-8.04	52.45	53.06	351.29	.26
7415.00	.35	283.65	7414.73	-7414.73	52.58	-8.46	52.58	53.25	350.86	.19
7510.00	.35	263.28	7509.73	-7509.73	52.61	-9.03	52.61	53.38	350.26	.13
7606.00	.70	263.36	7605.73	-7605.73	52.51	-9.90	52.51	53.44	349.32	.36
7701.00	.53	260.97	7700.72	-7700.72	52.37	-10.91	52.37	53.50	348.23	.18
7796.00	.50	232.50	7795.72	-7795.72	52.05	-11.67	52.05	53.35	347.36	.27
7891.00	.53	226.40	7890.71	-7890.71	51.50	-12.32	51.50	52.95	346.54	.07
7986.00	.70	218.28	7985.71	-7985.71	50.74	-13.00	50.74	52.38	345.63	.20
8081.00	.88	250.11	8080.70	-8080.70	50.04	-14.04	50.04	51.97	344.32	.49

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Subsea TVD FT	N-S FT	E-W FT	Vertical Section FT	C L O S U R E Distance FT	C L O S U R E Direction Deg	Dogleg Severity Deg/100
8176.00	.70	267.13	8175.69	-8175.69	49.76	-15.31	49.76	52.06	342.90	.31
8271.00	.88	258.39	8270.68	-8270.68	49.58	-16.60	49.58	52.29	341.49	.23
8366.00	.70	247.35	8365.67	-8365.67	49.21	-17.85	49.21	52.35	340.06	.25
8461.00	.70	267.73	8460.66	-8460.66	48.97	-18.97	48.97	52.51	338.82	.26
8556.00	.53	253.29	8555.66	-8555.66	48.82	-19.97	48.82	52.74	337.75	.24
8651.00	.70	246.68	8650.65	-8650.65	48.46	-20.92	48.46	52.78	336.65	.19
8747.00	.53	259.24	8746.65	-8746.65	48.15	-21.90	48.15	52.89	335.54	.23
8842.00	.53	253.35	8841.64	-8841.64	47.94	-22.75	47.94	53.06	334.61	.06
8937.00	.35	262.40	8936.64	-8936.64	47.77	-23.46	47.77	53.22	333.85	.20
9032.00	.53	263.58	9031.64	-9031.64	47.69	-24.18	47.69	53.47	333.11	.19
9127.00	.53	257.85	9126.63	-9126.63	47.54	-25.05	47.54	53.74	332.22	.06
9222.00	.70	263.78	9221.63	-9221.63	47.39	-26.06	47.39	54.08	331.20	.19
9307.00	.70	254.03	9306.62	-9306.62	47.19	-27.07	47.19	54.40	330.16	.14
9402.00	.70	251.88	9401.62	-9401.62	46.85	-28.18	46.85	54.67	328.97	.03
9497.00	.70	252.31	9496.61	-9496.61	46.49	-29.29	46.49	54.95	327.79	.01
9592.00	.79	245.72	9591.60	-9591.60	46.05	-30.44	46.05	55.20	326.54	.13
9687.00	.88	245.26	9686.59	-9686.59	45.47	-31.70	45.47	55.43	325.12	.09
9758.00	1.06	244.20	9757.58	-9757.58	44.96	-32.78	44.96	55.64	323.90	.25
9869.00	1.06	247.74	9868.56	-9868.56	44.12	-34.66	44.12	56.11	321.85	.06
9966.00	1.23	248.60	9965.54	-9965.54	43.40	-36.46	43.40	56.68	319.97	.18
10062.00	2.02	248.59	10061.50	-10061.50	42.41	-38.99	42.41	57.61	317.41	.82
10157.00	2.29	247.05	10156.43	-10156.43	41.06	-42.30	41.06	58.95	314.15	.29
10252.00	2.80	247.80	10251.34	-10251.34	39.44	-46.19	39.44	60.74	310.49	.54

SURVEY

		Client Personnel	Directional Personnel	MWD Personnel
PHOENIX TECHNOLOGY SERVICES LP	**Client:** WSP USA Inc. **Well Name:** Navajo WDW 4 **Location:** , **Job Number:** 62575 **Rig:** Patriot Rig 4 **From:** May-10-2018 **To:**	Kevin Cook	Cody ZZLeger Jason Whitson Nathan Adams Trevor Baldwin	August Holt Eric Hermida Gary Harmon Howard Becker

Tie-in Settings **Depth** 1615 **TVD** 1614.95 **Inclination** 0.6 **Azimuth** 0 **N/S** 10.75 **E/W** 0

BHA	Date	Time	Depth	Survey Depth	TVD	VS	Inclination	Azimuth	DIP	TMF	TGF
1	May-13-2018	13:00	1769.00	1706.00	1705.94	11.79	0.71	355.1	61.58	0.492060	1.0011
1	May-13-2018	15:00	1863.00	1800.00	1799.94	12.97	0.77	16.24	61.39	0.492590	1.0011
1	May-13-2018	17:10	1958.00	1895.00	1894.93	14.06	0.57	352.28	61.38	0.480750	1.0010
1	May-13-2018	19:35	2053.00	1990.00	1989.93	14.87	0.42	359.95	61.36	0.492590	1.0010
1	May-13-2018	21:45	2149.00	2086.00	2085.92	15.63	0.49	353.6	61.35	0.492400	1.0010
1	May-14-2018	0:30	2244.00	2181.00	2180.92	16.36	0.4	351.52			1.0010
1	May-14-2018	2:55	2339.00	2276.00	2275.92	17.16	0.58	346.61	61.36	0.492600	1.0011
1	May-14-2018	7:46	2434.00	2371.00	2370.91	17.91	0.36	18.96	61.32	0.492540	1.0010
1	May-15-2018	4:20	2529.00	2466.00	2465.91	18.46	0.34	339.99	61.28	0.492680	1.0005
1	May-15-2018	8:30	2624.00	2561.00	2560.91	19.15	0.53	14.38	61.13	0.492790	1.0010
1	May-15-2018	12:00	2719.00	2656.00	2655.91	19.78	0.28	25.24	61.34	0.492260	1.0010
1	May-15-2018	20:00	2815.00	2752.00	2751.91	20.44	0.53	5.81	61.32	0.492500	1.0010
1	May-15-2018	22:30	2910.00	2847.00	2846.90	21.13	0.49	51.21	61.36	0.492330	1.0010
1	May-16-2018	1:30	3005.00	2942.00	2941.90	21.47	0.2	57.95	61.32	0.492410	1.0010
1	May-16-2018	4:55	3100.00	3037.00	3036.90	21.84	0.49	47.06	61.51	0.492110	1.0010
1	May-16-2018	9:50	3195.00	3132.00	3131.89	22.52	0.63	38.28			
1	May-16-2018	13:30	3290.00	3227.00	3226.89	23.22	0.37	19.42			
1	May-16-2018	17:10	3385.00	3322.00	3321.89	24.08	0.71	13.09	61.42	0.492160	1.0011
1	May-16-2018	22:15	3480.00	3417.00	3416.88	25.15	0.68	28.7	61.31	0.493000	1.0011
1	May-17-2018	3:15	3576.00	3513.00	3512.87	26.00	0.42	350.27	61.36	0.492680	1.0010
1	May-17-2018	9:50	3670.00	3607.00	3606.87	26.86	0.64	6.61	61.44	0.492370	1.0011
1	May-17-2018	14:50	3765.00	3702.00	3701.87	27.80	0.53	21.35	61.20	0.493000	1.0010
1	May-17-2018	19:15	3861.00	3798.00	3797.86	28.75	0.66	11.51	61.38	0.492520	1.0011
1	May-18-2018	0:25	3956.00	3893.00	3892.85	29.88	0.71	0.94	61.42	0.492160	1.0011
1	May-18-2018	8:02	4051.00	3988.00	3987.85	30.87	0.51	346.04	61.36	0.492320	1.0010
1	May-18-2018	16:14	4146.00	4083.00	4082.85	31.53	0.29	358.64	62.47	0.487610	1.0010
1	May-18-2018	21:40	4241.00	4178.00	4177.84	32.25	0.59	356.3	61.40	0.492230	1.0010
1	May-19-2018	2:45	4336.00	4273.00	4272.84	32.98	0.3	340.61	61.34	0.492250	1.0010
1	May-19-2018	8:20	4431.00	4368.00	4367.84	33.64	0.53	11.15	61.32	0.492850	1.0010
2	May-20-2018	5:20	4527.00	4466.00	4465.83	34.40	0.39	339.52			
2	May-20-2018	12:30	4622.00	4561.00	4560.83	35.13	0.53	345.23	61.19	0.490000	1.0010
2	May-20-2018	18:00	4717.00	4656.00	4655.83	36.00	0.54	354.02	61.42	0.490400	1.0010
2	May-21-2018	20:25	4812.00	4751.00	4750.82	36.85	0.53	336.73	61.38	0.490540	1.0010
2	May-22-2018	4:19	4907.00	4846.00	4845.82	37.68	0.53	350.02	61.42	0.490400	1.0010
2	May-22-2018	13:35	5002.00	4941.00	4940.82	38.41	0.35	0.23	61.16	0.491000	1.0001
2	May-22-2018	18:00	5097.00	5036.00	5035.81	39.09	0.49	348.9	61.24	0.491010	1.0010

2	May-22-2018	22:45	5193.00	5132.00	5131.81	39.82	0.39	0.89	61.39	0.490550	1.0010	
2	May-23-2018	2:20	5288.00	5227.00	5226.81	40.22	0.16	303.05	61.34	0.491200	1.0010	
3	May-25-2018	4:00	5381.00	5318.00	5317.81	40.27	0.21	265.21	61.04	0.486700	1.0010	
3	May-25-2018	7:21	5476.00	5413.00	5412.81	40.48	0.3	330.6	60.84	0.487000	1.0010	
3	May-25-2018	9:51	5571.00	5508.00	5507.81	40.71	0.2	276.8	60.95	0.487000	1.0010	
3	May-25-2018	15:20	5666.00	5603.00	5602.81	41.11	0.53	328.3	60.56	0.580750	1.0015	
3	May-25-2018	20:15	5761.00	5698.00	5697.80	41.82	0.54	319.1	61.03	0.487150	1.0010	
3	May-26-2018	3:45	5856.00	5793.00	5792.80	42.69	0.77	326.66	61.05	0.487190	1.0011	
4	May-27-2018	2:30	5952.00	5889.00	5888.79	43.64	0.59	326.89	61.02	0.487320	1.0011	
4	May-27-2018	12:05	6047.00	5984.00	5983.78	44.50	0.7	320.2	60.91	0.487000	1.0010	
4	May-27-2018	21:25	6142.00	6079.00	6078.78	45.31	0.55	322.86	61.09	0.487860	1.0010	
4	May-28-2018	7:00	6237.00	6174.00	6173.77	46.14	0.68	326.27	61.02	0.488180	1.0011	
4	May-28-2018	14:25	6332.00	6269.00	6268.77	47.03	0.67	318.56	61.09	0.487630	1.0011	
5	May-29-2018	11:22	6432.00	6369.00	6368.76	47.88	0.55	330.54	60.76	0.482190	1.0015	
5	May-29-2018	14:50	6527.00	6464.00	6463.76	48.67	0.64	316.99	60.83	0.482010	1.0016	
5	May-29-2018	18:15	6622.00	6559.00	6558.75	49.38	0.59	312.43	60.89	0.481500	1.0016	
5	May-29-2018	21:15	6717.00	6654.00	6653.75	49.95	0.45	308.88				
5	May-30-2018	0:15	6812.00	6749.00	6748.74	50.58	0.54	333.59	60.84	48181.000000	1.0015	
5	May-30-2018	3:15	6907.00	6844.00	6843.74	51.27	0.35	8.55	60.76	0.482020	1.0015	
5	May-30-2018	6:37	7003.00	6940.00	6939.74	51.63	0.18	298.54	60.66	0.482000	1.0010	
5	May-30-2018	9:41	7098.00	7035.00	7034.74	51.98	0.35	338.74	60.67	0.482000	1.0010	
5	May-30-2018	13:12	7193.00	7130.00	7129.74	52.41	0.35	303.56	60.62	0.482000	1.0010	
5	May-30-2018	17:45	7288.00	7225.00	7224.73	52.48	0.35	251.75	60.59	0.483000	1.0010	
6	May-30-2018	13:00	7383.00	7320.00	7319.73	52.45	0.18	294.74	60.65	0.481000	1.0010	
6	May-30-2018	21:40	7478.00	7415.00	7414.73	52.58	0.35	283.65	60.63	0.482000	1.0010	
6	Jun-01-2018	3:40	7573.00	7510.00	7509.73	52.61	0.35	263.28	60.58	0.482000	1.0010	
6	Jun-01-2018	9:05	7669.00	7606.00	7605.73	52.51	0.7	263.36	60.71	0.482000	1.0020	
6	Jun-01-2018	17:10	7764.00	7701.00	7700.72	52.37	0.53	260.97	60.65	0.483000	1.0010	
7	Jun-02-2018	8:00	7859.00	7796.00	7795.72	52.05	0.5	232.5	60.60	0.482000	1.0020	
7	Jun-02-2018	9:49	7954.00	7891.00	7890.71	51.50	0.53	226.4	60.64	0.482000	1.0020	
7	Jun-02-2018	11:38	8049.00	7986.00	7985.71	50.74	0.7	218.28	60.59	0.483000	1.0010	
7	Jun-02-2018	13:55	8144.00	8081.00	8080.70	50.04	0.88	250.11				
7	Jun-02-2018	18:02	8239.00	8176.00	8175.69	49.76	0.7	267.13				
7	Jun-02-2018	22:05	8334.00	8271.00	8270.68	49.58	0.88	258.39	60.69	0.482000	1.0002	
7	Jun-03-2018	0:15	8429.00	8366.00	8365.67	49.21	0.7	247.35	60.65	0.483000	1.0020	
7	Jun-03-2018	3:05	8524.00	8461.00	8460.67	48.97	0.7	267.73	60.67	0.482000	1.0020	
7	Jun-03-2018	6:25	8619.00	8556.00	8555.66	48.82	0.53	253.29	60.62	0.482000	1.0010	
8	Jun-04-2018	6:10	8714.00	8651.00	8650.65	48.46	0.7	246.68	61.35	0.490620	1.0016	
8	Jun-04-2018	9:21	8810.00	8747.00	8746.65	48.15	0.53	259.24	61.21	0.491000	1.0010	
8	Jun-04-2018	12:53	8905.00	8842.00	8841.64	47.94	0.53	253.35	61.08	0.491000	1.0010	
8	Jun-04-2018	17:19	9000.00	8937.00	8936.64	47.77	0.35	262.4	61.26	0.490000	1.0010	
8	Jun-04-2018	20:20	9095.00	9032.00	9031.64	47.69	0.53	263.58	61.20	0.490000	1.0010	
8	Jun-05-2018	3:34	9190.00	9127.00	9126.63	47.54	0.53	257.85	61.19	0.490000	1.0010	
9	Jun-07-2018	2:45	9285.00	9222.00	9221.63	47.39	0.7	263.78	61.15	0.490000	1.0010	
11	Jun-14-2018	3:31	9370.00	9307.00	9306.62	47.19	0.7	254.03	61.21	0.491000	1.0010	
11	Jun-14-2018	15:50	9465.00	9402.00	9401.62	46.85	0.7	251.88	61.18	0.490000	1.0020	
11	Jun-15-2018	0:11	9560.00	9497.00	9496.61	46.49	0.7	252.31	60.56	0.480750	0.9990	

11	Jun-15-2018	9:40	9655.00	9592.00	9591.60	46.05	0.79	245.72	61.16	0.491000	1.0020	
12	Jun-17-2018	8:45	9750.00	9687.00	9686.59	45.47	0.88	245.26	61.07	0.490000	1.0010	
13	Jun-17-2018	4:47	9821.00	9758.00	9757.58	44.96	1.06	244.2	61.04	0.490000	1.0010	
14	Jun-23-2018	4:47	9932.00	9869.00	9868.56	44.12	1.06	247.74	61.04	0.490000	1.0010	
15	Jun-02-2018	6:00	10055.00	9966.00	9965.54	43.40	1.23	248.6	60.82	0.487000	1.0010	
15	Jun-02-2018	8:30	10151.00	10062.00	10061.50	42.41	2.02	248.59	61.01	0.486630	1.0011	
15	Jun-02-2018	23:30	10246.00	10157.00	10156.44	41.06	2.29	247.05	60.90	0.486000	1.0010	
15	Jun-26-2018	12:00	10341.00	10252.00	10251.34	39.44	2.8	247.8	60.97	0.486100	1.0010	
15	Jun-26-2018	12:00	10430.00	10341.00	10340.24	37.80	2.8	247.8				

PHOENIX
TECHNOLOGY SERVICES

Job #:	*62575*		**North Type:**	*Grid*	
Client:	WSP USA	*Wellbore Name*	**Total Correction:**	*7.31*	*degrees*
Well:	Navajo WDW 4		**Target TVD:**	*10400*	*feet*
Field:	*Wildcat*		**Vertical Section Dir.:**	*0*	*degrees*
Rig:	Patriot Drilling #4		**Dip Angle:**	*60.56*	
API:	30-015-44677		**TMF:**	*0.48075*	
Phoenix Rep:	Eric Hermida/August Holt		**TGF:**	*1.0000*	

SURVEY DATA

No.	Date	Time	M. Depth	Bit to DU	SD	INC	AZM	C.L	TVD	VS	N/-S	E/-W	DLS	B./D.	BHA
0	**xxx**	**xxx**	**1615**	**xxx**	**1615**	**0.60**	**0.00**	**0**	**1614.95**	**10.75**	**10.75**	**0.00**	**0.21**	**-0.21**	**0**
1	13-May	12:25	1769	63	**1706**	**0.71**	**355.10**	91	1705.94	11.79	11.79	-0.05	0.14	0.12	**1**
2	13-May	15:00	1863	63	**1800**	**0.77**	**16.24**	94	1799.94	12.97	12.97	0.08	0.30	0.06	**1**
3	13-May	17:10	1958	63	**1895**	**0.57**	**352.28**	95	1894.93	14.06	14.06	0.19	0.36	-0.21	**1**
4	13-May	19:35	2053	63	**1990**	**0.42**	**359.95**	95	1989.93	14.87	14.87	0.13	0.17	-0.16	**1**
5	13-May	21:45	2149	63	**2086**	**0.49**	**353.60**	96	2085.92	15.63	15.63	0.08	0.09	0.07	**1**
6	14-May	0:30	2244	63	**2181**	**0.40**	**351.52**	95	2180.92	16.36	16.36	-0.01	0.10	-0.09	**1**
7	14-May	2:55	2339	63	**2276**	**0.58**	**346.61**	95	2275.92	17.16	17.16	-0.17	0.19	0.19	**1**
8	14-May	6:46	2434	63	**2371**	**0.36**	**18.96**	95	2370.91	17.91	17.91	-0.18	0.35	-0.23	**1**
9	15-May	4:20	2529	63	**2466**	**0.34**	**339.99**	95	2465.91	18.46	18.46	-0.18	0.25	-0.02	**1**
10	15-May	8:30	2624	63	**2561**	**0.53**	**14.38**	95	2560.91	19.15	19.15	-0.17	0.33	0.20	**1**
11	15-May	12:00	2719	63	**2656**	**0.28**	**25.24**	95	2655.91	19.78	19.78	0.04	0.27	-0.26	**1**
12	15-May	20:00	2815	63	**2752**	**0.53**	**5.81**	96	2751.90	20.44	20.44	0.18	0.29	0.26	**1**
13	15-May	22:40	2910	63	**2847**	**0.49**	**51.21**	95	2846.90	21.13	21.13	0.54	0.42	-0.04	**1**
14	16-May	1:25	3005	63	**2942**	**0.20**	**57.95**	95	2941.90	21.47	21.47	1.00	0.31	-0.31	**1**
15	16-May	4:50	3100	63	**3037**	**0.49**	**47.06**	95	3036.90	21.84	21.84	1.44	0.31	0.31	**1**
16	16-May	9:50	3195	63	**3132**	**0.63**	**38.28**	95	3131.89	22.52	22.52	2.06	0.17	0.15	**1**
17	16-May	13:28	3290	63	**3227**	**0.37**	**19.42**	95	3226.89	23.22	23.22	2.48	0.32	-0.27	**1**
18	16-May	17:12	3385	63	**3322**	**0.71**	**13.09**	95	3321.89	24.08	24.08	2.72	0.36	0.36	**1**
19	16-May	22:15	3480	63	**3417**	**0.68**	**28.70**	95	3416.88	25.15	25.15	3.12	0.20	-0.03	**1**
20	17-May	3:15	3576	63	**3513**	**0.42**	**350.27**	96	3512.87	26.00	26.00	3.34	0.46	-0.27	**1**
21	17-May	9:52	3670	63	**3607**	**0.64**	**6.61**	94	3606.87	26.86	26.86	3.34	0.28	0.23	**1**
22	17-May	14:50	3765	63	**3702**	**0.53**	**21.35**	95	3701.87	27.80	27.80	3.56	0.20	-0.12	**1**
23	17-May	19:15	3861	63	**3798**	**0.66**	**11.51**	96	3797.86	28.75	28.75	3.83	0.17	0.14	**1**
24	18-May	0:15	3956	63	**3893**	**0.71**	**0.94**	95	3892.85	29.88	29.88	3.95	0.14	0.05	**1**
25	18-May	8:02	4051	63	**3988**	**0.51**	**346.04**	95	3987.85	30.87	30.87	3.86	0.27	-0.21	**1**
26	18-May	15:14	4146	63	**4083**	**0.29**	**358.64**	95	4082.85	31.53	31.53	3.75	0.25	-0.23	**1**
27	18-May	22:55	4241	63	**4178**	**0.59**	**356.30**	95	4177.84	32.25	32.25	3.71	0.32	0.32	**1**
28	19-May	2:45	4336	63	**4273**	**0.30**	**340.61**	95	4272.84	32.98	32.98	3.60	0.33	-0.31	**1**
29	19-May	8:20	4431	63	**4368**	**0.53**	**11.15**	95	4367.84	33.64	33.64	3.60	0.33	0.24	**1**
30	20-May	5:20	4527	61	**4466**	**0.39**	**339.52**	98	4465.83	34.40	34.40	3.57	0.29	-0.14	**1**
31	20-May	12:00	4622	61	**4561**	**0.53**	**345.23**	95	4560.83	35.13	35.13	3.35	0.15	0.15	**2**
32	20-May	18:05	4717	61	**4656**	**0.54**	**354.02**	95	4655.83	36.00	36.00	3.19	0.09	0.01	**2**
33	21-May	20:25	4812	61	**4751**	**0.53**	**336.73**	95	4750.82	36.85	36.85	2.97	0.17	-0.01	**2**
34	22-May	4:20	4907	61	**4846**	**0.53**	**350.02**	95	4845.82	37.68	37.68	2.72	0.13	0.00	**2**
35	22-May	13:30	5002	61	**4941**	**0.35**	**0.23**	95	4940.82	38.41	38.41	2.64	0.21	-0.19	**2**
36	22-May	18:00	5097	61	**5036**	**0.49**	**348.90**	95	5035.81	39.09	39.09	2.57	0.17	0.15	**2**
37	22-May	22:45	5193	61	**5132**	**0.39**	**0.89**	96	5131.81	39.82	39.82	2.49	0.14	-0.10	**2**
38	23-May	2:20	5288	61	**5227**	**0.16**	**303.05**	95	5226.81	40.22	40.22	2.39	0.35	-0.24	**2**
39	25-May	4:00	5381	63	**5318**	**0.21**	**265.21**	91	5317.81	40.27	40.27	2.11	0.14	0.05	**3**
40	25-May	7:21	5476	63	**5413**	**0.30**	**330.60**	95	5412.81	40.48	40.48	1.82	0.30	0.09	**3**
41	25-May	9:51	5571	63	**5508**	**0.20**	**276.80**	95	5507.81	40.71	40.71	1.53	0.26	-0.11	**3**
42	25-May	15:20	5666	63	**5603**	**0.53**	**328.30**	95	5602.81	41.11	41.11	1.14	0.46	0.35	**3**
43	25-May	20:15	5761	63	**5698**	**0.54**	**319.10**	95	5697.80	41.82	41.82	0.61	0.09	0.01	**3**
44	26-May	3:45	5856	63	**5793**	**0.77**	**326.66**	95	5792.80	42.69	42.69	-0.03	0.26	0.24	**3**
45	27-May	2:30	5952	63	**5889**	**0.59**	**326.89**	96	5888.79	43.64	43.64	-0.66	0.19	-0.19	**4**
46	27-May	12:05	6047	63	**5984**	**0.70**	**320.20**	95	5983.78	44.50	44.50	-1.29	0.14	0.12	**4**
47	27-May	21:25	6142	63	**6079**	**0.55**	**322.86**	95	6078.78	45.31	45.31	-1.94	0.16	-0.16	**4**
48	28-May	7:00	6237	63	**6174**	**0.68**	**326.27**	95	6173.77	46.14	46.14	-2.53	0.14	0.14	**4**
49	28-May	14:25	6332	63	**6269**	**0.67**	**318.56**	95	6268.76	47.03	47.03	-3.21	0.10	-0.01	**4**
50	29-May	11:25	6432	63	**6369**	**0.55**	**330.54**	100	6368.76	47.88	47.88	-3.83	0.17	-0.12	**5**
51	29-May	14:55	6527	63	**6464**	**0.64**	**316.99**	95	6463.75	48.67	48.67	-4.42	0.18	0.09	**5**
52	29-May	18:15	6622	63	**6559**	**0.59**	**312.43**	95	6558.75	49.38	49.38	-5.14	0.07	-0.05	**5**
53	29-May	21:20	6717	63	**6654**	**0.45**	**308.88**	95	6653.74	49.95	49.95	-5.79	0.15	-0.15	**5**
54	30-May	0:15	6812	63	**6749**	**0.54**	**333.59**	95	6748.74	50.58	50.58	-6.28	0.24	0.09	**5**
55	30-May	3:15	6907	63	**6844**	**0.35**	**8.55**	95	6843.74	51.27	51.27	-6.44	0.34	-0.20	**5**
56	30-May	6:42	7003	63	**6940**	**0.18**	**298.54**	96	6939.74	51.63	51.63	-6.53	0.35	-0.18	**5**
57	30-May	9:41	7098	63	**7035**	**0.35**	**338.74**	95	7034.74	51.98	51.98	-6.76	0.25	0.18	**5**
58	30-May	14:21	7193	63	**7130**	**0.35**	**303.56**	95	7129.74	52.41	52.41	-7.11	0.22	0.00	**5**
59	30-May	17:45	7288	63	**7225**	**0.35**	**251.75**	95	7224.73	52.48	52.48	-7.63	0.32	0.00	**5**
60	31-May	13:00	7383	63	**7320**	**0.18**	**294.74**	95	7319.73	52.45	52.45	-8.04	0.26	-0.18	**6**
61	31-May	21:37	7478	63	**7415**	**0.35**	**283.65**	95	7414.73	52.58	52.58	-8.46	0.19	0.18	**6**
62	1-Jun	2:40	7573	63	**7510**	**0.35**	**263.28**	95	7509.73	52.61	52.61	-9.03	0.13	0.00	**6**
63	1-Jun	9:05	7669	63	**7606**	**0.70**	**263.36**	96	7605.73	52.51	52.51	-9.90	0.36	0.36	**6**
64	1-Jun	21:19	7764	63	**7701**	**0.53**	**260.97**	95	7700.72	52.37	52.37	-10.91	0.18	-0.18	**6**
65	2-Jun	8:00	7859	63	**7796**	**0.50**	**232.50**	95	7795.72	52.05	52.05	-11.67	0.27	-0.03	**7**
66	2-Jun	9:49	7954	63	**7891**	**0.53**	**226.40**	95	7890.71	51.50	51.50	-12.32	0.07	0.03	**7**
67	2-Jun	11:38	8049	63	**7986**	**0.70**	**218.28**	95	7985.71	50.74	50.74	-13.00	0.20	0.18	**7**
68	2-Jun	13:55	8144	63	**8081**	**0.88**	**250.11**	95	8080.70	50.04	50.04	-14.04	0.49	0.19	**7**
69	2-Jun	18:02	8239	63	**8176**	**0.70**	**267.13**	95	8175.69	49.76	49.76	-15.31	0.31	-0.19	**7**
70	2-Jun	22:05	8334	63	**8271**	**0.88**	**258.39**	95	8270.68	49.58	49.58	-16.60	0.23	0.19	**7**
71	2-Jun	0:15	8429	63	**8366**	**0.70**	**247.35**	95	8365.67	49.21	49.21	-17.85	0.25	-0.19	**7**
72	3-Jun	3:05	8524	63	**8461**	**0.70**	**267.73**	95	8460.66	48.97	48.97	-18.97	0.26	0.00	**7**

SURVEY DATA															
No.	Date	Time	M. Depth	Bit to DU	SD	INC	AZM	C.L	TVD	VS	N/-S	E/-W	DLS	B./D.	BHA
73	3-Jun	6:20	8619	63	**8556**	**0.53**	**253.29**	95	8555.66	48.82	48.82	-19.97	0.24	-0.18	**7**
74	4-Jun	6:10	8714	63	**8651**	**0.70**	**246.68**	95	8650.65	48.46	48.46	-20.92	0.19	0.18	**8**
75	4-Jun	9:21	8810	63	**8747**	**0.53**	**259.24**	96	8746.65	48.15	48.15	-21.90	0.23	-0.18	**8**
76	4-Jun	12:53	8905	63	**8842**	**0.53**	**253.35**	95	8841.64	47.94	47.94	-22.75	0.06	0.00	**8**
77	4-Jun	17:19	9000	63	**8937**	**0.35**	**262.40**	95	8936.64	47.77	47.77	-23.46	0.20	-0.19	**8**
78	4-Jun	20:20	9095	63	**9032**	**0.53**	**263.58**	95	9031.64	47.69	47.69	-24.18	0.19	0.19	**8**
79	5-Jun	3:34	9190	63	**9127**	**0.53**	**257.85**	95	9126.63	47.54	47.54	-25.05	0.06	0.00	**8**
80	9-Jun	2:45	9285	63	**9222**	**0.70**	**263.78**	95	9221.63	47.39	47.39	-26.06	0.19	0.18	**9**
81	14-Jun	3:31	9370	63	**9307**	**0.70**	**254.03**	85	9306.62	47.19	47.19	-27.07	0.14	0.00	**11**
82	14-Jun	15:50	9465	63	**9402**	**0.70**	**251.88**	95	9401.62	46.85	46.85	-28.18	0.03	0.00	**11**
83	15-Jun	0:11	9560	63	**9497**	**0.70**	**252.31**	95	9496.61	46.49	46.49	-29.29	0.01	0.00	**11**
84	15-Jun	9:40	9655	63	**9592**	**0.79**	**245.72**	95	9591.60	46.05	46.05	-30.44	0.13	0.09	**11**
85	17-Jun	8:45	9750	63	**9687**	**0.88**	**245.26**	95	9686.59	45.47	45.47	-31.70	0.09	0.09	**12**
86	19-Jun	5:05	9821	63	**9758**	**1.06**	**244.20**	71	9757.58	44.96	44.96	-32.78	0.25	0.25	**13**
87	23-Jun	2:52	9932	63	**9869**	**1.06**	**247.74**	111	9868.56	44.12	44.12	-34.66	0.06	0.00	**14**
88	25-Jun	5:56	10055	89	**9966**	**1.23**	**248.60**	97	9965.54	43.40	43.40	-36.46	0.18	0.18	**15**
89	25-Jun	8:25	10151	89	**10062**	**2.02**	**248.59**	96	10061.50	42.41	42.41	-38.99	0.82	0.82	**15**
90	25-Jun	1:59	10246	89	**10157**	**2.29**	**247.05**	95	10156.43	41.06	41.06	-42.30	0.29	0.28	**15**
91	26-Jun	11:50	10341	89	**10252**	**2.80**	**247.80**	95	10251.34	39.44	39.44	-46.19	0.54	0.54	**15**
92															
93															
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Pason DataHub Deviation Survey 2018/11/01 07:00:02
Well Dossier 1525459656 - NAVAJO WDW 4
#

# Date	Depth	Deviation	Direction	TVD	Horiz	
05/07/2018		185.00	0.20	0.00	0.00	0.00
05/07/2018		304.00	0.20	0.00	0.00	0.00
05/07/2018		422.00	0.40	0.00	0.00	0.00
05/07/2018		541.00	0.10	0.00	0.00	0.00
05/07/2018		664.00	0.60	0.00	0.00	0.00
05/08/2018		759.00	0.40	0.00	0.00	0.00
05/08/2018		949.00	0.20	0.00	0.00	0.00
05/08/2018		1140.00	0.50	0.00	0.00	0.00
05/08/2018		854.00	0.40	0.00	0.00	0.00
05/08/2018		1044.00	0.30	0.00	0.00	0.00
05/08/2018		1236.00	0.60	0.00	0.00	0.00
05/08/2018		1426.00	0.70	0.00	0.00	0.00
05/08/2018		1331.00	0.40	0.00	0.00	0.00
05/09/2018		1520.00	0.80	0.00	0.00	0.00
05/09/2018		1615.00	0.60	0.00	0.00	0.00
05/13/2018		1706.00	0.71	355.10	1796.00	0.00
05/14/2018		1990.00	0.42	359.95	0.00	0.00
05/14/2018		2086.00	0.49	353.60	0.00	0.00
05/14/2018		2181.00	0.40	351.52	0.00	0.00
05/14/2018		2276.00	0.58	346.61	0.00	0.00
05/14/2018		2371.00	0.36	18.96	0.00	0.00
05/15/2018		2561.00	0.53	14.38	0.00	0.00
05/15/2018		2656.00	0.28	25.24	0.00	0.00
05/16/2018		2752.00	0.53	5.81	0.00	0.00
05/16/2018		2942.00	0.20	57.95	0.00	0.00
05/16/2018		2847.00	0.49	51.21	0.00	0.00
05/16/2018		3037.00	0.49	47.06	0.00	0.00
05/16/2018		3132.00	0.63	38.28	0.00	0.00
05/16/2018		3322.00	0.71	13.09	0.00	0.00
05/16/2018		3227.00	0.37	19.42	0.00	0.00
05/17/2018		3417.00	0.68	28.70	0.00	0.00
05/17/2018		3513.00	0.42	350.27	0.00	0.00
05/17/2018		3607.00	0.64	6.61	0.00	0.00
05/17/2018		3702.00	0.53	21.35	0.00	0.00
05/18/2018		3798.00	0.66	11.51	0.00	0.00
05/18/2018		3893.00	0.71	0.94	0.00	0.00
05/18/2018		3988.00	0.51	346.04	0.00	0.00
05/18/2018		4083.00	0.29	358.64	0.00	0.00
05/19/2018		4178.00	0.59	356.30	0.00	0.00
05/19/2018		4273.00	0.30	340.60	0.00	0.00
05/19/2018		4368.00	0.53	11.15	0.00	0.00
05/20/2018		4464.00	0.35	339.52	0.00	0.00
05/20/2018		4682.00	0.50	353.30	0.00	0.00
05/22/2018		4846.00	0.53	350.00	0.00	0.00
05/22/2018		4968.00	0.30	359.80	0.00	0.00
05/23/2018		5036.00	0.49	348.90	0.00	0.00
05/23/2018		5227.00	0.16	303.05	0.00	0.00
05/23/2018		5132.00	0.39	0.89	0.00	0.00

05/25/2018	5318.00	0.21	265.21	0.00	0.00
05/25/2018	5413.00	0.30	331.30	0.00	0.00
05/25/2018	5603.00	0.53	328.30	0.00	0.00
05/25/2018	5508.00	0.20	276.80	0.00	0.00
05/26/2018	5698.00	0.54	319.10	0.00	0.00
05/27/2018	5889.00	0.59	326.89	0.00	0.00
05/27/2018	5984.00	0.70	320.00	6047.00	0.00
05/28/2018	6079.00	0.55	322.86	0.00	0.00
05/28/2018	6147.00	0.68	326.27	0.00	0.00
05/28/2018	6269.00	0.67	318.56	0.00	0.00
05/29/2018	6369.00	0.55	330.54	0.00	0.00
05/29/2018	6464.00	0.64	316.99	0.00	0.00
05/30/2018	6559.00	0.59	312.43	0.00	0.00
05/30/2018	6749.00	0.54	333.59	0.00	0.00
05/30/2018	6844.00	0.35	8.55	0.00	0.00
05/30/2018	6940.00	0.18	298.54	0.00	0.00
05/30/2018	7130.00	0.35	303.56	7193.00	0.00
05/30/2018	7035.00	0.35	338.74	0.00	0.00
05/31/2018	7320.00	0.18	294.74	0.00	0.00
06/01/2018	7415.00	0.35	283.65	0.00	0.00
06/01/2018	7510.00	0.35	263.28	0.00	0.00
06/01/2018	7606.00	0.70	263.63	0.00	0.00
06/02/2018	7796.00	0.50	232.50	0.00	0.00
06/02/2018	7986.00	0.70	218.28	0.00	0.00
06/02/2018	7860.00	0.53	226.40	0.00	0.00
06/02/2018	8081.00	0.88	250.11	0.00	0.00
06/03/2018	8271.00	0.90	0.00	0.00	0.00
06/03/2018	8366.00	0.70	0.00	0.00	0.00
06/03/2018	8557.00	0.50	252.90	0.00	0.00
06/04/2018	8651.00	0.70	246.68	8714.00	0.00
06/04/2018	8842.00	0.53	253.35	8905.00	0.00
06/04/2018	8747.00	0.53	259.24	8810.00	0.00
06/14/2018	9307.00	0.70	254.30	0.00	0.00
06/14/2018	9402.00	0.07	251.88	9465.00	0.00
06/15/2018	9592.00	0.79	245.72	9655.00	0.00
06/19/2018	9758.00	1.06	244.20	0.00	0.00
06/23/2018	9869.00	1.06	247.74	0.00	0.00
06/25/2018	10062.00	2.02	248.59	0.00	0.00
06/26/2018	10157.00	2.30	247.10	0.00	0.00
06/26/2018	10252.00	2.80	247.80	0.00	0.00

EOF

SURVEY DATA CERTIFICATION

PHOENIX TECHNOLOGY SERVICES

Job #:	62575
Client:	WSP USA Inc.
County & State:	Eddy County, NM
Well:	Navajo WDW 4
API No:	3001544677
Proposed Direction:	"0"

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1615.00	1614.95	0.6	0	10.75	0	Gyro
				Data Source Company:		Tele Drift

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
13-May-18	1,706 ft	0.71°	355.10°

Last Survey Date	Last Survey Depth	INC	AZM
26-Jun-18	10,252 ft	2.80°	247.80°

Survey Instrument Type
Phoenix MWD

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
26-Jun-18	10,341 ft	2.80°	247.80°

CORRECTION INFORMATION

Magnetic Declination Used	7.36	degrees
Grid Convergence Used	-0.05	degrees
Total Correction	7.31	degrees

Corrected to True/Grid North
Grid

TO THE BEST OF MY KNOWLEDGE, I CERTIFY THIS SURVEY DATA TO BE TRUE AND CORRECT.

