

GW - 007

**FORMATION
MECHANICAL
INTEGRITY TESTS
(MITS)**

Chavez, Carl J, EMNRD

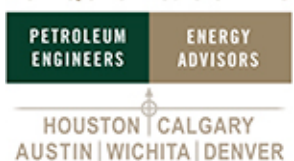
From: Will George <will@lonquist.com>
Sent: Tuesday, August 22, 2017 2:28 PM
To: Eric Busch; Chavez, Carl J, EMNRD
Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:
Attachments: Western Refining Well #3 MIT Report_6_20_2017.pdf; Western Refining Well #4 MIT Report_6_20_2017.pdf

All,

The MIT report, test data, temperature logs, and density logs for each cavern are attached. Please let me know if you require any additional information.

Regards,

LONQUIST & CO. LLC



William H. George • Staff Engineer

Lonquist & Co., LLC • 3345 Bee Cave Rd., Suite 201 • Austin, Texas, USA 78746

Direct: 512-600-1718 • Cell: 512-787-7478 • Fax: 512-732-9816

will@lonquist.com • www.lonquist.com

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From: Eric Busch

Sent: Tuesday, August 22, 2017 1:27 PM

To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Will George <will@lonquist.com>

Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Sure will...expect it tomorrow.

LONQUIST



Eric T. Busch • Senior Vice President • Lonquist & Co., LLC • 1001 McKinney, Suite 1650 • Houston, Texas, USA 77002

Direct: 713-559-9953 • Cell: 832-216-0785 • Fax: 713-559-9959 • Main: 713-559-9950 • eric@lonquist.com •

www.lonquist.com

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From: Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]

Sent: Tuesday, August 22, 2017 1:25 PM

To: Eric Busch <eric@lonquist.com>

Subject: FW: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Eric:

Hi. Could you please forward the pdf version of the MIT Reports, Test Density Logs, and Test Temperature Logs from the MIT on LPGs 3 and 4 to me.

OCD must update the administrative records for the above subject wells. Thank you.

From: Chavez, Carl J, EMNRD

Sent: Tuesday, August 22, 2017 11:51 AM

To: 'Parker, Kenneth J' <Kenneth.J.Parker@andeavor.com>; Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>

Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD

<MarkA.Whitaker@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>

Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Ken:

I located the attached files on OCD Online in the "Well File". Were there any charts or other accompanying information associated with the MITs?

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")

From: Parker, Kenneth J [<mailto:Kenneth.J.Parker@andeavor.com>]

Sent: Monday, August 21, 2017 1:52 PM

To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>

Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD

<MarkA.Whitaker@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>

Subject: Re: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Carl,

I believe the reports were already submitted and are on file.

Ken

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Friday, August 11, 2017 12:02 PM
To: Parker, Ken (Ken.Parker@wnr.com)
Cc: Brown, Maxey G, EMNRD; Whitaker, Mark A, EMNRD; Griswold, Jim, EMNRD
Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

This email was sent by an external sender. Please use caution when opening attachments, clicking web links, or replying until you have verified this email sender.



Ken:

Good afternoon. The New Mexico Oil Conservation Division is following up on the msg. below.

Has Western Refining, LLP completed the MITs yet?

Thank you.

From: Chavez, Carl J, EMNRD
Sent: Wednesday, March 1, 2017 11:24 AM
To: Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>
Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>
Subject: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Ken:

Good morning! I am writing to confirm our telephone call discussion and scheduling of the Well #3 and Well #4 Cavern MIT scheduled to be completed on or before July 1, 2017.

Western will submit C-103s with description of the application of Nitrogen for scheduled MITs with the OCD DO1 Staff (see contact info. provided below).

District 1

1625 N. French Drive
Hobbs, New Mexico 88240

OFFICE: (575) 393-6161 FAX: (575) 393-0720
EMERGENCY NUMBER - MOBILE: (575) 370-3186
Business Hours:
7:00 AM-12:00 PM and 1:00 - 4:00 PM
Monday through Friday

[Mark A. Whitaker](#) - Petroleum Engineering Specialist
Phone extension: 120
Mobile: (575) 399-3202

Please contact me if I may be of further assistance. 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”)

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
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

HOBBS 002
MAY 10 2017

Form C-103
Revised July 18, 2013

WELL API NO.
30-025-35957

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
30055

7. Lease Name or Unit Agreement Name
State LPG Storage

8. Well Number 004

9. OGRID Number
248440

10. Pool name or Wildcat
Salado

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
Western Refining Company, L.P.

3. Address of Operator
P.O. Box 1345 // Jal, NM 88252

4. Well Location

Unit Letter M : 1,000 feet from the South line and 1230 feet from the West line
Section 32 Township 23S Range 37E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3311' - KB 3304' - GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: Mechanical Integrity Test ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Perform a Mechanical Integrity Test ("MIT") on the cavern and wellbore.

Spud Date:

07/11/2013

Rig Release Date:

07/29/2013

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

SIGNATURE



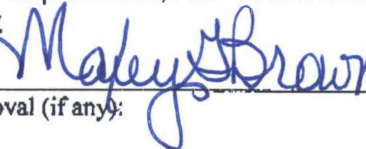
TITLE: Regulatory Manager for Lonquist Field Service, LLC DATE: 05/08/17

Type or print name: Stephen Pattee, P.G. E-mail address: steve@lonquist.com

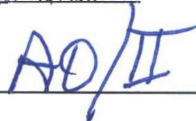
PHONE: (512) 600-1774

For State Use Only

APPROVED BY:



TITLE



DATE

5/10/2017

Conditions of Approval (if any):

LONQUIST & CO. LLCPETROLEUM
ENGINEERSENERGY
ADVISORS**AUSTIN HOUSTON WICHITA DENVER CALGARY**

May 8, 2017

Maxey Brown
State of New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240
(575) 393-6161

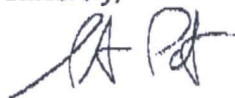
**RE: Form C-103
Mechanical Integrity Test
State LPG Storage No. 004 (API 30-025-35957)
Western Refining Company L.P. (OGRID 248440)**

Dear Mr. Brown,

Attached, please find the Form C-103 to perform a Mechanical Integrity Test ("MIT") on State LPG Storage No. 004 in Lea County, NM. Included with the form, is the MIT plan to be performed during this operation.

Please contact me by phone at (512) 600-1774 or via email (steve@lonquist.com) if you have any questions.

Sincerely,



Steve Pattee, P.G.
Regulatory Manager
Lonquist & Co., LLC

Attachments

AUSTIN
HOUSTON

LONQUIST

FIELD SERVICE

www.lonquistfieldservice.com

WICHITA
CALGARY

HOBBS OCD

JUN 23 2017

RECEIVED

June 21, 2017

Mr. George Bower
Oil Conservation Division - District 1
1625 N. French Drive
Hobbs, New Mexico 88240

Subject: Western Refining Company, LP – State LPG Storage No. 4 MIT

Dear Mr. Bower,

Western Refining Company, LP has performed a nitrogen-brine MIT on one of their storage cavern wells, State LPG Storage No. 4 (API No. 30-025-35957), located in the Jal Station Field in Lea County, New Mexico.

Nitrogen was injected on May 9th, 2017. An hour liner test was performed successfully with the following parameters:

- Nitrogen-brine interface start depth: 1,549'
- Start Annulus Pressure: 992.43 psig
- Nitrogen-brine interface end depth: 1,549'
- End Annulus Pressure: 991.54 psig

The 60-minute liner test passed with the pressures following a stabilization trend throughout the liner test period. Nitrogen injection continued until the nitrogen-brine interface was measured at 1,635'. An hour casing test was performed successfully with the following parameters:

- Nitrogen-brine interface start depth: 1,635'
- Start Annulus Pressure: 1,037.04 psig
- Nitrogen-brine interface end depth: 1,635'
- End Annulus Pressure: 1,036.23 psig

The 60-minute casing test passed with the pressures following a stabilization trend throughout the casing test period. Nitrogen injection continued into the borehole until the nitrogen-brine interface was measured at 1,682'. The well was shut in and allowed to stabilize overnight. The MIT was initialized on May 10th, 2017 at 09:00 with the following parameters:

- Annular pressure: 1,187.44psig
- Tubing pressure: 527.10 psig
- Nitrogen-brine interface: 1,682'

The pressure was monitored throughout a 72 hour period and finalized on May 13th, 2017 at 09:00 with the following parameters:

- Annular pressure: 1,180.72 psig
- Tubing pressure: 740.37 psig
- Nitrogen-brine interface: 1,682'
- Test Gradient at Casing Shoe: 0.77 psi/ft
- Calculated Leak Rate: 224.07 bbls/yr
- Minimum Detectable Leak Rate: 756.06 bbls/year

It was determined that State LPG Storage No. 4, at the time of this test, demonstrated the mechanical integrity required for the storage of hydrocarbons.

Included in this package are:

- MIT Report for State LPG Storage No. 4
- Test Density Log
- Test Temperature Log

Please contact me by phone (832-216-0785) or via email (eric@lonquist.com) if you have any questions.

Sincerely,



Eric Busch
Senior Vice President

CC: Richard Lonquist – Lonquist Field Service, LLC



**Mechanical Integrity Test Report
State LPG Storage No. 4
Operator: Western Refining Company, LP
API: 30-025-35957
Jal Station Field
Lea County, New Mexico, USA**

Prepared for:

Western Refining Company, LP

By:

**Lonquist Field Service, LLC
Texas Registered Firm No. F-9147
Houston, Texas**

June 2017

*MIT Report – Western Refining Company, LP
State LPG Storage No. 4*

Executive Summary

Lonquist Field Services, LLC was contracted by Western Refining Company, LP ("Western Refining") to conduct a Mechanical Integrity Test on State LPG Storage No. 4 ("Well No. 4"), operated by Western Refining Company, LP at the Jal Station Field in Lea County, New Mexico. The Nitrogen-Brine Interface Test Method was used for this test. Nitrogen was injected on May 9th, 2017 to achieve the desired interface depth below the casing shoe. The well was allowed to stabilize for approximately 11 hours and on May 10th, 2017 at 09:00 the MIT was initialized with an annulus (nitrogen) pressure of 1,187.44 psig and a tubing (brine) pressure of 527.10 psig with the nitrogen-brine interface at 1,682'. The test was finalized on May 13th, 2017 at 09:00 with an annulus (nitrogen) pressure of 1,180.72 psig and a tubing (brine) pressure of 740.365 psig with the nitrogen-brine interface at 1,682'. The calculations yielded a calculated leak rate ("CLR") of 224.07 barrels per year and a Minimum Detectable Leak Rate ("MDLR") of 756.06 barrels per year. The well was tested to a test gradient of 0.77 psi/ft at the 9-5/8" cemented casing shoe (1,659'). Considering these results and the guidelines set forth by the State of New Mexico Oil Conservation Division, Well No. 4 at the Jal Station Field, at the time of this test, demonstrated the mechanical integrity required for the storage of hydrocarbons.

Reviewed By:
Lonquist Field Service, LLC
Ben H. Bergman, Sr. Engineer



Date Signed: June 20th, 2017
Houston, Texas

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Table of Contents

Section Title	Page/Section
INTRODUCTION.....	4
SUMMARY	5
CONCLUSIONS.....	6
DAILY ACTIVITIES	7
TEST PARTICIPANTS	8
CALCULATIONS.....	9
WELL DATA SHEET	11
MIT/WELL SCHEMATIC	13
APPENDIX A – MIT TEST PROCEDURE.....	A
APPENDIX B – INJECTION PRESSURE DATA	B
APPENDIX C – TEST PRESSURE DATA	C
APPENDIX D – CALCULATED BOREHOLE VOLUMES	D
APPENDIX E – PRESSURE AND TEMPERATURE GRAPHS.....	E
APPENDIX F – WELL LOGS	F

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Introduction

Lonquist Field Service, LLC was contracted by Western Refining Company, LP to conduct a Mechanical Integrity Test on State LPG Storage No. 4 ("Well No. 4") at the Jal Station Field in Lea County, New Mexico.

Well No. 4 was tested using the Nitrogen-Brine Interface Test Method (See Appendix A). Typically this procedure begins with an initial injection of nitrogen into the well to check for wellhead and casing leaks. The initial injection is followed by continued injection of nitrogen into the storage well until the interface is located below the casing shoe and a sufficient test pressure has been reached. The interface depth and the nitrogen (annulus) pressure are monitored during the test period. The test is evaluated by calculating the nitrogen mass (volume) at the commencement and completion of the test period. This difference yields an apparent mass (volume) change. As the test occurs over a finite time period, the apparent mass (volume) rate of change can be calculated and linearly forecasted to an annual rate. The annual mass (volume) rate of change is usually expressed in barrels of nitrogen per year (at average well pressure and temperature conditions). The mass (volume) rate of change is subject to the accuracy of the test or Minimum Detectable Leak Rate (MDLR), also expressed in barrels per year.

The following report will outline the mechanical integrity test for Well No. 4. The report includes the cavern and wellbore configuration, temperature logs, and density logs completed during the test.

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Summary

On May 9th, 2017 at 07:00, wireline and nitrogen units were rigged up and a gauge run, base temperature log and base density log were completed. At 10:45, nitrogen was injected into Well No. 4 with a target temperature of 77° F until the nitrogen-product interface was measured at a depth of 1,549'. The liner test began on May 9th, 2017 at 13:15 with the nitrogen-product interface at 1,549', an annular (nitrogen) pressure of 992.43 psig, and a tubing (brine) pressure of 237.24 psig. The liner test ended with the nitrogen-product interface at 1,549', an annular (nitrogen) pressure of 991.54 psig, and a tubing (brine) pressure of 236.19 psig. The 60-minute liner test passed with a stabilizing pressure trend throughout the testing period. Following the liner test, nitrogen injection continued until the nitrogen-product interface was measured at a depth of 1,635'. The casing test began on May 9th, 2017 at 15:00 with the nitrogen-product interface at 1,635', an annular (nitrogen) pressure of 1,037.04 psig, and a tubing (brine) pressure of 246.05 psig. The casing test ended with the nitrogen-product interface at 1,635', an annular (nitrogen) pressure of 1,036.23 psig, and a tubing (brine) pressure of 244.96 psig. The 60-minute casing test passed with a stabilizing pressure trend throughout the testing period. Nitrogen injection continued while bleeding off brine until the nitrogen-brine interface was measured at a depth of 1,682' at an adequate test pressure.

After an approximate 11 hour stabilization period, on May 10th, 2017 at 09:00 the MIT on Well No. 4 was initialized with an annulus (nitrogen) pressure of 1,187.44 psig, a tubing (brine) pressure of 527.10 psig, and with the nitrogen-brine interface at a depth of 1,682'. The well was shut in for a 72 hour test period. On May 13th, 2017 at 09:00 the MIT on Well No. 4 was finalized with an annulus (nitrogen) pressure of 1,180.72 psig, a tubing (brine) pressure of 740.37 psig (tubing pressure increase indicated a small tubing leak) and with the nitrogen-brine interface at a depth of 1,682'. Per Western Refining Company, LP the tubing does not accumulate hydrocarbon products during storage. This concluded the MIT on Well No. 4 which passed the MIT.

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Conclusions

The mechanical integrity of Well No. 4 was established with the Nitrogen-Brine Interface Test Method. This test monitored the Nitrogen-Brine Interface for a 72 hour test period. Well No. 4 was initialized with an annulus (nitrogen) pressure of 1,187.44 psig, a tubing (brine) pressure of 527.10 psig, and the nitrogen-brine interface at 1,682'.

Well No. 4 was finalized with an annulus (nitrogen) pressure of 1,180.72 psig, a tubing (brine) pressure of 740.37 psig, and the nitrogen-brine interface at 1,682'. Well No. 4 had a test length of 72 hours and a test gradient of 0.77 psi/ft at the 9-5/8" cemented casing shoe.

The total gas volume in the annulus and the wellbore was calculated to be 319,582.52 SCF at the start of the test and total gas volume in the annulus, wellbore and upper tubing was calculated to be 318,723.06 SCF at the end of the test for a calculated "decrease" in gas volume of 859.46 SCF. The calculated gas volume was based on the measured wellhead pressure, measured wellbore temperature, known casing annulus volume, and calculated borehole volumes (Appendix D).

The calculated leak rate ("CLR") was 224.07 barrels per year. Considering the calculations, the calculated leak rate is less than the Minimum Detectable Leak Rate ("MDLR") of 756.06 barrels per year.

At the completion of this test, Well No. 4 exhibited the characteristics of a well that has mechanical integrity as required for hydrocarbon storage, in accordance with industry standards and the guidelines established by the State of New Mexico Oil Conservation Division.

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Daily Activities

May 9th, 2017

Arrive on location and spot equipment. Hold daily safety meeting and review JSAs. Rig up wireline and nitrogen equipment. Run in hole with gauge run and tag TD at 2,613'. Run in hole with wireline and record base temperature and density logs. Start nitrogen injection and spot nitrogen-product interface above the 7" liner shoe at 1,549' for the 60 minute liner test. The test started with an annulus pressure of 992.43 psig and a tubing pressure of 237.24 psig. The test ended with an annulus pressure of 991.54 psig and a tubing pressure of 236.19 psig. The interface at the beginning and end of the test was measured at 1,549'. The pressure trend during the 60 minute liner test showed a stabilization curve with pressure flattening out over the test. The test passed and nitrogen injection was continued. The nitrogen-product interface was spotted above the 9-5/8" casing shoe at 1,635' for the 60 minute casing test. The test started with an annulus pressure of 1,037.04 psig and a tubing pressure of 246.05 psig. The test ended with an annulus pressure of 1,036.23 psig and a tubing pressure of 244.96 psig. The interface at the beginning and end of the test was measured at 1,635'. The pressure trend during the 60 minute casing test showing a stabilization curve with pressure flattening out over the test. The test passed and nitrogen injection continued while bleeding off brine in order to spot the nitrogen-brine interface at 1,682' at an adequate test pressure. Complete post injection log. Rig down lubricator, crane, and nitrogen unit. Secure well and allow to stabilize overnight.

May 10th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Rig up lubricator and crane. Run in hole with temperature log and initialize test with density log. The nitrogen-brine interface was located at 1,682'. Test initialization annulus pressure was 1,187.44 psig and initialization tubing pressure was 527.10 psig. Rig down crane and lubricator. Secure well for the night.

May 12th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Rig up lubricator and crane. Run in hole with temperature log and pull out of hole with density log. The nitrogen-brine interface was located at 1,682'. Rig down crane and lubricator. Secure well for the night.

May 13th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Rig up lubricator and crane. Run in hole with temperature log and finalize test with density log. The nitrogen-brine interface was located at 1,682'. Test finalization annulus pressure was 1,180.72 psig and finalization tubing pressure was 740.37 psig. Rig down crane and lubricator. Secure and return well to Western Refining.

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Test Participants

Western Refining Company, LP

Ken Parker.....Project Manager

Lonquist Field Service, LLC

Eric Busch.....Operations Manager

Tadd Busch.....Operations Manager

Will George.....Petroleum / Test Engineer

Ben Bergman.....Sr. Engineer

Empire Wireline, LLC

Wireline Personnel.....Wireline Operator

CUDD Energy Services

Nitrogen Personnel.....Nitrogen Injection

Double R Transportation, LLC

Double R Personnel.....Pump Truck

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Calculations

Minimum Detectable Leak Rate – MDLR

The test sensitivity is defined as the ability of the test calculations and measurements to determine the status of the mechanical integrity of the well and wellbore. The conventional test sensitivity calculation using this test methodology is the Minimum Detectable Leak Rate (MDLR).

$$MDLR = \frac{[B_v * L_R * (T_c)]}{T_L}$$

Where:

B_v	=	12.43 bbls/ft (APPENDIX D)
L_R	=	0.50 feet
T_c	=	365 days/year
T_L	=	3 day
MDLR	=	756.06 bbls/year

Therefore: $(12.43 \times 0.50 \times 365)/3 = 756.06 \text{ bbls/year}^*$

*Hand calculations may yield different final MDLR due to rounding.

Volume Calculations – Annular Space & Borehole

Using the methodology outlined in the MIT procedure the following volumes were calculated:

Initial Wellbore Volume ($V_{I(\text{Borehole})}$)

- Annulus Pressure – 1,187.44 psig
- Tubing Pressure – 527.10 psig
- Wellbore Temperature – Logged (APPENDIX F)
- Volume
 - 7" x 3-1/2" Annulus – 0.027 bbls/ft
 - 9-5/8" x 3-1/2" Annulus – 0.065 bbls/ft
 - Borehole – APPENDIX D

$$(V_I) = \sum_o^{I/F} (N_2)_i$$

$V_{I(\text{Borehole})} = 319,582.52 \text{ SCF}$

Final Wellbore Volume & Tubing Volume to 543' ($V_{F(\text{Borehole})}$)

- Annulus Pressure – 1,180.72 psig
- Tubing Pressure – 740.37 psig
- Wellbore Temperature – Logged (APPENDIX F)
- Volume
 - 3-1/2" Tubing – 0.00494 bbls/ft
 - 7" x 3-1/2" Annulus – 0.027 bbls/ft
 - 9-5/8" x 3-1/2" Annulus – 0.065 bbls/ft
 - Borehole – APPENDIX D

$$(V_F) = \sum_o^{I/F} (N_2)_i$$

$V_{F(\text{Borehole})} = 318,723.06 \text{ SCF}$

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Borehole Volume Change:

$$(\Delta V)_{STP(Borehole)} = (\Delta V)_{I(Borehole)} - (\Delta V)_{F(Borehole)}$$

$$(\Delta V)_{STP(Borehole)} = 859.46 SCF$$

The calculated volume/mass change is based on standard temperature and pressure and to evaluate the test results against the MDLR the calculated volume/mass change is converted to downhole conditions with the following equation:

$$(\Delta V_{WB}) = \left(\frac{[(Z_A) * (T_A) * R * (\Delta V)_{STP}]}{[(P_A) * N_{GC}]} \right)$$

Where:

(Z_A)	=	1.00181
(T_A)	=	535.112 °R
R	=	Specific Gas Constant
$(\Delta V)_{STP}$	=	859.46 SCF
(P_A)	=	1,236.84 psi
N_{GC}	=	Nitrogen Gas Conversion (13.80 SCF = 1 lb)
(ΔV_{WB})	=	3.45 ft³/day

To calculate an annual volume change to compare to the MDLR the following calculations were completed:

$$(\Delta V_{ANNUAL}) = (\Delta V_{WB}) * 365(day / year)$$

Where:

(ΔV_{WB})	=	3.45 ft ³ /day
1 year	=	365 days
(ΔV_{ANNUAL})	=	1,259.25 ft³/yr

Where:

(ΔV_{ANNUAL})	=	1,259.25 ft ³ /yr
1 bbl	=	5.6146 ft ³
CLR (bbls/year)	=	$(\Delta V_{ANNUAL}) / 5.6146 \text{ ft}^3$
Calculated Leak Rate	=	224.07 bbls/year*

***Hand calculations may yield different final CLR due to rounding.**

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Well Data Sheet

TEST INFORMATION AND RESULTS

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

WELL INFORMATION

Production Casing			Casing Liner		
Casing Size	9 5/8	inches	Casing Size	7	inches
Casing ID	8.921	inches	Casing ID	6.366	inches
Casing Weight	36	lbs/ft	Casing Weight	23	lbs/ft
Grade	J-55		Grade	J-55	
Depth	1659	feet	Depth	1575	feet
Outer Hanging String			Inner Hanging String		
Casing Size	3 1/2	inches	Casing Size		inches
Casing ID	2.250	inches	Casing ID		inches
Casing Weight	NA	lbs/ft	Casing Weight		lbs/ft
Grade	NA		Grade		
Depth	2592	feet	Depth		feet
Cavern					
Cavern Size			136,626	bbls	
Compressibility			0.41	bbls/psi	
Cavern TD			2613	feet	

FINAL TEST INFORMATION

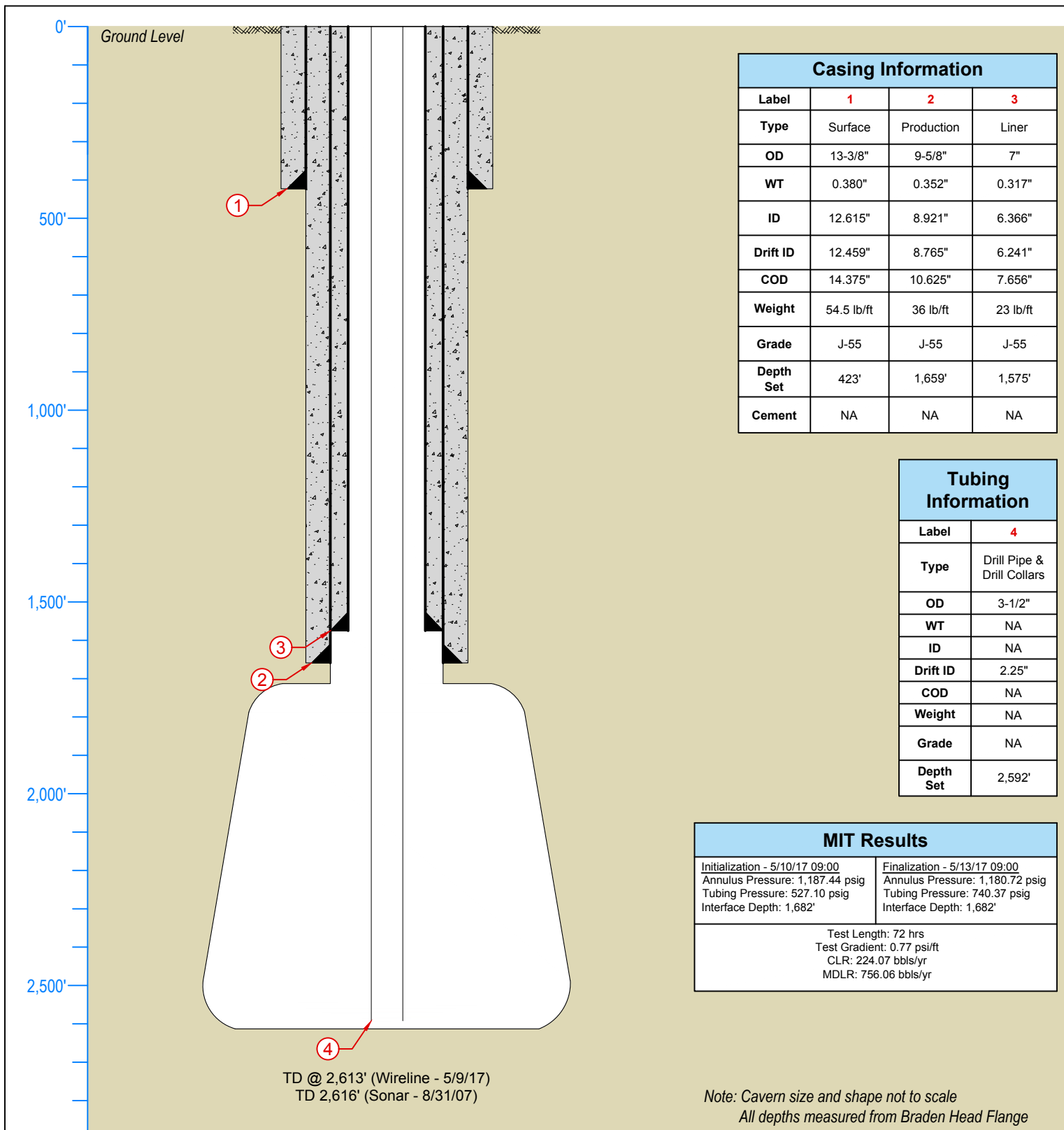
Effective Casing Shoe	1659	feet	Casing Shoe Pressure (avg)	1268.01	psi
Test Gradient	0.77	psi/ft	Interface Pressure (avg)	1268.99	psi
Brine Specific Gravity	1.2		Surface Tubing Pressure (avg)	633.74	psi
Nitrogen Temperature (avg)	75.43	deg F	Surface Annulus Pressure (avg)	1182.58	psi
Interface Depth	1682	feet	Pressure Increase	-3.72	psi
Gas Compressibility (avg)	1.00		Conversion	14.70	psi
Volume			Nitrogen		
Annular Volume No. 1	0.03	bbls/ft	Surface to Casing Shoe (avg)	22729.06	SCF
Annular Volume No. 2	0.07	bbls/ft	Casing Shoe to Interface (avg)	296205.35	SCF
Surface to Liner Shoe	43.3	bbls	Total (avg)	318934.41	SCF
Surface to Casing Shoe	48.8	bbls	Brine		
Casing Shoe to Interface	480.3	bbls	Cavern Pre-Pressure	50.00	psi
Total	529.1	bbls	Brine Injection	20.70	bbls

TEST RESULTS

Test Initialization Information			Test Finalization Information		
Date / Time	5/10/17 9:00		Date / Time	5/13/17 9:00	
Tubing Pressure	527.10	psig	Tubing Pressure	740.37	psig
Annulus Pressure	1,184.44	psig	Annulus Pressure	1,180.72	psig
Wellbore Temperature (avg)	75.80	deg F	Wellbore Temperature (avg)	75.06	deg F
Nitrogen/Brine Interface	1682	feet	Nitrogen/Brine Interface	1682	feet
Test Results					
CLR	428.05	bbls/yr	Test Length	72.00	hours
MDLR	764.75	bbls/yr	Test Length	3	days
Test Gradient	0.77	psi/ft	Logging Resolution	0.50	feet
Tubing Pressure Change	213.27	psi			
Annulus Pressure Change	-3.72	psi			

MIT Report – Western Refining Company, LP
State LPG Storage No. 4


MIT/Well Schematic





LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS AUSTIN HOUSTON WICHITA CALGARY Texas License F-8952 3345 Bee Cave Road, Suite 201 Austin, Texas 78746 Tel: 512.732.9812 Fax: 512.732.9816	Western Refining Company, LP		State LPG Storage No. 4 - MIT Results	
	Country: USA		State/Province: New Mexico	County/Parish: Lea
	Survey/STR: M-32-23S-37E		Site: 1000' FSL & 1230' FWL	Status: Storage
	API No.: 30-025-35957		Field:	Ground Elevation: 3,312'
	Serial No.:		Project No: F1204	Date: 6/13/2017
	Drawn: WHG		Reviewed: ETB	Approved: ETB
	Rev No:		Notes:	


MIT Report – Western Refining Company, LP
State LPG Storage No. 4


Appendix A – MIT Test Procedure

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017			
				Page: 1 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<p>INTRODUCTION</p> <p>Well No. 4 is operated by Western Refining Company, LP located in the Jal Station Field in Lea County, New Mexico. The purpose of this Mechanical Integrity Test (MIT) is to test the integrity of the underground storage system that includes the cavern, cemented casing, and wellhead to determine if the system demonstrates the mechanical integrity required to support hydrocarbon storage operations.</p> <p>In accordance with the Oil Conservation Division of New Mexico, Well No. 4 is undergoing a MIT to remain compliant.</p> <p>The test procedure will consist of the following basic steps:</p> <ol style="list-style-type: none"> 1. Pre-pressure the cavern to the required pre pressure. <ul style="list-style-type: none"> o Tubing Pressure: 50.0 psig o 0.75 psi/ft final test gradient at the effective casing shoe (1,659’). 2. Complete pre-test temperature and density logs. 3. Inject nitrogen into Well No. 4 and locate the nitrogen/brine interface above the cemented liner to complete a test on the cemented liner. 4. Inject nitrogen into Well No. 4 and locate the nitrogen/brine interface above the cemented casing shoe to complete a test on the cemented casing. 5. Inject nitrogen into Well No. 4 and locate the nitrogen/brine interface below the effective cemented casing shoe. 6. Monitor wellhead pressures, wellbore temperature, and the nitrogen/brine interface location during the specified test period. 7. Secure Well No. 4 and return to Western Refining. 8. Complete and submit a MIT report to Western Refining Company, LP and the Oil Conservation Division of New Mexico within 45 days. <p>The test procedure includes the following information:</p> <ul style="list-style-type: none"> • Nitrogen/Brine Interface Test Planning Sheet • Wellbore Schematic • Contact Information • 2007 Sonar Data 							
PREPARED BY		DATE		APPROVED BY		DATE	
WHG		3/27/2017		ETB		3/27/2017	
				CLIENT APPROVAL		DATE	
						Lonquist Field Service, LLC Texas Registration No. F-9147	

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017			
				Page: 2 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
Well Preparation <ol style="list-style-type: none"> 1. Wellhead should be isolated from all surface piping during the test. This may include blind flanges, skillet flanges, and 2" test flanges. <ol style="list-style-type: none"> a. Wellhead should maintain the ability to bleed excess brine pressure during the test. 2. Install pressure recording equipment on wellhead. Pressure equipment should be able to record wellhead pressures and wellhead temperatures during the test period. Additional equipment to measure the nitrogen stream injected into the well will be necessary. <ol style="list-style-type: none"> a. All equipment calibration certifications will be provided with final reports. 3. Wellhead configuration should permit the use of a wireline lubricator and logging tools. 4. Pre-pressure the cavern to predetermined pressure with saturated brine. <ol style="list-style-type: none"> a. Tubing Pressure: 50.0 psig 5. Wellhead pressure should be stable prior to starting the test. <ol style="list-style-type: none"> a. Stable wellhead pressure – Decline less than 10 psi/day. 							
Well Injection Phase <ol style="list-style-type: none"> 6. Move in and rig up wireline unit, logging tools, pressure equipment, and nitrogen services. 7. Make a gauge run to ensure logging and sonar tools will pass through the tubing. 8. Complete wellbore temperature log and base density log. <ol style="list-style-type: none"> a. Base Temperature Log – (0' –TD) b. Base Density Log – (TD' – 200' above effective casing shoe depth) c. Density logs should include: tubing collars, effective casing shoe, and approved logging scales. d. All depths are approximate. 9. Start Nitrogen Injection at a slow rate (<500 SCFM). Nitrogen temperature should be regulated to the average wellbore temperature. 10. Monitor the nitrogen/brine interface and wellbore pressures to locate the interface above the liner shoe and conduct a liner test. <ol style="list-style-type: none"> a. Liner Test – Minimum of 60 minutes. b. Monitor and record wellhead pressures and interface at the start and completion of the test. 11. Inject nitrogen and monitor the nitrogen/brine interface and wellbore pressures to locate the interface above the casing shoe and conduct a casing test. <ol style="list-style-type: none"> a. Casing Test – Minimum of 60 minutes. b. Monitor and record wellhead pressures and interface at the start and completion of the test. 							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147	

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017			
				Page: 3 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<p>12. Continue nitrogen injection and monitor the nitrogen/brine interface and wellbore pressures to locate the nitrogen/brine interface below the effective casing shoe. The targeted gradient is 0.75 psi/ft at the effective casing shoe and cannot exceed a test pressure gradient of 0.81 psi/ft at the effective casing shoe at any time.</p> <p>a. Pressure may need to be relieved by bleeding off brine during nitrogen injection.</p> <p>13. After the nitrogen/brine interface is located sufficiently below the cemented casing shoe, stop nitrogen injection and shut well in for a short stabilization period.</p> <p>14. Shut in for 30 minutes – Monitor pressures, interface location, and check wellhead for possible leak paths.</p> <p>15. Complete post injection density logs.</p> <p>a. Post Injection Density Log – (TD' – 200' above effective casing shoe).</p> <p>b. Record wellhead pressures.</p> <p>c. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales.</p> <p>d. All depths are approximate.</p> <p>16. Remove logging tools and shut well for the stabilization period.</p> <p>17. Complete pre-test calculations based on wellhead pressure measurements, nitrogen volume measurements, wellbore temperatures, and interface locations.</p> <p>a. Refer to Test Calculations Section.</p> <p>18. MIRU sonar tools and perform a sonar survey on the cavern.</p> <p>a. Shoot the roof of the cavern with upshots.</p> <p>b. Shoot the floor of the cavern with downshots.</p> <p>c. Record data every 2'.</p>							
PREPARED BY		DATE		APPROVED BY		DATE	
WHG		3/27/2017		ETB		3/27/2017	
				CLIENT APPROVAL			
				Lonquist Field Service, LLC			
						Texas Registration No. F-9147	

		WELL TEST		Project No.:			
				Date: March 2017			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Page: 4 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
Test Initialization							
19. Move in and rig up wireline unit, logging tools, and pressure equipment.							
20. Complete wellbore temperature log and initial density log. <ul style="list-style-type: none"> a. Initial Temperature Log – (0' – TD') b. Initial Density Log – (TD' – 200' above effective casing shoe) c. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales. d. All depths are approximate. 							
21. Shut well in for test period – Minimum of 24 hours.							
Test Finalization							
22. After planned test duration, move in and rig up wireline unit, logging tools, and pressure equipment. <ul style="list-style-type: none"> a. Complete wellbore temperature log and final density log. b. Final Temperature Log – (0' – TD') c. Final Density Log – (TD' – 200' above effective casing shoe) d. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales. e. All depths are approximate. 							
23. Determine if the test is complete or should be extended based on results.							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147	

		WELL TEST		Project No.:	
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017	
				Page: 5 of 12	
Well: No. 4		State: New Mexico		County: LEA	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal	
				Field: Jal Station	
				Status: Active	

Nitrogen/Brine Interface Test Calculations

The test methodology proposed in this procedure is developed using the industry standard nitrogen/brine interface test method.

The wellhead pressures and temperature, wellbore temperatures, nitrogen volumes, and interface location will be recorded throughout the test period and will allow for the calculation of the borehole volumes, test sensitivity, minimum test durations, and final test calculations.

All test calculations are based on the following measured parameters: wellhead pressure, nitrogen volumes, annular casing unit volume, wellbore temperatures, and interface locations. In addition to the measured parameters, the following calculated parameters are important in completing the test: unit borehole volume, MDLR, and test length.

To evaluate the test the calculated nitrogen volume/mass at the start of the test is compared to the calculated nitrogen volume/mass at the end of the test. This rate of volume change and it's comparison to the test sensitivity is one of the components in determining the final results of the MIT.

TEST SENSITIVITY AND TEST LENGTH

Test sensitivity calculations are the functions of three factors:

Casing volume – Calculated

Log Resolution – Recommended: 5":100' logging scale

Minimum test duration – 24 hours

The test sensitivity is defined at the ability of the test calculations and measurements to determine the status of the mechanical integrity of the well and wellbore. The conventional test sensitivity calculation using this test methodology is the Minimum Detectable Leak Rate (MDLR).


$$MDLR = \frac{[B_v * L_R * (T_c)]}{T_L}$$

Where:

MDLR	=	Minimum Detectable Leak Rate (bbl/year)
B _v	=	Borehole Volume (bbls/ft)
L _R	=	Log Resolution (feet)
T _c	=	Time Constant (365 days/year)
T _L	=	Test Length (days)

Using the MDLR method a reasonable and acceptable test accuracy and sensitivity can be calculated for the Mechanical Integrity Test. The MDLR calculation is based on downhole measurements of the test conditions.

PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147

		WELL TEST		Project No.:	
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017	
				Page: 6 of 12	
Well: No. 4	State: New Mexico	County: LEA	Field: Jal Station		
API: 30-025-35957	Oper: Western Refining Company, LP	Location: Jal	Status: Active		

The MDLR must be less than 1000 bbl/year for the designated test period. The length of the test must a minimum of 24 hours and sufficient in length to keep the MDLR below 1000 bbl/year and allow for a proper evaluation of the well test.

TEST EVALUATIONS

The volume/mass of nitrogen located in the wellbore can be affected by following: temperature stabilization, cavern leaching/creep, and volume changes. Using P-V-T gas calculations, any changes in the volume/mass of the nitrogen in the wellbore can be evaluated based on wellbore temperature changes, pressure changes, and/or wellbore leakage.

Pressure Calculations

The average wellbore pressure is calculated based on the wellhead surface pressure, wellbore temperature, and depth of the specific interval. The following equation is used to calculate the average wellbore pressure

$$(P_A)_i = (P_A)_{i-1} \left[1 + \left(\frac{D}{(R)(Z_A)_i(T)_i} \right) \right]$$

Where:

$(P_A)_i$ = Pressure @ Depth Interval (Calculated) (psia)

$(P_A)_{i-1}$ = Pressure @ Previous Depth Interval (Calculated) (psi)

D = Depth Interval (ft)

$(Z_A)_i$ = Gas Compressibility Factor @ Depth Interval

R = Specific Gas Constant

$(T)_i$ = Wellbore Temperature (°R)

Nitrogen Calculations

The following calculation is used to calculate the volume/mass of nitrogen for specific intervals over the entire wellbore at the start and end of the test period:

$$(N_2)_i = \left(\frac{[(P_A)_i * (B_v)_i]}{[(Z_A)_i * (T_A)_i * R]} \right) * N_{GC}$$


Where:

$(N_2)_i$ = Nitrogen Volume (SCF)

$(P_A)_i$ = Average Wellbore Pressure (psi)

$(B_v)_i$ = Wellbore Volume (ft³)

PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017			
				Page: 7 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> $(Z_A)_i$ $(T_A)_i$ R N_{GC} </div> <div style="width: 80%;"> = Gas Compressibility Factor = Wellbore Temperature (°R) = Specific Gas Constant = Nitrogen Gas Conversion (13.8 SCF = 1 lb) </div> </div> <p>Upon completion of each specific volume/mass calculation the sum of the each interval is calculated to determine the volume/mass of nitrogen in the wellbore at the beginning of the test. After the test is complete the calculation and summation is repeated to determine the final test results.</p> <p>The following equations represent the summation of the intervals to the nitrogen/brine interface at the start and completion of the test:</p> <div style="text-align: center; margin: 10px 0;"> $(V_I) = \sum_o^{I/F} (N_2)_i$ $(V_F) = \sum_o^{I/F} (N_2)_i$ </div> <p>The results of the beginning and completion of the test are compared and evaluated to determine the change in nitrogen volume during the test period. The following equation is used for the comparison:</p> <div style="text-align: center; margin: 10px 0;"> $(\Delta V)_{STP} = (V_I) - (V_F)$ </div> <p>The calculated volume/mass change is based on standard temperature and pressure and to evaluate the test results against the MDLR the calculated volume/mass change is converted to downhole conditions with the following equation:</p> <div style="text-align: center; margin: 10px 0;"> $(\Delta V_{WB}) = \left(\frac{[(Z_A) * (T_A) * R * (\Delta V)_{STP}]}{[(P_A) * N_{GC}]} \right)$ </div> <p>Where:</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 20%;"> (ΔV_{WB}) (Z_A) (T_A) R $(\Delta V)_{STP}$ (P_A) N_{GC} </div> <div style="width: 80%;"> = Nitrogen Volume Change (ft³) – Wellbore Conditions = Average Gas Compressibility Factor for Test Period = Average Wellbore Temperature (°R) for Test Period = Specific Gas Constant = Nitrogen Volume Change (SCF) – Standard Conditions = Average Wellbore Pressure for Test Period (psi) = Nitrogen Gas Conversion (13.8 SCF = 1 lb) </div> </div>							
PREPARED BY		DATE		APPROVED BY		DATE	
WHG		3/27/2017		ETB		3/27/2017	
CLIENT APPROVAL				DATE		Lonquist Field Service, LLC	
						Texas Registration No. F-9147	



WELL TEST

Project No.:

Western Refining Company, LP
State LPG Storage Well No. 4
Mechanical Integrity Test

Date: March 2017

Page: 8 of 12

Well: No. 4

State: New Mexico

County: LEA

Field: Jal Station

API: 30-025-35957

Oper: Western Refining Company, LP

Location: Jal

Status: Active

The change in wellbore volume for the test period is converted into a calculated annual volume change. The following equation determines this volume change:

$$(\Delta V_{ANNUAL}) = \frac{[(\Delta V_{WB}) * 24(hr/day) * 365(day/yr)]}{T_L}$$

Where:

$$\begin{aligned}(\Delta V_{ANNUAL}) &= \text{Calculated Volume Change (bbls/year)} \\(\Delta V_{WB}) &= \text{Nitrogen Volume Change (ft}^3\text{) – Wellbore Conditions} \\(T_L) &= \text{Test Length (hrs)}\end{aligned}$$

A positive change in wellbore volume indicates a calculated loss of nitrogen from the wellbore during the test period. A negative change in wellbore volume indicates a calculated increase (apparent nitrogen influx) in nitrogen volume during the test period.

Pass/Fail Criteria

Test results are evaluated for a successful test using the following criteria:

- MDLR less than 1000 bbls/day
- Calculated Annual Volume Change less than the MDLR
- Pressure response, wellbore temperature, and interface movement should respond in a way that represents the cavern has mechanical integrity

Test Reporting

A written report will be prepared within 45 days of completion and submitted to the Oil Conservation Division of New Mexico. The report will include the test procedures, test chronology, test results and conclusions, wireline logs, pressure information, and all supporting documentation.

PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147



WELL TEST

Project No.:

Western Refining Company, LP
State LPG Storage Well No. 4
Mechanical Integrity Test

Date: March 2017

Page: 9 of 12

Well: No. 4

State: New Mexico

County: LEA

Field: Jal Station

API: 30-025-35957

Oper: Western Refining Company, LP

Location: Jal

Status: Active

TEST PLANNING SHEET

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

WELL INFORMATION

Production Casing			Casing Liner		
Casing Size	9 5/8	inches	Casing Size	7	inches
Casing ID	8.921	inches	Casing ID	6.366	inches
Casing Weight	36	lbs/ft	Casing Weight	23	lbs/ft
Grade	J-55		Grade	J-55	
Depth	1659	feet	Depth	1575	feet

Outer Hanging String			Inner Hanging String		
Casing Size	3 1/2	inches	Casing Size		inches
Casing ID		inches	Casing ID		inches
Casing Weight		lbs/ft	Casing Weight		lbs/ft
Grade			Grade		
Depth	2601	feet	Depth		feet

Cavern

Cavern Size	136,626	bbls
Compressibility	0.41	bbls/psi
Cavern TD	2610	feet

TEST INFORMATION

Effective Casing Shoe	1659	feet	Casing Shoe Pressure	1244.25	psi
Test Gradient	0.75	psi/ft	Interface Pressure	1245.14	psi
Brine Specific Gravity	1.2		Surface Tubing Pressure	372.22	psi
Nitrogen Temperature	75	deg F	Surface Annulus Pressure	1177.42	psi
Interface Depth	1680	feet	Pressure Increase	1277.86	psi
Gas Compressibility	1.0020		Conversion	14.70	psi

Volume			Nitrogen		
Annular Volume No. 1	0.03	bbls/ft	Surface to Casing Shoe	42039.38	SCF
Annular Volume No. 2	0.07	bbls/ft	Casing Shoe to Interface	225565.90	SCF
Surface to Liner Shoe	43.3	bbls	Total	267605.28	SCF
Surface to Casing Shoe	48.8	bbls	Brine		
Casing Shoe to Interface	480.3	bbls	Cavern Pre-Pressure	-905.64	psi
Total	529.1	bbls	Brine Injection	-375	bbls

PREPARED BY

DATE

APPROVED BY

DATE

CLIENT
APPROVAL

DATE

Lonquist Field Service, LLC

WHG

3/27/2017

ETB

3/27/2017

Texas Registration No. F-9147

LONQUIST**FIELD****SERVICE****WELL TEST**

Project No.:

**Western Refining Company, LP
State LPG Storage Well No. 4
Mechanical Integrity Test**

Date: March 2017

Page: 10 of 12

Well: No. 4**State:** New Mexico**County:** LEA**Field:** Jal Station**API:** 30-025-35957**Oper:** Western Refining Company, LP**Location:** Jal**Status:** Active**WELL SCHEMATIC**

PREPARED BY

DATE

APPROVED BY

DATE

CLIENT
APPROVAL

DATE

Lonquist Field Service, LLC

WHG

3/27/2017

ETB

3/27/2017

Texas Registration No. F-9147

Well Information

Operator: Western Refining Company, L.P.

API Number: 30-025-35957

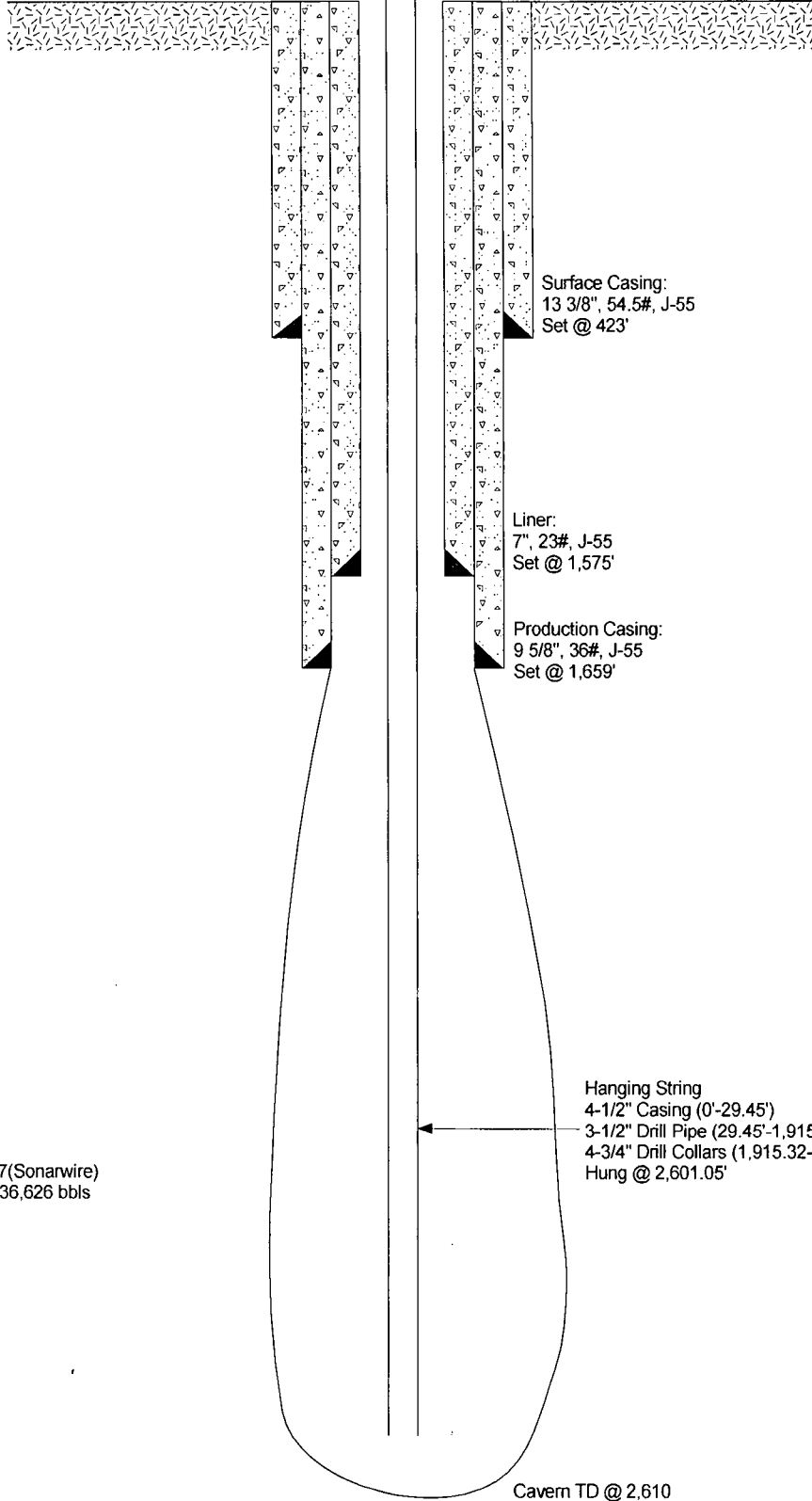
Well Number: 4

Well Name: State LPG Storage

Field Name: Jal

County: Lea

State: New Mexico



Sonar Survey - 8/31/2007(Sonarwire)
Total Cavern Volume = 136,626 bbls

LONQUIST

FIELD SERVICE

State LPG Storage Well No. 4

Western Refining Company, L.P.

PROJECT NUMBER:

DRAWN:
CMO

REVIEWED:
ETB

APPROVAL:
NONE

SCALE:
NONE

DATE:
August 2013

Lonquist Field Service, LLC
Texas Registered Firm No. F-9147



WELL TEST

Project No.:

Western Refining Company, LP
State LPG Storage Well No. 4
Mechanical Integrity Test

Date: March 2017

Page: 11 of 12

Well: No. 4

State: New Mexico

County: LEA

Field: Jal Station

API: 30-025-35957

Oper: Western Refining Company, LP

Location: Jal

Status: Active

CONTACT INFORMATION

Well Owner

Western Refining
PO Box 1345
Jal, New Mexico 88252

- Ken Parker – Site Manager
 - Telephone – (505) 395-2632
 - Mobile – (915) 471-1607
 - Email – ken.parker@wnr.com

Engineering Consultants

Lonquist Field Service, LLC
1001 McKinney, Suite 1650
Houston, Texas 77002

- Eric Busch – Senior Vice President
 - Telephone – (832) 216-0785
 - Fax – (713) 559-9959
 - Email – eric@lonquist.com
- Will George – Petroleum Engineer
 - Telephone – (512) 787-7478
 - Fax – (512) 732-9816
 - Email – will@lonquist.com

PREPARED BY

DATE

APPROVED BY

DATE

CLIENT
APPROVAL

DATE

Lonquist Field Service, LLC


WHG

3/27/2017

ETB

3/27/2017

Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 4 Mechanical Integrity Test		Date: March 2017			
				Page: 12 of 12			
Well: No. 4		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35957		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<div>2007 SONAR VOLUME TABLE</div>							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/27/2017	ETB	3/27/2017			Texas Registration No. F-9147	

SONARWIRE, INC.

P.O. BOX 576
ABITA SPRINGS, LA 70420
Office: 985-893-9221
Toll free: 888-211-6037
Fax: 985-893-4798
E-mail: gary@sonarwire.com

Survey conducted by: Gary McCool

WESTERN REFINING
JAL, NM
STATE LPG WELL NO. 4
AUGUST 31, 2007
SONAR-THRU-PIPE SURVEY

Survey from 1666 ft. to 2614 ft.
Sonar T.D. at 2616 ft.
9 5/8 inch cemented casing at 1666 ft.
4 1/2 inch tubing at 2607 ft.
Zero sonar tool at B.H.F.
Site personnel: Mr. Jerry Lindt
Lonquist Field Services

SONARWIRE INC.
Depth versus Volume

WESTERN REFINING
JAL, NM

STATE LPG WELL NO. 4
Fri, Aug 31, 2007

Depth	Cubic ft. per ft.	Cubic ft. total	Barrels per ft.	Barrels total
1667	325.6	325.6	58.0	58.0
1668	264.4	589.9	47.1	105.1
1669	209.6	799.5	37.3	142.4
1670	205.7	1005.2	36.6	179.0
1671	201.8	1207.1	36.0	215.0
1672	200.9	1407.9	35.8	250.8
1673	199.9	1607.8	35.6	286.4
1674	198.9	1806.7	35.4	321.8
1675	198.0	2004.8	35.3	357.1
1676	180.0	2184.7	32.1	389.1
1677	163.1	2347.8	29.0	418.2
1678	147.2	2495.0	26.2	444.4
1679	132.4	2627.5	23.6	468.0
1680	69.1	2696.6	12.3	480.3
1681	28.6	2725.2	5.1	485.4
1682	1.3	2726.5	0.2	485.6
1683	1.3	2727.7	0.2	485.8
1684	1.3	2729.0	0.2	486.1
1685	1.3	2730.2	0.2	486.3
1686	1.3	2731.5	0.2	486.5
1687	1.3	2732.7	0.2	486.7
1688	1.3	2734.0	0.2	486.9
1689	1.3	2735.2	0.2	487.2
1690	1.3	2736.5	0.2	487.4
1691	139.8	2876.3	24.9	512.3
1692	135.2	3011.5	24.1	536.4
1693	130.8	3142.3	23.3	559.7
1694	126.4	3268.7	22.5	582.2
1695	122.1	3390.9	21.8	603.9
1696	1.3	3392.1	0.2	604.2
1697	1.3	3393.4	0.2	604.4
1698	1.3	3394.6	0.2	604.6
1699	1.3	3395.9	0.2	604.8
1700	1.3	3397.1	0.2	605.1
1701	116.0	3513.1	20.7	625.7
1702	114.3	3627.4	20.4	646.1
1703	112.6	3740.0	20.1	666.1
1704	111.0	3851.0	19.8	685.9
1705	109.4	3960.3	19.5	705.4
1706	107.7	4068.1	19.2	724.6
1707	106.1	4174.2	18.9	743.5
1708	104.5	4278.7	18.6	762.1
1709	103.0	4381.7	18.3	780.4
1710	101.4	4483.1	18.1	798.5
1711	99.9	4583.0	17.8	816.3
1712	98.3	4681.3	17.5	833.8

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Appendix B – Injection Pressure Data

Nitrogen Injection

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/9/17 10:40	147.15	83.67	146.95	83.99	87.00
5/9/17 10:45	162.42	83.32	148.54	83.58	79.78
5/9/17 10:50	235.95	84.49	156.65	84.73	85.83
5/9/17 10:55	385.25	84.30	173.71	84.57	80.31
5/9/17 11:00	485.28	83.79	184.39	84.05	76.57
5/9/17 11:05	567.46	83.62	193.53	83.93	76.51
5/9/17 11:10	639.32	82.42	201.64	82.73	78.84
5/9/17 11:15	700.72	81.67	208.65	81.88	81.30
5/9/17 11:20	760.81	81.90	215.08	82.19	81.31
5/9/17 11:25	814.20	83.38	220.95	83.62	83.22
5/9/17 11:30	863.73	85.83	226.42	86.05	81.47
5/9/17 11:35	910.43	85.76	231.37	86.14	77.95
5/9/17 11:40	953.16	86.99	235.79	87.14	75.76
5/9/17 11:45	978.72	87.59	238.49	88.30	78.05
5/9/17 11:50	978.27	88.24	238.22	89.00	80.69
5/9/17 11:55	977.97	89.00	237.91	89.31	83.03
5/9/17 12:00	977.73	90.43	237.60	90.47	86.25
5/9/17 12:05	977.63	89.71	237.46	89.91	86.80
5/9/17 12:10	977.58	89.17	237.19	89.25	88.15
5/9/17 12:15	977.53	88.33	237.10	88.48	88.33
5/9/17 12:20	985.04	89.32	237.81	89.21	92.23
5/9/17 12:25	993.43	88.98	238.76	89.04	91.45
5/9/17 12:30	993.19	90.07	238.44	89.99	93.35
5/9/17 12:35	993.00	91.64	238.34	91.50	95.71
5/9/17 12:40	992.95	90.72	238.16	90.86	95.09
5/9/17 12:45	992.87	91.46	237.91	91.45	96.41
5/9/17 12:50	992.70	92.49	237.87	92.46	97.79
5/9/17 12:55	992.69	91.05	237.73	91.18	97.10
5/9/17 13:00	992.66	91.36	237.57	91.46	98.24
5/9/17 13:05	992.61	91.24	237.53	91.64	99.19
5/9/17 13:10	992.48	91.42	237.37	91.63	99.61
5/9/17 13:15	992.42	90.99	237.25	91.29	99.01
5/9/17 13:20	992.40	90.20	237.22	90.24	99.11
5/9/17 13:25	992.34	89.89	236.69	89.90	98.61
5/9/17 13:30	992.16	91.47	236.93	91.25	100.58
5/9/17 13:35	991.97	93.48	236.90	93.25	102.41
5/9/17 13:40	991.91	94.61	236.77	94.47	103.68
5/9/17 13:45	991.84	95.42	236.63	95.47	104.17
5/9/17 13:50	991.87	95.48	236.65	95.90	104.91

Nitrogen Injection

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/9/17 13:55	991.85	95.39	236.55	95.80	105.92
5/9/17 14:00	991.82	95.31	236.45	95.60	107.14
5/9/17 14:05	991.76	95.11	236.44	95.40	106.81
5/9/17 14:10	991.61	95.85	236.34	96.02	107.20
5/9/17 14:15	991.53	96.92	236.16	97.00	108.17
5/9/17 14:20	991.51	96.68	236.20	96.79	108.77
5/9/17 14:25	991.62	94.81	236.15	95.05	107.26
5/9/17 14:30	991.48	95.64	235.99	95.57	107.78
5/9/17 14:35	991.27	97.53	235.84	97.50	105.04
5/9/17 14:40	1012.98	95.63	240.67	95.79	99.20
5/9/17 14:45	1034.43	94.19	245.61	94.32	93.91
5/9/17 14:50	1033.84	95.60	244.84	95.43	97.67
5/9/17 14:55	1037.27	97.64	246.32	97.52	95.47
5/9/17 15:00	1037.03	99.22	246.05	99.19	99.89
5/9/17 15:05	1036.99	99.53	246.00	100.12	101.03
5/9/17 15:10	1036.88	99.70	245.71	100.09	101.31
5/9/17 15:15	1036.86	99.24	245.72	99.58	101.15
5/9/17 15:20	1036.97	96.78	245.77	97.00	100.44
5/9/17 15:25	1036.78	97.57	245.64	97.57	101.20
5/9/17 15:30	1036.78	96.57	245.48	96.71	101.01
5/9/17 15:35	1036.71	96.52	245.44	96.51	102.08
5/9/17 15:40	1036.72	95.25	245.36	95.34	101.51
5/9/17 15:45	1036.53	96.88	245.24	96.78	103.31
5/9/17 15:50	1036.40	98.46	245.20	98.44	104.69
5/9/17 15:55	1036.25	99.77	245.09	99.77	106.14
5/9/17 16:00	1036.23	99.77	244.98	99.91	106.86
5/9/17 16:05	1036.19	99.81	244.99	99.87	108.05
5/9/17 16:10	1036.17	99.36	244.92	99.40	108.69
5/9/17 16:15	1036.23	97.93	244.86	98.01	107.98
5/9/17 16:20	1036.13	98.25	244.67	98.27	108.38
5/9/17 16:25	1036.06	98.40	244.65	98.40	109.09
5/9/17 16:30	1036.00	98.90	244.52	98.90	109.83
5/9/17 16:35	1036.09	97.76	244.50	98.07	108.29
5/9/17 16:40	1036.36	92.07	244.53	92.71	104.45
5/9/17 16:45	1038.42	87.66	244.97	88.52	101.55
5/9/17 16:50	1043.61	86.33	246.86	86.57	96.87
5/9/17 16:55	1045.54	88.11	247.66	87.96	96.93
5/9/17 17:00	1045.28	90.25	247.53	90.13	90.51
5/9/17 17:05	1045.18	90.82	247.45	90.76	94.69

Nitrogen Injection

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/9/17 17:10	1045.07	90.77	247.39	90.82	94.76
5/9/17 17:15	1047.86	89.47	248.79	89.56	94.16
5/9/17 17:20	1047.69	89.33	248.98	89.41	95.93
5/9/17 17:25	1047.69	89.33	248.98	89.41	95.93
5/9/17 17:30	1047.12	93.31	248.42	93.43	95.60
5/9/17 17:35	1047.00	94.17	248.32	94.33	96.86
5/9/17 17:40	1046.89	95.30	248.23	95.44	98.21
5/9/17 17:45	1046.90	94.76	248.19	95.00	97.53
5/9/17 17:50	1053.73	92.59	254.87	92.82	90.02
5/9/17 17:55	1063.82	92.74	265.75	92.85	88.85
5/9/17 18:00	1079.43	93.03	281.85	93.14	70.95
5/9/17 18:05	1098.41	92.61	301.49	92.74	78.56
5/9/17 18:10	1117.68	92.50	321.35	92.69	88.42
5/9/17 18:15	1145.05	90.96	350.02	91.14	82.65
5/9/17 18:20	1170.43	90.23	376.69	90.37	80.49
5/9/17 18:25	1193.49	88.93	370.08	89.10	79.75
5/9/17 18:30	1199.59	89.00	260.09	89.05	79.92
5/9/17 18:35	1198.04	89.36	213.24	89.47	80.73
5/9/17 18:40	1196.43	89.42	212.68	89.57	83.07
5/9/17 18:45	1195.56	89.17	212.17	89.30	81.52
5/9/17 18:50	1194.88	88.85	211.95	89.00	81.06
5/9/17 18:55	1194.44	88.39	211.96	88.53	81.70
5/9/17 19:00	1194.09	87.81	211.65	87.96	81.50
5/9/17 19:05	1193.81	87.11	211.53	87.24	82.96
5/9/17 19:10	1193.58	86.97	211.90	87.10	82.57
5/9/17 19:15	1193.38	86.77	211.90	86.92	82.45
5/9/17 19:20	1193.23	86.64	211.96	86.79	83.73
5/9/17 19:25	1192.88	86.16	210.21	86.32	82.98
5/9/17 19:30	1192.78	85.36	210.61	85.49	82.09
5/9/17 19:35	1192.75	84.33	210.59	84.44	82.20
5/9/17 19:40	1192.81	83.42	210.32	83.48	81.65
5/9/17 19:45	1192.76	83.59	209.88	83.62	80.76
5/9/17 19:50	1192.78	83.93	210.33	84.03	81.00
5/9/17 19:55	1192.86	83.71	210.12	83.86	79.25
5/9/17 20:00	1193.12	82.59	210.62	82.72	79.30
5/9/17 20:05	1193.33	81.53	210.68	81.62	76.90
5/9/17 20:10	1193.46	80.58	209.98	80.60	76.97
5/9/17 20:15	1193.57	80.02	209.94	80.00	83.44
5/9/17 20:20	1193.66	79.69	210.08	79.67	81.13

Nitrogen Injection

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/9/17 20:25	1193.80	79.13	210.17	79.13	81.91
5/9/17 20:30	1193.93	78.53	209.91	78.52	80.81
5/9/17 20:35	1194.01	78.03	210.13	78.00	80.94
5/9/17 20:40	1194.10	77.68	209.82	77.65	80.59
5/9/17 20:45	1194.28	77.45	209.82	77.39	81.73
5/9/17 20:50	1194.37	77.34	209.70	77.31	80.54
5/9/17 20:55	1194.51	77.21	209.55	77.17	81.08
5/9/17 21:00	1195.23	77.11	209.23	77.08	81.98
5/9/17 21:05	1195.55	77.00	208.83	76.96	82.20

MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Appendix C – Test Pressure Data

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/10/17 9:00	1187.44	64.62	527.10	64.32
5/10/17 9:10	1187.45	66.06	528.09	66.05
5/10/17 9:20	1187.33	67.88	530.23	67.82
5/10/17 9:30	1187.26	69.37	330.75	69.26
5/10/17 9:40	1187.19	71.23	-1.92	71.15
5/10/17 9:50	1187.25	71.50	-1.92	71.37
5/10/17 10:00	1187.24	72.45	-1.89	72.42
5/10/17 10:10	1187.27	72.27	-1.88	72.39
5/10/17 10:20	1187.23	73.76	-1.85	73.74
5/10/17 10:30	1187.22	74.40	-1.81	74.36
5/10/17 10:40	1187.18	75.49	-1.77	75.43
5/10/17 10:50	1187.18	76.33	-1.74	76.27
5/10/17 11:00	1187.18	76.96	-1.72	76.85
5/10/17 11:10	1187.18	77.39	-1.69	77.23
5/10/17 11:20	1187.13	78.41	-1.67	78.28
5/10/17 11:30	1187.10	79.02	-1.64	78.88
5/10/17 11:40	1187.11	79.60	-1.62	79.42
5/10/17 11:50	1187.08	79.96	-1.62	79.76
5/10/17 12:00	1187.07	80.11	-1.60	79.78
5/10/17 12:10	1187.05	80.56	-1.59	80.30
5/10/17 12:20	1187.02	81.42	-1.55	81.10
5/10/17 12:30	1186.98	82.46	-1.52	82.10
5/10/17 12:40	1186.96	83.01	-1.51	82.64
5/10/17 12:50	1187.00	83.36	-1.48	82.98
5/10/17 13:00	1186.79	87.34	-1.43	86.90
5/10/17 13:10	1186.87	88.02	-1.43	87.65
5/10/17 13:20	1186.92	87.32	-1.38	86.87
5/10/17 13:30	1186.86	87.40	-1.40	86.93
5/10/17 13:40	1186.87	85.75	-1.42	85.32
5/10/17 13:50	1186.88	85.83	-1.40	85.73
5/10/17 14:00	1186.92	84.51	-1.39	84.45
5/10/17 14:10	1186.78	84.14	-1.37	83.88
5/10/17 14:20	1186.76	83.78	-1.39	83.43
5/10/17 14:30	1186.67	86.06	-1.35	85.91
5/10/17 14:40	1186.72	86.48	-1.34	86.24
5/10/17 14:50	1186.70	86.21	-1.35	85.99
5/10/17 15:00	1186.65	86.98	-1.34	86.82
5/10/17 15:10	1186.66	87.05	-1.34	86.96
5/10/17 15:20	1186.64	86.13	-1.36	85.97
5/10/17 15:30	1186.61	86.19	-1.36	85.97
5/10/17 15:40	1186.59	86.07	-1.36	86.06
5/10/17 15:50	1186.56	85.93	-1.36	85.76
5/10/17 16:00	1186.57	86.28	-1.37	86.06
5/10/17 16:10	1186.52	86.22	-1.38	86.13
5/10/17 16:20	1186.49	85.93	-1.38	85.81
5/10/17 16:30	1186.47	85.23	-1.40	85.05
5/10/17 16:40	1186.44	85.68	-1.40	85.51

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/10/17 16:50	1186.39	86.35	-1.38	86.21
5/10/17 17:00	1186.34	87.05	-1.37	86.95
5/10/17 17:10	1186.35	86.89	-1.37	86.81
5/10/17 17:20	1186.33	86.26	-1.39	86.14
5/10/17 17:30	1186.34	85.67	-1.40	85.51
5/10/17 17:40	1186.42	82.80	-1.48	82.65
5/10/17 17:50	1186.34	79.14	-1.55	79.00
5/10/17 18:00	1186.20	80.75	-1.52	80.71
5/10/17 18:10	1186.13	83.00	-1.50	82.95
5/10/17 18:20	1186.10	82.96	-1.50	82.91
5/10/17 18:30	1186.14	82.20	-1.53	82.12
5/10/17 18:40	1186.10	81.93	-1.54	81.86
5/10/17 18:50	1186.11	80.87	-1.56	80.85
5/10/17 19:00	1186.07	80.49	-1.59	80.44
5/10/17 19:10	1186.02	79.91	-1.61	79.83
5/10/17 19:20	1186.10	75.99	-1.69	75.82
5/10/17 19:30	1186.01	75.38	-1.72	75.32
5/10/17 19:40	1185.97	74.51	-1.76	74.39
5/10/17 19:50	1185.95	73.20	-1.79	73.08
5/10/17 20:00	1185.86	73.26	-1.81	73.18
5/10/17 20:10	1185.79	72.26	589.19	72.14
5/10/17 20:20	1185.77	72.08	589.79	72.07
5/10/17 20:30	1185.73	71.55	590.47	71.47
5/10/17 20:40	1185.71	70.71	591.14	70.58
5/10/17 20:50	1185.67	70.10	591.85	69.96
5/10/17 21:00	1185.67	69.54	592.62	69.40
5/10/17 21:10	1185.64	69.26	593.35	69.12
5/10/17 21:20	1185.59	69.05	594.07	68.92
5/10/17 21:30	1185.60	68.57	594.82	68.45
5/10/17 21:40	1185.58	68.20	595.59	68.06
5/10/17 21:50	1185.55	68.08	596.36	67.95
5/10/17 22:00	1185.54	68.40	597.15	68.26
5/10/17 22:10	1185.49	68.53	598.00	68.41
5/10/17 22:20	1185.47	68.38	598.83	68.25
5/10/17 22:30	1185.45	68.47	599.66	68.34
5/10/17 22:40	1185.44	68.43	600.57	68.31
5/10/17 22:50	1185.43	68.22	601.41	68.09
5/10/17 23:00	1185.40	68.20	602.27	68.07
5/10/17 23:10	1185.39	68.24	603.19	68.11
5/10/17 23:20	1185.36	68.18	604.11	68.06
5/10/17 23:30	1185.35	68.07	605.04	67.94
5/10/17 23:40	1185.34	67.92	605.94	67.79
5/10/17 23:50	1185.32	67.69	606.91	67.57
5/11/17 0:00	1185.31	67.41	607.91	67.29
5/11/17 0:10	1185.28	67.10	608.93	66.97
5/11/17 0:20	1185.27	66.62	609.93	66.50
5/11/17 0:30	1185.26	65.93	610.91	65.81

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 0:40	1185.27	65.47	611.91	65.34
5/11/17 0:50	1185.23	65.20	612.91	65.07
5/11/17 1:00	1185.22	64.71	613.94	64.59
5/11/17 1:10	1185.20	64.31	614.91	64.19
5/11/17 1:20	1185.18	64.16	615.92	64.04
5/11/17 1:30	1185.16	63.51	616.93	63.38
5/11/17 1:40	1185.17	62.75	617.88	62.61
5/11/17 1:50	1185.16	61.79	618.88	61.65
5/11/17 2:00	1185.14	60.64	619.87	60.51
5/11/17 2:10	1185.14	59.10	620.86	58.97
5/11/17 2:20	1185.19	57.39	621.87	57.25
5/11/17 2:30	1185.17	55.79	622.91	55.64
5/11/17 2:40	1185.13	54.75	623.96	54.59
5/11/17 2:50	1185.10	53.99	624.87	53.85
5/11/17 3:00	1185.01	54.99	625.77	54.85
5/11/17 3:10	1185.00	54.65	626.69	54.47
5/11/17 3:20	1185.01	53.94	627.64	53.81
5/11/17 3:30	1185.04	53.02	628.60	52.87
5/11/17 3:40	1184.99	52.12	629.50	51.99
5/11/17 3:50	1185.03	51.54	630.44	51.37
5/11/17 4:00	1184.99	51.30	631.35	51.12
5/11/17 4:10	1184.96	51.02	632.31	50.87
5/11/17 4:20	1184.93	50.96	633.22	50.83
5/11/17 4:30	1184.92	50.52	634.18	50.37
5/11/17 4:40	1184.91	50.22	635.09	50.04
5/11/17 4:50	1184.88	50.61	636.01	50.44
5/11/17 5:00	1184.87	50.68	636.96	50.50
5/11/17 5:10	1184.85	51.26	637.87	51.09
5/11/17 5:20	1184.82	51.85	638.89	51.73
5/11/17 5:30	1184.80	52.01	639.91	51.90
5/11/17 5:40	1184.77	51.66	640.88	51.53
5/11/17 5:50	1184.79	51.41	641.83	51.26
5/11/17 6:00	1184.79	51.50	642.79	51.38
5/11/17 6:10	1184.76	52.07	643.74	51.96
5/11/17 6:20	1184.78	51.03	644.72	50.92
5/11/17 6:30	1184.78	50.29	645.68	50.16
5/11/17 6:40	1184.76	49.77	646.64	49.66
5/11/17 6:50	1184.76	49.14	647.58	49.03
5/11/17 7:00	1184.74	48.81	648.55	48.70
5/11/17 7:10	1184.73	49.20	649.52	49.16
5/11/17 7:20	1184.68	50.81	650.47	50.86
5/11/17 7:30	1184.60	52.64	651.45	52.78
5/11/17 7:40	1184.57	54.70	652.38	54.89
5/11/17 7:50	1184.53	56.78	653.39	57.02
5/11/17 8:00	1184.46	59.34	654.47	59.58
5/11/17 8:10	1184.43	62.07	655.42	62.35
5/11/17 8:20	1184.45	63.80	656.44	64.08

