

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM57285

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other			7. Unit or CA Agreement Name and No.		
2. Name of Operator XTO ENERGY INCORPORATED			8. Lease Name and Well No. ESPEJO FEDERAL COM 1H		
Contact: TESSA FITZHUGH E-Mail: tessa_fitzhugh@xtoenergy.com					
3. Address 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707			9. API Well No. 30-025-43741-00-S1		
3a. Phone () () () () () () Ph: 432-620-4336					
4. Location of Well (Report location clearly and in accordance with Federal requirements) At surface SWSE 274FSL 1580FEL Sec 23 T19S R34E Mer NMP At top prod interval reported below NENE 351FNL 986FEL Sec 26 T19S R34E Mer NMP At total depth SESE 191FSL 809FEL			10. Field and Pool, or Exploratory LEA		
			11. Sec., T., R., M., or Block and Survey or Area Sec 23 T19S R34E Mer NMP		
			12. County or Parish LEA		13. State NM
14. Date Spudded 11/26/2017		15. Date T.D. Reached 12/15/2017	16. Date Completed ☐ D & A ☒ Ready to Prod. 05/11/2018		17. Elevations (DF, KB, RT, GL)* 3774 GL
18. Total Depth: MD 16143 TVD 10933		19. Plug Back T.D.: MD 16037 TVD 10933		20. Depth Bridge Plug Set: MD TVD	
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) RCBL GR CCL			22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)		

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J55	54.5	0	1875		1625		0	
12.250	9.625 J55	40.0	0	4016		1174		0	
8.500	5.500 CYP-110	17.0	0	16124		2069		3000	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	10004	10004						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING			11397 TO 16000			ACTIVE, PRODUCING
B) BONE SPRING 3RD	10804	10933				
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
11397 TO 16000	FRAC IN 24 STAGES USING 24000 GALS ACID, 11631750 LBS PROPPANT, AND 9887364 GALS FLUID

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
05/11/2018			→	1401.0	637.0	1478.0	36.2		GAS LIFT
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→	1401	637	1478	455	POW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
05/11/2018	05/30/2018	24	→	1401.0	637.0	1478.0	36.2		GAS LIFT
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→	1401	637	1478	454	POW	

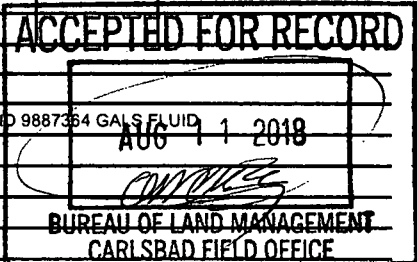
(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #423247 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Reclamation by 11/11/2018

K2



28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

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

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
RUSTLER	1822	2134		RUSTLER	1822
SALADO	2134	3288		SALADO	2134
DELAWARE	6176	694		DELAWARE	6176
BRUSHY CANYON	6694	8228	SANDSTONE, SHALE, LIMESTONE	BRUSHY CANYON	6694
BONE SPRING	8228	9549	LIMESTONE, SHALE, SANDSTONE	BONE SPRING	8228
BONE SPRING 1ST	9549	10090	LIMESTONE, SHALE, SANDSTONE	BONE SPRING 1ST	9549
BONE SPRING 2ND	10090	10804	LIMESTONE, SHALE, SANDSTONE	BONE SPRING 2ND	10090
BONE SPRING 3RD	10804	10933	LIMESTONE, SHALE, SANDSTONE	BONE SPRING 3RD	10804

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7 Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #423247 Verified by the BLM Well Information System.
For XTO ENERGY INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by DUNCAN WHITLOCK on 06/18/2018 (18DW0199SE)

Name (please print) TESSA FITZHUGHTitle REG. ANALYSTSignature (Electronic Submission)Date 06/08/2018

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Hondo Road, Artec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT AS-DRILLED PLAT

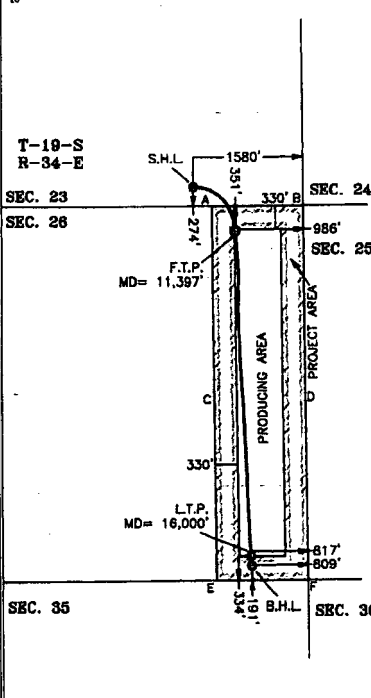
¹ API Number 30-025-43741	² Pool Code 37570	³ Pool Name Lea Bone Spring
⁴ Property Code 317589	⁵ Property Name ESPEJO FEDERAL COM	⁶ Well Number 1H
⁷ GRID No. 005380	⁸ Operator Name XTO ENERGY, INC.	⁹ Elevation 3774'

