KOLAR Document ID: 1354656

Confidentiality Requested:
☑ Yes ☐ No

# KANSAS CORPORATION COMMISSION
## OIL & GAS CONSERVATION DIVISION

**Form ACO-1**
January 2018
**Form must be Typed**
**Form must be Signed**
**All blanks must be Filled**

# WELL COMPLETION FORM
## WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5003
Name: McCoy Petroleum Corporation
Address 1: 9342 E CENTRAL
Address 2:
City: WICHITA State: KS Zip: 67206 + 2573
Contact Person: Scott Hampel
Phone: ( 316 ) 636-2737
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: Zach Wiele
Purchaser: None

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☐ Oil ☐ WSW ☐ SWD
☐ Gas ☑ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

| 3/8/2017 | 3/18/2017 | 3/18/2017 |
|---|---|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |

API No.: 15-069-20499-00-00
Spot Description: C NE NW
__ - __ - NE - NW Sec. 21 Twp. 29 S. R. 28 ☐ East ☑ West
660 Feet from ☑ North / ☐ South Line of Section
1980 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Gray
Lease Name: THOMAS & REED FARMS "A" Well #: 1-21
Field Name: Wildcat
Producing Formation: None
Elevation: Ground: 2728 Kelly Bushing: 2739
Total Vertical Depth: 6500 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1690 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

**Drilling Fluid Management Plan**
*(Data must be collected from the Reserve Pit)*

Chloride content: 12800 ppm Fluid volume: 1100 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

☑ **Confidentiality Requested**
Date: 05/12/2017
☑ **Confidential Release Date:** 05/12/2019
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
**ALT** ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 05/18/2017

Operator Name: McCoy Petroleum Corporation Lease Name: THOMAS & REED FARMS "A" Well #: 1-21

Sec. 21 Twp. 29 S. R. 28 ☐ East ☑ West County: Gray

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

| | | | |
|---|---|---|---|
| Drill Stem Tests Taken *(Attach Additional Sheets)* | ☑ Yes | ☐ No | |
| Samples Sent to Geological Survey | ☑ Yes | ☐ No | |
| Cores Taken | ☐ Yes | ☑ No | |
| Electric Log Run | ☑ Yes | ☐ No | |
| Geologist Report / Mud Logs | ☐ Yes | ☐ No | |

List All E. Logs Run: Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

| Name | Top | Datum |
|---|---|---|
| See Attached | See Attached | See Attached |

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|---|---|---|
| Surface | 12.25 | 8.625 | 24 | 1690 | AMD Lite / Class A | 700 | 3%CC, 1/2# Flocel/sx, |
| | | | | | | | |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|
| ☐ Perforate<br>☐ Protect Casing<br>☐ Plug Back TD<br>☐ Plug Off Zone | - | | | |
| | - | | | |

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

| Date of first Production/Injection or Resumed Production/ Injection: | Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* |
|---|---|

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|---|---|---|---|---|---|
| | | | | | |

| DISPOSITION OF GAS: | METHOD OF COMPLETION: | PRODUCTION INTERVAL: Top / Bottom |
|---|---|---|
| ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)* | ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* | D&A / |

| Shots Per Foot | Perforation Top | Perforation Bottom | Bridge Plug Type | Bridge Plug Set At | Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)* |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

TUBING RECORD: Size: Set At: Packer At:

**Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202**

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | McCoy Petroleum Corporation |
| Well Name | THOMAS & REED FARMS "A"  1-21 |
| Doc ID | 1354656 |

All Electric Logs Run

| |
|---|
| Dual Induction |
| Neutron Density |
| Microlog |
| Sonic |
| Caliper |

| | |
|---|---|
| Form | ACO1 - Well Completion |
| Operator | McCoy Petroleum Corporation |
| Well Name | THOMAS & REED FARMS "A"  1-21 |
| Doc ID | 1354656 |

Casing

| Purpose Of String | Size Hole Drilled | Size Casing Set | Weight | Setting Depth | Type Of Cement | Number of Sacks Used | Type and Percent Additives |
|---|---|---|---|---|---|---|---|
| Surface | 12.25 | 8.625 | 24 | 1690 | AMD Lite / Class A | 700 | 3%CC, 1/2# Flocel/sx, |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

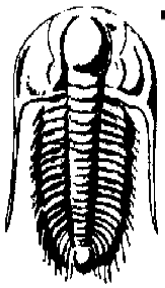
**ACO-1 Supplemental Information**

McCoy Petroleum Corp.
*Thomas & Reed Farms A #1-21*
C NE NW
660'FNL & 1980'FWL
Sec 21-29s-28w
KB: 2739'

| | Depth | Datum |
|---|---|---|
| Base Stone C. | 1685 | +1054 |
| Stotler | 3585 | - 846 |
| Heebner | 4235 | -1496 |
| Toronto | 4252 | -1513 |
| Lansing | 4297 | -1558 |
| Lansing B | 4349 | -1610 |
| Iola H | 4573 | -1834 |
| Stark | 4679 | -1940 |
| Swope Pors. | 4685 | -1946 |
| Hushpuckney | 4738 | -1999 |
| Hertha Pors. | 4747 | -2008 |
| Marmaton | 4865 | -2126 |
| Pawnee | 4946 | -2207 |
| Ft Scott | 4976 | -2237 |
| Cherokee | 4994 | -2255 |
| Atoka | 5142 | -2403 |
| Morrow Sh. | 5172 | -2433 |
| St Genevieve | 5178 | -2439 |
| St Louis | | |
| St Louis "C" | | |
| Spergen | | |
| Warsaw | 5510 | -2771 |
| Osage | 5661 | -2922 |
| Compton | | |
| Viola | 6266 | -3527 |
| Simpson | 6363 | -3624 |
| Simpson Sand | | |
| Arbuckle | 6384 | -3645 |
| RTD | 6500 | -3761 |

LOG TOPS Structure Compared To:

| | Depth | Datum |
|---|---|---|
| Base Stone C. | 1693 | +1046 |
| Winfield | 2767 | - 28 |
| Stotler | 3581 | - 842 |
| Heebner | 4233 | -1494 |
| Toronto | 4252 | -1513 |
| Lansing | 4294 | -1555 |
| Lansing B | 4352 | -1613 |
| Iola H | 4570 | -1831 |
| Stark | 4676 | -1937 |
| Swope Pors. | 4678 | -1939 |
| Hushpuckney | 4737 | -1998 |
| Hertha Pors. | 4751 | -2012 |
| Marmaton | 4858 | -2119 |
| Pawnee | 4942 | -2203 |
| Ft Scott | 4973 | -2234 |
| Cherokee | 4991 | -2252 |
| Atoka | 5139 | -2400 |
| Morrow Sh. | 5169 | -2430 |
| St Genevieve | 5174 | -2435 |
| St Louis | 5269 | -2530 |
| St Louis "C" | 5366 | -2627 |
| Spergen | 5427 | -2688 |
| Warsaw | 5617 | -2878 |
| Osage | 5840 | -3101 |
| Compton | 6129 | -3390 |
| Viola | 6261 | -3522 |
| Simpson | 6356 | -3617 |
| Simpson Sand | 6371 | -3632 |
| Arbuckle | 6384 | -3645 |
| LTD | 6495 | -3756 |



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**21-29s-28w Gray,KS**

**Thomas & Reed Farms A #1-21**

Start Date: 2017.03.15 @ 18:35:15

End Date: 2017.03.16 @ 03:24:45

Job Ticket #: 61347 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.21 @ 16:34:55

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61347 **DST#: 1**

Test Start: 2017.03.15 @ 18:35:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:29:00
Time Test Ended: 03:24:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

**Interval: 6211.00 ft (KB) To 6225.00 ft (KB) (TVD)**
Total Depth: 6225.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

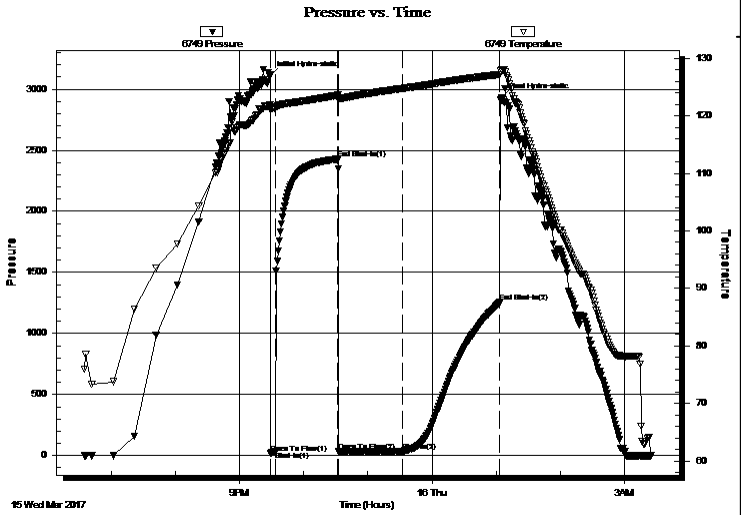
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**

Press@RunDepth: 35.46 psig @ 6212.00 ft (KB)
Start Date: 2017.03.15 End Date: 2017.03.16
Start Time: 18:35:15 End Time: 03:24:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.16
Time On Btm: 2017.03.15 @ 21:28:45
Time Off Btm: 2017.03.16 @ 01:04:30

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3114.43 | 121.95 | Initial Hydro-static |
| 1 | 19.02 | 121.10 | Open To Flow (1) |
| 5 | 32.21 | 121.24 | Shut-In(1) |
| 64 | 2427.69 | 123.61 | End Shut-In(1) |
| 64 | 34.58 | 122.86 | Open To Flow (2) |
| 124 | 35.46 | 124.77 | Shut-In(2) |
| 215 | 1254.08 | 127.22 | End Shut-In(2) |
| 216 | 2933.40 | 127.98 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 10.00 | mud 100%m | 453.23 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61347 **DST#: 1**

Test Start: 2017.03.15 @ 18:35:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:29:00
Time Test Ended: 03:24:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

**Interval: 6211.00 ft (KB) To 6225.00 ft (KB) (TVD)**
Total Depth: 6225.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

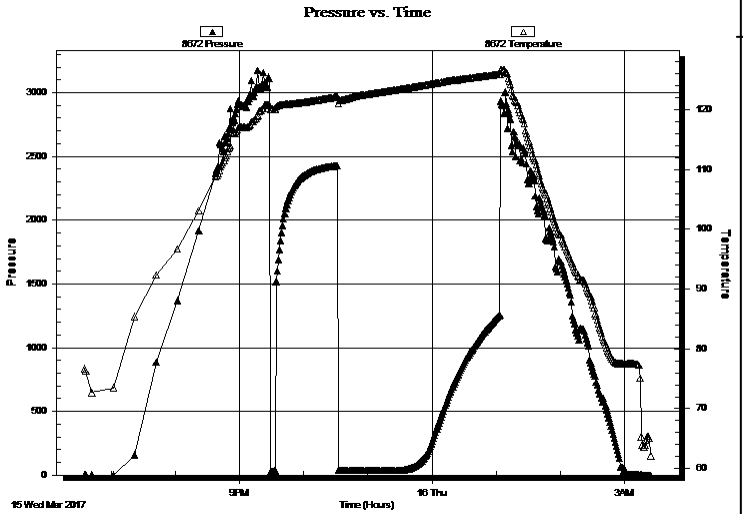
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8672** **Inside**

Press@RunDepth: psig @ 6212.00 ft (KB)
Start Date: 2017.03.15 End Date: 2017.03.16
Start Time: 18:35:15 End Time: 03:24:30

Capacity: 8000.00 psig
Last Calib.: 2017.03.16
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 10.00 | mud 100%m | 453.23 |
| | | |
| | | |
| | | |
| | | |
| | | |

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61347 **DST#: 1**

Test Start: 2017.03.15 @ 18:35:15

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 5988.00 ft | Diameter: | 3.80 inches | Volume: | 84.00 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 216.00 ft | Diameter: | 216.00 inches | Volume: | 9789.72 bbl | |
| | | | | | Total Volume: | 9873.72 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 21.00 ft |
| Depth to Top Packer: | 6211.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 14.00 ft |
| Tool Length: | 42.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 1500.00 lb |
| Weight set on Packer: | | 20000.00 lb |
| Weight to Pull Loose: | | 110000.0 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 90000.00 lb |
| | Final | 90000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 6184.00 | | |
| Shut In Tool | 5.00 | | | 6189.00 | | |
| Hydraulic tool | 5.00 | | | 6194.00 | | |
| Jars | 5.00 | | | 6199.00 | | |
| Safety Joint | 3.00 | | | 6202.00 | | |
| Packer | 5.00 | | | 6207.00 | 28.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 6211.00 | | |
| Stubb | 1.00 | | | 6212.00 | | |
| Recorder | 0.00 | 8672 | Inside | 6212.00 | | |
| Recorder | 0.00 | 6749 | Outside | 6212.00 | | |
| Perforations | 8.00 | | | 6220.00 | | |
| Bullnose | 5.00 | | | 6225.00 | 14.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **42.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61347 **DST#: 1**

Test Start: 2017.03.15 @ 18:35:15

## Mud and Cushion Information

| | | | | | |
|---|---|---|---|---|---|
| Mud Type: | Gel Chem | Cushion Type: | | Oil API: | 0 deg API |
| Mud Weight: | 9.00 lb/gal | Cushion Length: | ft | Water Salinity: | 0 ppm |
| Viscosity: | 48.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 6.35 in³ | Gas Cushion Type: | | | |
| Resistivity: | 0.00 ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 2450.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

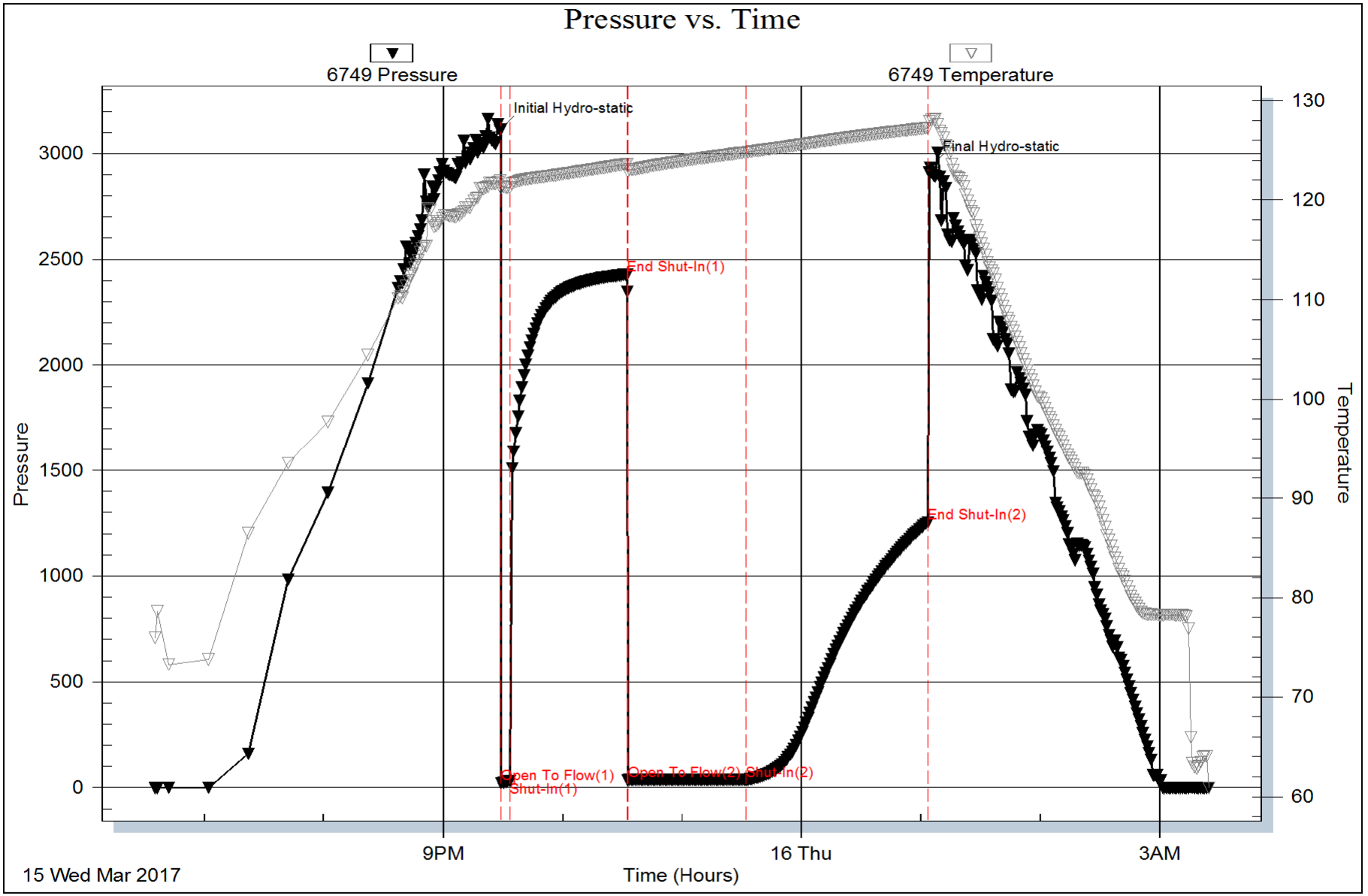
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 10.00 | mud 100%m | 453.228 |

Total Length: 10.00 ft Total Volume: 453.228 bbl

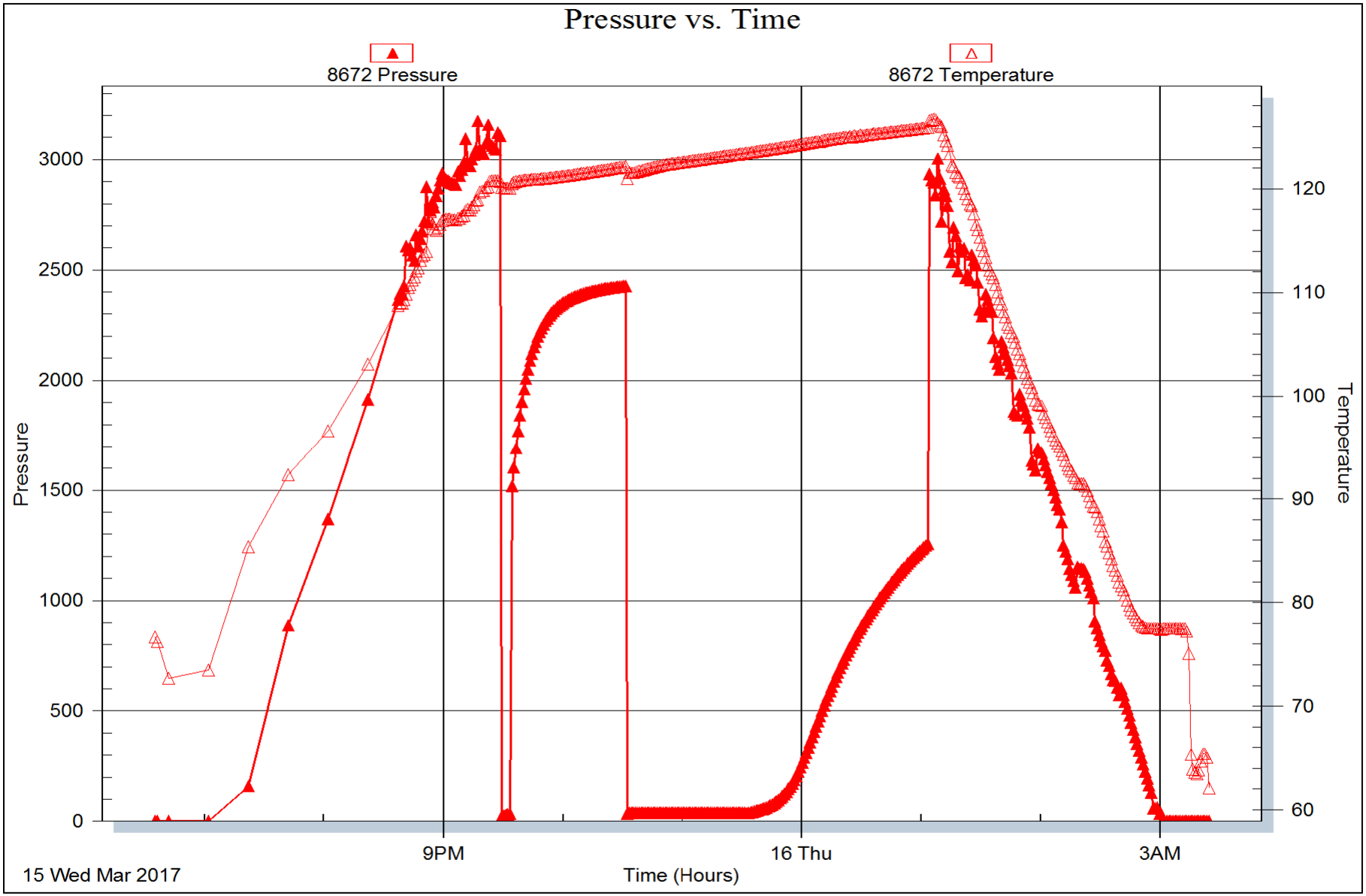
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 1

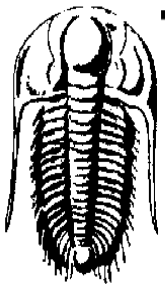



Trilobite Testing, Inc Ref. No: 61347 Printed: 2017.03.21 @ 16:34:56

Serial #: 8672 **Inside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 1




Trilobite Testing, Inc Ref. No: 61347 Printed: 2017.03.21 @ 16:34:56



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**21-29s-28w Gray,KS**

**Thomas & Reed Farms A #1-21**

Start Date: 2017.03.16 @ 17:02:15

End Date: 2017.03.17 @ 00:42:00

Job Ticket #: 61348 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.21 @ 16:17:09

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61348 **DST#: 2**

Test Start: 2017.03.16 @ 17:02:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:42:45
Time Test Ended: 00:42:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 6224.00 ft (KB) To 6255.00 ft (KB) (TVD)**
Total Depth: 6255.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

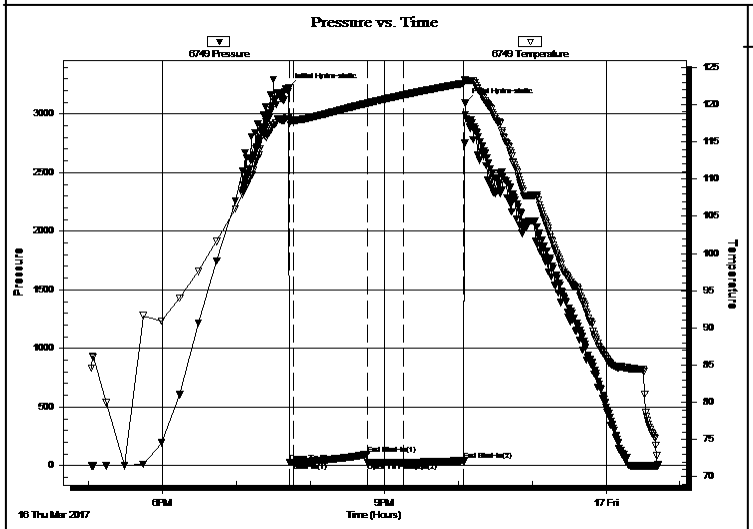
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**

Press@RunDepth: 29.42 psig @ 6225.00 ft (KB)
Start Date: 2017.03.16 End Date: 2017.03.17
Start Time: 17:02:15 End Time: 00:42:00

Capacity: 8000.00 psig
Last Calib.: 2017.03.17
Time On Btm: 2017.03.16 @ 19:42:30
Time Off Btm: 2017.03.16 @ 22:05:30

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3222.80 | 118.38 | Initial Hydro-static |
| 1 | 27.38 | 117.51 | Open To Flow (1) |
| 4 | 28.21 | 117.90 | Shut-In(1) |
| 64 | 96.51 | 120.19 | End Shut-In(1) |
| 64 | 28.06 | 120.19 | Open To Flow (2) |
| 93 | 29.42 | 121.28 | Shut-In(2) |
| 142 | 43.90 | 122.86 | End Shut-In(2) |
| 143 | 3093.35 | 123.38 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 2.00 | mud 100% m | 90.65 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61348 **DST#: 2**

Test Start: 2017.03.16 @ 17:02:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:42:45
Time Test Ended: 00:42:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 6224.00 ft (KB) To 6255.00 ft (KB) (TVD)**
Total Depth: 6255.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

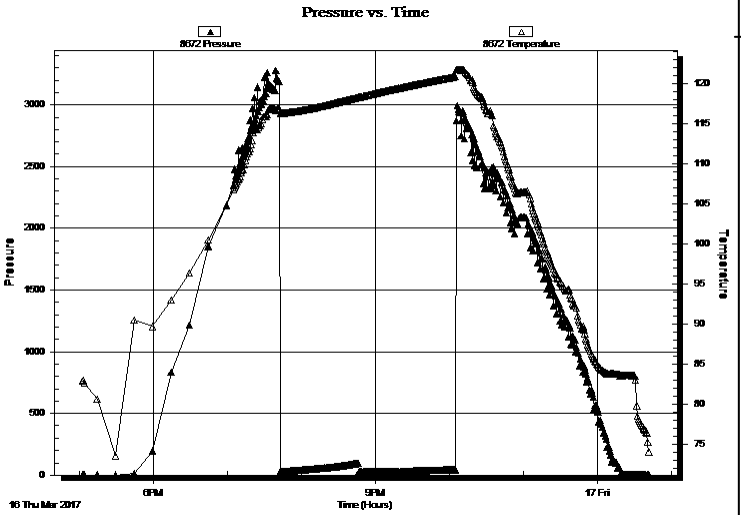
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8672** **Inside**

Press@RunDepth: psig @ 6225.00 ft (KB)
Start Date: 2017.03.16 End Date: 2017.03.17
Start Time: 17:02:15 End Time: 00:41:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.17
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 2.00 | mud 100% m | 90.65 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61348 **DST#: 2**

Test Start: 2017.03.16 @ 17:02:15

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 5988.00 ft | Diameter: | 3.80 inches | Volume: | 84.00 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 216.00 ft | Diameter: | 216.00 inches | Volume: | 9789.72 bbl | |
| | | | | | Total Volume: | 9873.72 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 8.00 ft |
| Depth to Top Packer: | 6224.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 31.00 ft |
| Tool Length: | 59.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 1500.00 lb |
| Weight set on Packer: | | 25000.00 lb |
| Weight to Pull Loose: | | 110000.0 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 90000.00 lb |
| | Final | 90000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 6197.00 | | |
| Shut In Tool | 5.00 | | | 6202.00 | | |
| Hydraulic tool | 5.00 | | | 6207.00 | | |
| Jars | 5.00 | | | 6212.00 | | |
| Safety Joint | 3.00 | | | 6215.00 | | |
| Packer | 5.00 | | | 6220.00 | 28.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 6224.00 | | |
| Stubb | 1.00 | | | 6225.00 | | |
| Recorder | 0.00 | 8672 | Inside | 6225.00 | | |
| Recorder | 0.00 | 6749 | Outside | 6225.00 | | |
| Perforations | 25.00 | | | 6250.00 | | |
| Bullnose | 5.00 | | | 6255.00 | 31.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **59.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61348 **DST#: 2**

Test Start: 2017.03.16 @ 17:02:15

## Mud and Cushion Information

| | | | | | |
|---|---|---|---|---|---|
| Mud Type: | Gel Chem | Cushion Type: | | Oil API: | 0 deg API |
| Mud Weight: | 8.00 lb/gal | Cushion Length: | ft | Water Salinity: | 0 ppm |
| Viscosity: | 91.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 7.95 in³ | Gas Cushion Type: | | | |
| Resistivity: | 0.00 ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 2850.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

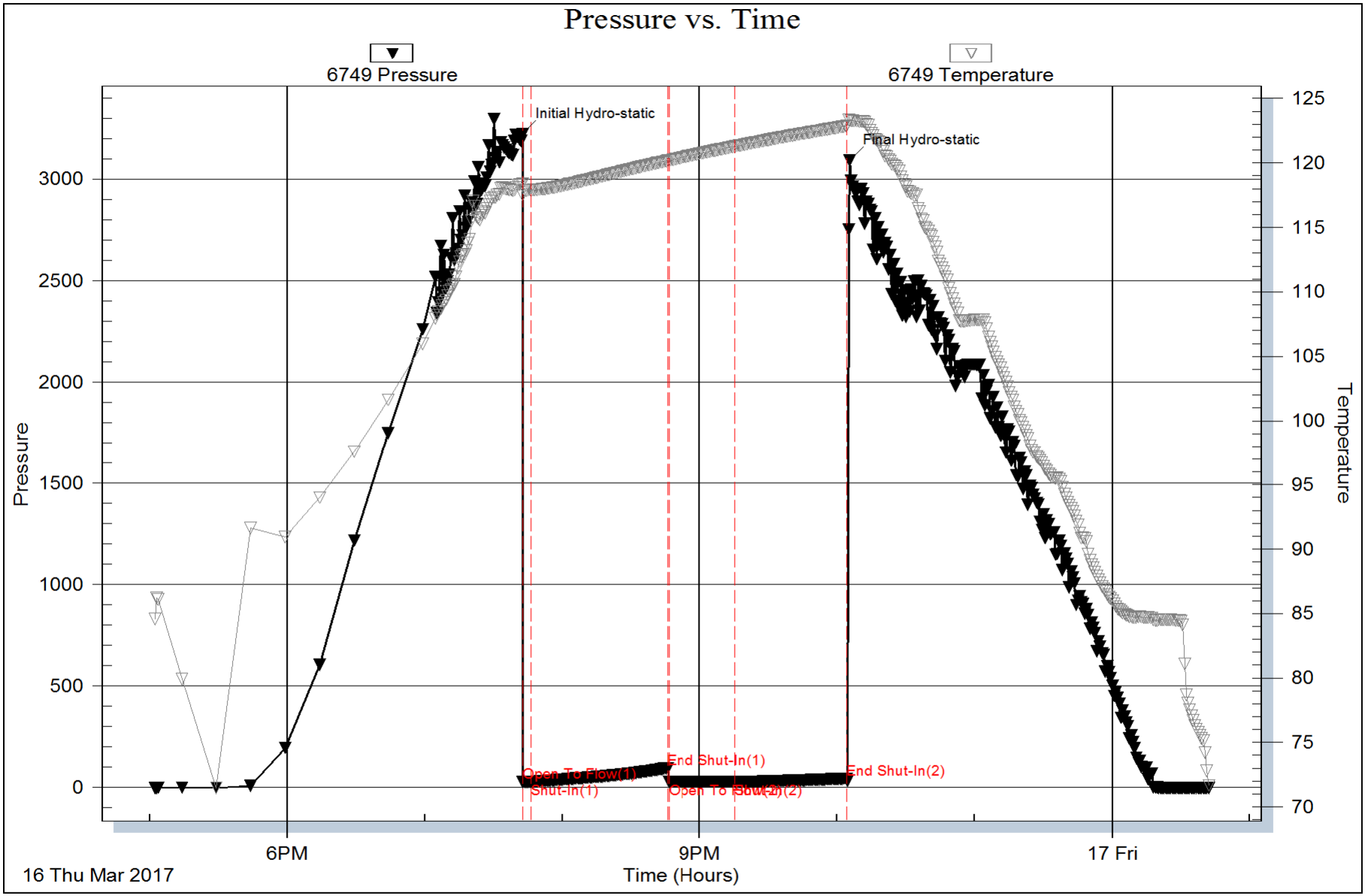
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 2.00 | mud 100% m | 90.646 |