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 8:30	1184.42	66.33	657.44	66.56
5/11/17 8:40	1184.35	69.58	658.42	69.84
5/11/17 8:50	1184.39	71.70	659.32	72.02
5/11/17 9:00	1184.53	70.36	660.31	70.68
5/11/17 9:10	1184.53	69.59	661.29	69.84
5/11/17 9:20	1184.53	69.62	662.18	69.83
5/11/17 9:30	1184.52	70.25	663.07	70.44
5/11/17 9:40	1184.50	70.84	663.98	71.02
5/11/17 9:50	1184.46	71.47	664.82	71.64
5/11/17 10:00	1184.50	71.82	665.66	71.97
5/11/17 10:10	1184.46	72.85	666.48	72.96
5/11/17 10:20	1184.42	73.68	667.30	73.76
5/11/17 10:30	1184.40	74.74	668.07	74.82
5/11/17 10:40	1184.38	75.48	668.87	75.53
5/11/17 10:50	1184.41	75.34	669.67	75.37
5/11/17 11:00	1184.40	75.82	670.39	75.84
5/11/17 11:10	1184.39	75.72	671.07	75.69
5/11/17 11:20	1184.40	75.97	671.75	75.94
5/11/17 11:30	1184.35	76.72	672.42	76.67
5/11/17 11:40	1184.37	77.58	673.06	77.54
5/11/17 11:50	1184.35	78.03	673.74	77.95
5/11/17 12:00	1184.36	78.56	674.33	78.47
5/11/17 12:10	1184.37	78.24	674.93	78.12
5/11/17 12:20	1184.38	78.62	675.53	78.44
5/11/17 12:30	1184.34	79.01	676.13	78.83
5/11/17 12:40	1184.33	79.84	676.72	79.65
5/11/17 12:50	1184.33	80.72	677.29	80.50
5/11/17 13:00	1184.34	81.28	677.88	81.05
5/11/17 13:10	1184.28	82.34	678.40	82.10
5/11/17 13:20	1184.32	82.73	679.01	82.39
5/11/17 13:30	1184.32	83.30	679.58	82.92
5/11/17 13:40	1184.30	83.29	680.07	82.99
5/11/17 13:50	1184.34	83.46	680.62	83.35
5/11/17 14:00	1184.34	82.26	681.14	82.23
5/11/17 14:10	1184.26	82.49	681.70	82.17
5/11/17 14:20	1184.23	83.83	682.18	83.49
5/11/17 14:30	1184.23	85.30	682.65	84.94
5/11/17 14:40	1184.24	85.15	683.16	84.81
5/11/17 14:50	1184.22	85.93	683.66	85.55
5/11/17 15:00	1184.26	86.12	684.19	85.81
5/11/17 15:10	1184.20	87.29	684.69	86.86
5/11/17 15:20	1184.17	87.90	685.21	87.39
5/11/17 15:30	1184.20	87.91	685.63	87.53
5/11/17 15:40	1184.19	87.27	686.03	86.95
5/11/17 15:50	1184.22	86.71	686.44	86.46
5/11/17 16:00	1184.17	86.64	686.83	86.32
5/11/17 16:10	1184.18	87.97	687.26	87.62

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 16:20	1184.18	88.48	687.63	88.32
5/11/17 16:30	1184.16	88.65	688.02	88.31
5/11/17 16:40	1184.18	88.47	688.37	88.35
5/11/17 16:50	1184.13	87.43	688.73	87.30
5/11/17 17:00	1184.14	87.20	689.03	87.00
5/11/17 17:10	1184.12	87.20	689.38	87.04
5/11/17 17:20	1184.12	87.18	689.72	87.08
5/11/17 17:30	1184.11	86.95	690.03	86.83
5/11/17 17:40	1184.07	86.80	690.33	86.68
5/11/17 17:50	1184.08	86.65	690.65	86.54
5/11/17 18:00	1184.04	87.20	690.97	87.11
5/11/17 18:10	1184.02	86.57	691.23	86.50
5/11/17 18:20	1184.03	85.93	691.54	85.81
5/11/17 18:30	1184.00	85.79	691.81	85.70
5/11/17 18:40	1183.96	85.79	692.13	85.68
5/11/17 18:50	1183.93	85.48	692.39	85.31
5/11/17 19:00	1183.93	84.84	692.70	84.75
5/11/17 19:10	1183.94	84.19	692.97	84.14
5/11/17 19:20	1183.89	84.03	693.27	83.93
5/11/17 19:30	1183.88	83.12	693.57	83.00
5/11/17 19:40	1183.89	82.42	693.86	82.32
5/11/17 19:50	1183.86	81.57	694.13	81.45
5/11/17 20:00	1183.83	80.64	694.44	80.53
5/11/17 20:10	1183.80	79.59	694.77	79.51
5/11/17 20:20	1183.82	78.37	695.06	78.19
5/11/17 20:30	1183.78	76.56	695.34	76.35
5/11/17 20:40	1183.81	74.48	695.67	74.25
5/11/17 20:50	1183.81	72.23	695.99	72.01
5/11/17 21:00	1183.74	70.45	696.26	70.23
5/11/17 21:10	1183.72	68.85	696.61	68.65
5/11/17 21:20	1183.75	67.43	696.93	67.23
5/11/17 21:30	1183.68	66.07	697.27	65.88
5/11/17 21:40	1183.65	65.63	697.62	65.49
5/11/17 21:50	1183.61	65.40	697.99	65.27
5/11/17 22:00	1183.60	64.95	698.36	64.83
5/11/17 22:10	1183.58	64.31	698.79	64.19
5/11/17 22:20	1183.56	63.99	699.23	63.88
5/11/17 22:30	1183.56	63.61	699.64	63.50
5/11/17 22:40	1183.55	63.07	700.06	62.96
5/11/17 22:50	1183.53	62.48	700.48	62.35
5/11/17 23:00	1183.53	62.05	700.92	61.95
5/11/17 23:10	1183.50	62.05	701.35	61.97
5/11/17 23:20	1183.48	62.13	701.81	62.05
5/11/17 23:30	1183.46	62.26	702.30	62.19
5/11/17 23:40	1183.45	62.51	702.80	62.44
5/11/17 23:50	1183.43	62.47	703.32	62.39
5/12/17 0:00	1183.41	62.13	703.87	62.04

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 0:10	1183.44	61.41	704.44	61.31
5/12/17 0:20	1183.45	60.47	704.99	60.35
5/12/17 0:30	1183.42	59.40	705.58	59.27
5/12/17 0:40	1183.43	58.55	706.19	58.42
5/12/17 0:50	1183.41	58.01	706.79	57.88
5/12/17 1:00	1183.39	57.57	707.41	57.45
5/12/17 1:10	1183.39	57.14	708.05	57.03
5/12/17 1:20	1183.39	56.73	708.69	56.62
5/12/17 1:30	1183.36	56.28	709.33	56.17
5/12/17 1:40	1183.35	56.17	709.99	56.08
5/12/17 1:50	1183.34	55.93	710.64	55.83
5/12/17 2:00	1183.31	55.87	711.27	55.80
5/12/17 2:10	1183.29	56.01	711.94	55.94
5/12/17 2:20	1183.28	56.06	712.61	56.00
5/12/17 2:30	1183.29	55.91	713.28	55.83
5/12/17 2:40	1183.28	55.69	714.03	55.63
5/12/17 2:50	1183.25	55.47	714.79	55.39
5/12/17 3:00	1183.25	55.20	715.50	55.12
5/12/17 3:10	1183.24	54.87	716.22	54.79
5/12/17 3:20	1183.23	54.64	716.92	54.57
5/12/17 3:30	1183.24	54.41	717.63	54.33
5/12/17 3:40	1183.22	54.19	718.36	54.13
5/12/17 3:50	1183.22	54.03	719.07	53.96
5/12/17 4:00	1183.18	53.62	719.80	53.54
5/12/17 4:10	1183.19	53.13	720.53	53.05
5/12/17 4:20	1183.20	52.79	721.26	52.71
5/12/17 4:30	1183.18	52.49	721.98	52.41
5/12/17 4:40	1183.16	52.28	722.68	52.20
5/12/17 4:50	1183.17	52.19	723.40	52.12
5/12/17 5:00	1183.14	52.14	724.15	52.07
5/12/17 5:10	1183.12	51.93	724.89	51.86
5/12/17 5:20	1183.12	51.57	725.61	51.51
5/12/17 5:30	1183.13	51.28	726.37	51.20
5/12/17 5:40	1183.15	51.03	727.10	50.96
5/12/17 5:50	1183.10	51.00	727.80	50.94
5/12/17 6:00	1183.10	50.85	728.56	50.79
5/12/17 6:10	1183.09	50.51	729.37	50.43
5/12/17 6:20	1183.08	50.23	730.09	50.15
5/12/17 6:30	1183.07	50.19	730.82	50.12
5/12/17 6:40	1183.06	50.13	731.57	50.05
5/12/17 6:50	1183.06	49.89	732.29	49.82
5/12/17 7:00	1183.05	49.72	733.03	49.64
5/12/17 7:10	1183.02	50.02	733.74	50.02
5/12/17 7:20	1183.02	51.00	734.52	51.09
5/12/17 7:30	1182.97	52.43	735.24	52.57
5/12/17 7:40	1182.93	53.94	735.99	54.13
5/12/17 7:50	1182.95	55.26	736.72	55.43

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 8:00	1182.93	56.46	737.45	56.62
5/12/17 8:10	1182.91	57.65	738.23	57.80
5/12/17 8:20	1182.87	58.85	738.93	59.02
5/12/17 8:30	1182.89	59.59	739.69	59.75
5/12/17 8:40	1182.86	60.55	740.41	60.69
5/12/17 8:50	1182.86	61.24	741.19	61.33
5/12/17 9:00	1182.84	62.24	741.95	62.32
5/12/17 9:10	1182.83	63.03	742.65	63.05
5/12/17 9:20	1182.84	64.11	743.39	64.11
5/12/17 9:30	1182.83	65.16	744.19	65.18
5/12/17 9:40	1182.83	65.99	744.97	65.95
5/12/17 9:50	1182.80	67.20	745.68	67.14
5/12/17 10:00	1182.77	67.85	746.39	67.74
5/12/17 10:10	1182.77	68.88	747.11	68.77
5/12/17 10:20	1182.77	70.27	747.82	70.08
5/12/17 10:30	1182.72	71.42	748.50	71.24
5/12/17 10:40	1182.73	72.25	749.10	72.14
5/12/17 10:50	1182.75	72.96	749.81	72.76
5/12/17 11:00	1182.71	74.82	750.45	74.62
5/12/17 11:10	1182.72	76.07	751.06	75.84
5/12/17 11:20	1182.74	77.32	751.67	77.12
5/12/17 11:30	1182.74	77.69	752.23	77.45
5/12/17 11:40	1182.79	78.05	752.87	77.82
5/12/17 11:50	1182.77	79.52	753.46	79.21
5/12/17 12:00	1182.76	80.47	753.96	80.22
5/12/17 12:10	1182.73	82.33	-1.78	82.01
5/12/17 12:20	1182.74	82.59	-1.79	82.24
5/12/17 12:30	1182.68	82.51	749.98	82.14
5/12/17 12:40	1182.65	82.31	750.53	81.88
5/12/17 12:50	1182.70	81.81	751.09	81.45
5/12/17 13:00	1182.69	82.31	751.60	81.90
5/12/17 13:10	1182.68	83.01	752.17	82.46
5/12/17 13:20	1182.66	83.97	-1.83	83.41
5/12/17 13:30	1182.41	84.80	739.29	84.26
5/12/17 13:40	1182.43	85.73	739.95	85.31
5/12/17 13:50	1182.43	85.10	735.08	84.78
5/12/17 14:00	1182.45	83.06	733.94	82.78
5/12/17 14:10	1182.32	83.65	730.14	83.26
5/12/17 14:20	1182.36	84.40	730.41	83.91
5/12/17 14:30	1182.34	85.94	729.35	85.37
5/12/17 14:40	1182.26	87.27	729.25	86.65
5/12/17 14:50	1182.25	88.14	729.63	87.57
5/12/17 15:00	1182.25	89.93	730.05	89.55
5/12/17 15:10	1182.29	90.11	730.54	89.71
5/12/17 15:20	1182.15	93.03	731.46	92.74
5/12/17 15:30	1182.15	94.04	-1.84	93.52
5/12/17 15:40	1182.04	91.97	724.61	91.51

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 15:50	1182.07	92.75	724.99	92.34
5/12/17 16:00	1182.07	93.43	725.37	93.07
5/12/17 16:10	1182.07	92.07	725.68	91.65
5/12/17 16:20	1182.12	91.40	726.06	91.03
5/12/17 16:30	1182.05	93.73	726.36	93.52
5/12/17 16:40	1182.06	93.02	726.67	92.64
5/12/17 16:50	1182.09	92.75	726.96	92.50
5/12/17 17:00	1182.09	92.32	727.33	92.10
5/12/17 17:10	1182.03	93.11	727.61	92.79
5/12/17 17:20	1182.09	92.32	727.91	92.07
5/12/17 17:30	1182.06	93.06	728.23	92.88
5/12/17 17:40	1182.06	91.60	728.45	91.40
5/12/17 17:50	1182.05	91.47	728.72	91.29
5/12/17 18:00	1182.01	92.78	729.03	92.74
5/12/17 18:10	1182.00	92.86	729.22	92.77
5/12/17 18:20	1182.05	91.47	729.47	91.29
5/12/17 18:30	1181.98	91.88	729.70	91.62
5/12/17 18:40	1182.01	91.57	729.97	91.50
5/12/17 18:50	1181.96	91.07	730.19	91.06
5/12/17 19:00	1182.01	89.05	730.41	89.04
5/12/17 19:10	1181.92	90.19	730.65	90.10
5/12/17 19:20	1181.97	88.35	730.88	88.36
5/12/17 19:30	1181.89	88.93	731.16	88.94
5/12/17 19:40	1181.90	88.52	731.36	88.57
5/12/17 19:50	1181.90	87.87	731.60	87.94
5/12/17 20:00	1181.90	86.31	731.84	86.32
5/12/17 20:10	1181.89	84.58	732.07	84.55
5/12/17 20:20	1181.89	82.69	732.31	82.58
5/12/17 20:30	1181.84	80.56	732.52	80.39
5/12/17 20:40	1181.89	78.01	732.76	77.77
5/12/17 20:50	1181.85	75.21	732.96	74.95
5/12/17 21:00	1181.81	72.92	733.27	72.68
5/12/17 21:10	1181.83	71.05	733.49	70.79
5/12/17 21:20	1181.80	69.52	733.76	69.27
5/12/17 21:30	1181.77	68.32	734.03	68.08
5/12/17 21:40	1181.70	67.34	734.31	67.08
5/12/17 21:50	1181.67	66.74	734.63	66.50
5/12/17 22:00	1181.67	66.34	734.90	66.09
5/12/17 22:10	1181.63	65.84	735.23	65.62
5/12/17 22:20	1181.61	65.22	735.55	65.02
5/12/17 22:30	1181.64	64.43	735.93	64.24
5/12/17 22:40	1181.61	63.71	736.27	63.52
5/12/17 22:50	1181.61	62.96	736.64	62.76
5/12/17 23:00	1181.60	62.28	736.99	62.08
5/12/17 23:10	1181.60	61.69	737.39	61.47
5/12/17 23:20	1181.58	61.16	737.80	60.95
5/12/17 23:30	1181.59	60.65	738.25	60.45

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 23:40	1181.56	60.29	738.67	60.10
5/12/17 23:50	1181.56	60.01	739.14	59.83
5/13/17 0:00	1181.54	59.65	739.60	59.49
5/13/17 0:10	1181.53	59.35	740.08	59.15
5/13/17 0:20	1181.52	59.08	740.57	58.88
5/13/17 0:30	1181.52	58.86	741.03	58.66
5/13/17 0:40	1181.51	58.81	741.48	58.59
5/13/17 0:50	1181.51	58.51	742.00	58.33
5/13/17 1:00	1181.48	58.29	742.51	58.13
5/13/17 1:10	1181.48	57.86	743.12	57.72
5/13/17 1:20	1181.47	57.26	743.65	57.12
5/13/17 1:30	1181.50	56.60	744.19	56.44
5/13/17 1:40	1181.48	56.11	744.72	55.95
5/13/17 1:50	1181.47	55.61	745.23	55.47
5/13/17 2:00	1181.46	55.15	745.74	55.03
5/13/17 2:10	1181.45	55.10	746.27	54.95
5/13/17 2:20	1181.42	55.23	746.79	55.04
5/13/17 2:30	1181.41	55.25	747.35	55.06
5/13/17 2:40	1181.39	55.22	747.89	55.03
5/13/17 2:50	1181.39	55.35	748.44	55.16
5/13/17 3:00	1181.37	55.25	749.05	55.09
5/13/17 3:10	1181.40	54.83	749.60	54.68
5/13/17 3:20	1181.41	54.47	750.18	54.30
5/13/17 3:30	1181.38	54.38	750.72	54.19
5/13/17 3:40	1181.37	54.50	751.31	54.30
5/13/17 3:50	1181.34	54.37	751.90	54.19
5/13/17 4:00	1181.33	54.13	752.49	53.96
5/13/17 4:10	1181.37	53.74	753.07	53.58
5/13/17 4:20	1181.34	53.31	753.67	53.15
5/13/17 4:30	1181.35	52.96	754.28	52.80
5/13/17 4:40	1181.34	52.61	754.84	52.48
5/13/17 4:50	1181.34	52.09	755.44	51.97
5/13/17 5:00	1181.35	51.79	756.02	51.68
5/13/17 5:10	1181.34	51.55	756.61	51.44
5/13/17 5:20	1181.31	51.42	757.28	51.29
5/13/17 5:30	1181.30	51.19	757.92	51.06
5/13/17 5:40	1181.30	50.89	758.52	50.77
5/13/17 5:50	1181.29	50.71	759.10	50.61
5/13/17 6:00	1181.30	50.26	759.68	50.14
5/13/17 6:10	1181.30	49.60	760.28	49.49
5/13/17 6:20	1181.30	48.94	760.88	48.82
5/13/17 6:30	1181.29	48.33	761.51	48.23
5/13/17 6:40	1181.31	47.90	762.11	47.78
5/13/17 6:50	1181.29	47.65	762.69	47.55
5/13/17 7:00	1181.26	47.78	763.28	47.72
5/13/17 7:10	1180.97	48.54	749.37	48.61
5/13/17 7:20	1180.98	50.15	750.16	50.22

TEST PRESSURE

Well Name:	State LPG Storage No. 4
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35957

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/13/17 7:30	1180.88	52.28	750.85	52.43
5/13/17 7:40	1180.85	54.65	751.12	54.81
5/13/17 7:50	1180.83	56.90	750.86	57.13
5/13/17 8:00	1180.82	59.26	747.39	59.52
5/13/17 8:10	1180.74	61.95	744.80	62.22
5/13/17 8:20	1180.70	64.61	743.13	64.94
5/13/17 8:30	1180.71	66.65	741.03	67.05
5/13/17 8:40	1180.75	67.66	740.35	68.13
5/13/17 8:50	1180.71	68.50	739.79	68.89
5/13/17 9:00	1180.72	69.93	740.37	70.31

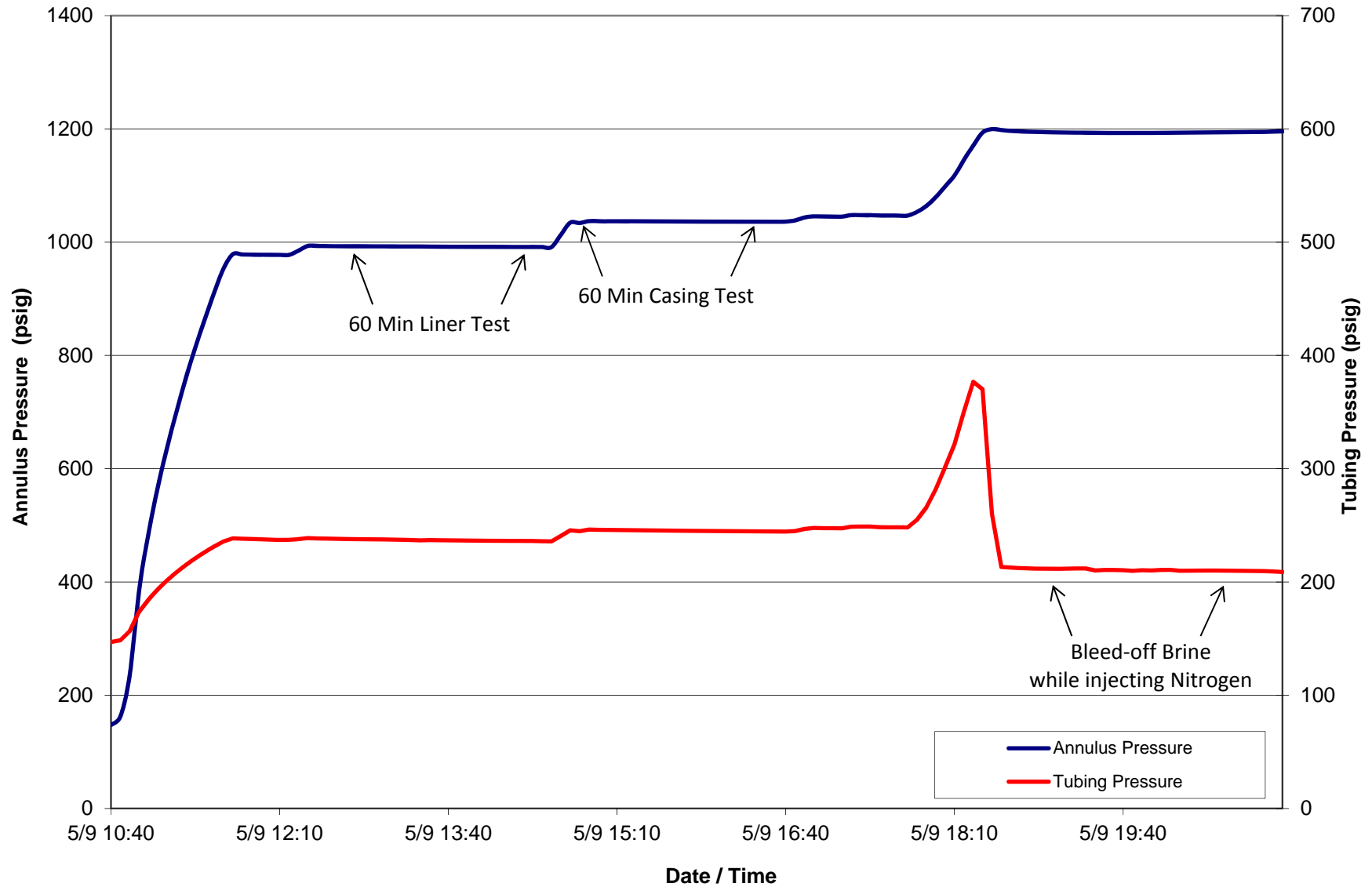
Appendix D – Calculated Borehole Volumes

Western Refining Company, LP State LPG Storage No. 4 MIT - Borehole Calculations
Nitrogen Volumes

I/F Depth Logged [ft]	N2 Volume Turbine Cumulative [scf]	N2 Pressure Gauge [psig]	Borehole Volume Cumulative [bbls]	Borehole Volume Incremental Per Interval [bbls]	Borehole Volume Incremental Per Foot [bbls/ft]
1665	39700	1110.49	92.51	43.11	7.18
1666	67200	1198.44	145.42	52.91	52.91
1667	82800	1196.98	179.38	33.97	33.97
1668	107300	1194.83	232.86	53.48	53.48
1669	125965	1193.89	273.57	40.71	40.71
1670	142665	1193.41	309.96	36.38	36.38
1671	162865	1192.79	354.02	44.06	44.06
1672	177465	1192.74	385.76	31.74	31.74
1673	194665	1192.76	423.14	37.37	37.37
1674	214265	1193.15	465.59	42.45	42.45
1675	228565	1193.43	496.54	30.95	30.95
1676	244565	1193.74	531.15	34.62	34.62
1677	259265	1193.96	562.97	31.81	31.81
1678	273665	1194.11	594.15	31.19	31.19
1679	285665	1194.34	620.08	25.93	25.93
1680	295865	1194.73	642.01	21.92	21.92
1681	304465	1195.41	660.29	18.29	18.29
1682	310265	1195.67	672.72	12.43	12.43

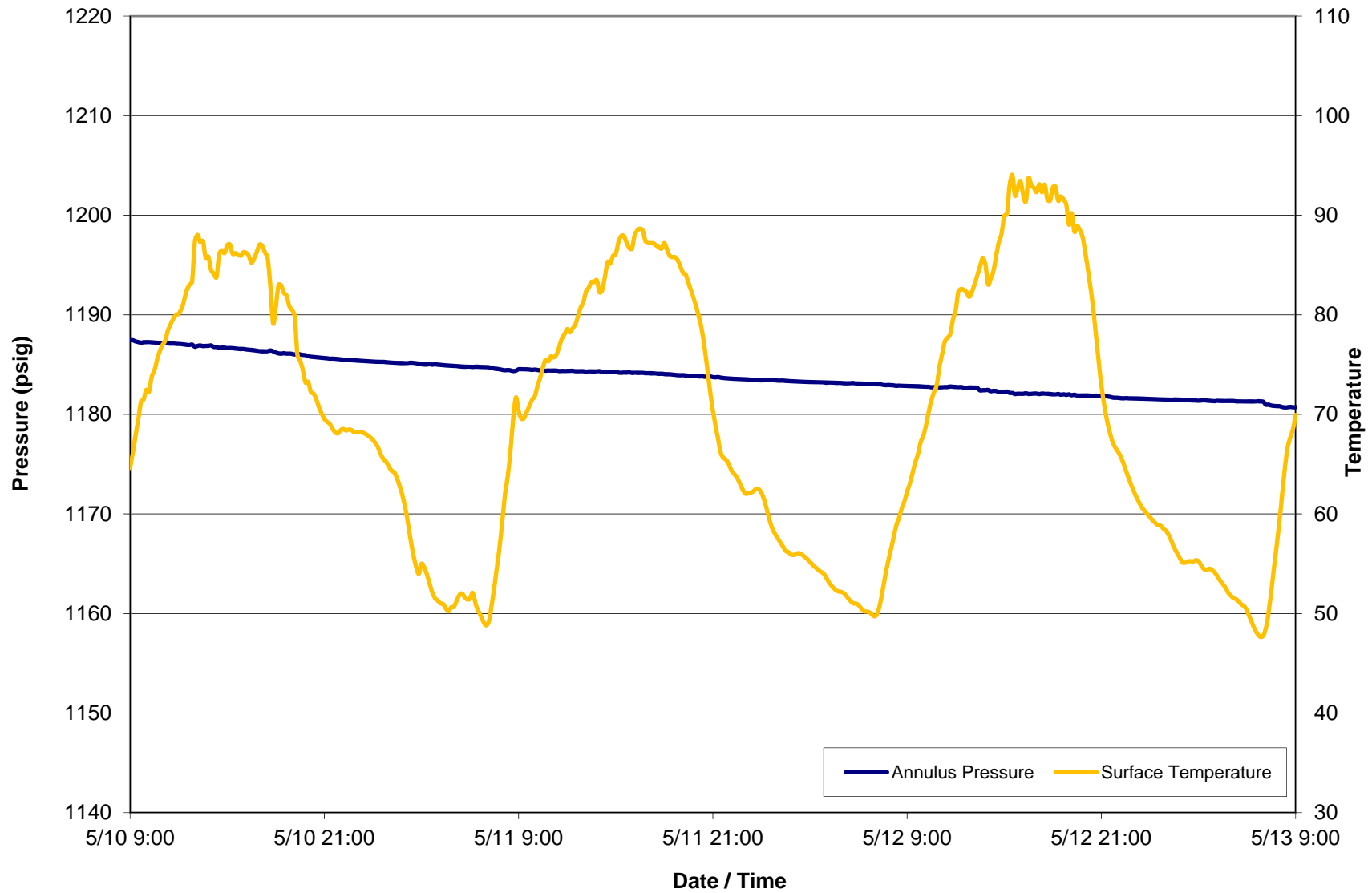
Appendix E – Pressure and Temperature Graphs

Western Refining Company, LP State LPG Storage No. 4 MIT Injection Pressures

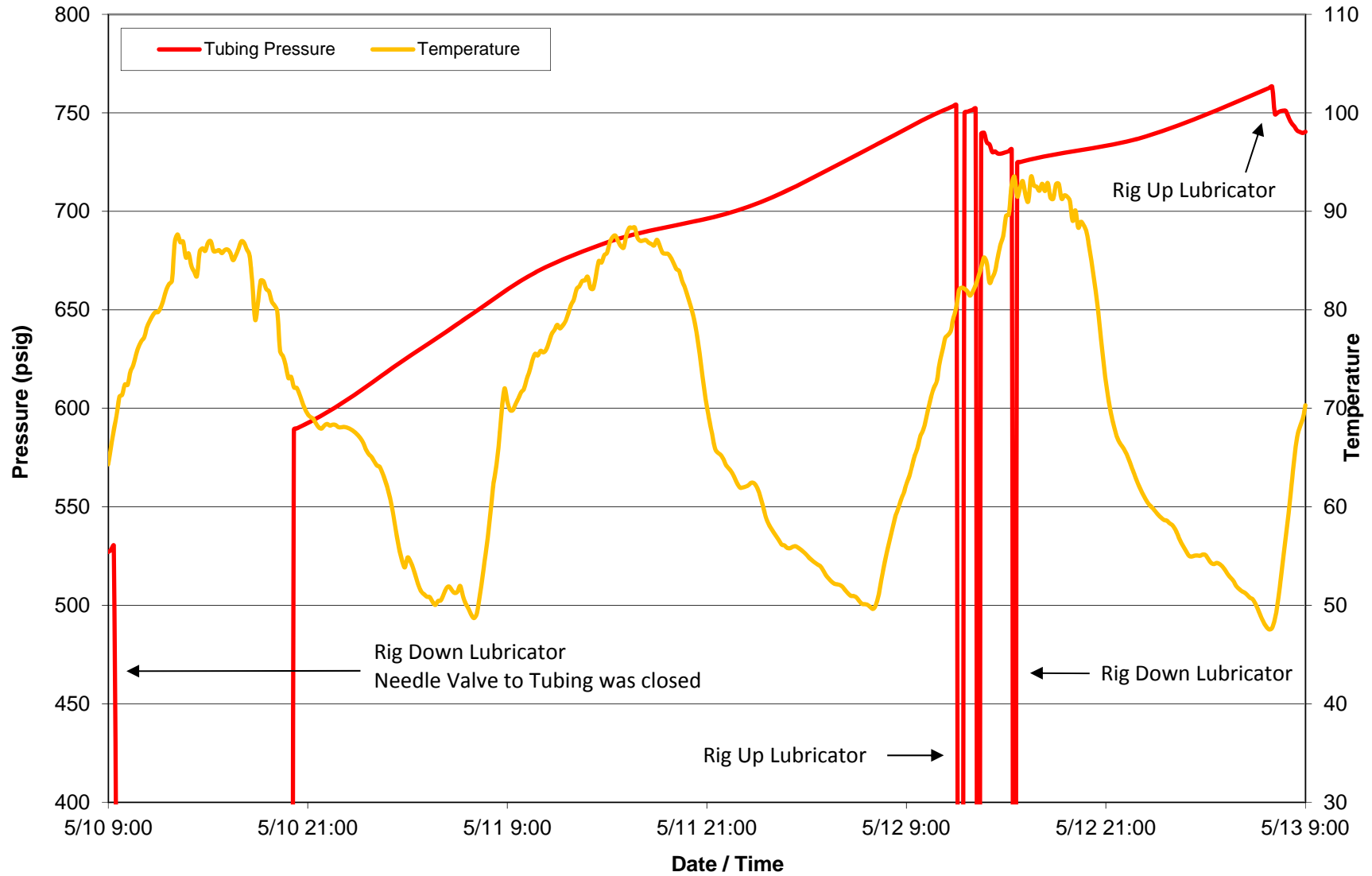


Western Refining Company, LP State LPG Storage No. 4 MIT

Annulus Test Pressure

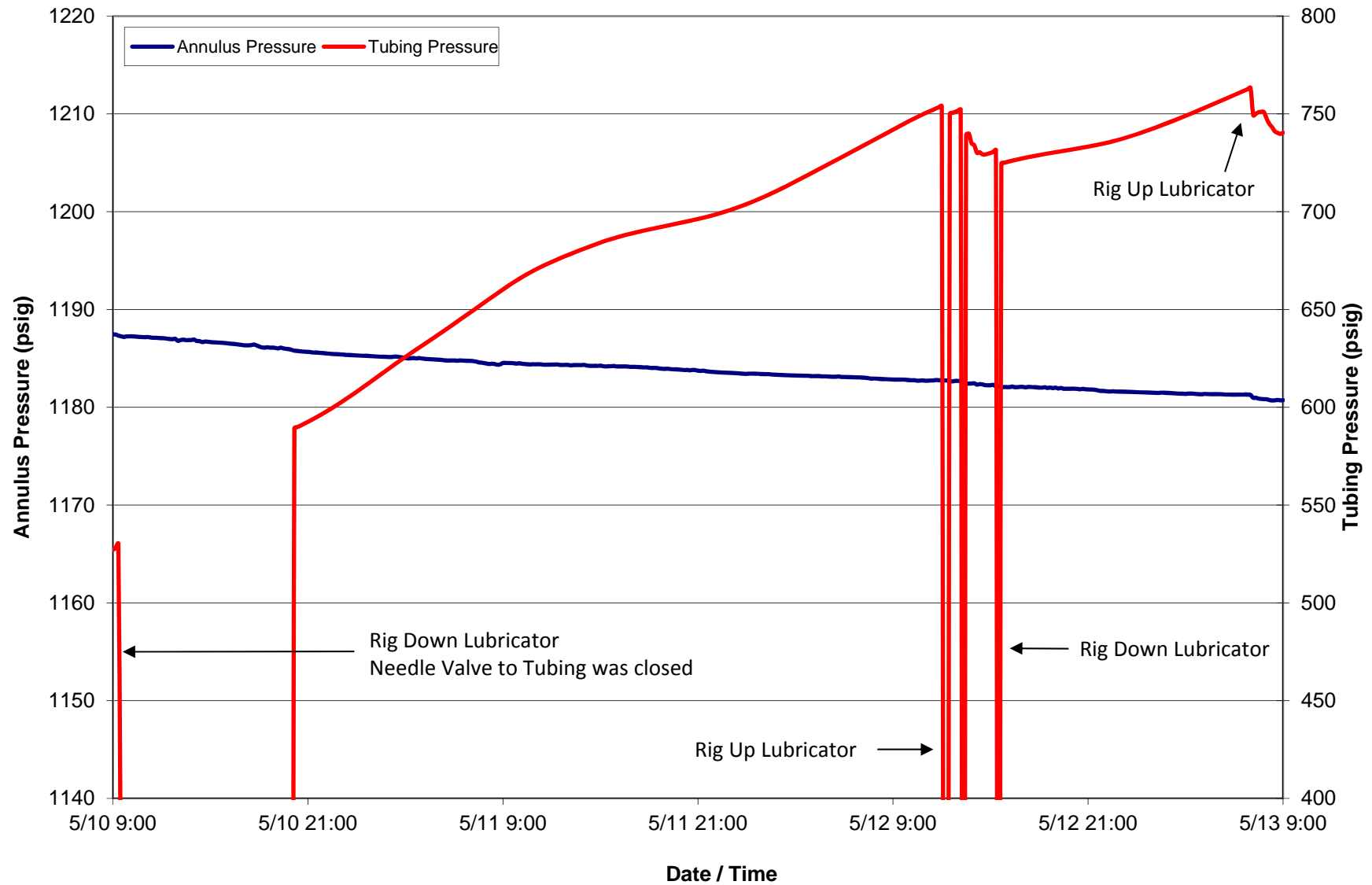


Western Refining Company, LP State LPG Storage No. 4 MIT Tubing Test Pressure

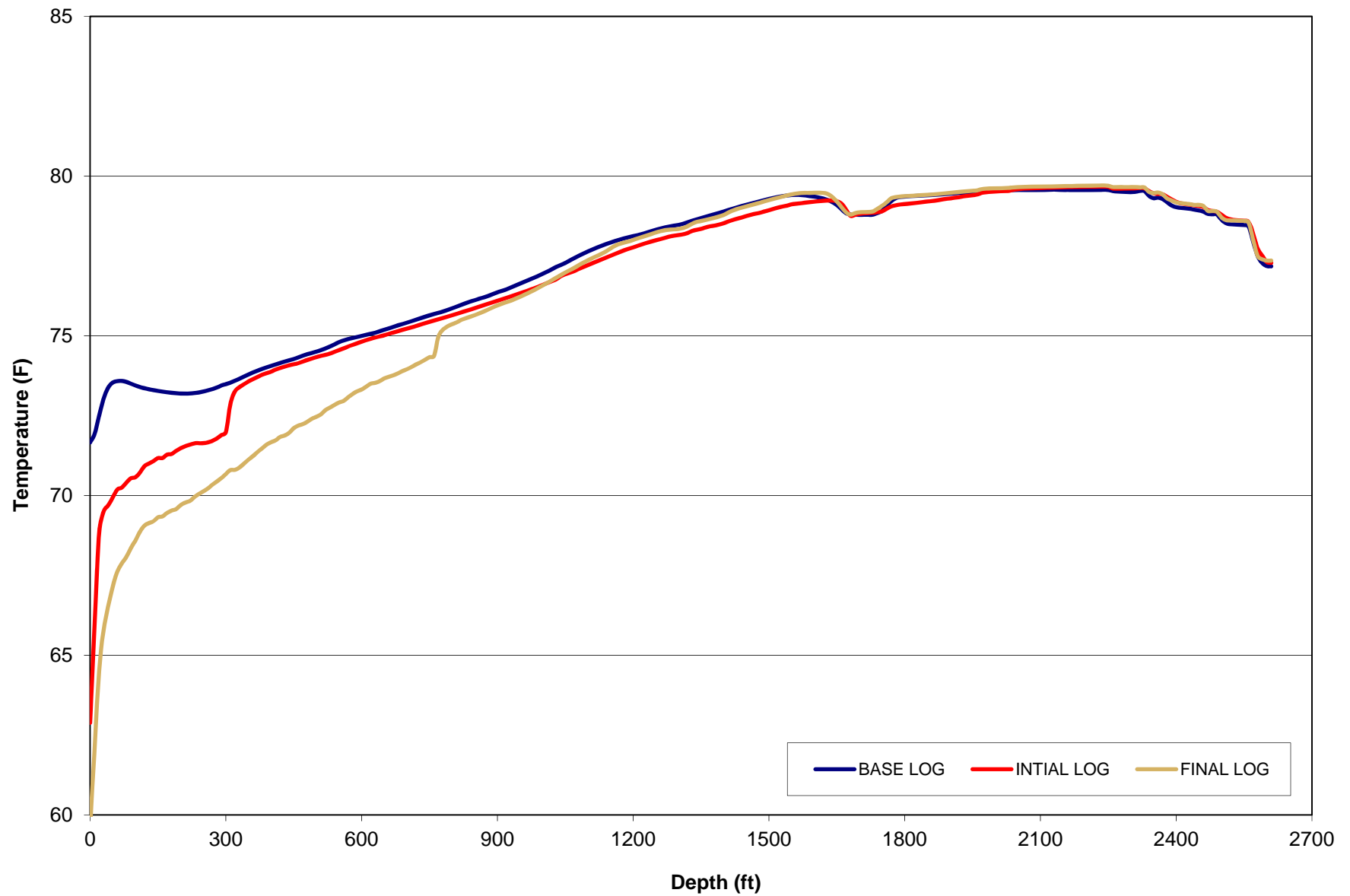


Western Refining Company, LP State LPG Storage No. 4 MIT

Annulus vs Tubing Test Pressure



Western Refining Company, LP State LPG Storage No. 4 MIT
Wellbore Temperature Graph



MIT Report – Western Refining Company, LP
State LPG Storage No. 4

Appendix F – Well Logs



MIT - Density Survey

Company: Western Refining Company, LP									
Well: State LPG Storage No. 004									
Field: Jal									
Area: Lea County									
State: New Mexico									
Run Information		Location				Other Services			
		N/A				Temperature			
Date of Service		Run No. 1		Run No. 2		Run No. 3		Run No. 4	
Depth Driller or PBTD		N/A		N/A		N/A		N/A	
Empire Depth		2.613 ft		2.613 ft		2.613 ft		2.613 ft	
Bottom Log Interval		2.612 ft		2.612 ft		2.612 ft		2.612 ft	
Top Log Interval		Surface		Surface		Surface		Surface	
Interface Depth		N/A		1.682 ft		1.682 ft		1.682 ft	
Fluid Type		Brine		Brine		Brine		Brine	
Fluid Density		N/A		N/A		N/A		N/A	
Fluid Level		Surface		308 ft		748 ft		778 ft	
Tubing Pressure		50 Psia		500 Psia		700 Psia		730 Psia	
Wellhead Connection		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K	
Time - Ran In Well		08:15		06:30		12:15		06:15	
Time - Temp. Start		08:15		06:45		12:30		06:30	
Time - Density Start		08:15		08:00		13:40		08:00	
Time - Out of Well		21:15		09:00		14:30		09:00	
Location		Broussard, LA		Broussard, LA		Broussard, LA		Broussard, LA	
Unit No. / Wire Size		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in	
Recorded By		C. Cross		C. Cross		C. Cross		C. Cross	
Witnessed By		Mr. Will George		Mr. Will George		Mr. Will George		Mr. Will George	
CSG / TBG Record		Size		Wt/Ft		Top		Bottom	
Surface Casing		13-5/8 in		54.5 lb/ft		Surface		423 ft	
Production Casing		9-5/8 in		36 lb/ft		Surface		1.659 ft	
Liner		7 in		23 lb/ft		Surface		1.575 ft	
Hanging String		4-1/2 in		N/A		Surface		29.45 ft	
Hanging String		3-1/2 in		Drill Pipe		29.45 ft		2.592 ft	

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Tool Zeroed at B.H.F. with no depth correction applied.

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)

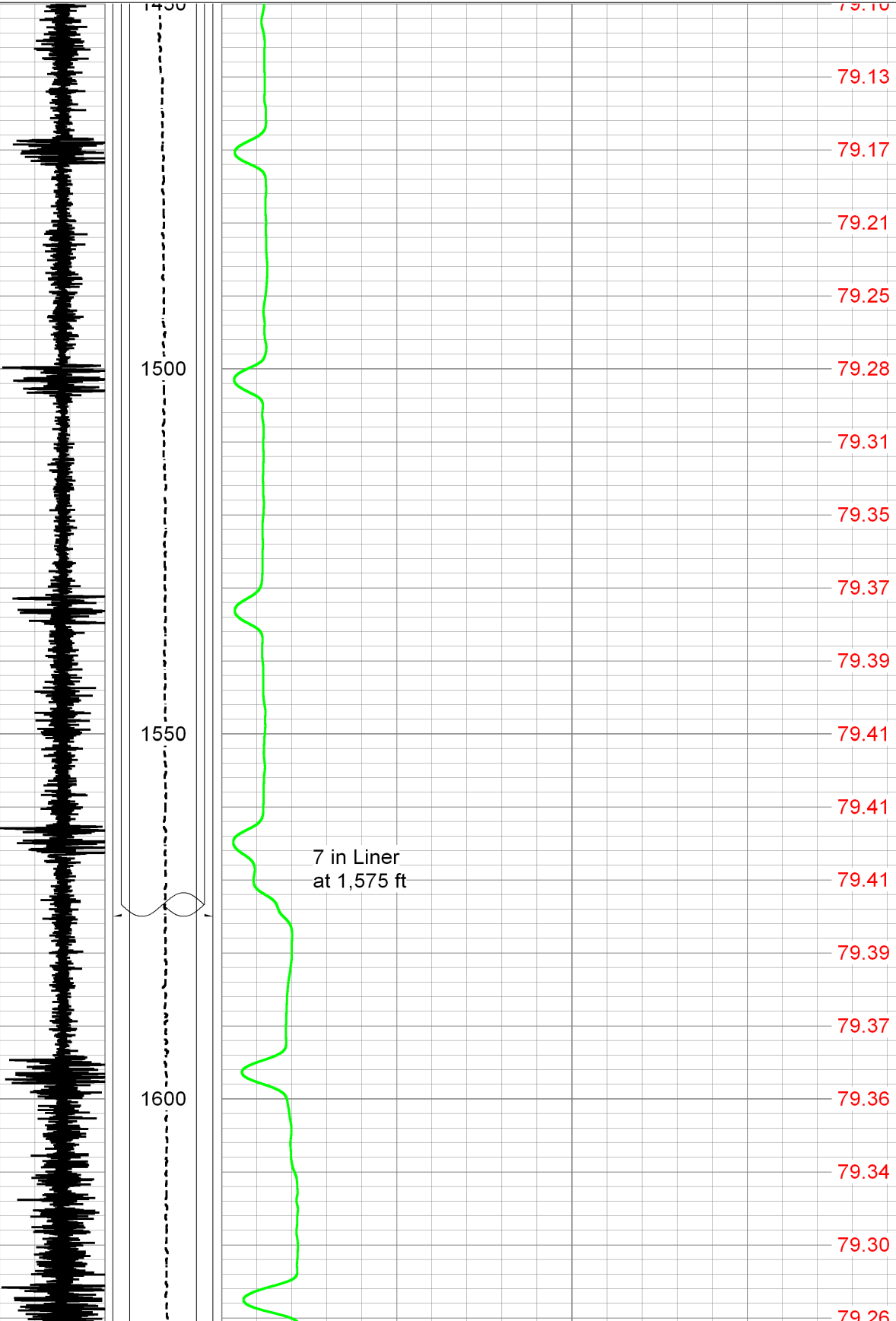
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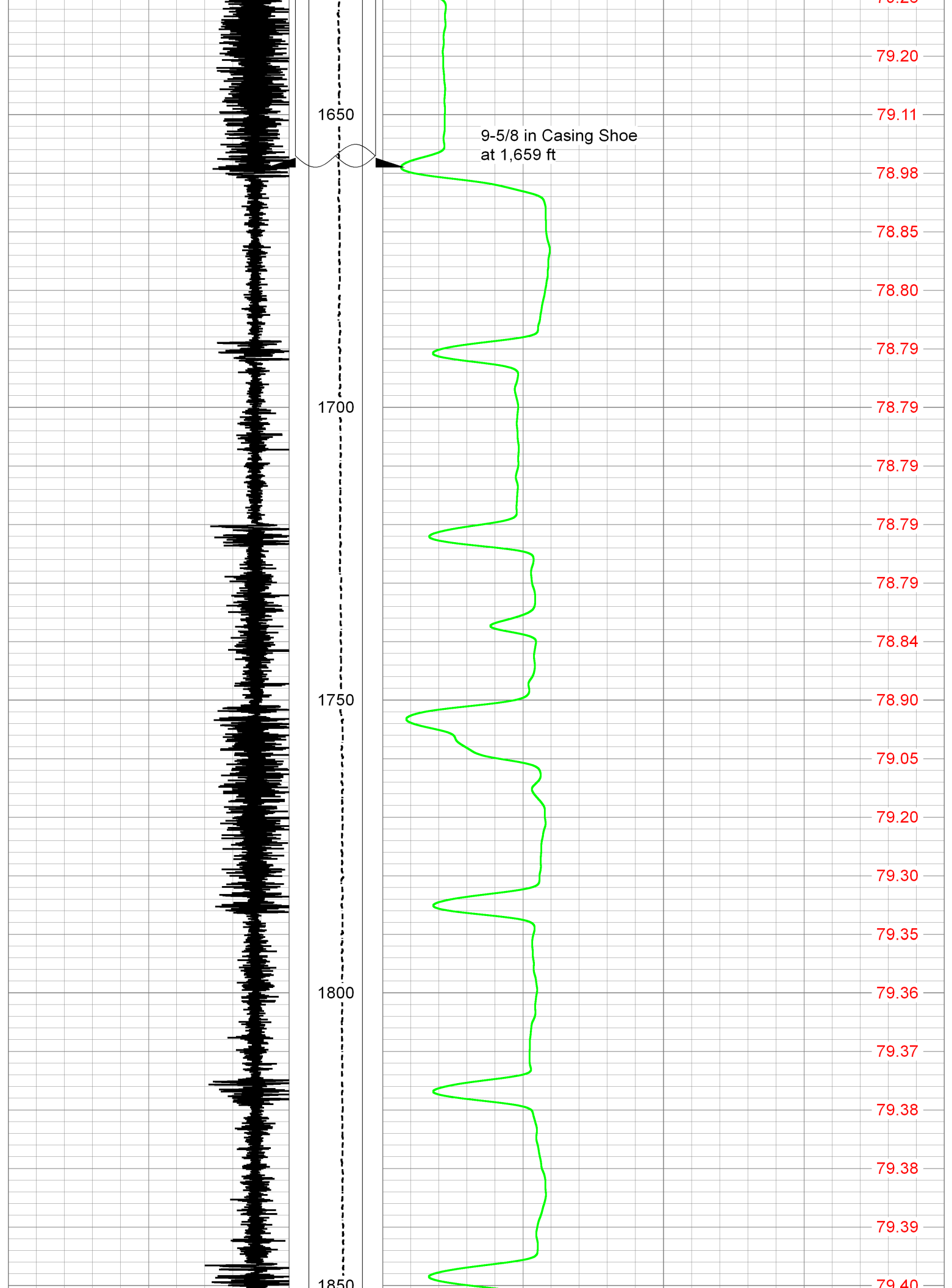
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Presentation Format cc-tempdensity
Dataset Creation Tue May 09 09:15:01 2017
Charted by Depth in Feet scaled 1:240

60000 CCL 2250 LTEN 0 DENSITY (cps) 80000

0 (lb) 400

TEMP
(degF)





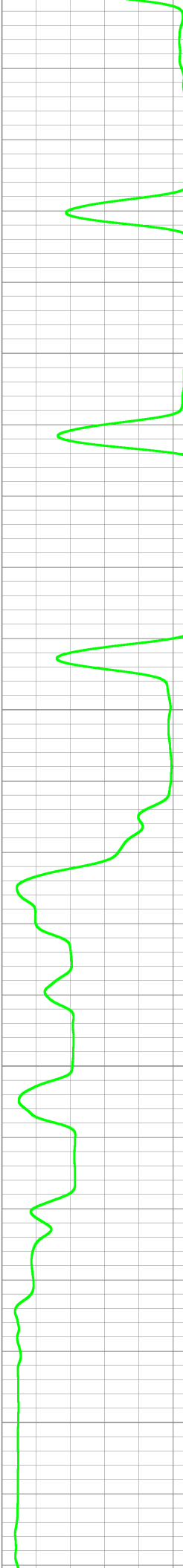


1900

1950

2000

2050



79.41

79.41

79.43

79.44

79.45

79.46

79.47

79.48

79.49

79.50

79.51

79.53

79.54

79.55

79.55

79.56

79.55

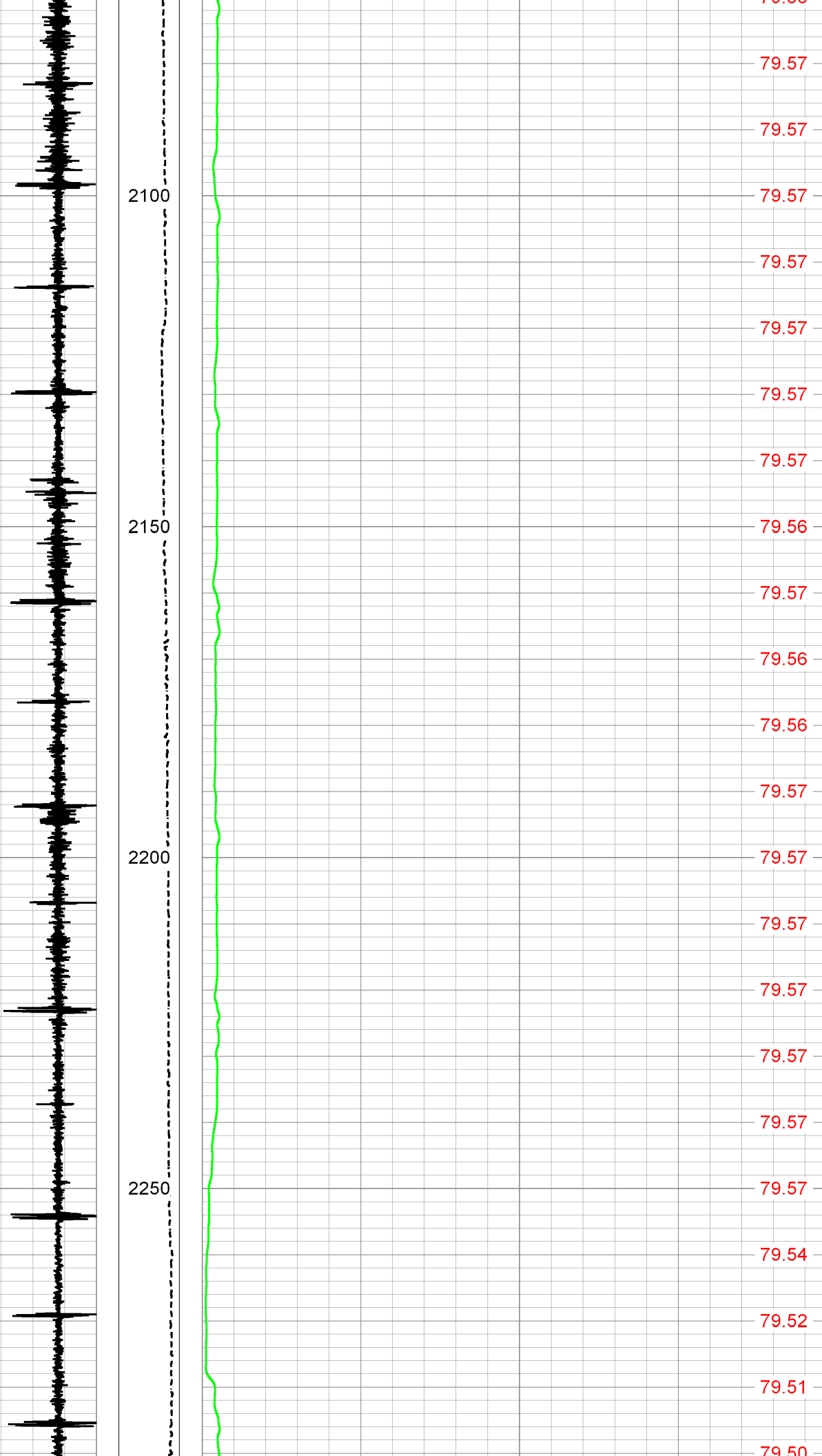
79.55

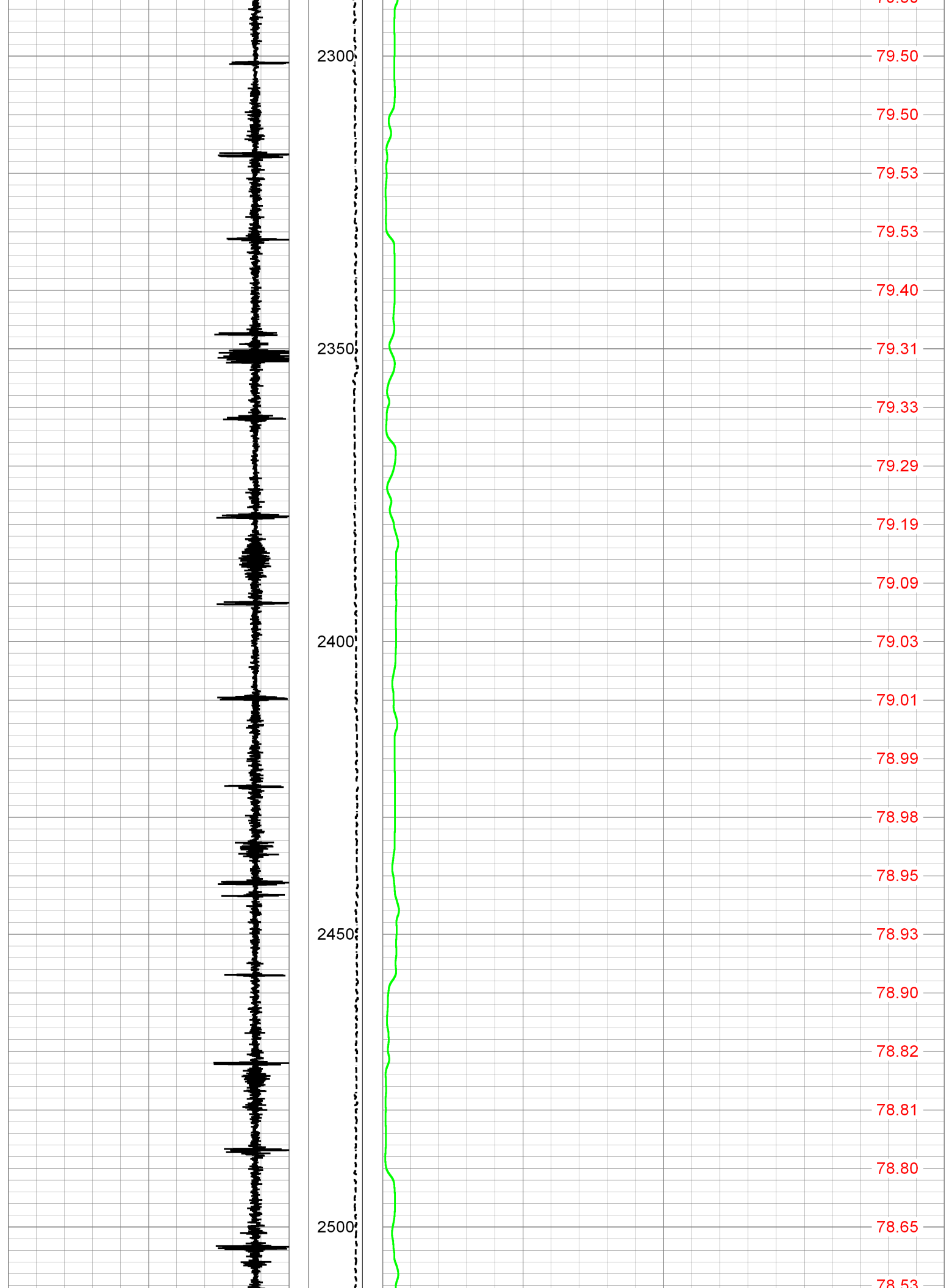
79.57

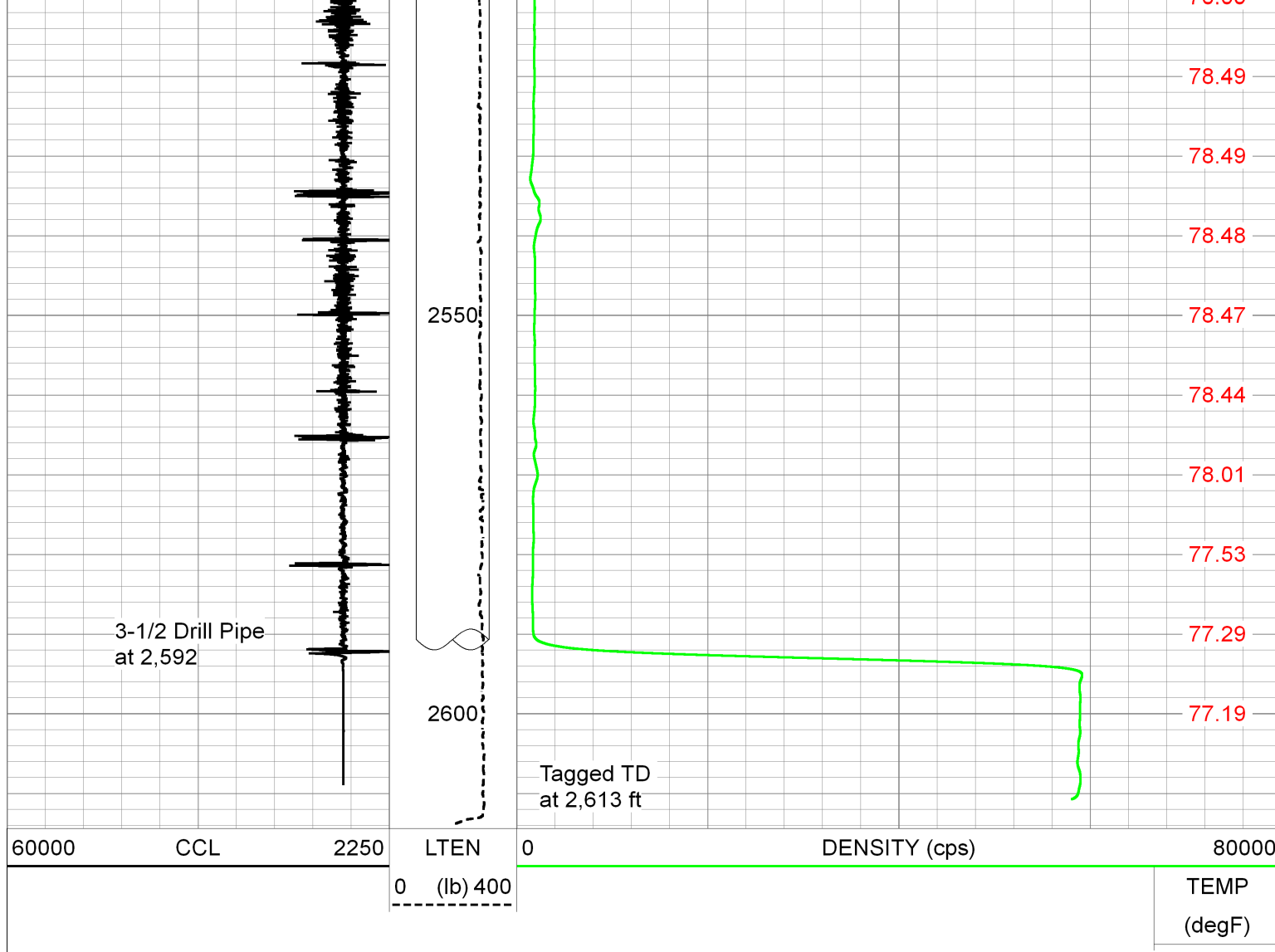
79.57

79.57

79.56







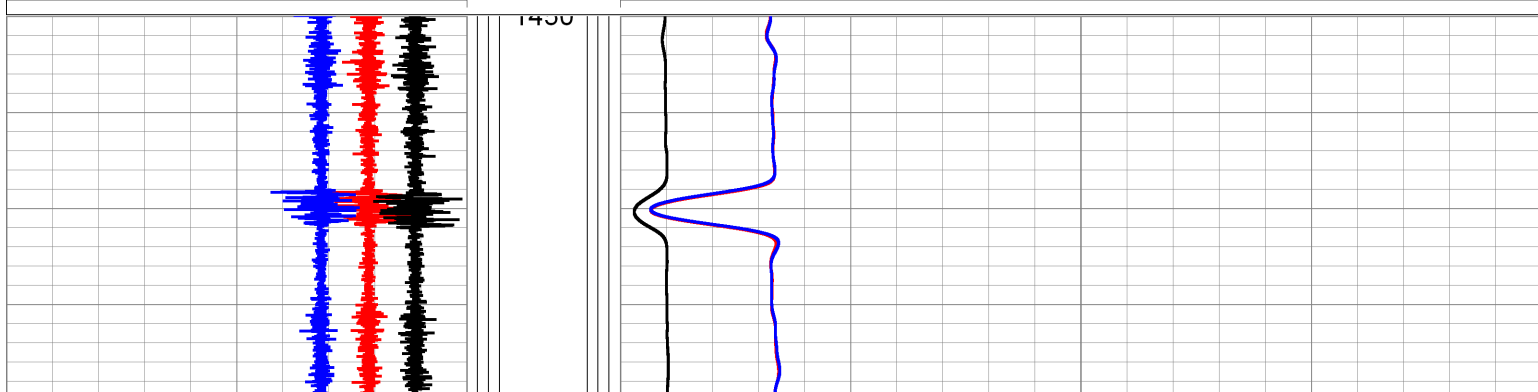
Density - Liner Test

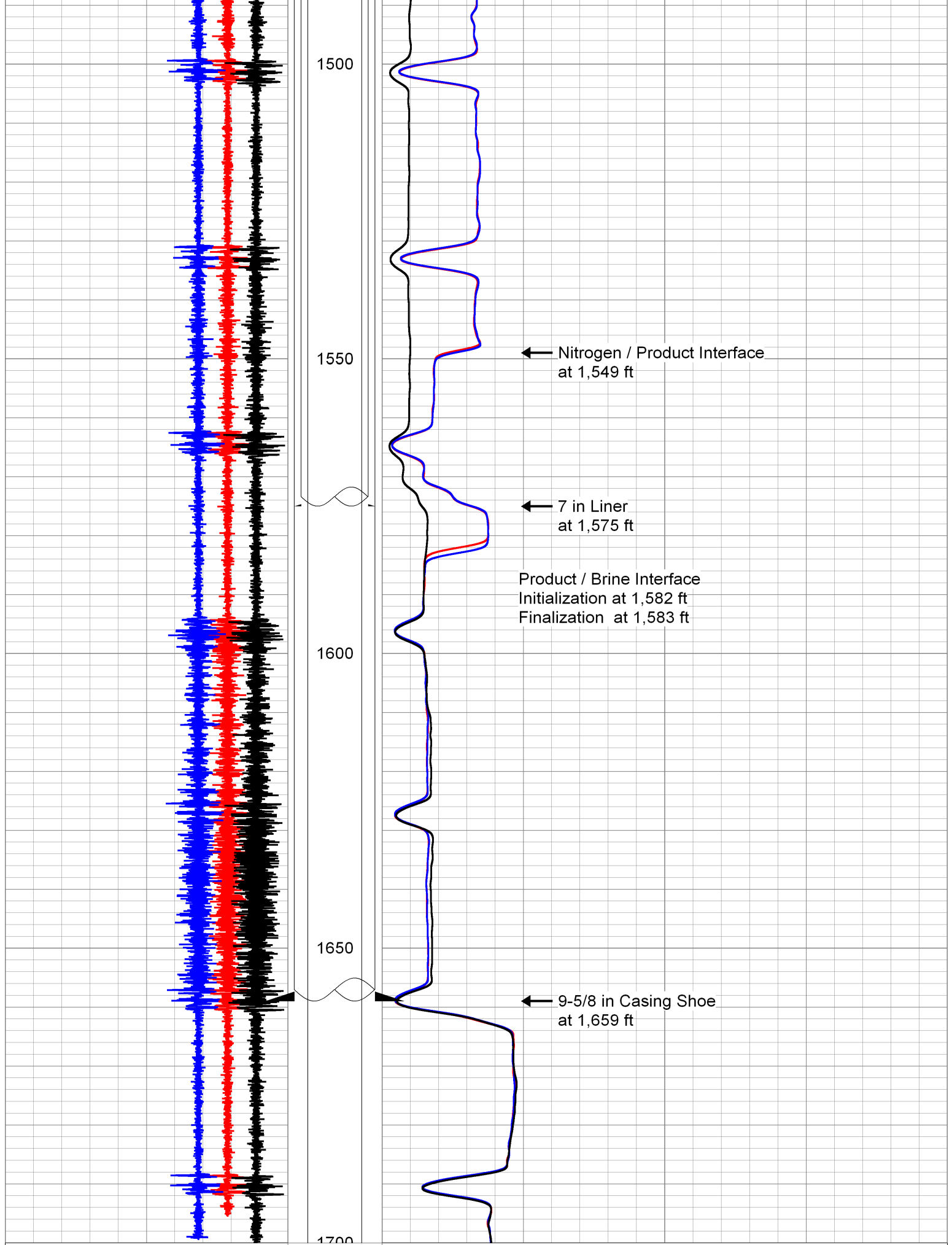
09-May-2017 - Black = Baseline at 08:15,
Red = Initialization at 12:15, Blue = Finalization at 13:15

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
Dataset Pathname M-Liner
Presentation Format cc-tempdensitymerg
Dataset Creation Tue May 09 15:52:11 2017
Charted by Depth in Feet scaled 1:240

80000 CCL - Initialization -10000
70000 CCL - Finalization -19000
90000 CCL - Baseline -1000

0 Density - Initializaiton (cps) 100000
0 Density - Finalization (cps) 100000
0 Density - Baseline (cps) 100000





80000 CCL - Initialization -10000

70000 CCL - Finalization -19000

0 Density - Initializaiton (cps)

100000

0 Density - Finalization (cps)

100000

90000	CCL - Baseline	-1000
-------	----------------	-------

0	Density - Baseline (cps)	100000
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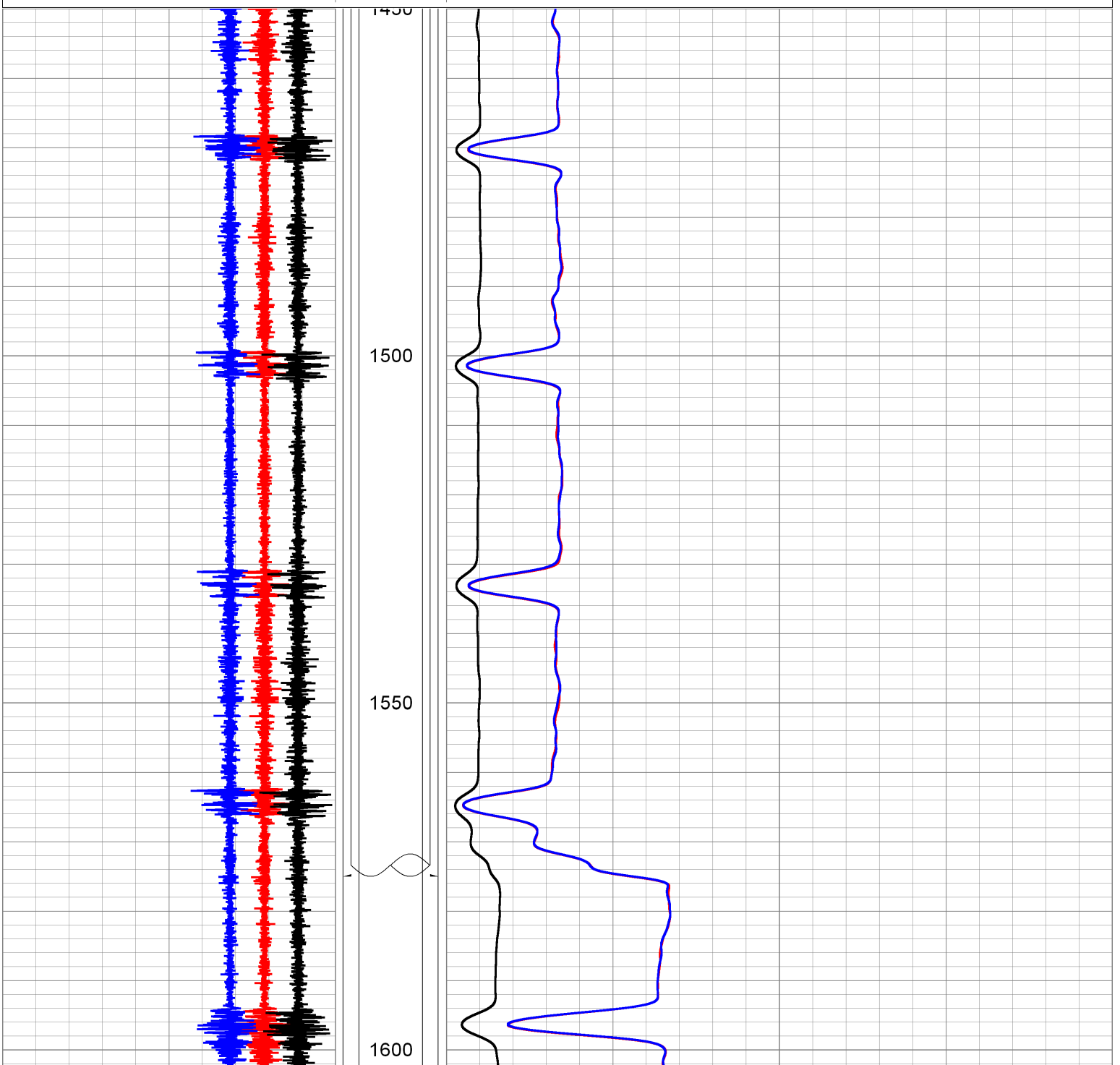
Density - Casing Test