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
O	23	19 S	34 E		274	SOUTH	1,580	EAST	LEA

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
P	26	19 S	34 E		191	SOUTH	809	EAST	LEA

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

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.
NOTE: AS-DRILLED BOTTOM HOLE PLOTTED FROM DATA FURNISHED BY XTO ENERGY

	SURFACE LOCATION NAD 27 NME Y= 597,189.3 X= 748,217.2 LAT.= 32.639186°N LONG.= 103.526986°W FIRST TAKE POINT NAD 27 NME Y= 596,570.5 X= 748,816.2 LAT.= 32.637473°N LONG.= 103.525056°W CORNER COORDINATES TABLE NAD 83 NME A - Y= 596,918.3 N, X= 748,479.2 E B - Y= 596,931.4 N, X= 749,799.4 E C - Y= 594,279.8 N, X= 748,502.1 E D - Y= 594,290.6 N, X= 749,822.2 E E - Y= 591,636.7 N, X= 748,525.4 E F - Y= 591,648.1 N, X= 749,845.7 E CORNER COORDINATES TABLE NAD 83 NME A - Y= 596,980.4 N, X= 789,659.4 E B - Y= 596,993.5 N, X= 790,979.6 E C - Y= 594,341.9 N, X= 789,682.4 E D - Y= 594,352.7 N, X= 791,002.5 E E - Y= 591,698.7 N, X= 789,705.8 E F - Y= 591,711.1 N, X= 791,026.1 E LAST TAKE POINT NAD 27 NME Y= 591,975.5 X= 749,025.3 LAT.= 32.624839°N LONG.= 103.524490°W BOTTOM HOLE LOCATION NAD 27 NME Y= 591,832.8 X= 749,035.2 LAT.= 32.624446°N LONG.= 103.524462°W	SURFACE LOCATION NAD 83 NME Y= 597,251.5 X= 789,397.4 LAT.= 32.639306°N LONG.= 103.527479°W FIRST TAKE POINT NAD 83 NME Y= 596,632.6 X= 789,986.4 LAT.= 32.637593°N LONG.= 103.528548°W CORNER COORDINATES TABLE NAD 83 NME A - Y= 596,980.4 N, X= 789,659.4 E B - Y= 596,993.5 N, X= 790,979.6 E C - Y= 594,341.9 N, X= 789,682.4 E D - Y= 594,352.7 N, X= 791,002.5 E E - Y= 591,698.7 N, X= 789,705.8 E F - Y= 591,711.1 N, X= 791,026.1 E LAST TAKE POINT NAD 83 NME Y= 592,037.5 X= 790,205.7 LAT.= 32.624859°N LONG.= 103.524982°W BOTTOM HOLE LOCATION NAD 83 NME Y= 591,894.8 X= 790,215.6 LAT.= 32.624567°N LONG.= 103.524953°W	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well as this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Tessa Fitzhugh</u> Date: <u>5/23/2018</u> Printed Name: <u>Tessa Fitzhugh</u> E-mail Address: <u>tessa.fitzhugh@xtoenergy.com</u>
	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: <u>05-17-2018</u> Signature and Seal of Professional Surveyor:  MARK DILLON HARP 23786 Certificate Number: <u>23786</u> AL/AW 2018020564		
			

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1625 N. French Dr., Hobbs, NM 88240
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address XTO Energy, Inc. 6401 Holiday Hill Rd, Bldg 5 Midland, TX 79707		² OGRID Number 005380
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30 - 025-43741	⁵ Pool Name Lea, Bone Spring	⁶ Pool Code 37570
⁷ Property Code 317589	⁸ Property Name Espejo Federal Com	⁹ Well Number 1H

II. 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
O	23	19S	34E		274	South	1580	East	Lea

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	26	19S	34E		191	South	809	East	Lea

¹² Lse Code	¹³ Producing Method Code	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
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III. Oil and Gas Transporters

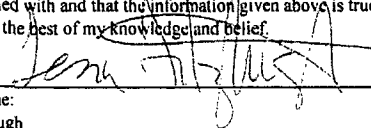
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
195739	Plains Pipeline, L.P.	O
24650	Targa Midstream Services LLC	G

IV. Well Completion Data

²¹ Spud Date 11/26/2017	²² Ready Date 05/11/2018	²³ TD 16143	²⁴ PBTB	²⁵ Perforations 11397-16000	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2	13 3/8	1875	1625		
12 1/4	9 5/8	4016	1174		
8 1/2	5 1/2	16124	2069		
	2 7/8	10004			