Total Length: 2.00 ft Total Volume: 90.646 bbl

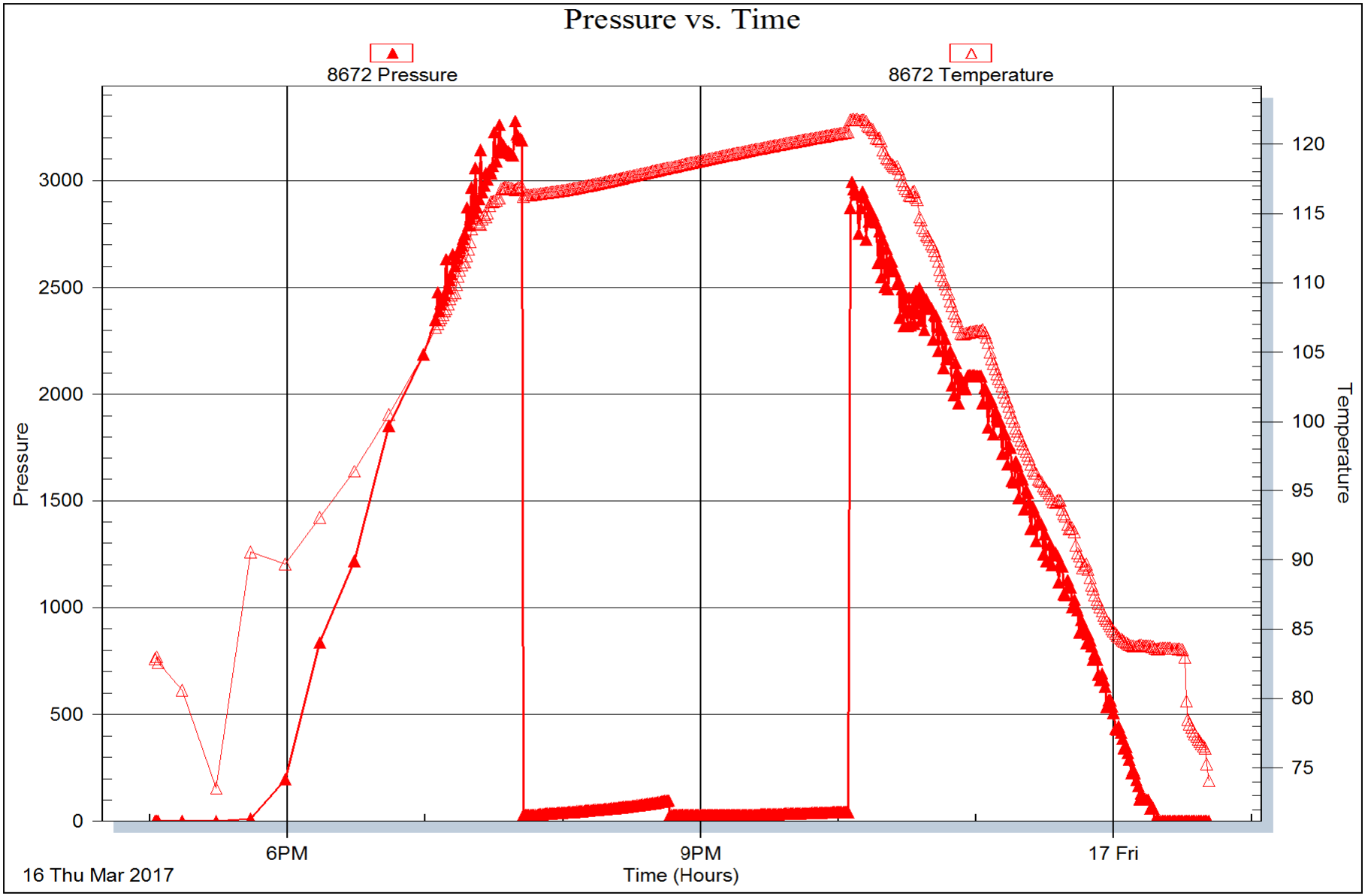
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 2

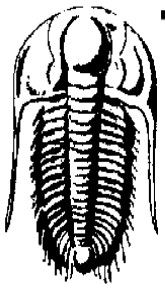



Trilobite Testing, Inc Ref. No: 61348 Printed: 2017.03.21 @ 16:17:10

Serial #: 8672 **Inside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 2




Trilobite Testing, Inc Ref. No: 61348 Printed: 2017.03.21 @ 16:17:10



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**21-29s-28w Gray,KS**

**Thomas & Reed Farms A #1-21**

Start Date: 2017.03.17 @ 12:21:15

End Date: 2017.03.17 @ 19:18:00

Job Ticket #: 61349 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.21 @ 16:16:23

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61349 **DST#: 3**

Test Start: 2017.03.17 @ 12:21:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:41:30
Time Test Ended: 19:18:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

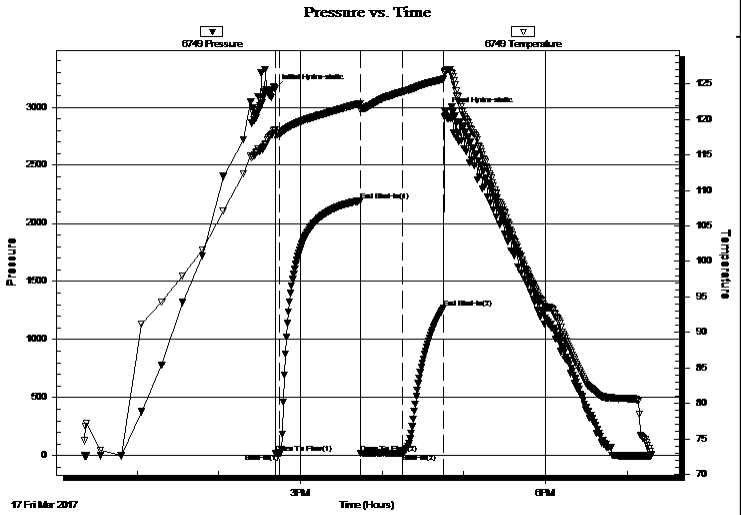
**Interval: 6266.00 ft (KB) To 6282.00 ft (KB) (TVD)**
Total Depth: 6282.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**
Press@RunDepth: 21.45 psig @ 6267.00 ft (KB)
Start Date: 2017.03.17 End Date: 2017.03.17
Start Time: 12:21:15 End Time: 19:18:00

Capacity: 8000.00 psig
Last Calib.: 2017.03.17
Time On Btm: 2017.03.17 @ 14:41:15
Time Off Btm: 2017.03.17 @ 16:46:15

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3158.68 | 118.56 | Initial Hydro-static |
| 1 | 18.64 | 117.67 | Open To Flow (1) |
| 4 | 18.40 | 118.05 | Shut-In(1) |
| 63 | 2195.46 | 122.26 | End Shut-In(1) |
| 63 | 19.93 | 121.38 | Open To Flow (2) |
| 94 | 21.45 | 123.87 | Shut-In(2) |
| 124 | 1269.17 | 125.70 | End Shut-In(2) |
| 125 | 2957.75 | 126.73 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100%m | 226.61 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61349 **DST#: 3**

Test Start: 2017.03.17 @ 12:21:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:41:30
Time Test Ended: 19:18:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 6266.00 ft (KB) To 6282.00 ft (KB) (TVD)**
Total Depth: 6282.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

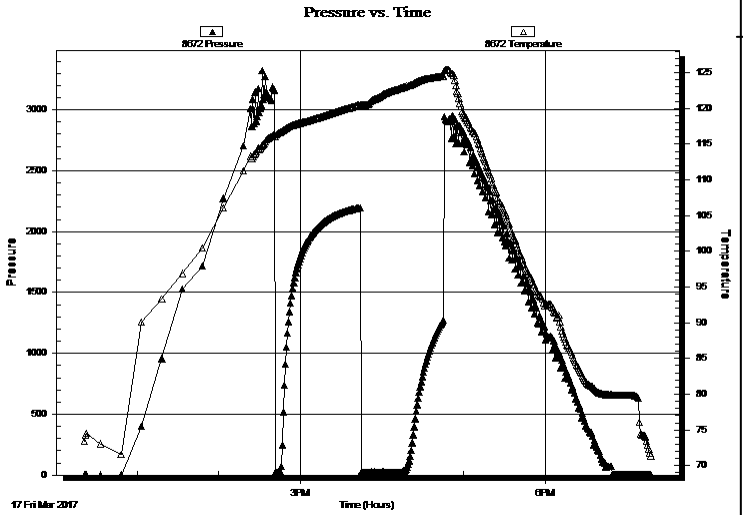
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8672** **Inside**

Press@RunDepth: psig @ 6267.00 ft (KB)
Start Date: 2017.03.17 End Date: 2017.03.17
Start Time: 12:21:15 End Time: 19:18:00

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to w eak surface blow
IS:No return blow
FF:No blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100%m | 226.61 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61349 **DST#: 3**

Test Start: 2017.03.17 @ 12:21:15

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 6052.00 ft | Diameter: | 3.80 inches | Volume: | 84.89 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 216.00 ft | Diameter: | 216.00 inches | Volume: | 9789.72 bbl | |
| | | | | | Total Volume: | 9874.61 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 30.00 ft |
| Depth to Top Packer: | 6266.00 ft |
| Depth to Bottom Packer: | ft |
| Interval betw een Packers: | 16.00 ft |
| Tool Length: | 44.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 1500.00 lb |
| Weight set on Packer: | | 25000.00 lb |
| Weight to Pull Loose: | | 110000.0 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 92000.00 lb |
| | Final | 92000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 6239.00 | | |
| Shut In Tool | 5.00 | | | 6244.00 | | |
| Hydraulic tool | 5.00 | | | 6249.00 | | |
| Jars | 5.00 | | | 6254.00 | | |
| Safety Joint | 3.00 | | | 6257.00 | | |
| Packer | 5.00 | | | 6262.00 | 28.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 6266.00 | | |
| Stubb | 1.00 | | | 6267.00 | | |
| Recorder | 0.00 | 8672 | Inside | 6267.00 | | |
| Recorder | 0.00 | 6749 | Outside | 6267.00 | | |
| Perforations | 10.00 | | | 6277.00 | | |
| Bullnose | 5.00 | | | 6282.00 | 16.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **44.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61349 **DST#: 3**

Test Start: 2017.03.17 @ 12:21:15

## Mud and Cushion Information

| | | | | | |
|---|---|---|---|---|---|
| Mud Type: | Gel Chem | Cushion Type: | | Oil API: | 0 deg API |
| Mud Weight: | 9.00 lb/gal | Cushion Length: | ft | Water Salinity: | 0 ppm |
| Viscosity: | 55.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 7.96 in³ | Gas Cushion Type: | | | |
| Resistivity: | 0.00 ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 2750.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

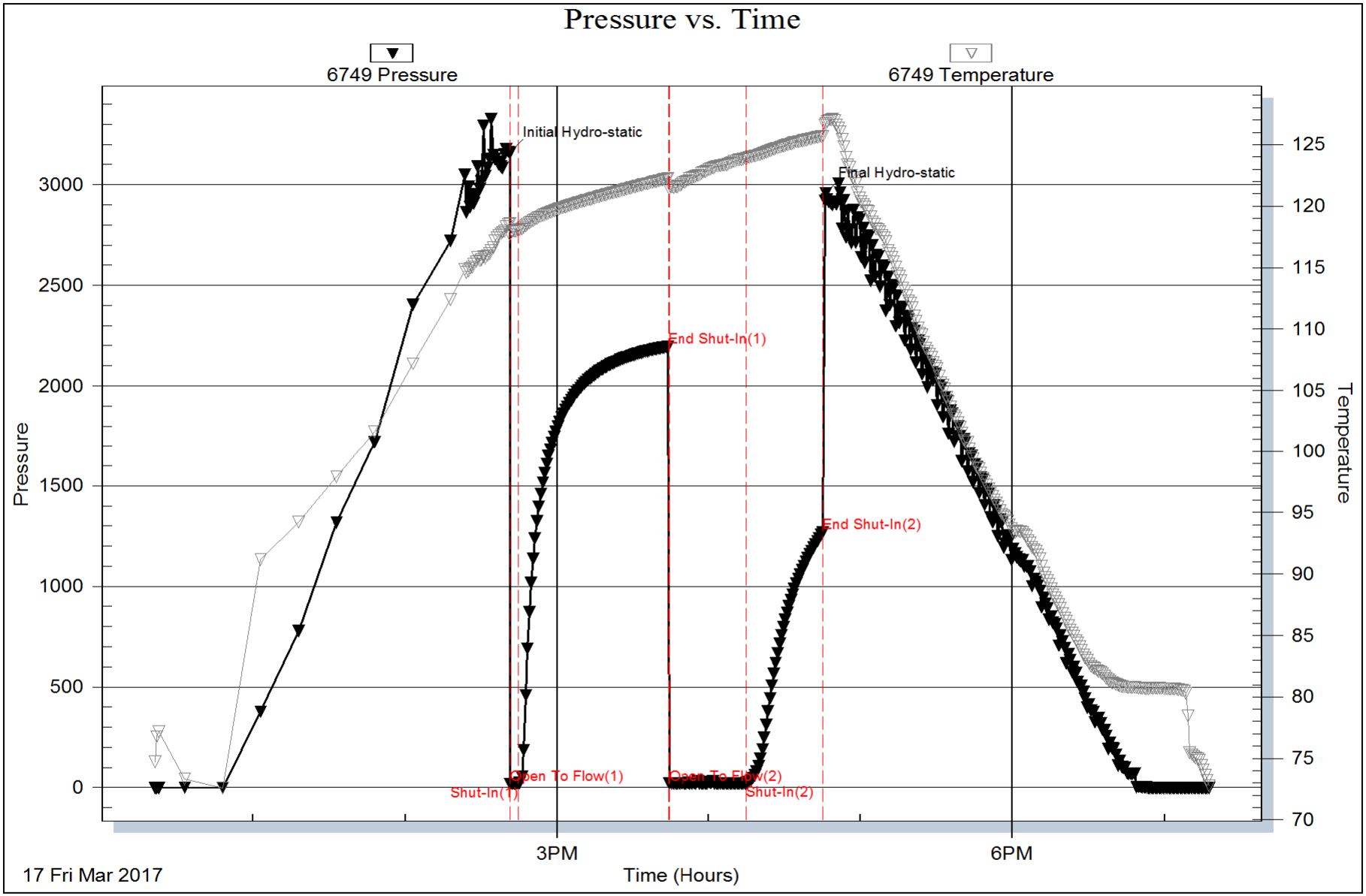
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 5.00 | mud 100%m | 226.614 |

Total Length: 5.00 ft Total Volume: 226.614 bbl

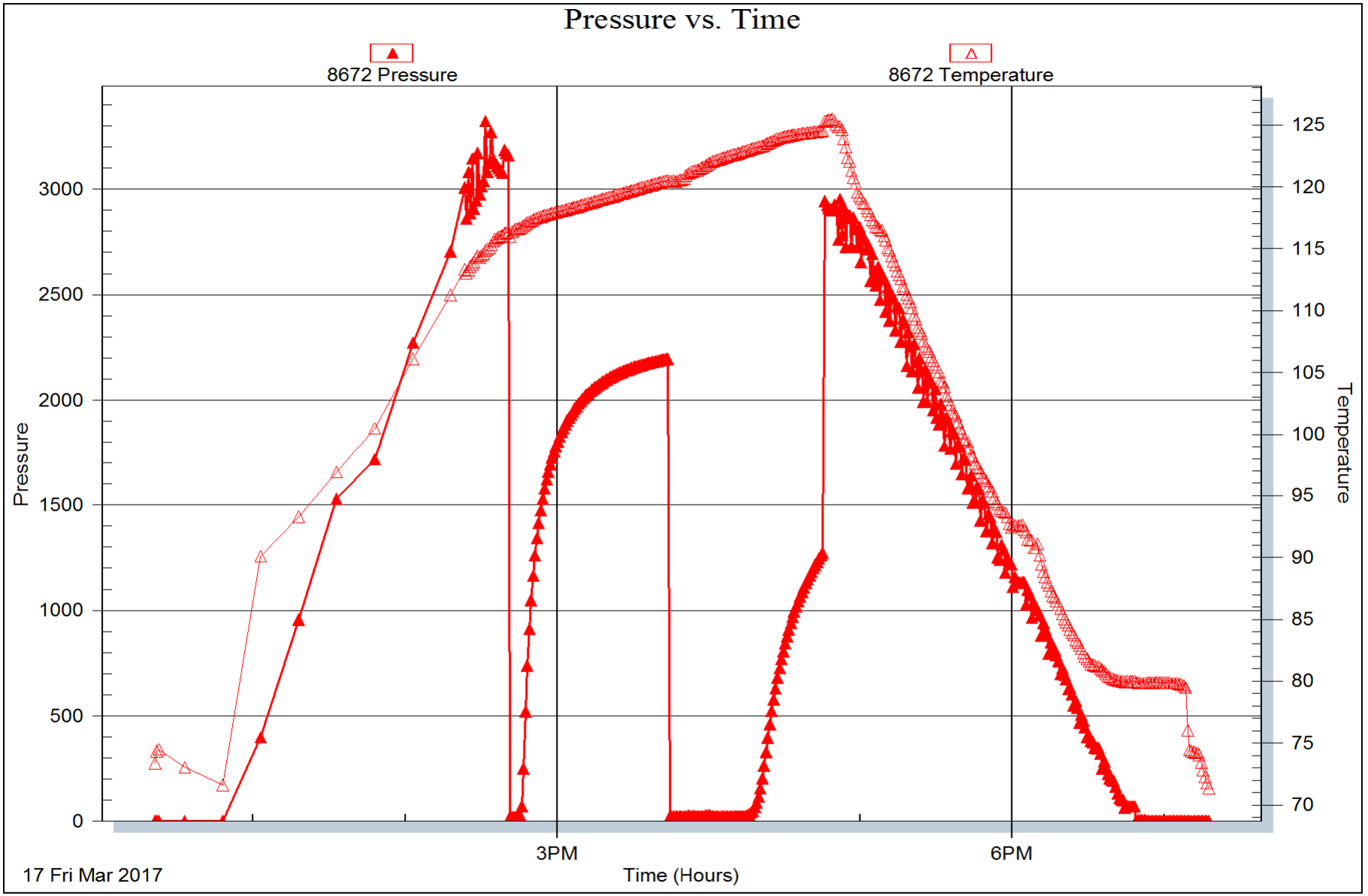
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 3

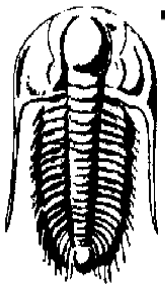



Trilobite Testing, Inc Ref. No: 61349 Printed: 2017.03.21 @ 16:16:24

Serial #: 8672 **Inside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 3




Trilobite Testing, Inc Ref. No: 61349 Printed: 2017.03.21 @ 16:16:24



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**21-29s-28w Gray,KS**

**Thomas & Reed Farms A #1-21**

Start Date: 2017.03.18 @ 21:36:15

End Date: 2017.03.19 @ 05:24:45

Job Ticket #: 61350 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.21 @ 16:06:57

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## GENERAL INFORMATION:

Formation: **Compton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:22:45
Time Test Ended: 05:24:45

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 6115.00 ft (KB) To 6159.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

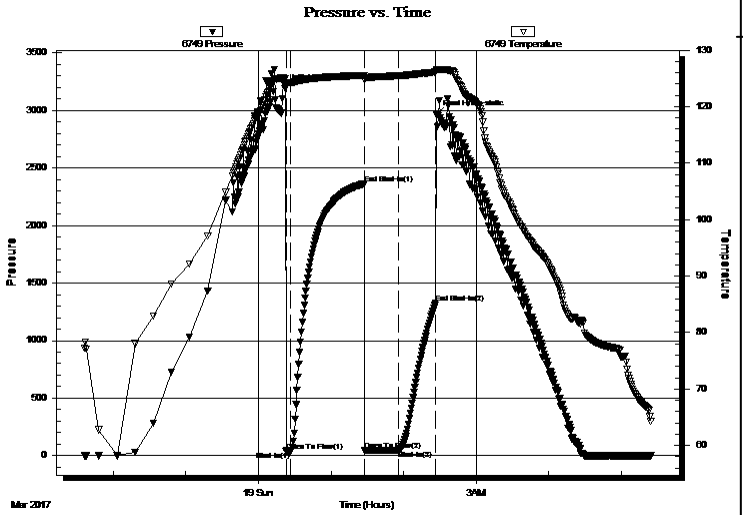
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**

Press@RunDepth: 45.71 psig @ 6155.00 ft (KB)
Start Date: 2017.03.18 End Date: 2017.03.19
Start Time: 21:36:15 End Time: 05:24:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm: 2017.03.19 @ 00:22:30
Time Off Btm: 2017.03.19 @ 02:27:15

TEST COMMENT: IF:Buit to 1/8" blow
IS:No return blow
FF:Weak surface blow that died in 5 minutes
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3190.69 | 124.93 | Initial Hydro-static |
| 1 | 40.62 | 123.82 | Open To Flow (1) |
| 5 | 40.24 | 124.24 | Shut-In(1) |
| 65 | 2362.31 | 125.52 | End Shut-In(1) |
| 65 | 43.88 | 124.68 | Open To Flow (2) |
| 94 | 45.71 | 125.44 | Shut-In(2) |
| 124 | 1329.03 | 126.08 | End Shut-In(2) |
| 125 | 2960.18 | 126.51 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100% m | 226.61 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## GENERAL INFORMATION:

Formation: **Compton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:22:45
Time Test Ended: 05:24:45

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

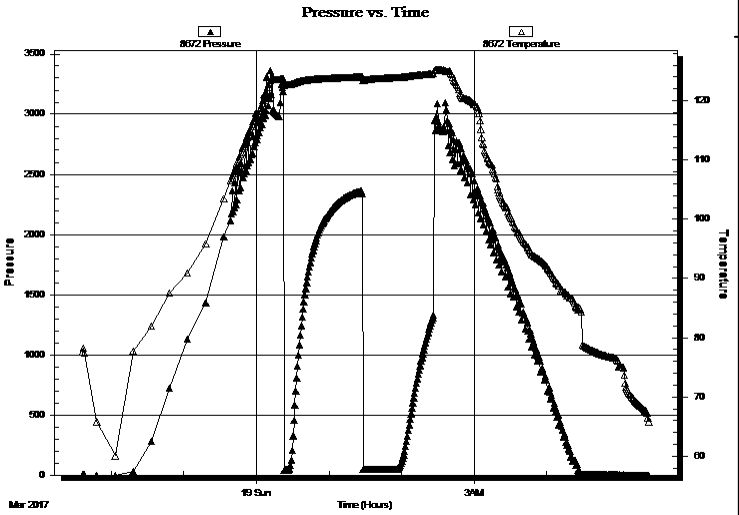
**Interval: 6115.00 ft (KB) To 6159.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8672** **Inside**
Press@RunDepth: psig @ 6155.00 ft (KB)
Start Date: 2017.03.18 End Date: 2017.03.19
Start Time: 21:36:15 End Time: 05:24:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Buit to 1/8" blow
IS:No return blow
FF:Weak surface blow that died in 5 minutes
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100% m | 226.61 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## GENERAL INFORMATION:

Formation: **Compton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:22:45
Time Test Ended: 05:24:45

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 6115.00 ft (KB) To 6159.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

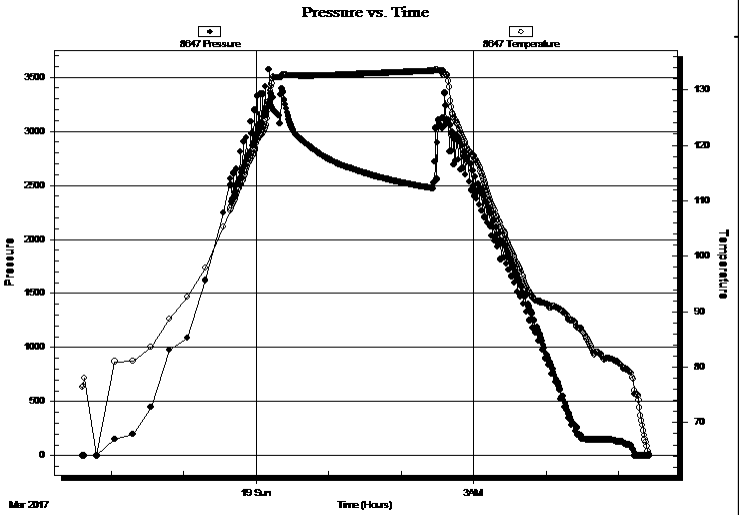
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8647** **Below (Straddle)**

Press@RunDepth: psig @ 6468.00 ft (KB)
Start Date: 2017.03.18 End Date: 2017.03.19
Start Time: 21:36:15 End Time: 05:25:00

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Buit to 1/8" blow
IS:No return blow
FF:Weak surface blow that died in 5 minutes
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100% m | 226.61 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 5919.00 ft | Diameter: | 3.80 inches | Volume: | 83.03 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 216.00 ft | Diameter: | 216.00 inches | Volume: | 9789.72 bbl | |
| | | | | | Total Volume: | 9872.75 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 48.00 ft |
| Depth to Top Packer: | 6115.00 ft |
| Depth to Bottom Packer: | 6160.00 ft |
| Interval betw een Packers: | 45.00 ft |
| Tool Length: | 387.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 1500.00 lb |
| Weight set on Packer: | | 30000.00 lb |
| Weight to Pull Loose: | | 110000.0 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 92000.00 lb |
| | Final | 92000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 6088.00 | | |
| Shut In Tool | 5.00 | | | 6093.00 | | |
| Hydraulic tool | 5.00 | | | 6098.00 | | |
| Jars | 5.00 | | | 6103.00 | | |
| Safety Joint | 3.00 | | | 6106.00 | | |
| Packer | 5.00 | | | 6111.00 | 28.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 6115.00 | | |
| Stubb | 1.00 | | | 6116.00 | | |
| Perforations | 1.00 | | | 6117.00 | | |
| Change Over Sub | 1.00 | | | 6118.00 | | |
| Drill Pipe | 31.00 | | | 6149.00 | | |
| Perforations | 5.00 | | | 6154.00 | | |
| Blank Off Sub | 1.00 | | | 6155.00 | | |
| Recorder | 0.00 | 8672 | Inside | 6155.00 | | |
| Recorder | 0.00 | 6749 | Outside | 6155.00 | | |
| Perforations | 5.00 | | | 6160.00 | 45.00 | Tool Interval |
| Packer | 3.00 | | | 6163.00 | | |
| Stubb | 1.00 | | | 6164.00 | | |
| Perforations | 17.00 | | | 6181.00 | | |
| Change Over Sub | 1.00 | | | 6182.00 | | |
| Drill Pipe | 286.00 | | | 6468.00 | | |
| Recorder | 0.00 | 8647 | Below | 6468.00 | | |
| Change Over Sub | 1.00 | | | 6469.00 | | |
| Bullnose | 5.00 | | | 6474.00 | 314.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **387.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## Mud and Cushion Information

| | | | | | |
|---|---|---|---|---|---|
| Mud Type: | Gel Chem | Cushion Type: | | Oil API: | 0 deg API |
| Mud Weight: | 9.00 lb/gal | Cushion Length: | ft | Water Salinity: | 0 ppm |
| Viscosity: | 65.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 7.58 in³ | Gas Cushion Type: | | | |
| Resistivity: | 0.00 ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 3000.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

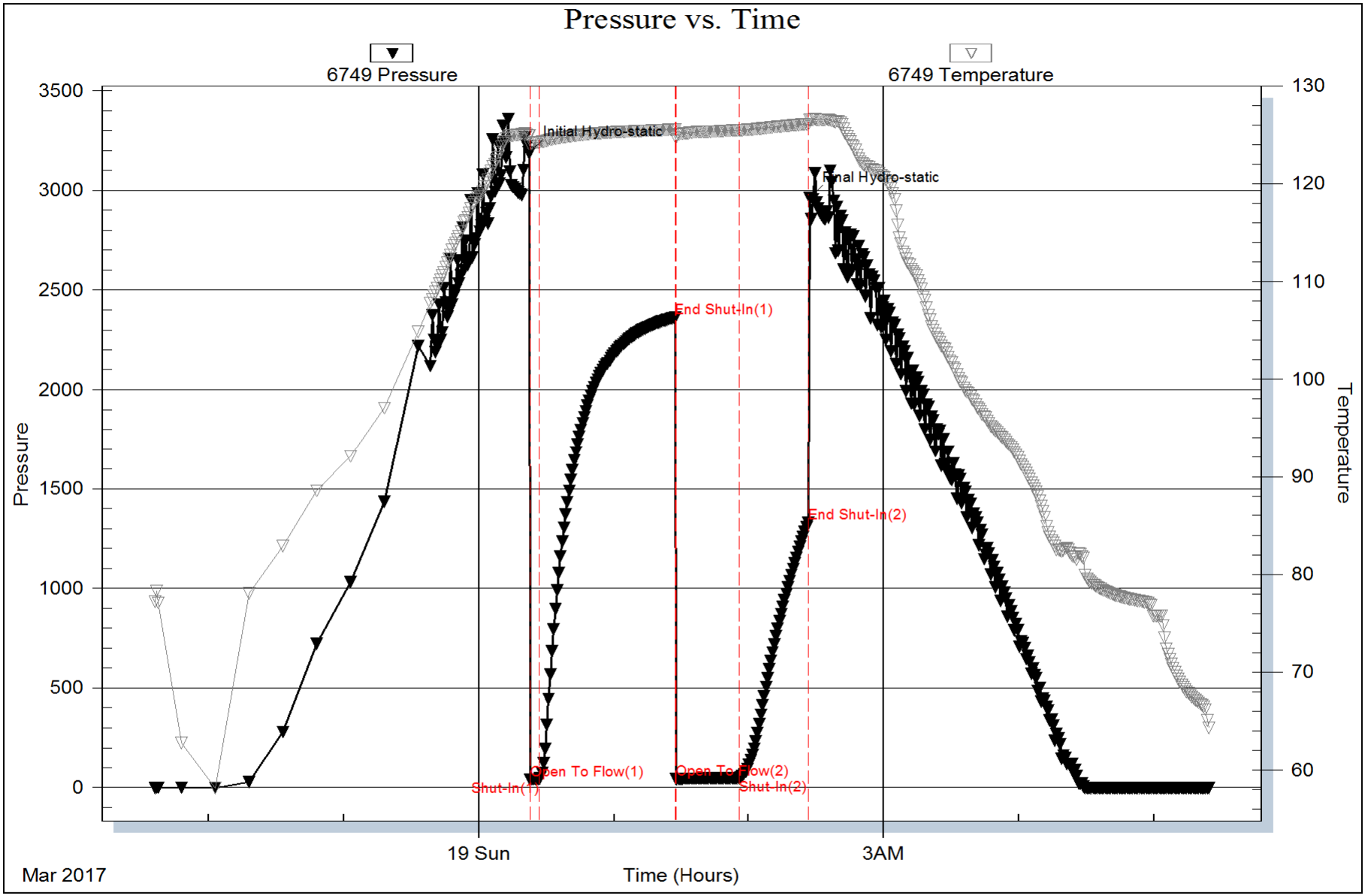
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 5.00 | mud 100% m | 226.614 |