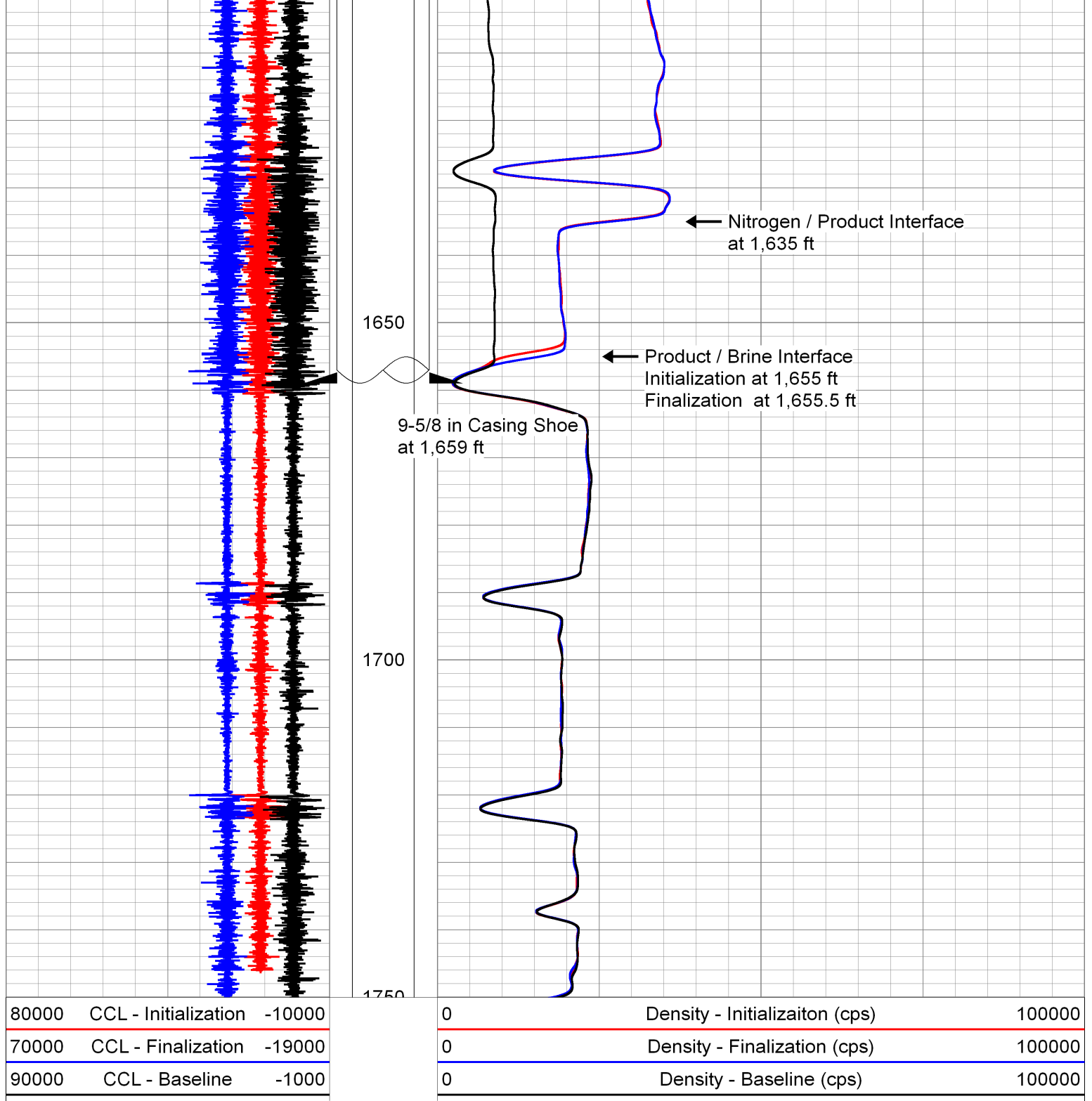
09-May-2017 - Black = Baseline at 08:15,
Red = Initialization at 14:00, Blue = Finalizatin at 15:00

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
Dataset Pathname M-CSG
Presentation Format cc-tempdensitymerg
Dataset Creation Tue May 09 16:20:20 2017
Charted by Depth in Feet scaled 1:240

80000	CCL - Initialization	-10000
70000	CCL - Finalization	-19000
90000	CCL - Baseline	-1000

0	Density - Initializaiton (cps)	100000
0	Density - Finalization (cps)	100000
0	Density - Baseline (cps)	100000



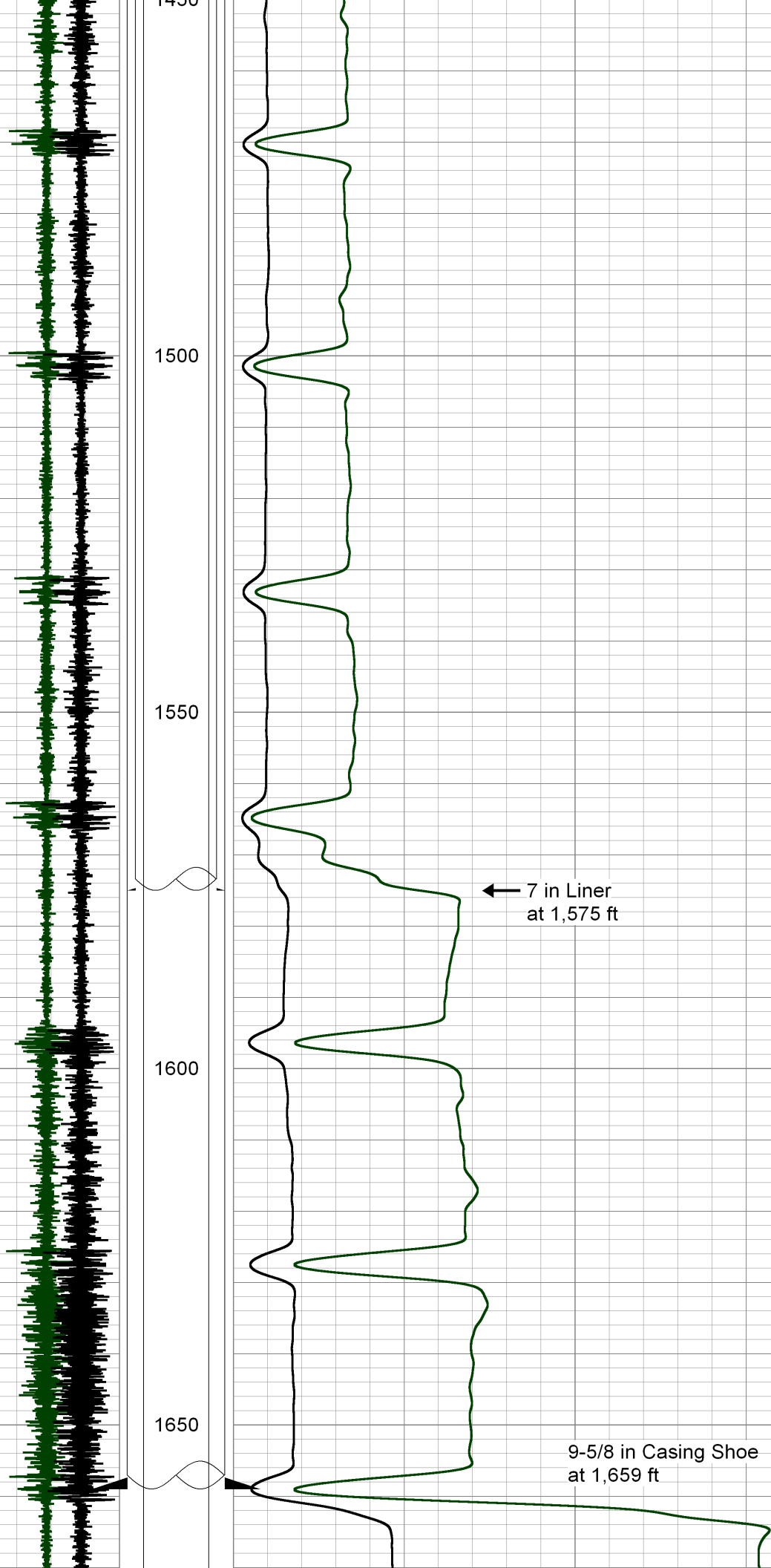


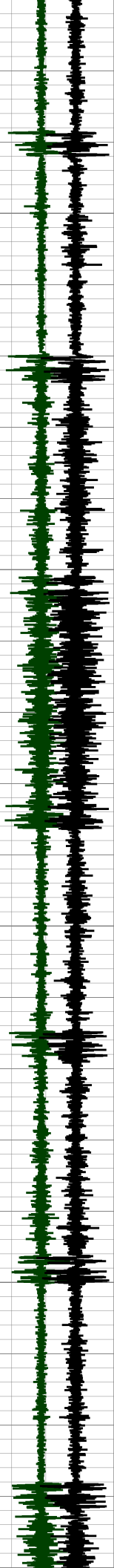
Density - Post Injection Overlay

Black = Baseline on 09-May-2017 at 08:15,
Green = Post Injection on 09-May-2017 at 20:40

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
Dataset Pathname M-PostInj
Presentation Format cc-tempdensitymerg
Dataset Creation Tue May 09 22:03:11 2017
Charted by Depth in Feet scaled 1:240

80000	CCL - Post Injection	-10000	0	Density - Post Injection (cps)	100000
90000	CCL - Baseline	-1000	0	Density - Baseline (cps)	100000



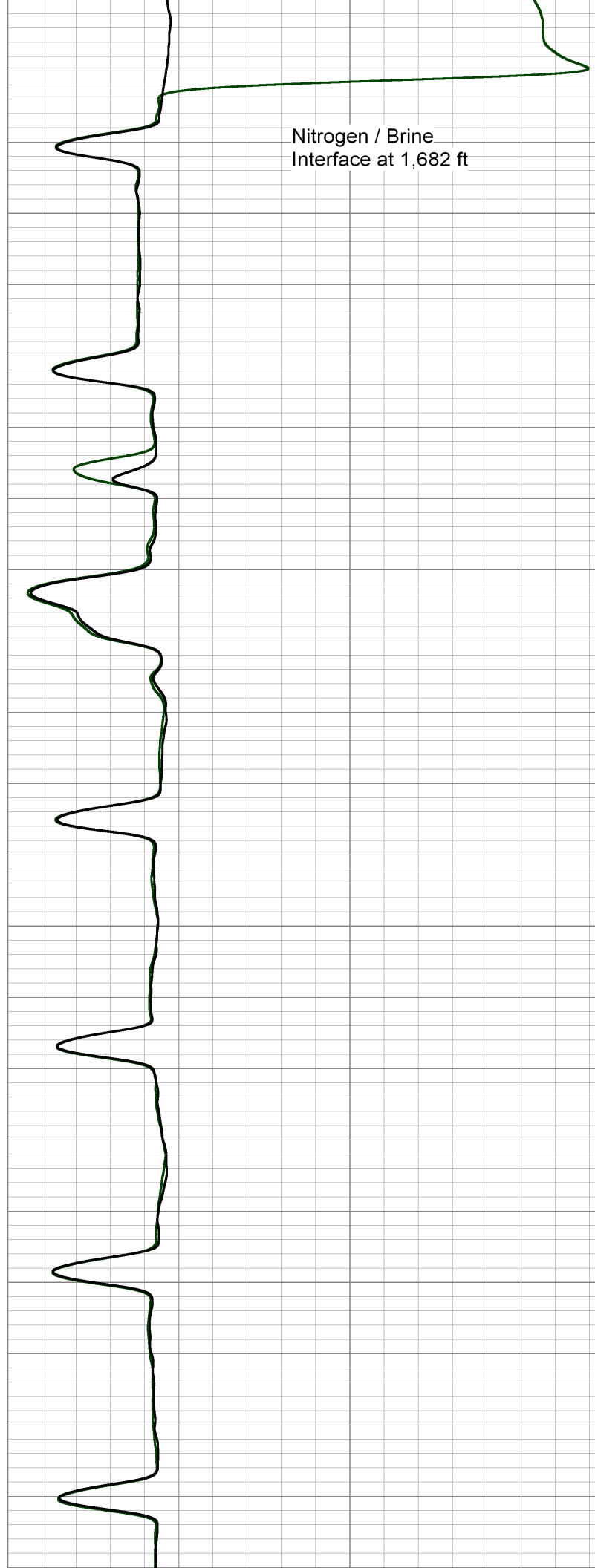


1700

1750

1800

1850



Nitrogen / Brine
Interface at 1,682 ft

80000	CCL - Post Injection	-10000	0	Density - Post Injection (cps)	100000
90000	CCL - Baseline	-1000	0	Density - Baseline (cps)	100000

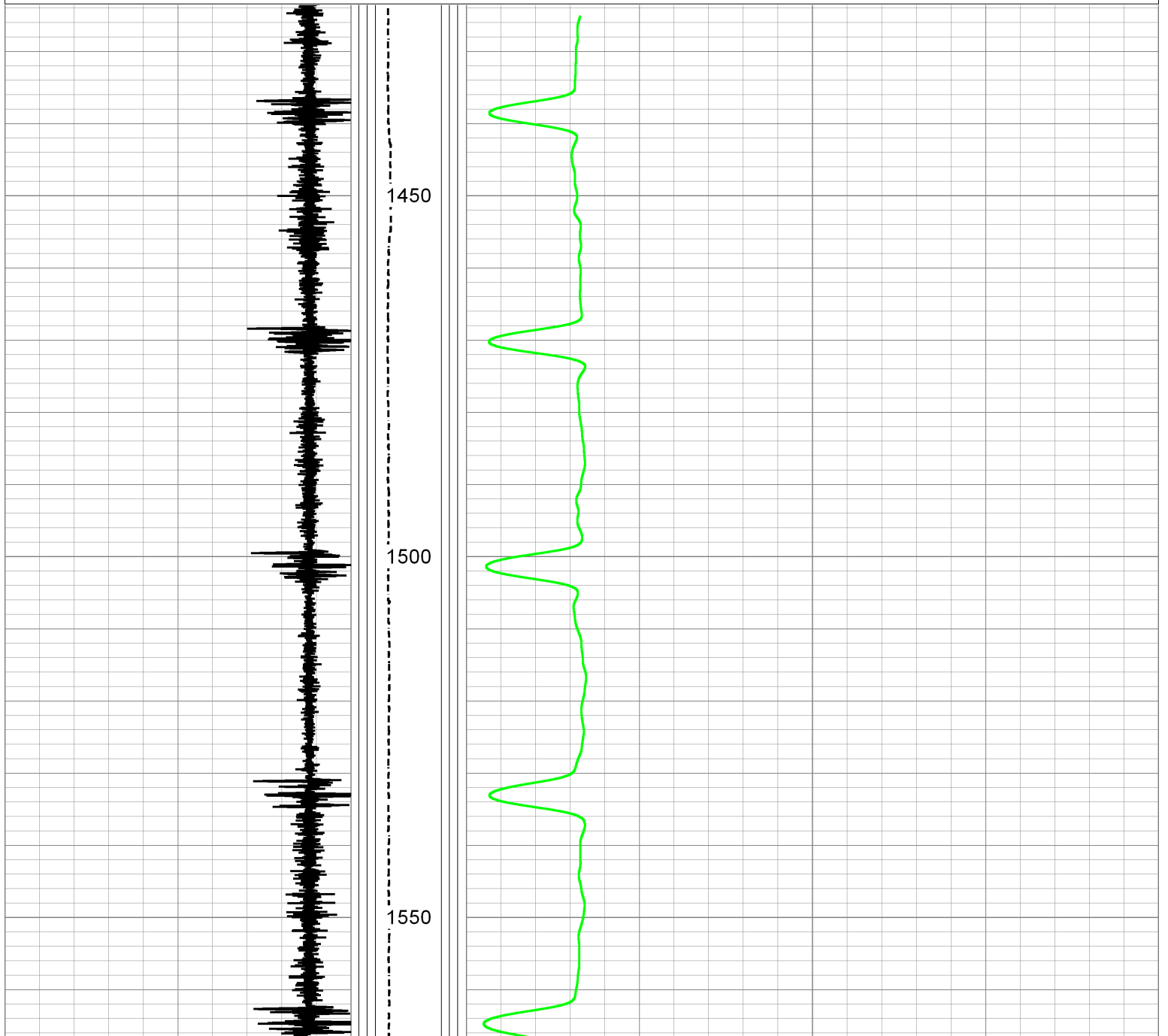


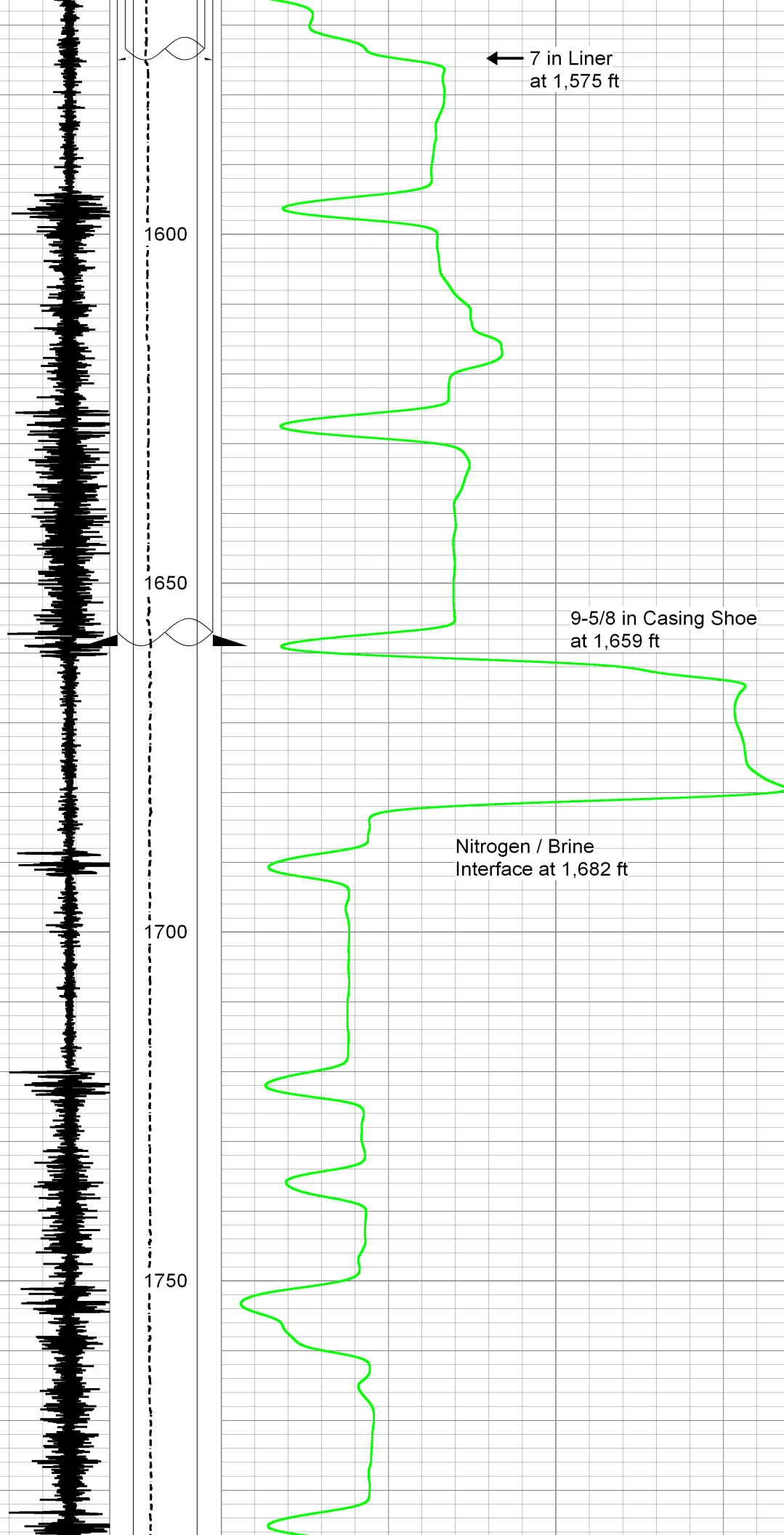
Density - Initializatin

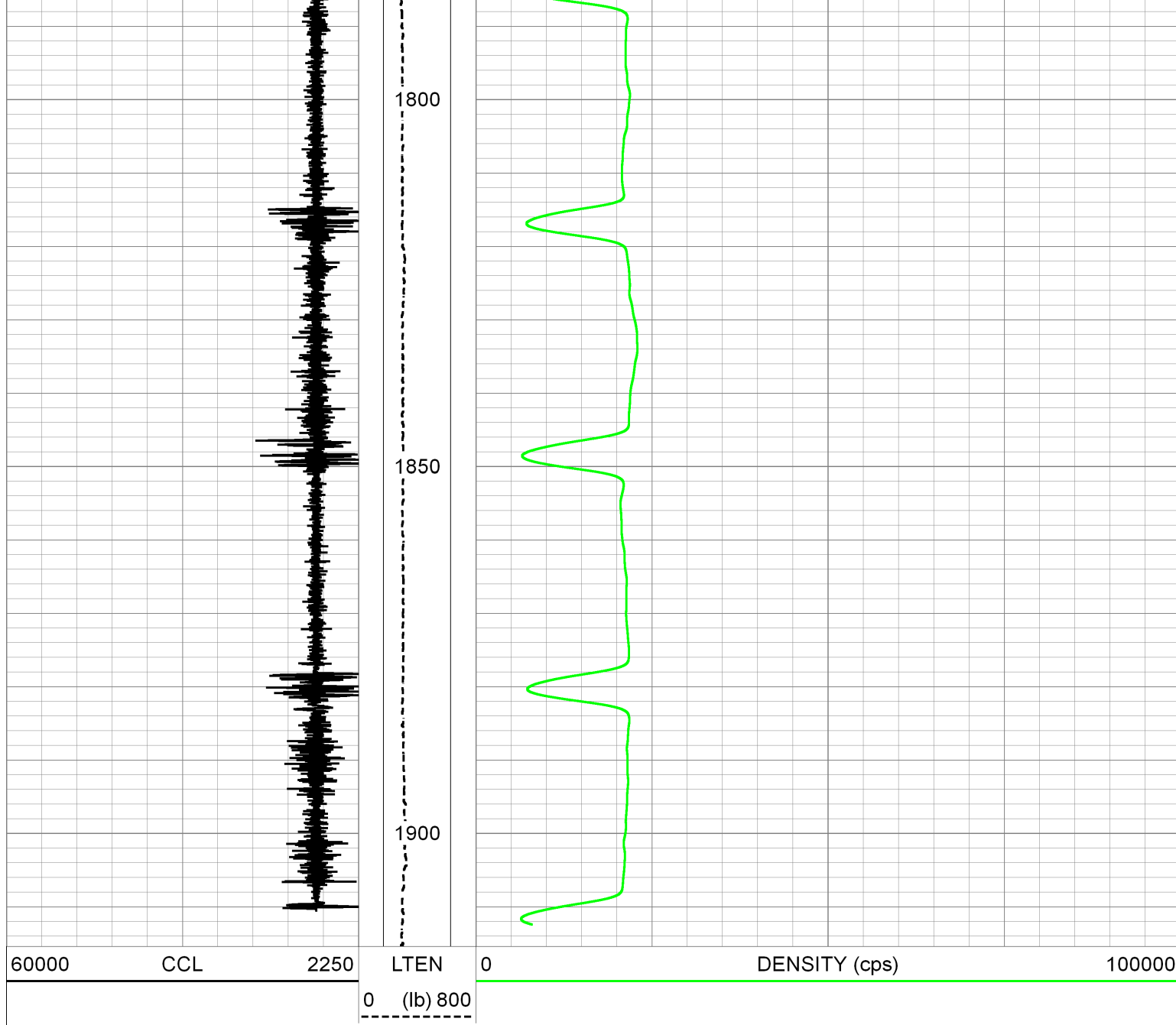
10-May-2017 at 08:00

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
Dataset Pathname 170510-0800_Density
Presentation Format cc-tempdensity
Dataset Creation Wed May 10 08:59:55 2017
Charted by Depth in Feet scaled 1:240

60000	CCL	2250	LTEN	0	DENSITY (cps)	100000
			0 (lb) 800			



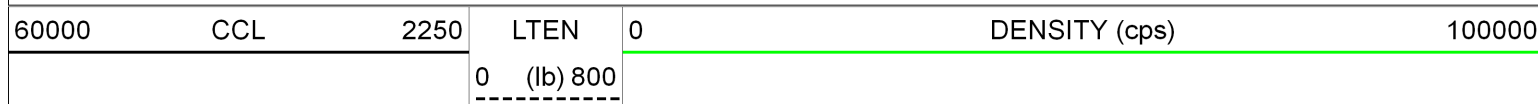


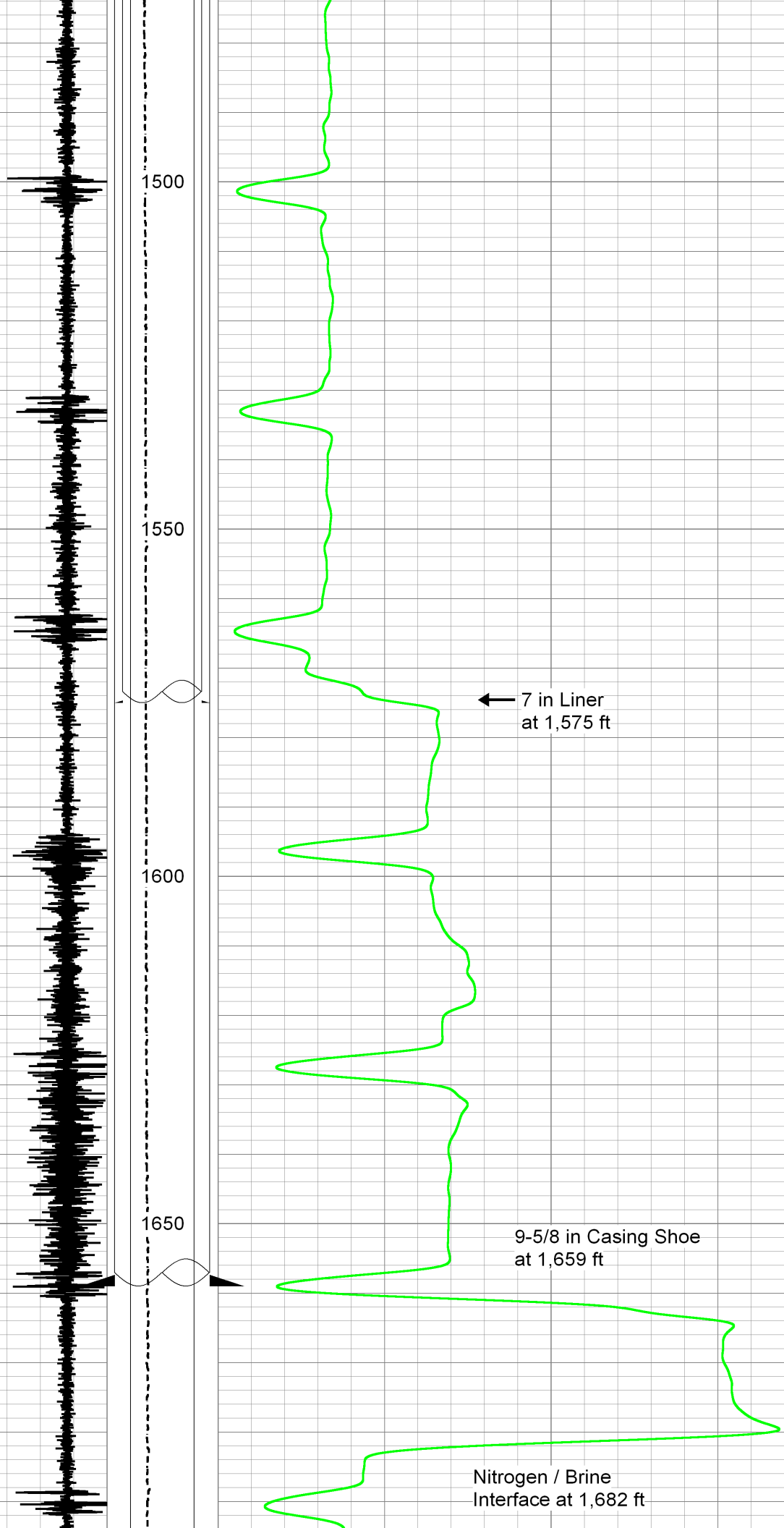


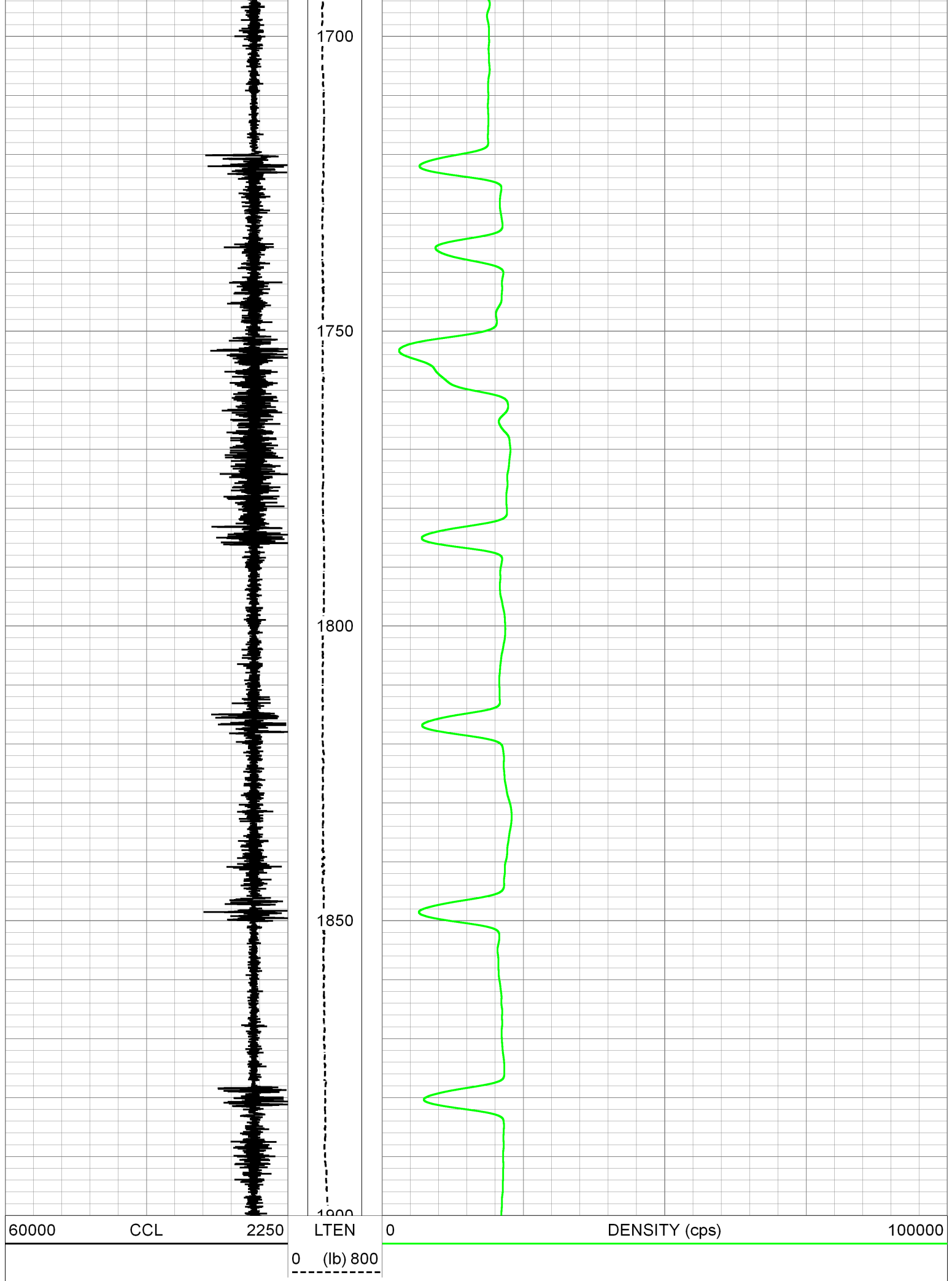
Density - Finalization

13-May-2017 at 08:00

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
 Dataset Pathname 170513-0800_Density-Final
 Presentation Format cc-tempdensity
 Dataset Creation Sat May 13 08:59:45 2017
 Charted by Depth in Feet scaled 1:240







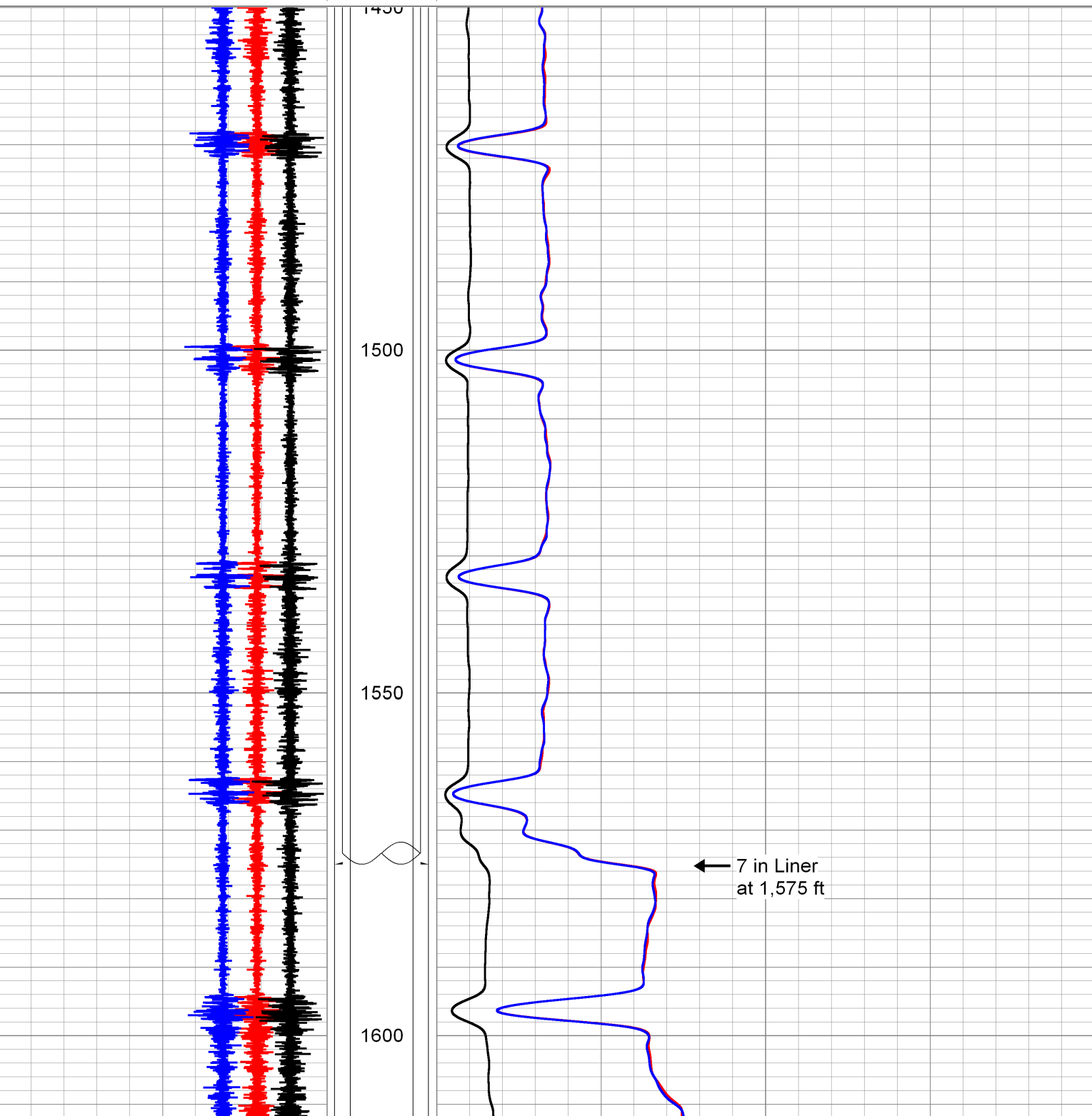


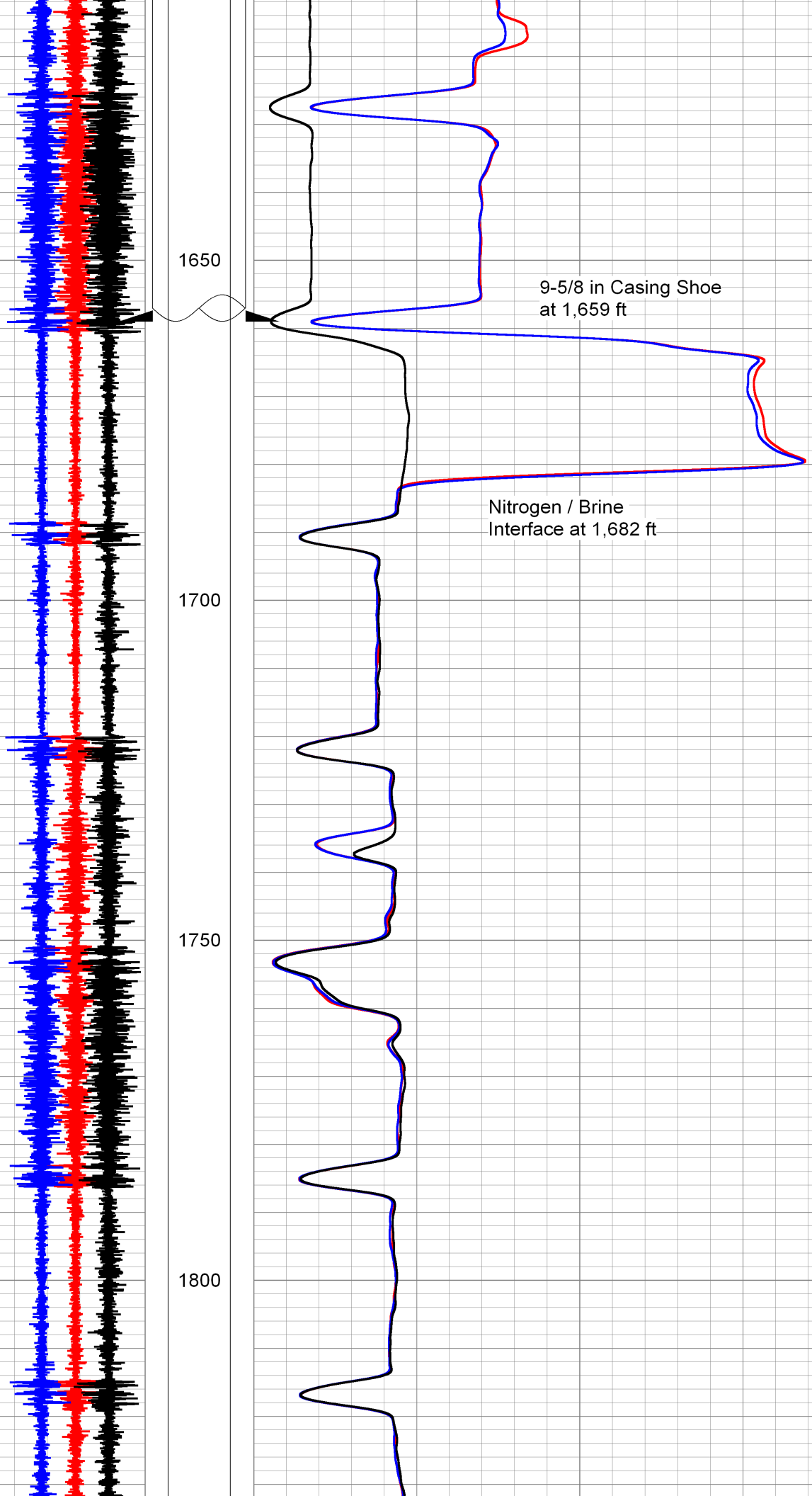
Density - MIT Overlay

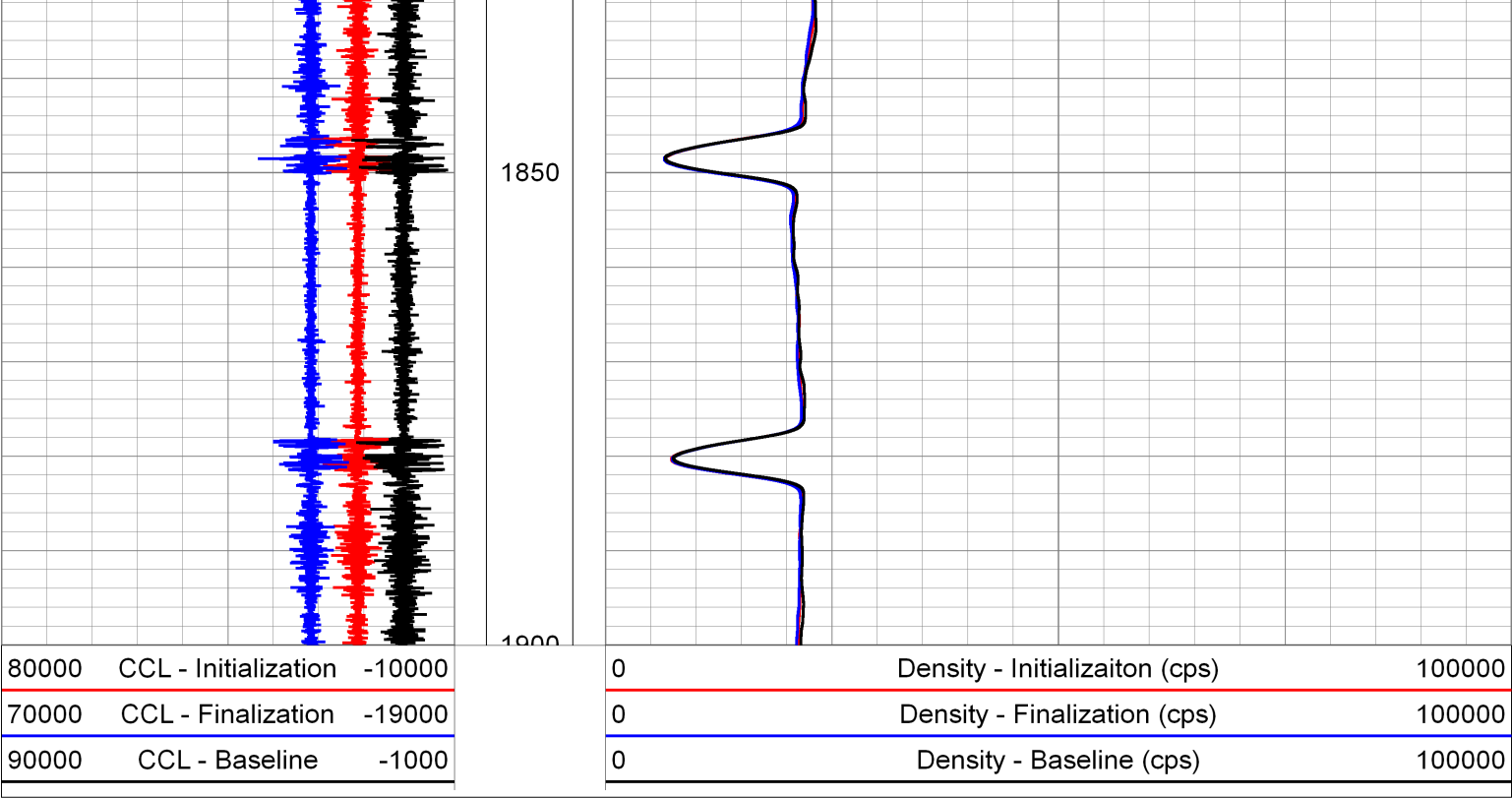
Black = Baseline on 09May17 at 08:15, Red = Initializatin on 10May17 at 08:00, Blue = Finalizatin on 13May17 at 08:00

Database File westernrefinery_lpgs04_20170509_gdt-mit.db
Dataset Pathname M-Density
Presentation Format cc-tempdensitymerg
Dataset Creation Sat May 13 09:23:21 2017
Charted by Depth in Feet scaled 1:240

80000	CCL - Initialization	-10000	0	Density - Initializaiton (cps)	100000
70000	CCL - Finalization	-19000	0	Density - Finalization (cps)	100000
90000	CCL - Baseline	-1000	0	Density - Baseline (cps)	100000







Company	Western Refining Company, LP	
Well	State LPG Storage No. 004	
Field	Jal	
County	Lea County	
State	New Mexico	Country



MIT - Temperature Survey

Company: Western Refining Company, LP									
Well: State LPG Storage No. 004									
Field: Jal									
Area: Lea County									
State: New Mexico									
Run Information	Location		Company: Western Refining Company, LP						
	N/A		Well: State LPG Storage No. 004						
	API # : 30-025-35957		Field: Jal						
	Permanent Datum:		Area: Lea County						
	Log Measured From:		State: New Mexico						
Drilling Measured From:		Ground Level		Elevation: N/A					
		SEC: N/A		TWP: N/A		RGE: N/A			
						Other Services			
						Temperature			
						K.B. N/A			
						D.F. N/A			
						G.L. N/A			
Run No. 1		Run No. 2		Run No. 3		Run No. 4			
Date of Service		09-May-2017		10-May-2017		12-May-2017		13-May-2017	
Depth Driller or PBTD		N/A		N/A		N/A		N/A	
Empire Depth		2.613 ft		2.613 ft		2.613 ft		2.613 ft	
Bottom Log Interval		2.612 ft		2.612 ft		2.612 ft		2.612 ft	
Top Log Interval		Surface		Surface		Surface		Surface	
Interface Depth		N/A		1.682 ft		1.682 ft		1.682 ft	
Fluid Type		Brine		Brine		Brine		Brine	
Fluid Density		N/A		N/A		N/A		N/A	
Fluid Level		Surface		308 ft		748 ft		778 ft	
Tubing Pressure		50 Psia		500 Psia		700 Psia		730 Psia	
Wellhead Connection		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K	
Time - Ran In Well		08:15		06:30		12:15		06:15	
Time - Temp. Start		08:15		06:45		12:30		06:30	
Time - Density Start		08:15		08:00		13:40		08:00	
Time - Out of Well		21:15		09:00		14:30		09:00	
Location		Broussard, LA		Broussard, LA		Broussard, LA		Broussard, LA	
Unit No. / Wire Size		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in	
Recorded By		C. Cross		C. Cross		C. Cross		C. Cross	
Witnessed By		Mr. Will George		Mr. Will George		Mr. Will George		Mr. Will George	
CSG / TBG Record		Size		Wt/Ft		Top		Bottom	
Surface Casing		13-5/8 in		54.5 lb/ft		Surface		423 ft	
Production Casing		9-5/8 in		36 lb/ft		Surface		1.659 ft	
Liner		7 in		23 lb/ft		Surface		1.575 ft	
Hanging String		4-1/2 in		N/A		Surface		29.45 ft	
Hanging String		3-1/2 in		Drill Pipe		29.45 ft		2.592 ft	

<<< Fold Here >>>

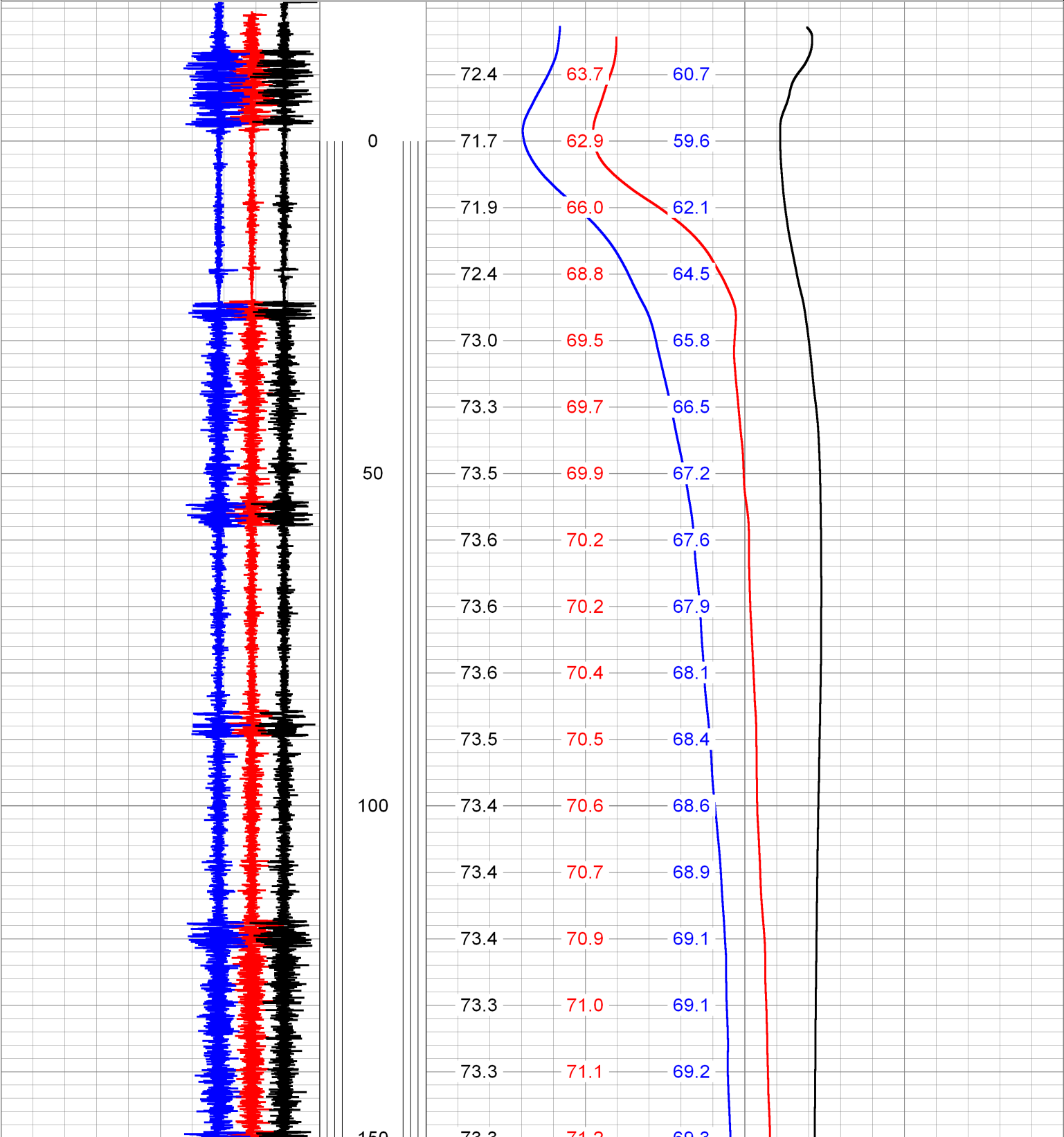
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

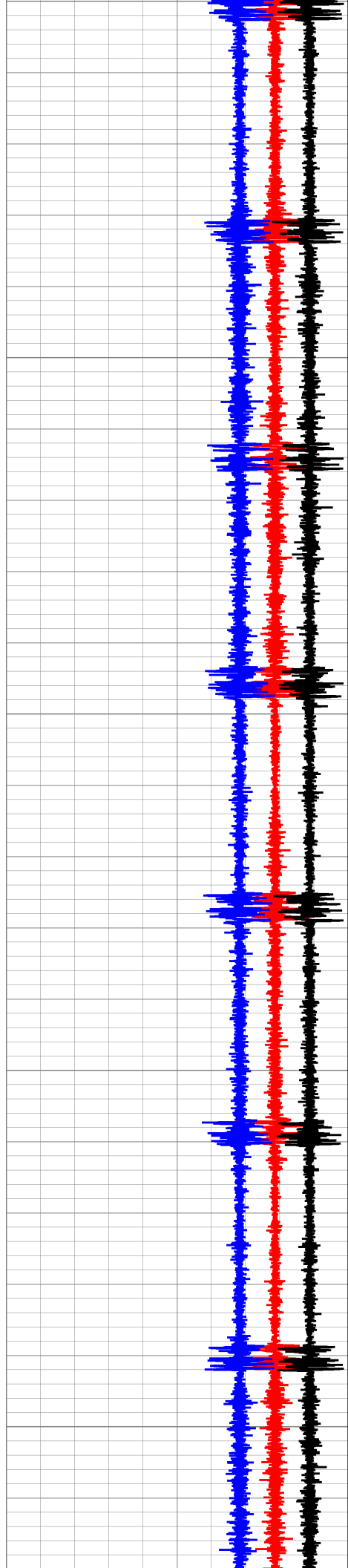
Comments

Tool Zeroed at B.H.F. with no depth correction applied.

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)

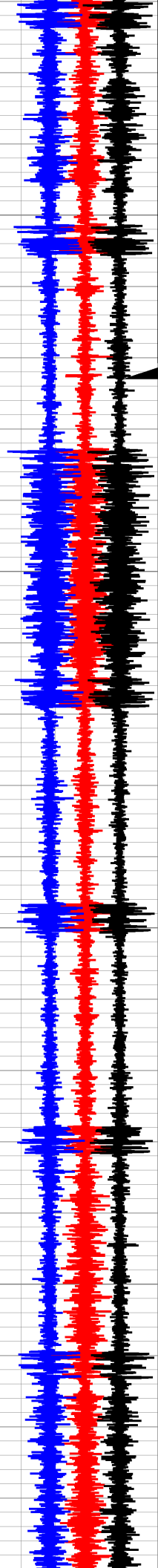
Database File	westernrefinery_lpgs04_20170509_gdt-mit.db		
Dataset Pathname	M-Temperature		
Presentation Format	cc-tempmerg		
Dataset Creation	Sat May 13 08:49:34 2017		
Charted by	Depth in Feet scaled 1:240		
80000	CCL - Initialization	-10000	
70000	CCL - Finalizin	-19000	
90000	CCL - Baseline	-1000	
		Temp - Initialzaiton (degF)	85
		Temp - Finalization (degF)	85
		Temp - Baseline (degF)	85
		Temp - Base (degF)	
		Temp-Initial (degF)	
		Temp-Final (degF)	





150
200
250
300
350

73.3	71.2	69.3
73.3	71.2	69.3
73.2	71.3	69.5
73.2	71.3	69.5
73.2	71.4	69.6
73.2	71.5	69.7
73.2	71.5	69.8
73.2	71.6	69.8
73.2	71.6	69.9
73.2	71.6	70.0
73.2	71.6	70.1
73.3	71.7	70.2
73.3	71.7	70.3
73.4	71.8	70.4
73.4	71.9	70.5
73.5	72.0	70.7
73.5	72.9	70.8
73.6	73.3	70.8
73.7	73.4	70.9
73.7	73.5	71.0
73.8	73.6	71.1
73.8	73.6	71.2
73.9	73.7	71.4



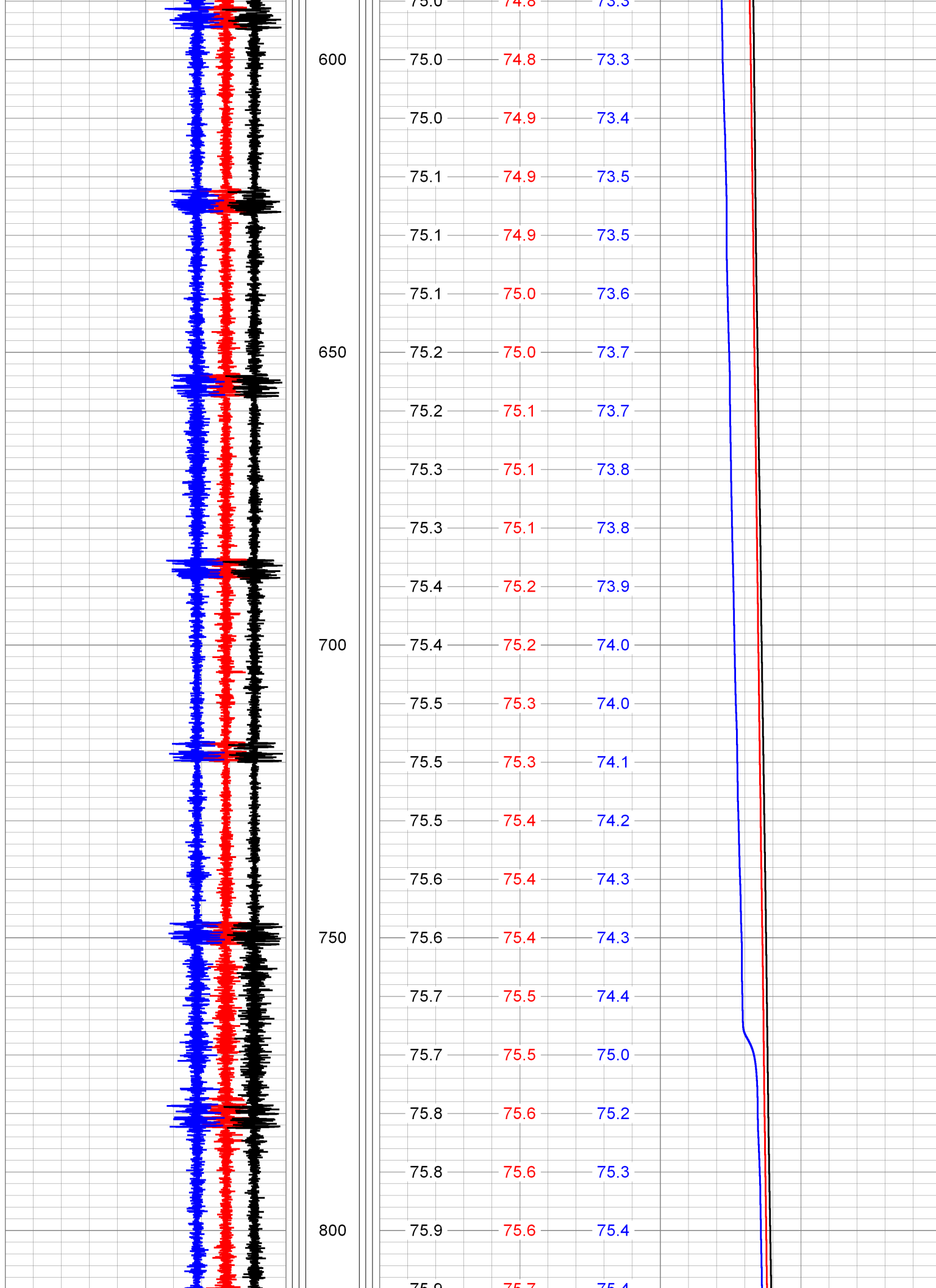
400

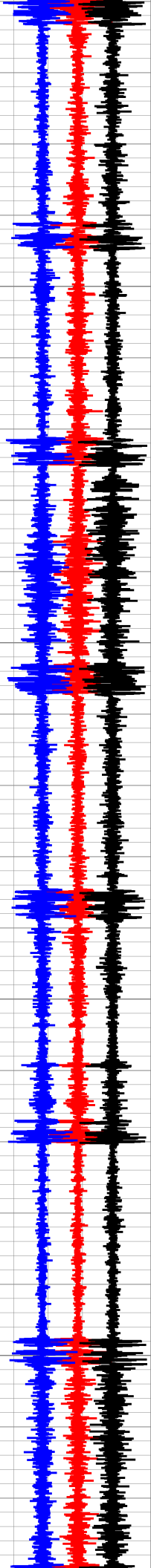
450

500

550

73.9	73.7	71.4
74.0	73.8	71.5
74.0	73.8	71.6
74.1	73.9	71.7
74.1	73.9	71.7
74.1	74.0	71.8
74.2	74.0	71.9
74.2	74.1	72.0
74.3	74.1	72.1
74.3	74.1	72.2
74.4	74.2	72.2
74.4	74.2	72.3
74.5	74.3	72.4
74.5	74.3	72.5
74.5	74.4	72.5
74.6	74.4	72.7
74.7	74.4	72.8
74.7	74.5	72.8
74.8	74.6	72.9
74.9	74.6	73.0
74.9	74.7	73.1
74.9	74.7	73.2
75.0	74.8	73.2





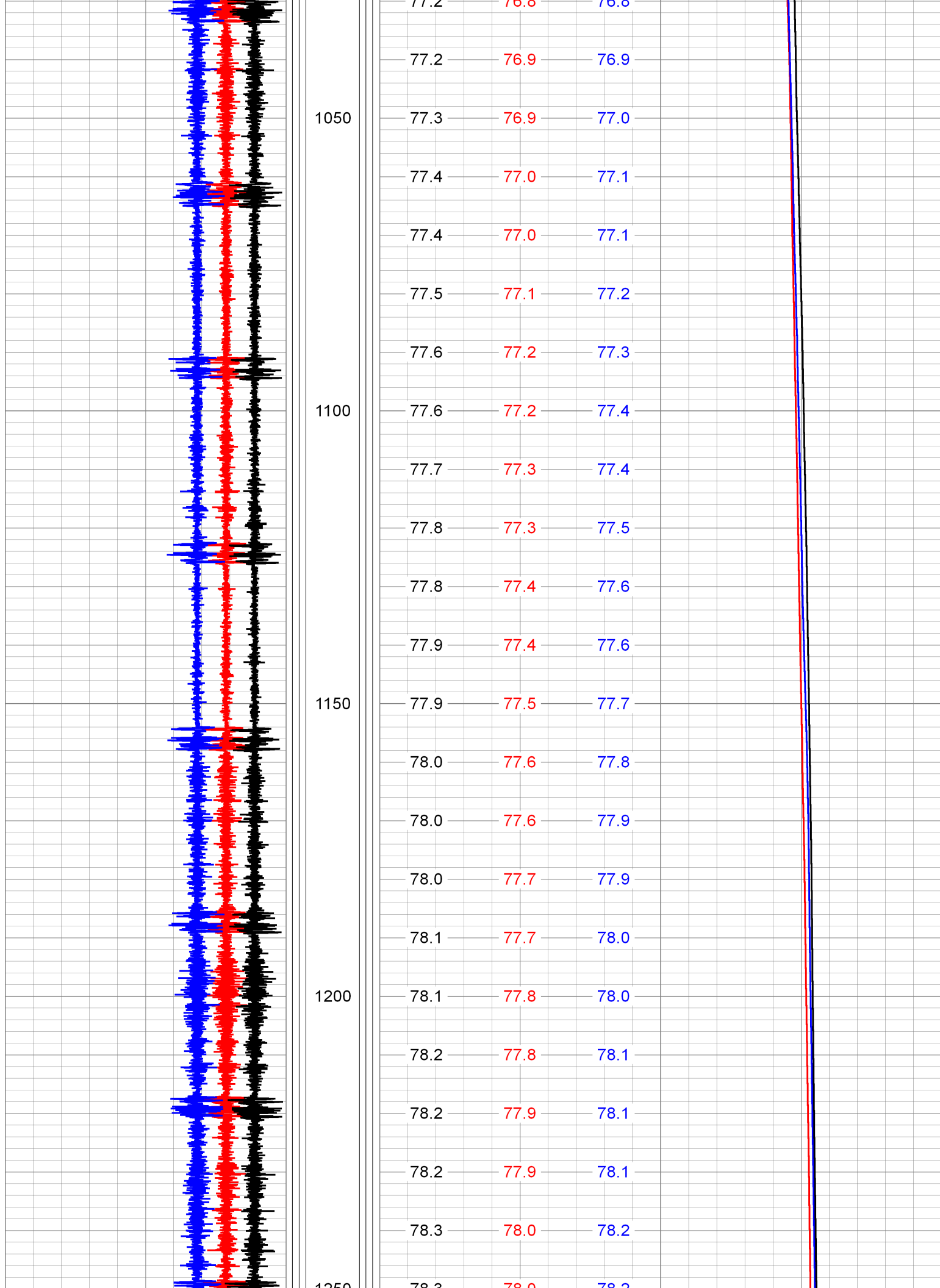
850

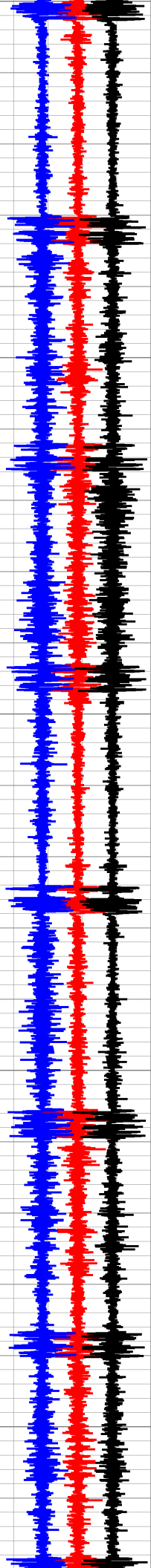
900

950

1000

75.9	75.7	75.4
76.0	75.7	75.5
76.0	75.8	75.5
76.1	75.8	75.6
76.1	75.9	75.6
76.2	75.9	75.7
76.2	76.0	75.8
76.2	76.0	75.8
76.3	76.1	75.9
76.4	76.1	76.0
76.4	76.1	76.0
76.4	76.2	76.0
76.5	76.2	76.1
76.6	76.3	76.2
76.6	76.3	76.2
76.7	76.4	76.3
76.7	76.4	76.4
76.8	76.5	76.4
76.9	76.5	76.5
76.9	76.6	76.6
77.0	76.7	76.7
77.1	76.7	76.7
77.2	76.8	76.8





1250

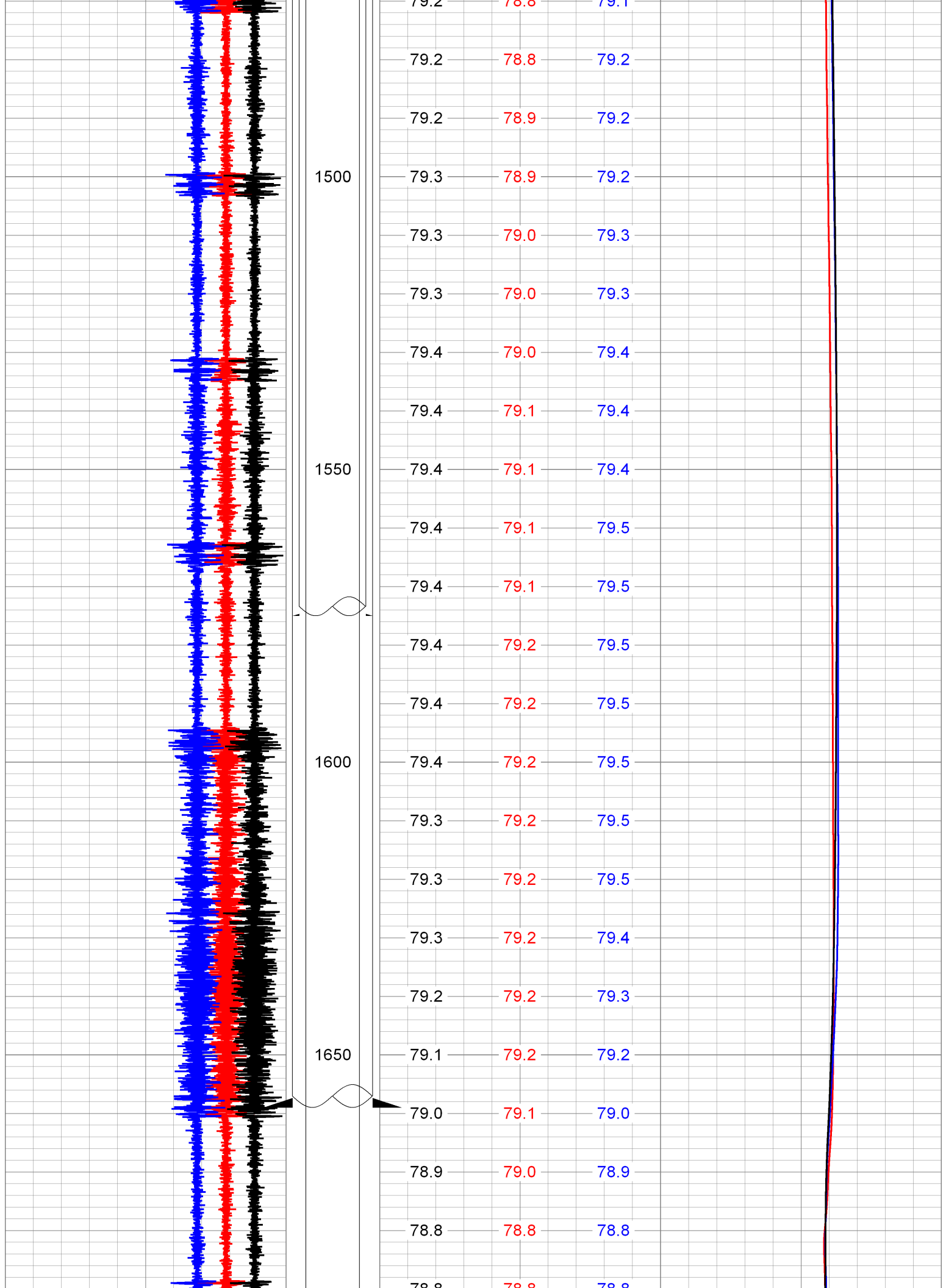
1300

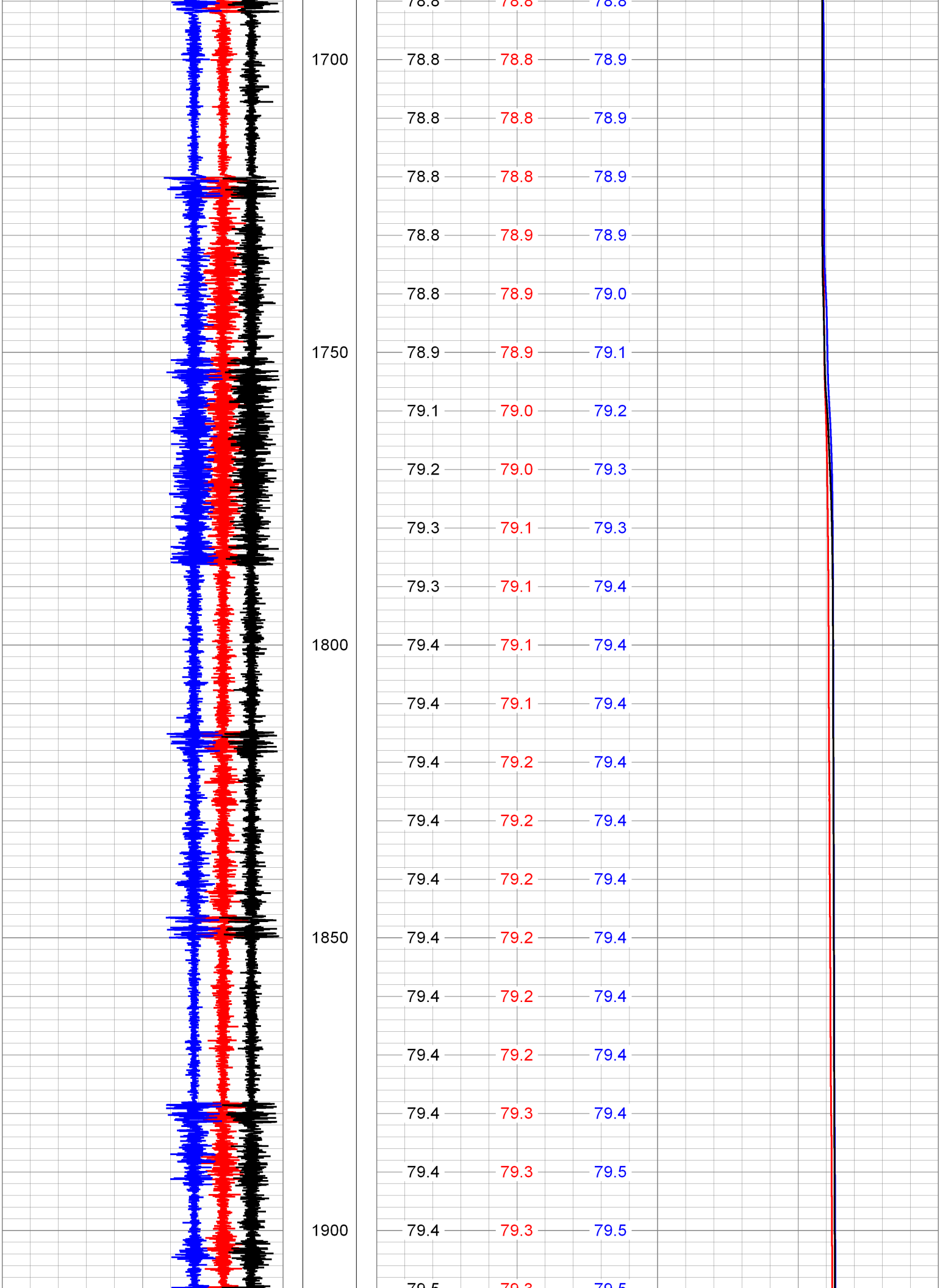
1350

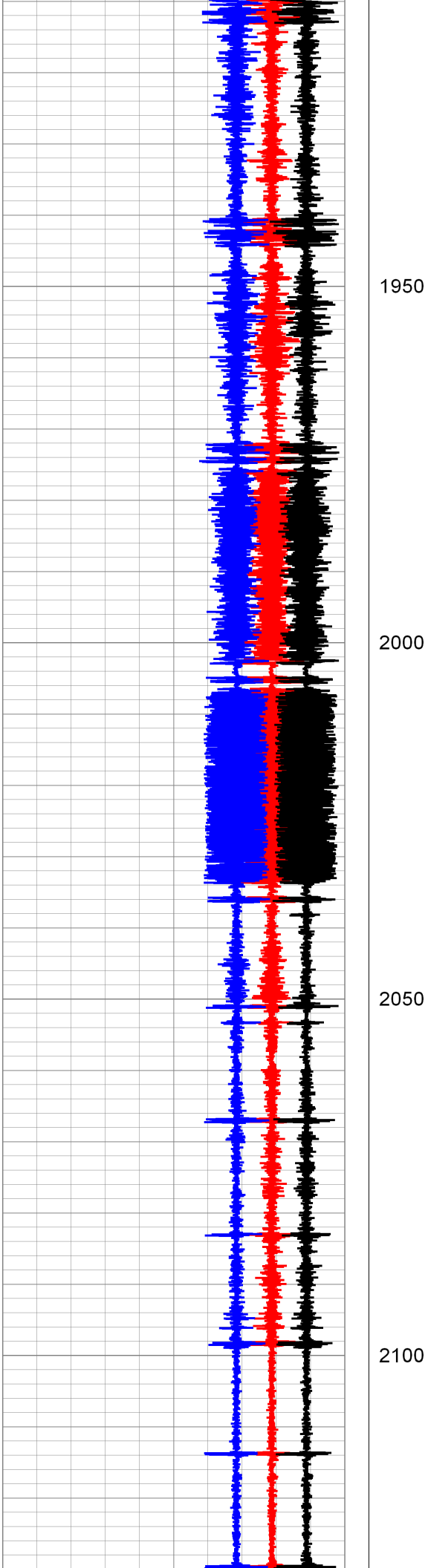
1400

1450

78.3	78.0	78.2
78.4	78.0	78.3
78.4	78.1	78.3
78.4	78.1	78.3
78.4	78.1	78.3
78.5	78.2	78.3
78.5	78.2	78.4
78.5	78.2	78.4
78.6	78.3	78.5
78.6	78.3	78.6
78.7	78.3	78.6
78.7	78.4	78.6
78.8	78.4	78.7
78.8	78.5	78.7
78.8	78.5	78.7
78.9	78.5	78.8
78.9	78.6	78.9
79.0	78.6	78.9
79.0	78.7	79.0
79.1	78.7	79.0
79.1	78.7	79.1
79.1	78.8	79.1
79.2	78.8	79.2