V. Well Test Data

³¹ Date New Oil 05/11/2018	³² Gas Delivery Date 05/12/2018	³³ Test Date 05/30/2018	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil 1401	³⁹ Water 1478	⁴⁰ Gas 637		⁴¹ Test Method

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Tessa Fitzhugh		Approved by:	
Title: Reg. Analyst		Title:	
E-mail Address: tessa_fitzhugh@xtoenergy.com		Approval Date:	
Date: 06/08/2018	Phone: 432-620-4336		

Weatherford

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

XTO Energy
200 N Loraine, Ste 800
Midland, TX 79701

Date: December 18, 2017

Attention: Matthew Naeher

Re: XTO Energy
Well: Espejo Federal Cm 1H
Lea County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

Name & Title Of Surveyor	Well Number	Surveyed Depths	Dates Performed	Type of Survey
Brice Tamdjo	1H	4062 MD	12/2/2017	Measurement
MWD Supervisor		16078 MD	12/15/2017	While Drilling

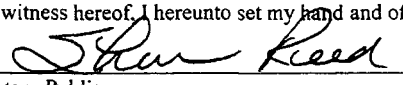
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

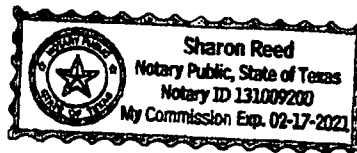


Jon Leger
MWD Ops Coordinator

On this, the 18th day of December, 2017, before me a notary public, the undersigned officer, personally appeared Jonathan Leger, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.


Notary Public





5D Survey Report

XTO Energy

Field Name: *XTO Lea Co, NM (NAD 27 NME)*
Site Name: *Espejo Federal Com 1H,2H,3H Pad*
Well Name: *Espejo Federal Com 1H*
Survey: *Definitive survey*

18 December 2017





Espejo Federal Com 1H

Field Name: XTO 1224 (20, NM) (NAD 27 NME)	Map Units: US ft	Company Name: XTO Energy	
	Vertical Reference Datum (VRD): Mean Sea Level		
	Projected Coordinate System: NAD27 / New Mexico East		
Comment:			
Site: Espejo Federal Com 1H, 2Ft, 3H Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.43
	Position:	Northings: 597189.30 US ft	Latitude: 32° 38' 21.07"
		Easting: 748217.20 US ft	Longitude: -103° 31' 37.15"
Elevation above MSL: 3774.00 US ft		Comment:	
Slot: Espejo Federal Com 1H	Position (Relative to Site Centre)		
	+N/-S: 0.00 US ft	Northings: 597189.30 US ft	Latitude: 32° 38' 21.07"
	+E/-W: 0.00 US ft	Easting: 748217.20 US ft	Longitude: -103° 31' 37.15"
Elevation above MSL: 3774.00 US ft		Comment:	
Well: Espejo Federal Com 1H	Type: Main well	UWI:	
	File Number:	Comment:	
	Closure Distance: 5418.6 US ft	Closure Azimuth: 171.32°	
Vertical Section: Position of Origin (Relative to Slot centre)			
+N/-S: -0.00 US ft		+E/-W: -0.00 US ft	Az: 177.63°
Drill floor: Survey Name: Definitive Survey			
Rig Height (Drill Floor): 26.50 US ft	Elevation above MSL: 3800.50 US ft	Inclination: 0.00°	Azimuth: 0.00°

Survey Name: Definitive Survey

Date: 17/Oct/2017 Survey Tool: See Survey Tool Ranges below. Comment: Company:

Magnetic Model:
Model Name: bggm2017 Date: 10/Nov/2017 Field Strength: 48234.5 nT Declination: 6.96° Dip: 60.45°

Tie Point:
MD: 0.00 US ft Inclination: 0.00° Azimuth: 0.00° TVD: 0.00 US ft North Offset: -0.00 US ft East Offset: -0.00 US ft

Survey Tool Ranges

Name	Start MD (us ft)	End MD (us ft)	Source Survey
MWD	0.00	3894.00	WellBenders MWD
MWD	3894.00	9823.00	WFT MWD SVY_1
MWD	9823.00	11546.00	WFT MWD SVY_2

Survey Tool Ranges:			Source Survey	
Name	Start MD(usf)	End MD(usf)		
WMD	11546.00	16143.00	WFT NWD SVL_3	

Curve Points: (Relative to Slot Centre) (TVD relative to Driller Floor)				
MD (USF)	WMD (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)
4025.37	1.64	52.27	4025.00	15.47
				32.07
				597204.77
				748249.27
				9 5/8 in