Gary Harmon

Signature

June 29, 2018

Date

9.19 MUD LOG

SELMAN AND ASSOCIATES, LTD.
GEOLOGICAL CONSULTING / SURFACE LOGGING SERVICES
CORPUS CHRISTI TEXAS
P.O. BOX 61150
MIDLAND TEXAS 79711
ROCK SPRINGS WYOMING
OFFICE (432) 563-0084 --- 24 HOURS (800) 578-1006

COMPANY:	WSP					**DRILLING CO:**	PATRIOT
WELL:	WDW-4					**RIG #:**	4
FIELD:	SWD; DEVONIAN					**API:**	30-015-42872
LOCATION:	2310' FNL & 1100' FEL, SEC 28, T-17-S, R-27-E					**GL (FT):**	3565.8
COUNTY:	EDDY	**STATE:**	NM	**LAT:**	32.815814	**DF (FT):**	
INTERVAL:	120'	**TO:**	10400'	**LONG:**	-104.250034	**KB (FT):**	3585.8
DATE:	5/6/2018	**TO:**		**JOB #:**	10150	**UNIT #:**	63
LOGGER(S):	C HILMES A MOHAMMED					**PHONE #:**	432/260-7002

5 INCH IMAGE HYDROCARBON WELL LOG [5" = 100']

CUTTINGS

ANHYDRITE, CHERT, DOLOMITE, LIMESTONE, SILTSTONE
BENTONITE, COAL, GRANITE, SALT, SAND
CALCITE, CONGLOMERATE, GRANITE WASH, SHALE, CEMENT

POROSITY - % FLUORESCENCE - TYPE CUT

NONE, TRACE, FAIR, GOOD

SYMBOLS

FOSSIL
ALGAE, AMPH, BELM, BIOCLST, BRACH, BRYOZOA, CEPHAL, CORAL, CRIN, ECHIN, FISH, FORAM, FOSSIL
OOLITE, OSTRA, PELEC, PELLET, PISOLITE, PLANT, STROM

MINERAL
ANHY, ARG, ARGGRN, BENT, BIT, BRECFRAG
CARB, CHTDK, CHTLT, DOL, FELDSPAR, FERR, FERRPEL, GLAU, GYP, HVYMIN, KAOL, MARL, MINXL, NODULE
PYR, SALT, SANDY, SIL, SILT, SULPHUR, TUFF

TEXTURE
BS BOUNDST, C CHALKY, CX CRXLN, E EARTHY, FX FINEXLN, GS GRAINST
MX MICROXLN, MS MUDST, PS PACKST, WS WACKEST

STRINGER
ANHYSTRG, ARGSTRG, BENTSTRG, COALSTRG, DOLSTRG, GYPSTRG, LSSTRG, MRST, SLTSTRG

GASTRO CALC PHOS LITHOGR SSSTRG

DRILLING INFO

DRILL RATE [MIN/FT]
WOB [kLBS]

DEPTH

SLIDE / ROTATE | POROSITY

CUTTINGS [%]

% FLUORESCENCE | CUT

SampleCam® PHOTOS

LITHOLOGY DESCRIPTIONS AND OTHER REMARKS

GAS ANALYSIS

TOTAL GAS
C1 - METHANE
C2 - ETHANE
C3 - PROPANE
C4 - BUTANE
C5 - PENTANE

GAS

0 | 100 u | 1 % | 10 kppm

0 ROP 7
0 WOB 50

JC

5/6/2018

150

C

WOB 13
RPM 85
PP 266
SPM 105

200

C

250

C

5/7/2018

JL

WOB 13
RPM 85
PP 266
SPM 105

300

MUDLOGGERS ARRIVED ON LOCATION @0600HRS ON 5/5/2018 BHA #1 17.25" MAKE BAKER TYPE 606S S/N 7046740 JETS 9X15

ANHYDRITE: CLR - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY CRSXLN INTXLN POR NO STN NO FLUOR NO CUT SANDSTONE: GYSHORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR LTYL FLUOR NO CUT

DOLOMITE: MLKY - OFF WH CRSXLN INTXLN POR NO STN LTYL FLUOR NO CUT ANHYDRITE: OPQ - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: MLKY - OFF WH CRSXLN INTXLN POR NO STN LTYL FLUOR NO CUT ANHYDRITE: OPQ - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY CRSXLN INTXLN POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: GYSHORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY CRSXLN INTXLN POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: GYSHORPK - MODRDBN CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - TR MODPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - GYSHORPK CRS GRN SUBANG MOD SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - GYSHPK FXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - GYSHORPK CRS GRN SUBANG MOD SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - GYSHORPK MICROXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - MODORPK CRS GRN SUBANG

FID CALIBRATED TO STANDARDS

1u

WT N/R VIS N/R

LAG CALCULATED @150' 430 STKS OR 4 MINS @ 105 SPM

1u

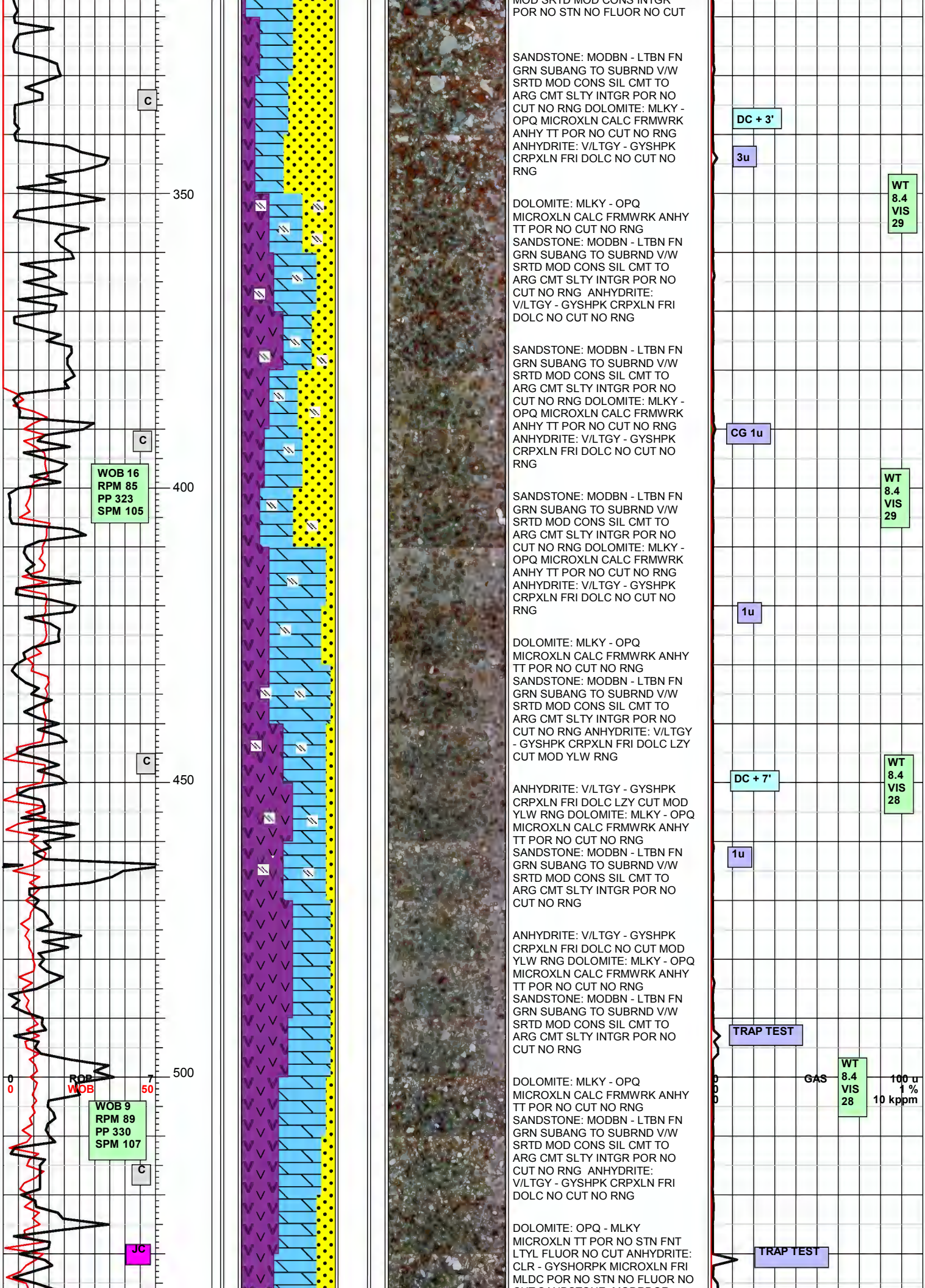
WT N/R VIS N/R

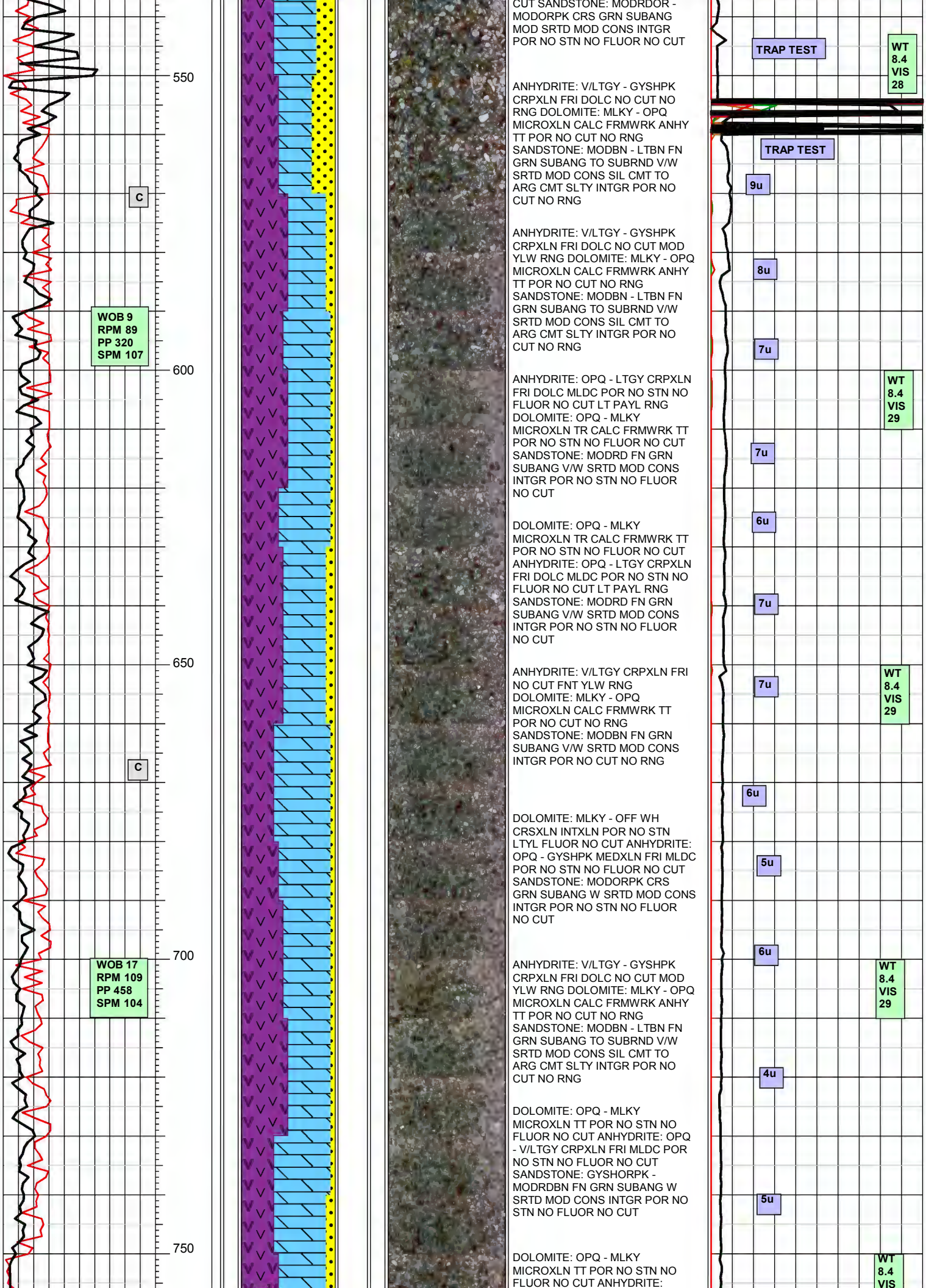
1u

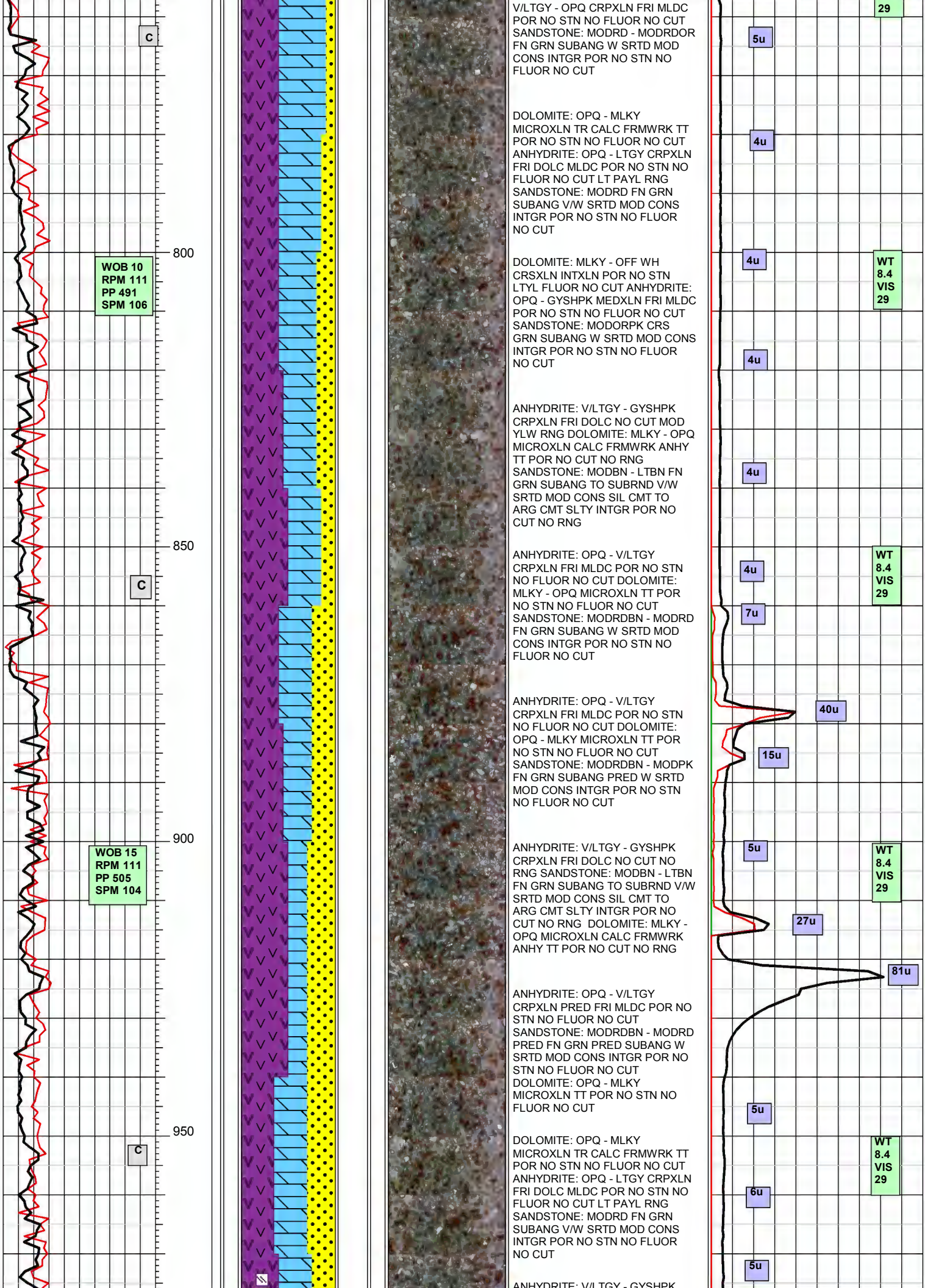
WT N/R VIS N/R

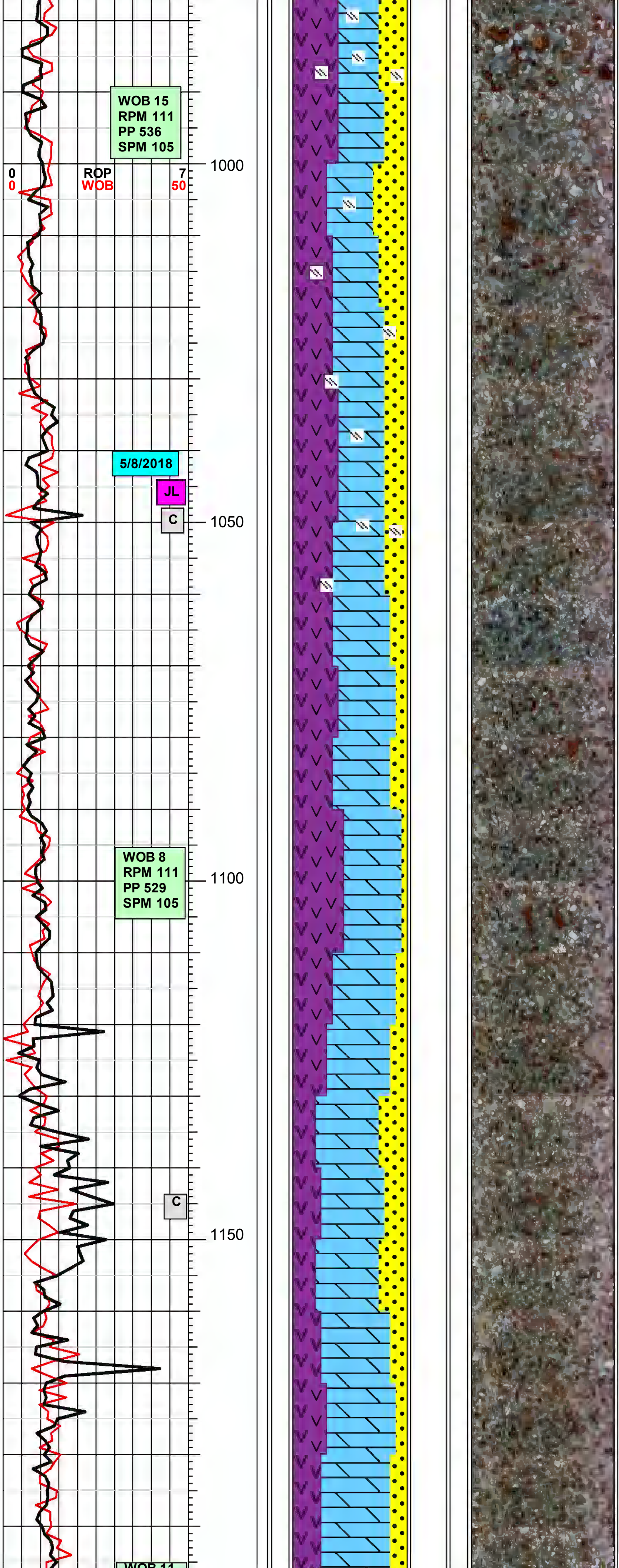
1u

WT 8.4 VIS 29


C
350
C
WOB 16
RPM 85
PP 323
SPM 105
400
C
450
0
0
ROP
WOB
7
50
500
WOB 9
RPM 89
PP 330
SPM 107
C
JC
MOD SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
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SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
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ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC LZY CUT MOD YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MOD YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN FNT LTYL FLUOR NO CUT ANHYDRITE: CLR - GYSHORPK MICROXLN FRI MLDC POR NO STN NO FLUOR NO
DC + 3'
3u
WT 8.4 VIS 29
CG 1u
WT 8.4 VIS 29
1u
DC + 7'
WT 8.4 VIS 28
1u
TRAP TEST
0
0
0
GAS
WT 8.4 VIS 28
100 u
1 %
10 kppm
TRAP TEST


550
C
WOB 9
RPM 89
PP 320
SPM 107
600
650
C
700
WOB 17
RPM 109
PP 458
SPM 104
750
CUT SANDSTONE: MODRDOR - MODORPK CRS GRN SUBANG MOD SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MOD YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
ANHYDRITE: OPQ - LTGY CRPXLN FRI DOLC MLDC POR NO STN NO FLUOR NO CUT LT PAYL RNG DOLOMITE: OPQ - MLKY MICROXLN TR CALC FRMWRK TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRD FN GRN SUBANG V/W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TR CALC FRMWRK TT POR NO STN NO FLUOR NO CUT ANHYDRITE: OPQ - LTGY CRPXLN FRI DOLC MLDC POR NO STN NO FLUOR NO CUT LT PAYL RNG SANDSTONE: MODRD FN GRN SUBANG V/W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY CRPXLN FRI NO CUT FNT YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK TT POR NO CUT NO RNG SANDSTONE: MODBN FN GRN SUBANG V/W SRTD MOD CONS INTGR POR NO CUT NO RNG
DOLOMITE: MLKY - OFF WH CRSXLN INTXLN POR NO STN LTYL FLUOR NO CUT ANHYDRITE: OPQ - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MOD YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT ANHYDRITE: OPQ - V/LTGY CRPXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: GYSHORPK - MODRDBN FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT ANHYDRITE:
TRAP TEST
WT 8.4 VIS 28
TRAP TEST
9u
8u
7u
WT 8.4 VIS 29
7u
6u
7u
WT 8.4 VIS 29
6u
5u
6u
WT 8.4 VIS 29
4u
5u
WT 8.4 VIS


C
800
WOB 10
RPM 111
PP 491
SPM 106
850
C
900
WOB 15
RPM 111
PP 505
SPM 104
950
C
V/LTGY - OPQ CRPXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODRD - MODRDOR FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TR CALC FRMWRK TT POR NO STN NO FLUOR NO CUT ANHYDRITE: OPQ - LTGY CRPXLN FRI DOLC MLDC POR NO STN NO FLUOR NO CUT LT PAYL RNG SANDSTONE: MODRD FN GRN SUBANG V/W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
DOLOMITE: MLKY - OFF WH CRSXLN INTXLN POR NO STN LTYL FLUOR NO CUT ANHYDRITE: OPQ - GYSHPK MEDXLN FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODORPK CRS GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MOD YLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG
ANHYDRITE: OPQ - V/LTGY CRPXLN FRI MLDC POR NO STN NO FLUOR NO CUT DOLOMITE: MLKY - OPQ MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN - MODRD FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: OPQ - V/LTGY CRPXLN FRI MLDC POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN - MODPK FN GRN SUBANG PRED W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG
ANHYDRITE: OPQ - V/LTGY CRPXLN PRED FRI MLDC POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN - MODRD PRED FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TR CALC FRMWRK TT POR NO STN NO FLUOR NO CUT ANHYDRITE: OPQ - LTGY CRPXLN FRI DOLC MLDC POR NO STN NO FLUOR NO CUT LT PAYL RNG SANDSTONE: MODRD FN GRN SUBANG V/W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT
ANHYDRITE: V/LTGY - GYSHPK
29
5u
4u
4u
4u
WT 8.4 VIS 29
4u
7u
40u
15u
5u
27u
81u
WT 8.4 VIS 29
WT 8.4 VIS 29
6u
5u



ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN TR CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

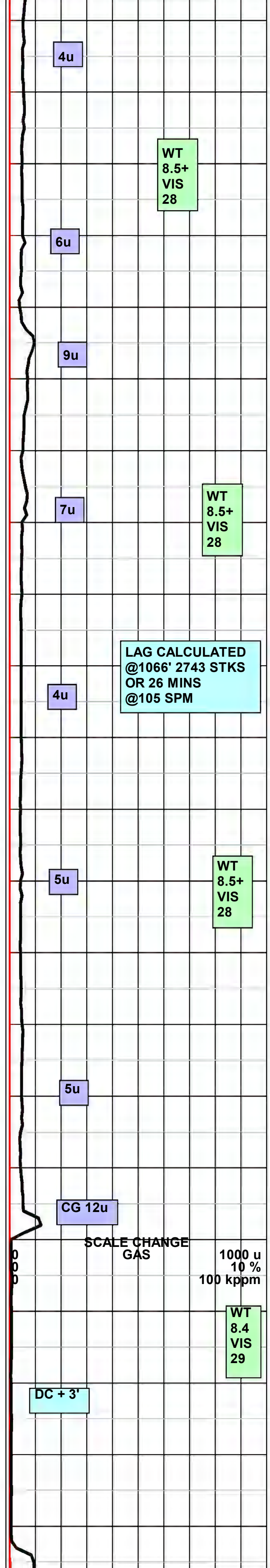
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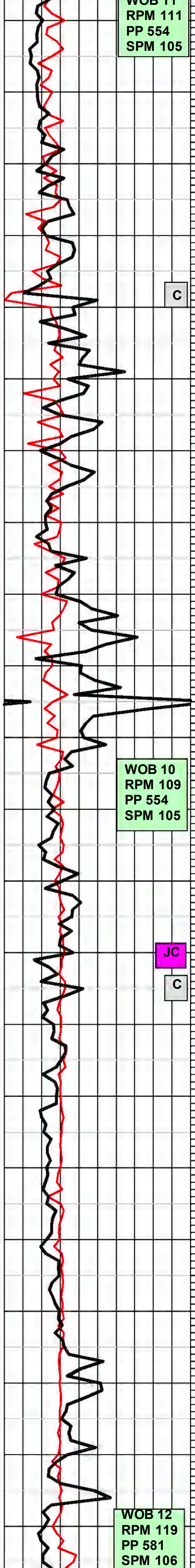
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN TR CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN TR CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG





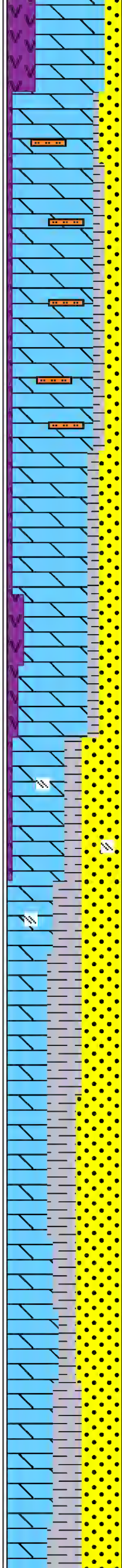
1200

1250

1300

1350

1400





DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG

DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG

DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG

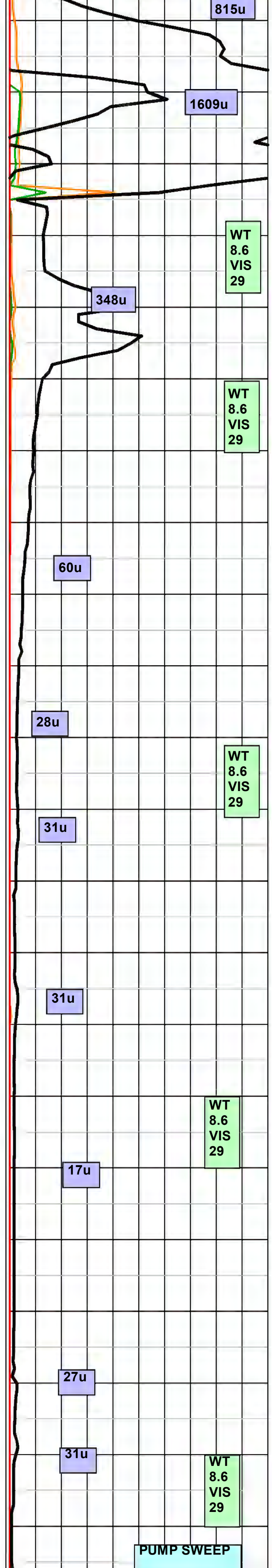
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG