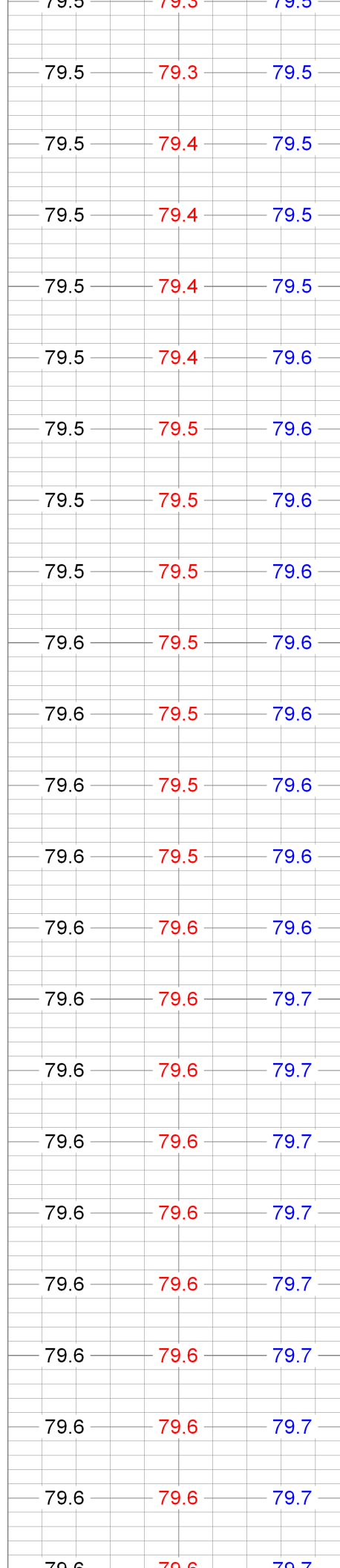


1950

2000

2050

2100



79.5

79.3

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79.6

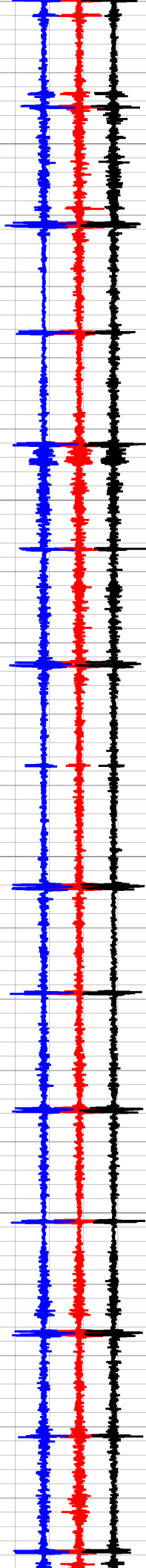
79.6

79.7

79.6

79.6

79.7



2150

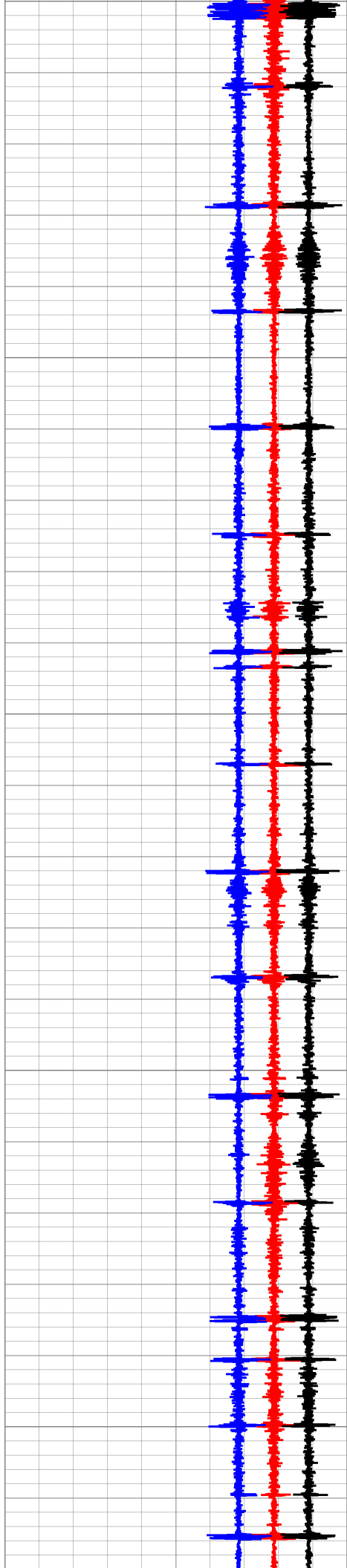
2200

2250

2300

2350

79.6	79.6	79.7
79.6	79.6	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.6	79.7	79.7
79.5	79.6	79.7
79.5	79.6	79.7
79.5	79.6	79.7
79.5	79.6	79.7
79.5	79.6	79.7
79.5	79.6	79.7
79.5	79.6	79.6
79.5	79.6	79.6
79.4	79.5	79.5
79.3	79.5	79.5



2350

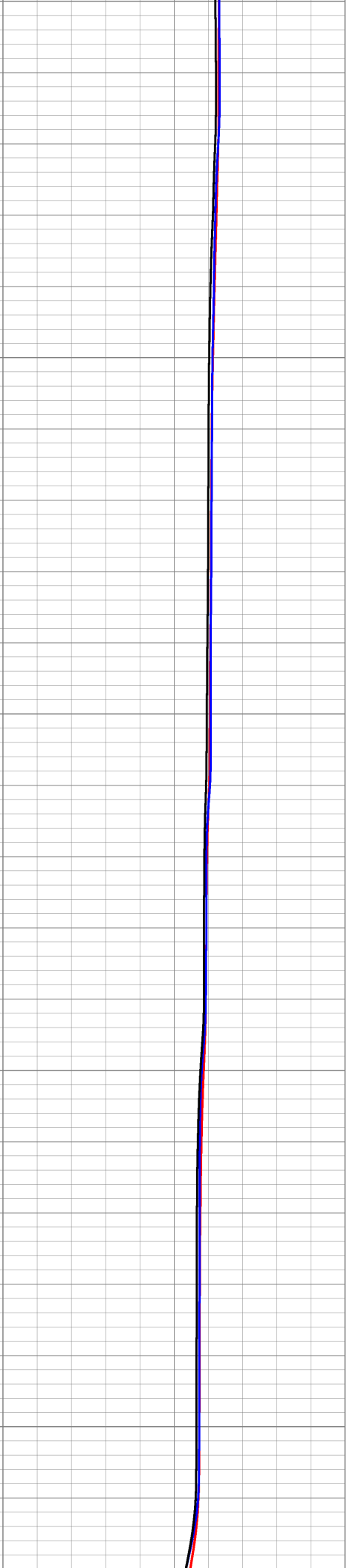
2400

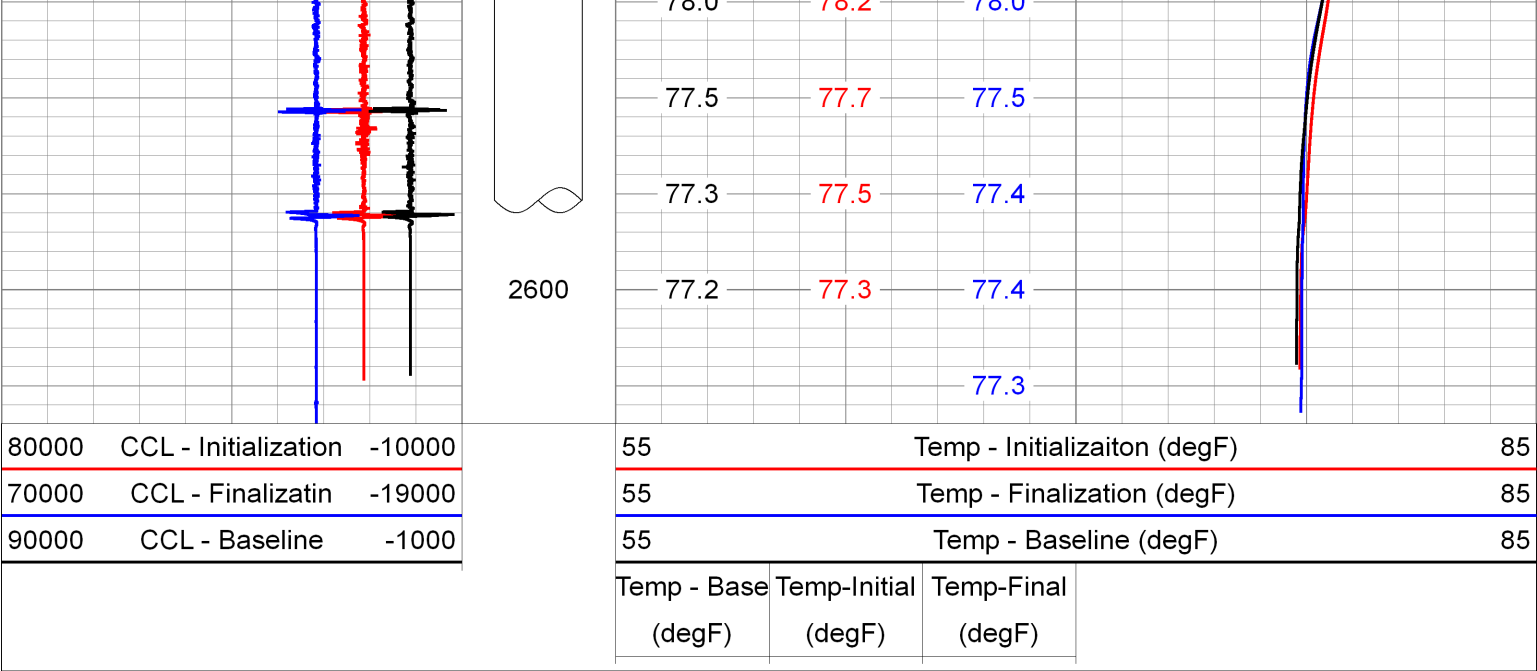
2450

2500

2550

79.3	79.3	79.3
79.3	79.4	79.5
79.3	79.4	79.4
79.2	79.4	79.3
79.1	79.3	79.2
79.0	79.2	79.2
79.0	79.1	79.2
79.0	79.1	79.1
79.0	79.1	79.1
79.0	79.1	79.1
78.9	79.1	79.1
78.9	79.0	79.1
78.8	78.9	78.9
78.8	78.9	78.9
78.8	78.9	78.9
78.7	78.8	78.7
78.5	78.7	78.6
78.5	78.6	78.6
78.5	78.6	78.6
78.5	78.6	78.6
78.5	78.6	78.6
78.4	78.6	78.5
78.0	78.2	78.0





Company	Western Refining Company, LP		
Well	State LPG Storage No. 004		
Field	Jal		
County	Lea County		
State	New Mexico		Country

Chavez, Carl J, EMNRD

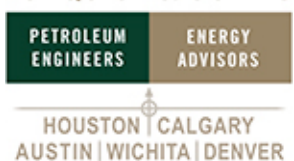
From: Will George <will@lonquist.com>
Sent: Tuesday, August 22, 2017 2:28 PM
To: Eric Busch; Chavez, Carl J, EMNRD
Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:
Attachments: Western Refining Well #3 MIT Report_6_20_2017.pdf; Western Refining Well #4 MIT Report_6_20_2017.pdf

All,

The MIT report, test data, temperature logs, and density logs for each cavern are attached. Please let me know if you require any additional information.

Regards,

LONQUIST & CO. LLC



William H. George • Staff Engineer

Lonquist & Co., LLC • 3345 Bee Cave Rd., Suite 201 • Austin, Texas, USA 78746

Direct: 512-600-1718 • Cell: 512-787-7478 • Fax: 512-732-9816

will@lonquist.com • www.lonquist.com

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From: Eric Busch

Sent: Tuesday, August 22, 2017 1:27 PM

To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Will George <will@lonquist.com>

Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Sure will...expect it tomorrow.

LONQUIST



Eric T. Busch • Senior Vice President • Lonquist & Co., LLC • 1001 McKinney, Suite 1650 • Houston, Texas, USA 77002

Direct: 713-559-9953 • Cell: 832-216-0785 • Fax: 713-559-9959 • Main: 713-559-9950 • eric@lonquist.com •

www.lonquist.com

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From: Chavez, Carl J, EMNRD [<mailto:CarlJ.Chavez@state.nm.us>]

Sent: Tuesday, August 22, 2017 1:25 PM

To: Eric Busch <eric@lonquist.com>

Subject: FW: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Eric:

Hi. Could you please forward the pdf version of the MIT Reports, Test Density Logs, and Test Temperature Logs from the MIT on LPGs 3 and 4 to me.

OCD must update the administrative records for the above subject wells. Thank you.

From: Chavez, Carl J, EMNRD

Sent: Tuesday, August 22, 2017 11:51 AM

To: 'Parker, Kenneth J' <Kenneth.J.Parker@andeavor.com>; Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>

Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD

<MarkA.Whitaker@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>

Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Ken:

I located the attached files on OCD Online in the "Well File". Were there any charts or other accompanying information associated with the MITs?

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")

From: Parker, Kenneth J [<mailto:Kenneth.J.Parker@andeavor.com>]

Sent: Monday, August 21, 2017 1:52 PM

To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>

Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD

<MarkA.Whitaker@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>

Subject: Re: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Carl,

I believe the reports were already submitted and are on file.

Ken

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Friday, August 11, 2017 12:02 PM
To: Parker, Ken (Ken.Parker@wnr.com)
Cc: Brown, Maxey G, EMNRD; Whitaker, Mark A, EMNRD; Griswold, Jim, EMNRD
Subject: RE: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

This email was sent by an external sender. Please use caution when opening attachments, clicking web links, or replying until you have verified this email sender.



Ken:

Good afternoon. The New Mexico Oil Conservation Division is following up on the msg. below.

Has Western Refining, LLP completed the MITs yet?

Thank you.

From: Chavez, Carl J, EMNRD
Sent: Wednesday, March 1, 2017 11:24 AM
To: Parker, Ken (Ken.Parker@wnr.com) <Ken.Parker@wnr.com>
Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>
Subject: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Ken:

Good morning! I am writing to confirm our telephone call discussion and scheduling of the Well #3 and Well #4 Cavern MIT scheduled to be completed on or before July 1, 2017.

Western will submit C-103s with description of the application of Nitrogen for scheduled MITs with the OCD DO1 Staff (see contact info. provided below).

District 1

1625 N. French Drive
Hobbs, New Mexico 88240

OFFICE: (575) 393-6161 FAX: (575) 393-0720
EMERGENCY NUMBER - MOBILE: (575) 370-3186
Business Hours:
7:00 AM-12:00 PM and 1:00 - 4:00 PM
Monday through Friday

[Mark A. Whitaker](#) - Petroleum Engineering Specialist
Phone extension: 120
Mobile: (575) 399-3202

Please contact me if I may be of further assistance. 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

Submit 1 Copy To Appropriate District Office
 District I - (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II - (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV - (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO.
 30-025-35956

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
 30055

7. Lease Name or Unit Agreement Name
 State LPG Storage

8. Well Number 003

9. OGRID Number
 248440

10. Pool name or Wildcat
 Salado

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
 Western Refining Company, L.P.

3. Address of Operator
 P.O. Box 1345 // Jal, NM 88252

4. Well Location

Unit Letter M : 1,000 feet from the South line and 530 feet from the West line
 Section 32 Township 23S Range 37E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
 3314.5' - KB 3304' - GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐
 CLOSED-LOOP SYSTEM ☐
 OTHER: Mechanical Integrity Test ☒

SUBSEQUENT REPORT OF:

REMEDIATION WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☐
 CASING/CEMENT JOB ☐
 OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Perform a Mechanical Integrity Test ("MIT") on the cavern and wellbore.

Spud Date:

07/30/2013

Rig Release Date:

08/08/2013

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

SIGNATURE [Signature] TITLE: Regulatory Manager for Lonquist Field Service, LLC DATE: 05/08/17

Type or print name: Stephen Pattee, P.G. E-mail address: steve@lonquist.com

PHONE: (512) 600-1774

For State Use Only

APPROVED BY: [Signature] TITLE: AO/II

DATE: 5/10/2017

Conditions of Approval (if any):

LONQUIST & CO. LLCPETROLEUM
ENGINEERSENERGY
ADVISORS**AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY**

May 8, 2017

Maxey Brown
State of New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240
(575) 393-6161

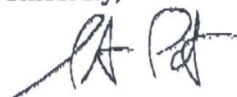
**RE: Form C-103
Mechanical Integrity Test
State LPG Storage No. 003 (API 30-025-35956)
Western Refining Company L.P. (OGRID 248440)**

Dear Mr. Brown,

Attached, please find the Form C-103 to perform a Mechanical Integrity Test ("MIT") on State LPG Storage No. 003 in Lea County, NM. Included with the form, is the MIT plan to be performed during this operation.

Please contact me by phone at (512) 600-1774 or via email (steve@lonquist.com) if you have any questions.

Sincerely,



Steve Pattee, P.G.
Regulatory Manager
Lonquist & Co., LLC

Attachments

AUSTIN
HOUSTON

LONQUIST

FIELD SERVICE

www.lonquistfieldservice.com

WICHITA
CALGARY

June 21, 2017

Mr. George Bower
Oil Conservation Division - District 1
1625 N. French Drive
Hobbs, New Mexico 88240

HOBBS OCD
JUN 23 2017
RECEIVED

Subject: Western Refining Company, LP – State LPG Storage No. 3 MIT

Dear Mr. Bower,

Western Refining Company, LP has performed a nitrogen-brine MIT on one of their storage cavern wells, State LPG Storage No. 3 (API No. 30-025-35956), located in the Jal Station Field in Lea County, New Mexico.

Nitrogen was injected on May 8th, 2017. An hour liner test was performed successfully with the following parameters:

- Nitrogen-brine interface start depth: 1,552'
- Start Annulus Pressure: 891.71 psig
- Nitrogen-brine interface end depth: 1,552'
- End Annulus Pressure: 891.48 psig

The 60-minute liner test passed with the pressures following a stabilization trend throughout the liner test period. Nitrogen injection continued until the nitrogen-brine interface was measured at 1,643'. An hour casing test was performed successfully with the following parameters:

- Nitrogen-brine interface start depth: 1,643'
- Start Annulus Pressure: 944.64 psig
- Nitrogen-brine interface end depth: 1,643'
- End Annulus Pressure: 944.23 psig

The 60-minute casing test passed with the pressures following a stabilization trend throughout the casing test period. On May 10th, 2017, nitrogen was injected into the borehole until the nitrogen-brine interface was measured at 1,690'. The well was shut in and allowed to stabilize overnight. The MIT was initialized on May 11th, 2017 at 10:45 with the following parameters:

- Annular pressure: 1,203.38 psig
- Tubing pressure: 387.07 psig
- Nitrogen-brine interface: 1,690'

The pressure was monitored throughout a 24 hour period and finalized on May 12th, 2017 at 10:45 with the following parameters:

- Annular pressure: 1,199.40 psig
- Tubing pressure: 382.88 psig
- Nitrogen-brine interface: 1,690'
- Test Gradient at Casing Shoe: 0.77 psi/ft
- Calculated Leak Rate: 475.54 bbls/yr
- Minimum Detectable Leak Rate: 927.39 bbls/year

It was determined that State LPG Storage No. 3, at the time of this test, demonstrated the mechanical integrity required for the storage of hydrocarbons.

Included in this package are:

- MIT Report for State LPG Storage No. 3
- Test Density Log
- Test Temperature Log

Please contact me by phone (832-216-0785) or via email (eric@lonquist.com) if you have any questions.

Sincerely,



Eric Busch
Senior Vice President

CC: Richard Lonquist – Lonquist Field Service, LLC



**Mechanical Integrity Test Report
State LPG Storage No. 3
Operator: Western Refining Company, LP
API: 30-025-35956
Jal Station Field
Lea County, New Mexico, USA**

Prepared for:

Western Refining Company, LP

By:

**Lonquist Field Service, LLC
Texas Registered Firm No. F-9147
Houston, Texas**

June 2017

*MIT Report – Western Refining Company, LP
State LPG Storage No. 3*

Executive Summary

Lonquist Field Services, LLC was contracted by Western Refining Company, LP ("Western Refining") to conduct a Mechanical Integrity Test on State LPG Storage No. 3 ("Well No. 3"), operated by Western Refining Company, LP at the Jal Station Field in Lea County, New Mexico. The Nitrogen-Brine Interface Test Method was used for this test. Nitrogen was injected on May 10th, 2017 to achieve the desired interface depth below the casing shoe. The well was allowed to stabilize for approximately 15 hours and on May 11th, 2017 at 10:45 the MIT was initialized with an annulus (nitrogen) pressure of 1,203.38 psig and a tubing (brine) pressure of 387.07 psig with the nitrogen-brine interface at 1,690'. The test was finalized on May 12th, 2017 at 10:45 with an annulus (nitrogen) pressure of 1,199.40 psig and a tubing (brine) pressure of 382.88 psig with the nitrogen-brine interface at 1,690'. The calculations yielded a calculated leak rate ("CLR") of 475.54 barrels per year and a Minimum Detectable Leak Rate ("MDLR") of 927.39 barrels per year. The well was tested to a test gradient of 0.77 psi/ft at the 9-5/8" cemented casing shoe (1,665'). Considering these results and the guidelines set forth by the State of New Mexico Oil Conservation Division, Well No. 3 at the Jal Station Field, at the time of this test, demonstrated the mechanical integrity required for the storage of hydrocarbons.

Reviewed By:
Lonquist Field Service, LLC
Ben H. Bergman, Sr. Engineer



Date Signed: June 20th, 2017
Houston, Texas

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Table of Contents

Section Title	Page/Section
INTRODUCTION.....	4
SUMMARY	5
CONCLUSIONS.....	6
DAILY ACTIVITIES	7
TEST PARTICIPANTS	8
CALCULATIONS.....	9
WELL DATA SHEET	11
MIT/WELL SCHEMATIC	13
APPENDIX A – MIT TEST PROCEDURE.....	A
APPENDIX B – INJECTION PRESSURE DATA	B
APPENDIX C – TEST PRESSURE DATA	C
APPENDIX D – CALCULATED BOREHOLE VOLUMES	D
APPENDIX E – PRESSURE AND TEMPERATURE GRAPHS.....	E
APPENDIX F – WELL LOGS	F

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Introduction

Lonquist Field Service, LLC was contracted by Western Refining Company, LP to conduct a Mechanical Integrity Test on State LPG Storage No. 3 ("Well No. 3") at the Jal Station Field in Lea County, New Mexico.

Well No. 3 was tested using the Nitrogen-Brine Interface Test Method (See Appendix A). Typically this procedure begins with an initial injection of nitrogen into the well to check for wellhead and casing leaks. The initial injection is followed by continued injection of nitrogen into the storage well until the interface is located below the casing shoe and a sufficient test pressure has been reached. The interface depth and the nitrogen (annulus) pressure are monitored during the test period. The test is evaluated by calculating the nitrogen mass (volume) at the commencement and completion of the test period. This difference yields an apparent mass (volume) change. As the test occurs over a finite time period, the apparent mass (volume) rate of change can be calculated and linearly forecasted to an annual rate. The annual mass (volume) rate of change is usually expressed in barrels of nitrogen per year (at average well pressure and temperature conditions). The mass (volume) rate of change is subject to the accuracy of the test or Minimum Detectable Leak Rate (MDLR), also expressed in barrels per year.

The following report will outline the mechanical integrity test for Well No. 3. The report includes the cavern and wellbore configuration, temperature logs, and density logs completed during the test.

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Summary

On May 8th, 2017 at 07:00, wireline and nitrogen units were rigged up and a gauge run, base temperature log and base density log were completed. At 12:00, nitrogen was injected into Well No. 3 with a target temperature of 77° F until the nitrogen-brine interface was measured at a depth of 1,552'. The liner test began on May 8th, 2017 at 15:30 with the nitrogen-brine interface at 1,552', an annular (nitrogen) pressure of 891.71 psig, and a tubing (brine) pressure of 160.37 psig. The liner test ended with the nitrogen-brine interface at 1,552', an annular (nitrogen) pressure of 891.48 psig, and a tubing (brine) pressure of 159.86 psig. The 60-minute liner test passed with a stabilizing pressure trend throughout the testing period. Following the liner test, nitrogen injection continued until the nitrogen-brine interface was measured at a depth of 1,643'. The casing test began on May 8th, 2017 at 17:00 with the nitrogen-brine interface at 1,643', an annular (nitrogen) pressure of 944.64 psig, and a tubing (brine) pressure of 170.99 psig. The casing test ended with the nitrogen-brine interface at 1,643', an annular (nitrogen) pressure of 944.23 psig, and a tubing (brine) pressure of 170.23 psig. The 60-minute casing test passed with a stabilizing pressure trend throughout the testing period.

On May 10th, 2017, nitrogen was injected into Well No. 3 with a target temperature of 77° F until the nitrogen-brine interface was measured at a depth of 1,690' at an adequate test pressure.

After an approximate 15 hour stabilization period, on May 11th, 2017 at 10:45 the MIT on Well No. 3 was initialized with an annulus (nitrogen) pressure of 1,203.38 psig, a tubing (brine) pressure of 387.07 psig, and with the nitrogen-brine interface at a depth of 1,690'. The well was shut in for a 24 hour test period. On May 12th, 2017 at 10:45 the MIT on Well No. 3 was finalized with an annulus (nitrogen) pressure of 1,199.40 psig, a tubing (brine) pressure of 382.88 psig and with the nitrogen-brine interface at a depth of 1,690'. This concluded the MIT on Well No. 3.

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Conclusions

The mechanical integrity of Well No. 3 was established with the Nitrogen-Brine Interface Test Method. This test monitored the Nitrogen-Brine Interface for a 24 hour test period. Well No. 3 was initialized with an annulus (nitrogen) pressure of 1,203.38 psig, a tubing (brine) pressure of 387.07 psig, and the nitrogen-brine interface at 1,690'.

Well No. 3 was finalized with an annulus (nitrogen) pressure of 1,199.40 psig, a tubing (brine) pressure of 382.88 psig, and the nitrogen-brine interface at 1,690'. Well No. 3 had a test length of 24 hours and a test gradient of 0.77 psi/ft at the 9-5/8" cemented casing shoe.

The total gas volume in the annulus and the wellbore was calculated to be 195,524.30 SCF at the start of the test and 194,909.15 SCF at the end of the test for a calculated "decrease" in gas volume of 615.15 SCF. The calculated gas volume was based on the measured wellhead pressure, measured wellbore temperature, known casing annulus volume, and calculated borehole volumes (Appendix D).

The calculated leak rate ("CLR") was 475.54 barrels per year. Considering the calculations, the calculated leak rate is less than the Minimum Detectable Leak Rate ("MDLR") of 927.39 barrels per year.

At the completion of this test, Well No. 3 exhibited the characteristics of a well that has mechanical integrity as required for hydrocarbon storage, in accordance with industry standards and the guidelines established by the State of New Mexico Oil Conservation Division.

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Daily Activities

May 8th, 2017

Arrive on location and spot equipment. Hold daily safety meeting and review JSAs. Rig up wireline and nitrogen equipment. Run in hole with gauge run and tag TD at 2,439'. Run in hole with wireline and record base temperature and density logs. Start nitrogen injection and spot nitrogen-brine interface above the 7" liner shoe at 1,552' for the 60 minute liner test. The test started with an annulus pressure of 891.71 psig and a tubing pressure of 160.37 psig. The test ended with an annulus pressure of 891.48 psig and a tubing pressure of 159.86 psig. The interface at the beginning and end of the test was measured at 1,552'. The pressure trend during the 60 minute liner test showed a stabilization curve with pressure flattening out over the test. The test passed and nitrogen injection was continued. The nitrogen-brine interface was spotted above the 9-5/8" casing shoe at 1,643' for the 60 minute casing test. The test started with an annulus pressure of 944.64 psig and a tubing pressure of 170.99 psig. The test ended with an annulus pressure of 944.23 psig and a tubing pressure of 170.23 psig. The interface at the beginning and end of the test was measured at 1,643'. The test passed with a pressure trend during the 60 minute casing test showing a stabilization curve with pressure flattening out over the test.

May 10th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Inject nitrogen while bleeding off brine in order to spot the nitrogen-brine interface at 1,690' at an adequate test pressure. Complete post injection log. Rig down lubricator, crane, and nitrogen unit. Secure well and allow to stabilize overnight.

May 11th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Rig up lubricator and crane. Run in hole with temperature log and initialize test with density log. The nitrogen-brine interface was located at 1,690'. Test initialization annulus pressure was 1,203.38 psig and initialization tubing pressure was 387.07 psig. Rig down crane and lubricator. Secure well for the night.

May 12th, 2017

Arrive on location, hold daily safety meeting, and review JSAs. Rig up lubricator and crane. Run in hole with temperature log and finalize test with density log. The nitrogen-brine interface was located at 1,690'. Test finalization annulus pressure was 1,199.40 psig and finalization tubing pressure was 382.88 psig. Rig down crane and lubricator. Secure and return well to Western Refining.

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Test Participants

Western Refining Company, LP

Ken Parker.....Project Manager

Lonquist Field Service, LLC

Eric Busch.....Operations Manager

Tadd Busch.....Operations Manager

Will George.....Petroleum / Test Engineer

Ben Bergman.....Sr. Engineer

Empire Wireline, LLC

Wireline Personnel.....Wireline Operator

CUDD Energy Services

Nitrogen Personnel.....Nitrogen Injection

Double R Transportation, LLC

Double R Personnel.....Pump Truck

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Calculations

Minimum Detectable Leak Rate – MDLR

The test sensitivity is defined as the ability of the test calculations and measurements to determine the status of the mechanical integrity of the well and wellbore. The conventional test sensitivity calculation using this test methodology is the Minimum Detectable Leak Rate (MDLR).

$$MDLR = \frac{[B_v * L_R * (T_c)]}{T_L}$$

Where:

B_v	=	5.08 bbls/ft (APPENDIX D)
L_R	=	0.50 feet
T_c	=	365 days/year
T_L	=	1 day
MDLR	=	927.39 bbls/year

Therefore: $(5.08 \times 0.50 \times 365)/1 = 927.39 \text{ bbls/year}^*$

*Hand calculations may yield different final MDLR due to rounding.

Volume Calculations – Annular Space & Borehole

Using the methodology outlined in the MIT procedure the following volumes were calculated:

Initial Wellbore Volume ($V_{I(\text{Borehole})}$)

- Annulus Pressure – 1,203.38 psig
- Tubing Pressure – 387.07 psig
- Wellbore Temperature – Logged (APPENDIX F)
- Volume
 - 7" x 3-1/2" Annulus – 0.027 bbls/ft
 - 9-5/8" x 3-1/2" Annulus – 0.065 bbls/ft
 - Borehole – APPENDIX D

$$(V_I) = \sum_o^{I/F} (N_2)_i$$

$V_{I(\text{Borehole})} = 195,524.30 \text{ SCF}$

Final Wellbore Volume ($V_{F(\text{Borehole})}$)

- Annulus Pressure – 1,199.40 psig
- Tubing Pressure – 382.88 psig
- Wellbore Temperature – Logged (APPENDIX F)
- Volume
 - 7" x 3-1/2" Annulus – 0.027 bbls/ft
 - 9-5/8" x 3-1/2" Annulus – 0.065 bbls/ft
 - Borehole – APPENDIX D

$$(V_F) = \sum_o^{I/F} (N_2)_i$$

$V_{F(\text{Borehole})} = 194,909.15 \text{ SCF}$

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Borehole Volume Change:

$$(\Delta V)_{STP(Borehole)} = (\Delta V)_{I(Borehole)} - (\Delta V)_{F(Borehole)}$$

$$(\Delta V)_{STP(Borehole)} = 615.15 SCF$$

The calculated volume/mass change is based on standard temperature and pressure and to evaluate the test results against the MDLR the calculated volume/mass change is converted to downhole conditions with the following equation:

$$(\Delta V_{WB}) = \left(\frac{[(Z_A) * (T_A) * R * (\Delta V)_{STP}]}{[(P_A) * N_{GC}]} \right)$$

Where:

(Z_A)	=	1.00244
(T_A)	=	536.58 °R
R	=	Specific Gas Constant
$(\Delta V)_{STP}$	=	615.15 SCF
(P_A)	=	1,255.58 psi
N_{GC}	=	Nitrogen Gas Conversion (13.80 SCF = 1 lb)
(ΔV_{WB})	=	7.31 ft³/day

To calculate an annual volume change to compare to the MDLR the following calculations were completed:

$$(\Delta V_{ANNUAL}) = (\Delta V_{WB}) * 365(day / year)$$

Where:

(ΔV_{WB})	=	7.31 ft ³ /day
1 year	=	365 days
(ΔV_{ANNUAL})	=	2,668.15 ft³/yr

Where:

(ΔV_{ANNUAL})	=	2,668.15 ft ³ /yr
1 bbl	=	5.6146 ft ³
CLR (bbls/year)	=	$(\Delta V_{ANNUAL}) / 5.6146 \text{ ft}^3$
Calculated Leak Rate	=	475.54 bbls/year*

***Hand calculations may yield different final CLR due to rounding.**

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Well Data Sheet

TEST INFORMATION AND RESULTS

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

WELL INFORMATION

Production Casing			Casing Liner		
Casing Size	9 5/8	inches	Casing Size	7	inches
Casing ID	8.921	inches	Casing ID	6.366	inches
Casing Weight	36	lbs/ft	Casing Weight	23	lbs/ft
Grade	J-55		Grade	J-55	
Depth	1665	feet	Depth	1578	feet

Outer Hanging String			Inner Hanging String		
Casing Size	3 1/2	inches	Casing Size		inches
Casing ID	2.250	inches	Casing ID		inches
Casing Weight	NA	lbs/ft	Casing Weight		lbs/ft
Grade	NA		Grade		
Depth	2430	feet	Depth		feet

Cavern		
Cavern Size	68558	bbls
Compressibility	0.21	bbls/psi
Cavern TD	2439	feet

FINAL TEST INFORMATION

Effective Casing Shoe	1665	feet	Casing Shoe Pressure (avg)	1286.35	psi
Test Gradient	0.77	psi/ft	Interface Pressure (avg)	1287.43	psi
Brine Specific Gravity	1.2		Surface Tubing Pressure (avg)	384.97	psi
Nitrogen Temperature (avg)	76.89	deg F	Surface Annulus Pressure (avg)	1201.39	psi
Interface Depth	1690	feet	Pressure Increase	-3.98	psi
Gas Compressibility (avg)	1.00		Conversion	14.70	psi

Volume			Nitrogen		
Annular Volume No. 1	0.03	bbls/ft	Surface to Casing Shoe (avg)	23173.37	SCF
Annular Volume No. 2	0.07	bbls/ft	Casing Shoe to Interface (avg)	172043.35	SCF
Surface to Liner Shoe	43.3	bbls	Total (avg)	195216.73	SCF
Surface to Casing Shoe	49.0	bbls	Brine		
Casing Shoe to Interface	343.3	bbls	Cavern Pre-Pressure	50.00	psi
Total	392.3	bbls	Brine Injection	10.39	bbls

TEST RESULTS

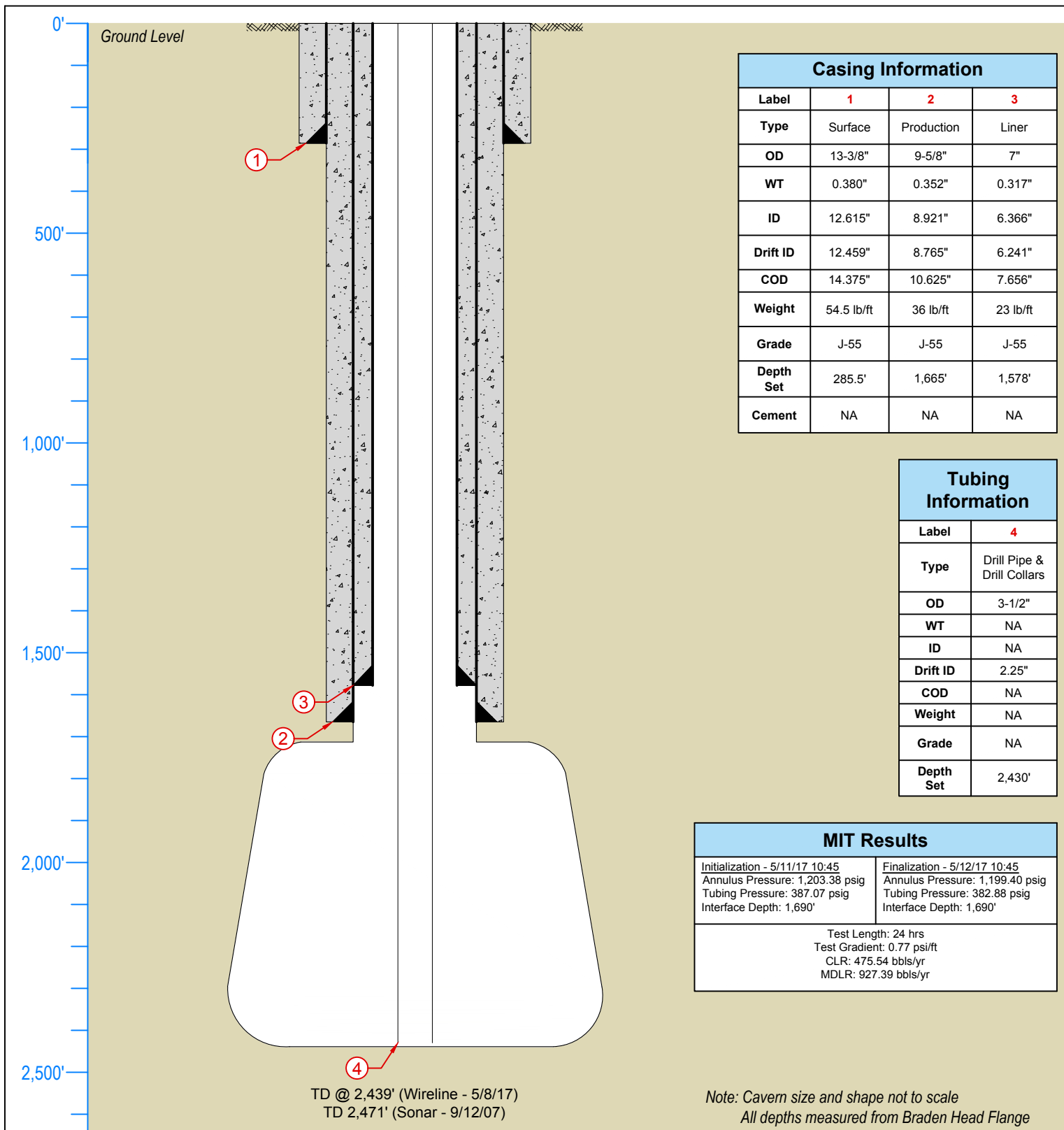
Test Initialization Information			Test Finalization Information		
Date / Time	5/11/17	10:45	Date / Time	5/12/17	10:45
Tubing Pressure	387.07	psig	Tubing Pressure	382.88	psig
Annulus Pressure	1,203.38	psig	Annulus Pressure	1,199.40	psig
Wellbore Temperature (avg)	77.03	deg F	Wellbore Temperature (avg)	76.75	deg F
Nitrogen/Brine Interface	1690	feet	Nitrogen/Brine Interface	1690	feet

Test Results		
CLR	475.54	bbls/yr
MDLR	927.39	bbls/yr
Test Gradient	0.77	psi/ft
Tubing Pressure Change	-4.19	psi
Annulus Pressure Change	-3.98	psi

Test Length	24.00	hours
Test Length	1	days
Logging Resolution	0.50	feet

MIT Report – Western Refining Company, LP
State LPG Storage No. 3


MIT/Well Schematic





LONQUIST & CO. LLC PETROLEUM ENGINEERS ENERGY ADVISORS AUSTIN HOUSTON WICHITA CALGARY Texas License F-8952 3345 Bee Cave Road, Suite 201 Austin, Texas 78746 Tel: 512.732.9812 Fax: 512.732.9816	Western Refining Company, LP		State LPG Storage No. 3 - MIT Results	
	Country: USA		State/Province: New Mexico	County/Parish: Lea
	Survey/STR: M-32-23S-37E		Site: 1000' FSL & 530' FWL	Status: Storage
	API No.: 30-025-35956		Field:	Ground Elevation: 3,312'
	Serial No.:		Project No: F1203	Date: 6/9/2017
	Drawn: WHG		Reviewed: ETB	Approved: ETB
	Rev No:		Notes:	


MIT Report – Western Refining Company, LP
State LPG Storage No. 3


Appendix A – MIT Test Procedure

		WELL TEST		Project No.:		
				Date: March 2017		
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Page: 1 of 12		
Well: No. 3	State: New Mexico	County: LEA	Field: Jal Station			
API: 30-025-35956	Oper: Western Refining Company, LP	Location: Jal	Status: Active			
INTRODUCTION <p>Well No. 3 is operated by Western Refining Company, LP located in the Jal Station Field in Lea County, New Mexico. The purpose of this Mechanical Integrity Test (MIT) is to test the integrity of the underground storage system that includes the cavern, cemented casing, and wellhead to determine if the system demonstrates the mechanical integrity required to support hydrocarbon storage operations.</p> <p>In accordance with the Oil Conservation Division of New Mexico, Well No. 3 is undergoing a MIT to remain compliant.</p> <p>The test procedure will consist of the following basic steps:</p> <ol style="list-style-type: none"> Pre-pressure the cavern to the required pre pressure. <ul style="list-style-type: none"> Tubing Pressure: 50.0 psig 0.75 psi/ft final test gradient at the effective casing shoe (1,655.5'). Complete pre-test temperature and density logs. Inject nitrogen into Well No. 3 and locate the nitrogen/brine interface above the cemented liner to complete a test on the cemented liner. Inject nitrogen into Well No. 3 and locate the nitrogen/brine interface above the cemented casing shoe to complete a test on the cemented casing. Inject nitrogen into Well No. 3 and locate the nitrogen/brine interface below the effective cemented casing shoe. Monitor wellhead pressures, wellbore temperature, and the nitrogen/brine interface location during the specified test period. Secure Well No. 3 and return to Western Refining. Complete and submit a MIT report to Western Refining Company, LP and the Oil Conservation Division of New Mexico within 45 days. <p>The test procedure includes the following information:</p> <ul style="list-style-type: none"> Nitrogen/Brine Interface Test Planning Sheet Wellbore Schematic Contact Information 2007 Sonar Data 						
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 2 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<p>Well Preparation</p> <ol style="list-style-type: none"> 1. Wellhead should be isolated from all surface piping during the test. This may include blind flanges, skillet flanges, and 2" test flanges. <ol style="list-style-type: none"> a. Wellhead should maintain the ability to bleed excess brine pressure during the test. 2. Install pressure recording equipment on wellhead. Pressure equipment should be able to record wellhead pressures and wellhead temperatures during the test period. Additional equipment to measure the nitrogen stream injected into the well will be necessary. <ol style="list-style-type: none"> a. All equipment calibration certifications will be provided with final reports. 3. Wellhead configuration should permit the use of a wireline lubricator and logging tools. 4. Pre-pressure the cavern to predetermined pressure with saturated brine. <ol style="list-style-type: none"> a. Tubing Pressure: 50.0 psig 5. Wellhead pressure should be stable prior to starting the test. <ol style="list-style-type: none"> a. Stable wellhead pressure – Decline less than 10 psi/day. <p>Well Injection Phase</p> <ol style="list-style-type: none"> 6. Move in and rig up wireline unit, logging tools, pressure equipment, and nitrogen services. 7. Make a gauge run to ensure logging and sonar tools will pass through the tubing. 8. Complete wellbore temperature log and base density log. <ol style="list-style-type: none"> a. Base Temperature Log – (0' – TD) b. Base Density Log – (TD' – 200' above effective casing shoe depth) c. Density logs should include: tubing collars, effective casing shoe, and approved logging scales. d. All depths are approximate. 9. Start Nitrogen Injection at a slow rate (<500 SCFM). Nitrogen temperature should be regulated to the average wellbore temperature. 10. Monitor the nitrogen/brine interface and wellbore pressures to locate the interface above the liner shoe and conduct a liner test. <ol style="list-style-type: none"> a. Liner Test – Minimum of 60 minutes. b. Monitor and record wellhead pressures and interface at the start and completion of the test. 11. Inject nitrogen and monitor the nitrogen/brine interface and wellbore pressures to locate the interface above the casing shoe and conduct a casing test. <ol style="list-style-type: none"> a. Casing Test – Minimum of 60 minutes. b. Monitor and record wellhead pressures and interface at the start and completion of the test. 							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
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		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 3 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<p>12. Continue nitrogen injection and monitor the nitrogen/brine interface and wellbore pressures to locate the nitrogen/brine interface below the effective casing shoe. The targeted gradient is 0.75 psi/ft at the effective casing shoe and cannot exceed a test pressure gradient of 0.81 psi/ft at the effective casing shoe at any time.</p> <p style="padding-left: 40px;">a. Pressure may need to be relieved by bleeding off brine during nitrogen injection.</p> <p>13. After the nitrogen/brine interface is located sufficiently below the cemented casing shoe, stop nitrogen injection and shut well in for a short stabilization period.</p> <p>14. Shut in for 30 minutes – Monitor pressures, interface location, and check wellhead for possible leak paths.</p> <p>15. Complete post injection density logs.</p> <p style="padding-left: 40px;">a. Post Injection Density Log – (TD' – 200' above effective casing shoe).</p> <p style="padding-left: 40px;">b. Record wellhead pressures.</p> <p style="padding-left: 40px;">c. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales.</p> <p style="padding-left: 40px;">d. All depths are approximate.</p> <p>16. Remove logging tools and shut well for the stabilization period.</p> <p>17. Complete pre-test calculations based on wellhead pressure measurements, nitrogen volume measurements, wellbore temperatures, and interface locations.</p> <p style="padding-left: 40px;">a. Refer to Test Calculations Section.</p> <p>18. MIRU sonar tools and perform a sonar survey on the cavern.</p> <p style="padding-left: 40px;">a. Shoot the roof of the cavern with upshots.</p> <p style="padding-left: 40px;">b. Shoot the floor of the cavern with downshots.</p> <p style="padding-left: 40px;">c. Record data every 2'.</p>							
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		WELL TEST		Project No.:			
				Date: March 2017			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Page: 4 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
Test Initialization							
19. Move in and rig up wireline unit, logging tools, and pressure equipment.							
20. Complete wellbore temperature log and initial density log. <ul style="list-style-type: none"> a. Initial Temperature Log – (0' – TD') b. Initial Density Log – (TD' – 200' above effective casing shoe) c. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales. d. All depths are approximate. 							
21. Shut well in for test period – Minimum of 24 hours.							
Test Finalization							
22. After planned test duration, move in and rig up wireline unit, logging tools, and pressure equipment. <ul style="list-style-type: none"> a. Complete wellbore temperature log and final density log. b. Final Temperature Log – (0' – TD') c. Final Density Log – (TD' – 200' above effective casing shoe) d. Density logs should include: tubing collars, nitrogen/brine interface, production casing shoe, and approved logging scales. e. All depths are approximate. 							
23. Determine if the test is complete or should be extended based on results.							
PREPARED BY		DATE		APPROVED BY		DATE	
WHG		3/23/2017		ETB		3/23/2017	
				CLIENT APPROVAL		DATE	
Lonquist Field Service, LLC Texas Registration No. F-9147							

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 5 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	

Nitrogen/Brine Interface Test Calculations

The test methodology proposed in this procedure is developed using the industry standard nitrogen/brine interface test method.

The wellhead pressures and temperature, wellbore temperatures, nitrogen volumes, and interface location will be recorded throughout the test period and will allow for the calculation of the borehole volumes, test sensitivity, minimum test durations, and final test calculations.

All test calculations are based on the following measured parameters: wellhead pressure, nitrogen volumes, annular casing unit volume, wellbore temperatures, and interface locations. In addition to the measured parameters, the following calculated parameters are important in completing the test: unit borehole volume, MDLR, and test length.

To evaluate the test the calculated nitrogen volume/mass at the start of the test is compared to the calculated nitrogen volume/mass at the end of the test. This rate of volume change and it's comparison to the test sensitivity is one of the components in determining the final results of the MIT.

TEST SENSITIVITY AND TEST LENGTH

Test sensitivity calculations are the functions of three factors:

Casing volume – Calculated

Log Resolution – Recommended: 5":100' logging scale

Minimum test duration – 24 hours

The test sensitivity is defined at the ability of the test calculations and measurements to determine the status of the mechanical integrity of the well and wellbore. The conventional test sensitivity calculation using this test methodology is the Minimum Detectable Leak Rate (MDLR).


$$MDLR = \frac{[B_v * L_R * (T_c)]}{T_L}$$

Where:

MDLR	=	Minimum Detectable Leak Rate (bbl/year)
B _v	=	Borehole Volume (bbls/ft)
L _R	=	Log Resolution (feet)
T _c	=	Time Constant (365 days/year)
T _L	=	Test Length (days)

Using the MDLR method a reasonable and acceptable test accuracy and sensitivity can be calculated for the Mechanical Integrity Test. The MDLR calculation is based on downhole measurements of the test conditions.

PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147

		WELL TEST		Project No.:	
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017	
				Page: 6 of 12	
Well: No. 3	State: New Mexico	County: LEA	Field: Jal Station		
API: 30-025-35956	Oper: Western Refining Company, LP	Location: Jal	Status: Active		

The MDLR must be less than 1000 bbl/year for the designated test period. The length of the test must a minimum of 24 hours and sufficient in length to keep the MDLR below 1000 bbl/year and allow for a proper evaluation of the well test.

TEST EVALUATIONS

The volume/mass of nitrogen located in the wellbore can be affected by following: temperature stabilization, cavern leaching/creep, and volume changes. Using P-V-T gas calculations, any changes in the volume/mass of the nitrogen in the wellbore can be evaluated based on wellbore temperature changes, pressure changes, and/or wellbore leakage.

Pressure Calculations

The average wellbore pressure is calculated based on the wellhead surface pressure, wellbore temperature, and depth of the specific interval. The following equation is used to calculate the average wellbore pressure

$$(P_A)_i = (P_A)_{i-1} \left[1 + \left(\frac{D}{(R)(Z_A)_i(T)_i} \right) \right]$$

Where:

$(P_A)_i$ = Pressure @ Depth Interval (Calculated) (psia)

$(P_A)_{i-1}$ = Pressure @ Previous Depth Interval (Calculated) (psi)

D = Depth Interval (ft)

$(Z_A)_i$ = Gas Compressibility Factor @ Depth Interval

R = Specific Gas Constant

$(T)_i$ = Wellbore Temperature (°R)

Nitrogen Calculations

The following calculation is used to calculate the volume/mass of nitrogen for specific intervals over the entire wellbore at the start and end of the test period:

$$(N_2)_i = \left(\frac{[(P_A)_i * (B_v)_i]}{[(Z_A)_i * (T_A)_i * R]} \right) * N_{GC}$$


Where:


$(N_2)_i$ = Nitrogen Volume (SCF)

$(P_A)_i$ = Average Wellbore Pressure (psi)

$(B_v)_i$ = Wellbore Volume (ft³)

PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 7 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> $(Z_A)_i$ $(T_A)_i$ R N_{GC} </div> <div style="width: 80%;"> = Gas Compressibility Factor = Wellbore Temperature (°R) = Specific Gas Constant = Nitrogen Gas Conversion (13.8 SCF = 1 lb) </div> </div> <p>Upon completion of each specific volume/mass calculation the sum of the each interval is calculated to determine the volume/mass of nitrogen in the wellbore at the beginning of the test. After the test is complete the calculation and summation is repeated to determine the final test results.</p> <p>The following equations represent the summation of the intervals to the nitrogen/brine interface at the start and completion of the test:</p> <div style="text-align: center; margin: 20px 0;"> $(V_I) = \sum_o^{I/F} (N_2)_i$ $(V_F) = \sum_o^{I/F} (N_2)_i$ </div> <p>The results of the beginning and completion of the test are compared and evaluated to determine the change in nitrogen volume during the test period. The following equation is used for the comparison:</p> <div style="text-align: center; margin: 20px 0;"> $(\Delta V)_{STP} = (V_I) - (V_F)$ </div> <p>The calculated volume/mass change is based on standard temperature and pressure and to evaluate the test results against the MDLR the calculated volume/mass change is converted to downhole conditions with the following equation:</p> <div style="text-align: center; margin: 20px 0;"> $(\Delta V_{WB}) = \left(\frac{[(Z_A) * (T_A) * R * (\Delta V)_{STP}]}{[(P_A) * N_{GC}]} \right)$ </div> <p>Where:</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 20%;"> (ΔV_{WB}) (Z_A) (T_A) R $(\Delta V)_{STP}$ (P_A) N_{GC} </div> <div style="width: 80%;"> = Nitrogen Volume Change (ft³) – Wellbore Conditions = Average Gas Compressibility Factor for Test Period = Average Wellbore Temperature (°R) for Test Period = Specific Gas Constant = Nitrogen Volume Change (SCF) – Standard Conditions = Average Wellbore Pressure for Test Period (psi) = Nitrogen Gas Conversion (13.8 SCF = 1 lb) </div> </div>							
PREPARED BY		DATE		APPROVED BY		DATE	
WHG		3/23/2017		ETB		3/23/2017	
CLIENT APPROVAL				DATE		Lonquist Field Service, LLC	
						Texas Registration No. F-9147	

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 8 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<p>The change in wellbore volume for the test period is converted into a calculated annual volume change. The following equation determines this volume change:</p> $(\Delta V_{ANNUAL}) = \frac{[(\Delta V_{WB}) * 24(hr / day) * 365(day / yr)]}{T_L}$ <p>Where:</p> <p> (ΔV_{ANNUAL}) = Calculated Volume Change (bbls/year) (ΔV_{WB}) = Nitrogen Volume Change (ft³) – Wellbore Conditions (T_L) = Test Length (hrs) </p> <p>A positive change in wellbore volume indicates a calculated loss of nitrogen from the wellbore during the test period. A negative change in wellbore volume indicates a calculated increase (apparent nitrogen influx) in nitrogen volume during the test period.</p> <p>Pass/Fail Criteria</p> <p>Test results are evaluated for a successful test using the following criteria:</p> <ul style="list-style-type: none"> • MDLR less than 1000 bbls/day • Calculated Annual Volume Change less than the MDLR • Pressure response, wellbore temperature, and interface movement should respond in a way that represents the cavern has mechanical integrity <p>Test Reporting</p> <p>A written report will be prepared within 45 days of completion and submitted to the Oil Conservation Division of New Mexico. The report will include the test procedures, test chronology, test results and conclusions, wireline logs, pressure information, and all supporting documentation.</p>							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147	

LONQUIST**FIELD SERVICE****WELL TEST**

Project No.:

Western Refining Company, LP
State LPG Storage Well No. 3
Mechanical Integrity Test

Date: March 2017

Page: 9 of 12

Well: No. 3

State: New Mexico

County: LEA

Field: Jal Station

API: 30-025-35956

Oper: Western Refining Company, LP

Location: Jal

Status: Active

TEST PLANNING SHEET

Well Name: State LPG Storage No. 3

Operator: Western Refining Company, L.P.

State: NM

County/Parish: Lea

Field: Jal

Serial/API: 30-025-35956

WELL INFORMATION**Production Casing**

Casing Size	9 5/8 inches
Casing ID	8.921 inches
Casing Weight	36 lbs/ft
Grade	J-55
Depth	1666 feet

Casing Liner

Casing Size	7 inches
Casing ID	6.366 inches
Casing Weight	23 lbs/ft
Grade	J-55
Depth	1579 feet

Outer Hanging String

Casing Size	3 1/2 inches
Casing ID	inches
Casing Weight	lbs/ft
Grade	
Depth	2447 feet

Inner Hanging String

Casing Size	inches
Casing ID	inches
Casing Weight	lbs/ft
Grade	
Depth	feet

Cavern

Cavern Size	79,692 bbls
Compressibility	0.24 bbls/psi
Cavern TD	2455 feet

TEST INFORMATION

Effective Casing Shoe	1666 feet	Casing Shoe Pressure	1249.50 psi
Test Gradient	0.75 psi/ft	Interface Pressure	1250.53 psi
Brine Specific Gravity	1.2	Surface Tubing Pressure	372.40 psi
Nitrogen Temperature	75 deg F	Surface Annulus Pressure	1182.13 psi
Interface Depth	1690 feet	Pressure Increase	1624.76 psi
Gas Compressibility	1.0021	Conversion	14.70 psi

Volume

Annular Volume No. 1	0.03 bbls/ft
Annular Volume No. 2	0.07 bbls/ft
Surface to Liner Shoe	43.4 bbls
Surface to Casing Shoe	49.1 bbls
Casing Shoe to Interface	343.3 bbls
Total	392.4 bbls

Nitrogen

Surface to Casing Shoe	42399.82 SCF
Casing Shoe to Interface	161901.55 SCF
Total	204301.37 SCF

Brine

Cavern Pre-Pressure	-1252.35 psi
Brine Injection	-302 bbls

PREPARED BY

DATE

APPROVED BY

DATE

CLIENT
APPROVAL

DATE

Lonquist Field Service, LLC


WHG

3/23/2017

ETB

3/23/2017

Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 10 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<div>WELL SCHEMATIC</div>							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147	

Well Information

Operator: Western Refining Company, L.P.

API Number: 30-025-35956

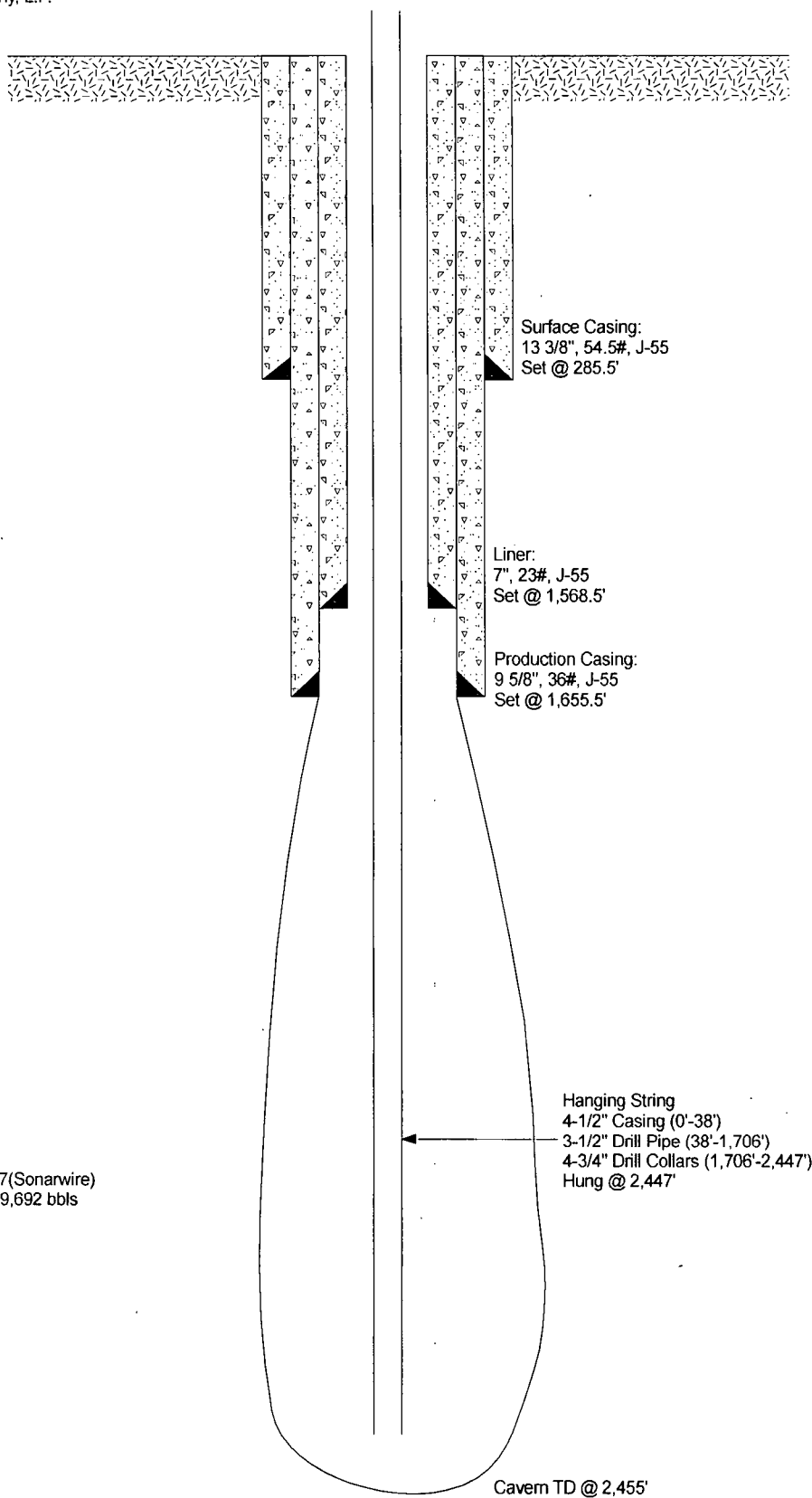
Well Number: 3

Well Name: State LPG Storage

Field Name: Jal

County: Lea

State: New Mexico



Sonar Survey - 9/12/2007(Sonarwire)
Total Cavem Volume = 79,692 bbls

LONQUIST

FIELD SERVICE

State LPG Storage Well No. 3

Western Refining Company, L.P.

PROJECT NUMBER:

DRAWN:
CMO

REVIEWED:
ETB

APPROVAL:
NONE

SCALE:
NONE

DATE:
August 2013

Longquist Field Service, LLC
Texas Registered Firm No. F-9147



WELL TEST

Project No.:

Western Refining Company, LP
State LPG Storage Well No. 3
Mechanical Integrity Test

Date: March 2017

Page: 11 of 12

Well: No. 3

State: New Mexico

County: LEA

Field: Jal Station

API: 30-025-35956

Oper: Western Refining Company, LP

Location: Jal

Status: Active

CONTACT INFORMATION

Well Owner

Western Refining
PO Box 1345
Jal, New Mexico 88252

- Ken Parker – Site Manager
 - Telephone – (505) 395-2632
 - Mobile – (915) 471-1607
 - Email – ken.parker@wnr.com

Engineering Consultants

Lonquist Field Service, LLC
1001 McKinney, Suite 1650
Houston, Texas 77002

- Eric Busch – Senior Vice President
 - Telephone – (832) 216-0785
 - Fax – (713) 559-9959
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PREPARED BY

DATE

APPROVED BY

DATE

CLIENT
APPROVAL

DATE

Lonquist Field Service, LLC


WHG

3/23/2017

ETB

3/23/2017

Texas Registration No. F-9147

		WELL TEST		Project No.:			
		Western Refining Company, LP State LPG Storage Well No. 3 Mechanical Integrity Test		Date: March 2017			
				Page: 12 of 12			
Well: No. 3		State: New Mexico		County: LEA		Field: Jal Station	
API: 30-025-35956		Oper: Western Refining Company, LP		Location: Jal		Status: Active	
<div>2007 SONAR VOLUME TABLE</div>							
PREPARED BY	DATE	APPROVED BY	DATE	CLIENT APPROVAL	DATE	Lonquist Field Service, LLC	
WHG	3/23/2017	ETB	3/23/2017			Texas Registration No. F-9147	

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Survey conducted by: Gary McCool

WESTERN REFINING
JAL, NM
STATE LPG WELL NO. 3
SEPTEMBER 12, 2007
SONAR-THRU-PIPE SURVEY

Survey from 1666 ft. to 2470 ft.
Sonar T.D. at 2471 ft.
9 5/8 inch cemented casing at 1666 ft.
4 1/2 inch tubing at 2449 ft.
Zero sonar tool at B.H.F.
Site personnel: Mr. Jerry Lindt
Lonquist Field Services

SONARWIRE INC.
Depth versus Volume

WESTERN REFINING
JAL, NM

STATE LPG WELL NO. 3
Wed, Sep 12, 2007

Depth	Cubic ft. per ft.	Cubic ft. total	Barrels per ft.	Barrels total
1667	151.7	151.7	27.0	27.0
1668	127.1	278.8	22.6	49.7
1669	104.8	383.6	18.7	68.3
1670	100.5	484.1	17.9	86.2
1671	96.3	580.3	17.1	103.4
1672	94.4	674.7	16.8	120.2
1673	92.5	767.2	16.5	136.6
1674	92.0	859.2	16.4	153.0
1675	91.4	950.6	16.3	169.3
1676	90.0	1040.6	16.0	185.3
1677	88.6	1129.2	15.8	201.1
1678	87.2	1216.4	15.5	216.6
1679	85.8	1302.2	15.3	231.9
1680	84.9	1387.1	15.1	247.1
1681	84.1	1471.2	15.0	262.0
1682	83.4	1554.7	14.9	276.9
1683	82.8	1637.5	14.8	291.6
1684	74.0	1711.5	13.2	304.8
1685	65.8	1777.3	11.7	316.6
1686	51.5	1828.8	9.2	325.7
1687	39.2	1868.1	7.0	332.7
1688	27.6	1895.6	4.9	337.6
1689	18.3	1913.9	3.3	340.9
1690	13.8	1927.7	2.5	343.3
1691	10.5	1938.1	1.9	345.2
1692	29.9	1968.0	5.3	350.5
1693	63.4	2031.4	11.3	361.8
1694	58.9	2090.3	10.5	372.3
1695	54.6	2144.9	9.7	382.0
1696	50.6	2195.5	9.0	391.0
1697	46.8	2242.3	8.3	399.4
1698	20.9	2263.2	3.7	403.1
1699	6.2	2269.4	1.1	404.2
1700	0.9	2270.2	0.2	404.3
1701	0.9	2271.1	0.2	404.5
1702	0.9	2272.0	0.2	404.7
1703	48.5	2320.5	8.6	413.3
1704	50.2	2370.7	8.9	422.2
1705	51.9	2422.5	9.2	431.5
1706	53.6	2476.1	9.5	441.0
1707	55.4	2531.5	9.9	450.9
1708	53.5	2585.0	9.5	460.4
1709	51.7	2636.7	9.2	469.6
1710	49.9	2686.6	8.9	478.5
1711	48.1	2734.7	8.6	487.1
1712	47.1	2781.8	8.4	495.5

Appendix B – Injection Pressure Data

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 11:34	90.31	82.62	63.07	82.60	91.02
5/10/17 11:35	164.98	82.64	69.51	82.60	89.40
5/10/17 11:36	228.31	82.63	79.30	82.57	86.92
5/10/17 11:37	278.30	82.61	85.34	82.54	84.57
5/10/17 11:38	320.76	82.61	89.99	82.54	83.20
5/10/17 11:39	358.38	82.67	93.49	82.56	83.27
5/10/17 11:40	390.31	82.77	97.33	82.65	83.53
5/10/17 11:41	421.57	82.86	100.31	82.74	83.60
5/10/17 11:42	451.21	82.95	104.00	82.82	82.31
5/10/17 11:43	477.60	82.98	107.22	82.84	81.62
5/10/17 11:44	503.54	82.99	109.99	82.86	82.50
5/10/17 11:45	528.68	83.00	112.57	82.89	83.55
5/10/17 11:46	550.29	83.04	115.16	82.92	85.02
5/10/17 11:47	570.80	83.15	117.53	83.01	86.63
5/10/17 11:48	593.02	83.33	120.05	83.15	88.56
5/10/17 11:49	614.07	83.56	121.86	83.36	89.53
5/10/17 11:50	633.75	83.75	123.54	83.52	89.65
5/10/17 11:51	653.27	83.89	125.84	83.67	89.29
5/10/17 11:52	671.64	83.98	127.82	83.76	88.71
5/10/17 11:53	689.71	84.00	130.73	83.80	88.18
5/10/17 11:54	706.51	83.97	132.74	83.80	87.64
5/10/17 11:55	724.19	83.90	134.71	83.74	87.04
5/10/17 11:56	739.89	83.81	136.53	83.66	86.64
5/10/17 11:57	755.58	83.75	138.31	83.60	86.23
5/10/17 11:58	770.93	83.70	140.11	83.55	86.18
5/10/17 11:59	787.97	83.65	141.88	83.49	86.22
5/10/17 12:00	803.90	83.56	143.60	83.42	86.49
5/10/17 12:01	818.78	83.48	145.35	83.33	86.75
5/10/17 12:02	833.31	83.44	146.94	83.29	87.22
5/10/17 12:03	848.28	83.45	148.62	83.29	88.77
5/10/17 12:04	861.94	83.59	150.08	83.41	90.54
5/10/17 12:05	875.75	83.75	151.43	83.55	91.57
5/10/17 12:06	889.18	83.87	153.30	83.66	91.81
5/10/17 12:07	902.21	83.96	154.93	83.75	91.39
5/10/17 12:08	910.32	84.01	156.87	83.80	90.58
5/10/17 12:09	918.88	84.04	158.88	83.84	89.62
5/10/17 12:10	926.42	84.07	160.84	83.87	88.51
5/10/17 12:11	934.78	84.07	162.82	83.87	87.52
5/10/17 12:12	943.30	84.08	164.69	83.88	86.80

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 12:13	946.78	84.18	165.08	83.95	86.89
5/10/17 12:14	946.42	84.37	165.46	84.11	88.32
5/10/17 12:15	946.25	84.62	165.32	84.34	89.12
5/10/17 12:16	946.14	84.94	165.13	84.61	89.59
5/10/17 12:17	946.06	85.22	165.02	84.89	89.90
5/10/17 12:18	945.98	85.38	164.91	85.05	90.13
5/10/17 12:19	945.95	85.47	164.63	85.17	90.32
5/10/17 12:20	945.89	85.53	164.82	85.25	90.51
5/10/17 12:21	945.87	85.58	164.74	85.32	90.77
5/10/17 12:22	945.81	85.70	164.71	85.45	91.06
5/10/17 12:23	945.77	85.80	164.65	85.53	91.30
5/10/17 12:24	946.83	85.83	164.83	85.58	93.15
5/10/17 12:25	952.81	85.82	166.97	85.59	85.58
5/10/17 12:26	954.89	85.84	169.37	85.62	79.77
5/10/17 12:27	957.38	85.88	171.78	85.66	76.62
5/10/17 12:28	960.17	85.99	174.12	85.76	76.02
5/10/17 12:29	962.79	86.16	177.01	85.89	76.71
5/10/17 12:30	967.40	86.23	181.84	85.96	78.54
5/10/17 12:31	971.84	86.25	186.57	86.00	81.22
5/10/17 12:32	976.46	86.24	191.29	86.00	82.73
5/10/17 12:33	980.90	86.21	195.89	85.98	82.68
5/10/17 12:34	985.33	86.21	200.53	85.97	81.62
5/10/17 12:35	989.49	86.21	205.03	85.97	80.12
5/10/17 12:36	993.94	86.22	209.56	85.97	78.88
5/10/17 12:37	998.12	86.27	213.97	86.01	78.88
5/10/17 12:38	1003.76	86.41	219.39	86.13	88.26
5/10/17 12:39	1010.43	86.60	226.57	86.30	104.11
5/10/17 12:40	1017.07	86.82	233.45	86.49	103.44
5/10/17 12:41	1023.43	86.98	240.19	86.66	94.51
5/10/17 12:42	1029.77	87.13	246.83	86.81	85.90
5/10/17 12:43	1036.01	87.30	253.37	86.99	81.08
5/10/17 12:44	1042.24	87.55	259.85	87.22	80.57
5/10/17 12:45	1048.36	87.76	266.25	87.43	81.03
5/10/17 12:46	1054.37	87.87	272.60	87.57	81.37
5/10/17 12:47	1060.44	87.94	278.81	87.64	81.42
5/10/17 12:48	1066.29	88.02	284.98	87.71	81.54
5/10/17 12:49	1072.12	88.11	291.03	87.80	81.28
5/10/17 12:50	1077.85	88.24	297.12	87.92	81.20
5/10/17 12:51	1083.62	88.40	303.07	88.08	81.36