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot Centre) (TVD relative to Driller Floor)										
MD (USF)	WMD (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)	WFT NWD SVL_3 (USF)
3894.00	1.60	51.70	3893.68	-11.97	13.19	29.15	597202.49	748246.35	31.99	65.66
4025.37	1.64	52.27	4025.00	-14.14	15.47	32.07	597204.77	748249.27	35.61	64.24
4062.00	1.65	52.42	4061.61	-14.74	16.12	32.91	597205.42	748250.11	36.64	63.91
4126.00	1.82	47.34	4125.58	-15.92	17.37	34.38	597206.67	748251.58	38.52	63.20
4221.00	0.35	132.19	4220.57	-16.70	18.20	35.71	597207.50	748252.91	40.08	63.00
4316.00	0.30	169.62	4315.57	-16.25	17.76	35.97	597207.06	748253.17	40.11	63.73
4412.00	0.30	187.47	4411.56	-15.76	17.26	35.98	597206.56	748253.18	39.91	64.37
4508.00	0.31	182.10	4507.56	-15.25	16.75	35.94	597206.05	748253.14	39.65	65.01
4603.00	0.35	178.18	4602.56	-14.70	16.20	35.94	597205.50	748253.14	39.42	65.73
4697.00	0.29	162.82	4696.56	-14.19	15.69	36.02	597204.99	748253.22	39.29	66.46
4791.00	0.36	171.77	4790.56	-13.66	15.17	36.13	597204.47	748253.33	39.19	67.22
4885.00	0.38	180.53	4884.56	-13.06	14.57	36.17	597203.87	748253.37	38.99	68.07
4978.00	0.38	162.95	4977.55	-12.45	13.96	36.26	597203.26	748253.46	38.85	68.94
5072.00	0.36	167.89	5071.55	-11.86	13.38	36.41	597202.68	748253.61	38.79	69.83
5166.00	0.35	157.75	5165.55	-11.30	12.82	36.58	597202.12	748253.78	38.76	70.69
5261.00	0.31	158.27	5260.55	-10.78	12.31	36.79	597201.61	748253.99	38.79	71.49
5357.00	0.29	143.83	5356.55	-10.34	11.88	37.03	597201.18	748254.23	38.89	72.22
5452.00	0.35	127.26	5451.55	-9.95	11.51	37.40	597200.81	748254.60	39.13	72.90
5548.00	0.47	238.59	5547.55	-9.57	11.12	37.30	597200.42	748254.50	38.92	73.39
5643.00	0.79	257.59	5642.54	-9.27	10.78	36.33	597200.08	748253.53	37.89	73.47
5738.00	0.53	265.73	5737.53	-9.14	10.61	35.25	597199.91	748252.45	36.81	73.25
5833.00	0.36	275.47	5832.53	-9.17	10.60	34.51	597199.90	748251.71	36.10	72.92
5929.00	0.41	248.31	5928.53	-9.09	10.50	33.89	597199.80	748251.09	35.48	72.78
6025.00	0.40	219.15	6024.53	-8.73	10.12	33.36	597199.42	748250.56	34.86	73.13
6119.00	0.63	200.42	6118.52	-8.01	9.38	32.97	597198.68	748250.17	34.28	74.12
6215.00	0.60	205.84	6214.52	-7.08	8.43	32.57	597197.73	748249.77	33.65	75.49
6310.00	0.16	220.64	6309.51	-6.54	7.88	32.27	597197.18	748249.47	33.22	76.27
6405.00	0.82	213.63	6404.51	-6.01	7.33	31.88	597196.63	748249.08	32.72	77.04
6500.00	0.84	211.77	6499.50	-5.01	6.31	31.23	597195.61	748248.43	31.86	78.58
6596.00	0.69	205.66	6595.50	-3.93	5.20	30.62	597194.50	748247.82	31.05	80.35
6691.00	0.84	218.60	6690.49	-2.90	4.14	29.93	597193.44	748247.13	30.22	82.12
6787.00	0.75	220.46	6786.48	-1.91	3.12	29.09	597192.42	748246.29	29.25	83.89
6883.00	0.65	224.88	6882.47	-1.08	2.25	28.29	597191.55	748245.49	28.38	85.45
6978.00	0.60	223.93	6977.46	-0.37	1.51	27.57	597190.81	748244.77	27.61	86.86
7073.00	0.56	229.30	7072.46	0.26	0.85	26.87	597190.15	748244.07	26.89	88.19
7168.00	0.74	246.51	7167.45	0.77	0.30	25.96	597189.60	748243.16	25.96	89.33
7262.00	0.71	248.96	7261.45	1.18	-0.15	24.86	597189.15	748242.06	24.86	90.34
7358.00	0.55	246.40	7357.44	1.53	-0.55	23.88	597188.75	748241.08	23.89	91.31
7453.00	0.65	232.30	7452.44	2.01	-1.06	23.04	597188.24	748240.24	23.06	92.63
7549.00	0.66	211.52	7548.43	2.78	-1.86	22.32	597187.44	748239.52	22.39	94.77
7643.00	1.12	264.86	7642.42	3.28	-2.41	21.12	597186.89	748238.32	21.25	96.50
7739.00	1.21	269.94	7738.40	3.28	-2.49	19.17	597186.81	748236.37	19.33	97.40
7835.00	1.13	261.15	7834.38	3.35	-2.64	17.22	597186.66	748234.42	17.42	98.71
7931.00	1.09	263.64	7930.36	3.52	-2.88	15.38	597186.42	748232.58	15.65	100.62
8027.00	1.22	299.72	8026.34	3.04	-2.48	13.58	597186.82	748230.78	13.81	100.34
8122.00	1.22	308.42	8121.32	1.84	-1.35	11.91	597187.95	748229.11	11.99	96.46
8216.00	1.49	310.10	8215.30	0.36	0.06	10.19	597189.36	748227.39	10.19	89.67