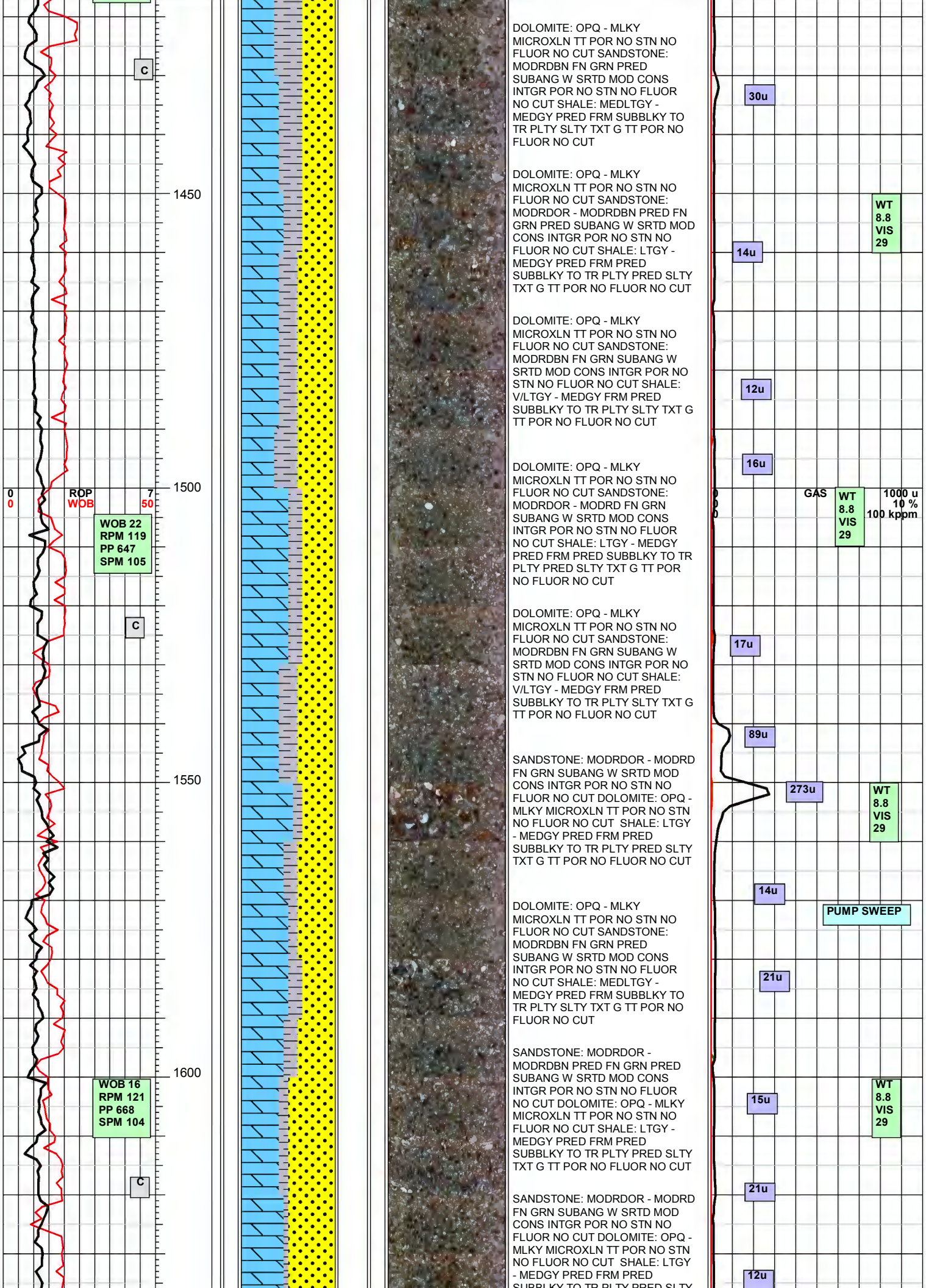
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG

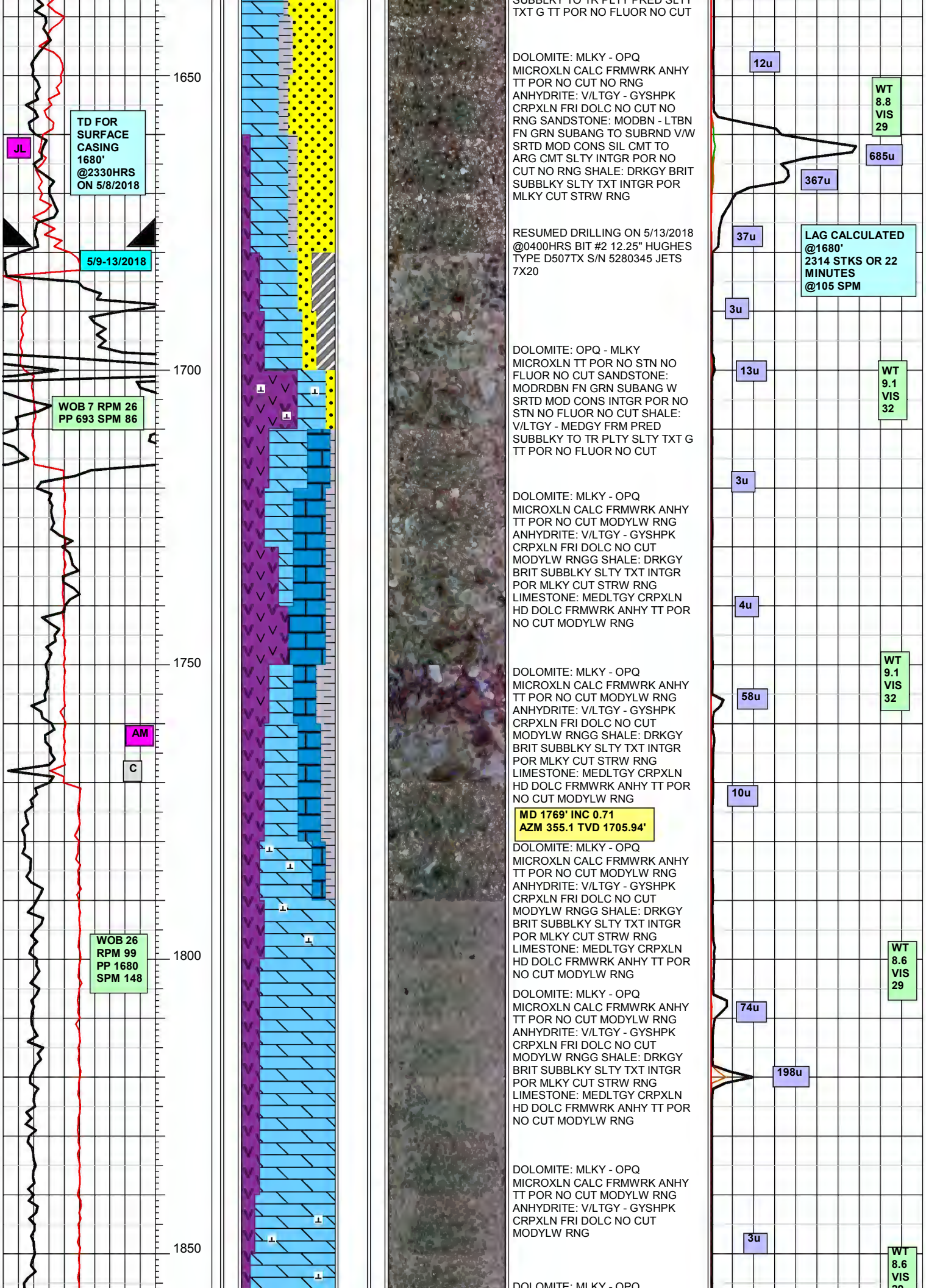
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: V/LTGY - MEDGY FRM PRED SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT

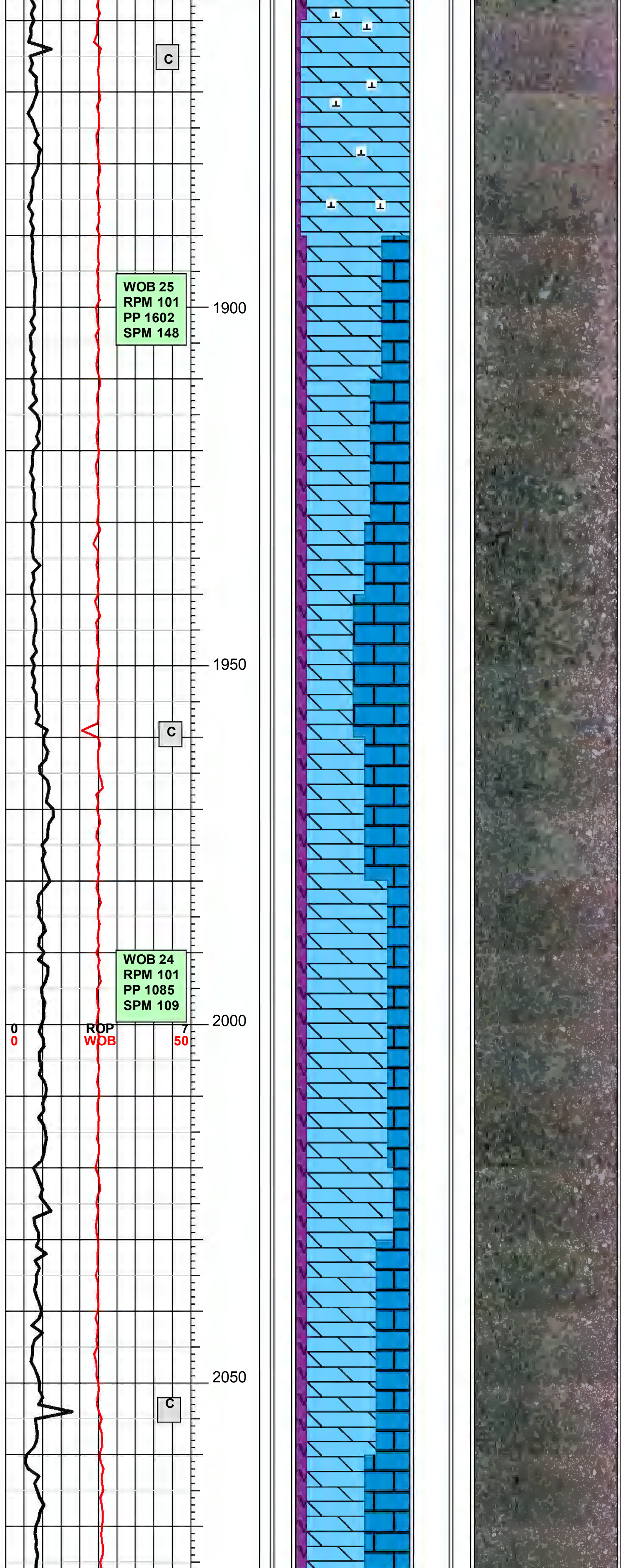
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: MEDLTGY - MEDGY PRED FRM SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT

DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - MODRD FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED SUBBLKY TO TR PLTY PRED SLTY TXT G TT POR NO FLUOR NO CUT




C
1450
0
ROP
WOB
7
50
1500
WOB 22
RPM 119
PP 647
SPM 105
C
1550
1600
WOB 16
RPM 121
PP 668
SPM 104
C
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: MEDLTGY - MEDGY PRED FRM SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - MODRDBN PRED FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED SUBBLKY TO TR PLTY PRED SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: V/LTGY - MEDGY FRM PRED SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDOR - MODRD FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED SUBBLKY TO TR PLTY PRED SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: V/LTGY - MEDGY FRM PRED SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT
SANDSTONE: MODRDOR - MODRD FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED SUBBLKY TO TR PLTY PRED SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: MEDLTGY - MEDGY PRED FRM SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT
SANDSTONE: MODRDOR - MODRDBN PRED FN GRN PRED SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED SUBBLKY TO TR PLTY PRED SLTY TXT G TT POR NO FLUOR NO CUT
SANDSTONE: MODRDOR - MODRD FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SHALE: LTGY - MEDGY PRED FRM PRED
30u
WT 8.8 VIS 29
14u
12u
16u
0
0
GAS
WT 8.8 VIS 29
1000 u
10 %
100 kppm
17u
89u
273u
WT 8.8 VIS 29
14u
PUMP SWEEP
21u
WT 8.8 VIS 29
15u
21u
12u


1650
1700
1750
1800
1850
JL
TD FOR SURFACE CASING 1680' @2330HRS ON 5/8/2018
5/9-13/2018
WOB 7 RPM 26 PP 693 SPM 86
AM
C
WOB 26 RPM 99 PP 1680 SPM 148
TXT G TT POR NO FLUOR NO CUT
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG SANDSTONE: MODBN - LTBN FN GRN SUBANG TO SUBRND V/W SRTD MOD CONS SIL CMT TO ARG CMT SLTY INTGR POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
RESUMED DRILLING ON 5/13/2018 @0400HRS BIT #2 12.25" HUGHES TYPE D507TX S/N 5280345 JETS 7X20
DOLOMITE: OPQ - MLKY MICROXLN TT POR NO STN NO FLUOR NO CUT SANDSTONE: MODRDBN FN GRN SUBANG W SRTD MOD CONS INTGR POR NO STN NO FLUOR NO CUT SHALE: V/LTGY - MEDGY FRM PRED SUBBLKY TO TR PLTY SLTY TXT G TT POR NO FLUOR NO CUT
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNGG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNGG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
MD 1769' INC 0.71 AZM 355.1 TVD 1705.94'
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNGG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNGG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNG
12u
WT 8.8 VIS 29
685u
367u
37u
LAG CALCULATED @1680' 2314 STKS OR 22 MINUTES @105 SPM
3u
13u
WT 9.1 VIS 32
3u
4u
WT 9.1 VIS 32
58u
10u
WT 8.6 VIS 29
74u
198u
3u
WT 8.6 VIS



DOLOMITE: MLKY - OPQ
MICROXLN V/CALC FRMWRK
ANHY TT POR NO CUT MODYLW
RNG ANHYDRITE: V/LTGY -
GYSHPK CRPXLN FRI DOLC NO
CUT MODYLW RNG

MD 1863' INC 0.77
AZM 16.24 TVD 1799.94'

DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG DOLOMITE: MLKY -
OPQ MICROXLN CALC FRMWRK
ANHY TT POR NO CUT MODYLW
RNG

MD 1958' INC 0.57
AZM 352.28 TVD 1894.93'

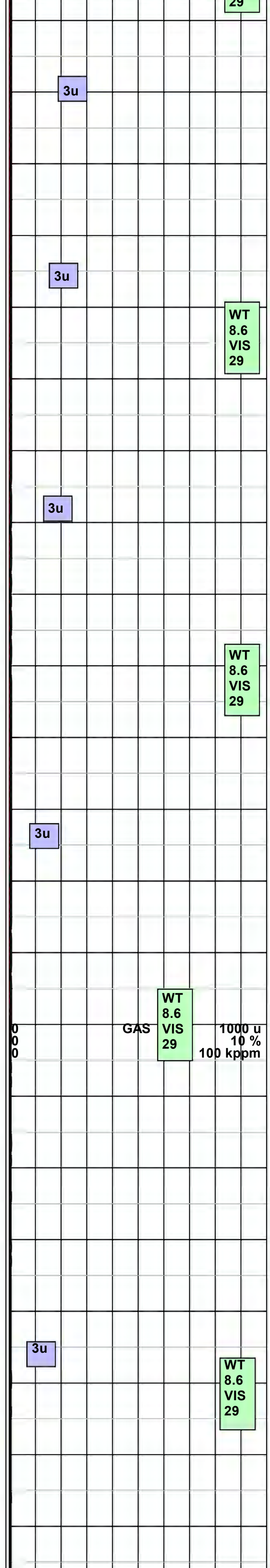
DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

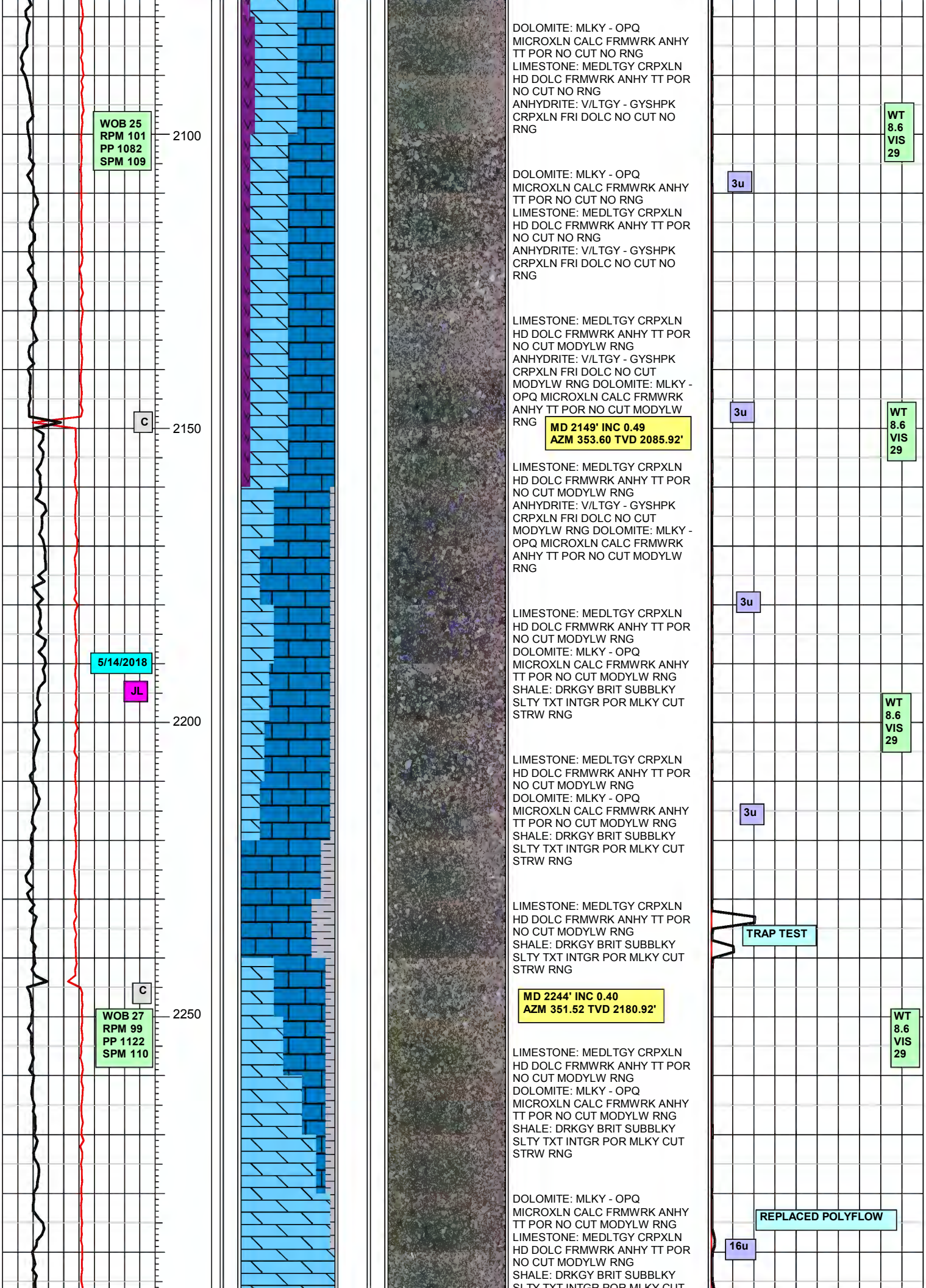
DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

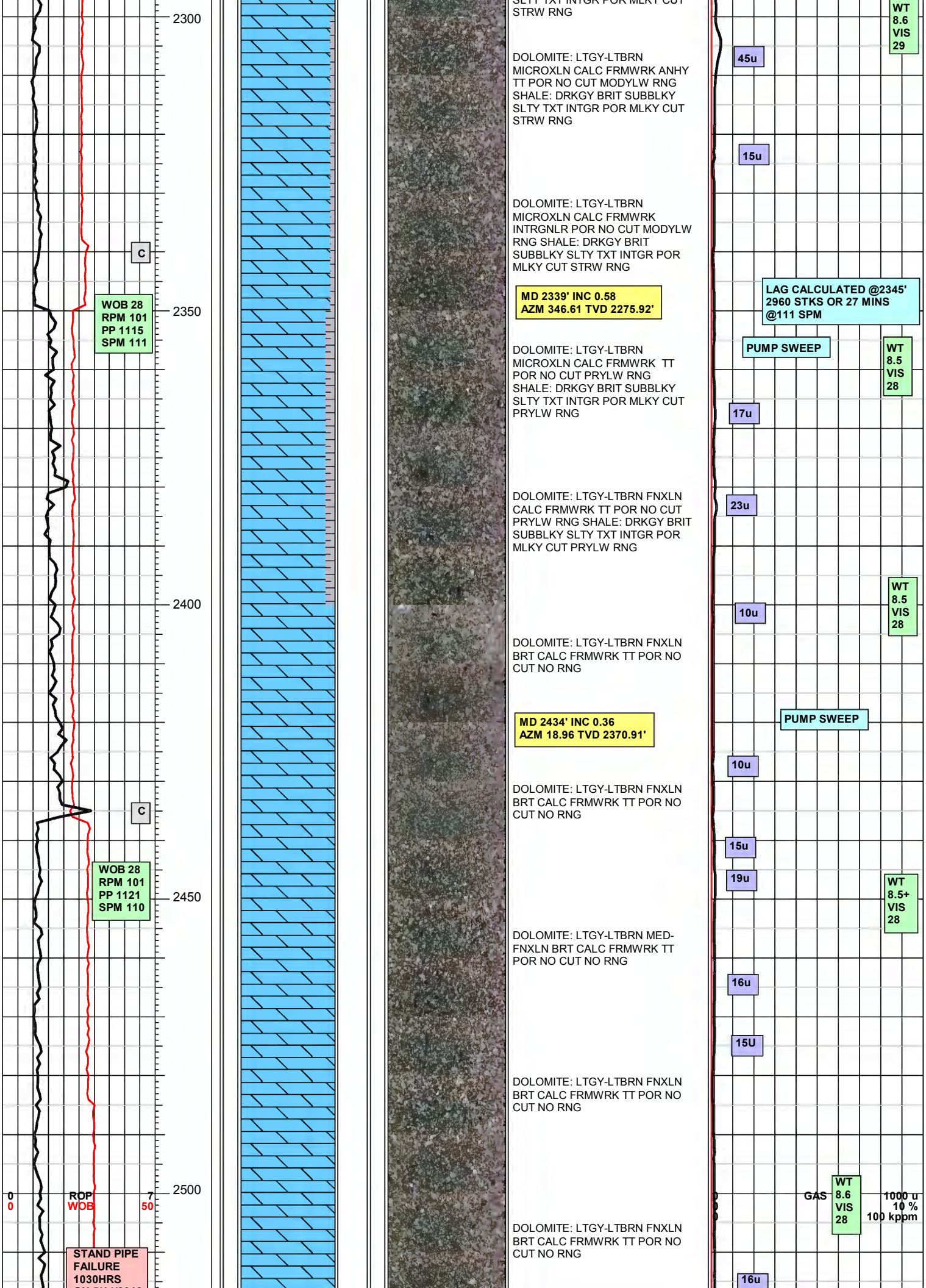
DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT
MODYLW RNG

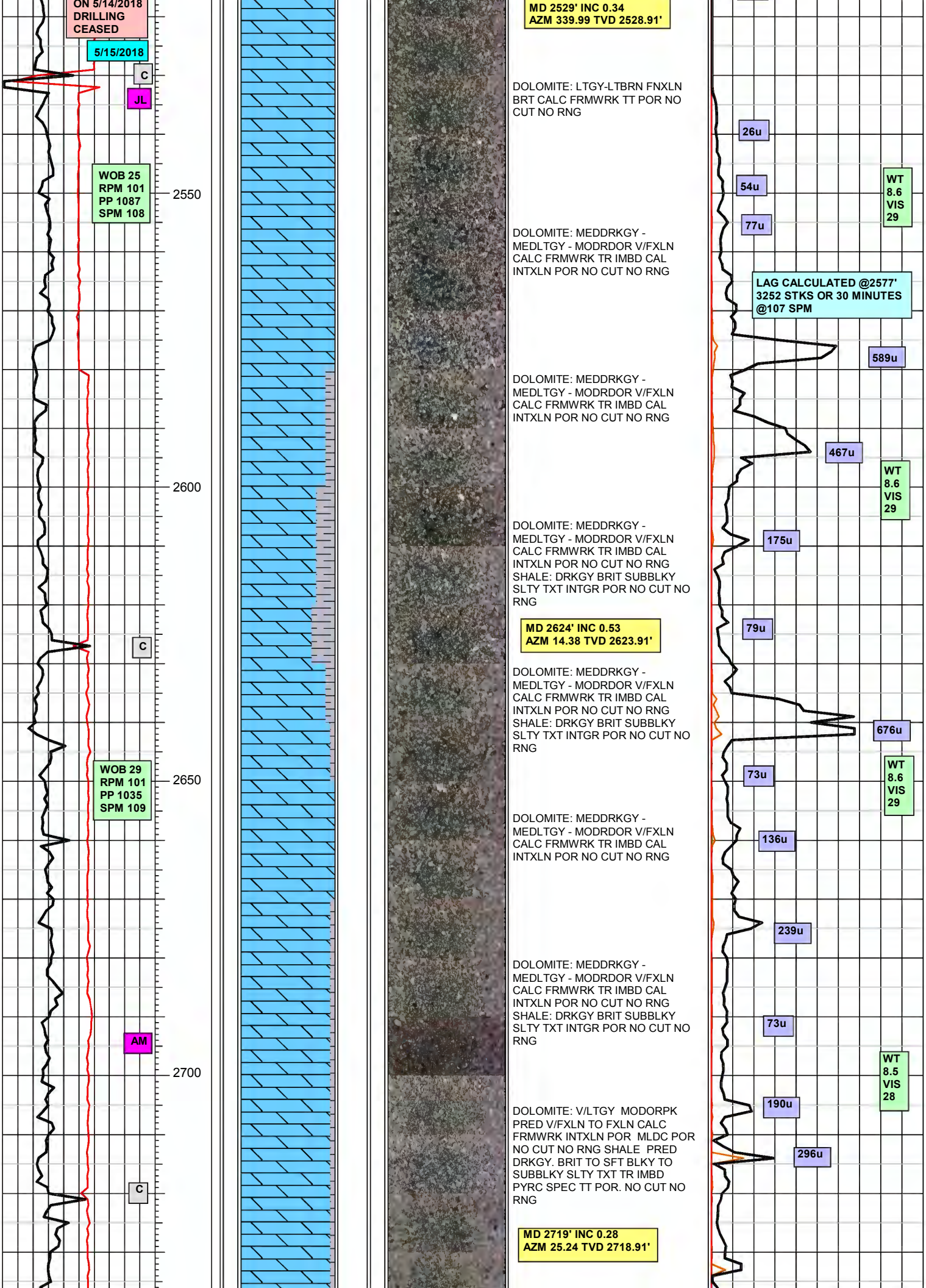
MD 2053' INC 0.42
AZM 359.95 TVD 1989.93'

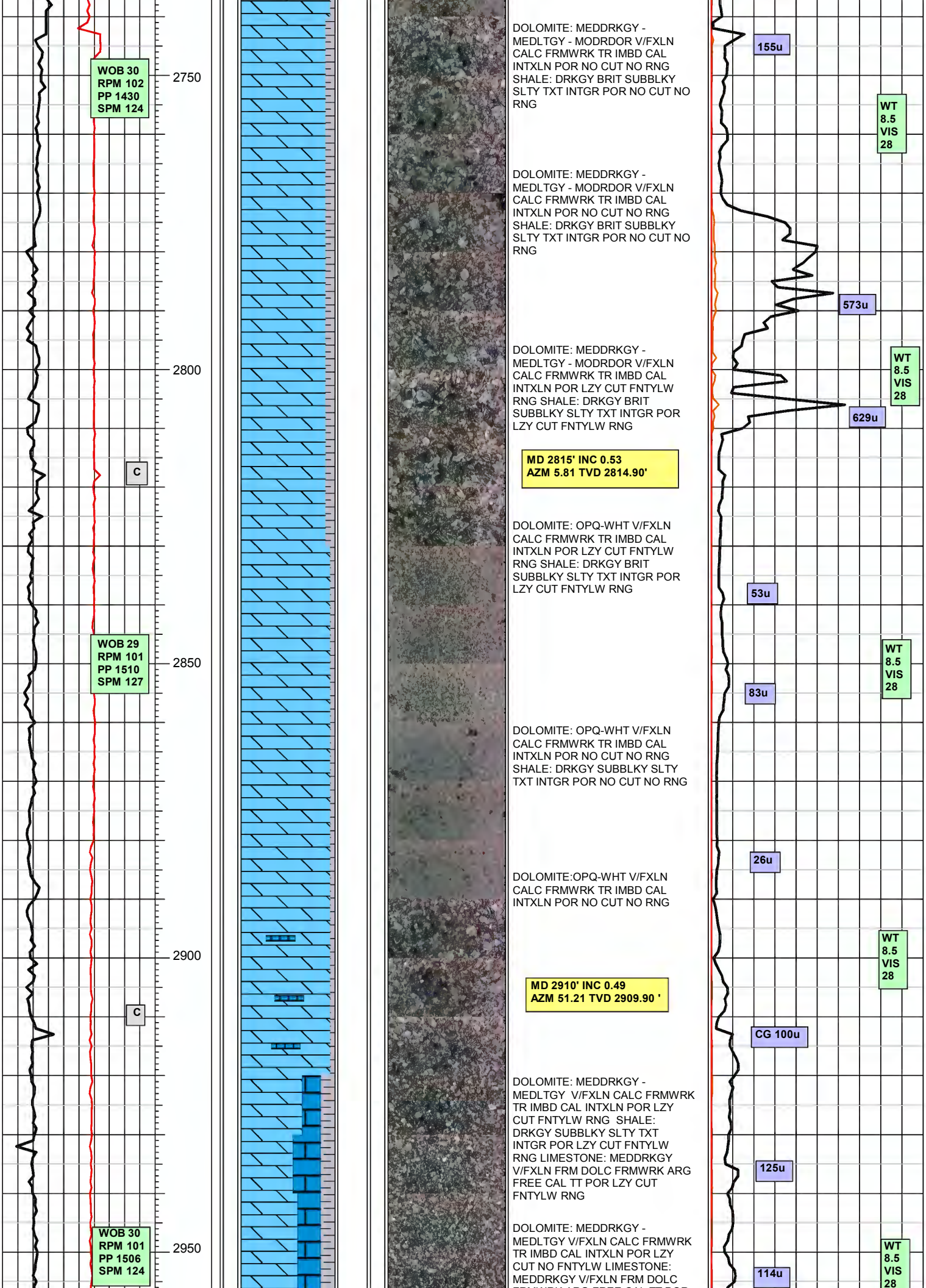
DOLOMITE: MLKY - OPQ
MICROXLN CALC FRMWRK ANHY
TT POR NO CUT NO RNG
LIMESTONE: MEDLTGY CRPXLN
HD DOLC FRMWRK ANHY TT POR
NO CUT NO RNG
ANHYDRITE: V/LTGY - GYSHPK
CRPXLN FRI DOLC NO CUT NO
RNG

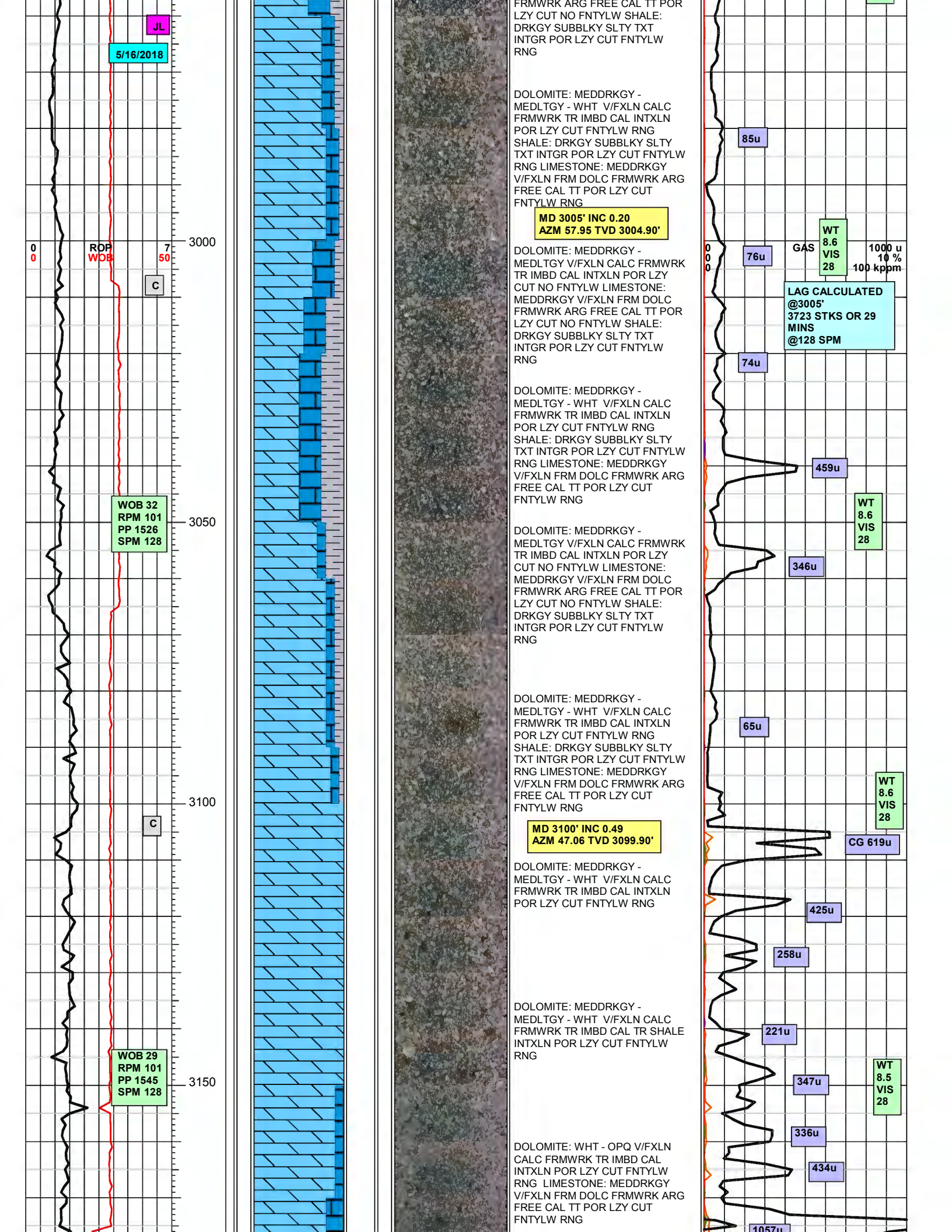


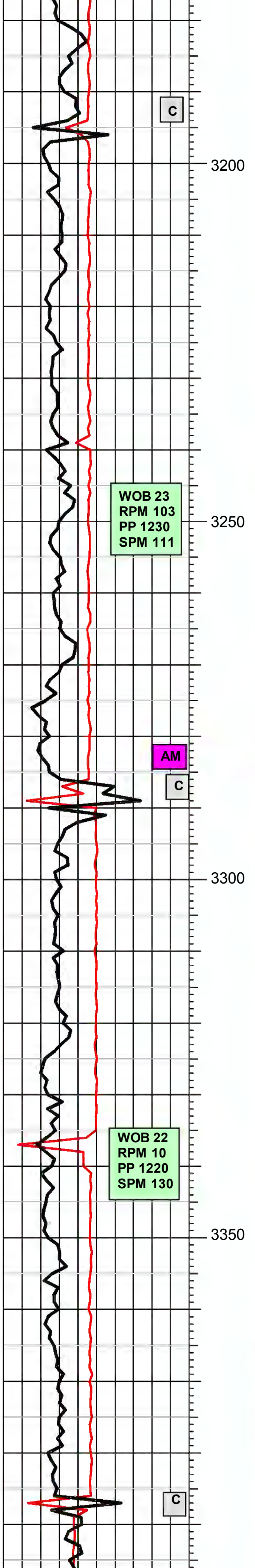

WOB 25
RPM 101
PP 1082
SPM 109
2100
C
2150
5/14/2018
JL
2200
C
WOB 27
RPM 99
PP 1122
SPM 110
2250
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT NO RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT NO RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT NO RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT NO RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
MD 2149' INC 0.49
AZM 353.60 TVD 2085.92'
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
ANHYDRITE: V/LTGY - GYSHPK CRPXLN FRI DOLC NO CUT MODYLW RNG DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
MD 2244' INC 0.40
AZM 351.52 TVD 2180.92'
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
DOLOMITE: MLKY - OPQ MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG
LIMESTONE: MEDLTGY CRPXLN HD DOLC FRMWRK ANHY TT POR NO CUT MODYLW RNG
SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT
WT 8.6 VIS 29
3u
3u
WT 8.6 VIS 29
3u
WT 8.6 VIS 29
3u
TRAP TEST
WT 8.6 VIS 29
REPLACED POLYFLOW
16u