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 12:52	1089.22	88.66	308.97	88.33	81.63
5/10/17 12:53	1094.81	89.05	314.79	88.64	81.10
5/10/17 12:54	1100.30	89.46	320.59	89.04	81.15
5/10/17 12:55	1105.81	89.89	326.29	89.42	82.31
5/10/17 12:56	1111.24	90.31	331.98	89.83	83.85
5/10/17 12:57	1116.57	90.76	337.62	90.29	85.58
5/10/17 12:58	1121.83	91.19	343.11	90.73	84.40
5/10/17 12:59	1127.12	91.57	348.60	91.13	82.67
5/10/17 13:00	1132.39	91.82	354.04	91.45	80.90
5/10/17 13:01	1137.54	91.98	359.45	91.65	80.15
5/10/17 13:02	1142.65	92.12	364.77	91.83	80.19
5/10/17 13:03	1147.68	92.29	370.04	92.02	80.05
5/10/17 13:04	1152.73	92.47	375.21	92.21	79.79
5/10/17 13:05	1157.70	92.59	380.43	92.33	79.84
5/10/17 13:06	1162.72	92.61	385.54	92.35	79.92
5/10/17 13:07	1167.54	92.43	390.66	92.21	79.87
5/10/17 13:08	1172.61	92.16	395.65	91.92	80.32
5/10/17 13:09	1177.36	91.81	400.71	91.60	81.84
5/10/17 13:10	1182.25	91.41	405.73	91.22	83.41
5/10/17 13:11	1186.99	91.07	410.55	90.88	83.95
5/10/17 13:12	1191.60	90.77	415.50	90.57	83.99
5/10/17 13:13	1196.26	90.53	420.31	90.32	83.42
5/10/17 13:14	1200.82	90.35	425.09	90.10	82.03
5/10/17 13:15	1205.46	90.26	429.82	89.99	82.39
5/10/17 13:16	1209.75	90.24	434.74	89.97	83.46
5/10/17 13:17	1214.26	90.47	439.15	90.12	84.53
5/10/17 13:18	1218.59	90.81	443.75	90.42	85.01
5/10/17 13:19	1222.99	91.14	448.30	90.70	85.10
5/10/17 13:20	1227.37	91.39	452.83	90.94	85.15
5/10/17 13:21	1231.73	91.53	457.31	91.11	83.61
5/10/17 13:22	1235.87	91.59	461.73	91.17	78.96
5/10/17 13:23	1239.70	91.56	466.04	91.18	78.10
5/10/17 13:24	1239.38	91.40	465.64	91.04	78.23
5/10/17 13:25	1238.58	91.18	464.88	90.84	80.33
5/10/17 13:26	1237.95	90.93	464.19	90.62	81.40
5/10/17 13:27	1237.38	90.67	463.60	90.39	82.04
5/10/17 13:28	1236.89	90.42	463.06	90.12	82.49
5/10/17 13:29	1236.43	90.19	462.54	89.87	82.92
5/10/17 13:30	1235.98	89.95	462.11	89.66	83.35

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 13:31	1235.57	89.68	461.71	89.38	83.74
5/10/17 13:32	1235.19	89.35	461.33	89.05	84.09
5/10/17 13:33	1234.91	89.01	460.95	88.71	84.43
5/10/17 13:34	1234.61	88.71	460.66	88.41	84.90
5/10/17 13:35	1234.33	88.49	460.33	88.17	85.17
5/10/17 13:36	1234.13	88.39	460.04	88.03	85.93
5/10/17 13:37	1233.80	88.34	459.75	87.99	86.07
5/10/17 13:38	1233.47	88.36	459.48	87.99	86.45
5/10/17 13:39	1233.23	88.45	459.22	88.10	86.99
5/10/17 13:40	1232.94	88.55	458.95	88.20	87.21
5/10/17 13:41	1232.73	88.63	458.58	88.28	87.60
5/10/17 13:42	1232.54	88.70	458.47	88.37	88.03
5/10/17 13:43	1232.36	88.72	458.20	88.42	88.55
5/10/17 13:44	1232.19	88.57	458.04	88.44	89.04
5/10/17 13:45	1232.14	88.30	457.83	88.40	89.54
5/10/17 13:46	1231.96	88.11	457.62	88.37	90.02
5/10/17 13:47	1231.80	88.08	457.42	88.39	90.54
5/10/17 13:48	1231.60	88.06	457.23	88.41	90.96
5/10/17 13:49	1231.42	87.96	457.07	88.35	91.27
5/10/17 13:50	1231.24	87.83	456.91	88.24	91.61
5/10/17 13:51	1231.08	87.73	456.72	88.12	91.98
5/10/17 13:52	1230.88	87.57	456.56	87.94	92.23
5/10/17 13:53	1230.77	87.40	456.42	87.73	92.48
5/10/17 13:54	1230.60	87.25	456.26	87.53	92.62
5/10/17 13:55	1230.43	87.11	456.12	87.33	92.76
5/10/17 13:56	1230.26	86.96	455.97	87.10	92.93
5/10/17 13:57	1230.13	86.79	455.80	86.85	93.13
5/10/17 13:58	1229.99	86.62	455.69	86.62	93.33
5/10/17 13:59	1229.84	86.47	455.55	86.39	93.51
5/10/17 14:00	1229.71	86.32	455.42	86.19	93.69
5/10/17 14:01	1229.59	86.20	455.30	86.05	93.87
5/10/17 14:02	1229.47	86.15	455.18	85.96	94.09
5/10/17 14:03	1229.35	86.12	455.05	85.89	94.21
5/10/17 14:04	1229.21	86.11	454.91	85.84	94.37
5/10/17 14:05	1229.05	86.12	454.75	85.83	94.58
5/10/17 14:06	1228.94	86.18	454.62	85.85	94.79
5/10/17 14:07	1228.83	86.24	454.52	85.88	94.94
5/10/17 14:08	1228.70	86.28	454.43	85.91	94.99
5/10/17 14:09	1228.58	86.32	454.30	85.94	94.96

Nitrogen Injection

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Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 14:10	1228.46	86.39	454.19	85.99	94.91
5/10/17 14:11	1228.37	86.46	454.05	86.05	94.83
5/10/17 14:12	1228.24	86.50	453.98	86.07	94.81
5/10/17 14:13	1228.14	86.52	453.90	86.08	94.84
5/10/17 14:14	1228.05	86.53	453.79	86.08	94.89
5/10/17 14:15	1227.95	86.53	453.69	86.08	94.96
5/10/17 14:16	1227.88	86.53	453.61	86.06	94.99
5/10/17 14:17	1227.80	86.52	453.48	86.03	94.98
5/10/17 14:18	1227.71	86.51	453.38	86.01	94.96
5/10/17 14:19	1227.56	86.51	453.30	86.01	94.95
5/10/17 14:20	1227.50	86.52	453.18	86.02	94.84
5/10/17 14:21	1227.37	86.55	453.09	86.04	94.75
5/10/17 14:22	1227.30	86.59	453.02	86.06	94.69
5/10/17 14:23	1227.24	86.64	452.90	86.11	94.66
5/10/17 14:24	1227.13	86.72	452.81	86.19	94.74
5/10/17 14:25	1227.03	86.85	452.73	86.30	94.91
5/10/17 14:26	1226.94	87.00	452.61	86.45	95.12
5/10/17 14:27	1226.86	87.14	452.55	86.61	95.26
5/10/17 14:28	1226.71	87.35	452.44	86.85	95.36
5/10/17 14:29	1226.63	87.58	452.37	87.09	95.43
5/10/17 14:30	1226.52	87.77	452.26	87.29	95.47
5/10/17 14:31	1226.48	87.91	452.20	87.43	95.47
5/10/17 14:32	1226.41	87.96	452.12	87.50	95.48
5/10/17 14:33	1226.38	87.96	452.02	87.52	95.54
5/10/17 14:34	1226.33	87.95	451.96	87.53	95.63
5/10/17 14:35	1226.26	87.93	451.89	87.53	95.77
5/10/17 14:36	1226.14	87.96	451.78	87.57	95.92
5/10/17 14:37	1226.07	88.04	451.74	87.66	95.99
5/10/17 14:38	1225.99	88.11	451.62	87.74	95.99
5/10/17 14:39	1225.94	88.14	451.57	87.78	95.97
5/10/17 14:40	1225.90	88.14	451.52	87.78	95.98
5/10/17 14:41	1225.80	88.08	451.44	87.74	95.98
5/10/17 14:42	1225.72	88.00	451.38	87.66	95.88
5/10/17 14:43	1225.65	87.90	451.30	87.58	95.79
5/10/17 14:44	1225.62	87.80	451.23	87.48	95.74
5/10/17 14:45	1225.58	87.70	451.16	87.38	95.72
5/10/17 14:46	1225.51	87.65	451.11	87.32	95.73
5/10/17 14:47	1225.47	87.63	451.04	87.31	95.74
5/10/17 14:48	1225.41	87.72	450.97	87.37	95.79

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 14:49	1225.32	87.83	450.87	87.49	95.80
5/10/17 14:50	1225.22	87.96	450.80	87.61	95.81
5/10/17 14:51	1225.09	88.07	450.75	87.75	95.82
5/10/17 14:52	1225.09	88.24	450.66	87.91	95.82
5/10/17 14:53	1225.00	88.44	450.58	88.10	95.85
5/10/17 14:54	1224.88	88.67	450.52	88.32	95.92
5/10/17 14:55	1224.85	88.87	450.40	88.53	95.96
5/10/17 14:56	1224.75	88.99	450.38	88.67	95.96
5/10/17 14:57	1224.71	89.11	450.32	88.80	95.82
5/10/17 14:58	1224.66	89.21	450.27	88.90	95.66
5/10/17 14:59	1224.62	89.26	450.22	88.99	95.53
5/10/17 15:00	1224.56	89.33	450.15	89.06	95.52
5/10/17 15:01	1224.49	89.46	441.95	89.22	95.53
5/10/17 15:02	1224.41	89.62	449.67	89.42	95.55
5/10/17 15:03	1224.30	89.83	449.77	89.64	95.35
5/10/17 15:04	1224.24	90.08	449.69	89.88	95.06
5/10/17 15:05	1224.18	90.33	449.64	90.12	94.92
5/10/17 15:06	1224.08	90.55	449.99	90.36	94.91
5/10/17 15:07	1223.99	90.70	449.26	90.53	94.95
5/10/17 15:08	1223.96	90.77	449.34	90.63	94.86
5/10/17 15:09	1223.95	90.80	449.31	90.71	94.70
5/10/17 15:10	1223.90	90.83	449.19	90.77	94.59
5/10/17 15:11	1223.85	90.85	449.17	90.80	94.51
5/10/17 15:12	1223.79	90.82	449.16	90.80	94.43
5/10/17 15:13	1226.41	90.75	457.72	90.73	90.45
5/10/17 15:14	1231.02	90.69	440.14	90.66	80.32
5/10/17 15:15	1233.77	90.60	400.93	90.58	78.93
5/10/17 15:16	1236.15	90.52	398.07	90.50	81.80
5/10/17 15:17	1238.49	90.46	389.26	90.44	85.42
5/10/17 15:18	1240.77	90.41	383.50	90.39	86.61
5/10/17 15:19	1242.68	90.38	367.17	90.36	85.46
5/10/17 15:20	1244.21	90.38	367.56	90.36	86.49
5/10/17 15:21	1245.92	90.40	367.87	90.36	86.19
5/10/17 15:22	1247.20	90.41	369.01	90.37	83.31
5/10/17 15:23	1246.95	90.43	369.46	90.38	66.85
5/10/17 15:24	1246.77	90.43	369.45	90.37	50.18
5/10/17 15:25	1246.65	90.40	369.60	90.35	51.62
5/10/17 15:26	1246.44	90.36	369.24	90.30	60.72
5/10/17 15:27	1246.33	90.27	369.42	90.22	70.15

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 15:28	1246.25	90.16	369.40	90.11	77.18
5/10/17 15:29	1246.09	90.03	369.19	90.00	80.82
5/10/17 15:30	1246.07	89.95	368.84	89.91	82.19
5/10/17 15:31	1245.94	89.89	368.43	89.86	82.32
5/10/17 15:32	1245.78	89.86	368.58	89.82	82.18
5/10/17 15:33	1245.69	89.85	369.55	89.81	82.35
5/10/17 15:34	1245.62	89.84	368.80	89.80	82.78
5/10/17 15:35	1245.50	89.83	368.49	89.80	82.86
5/10/17 15:36	1245.37	89.82	368.54	89.81	82.95
5/10/17 15:37	1245.37	89.85	368.18	89.85	83.19
5/10/17 15:38	1245.27	89.86	368.23	89.86	83.18
5/10/17 15:39	1245.19	89.84	368.25	89.84	82.86
5/10/17 15:40	1245.18	89.82	368.36	89.83	82.00
5/10/17 15:41	1245.25	89.83	367.99	89.83	80.78
5/10/17 15:42	1244.93	89.84	368.12	89.84	80.62
5/10/17 15:43	1244.93	89.82	368.10	89.83	81.06
5/10/17 15:44	1244.89	89.75	368.19	89.76	81.37
5/10/17 15:45	1244.87	89.67	367.47	89.67	81.62
5/10/17 15:46	1244.83	89.61	367.45	89.60	81.51
5/10/17 15:47	1244.70	89.54	367.63	89.53	81.15
5/10/17 15:48	1244.65	89.47	367.03	89.46	81.04
5/10/17 15:49	1244.65	89.42	366.89	89.41	81.33
5/10/17 15:50	1244.64	89.39	366.79	89.37	81.59
5/10/17 15:51	1244.32	89.38	367.49	89.36	81.84
5/10/17 15:52	1244.58	89.38	367.14	89.35	81.94
5/10/17 15:53	1244.43	89.40	366.87	89.37	82.01
5/10/17 15:54	1244.38	89.47	367.12	89.44	82.14
5/10/17 15:55	1244.38	89.55	367.30	89.53	82.17
5/10/17 15:56	1244.28	89.61	366.91	89.58	82.30
5/10/17 15:57	1244.26	89.63	367.00	89.61	82.44
5/10/17 15:58	1244.15	89.60	366.35	89.59	82.55
5/10/17 15:59	1244.27	89.47	366.98	89.49	82.59
5/10/17 16:00	1244.23	89.34	366.32	89.36	82.54
5/10/17 16:01	1244.17	89.27	365.98	89.30	82.38
5/10/17 16:02	1244.11	89.26	365.55	89.29	82.23
5/10/17 16:03	1244.08	89.28	365.69	89.29	82.14
5/10/17 16:04	1244.04	89.31	365.74	89.31	82.12
5/10/17 16:05	1244.04	89.36	366.10	89.35	82.18
5/10/17 16:06	1244.10	89.42	365.99	89.43	82.31

Nitrogen Injection

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

Flow Conditions

Date / Time	Annulus Gauge		Tubing Gauge		Flow Conditions
	Pressure	Temp	Pressure	Temp	Temp
	psig	deg F	psig	deg F	deg F
5/10/17 16:07	1244.11	89.53	365.99	89.54	82.58
5/10/17 16:08	1244.04	89.64	365.19	89.67	82.93
5/10/17 16:09	1243.97	89.76	365.19	89.79	83.16
5/10/17 16:10	1244.00	89.88	365.50	89.91	83.41
5/10/17 16:11	1243.91	89.95	365.41	89.99	83.66
5/10/17 16:12	1243.98	90.02	365.49	90.06	83.47
5/10/17 16:13	1243.98	90.06	365.31	90.10	82.93
5/10/17 16:14	1244.03	90.07	409.61	90.12	82.36
5/10/17 16:15	1243.06	90.06	433.04	90.12	83.14
5/10/17 16:16	1242.92	90.01	434.24	90.09	83.69
5/10/17 16:17	1242.88	89.99	434.19	90.07	84.08
5/10/17 16:18	1242.83	89.98	434.15	90.06	84.41
5/10/17 16:19	1242.78	89.97	434.11	90.05	84.82
5/10/17 16:20	1242.71	89.93	434.07	90.01	85.23
5/10/17 16:21	1242.64	89.84	434.01	89.92	85.71

MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Appendix C – Test Pressure Data

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 10:45	1203.38	80.79	387.07	80.67
5/11/17 10:50	1203.42	81.51	387.40	81.41
5/11/17 10:55	1203.34	82.13	387.12	82.08
5/11/17 11:00	1203.36	82.00	387.16	81.99
5/11/17 11:05	1203.34	81.97	388.34	81.89
5/11/17 11:10	1203.23	82.78	387.47	82.66
5/11/17 11:15	1203.21	83.26	387.08	83.13
5/11/17 11:20	1203.22	83.17	4.43	83.08
5/11/17 11:25	1203.37	82.14	3.18	82.11
5/11/17 11:30	1203.30	82.35	386.95	82.35
5/11/17 11:35	1203.13	83.71	386.90	83.61
5/11/17 11:40	1203.21	83.13	386.89	83.10
5/11/17 11:45	1203.20	83.02	386.89	82.96
5/11/17 11:50	1203.20	83.15	386.88	83.06
5/11/17 11:55	1203.13	83.70	386.86	83.49
5/11/17 12:00	1203.20	83.34	386.84	83.25
5/11/17 12:05	1203.13	83.87	386.82	83.64
5/11/17 12:10	1203.11	84.47	386.80	84.27
5/11/17 12:15	1203.09	84.49	386.78	84.34
5/11/17 12:20	1203.06	84.76	386.76	84.57
5/11/17 12:25	1203.06	84.95	386.75	84.74
5/11/17 12:30	1203.14	84.21	386.75	84.09
5/11/17 12:35	1203.18	83.49	386.76	83.35
5/11/17 12:40	1203.16	83.11	386.74	82.94
5/11/17 12:45	1203.00	83.98	386.74	83.66
5/11/17 12:50	1202.94	85.07	386.67	84.74
5/11/17 12:55	1202.93	85.62	386.64	85.28
5/11/17 13:00	1203.04	84.93	386.64	84.75
5/11/17 13:05	1202.94	85.57	386.61	85.21
5/11/17 13:10	1202.94	85.80	386.59	85.49
5/11/17 13:15	1202.85	86.80	386.53	86.41
5/11/17 13:20	1202.78	88.00	386.52	87.61
5/11/17 13:25	1202.82	87.88	386.49	87.63
5/11/17 13:30	1202.82	87.85	386.50	87.59
5/11/17 13:35	1202.83	87.96	386.48	87.68
5/11/17 13:40	1202.84	87.61	386.47	87.36
5/11/17 13:45	1202.90	87.05	386.46	86.97
5/11/17 13:50	1202.96	86.58	386.43	86.71
5/11/17 13:55	1202.94	86.15	386.42	86.18
5/11/17 14:00	1202.81	86.50	386.43	86.27
5/11/17 14:05	1202.72	86.86	386.37	86.53
5/11/17 14:10	1202.66	87.28	386.38	86.84
5/11/17 14:15	1202.58	88.50	386.34	88.13
5/11/17 14:20	1202.69	87.97	386.30	87.78
5/11/17 14:25	1202.67	87.92	386.28	87.76
5/11/17 14:30	1202.66	87.85	386.27	87.69
5/11/17 14:35	1202.62	87.79	386.25	87.63

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 14:40	1202.62	87.93	386.22	87.80
5/11/17 14:45	1202.54	88.19	386.22	88.05
5/11/17 14:50	1202.46	89.04	386.19	88.88
5/11/17 14:55	1202.46	89.45	386.14	89.40
5/11/17 15:00	1202.50	89.27	386.13	89.32
5/11/17 15:05	1202.41	90.27	386.09	90.26
5/11/17 15:10	1202.36	91.33	386.09	91.38
5/11/17 15:15	1202.39	92.14	386.06	92.20
5/11/17 15:20	1202.30	93.29	386.00	93.35
5/11/17 15:25	1202.31	93.87	386.00	94.01
5/11/17 15:30	1202.36	94.30	385.99	94.47
5/11/17 15:35	1202.32	94.68	385.96	94.85
5/11/17 15:40	1202.33	95.01	385.95	95.19
5/11/17 15:45	1202.30	94.98	385.92	95.15
5/11/17 15:50	1202.39	94.31	385.95	94.52
5/11/17 15:55	1202.31	94.86	385.94	94.96
5/11/17 16:00	1202.29	95.16	385.90	95.24
5/11/17 16:05	1202.27	95.51	385.89	95.57
5/11/17 16:10	1202.17	96.64	385.85	96.72
5/11/17 16:15	1202.19	96.64	385.82	96.81
5/11/17 16:20	1202.28	96.06	385.82	96.18
5/11/17 16:25	1202.21	96.25	385.81	96.30
5/11/17 16:30	1202.14	96.99	385.78	97.01
5/11/17 16:35	1202.13	97.16	385.76	97.24
5/11/17 16:40	1202.17	96.76	385.76	96.89
5/11/17 16:45	1202.20	95.58	385.76	95.75
5/11/17 16:50	1202.19	95.30	385.75	95.32
5/11/17 16:55	1202.17	95.24	385.74	95.25
5/11/17 17:00	1202.14	95.24	385.73	95.25
5/11/17 17:05	1202.09	95.40	385.70	95.42
5/11/17 17:10	1202.08	95.46	385.69	95.46
5/11/17 17:15	1202.03	95.75	385.66	95.74
5/11/17 17:20	1202.08	95.13	385.65	95.22
5/11/17 17:25	1202.02	95.05	385.64	95.08
5/11/17 17:30	1202.06	94.49	385.62	94.62
5/11/17 17:35	1202.00	94.67	385.60	94.71
5/11/17 17:40	1201.94	94.81	385.59	94.82
5/11/17 17:45	1201.95	94.69	385.56	94.76
5/11/17 17:50	1201.91	94.76	385.56	94.80
5/11/17 17:55	1201.83	95.25	385.54	95.28
5/11/17 18:00	1201.82	95.03	385.49	95.11
5/11/17 18:05	1201.85	94.76	385.48	94.83
5/11/17 18:10	1201.88	93.91	385.50	94.00
5/11/17 18:15	1201.86	94.04	385.49	94.09
5/11/17 18:20	1201.83	93.72	385.44	93.77
5/11/17 18:25	1201.81	93.55	385.44	93.61
5/11/17 18:30	1201.79	93.65	385.43	93.71

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 18:35	1201.74	93.63	385.41	93.72
5/11/17 18:40	1201.72	93.39	385.38	93.48
5/11/17 18:45	1201.76	92.78	385.37	92.89
5/11/17 18:50	1201.73	92.42	385.38	92.52
5/11/17 18:55	1201.72	92.20	385.35	92.29
5/11/17 19:00	1201.70	91.90	385.34	92.00
5/11/17 19:05	1201.70	91.75	385.31	91.85
5/11/17 19:10	1201.68	91.28	385.31	91.40
5/11/17 19:15	1201.65	91.10	385.30	91.20
5/11/17 19:20	1201.66	90.68	385.28	90.81
5/11/17 19:25	1201.65	90.08	385.29	90.20
5/11/17 19:30	1201.66	89.32	385.27	89.45
5/11/17 19:35	1201.64	88.81	385.25	88.94
5/11/17 19:40	1201.68	88.17	385.26	88.29
5/11/17 19:45	1201.68	87.36	385.24	87.48
5/11/17 19:50	1201.65	86.66	385.22	86.76
5/11/17 19:55	1201.65	85.93	385.22	86.02
5/11/17 20:00	1201.65	85.15	385.22	85.23
5/11/17 20:05	1201.71	83.72	385.24	83.74
5/11/17 20:10	1201.75	81.94	385.27	81.93
5/11/17 20:15	1201.80	80.26	385.28	80.21
5/11/17 20:20	1201.80	78.95	385.27	78.87
5/11/17 20:25	1201.69	78.26	385.25	78.20
5/11/17 20:30	1201.64	77.70	385.24	77.65
5/11/17 20:35	1201.63	77.06	385.20	77.01
5/11/17 20:40	1201.61	76.15	385.19	76.07
5/11/17 20:45	1201.69	75.08	385.22	74.98
5/11/17 20:50	1201.64	74.07	385.22	73.96
5/11/17 20:55	1201.62	73.17	385.20	73.04
5/11/17 21:00	1201.60	72.31	385.20	72.17
5/11/17 21:05	1201.60	71.49	385.19	71.34
5/11/17 21:10	1201.56	70.70	385.19	70.56
5/11/17 21:15	1201.52	69.95	385.18	69.78
5/11/17 21:20	1201.53	69.23	385.17	69.06
5/11/17 21:25	1201.50	68.50	385.18	68.34
5/11/17 21:30	1201.51	67.85	385.16	67.67
5/11/17 21:35	1201.45	67.24	385.13	67.06
5/11/17 21:40	1201.46	66.76	385.14	66.59
5/11/17 21:45	1201.40	66.37	385.10	66.21
5/11/17 21:50	1201.39	66.06	385.10	65.90
5/11/17 21:55	1201.34	65.77	385.08	65.61
5/11/17 22:00	1201.30	65.44	385.07	65.31
5/11/17 22:05	1201.32	65.11	385.07	64.98
5/11/17 22:10	1201.29	64.72	385.04	64.59
5/11/17 22:15	1201.29	64.45	385.03	64.32
5/11/17 22:20	1201.27	64.23	385.02	64.12
5/11/17 22:25	1201.26	63.97	385.01	63.87

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/11/17 22:30	1201.25	63.74	384.98	63.64
5/11/17 22:35	1201.23	63.44	384.99	63.36
5/11/17 22:40	1201.25	63.16	384.96	63.06
5/11/17 22:45	1201.21	62.84	384.95	62.76
5/11/17 22:50	1201.19	62.54	384.94	62.47
5/11/17 22:55	1201.19	62.28	384.94	62.20
5/11/17 23:00	1201.19	62.06	384.92	61.98
5/11/17 23:05	1201.16	61.95	384.91	61.88
5/11/17 23:10	1201.13	61.88	384.90	61.81
5/11/17 23:15	1201.11	61.83	384.88	61.77
5/11/17 23:20	1201.09	61.83	384.87	61.78
5/11/17 23:25	1201.08	61.80	384.85	61.76
5/11/17 23:30	1201.04	61.81	384.83	61.79
5/11/17 23:35	1201.03	61.88	384.81	61.87
5/11/17 23:40	1201.04	62.03	384.79	62.02
5/11/17 23:45	1200.98	62.13	384.77	62.13
5/11/17 23:50	1200.98	62.13	384.76	62.14
5/11/17 23:55	1200.98	62.06	384.75	62.08
5/12/17 0:00	1200.97	61.88	384.74	61.91
5/12/17 0:05	1200.98	61.61	384.74	61.63
5/12/17 0:10	1200.96	61.26	384.72	61.28
5/12/17 0:15	1201.00	60.87	384.70	60.89
5/12/17 0:20	1200.98	60.43	384.71	60.44
5/12/17 0:25	1200.98	59.99	384.71	59.99
5/12/17 0:30	1200.98	59.58	384.70	59.55
5/12/17 0:35	1200.97	59.18	384.69	59.17
5/12/17 0:40	1200.94	58.86	384.67	58.83
5/12/17 0:45	1200.93	58.58	384.68	58.55
5/12/17 0:50	1200.93	58.36	384.65	58.34
5/12/17 0:55	1200.91	58.16	384.65	58.12
5/12/17 1:00	1200.88	57.93	384.63	57.92
5/12/17 1:05	1200.88	57.71	384.61	57.68
5/12/17 1:10	1200.85	57.54	384.61	57.52
5/12/17 1:15	1200.82	57.34	384.59	57.33
5/12/17 1:20	1200.81	57.10	384.58	57.09
5/12/17 1:25	1200.79	56.84	384.57	56.83
5/12/17 1:30	1200.80	56.64	384.56	56.62
5/12/17 1:35	1200.80	56.49	384.55	56.47
5/12/17 1:40	1200.78	56.34	384.55	56.31
5/12/17 1:45	1200.76	56.16	384.52	56.15
5/12/17 1:50	1200.74	55.98	384.50	55.96
5/12/17 1:55	1200.72	55.84	384.50	55.83
5/12/17 2:00	1200.71	55.78	384.48	55.77
5/12/17 2:05	1200.70	55.74	384.48	55.73
5/12/17 2:10	1200.67	55.73	384.45	55.73
5/12/17 2:15	1200.66	55.77	384.44	55.78
5/12/17 2:20	1200.63	55.76	384.43	55.77

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 2:25	1200.62	55.71	384.41	55.73
5/12/17 2:30	1200.63	55.61	384.41	55.64
5/12/17 2:35	1200.62	55.49	384.39	55.52
5/12/17 2:40	1200.59	55.41	384.38	55.43
5/12/17 2:45	1200.60	55.32	384.36	55.34
5/12/17 2:50	1200.58	55.20	384.36	55.23
5/12/17 2:55	1200.57	55.07	384.34	55.10
5/12/17 3:00	1200.57	54.92	384.34	54.95
5/12/17 3:05	1200.56	54.78	384.33	54.82
5/12/17 3:10	1200.54	54.64	384.32	54.68
5/12/17 3:15	1200.51	54.48	384.30	54.52
5/12/17 3:20	1200.52	54.38	384.30	54.41
5/12/17 3:25	1200.51	54.25	384.28	54.28
5/12/17 3:30	1200.50	54.15	384.28	54.18
5/12/17 3:35	1200.47	54.05	384.27	54.09
5/12/17 3:40	1200.47	53.94	384.24	53.97
5/12/17 3:45	1200.47	53.84	384.24	53.88
5/12/17 3:50	1200.44	53.74	384.22	53.78
5/12/17 3:55	1200.44	53.61	384.21	53.64
5/12/17 4:00	1200.44	53.39	384.20	53.44
5/12/17 4:05	1200.42	53.16	384.20	53.21
5/12/17 4:10	1200.42	52.97	384.19	53.00
5/12/17 4:15	1200.41	52.79	384.18	52.83
5/12/17 4:20	1200.41	52.65	384.17	52.68
5/12/17 4:25	1200.39	52.52	384.15	52.56
5/12/17 4:30	1200.37	52.44	384.14	52.48
5/12/17 4:35	1200.36	52.35	384.13	52.39
5/12/17 4:40	1200.33	52.26	384.12	52.31
5/12/17 4:45	1200.33	52.18	384.11	52.23
5/12/17 4:50	1200.31	52.13	384.10	52.18
5/12/17 4:55	1200.31	52.06	384.09	52.10
5/12/17 5:00	1200.30	51.97	384.07	52.02
5/12/17 5:05	1200.27	51.86	384.07	51.91
5/12/17 5:10	1200.26	51.74	384.06	51.79
5/12/17 5:15	1200.26	51.60	384.05	51.65
5/12/17 5:20	1200.26	51.46	384.03	51.50
5/12/17 5:25	1200.24	51.31	384.02	51.36
5/12/17 5:30	1200.24	51.17	384.02	51.22
5/12/17 5:35	1200.21	51.04	384.00	51.08
5/12/17 5:40	1200.21	50.93	384.00	50.98
5/12/17 5:45	1200.19	50.86	383.98	50.91
5/12/17 5:50	1200.19	50.82	383.97	50.87
5/12/17 5:55	1200.18	50.77	383.96	50.81
5/12/17 6:00	1200.16	50.67	383.95	50.72
5/12/17 6:05	1200.14	50.55	383.94	50.60
5/12/17 6:10	1200.15	50.40	383.94	50.45
5/12/17 6:15	1200.13	50.25	383.93	50.30

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 6:20	1200.12	50.14	383.91	50.20
5/12/17 6:25	1200.11	50.07	383.90	50.12
5/12/17 6:30	1200.10	50.03	383.90	50.08
5/12/17 6:35	1200.09	49.94	383.87	49.99
5/12/17 6:40	1200.06	49.84	383.87	49.90
5/12/17 6:45	1200.07	49.73	383.85	49.78
5/12/17 6:50	1200.05	49.61	383.85	49.65
5/12/17 6:55	1200.04	49.50	383.84	49.55
5/12/17 7:00	1200.04	49.45	383.82	49.50
5/12/17 7:05	1200.04	49.51	383.80	49.56
5/12/17 7:10	1200.01	49.82	383.79	49.89
5/12/17 7:15	1199.96	50.32	383.77	50.39
5/12/17 7:20	1199.93	50.97	383.75	51.06
5/12/17 7:25	1199.87	51.76	383.72	51.87
5/12/17 7:30	1199.84	52.65	383.69	52.77
5/12/17 7:35	1199.81	53.64	383.65	53.76
5/12/17 7:40	1199.72	54.64	383.64	54.82
5/12/17 7:45	1199.73	55.64	383.61	55.80
5/12/17 7:50	1199.72	56.51	383.59	56.69
5/12/17 7:55	1199.70	57.33	383.56	57.48
5/12/17 8:00	1199.70	58.17	383.56	58.32
5/12/17 8:05	1199.69	58.97	383.53	59.13
5/12/17 8:10	1199.63	59.91	383.48	60.06
5/12/17 8:15	1199.66	60.66	383.47	60.86
5/12/17 8:20	1199.63	61.42	383.46	61.62
5/12/17 8:25	1199.63	62.13	383.44	62.31
5/12/17 8:30	1199.62	62.87	383.42	63.03
5/12/17 8:35	1199.61	63.59	3.43	63.68
5/12/17 8:40	1199.56	64.36	3.41	64.50
5/12/17 8:45	1199.26	65.47	383.02	65.69
5/12/17 8:50	1199.27	66.17	383.02	66.34
5/12/17 8:55	1199.28	66.91	383.03	67.05
5/12/17 9:00	1199.21	67.95	383.01	68.05
5/12/17 9:05	1199.24	68.87	382.98	68.96
5/12/17 9:10	1199.18	69.92	382.95	69.98
5/12/17 9:15	1199.18	70.85	382.95	70.91
5/12/17 9:20	1199.20	71.74	382.93	71.80
5/12/17 9:25	1199.15	72.78	382.91	72.81
5/12/17 9:30	1199.12	74.14	382.89	74.15
5/12/17 9:35	1199.18	74.88	382.86	74.93
5/12/17 9:40	1199.20	75.26	382.79	75.32
5/12/17 9:45	1199.24	75.62	382.77	75.66
5/12/17 9:50	1199.25	76.08	382.82	76.10
5/12/17 9:55	1199.26	76.69	382.81	76.68
5/12/17 10:00	1199.30	76.66	382.81	76.68
5/12/17 10:05	1199.30	77.23	382.81	77.22
5/12/17 10:10	1199.29	77.99	382.70	77.95

TEST PRESSURE

Well Name:	State LPG Storage No. 3
Operator:	Western Refining Company, L.P.
State:	NM
County/Parish:	Lea
Field:	Jal
Serial/API:	30-025-35956

PRESSURE INFORMATION

Date / Time	Annulus Pressure		Tubing Pressure	
	Pressure	Temp	Pressure	Temp
	psig	deg F	psig	deg F
5/12/17 10:15	1199.27	78.95	382.65	78.89
5/12/17 10:20	1199.26	79.83	382.66	79.77
5/12/17 10:25	1199.30	80.64	382.58	80.61
5/12/17 10:30	1199.22	81.48	383.65	81.44
5/12/17 10:35	1199.31	81.16	383.95	81.20
5/12/17 10:40	1199.36	80.51	382.87	80.50
5/12/17 10:45	1199.41	79.93	518.65	79.89

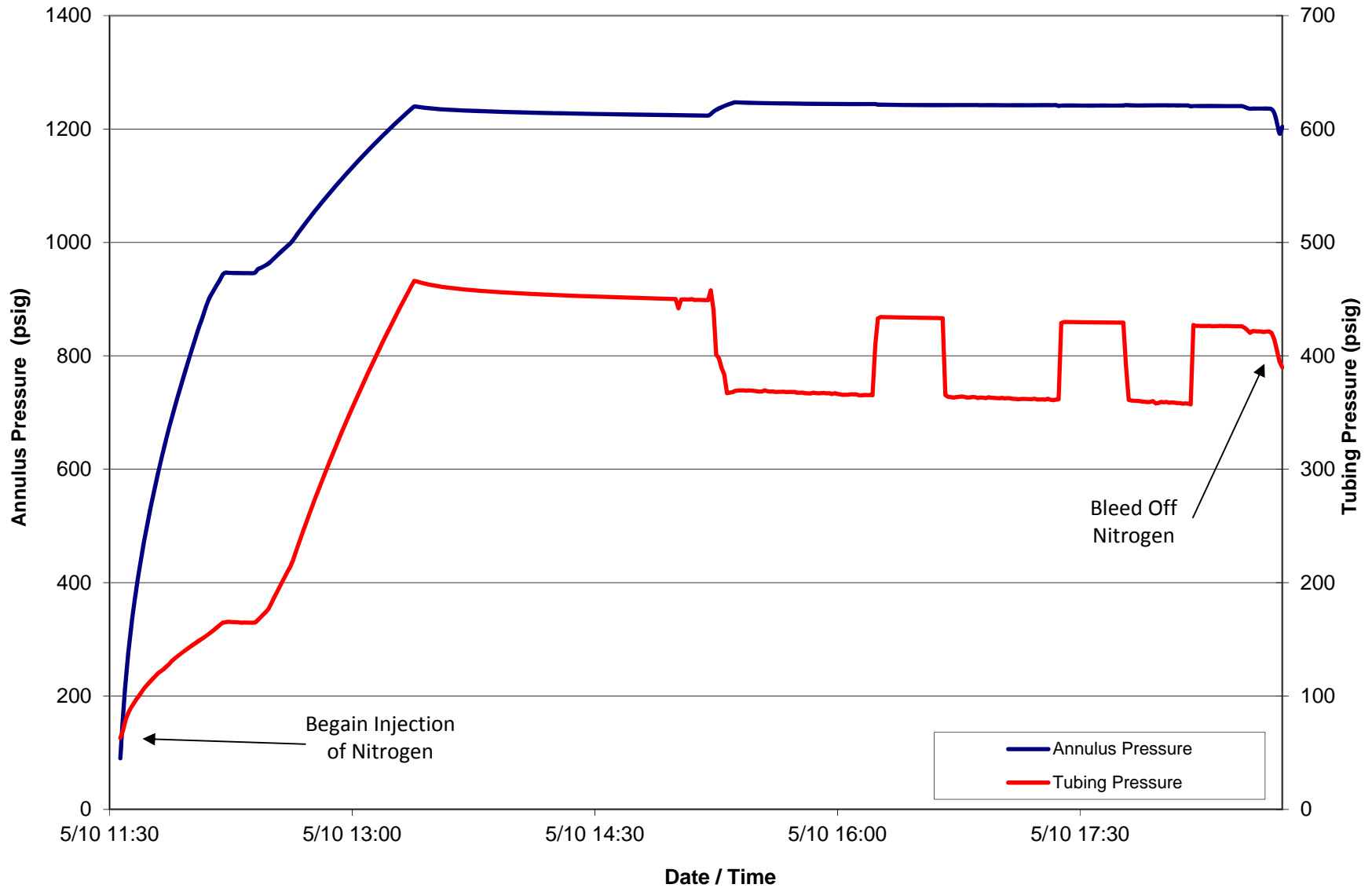
Appendix D – Calculated Borehole Volumes

Western Refining Company, LP State LPG Storage No. 3 MIT - Borehole Calculations
Nitrogen Volumes

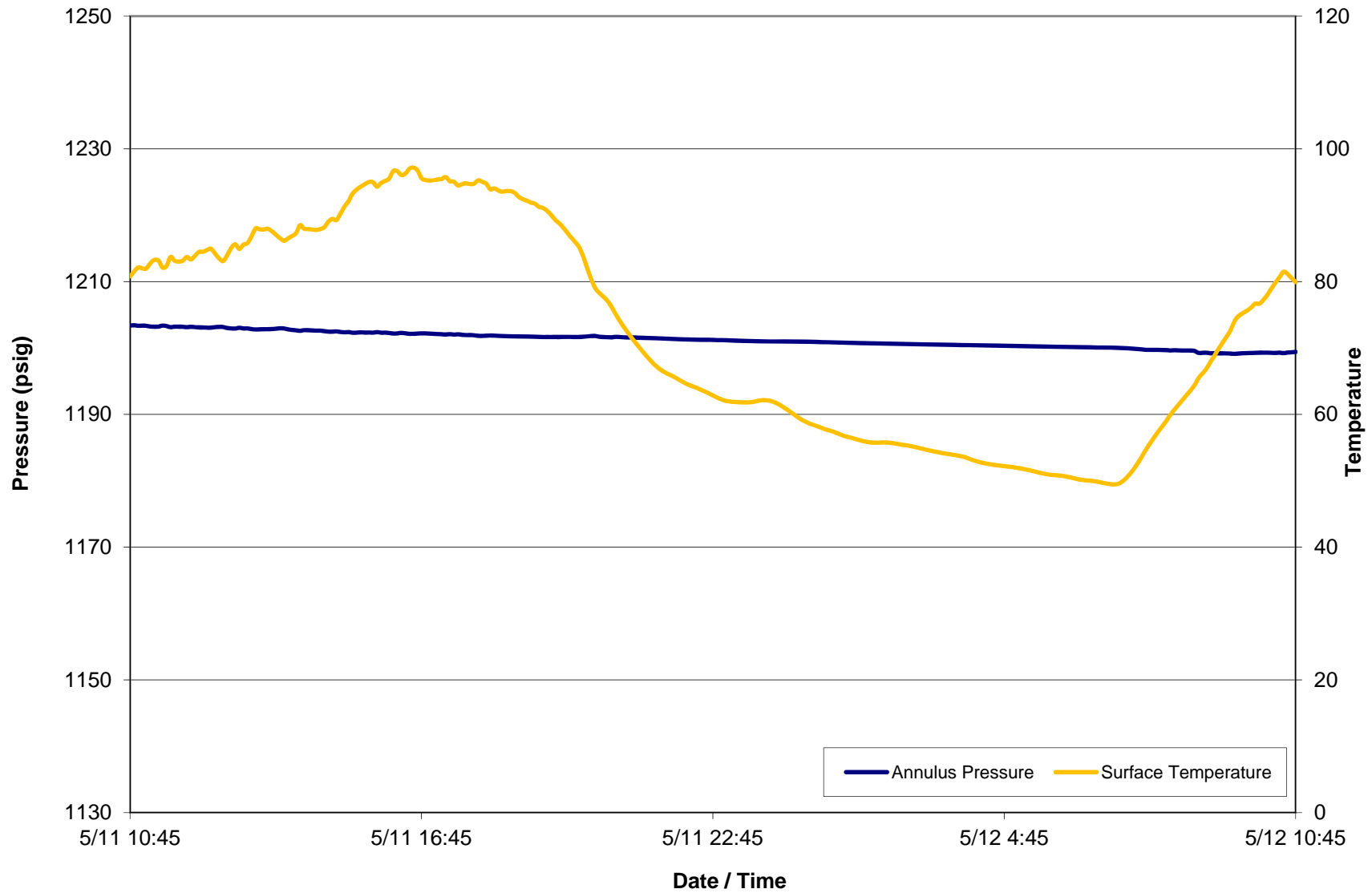
I/F Depth Logged [ft]	N2 Volume Turbine Cumulative [scf]	N2 Pressure Gauge [psig]	Borehole Volume Cumulative [bbls]	Borehole Volume Incremental Per Interval [bbls]	Borehole Volume Incremental Per Foot [bbls/ft]
1667	42000	1075.09	101.13	46.56	23.28
1668	51285	1113.00	119.40	18.26	18.26
1669	59594	1144.39	135.04	15.64	15.64
1670	68304	1175.30	150.82	15.78	15.78
1671	78616	1209.15	168.88	18.05	18.05
1672	87744	1237.66	184.28	15.40	15.40
1673	98162	1243.20	205.26	20.99	20.99
1674	106100	1246.44	221.30	16.04	16.04
1675	112933	1245.57	235.71	14.41	14.41
1676	121549	1244.86	253.83	18.12	18.12
1677	127635	1244.32	266.64	12.82	12.82
1678	135705	1244.23	283.52	16.87	16.87
1679	141540	1244.07	295.74	12.22	12.22
1680	148948	1242.42	311.61	15.87	15.87
1681	154742	1242.39	323.74	12.12	12.12
1682	162296	1242.17	339.59	15.86	15.86
1683	169172	1242.02	354.02	14.42	14.42
1684	174868	1242.03	365.93	11.91	11.91
1685	179597	1242.18	375.77	9.85	9.85
1686	184086	1242.15	385.17	9.39	9.39
1687	188261	1241.59	394.07	8.90	8.90
1688	191893	1241.79	401.60	7.53	7.53
1689	194787	1241.83	407.64	6.04	6.04
1690	197231	1241.91	412.72	5.08	5.08

Appendix E – Pressure and Temperature Graphs

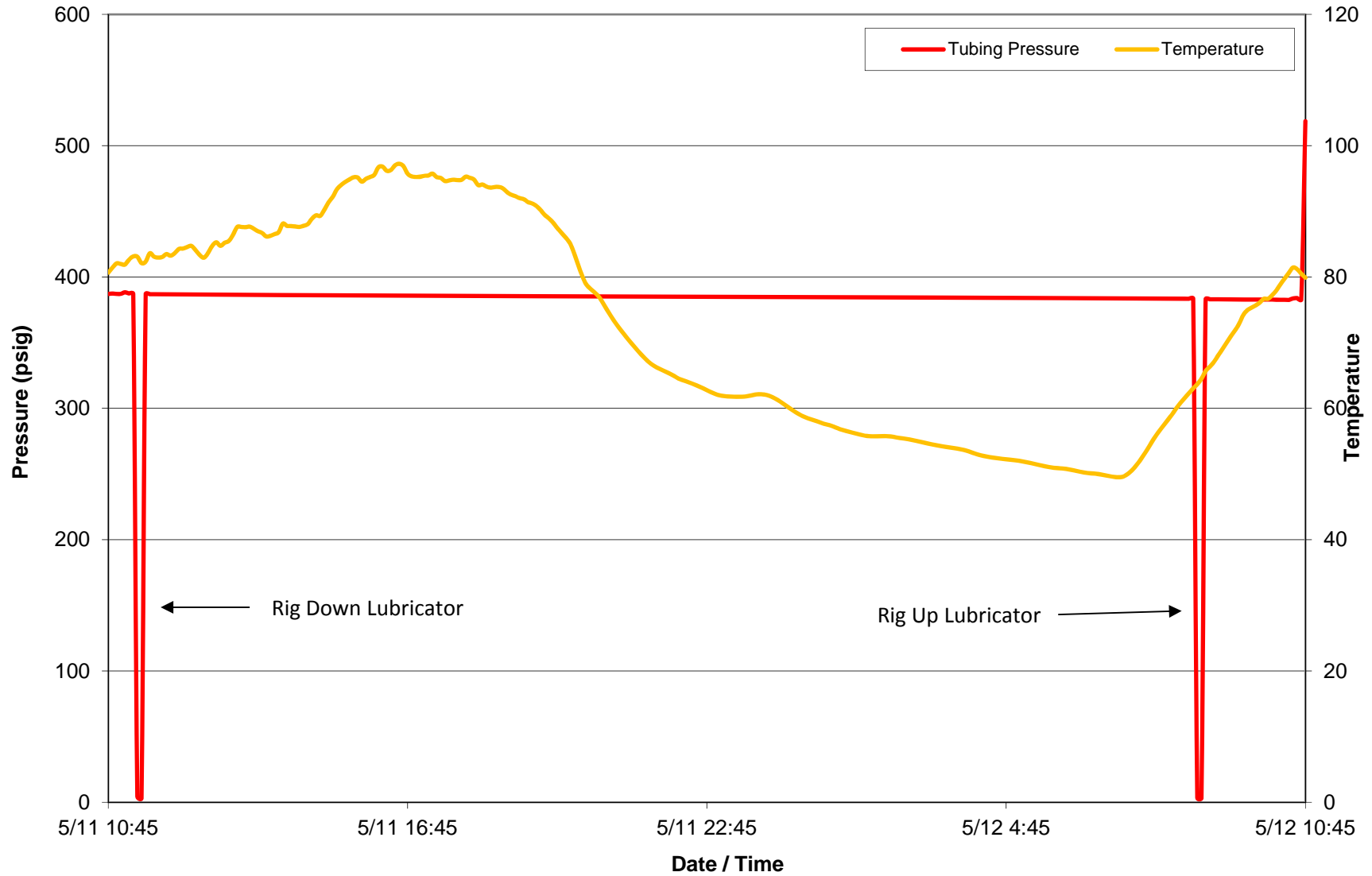
Western Refining Company, LP State LPG Storage No. 3 MIT Injection Pressures



Western Refining Company, LP State LPG Storage No. 3 MIT Annulus Test Pressure

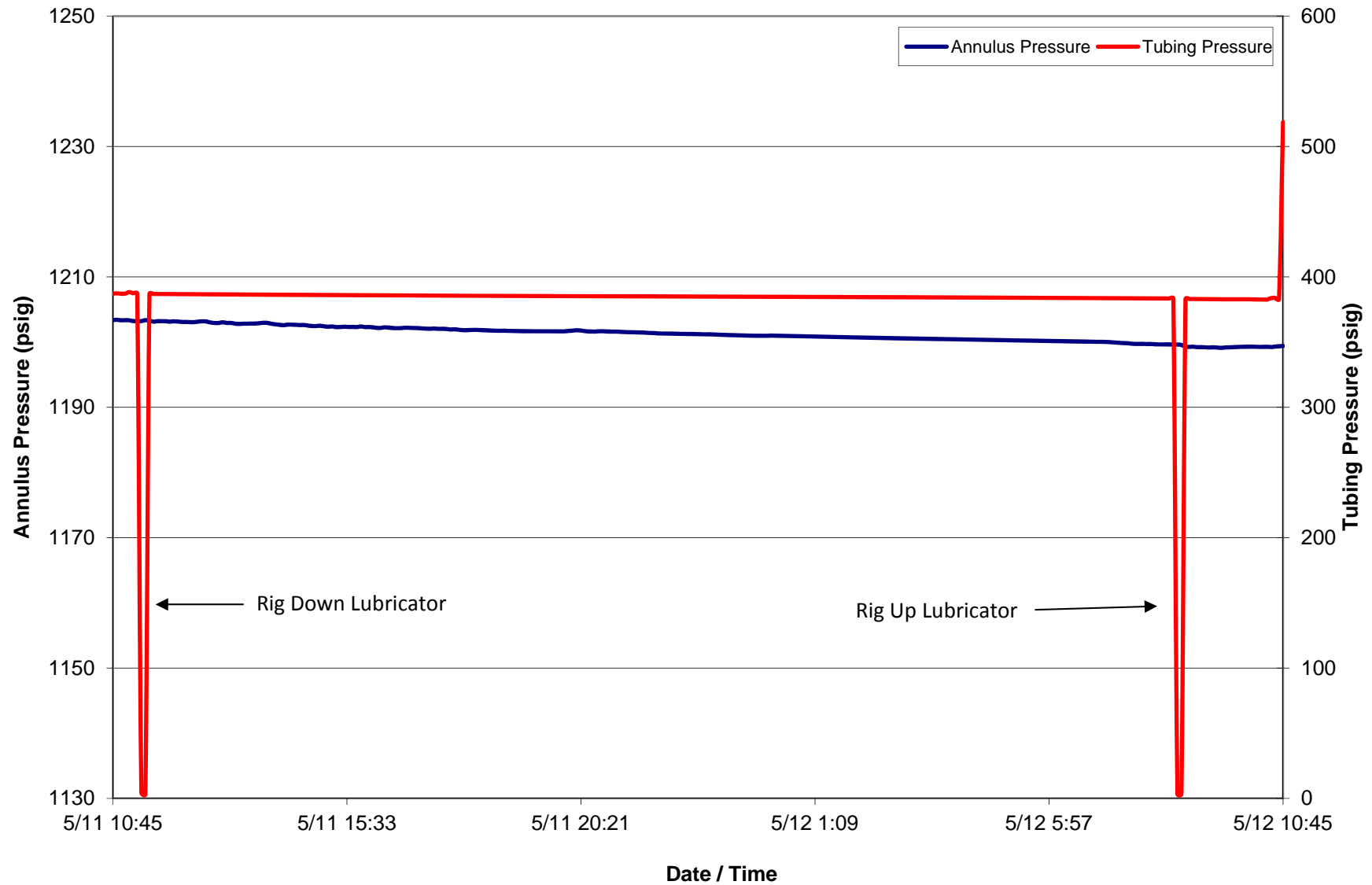


Western Refining Company, LP State LPG Storage No. 3 MIT Tubing Test Pressure

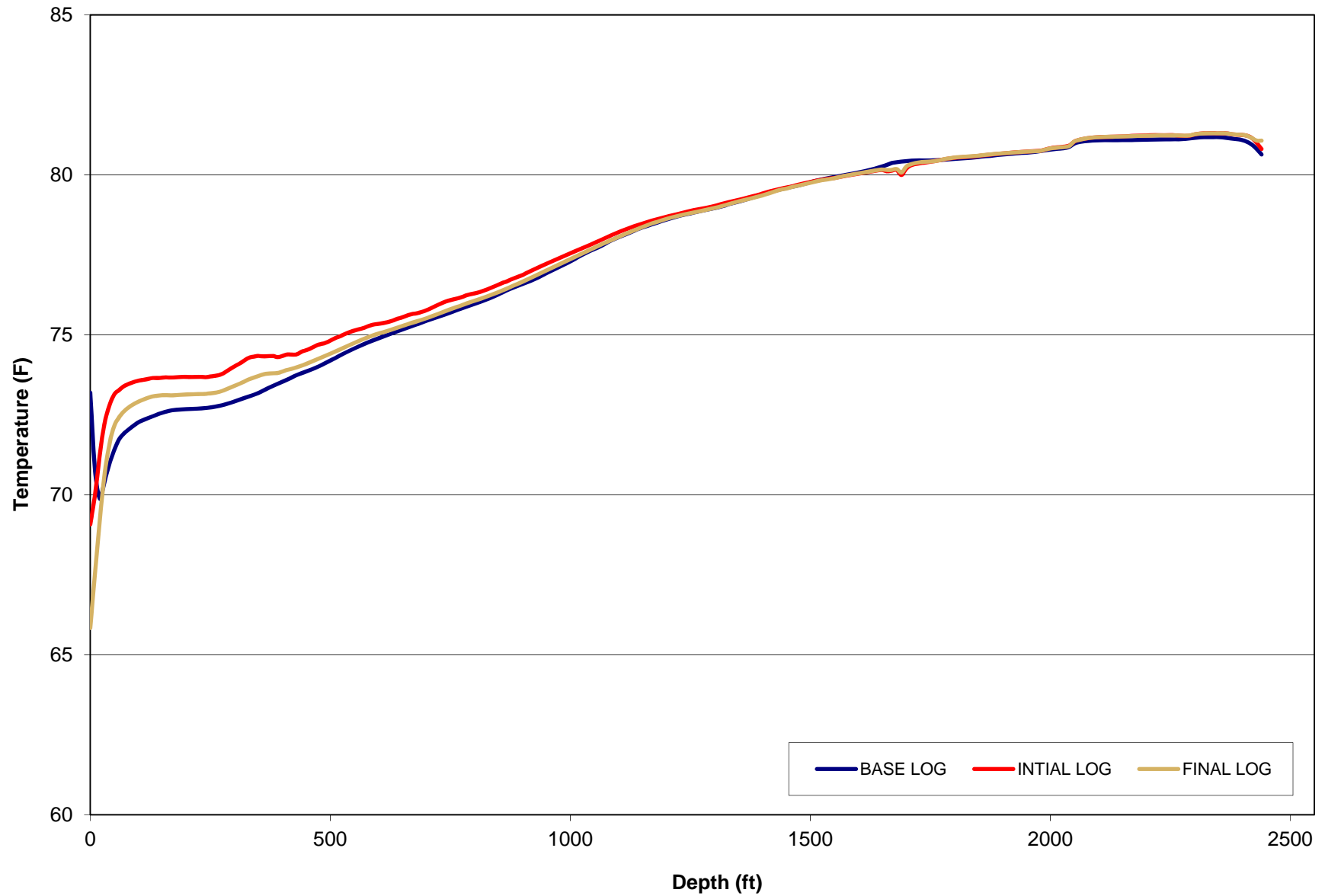


Western Refining Company, LP State LPG Storage No. 3 MIT

Annulus vs Tubing Test Pressure



Western Refining Company, LP State LPG Storage No. 3 MIT Wellbore Temperature Graph



MIT Report – Western Refining Company, LP
State LPG Storage No. 3

Appendix F – Well Logs



MIT - Density

Company: Western Refining Company, LP									
Well: State LPG Storage No. 003									
Field: Jal									
Area: Lea County									
State: New Mexico									
Company: Western Refining Company, LP									
Well: State LPG Storage No. 003									
Field: Jal									
Area: Lea County									
State: New Mexico									
Run Information		Run No. 1		Run No. 2		Run No. 3		Run No. 4	
Date of Service		08-May-2017		10-May-2017		11-May-2017		12-May-2017	
Depth		N/A		N/A		N/A		N/A	
Empire Depth		2,439 ft		2,439 ft		2,439 ft		2,439 ft	
Bottom Log Interval		2,438 ft		2,438 ft		2,438 ft		2,438 ft	
Top Log Interval		Surface		Surface		Surface		Surface	
Interface Depth		N/A		1,690 ft		1,690 ft		1,690 ft	
Fluid Type		Brine		Brine		Brine		Brine	
Fluid Density		N/A		N/A		N/A		N/A	
Fluid Level		Surface		Surface		Surface		Surface	
Tubing Pressure		50 Psia		400 Psia		400 Psia		400 Psia	
Wellhead Connection		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K		4-1/16 in 3K	
Time - Ran In Well		08:00		10:00		08:30		08:15	
Time - Temp. Start		09:15		N/A		08:45		08:30	
Time - Density Start		N/A		10:15		09:45		09:45	
Time - Out of Well		17:30		19:00		10:30		10:30	
Location		Broussard, LA		Broussard, LA		Broussard, LA		Broussard, LA	
Unit No. / Wire Size		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in		P-03 / 1/4 in	
Recorded By		C. Cross		C. Cross		C. Cross		C. Cross	
Witnessed By		Mr. Will George		Mr. Will George		Mr. Will George		Mr. Will George	
CSG / TBG Record		Size		Wt/Ft		Top		Bottom	
Surface Casing		13-5/8 in		54.5 lb/ft		Surface		285.5 ft	
Production Casing		9-5/8 in		36 lb/ft		Surface		1,665 ft	
Liner		7 in		23 lb/ft		Surface		1,578 ft	
Hanging String		4-1/2 in		N/A		Surface		38 ft	
Hanging String		3-1/2 in		Drill Pipe		38 ft		2,430 ft	


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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log correlated to the 9-5/8 in Casing Shoe at 1,665 ft

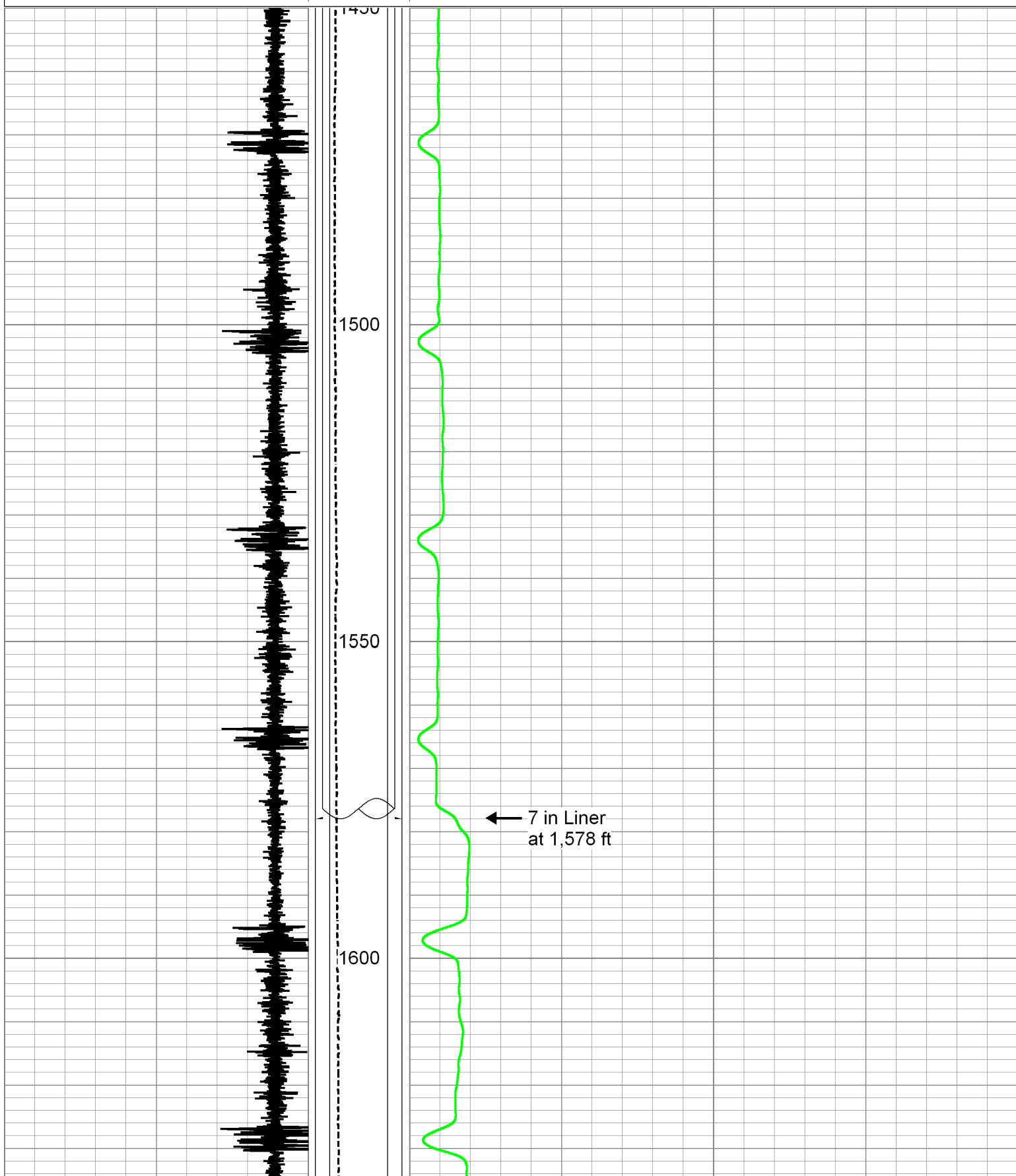
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)

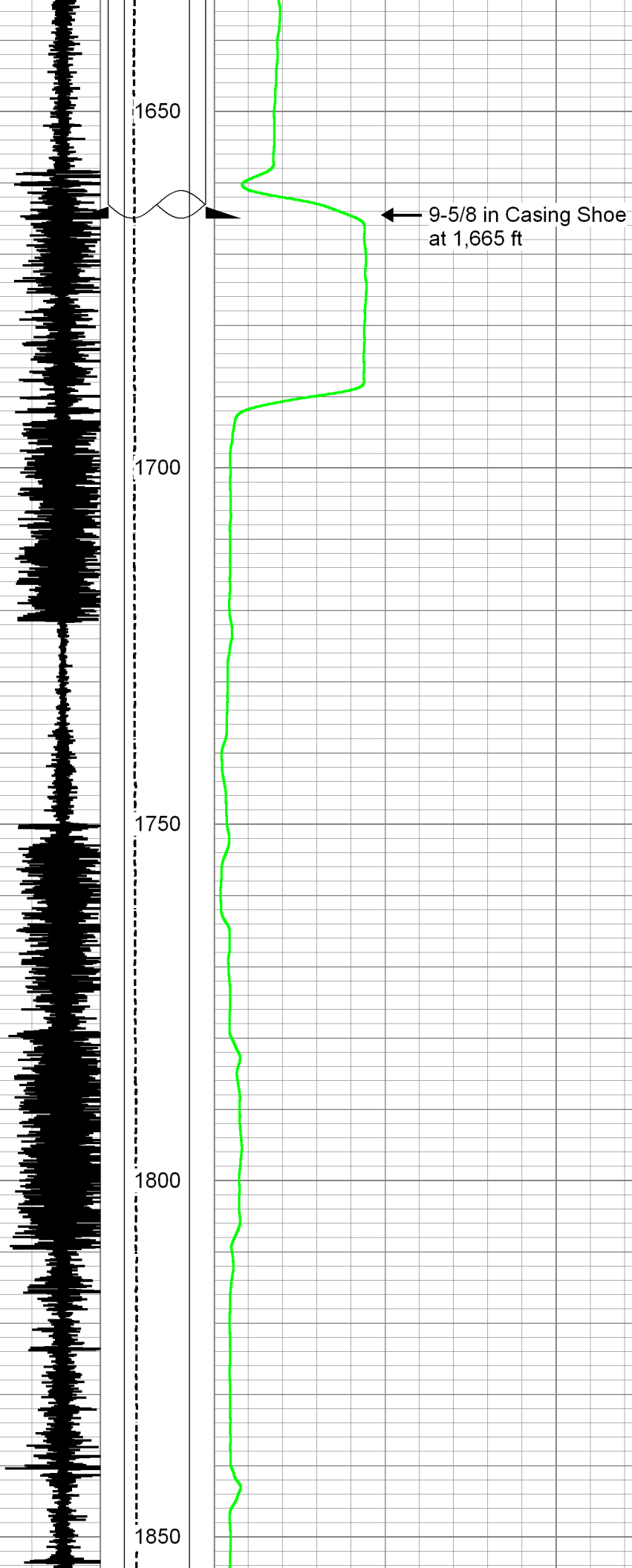
			Tungsten-1-11/16x7 Weigh Bar Tungten 1-11/16" x 7"	7.00	1.69		84.00
<hr/>							
			GDT_WTC-WTS06 (14023103) Digital Telemetry GDTBus	1.82	1.69		8.60
<hr/>							
CRCCnt	6.39		GDT_CCL-CCL10 (14023401) Digital CCL GDTBus	1.35	1.69		6.20
FrmCnt	6.39						
WTSTime	6.39						
WTSTemp	6.39						
CHV	6.39						
CCL	5.47		GDT_RDT-RDT04 (14023128)	1.19	0.00		
<hr/>							
RDTTemp	4.14		GDT_GRT2-GRT10-1 (14023359) Secondary Gamma Ray Tool GDTBus	2.23	1.69		10.40
<hr/>							
GR2	1.63		Density-DensitySub (01)	1.63	1.88		8.00
Density2	1.12						
Density1	1.12						

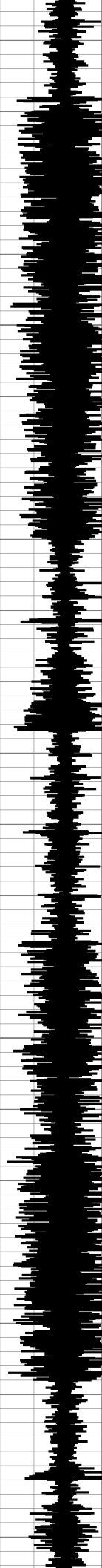
Dataset: westernrefinery_lpgs03_20170508_gdt-mit.db: field/well/run1/170511-0945_Den-Final
 Total length: 15.21 ft
 Total weight: 117.20 lb
 O.D.: 1.88 in

Database File westernrefinery_lpgs03_20170508_gdt-mit.db
Dataset Pathname 170508-0915_Temp-Base
Presentation Format cc-tempdensity
Dataset Creation Mon May 08 09:14:55 2017
Charted by Depth in Feet scaled 1:240

60000	CCL	3000	LTEN	0	Density2 (cps)	100000
			0 (lb) 800			







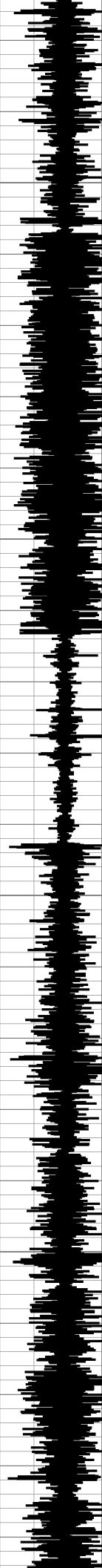
1900

1950

2000

2050





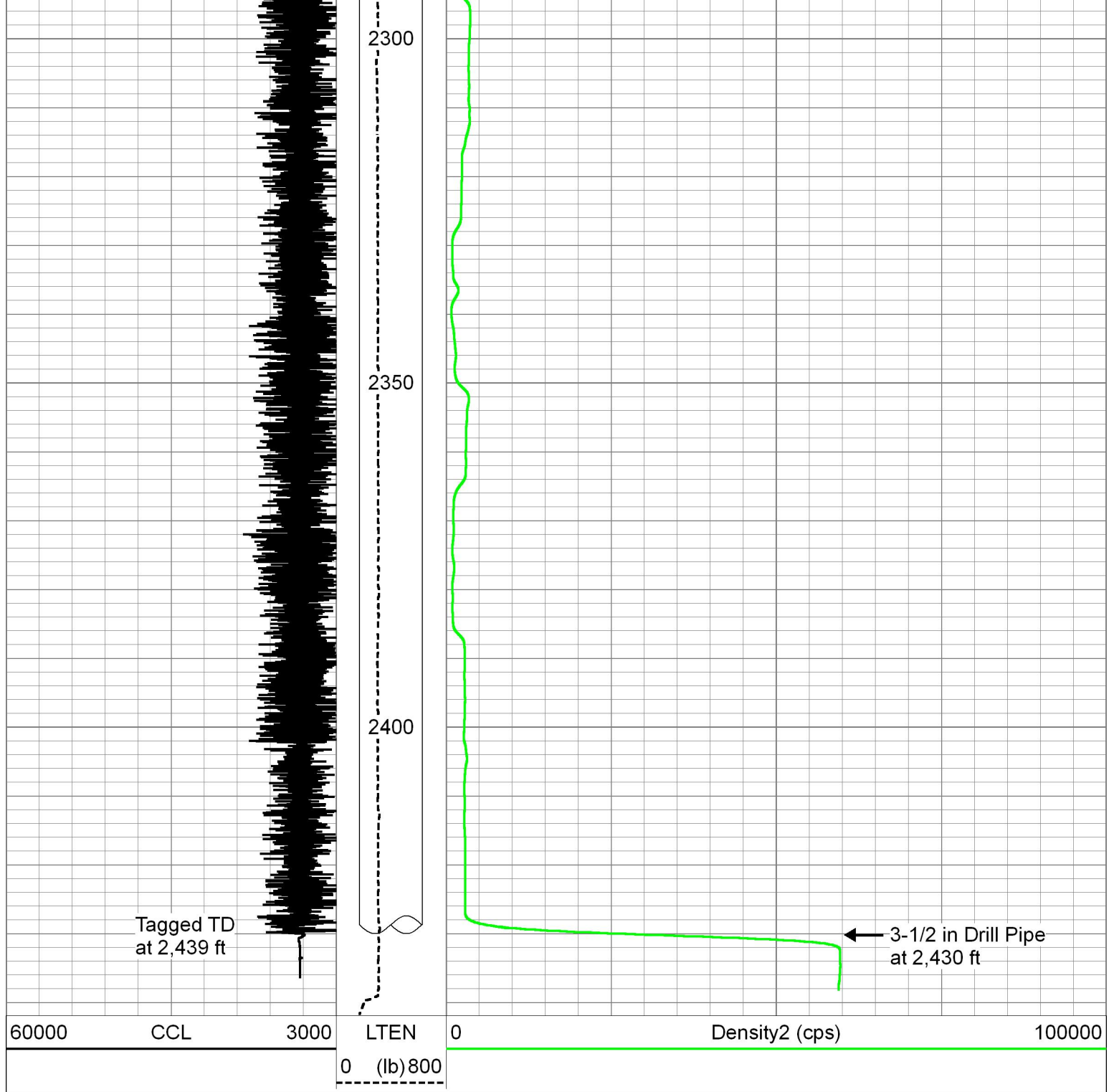
2100

2150

2200

2250





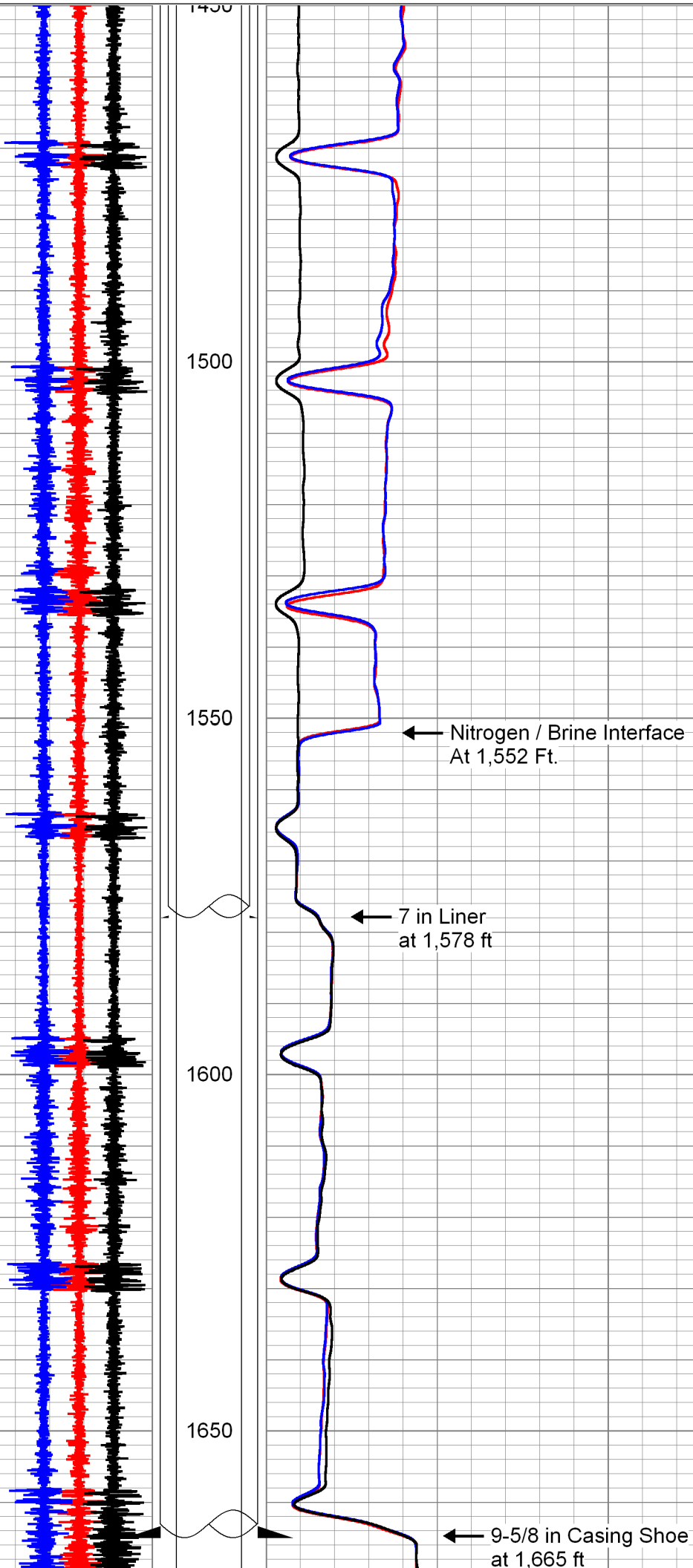
Density - Liner Test

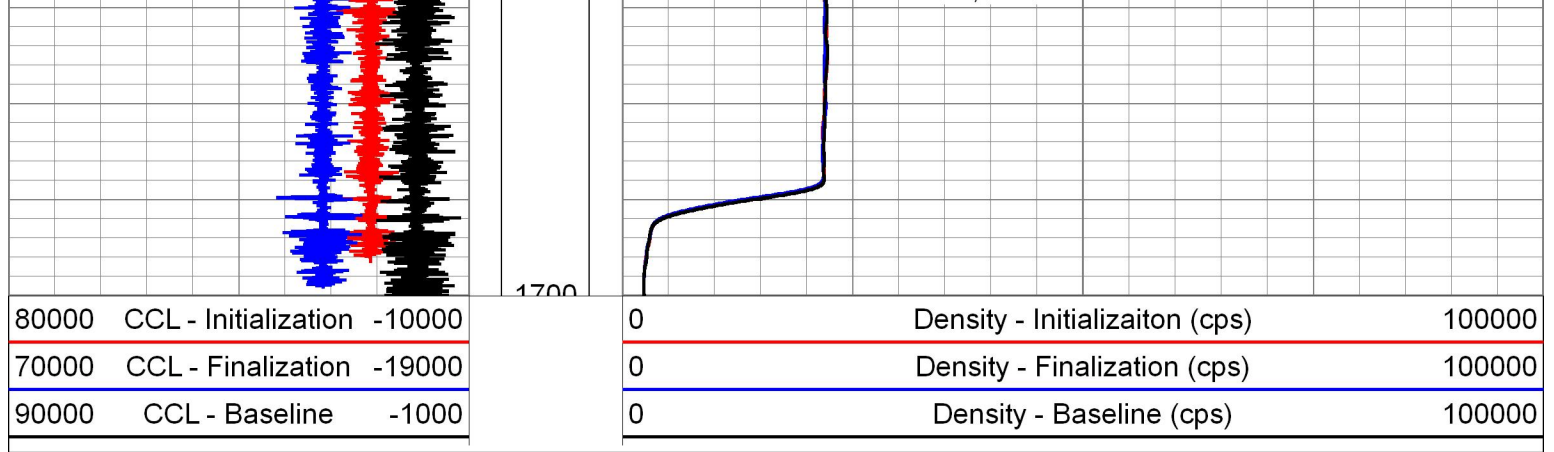
08-May-2017 - Black = Baseline at 09:15,
Red = Initialization at 14:30, Blue = Finalization at 15:30