Weatherford International Limited

SD 8.1.28 (64 bit) : 18 December 2017, 08:34:51 UTC-5

Survey Points (Relative to Slot centre (IVD - Relative to Drill Floor))											Comment		
IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)	IVD (US-ft)	IVD (m)
8310.00	1.40	310.09	8304.27	-1.24	1.59	8.38	597190.89	748225.58	8.53	79.28			
8405.00	0.47	301.39	8404.25	-2.24	2.54	7.16	597191.84	748224.36	7.60	70.49			
8499.00	0.75	304.20	8498.25	-2.82	3.08	6.32	597192.38	748223.52	7.03	64.00			
8593.00	1.14	295.24	8592.23	-3.62	3.83	4.97	597193.13	748222.17	6.27	52.38			
8688.00	1.64	304.48	8687.21	-4.87	5.00	2.99	597194.30	748220.19	5.83	30.89			
8783.00	2.02	328.02	8782.16	-7.14	7.19	0.98	597196.49	748218.18	7.26	7.79			
8877.00	1.53	334.13	8876.10	-10.04	13.02	-0.58	597196.32	748216.62	10.04	356.66			
8972.00	1.39	60.20	8971.07	-12.03	12.03	-0.28	597201.33	748216.92	12.04	358.66			
9066.00	2.08	112.44	9065.04	-11.94	11.95	2.28	597201.25	748219.48	12.16	10.82			
9162.00	1.38	157.57	9161.00	-9.97	10.15	4.14	597199.45	748221.34	10.97	22.20			
9256.00	1.35	180.24	9254.97	-7.75	7.94	4.38	597197.24	748221.58	9.07	28.89			
9350.00	1.54	175.52	9348.94	-5.38	5.37	4.48	597194.87	748221.68	7.15	38.77			
9445.00	1.73	181.23	9443.90	-2.68	2.87	4.55	597192.17	748221.75	5.37	57.75			
9540.00	0.65	224.35	9538.88	-0.88	1.05	4.14	597190.35	748221.34	4.27	75.78			
9635.00	0.63	228.67	9633.88	-0.18	0.32	3.37	597189.62	748220.57	3.38	84.60			
9728.00	0.63	220.92	9726.87	0.51	-0.41	2.65	597188.89	748219.85	2.68	96.70			
9823.00	1.07	212.29	9821.86	1.62	-1.55	1.83	597187.75	748219.03	2.40	130.20			
9942.00	0.78	52.58	9940.85	2.07	-2.00	1.88	597187.30	748219.08	2.75	136.67			
10036.00	1.09	74.21	10034.84	1.50	-1.37	3.25	597187.93	748220.45	3.53	112.77			
10066.00	5.26	87.63	10066.79	1.43	-1.22	5.01	597188.08	748222.21	5.16	103.70			
10100.00	9.98	91.43	10098.49	1.61	-1.23	9.25	597188.07	748226.45	9.33	97.57			
10132.00	13.51	94.35	10129.82	2.23	-1.58	15.75	597187.72	748232.95	15.83	95.74			
10164.00	16.15	93.99	10160.75	3.16	-2.18	23.92	597187.12	748241.12	24.02	95.20			
10196.00	17.69	93.64	10191.36	4.17	-2.79	33.21	597186.51	748250.41	33.33	94.81			
10222.00	19.77	91.76	10220.72	5.04	-3.25	43.16	597186.05	748260.36	43.28	94.31			
10259.00	21.57	90.76	10250.66	5.75	-3.50	54.45	597185.80	748271.65	54.56	93.68			
10290.00	25.04	91.05	10279.13	6.45	-3.69	66.71	597185.61	748283.91	66.81	93.17			
10322.00	28.26	93.71	10307.72	7.66	-4.31	81.04	597184.99	748298.24	81.16	93.04			
10353.00	30.87	96.93	10334.69	9.72	-5.74	96.26	597183.56	748313.46	96.44	93.41			