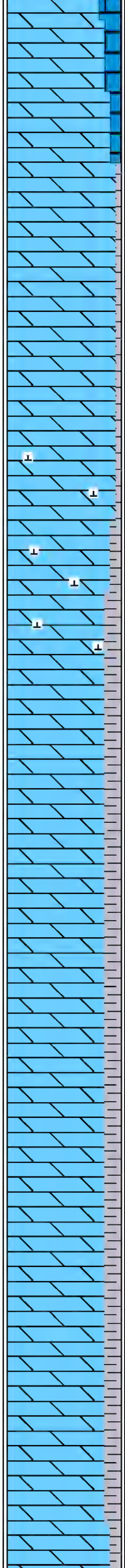

2300
2350
2400
2450
2500
C
C
WOB 28
RPM 101
PP 1115
SPM 111
WOB 28
RPM 101
PP 1121
SPM 110
0
0
ROP
WOB
7
50
STAND PIPE
FAILURE
1030HRS
STRW RNG
DOLOMITE: LTGY-LTBRN MICROXLN CALC FRMWRK ANHY TT POR NO CUT MODYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
DOLOMITE: LTGY-LTBRN MICROXLN CALC FRMWRK INTRGNLR POR NO CUT MODYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT STRW RNG
MD 2339' INC 0.58
AZM 346.61 TVD 2275.92'
DOLOMITE: LTGY-LTBRN MICROXLN CALC FRMWRK TT POR NO CUT PRYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT PRYLW RNG
DOLOMITE: LTGY-LTBRN FNXLN CALC FRMWRK TT POR NO CUT PRYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR MLKY CUT PRYLW RNG
DOLOMITE: LTGY-LTBRN FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
MD 2434' INC 0.36
AZM 18.96 TVD 2370.91'
DOLOMITE: LTGY-LTBRN FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
DOLOMITE: LTGY-LTBRN MED-FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
DOLOMITE: LTGY-LTBRN FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
DOLOMITE: LTGY-LTBRN FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
WT 8.6 VIS 29
45u
15u
LAG CALCULATED @2345' 2960 STKS OR 27 MINS @111 SPM
PUMP SWEEP
WT 8.5 VIS 28
17u
23u
10u
WT 8.5 VIS 28
PUMP SWEEP
10u
15u
19u
WT 8.5+ VIS 28
16u
15U
GAS
WT 8.6 VIS 28
1000 u
10 %
100 kppm
16u


ON 5/14/2018
DRILLING
CEASED
5/15/2018
C
JL
WOB 25
RPM 101
PP 1087
SPM 108
2550
2600
C
WOB 29
RPM 101
PP 1035
SPM 109
2650
AM
2700
C
MD 2529' INC 0.34
AZM 339.99 TVD 2528.91'
DOLOMITE: LTGY-LTBRN FNXLN BRT CALC FRMWRK TT POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
MD 2624' INC 0.53
AZM 14.38 TVD 2623.91'
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
DOLOMITE: V/LTGY MODORPK PRED V/FXLN TO FXLN CALC FRMWRK INTXLN POR MLDC POR NO CUT NO RNG SHALE PRED DRKGY. BRIT TO SFT BLKY TO SUBBLKY SLTY TXT TR IMBD PYRC SPEC TT POR. NO CUT NO RNG
MD 2719' INC 0.28
AZM 25.24 TVD 2718.91'
26u
54u
77u
WT 8.6 VIS 29
LAG CALCULATED @2577'
3252 STKS OR 30 MINUTES
@107 SPM
589u
467u
WT 8.6 VIS 29
175u
79u
676u
73u
WT 8.6 VIS 29
136u
239u
73u
WT 8.5 VIS 28
190u
296u


WOB 30
RPM 102
PP 1430
SPM 124
2750
2800
C
WOB 29
RPM 101
PP 1510
SPM 127
2850
2900
C
WOB 30
RPM 101
PP 1506
SPM 124
2950
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
DOLOMITE: MEDDRKGY - MEDLTGY - MODRDOR V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
MD 2815' INC 0.53
AZM 5.81 TVD 2814.90'
DOLOMITE: OPQ-WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY BRIT SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: OPQ-WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR NO CUT NO RNG
DOLOMITE:OPQ-WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR NO CUT NO RNG
MD 2910' INC 0.49
AZM 51.21 TVD 2909.90 '
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC
155u
WT 8.5 VIS 28
573u
WT 8.5 VIS 28
629u
53u
WT 8.5 VIS 28
83u
26u
WT 8.5 VIS 28
CG 100u
125u
114u
WT 8.5 VIS 28


JL
5/16/2018
0
0
ROP
WOB
7
50
3000
C
WOB 32
RPM 101
PP 1526
SPM 128
3050
3100
C
WOB 29
RPM 101
PP 1545
SPM 128
3150
FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY - WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG
MD 3005' INC 0.20
AZM 57.95 TVD 3004.90'
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY - WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY - WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG
MD 3100' INC 0.49
AZM 47.06 TVD 3099.90'
DOLOMITE: MEDDRKGY - MEDLTGY - WHT V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY - WHT V/FXLN CALC FRMWRK TR IMBD CAL TR SHALE INTXLN POR LZY CUT FNTYLW RNG
DOLOMITE: WHT - OPQ V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG
85u
WT 8.6 VIS 28
0
0
0
76u
GAS
1000 u
10 %
100 kppm
LAG CALCULATED @3005' 3723 STKS OR 29 MINS @128 SPM
74u
459u
WT 8.6 VIS 28
346u
65u
WT 8.6 VIS 28
CG 619u
425u
258u
221u
347u
WT 8.5 VIS 28
336u
434u
1057u







DOLOMITE: WHT - OPQ V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT FNTYLW RNG

MD 3195' INC 0.63
AZM 38.28 TVD 3131.89'

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT SCAT PYR INTGR POR LZY CUT FNTYLW RNG

DOLOMITE: ORN - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT SCAT PYR INTGR POR LZY CUT FNTYLW RNG

MD 3290' INC 0.37
AZM 19.42 TVD 3289.89'

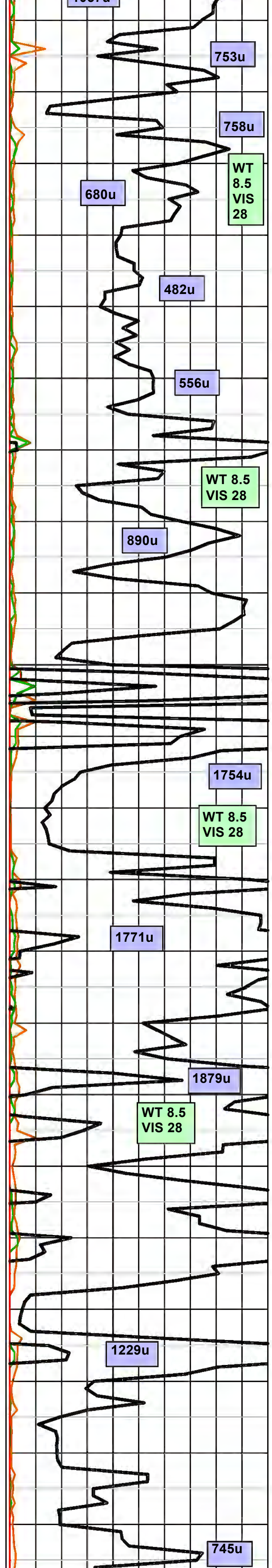
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

MD 3385' INC 0.71
AZM 13.09 TVD 3384.88'

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR



LZY CUT FNTYLW RNG

3400

WT
8.5
VIS
28

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

226u

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

151u

WOB 21
RPM 101
PP 1019
SPM 130

3450

WT
8.5
VIS
28

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

143u

MD 3480' INC 0.68
AZM 28.70 TVD 3479.87'

168u

C

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

112u

0 ROP 7
0 WOB 50

3500

0
0
0
GAS
1000 u
10 %
100 kppm

WT
8.5
VIS
28

118u

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

JL

5/17/2018

98u

111u

DOLOMITE: WHT - OPQ -LTOR V/FXLN CALC FRMWRK TR IMBD CAL TT POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR TR PYR LZY CUT FNTYLW RNG

98u

WOB 20
RPM 103
PP 1277
SPM 148

3550

WT
8.5
VIS
28

MD 3576' INC 0.42
AZM 350.27 TVD 3575.87'

98u

DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR TR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT PYR INTGR POR LZY CUT FNTYLW RNG

159u

C

CG 176u

182u

DOLOMITE: WHT - OPQ -LTOR V/FXLN CALC FRMWRK TR IMBD CAL TT POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR TR PYR LZY CUT FNTYLW RNG

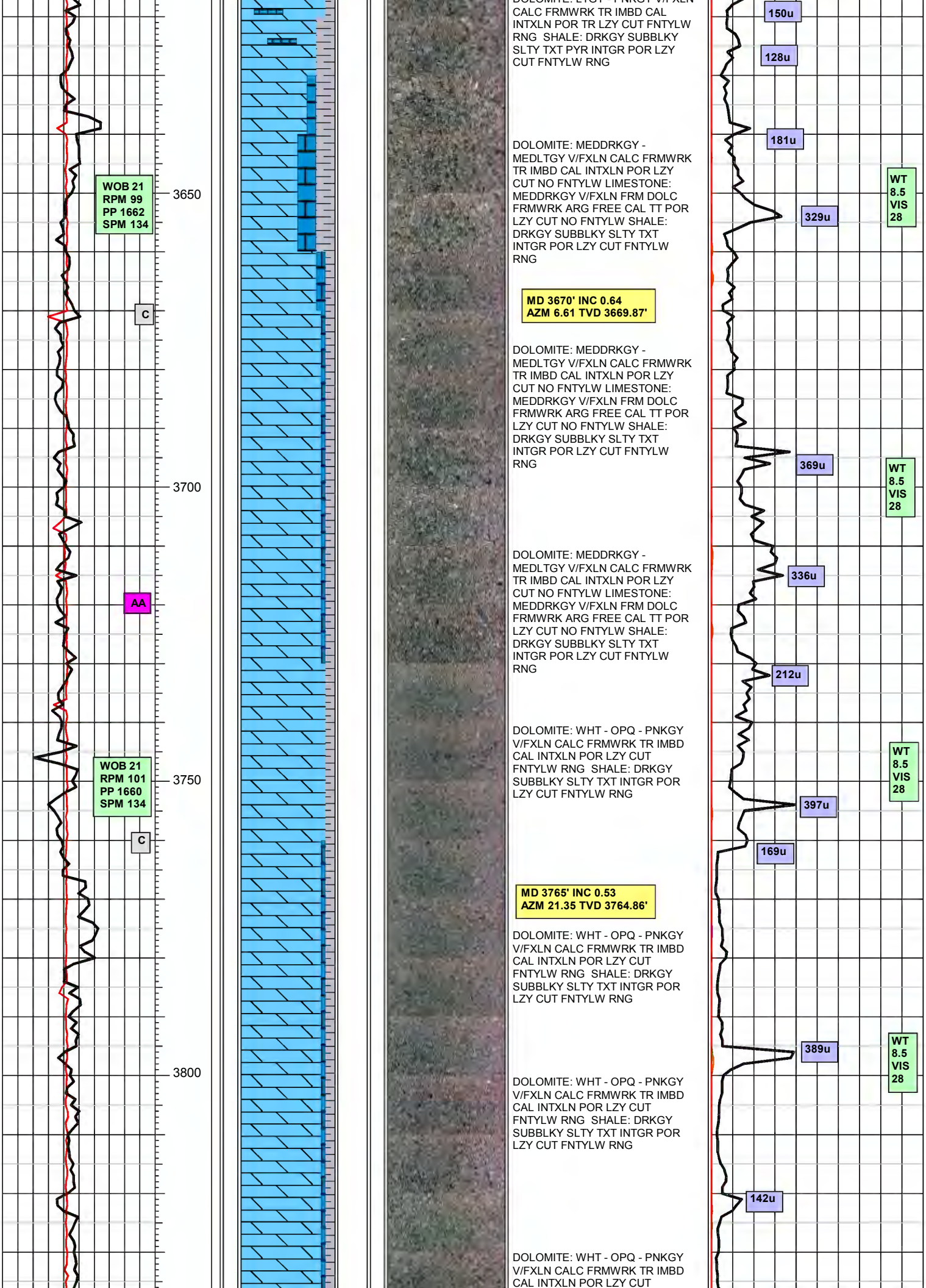
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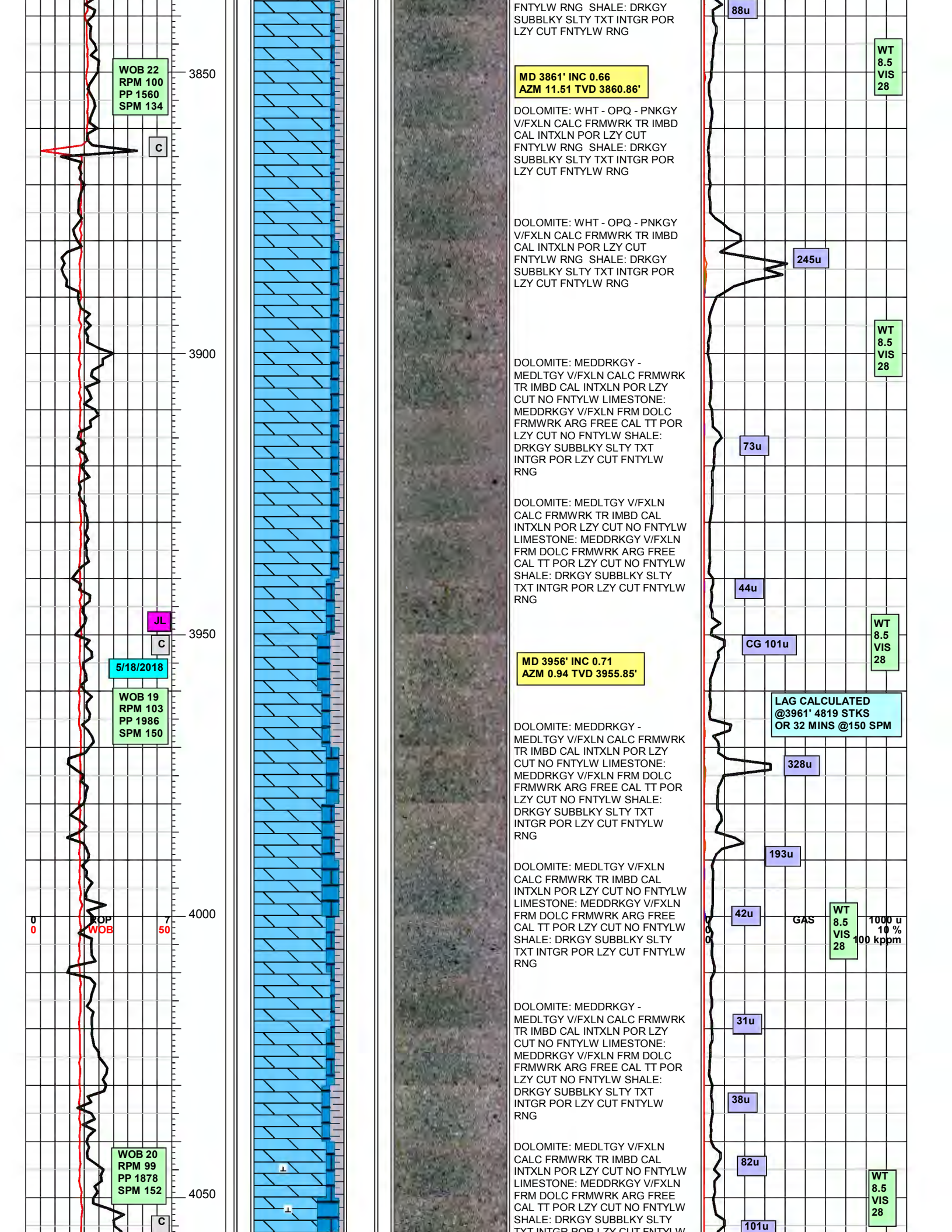
WT
8.5
VIS
28

124u

138u

DOLOMITE: LTGY - PNKGY V/FXLN


WOB 21
RPM 99
PP 1662
SPM 134
3650
C
3700
AA
WOB 21
RPM 101
PP 1660
SPM 134
3750
C
3800
DOLOMITE: LTGY - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR TR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT PYR INTGR POR LZY CUT FNTYLW RNG
150u
128u
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
181u
329u
WT 8.5 VIS 28
MD 3670' INC 0.64
AZM 6.61 TVD 3669.87'
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
369u
WT 8.5 VIS 28
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
336u
212u
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
WT 8.5 VIS 28
397u
169u
MD 3765' INC 0.53
AZM 21.35 TVD 3764.86'
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
389u
WT 8.5 VIS 28
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
142u
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT


WOB 22
RPM 100
PP 1560
SPM 134
C
3850
3900
JL
C
5/18/2018
WOB 19
RPM 103
PP 1986
SPM 150
3950
4000
0
0
ROP
WOB
7
50
WOB 20
RPM 99
PP 1878
SPM 152
C
4050
FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
MD 3861' INC 0.66
AZM 11.51 TVD 3860.86'
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: WHT - OPQ - PNKGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT FNTYLW RNG SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
MD 3956' INC 0.71
AZM 0.94 TVD 3955.85'
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG
88u
WT 8.5 VIS 28
245u
WT 8.5 VIS 28
73u
44u
CG 101u
WT 8.5 VIS 28
LAG CALCULATED @3961' 4819 STKS OR 32 MINS @150 SPM
328u
193u
0
0
0
42u
GAS
WT 8.5 VIS 28
1000 u
10 %
100 kppm
31u
38u
82u
WT 8.5 VIS 28
101u

TXT INTGR POR LZY CUT FNTYLW
RNG

AM

MD 4051' INC 0.5
AZM 346.04 TVD 4050.85'

53u

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

132u

DOLOMITE: MEDDRKGY - MEDLTGY V/FXLN CALC FRMWRK TR IMBD CAL INTXLN POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

4100

WT 8.5 VIS 28

83u

AQUIREIT FROZE

WOB 20
RPM 99
PP 1878
SPM 152

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

C

32u

WT 8.5 VIS 28

4150

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

49u

WT 8.5 VIS 28

4200

DOLOMITE: MLKY FXLN CALC FRMWRK. IMBD CAL FREE CAL MLDC POR MLKY CUT. NO RNG FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

WOB 22
RPM 101
PP 1880
SPM 123

95u

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

83u

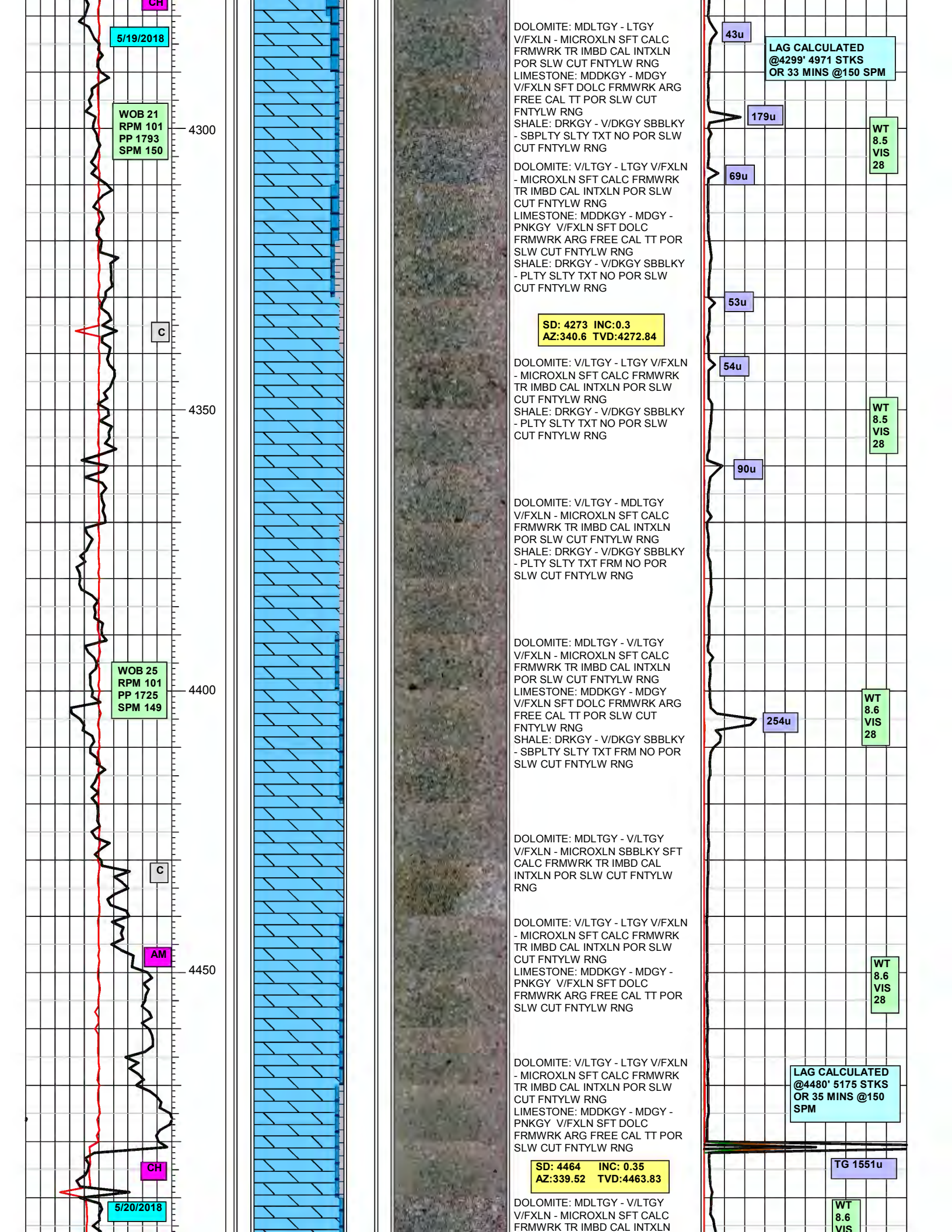
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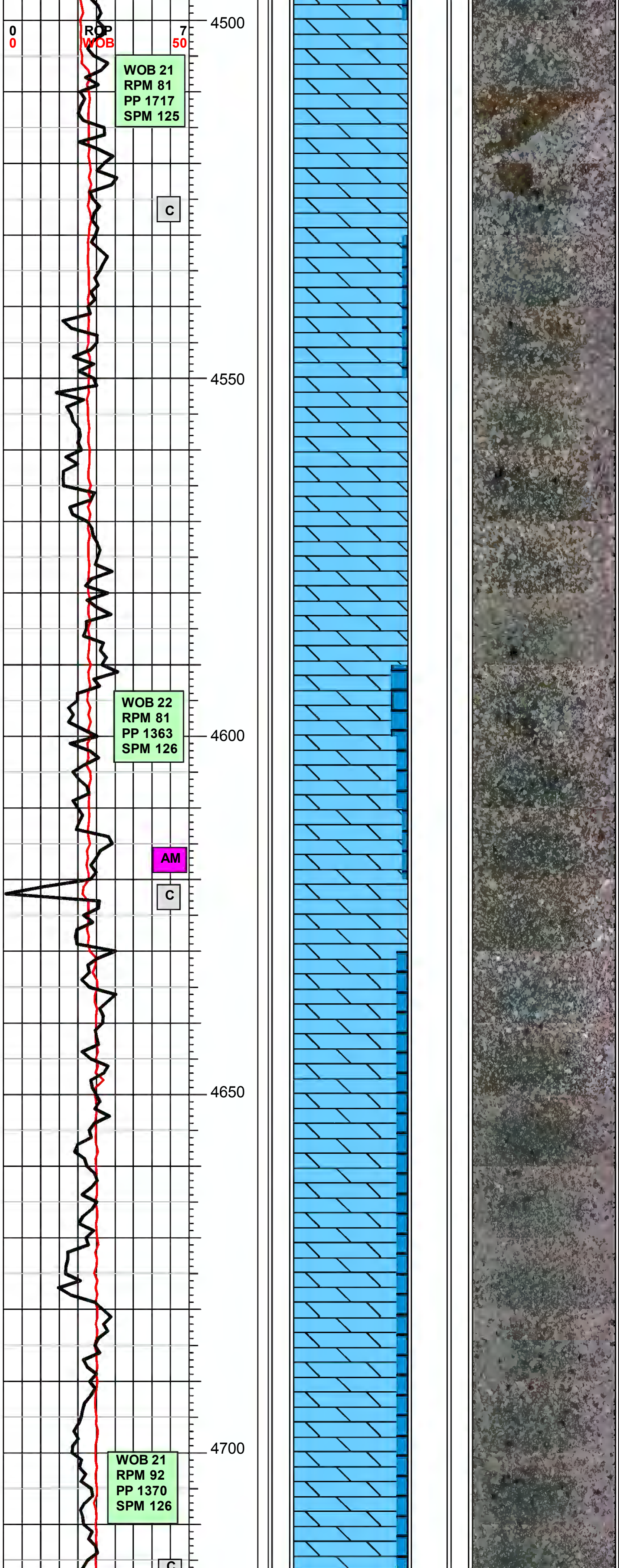
WT 8.5 VIS 28

4250

DOLOMITE: MEDLTGY V/FXLN CALC FRMWRK POR LZY CUT NO FNTYLW LIMESTONE: MEDDRKGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR LZY CUT NO FNTYLW SHALE: DRKGY SUBBLKY SLTY TXT INTGR POR LZY CUT FNTYLW RNG

72u


CH
5/19/2018
WOB 21
RPM 101
PP 1793
SPM 150
4300
C
4350
WOB 25
RPM 101
PP 1725
SPM 149
4400
C
AM
4450
CH
5/20/2018
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: V/LTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - PNKGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 4273 INC:0.3
AZ:340.6 TVD:4272.84
DOLOMITE: V/LTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: V/LTGY - MDLTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT FRM NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT FRM NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SBBLKY SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
DOLOMITE: V/LTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - PNKGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: V/LTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - PNKGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 4464 INC: 0.35
AZ:339.52 TVD:4463.83
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN
43u
LAG CALCULATED @4299' 4971 STKS OR 33 MINS @150 SPM
179u
WT 8.5 VIS 28
69u
53u
54u
WT 8.5 VIS 28
90u
254u
WT 8.6 VIS 28
WT 8.6 VIS 28
LAG CALCULATED @4480' 5175 STKS OR 35 MINS @150 SPM
TG 1551u
WT 8.6 VIS



POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

DOLOMITE: MDLTGY - V/LTGY - OFFWHT V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG

DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SBBLKY SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG

DOLOMITE: MDLTGY - MDGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN FRM DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

SD: 4622 INC: 0.53
AZ:345.23 TVD: 4621.83

DOLOMITE: MDLTGY - V/LTGY - OFFWHT V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG

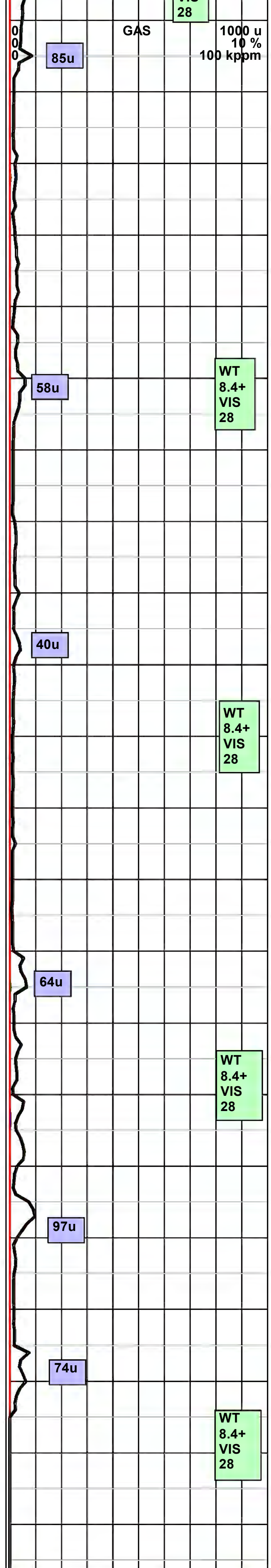
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

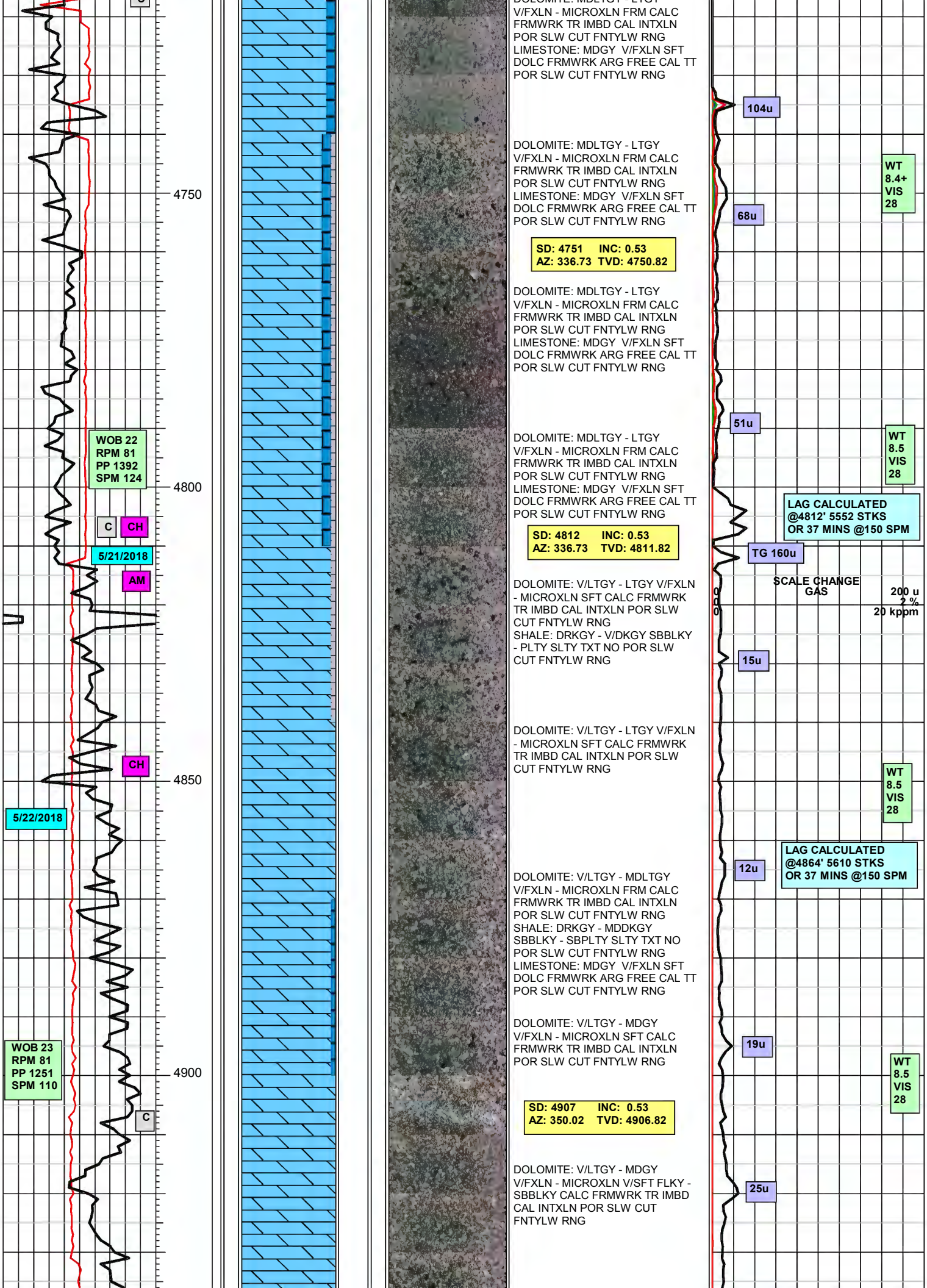
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