Total Length: 5.00 ft Total Volume: 226.614 bbl

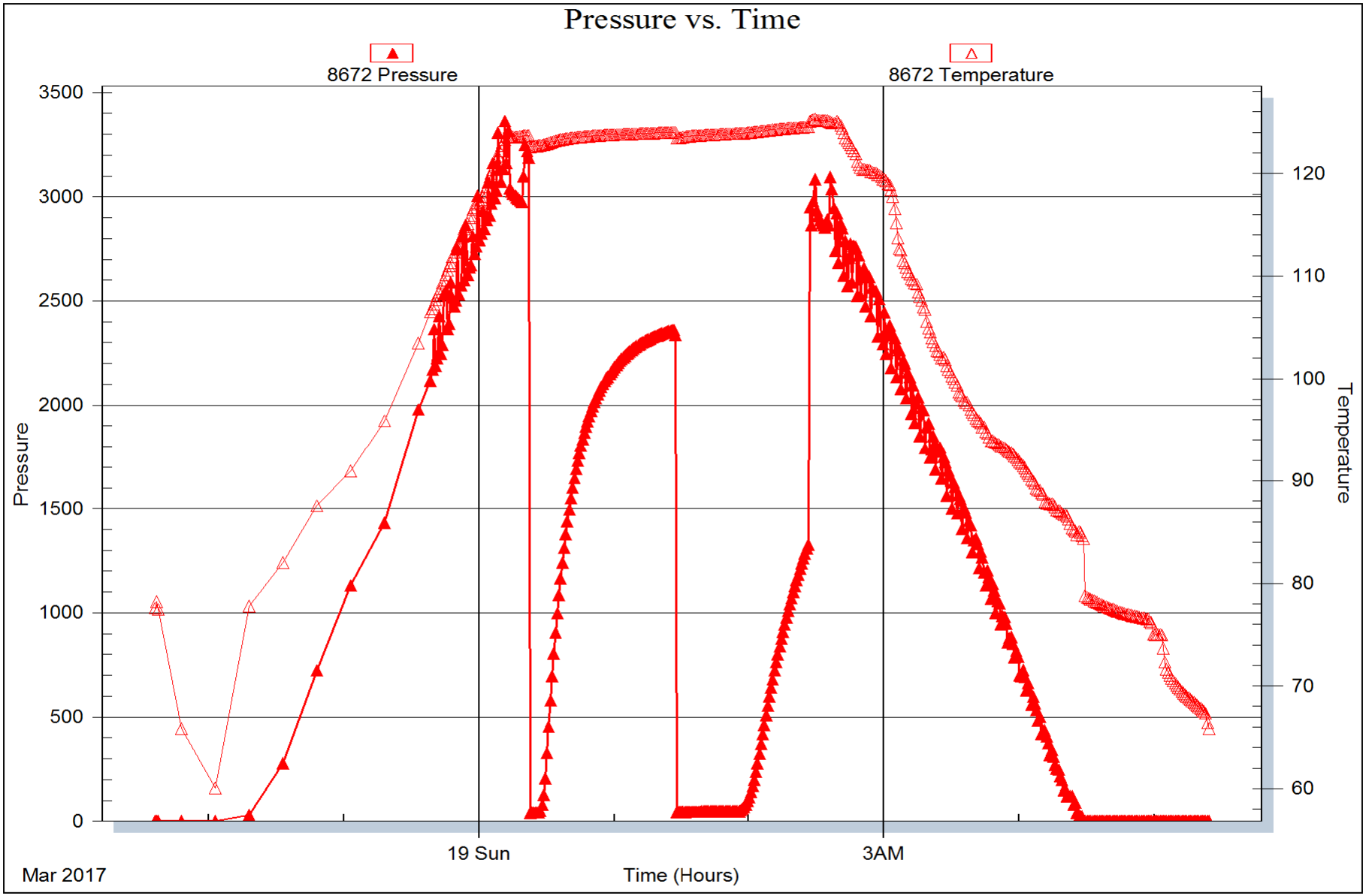
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 4



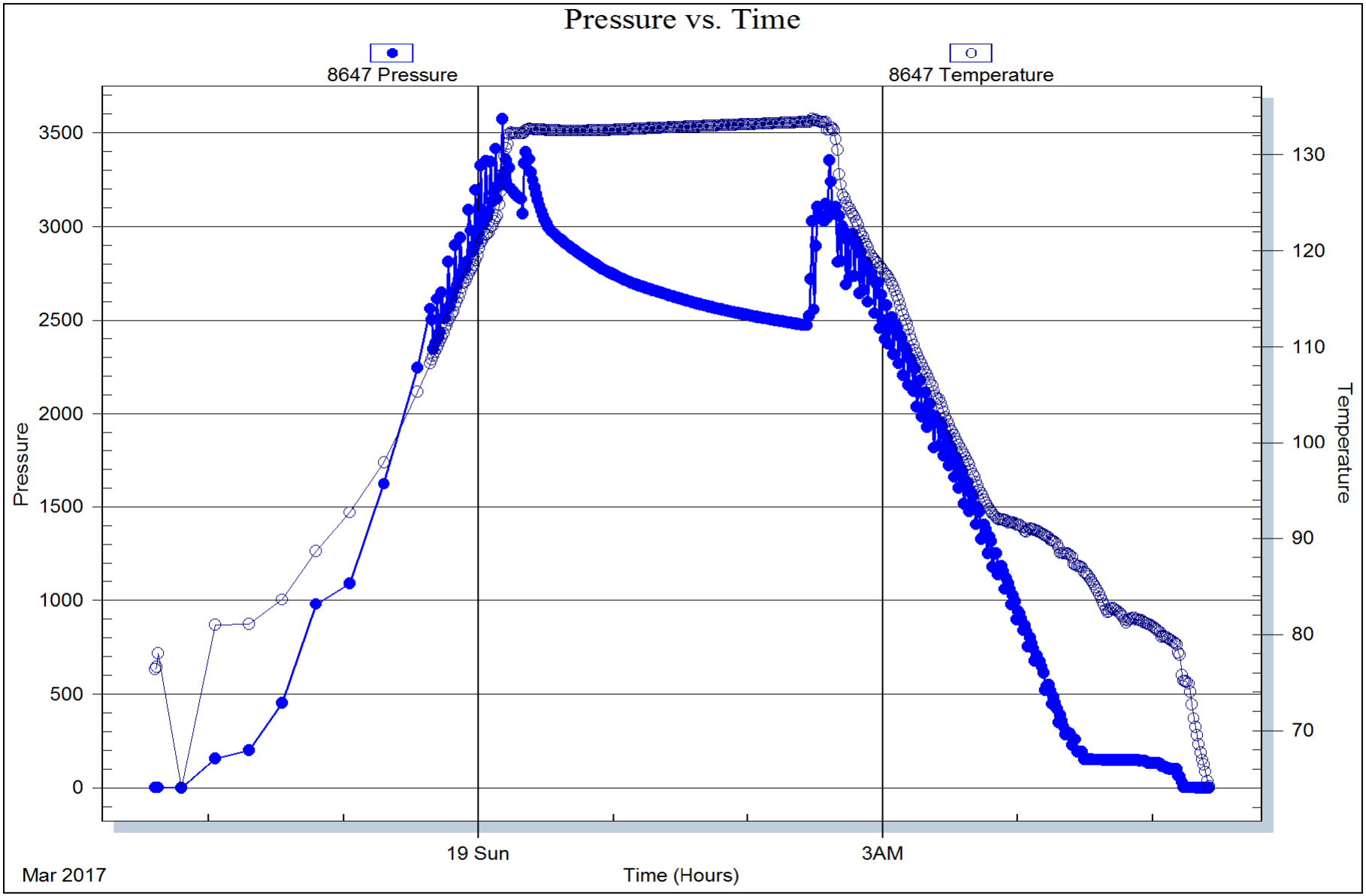

Trilobite Testing, Inc Ref. No: 61350 Printed: 2017.03.21 @ 16:06:58

Serial #: 8672 **Inside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 4

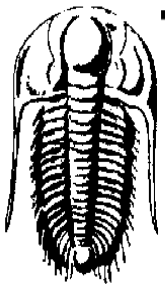



Trilobite Testing, Inc Ref. No: 61350 Printed: 2017.03.21 @ 16:06:58

Serial #: 8647 **Below (Straddle)** Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 4




Trilobite Testing, Inc Ref. No: 61350 Printed: 2017.03.21 @ 16:06:59



TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**21-29s-28w Gray,KS**

**Thomas & Reed Farms A #1-21**

Start Date: 2017.03.19 @ 06:12:15
End Date: 2017.03.19 @ 16:01:30
Job Ticket #: 63701 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.03.21 @ 16:05:29

# DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## GENERAL INFORMATION:

Formation: **St. Loius**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:57:30
Time Test Ended: 16:01:30

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 5275.00 ft (KB) To 5320.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

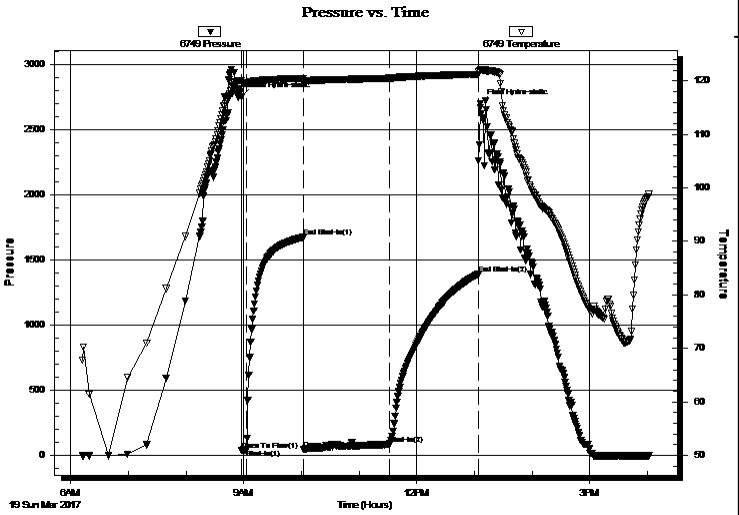
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**

Press@RunDepth: 85.97 psig @ 5311.00 ft (KB)
Start Date: 2017.03.19 End Date: 2017.03.19
Start Time: 06:12:15 End Time: 16:01:30

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm: 2017.03.19 @ 08:57:15
Time Off Btm: 2017.03.19 @ 13:06:00

TEST COMMENT: IF:Built to 1/2" blow
IS:No return blow
FF:Built to w eak surface blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 2750.82 | 120.10 | Initial Hydro-static |
| 1 | 41.62 | 118.60 | Open To Flow (1) |
| 5 | 45.71 | 119.51 | Shut-In(1) |
| 65 | 1674.37 | 120.47 | End Shut-In(1) |
| 65 | 49.34 | 119.73 | Open To Flow (2) |
| 155 | 85.97 | 120.50 | Shut-In(2) |
| 247 | 1389.90 | 121.23 | End Shut-In(2) |
| 249 | 2699.70 | 122.14 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 70.00 | mud 100%m | 3172.60 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## GENERAL INFORMATION:

Formation: **St. Loius**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:57:30
Time Test Ended: 16:01:30

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 5275.00 ft (KB) To 5320.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

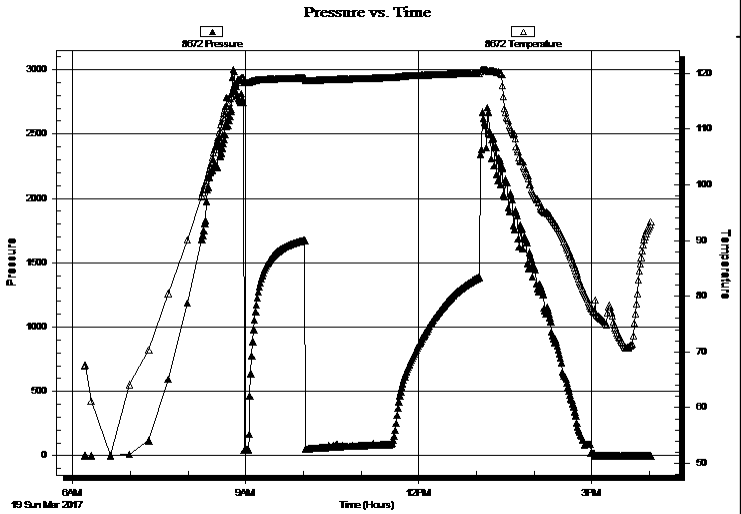
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8672** **Inside**

Press@RunDepth: psig @ 5311.00 ft (KB)
Start Date: 2017.03.19 End Date: 2017.03.19
Start Time: 06:12:15 End Time: 16:01:30

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 1/2" blow
IS:No return blow
FF:Built to w eak surface blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 70.00 | mud 100%m | 3172.60 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## GENERAL INFORMATION:

Formation: **St. Loius**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:57:30
Time Test Ended: 16:01:30

Test Type: Conventional Straddle (Reset)
Tester: Mike Roberts
Unit No: 81

**Interval: 5275.00 ft (KB) To 5320.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

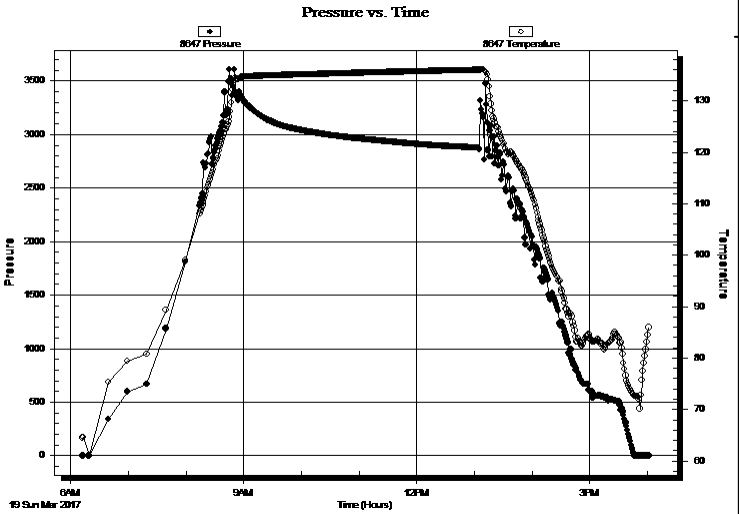
Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 8647** **Below (Straddle)**

Press@RunDepth: psig @ 6494.00 ft (KB)
Start Date: 2017.03.19 End Date: 2017.03.19
Start Time: 06:12:15 End Time: 16:01:30

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 1/2" blow
IS:No return blow
FF:Built to w eak surface blow
FS:No return blow




## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 70.00 | mud 100%m | 3172.60 |
| | | |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## Tool Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Drill Pipe: | Length: | 5059.00 ft | Diameter: | 3.80 inches | Volume: | 70.96 bbl | |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | |
| Drill Collar: | Length: | 216.00 ft | Diameter: | 216.00 inches | Volume: | 9789.72 bbl | |
| | | | | | Total Volume: | 9860.68 bbl | |

| | |
|---|---|
| Drill Pipe Above KB: | 28.00 ft |
| Depth to Top Packer: | 5275.00 ft |
| Depth to Bottom Packer: | 5317.00 ft |
| Interval betw een Packers: | 42.00 ft |
| Tool Length: | 1253.00 ft |
| Number of Packers: | 2 Diameter: 6.75 inches |

| | | |
|---|---|---|
| Tool Weight: | | 1500.00 lb |
| Weight set on Packer: | | 25000.00 lb |
| Weight to Pull Loose: | | 120000.0 lb |
| Tool Chased | | 0.00 ft |
| String Weight: | Initial | 92000.00 lb |
| | Final | 98000.00 lb |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths | |
|---|---|---|---|---|---|---|
| Change Over Sub | 1.00 | | | 5248.00 | | |
| Shut In Tool | 5.00 | | | 5253.00 | | |
| Hydraulic tool | 5.00 | | | 5258.00 | | |
| Jars | 5.00 | | | 5263.00 | | |
| Safety Joint | 3.00 | | | 5266.00 | | |
| Packer | 5.00 | | | 5271.00 | 28.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 5275.00 | | |
| Stubb | 1.00 | | | 5276.00 | | |
| Perforations | 1.00 | | | 5277.00 | | |
| Change Over Sub | 1.00 | | | 5278.00 | | |
| Drill Pipe | 32.00 | | | 5310.00 | | |
| Change Over Sub | 1.00 | | | 5311.00 | | |
| Recorder | 0.00 | 8672 | Inside | 5311.00 | | |
| Recorder | 0.00 | 6749 | Outside | 5311.00 | | |
| Perforations | 5.00 | | | 5316.00 | | |
| Blank Off Sub | 1.00 | | | 5317.00 | 42.00 | Tool Interval |
| Packer | 3.00 | | | 5320.00 | | |
| Stubb | 1.00 | | | 5321.00 | | |
| Perforations | 24.00 | | | 5345.00 | | |
| Change Over Sub | 1.00 | | | 5346.00 | | |
| Drill Pipe | 1148.00 | | | 6494.00 | | |
| Recorder | 0.00 | 8647 | Below | 6494.00 | | |
| Change Over Sub | 1.00 | | | 6495.00 | | |
| Bullnose | 5.00 | | | 6500.00 | 1183.00 | Bottom Packers & Anchor |
| **Total Tool Length:** | **1253.00** | | | | | |

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

9342 E Central
Wichita KS 67206

ATTN: Zach Wiele

**Thomas & Reed Farms A #1-21**

**21-29s-28w Gray,KS**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## Mud and Cushion Information

| | | | | | |
|---|---|---|---|---|---|
| Mud Type: | Gel Chem | Cushion Type: | | Oil API: | 0 deg API |
| Mud Weight: | 9.00 lb/gal | Cushion Length: | ft | Water Salinity: | 0 ppm |
| Viscosity: | 65.00 sec/qt | Cushion Volume: | bbl | | |
| Water Loss: | 7.58 in³ | Gas Cushion Type: | | | |
| Resistivity: | 0.00 ohm.m | Gas Cushion Pressure: | psig | | |
| Salinity: | 3000.00 ppm | | | | |
| Filter Cake: | 1.00 inches | | | | |

## Recovery Information

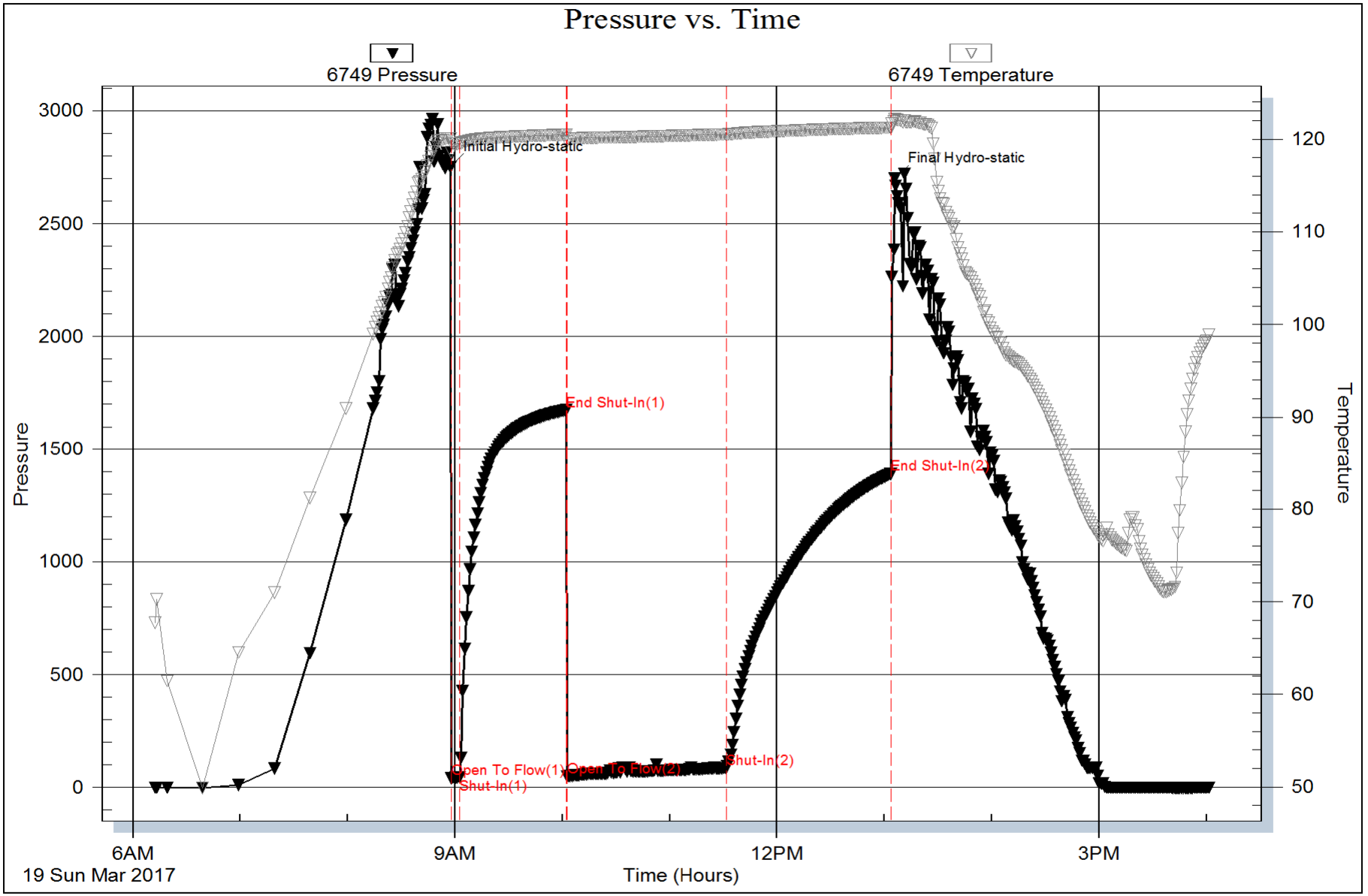
Recovery Table

| Length ft | Description | Volume bbl |
|---|---|---|
| 70.00 | mud 100%m | 3172.595 |

Total Length: 70.00 ft Total Volume: 3172.595 bbl

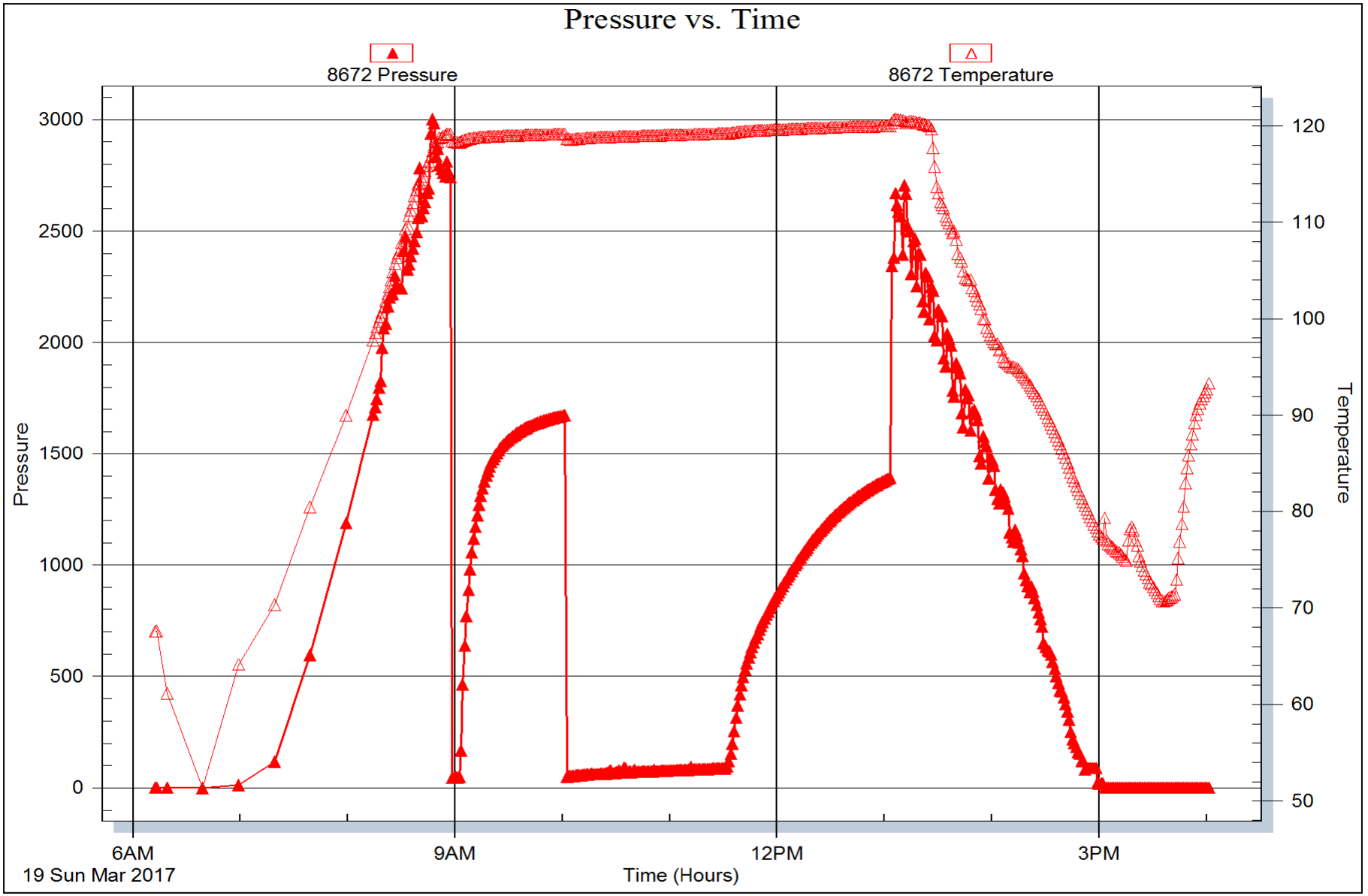
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6749 **Outside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 5



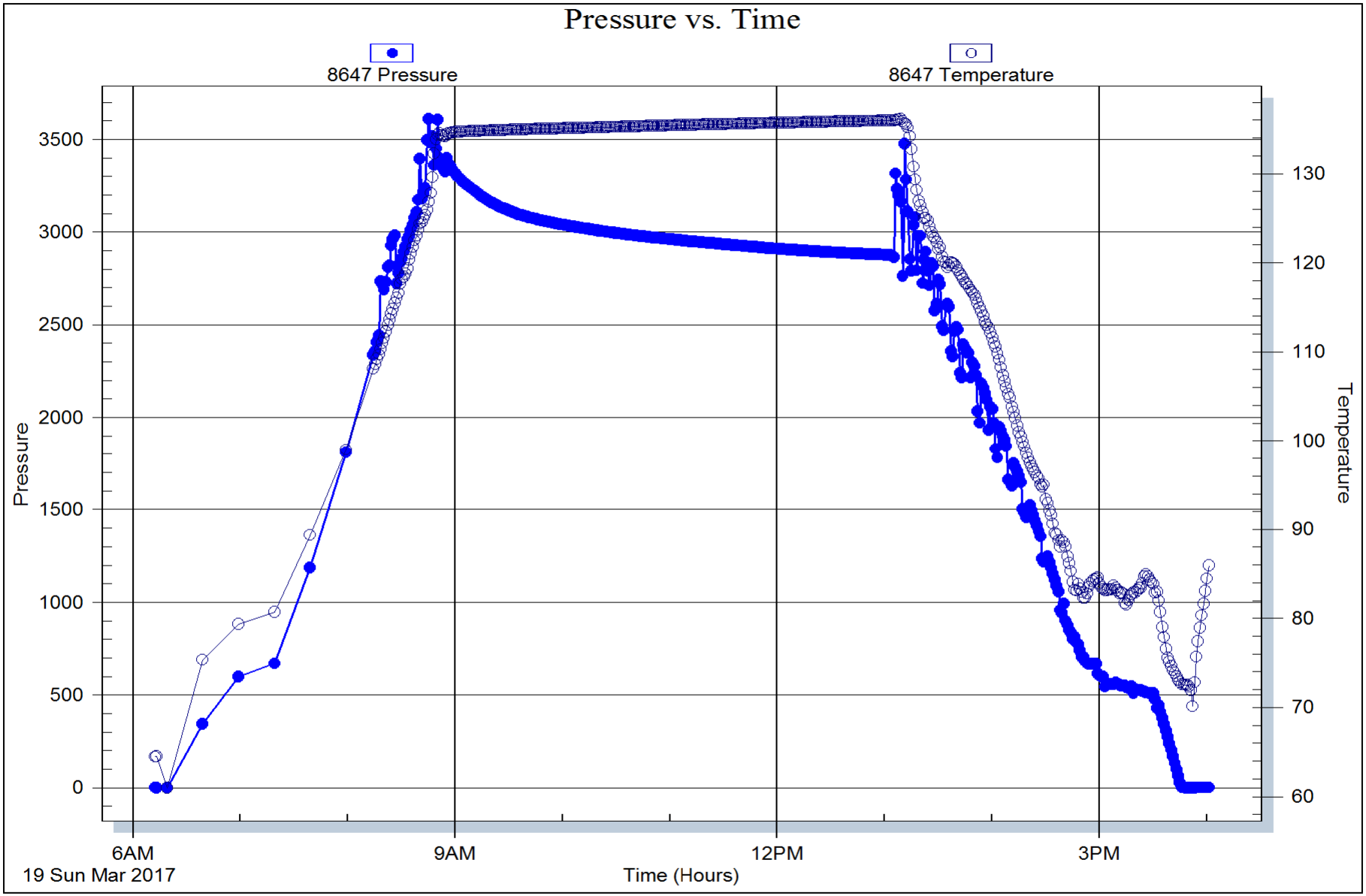

Trilobite Testing, Inc Ref. No: 63701 Printed: 2017.03.21 @ 16:05:30

Serial #: 8672 **Inside** McCoy Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 5