10449.00	39.53	100.68	10412.94	21.20	-14.98	150.92	597174.32	748368.12	151.56	95.67			
10481.00	42.16	102.10	10437.15	26.19	-19.12	171.43	597170.18	748388.63	172.50	96.36			
10513.00	43.43	105.86	10460.63	32.31	-24.37	193.52	597164.93	748409.72	194.06	97.22			
10544.00	43.72	112.64	10483.11	40.18	-31.41	212.67	597157.89	748429.87	214.97	98.40			
10575.00	44.31	116.05	10505.40	49.86	-40.29	232.28	597149.01	748449.48	235.75	99.84			
10607.00	45.19	118.22	10528.13	60.96	-50.57	252.33	597138.73	748469.53	257.35	101.33			
10639.00	47.15	119.22	10550.29	72.88	-61.67	272.57	597127.63	748489.77	279.46	102.75			
10671.00	48.95	120.53	10571.68	85.58	-73.52	293.20	597115.78	748510.40	302.28	104.08			
10702.00	49.79	122.14	10591.87	98.64	-85.76	311.30	597103.54	748530.50	324.82	105.31			
10733.00	50.70	124.10	10611.69	112.48	-98.78	331.25	597090.52	748550.45	347.59	106.51			
10764.00	52.83	126.76	10630.88	127.40	-112.90	353.09	597076.40	748570.29	370.70	107.73			
10796.00	53.43	130.14	10650.08	144.14	-128.82	373.13	597060.48	748590.33	394.74	109.05			
10827.00	55.55	133.64	10668.09	161.75	-145.67	391.90	597043.63	748609.10	418.10	110.39			
10859.00	57.33	136.06	10685.78	181.32	-164.48	410.80	597024.82	748628.00	442.50	111.82			
10890.00	59.24	139.20	10702.08	201.52	-183.96	428.56	597005.34	748645.76	466.37	113.23			
10922.00	61.02	141.40	10718.02	223.59	-205.31	446.28	596983.99	748663.48	491.24	114.70			
10954.00	61.62	143.90	10733.38	246.59	-227.63	463.31	596961.67	748680.51	516.20	116.17			
10985.00	61.97	145.51	10748.03	269.52	-249.92	479.09	596939.38	748696.29	540.36	117.55			
11016.00	63.08	147.47	10762.33	293.06	-272.85	494.27	596916.45	748711.47	564.38	118.90			
11048.00	65.03	150.37	10776.34	318.30	-297.50	509.12	596891.80	748726.32	589.67	120.30			
11078.00	66.78	153.65	10788.59	342.99	-321.68	521.96	596867.62	748739.16	613.12	121.64			
11110.00	68.44	157.09	10800.78	370.36	-348.57	534.29	596840.73	748751.49	637.94	123.12			
11141.00	70.53	159.35	10811.64	397.75	-375.53	545.05	596813.77	748762.25	661.89	124.57			
11173.00	72.60	161.54	10821.76	428.75	-404.13	555.21	596785.17	748771.41	686.72	126.05			
11204.00	74.64	163.78	10830.51	455.47	-432.52	564.07	596756.78	748781.27	710.81	127.48			
11235.00	76.01	165.40	10838.36	484.69	-461.43	572.04	596727.87	748789.24	734.94	128.89			
11267.00	77.95	167.63	10845.57	515.28	-491.74	579.30	596697.56	748796.50	759.87	130.33			
11298.00	79.95	169.44	10851.51	545.32	-521.56	585.35	596667.74	748802.55	784.00	131.70			