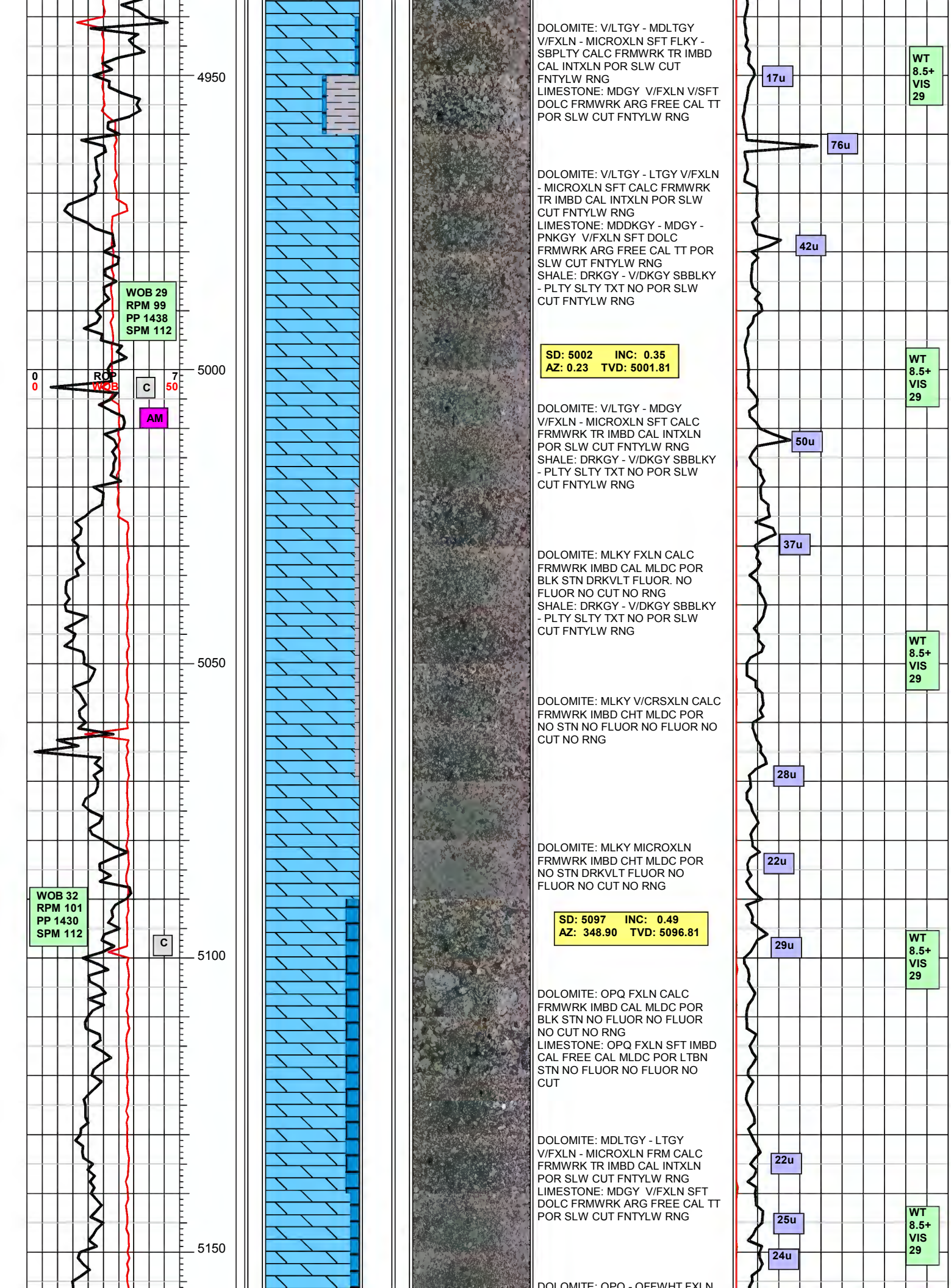
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG

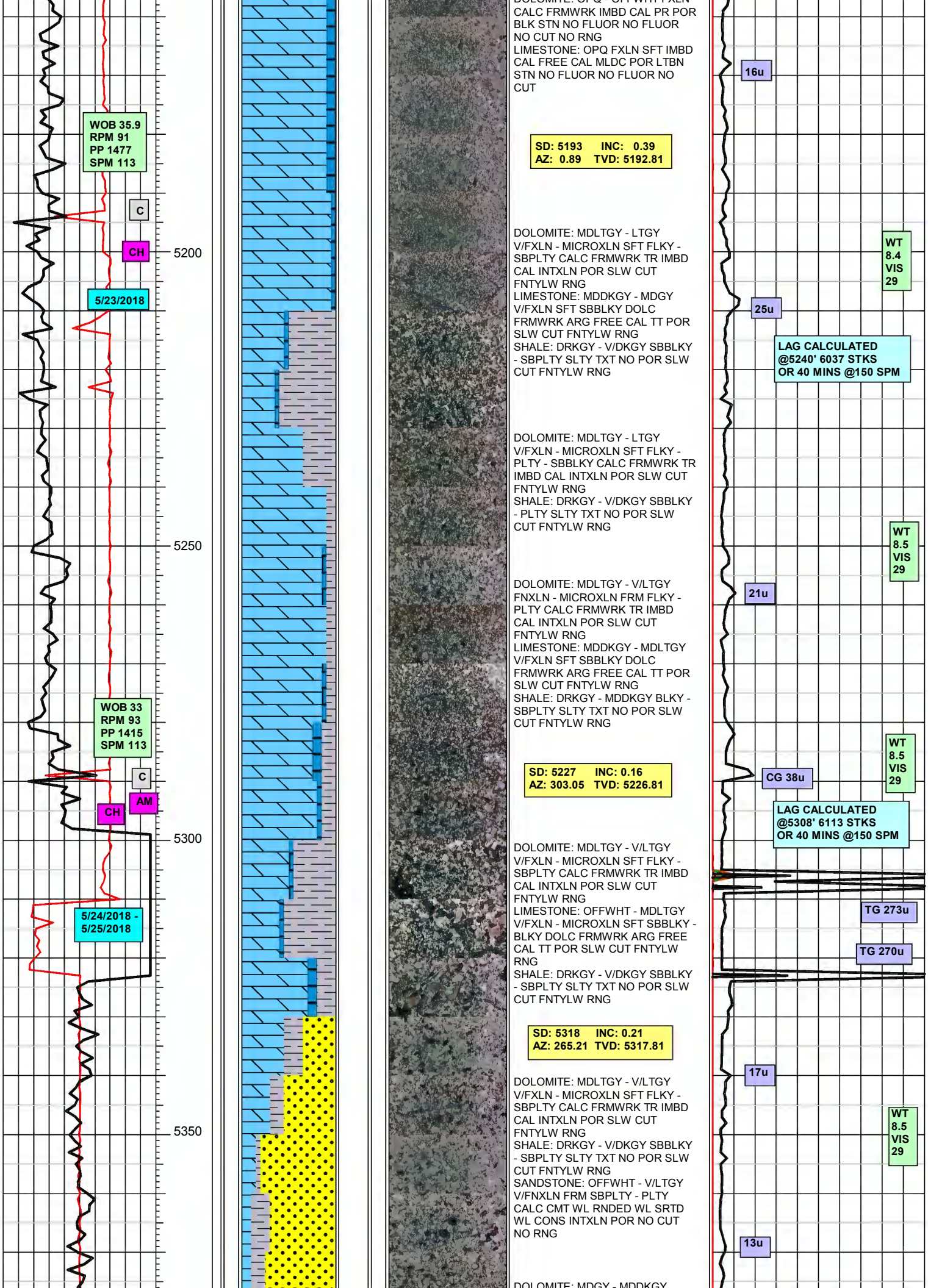
MD: 4717 INC: 0.54
AZ:354.02 TVD: 4716.82

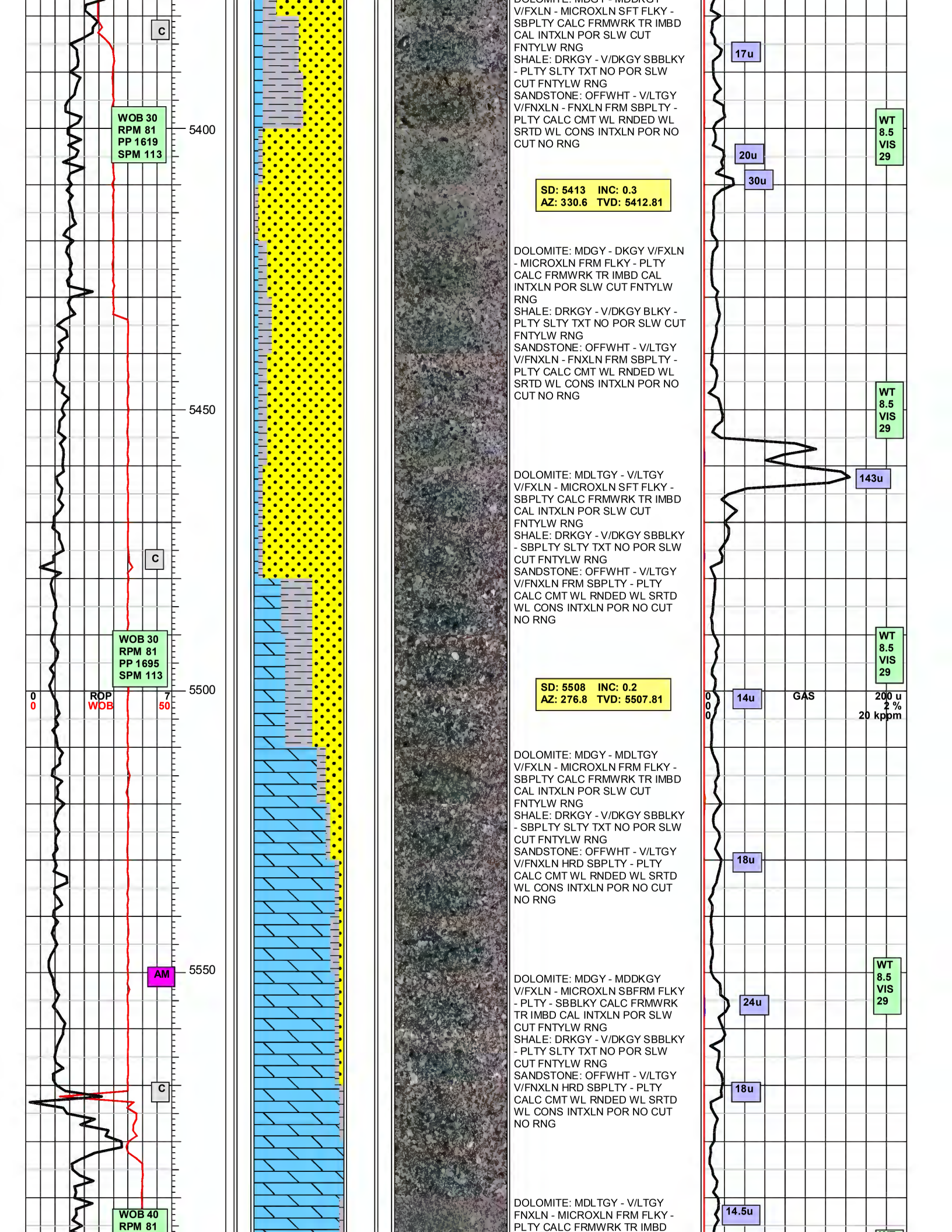
DOLOMITE: MDLTGY - LTGY

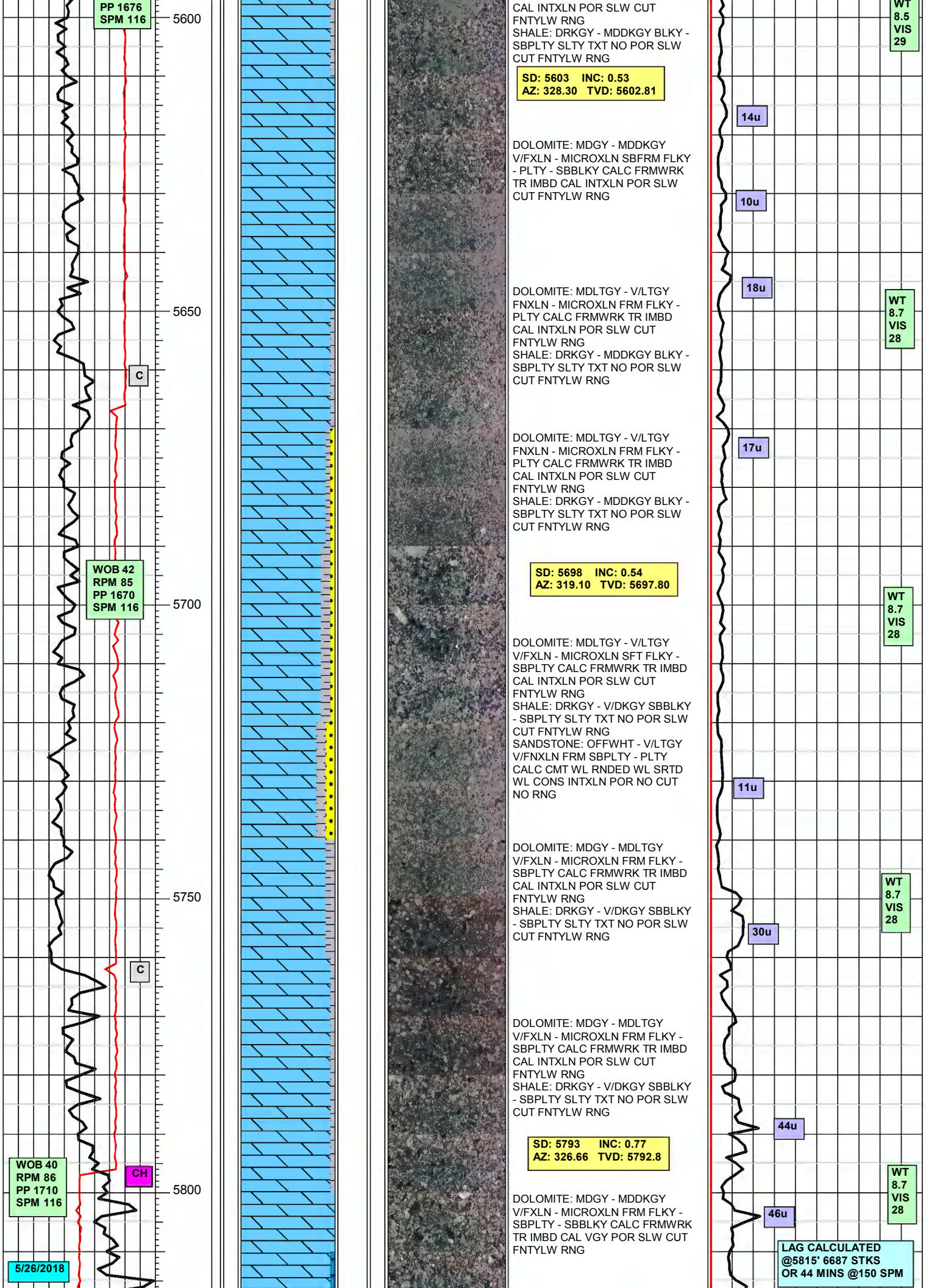


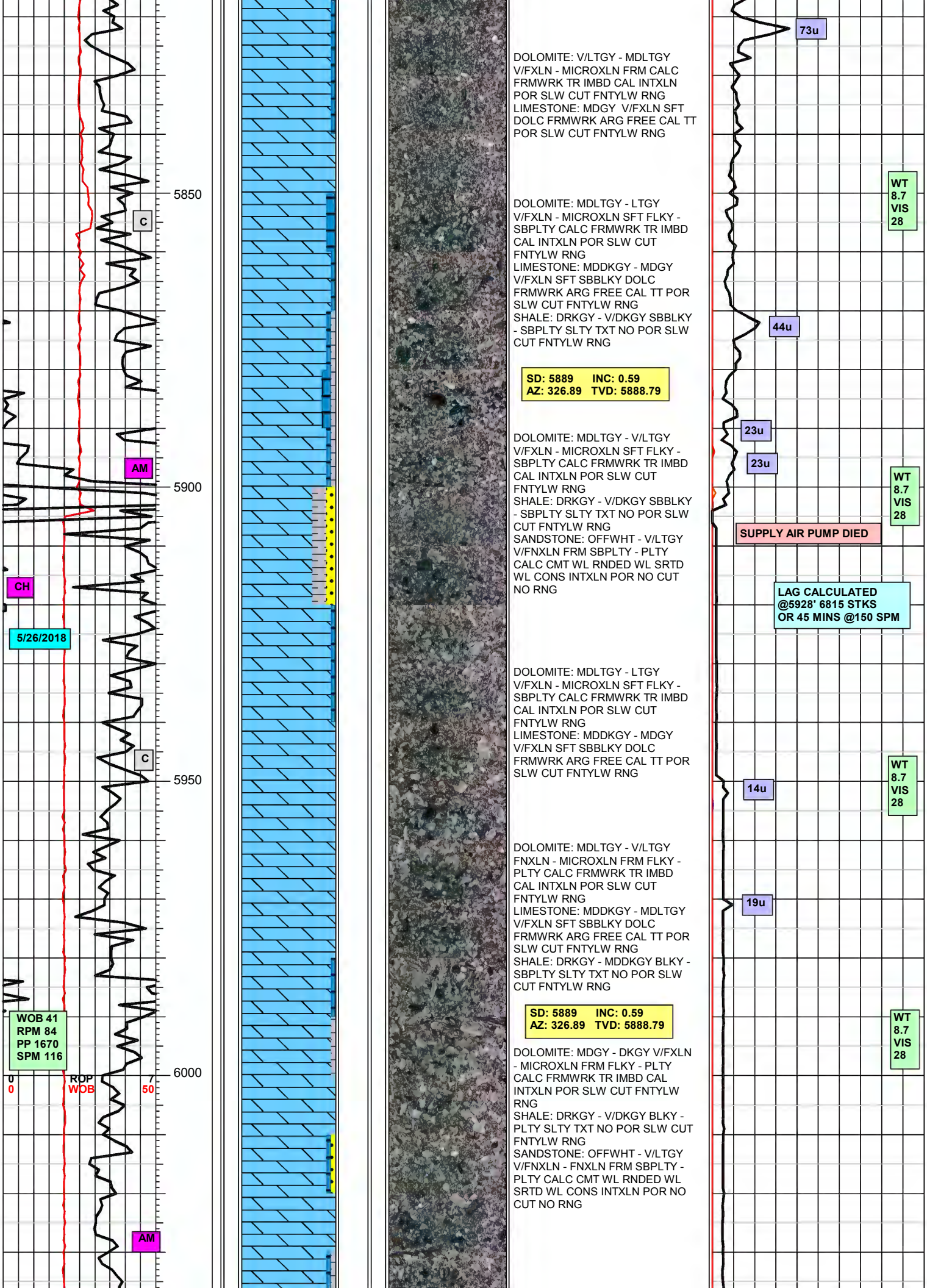

V/FXLN - MICROXLN FRM CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT
DOLC FRMWRK ARG FREE CAL TT
POR SLW CUT FNTYLW RNG
104u
DOLOMITE: MDLTGY - LTGY
V/FXLN - MICROXLN FRM CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT
DOLC FRMWRK ARG FREE CAL TT
POR SLW CUT FNTYLW RNG
WT
8.4+
VIS
28
68u
4750
SD: 4751 INC: 0.53
AZ: 336.73 TVD: 4750.82
DOLOMITE: MDLTGY - LTGY
V/FXLN - MICROXLN FRM CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT
DOLC FRMWRK ARG FREE CAL TT
POR SLW CUT FNTYLW RNG
51u
WT
8.5
VIS
28
WOB 22
RPM 81
PP 1392
SPM 124
4800
C
CH
LAG CALCULATED
@4812' 5552 STKS
OR 37 MINS @150 SPM
5/21/2018
TG 160u
AM
SCALE CHANGE
GAS
200 u
2 %
20 kppm
DOLOMITE: MDLTGY - LTGY
V/FXLN - MICROXLN FRM CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT
DOLC FRMWRK ARG FREE CAL TT
POR SLW CUT FNTYLW RNG
SD: 4812 INC: 0.53
AZ: 336.73 TVD: 4811.82
DOLOMITE: V/LTGY - LTGY V/FXLN
- MICROXLN SFT CALC FRMWRK
TR IMBD CAL INTXLN POR SLW
CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY
- PLTY SLTY TXT NO POR SLW
CUT FNTYLW RNG
15u
CH
DOLOMITE: V/LTGY - LTGY V/FXLN
- MICROXLN SFT CALC FRMWRK
TR IMBD CAL INTXLN POR SLW
CUT FNTYLW RNG
4850
WT
8.5
VIS
28
5/22/2018
LAG CALCULATED
@4864' 5610 STKS
OR 37 MINS @150 SPM
12u
DOLOMITE: V/LTGY - MDLTGY
V/FXLN - MICROXLN FRM CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
SHALE: DRKGY - MDDKGY
SBBLKY - SBPLTY SLTY TXT NO
POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT
DOLC FRMWRK ARG FREE CAL TT
POR SLW CUT FNTYLW RNG
DOLOMITE: V/LTGY - MDGY
V/FXLN - MICROXLN SFT CALC
FRMWRK TR IMBD CAL INTXLN
POR SLW CUT FNTYLW RNG
19u
WT
8.5
VIS
28
WOB 23
RPM 81
PP 1251
SPM 110
4900
C
SD: 4907 INC: 0.53
AZ: 350.02 TVD: 4906.82
DOLOMITE: V/LTGY - MDGY
V/FXLN - MICROXLN V/SFT FLKY -
SBBLKY CALC FRMWRK TR IMBD
CAL INTXLN POR SLW CUT
FNTYLW RNG
25u

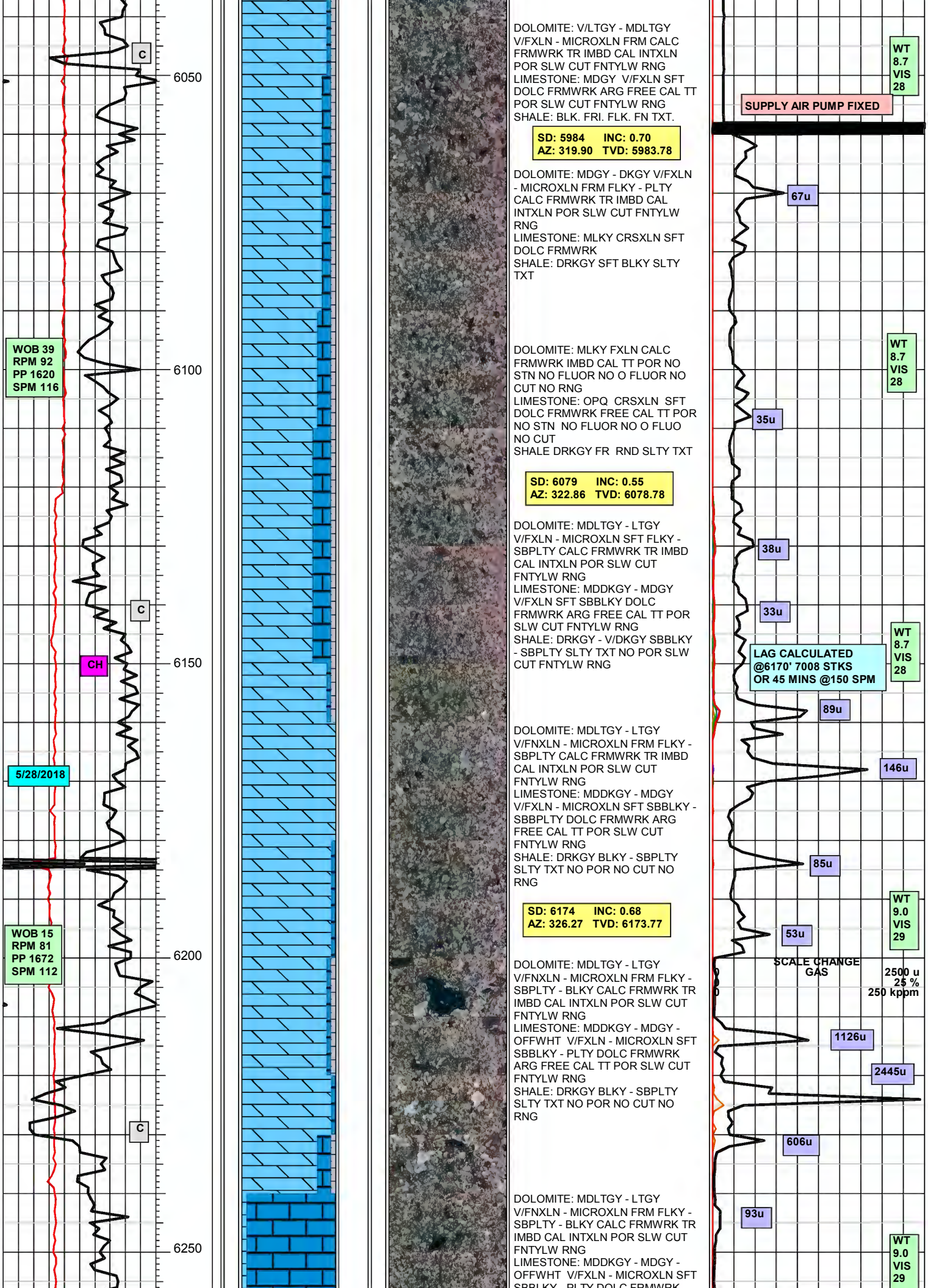

4950
5000
5050
5100
5150
WOB 29
RPM 99
PP 1438
SPM 112
0
0
ROP
WOB
C
7
50
AM
WOB 32
RPM 101
PP 1430
SPM 112
C
DOLOMITE: V/LTGY - MDLTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN V/SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
17u
76u
WT 8.5+ VIS 29
DOLOMITE: V/LTGY - LTGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - PNKGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
42u
SD: 5002 INC: 0.35
AZ: 0.23 TVD: 5001.81
DOLOMITE: V/LTGY - MDGY V/FXLN - MICROXLN SFT CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
50u
WT 8.5+ VIS 29
DOLOMITE: MLKY FXLN CALC FRMWRK IMBD CAL MLDC POR BLK STN DRKVLT FLUOR. NO FLUOR NO CUT NO RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
37u
DOLOMITE: MLKY V/CRSXLN CALC FRMWRK IMBD CHT MLDC POR NO STN NO FLUOR NO FLUOR NO CUT NO RNG
28u
WT 8.5+ VIS 29
DOLOMITE: MLKY MICROXLN FRMWRK IMBD CHT MLDC POR NO STN DRKVLT FLUOR NO FLUOR NO CUT NO RNG
22u
SD: 5097 INC: 0.49
AZ: 348.90 TVD: 5096.81
29u
WT 8.5+ VIS 29
DOLOMITE: OPQ FXLN CALC FRMWRK IMBD CAL MLDC POR BLK STN NO FLUOR NO FLUOR NO CUT NO RNG
LIMESTONE: OPQ FXLN SFT IMBD CAL FREE CAL MLDC POR LTBN STN NO FLUOR NO FLUOR NO CUT
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
22u
25u
24u
WT 8.5+ VIS 29

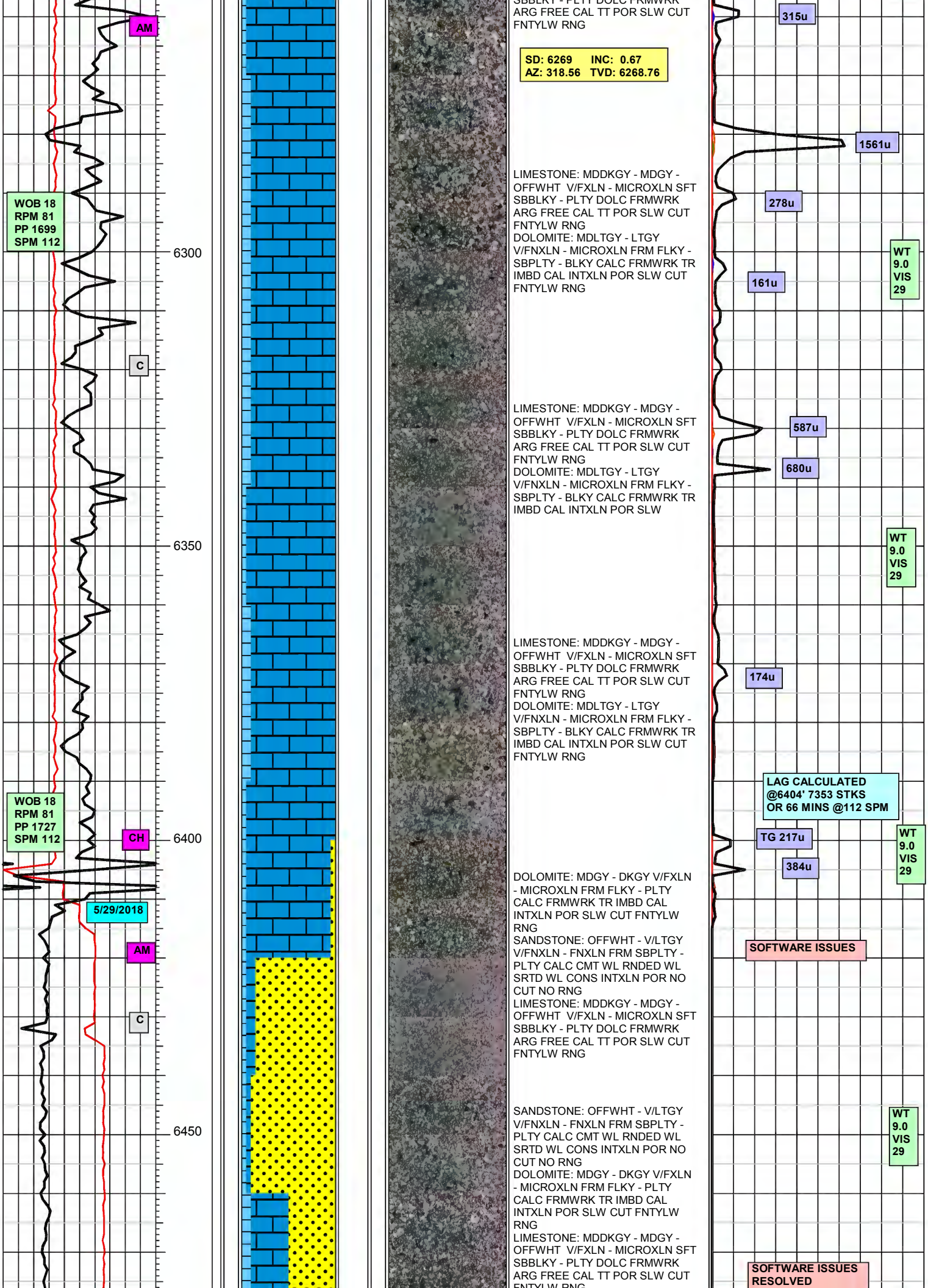

WOB 35.9
RPM 91
PP 1477
SPM 113
C
CH
5200
5/23/2018
5250
WOB 33
RPM 93
PP 1415
SPM 113
C
AM
CH
5300
5/24/2018 -
5/25/2018
5350
CALC FRMWRK IMBD CAL PR POR BLK STN NO FLUOR NO FLUOR NO CUT NO RNG
LIMESTONE: OPQ FXLN SFT IMBD CAL FREE CAL MLDC POR LTBN STN NO FLUOR NO FLUOR NO CUT
SD: 5193 INC: 0.39
AZ: 0.89 TVD: 5192.81
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY FNXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDLTGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - MDDKGY BLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5227 INC: 0.16
AZ: 303.05 TVD: 5226.81
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN SFT SBBLKY - BLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5318 INC: 0.21
AZ: 265.21 TVD: 5317.81
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
16u
WT 8.4 VIS 29
25u
LAG CALCULATED @5240' 6037 STKS OR 40 MINS @150 SPM
WT 8.5 VIS 29
21u
WT 8.5 VIS 29
CG 38u
LAG CALCULATED @5308' 6113 STKS OR 40 MINS @150 SPM
TG 273u
TG 270u
17u
WT 8.5 VIS 29
13u

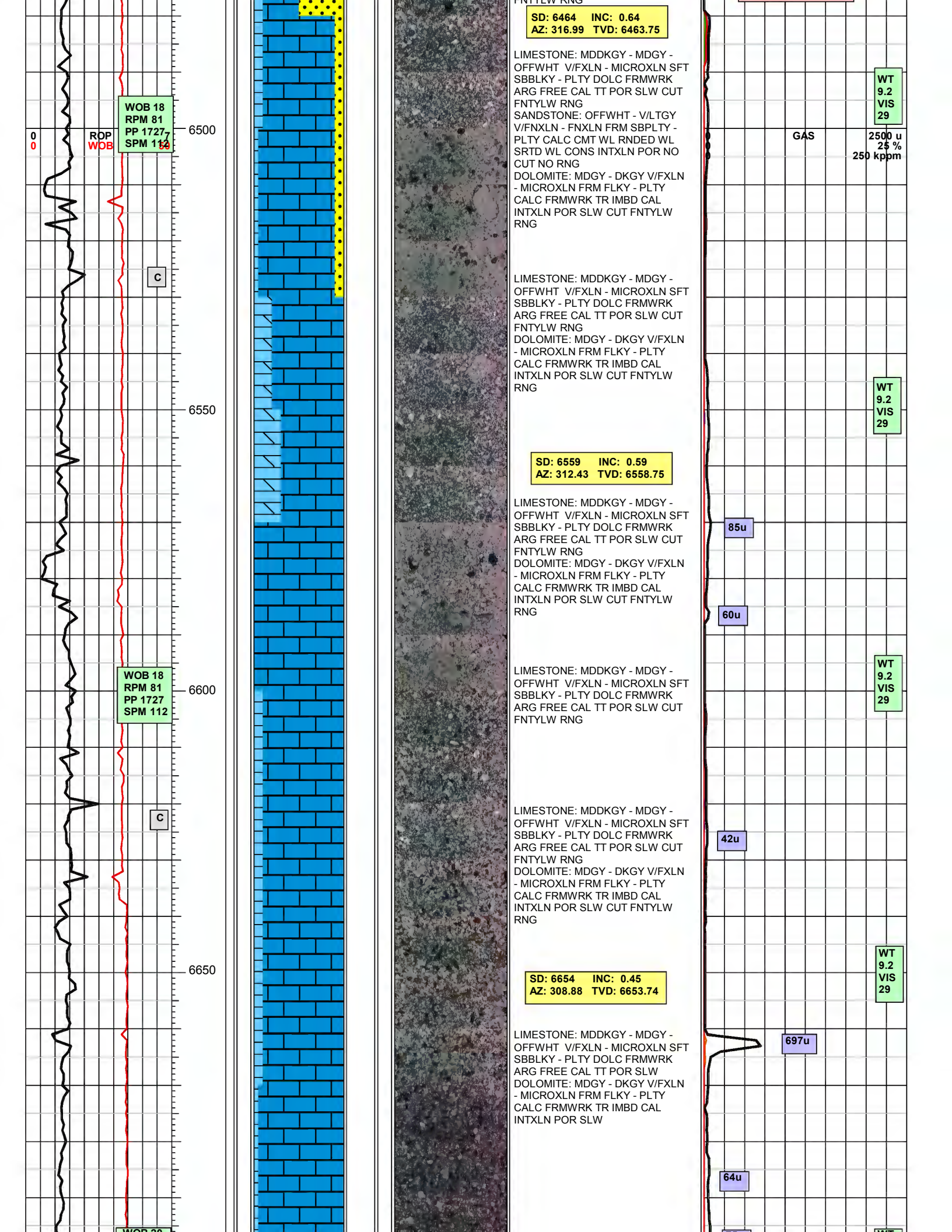

C
WOB 30
RPM 81
PP 1619
SPM 113
5400
5450
C
WOB 30
RPM 81
PP 1695
SPM 113
0
0
ROP
WOB
7
50
5500
AM
5550
C
WOB 40
RPM 81
V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
SD: 5413 INC: 0.3
AZ: 330.6 TVD: 5412.81
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY BLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
SD: 5508 INC: 0.2
AZ: 276.8 TVD: 5507.81
DOLOMITE: MDGY - MDLTGY V/FXLN - MICROXLN FRM FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN HRD SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDGY - MDDKGY V/FXLN - MICROXLN SBFRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN HRD SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDLTGY - V/LTGY FNXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD
17u
20u
30u
WT 8.5 VIS 29
WT 8.5 VIS 29
143u
WT 8.5 VIS 29
0
0
14u
GAS
200 u
2 %
20 kppm
18u
WT 8.5 VIS 29
24u
18u
14.5u