Trilobite Testing, Inc Ref. No: 63701 Printed: 2017.03.21 @ 16:05:30

Serial #: 8647 **Below (Straddle)** Petroleum Corporation 21-29s-28w Gray,KS DST Test Number: 5




Trilobite Testing, Inc Ref. No: 63701 Printed: 2017.03.21 @ 16:05:30

# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

## Test Ticket

NO. 61347

Well Name & No. Thomas + Reed Farms #1-21 Test No. 1 Date 3-15-17

Company McCoy Petroleum Corporation Elevation 2739 KB 2728 GL

Address 9342 E Central Wichita KS 67206

Co. Rep / Geo. Zack Weile Rig Sterling #4

Location: Sec. 21 Twp. 29S Rge. 29W Co. Gray State KS

Interval Tested 6211-6225 Zone Tested Viola

Anchor Length 14 Drill Pipe Run 5988 Mud Wt. 9.2

Top Packer Depth 6206 Drill Collars Run 216 Vis 48

Bottom Packer Depth 6211 Wt. Pipe Run 0 WL 6.4

Total Depth 6225 Chlorides 2450 ppm System LCM 8

Blow Description IF: Built to Weak Surface Blow

IS: No Return Blow

FF: No Blow

FS: No Return Blow

| | | | | | |
|---|---|---|---|---|---|
| Rec 10 | Feet of MUD | %gas | %oil | %water 100 | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 10 BHT 128 Gravity — API RW — @ — °F Chlorides — ppm

| | | | | | |
|---|---|---|---|---|---|
| (A) Initial Hydrostatic | 3114 | ☑ Test | $1200.00/- | T-On Location | 14:00 X |
| (B) First Initial Flow | 19 | ☑ Jars | $250.00/- | T-Started | 18:35 2 |
| (C) First Final Flow | 32 | ☑ Safety Joint | $75.00/- | T-Open | 21:30 |
| (D) Initial Shut-In | 2427 | ☑ Circ Sub | NC | T-Pulled | 01:03 |
| (E) Second Initial Flow | 34 | ☐ Hourly Standby | | T-Out | 03:24 |
| (F) Second Final Flow | 35 | ☑ Mileage | 200RT=$150.00/- | Comments | |
| (G) Final Shut-In | 1254 | | 142rt 106.50 | | |
| (H) Final Hydrostatic | 2933 | ☐ Sampler | | Motel | |
| | | ☐ Straddle | | ☐ Ruined Shale Packer | |
| | | ☐ Shale Packer | | ☐ Ruined Packer | |
| Initial Open | 3 | ☐ Extra Packer | | ☐ Extra Copies | |
| Initial Shut-In | 60 | ☐ Extra Recorder | | Sub Total | 0 |
| Final Flow | 60 | ☐ Day Standby | | Total | 1831.50 |
| Final Shut-In | 90 | ☐ Accessibility | | MP/DST Disc't | |
| | | Sub Total | $1875.00/- | | |

Approved By _____ Our Representative Mike Bohnert

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

~~6799~~

# Test Ticket

NO. 61348

Well Name & No. Thomas + Reed Farms "A" 1-21 Test No. 2 Date 3-16-17
Company McCoy Petroleum Corporation Elevation 2739 KB 2728 GL
Address 9342 E Central Wichita KS 67206
Co. Rep / Geo. Zack Weile Rig Sterling 4
Location: Sec. 21 Twp. 29S Rge. 29W Co. Gray State KS

Interval Tested 6224-6255 Zone Tested Viola
Anchor Length 31 Drill Pipe Run 5988 Mud Wt. 8.0
Top Packer Depth 6219 Drill Collars Run 216 Vis 91
Bottom Packer Depth 6224 Wt. Pipe Run Ø WL 8.0
Total Depth 6255 Chlorides 2850 ppm System LCM 7

Blow Description IF: Built to Weak Surface Blow
IS: No Return Blow
FF: No Blow
FS: No Return Blow

| | | | | | | |
|---|---|---|---|---|---|---|
| Rec 2 | Feet of MUD | %gas | %oil | %water | 100 | %mud |
| Rec | Feet of | %gas | %oil | %water | | %mud |
| Rec | Feet of | %gas | %oil | %water | | %mud |
| Rec | Feet of | %gas | %oil | %water | | %mud |
| Rec | Feet of | %gas | %oil | %water | | %mud |

Rec Total 2 BHT 123 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 3222
(B) First Initial Flow 27
(C) First Final Flow 28
(D) Initial Shut-In 96
(E) Second Initial Flow 28
(F) Second Final Flow 29
(G) Final Shut-In 43
(H) Final Hydrostatic 3093

Initial Open 3
Initial Shut-In 60
Final Flow ~~60~~ 30
Final Shut-In ~~90~~ 45

- ☑ Test $1400.00
- ☑ Jars $250.00
- ☑ Safety Joint $75.00
- ☑ Circ Sub NC
- ☐ Hourly Standby
- ☑ Mileage 200 RT = $150.00
- ☐ Sampler 106.50
- ☐ Straddle
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total $1875.00

T-On Location ~~17:02~~ 16:00
T-Started 17:02
T-Open 19:43
T-Pulled 21:46
T-Out 00:42

Comments FSI - Tool plugged Requested 15 Min to Finish Mud Pump

- ☐ Ruined Shale Packer
- ☐ Ruined Packer Motel
- ☐ Extra Copies
- Sub Total
- Total 1831.50
- MP/DST Disc't

Approved By Our Representative Mike Roberts

# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

## Test Ticket

NO. 61349

Well Name & No. Thomas & Reed Farms "A" 1-21 Test No. 3 Date 3-17-17

Company McCoy Petroleum Corporation Elevation 2739 KB 2728 GL

Address 9342 E Central Wichita KS 67206

Co. Rep / Geo. Zack Weile Rig Sterling #4

Location: Sec. 21 Twp. 29S Rge. 29W Co. Grey State KS

Interval Tested 6266-6282 Zone Tested Viola

Anchor Length 16 Drill Pipe Run 6052 Mud Wt. 9.0

Top Packer Depth 6261 Drill Collars Run 216 Vis 55

Bottom Packer Depth 6266 Wt. Pipe Run Ø WL 8.0

Total Depth 6282 Chlorides 2750 ppm System LCM 6

Blow Description IF: Weak Surface Blow
IS: No Return Blow
FF: No Blow
FS: No Return Blow

| | | | | | |
|---|---|---|---|---|---|
| Rec 5 | Feet of MUD | %gas | %oil | %water | 100 %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 5 BHT 126 Gravity — API RW — @ — °F Chlorides — ppm

| | | | |
|---|---|---|---|
| (A) Initial Hydrostatic 3158 | ☑ Test $1400.00/- | T-On Location 11:20 |
| (B) First Initial Flow 18 | ☑ Jars $250.00/- | T-Started 12:21 |
| (C) First Final Flow 18 | ☑ Safety Joint $75.00/- | T-Open 14:41 |
| (D) Initial Shut-In 2195 | ☑ Circ Sub NC | T-Pulled 16:44 |
| (E) Second Initial Flow 19 | ☐ Hourly Standby | T-Out 19:18 |
| (F) Second Final Flow 21 | ☑ Mileage 200RT @ 150.00/- 106.50 | Comments Motel |
| (G) Final Shut-In 1269 | ☐ Sampler | |
| (H) Final Hydrostatic 2957 | ☐ Straddle | ☐ Ruined Shale Packer |
| | ☐ Shale Packer | ☐ Ruined Packer |
| Initial Open 3 | ☐ Extra Packer | ☐ Extra Copies |
| Initial Shut-In 60 | ☐ Extra Recorder | Sub Total 0 |
| Final Flow 30 | ☐ Day Standby | Total 1831.50 |
| Final Shut-In 30 | ☐ Accessibility | MP/DST Disc't |
| | Sub Total $1875.00/- | |

Approved By _____ Our Representative Mike Robertson

Straddle 8647

# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

## Test Ticket

NO. 61350

Well Name & No. Thomas + Reedfams "A" 1-21 Test No. 4 Date 3-18-17

Company McCoy Petroleum Corporation Elevation 2739 KB 2728 GL

Address 9342 E Central Wichita KS 67206

Co. Rep / Geo. Zack Weile Rig Sterling #4

Location: Sec. 21 Twp. 29S Rge. 29W Co. Grey State KS

Interval Tested 6140-6184 TD6495 Zone Tested Viola

Anchor Length 44 Drill Pipe Run 5919 Mud Wt. 9.3

Top Packer Depth 6135 Drill Collars Run 216 Vis 65

Bottom Packer Depth 6140 Wt. Pipe Run 0 WL 7.6

Total Depth 6495 Chlorides 3000 ppm System LCM 5

Blow Description IF: 1/8" Blow
IS: No Return Blow
FF: Weak Surface Died in 5 Min
FS: No Return Blow

| | | | | | |
|---|---|---|---|---|---|
| Rec 5 | Feet of MUD | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 5 BHT 125 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 3190
(B) First Initial Flow 40
(C) First Final Flow 40
(D) Initial Shut-In 2362
(E) Second Initial Flow 43
(F) Second Final Flow 45
(G) Final Shut-In 1329
(H) Final Hydrostatic 2960

Initial Open 3
Initial Shut-In 60
Final Flow 30
Final Shut-In 30

- ☑ Test $1400.00
- ☑ Jars $250.00
- ☑ Safety Joint $75.00
- ☑ Circ Sub NC
- ☐ Hourly Standby
- ☑ Mileage 200 RT = $150.00 — 106.50
- ☐ Sampler
- ☑ Straddle $600.00
- ☑ Shale Packer $250.00
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total $2725.00

T-On Location 19:45
T-Started 21:36
T-Open 12:23
T-Pulled 02:26
T-Out 05:24

Comments Motel

- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Extra Copies

Sub Total 0
Total 2681.50
MP/DST Disc't

Approved By _____ Our Representative Mike Roberts

8647

# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

## Test Ticket

NO. 63701

Well Name & No. Thomas + Reed Farms "A" 1-21 Test No. 5 Date 3-19-17

Company McCoy Petroleum Corporation Elevation 2739 KB 2728 GL

Address 9342 E Central Wichita KS 67601

Co. Rep / Geo. Zack Weiler Rig Sterling #4

Location: Sec. 21 Twp. 29S Rge. 29W Co. Grey State KS

Interval Tested 5275-5320 (48') Zone Tested St. Lewis

Anchor Length 45 Drill Pipe Run 5059 Mud Wt. 9.3

Top Packer Depth 5270 Drill Collars Run 216 Vis 65

Bottom Packer Depth 5275 Wt. Pipe Run WL 7.6

Total Depth 5320 Chlorides 3000 ppm System LCM 5

Blow Description IF: Built to 1/2" Blow

IS: No Return Blow

FF: Built to weak Surface Blow

FS: No Return Blow

| | | | | | | |
|---|---|---|---|---|---|---|
| Rec 70 | Feet of MUD | %gas | %oil | %water 100 | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 70 BHT 122 Gravity — API RW — @ — °F Chlorides — ppm

| | | | |
|---|---|---|---|
| (A) Initial Hydrostatic 2750 | ☑ Test $1400.00/- | T-On Location 04:24 |
| (B) First Initial Flow 41 | ☑ Jars $250.00/- | T-Started 06:12 |
| (C) First Final Flow 45 | ☑ Safety Joint $75.00/- | T-Open 09:00 |
| (D) Initial Shut-In 1674 | ☑ Circ Sub | T-Pulled 13:03 |
| (E) Second Initial Flow 49 | ☐ Hourly Standby | T-Out 16:01 |
| (F) Second Final Flow 85 | ☑ Mileage 200RT = $150.00/- | Comments Went To get Hook wall |
| (G) Final Shut-In 1389 | ☐ Sampler 213 | |
| (H) Final Hydrostatic 2699 | ☑ Straddle $600.00/- | |
| | ☑ Shale Packer 250 | ☐ Ruined Shale Packer |
| Initial Open 3 | ☐ Extra Packer | ☐ Ruined Packer |
| Initial Shut-In 60 | ☐ Extra Recorder | ☐ Extra Copies |
| Final Flow 90 | ☐ Day Standby | Sub Total 0 |
| Final Shut-In 90 | ☐ Accessibility 2788 | Total 2788 |
| | Sub Total $2725.00/- | MP/DST Disc't |

Approved By [signature] Our Representative Mike Roberts

Remit to:
BJ Services LLC
P.O. Box 733585
Dallas, TX 75373-3585

**Cementing Services**
**Field Ticket**
TAX ID 81-1373543

Printed on 3/10/2017 at 4:38 AM

| *Field Ticket Number:* Lib1703100418 | *Field Ticket Date:* | Friday, March 10, 2017 |
|---|---|---|

*Bill To:*
McCoy Petroleum Corp
Wichita Kansas 67206
9342 E Centeral

| | |
|---|---|
| *Job Name:* | 01 Surface |
| *Well Location:* | Gray, Kansas |
| *Well Name:* | Thomas & Reed Farms "A" |
| *Well Number:* | 1-21 |
| *Well Type:* | New Well |
| *Rig Number:* | Sterling Drilling # 4 |
| *Shipping Point:* | Liberal, KS |
| *Sales Office:* | Mid Con |

| PERSONEL | | EQUIPMENT | |
|---|---|---|---|
| Carlos Ibarra | Hector Esqueda | 531-4-541-5 | 868-4-642-5 |
| Alex Ayala | Victor Garcia | 1039-2 | 870-4-553-5 |

## SERVICES - SERVICES - SERVICES

| Description | QTY | UOM | Unit Amt | Gross Amt | Unit Net | Discount | Net Amount |
|---|---|---|---|---|---|---|---|
| PUMP, CASING CEMENT 1001-2000 FT | 1.00 | min. 4 hr | 2,213.75 | 2213.75 | | | |
| CMLP | 1.00 | per day | 275.00 | 275.00 | | | |
| PHDL | 842.00 | per cu. Ft. | 2.48 | 2088.16 | | | |
| DRYG | 1640.00 | ton-mile | 2.75 | 4510.00 | | | |
| MILV | 45.00 | per mile | 4.40 | 198.00 | | | |
| MIHV | 45.00 | per mile | 7.70 | 346.50 | | | |

## FLOAT EQUIPMENT -- FLOAT EQUIPMENT -- FLO

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GS-8.625 | 1.00 | each | 460.00 | 460.00 | | | |
| AFV-8.625 | 1.00 | each | 447.00 | 447.00 | | | |
| CEN-8.625 | 3.00 | each | 75.00 | 225.00 | | | |
| CB - 8.625 | 1.00 | each | 560.00 | 560.00 | | | |
| TRP - 8.625 | 1.00 | each | 131.00 | 131.00 | | | |

## MATERIALS - MATERIALS - MATERIA

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CB-AMDAL | 500.00 | sack | 26.57 | 13,285.00 | | | |
| CA-100 | 1410.00 | pound | 1.10 | 1,551.00 | | | |
| CLC-CPF | 250.00 | pound | 2.97 | 742.50 | | | |
| CCAC | 200.00 | sack | 17.90 | 3,580.00 | | | |
| CA-100 | 376.00 | pound | 1.10 | 413.60 | | | |
| CLC-CPF | 50.00 | pound | 2.97 | 148.50 | | | |

## ADDITIONAL ITEMS - ADDITIONAL ITEMS - ADDI

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Additional hours, in excess of set hours | 1.00 | per hour | 440.00 | 440.00 | | | |

| | |
|---|---|
| *Services Total* | $ |
| *Equipment Total* | 1 |
| *Materials Total* | 1 |
| *Additional Items* | |
| *Final Total* | 3 |

*BJ Rep* _____
*Customer Agent:* _____

*This output does NOT include taxes. Applicaple sales tax will be billed on the final invoice.*
*Customer hereby acknowledges receipt of the materials and services described above and on the attached documents.*
*I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the following page.*

X _____
Customer Signature

Field Ticket Total (USD):

Natural Gas • Crude Oil
Exploration & Production

# McCOY PETROLEUM CORPORATION

Wichita, Kansas

Scale 1:240 (5"=100') Imperial
Measured Depth Log

| | | | |
|---|---|---|---|
| Well Name: | Thomas & Reed Farms 'A' #1-21 | | |
| API: | 15-069-20499-00-00 | | |
| Location: | Sec. 21 - T29S - R28W | | |
| License Number: | #5003 | Region: | GRAY CO., KS |
| Spud Date: | 03-08-2017 @ 5:30 PM | Drilling Completed: | 03/18/2017 |
| Surface Coordinates: | C NE NW<br>660' FNL & 1980' FWL | | |
| Bottom Hole Coordinates: | | | |
| Ground Elevation (ft): | 2728' | K.B. Elevation (ft): | 2739' |
| Logged Interval (ft): | Surface To: 6500' | Total Depth (ft): | RTD: 6500' LTD: 6495 |
| Formation: | Arbuckle | | |
| Type of Drilling Fluid: | Chemical/Polymer/Gel | | |

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

## OPERATOR

Company: McCoy Petroleum Corporation, KCC License #5003
Address: 9342 E Central
Wichita, KS 67206

## GEOLOGIST

Name: Zach Wiele
Company: McCoy Petroleum Corporation
Address: 9342 E. Central
Wichita, KS 67206

## Casing & Deviation Surveys:

Surface/Production Casing Data:
Spud @ 5:30 pm on 03/08/17. Drilled 12-1/4" to 1695'. Ran 41 joints of new 24#, 8-5/8" casing. Tallied 1677.70' with 1' GS. Set at 1690' KB. Welded straps on bottom 3 joints, tacked 4 top collars. Centralizers (3) 1,3,5. Float insert in top of collar. SJ = 22.89'. Basket on top of #16 (1080'). Cemented with 500 sks AMD Lite with; 3% cc, 1/2# FS & tailed with 200 sks Class A with 2% CC & 1/4# FS. Cement did circulate to pits. Plug down at 4:20 am on 03/10/17. BJ Services Cementing ticket #LIB1703100420.

Deviation Survey's Taken: @ 1695' = 3/4 Degree, @ 6225' = 1 1/4 Degree, @ 6500' = 1 degree

## DRILL STEM TEST

** DST #1 **
6211' - 6225' 3"-60"-60"-90"
IF: Blt to wk surf blw IS: No return
FF: No blw FS: No return
Rec: 10 mud 100%
Pressures:
IH: 3114 FH: 2933
IF: 19-35 FF: 32-35
ISP: 2428# FSIP: 1254#
TEMP: 128 Deg F

** DST #2 **
6224' - 6255' 3"-60"-30"-45"
IF: Blt to wk surf blw IS: No return
FF: No blw FS: No return
Rec: 2' mud 100%
Pressures:
IH: 3223 FH: 3093
IF: 27-28 FF: 28-29
ISP: 97# FSIP: 44#
TEMP: 123 Deg F

** DST #3 **
6266' - 6282' 3"-60"-30"-30"
IF: Blt to wk surf blw IS: No return
FF: No blw FS: No return
Rec: 5' mud 100%
Pressures:
IH: 3159 FH: 2958
IF: 19-20 FF: 18-21
ISP: 2195# FSIP: 1269#
TEMP: 127 Deg F

NOTE: DST #4 SHOULD HAVE BEEN 6140'-6184' IN THE COMPTON,
TESTER CALCULATED INCORRECT, INSTEAD DST #4 = 6115-6159'
** DST #4 **
( STRADDLE ) 6115' - 6159'
IF:Blt to 1/8" blw IS:No return blw
FF:Wk surface blw died in 5 min FS:No return blw
Rec: 5' mud
Pressures:
IH:3191 FH:2960
IF:41-44 FF:40-46
ISP:2362# FSIP:1329#
Temp: 127 Deg F

** DST #5 **
5275'-5320'
IF: Built to 1/2"blw IS: No return blw
FF: Built to wk surface blw FS: No return blw
Rec: 70' Mud
Pressures:
IH: 2751 FH: 2700
IF: 42-49 FF: 46-86
ISP: 1674# FSIP: 1390#
TEMP: 122 Deg F

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita Ks
67206
ATTN: Zack Weile

**21-29s-28w Gray Co KS**

**Thomas& Reed Farms**

Job Ticket: 61347 **DST#: 1**

Test Start: 2017.03.15 @ 18:35:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:29:00
Time Test Ended: 03:24:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

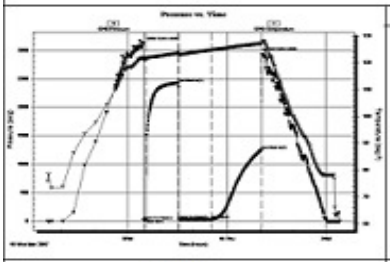
**Interval: 6211.00 ft (KB) To 6225.00 ft (KB) (TVD)**
Total Depth: 6225.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**
Press@RunDepth: 35.46 psig @ 6212.00 ft (KB)
Start Date: 2017.03.15 End Date: 2017.03.16
Start Time: 18:35:15 End Time: 03:24:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.16
Time On Btm: 2017.03.15 @ 21:28:45
Time Off Btm: 2017.03.16 @ 01:04:30

TEST COMMENT: IF:Built to weak surface blow
IS:No return blow
FF:No blow
FS:No return blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3114.43 | 121.05 | Initial Hydro-static |
| 1 | 19.02 | 121.10 | Open To Flow (1) |
| 5 | 32.21 | 121.24 | Shut-In(1) |
| 64 | 2427.69 | 123.61 | End Shut-In(1) |
| 64 | 34.58 | 122.66 | Open To Flow (2) |
| 124 | 35.46 | 124.77 | Shut-In(2) |
| 215 | 1254.08 | 127.22 | End Shut-In(2) |
| 216 | 2033.40 | 127.98 | Final Hydro-static |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 10.00 | mud 100%m | 453.23 |

### Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita Ks
67206
ATTN: Zack Weile

**21-29s-28w Gray Co KS**

**Thomas& Reed Farms**

Job Ticket: 61348 **DST#: 2**

Test Start: 2017.03.16 @ 17:02:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:42:45
Time Test Ended: 00:42:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

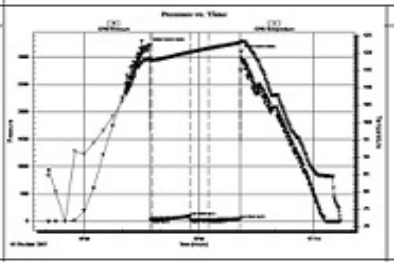
**Interval: 6224.00 ft (KB) To 6255.00 ft (KB) (TVD)**
Total Depth: 6255.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**
Press@RunDepth: 29.42 psig @ 6225.00 ft (KB)
Start Date: 2017.03.16 End Date: 2017.03.17
Start Time: 17:02:15 End Time: 00:42:00

Capacity: 8000.00 psig
Last Calib.: 2017.03.17
Time On Btm: 2017.03.16 @ 19:42:30
Time Off Btm: 2017.03.16 @ 22:55:30

TEST COMMENT: IF:Built to weak surface blow
IS:No return blow
FF:No blow
FS:No return blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3222.80 | 119.38 | Initial Hydro-static |
| 1 | 27.38 | 117.51 | Open To Flow (1) |
| 4 | 28.21 | 117.90 | Shut-In(1) |
| 64 | 95.51 | 120.19 | End Shut-In(1) |
| 64 | 28.06 | 120.19 | Open To Flow (2) |
| 93 | 29.42 | 121.28 | Shut-In(2) |
| 142 | 43.90 | 122.86 | End Shut-In(2) |
| 143 | 3093.35 | 123.38 | Final Hydro-static |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 2.00 | mud 100% m | 90.65 |

* Recovery from multiple tests

### Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita Ks
67206
ATTN: Zack Weile

**21-29s-28w Gray Co KS**

**Thomas& Reed Farms**

Job Ticket: 61349 **DST#: 3**

Test Start: 2017.03.17 @ 12:21:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:41:30
Time Test Ended: 19:18:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

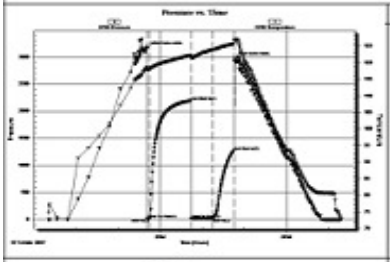
**Interval: 6266.00 ft (KB) To 6282.00 ft (KB) (TVD)**
Total Depth: 6282.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749**
Press@RunDepth: 21.45 psig @ ft (KB)
Start Date: 2017.03.17 End Date: 2017.03.17
Start Time: 12:21:15 End Time: 19:18:00

Capacity: 8000.00 psig
Last Calib.: 2017.03.17
Time On Btm: 2017.03.17 @ 14:41:15
Time Off Btm: 2017.03.17 @ 19:46:15

TEST COMMENT: IF:Built to weak surface blow
IS:No return blow
FF:No blow
FS:No return blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3158.68 | 118.56 | Initial Hydro-static |
| 1 | 18.64 | 117.67 | Open To Flow (1) |
| 4 | 18.40 | 118.05 | Shut-In(1) |
| 63 | 2195.46 | 122.26 | End Shut-In(1) |
| 63 | 19.93 | 121.38 | Open To Flow (2) |
| 94 | 21.45 | 123.87 | Shut-In(2) |
| 124 | 1269.17 | 125.70 | End Shut-In(2) |
| 125 | 2957.75 | 126.73 | Final Hydro-static |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100%m | 226.61 |

* Recovery from multiple tests

### Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita Ks
67206
ATTN: Zack Weile

**21-29s-28w Gray Co KS**

**Thomas& Reed Farms**

Job Ticket: 61350 **DST#: 4**

Test Start: 2017.03.18 @ 21:36:15

## GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:22:45
Time Test Ended: 05:24:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

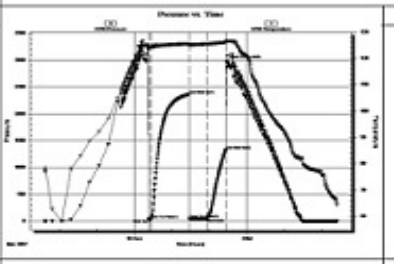
**Interval: 6140.00 ft (KB) To 6184.00 ft (KB) (TVD)**
Total Depth: 6495.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**
Press@RunDepth: 45.71 psig @ 6180.00 ft (KB)
Start Date: 2017.03.18 End Date: 2017.03.19
Start Time: 21:36:15 End Time: 05:24:45

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm: 2017.03.19 @ 00:22:30
Time Off Btm: 2017.03.19 @ 02:27:15

TEST COMMENT: IF:Slut to 1/8" blow
IS:No return blow
FF:Weak surface blow that died in 5 minutes
FS:No return blow



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 3190.69 | 124.93 | Initial Hydro-static |
| 1 | 40.62 | 123.82 | Open To Flow (1) |
| 5 | 40.24 | 124.24 | Shut-In(1) |
| 65 | 2362.31 | 125.52 | End Shut-In(1) |
| 65 | 43.88 | 124.65 | Open To Flow (2) |
| 94 | 45.71 | 125.44 | Shut-In(2) |
| 124 | 1329.03 | 126.08 | End Shut-In(2) |
| 125 | 2960.19 | 126.51 | Final Hydro-static |

### Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 5.00 | mud 100% m | 226.61 |

* Recovery from multiple tests

### Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

TRILOBITE TESTING, INC.