Weatherford International Limited

SD 8.1.23 (64 bit) 18 December 2017, 08:34:51 UTC-6

SD Survey Report

Survey Points (Relative to Station 11+202.00 on D.M. Right)																																			
Station	Offset	Angle	Distance	Delta X	Delta Y	Delta Z	Delta S	Delta T	Delta U	Delta V	Delta W	Delta X	Delta Y	Delta Z	Delta S	Delta T	Delta U	Delta V	Delta W	Delta X	Delta Y	Delta Z	Delta S	Delta T	Delta U	Delta V	Delta W	Delta X	Delta Y	Delta Z	Delta S	Delta T	Delta U	Delta V	Delta W
11329.00	81.78	171.06	10856.43	575.67	-551.72							590.53	596637.58	748807.73	808.16	133.05																			
11359.00	84.11	172.53	10865.12	605.29	-581.19							594.78	596608.11	748811.99	811.59	134.34																			
11391.00	85.38	174.24	10863.05	637.06	-612.84							598.45	596576.46	748815.65	856.57	135.68																			
11453.00	87.90	176.06	10866.68	698.89	-674.50							603.68	596514.80	748820.88	905.20	138.17																			
11546.00	87.69	175.67	10870.26	791.78	-767.19							610.38	596422.11	748827.58	980.38	141.49																			
11569.00	87.48	175.44	10871.23	814.74	-790.10							612.16	596399.20	748829.36	999.50	142.23																			
11664.00	90.21	176.08	10870.99	1002.66	-984.81							618.18	596304.49	748836.19	1079.55	145.02																			
11757.00	92.45	176.26	10870.99	1009.60	-977.57							625.39	596211.73	748842.59	1160.50	147.39																			
11853.00	92.10	176.83	10867.17	1098.51	-1073.32							631.17	596115.98	748848.37	1245.15	149.54																			
11948.00	91.25	174.05	10864.40	1193.39	-1167.97							638.72	596021.33	748855.92	1331.21	151.33																			
12044.00	90.28	179.35	10863.11	1298.33	-1263.77							644.25	595925.53	748861.45	1418.51	152.99																			
12140.00	88.25	180.61	10864.35	1385.23	-1359.75							644.28	595829.55	748861.48	1504.67	154.65																			
12234.00	89.02	181.02	10866.59	1479.06	-1453.72							642.94	595725.58	748860.14	1589.55	156.14																			
12300.00	90.28	180.83	10867.17	1574.90	-1549.70							641.39	595639.60	748858.59	1677.19	157.52																			
12424.00	89.02	180.60	10867.75	1668.76	-1643.69							640.22	595545.61	748857.42	1763.97	158.72																			
12519.00	87.97	179.24	10870.24	1763.65	-1738.65							640.35	595450.65	748857.55	1852.83	159.78																			
12613.00	86.50	178.53	10874.78	1857.51	-1832.52							642.18	595356.78	748859.38	1941.79	160.69																			
12709.00	86.57	177.78	10880.58	1953.33	-1928.30							645.27	595261.00	748862.47	2033.40	161.50																			
12899.00	86.57	177.77	10890.21	2143.08	-2117.91							652.59	595071.39	748869.79	2216.17	162.87																			
12994.00	87.41	177.49	10895.20	2237.95	-2212.70							656.51	594976.60	748873.71	2308.04	163.47																			
13089.00	86.60	178.17	10898.50	2332.89	-2307.57							660.11	594881.73	748877.31	2400.13	164.04																			
13184.00	88.81	177.14	10900.65	2427.87	-2402.46							664.00	594786.84	748881.20	2492.53	164.55																			
13280.00	89.79	177.25	10901.82	2523.85	-2498.34							668.69	594690.96	748885.89	2586.28	165.02																			
13375.00	89.44	176.35	10902.46	2618.84	-2593.19							674.00	594596.11	748891.20	2673.35	165.43																			
13469.00	90.14	176.37	10902.80	2712.82	-2687.00							679.96	594502.30	748897.16	2771.70	165.80																			
13563.00	88.18	176.10	10904.18	2806.77	-2780.78							686.13	594408.52	748903.33	2864.18	166.14																			
13659.00	88.95	175.93	10906.59	2902.71	-2876.52							692.80	594312.78	748910.00	2958.77	166.46																			
13753.00	90.21	176.09	10907.28	2996.66	-2970.28							699.34	594219.02	748916.54	3051.57	166.75																			
13849.00	91.82	176.27	10905.58	3092.61	-3066.05							705.74	594123.25	748922.94	3146.23	167.04																			
13945.00	90.84	177.16	10903.35	3188.57	-3161.87							711.24	594027.43	748928.44	3240.87	167.32																			
14040.00	88.25	177.52	10904.10	3283.56	-3256.75							715.65	593932.55	748932.85	3334.06	167.61																			
14135.00	88.74	177.37	10906.60	3378.53	-3351.63							719.88	593837.67	748937.08	3428.06	167.88																			
14231.00	90.28	177.50	10907.42	3474.52	-3447.52							724.18	593741.78	748941.38	3522.76	168.14																			
14327.00	88.81	177.34	10908.18	3570.52	-3543.42							728.50	593645.88	748945.70	3617.53	168.38																			
14423.00	89.44	177.27	10909.65	3666.50	-3639.30							733.01	593550.00	748950.21	3712.39	168.61																			
14518.00	88.39	176.83	10911.44	3761.48	-3734.16							737.90	593455.14	748955.10	3806.37	168.82																			
14613.00	86.60	176.79	10913.94	3856.44	-3828.98							743.18	593360.32	748960.38	3900.44	169.02																			
14707.00	90.21	176.70	10914.92	3950.42	-3922.82							748.52	593266.48	748965.72	3993.59	169.20																			
14801.00	89.51	176.84	10915.15	4046.40	-4018.67							753.93	593170.63	748971.13	4088.78	169.37																			
14899.00	87.76	178.41	10917.44	4143.37	-4114.55							757.91	593074.75	748975.11	4183.77	169.56																			
14995.00	89.09	178.40	10920.08	4238.32	-4210.47							763.40	592978.83	748977.78	4278.62	169.76																			
15090.00	90.98	178.19	10920.02	4331.31	-4305.43							768.58	592883.87	748980.60	4372.58	169.95																			
15186.00	86.85	178.27	10919.10	4429.30	-4401.38							773.15	592796.32	748986.73	4467.60	170.12																			
15282.00	85.94	177.95	10922.60	4525.22	-4497.24							769.53	592692.06	748986.73	4562.61	170.29																			
15378.00	86.85	177.72	10928.63	4716.93	-4692.98							773.15	592596.32	748990.35	4657.60	170.44																			
15474.00	88.11	177.39	10932.85	4812.93	-4688.80							777.24	592500.50	748994.44	4752.79	170.59																			
15569.00	89.37	176.98	10934.94	4811.90	-4783.66							781.91	592405.64	748999.11	4847.14	170.72																			