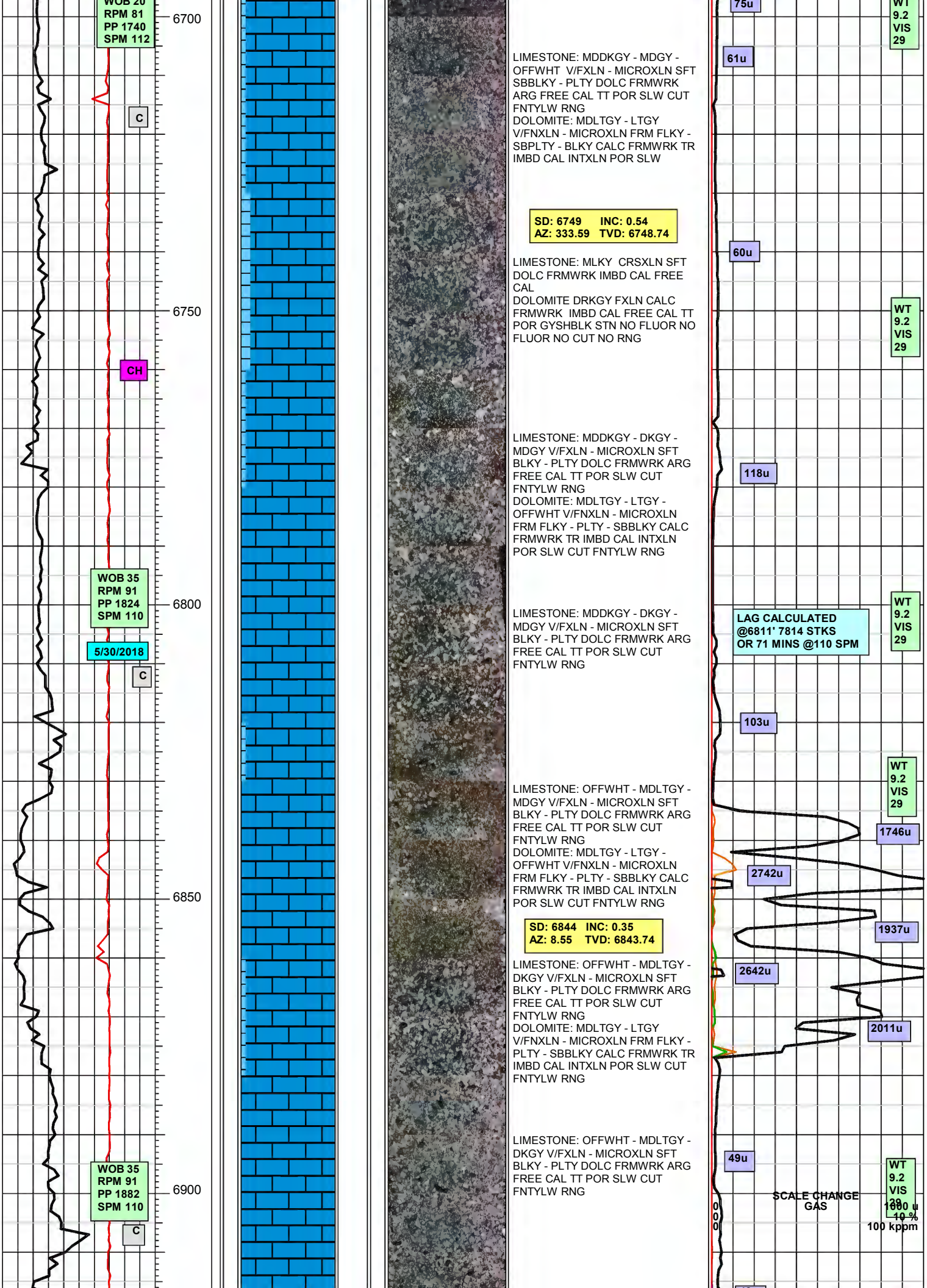

PP 1676
SPM 116
5600
5650
C
WOB 42
RPM 85
PP 1670
SPM 116
5700
5750
C
WOB 40
RPM 86
PP 1710
SPM 116
CH
5800
5/26/2018
CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - MDDKGY BLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5603 INC: 0.53
AZ: 328.30 TVD: 5602.81
DOLOMITE: MDGY - MDDKGY V/FXLN - MICROXLN SBFRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY FNXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - MDDKGY BLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY FNXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - MDDKGY BLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5698 INC: 0.54
AZ: 319.10 TVD: 5697.80
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDGY - MDLTGY V/FXLN - MICROXLN FRM FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - MDLTGY V/FXLN - MICROXLN FRM FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5793 INC: 0.77
AZ: 326.66 TVD: 5792.8
DOLOMITE: MDGY - MDDKGY V/FXLN - MICROXLN FRM FLKY - SBPLTY - SBBLKY CALC FRMWRK TR IMBD CAL VGY POR SLW CUT FNTYLW RNG
WT 8.5 VIS 29
14u
10u
18u
WT 8.7 VIS 28
17u
WT 8.7 VIS 28
11u
WT 8.7 VIS 28
30u
44u
WT 8.7 VIS 28
46u
LAG CALCULATED @5815' 6687 STKS OR 44 MINS @150 SPM

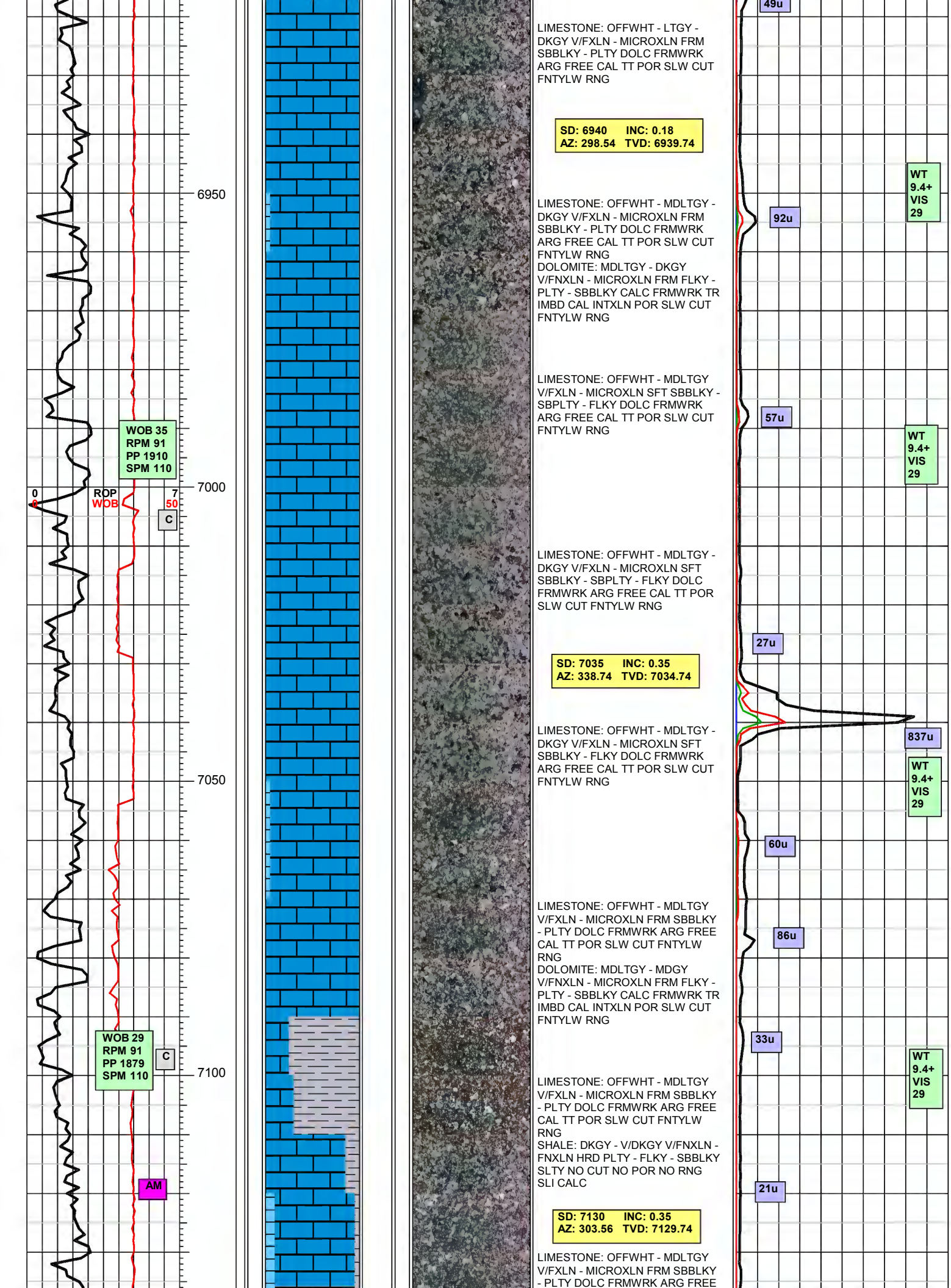

5850
C
AM
5900
CH
5/26/2018
C
5950
WOB 41
RPM 84
PP 1670
SPM 116
0
0
ROP
WOB
7
50
6000
AM
DOLOMITE: V/LTGY - MDLTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG LIMESTONE: MDDKGY - MDGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5889 INC: 0.59
AZ: 326.89 TVD: 5888.79
DOLOMITE: MDLTGY - V/LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG SANDSTONE: OFFWHT - V/LTGY V/FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG LIMESTONE: MDDKGY - MDGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - V/LTGY FNXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG LIMESTONE: MDDKGY - MDLTGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG SHALE: DRKGY - MDDKGY BLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
SD: 5889 INC: 0.59
AZ: 326.89 TVD: 5888.79
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG SHALE: DRKGY - V/DKGY BLKY - PLTY SLTY TXT NO POR SLW CUT FNTYLW RNG SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
73u
WT 8.7 VIS 28
44u
23u
23u
WT 8.7 VIS 28
SUPPLY AIR PUMP DIED
LAG CALCULATED @5928' 6815 STKS OR 45 MINS @150 SPM
14u
WT 8.7 VIS 28
19u
WT 8.7 VIS 28

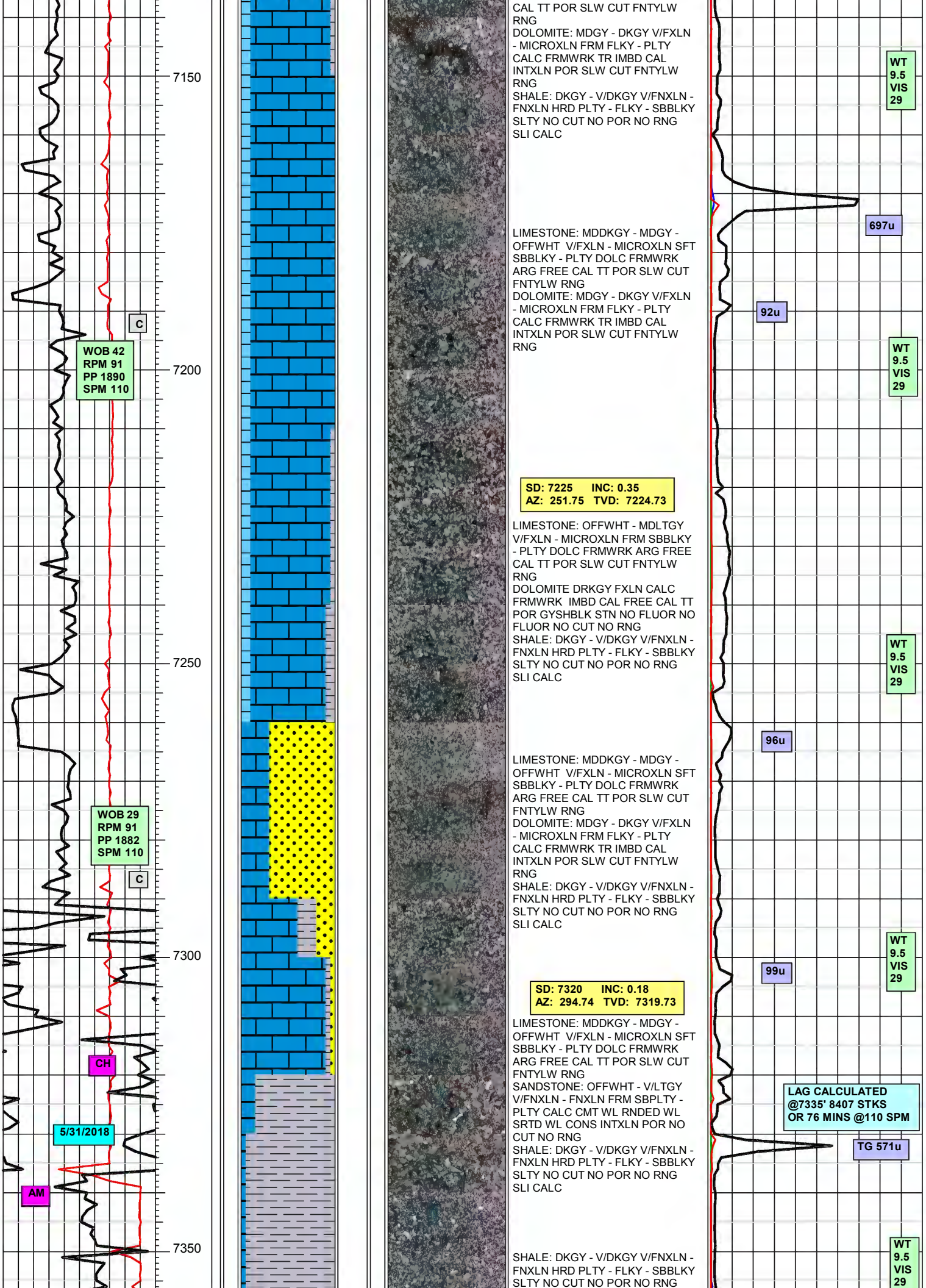

C
6050
WOB 39
RPM 92
PP 1620
SPM 116
6100
C
CH
6150
5/28/2018
WOB 15
RPM 81
PP 1672
SPM 112
6200
C
6250
DOLOMITE: V/LTGY - MDLTGY V/FXLN - MICROXLN FRM CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDGY V/FXLN SFT DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: BLK. FRI. FLK. FN TXT.
SD: 5984 INC: 0.70
AZ: 319.90 TVD: 5983.78
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MLKY CRSXLN SFT DOLC FRMWRK
SHALE: DRKGY SFT BLKY SLTY TXT
DOLOMITE: MLKY FXLN CALC FRMWRK IMBD CAL TT POR NO STN NO FLUOR NO O FLUOR NO CUT NO RNG
LIMESTONE: OPQ CRSXLN SFT DOLC FRMWRK FREE CAL TT POR NO STN NO FLUOR NO O FLUO NO CUT
SHALE DRKGY FR RND SLTY TXT
SD: 6079 INC: 0.55
AZ: 322.86 TVD: 6078.78
DOLOMITE: MDLTGY - LTGY V/FXLN - MICROXLN SFT FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN SFT SBBLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY - V/DKGY SBBLKY - SBPLTY SLTY TXT NO POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY V/FXLN - MICROXLN SFT SBBLKY - SBBPLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY BLKY - SBPLTY SLTY TXT NO POR NO CUT NO RNG
SD: 6174 INC: 0.68
AZ: 326.27 TVD: 6173.77
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY BLKY - SBPLTY SLTY TXT NO POR NO CUT NO RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT
WT 8.7 VIS 28
SUPPLY AIR PUMP FIXED
67u
WT 8.7 VIS 28
35u
38u
33u
LAG CALCULATED @6170' 7008 STKS OR 45 MINS @150 SPM
WT 8.7 VIS 28
89u
146u
85u
WT 9.0 VIS 29
53u
SCALE CHANGE GAS
2500 u
25 %
250 kppm
1126u
2445u
606u
93u
WT 9.0 VIS 29

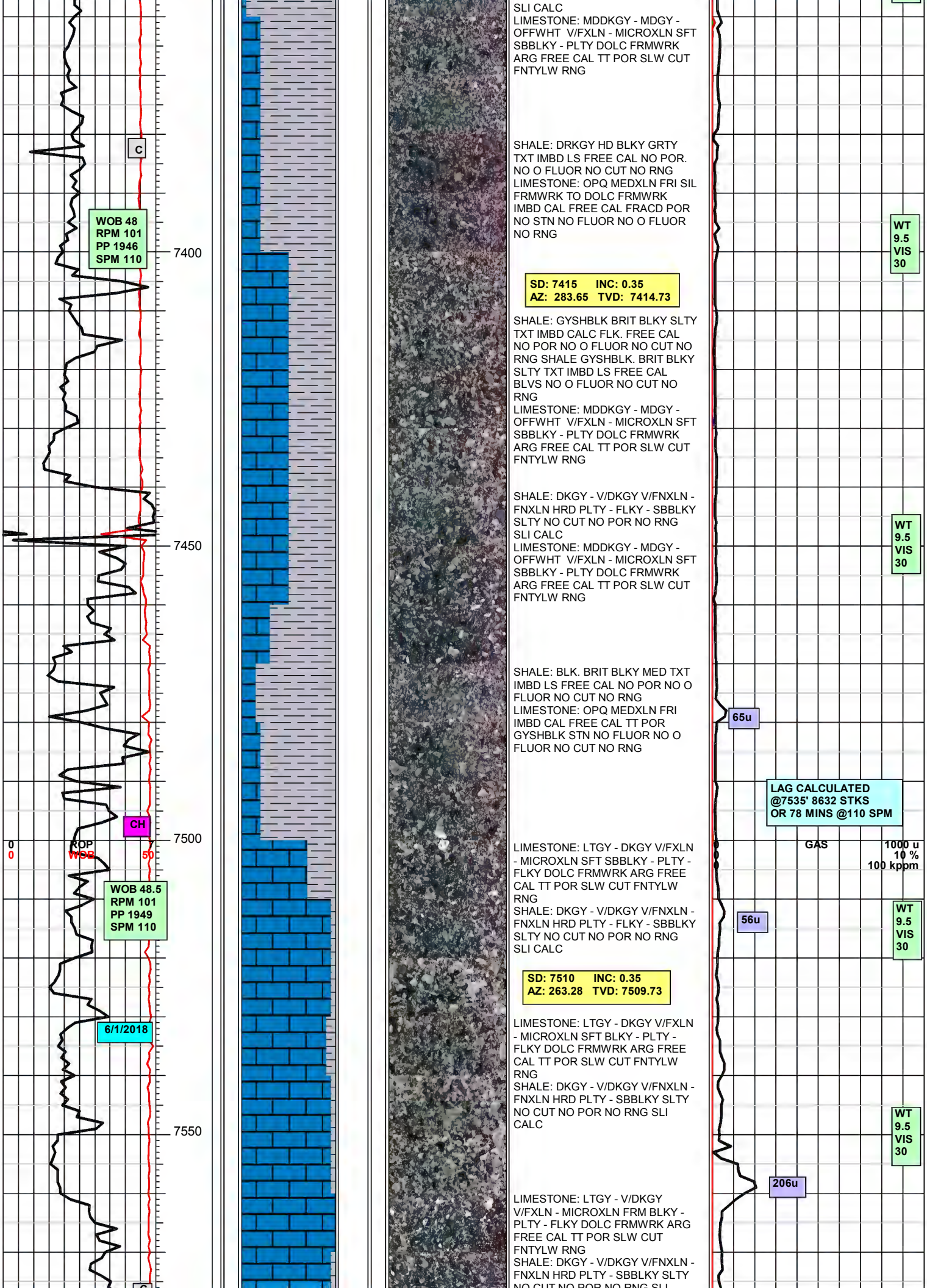

AM
WOB 18
RPM 81
PP 1699
SPM 112
6300
C
WOB 18
RPM 81
PP 1727
SPM 112
CH
6400
5/29/2018
AM
C
6450
SD: 6269 INC: 0.67
AZ: 318.56 TVD: 6268.76
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
315u
1561u
278u
161u
WT 9.0 VIS 29
587u
680u
WT 9.0 VIS 29
174u
LAG CALCULATED @6404' 7353 STKS OR 66 MINS @112 SPM
TG 217u
384u
WT 9.0 VIS 29
SOFTWARE ISSUES
WT 9.0 VIS 29
SOFTWARE ISSUES RESOLVED

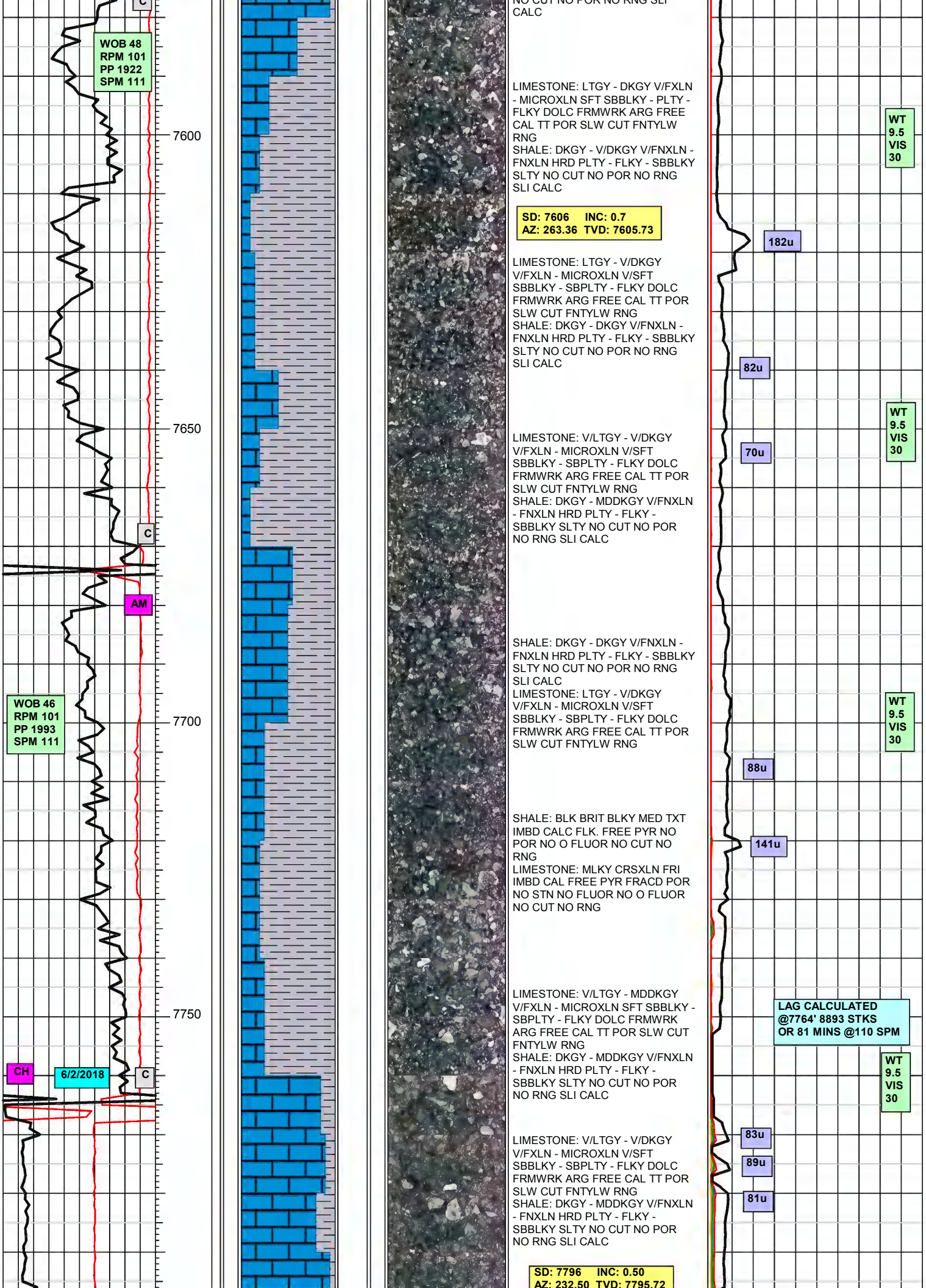

0
0
ROP
WOB
WOB 18
RPM 81
PP 1727
SPM 112
6500
C
6550
WOB 18
RPM 81
PP 1727
SPM 112
6600
C
6650
SD: 6464 INC: 0.64
AZ: 316.99 TVD: 6463.75
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SD: 6559 INC: 0.59
AZ: 312.43 TVD: 6558.75
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SD: 6654 INC: 0.45
AZ: 308.88 TVD: 6653.74
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW
WT 9.2 VIS 29
GAS
2500 u
25 %
250 kppm
WT 9.2 VIS 29
85u
60u
WT 9.2 VIS 29
42u
WT 9.2 VIS 29
697u
64u

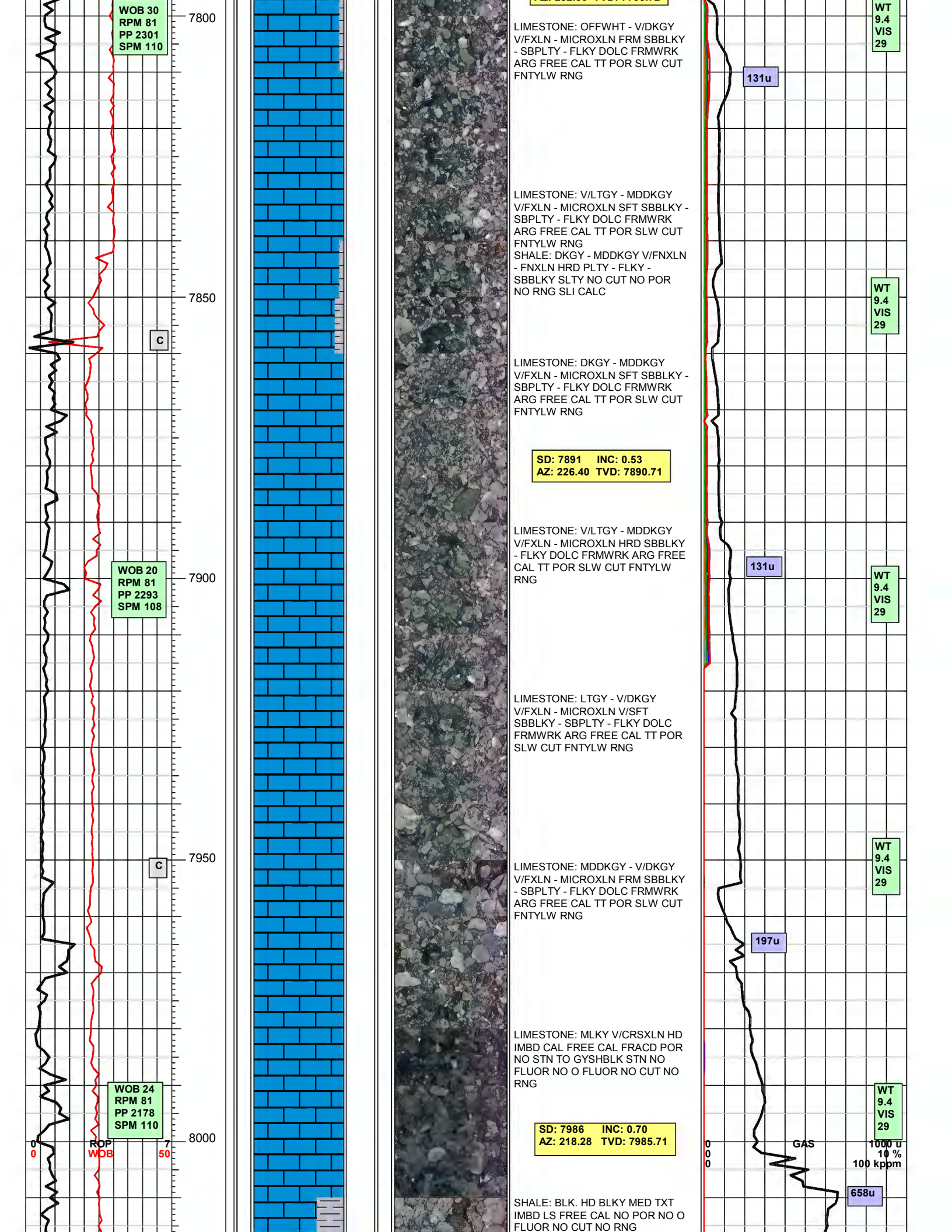

WOB 20
RPM 81
PP 1740
SPM 112
6700
C
6750
CH
WOB 35
RPM 91
PP 1824
SPM 110
6800
5/30/2018
C
6850
WOB 35
RPM 91
PP 1882
SPM 110
6900
C
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - SBPLTY - BLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW
SD: 6749 INC: 0.54
AZ: 333.59 TVD: 6748.74
LIMESTONE: MLKY CRSXLN SFT DOLC FRMWRK IMBD CAL FREE CAL
DOLOMITE DRKGY FXLN CALC FRMWRK IMBD CAL FREE CAL TT POR GYSHBLK STN NO FLUOR NO FLUOR NO CUT NO RNG
LIMESTONE: MDDKGY - DKGY - MDGY V/FXLN - MICROXLN SFT BLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY - OFFWHT V/FNXLN - MICROXLN FRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - DKGY - MDGY V/FXLN - MICROXLN SFT BLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY - MDGY V/FXLN - MICROXLN SFT BLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY - OFFWHT V/FNXLN - MICROXLN FRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SD: 6844 INC: 0.35
AZ: 8.55 TVD: 6843.74
LIMESTONE: OFFWHT - MDLTGY - DKGY V/FXLN - MICROXLN SFT BLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - LTGY V/FNXLN - MICROXLN FRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY - DKGY V/FXLN - MICROXLN SFT BLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
75u
WT 9.2 VIS 29
61u
60u
WT 9.2 VIS 29
118u
LAG CALCULATED @6811' 7814 STKS OR 71 MINS @110 SPM
WT 9.2 VIS 29
103u
WT 9.2 VIS 29
1746u
2742u
1937u
2642u
2011u
49u
SCALE CHANGE
GAS
WT 9.2 VIS 29
0
0
0
1000 u
10 %
100 kppm

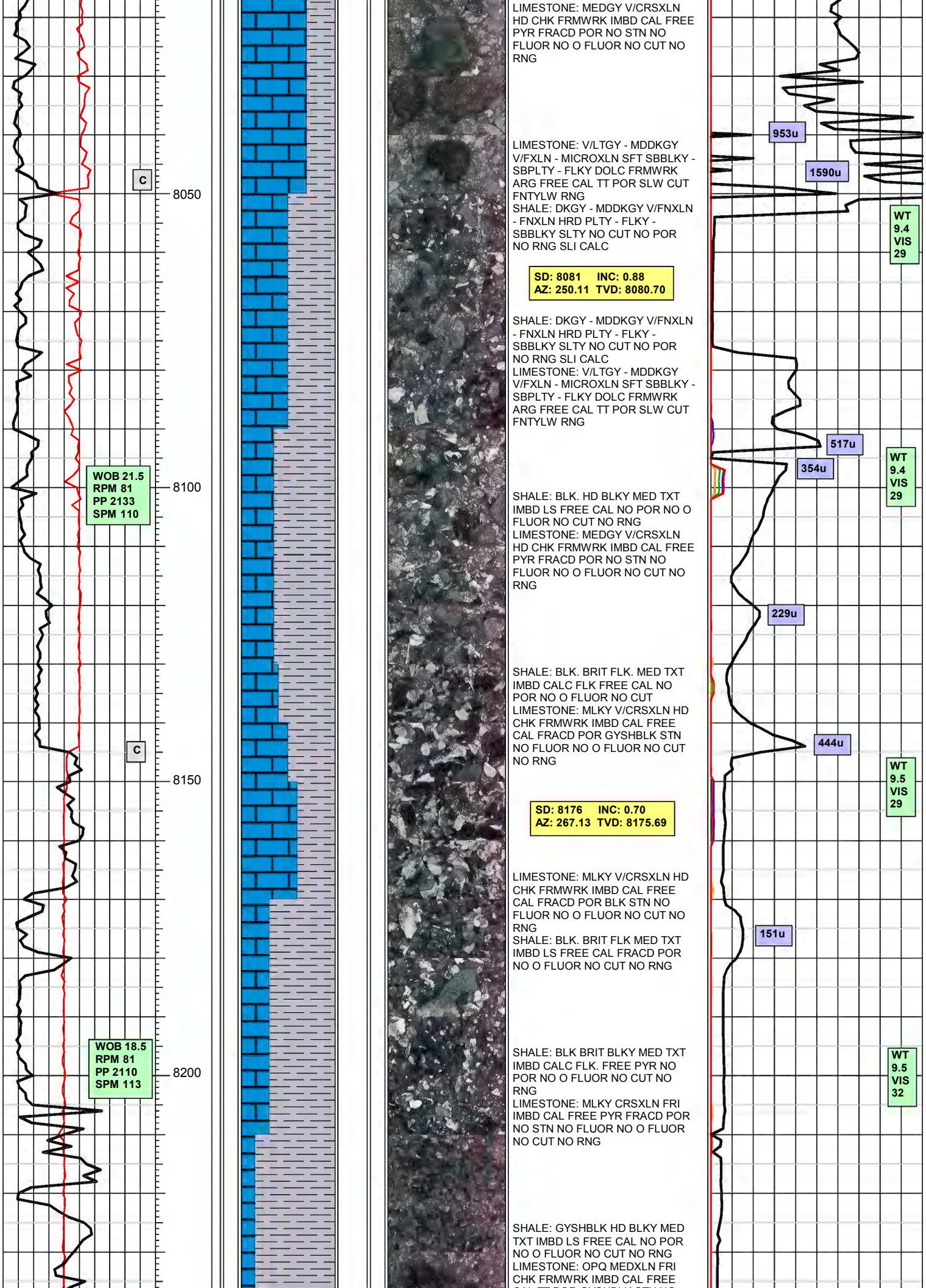

6950
7000
7050
7100
WOB 35
RPM 91
PP 1910
SPM 110
0
ROP
7
WOB
50
C
WOB 29
RPM 91
PP 1879
SPM 110
C
AM
LIMESTONE: OFFWHT - LTGY - DKGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SD: 6940 INC: 0.18
AZ: 298.54 TVD: 6939.74
LIMESTONE: OFFWHT - MDLTGY - DKGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - DKGY V/FNXLN - MICROXLN FRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY - DKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SD: 7035 INC: 0.35
AZ: 338.74 TVD: 7034.74
LIMESTONE: OFFWHT - MDLTGY - DKGY V/FXLN - MICROXLN SFT SBBLKY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDLTGY - MDGY V/FNXLN - MICROXLN FRM FLKY - PLTY - SBBLKY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 7130 INC: 0.35
AZ: 303.56 TVD: 7129.74
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE
49u
92u
57u
27u
837u
60u
86u
33u
21u
WT 9.4+ VIS 29
WT 9.4+ VIS 29
WT 9.4+ VIS 29
WT 9.4+ VIS 29