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

9342 E Central
Wichita Ks
67206
ATTN: Zack Wells

**21-29s-28w Gray Co KS**

**Thomas& Reed Farms**

Job Ticket: 63701 **DST#: 5**

Test Start: 2017.03.19 @ 06:12:15

## GENERAL INFORMATION:

Formation: **St. Lolus**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:57:30
Time Test Ended: 16:01:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

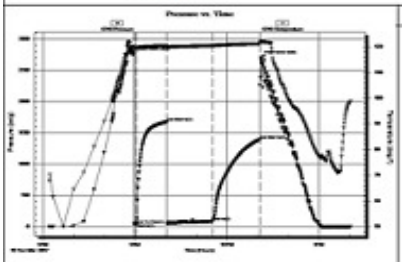
Interval: **5275.00 ft (KB) To 5320.00 ft (KB) (TVD)**
Total Depth: 5455.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2739.00 ft (KB)
2728.00 ft (CF)
KB to GR/CF: 11.00 ft

**Serial #: 6749** **Outside**
Press@RunDepth: 85.97 psig @ 5311.00 ft (KB)
Start Date: 2017.03.19 End Date: 2017.03.19
Start Time: 06:12:15 End Time: 16:01:30

Capacity: 8000.00 psig
Last Calib.: 2017.03.19
Time On Btm: 2017.03.19 @ 08:57:15
Time Off Btm: 2017.03.19 @ 13:06:00

TEST COMMENT: IF:Built to 1/2" blow
IS:No return blow
FF:Built to weak surface blow
FS:No return blow



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|---|---|---|---|
| 0 | 2750.82 | 120.10 | Initial Hydro-static |
| 1 | 41.62 | 118.60 | Open To Flow (1) |
| 5 | 45.71 | 119.51 | Shut-In(1) |
| 65 | 1674.37 | 120.47 | End Shut-In(1) |
| 65 | 49.34 | 119.73 | Open To Flow (2) |
| 155 | 85.97 | 120.50 | Shut-In(2) |
| 247 | 1389.90 | 121.23 | End Shut-In(2) |
| 249 | 2699.70 | 122.14 | Final Hydro-static |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|---|---|---|
| 70.00 | mud 100%m | 3172.60 |

* Recovery from multiple tests

## Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|---|---|---|---|

# ROCK TYPES

## LITHOLOGY

- Chr-grn sh
- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Dol
- Gyp
- Igne
- Lmst
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Congl
- Carb sh
- Grn sh
- Redbrn sh
- Gry sh

## TEXTURE

- BS Boundst
- C Chalky
- CX Cryxln
- E Earthy
- FX Finexln
- GS Grainst
- L Lithogr
- MX Microxln
- MS Mudst
- PS Packst
- WS Wackest

## OIL SHOW

- Even
- Spotted
- Ques
- Gas
- D Dead

# OTHER SYMBOLS

## POROSITY

- E Earthy
- Fenest
- F Fracture
- Inter
- Moldic
- O Organic
- P Pinpoint
- V Vuggy

## SORTING

- W Well
- M Moderate
- P Poor

## ROUNDING

- R Rounded
- r Subrnd
- a Subang
- A Angular

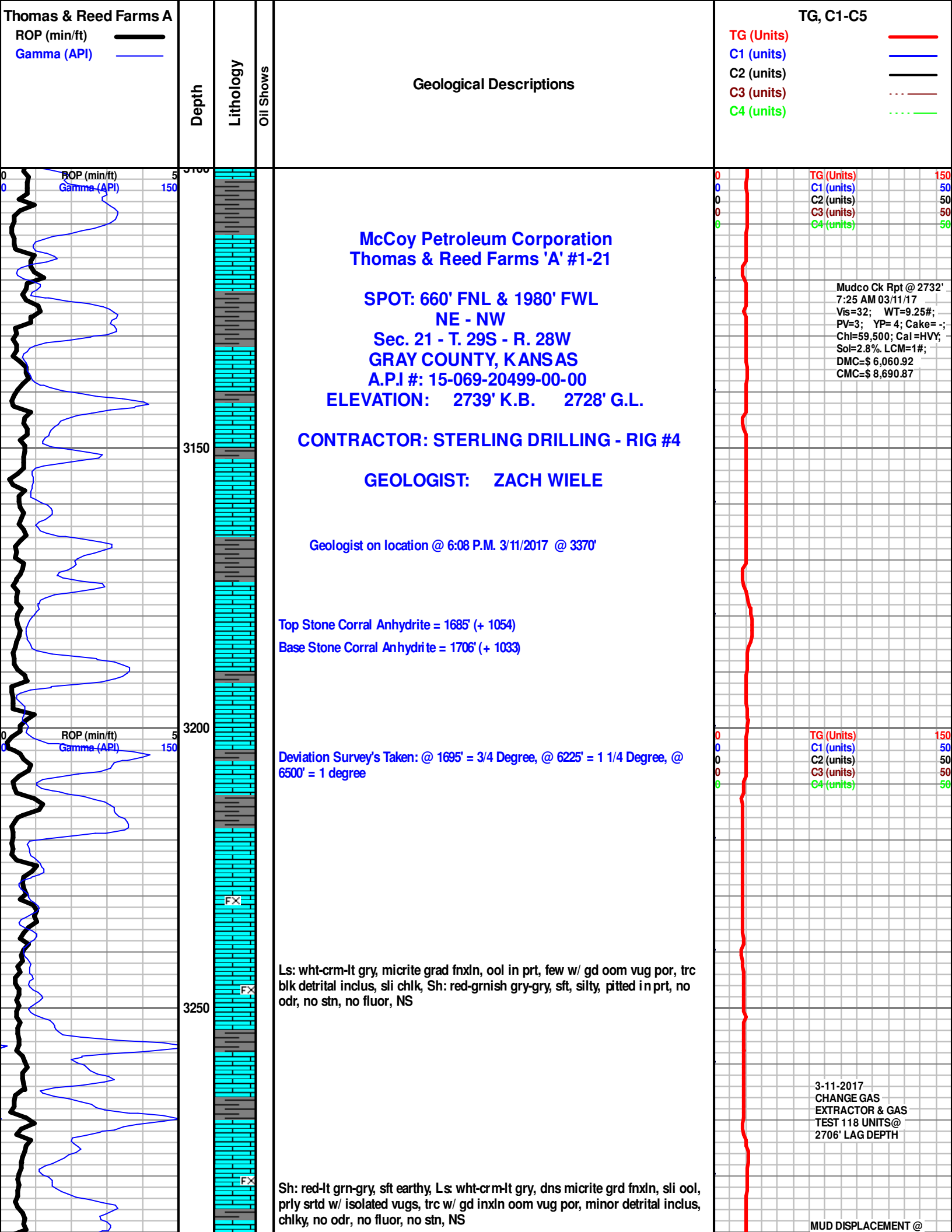
## OIL SHOW

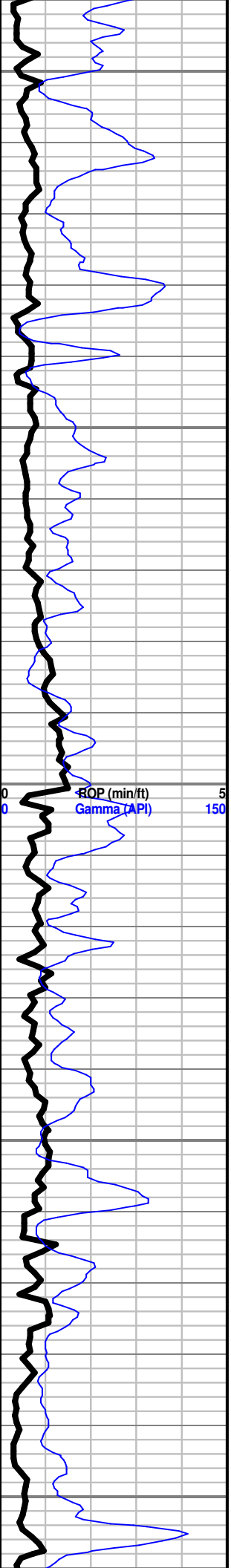
- Even
- Spotted
- Ques
- Gas
- D Dead

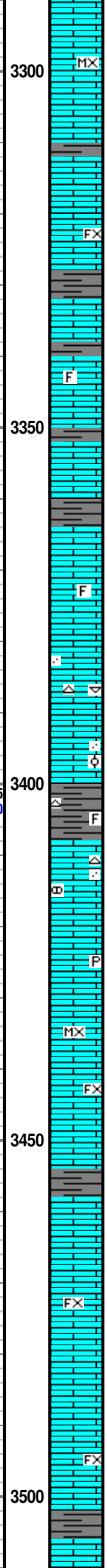
## INTERVAL

## EVENT

- Rft
- Sidewall


Thomas & Reed Farms A
ROP (min/ft)
Gamma (API)
Depth
Lithology
Oil Shows
Geological Descriptions
TG, C1-C5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
ROP (min/ft) 0 5
Gamma (API) 0 150
TG (Units) 0 150
C1 (units) 0 50
C2 (units) 0 50
C3 (units) 0 50
C4 (units) 0 50
3150
3200
3250
FX
McCoy Petroleum Corporation
Thomas & Reed Farms 'A' #1-21
SPOT: 660' FNL & 1980' FWL
NE - NW
Sec. 21 - T. 29S - R. 28W
GRAY COUNTY, KANSAS
A.P.I #: 15-069-20499-00-00
ELEVATION: 2739' K.B. 2728' G.L.
CONTRACTOR: STERLING DRILLING - RIG #4
GEOLOGIST: ZACH WIELE
Geologist on location @ 6:08 P.M. 3/11/2017 @ 3370'
Top Stone Corral Anhydrite = 1685' (+ 1054)
Base Stone Corral Anhydrite = 1706' (+ 1033)
Deviation Survey's Taken: @ 1695' = 3/4 Degree, @ 6225' = 1 1/4 Degree, @ 6500' = 1 degree
Ls: wht-crm-lt gry, micrite grad fnxln, ool in prt, few w/ gd oom vug por, trc blk detrital inclus, sli chlk, Sh: red-grnish gry-gry, sft, silty, pitted in prt, no odr, no stn, no fluor, NS
Sh: red-lt grn-gry, sft earthy, Ls: wht-crm-lt gry, dns micrite grd fnxln, sli ool, prly srtd w/ isolated vugs, trc w/ gd inxln oom vug por, minor detrital inclus, chlky, no odr, no fluor, no stn, NS
Mudco Ck Rpt @ 2732'
7:25 AM 03/11/17
Vis=32; WT=9.25#;
PV=3; YP= 4; Cake= -;
Chl=59,500; Cal=HVY;
Sol=2.8%. LCM=1#;
DMC=$ 6,060.92
CMC=$ 8,690.87
3-11-2017
CHANGE GAS
EXTRACTOR & GAS
TEST 118 UNITS@
2706' LAG DEPTH
MUD DISPLACEMENT @




3210'

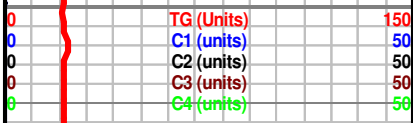
Ls: crm-lt gry-lt tan, micrite, grd vfnxln, sli dol in prt, pr-mod pp inxln por, chlky, Sh: red-gry, sft, no odr, no fluor, no stn, NS

Ls: crm-lt gry, dns micrite grd fnxln vr pr pp inxln por, scat vugs, sli foss & mottled w/ blk rnd inclus, chlky, trc chrt, Sh: red-lt grnish gry, no odr, no fluor, no stn, NS

Ls: lt gry-crm, vfn-fnxln, mottled w/ blk-gry rnd/ang fragmented inclus, sli foss(bryz) w/scat vuggy por, trc ool Ls: tan, w/gd oom vug lnxln por, chlky, Sh: red-brnish red-gry, sft, no odr, no fluor, no stn, NS

Ls: lt gry-tan-grnish gry-brnish red, micrite grd vfnxln, sli dol w/ vfn-medgrn ool & frag inclus, minor inxln & pp por, chlky, Sh: red-brnish red, silty, no odr, no fluor, no stn, NS

Ls: wht-crm-lt gry, mstly microxln micrite w/ no vis por, grd vfnxln w/ scat vuggy por, chlky, Chrt: lt tan, foss, Sh: red-gry, no odr, no fluor, no stn, NS




Ls: gry-lt gry-crm, vfn-microxln, pitted w/ fragmented grn inclst & foss inclus, minor pp vug por, Chrt: wht, foss, sub opq, shp, no odr, no fluor, no stn, NS

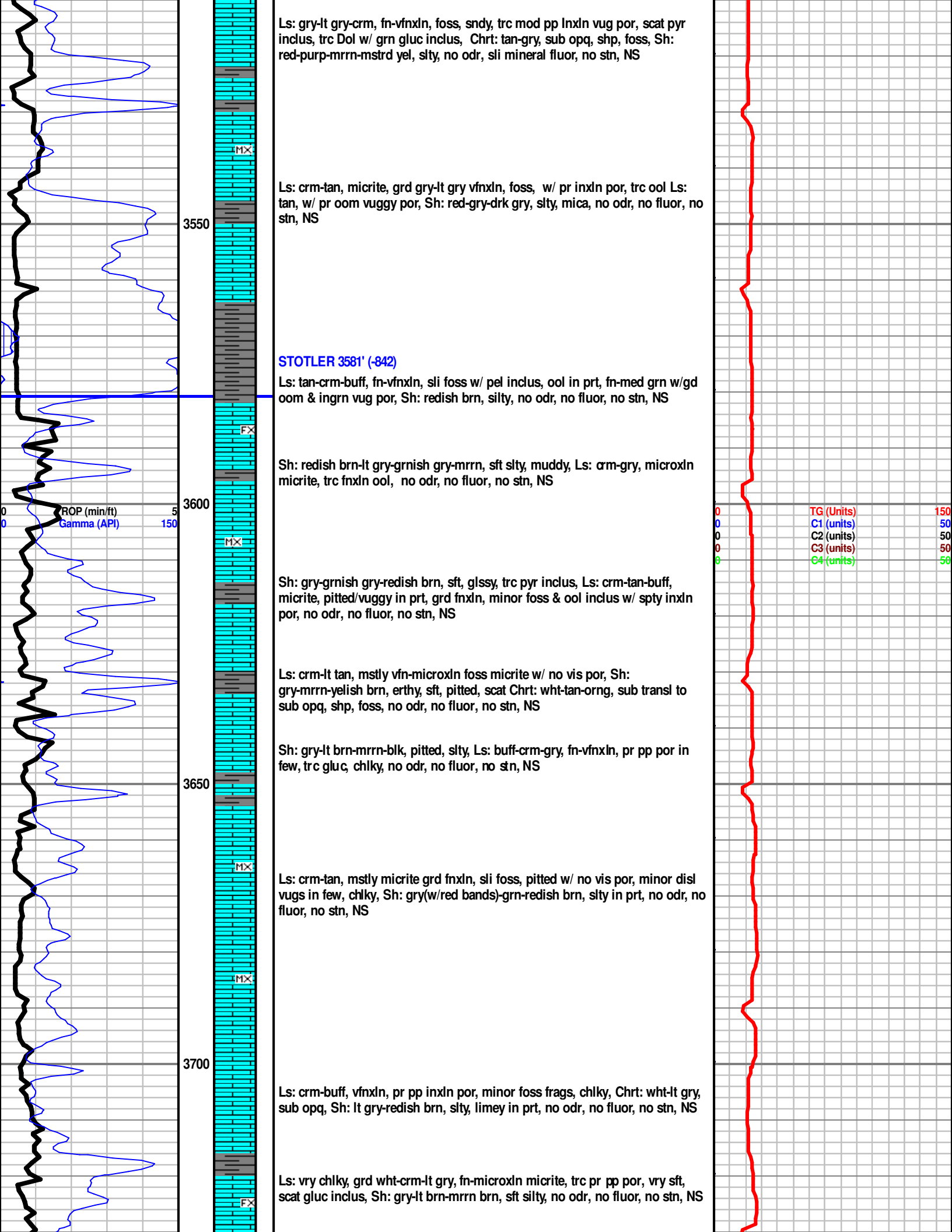
Ls: crm-gry-tan, fn-vfnxln, foss silty in prt w/ prly srtd grn & frag inclus, minor foss leached vugs, strky pp/vuggy inxln por, trc pry inclus, Sh: drk gry-gry-redish brn, sft, no odr, no fluor, no stn, NS

Sh: red-redish brn-gry-lt grn, sft, silty, Ls: gry-buff-tan, fnxln, mot, foss & rnd chrty inclus, pr-mod pp lnxln por in prt, sli trc gd oom por w/ vfn-med disl vugs, no odr, no fluor, no stn, NS

Ls: buff-gry-tan, dns micrite grd fnxln, foss, slty, grd sli ool-ooc w/ pr ingrn ooc vug por & pr leching, Sh: red-gry, sft, silty, Chrt: foss, no odr, no fluor, no stn, NS

Sh: red-grn aqua-gry, sft, pitted, Ls: vfn-fnxln, foss w/ clst inclus, pr pp lnxln por, few w/ vuggy por, trc Chrt, no odr, no fluor, no stn, NS

Ls: tan-buff, micrite grd to fnxln, few w/scat isolated vuggy por, sli ool, prly srtd, well cemented, chrty, minor Sh: red-redish brn, no odr, no fluor, no stn, NS




Ls: gry-lt gry-crm, fn-vfnxln, foss, sndy, trc mod pp lnxln vug por, scat pyr inclus, trc Dol w/ grn gluc inclus, Chrt: tan-gry, sub opq, shp, foss, Sh: red-purp-mrrn-mstrd yel, slty, no odr, sli mineral fluor, no stn, NS

Ls: crm-tan, micrite, grd gry-lt gry vfnxln, foss, w/ pr inxln por, trc ool Ls: tan, w/ pr oom vuggy por, Sh: red-gry-drk gry, slty, mica, no odr, no fluor, no stn, NS

**STOTLER 3581' (-842)**

Ls: tan-crm-buff, fn-vfnxln, sli foss w/ pel inclus, ool in prt, fn-med grn w/gd oom & ingrn vug por, Sh: redish brn, silty, no odr, no fluor, no stn, NS

Sh: redish brn-lt gry-grnish gry-mrrn, sft slty, muddy, Ls: crm-gry, microxln micrite, trc fnxln ool, no odr, no fluor, no stn, NS

Sh: gry-grnish gry-redish brn, sft, glssy, trc pyr inclus, Ls: crm-tan-buff, micrite, pitted/vuggy in prt, grd fnxln, minor foss & ool inclus w/ spty inxln por, no odr, no fluor, no stn, NS

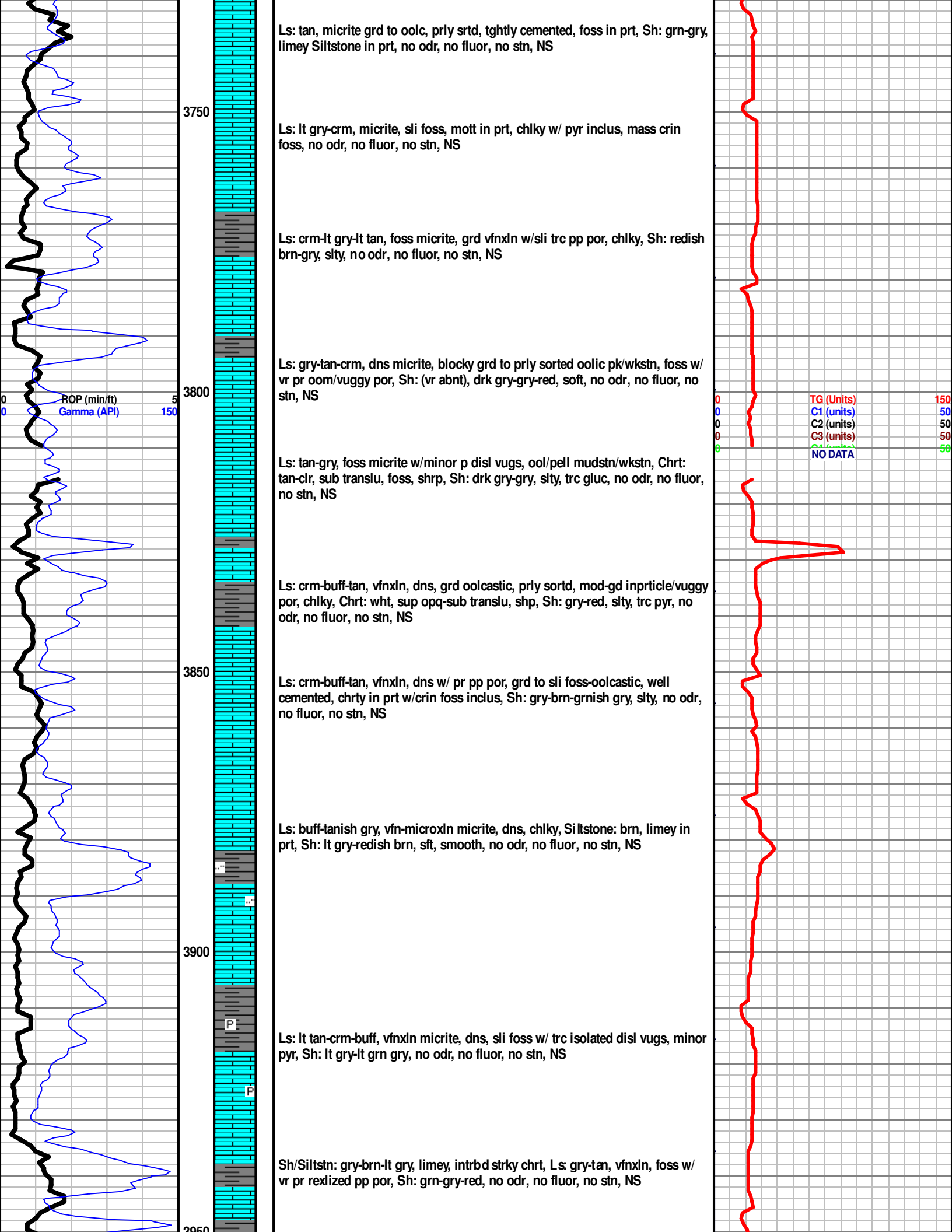
Ls: crm-lt tan, mstly vfn-microxln foss micrite w/ no vis por, Sh: gry-mrrn-yelish brn, erthy, sft, pitted, scat Chrt: wht-tan-orng, sub transl to sub opq, shp, foss, no odr, no fluor, no stn, NS

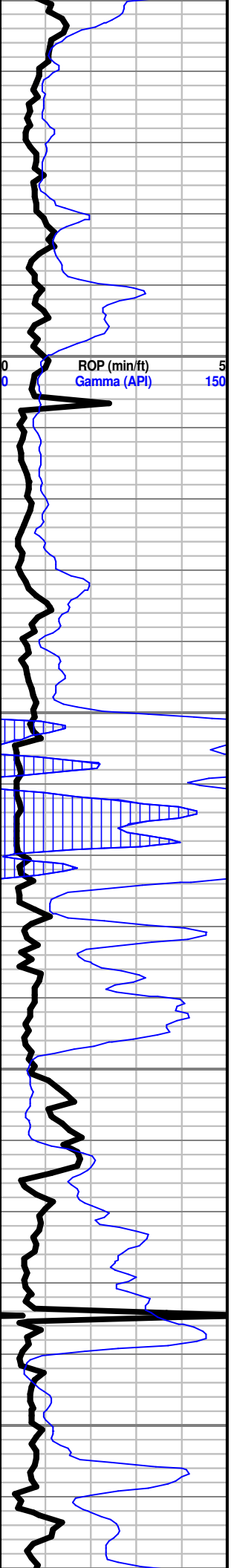
Sh: gry-lt brn-mrrn-blk, pitted, slty, Ls: buff-crm-gry, fn-vfnxln, pr pp por in few, trc gluc, chlky, no odr, no fluor, no stn, NS

Ls: crm-tan, mstly micrite grd fnxln, sli foss, pitted w/ no vis por, minor disl vugs in few, chlky, Sh: gry(w/red bands)-grn-redish brn, slty in prt, no odr, no fluor, no stn, NS

Ls: crm-buff, vfnxln, pr pp inxln por, minor foss frags, chlky, Chrt: wht-lt gry, sub opq, Sh: lt gry-redish brn, slty, limey in prt, no odr, no fluor, no stn, NS

Ls: vry chlky, grd wht-crm-lt gry, fn-microxln micrite, trc pr pp por, vry sft, scat gluc inclus, Sh: gry-lt brn-mrrn brn, sft silty, no odr, no fluor, no stn, NS


ROP (min/ft)
Gamma (API)
3750
3800
3850
3900
TG (Units)
C1 (units)
C2 (units)
C3 (units)
NO DATA
Ls: tan, micrite grd to oolc, prly srtd, tghtly cemented, foss in prt, Sh: grn-gry, limey Siltstone in prt, no odr, no fluor, no stn, NS
Ls: lt gry-crm, micrite, sli foss, mott in prt, chlky w/ pyr inclus, mass crin foss, no odr, no fluor, no stn, NS
Ls: crm-lt gry-lt tan, foss micrite, grd vfnxln w/sli trc pp por, chlky, Sh: redish brn-gry, slty, no odr, no fluor, no stn, NS
Ls: gry-tan-crm, dns micrite, blocky grd to prly sorted oolic pk/wkstn, foss w/ vr pr oom/vuggy por, Sh: (vr abnt), drk gry-gry-red, soft, no odr, no fluor, no stn, NS
Ls: tan-gry, foss micrite w/minor p disl vugs, ool/pell mudstn/wkstn, Chrt: tan-clr, sub translu, foss, shrp, Sh: drk gry-gry, slty, trc gluc, no odr, no fluor, no stn, NS
Ls: crm-buff-tan, vfnxln, dns, grd oolcastic, prly sortd, mod-gd inprticle/vuggy por, chlky, Chrt: wht, sup opq-sub translu, shp, Sh: gry-red, slty, trc pyr, no odr, no fluor, no stn, NS
Ls: crm-buff-tan, vfnxln, dns w/ pr pp por, grd to sli foss-oolcastic, well cemented, chrty in prt w/crin foss inclus, Sh: gry-brn-grnish gry, slty, no odr, no fluor, no stn, NS
Ls: buff-tanish gry, vfn-microxln micrite, dns, chlky, Siltstone: brn, limey in prt, Sh: lt gry-redish brn, sft, smooth, no odr, no fluor, no stn, NS
Ls: lt tan-crm-buff, vfnxln micrite, dns, sli foss w/ trc isolated disl vugs, minor pyr, Sh: lt gry-lt grn gry, no odr, no fluor, no stn, NS
Sh/Siltstn: gry-brn-lt gry, limey, intrbd strky chrt, Ls: gry-tan, vfnxln, foss w/ vr pr rexlized pp por, Sh: grn-gry-red, no odr, no fluor, no stn, NS





Ls: crm-lt tan, vr chlky grd dns foss micrite, grd foss-oolc well cemented pkstn, minor leched foss vugs, Sh: gry, slty mica, no odr, no fluor, no stn, NS

Ls: lt gry-crm-tan, dns micrite grd to vfxln w/vpr pp inxln por, sli foss(crin,fus), chlky, scat pyr, Chrt: wht-lt tanish gry, sub opq, Sh: grnish gry-brn, slty, no odr, no fluor, no stn, NS

Ls: tan-crm, dns micrite grd fnxln w/ mod pp inxln por, 3-4 pc w/mod oom por, limey Dol: lt gry, micro suc w/mod-pr pp inxln por, Chrt: lt tan-wht opq-sub opq, shp, Sh: brn-red, slty w/ minor pyr inclus, no odr, no fluor, no stn, NS

Ls: gry-crm, micrite, mott in prt w/ scat rexlized vuggy por, Chrt: wht-lt gry, foss(crin), chlky, Sh: grn, no odr, no fluor, no stn, NS

Ls: brnish gry-crm, mott in prt, vfn-microxln, dns w/ no vis por, grd to pr pp inxln por, Chrt: tan, sub opq-sub translu, shp, chlky, no odr, no fluor, no stn, NS

Ls: crm-lt tan-lt gry, vr dns, grd med-coxln, vr chrty w/ pr inxln por, chlk, mass foss frag(fus) Sh: gry-redish brn, no odr, no fluor, no stn, NS

Sh: drk gry-blk-char-gry, Ls: buff-tan-Ggy, mott/strky in prt, dolomitic, fn-vfnxln, mod micro suc pp por, grd fair vuggy inxln por, chrty, trc anhy, no odr, no fluor, no stn, NS

Sh: blk-char-gry-brn, slty, Ls: gry-brn-blk-wht, fnxln, vr dns/hrd, sli dolomitic, few w/ intraclst & foss frag inclus, sli trc pyr, no odr, no fluor, no stn, NS

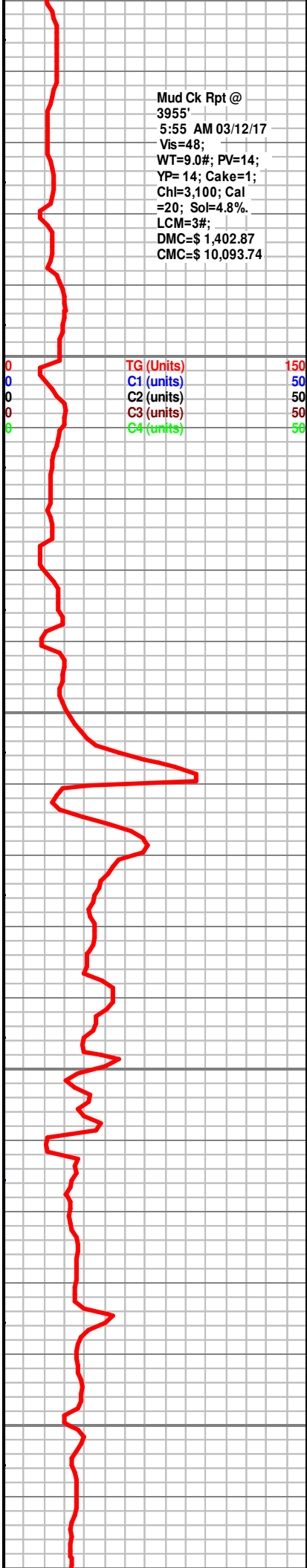
Ls/Dol, gry, vfnxln w/mod pp inxln por, Ls: tan, mott in prt, Dol: crm-lt gry, suc w/ pr pp por, chlky, Chrt: tan-opq, shp, Sh: gry-grn, limey, no odr, no fluor, no stn, NS

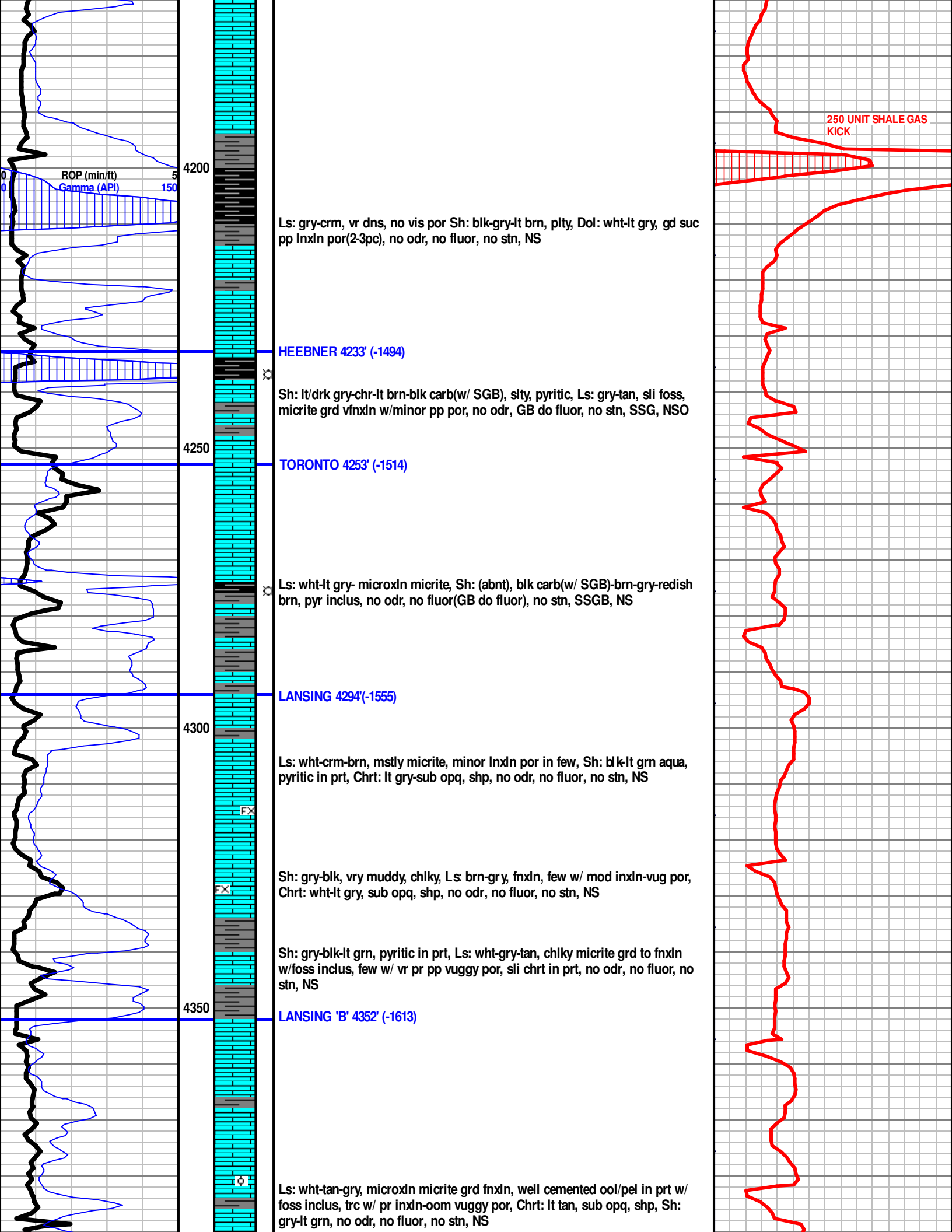
Ls dolomitic, Gry-Brnish Gry, micro suc, vr dns, mott w/ Drk Gry/Blk - Tan Inclus, strky inxln por thr out, trc pyr, Sh. Drk Gry, no odr, no fluor, no stn, NS