5D Survey Report

Formation Points: (Relative to Slot Centre) (TVD relative to Drift Floor)									
ID	Inc	Az	TVD	R-Offset	T-Offset	Isotiming	Isotiming	Isotiming	Comment
(US ft)	(°)	(°)	(US ft)	(US ft)	(US ft)	(US ft)	(US ft)	(US ft)	
4711.94	0.30	164.52	4711.50	15.62	36.04	597204.92	748253.24	Queen	
4891.95	0.38	163.05	4891.50	13.94	36.27	597203.24	748253.47	Penrose Sand	
5266.95	0.31	157.44	5266.50	12.28	36.80	597201.58	748254.00	Grayburg	
5931.97	0.41	247.46	5931.50	10.50	33.87	597199.80	748251.07	Delaware	
6692.01	0.84	218.62	6691.50	4.13	29.92	597193.43	748247.12	Brushy Canyon	
7997.15	1.13	289.57	7996.50	-2.74	14.14	597186.56	748231.34	Basal Brushy Canyon	
8192.20	1.42	309.73	8191.50	-0.33	10.66	597188.97	748227.86	"BSGL" Marker	
8212.20	1.48	310.04	8211.50	-0.00	10.27	597189.30	748227.47	Bone Spring	
8352.24	0.98	308.25	8351.50	2.14	7.70	597191.44	748224.90	Avalon Sand	
8852.38	1.95	332.48	8851.50	9.28	-0.21	597198.58	748216.99	Lower Avalon	
9027.44	1.64	96.48	9026.50	12.28	1.09	597201.58	748218.29	First Bone Spring Limestone	
9542.62	0.65	224.47	9541.50	1.03	4.12	597190.33	748221.32	First Bone Spring Sand	
9727.63	0.63	220.95	9726.50	-0.40	2.65	597188.90	748219.85	First Bone Spring Middle	
9847.64	0.70	207.69	9846.50	-1.88	1.64	597187.42	748218.84	Second Bone Spring	
10052.67	3.25	85.49	10051.50	-1.28	3.88	597188.02	748221.08	Limestone	
10201.40	18.05	93.28	10196.50	-2.89	34.87	597186.41	748252.07	Second Bone Spring Lower Limestone	
10243.82	20.72	91.21	10236.50	-3.40	48.97	597185.90	748266.17	Second Bone Spring Lower Sand	
10381.12	33.43	99.01	10358.50	-7.83	111.08	597181.47	748328.28	Second Bone Spring Sand	
10478.78	41.98	102.01	10435.50	-18.80	169.97	597170.50	748387.17	Base "B" Sand	
10514.19	43.43	106.12	10461.50	-24.60	193.30	597164.70	748410.50	Third Bone Spring Limestone	
10812.01	54.51	131.97	10659.50	-137.32	382.89	597051.98	748600.09	Third Bone Spring Sand	
10994.56	62.31	146.12	10752.50	-256.91	483.84	596932.39	748701.04	Third Bone Spring WW Sand	
11189.32	73.67	162.73	10826.50	-419.00	560.00	596770.30	748777.20	Base WW Sand	
11223.37	75.49	164.79	10835.50	-450.54	569.14	596738.76	748786.34	Third Bone Spring RH Sand Marker	
11257.31	77.36	166.96	10843.50	-482.51	577.22	596706.79	748794.42	Third Bone Spring RH Sand	
14342.95	88.91	177.33	10908.50	-3559.35	729.74	593629.95	748946.44	Base RH Sand/Wolfcam	p