Database File westernrefinery_lpgs03_20170508_gdt-mit.db
Dataset Pathname M-LNR
Presentation Format cc-tempdensitymerg
Dataset Creation Mon May 08 16:13:47 2017
Charted by Depth in Feet scaled 1:240

80000	CCL - Initialization	-10000
70000	CCL - Finalization	-19000
90000	CCL - Baseline	-1000

0	Density - Initializaiton (cps)	100000
0	Density - Finalization (cps)	100000
0	Density - Baseline (cps)	100000



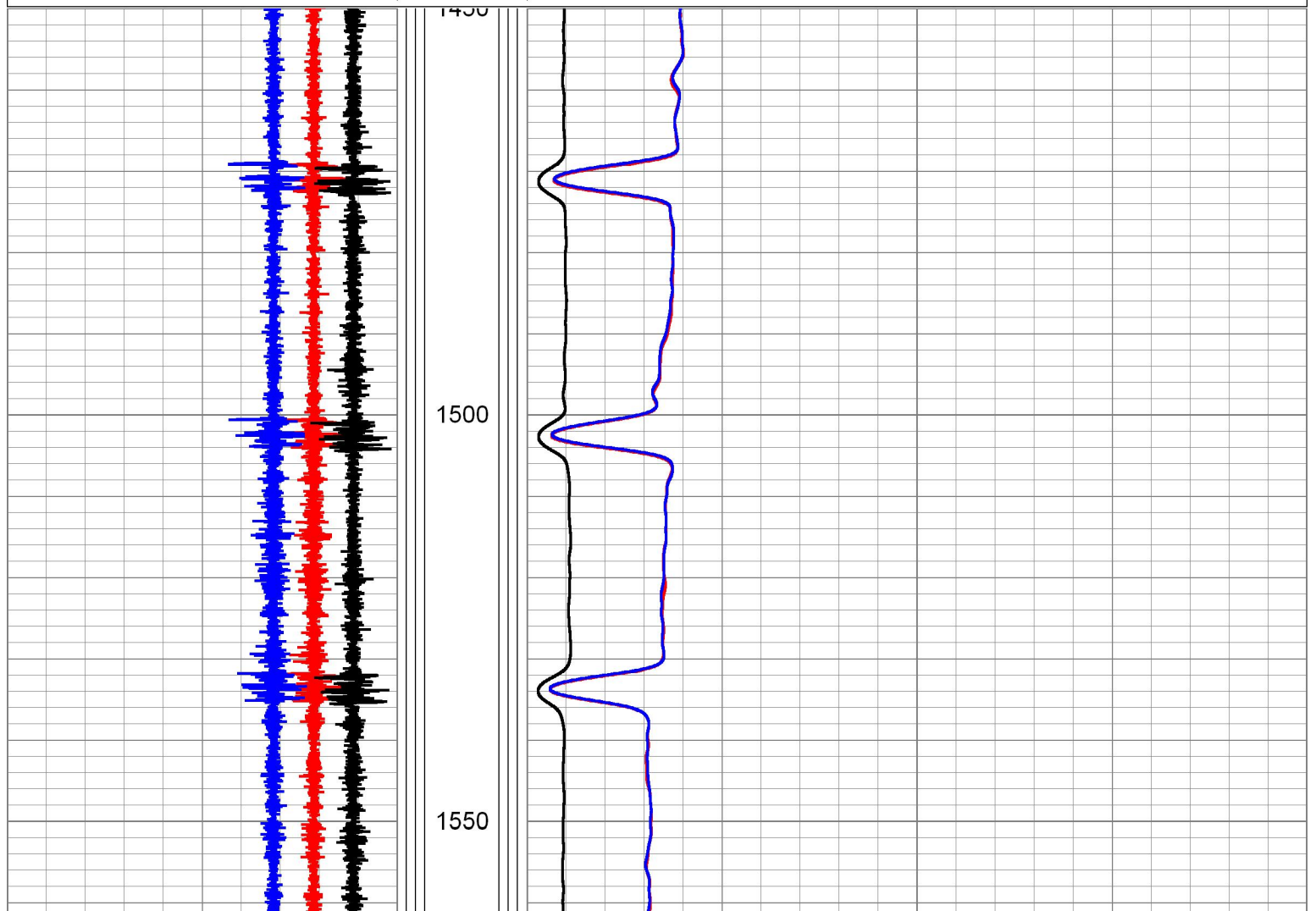


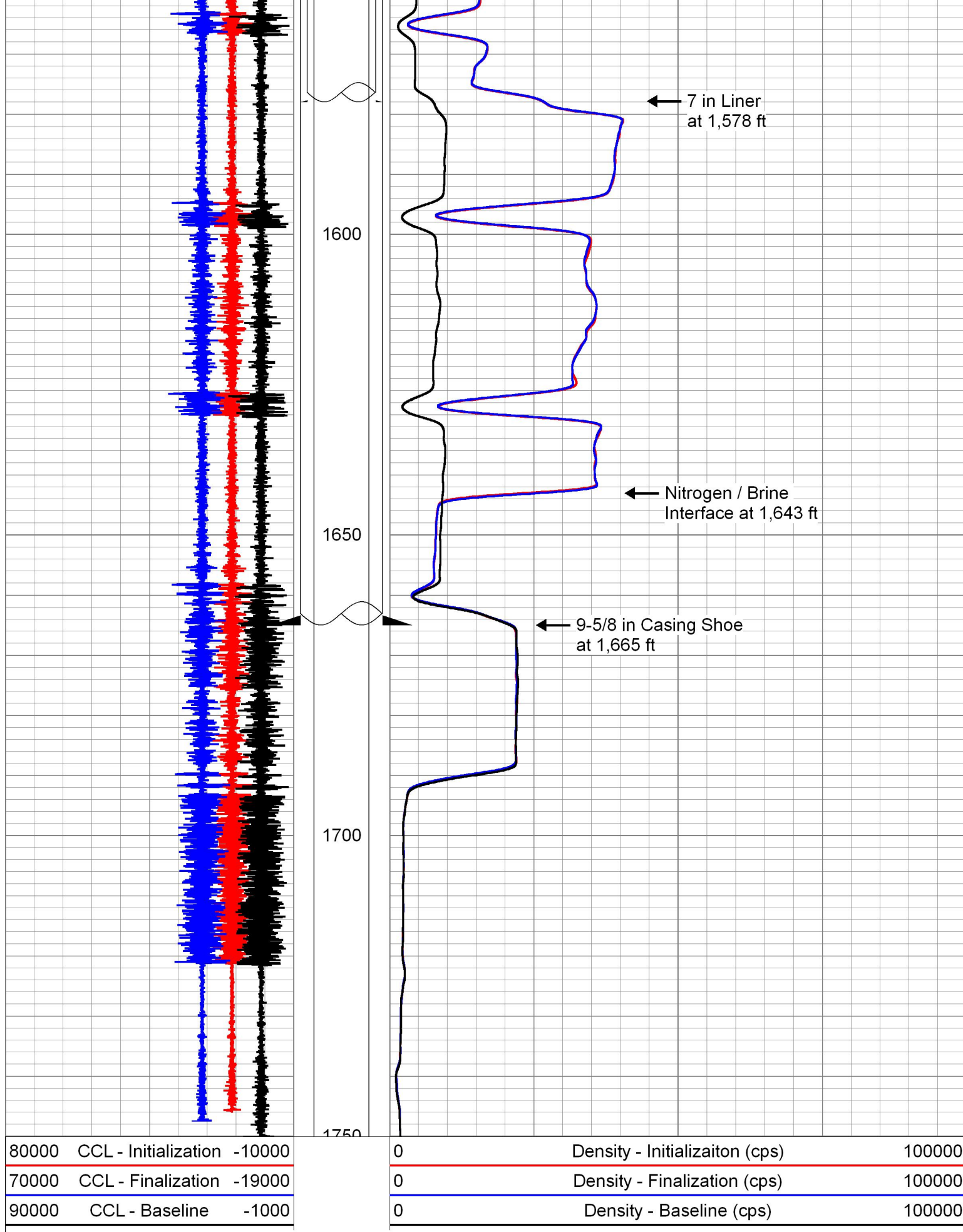
Density - Casing Test

08-May-2017 - Black = Baseline at 09:15,
Red = Initialization at 16:00, Blue = Finalization at 17:00

Database File westernrefinery_lpgs03_20170508_gdt-mit.db
Dataset Pathname M-CSG
Presentation Format cc-tempdensitymerg
Dataset Creation Mon May 08 17:25:03 2017
Charted by Depth in Feet scaled 1:240

80000	CCL - Initialization	-10000	0	Density - Initializaiton (cps)	100000
70000	CCL - Finalization	-19000	0	Density - Finalization (cps)	100000
90000	CCL - Baseline	-1000	0	Density - Baseline (cps)	100000

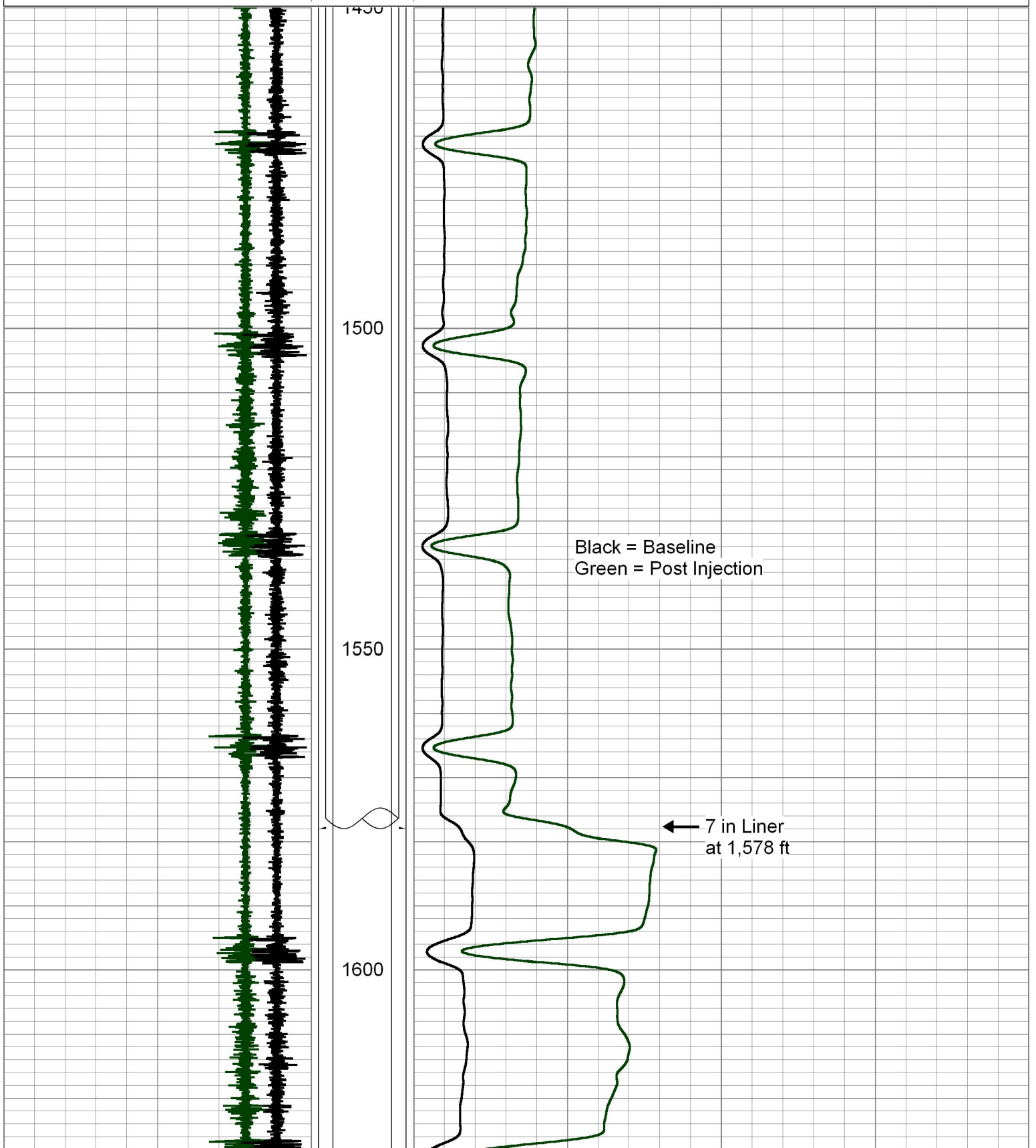


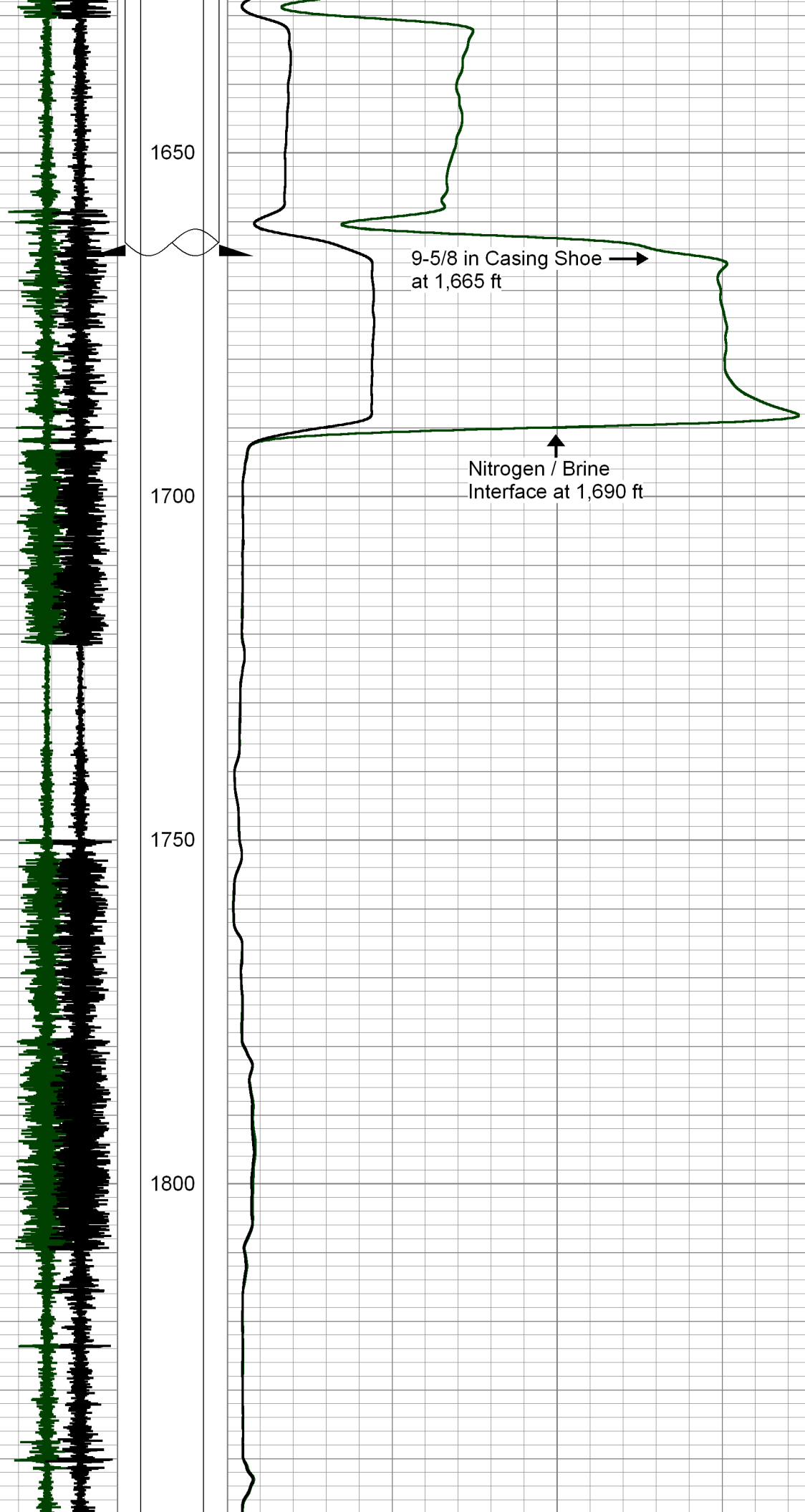


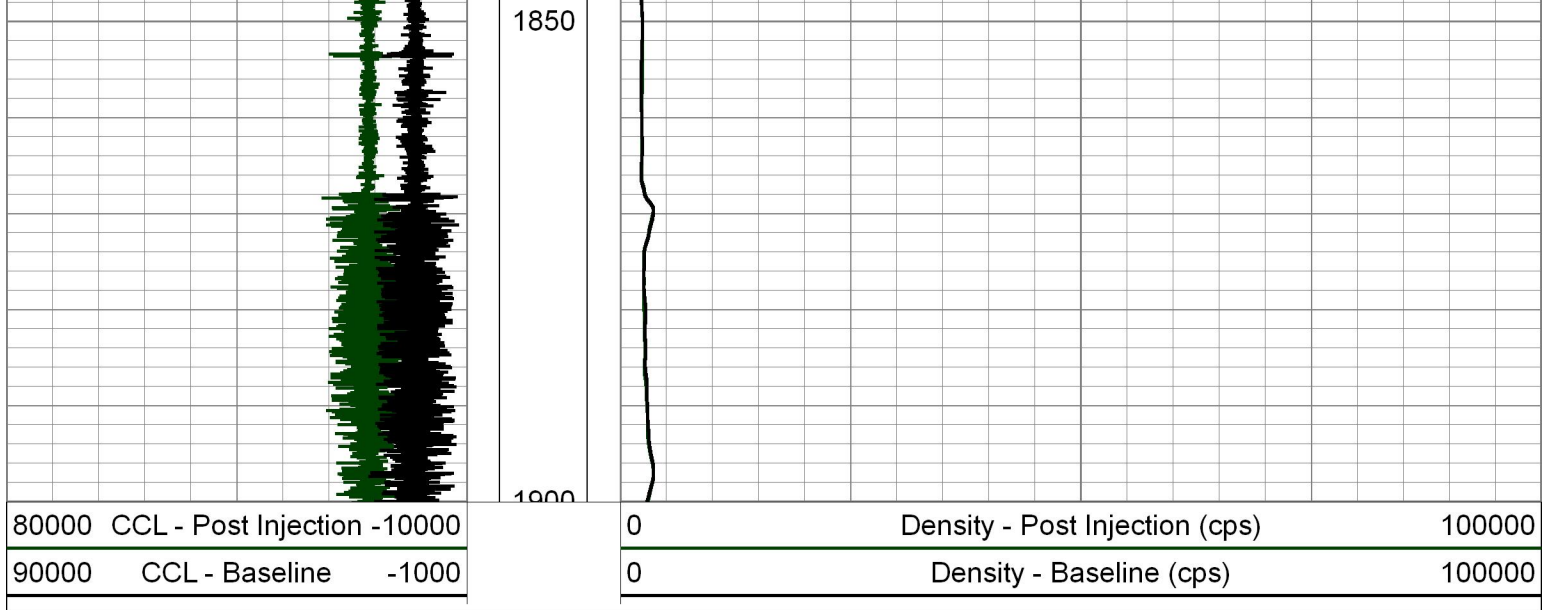
Database File westernrefinery_lpgs03_20170508_gdt-mit.db
Dataset Pathname M-PostInj
Presentation Format cc-tempdensitymerg
Dataset Creation Wed May 10 18:16:47 2017
Charted by Depth in Feet scaled 1:240

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90000 CCL - Baseline -1000

0 Density - Post Injection (cps) 100000
0 Density - Baseline (cps) 100000





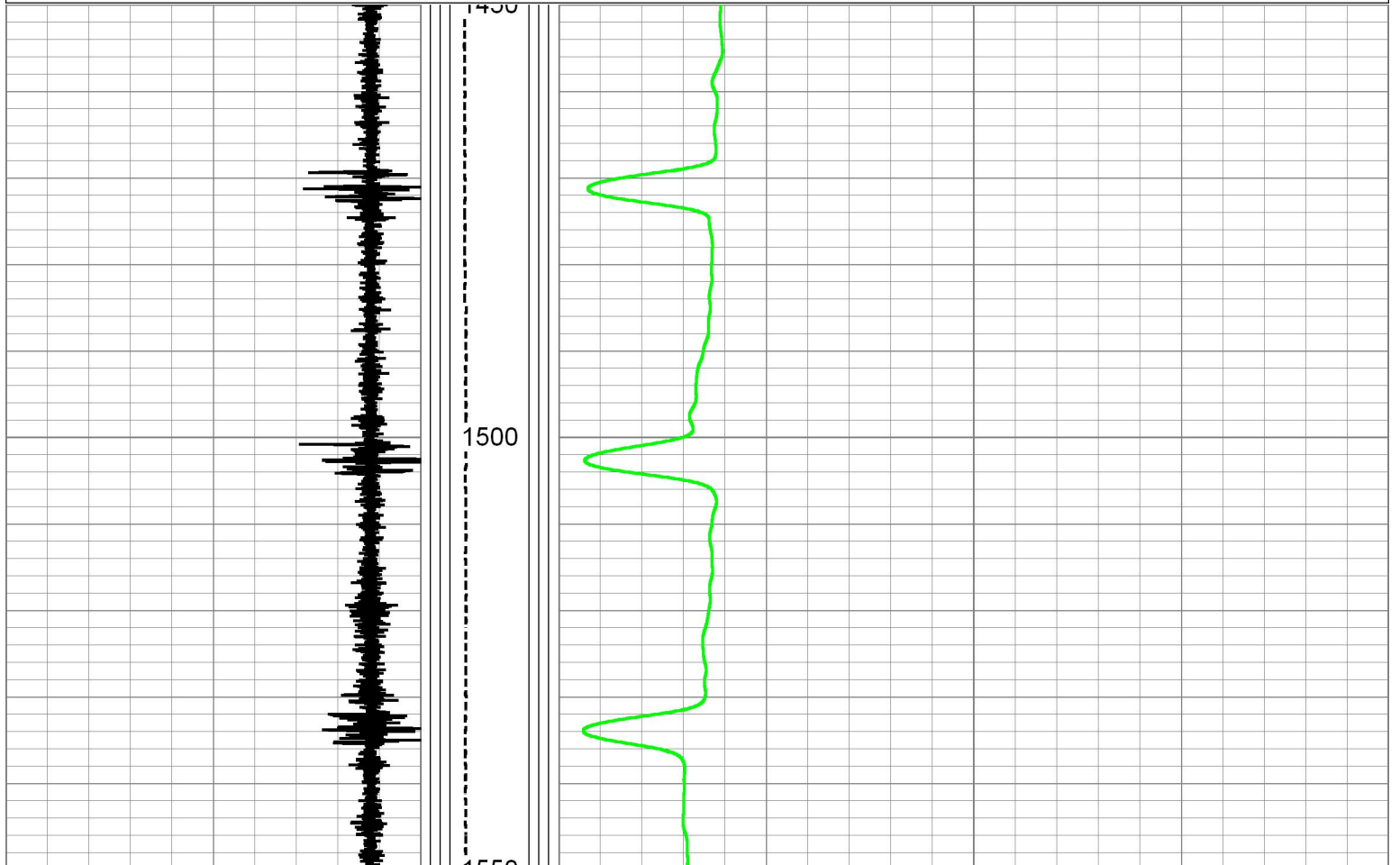


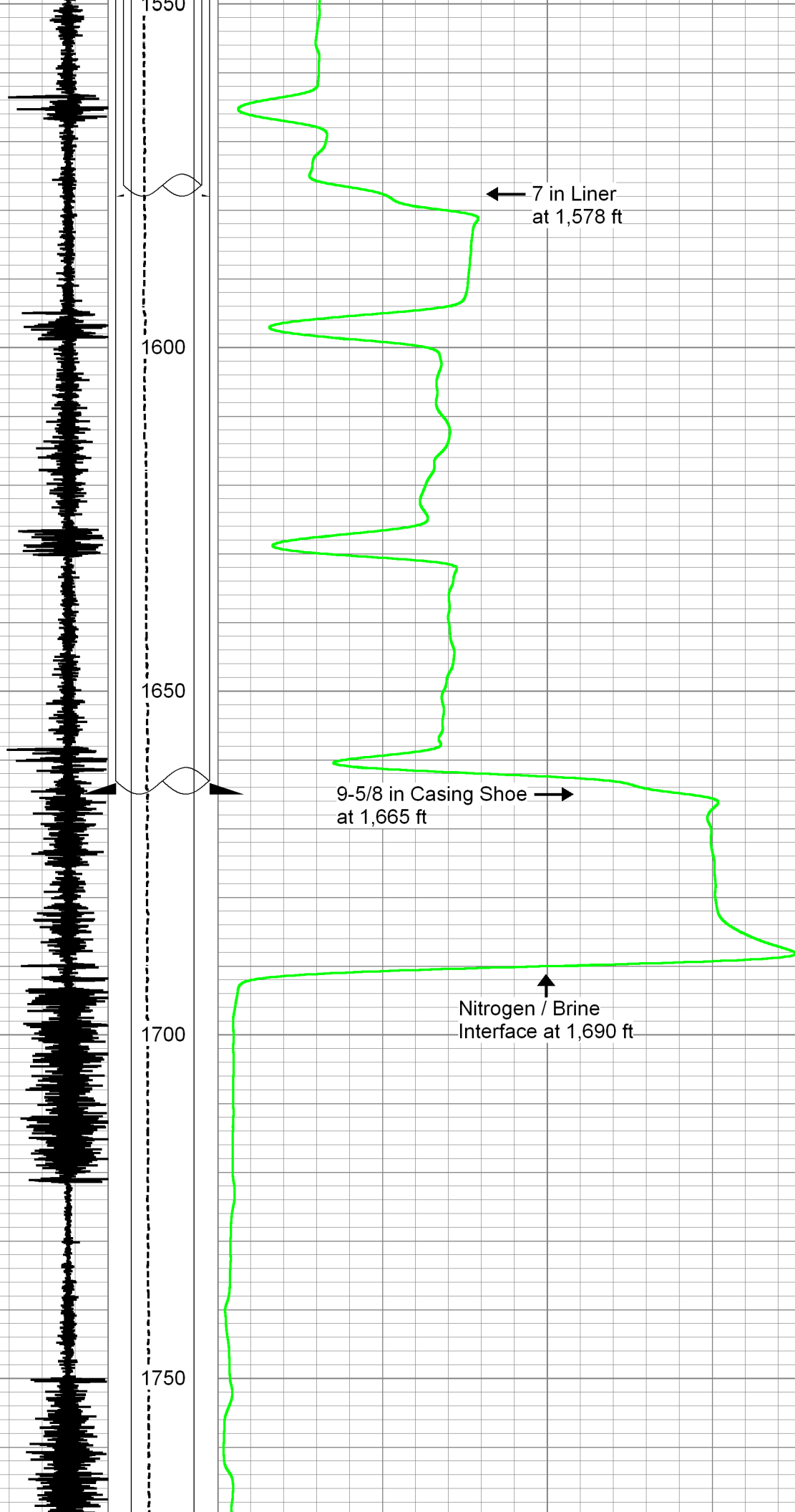
Density - Initialization

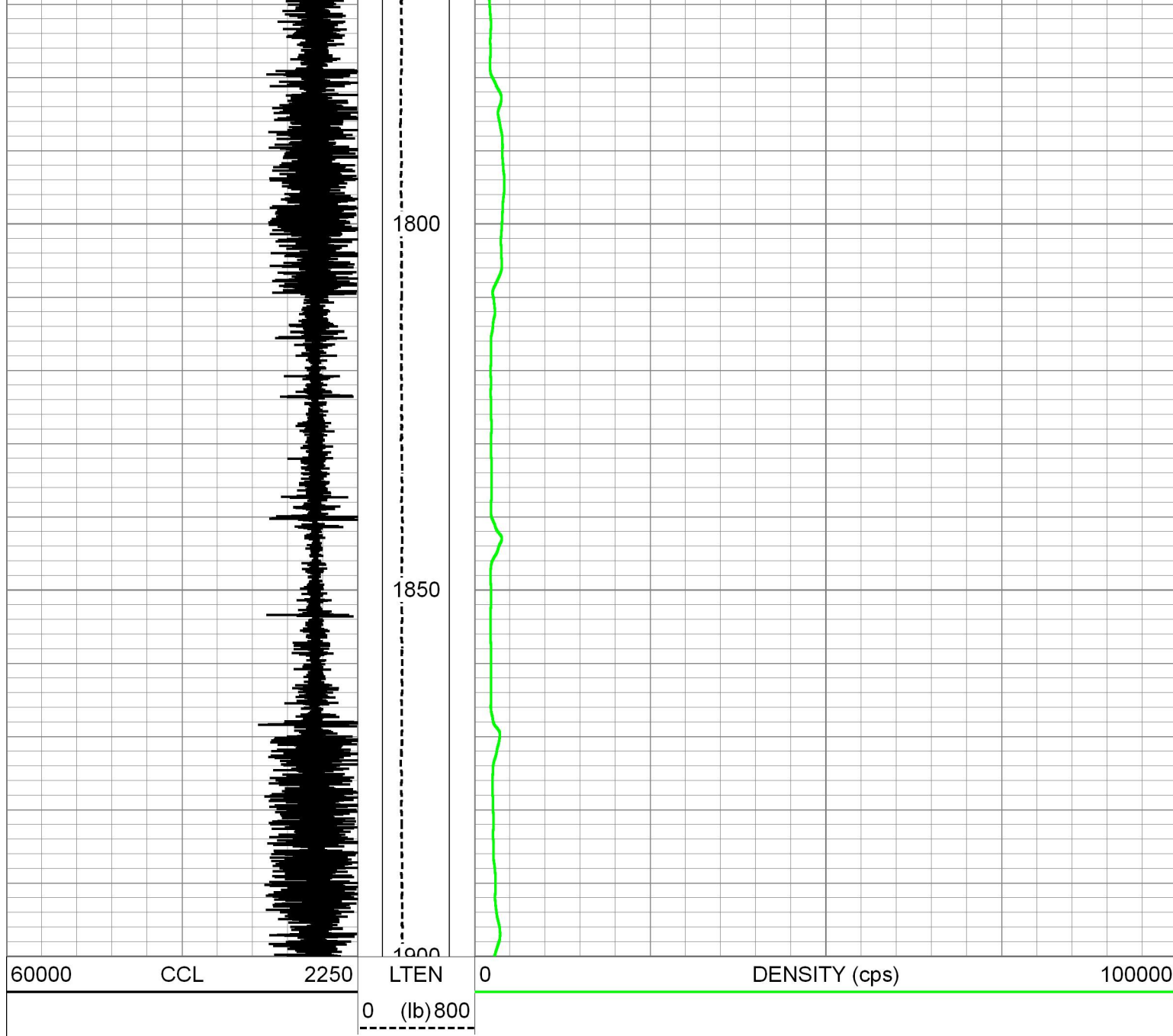
11-May-2017 at 09:45

Database File westernrefinery_lpgs03_20170508_gdt-mit.db
 Dataset Pathname 170511-0945_Den-Initial
 Presentation Format cc-tempdensity
 Dataset Creation Thu May 11 09:44:54 2017
 Charted by Depth in Feet scaled 1:240

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			0 (lb) 800			



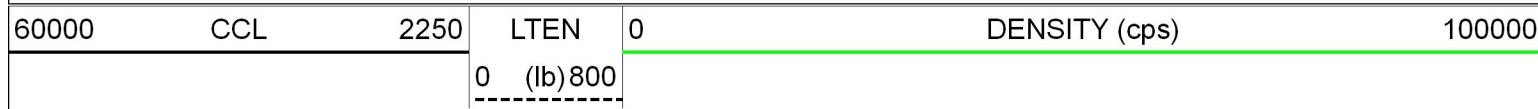


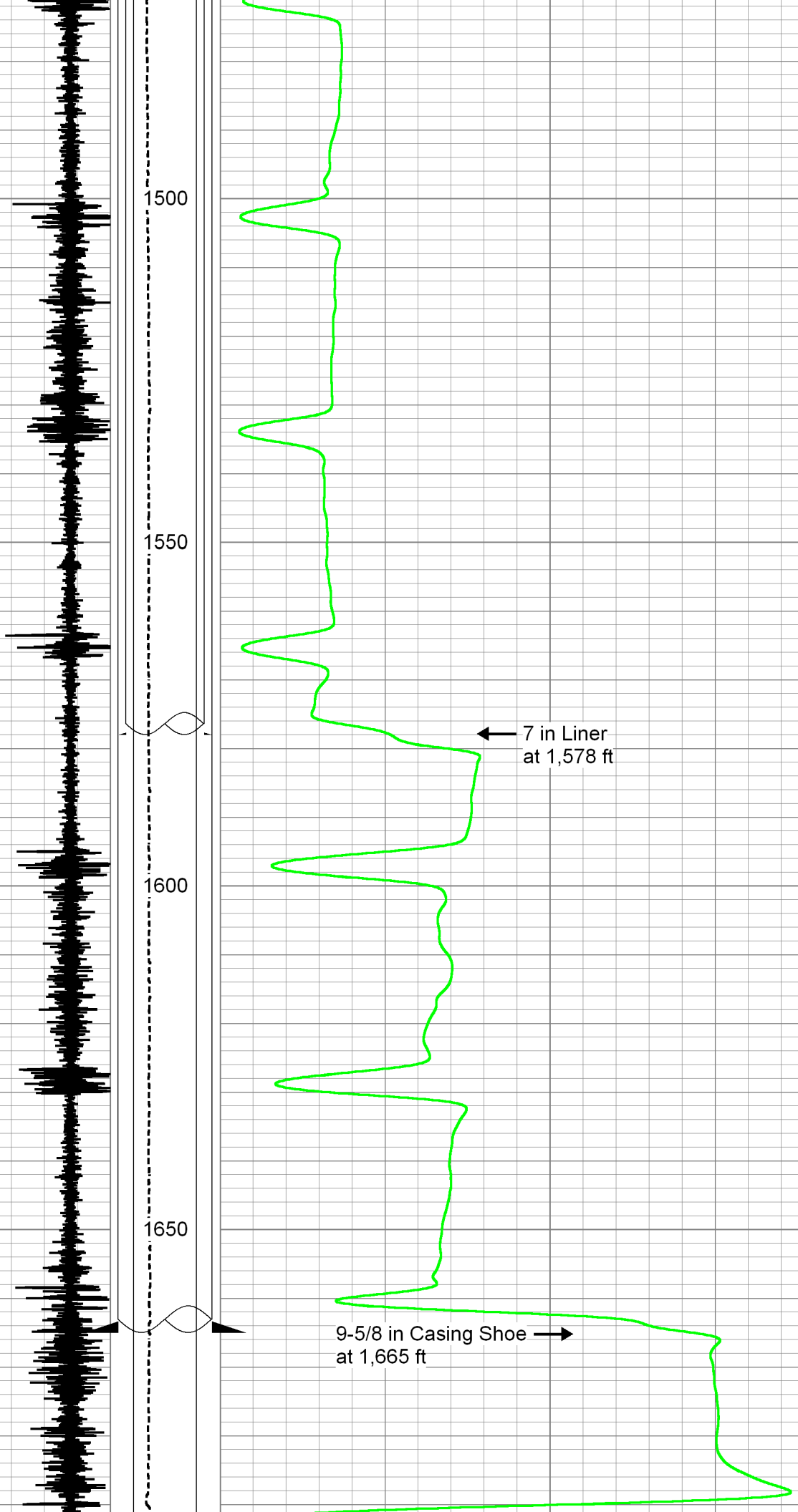


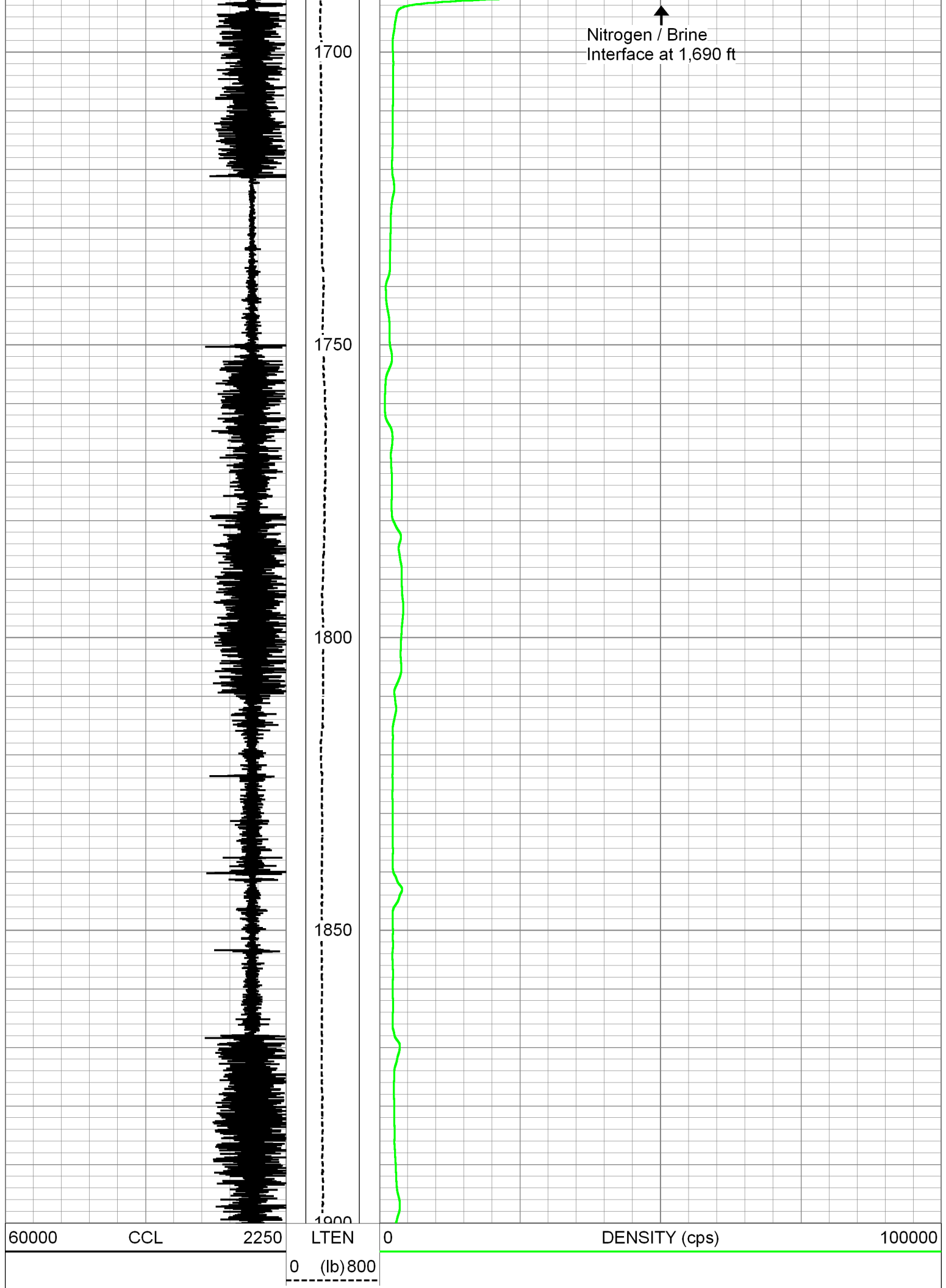
Density - Finalization

12-May-2017 at 09:45

Database File westernrefinery_lpgs03_20170508_gdt-mit.db
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 Presentation Format cc-tempdensity
 Dataset Creation Fri May 12 09:44:35 2017
 Charted by Depth in Feet scaled 1:240









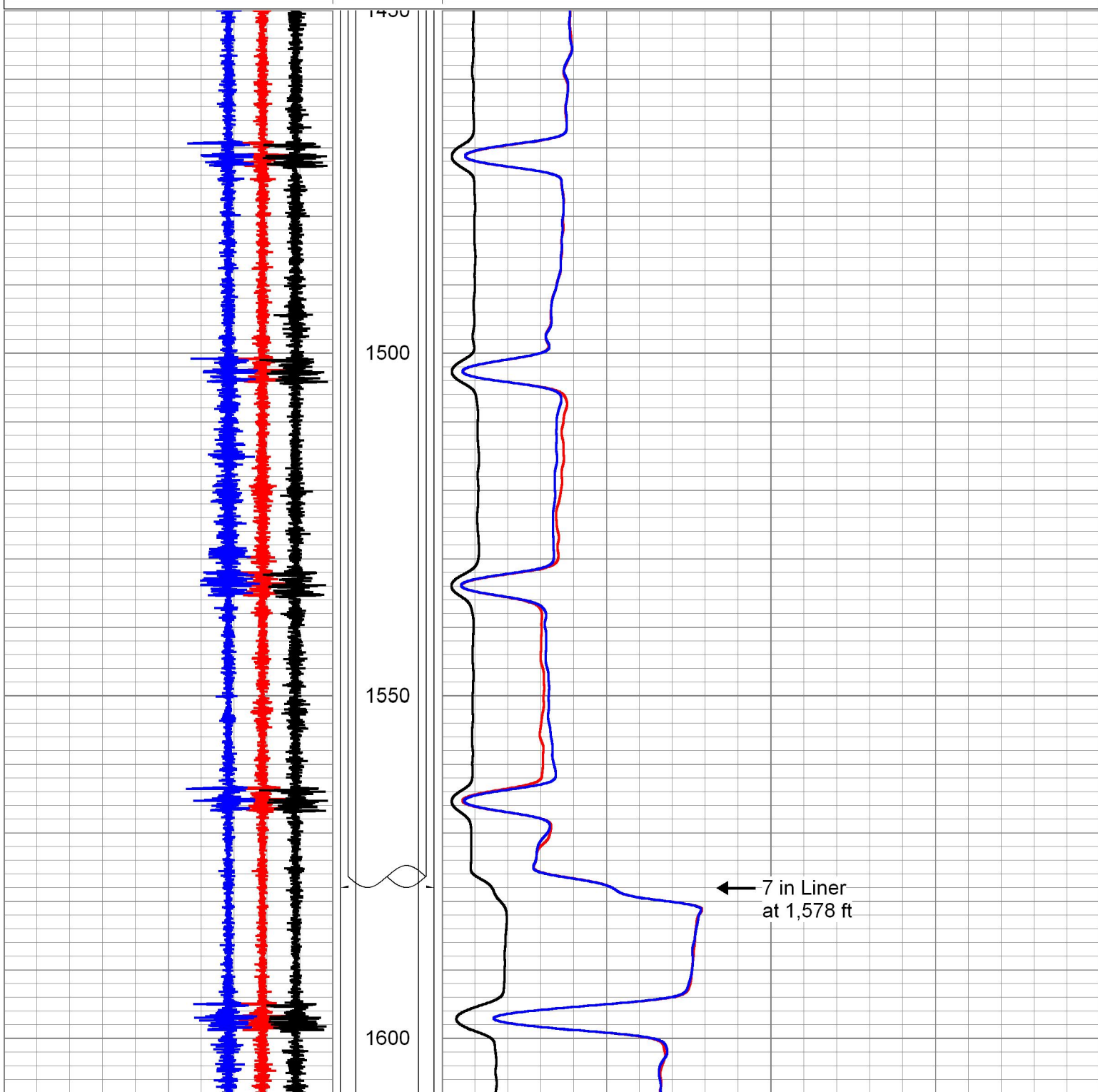
Density - MIT Overlay

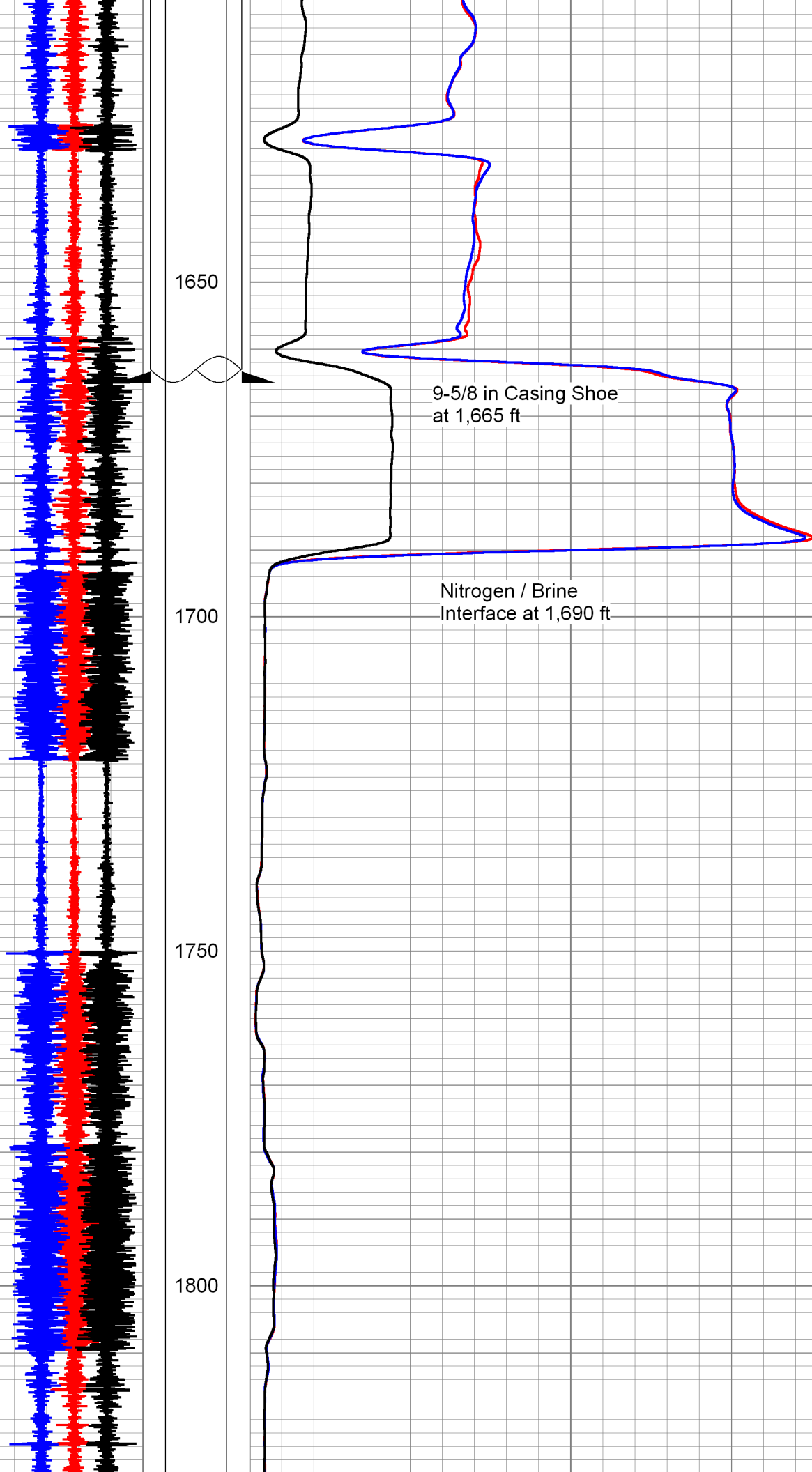
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on 11-May-17 at 16:00, Blue = Finalization on 12-May-17 at 17:00

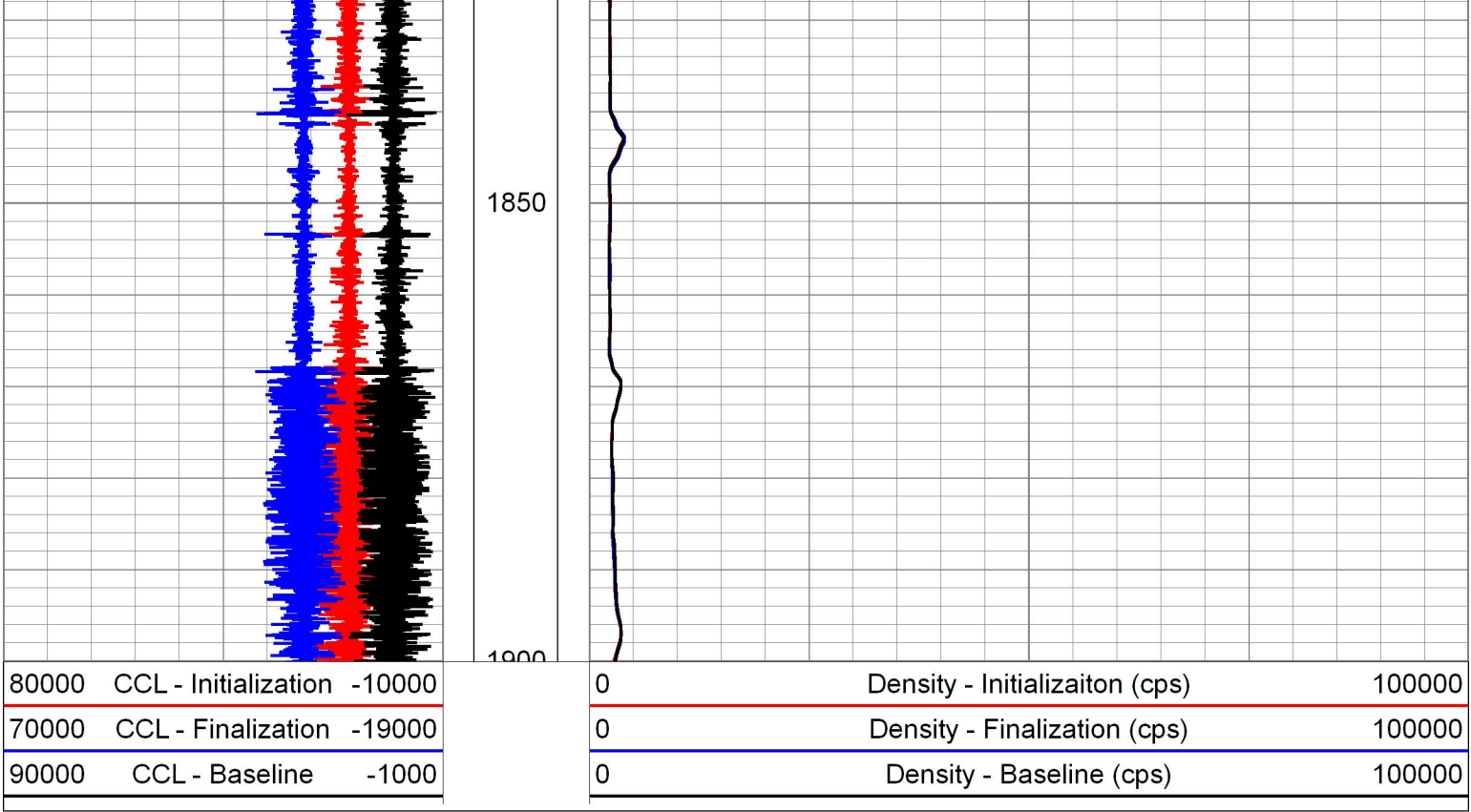
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80000	CCL - Initialization	-10000
70000	CCL - Finalization	-19000
90000	CCL - Baseline	-1000

0	Density - Initializaiton (cps)	100000
0	Density - Finalization (cps)	100000
0	Density - Baseline (cps)	100000







80000	CCL - Initialization	-10000
70000	CCL - Finalization	-19000
90000	CCL - Baseline	-1000

0	Density - Initializaiton (cps)	100000
0	Density - Finalization (cps)	100000
0	Density - Baseline (cps)	100000

		Company	Western Refining Company, LP	
		Well	State LPG Storage No. 003	
		Field	Jal	
		County	Lea County	
		State	New Mexico	
			Country	



MIT - Temperature

Company: Western Refining Company, LP									
Well: State LPG Storage No. 003									
Field: Jal									
Area: Lea County									
State: New Mexico									
Location		Company: Western Refining Company, LP							
N/A		Well: State LPG Storage No. 003							
API # : 30-025-35956		Field: Jal							
SEC: N/A		Area: Lea County							
TWP: N/A		State: New Mexico							
RGE: N/A									
Permanent Datum:		Other Services							
Ground Level		Temperature							
Log Measured From: B.H.F.		Elevation: N/A							
Drilling Measured From: Kelly Bushing		N/A Above P.D.							
		K.B. N/A							
		D.F. N/A							
		G.L. N/A							
Run Information		Run No. 1							
Date of Service		Run No. 2							
Depth Driller or PBTD		Run No. 3							
N/A		Run No. 4							
Empire Depth		2,439 ft							
Bottom Log Interval		2,438 ft							
Top Log Interval		2,438 ft							
Interface Depth		Surface							
N/A		Surface							
Fluid Type		1,690 ft							
Brine		Surface							
Fluid Density		1,690 ft							
N/A		Brine							
Fluid Level		N/A							
Surface		N/A							
Tubing Pressure		Surface							
50 Psi/A		Surface							
Wellhead Connection		400 Psi/A							
4-1/16 in 3K		Surface							
Time - Ran In Well		4-1/16 in 3K							
08:00		4-1/16 in 3K							
Time - Temp. Start		08:30							
09:15		08:45							
Time - Density Start		10:15							
N/A		09:45							
Time - Out of Well		10:30							
17:30		10:30							
Location		Broussard, LA							
Broussard, LA		Broussard, LA							
Unit No. / Wife Size		P-03 / 1/4 in							
P-03 / 1/4 in		P-03 / 1/4 in							
Recorded By		C. Cross							
C. Cross		C. Cross							
Witnessed By		Mr. Will George							
Mr. Will George		Mr. Will George							
CSG / TBG Record		Size							
13-5/8 in		Wt/Ft							
Surface Casing		Top							
54.5 lb/ft		Bottom							
285.5 ft		Surface							
Production Casing		36 lb/ft							
9-5/8 in		Surface							
1,665 ft		7 in							
Liner		23 lb/ft							
Surface		1,578 ft							
Hanging String		4-1/2 in							
N/A		Surface							
38 ft		3-1/2 in							
Drill Pipe		38 ft							
2,430 ft									

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log correlated to the 9-5/8 in Casing Shoe at 1,665 ft

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)

EMPIRE 
WIRELINE, LLC

Merged Temperature Overlay

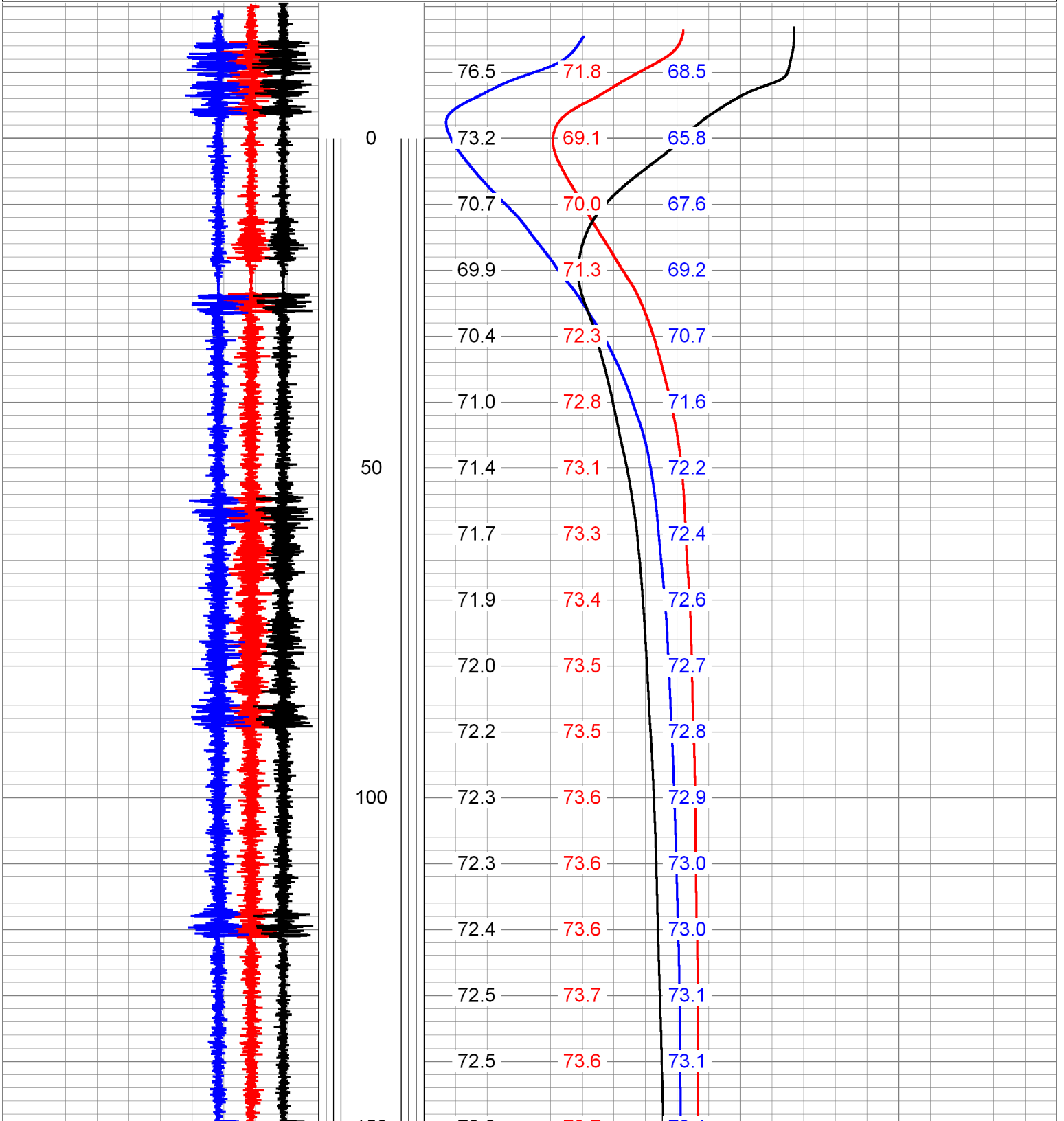
08-May-2017 - Black = Baseline at 09:15,
Red = Initialization at 09:15, Blue = Finalization at 09:20

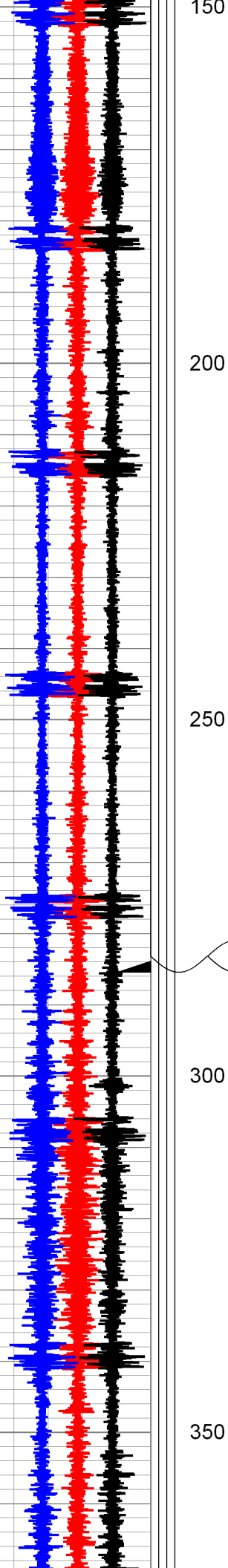
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Presentation Format cc-tempdensitymerg
Dataset Creation Fri May 12 09:37:53 2017
Charted by Depth in Feet scaled 1:240

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70000	CCL - Finalization	-19000
90000	CCL - Baseline	-1000

65	Temp - Initializaiton (degF)	85
65	Temp - Finalization (degF)	85
65	Temp - Baseline (degF)	85

Temp-Base (degF)	Temp-Initial (degF)	Temp-Final (degF)
---------------------	------------------------	----------------------





150

200

250

300

350

72.6	73.7	73.1
72.6	73.7	73.1
72.6	73.7	73.1
72.7	73.7	73.1
72.7	73.7	73.1
72.7	73.7	73.1
72.7	73.7	73.1
72.7	73.7	73.2
72.7	73.7	73.2
72.7	73.7	73.2
72.8	73.7	73.2
72.8	73.8	73.2
72.8	73.8	73.3
72.9	73.9	73.3
72.9	74.0	73.4
73.0	74.1	73.5
73.0	74.2	73.5
73.1	74.3	73.6
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73.3	74.3	73.8
73.3	74.3	73.8



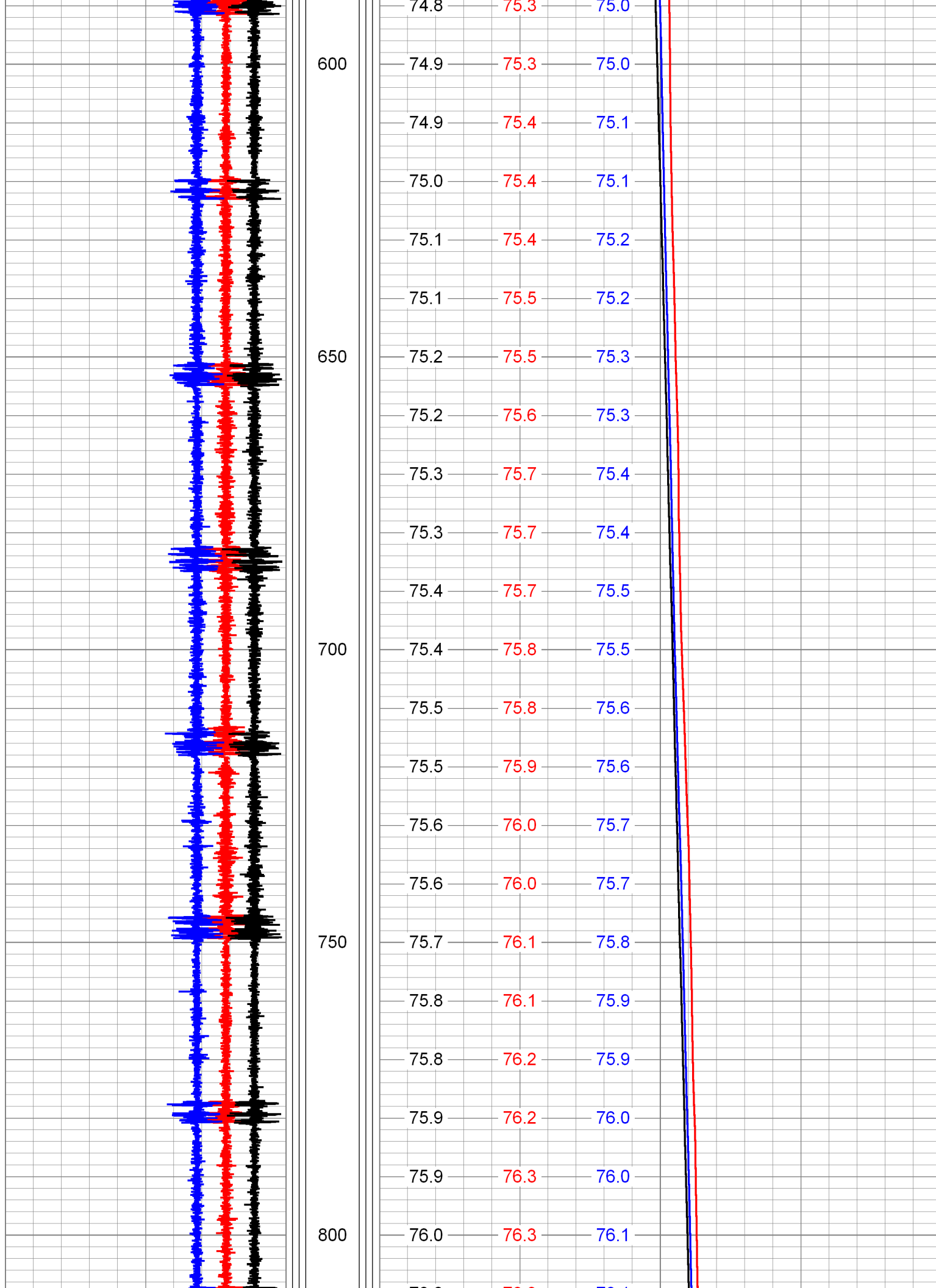
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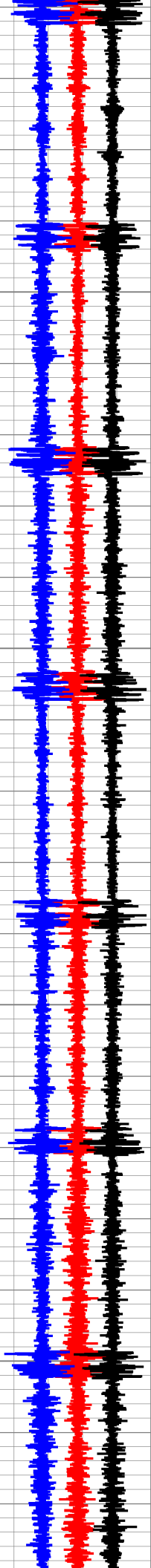
450

500

550

73.3	74.3	73.8
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73.6	74.4	73.9
73.7	74.4	73.9
73.7	74.4	74.0
73.8	74.5	74.0
73.9	74.5	74.1
73.9	74.6	74.2
74.0	74.7	74.2
74.0	74.7	74.3
74.1	74.7	74.3
74.2	74.8	74.4
74.3	74.9	74.5
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74.4	75.0	74.6
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74.6	75.1	74.7
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74.9	75.4	75.0





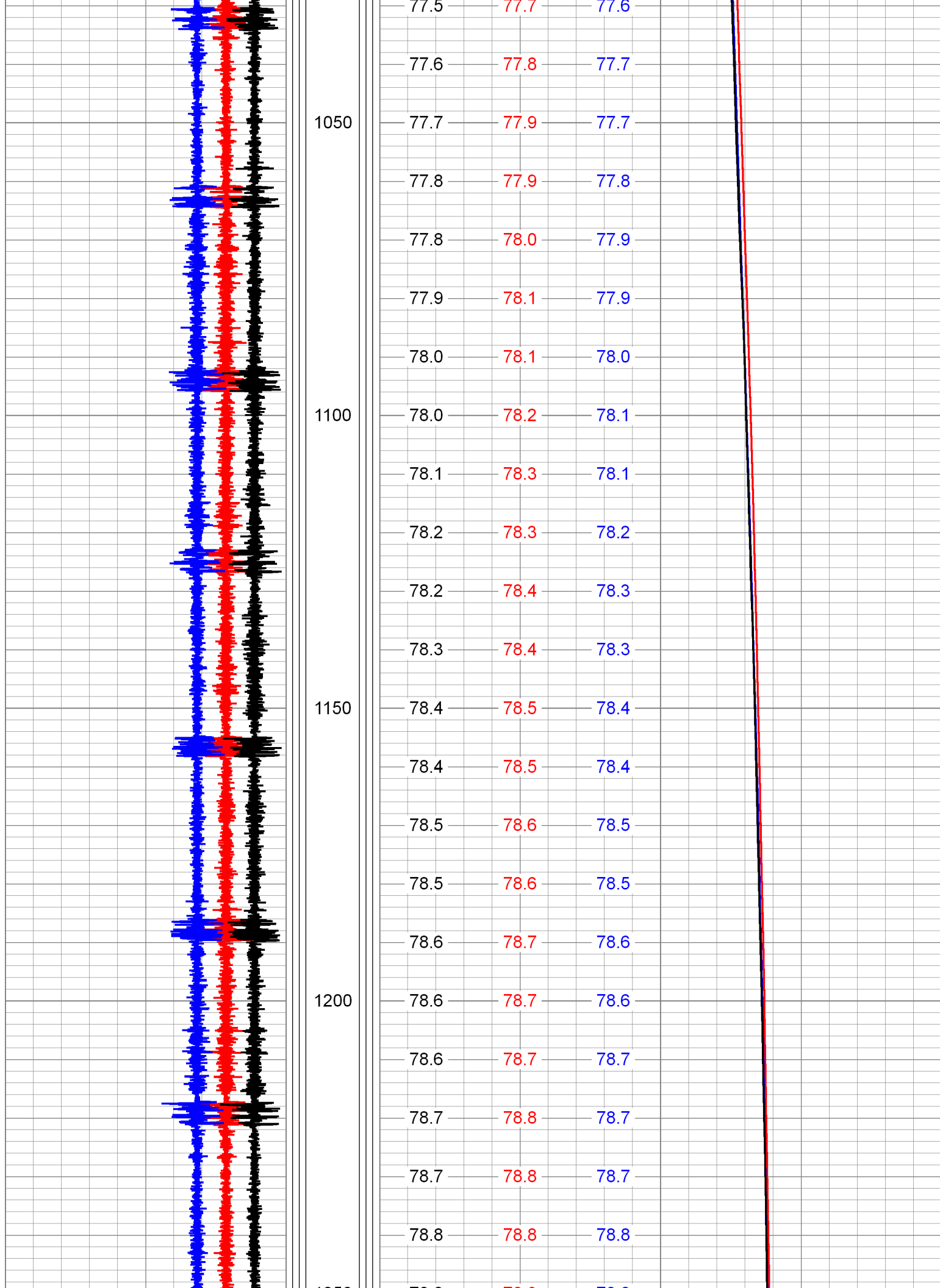
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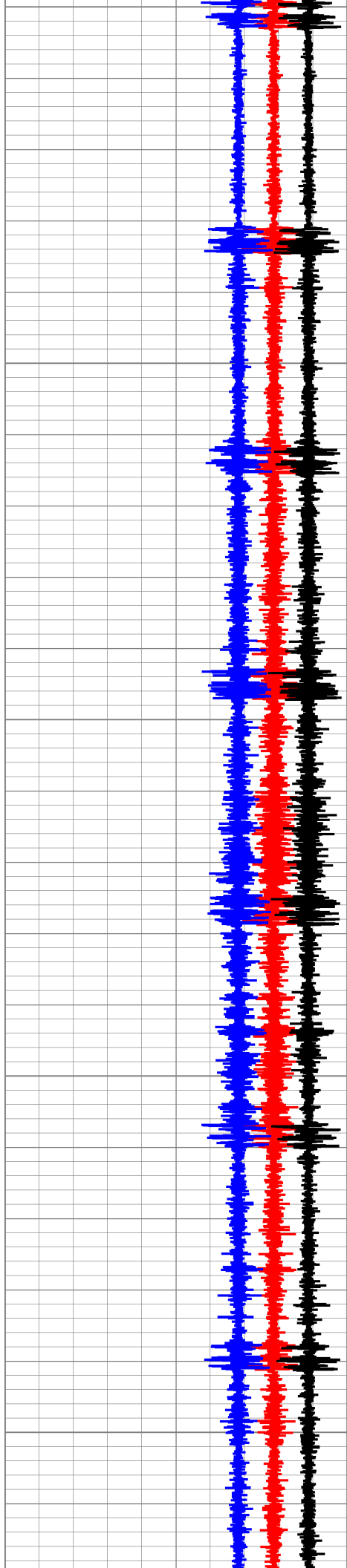
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950

1000

76.0	76.3	76.1
76.1	76.4	76.2
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76.2	76.5	76.3
76.3	76.6	76.3
76.3	76.6	76.4
76.4	76.7	76.5
76.5	76.8	76.5
76.5	76.8	76.6
76.6	76.9	76.7
76.6	76.9	76.7
76.7	77.0	76.8
76.8	77.1	76.9
76.8	77.1	76.9
76.9	77.2	77.0
77.0	77.3	77.1
77.1	77.4	77.2
77.1	77.4	77.2
77.2	77.5	77.3
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77.5	77.7	77.5
77.5	77.7	77.5