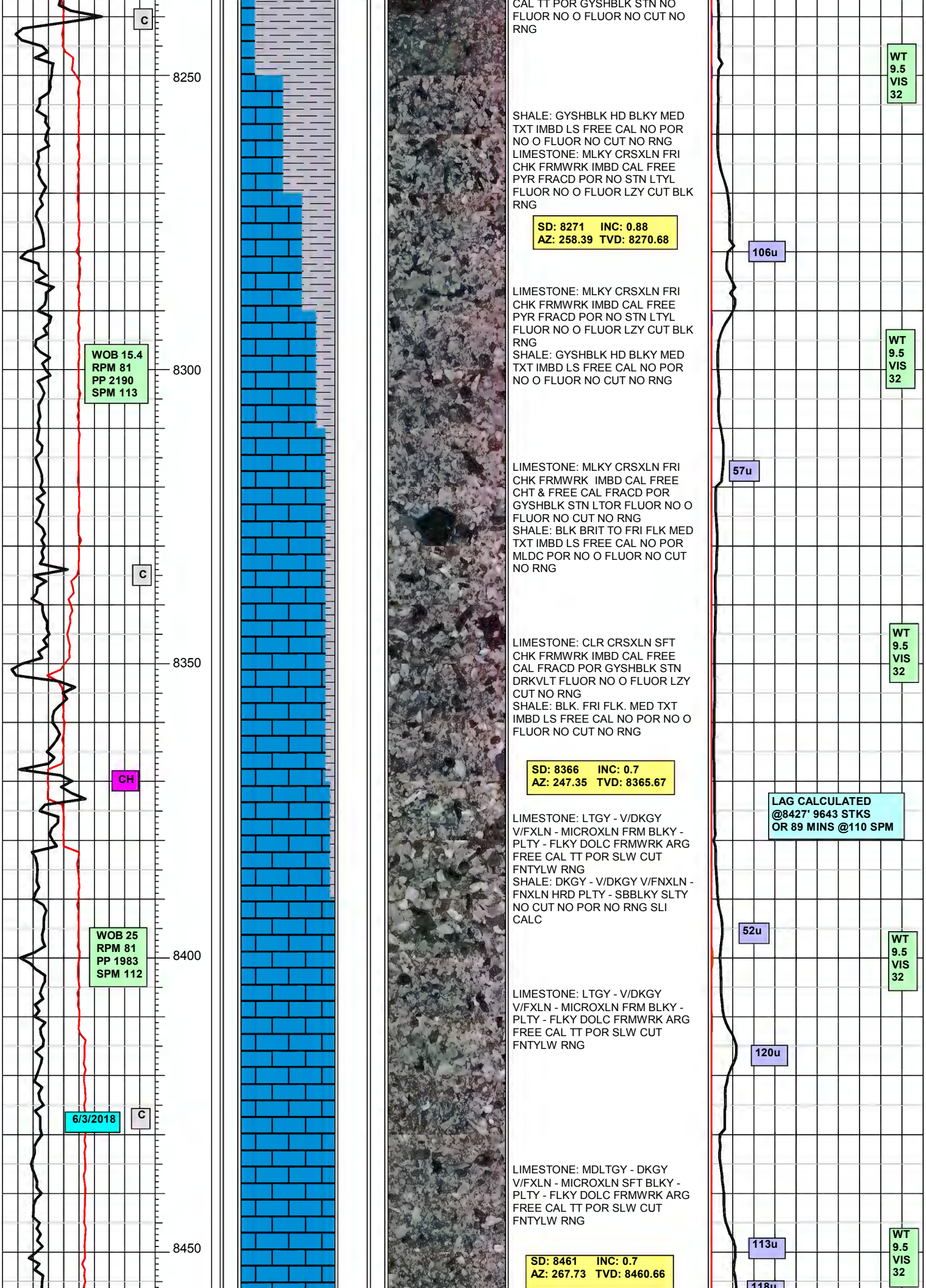

7150
7200
7250
7300
7350
C
WOB 42
RPM 91
PP 1890
SPM 110
C
WOB 29
RPM 91
PP 1882
SPM 110
CH
5/31/2018
AM
CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SD: 7225 INC: 0.35
AZ: 251.75 TVD: 7224.73
LIMESTONE: OFFWHT - MDLTGY V/FXLN - MICROXLN FRM SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE DRKGY FXLN CALC FRMWRK IMBD CAL FREE CAL TT POR GYSHBLK STN NO FLUOR NO FLUOR NO CUT NO RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
DOLOMITE: MDGY - DKGY V/FXLN - MICROXLN FRM FLKY - PLTY CALC FRMWRK TR IMBD CAL INTXLN POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 7320 INC: 0.18
AZ: 294.74 TVD: 7319.73
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SANDSTONE: OFFWHT - V/LTGY V/FNXLN - FNXLN FRM SBPLTY - PLTY CALC CMT WL RNDED WL SRTD WL CONS INTXLN POR NO CUT NO RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG
WT 9.5 VIS 29
697u
92u
WT 9.5 VIS 29
WT 9.5 VIS 29
96u
WT 9.5 VIS 29
99u
LAG CALCULATED @7335' 8407 STKS OR 76 MINS @110 SPM
TG 571u
WT 9.5 VIS 29

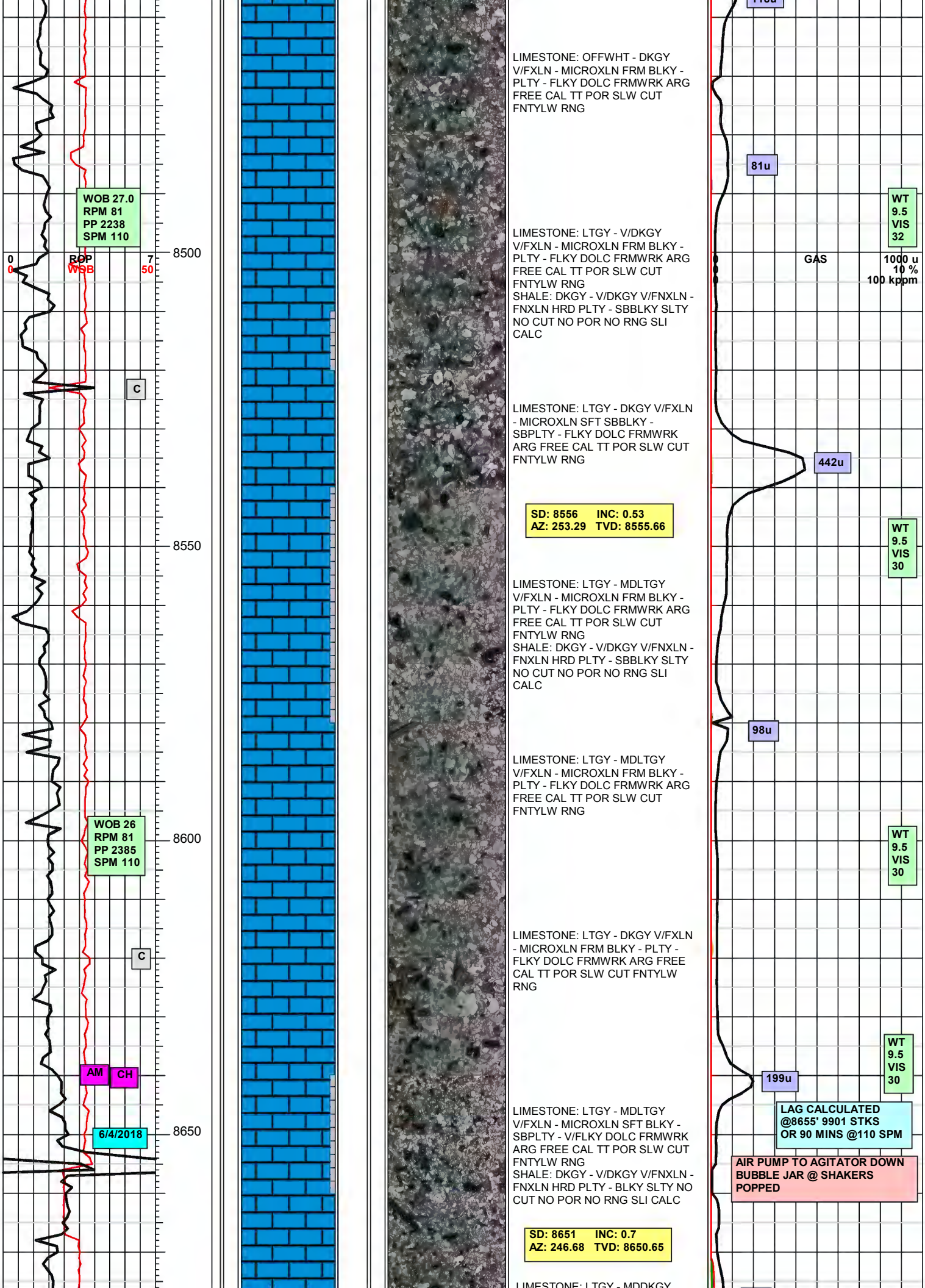

C
WOB 48
RPM 101
PP 1946
SPM 110
7400
7450
CH
7500
0
0
ROP
WOB
7
50
WOB 48.5
RPM 101
PP 1949
SPM 110
6/1/2018
7550
SLI CALC
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DRKGY HD BLKY GRTY TXT IMBD LS FREE CAL NO POR. NO O FLUOR NO CUT NO RNG
LIMESTONE: OPQ MEDXLN FRI SIL FRMWRK TO DOLC FRMWRK IMBD CAL FREE CAL FRACD POR NO STN NO FLUOR NO O FLUOR NO RNG
SD: 7415 INC: 0.35
AZ: 283.65 TVD: 7414.73
SHALE: GYSHBLK BRIT BLKY SLTY TXT IMBD CALC FLK. FREE CAL NO POR NO O FLUOR NO CUT NO RNG SHALE GYSHBLK. BRIT BLKY SLTY TXT IMBD LS FREE CAL BLVS NO O FLUOR NO CUT NO RNG
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MDDKGY - MDGY - OFFWHT V/FXLN - MICROXLN SFT SBBLKY - PLTY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: BLK. BRIT BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: OPQ MEDXLN FRI IMBD CAL FREE CAL TT POR GYSHBLK STN NO FLUOR NO O FLUOR NO CUT NO RNG
LIMESTONE: LTGY - DKGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 7510 INC: 0.35
AZ: 263.28 TVD: 7509.73
LIMESTONE: LTGY - DKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY
WT 9.5 VIS 30
WT 9.5 VIS 30
WT 9.5 VIS 30
WT 9.5 VIS 30
65u
LAG CALCULATED @7535' 8632 STKS OR 78 MINS @110 SPM
0
0
0
GAS
1000 u
10 %
100 kppm
56u
206u

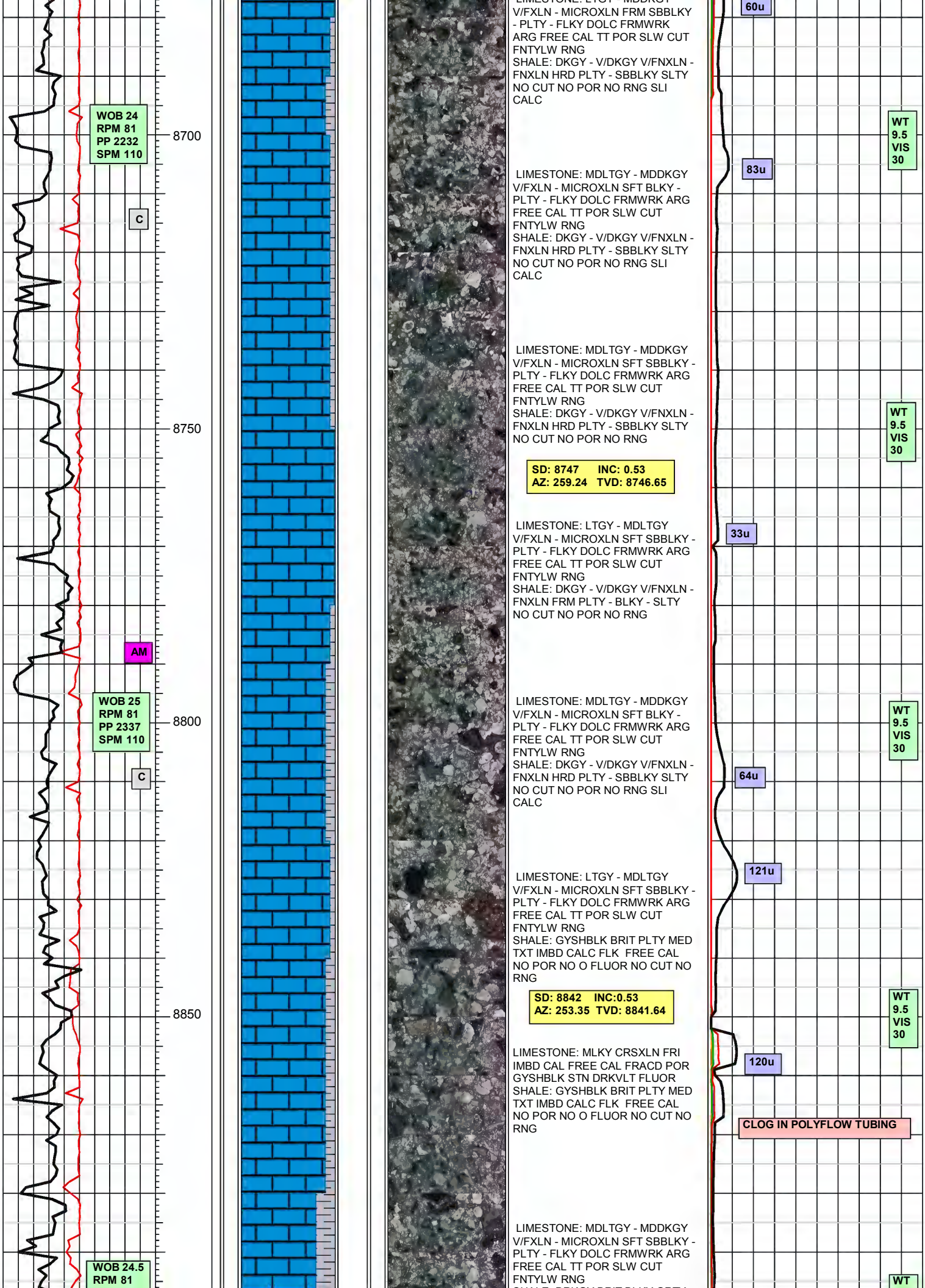

C
WOB 48
RPM 101
PP 1922
SPM 111
7600
7650
C
AM
WOB 46
RPM 101
PP 1993
SPM 111
7700
7750
CH
6/2/2018
C
NO CUT NO POR NO RNG SLI CALC
LIMESTONE: LTGY - DKGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 7606 INC: 0.7
AZ: 263.36 TVD: 7605.73
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN V/SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: V/LTGY - V/DKGY V/FXLN - MICROXLN V/SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SHALE: DKGY - DKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN V/SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: BLK BRIT BLKY MED TXT IMBD CALC FLK. FREE PYR NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MLKY CRSXLN FRI IMBD CAL FREE PYR FRACD POR NO STN NO FLUOR NO O FLUOR NO CUT NO RNG
LIMESTONE: V/LTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: V/LTGY - V/DKGY V/FXLN - MICROXLN V/SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 7796 INC: 0.50
AZ: 232.50 TVD: 7795.72
WT 9.5 VIS 30
182u
82u
WT 9.5 VIS 30
70u
88u
WT 9.5 VIS 30
141u
LAG CALCULATED @7764' 8893 STKS OR 81 MINS @110 SPM
WT 9.5 VIS 30
83u
89u
81u

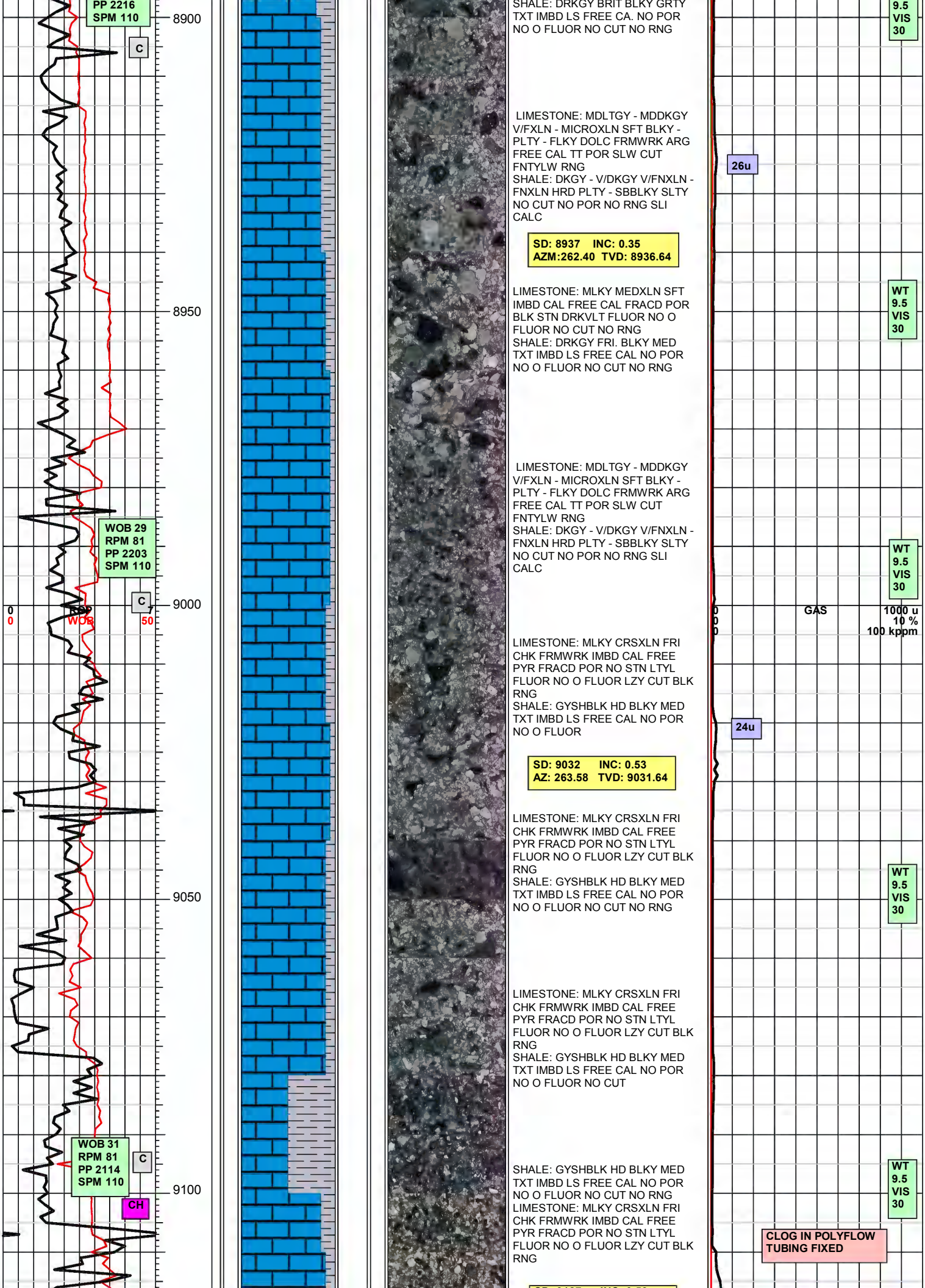

WOB 30
RPM 81
PP 2301
SPM 110
7800
7850
C
WOB 20
RPM 81
PP 2293
SPM 108
7900
C
7950
WOB 24
RPM 81
PP 2178
SPM 110
8000
0
0
ROP
WOB
7
50
LIMESTONE: OFFWHT - V/DKGY V/FXLN - MICROXLN FRM SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: V/LTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: DKGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SD: 7891 INC: 0.53
AZ: 226.40 TVD: 7890.71
LIMESTONE: V/LTGY - MDDKGY V/FXLN - MICROXLN HRD SBBLKY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN V/SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: MDDKGY - V/DKGY V/FXLN - MICROXLN FRM SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
LIMESTONE: MLKY V/CRSXLN HD IMBD CAL FREE CAL FRACD POR NO STN TO GYSHBLK STN NO FLUOR NO O FLUOR NO CUT NO RNG
SD: 7986 INC: 0.70
AZ: 218.28 TVD: 7985.71
SHALE: BLK. HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
WT 9.4 VIS 29
131u
WT 9.4 VIS 29
131u
WT 9.4 VIS 29
197u
WT 9.4 VIS 29
0
0
0
GAS
1000 u
10 %
100 kppm
658u

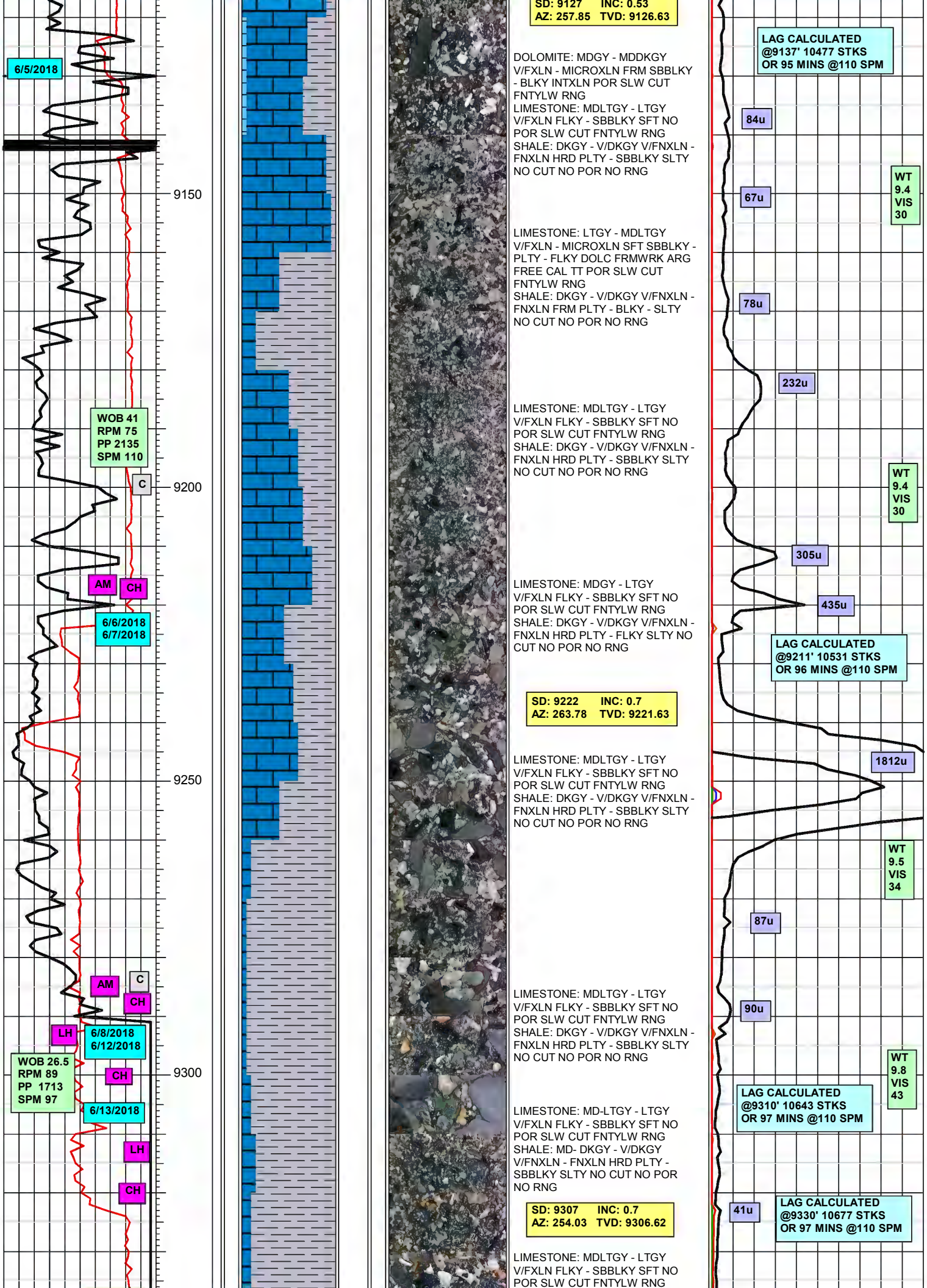

C
8050
WOB 21.5
RPM 81
PP 2133
SPM 110
8100
C
8150
WOB 18.5
RPM 81
PP 2110
SPM 113
8200
LIMESTONE: MEDGY V/CRSXLN HD CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN NO FLUOR NO O FLUOR NO CUT NO RNG
LIMESTONE: V/LTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 8081 INC: 0.88
AZ: 250.11 TVD: 8080.70
SHALE: DKGY - MDDKGY V/FNXLN - FNXLN HRD PLTY - FLKY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: V/LTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: BLK. HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MEDGY V/CRSXLN HD CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN NO FLUOR NO O FLUOR NO CUT NO RNG
SHALE: BLK. BRIT FLK. MED TXT IMBD CALC FLK FREE CAL NO POR NO O FLUOR NO CUT
LIMESTONE: MLKY V/CRSXLN HD CHK FRMWRK IMBD CAL FREE CAL FRACD POR GYSHBLK STN NO FLUOR NO O FLUOR NO CUT NO RNG
SD: 8176 INC: 0.70
AZ: 267.13 TVD: 8175.69
LIMESTONE: MLKY V/CRSXLN HD CHK FRMWRK IMBD CAL FREE CAL FRACD POR BLK STN NO FLUOR NO O FLUOR NO CUT NO RNG
SHALE: BLK. BRIT FLK MED TXT IMBD LS FREE CAL FRACD POR NO O FLUOR NO CUT NO RNG
SHALE: BLK BRIT BLKY MED TXT IMBD CALC FLK. FREE PYR NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MLKY CRSXLN FRI IMBD CAL FREE PYR FRACD POR NO STN NO FLUOR NO O FLUOR NO CUT NO RNG
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: OPQ MEDXLN FRI CHK FRMWRK IMBD CAL FREE
953u
1590u
WT 9.4 VIS 29
517u
354u
WT 9.4 VIS 29
229u
444u
WT 9.5 VIS 29
151u
WT 9.5 VIS 32

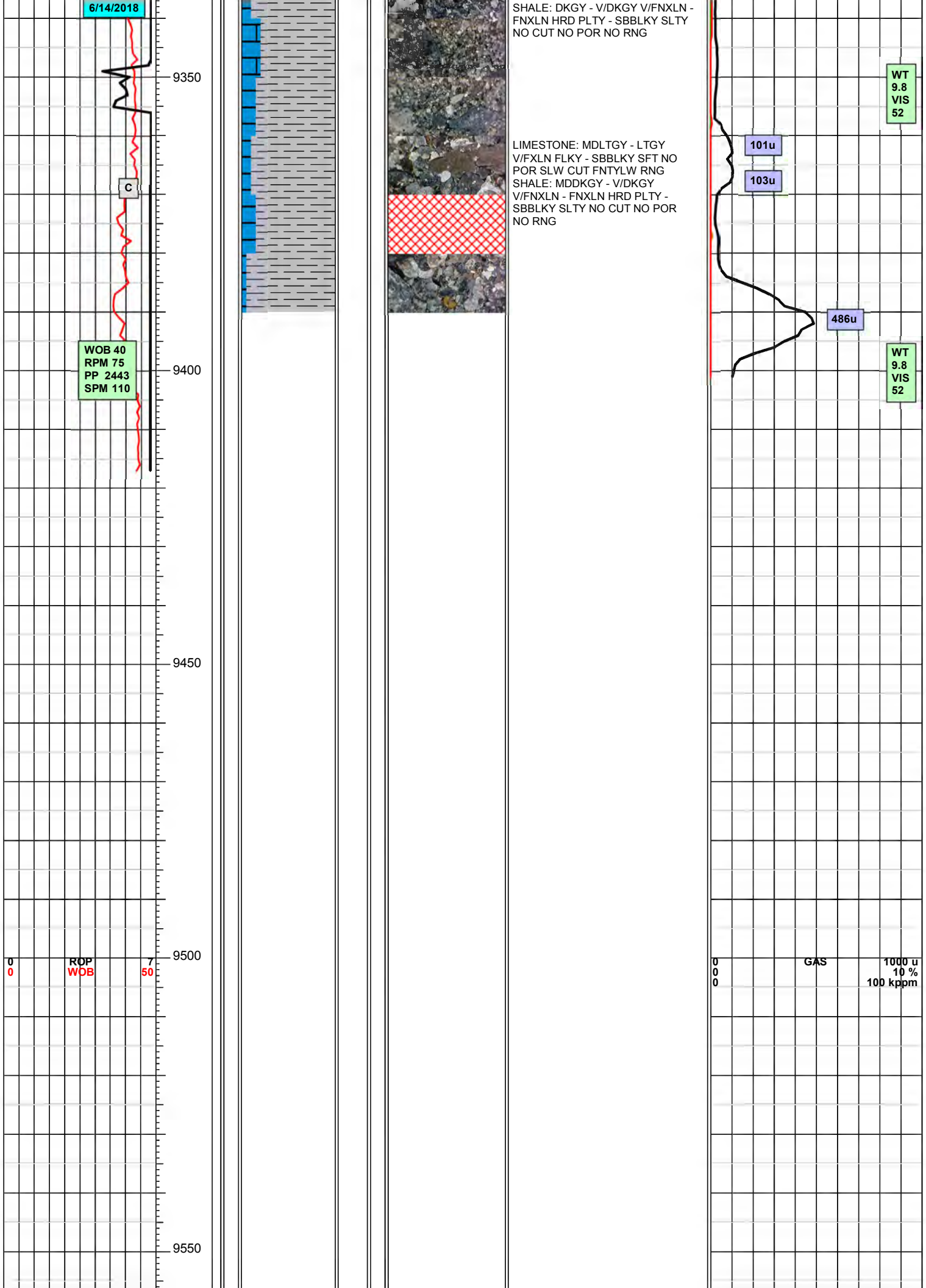

C
8250
WOB 15.4
RPM 81
PP 2190
SPM 113
8300
C
8350
CH
WOB 25
RPM 81
PP 1983
SPM 112
8400
6/3/2018
C
8450
CAL TT POR GYSHBLK STN NO FLUOR NO O FLUOR NO CUT NO RNG
WT 9.5 VIS 32
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
SD: 8271 INC: 0.88
AZ: 258.39 TVD: 8270.68
106u
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
WT 9.5 VIS 32
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE CHT & FREE CAL FRACD POR GYSHBLK STN LTOR FLUOR NO O FLUOR NO CUT NO RNG
SHALE: BLK BRIT TO FRI FLK MED TXT IMBD LS FREE CAL NO POR MLDC POR NO O FLUOR NO CUT NO RNG
57u
WT 9.5 VIS 32
LIMESTONE: CLR CRSXLN SFT CHK FRMWRK IMBD CAL FREE CAL FRACD POR GYSHBLK STN DRKVLT FLUOR NO O FLUOR LZY CUT NO RNG
SHALE: BLK. FRI FLK. MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
SD: 8366 INC: 0.7
AZ: 247.35 TVD: 8365.67
LAG CALCULATED @8427' 9643 STKS OR 89 MINS @110 SPM
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
52u
WT 9.5 VIS 32
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
120u
LIMESTONE: MDLTGY - DKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SD: 8461 INC: 0.7
AZ: 267.73 TVD: 8460.66
113u
WT 9.5 VIS 32
118u