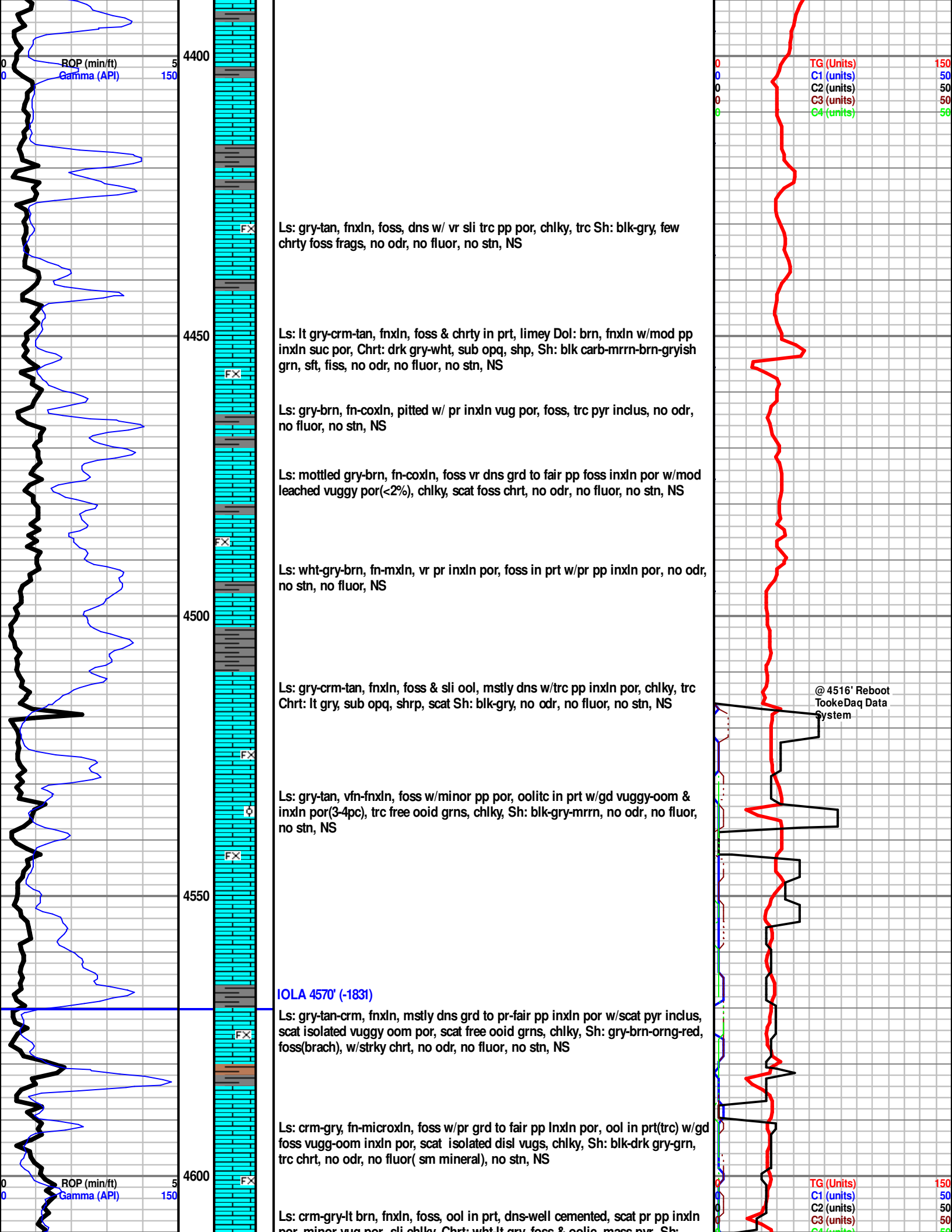
Sh: char-gry-lt brn(w/pyr inclus), Ls: crm-gry, vr chlky, microxln micrite grd to foss w/ pr pp inxln por, fn-med xln w/ trc pr-gd inxln vuggy por, sli chrt, no odr, no fluor, no stn, NS

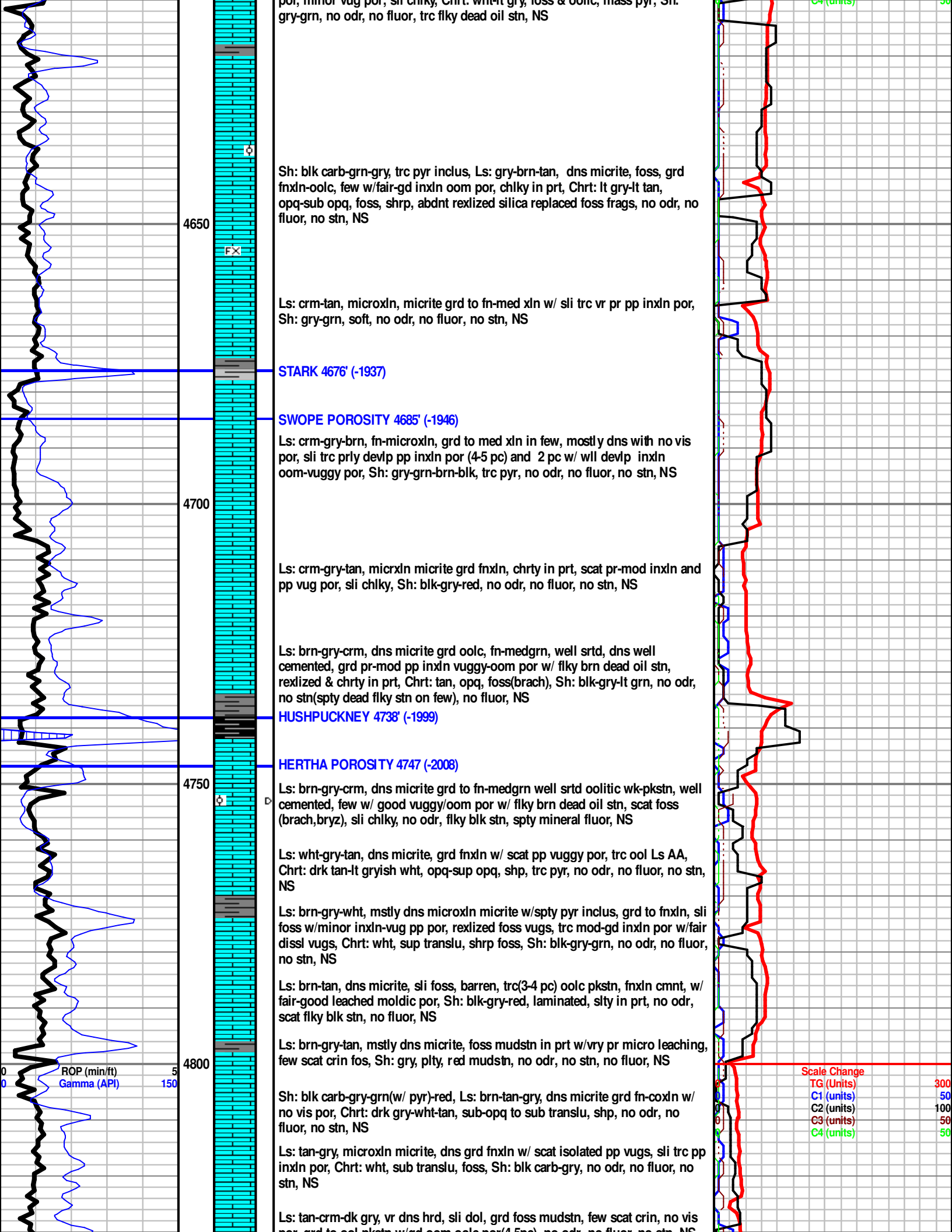
Sh: gry-blk-brn, vr muddy, Ls: tan-gry, microxln, no odr, no fluor, no stn, NS

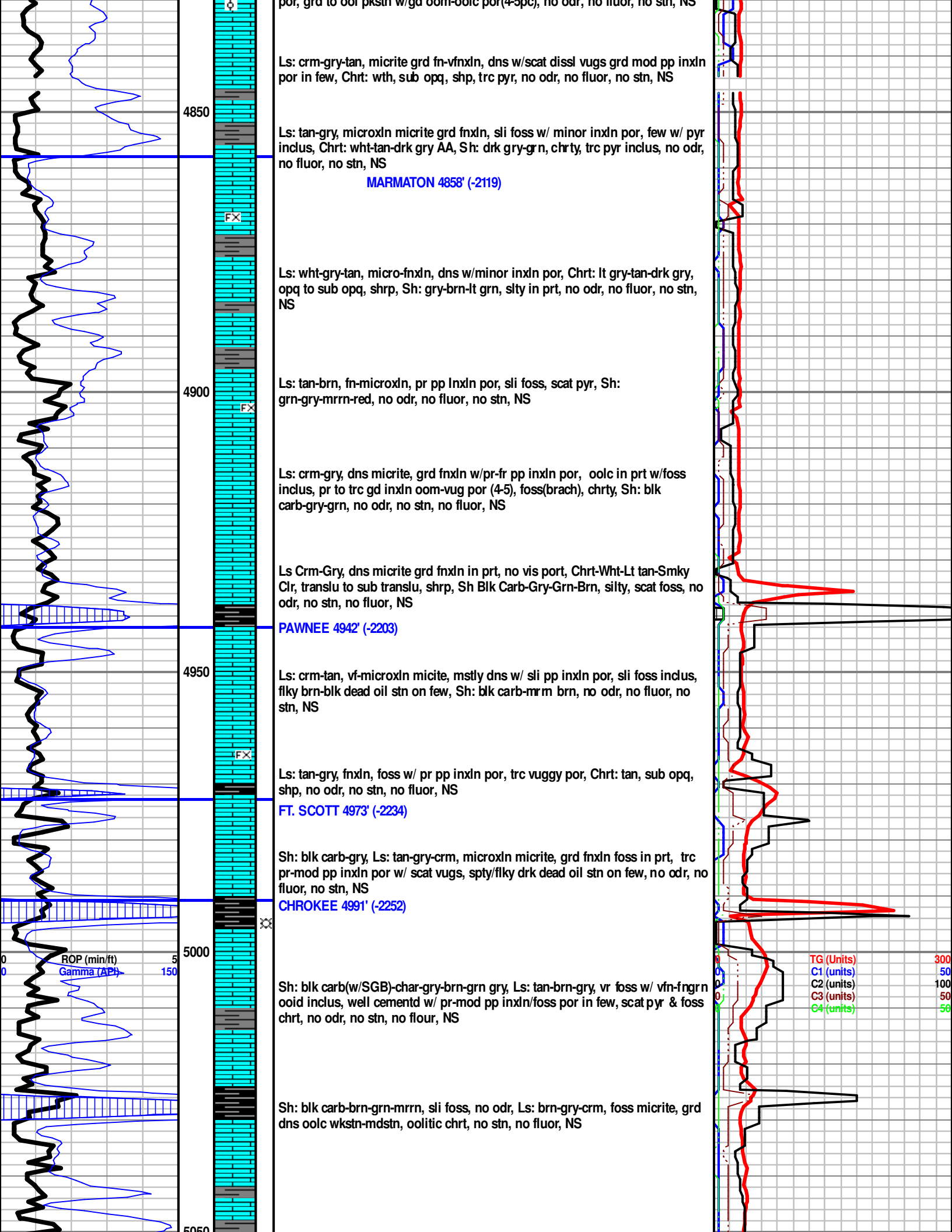
Mud Ck Rpt @ 3955'
5:55 AM 03/12/17
Vis=48;
WT=9.0#; PV=14;
YP= 14; Cake=1;
Chl=3,100; Cal =20; Sol=4.8%.
LCM=3#;
DMC=$ 1,402.87
CMC=$ 10,093.74

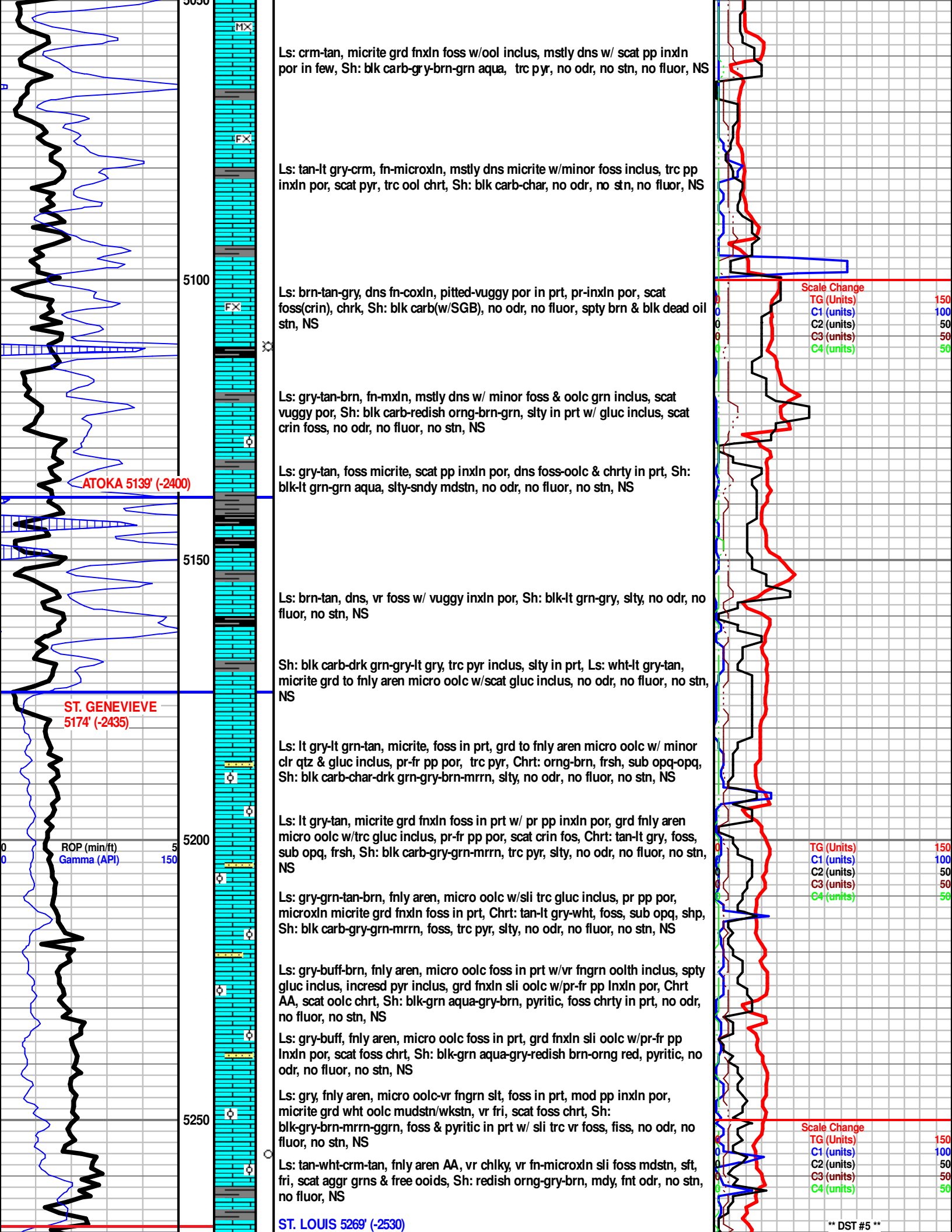


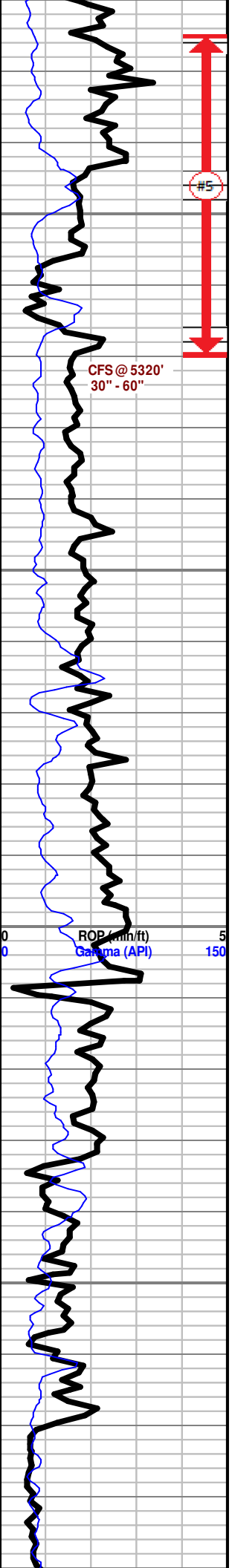

ROP (min/ft)
Gamma (API)
150
4200
4250
4300
4350
250 UNIT SHALE GAS KICK
Ls: gry-crm, vr dns, no vis por Sh: blk-gry-lt brn, plty, Dol: wht-lt gry, gd suc pp lnxln por(2-3pc), no odr, no fluor, no stn, NS
HEEBNER 4233' (-1494)
Sh: lt/drk gry-chr-lt brn-blk carb(w/ SGB), slty, pyritic, Ls: gry-tan, sli foss, micrite grd vfnxln w/minor pp por, no odr, GB do fluor, no stn, SSG, NSO
TORONTO 4253' (-1514)
Ls: wht-lt gry- microxln micrite, Sh: (abnt), blk carb(w/ SGB)-brn-gry-redish brn, pyr inclus, no odr, no fluor(GB do fluor), no stn, SSGB, NS
LANSING 4294'(-1555)
Ls: wht-crm-brn, mstly micrite, minor lnxln por in few, Sh: blk-lt grn aqua, pyritic in prt, Chrt: lt gry-sub opq, shp, no odr, no fluor, no stn, NS
Sh: gry-blk, vry muddy, chlky, Ls: brn-gry, fnxln, few w/ mod inxln-vug por, Chrt: wht-lt gry, sub opq, shp, no odr, no fluor, no stn, NS
Sh: gry-blk-lt grn, pyritic in prt, Ls: wht-gry-tan, chlky micrite grd to fnxln w/foss inclus, few w/ vr pr pp vuggy por, sli chrt in prt, no odr, no fluor, no stn, NS
LANSING 'B' 4352' (-1613)
Ls: wht-tan-gry, microxln micrite grd fnxln, well cemented ool/pel in prt w/ foss inclus, trc w/ pr inxln-oom vuggy por, Chrt: lt tan, sub opq, shp, Sh: gry-lt grn, no odr, no fluor, no stn, NS

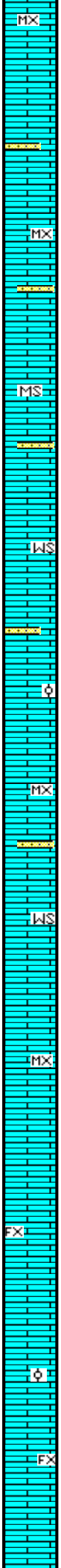

ROP (min/ft)
Gamma (API)
0
150
4400
4450
4500
4550
4600
FX
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
50
Ls: gry-tan, fnxln, foss, dns w/ vr sli trc pp por, chlky, trc Sh: blk-gry, few chrty foss frags, no odr, no fluor, no stn, NS
Ls: lt gry-crm-tan, fnxln, foss & chrty in prt, limey Dol: brn, fnxln w/mod pp inxln suc por, Chrt: drk gry-wht, sub opq, shp, Sh: blk carb-mrrn-brn-gryish grn, sft, fiss, no odr, no fluor, no stn, NS
Ls: gry-brn, fn-coxln, pitted w/ pr inxln vug por, foss, trc pyr inclus, no odr, no fluor, no stn, NS
Ls: mottled gry-brn, fn-coxln, foss vr dns grd to fair pp foss inxln por w/mod leached vuggy por(<2%), chlky, scat foss chrt, no odr, no fluor, no stn, NS
Ls: wht-gry-brn, fn-mxln, vr pr inxln por, foss in prt w/pr pp inxln por, no odr, no stn, no fluor, NS
Ls: gry-crm-tan, fnxln, foss & sli ool, mstly dns w/trc pp inxln por, chlky, trc Chrt: lt gry, sub opq, shrp, scat Sh: blk-gry, no odr, no fluor, no stn, NS
@ 4516' Reboot TookeDaq Data System
Ls: gry-tan, vfn-fnxln, foss w/minor pp por, oolitc in prt w/gd vuggy-oom & inxln por(3-4pc), trc free ooid grns, chlky, Sh: blk-gry-mrrn, no odr, no fluor, no stn, NS
IOLA 4570' (-1831)
Ls: gry-tan-crm, fnxln, mstly dns grd to pr-fair pp inxln por w/scat pyr inclus, scat isolated vuggy oom por, scat free ooid grns, chlky, Sh: gry-brn-orng-red, foss(brach), w/strky chrt, no odr, no fluor, no stn, NS
Ls: crm-gry, fn-microxln, foss w/pr grd to fair pp lnxln por, ool in prt(trc) w/gd foss vugg-oom inxln por, scat isolated disl vugs, chlky, Sh: blk-drk gry-grn, trc chrt, no odr, no fluor( sm mineral), no stn, NS
Ls: crm-gry-lt brn, fnxln, foss, ool in prt, dns-well cemented, scat pr pp inxln


por, minor vug por, sli chlky, Chrt: wht-lt gry, foss & oolc, mass pyr, Sh:
gry-grn, no odr, no fluor, trc flky dead oil stn, NS
Sh: blk carb-grn-gry, trc pyr inclus, Ls: gry-brn-tan, dns micrite, foss, grd fnxln-oolc, few w/fair-gd inxln oom por, chlky in prt, Chrt: lt gry-lt tan, opq-sub opq, foss, shrp, abdnt rexlized silica replaced foss frags, no odr, no fluor, no stn, NS
4650
FX
Ls: crm-tan, microxln, micrite grd to fn-med xln w/ sli trc vr pr pp inxln por, Sh: gry-grn, soft, no odr, no fluor, no stn, NS
STARK 4676' (-1937)
SWOPE POROSITY 4685' (-1946)
Ls: crm-gry-brn, fn-microxln, grd to med xln in few, mostly dns with no vis por, sli trc prly devlp pp inxln por (4-5 pc) and 2 pc w/ wll devlp inxln oom-vuggy por, Sh: gry-grn-brn-blk, trc pyr, no odr, no fluor, no stn, NS
4700
Ls: crm-gry-tan, micrxln micrite grd fnxln, chrty in prt, scat pr-mod inxln and pp vug por, sli chlky, Sh: blk-gry-red, no odr, no fluor, no stn, NS
Ls: brn-gry-crm, dns micrite grd oolc, fn-medgrn, well srtd, dns well cemented, grd pr-mod pp inxln vuggy-oom por w/ flky brn dead oil stn, rexlized & chrty in prt, Chrt: tan, opq, foss(brach), Sh: blk-gry-lt grn, no odr, no stn(spty dead flky stn on few), no fluor, NS
HUSHPUCKNEY 4738' (-1999)
HERTHA POROSITY 4747 (-2008)
4750
Ls: brn-gry-crm, dns micrite grd to fn-medgrn well srtd oolitic wk-pkstn, well cemented, few w/ good vuggy/oom por w/ flky brn dead oil stn, scat foss (brach,bryz), sli chlky, no odr, flky blk stn, spty mineral fluor, NS
Ls: wht-gry-tan, dns micrite, grd fnxln w/ scat pp vuggy por, trc ool Ls AA, Chrt: drk tan-lt gryish wht, opq-sup opq, shp, trc pyr, no odr, no fluor, no stn, NS
Ls: brn-gry-wht, mstly dns microxln micrite w/spty pyr inclus, grd to fnxln, sli foss w/minor inxln-vug pp por, rexlized foss vugs, trc mod-gd inxln por w/fair dissl vugs, Chrt: wht, sup translu, shrp foss, Sh: blk-gry-grn, no odr, no fluor, no stn, NS
Ls: brn-tan, dns micrite, sli foss, barren, trc(3-4 pc) oolc pkstn, fnxln cmnt, w/ fair-good leached moldic por, Sh: blk-gry-red, laminated, slty in prt, no odr, scat flky blk stn, no fluor, NS
Ls: brn-gry-tan, mstly dns micrite, foss mudstn in prt w/vry pr micro leaching, few scat crin fos, Sh: gry, plty, red mudstn, no odr, no stn, no fluor, NS
4800
0 ROP (min/ft) 5
0 Gamma (API) 150
Sh: blk carb-gry-grn(w/ pyr)-red, Ls: brn-tan-gry, dns micrite grd fn-coxln w/ no vis por, Chrt: drk gry-wht-tan, sub-opq to sub translu, shp, no odr, no fluor, no stn, NS
Ls: tan-gry, microxln micrite, dns grd fnxln w/ scat isolated pp vugs, sli trc pp inxln por, Chrt: wht, sub translu, foss, Sh: blk carb-gry, no odr, no fluor, no stn, NS
Ls: tan-crm-dk gry, vr dns hrd, sli dol, grd foss mudstn, few scat crin, no vis
C4 (units) 50
Scale Change
TG (Units) 300
C1 (units) 50
C2 (units) 100
C3 (units) 50
C4 (units) 50


por, grd to ool pkstn w/gd oom-oolc por(4-5pc), no odr, no fluor, no stn, NS
Ls: crm-gry-tan, micrite grd fn-vfnxln, dns w/scat dissl vugs grd mod pp inxln por in few, Chrt: wth, sub opq, shp, trc pyr, no odr, no fluor, no stn, NS
4850
Ls: tan-gry, microxln micrite grd fnxln, sli foss w/ minor inxln por, few w/ pyr inclus, Chrt: wht-tan-drk gry AA, Sh: drk gry-grn, chrty, trc pyr inclus, no odr, no fluor, no stn, NS
MARMATON 4858' (-2119)
Ls: wht-gry-tan, micro-fnxln, dns w/minor inxln por, Chrt: lt gry-tan-drk gry, opq to sub opq, shrp, Sh: gry-brn-lt grn, slty in prt, no odr, no fluor, no stn, NS
4900
Ls: tan-brn, fn-microxln, pr pp Inxln por, sli foss, scat pyr, Sh: grn-gry-mrrn-red, no odr, no fluor, no stn, NS
Ls: crm-gry, dns micrite, grd fnxln w/pr-fr pp inxln por, oolc in prt w/foss inclus, pr to trc gd inxln oom-vug por (4-5), foss(brach), chrty, Sh: blk carb-gry-grn, no odr, no stn, no fluor, NS
Ls Crm-Gry, dns micrite grd fnxln in prt, no vis port, Chrt-Wht-Lt tan-Smky Clr, translu to sub translu, shrp, Sh Blk Carb-Gry-Grn-Brn, silty, scat foss, no odr, no stn, no fluor, NS
PAWNEE 4942' (-2203)
4950
Ls: crm-tan, vf-microxln micite, mstly dns w/ sli pp inxln por, sli foss inclus, flky brn-blk dead oil stn on few, Sh: blk carb-mrm brn, no odr, no fluor, no stn, NS
Ls: tan-gry, fnxln, foss w/ pr pp inxln por, trc vuggy por, Chrt: tan, sub opq, shp, no odr, no stn, no fluor, NS
FT. SCOTT 4973' (-2234)
Sh: blk carb-gry, Ls: tan-gry-crm, microxln micrite, grd fnxln foss in prt, trc pr-mod pp inxln por w/ scat vugs, spty/flky drk dead oil stn on few, no odr, no fluor, no stn, NS
CHROKEE 4991' (-2252)
5000
0 ROP (min/ft) 5
0 Gamma (API) 150
Sh: blk carb(w/SGB)-char-gry-brn-grn gry, Ls: tan-brn-gry, vr foss w/ vfn-fngrn ooid inclus, well cementd w/ pr-mod pp inxln/foss por in few, scat pyr & foss chrt, no odr, no stn, no flour, NS
Sh: blk carb-brn-grn-mrrn, sli foss, no odr, Ls: brn-gry-crm, foss micrite, grd dns oolc wkstn-mdstn, oolitic chrt, no stn, no fluor, NS
TG (Units) 300
C1 (units) 50
C2 (units) 100
C3 (units) 50
C4 (units) 50


5050
MX
Ls: crm-tan, micrite grd fnxln foss w/ool inclus, mstly dns w/ scat pp inxln por in few, Sh: blk carb-gry-brn-grn aqua, trc pyr, no odr, no stn, no fluor, NS
FX
Ls: tan-lt gry-crm, fn-microxln, mstly dns micrite w/minor foss inclus, trc pp inxln por, scat pyr, trc ool chrt, Sh: blk carb-char, no odr, no stn, no fluor, NS
5100
Scale Change
TG (Units) 150
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50
FX
Ls: brn-tan-gry, dns fn-coxln, pitted-vuggy por in prt, pr-inxln por, scat foss(crin), chrk, Sh: blk carb(w/SGB), no odr, no fluor, spty brn & blk dead oil stn, NS
Ls: gry-tan-brn, fn-mxln, mstly dns w/ minor foss & oolc grn inclus, scat vuggy por, Sh: blk carb-redish orng-brn-grn, slty in prt w/ gluc inclus, scat crin foss, no odr, no fluor, no stn, NS
ATOKA 5139' (-2400)
Ls: gry-tan, foss micrite, scat pp inxln por, dns foss-oolc & chrty in prt, Sh: blk-lt grn-grn aqua, slty-sndy mdstn, no odr, no fluor, no stn, NS
5150
Ls: brn-tan, dns, vr foss w/ vuggy inxln por, Sh: blk-lt grn-gry, slty, no odr, no fluor, no stn, NS
Sh: blk carb-drk grn-gry-lt gry, trc pyr inclus, slty in prt, Ls: wht-lt gry-tan, micrite grd to fnly aren micro oolc w/scat gluc inclus, no odr, no fluor, no stn, NS
ST. GENEVIEVE
5174' (-2435)
Ls: lt gry-lt grn-tan, micrite, foss in prt, grd to fnly aren micro oolc w/ minor clr qtz & gluc inclus, pr-fr pp por, trc pyr, Chrt: orng-brn, frsh, sub opq-opq, Sh: blk carb-char-drk grn-gry-brn-mrrn, slty, no odr, no fluor, no stn, NS
0 ROP (min/ft) 5
0 Gamma (API) 150
5200
Ls: lt gry-tan, micrite grd fnxln foss in prt w/ pr pp inxln por, grd fnly aren micro oolc w/trc gluc inclus, pr-fr pp por, scat crin fos, Chrt: tan-lt gry, foss, sub opq, frsh, Sh: blk carb-gry-grn-mrrn, trc pyr, slty, no odr, no fluor, no stn, NS
TG (Units) 150
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50
Ls: gry-grn-tan-brn, fnly aren, micro oolc w/sli trc gluc inclus, pr pp por, microxln micrite grd fnxln foss in prt, Chrt: tan-lt gry-wht, foss, sub opq, shp, Sh: blk carb-gry-grn-mrrn, foss, trc pyr, slty, no odr, no fluor, no stn, NS
Ls: gry-buff-brn, fnly aren, micro oolc foss in prt w/vr fngrn oolth inclus, spty gluc inclus, incresd pyr inclus, grd fnxln sli oolc w/pr-fr pp lnxln por, Chrt AA, scat oolc chrt, Sh: blk-grn aqua-gry-brn, pyritic, foss chrty in prt, no odr, no fluor, no stn, NS
Ls: gry-buff, fnly aren, micro oolc foss in prt, grd fnxln sli oolc w/pr-fr pp lnxln por, scat foss chrt, Sh: blk-grn aqua-gry-redish brn-orng red, pyritic, no odr, no fluor, no stn, NS
Ls: gry, fnly aren, micro oolc-vr fngrn slt, foss in prt, mod pp inxln por, micrite grd wht oolc mudstn/wkstn, vr fri, scat foss chrt, Sh: blk-gry-brn-mrrn-ggrn, foss & pyritic in prt w/ sli trc vr foss, fiss, no odr, no fluor, no stn, NS
5250
Scale Change
TG (Units) 150
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50
Ls: tan-wht-crm-tan, fnly aren AA, vr chlky, vr fn-microxln sli foss mdstn, sft, fri, scat aggr grns & free ooids, Sh: redish orng-gry-brn, mdy, fnt odr, no stn, no fluor, NS
ST. LOUIS 5269' (-2530)
** DST #5 **