1250

1300

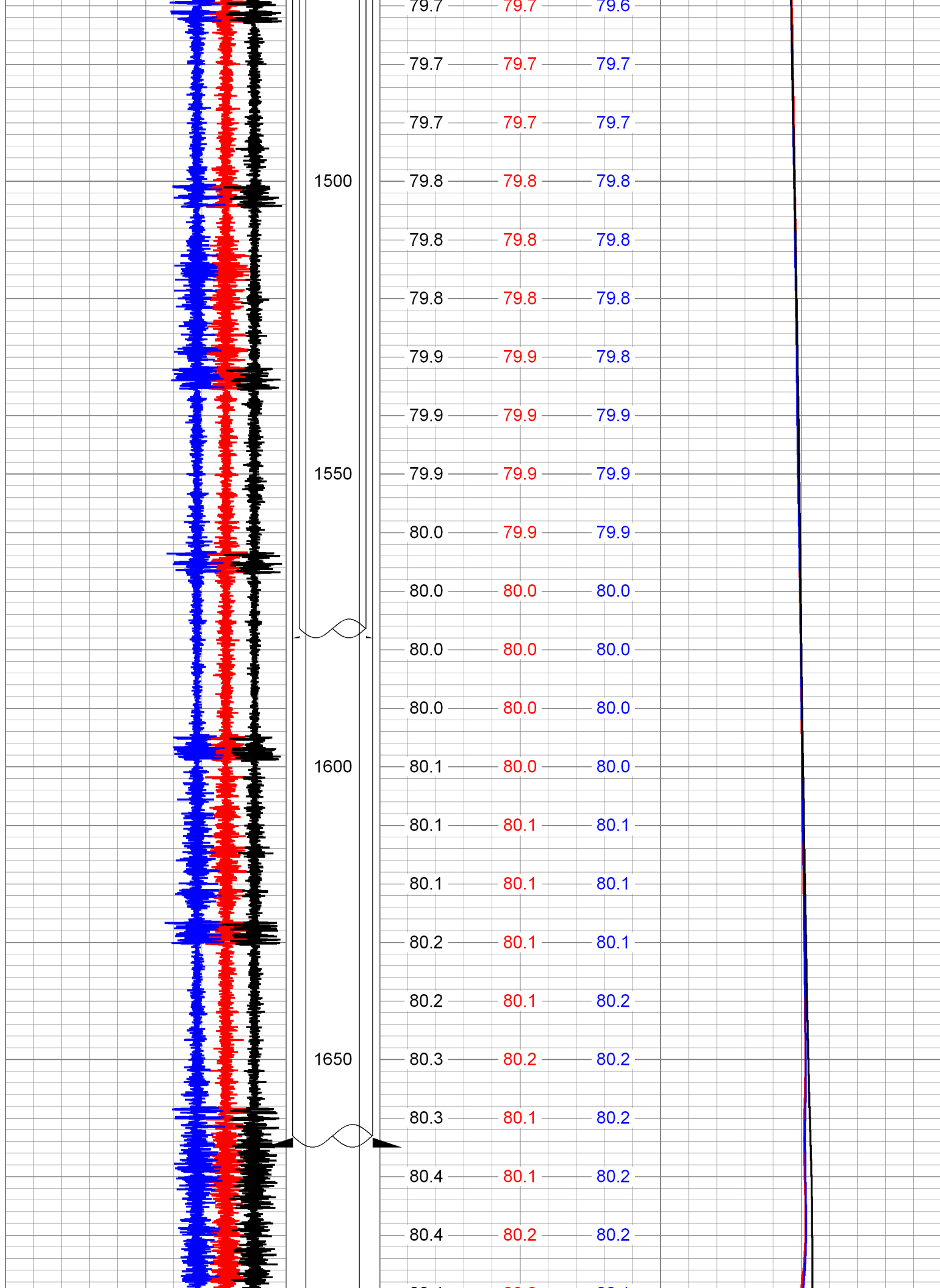
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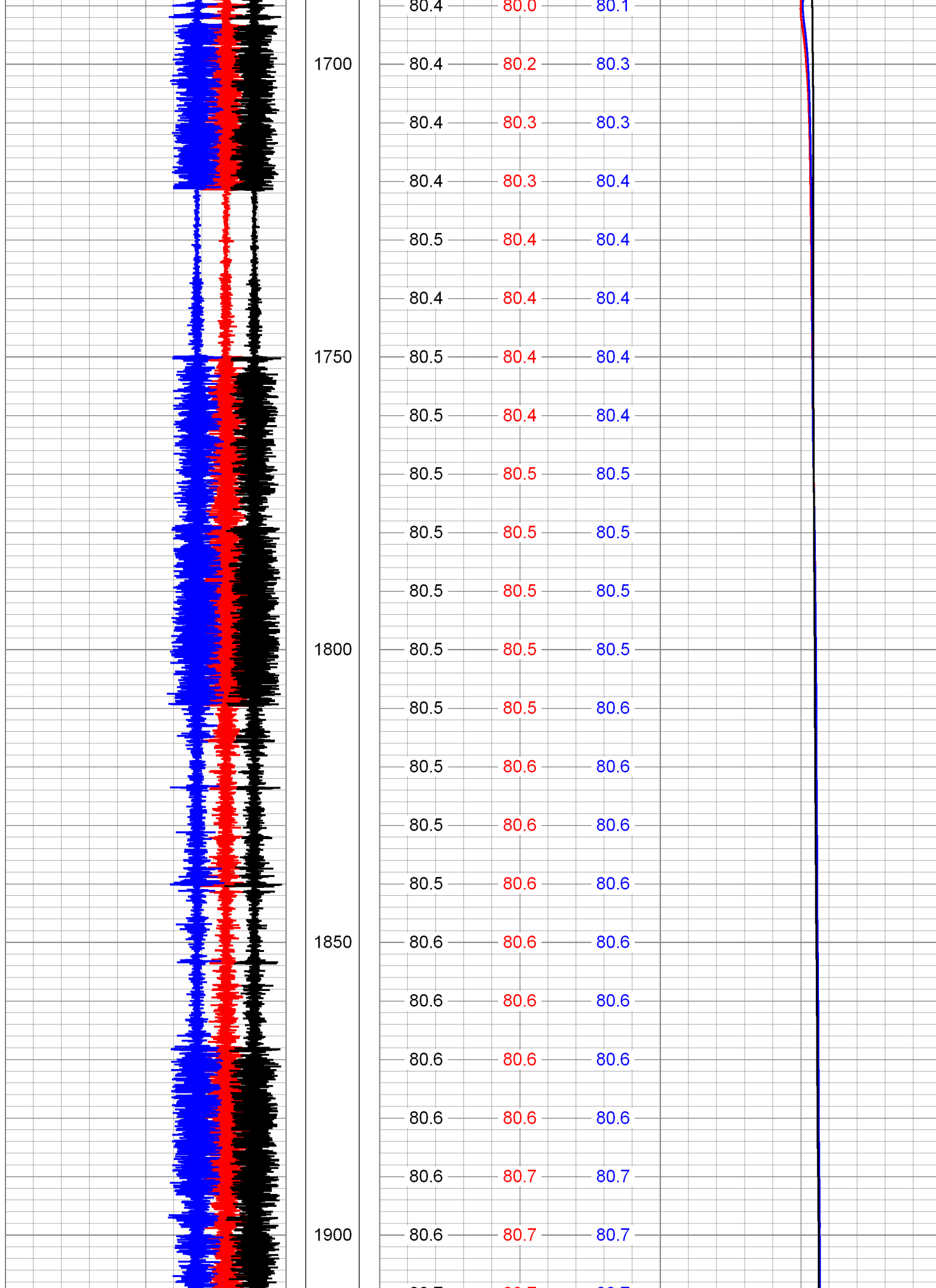
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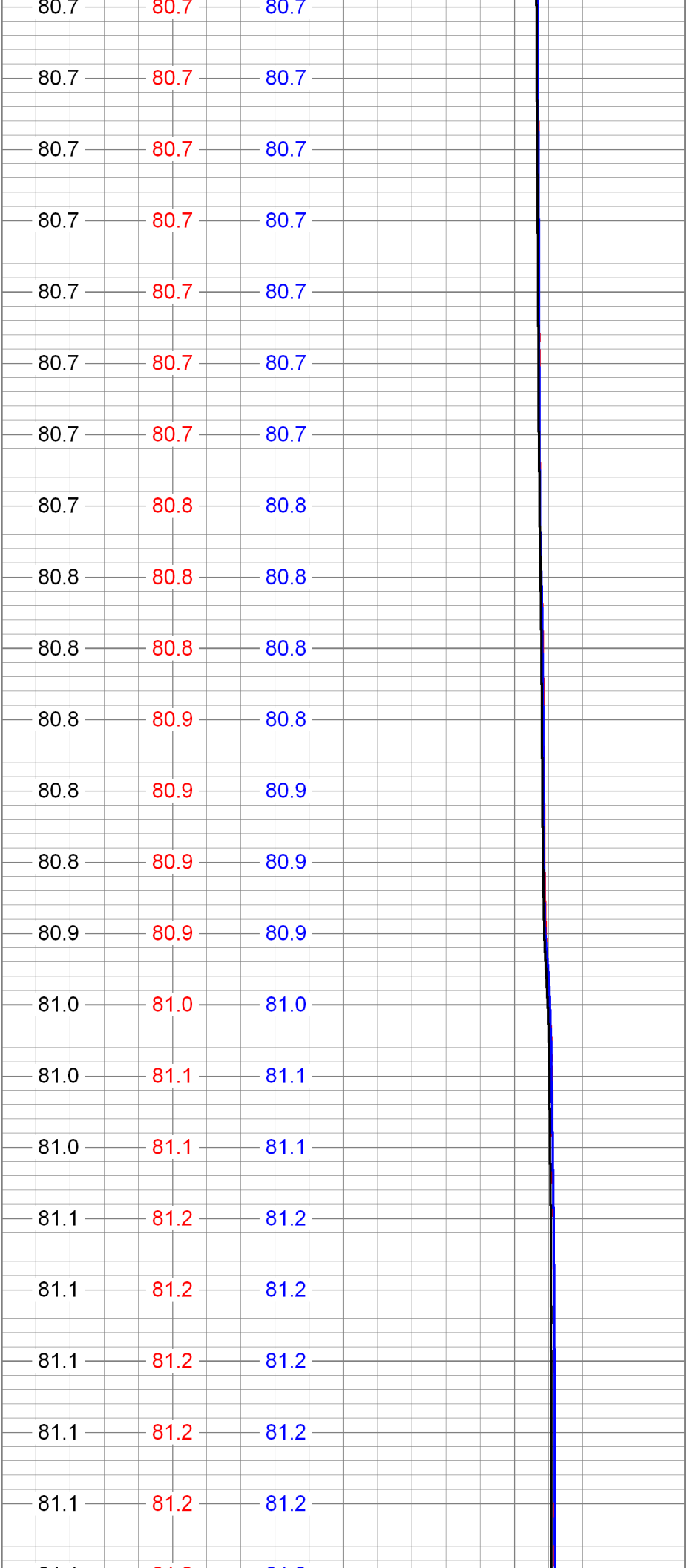
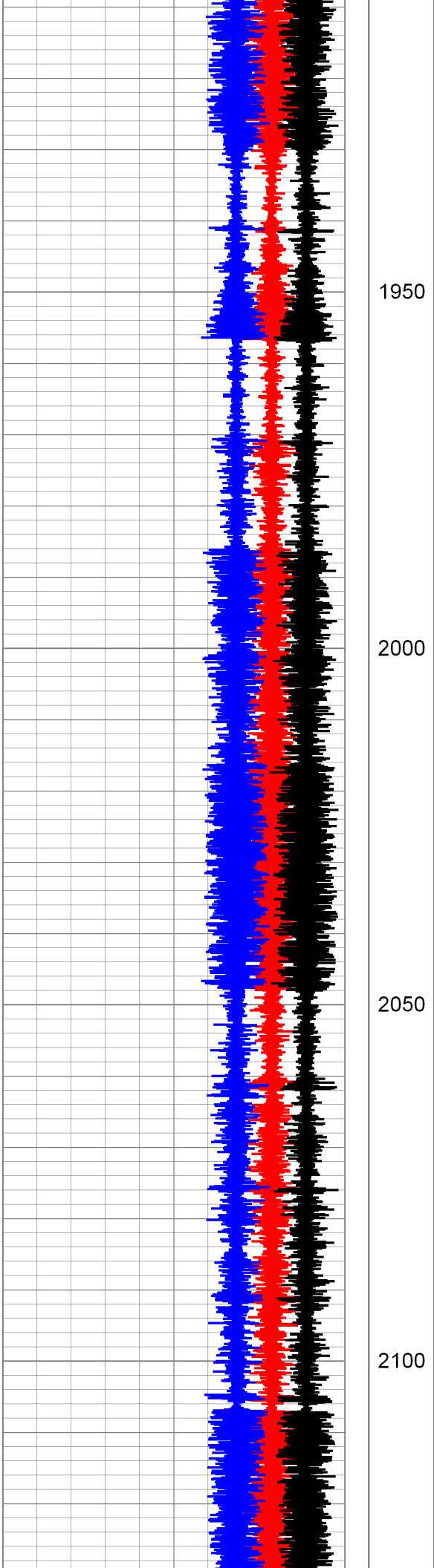
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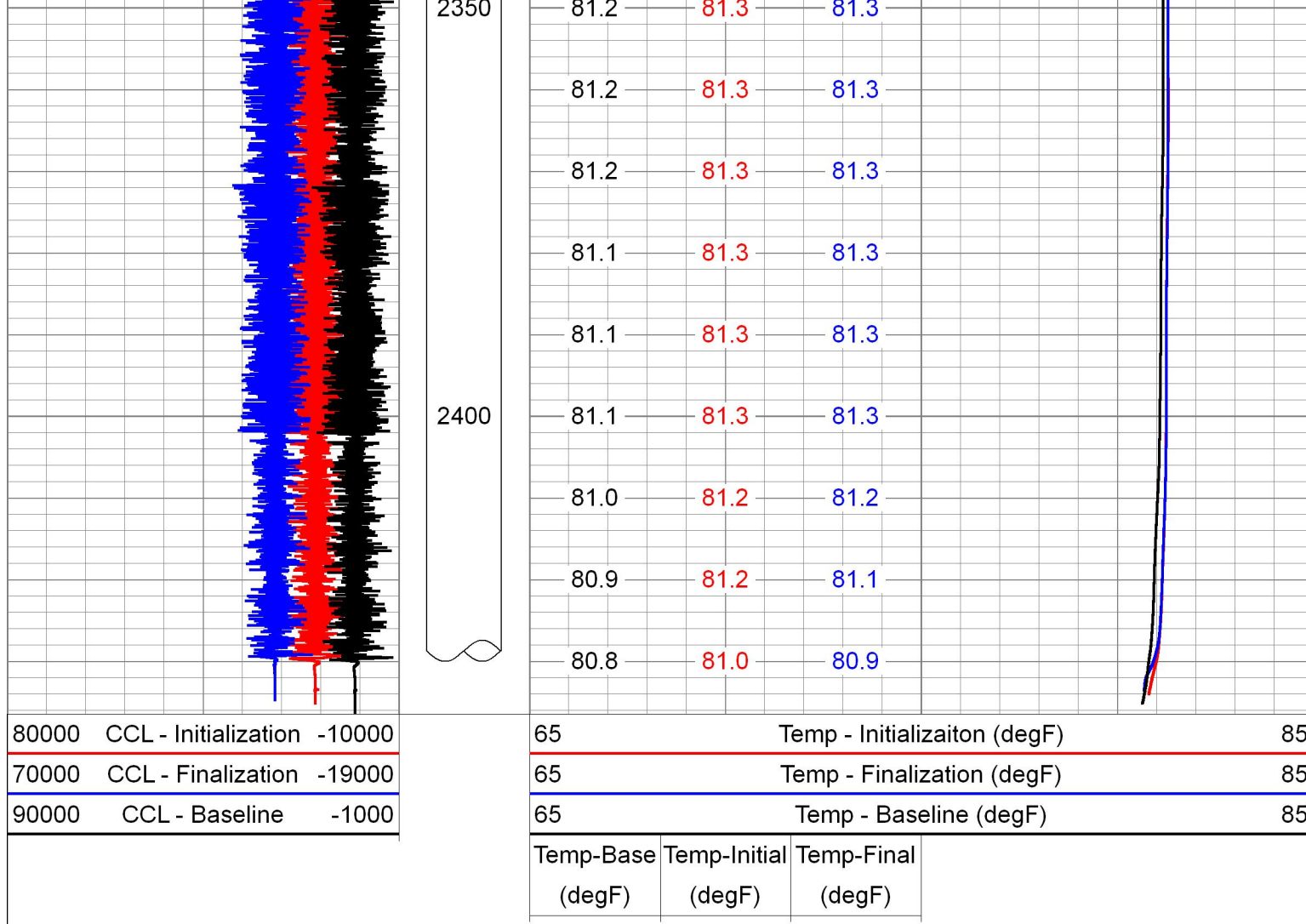
78.8	78.9	78.8
78.8	78.9	78.8
78.9	78.9	78.9
78.9	79.0	78.9
78.9	79.0	78.9
79.0	79.0	79.0
79.0	79.1	79.0
79.0	79.1	79.0
79.1	79.2	79.1
79.1	79.2	79.1
79.2	79.2	79.2
79.2	79.3	79.2
79.2	79.3	79.2
79.3	79.3	79.3
79.3	79.4	79.3
79.4	79.4	79.4
79.4	79.5	79.4
79.5	79.5	79.5
79.5	79.5	79.5
79.6	79.6	79.5
79.6	79.6	79.6
79.6	79.6	79.6
79.5	79.5	79.6











EMPIRE
WIRELINE, LLC

Company	Western Refining Company, LP	
Well	State LPG Storage No. 003	
Field	Jal	
County	Lea County	
State	New Mexico	Country

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, March 1, 2017 11:24 AM
To: Parker, Ken (Ken.Parker@wnr.com)
Cc: Brown, Maxey G, EMNRD; Whitaker, Mark A, EMNRD
Subject: GW-007 (Western Refining, LLP) Jal LPG Storage Facility Well #4 30-025-10920, 30-025-35954, 30-025-35955, Well #3 30-025-35956, and 30-025-35957:

Ken:

Good morning! I am writing to confirm our telephone call discussion and scheduling of the Well #3 and Well #4 Cavern MIT scheduled to be completed on or before July 1, 2017.

Western will submit C-103s with description of the application of Nitrogen for scheduled MITs with the OCD DO1 Staff (see contact info. provided below).

District 1
1625 N. French Drive
Hobbs, New Mexico 88240
OFFICE: (575) 393-6161 FAX: (575) 393-0720
EMERGENCY NUMBER - MOBILE: (575) 370-3186
Business Hours:
7:00 AM-12:00 PM and 1:00 - 4:00 PM
Monday through Friday

[Mark A. Whitaker](#) - Petroleum Engineering Specialist
Phone extension: 120
Mobile: (575) 399-3202

Please contact me if I may be of further assistance. 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”)

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, September 21, 2012 1:25 PM
To: 'Paul Hughes'
Cc: Austin Powers; Sanchez, Daniel J., EMNRD; Gonzales, Elidio L, EMNRD; Gonzales, Elidio L, EMNRD; Whitaker, Mark A, EMNRD; Parker, Ken (Ken.Parker@wnr.com)
Subject: RE: LPG Storage wells 3 & 4-Western Refining, Jal, New Mexico
Attachments: LPG Wells 3 and 4 Formation MITs 9-21-2012.pdf

Mr. Hughes:

Re: LPG Wells No. 3 and 4 Cavern/Formation MITs

Please find attached OCD C-103 Forms Approvals with Conditions. Please contact me if you have questions.

Thank you for your cooperation.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: <http://www.emnrd.state.nm.us/ocd/>
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at <http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>

From: Paul Hughes [<mailto:phughes@geostockus.com>]
Sent: Friday, September 21, 2012 11:18 AM
To: Chavez, Carl J, EMNRD
Cc: Austin Powers; Sanchez, Daniel J., EMNRD; Gonzales, Elidio L, EMNRD
Subject: LPG Storage wells 3 & 4-Western Refining, Jal, New Mexico

Mr. Chavez, pursuant to your discussions with our Engineer Austin Powers, our Engineering department personnel here in Houston have amended the "MIT" prognosis per your suggestions/requirements. See attached for both wells. You will note that we have highlighted in yellow certain components which you so cordially pointed out to us, for your information in the well #3 program. With these modifications in the steps we wish to take, we are hoping that you can grant the permit to proceed.

Thanking you in advance,

Paul T. Hughes, Jr., P.E.

From: "Chavez, Carl J, EMNRD" <CarlJ.Chavez@state.nm.us>
To: "Austin Powers" <apowers@geostockus.com>
Cc: "Sanchez, Daniel J., EMNRD" <daniel.sanchez@state.nm.us>, "Gonzales, Elidio L, EMNRD" <ElidioL.Gonzales@state.nm.us>
Subject: LPG Stoage Wells 3 & 4

Austin:

Good morning. I received your voicemail msg. from yesterday afternoon.

The New Mexico Oil Conservation Division (OCD) has reviewed the MIT procedure for the above subject wells and have the following comments/recommendations:

Comments:

- 1) OCD notices the SMRI guidelines for External MIT (Apparent leak (or gain) +/- sensitivity ≤ 150 kg/day).
- 2) OCD notices that a 10 day test will be run, which complies with the minimum 4-hour requirement.
- 3) OCD has referred and allowed for use in NM the Kansas Brine-Nitrogen Interface "Cavern Test" Guidelines (see attachment "UICLPG-20 Nitrogen Brine Interface.pdf").

Recommendations:

- 1) OCD requirements for salt cavern formation tests require a minimum 4-hour test with chart recorder (see attachment) with 500 or 1000 lb. spring and calibrated instrument within last 6 months. The pass/fail is determined based on a +/- 1% of start pressure. Note: This test is not a Nitrogen Brine Interface Test.
- 2) OCD recommends that the operator comply with the State of Kansas "Pass/Fail" Cavern Minimum Detectable Leak Rate (1000 bbl. nitrogen per year) for the Nitrogen Brine Interface Test.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Department

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Drive, Santa Fe, New Mexico 87505

Office: (505) 476-3490

E-mail: CarlJ.Chavez@State.NM.US<<mailto:CarlJ.Chavez@State.NM.US>>

Website: <http://www.emnrd.state.nm.us/ocd/>

"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at <http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>



us
Geostock

UNDERGROUND STORAGE ENGINEERING

Paul (PT) Hughes, Jr., P.E.

Drilling Manager

16420 Park Ten Place, Suite 450, Houston, TX 77084

Cell: 832-715-9060 (Main #)
Direct: 281 944 3027
Fax: 281 944 3042

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N French Dr, Hobbs, NM 88240
District II - (575) 748-1283
811 S First St, Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd, Aztec, NM 87410
District IV - (505) 476-3460
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-103
Revised August 1, 2011

WELL API NO. 30 - 025 - 35956	
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6 State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage	
8. Well Number 3	
9 OGRID Number 248440	
10 Pool name or Wildcat Langlie Mattix	
11 Elevation (Show whether DR, RKB, RT, GR, etc) 3310 ft GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER <input checked="" type="checkbox"/>		OTHER <input type="checkbox"/>	

13 Describe proposed or completed operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 19 15.7.14 NMAC For Multiple Completions. Attach wellbore diagram of proposed completion or recompletion

See attached documents

Spud Date:

Rig Release Date:

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

SIGNATURE

on behalf of Western Refining Company, L.P.

Type or print name Paul T. Hughes, JR., P.E.

For State Use Only

TITLE Drilling Manager

DATE 9/1/2012

E-mail address: phughes@geostockys.com

PHONE: (832) 715-9060

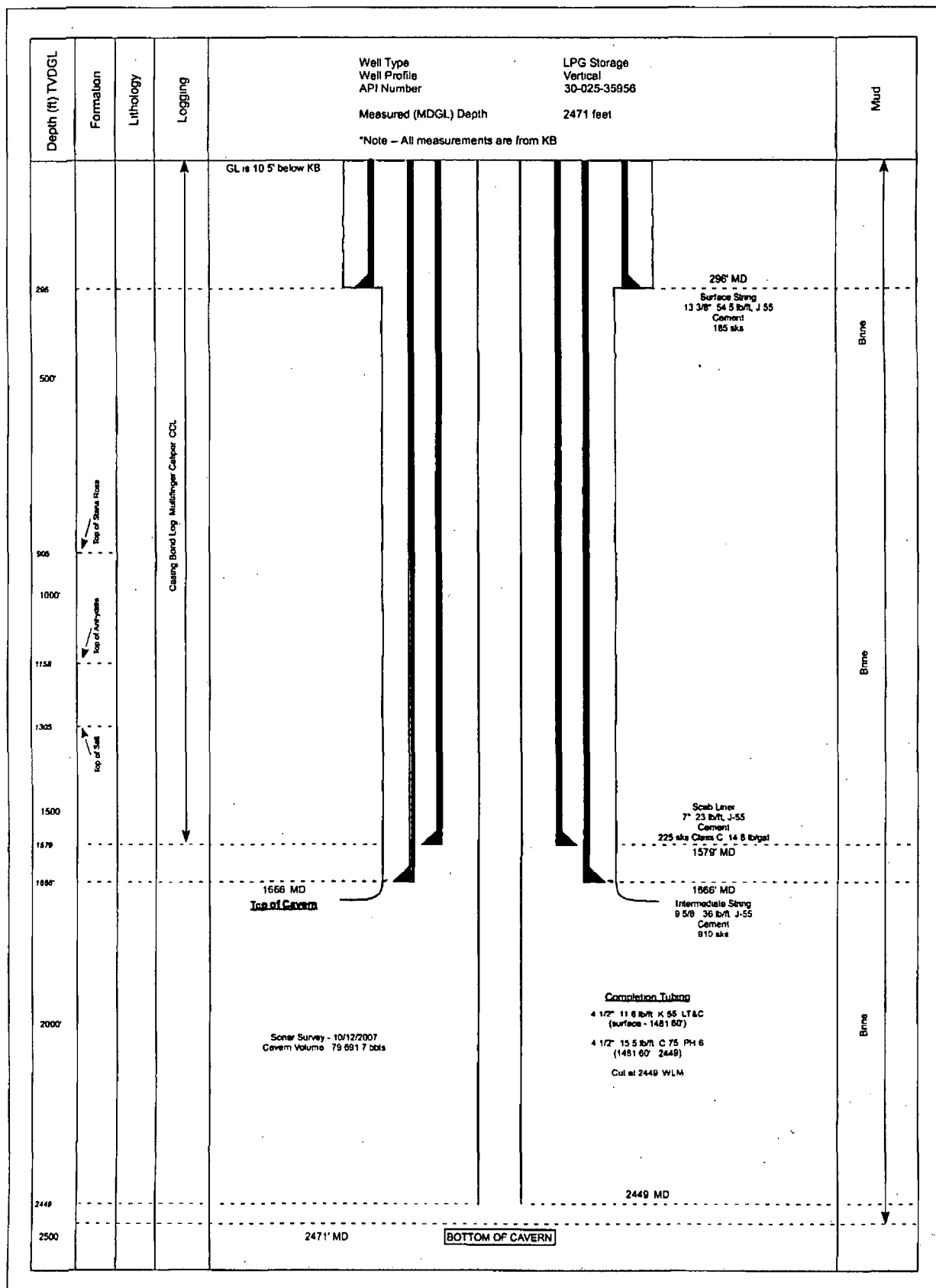
APPROVED BY:

Conditions of Approval (if any)

TITLE Environmental Engineer

DATE 9/21/2012

9/11-2012 * See attached conditions of approval



16420 PARK TEN PLACE S450 HOUSTON TX 77084		Jal Storage, State LPG Well #3																			
DRAWN BY J A Powers		DATE 8/30/12																			
CHECKED BY P Hughes		DATE 8/30/12																			
APPROVED BY R Kleinenberg		DATE 8/30/12																			
CLIENT Western Refining Company, L P		DRAWING REF / No																			
THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION AND IS PROTECTED BY COPYRIGHT IT MAY NOT BE REPRODUCED TRANSFERRED OR USED WITHOUT PRIOR WRITTEN CONSENT FROM GEOSTOCK U.S. INC.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>JA</td> <td>3</td> <td>3</td> <td>00</td> <td>12</td> <td>003</td> <td>D</td> <td>P</td> <td>O</td> </tr> <tr> <td>Project Name</td> <td>Type</td> <td>Discipline</td> <td>Task</td> <td>Year</td> <td>Change log</td> <td>Activity Code</td> <td>Type of doc</td> <td>Revision Index</td> </tr> </table>		JA	3	3	00	12	003	D	P	O	Project Name	Type	Discipline	Task	Year	Change log	Activity Code	Type of doc	Revision Index
JA	3	3	00	12	003	D	P	O													
Project Name	Type	Discipline	Task	Year	Change log	Activity Code	Type of doc	Revision Index													



16420 Park Ten Place Drive
Suite 450
Houston, TX, 77084
Phone: 281 944 3000
Fax: 281 944 3042

UNDERGROUND STORAGE CONSULTING ENGINEERS

Jal Storage - State LPG Well No. 3
MIT Workover Procedure
Friday, September 21, 2012

Chrono: JA3300/12 005/O/Z/O

Subject: Jal Storage Abridged Procedure – State LPG Well No. 3 – MIT Workover

Dear Mark,

Geostock US has put together the technical and commercial components for the below mentioned operations. Please find in this document all pertinent action items and steps planned during the intervention of these wells. The objective is to remove the 4 1/2" tubing, inspect/test the 7" scab liner, inspect/test the 4 1/2" casing, re-run the tubing, and perform a Mechanical Integrity Test on the cavern. Geostock US and Western Refining take the stance that safety is of the highest priority throughout these operations.

Please note all site operations will be during daylight hours only and the following procedure may be altered to accommodate this schedule.

Any questions, concerns, or you require greater detail; please contact Paul Hughes, (832) 715-9060, or Austin Powers, (281) 216-0911.

Well Information:

Well Name: State LPG Well No. 3
API Number: 30-025-35956
County: Lea
TVD: 2471'
KB: 10.5' above GL

Procedure:

Workover Operations Begin

1. Move rig to location
2. HSE Site Works
3. R/U and check equipment
4. Ensure pressure on wellhead is null
5. M/U to tree and circulate well and ensure well is static
6. Safety meeting and JSA to be conducted
7. De-stud tree and lay aside, send for re-fab / maintenance
8. N/U manifold, BOP, gas buster, mud cross, etc and test both high/low



9. Prep rig floor to pull tubing, P/U spear, and stab into tubing
10. Visually inspect, rabbit joints, and lay down, call bad joints
11. Close hydril and R/U wireline unit and prep for logging
12. R/U wireline lubricator and perform downhole logging with CBL and multi-finger caliper t/ 1579'
13. R/D wireline unit and demob from location
14. P/U packer and RIH w/ 4 1/2" tubing string or work string, set packer at 7" shoe
15. Install TIW valve on tubing
16. Close same, close hydril
17. Test backside of 4 1/2", 350 psi for 30 minutes on a 60 minute chart; ensure all casing valves are open during test
18. Bleed pressure off packer and POOH w/ 4 1/2" tubing/work string and lay down packer
19. RIH w/ 4 1/2" tubing, hydrostatic test joints below rotary while RIH, R/D testers
20. Land tubing in wellhead and install backpressure valve, test valve is holding
21. N/D mud cross, BOP, gas buster and N/U tree, test high/low
22. Rig down unit and move to Well #4

MIT Operations Begin

The cavern will be subjected to an external mechanical integrity test via the brine-nitrogen interface test method as described by the Kansas Department of Health and Environment Brine-Nitrogen Interface "Cavern Test" Guidelines.

23. Conduct safety meeting and JSA with site personnel before commencement of MIT operations
24. Install all necessary surface equipment
25. Install pressure and temperature recorders on the 4 1/2" tubing and the annulus of the 4 1/2" tubing (ID of 7")
26. Pressure test monitors and recording equipment
27. N/U manifold, frac tanks, vac trucks, all to wellhead
28. Prime pump and prep for brine injection
29. Begin injecting brine and fill well
30. Once static condition is reached ensure all valves are closed, except for injection line
31. Start brine injection into the 4 1/2" tubing, pressure increase not to exceed 150 psi/hr
32. Inject brine until the annulus, between the 7" and 4 1/2", reaches 364 psig
33. Isolate wellhead using a double valve combination and shut in at surface
34. Monitor the wellhead pressure for 24 hours or until pressure has stabilized (decrease of less than 10 psi/day), pressure to be maintained via brine injection when required
35. Conduct safety meeting and JSA with site personnel before commencement of cavern pressurization via nitrogen



36. Begin R/U of nitrogen supply company, wireline density logging
37. N/U nitrogen line to the wellhead, test same
38. Take note of current brine surface pressure on 4 1/2" tubing and annulus
39. Ensure nitrogen pressure of greater than current brine pressure in surface system
40. Open wellhead valve to allow injection of nitrogen into the annulus of 4 1/2"
41. During nitrogen injection, bleed off brine from 4 1/2" tubing as needed to keep casing shoe at or below test pressure, and monitor interface level with wireline density log
42. Inject nitrogen until nitrogen interface is below casing seat (surface annulus pressure approx. 1,184 psig.)
43. Allow cavern to stabilize overnight, monitor pressure as required
44. Conduct safety meeting and JSA with site personnel
45. Once confirmation of cavern stabilization begin prep for logging
46. R/U wireline unit and required equipment
47. M/U lubricator to wellhead and test same
48. RIH with sinker bar and gauge ring to approximately 1700' to confirm 4 1/2" tubing clearance, may depend on final EOT depth
49. POOH and lay down logging tools
50. Run a nitrogen-brine interface measurement log (pulsed-neutron) in the 4 1/2" tubing to verify the brine-nitrogen interface depth and pressure/temperature log.
51. Monitor the wellhead pressures for 240 hours
52. Repeat the nitrogen-brine interface measurement and pressure/temperature logs
53. Pass/Fail of test to be in accordance with the Kansas Brine-Nitrogen Interface "Cavern Test" Guidelines. Minimum detectable leak rate (MDLR) must be less than 1000 bbl/yr. Calculated nitrogen leak rate (CNLR) must be less than MDLR.

V	Unit volume of borehole, bbl/ft	27
R	Resolution of interface tool, ft	1
T	Duration of test, days	10
MDLR	Min. Detectable leak Rate, bbl/yr	985.5

54. Data to be analyzed and reported to Western Refining Company, L.P
55. Submit 'Form C-103' per requirements upon successful completion of site operations

END OF OPERATIONS

**Western Refining Company, L.P.
Jal LPG Storage Facility (GW-007)
LPG Storage Wells No. 3 and 4**

**C-103 Form
OCD Santa Fe Office
Conditions of Approval
(9/21/2012)**

- 1) The operator shall submit a final C-103 Sundry Notice for each well with all applicable well testing information attached to the notice within 30 days of well testing completion. Information consistent with the State of Kansas "Nitrogen Brine Interface" Cavern Test Form shall be provided with the final C-103 Notice information.

Please be advised that OCD's approval does not relieve Western Refining, L.P. from responsibility if their operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Western Refining, L.P. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources

CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103

Revised August 1, 2011

HOBBS OGD

SEP 10 2012

RECEIVED

WELL API NO.

30-025-35957

5. Indicate Type of Lease

STATE ☒ FEE ☐

6 State Oil & Gas Lease No

7 Lease Name or Unit Agreement Name

State LPG Storage Well

8 Well Number

4

9. OGRID Number

248440

10 Pool name or Wildcat

Langlie Mattix

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, L.P.

3 Address of Operator

6500 Townbridge Drive El Paso, TX 79905

4. Well Location

Unit Letter M 1000 feet from the south line and 1230 feet from the west line
Section 32 Township 23S Range 37E NMPM County Lea

11 Elevation (Show whether DR, RKB, RT, GR, etc.)

3310 ft GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER:

☐

13 Describe proposed or completed operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 19.15 7 14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

See attached documents

Spud Date:

Rig Release Date:

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

SIGNATURE

TITLE Drilling Manager

DATE 9/7/2012

on behalf of Western Refining Company L.P.

Type or print name Paul T. Hughes, JR., P.E.

E-mail address phughes@geostockus.com

PHONE (832) 715-9060

For State Use Only

APPROVED BY:

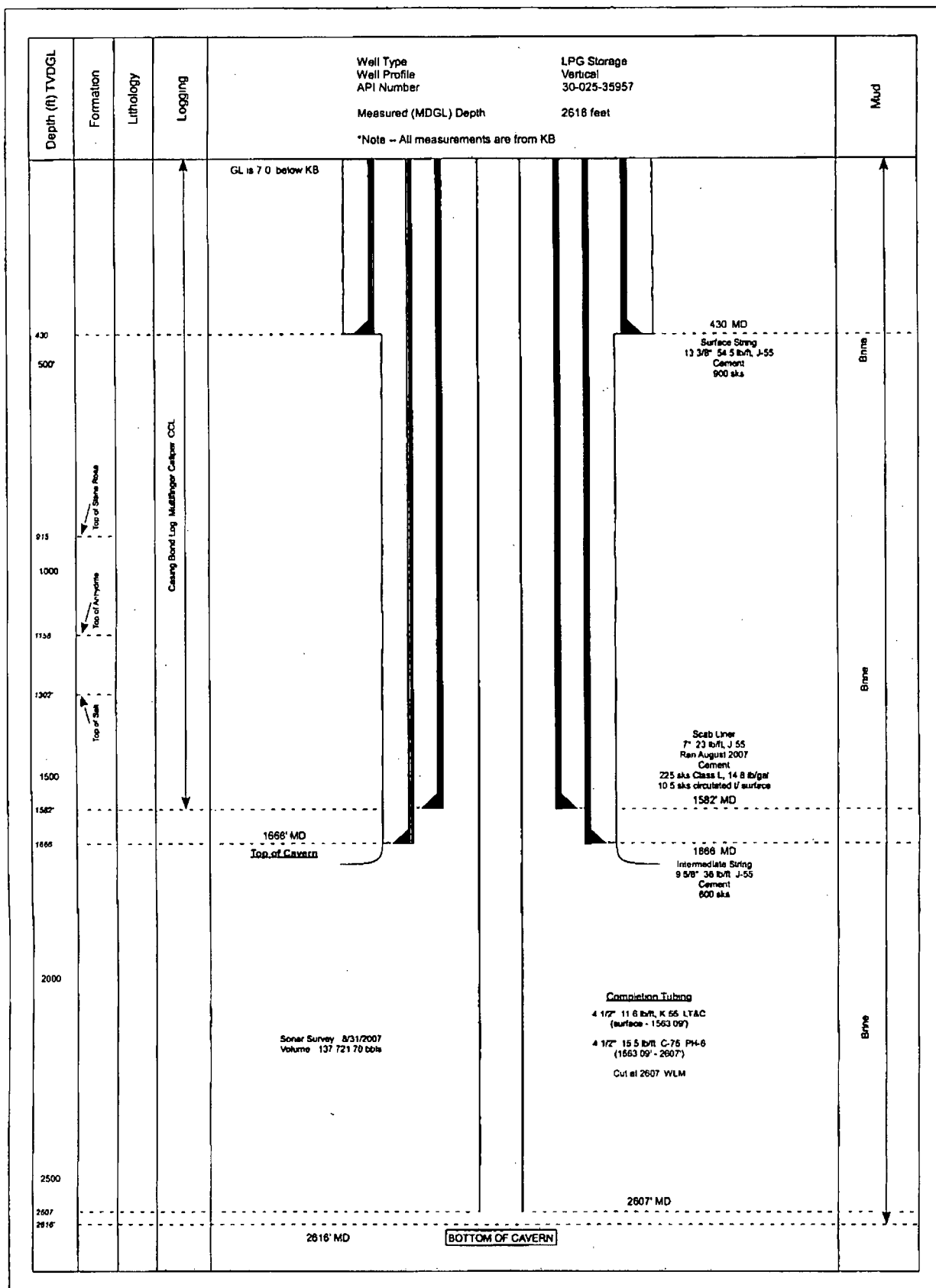
TITLE Environmental Engineer

DATE 9/21/2012

Conditions of Approval (if any).

ELG 9-11-2012

* See attached conditions of approval



 16420 PARK TEN PLACE S450 HOUSTON TX 77064		<h2 style="margin: 0;">Jal Storage, State LPG Well #4</h2>																			
DRAWN BY J A Powers		DATE 8/30/12																			
CHECKED BY P Hughes		DATE 8/30/12																			
APPROVED BY R Kienenberg		DATE 8/30/12																			
CLIENT Western Refining Company, L P		DRAWING REF / No																			
THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION AND IS PROTECTED BY COPYRIGHT. IT MAY NOT BE REPRODUCED, TRANSMITTED OR USED WITHOUT PRIOR WRITTEN CONSENT FROM GEOSTOCK U.S. Inc.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">JA</td> <td style="width: 10%;">3</td> <td style="width: 10%;">3</td> <td style="width: 10%;">00</td> <td style="width: 10%;">12</td> <td style="width: 10%;">004</td> <td style="width: 10%;">D</td> <td style="width: 10%;">P</td> <td style="width: 10%;">O</td> </tr> <tr> <td>Project Name</td> <td>Type</td> <td>Discipline</td> <td>Task</td> <td>Year</td> <td>Change log</td> <td>Activity Code</td> <td>Type of doc</td> <td>Revision Index</td> </tr> </table>		JA	3	3	00	12	004	D	P	O	Project Name	Type	Discipline	Task	Year	Change log	Activity Code	Type of doc	Revision Index
JA	3	3	00	12	004	D	P	O													
Project Name	Type	Discipline	Task	Year	Change log	Activity Code	Type of doc	Revision Index													



16420 Park Ten Place Drive
Suite 450
Houston, TX, 77084
Phone: 281 944 3000
Fax: 281 944 3042

UNDERGROUND STORAGE CONSULTING ENGINEERS

Jal Storage - State LPG Well No. 4
MIT Workover Procedure
Friday, September 21, 2012

Chrono: JA3300/12 006/O/Z/O

Subject: Jal Storage Abridged Procedure – State LPG Well No. 4 – MIT Workover

Dear Mark,

Geostock US has put together the technical and commercial components for the below mentioned operations. Please find in this document all pertinent action items and steps planned during the intervention of these wells. The objective is to remove the 4 1/2" tubing, inspect/test the 7" scab liner, inspect/test the 4 1/2" casing, re-run the tubing, and perform a Mechanical Integrity Test on the cavern. Geostock US and Western Refining take the stance that safety is of the highest priority throughout these operations.

Please note all site operations will be during daylight hours only and the following procedure may be altered to accommodate this schedule.

Any questions, concerns, or you require greater detail; please contact Paul Hughes, (832) 715-9060, or Austin Powers, (281) 216-0911.

Well Information:

Well Name: State LPG Well No. 4
API Number: 30-025-35957
County: Lea
TVD: 2471'
KB: 7' above GL

Procedure:

Workover Operations Begin

1. Move rig to location
2. HSE Site Works
3. R/U and check equipment
4. Ensure pressure on wellhead is null
5. M/U to tree and circulate well and ensure well is static
6. Safety meeting and JSA to be conducted
7. De-stud tree and lay aside, send for re-fab / maintenance
8. N/U manifold, BOP, gas buster, mud cross, etc and test both high/low



9. Prep rig floor to pull tubing, P/U spear, and stab into tubing
10. Visually inspect, rabbit joints, and lay down, call bad joints
11. Close hydril and R/U wireline unit and prep for logging
12. R/U wireline lubricator and perform downhole logging with CBL and multi-finger caliper t/ 1582'
13. R/D wireline unit and demob from location
14. P/U packer and RIH w/ 4 1/2" tubing string or work string, set packer at 7" shoe
15. Install TIW valve on tubing
16. Close same, close hydril
17. Test backside of 4 1/2", 350 psi for 30 minutes on a 60 minute chart; ensure all casing valves are open during test
18. Bleed pressure off packer and POOH w/ 4 1/2" tubing/work string and lay down packer
19. RIH w/ 4 1/2" tubing, hydrostatic test joints below rotary while RIH, R/D testers
20. Land tubing in wellhead and install backpressure valve, test valve is holding
21. N/D mud cross, BOP, gas buster and N/U tree, test high/low
22. Rig down unit and move off of location

MIT Operations Begin

The cavern will be subjected to an external mechanical integrity test via the brine-nitrogen interface test method as described by the Kansas Department of Health and Environment Brine-Nitrogen Interface "Cavern Test" Guidelines

23. Conduct safety meeting and JSA with site personnel before commencement of MIT operations
24. Install all necessary surface equipment
25. Install pressure and temperature recorders on the 4 1/2" tubing and the annulus of the 4 1/2" tubing (ID of 7")
26. Pressure test monitors and recording equipment
27. N/U manifold, frac tanks, vac trucks, all to wellhead
28. Prime pump and prep for brine injection
29. Begin injecting brine and fill well
30. Once static condition is reached ensure all valves are closed, except for injection line
31. Start brine injection into the 4 1/2" tubing, pressure increase not to exceed 150 psi/hr
32. Inject brine until the annulus, between the 7" and 4 1/2", reaches 364 psig
33. Isolate wellhead using a double valve combination and shut in at surface
34. Monitor the wellhead pressure for 24 hours or until pressure has stabilized (decrease of less than 10 psi/day), pressure to be maintained via brine injection when required
35. Conduct safety meeting and JSA with site personnel before commencement of cavern pressurization via nitrogen



36. Begin R/U of nitrogen supply company, wireline density logging
37. N/U nitrogen line to the wellhead, test same
38. Take note of current brine surface pressure on 4 1/2" tubing and annulus
39. Ensure nitrogen pressure of greater than current brine pressure in surface system
40. Open wellhead valve to allow injection of nitrogen into the annulus of 4 1/2"
41. During nitrogen injection, bleed off brine from 4 1/2" tubing as needed to keep casing shoe at or below test pressure, and monitor interface level with wireline density log
42. Inject nitrogen until nitrogen interface is below casing seat (surface annulus pressure approx. 1,184 psig.)
43. Allow cavern to stabilize overnight, monitor pressure as required
44. Conduct safety meeting and JSA with site personnel
45. Once confirmation of cavern stabilization begin prep for logging
46. R/U wireline unit and required equipment
47. M/U lubricator to wellhead and test same
48. RIH with sinker bar and gauge ring to approximately 1700' to confirm 4 1/2" tubing clearance, may depend on final EOT depth
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53. Pass/Fail of test to be in accordance with the Kansas Brine-Nitrogen Interface "Cavern Test" Guidelines. Minimum detectable leak rate (MDLR) must be less than 1000 bbl/yr. Calculated nitrogen leak rate (CNLR) must be less than MDLR.

V	Unit volume of borehole, bbl/ft	27
R	Resolution of interface tool, ft	1
T	Duration of test, days	10
MDLR	Min. Detectable leak Rate, bbl/yr	985.5

54. Data to be analyzed and reported to Western Refining Company, L.P
55. Submit 'Form C-103' per requirements upon successful completion of site operations

END OF OPERATIONS

**Western Refining Company, L.P.
Jal LPG Storage Facility (GW-007)
LPG Storage Wells No. 3 and 4**

**C-103 Form
OCD Santa Fe Office
Conditions of Approval
(9/21/2012)**

- 1) The operator shall submit a final C-103 Sundry Notice for each well with all applicable well testing information attached to the notice within 30 days of well testing completion. Information consistent with the State of Kansas "Nitrogen Brine Interface" Cavern Test Form shall be provided with the final C-103 Notice information.

Please be advised that OCD's approval does not relieve Western Refining, L.P. from responsibility if their operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Western Refining, L.P. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

July 23, 2012

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505

RECEIVED OGD
2012 JUL 24 P 12:38

Mr. Chavez:

This letter is to request an extension for the completion of the MIT on wells 3 & 4 at Western Refining Company's Jal Facility under permit GW-007. Previous MITs were completed on August 19, 2007 and Western is requesting an extension for completion until November 30, 2012.

Western has been in negotiations with a contractor to complete the MITs since March of this year and those contract negotiations just recently dissolved, hence the request for extension. Western is in the process of contracting another company to conduct the MITs for wells # 3 and # 4.

Your attention to this request is greatly appreciated.

Ron Weaver



Western Refining Company, Inc
Regional Terminals Manager
50 C.R. 4990
Bloomfield, NM 87413

Cc:

Randy Schmaltz
Allen Hains
Ken Parker

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, July 24, 2012 10:56 AM
To: 'Weaver, Ron'
Cc: Schmaltz, Randy; Parker, Ken; Hains, Allen; VonGonten, Glenn, EMNRD; Gonzales, Elidio L, EMNRD
Subject: RE: Jal LPG Storage Facility (GW-007) MIT extension request (LPG Storage Wells 3 & 4)

Ron:

The New Mexico Oil Conservation Division approves the MIT completion date of November 30, 2012.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: <http://www.emnrd.state.nm.us/ocd/>

"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at <http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>

From: Weaver, Ron [<mailto:Ron.Weaver@wnr.com>]
Sent: Monday, July 23, 2012 9:41 AM
To: Chavez, Carl J, EMNRD
Cc: Schmaltz, Randy; Parker, Ken; Hains, Allen
Subject: MIT extension request

Good morning Carl,

Attached is a request for extension of our Jal Facility MITs for wells #3 and #4. The hard copy of this request has been placed in the mail.

Thanks!

Ron Weaver
Western Refining Company, Inc
Regional Terminals Manager

From: blmrefscanner@wnr.com [<mailto:blmrefscanner@wnr.com>]
Sent: Sunday, July 22, 2012 10:27 PM
To: Weaver, Ron
Subject: Message from KMBT_C552



WNR
NYSE

July 23, 2012

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505

Mr. Chavez:

This letter is to request an extension for the completion of the MIT on wells 3 & 4 at Western Refining Company's Jal Facility under permit GW-007. Previous MITs were completed on August 19, 2007 and Western is requesting an extension for completion until November 30, 2012.

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Your attention to this request is greatly appreciated.

Ron Weaver

A handwritten signature in black ink that reads 'Ron Weaver'.

Western Refining Company, Inc
Regional Terminals Manager
50 C.R. 4990
Bloomfield, NM 87413

Cc:

Randy Schmalz
Allen Hains
Ken Parker

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, November 03, 2011 8:48 AM
To: 'Parker, Ken'
Cc: Sanchez, Daniel J., EMNRD; Gonzales, Elidio L, EMNRD
Subject: Jal LPG Storage Facility (GW-007) Western Refining L.P. Annual LPG Storage Cavern Pressure Tests (Lea County)

Ken:

Good morning. I have completed a review of your submitted MITs for 2011. The MITs all passed.

The OCD will file the C-103 with charts under API# Well File and under OCD Online "GW-007" MITs.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>
"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:
<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

From: Parker, Ken [<mailto:Ken.Parker@wnr.com>]
Sent: Friday, September 09, 2011 9:33 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Annual LPG Storage Cavern Pressure Test

Cell number is 915-471-1607.

From: Chavez, Carl J, EMNRD [CarlJ.Chavez@state.nm.us]
Sent: Friday, September 09, 2011 7:58 AM
To: Parker, Ken; Gonzales, Elidio L, EMNRD; Griswold, Jim, EMNRD
Subject: RE: Annual LPG Storage Cavern Pressure Test

Ken:

Please provide your cell phone contact number in the event an OCD staff person may be available. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>
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<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

From: Parker, Ken [<mailto:Ken.Parker@wnr.com>]

Sent: Friday, September 09, 2011 8:45 AM

To: Chavez, Carl J, EMNRD; Gonzales, Elidio L, EMNRD; Griswold, Jim, EMNRD

Subject: Annual LPG Storage Cavern Pressure Test

Carl,

I should be ready to start testing on Tuesday the 13th. My plan is to use 10 pound brine water and normal butane/isobutane to reach 700 pound of cavern pressure. Each cavern will stabilize for 24 hour before the 4 hour test begins.

Please have your witness give me a call on Monday and I can give an exact start time.

Ken

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, October 27, 2011 12:50 PM
To: Parker, Ken
Cc: Sanchez, Daniel J., EMNRD
Subject: Western Refining, L.P. (GW-007) LPG Storage Well MITs

Ken:

Good afternoon. The OCD is in receipt of your MITs and will contact you if we have questions.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <http://www.emnrd.state.nm.us/oed/>

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<http://www.emnrd.state.nm.us/oed/environmental.htm#environmental>)

ANNUAL LPG WELL MIT Results

OPERATOR: Western Refining Company

GW PERMIT NUMBER: GW-007

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954

31055 WELL 2: 30-025-35955

31055 WELL 3: 30-025-35956

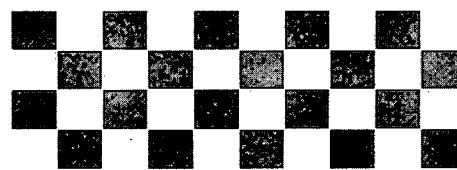
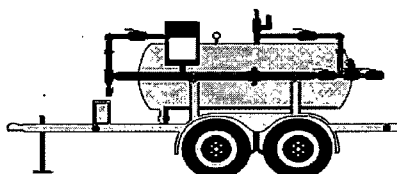
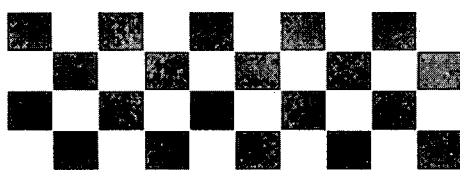
31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 10-25-11

METERING & TESTING SERVICES, INC.



SOPHISTICATED TOOLS TO PRODUCE WELLS MORE EFFICIENTLY

Well Checkers for the Permian Basin

METERING & TESTING

Certification

11300 West Interstate 20 East

Odessa, TX 79765

(432)563-1445

Company:	M&T Hobbs	Lease:	N/A	Date:	9/8/2011
County:	Midland	State:	TX	Location:	N/A
Purchaser:	N/A	Crystal Gauge SER:	442385	Station Number:	N/A
Make of Meter:	Barton	Serial Number:	265A-1557	Gas Gravity:	N/A
Differential Range:	N/A	Static Range:	0-1000 PSI	Temperature Range:	0-150 DEG.
Average Differential:	N/A	Average Static:	N/A	Average Temperature:	N/A
Line Size:	N/A	Upstream:	N/A	Downstream:	N/A
Orifice Size:	N/A	Orifice Condition:	N/A	Seal Condition:	N/A
Flange or Pipe Taps:	N/A	Vanes:	N/A	Calculated Beta Ratio:	N/A
Pen Arc:	OK	Pen Drag:	OK	Clock Rotation:	Programable

Calibration Data

Differential		
Found	C/G	Left
NA	NA	NA

Static		
Found	C/G	Left
0	0	0
200	200	200
400	400	400
600	600	600
800	800	800
1000	1000	1000

Temperature		
Found	Therm	Left
41	41	41
75	75	75
98	98	98
143	143	143

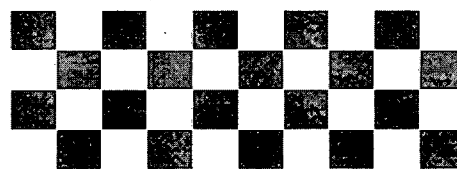
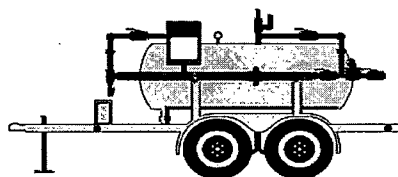
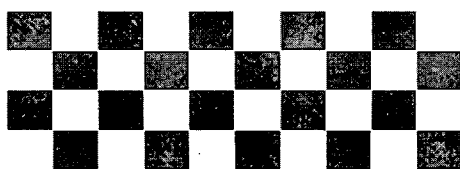
Meter(was) in calibration as found

Tester: Tester: D. Franklin

Witness: Witness

Witness: Witness:

METERING & TESTING SERVICES, INC.



SOPHISTICATED TOOLS TO PRODUCE WELLS MORE EFFICIENTLY

Well Checkers for the Permian Basin

METERING & TESTING Certification

11300 West Interstate 20 East
Odessa, TX 79765
(432)563-1445

Company:	M&T Hobbs	Lease:	N/A	Date:	9/8/2011
County:	Midland	State:	TX	Location:	N/A
Purchaser:	N/A	Crystal Gauge SER:	442385	Station Number:	N/A
Make of Meter:	Barton	Serial Number:	P051	Gas Gravity:	N/A
Differential Range:	N/A	Static Range:	0-1000 PSI	Temperature Range:	0-150 DEG.
Average Differential:	N/A	Average Static:	N/A	Average Temperature:	N/A
Line Size:	N/A	Upstream:	N/A	Downstream:	N/A
Orifice Size:	N/A	Orifice Condition:	N/A	Seal Condition:	N/A
Flange or Pipe Taps:	N/A	Vanes:	N/A	Calculated Beta Ratio:	N/A
Pen Arc:	OK	Pen Drag:	OK	Clock Rotation:	Programable

Calibration Data

Differential		
Found	C/G	Left
NA	NA	NA

Static		
Found	C/G	Left
0	0	0
200	200	200
400	400	400
600	600	600
800	800	800
1000	1000	1000

Temperature		
Found	Therm	Left
41	41	41
75	75	75
98	98	98
143	143	143

Meter(was) in calibration as found

Tester: Tester: D. Franklin

Witness: Witness

Witness: Witness:

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-35954
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other LPG Storage		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Western Refining Company, LP		6. State Oil & Gas Lease No.
3. Address of Operator PO Box 1345 Jal, New Mexico 88252		7. Lease Name or Unit Agreement Name State LPG Storage Well
4. Well Location Unit Letter <u>M</u> : <u>450</u> feet from the <u>South</u> line and <u>780</u> feet from the <u>West</u> line Section <u>32</u> Township <u>23S</u> Range <u>37E</u> NMPM Lea County		8. Well Number 1
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number 248440
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Salado
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: _____ X		OTHER: _____ <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Purpose: Annual MIT
Date Work Begins: 9-15-11
Date Completed: 9-16-11

Well one is currently empty of product and is brine water full. Western Refining Company will use normal butane to pressure the cavern above 700 pounds. A three pen pressure and temperature record will be utilized to record testing for a minimum of 24 hours.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE _____ TITLE Manager DATE 9-9-11

Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carl J. Chapman TITLE Environmental Engineer DATE 11/2/2011
Conditions of Approval (if any):

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-35954
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name State LPG Storage Well
8. Well Number 1
9. OGRID Number 248440
10. Pool name or Wildcat Salado

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 450 feet from the South line and 780 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ANNUAL CAVERN PRESSURE TEST

Date: 9-28-11

Measuring Equipment

Service: Monitor and Record Tubing Pressures

Make: Barton

S. N. 265A-1557

Static Range: 0-1,000 PSI (Blue Pen)

Temp. Range: 0-150 Deg. (Red Pen)

Service: Monitor and Record Casing Pressures

Make: Barton

S. N. P051

Static Range: 0-1,000 PSI (Blue Pen)

Temp. Range: 0-150 Deg. (Red Pen)

- Installed Pressure/Temperature recorders on well.
- Initial Pressure Readings: Tubing 100 PSI, Casing 495 PSI. Temperature 78
- Increased casing pressure from 495 psi to 715 psi with 12,500 gallons of normal butane.
- Tubing pressure increased from 100 psi to 300 psi.
- Well stabilized for 24 hours before beginning test

See attachments for test results.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Ken Parker TITLE Manager DATE 10-25-11

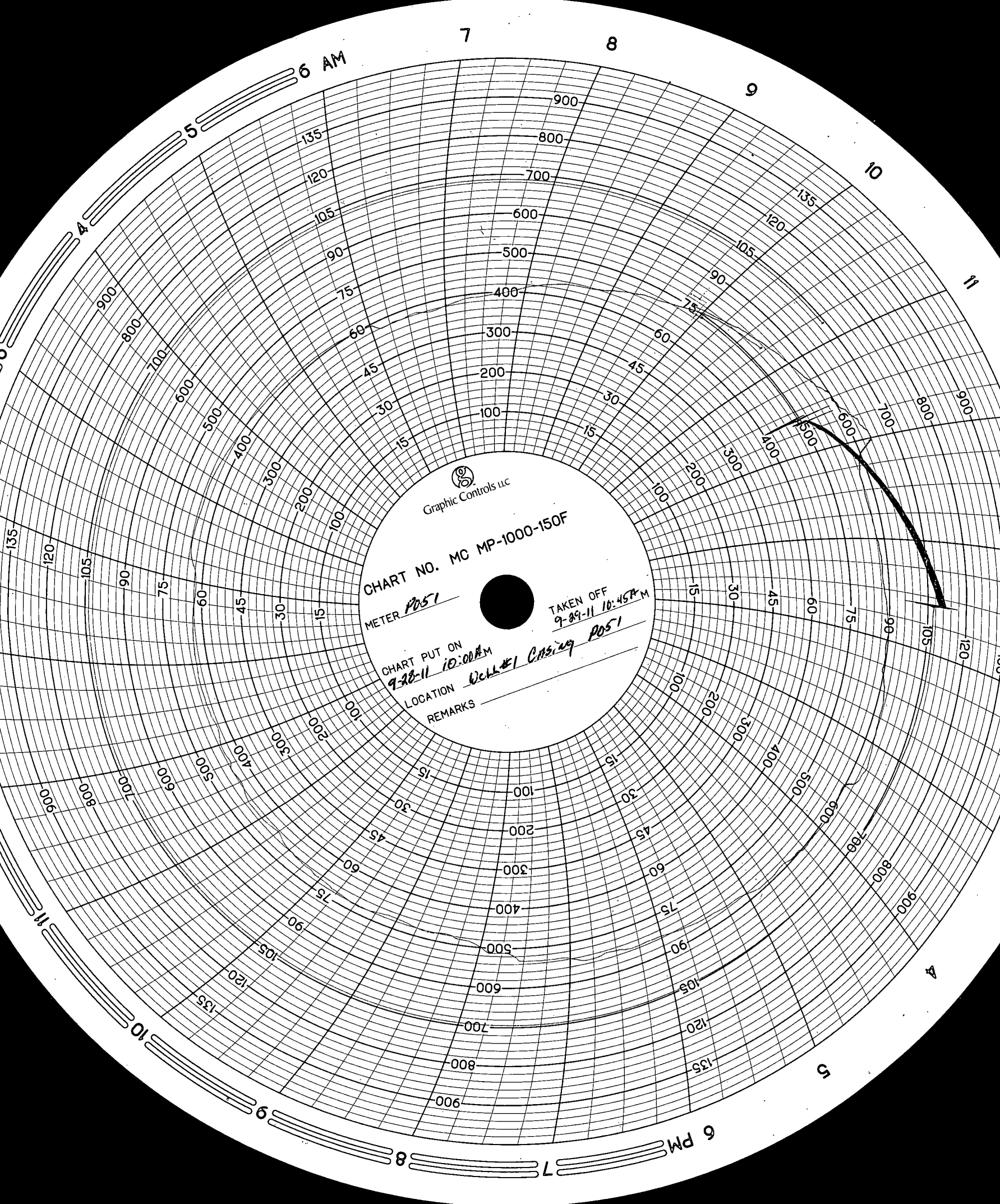
Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carl J. Whives TITLE Environmental Engineer DATE 11/2/2011
Conditions of Approval (if any):



Graphic Controls LLC

CHART NO. MC MP-1000-150F

METER P051

TAKEN OFF
9-29-11 10:45 PM

CHART PUT ON
9-28-11 10:00 AM

LOCATION Well #1 Casing P051

REMARKS

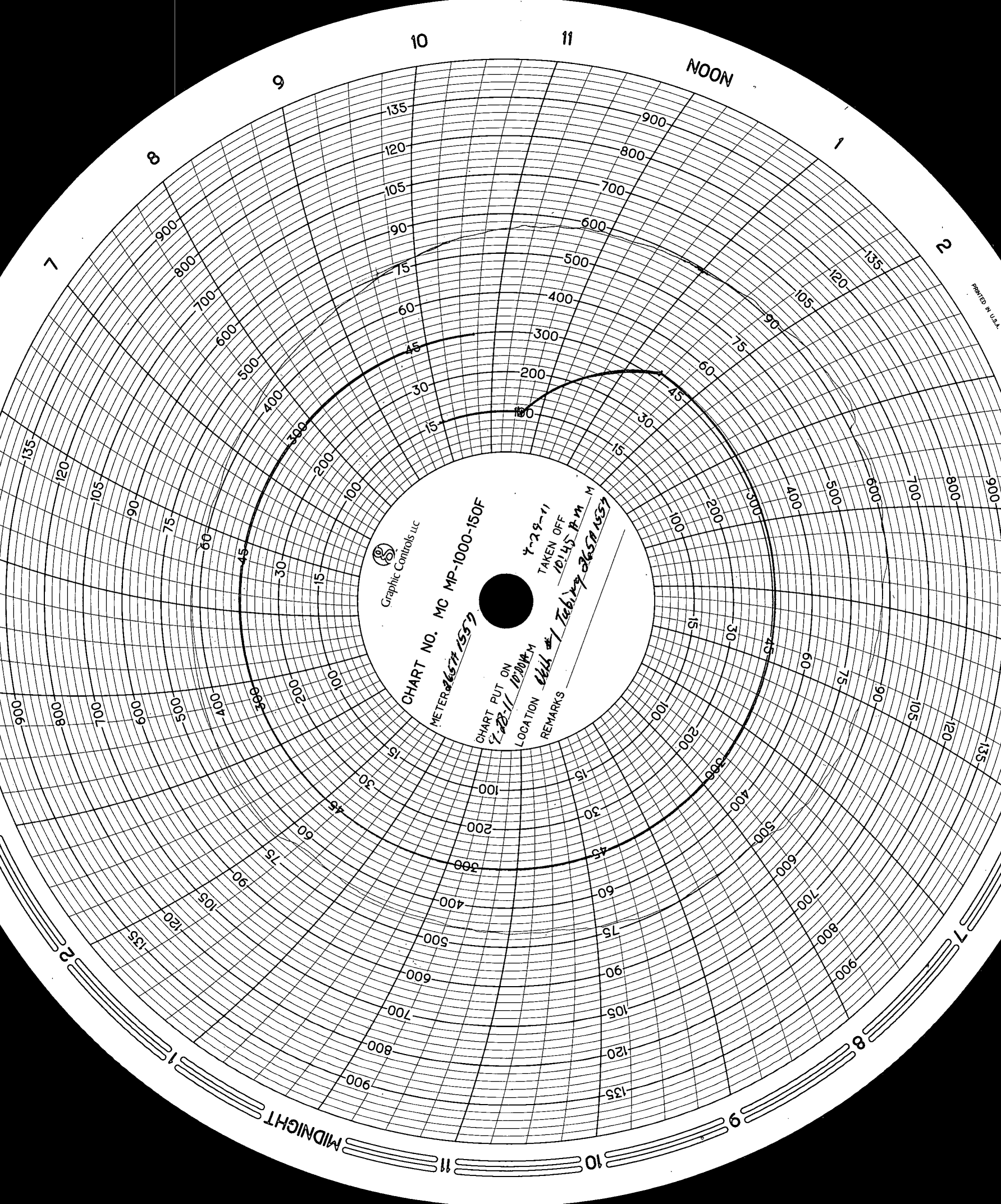


CHART NO. MC MP-1000-150F
METER 26571557

CHART PUT ON
7-28-11 10:00 AM

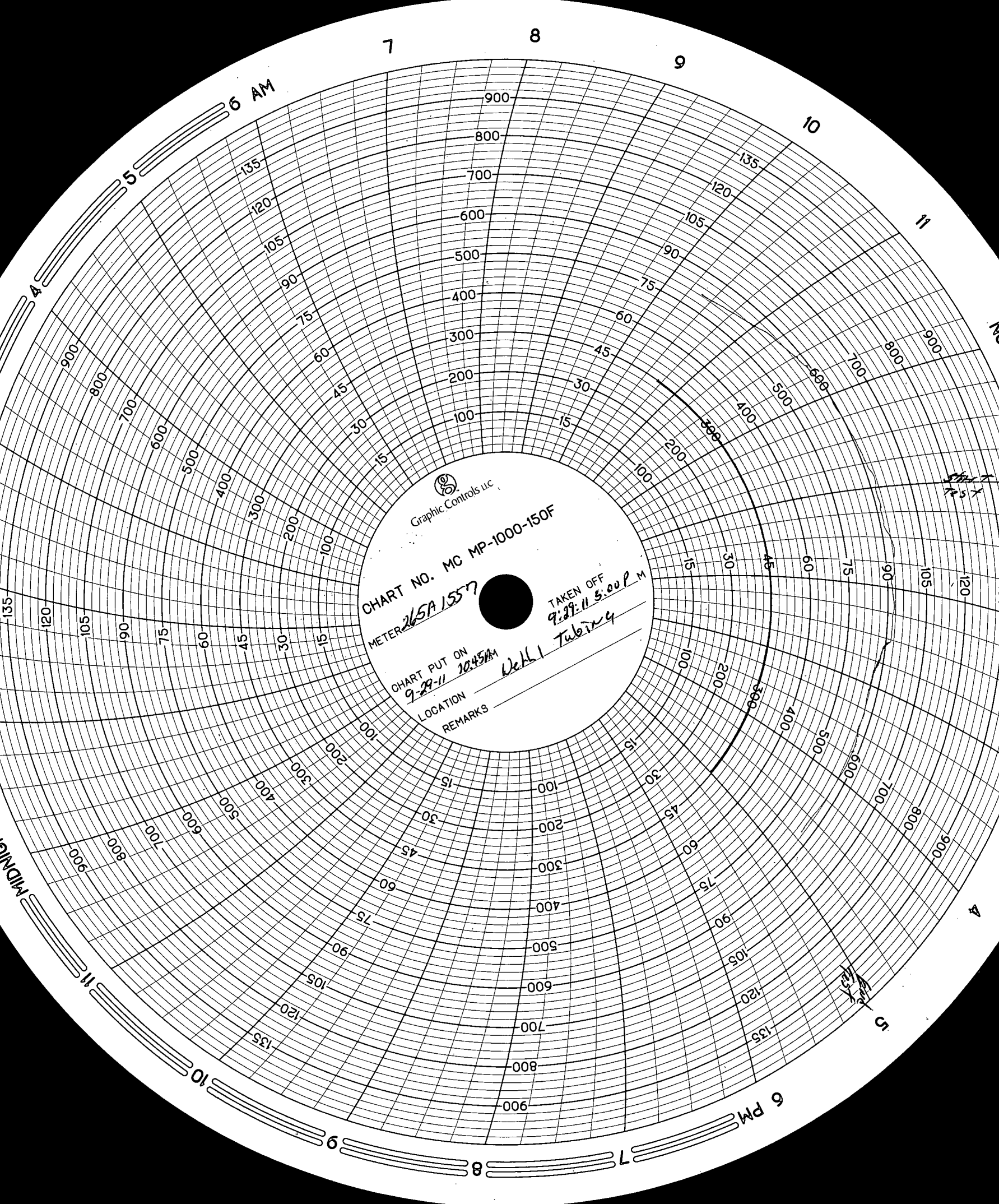
LOCATION 666 #1 Tabby

REMARKS

7-29-11
TAKEN OFF
10:45 PM

METER 26571557

PRINTED IN U.S.A.



Graphic Controls LLC

CHART NO. MC MP-1000-150F

METER 265A 1557

CHART PUT ON
9-29-11 10:45 AM

LOCATION
REMARKS

TAKEN OFF
9-29-11 5:00 PM

Well 1 Tubing

725X

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-35955	
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	2
9. OGRID Number	248440
10. Pool name or Wildcat Salado	

4. Well Location
Unit Letter M : 100 feet from the South line and 280 feet from the West line
Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator
Western Refining Company, LP

3. Address of Operator
PO Box 1345 Jal, New Mexico 88252

4. Well Location
Unit Letter M : 100 feet from the South line and 280 feet from the West line
Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Purpose: Annual Cavern Pressure Test
Date Work Begins: 9-13-11
Date Work Completed: 9-14-11

Well two currently has 18,585 barrels of normal butane in storage. Casing pressure is 450 pounds and the tubing pressure 0. Cavern pressure will be increased above 700 pounds by injecting 10 pound brine water down the tubing or injecting normal butane into the casing. Well will stabilize for 24 hours before testing begins. A three pen pressure temperature recorder will be utilized to record the test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE _____ TITLE Manager DATE 9-9-11

Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carol J. Chavez TITLE Environmental Engineer DATE 11/2/2011

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35955
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	State LPG Storage Well
8. Well Number	2
9. OGRID Number	248440
10. Pool name or Wildcat	Salado

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 100 feet from the South line and 280 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER:

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ANNUAL CAVERN PRESSURE TEST

Date: 9-14-11

Measuring Equipment

Service: Monitor and Record Tubing Pressures

Make: Barton

S. N. 265A-1557

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

Service: Monitor and Record Casing Pressures

Make: Barton

S. N. P051

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

- Installed Pressure/Temperature recorders on well.
- Initial Pressure Readings: Tubing 0 PSI, Casing 435 PSI. Temperature 93
- Increased casing pressure from 435 psi to 715 psi with 6,500 gallons of normal butane.
- Tubing pressure increased from 0 psi to 240 psi.
- Well stabilized for 24 hours before beginning test

See attachments for test results.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.