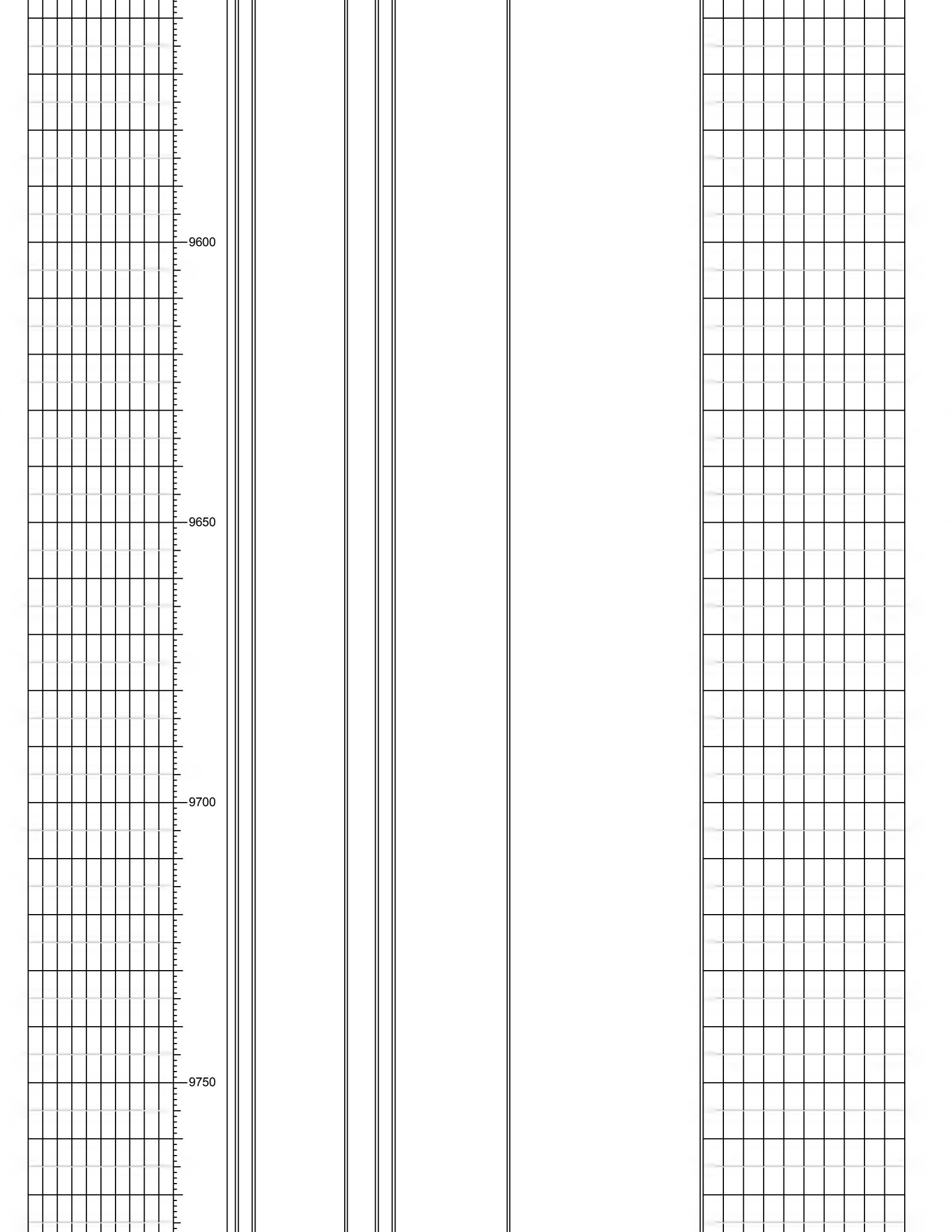

WOB 27.0
RPM 81
PP 2238
SPM 110
0
ROP
WOB
7
50
8500
C
8550
WOB 26
RPM 81
PP 2385
SPM 110
8600
C
AM
CH
6/4/2018
8650
LIMESTONE: OFFWHT - DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
81u
WT 9.5 VIS 32
LIMESTONE: LTGY - V/DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
GAS
1000 u
10 %
100 kppm
LIMESTONE: LTGY - DKGY V/FXLN - MICROXLN SFT SBBLKY - SBPLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
442u
SD: 8556 INC: 0.53
AZ: 253.29 TVD: 8555.66
WT 9.5 VIS 30
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
98u
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
WT 9.5 VIS 30
LIMESTONE: LTGY - DKGY V/FXLN - MICROXLN FRM BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
WT 9.5 VIS 30
199u
LAG CALCULATED @8655' 9901 STKS OR 90 MINS @110 SPM
AIR PUMP TO AGITATOR DOWN BUBBLE JAR @ SHAKERS POPPED
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN SFT BLKY - SBPLTY - V/FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - BLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 8651 INC: 0.7
AZ: 246.68 TVD: 8650.65

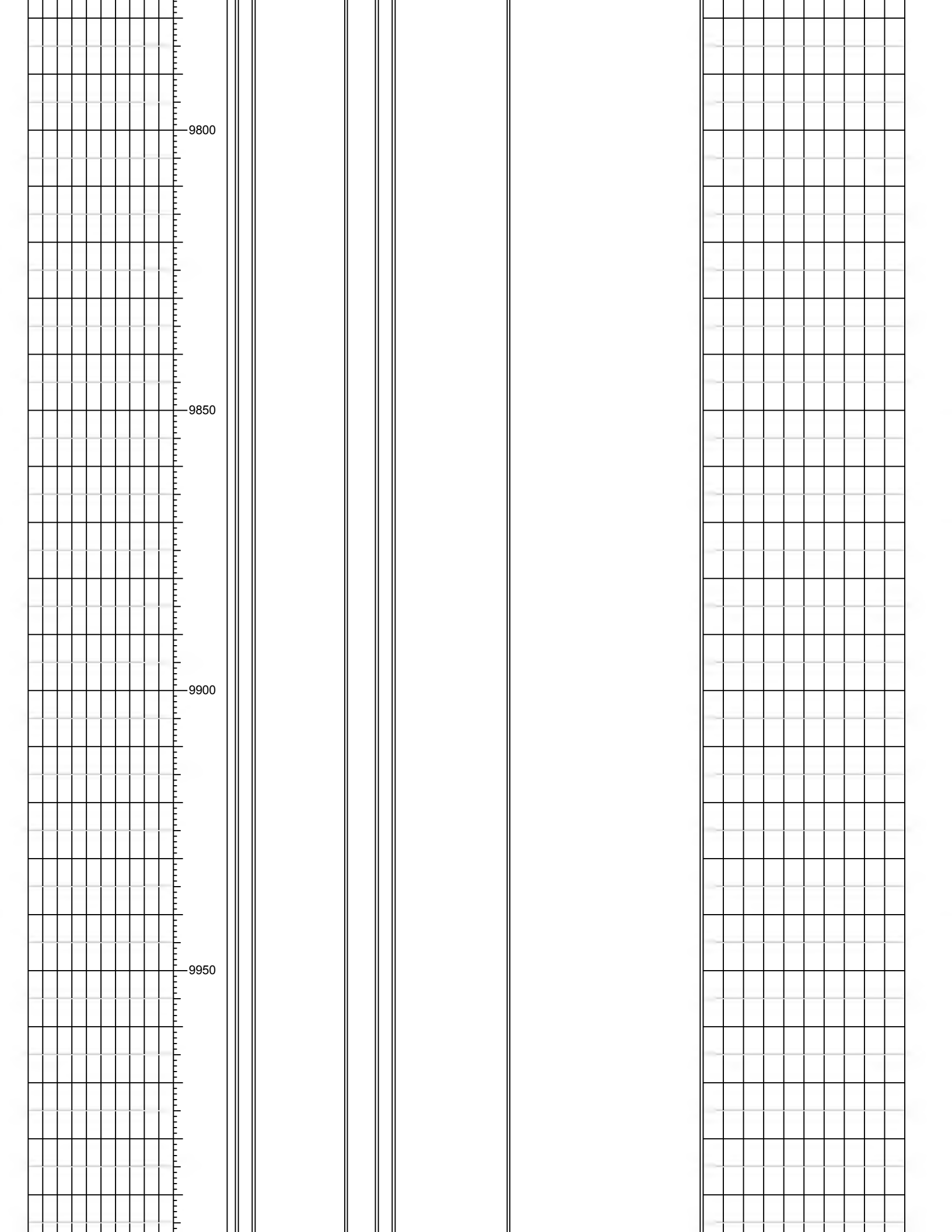

WOB 24
RPM 81
PP 2232
SPM 110
8700
C
8750
AM
WOB 25
RPM 81
PP 2337
SPM 110
8800
C
8850
WOB 24.5
RPM 81
V/FXLN - MICROXLN FRM SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
SD: 8747 INC: 0.53
AZ: 259.24 TVD: 8746.65
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN FRM PLTY - BLKY - SLTY NO CUT NO POR NO RNG
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: GYSHBLK BRIT PLTY MED TXT IMBD CALC FLK FREE CAL NO POR NO O FLUOR NO CUT NO RNG
SD: 8842 INC:0.53
AZ: 253.35 TVD: 8841.64
LIMESTONE: MLKY CRSXLN FRI IMBD CAL FREE CAL FRACD POR GYSHBLK STN DRKVLT FLUOR
SHALE: GYSHBLK BRIT PLTY MED TXT IMBD CALC FLK FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
60u
WT 9.5 VIS 30
83u
WT 9.5 VIS 30
33u
WT 9.5 VIS 30
64u
121u
WT 9.5 VIS 30
120u
CLOG IN POLYFLOW TUBING
WT

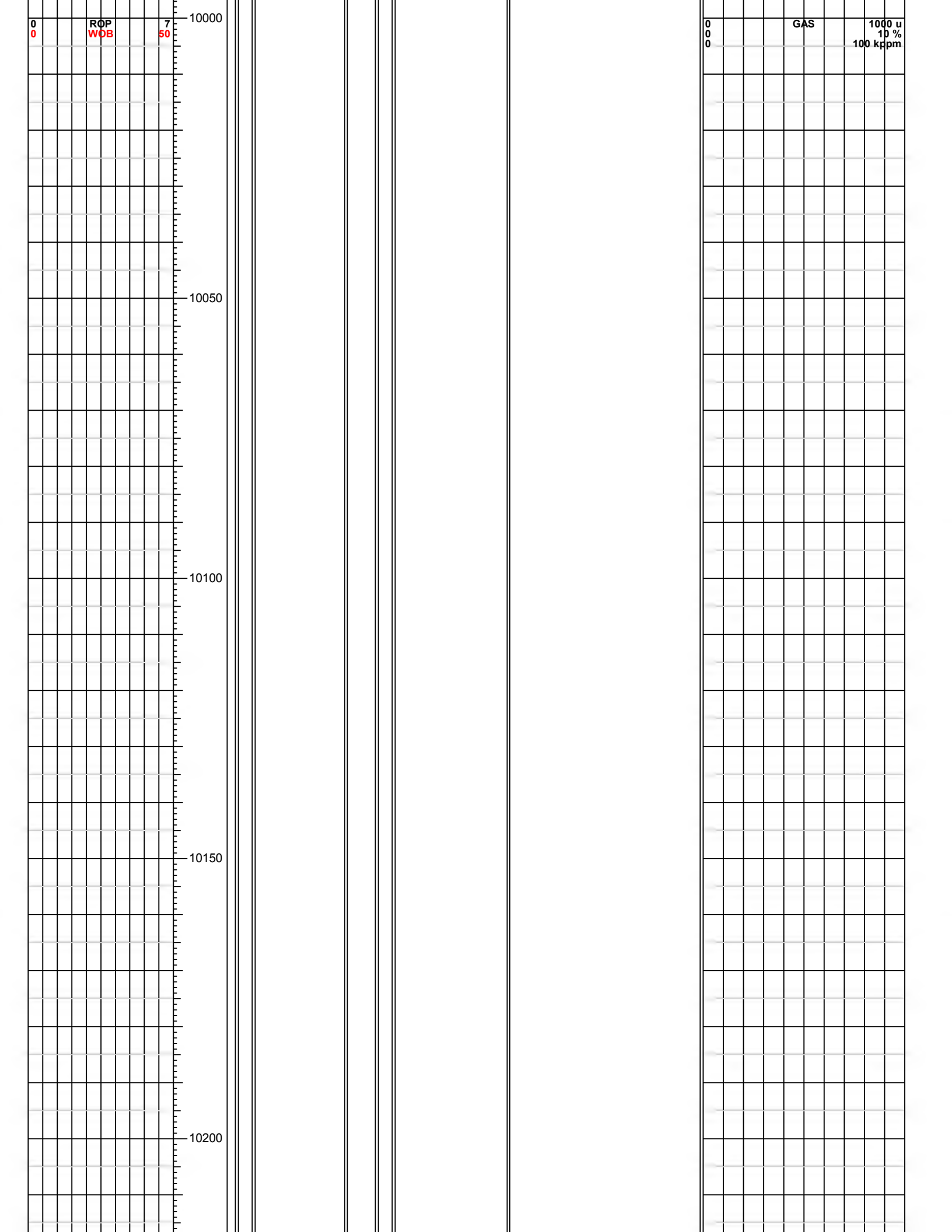

PP 2216
SPM 110
C
8900
8950
WOB 29
RPM 81
PP 2203
SPM 110
C
0
0
RPP
WOB
7
50
9000
9050
WOB 31
RPM 81
PP 2114
SPM 110
C
CH
9100
SHALE: DRKGY BRIT BLKY GRTY TXT IMBD LS FREE CA. NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
SD: 8937 INC: 0.35
AZM:262.40 TVD: 8936.64
LIMESTONE: MLKY MEDXLN SFT IMBD CAL FREE CAL FRACD POR BLK STN DRKVLT FLUOR NO O FLUOR NO CUT NO RNG
SHALE: DRKGY FRI. BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MDLTGY - MDDKGY V/FXLN - MICROXLN SFT BLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG SLI CALC
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR
SD: 9032 INC: 0.53
AZ: 263.58 TVD: 9031.64
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT
SHALE: GYSHBLK HD BLKY MED TXT IMBD LS FREE CAL NO POR NO O FLUOR NO CUT NO RNG
LIMESTONE: MLKY CRSXLN FRI CHK FRMWRK IMBD CAL FREE PYR FRACD POR NO STN LTYL FLUOR NO O FLUOR LZY CUT BLK RNG
26u
24u
WT 9.5 VIS 30
WT 9.5 VIS 30
WT 9.5 VIS 30
WT 9.5 VIS 30
WT 9.5 VIS 30
0
0
0
GAS
1000 u
10 %
100 kppm
CLOG IN POLYFLOW TUBING FIXED

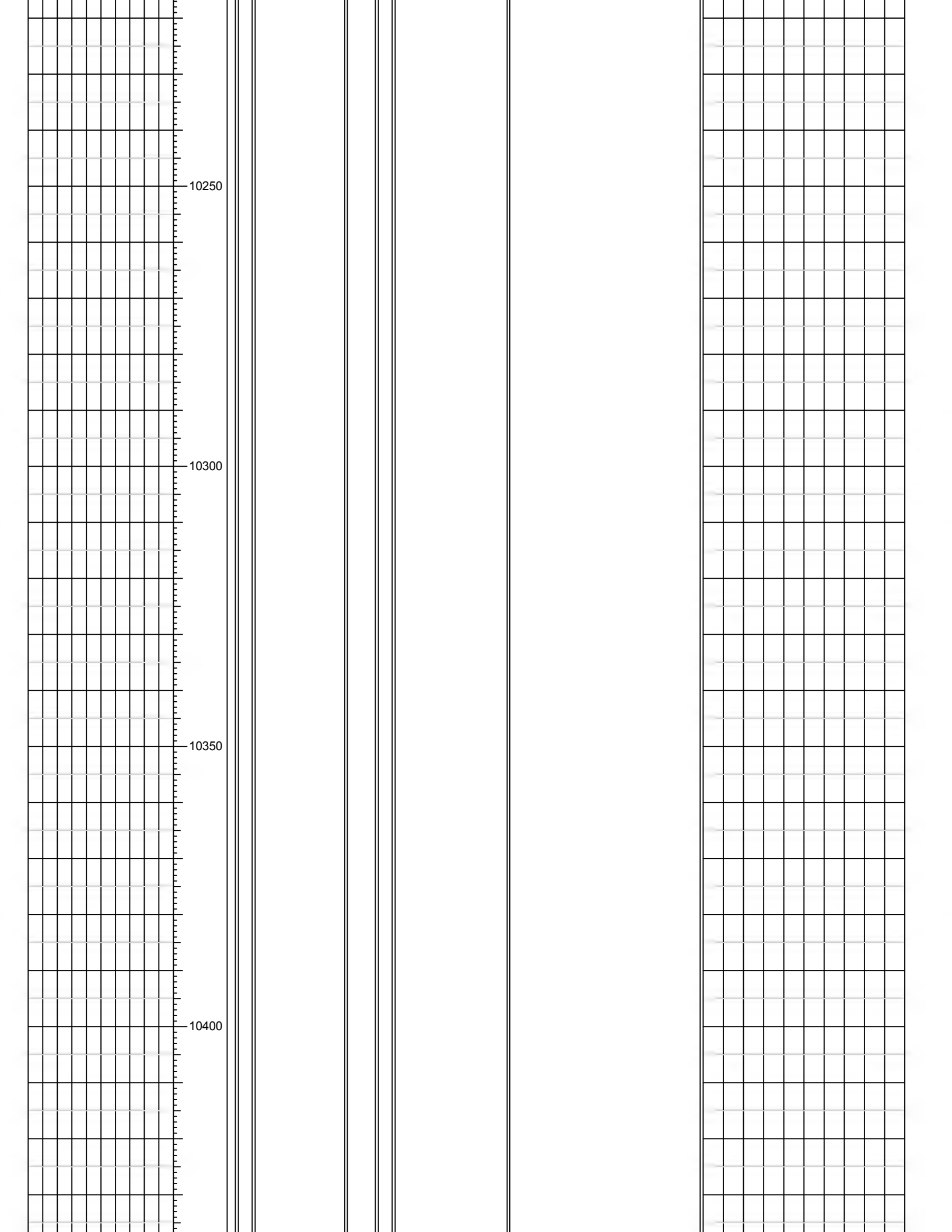

6/5/2018
9150
WOB 41
RPM 75
PP 2135
SPM 110
C
9200
AM
CH
6/6/2018
6/7/2018
9250
AM
C
CH
LH
6/8/2018
6/12/2018
WOB 26.5
RPM 89
PP 1713
SPM 97
CH
9300
6/13/2018
LH
CH
SD: 9127 INC: 0.53
AZ: 257.85 TVD: 9126.63
DOLOMITE: MDGY - MDDKGY V/FXLN - MICROXLN FRM SBBLKY - BLKY INTXLN POR SLW CUT FNTYLW RNG
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
LIMESTONE: LTGY - MDLTGY V/FXLN - MICROXLN SFT SBBLKY - PLTY - FLKY DOLC FRMWRK ARG FREE CAL TT POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN FRM PLTY - BLKY - SLTY NO CUT NO POR NO RNG
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
LIMESTONE: MDGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - FLKY SLTY NO CUT NO POR NO RNG
SD: 9222 INC: 0.7
AZ: 263.78 TVD: 9221.63
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
LIMESTONE: MD-LTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: MD- DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
SD: 9307 INC: 0.7
AZ: 254.03 TVD: 9306.62
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
LAG CALCULATED @9137' 10477 STKS OR 95 MINS @110 SPM
84u
67u
WT 9.4 VIS 30
78u
232u
WT 9.4 VIS 30
305u
435u
LAG CALCULATED @9211' 10531 STKS OR 96 MINS @110 SPM
1812u
WT 9.5 VIS 34
87u
90u
WT 9.8 VIS 43
LAG CALCULATED @9310' 10643 STKS OR 97 MINS @110 SPM
41u
LAG CALCULATED @9330' 10677 STKS OR 97 MINS @110 SPM

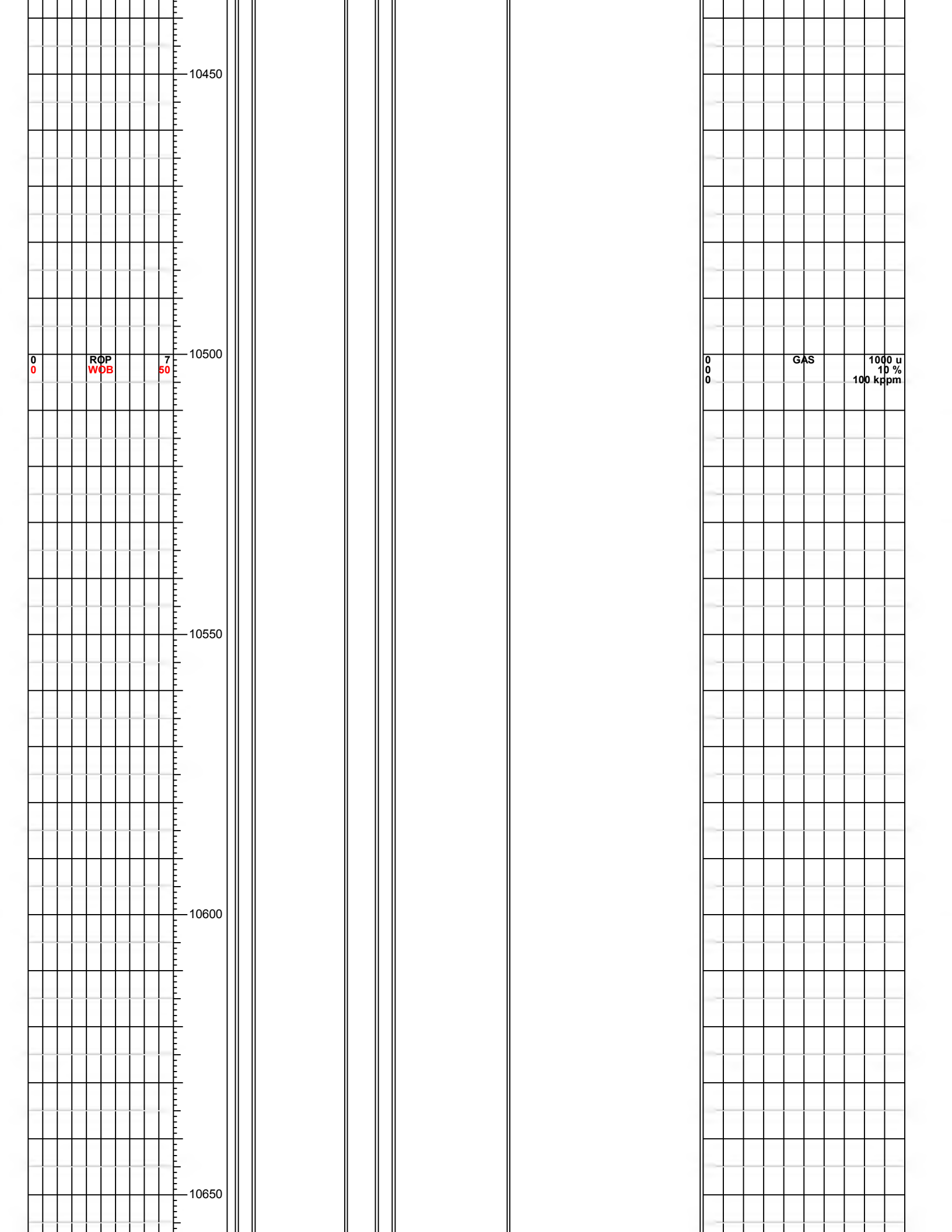

6/14/2018
9350
C
WOB 40
RPM 75
PP 2443
SPM 110
9400
9450
9500
9550
SHALE: DKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
LIMESTONE: MDLTGY - LTGY V/FXLN FLKY - SBBLKY SFT NO POR SLW CUT FNTYLW RNG
SHALE: MDDKGY - V/DKGY V/FNXLN - FNXLN HRD PLTY - SBBLKY SLTY NO CUT NO POR NO RNG
WT 9.8 VIS 52
101u
103u
486u
WT 9.8 VIS 52
0
0
ROP
WOB
7
50
0
0
0
GAS
1000 u
10 %
100 kppm

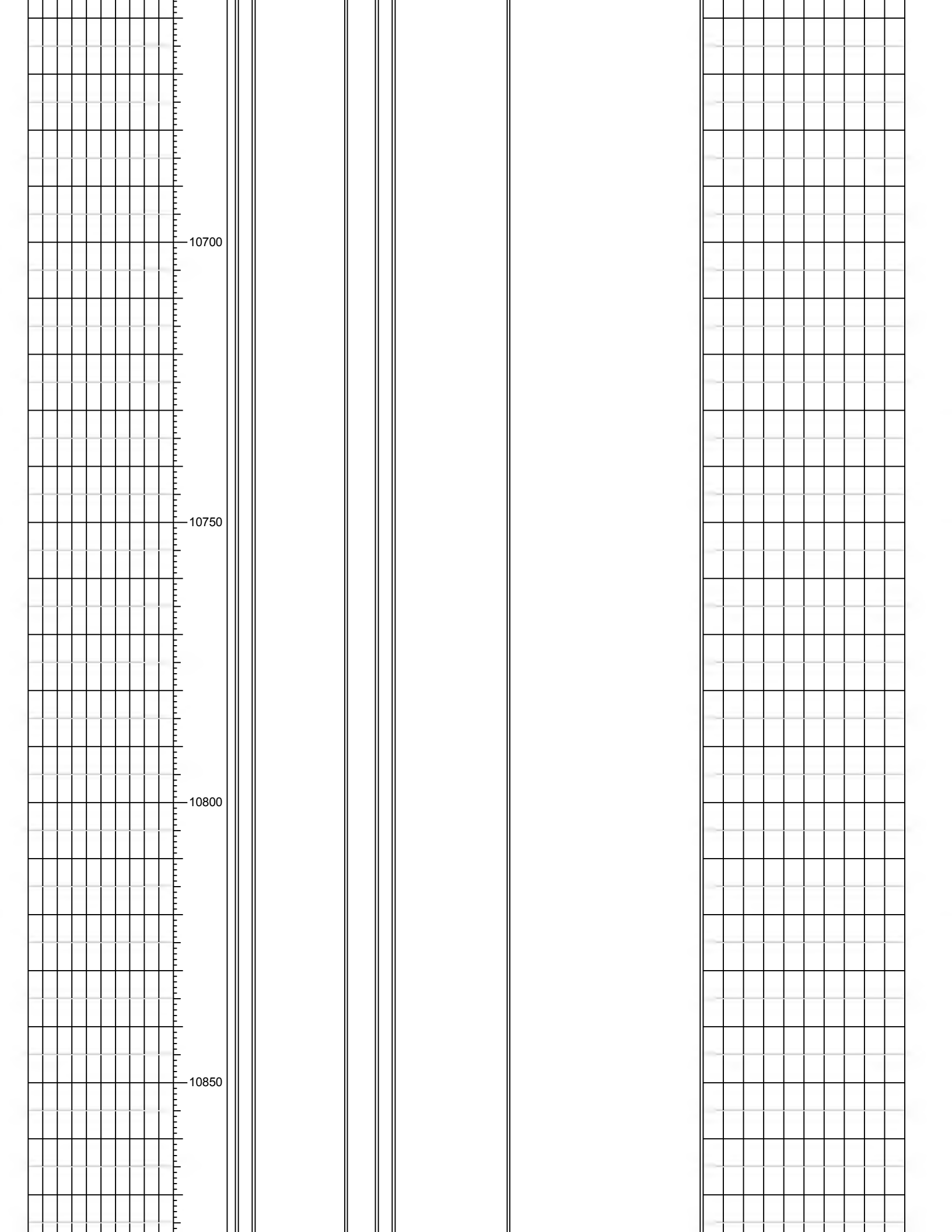

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9650
9700
9750

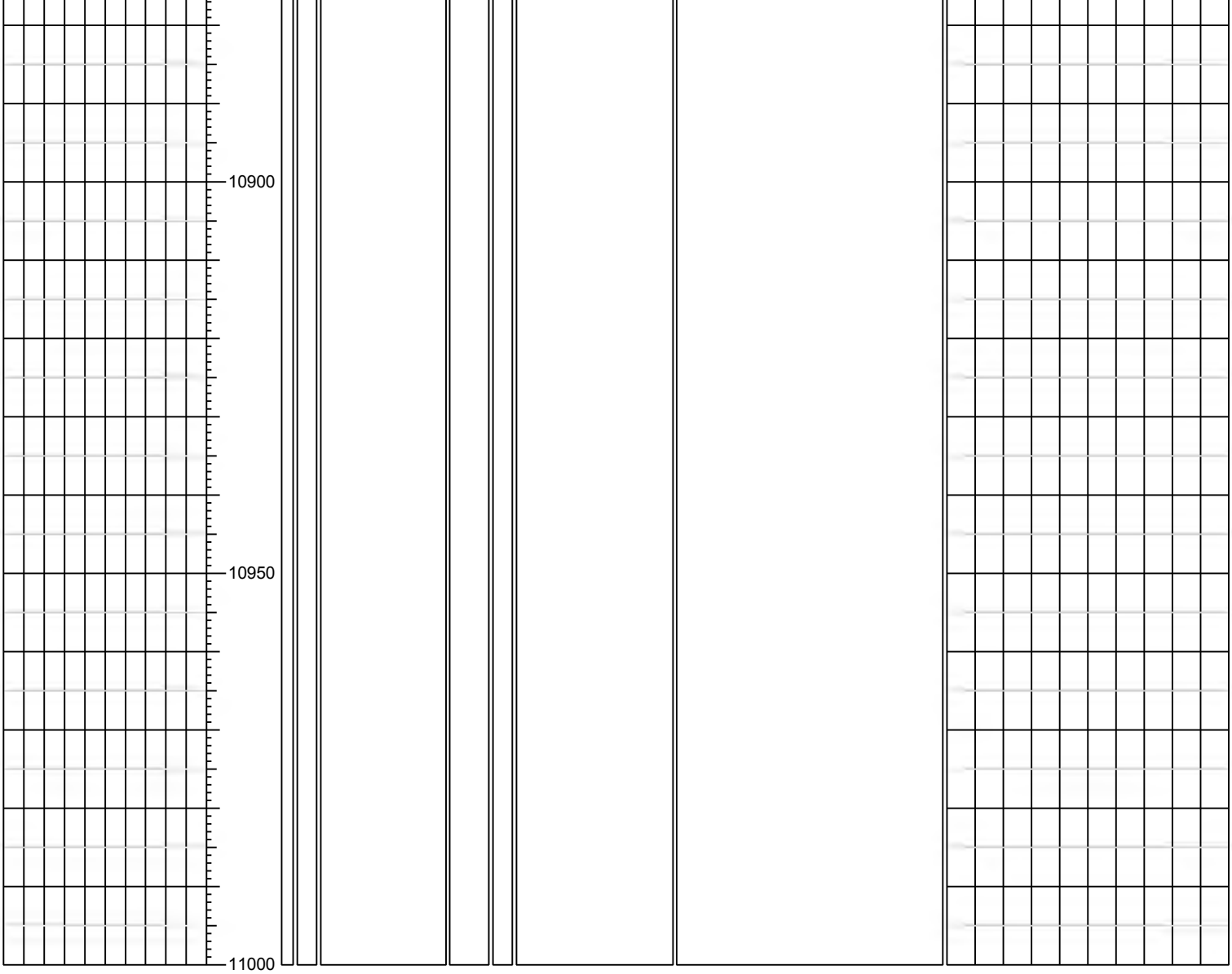

9800
9850
9900
9950


0
0
ROP
WOB
7
50
10000
10050
10100
10150
10200
0
0
0
GAS
1000 u
10 %
100 kppm


10250
10300
10350
10400


10450
10500
10550
10600
10650
0
ROP
7
0
WOB
50
0
GAS
1000 u
0
10 %
0
100 kppm


10700
10750
10800
10850


10900
10950
11000

10 EXHIBITS - LOGS

10.1 BAKER HUGHES – MICRO LATEROLOG , GAMMA RAY LOG (17-1/2 INCH HOLE; 05/09/2018)

10.2 BAKER HUGHES – BOREHOLE PROFILE (17-1/2 INCH HOLE; 05/09/2018)

10.3 BAKER HUGHES – HEXAGONAL CALIPER LOG, GAMMA RAY LOG (17-1/2 INCH HOLE; 05/09/2018)

10.4 BAKER HUGHES – COMPENSATED Z-DENSILOG, COMPENSATED NEUTRON LOG, GAMMA RAY LOG, (17-1/2 INCH HOLE; 05/09/2018)

10.5 BAKER HUGHES – SEGMENTED BOND TOOL LOG (13-3/8 INCH SURFACE CASING; 05/11/2018)

10.6 BAKER HUGHES – TEMPERATURE LOG (13-3/8 INCH SURFACE CASING; 05/11/2018)

10.7 BAKER HUGHES – MICRO LATEROLOG , GAMMA RAY LOG (12-1/4 INCH HOLE; 06/16/2018)

10.8 BAKER HUGHES – BOREHOLE PROFILE (12-1/4 INCH HOLE; 06/16/2018)

10.9 BAKER HUGHES – HEXAGONAL CALIPER LOG, GAMMA RAY LOG (12-1/4 INCH HOLE; 06/16/2018)

10.10 BAKER HUGHES - COMPENSATED Z-DENSILOG, COMPENSATED NEUTRON LOG, GAMMA RAY LOG, (12-1/4 INCH HOLE; 06/16/2018)

10.11 BAKER HUGHES – MICRO LATEROLOG, GAMMA RAY LOG (12-1/4 INCH HOLE; 06/16/2018)

10.12 BAKER HUGHES – CALIPER LOG (OPEN-HOLE INTERVAL; 06/29/2018)

10.13 BAKER HUGHES - COMPENSATED Z-DENSILOG, COMPENSATED NEUTRON LOG, GAMMA RAY LOG, (OPEN-HOLE INTERVAL; 06/29/2018)

10.14 BAKER HUGHES – STAR RESISTIVITY IMAGING LOG (CONFINING INTERVAL; 07/03/2018)

10.15 BAKER HUGHES – STAR RESISTIVITY IMAGING LOG (INJECTION INTERVAL; 08/09/2018)

10.16 BAKER HUGHES – CASING COLLAR LOCATOR (07/01/2018)

10.17 BAKER HUGHES – SEGMENTED BOND TOOL LOG (07/03/2018)

10.18 WEATHERFORD – CEMENT BOND LOG (07/14/2018)

10.19 BAKER HUGHES – TEMPERATURE LOG (07/14/2018)

10.20 BAKER HUGHES – SEGMENTED BOND TOOL LOG (07/19/2018)

10.21 BAKER HUGHES – TEMPERATURE, GAMMA RAY LOG (07/21/2018)

10.22 BAKER HUGHES – PULSE NEUTRON, GAMMA RAY LOG (07/21/2018)

10.23 BAKER HUGHES – TEMPERATURE, CASING COLLAR LOCATOR LOG (07/26/2018)

10.24 BAKER HUGHES – TEMPERATURE, CASING COLLAR LOCATOR LOG (07/27/2018)

10.25 WEATHERFORD – SECUREVIEW, ULTRAVIEW/BONDVIEW, CEMENT EVALUATION LOG (07/31/2018)

10.26 WEATHERFORD – SECUREVIEW, ULTRAVIEW CASING EVALUATION LOG (07/31/2018)

10.27 RENEGADE SERVICES - PRESSURE/TEMPERATURE SURVEY (08/14/2018)

10.28 RENEGADE SERVICES - RADIOACTIVE TRACER SURVEY (08/14/2018)

10.29 STATE OF NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT - WDW-4 APPROVED DISCHARGE PERMIT (UICI-8-4 DECEMBER 14, 2017)