Ls: wht-lt tan, microxln dns micrite, scat fngrn oolc mdstn, minr pp vug por, scat fus/crin foss, Chrt: drk tan-drk gry, sub opq, shp, dns, Sh: gry-red-blk-grn, no odr, no fluor, no stn, NS

Ls: crm-lt tan, dns micrite, vfnxln foss mdstn, vr pr to no vis por, scat free ooids, few w/ flky brn dead oil stn, Chrt AA, Sh: blk-gry, no odr, no fluor, NS

Ls: lt gry-lt tan, dns mcrite AA w/scat medgrn oolth inclus, grd fnly aren w/mod pp inxln por, scat Chrt: wht-lt gry, sub opq-sub translu, flky drk brn & blk dead o stn, Sh: blk-mrrn red, sft mdy, no odr, no fluor, no stn, NS

30" CFS @ 5320' Ls: wht-lt tan-crm, vr chlky/mdy, dns mcxln micrite, grd to sli foss oolc mdstn, fri w/ pr pp inxln por, abndnt free ooid grns (vfn-medgrn) & scat foss frag, minor chrt, Sh: gry-grn, sli pyr, fair odr in cup, no stn, no fluor, NS

60" CFS @ 5320' Ls: AA, less freqnt/ more co-grn free ooids in tray, less freq oolc mdstn grd to dns micrite, sli foss, less chlk, more abndt chrt & Sh, no odr, no flour, poss spty brn stn on few, NS

Ls: lt gry-tan, fnly aren, slty w/ fn-med grn oolith inclus, mod pp inxln por, scat gluc inclus, grd foss oolc mdstn/wkstn, dns, well cmnt, Chrt: tan, Sh: blk-drk grn-gry-red, fiss, no odr, no stn, no fluor, NS

Ls: tan-brn-gry, fnly aren micro oolc w/mod pp inxln por grd fnxln prly srtd ool wkstn-pckstn, sli foss in prt, dns-well cmtd, scat Chrt: orng, sup opq-sup trnslu, shp, Sh: brn-drk gry-grn, no odr, no fluor, no stn, NS

Ls: tan-gry, dns micrite, fnly aren grd foss micro-fngrn oolc, minor gluc inclus, grd to more abndt fnxln ool wkstn, trc pkstn, dns, prly srtd in prt w/ pr ingrn-inxln vuggy por(vr few), scat pyr & foss, no odr, no stn, no fluor, NS

Ls: lt crm-lt gry-tan, foss ool micrite, Ls: gry-lt grn aqua, fnly arnc, slty, suc w/ micro ool inclus, grd to fn-microxln, sli foss-ool wkstn w/gluc inclus, no odr, no stn, no fluor, NS

Ls: lt gry-lt tan, fn-med xln, dns grd fnly aren slty in prt, pr pp inxln por, scat oolc mdstn, dns w/ trc vug por, Sh: blk-gry-Grn, no odr, no stn, no fluor, NS

Ls: gry-tan, vfn-mxln, dns mdstn, fnly arnc gry-grn slty in prt w/ minor gluc & pyr inclus, pr-md pp inxln por, Chrt: lt tan-lt gryish wht, sup opq, shp, minor Sh: lt grn aqua, spty brn-drk brn flky stn on few, no odr, no fluor, NS

Ls: lt tan-lt gry-crm, sli chlky txtr, fn-microxln micrite, slty-fnly arenc, sli ool w/ fngrn ool inclus, scat pr-mod pp inxln por, minor chrt, trc Sh: gry, no odr, no stn, no fluor, NS

Ls: gry-tan, fnly aren micro ool w/fair pp inxln pr, oolc mudst grd oolc wkstn, minor vuggy por, scat pyr inclus, trc spy drk brn flky stn, Sh: blk-red, no odr, no fluor, NS

Ls: crm-lt gry, chlky micrite, grd fnxln foss-oolc mdstn/wkstn, pr-fair pitted/vuggy inxln por, Dol: lt gry-brn, vf fnxln, micro suc w/mod pp inxln por, Sh: grn-gry-red, dns, foss, grainy, no odr, no fluor, spty/flky brn-blk dead o stn, NS

Ls: tan-crm-gry, dns micrite, fnxln, scat pp inxln por, chlky, Chrt: tan, sub opq, shp, Sh: blk carb-grn, no odr, no stn, no fluor, NS

Ls: gry-tan, sli aren, slty in prt, fn-mxln, pr inxln por, grd dns micrite, Chrt: wht-lt gry, opq-sub opq, foss, sli trc pyr, Sh: blk-grn-red, earthy, no odr, no fluor, no stn, NS

Dol: lt gry, limey, vfnxln, pr micro suc pp por, Ls: crm-tan, micrite grd fnxln foss oolc mdstn-wkstn, minor lnxln por, Sh: drk gry-grn-blk-red, no odr, no fluor, no stn, NS

Ls: crm-lt tan-gry, mstly microxln micrite, sli foss & scat ool, dolomitic w/ trc micro suc por, Sh: (less abdnt) grn-blk-red, no odr, scat drk brn stn, no fluor, NS

Ls: crm-wht, microxln micriite, sli dol, grd fnxln in prt, trc vr fngrn ool wkstn w/minor free ooid grns, few w/pr-fr pp vugy por, Sh: grn-gry, sli pyritic, no odr, no stn, no fluor, NS

Ls: gry-tan, fn-vrfnxln, dol w/gd suc pp inxln por, pel mdstn, foss ool wk-pkstn, fri, pr inprtc vug por, free vfn-mdgrn ooids, coated in prt, Sh: gry-mrrn, no odr, no fluor, no stn, NS

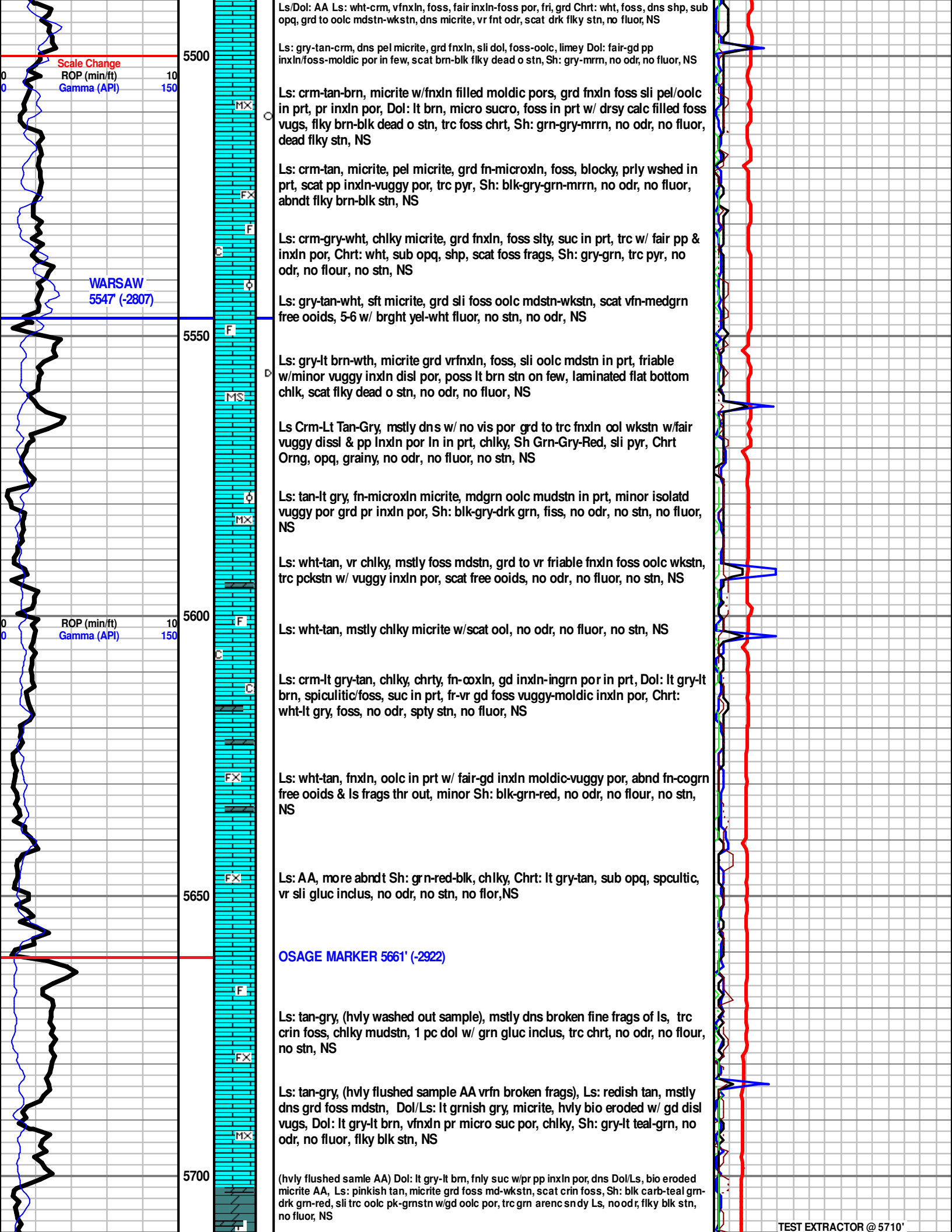
Ls/Dol: gry-lt tan-brn, fnxln, dns grd to foss-pel-ool vfn-fngrn ang inclus, fair-gd intrfoss-vug por, fair leach & disl vugs, fair pp inxln suc por in few, grsy lustr, 1-2 pc w/saturad brght yel fluor, vry lt brn stn, brt yel fluor GB aft 10% hcl, instant Bright yel/wht cut, vr lt floating oil sheen

Ls/Dol: gry-lt brn-wht, micrite grd fnxln, foss-pel-ool w/ agg intraclst, pr-gd inxln vug por, fair pp suc-inixln por, chrty in prt, Sh: blk-gry, spty/flky lt brn-drk brn dead o stn, no odr, no fluor, NS

5275'-5320'
IF: Built to 1/2"blw
IS: No return blw
FF: Built to wk surface blw
FS: No return blw
Rec: 70' Mud
Pressures:
IH: 2751
FH: 2700
IF: 42-49
FF: 46-86
ISP: 1674 #
FSIP: 1390 #
TEMP: 122 Deg F

Mud-Co Ck @ 5320'
11:20 AM 3/13/17
Vis:50 WT: 9.0#;
PV=16 YP= 16
Cake=1 Chl=2,400 ppm
Cal =20 Sol=4.9%.
LCM: 2 #
DMC= $3,820.80
CMC= $13,914.54

TG (Units) 150
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50




Ls/Dol: AA Ls: wht-crm, vfnxln, foss, fair inxln-foss por, fri, grd Chrt: wht, foss, dns shp, sub opq, grd to oolc mdstn-wkstn, dns micrite, vr fnt odr, scat drk flky stn, no fluor, NS

Ls: gry-tan-crm, dns pel micrite, grd fnxln, sli dol, foss-oolc, limey Dol: fair-gd pp inxln/foss-moldic por in few, scat brn-blk flky dead o stn, Sh: gry-mrrn, no odr, no fluor, NS

Ls: crm-tan-brn, micrite w/fnxln filled moldic pors, grd fnxln foss sli pel/oolc in prt, pr inxln por, Dol: lt brn, micro sucro, foss in prt w/ drsy calc filled foss vugs, flky brn-blk dead o stn, trc foss chrt, Sh: grn-gry-mrrn, no odr, no fluor, dead flky stn, NS

Ls: crm-tan, micrite, pel micrite, grd fn-microxln, foss, blocky, prly wshed in prt, scat pp inxln-vuggy por, trc pyr, Sh: blk-gry-grn-mrrn, no odr, no fluor, abndt flky brn-blk stn, NS

Ls: crm-gry-wht, chlky micrite, grd fnxln, foss slty, suc in prt, trc w/ fair pp & inxln por, Chrt: wht, sub opq, shp, scat foss frags, Sh: gry-grn, trc pyr, no odr, no flour, no stn, NS

Ls: gry-tan-wht, sft micrite, grd sli foss oolc mdstn-wkstn, scat vfn-medgrn free ooids, 5-6 w/ brght yel-wht fluor, no stn, no odr, NS

Ls: gry-lt brn-wth, micrite grd vrfnxln, foss, sli oolc mdstn in prt, friable w/minor vuggy inxln disl por, poss lt brn stn on few, laminated flat bottom chlk, scat flky dead o stn, no odr, no fluor, NS

Ls Crm-Lt Tan-Gry, mstly dns w/ no vis por grd to trc fnxln ool wkstn w/fair vuggy dissl & pp lnxln por ln in prt, chlky, Sh Grn-Gry-Red, sli pyr, Chrt Orng, opq, grainy, no odr, no fluor, no stn, NS

Ls: tan-lt gry, fn-microxln micrite, mdgrn oolc mudstn in prt, minor isolatd vuggy por grd pr inxln por, Sh: blk-gry-drk grn, fiss, no odr, no stn, no fluor, NS

Ls: wht-tan, vr chlky, mstly foss mdstn, grd to vr friable fnxln foss oolc wkstn, trc pckstn w/ vuggy inxln por, scat free ooids, no odr, no fluor, no stn, NS

Ls: wht-tan, mstly chlky micrite w/scat ool, no odr, no fluor, no stn, NS

Ls: crm-lt gry-tan, chlky, chrty, fn-cxln, gd inxln-ingrn por in prt, Dol: lt gry-lt brn, spiculitic/foss, suc in prt, fr-vr gd foss vuggy-moldic inxln por, Chrt: wht-lt gry, foss, no odr, spty stn, no fluor, NS

Ls: wht-tan, fnxln, oolc in prt w/ fair-gd inxln moldic-vuggy por, abnd fn-cogrn free ooids & ls frags thr out, minor Sh: blk-grn-red, no odr, no flour, no stn, NS

Ls: AA, more abndt Sh: grn-red-blk, chlky, Chrt: lt gry-tan, sub opq, spcultic, vr sli gluc inclus, no odr, no stn, no flor,NS

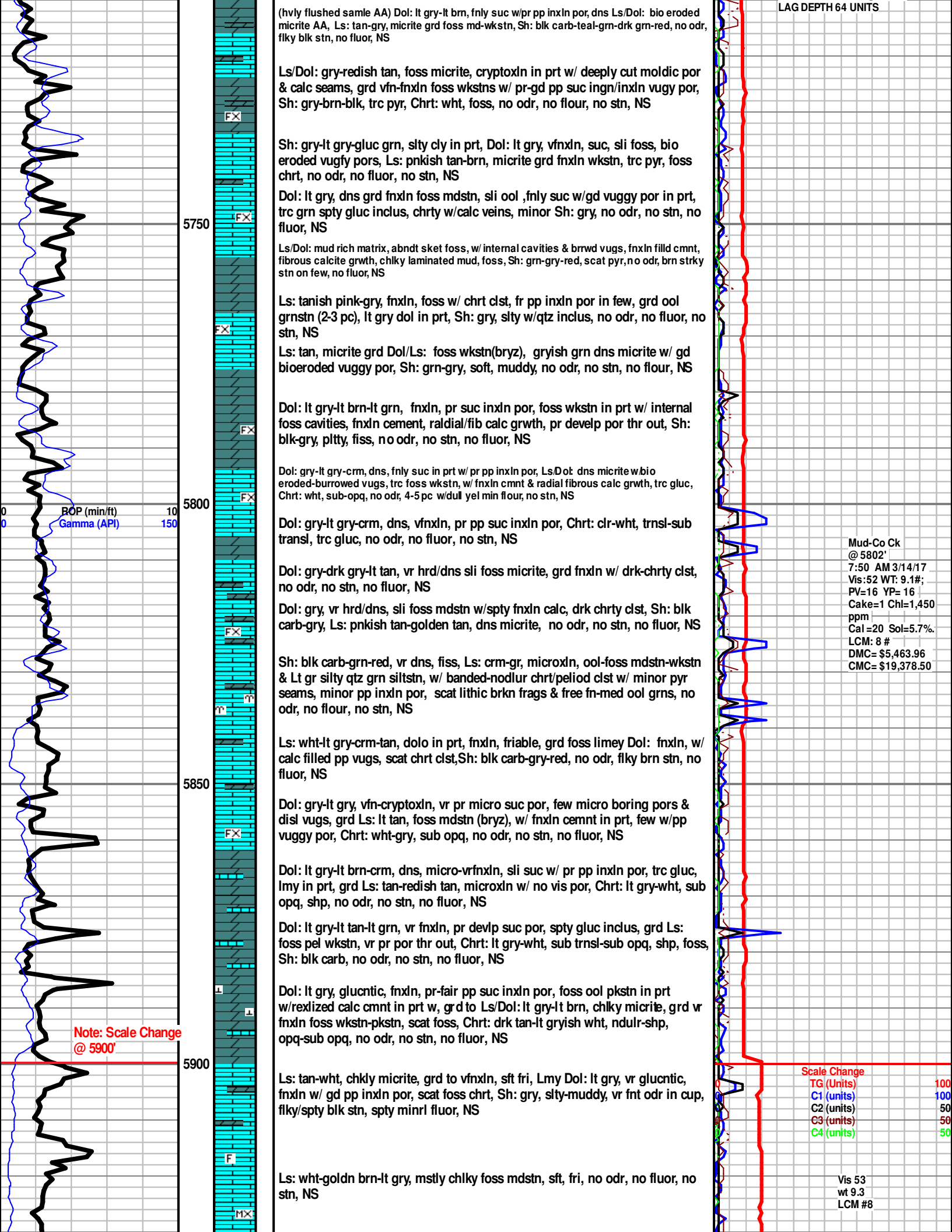
OSAGE MARKER 5661' (-2922)

Ls: tan-gry, (hvly washed out sample), mstly dns broken fine frags of ls, trc crin foss, chlky mudstn, 1 pc dol w/ grn gluc inclus, trc chrt, no odr, no flour, no stn, NS

Ls: tan-gry, (hvly flushed sample AA vrfn broken frags), Ls: redish tan, mstly dns grd foss mdstn, Dol/Ls: lt grnish gry, micrite, hvly bio eroded w/ gd disl vugs, Dol: lt gry-lt brn, vfnxln pr micro suc por, chlky, Sh: gry-lt teal-grn, no odr, no fluor, flky blk stn, NS

(hvly flushed samle AA) Dol: lt gry-lt brn, fnly suc w/pr pp inxln por, dns Dol/Ls, bio eroded micrite AA, Ls: pinkish tan, micrite grd foss md-wkstn, scat crin foss, Sh: blk carb-teal grn-drk grn-red, sli trc oolc pk-grnstn w/gd oolc por, trc grn arenc sndy Ls, noodr, flky blk stn, no fluor, NS

TEST EXTRACTOR @ 5710'




(hvly flushed samle AA) Dol: lt gry-lt brn, fnly suc w/pr pp inxln por, dns Ls/Dol: bio eroded micrite AA, Ls: tan-gry, micrite grd foss md-wkstn, Sh: blk carb-teal-grn-drk grn-red, no odr, flky blk stn, no fluor, NS

Ls/Dol: gry-redish tan, foss micrite, cryptoxln in prt w/ deeply cut moldic por & calc seams, grd vfn-fnxln foss wkstns w/ pr-gd pp suc ingn/inxln vugy por, Sh: gry-brn-blk, trc pyr, Chrt: wht, foss, no odr, no flour, no stn, NS

Sh: gry-lt gry-gluc grn, slty cly in prt, Dol: lt gry, vfnxln, suc, sli foss, bio eroded vugfy pors, Ls: pnkish tan-brn, micrite grd fnxln wkstn, trc pyr, foss chrt, no odr, no fluor, no stn, NS

Dol: lt gry, dns grd fnxln foss mdstn, sli ool ,fnly suc w/gd vuggy por in prt, trc grn spty gluc inclus, chrty w/calc veins, minor Sh: gry, no odr, no stn, no fluor, NS

Ls/Dol: mud rich matrix, abndt sket foss, w/ internal cavities & brrwd vugs, fnxln filld cmnt, fibrous calcite grwth, chlky laminated mud, foss, Sh: grn-gry-red, scat pyr, no odr, brn strky stn on few, no fluor, NS

Ls: tanish pink-gry, fnxln, foss w/ chrt clst, fr pp inxln por in few, grd ool grnstn (2-3 pc), lt gry dol in prt, Sh: gry, slty w/qtz inclus, no odr, no fluor, no stn, NS

Ls: tan, micrite grd Dol/Ls: foss wkstn(bryz), gryish grn dns micrite w/ gd bioeroded vuggy por, Sh: grn-gry, soft, muddy, no odr, no stn, no flour, NS

Dol: lt gry-lt brn-lt grn, fnxln, pr suc inxln por, foss wkstn in prt w/ internal foss cavities, fnxln cement, raldial/fib calc grwth, pr develp por thr out, Sh: blk-gry, pltty, fiss, no odr, no stn, no fluor, NS

Dol: gry-lt gry-crm, dns, fnly suc in prt w/ pr pp inxln por, Ls/Dol: dns micrite w/bio eroded-burrowed vugs, trc foss wkstn, w/ fnxln cmnt & radial fibrous calc grwth, trc gluc, Chrt: wht, sub-opq, no odr, 4-5 pc w/dull yel min flour, no stn, NS

Dol: gry-lt gry-crm, dns, vfnxln, pr pp suc inxln por, Chrt: clr-wht, trnsl-sub transl, trc gluc, no odr, no fluor, no stn, NS

Dol: gry-drk gry-lt tan, vr hrd/dns sli foss micrite, grd fnxln w/ drk-chrty clst, no odr, no stn, no fluor, NS

Dol: gry, vr hrd/dns, sli foss mdstn w/spty fnxln calc, drk chrty clst, Sh: blk carb-gry, Ls: pnkish tan-golden tan, dns micrite, no odr, no stn, no fluor, NS

Sh: blk carb-grn-red, vr dns, fiss, Ls: crm-gr, microxln, ool-foss mdstn-wkstn & Lt gr silty qtz grn siltstn, w/ banded-nodlur chrt/peliod clst w/ minor pyr seams, minor pp inxln por, scat lithic brkn frags & free fn-med ool grns, no odr, no flour, no stn, NS

Ls: wht-lt gry-crm-tan, dolo in prt, fnxln, friable, grd foss limey Dol: fnxln, w/ calc filled pp vugs, scat chrt clst,Sh: blk carb-gry-red, no odr, flky brn stn, no fluor, NS

Dol: gry-lt gry, vfn-cryptoxln, vr pr micro suc por, few micro boring pors & disl vugs, grd Ls: lt tan, foss mdstn (bryz), w/ fnxln cemnt in prt, few w/pp vuggy por, Chrt: wht-gry, sub opq, no odr, no stn, no fluor, NS

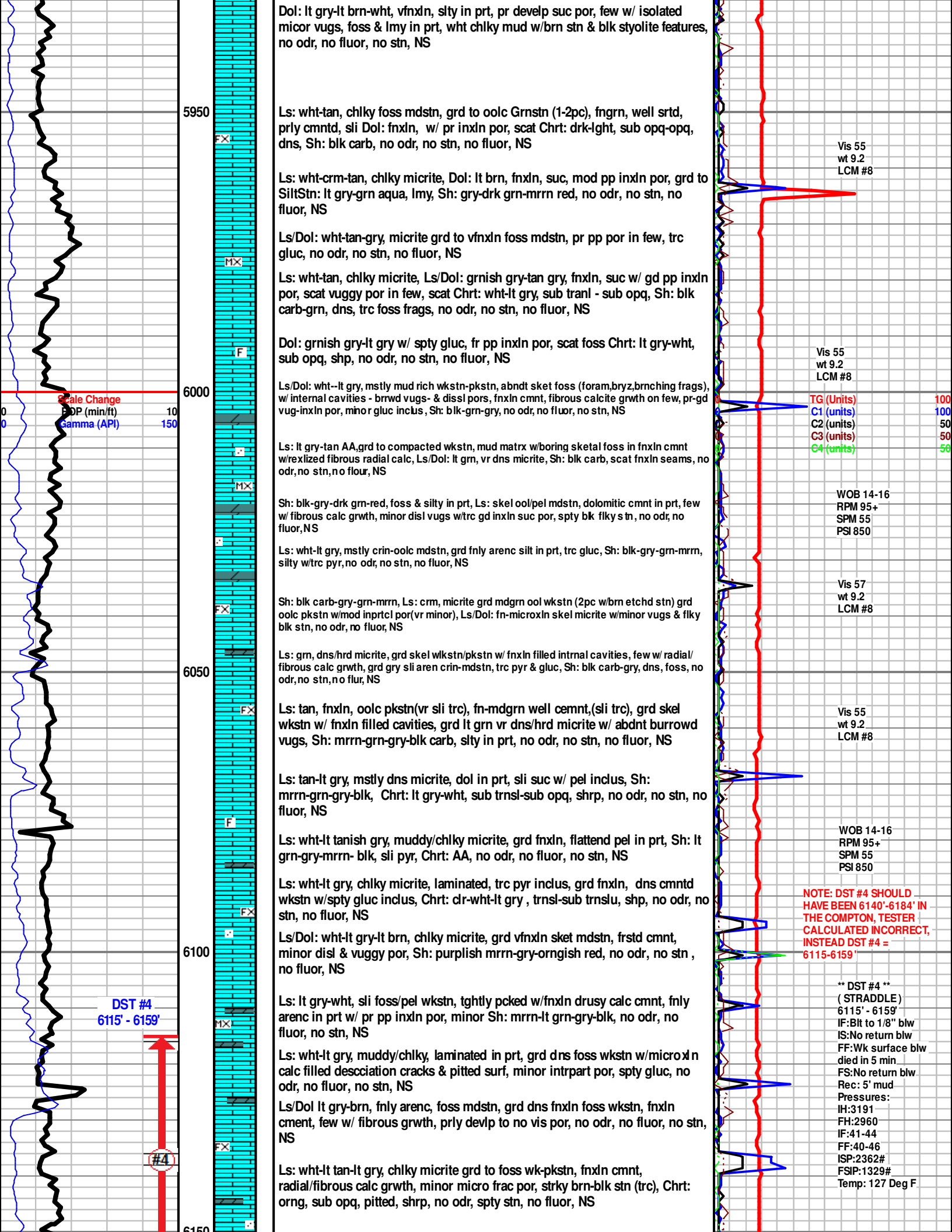
Dol: lt gry-lt brn-crm, dns, micro-vrfnxln, sli suc w/ pr pp inxln por, trc gluc, lmy in prt, grd Ls: tan-redish tan, microxln w/ no vis por, Chrt: lt gry-wht, sub opq, shp, no odr, no stn, no fluor, NS

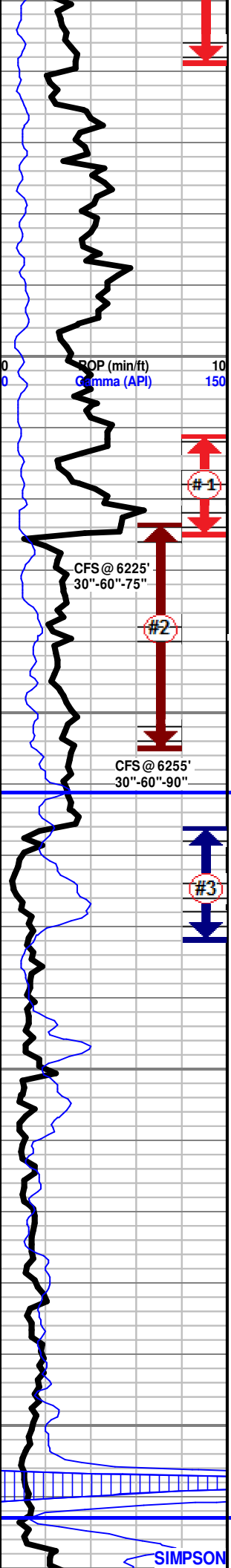
Dol: lt gry-lt tan-lt grn, vr fnxln, pr devlp suc por, spty gluc inclus, grd Ls: foss pel wkstn, vr pr por thr out, Chrt: lt gry-wht, sub trnsl-sub opq, shp, foss, Sh: blk carb, no odr, no stn, no fluor, NS

Dol: lt gry, glucntic, fnxln, pr-fair pp suc inxln por, foss ool pkstn in prt w/rexlized calc cmnt in prt w, grd to Ls/Dol: lt gry-lt brn, chlky micrite, grd vr fnxln foss wkstn-pkstn, scat foss, Chrt: drk tan-lt gryish wht, ndulr-shp, opq-sub opq, no odr, no stn, no fluor, NS

Ls: tan-wht, chkly micrite, grd to vfnxln, sft fri, Lmy Dol: lt gry, vr glucntic, fnxln w/ gd pp inxln por, scat foss chrt, Sh: gry, slty-muddy, vr fnt odr in cup, flky/spty blk stn, spty minrl fluor, NS

Ls: wht-goldn brn-lt gry, mstly chlky foss mdstn, sft, fri, no odr, no fluor, no stn, NS