SIGNATURE  TITLE Manager DATE 10-25-11

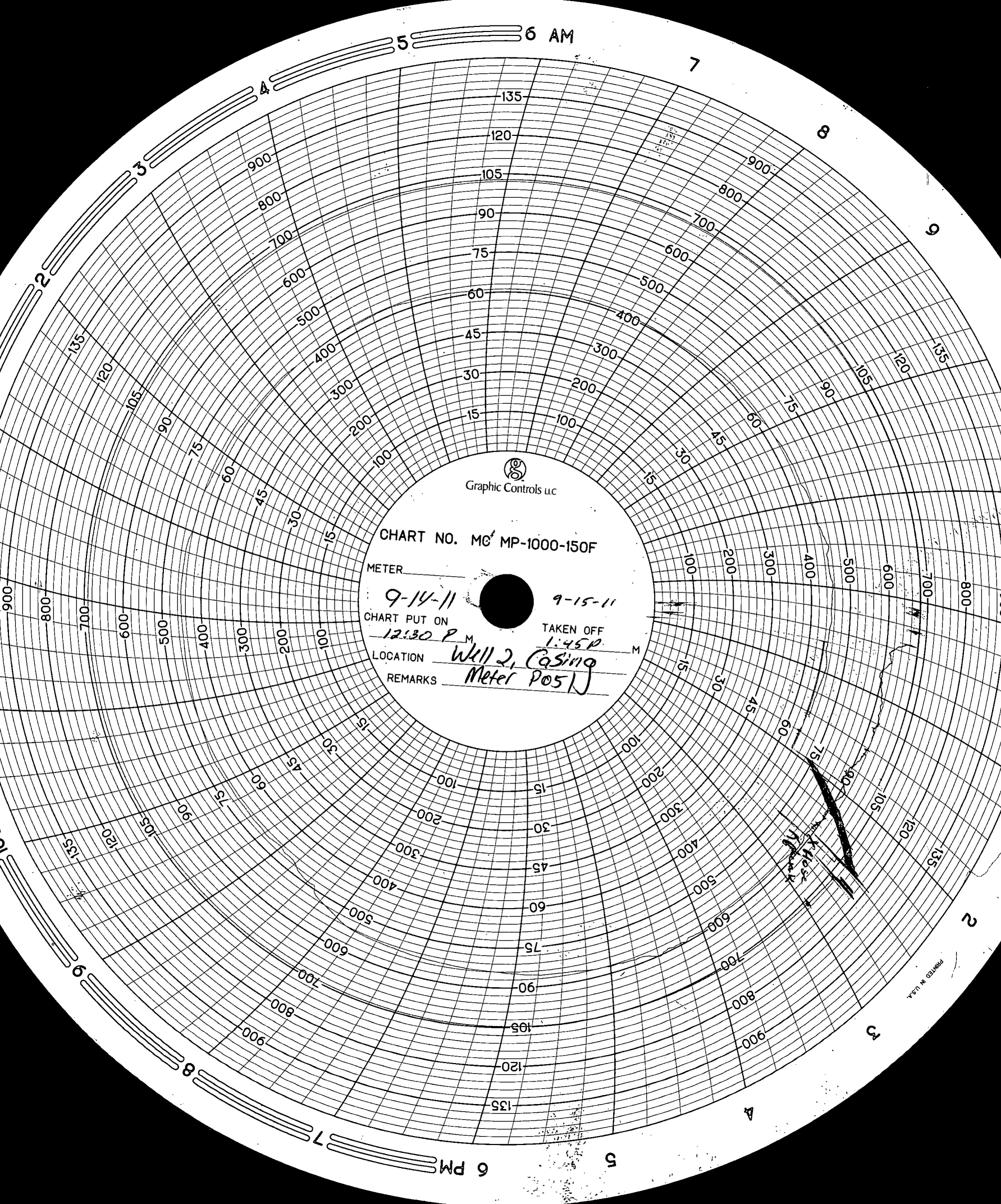
Type or print name Ken Parker

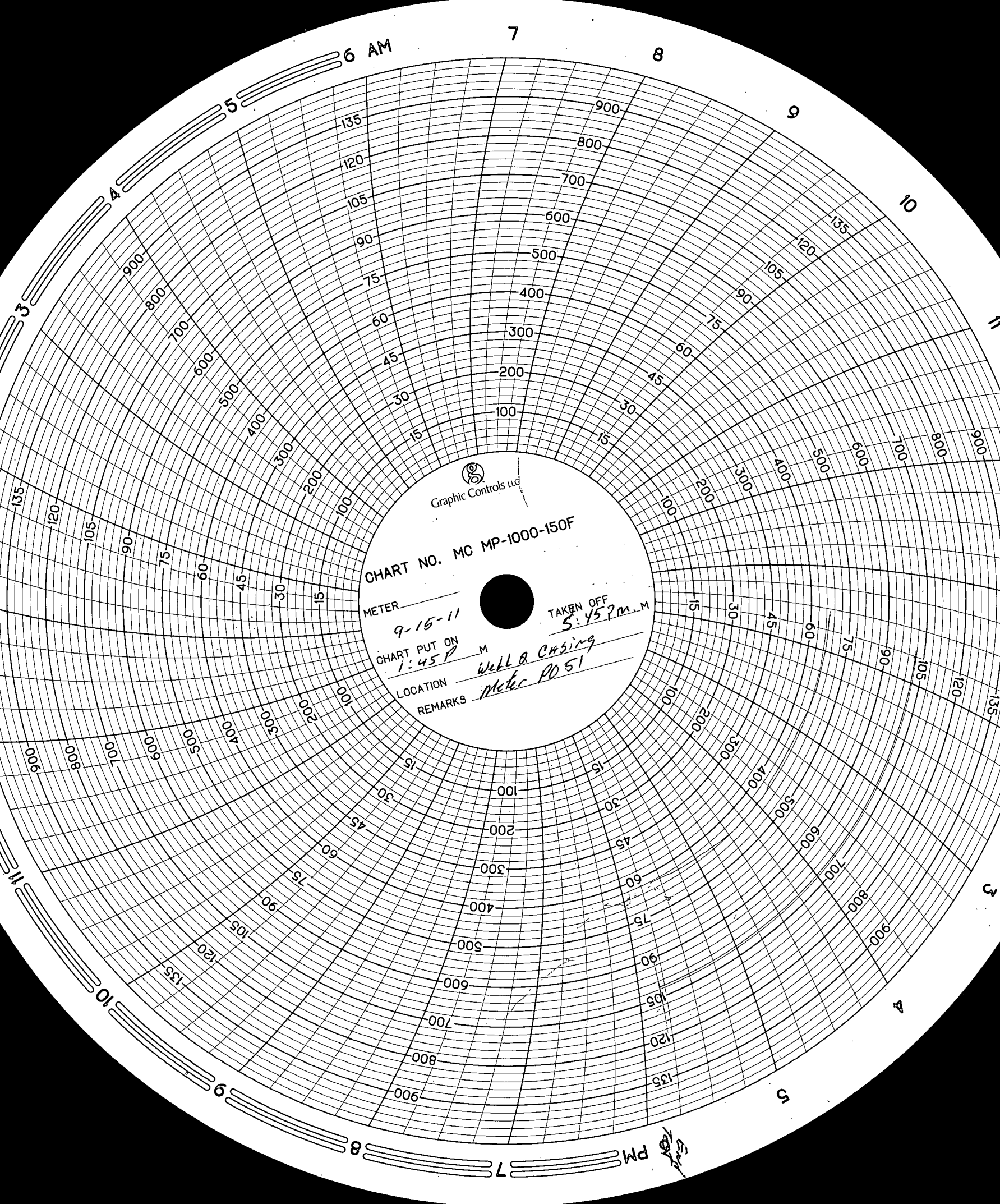
E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY:  TITLE Environmental Engineer DATE 11/2/2011
Conditions of Approval (if any):





Graphic Controls Ltd

CHART NO. MC MP-1000-150F

METER

9-15-11

TAKEN OFF

5:45 PM M

CHART PUT ON

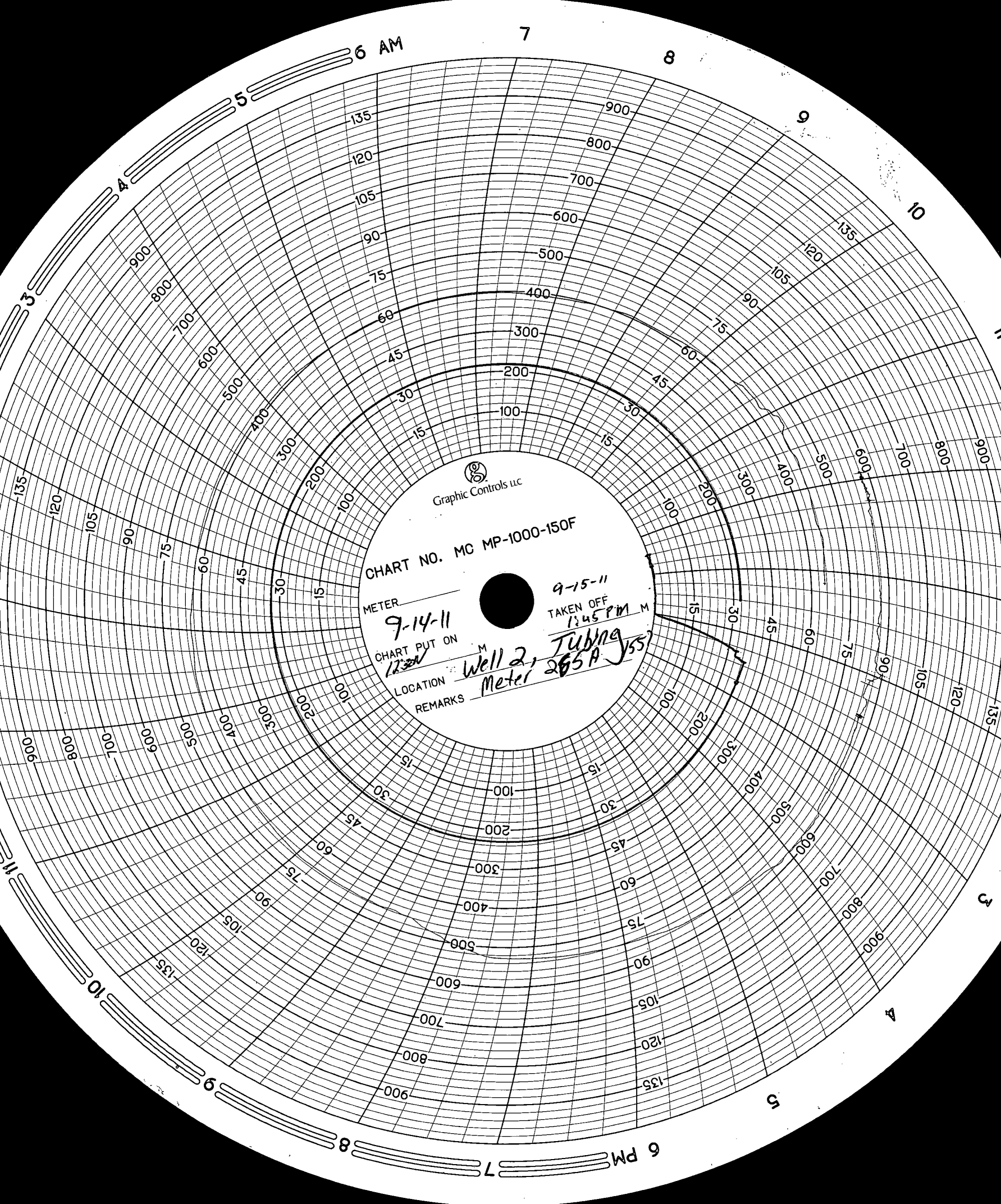
1:45 PM

LOCATION

REMARKS

WELL & CASING

Meter PD 51



Graphic Controls Inc

CHART NO. MC MP-1000-150F

METER

9-14-11

9-15-11

TAKEN OFF

1:45 PM

CHART PUT ON

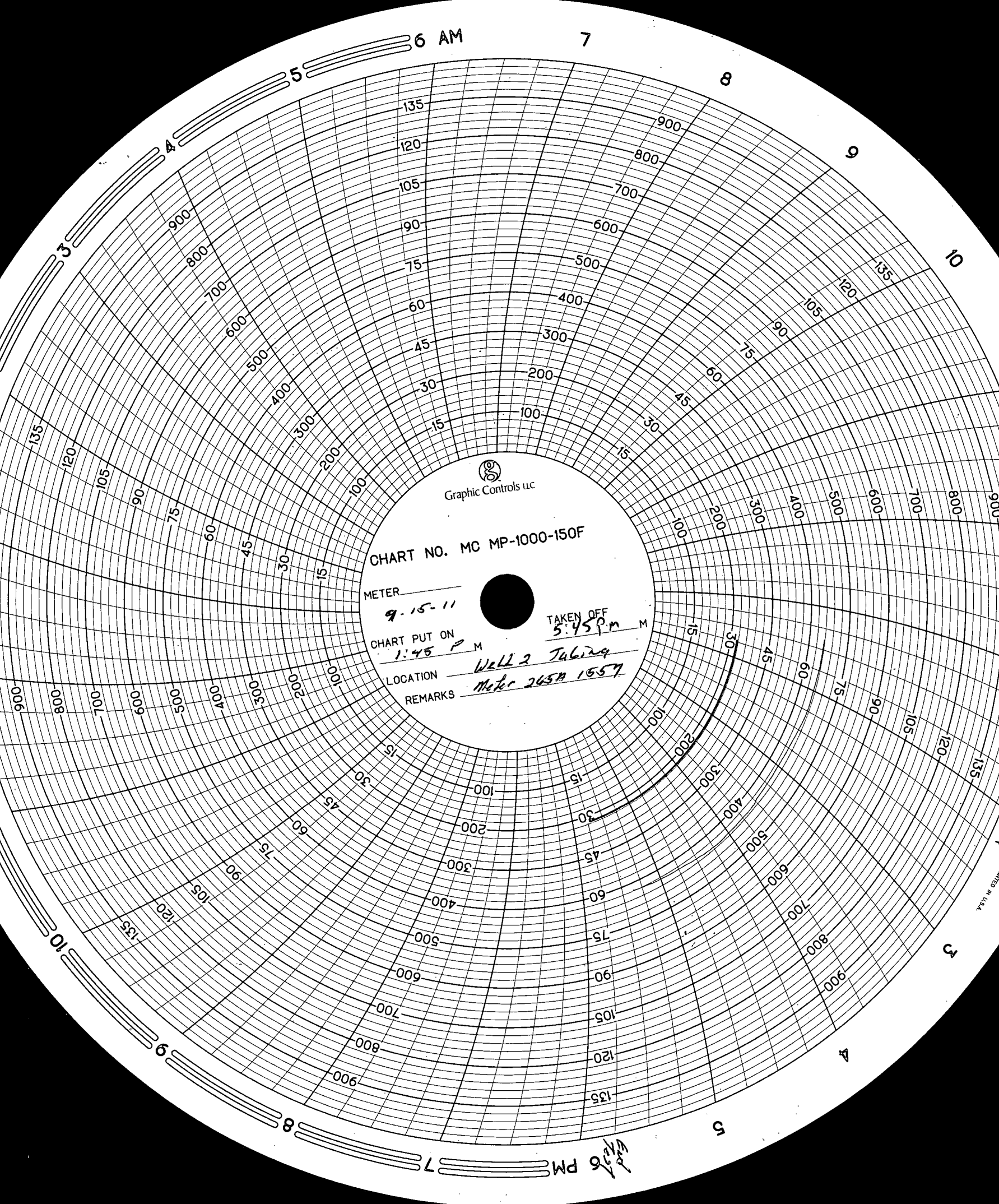
12:30

LOCATION

Well 2, Tubing

Meter 265A JSS

REMARKS



Graphic Controls LLC

CHART NO. MC MP-1000-150F

METER 9-15-11

TAKEN OFF 5:45 PM

CHART PUT ON 1:45 PM

LOCATION Well 2 Tubing

REMARKS Meter 265A 1557

4:45 PM

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35956
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	3
9. OGRID Number	248440
10. Pool name or Wildcat	Langlie Mattix

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator
Western Refining Company, LP

3. Address of Operator
PO Box 1345 Jal, New Mexico 88252

4. Well Location
Unit Letter M : 1000 feet from the South line and 530 feet from the West line
Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Purpose: Annual Cavern Pressure Test
Date Work Begins: 9-13-11
Date Work Completed: 9-14-11

Well three currently has 13,094 barrels of normal butane in storage. Casing pressure is 625 pounds and the tubing pressure is 0. Casing pressure will be increased above 700 pound by injecting ten pound brine water into the tubing. Tubing pressure will be increased to 50 pounds. Well will stabilize for 24 hours before testing begins. A three pen pressure temperature recorder will utilized to record the test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCDC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE _____ TITLE Manager DATE 9-9-11

Type or print name Ken Parker
For State Use Only

E-mail address: ken.parker@wnr.com Telephone No. 575-395-2632

APPROVED BY: Carl J. Chavez TITLE Environmental Engineer DATE 11/21/2011
Conditions of Approval (if any):

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., 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-103

May 27, 2004

WELL API NO. 30-025-35956	
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	3
9. OGRID Number	248440
10. Pool name or Wildcat Langlie Mattix	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator
Western Refining Company, LP

3. Address of Operator
PO Box 1345 Jal, New Mexico 88252

4. Well Location
Unit Letter M : 1000 feet from the South line and 530 feet from the West line
Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ANNUAL CAVERN PRESSURE TEST

Date: 9-13-11

Measuring Equipment

Service: Monitor and Record Tubing Pressures

Make: Barton

S. N. 265A-1557

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

Service: Monitor and Record Casing Pressures

Make: Barton

S. N. P051

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

- Installed Pressure/Temperature recorders on well.
- Initial Pressure Readings: Tubing 0 PSI, Casing 540 PSI. Temperature 78
- Increased casing pressure from 540 psi to 720 psi with 4,800 gallons of normal butane.
- Tubing pressure increased from 0 psi to 100 psi.
- Well stabilized for 24 hours before beginning test

See attachments for test results

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE  TITLE Manager DATE 10-25-11

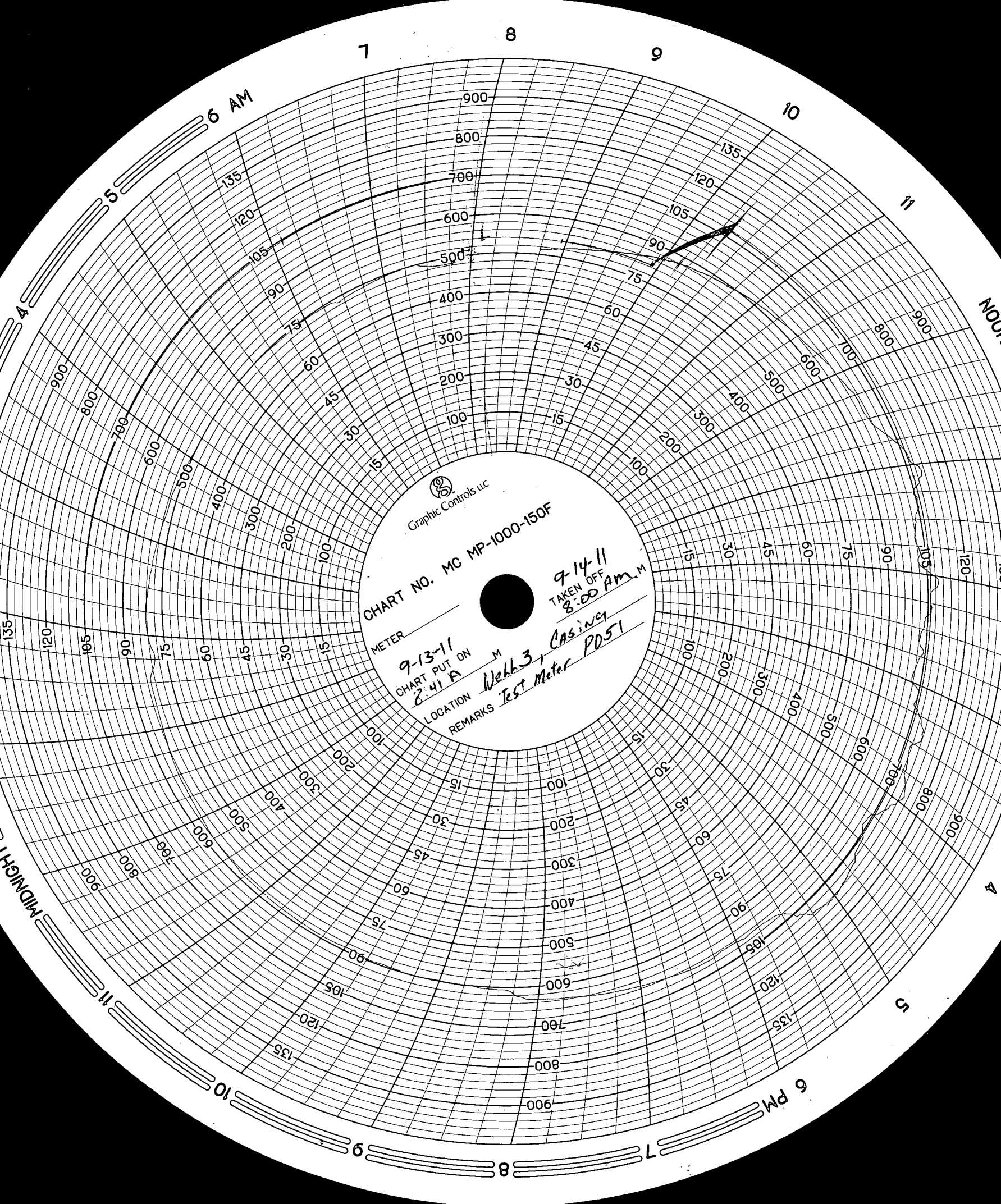
Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY:  TITLE Environmental Engineer DATE 11/2/2011
Conditions of Approval (if any):



Graphic Controls LLC

CHART NO. MC MP-1000-150F

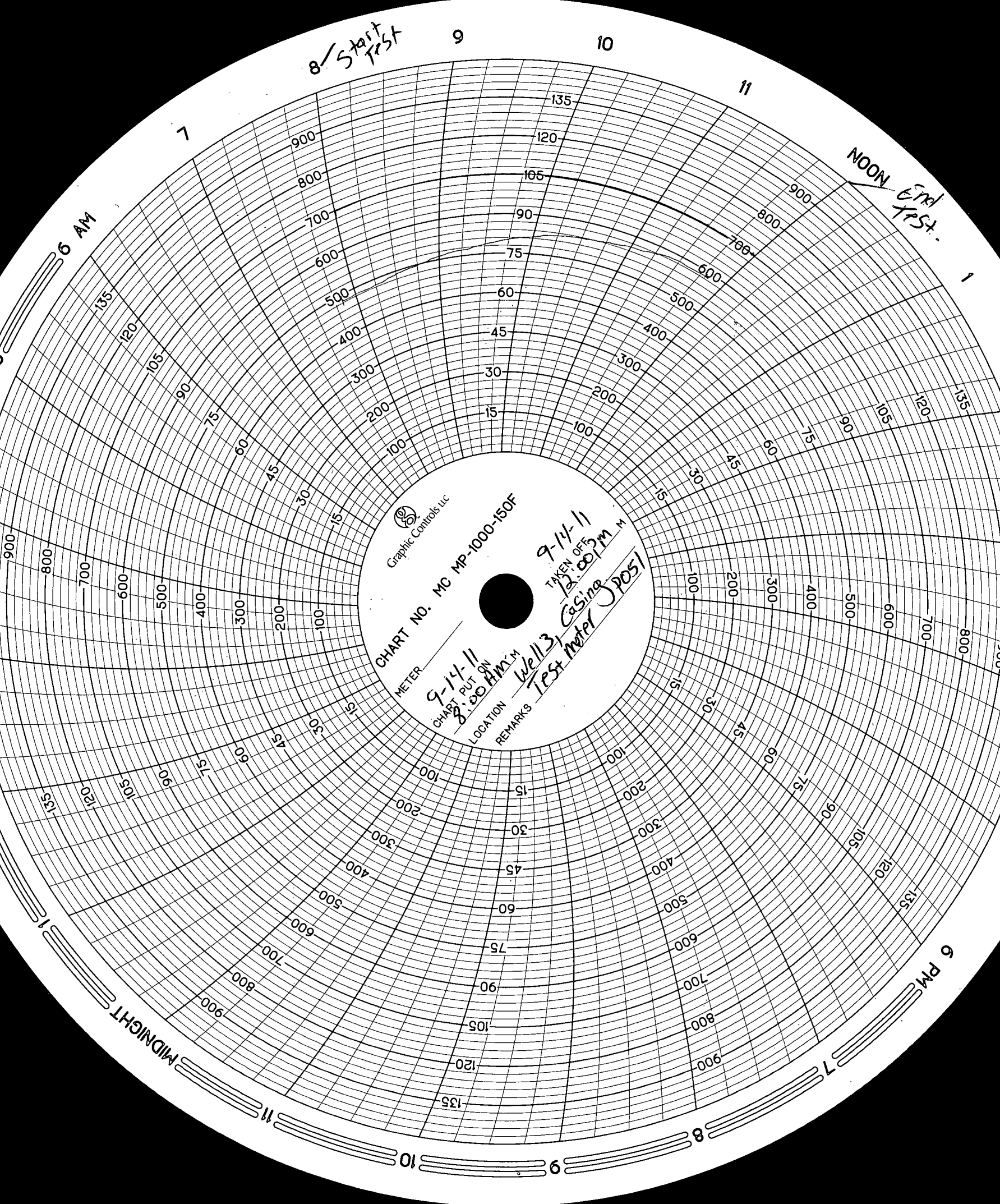
9-14-11
TAKEN OFF
8:00 AM M

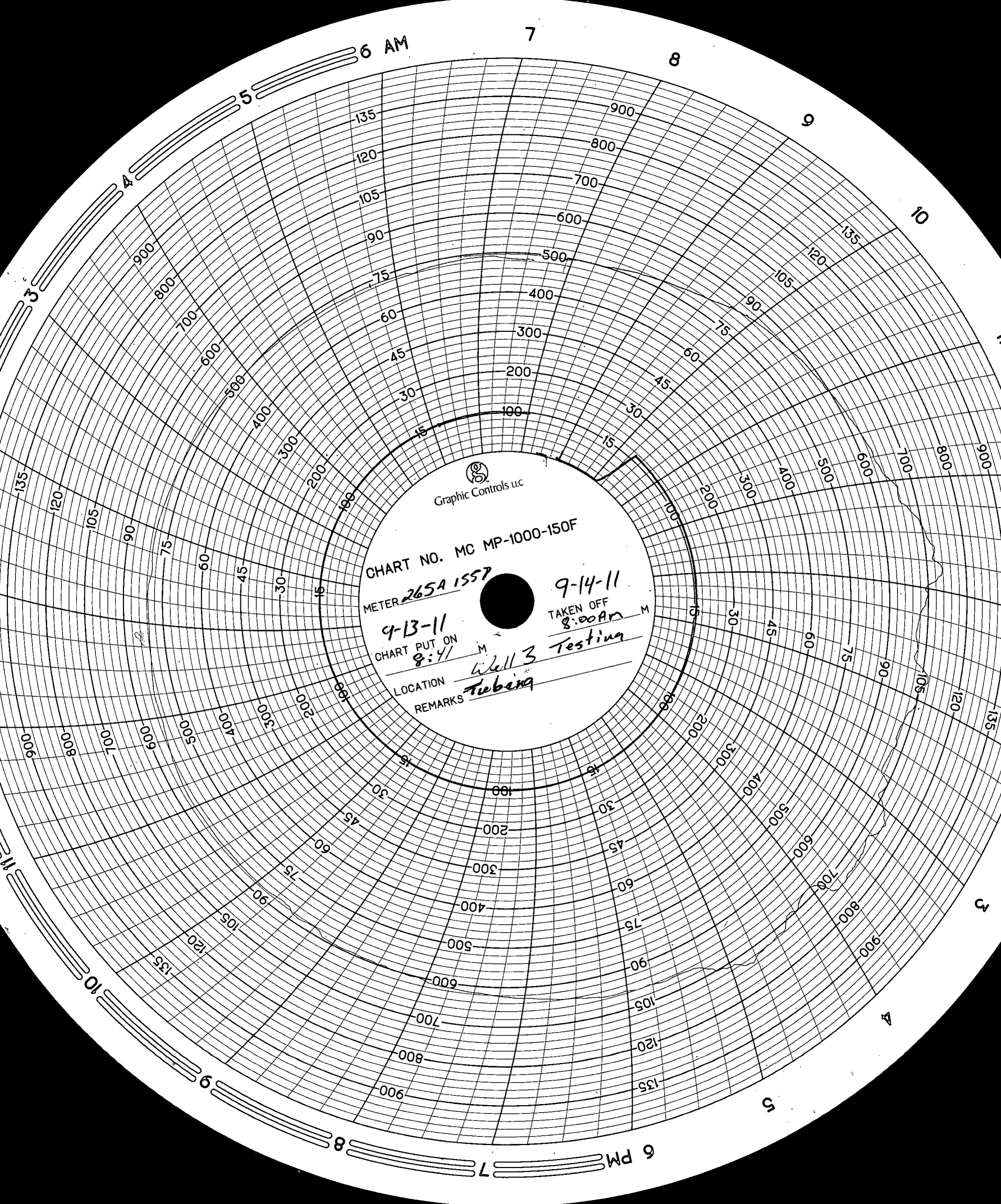
METER

9-13-11
CHART PUT ON
8:41 A

LOCATION Weh 3, Casiney

REMARKS Test Meter PD51





Graphic Controls LLC

CHART NO. MC MP-1000-150F

METER 2654 1557

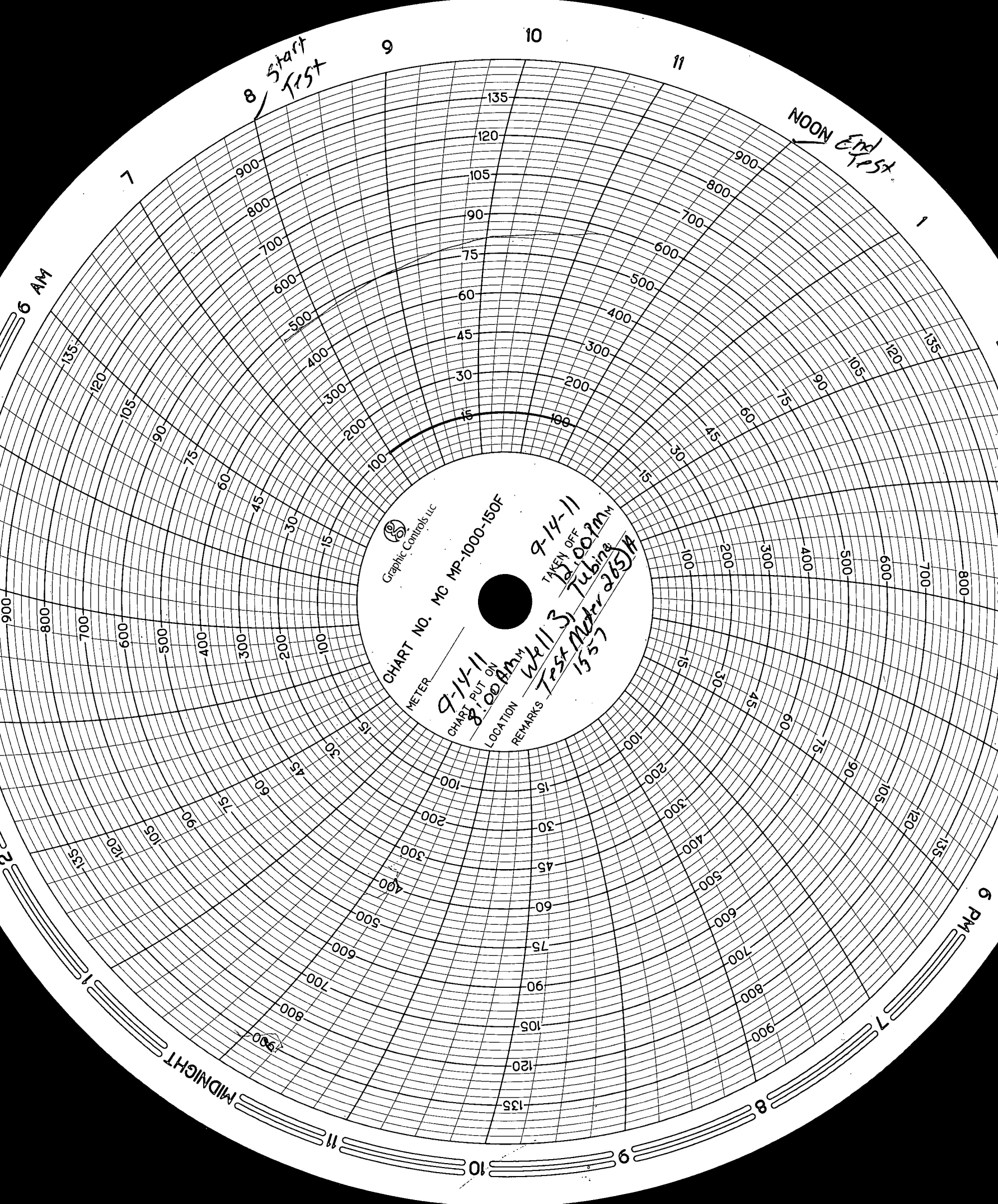
9-14-11
TAKEN OFF
8:00 AM

9-13-11
CHART PUT ON
8:41 M

LOCATION
Tubing

REMARKS

Well 3
Testing



8 Start Test

NOON End Test

Graphic Controls, Inc.

CHART NO. MC MP-1000-150F

METER

9-14-11

CHART PUT ON 8:00 AM

LOCATION

REMARKS

9-14-11

TAKEN OFF

12:00 PM

Tubina

Test Motor 265H

1557

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35957
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	4
9. OGRID Number	248440
10. Pool name or Wildcat	Langlie Mattix

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 1000 feet from the South line and 1230 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☒ X

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Purpose: Annual Cavern Pressure Test

Date Work Begins: 9-15-11

Date Work Completed: 9-16-11

Well four currently has 22,025 barrels of iso butane in storage. Casing pressure is 625 pounds and the tubing pressure is 0. Casing pressure will be increased above 700 pounds by injecting ten pound brine water into the tubing. Tubing pressure will be increased to 50 pounds. Well will stabilize for 24 hours before testing begins. A three pen pressure and temperature recorder will be used to record the test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE _____ TITLE Manager DATE 9-9-11

Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carol J. Chavez TITLE Environmental Engineer DATE 11/2/2011

Conditions of Approval (if any):

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
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87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-35957
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name State LPG Storage Well
8. Well Number 4
9. OGRID Number 248440
10. Pool name or Wildcat Langlie Mattix

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 1000 feet from the South line and 1230 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ANNUAL CAVERN PRESSURE TEST

Date: 9-16-11

Measuring Equipment

Service: Monitor and Record Tubing Pressures

Make: Barton

S. N. 265A-1557

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

Service: Monitor and Record Casing Pressures

Make: Barton

S. N. P051

Static Range: 0-1,000 PSI

Temp. Range: 0-150 Deg.

- Installed Pressure/Temperature recorders on well.
- Initial Pressure Readings: Tubing 20 PSI, Casing 618 PSI. Temperature 57
- Increased casing pressure from 618 psi to 675 psi with 3,000 gallons of iso-butane.
- Tubing pressure increased from 20 psi to 230 psi.
- Well stabilized for 24 hours before beginning test

See attachments for test result

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Ken Parker TITLE Manager DATE 10-25-11

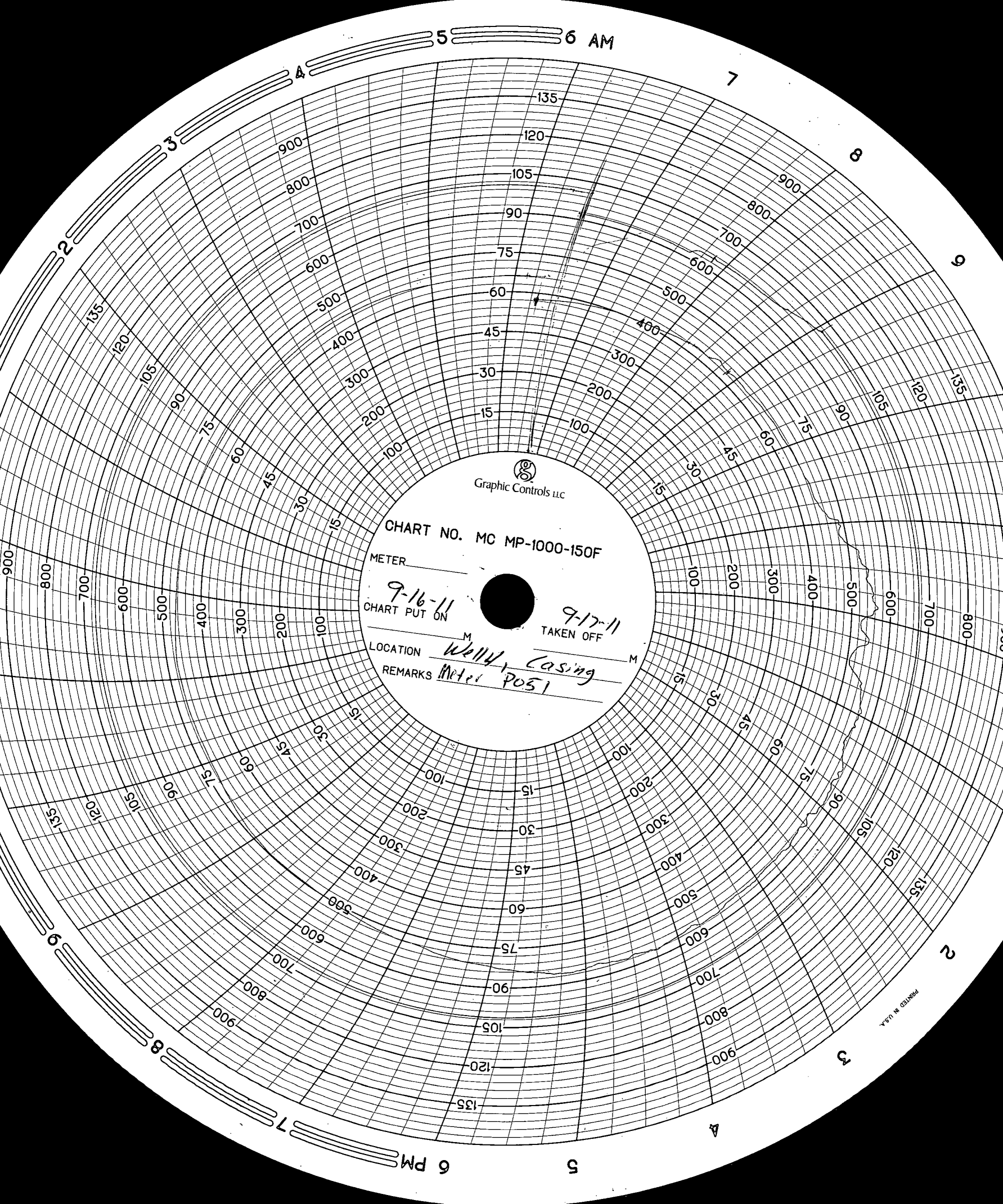
Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carol J. Egan TITLE Environmental Engineer DATE 11/2/2011
Conditions of Approval (if any):



Graphic Controls LLC

CHART NO. MC MP-1000-150F

METER

9-16-11
CHART PUT ON

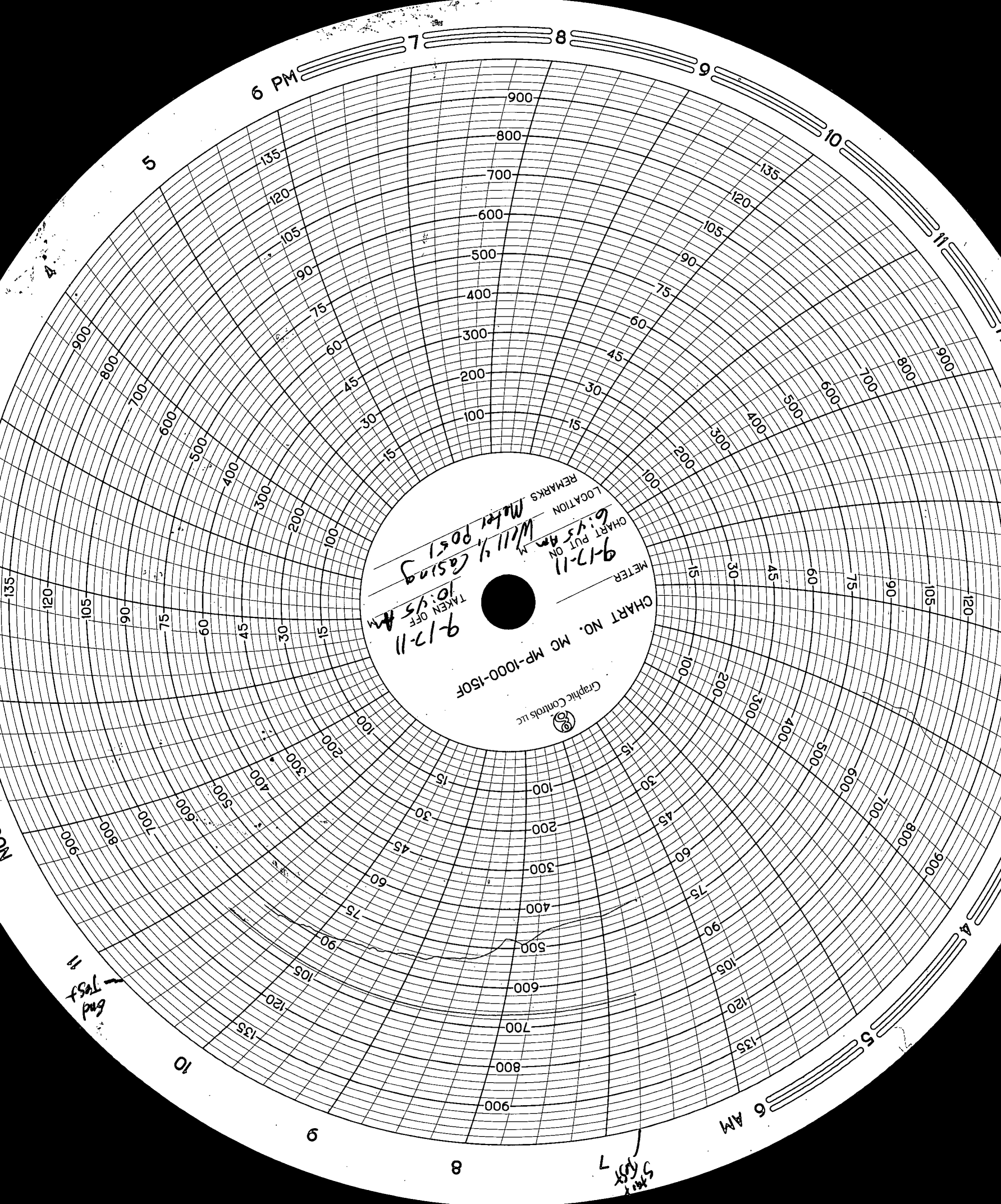
9-17-11
TAKEN OFF

LOCATION

Well 14 Casing
Meter 2051

REMARKS

PRINTED IN U.S.A.



6 PM

5

4

3

8

9

10

PRINTED IN U.S.A.

2

6 AM

7

8

9

10

CHART NO. MC MP-1000-150F

Graphic Controls Inc



METER

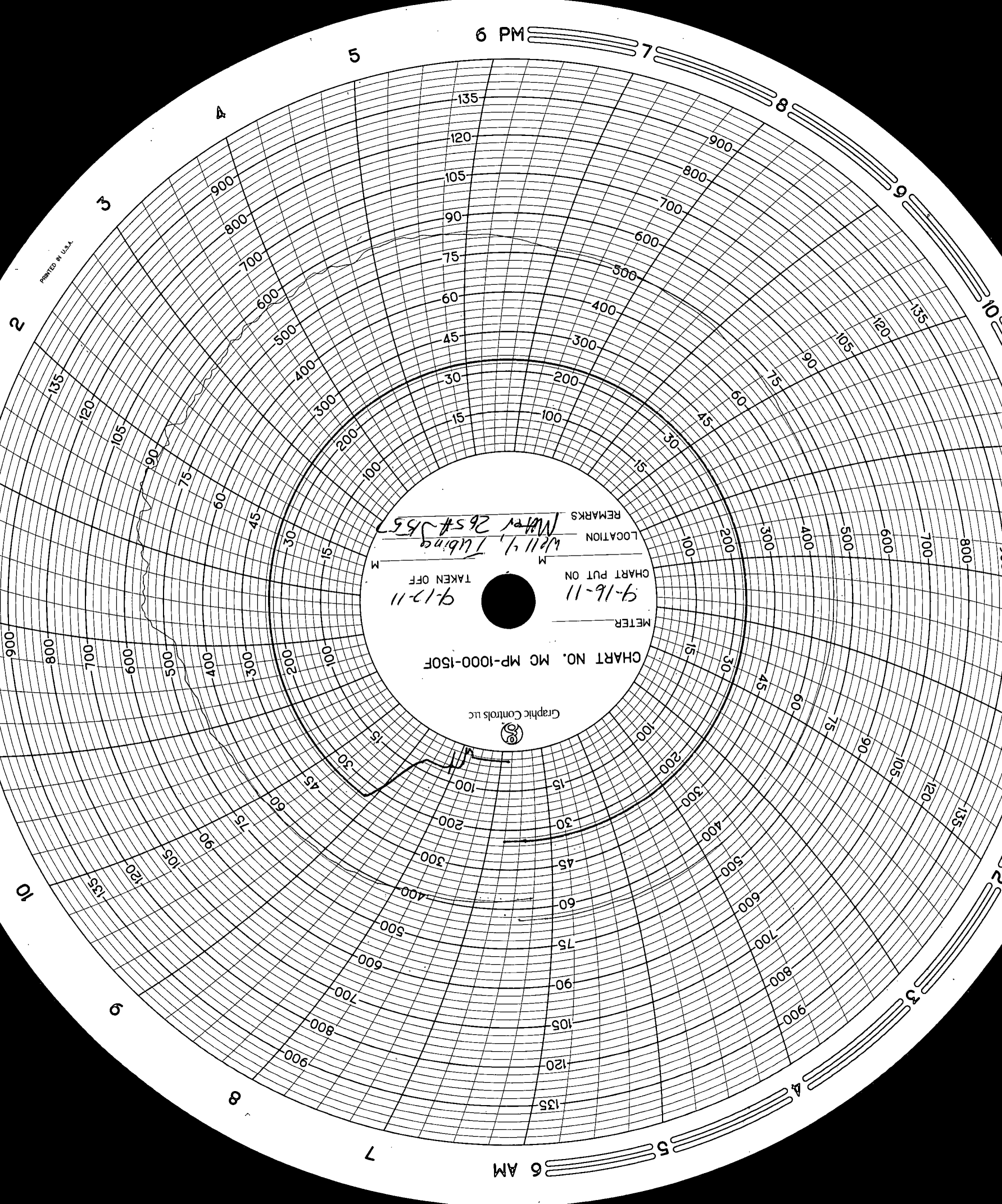
CHART PUT ON

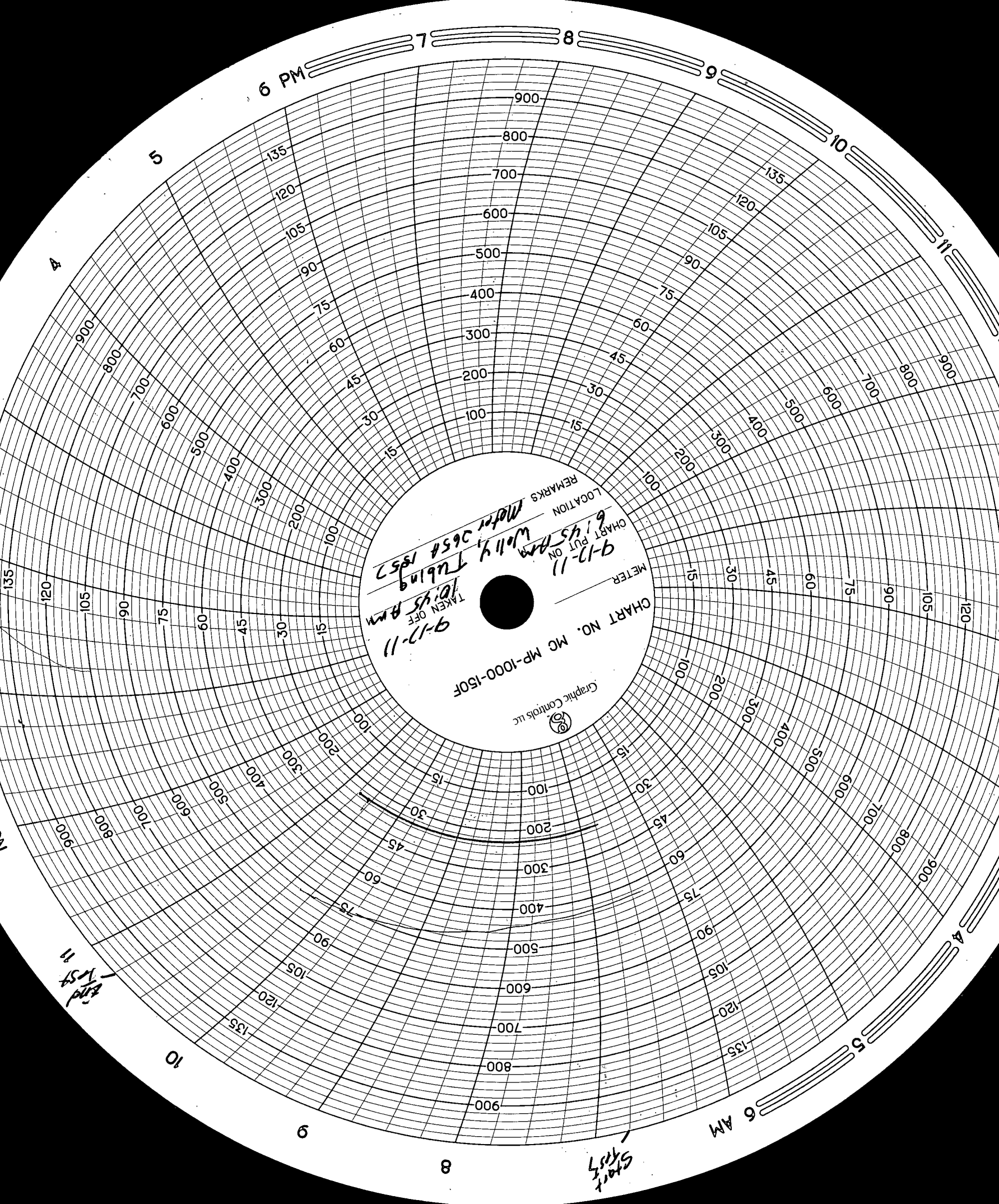
LOCATION

REMARKS

9-17-11
TAKEN OFF

Well 1, Lubing
Meter 2654-55





6 PM

5

4

10

11

12

120

4

5

6 AM

8

9

10

11

CHART NO. MC MP-1000-150F
GRAPHIC CONTROLS LLC

9-17-11
TAKEN OFF 10:45 AM
PUT ON 6:45 AM
LOCATION Wally, Tubing
REMARKS Motor, 2654 1957

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, November 09, 2010 11:31 AM
To: 'Parker, Ken'
Cc: Hill, Larry, EMNRD; VonGonten, Glenn, EMNRD
Subject: Final C-103s and Annual MIT Charts Wells 1 - 4 (GW-007)
Attachments: MITs Annual Final 11-9-10.pdf

Mr. Parker:

Good morning. Please find attached the OCD signed and **approved** C-103s from the recent annual MITs performed on Wells 1 – 4 (see attachments).

The OCD appreciates the time you have taken to meet with OCD District Staff and for communication with the OCD Environmental Bureau to discuss the MIT charts to confirm that all of the wells passed their formation MITs this year.

The information placed on the charts by the operator is accurate. Since OCD did not witness the tests, it could not apply its signatures with “pass” approvals directly on the charts; however, the charts do reflect passing tests for each well this year.

Please contact me if you have questions. Thank you.

File: GW-007 “Annual Formation MITs” and RBDMS “API# Well Summary Forms”

Please be advised that OCD approval of the annual formation MITs does not relieve Western Refining L.P. of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Western Refining L.P. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oed/index.htm>
(Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From: Parker, Ken [Ken.Parker@wnr.com]
Sent: Tuesday, November 02, 2010 2:52 PM
To: Chavez, Carl J, EMNRD
Subject: RE: State LPG Wells 1-4 MIT
Attachments: Signed C-103, Well 4 2010.pdf

Carl,

Reason for using the percentage is due to the different pressure ranges. Well casing was connected to a 0-1,000 pound pressure element. We calculated that the final test pressure would be at least 600 to 700 pounds. This would track the pressure on the upper end of the chart. Looking at the chart 50% is equal to 500 pounds and 100% is equal to 1,000 pounds.

The tubing was connected to a 0-500 pound pressure element. We calculated that the final test pressure would be 50 to 75 pounds. This would track the pressure on the lower end of the chart. Looking at the chart 50% is equal to 250 pounds and 100% is equal to 500 pounds.

Temperature element that was used in the test had a range of 0-150 degrees. That means the percentage chart holds true at 100% is equal to 150 degrees.

If you have anyother question please call me at 575-395-2632.

Ken

From: Chavez, Carl J, EMNRD [CarlJ.Chavez@state.nm.us]
Sent: Tuesday, November 02, 2010 8:36 AM
To: Parker, Ken; Griswold, Jim, EMNRD; Hill, Larry, EMNRD
Subject: RE: State LPG Wells 1-4 MIT

Ken:

The OCD is in receipt of the MITs and C-103s (Finals) and the OCD is currently evaluating them.

A couple of quick items:

- 1) I think the signature date on the C-103 for Well 4 is misdated and if you could correct and send w/ hard copy that would work?
- 2) The charts appear to display percentages instead of pressure. Can you please explain the rationale for percentage versus standard pressure charts?

Thanks.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/oqd/index.htm>
(Pollution Prevention Guidance is under "Publications")

From: Parker, Ken [<mailto:Ken.Parker@wnr.com>]
Sent: Tuesday, November 02, 2010 7:32 AM
To: Chavez, Carl J, EMNRD; Griswold, Jim, EMNRD; Hill, Larry, EMNRD
Subject: State LPG Wells 1-4 MIT

Gentlemen,

I will send you a hard copy by mail today.

Thanks,

Ken Parker

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

Submit 3 Copies To Appropriate District
Office
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1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35954
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	1
9. OGRID Number	248440
10. Pool name or Wildcat	Salado

4. Well Location Unit Letter <u>M</u> : <u>450</u> feet from the <u>South</u> line and <u>780</u> feet from the <u>West</u> line Section <u>32</u> Township <u>23S</u> Range <u>37E</u> NMPM <u>Lea</u> County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other LPG Storage	
2. Name of Operator Western Refining Company, LP	
3. Address of Operator PO Box 1345 Jal, New Mexico 88252	
4. Well Location Unit Letter <u>M</u> : <u>450</u> feet from the <u>South</u> line and <u>780</u> feet from the <u>West</u> line Section <u>32</u> Township <u>23S</u> Range <u>37E</u> NMPM <u>Lea</u> County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	

Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- Annual MIT
- Date: 10-26-10

- The following activities were completed
- Installed temperature and pressure recorder on State LPG Well One. Green pen pressure range is 0-1,000 pounds. Blue pen pressure range is 0-500 pounds. Red pen is 0-150 degrees Fahrenheit used to record atmosphere temperature.
- Well # 1 temperature and pressure starting points. Tubing pressure 50 pounds, Casing pressure 460 pounds, and the starting temperature is 73 degrees.
- Injected 15,000 gallons of mix butane into well # 1. The specific gravity of this product is .580.
- Chart was used to record the injection, stabilization, and temperature changes for the next 24 hours. See attachment for the results of this test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Ken Parker TITLE Manager DATE 11-1-10

Type or print name Ken Parker E-mail address: ken.parker@wnr.com Telephone No. 575-395-2632
For State Use Only

APPROVED BY: Carl J. Chavez TITLE Environmental Engineer DATE 11/9/10
Conditions of Approval (if any):

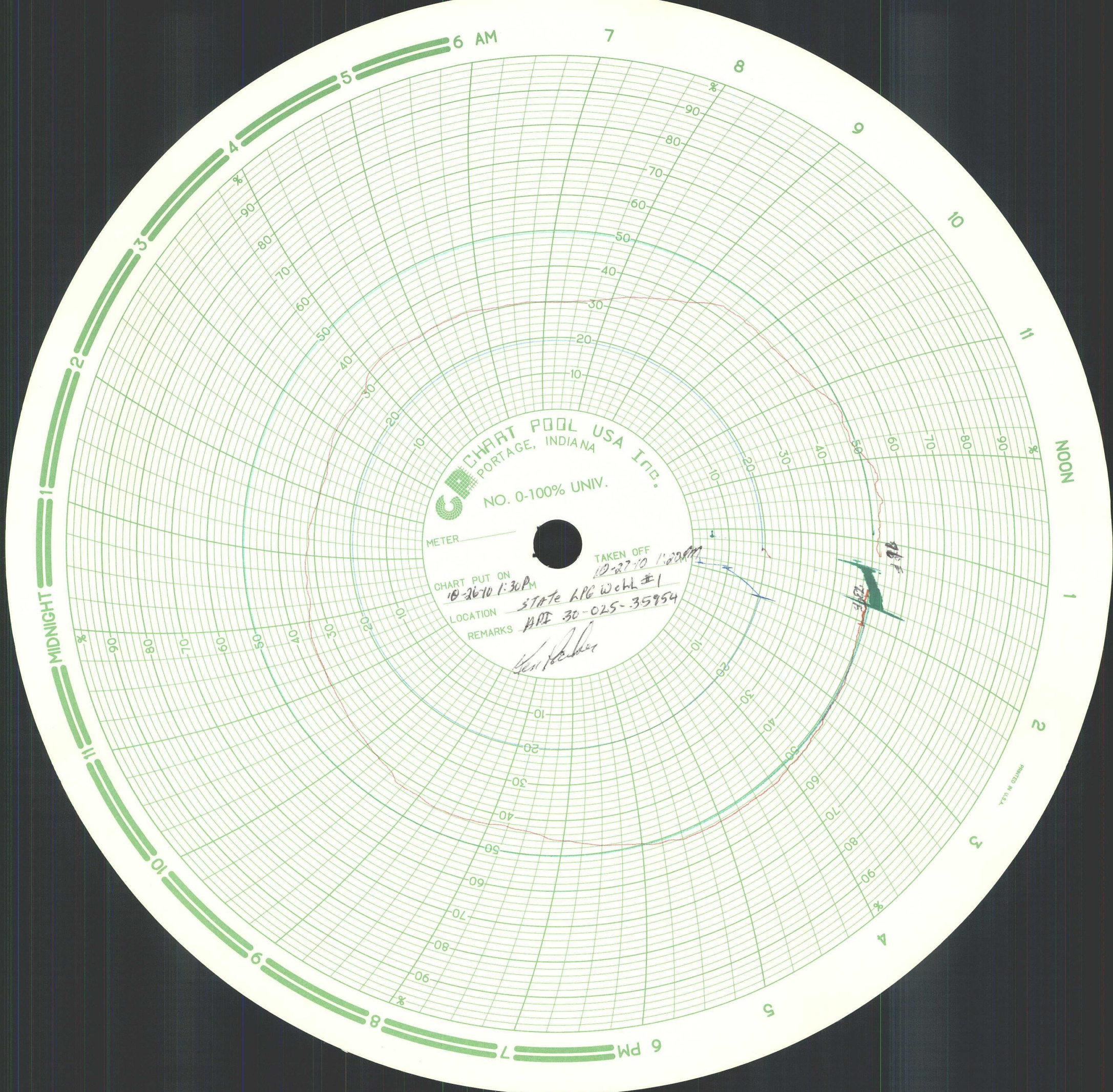


CHART POOL USA INC.
PORTAGE, INDIANA
NO. 0-100% UNIV.

METER

CHART PUT ON 10-26-10 1:30 PM
LOCATION STATE APC Well #1
REMARKS API 30-025-35954

TAKEN OFF 10-27-10 1:22 PM

PRINTED IN U.S.A.

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35955
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	State LPG Storage Well
8. Well Number	2
9. OGRID Number	248440
10. Pool name or Wildcat	Salado

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 100 feet from the South line and 280 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls: Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER:

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- Annual MIT
- Date: 10-25-10
- The following activities were completed
- Installed temperature and pressure recorder on State LPG Well 2. Green pen pressure range is 0-1,000 pounds. Blue pen pressure range is 0-500 pounds. Red pen is 0-150 degrees Fahrenheit to record atmosphere temperature.
- Well two temperature and pressure starting points: Tubing pressure 75 pounds, Casing pressure 120 pounds, starting Temperature is 82 degrees.
- Injected 5,460 gallons of normal butane into well #2. The specific gravity of formal is .584.
- Chart was used to record the injection, stabilization, and temperature changes for the next 24 hours. See attachment for the results of this test.

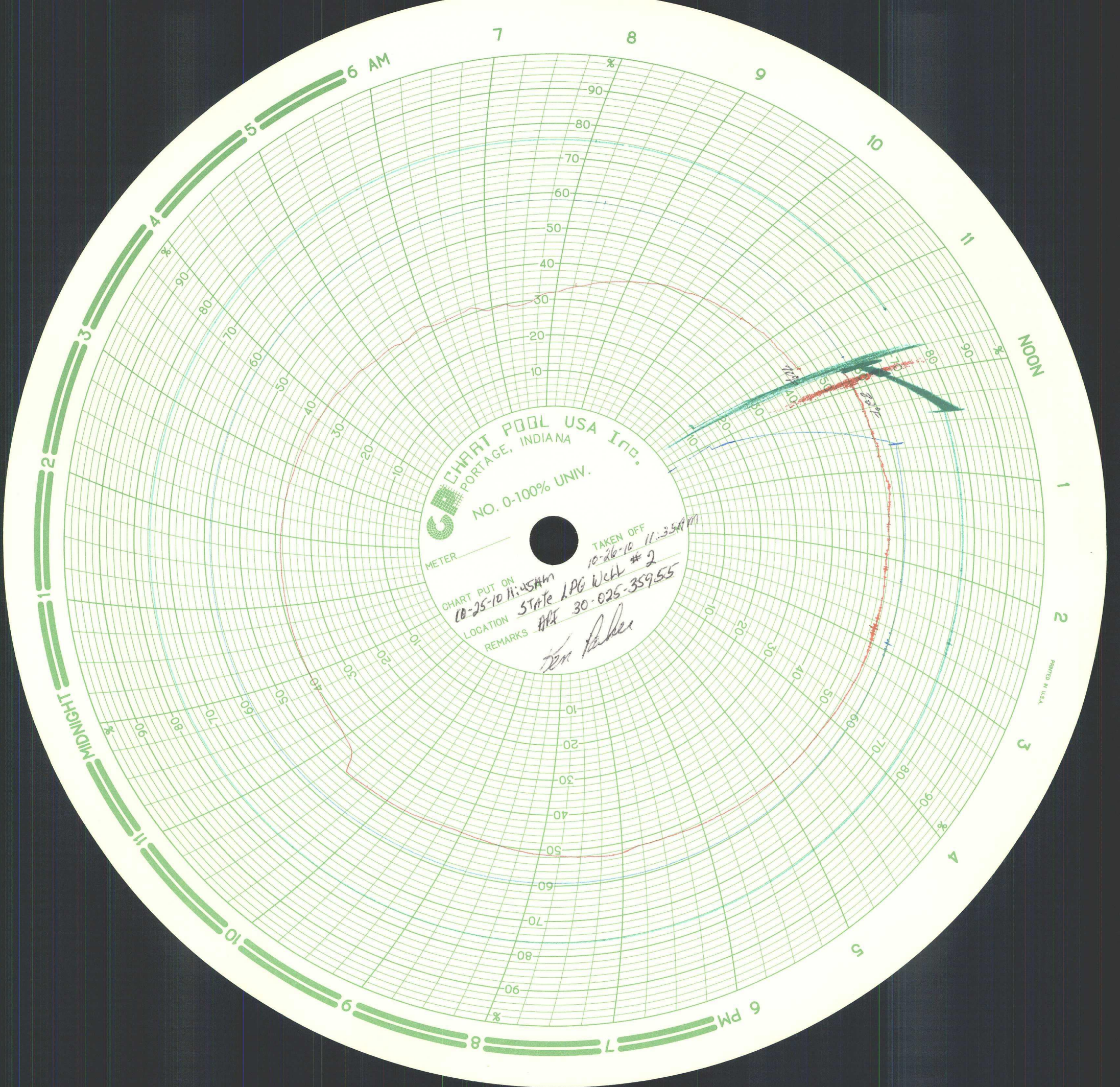
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Ken Parker TITLE Manager DATE 11-1-10

Type or print name Ken Parker E-mail address: ken.parker@wnr.com Telephone No. 575-395-2632

For State Use Only APPROVED

BY: David J. Chavez TITLE Environmental Engineer DATE 11/9/10 Conditions of Approval (if any):



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Submit 3 Copies To Appropriate District Office
District I
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.	30-025-35956
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name State LPG Storage Well	
8. Well Number	3
9. OGRID Number	248440
10. Pool name or Wildcat	Langlie Mattix
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other LPG Storage

2. Name of Operator

Western Refining Company, LP

3. Address of Operator

PO Box 1345 Jal, New Mexico 88252

4. Well Location

Unit Letter M : 1000 feet from the South line and 530 feet from the West line

Section 32 Township 23S Range 37E NMPM Lea County

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- Annual MIT
- Date: 10-23-10
- The following activities were completed
- Installed temperature and pressure recorder on State LPG Well Three. Green pen pressure range is 0-1,000 pounds. Blue pen pressure range is 0-500 pounds. Red pen is 0-150 degrees Fahrenheit use to record atmosphere temperature.
- Well 3 temperature and pressure starting points: Tubing pressure 24 pounds, Casing pressure 618 pounds, and temperature is 68 degrees.
- Well three already has 24,700 barrels of normal butane stored in the cavern. Using the existing brine water pump, brine water was injected into the tubing increasing the tubing pressure to 80 pounds. The casing pressure increased to 682 pounds.
- Chart was used to record the pressure stabilization and temperature changes for the next 24 hours. See attachment for the results of this test.
- I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

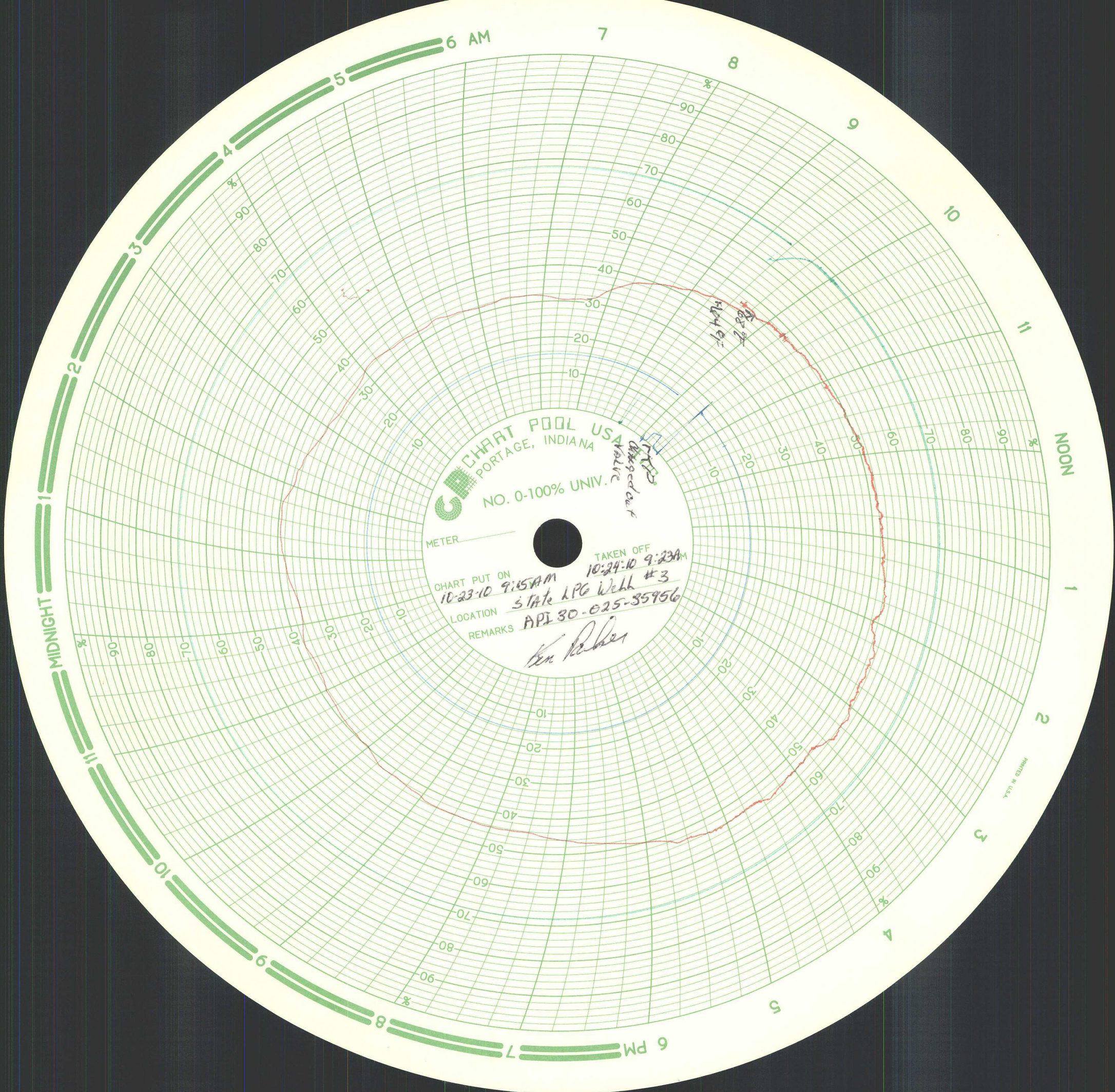
SIGNATURE Ken Parker
Type or print name Ken Parker

TITLE Manager DATE 11-1-10
E-mail address: ken.parker@wnr.com Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Carl J. Chutkan
Conditions of Approval (if any):

TITLE Environmental Engineer DATE 11/9/10



Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-35957
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other LPG Storage		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Western Refining Company, LP		6. State Oil & Gas Lease No.
3. Address of Operator PO Box 1345 Jal, New Mexico 88252		7. Lease Name or Unit Agreement Name State LPG Storage Well
4. Well Location Unit Letter <u>M</u> : <u>1000</u> feet from the <u>South</u> line and <u>1230</u> feet from the <u>West</u> line Section <u>32</u> Township <u>23S</u> Range <u>37E</u> NMPM <u>Lea</u> County		8. Well Number 4
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number 248440
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Langlie Mattix
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- Annual MIT
- Date: 10-24-10
- The following activities were completed
- Installed temperature and pressure recorder on State LPG Well Four. Green pen pressure is 0-1,000 pounds. Blue pen pressure range is 0-500 pounds. Red pen is 0-150 degrees Fahrenheit used to record atmosphere temperature.
- Well four temperature and pressure starting points: Tubing pressure 25, Casing pressure 630, and temperature is 66 degrees.
- Well four has 10,112 barrels of iso-butane stored in the cavern. Using existing water pump, brine water was injected into the tubing increasing the tubing pressure to 70 pounds. The casing pressure increased to 675 pounds.
- Chart recorder was used to record the pressure stabilization and temperature changes for the next 24 hours. See attachment for the results of this test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Ken Parker TITLE Manager DATE 6-19-07

Type or print name Ken Parker

E-mail address: ken.parker@wnr.com

Telephone No. 575-395-2632

For State Use Only

APPROVED BY: Emily J. Chavez TITLE Environmental Engineer DATE 11/9/10 Conditions of Approval (if any):

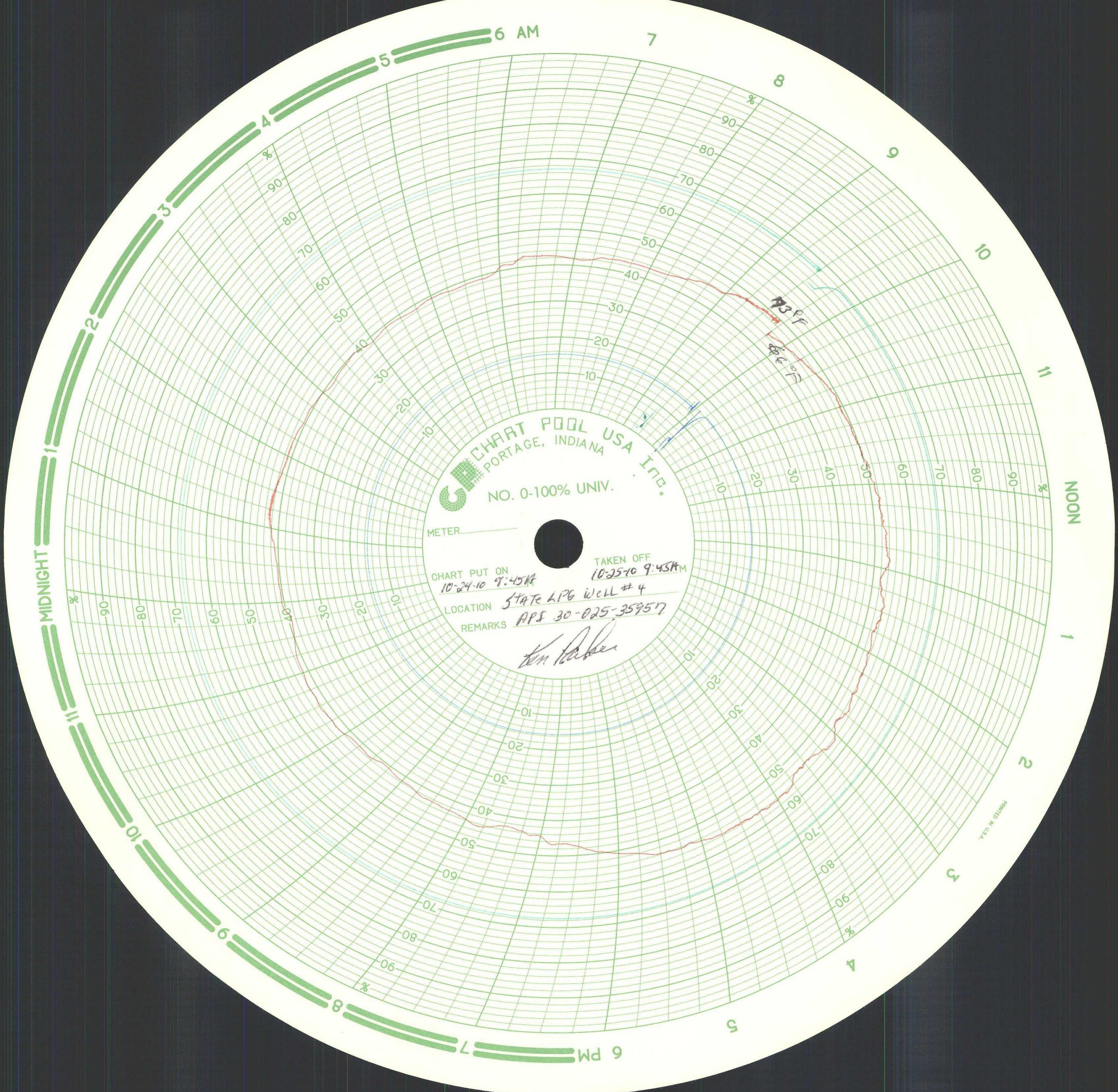


CHART POOL USA INC.
PORTAGE, INDIANA
NO. 0-100% UNIV.

METER _____
CHART PUT ON 10-24-10 9:45 AM
TAKEN OFF 10-25-10 9:45 AM
LOCATION State L126 Well # 4
REMARKS API 30-025-35957
Ken Baker

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