Scale Change
ROP (min/ft) 0 10
Gamma (API) 0 150
5950
6000
6050
6100
6150
DST #4
6115' - 6159'
#4
Dol: lt gry-lt brn-wht, vfnxln, slty in prt, pr develp suc por, few w/ isolated micor vugs, foss & lmy in prt, wht chlky mud w/brn stn & blk styolite features, no odr, no fluor, no stn, NS
Ls: wht-tan, chlky foss mdstn, grd to oolc Grnstn (1-2pc), fngrn, well srtd, prly cmntd, sli Dol: fnxln, w/ pr inxln por, scat Chrt: drk-lght, sub opq-opq, dns, Sh: blk carb, no odr, no stn, no fluor, NS
Ls: wht-crm-tan, chlky micrite, Dol: lt brn, fnxln, suc, mod pp inxln por, grd to SiltStn: lt gry-grn aqua, lmy, Sh: gry-drk grn-mrrn red, no odr, no stn, no fluor, NS
Ls/Dol: wht-tan-gry, micrite grd to vfnxln foss mdstn, pr pp por in few, trc gluc, no odr, no stn, no fluor, NS
Ls: wht-tan, chlky micrite, Ls/Dol: grnish gry-tan gry, fnxln, suc w/ gd pp inxln por, scat vuggy por in few, scat Chrt: wht-lt gry, sub tranl - sub opq, Sh: blk carb-grn, dns, trc foss frags, no odr, no stn, no fluor, NS
Dol: grnish gry-lt gry w/ spty gluc, fr pp inxln por, scat foss Chrt: lt gry-wht, sub opq, shp, no odr, no stn, no fluor, NS
Ls/Dol: wht--lt gry, mstly mud rich wkstn-pkstn, abndt sket foss (foram,bryz,brnching frags), w/ internal cavities - brrwd vugs- & dissl pors, fnxln cmnt, fibrous calcite grwth on few, pr-gd vug-inxln por, minor gluc inclus, Sh: blk-grn-gry, no odr, no fluor, no stn, NS
Ls: lt gry-tan AA,grd to compacted wkstn, mud matrx w/boring sketal foss in fnxln cmnt w/rexlized fibrous radial calc, Ls/Dol: lt grn, vr dns micrite, Sh: blk carb, scat fnxln seams, no odr,no stn,no flour, NS
Sh: blk-gry-drk grn-red, foss & silty in prt, Ls: skel ool/pel mdstn, dolomitic cmnt in prt, few w/ fibrous calc grwth, minor disl vugs w/trc gd inxln suc por, spty blk flky stn, no odr, no fluor,NS
Ls: wht-lt gry, mstly crin-oolc mdstn, grd fnly arenc silt in prt, trc gluc, Sh: blk-gry-grn-mrrn, silty w/trc pyr,no odr, no stn, no fluor, NS
Sh: blk carb-gry-grn-mrrn, Ls: crm, micrite grd mdgrn ool wkstn (2pc w/brn etchd stn) grd oolc pkstn w/mod inprtcl por(vr minor), Ls/Dol: fn-microxln skel micrite w/minor vugs & flky blk stn, no odr, no fluor, NS
Ls: grn, dns/hrd micrite, grd skel wlkstn/pkstn w/ fnxln filled intrnal cavities, few w/ radial/ fibrous calc grwth, grd gry sli aren crin-mdstn, trc pyr & gluc, Sh: blk carb-gry, dns, foss, no odr,no stn,no flur, NS
Ls: tan, fnxln, oolc pkstn(vr sli trc), fn-mdgrn well cemnt,(sli trc), grd skel wkstn w/ fnxln filled cavities, grd lt grn vr dns/hrd micrite w/ abdnt burrowd vugs, Sh: mrrn-grn-gry-blk carb, slty in prt, no odr, no stn, no fluor, NS
Ls: tan-lt gry, mstly dns micrite, dol in prt, sli suc w/ pel inclus, Sh: mrrn-grn-gry-blk, Chrt: lt gry-wht, sub trnsl-sub opq, shrp, no odr, no stn, no fluor, NS
Ls: wht-lt tanish gry, muddy/chlky micrite, grd fnxln, flattend pel in prt, Sh: lt grn-gry-mrrn- blk, sli pyr, Chrt: AA, no odr, no fluor, no stn, NS
Ls: wht-lt gry, chlky micrite, laminated, trc pyr inclus, grd fnxln, dns cmntd wkstn w/spty gluc inclus, Chrt: clr-wht-lt gry , trnsl-sub trnslu, shp, no odr, no stn, no fluor, NS
Ls/Dol: wht-lt gry-lt brn, chlky micrite, grd vfnxln sket mdstn, frstd cmnt, minor disl & vuggy por, Sh: purplish mrrn-gry-orngish red, no odr, no stn , no fluor, NS
Ls: lt gry-wht, sli foss/pel wkstn, tghtly pcked w/fnxln drusy calc cmnt, fnly arenc in prt w/ pr pp inxln por, minor Sh: mrrn-lt grn-gry-blk, no odr, no fluor, no stn, NS
Ls: wht-lt gry, muddy/chlky, laminated in prt, grd dns foss wkstn w/microxln calc filled descciation cracks & pitted surf, minor intrpart por, spty gluc, no odr, no fluor, no stn, NS
Ls/Dol lt gry-brn, fnly arenc, foss mdstn, grd dns fnxln foss wkstn, fnxln cment, few w/ fibrous grwth, prly devlp to no vis por, no odr, no fluor, no stn, NS
Ls: wht-lt tan-lt gry, chlky micrite grd to foss wk-pkstn, fnxln cmnt, radial/fibrous calc grwth, minor micro frac por, strky brn-blk stn (trc), Chrt: orng, sub opq, pitted, shrp, no odr, spty stn, no fluor, NS
Vis 55
wt 9.2
LCM #8
Vis 55
wt 9.2
LCM #8
TG (Units) 100
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50
WOB 14-16
RPM 95+
SPM 55
PSI 850
Vis 57
wt 9.2
LCM #8
Vis 55
wt 9.2
LCM #8
WOB 14-16
RPM 95+
SPM 55
PSI 850
NOTE: DST #4 SHOULD HAVE BEEN 6140'-6184' IN THE COMPTON, TESTER CALCULATED INCORRECT, INSTEAD DST #4 = 6115-6159'
** DST #4 **
( STRADDLE )
6115' - 6159'
IF:Blt to 1/8" blw
IS:No return blw
FF:Wk surface blw died in 5 min
FS:No return blw
Rec: 5' mud
Pressures:
IH:3191
FH:2960
IF:41-44
FF:40-46
ISP:2362#
FSIP:1329#
Temp: 127 Deg F




Ls/Dol: lt gry-lt brn, mstly dns foss wkstn-mdstn, Chrt: lt gryish wht-tan-orng, sub opq, foss in prt, trc Sh: blk carb-lt grn, no odr, no stn, no fluor, NS

Ls/Dol: wht-tan-lt gry, laminatd micrite, dns compact/flattend foss wkstn to trc pkstn, minor pp vug por, spty blk gil stn in few, trc Sh: grn-mrrn-blk, no odr, no fluor, NS

Ls: lt gry-lt tan, vr dns, foss-chrt in prt, Sh: blk carb(foss)-gry, no odr, tcr blk gil stn on 2-3 pc, no fluor, NS

Ls: lt gry-crm, micrite grd foss md-wkstn, trc Dol: lt gry, vfnxln, pr pp suc inxln por, Chrt: lt gryish wht-lt tan, sub trnsl-sub opq, foss, shp, Sh: blk carb, no odr, no fluor, spty/flky blk stn on few, NS

Ls/Dol: lt gry-lt brn-grnish gry, vr dns/hrd micrite w/micro bio vugs, grd vrfnxln foss mdstn-wkstn, fibrous calc grwth in few, mstly dns w/minor frac por, Chrt: lt gryish wht, foss, no odr, spty/flky dead o stn, no fluor, NS

Ls: lt gry-tan, dns foss mdstn, Chrt: lt gry-wht-orng, sub opq-sub trnl, shp, foss, Sh: lt grn-mrrn-red-gry-blk, foss in prt, sli trc laminated chlky micrite, no odr, no stn, no fluor, NS

45"-60"-90" CFS @ 6225' Ls/Dol: sft micrite, fnxln, laminated foss, grd mstly mud rich wkstn-pkstn, abndt sket foss(foram,crin,brach,pel), w/ internal cavities filld w/ fnxln cmnt w/ fibrous calcite grwth, pr-mod w/trc gd inxln por, minor bio eroded v ugs, s kelo olc pkstn stringer w/pr-mod intrpart/moldic por, spty gluc inclus, Sh Blk-Gry-Grn-Mrrn, Chrt AA, fair odr, spty brght-dulyel fluor, spty/strky brn & blk stn, NSFO

30"-60"-90" CFS @ 6255' Shale: Gry-Red-Blk-Teal-Mustard Yellow, wa xy, foss, silty in prt, grad to Dol: Gry-Lt Brn, vrfn-fnxln, pr-mod pp suc por in few, vr foss w/isolated vugs, silty w/recrystallized lime cement, mod-strng odor in 90" sample, oily rainbow sheen in water, sptty lt brn & flky blk stn, brght yel min fluor, no cut, no show free oil

VIOLA 6261' (-3522)

Dol: lt gry, micro suc, pr pp inxln por w/minor fenstr/vug por, sli foss wkstn in prt, trc medgrn pkstn, Sh: grn-red-gry-lt brn-blk, laminated, rnd co-grn clr qtz inclus, Qtz SS/Siltstn, vfgrn, well srtd, pr cmnt, rnd-subrnd, friable, pr-fair intrgrn por, Chrt: wht-lt pale gry-gry, sub opq-sub translu, chlky, no odr, no fluor (some mineral fluor), no stn, NS

Sh: AA silty, Increase in Clr Qtz SS wht-lt brn mtrx, subrnd-subang, vrfngrn, pr-fair intgrn por, w/ spty brn stn, Chrt: wht-lt gry, AA, scat crin fos, Dol: lt gry-lt brn, foss wkstn w/ silica replaced internal cavities, fnt odr, spty brn stn, mineral fluor, NSFO

Dol: lt Ggy-lt brn, vfnxln, silty in prt, pr develp micro suc por, sli limey matrix w/clr silica clst inclus, scat Chrt: wht-lt gry, sub opq, shrp, fn-med grn wkstn w/ pr vuggy ingrn por,sli chlky, Sh: AA w/silica filled styolites, no odr, spty mineral fluor, flky dead stn on few, NS

Dol Brn-Lt Gry-Crm, dns fnxln with pr developed suc por, impure silica & calc mixed cmnt w/fair inxln differential por in prt, Sh AA, no odr, no stn, sme miner fluor, NS

Dol Brn-Gry, dns micro suc grd fnxln w/ pr-fair inxln suc por, Ls Lt Gry, fn-microxln, pr inxln por in few, Chrt Wht-Lt Gry-Blk, sub opq-sub tranl, vit shp, Sh Grn-Teal-Gry-Blk-Red, no odr, no stn, no fluor, NS

Dol Lt Brn-Lt Gryish Crm, fnxln, suc w/ fair-gd pp Inxln por, friable in pc w/gd vuggy fenstrl disl por, Ls Lt Tanish Gry, fn-microxln micrite, sli chlk, Sh Blk/carb-Red Chrt Wht-Lt Crm Gry, opq-sub opq, fnt odr

** DST #1 **
6211' - 6225'
3"-60"-60"-90"
IF: Blt to wk surf blw
IS: No return
FF: No blw
FS: No return
Rec: 10 mud 100%
Pressures:
IH: 3114
FH: 2933
IF: 19-35
FF: 32-35
ISP: 2428 #
FSIP: 1254 #
TEMP: 128 Deg F

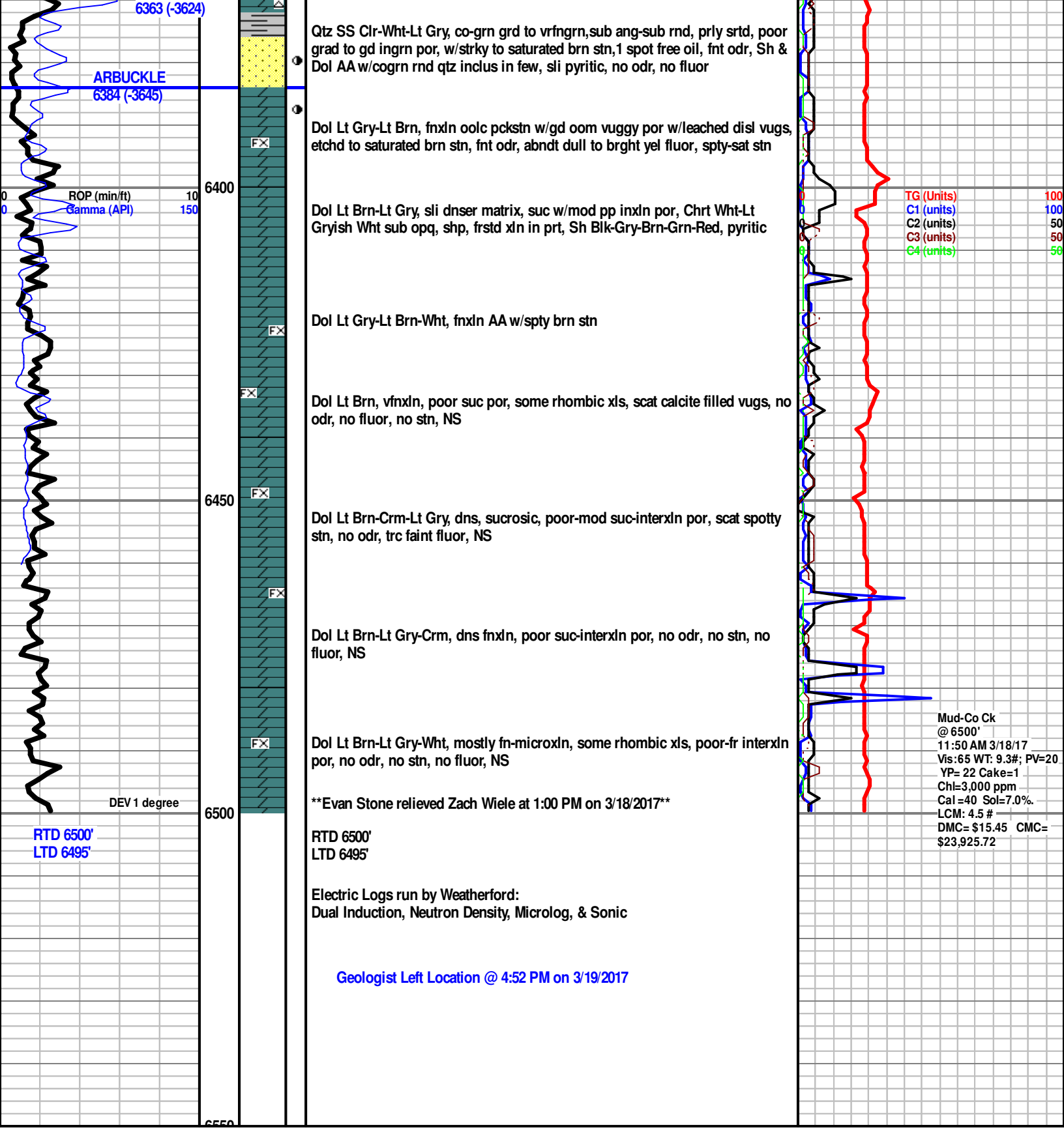
Mud-Co Ck
@ 6225'
7:50 AM 3/15/17
Vis:48 WT: 9.2#; PV=16
YP= 16 Cake=1
Chl=2,450 ppm
Cal =20 Sol=6.3%.
LCM: 7.5 #
DMC= $2,852.79
CMC= $22,231.29

Mud-Co Ck
@ 6240'
9:10 AM 3/16/17
Vis:91 WT: 8.9#;
PV=22 YP= 25 Cake=1
Chl=2,850 ppm
Cal =40 Sol=4.2%.
LCM: 7 #
DMC= $1,513.21
CMC= $23,744.50

** DST #2 **
6224' - 6255'
3"-60"-30"-45"
IF: Blt to wk surf blw
IS: No return
FF: No blw
FS: No return
Rec: 2' mud 100%
Pressures:
IH: 3223
FH: 3093
IF: 27-28
FF: 28-29
ISP: 97 #
FSIP: 44 #
TEMP: 123 Deg F

** DST #3 **
6266' - 6282'
3"-60"-30"-30"
IF: Blt to wk surf blw
IS: No return
FF: No blw
FS: No return
Rec: 5' mud 100%
Pressures:
IH: 3159
FH: 2958
IF: 19-20
FF: 18-21
ISP: 2195 #
FSIP: 1269 #
TEMP: 127 Deg F

Mud-Co Ck
@ 6282'
8:10 AM 3/17/17
Vis:55 WT: 9.0#; PV=17
YP= 18 Cake=1
Chl=2,750 ppm
Cal =60 Sol=4.8%.
LCM: 6 #
DMC= $165.77 CMC= $23,910.27


6363 (-3624)
ARBUCKLE
6384 (-3645)
ROP (min/ft) 10
Gamma (API) 150
6400
6450
6500
DEV 1 degree
RTD 6500'
LTD 6495'
Qtz SS Clr-Wht-Lt Gry, co-grn grd to vrfngrn,sub ang-sub rnd, prly srtd, poor grad to gd ingrn por, w/strky to saturated brn stn,1 spot free oil, fnt odr, Sh & Dol AA w/cogrn rnd qtz inclus in few, sli pyritic, no odr, no fluor
Dol Lt Gry-Lt Brn, fnxln oolc pckstn w/gd oom vuggy por w/leached disl vugs, etchd to saturated brn stn, fnt odr, abndt dull to brght yel fluor, spty-sat stn
Dol Lt Brn-Lt Gry, sli dnser matrix, suc w/mod pp inxln por, Chrt Wht-Lt Gryish Wht sub opq, shp, frstd xln in prt, Sh Blk-Gry-Brn-Grn-Red, pyritic
Dol Lt Gry-Lt Brn-Wht, fnxln AA w/spty brn stn
Dol Lt Brn, vfnxln, poor suc por, some rhombic xls, scat calcite filled vugs, no odr, no fluor, no stn, NS
Dol Lt Brn-Crm-Lt Gry, dns, sucrosic, poor-mod suc-interxln por, scat spotty stn, no odr, trc faint fluor, NS
Dol Lt Brn-Lt Gry-Crm, dns fnxln, poor suc-interxln por, no odr, no stn, no fluor, NS
Dol Lt Brn-Lt Gry-Wht, mostly fn-microxln, some rhombic xls, poor-fr interxln por, no odr, no stn, no fluor, NS
**Evan Stone relieved Zach Wiele at 1:00 PM on 3/18/2017**
RTD 6500'
LTD 6495'
Electric Logs run by Weatherford:
Dual Induction, Neutron Density, Microlog, & Sonic
Geologist Left Location @ 4:52 PM on 3/19/2017
TG (Units) 100
C1 (units) 100
C2 (units) 50
C3 (units) 50
C4 (units) 50
Mud-Co Ck
@ 6500'
11:50 AM 3/18/17
Vis:65 WT: 9.3#; PV=20
YP= 22 Cake=1
Chl=3,000 ppm
Cal =40 Sol=7.0%.
LCM: 4.5 #
DMC= $15.45 CMC= $23,925.72

# MORNING DRILLING REPORT

| Sterling Drilling Company, Rig #4 | | Wellsite Geologist: |
|---|---|---|
| Box 1006, Pratt, Kansas 67124-1006 | | Zach Wiele |
| Office Phone (620) 672-9508, Fax 672-9509 | | |
| Toolpusher - Lanny Saloga | IN USE | |
| Rig Cellular | (620) 388-4192 | Yes |
| Geologist Cellular | (620) 388-5381 | Fax |
| Tool Pusher Cellular | (620) 388-4193 | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fax to: | Scott Hampel | | | | | | |
| # of Pages | 1 | Fax# | 316-636-2741 | | | | |
| WELL NAME | Thomas & Reed Farms A' #1-21 | | | | | | |
| LOCATION | NE NW | | | | | | |
| SEC | 21 | TWP | 29s | RNG | 28w | CO | Gray |

McCoy Petroleum Corporation
9342 E. Central,
Wichita, Kansas 67206

| ELEVATION | G.L. | 2728 | K.B. | 2739 | API# | 15-069--21499-00-00 |
|---|---|---|---|---|---|---|

Central Kansas Survey staked location February 16, 2017. W & L called Digsafe prior to beginning dirt work. Max's Water Svc is hauling water from Montezuma. Using steel working pit. **Sterling made spud call to KCC (Mike Maier) on 03/07/17.**

**Day 1** **Date:** 03/08/17 **Wednesday**

Moving off the Reed Trust at 7 am. Plan to spud this evening.

**Day 2** **Date:** 03/09/17 **Thursday** **Spud at 5:30 pm on 03/08/17**

Drilling with 12-1/4" bit at 890' at 7am. Drilled 890' in 24 hours.
Ran 8.50 hours, down 15.50 hours - (9.00 Move/Rig up, 1.50 Mix mud, 2.00 Set rathole/mousehole, .50 Rig check, 2.50 Connections).
Mud Properties: Wt. 9.9, Vis 40, LCM 3#; WOB 25,000, RPM 140, Pump PSI 580, SPM 60.
Surface Bit "A" : New JZ 12-1/4" JZ HAOOTC,SN#L10604, (4-16's), made 890' in 8.50 hour 105 **ROP**

**Day 3** **Date:** 03/10/17 **Friday** **Glorietta Sand (1149' - 1274').** **Survey at 1695' = 3/4 Degree**

WOC at 1695' at 7am. Drilled 805' in 24 hours.
Ran 9.00 hours, down 15.00 hours - (.50 Rig check, 1.75 Connections, 2.25 Wiper trip 26 stds) .25 Survey, 2.00 CTCH at 1695', 1.50 Trip out, 4.00 Run/Cement 8-5/8" c
2.75 WOC).
Mud Properties: Wt. 9.6, Vis 36, LCM 2#; WOB 25-30,000, RPM 150, Pump PSI 650, SPM 60.
Surface Bit "A" : New JZ 12-1/4" JZ HAOOTC,SN#L10604, (4-16's), made 1695' in 17.50 hours. 97 **ROP** Mud Cost: $2,629

**Surface Casing:**

Spud at 5:30 pm on 03/08/17. Drilled 12-1/4" to 1695'. Ran 41 joints of new 24#, 8-5/8" casing. Tallied 1677.70' with 1' GS. Set at 1690' KB. Welded straps on bottom 3 joints, tacked 4 top collars. Centralizers (3) 1,3,5. Float insert in top of collar. SJ = 22.89'. Basket on top of #16 (1080'). Cemented with 500 sks AMD Lite with; 3% cc, 1/2# FS & tailed with 200 sks Class A with 2% CC & 1/4# FS. Cement did circulate to pits. Plug down at 4:20 am on 03/10/17. BJ Services Cementing ticket #LIB1703100420.

**Day 4** **Date:** 03/11/17 **Saturday** **Anhydrite (1685' - 1706').**

Drilling at 2700' at 7am. Drilled 1005' in 24 hours. **Tooth bit for cement plug plus 82'. PDC bit in at 1777'**
Ran 10.50 hours, down 13.50 hours - (7.25 WOC, .50 Rig check, 2.75 Connections, .50 Repairs, .75 Drill plug, 1.75 Bit trip).
Mud Properties: Wt. 9.6, Vis. 32, LCM 2# ; WOB 14K, RPM 95, Pump PSI 740, SPM 60.
Bit No. 1: RR STC 7-7/8" FDS, SN#TS3321, (1-18, 2-16's), in at 1695', out at 1777', made 82' in 1.25 hours.
Bit No. 2: New 7-7/8" JZ 516, #S09531, (2-16's, 3-15's), in at 1777', made 923.' in 9.25 hours. 96 = Last 24<ROP>7-7/8" 96 Mud Cost: $2,629

# Cement Job Summary

| | | | | | |
|---|---|---|---|---|---|
| Job Number: | Lib1703100418 | Job Purpose | 01 Surface | | |
| Customer: | McCoy Petroleum Corp | | | Date: | 3/10/2017 |
| Well Name: | Thomas & Reed Farms "A" | | Number: 1-21 | API/UWI: | |
| County: | Gray | City: | | State: | Kansas |
| Cust. Rep: | | Phone: | | Rig Phone: | |
| Legal Desc: | | | | Rig Name: | Sterling Drilling#4 |
| Distance | 45 miles (one way) | | | Supervisor | Hector Esqueda |

| Employees: | Emp. ID: | Employees: | Emp. ID: |
|---|---|---|---|
| Carlos Ibarra | | Hector Esqueda | |
| Alex Ayala | | Victor Garcia | |
| | | | |

| Equipment: | |
|---|---|
| 531-4-541-5 | 868-4-642-5 |
| 1039-2 | 870-4-553-5 |
| | |

**Well Information**

**Open Hole Section**

| Description: | Size (in): | Excess | Top MD (ft) | Btm MD (ft) | |
|---|---|---|---|---|---|
| OPEN HOLE | 12 1/4 | 100% | 1540 | 1,800 | TAIL CEMENT |
| OPEN HOLE | 12 1/4 | 100% | 0 | 1,540 | LEAD CEMENT |
| OPEN HOLE | 12 1/4 | | | 0 | |
| OPEN HOLE | 12 1/4 | | | | |

**Tubulars**

| Description: | Size (in): | Wgt. (lb/ft) | ID (in) | Grade: | Top MD (ft) | Btm MD (ft) |
|---|---|---|---|---|---|---|
| TOTAL CASING | 8 5/8 | 24 | 8.097 | J-55 | 0 | 1,800 |
| SHOE | 8 5/8 | 24 | 8.097 | J-55 | 1,758 | 1,800 |

**Materials - Pumping Schedule**

| Fluid Name | Description | Rqstd Qty | Density | Yield | Water (gal/sk) |
|---|---|---|---|---|---|
| Spacer 1 | FRESH WATER | 10 | 8.33 | n/a | n/a |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| Lead 1 | ALLIED MULTI-DENSITY CEMENT - CLASS A | 500 | 12.10 | 2.55 | 14.86 |
| **Addl. Additive** | **Description** | **Conc. (lb/sk)** | **Determined by** | **Load Volume** | **UOM** |
| CA-100 | CALCIUM CHLORIDE, PELLETS OR FLAKE | 2.82 | % BWOC | 1410.0 | lbm |
| CLC-CPF | CELLOPHANE FLAKES | 0.5 | lb/sk | 250.0 | lbm |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| Tail 1 | CLASS A COMMON | 200 | 15.62 | 1.19 | 5.20 |
| **Addl. Additive** | **Description** | **Conc. (lb/sk)** | **Determined by** | **Load Volume** | **UOM** |
| CA-100 | CALCIUM CHLORIDE, PELLETS OR FLAKE | 1.88 | % BWOC | 376.0 | lbm |
| CLC-CPF | CELLOPHANE FLAKES | 0.25 | lb/sk | 50.0 | lbm |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| Disp. 1 | Fresh Water | 111.9556981 | 8.33 | n/a | n/a |



| | | | | | |
|---|---|---|---|---|---|
| Job Number: | Lib1703100418 | Job Purpose | 01 Surface | | |
| Customer: | McCoy Petroleum Corp | | | Date: | 3/10/2017 |
| Well Name: | Thomas & Reed Farms "A" | | Number: 1-21 | API/UWI: | |
| County: | Gray | City: | | State: | Kansas |
| Cust. Rep: | | Phone: | | Rig Phone: | 0 |
| Distance | 45 miles (one way) | | | Supervisor | Hector Esqueda |

BJ

# Cement Job Summary

| TIME | PRESSURE - (PSI) | | FLUID PUMPED DATA | | COMMENTS |
|---|---|---|---|---|---|
| AM/PM | CASING | ANNULUS | VOLUME | RATE (BPM) | |
| | | | | | 3/9/2017 |
| 23:00 | | | | | arrived to location |
| 23:30 | | | | | rig up to catwalk and wait for casing crew |
| | | | | | to finish running in casing |
| | | | | | 3/10/2017 |
| 2:00 | | | | | rig up head and manifold and the rest |
| | | | | | of the iron |
| 2:30 | | | | | prime up the pump |
| 2:40 | | | | | safety meeting |
| 2:51 | 3800 | | | | pressure test to 3800PSI |
| 2:54 | 200 | | 10 | 5 | start the 10bbl spacer of fresh water |
| 2:56 | 250 | | 227 | 6.7 | start the lead cement @ 12.10# |
| 3:12 | 270 | | 115 | 7.7 | 115bbls of lead cement gone increased |
| | | | | | rate |
| 3:38 | 230 | | 42 | 6 | start the tail cement @ 15.62# |
| 3:49 | | | | | shut down (drop the plug) wash up |
| 3:54 | 80 | | 106 | 4 | start the 106bbl displacement of fresh |
| | | | | | water |
| 4:00 | 50 | | 20 | 4 | 20bbls gone |
| 4:04 | 200 | | 40 | 6 | 40bbls gone |
| 4:12 | 500 | | 80 | 4.5 | 80bbls gone |
| 4:17 | 650 | | 100 | 3 | 100bbls gone slow down the rate to 3bpm |
| | | | | | to land the plug |
| 4:18 | 1100 | | 106 | | landed plug @ 1100PSI |
| | | | | | hold the pressure for a few minutes to |
| | | | | | make sure that the floats are holding |
| | | | | | |
| | | | | | released pressure and the floats held good |
| | | | | | got 1/2bbl back to the tank |
| | | | | | |
| | | | | | 140bbls of cement returned to surface |
| | | | | | |
| | | | | | rig down released from location @ 5:00 |

BJ

# Cement Job Summary

| | | | |
|---|---|---|---|
| Job Number: Lib170320735 | Job Purpose 03 Plug | | |
| Customer: McCoy Petroleum Corp | | | Date: 3/20/2017 |
| Well Name: Thomas & Reed Farms "A" | | Number: 1-21 | API/UWI: |
| County: Gray | City: | | State: Kansas |
| Cust. Rep: | Phone: | Rig Phone: | |
| Legal Desc: | | Rig Name: | Sterling Drilling#4 |
| Distance 45 miles (one way) | | Supervisor | |

| Employees: | Emp. ID: | Employees: | Emp. ID: |
|---|---|---|---|
| Erik Chavez | #N/A | Jaime Torres | #N/A |
| Ramon Escarcega | #N/A | | |
| | | | |

| Equipment: | |
|---|---|
| 549-4 / 550 | 705-4 / 467-5 |

## Well Information

### Open Hole Section

| Description: | Size (in): | Excess | Top MD (ft) | Btm MD (ft) | |
|---|---|---|---|---|---|
| OPEN HOLE | 7 7/8 | | | | |

### Tubulars

| Description: | Size (in): | Wgt. (lb/ft) | ID (in) | Grade: | Top MD (ft) | Btm MD (ft) |
|---|---|---|---|---|---|---|
| PREVIOUS CASING | 8 5/8 | 24 | 8.097 | J-55 | 0 | 1,690 |
| TUBING/DRILL PIPE | 4 1/2 | 16.6 | 3.826 | J-55 | 0 | 6,400 |

### Squeeze Information

| Description: | # of Perfs | Perf/Leak Depth | Packer/Retainer Depth | |
|---|---|---|---|---|
| Leak | 0 | | 6400 | |
| Perfs | | | 6400 | |

## Materials - Pumping Schedule

### STAGE #1

| Fluid Name | Description | Rqstd Qty | Density | Yield | Water (gal/sk) |
|---|---|---|---|---|---|
| Spacer 1 | FRESH WATER | 10 | 8.33 | n/a | n/a |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| Disp. 1 | Fresh Water | 0 | 8.33 | n/a | n/a |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| **Fluid Name** | **Description** | **Rqstd Qty** | **Density** | **Yield** | **Water (gal/sk)** |
| Disp. 4 | 0 | 91.00158538 | 0.00 | n/a | n/a |


| | | | |
|---|---|---|---|
| Job Number: Lib170320735 | Job Purpose 03 Plug | | |
| Customer: McCoy Petroleum Corp | | | Date: 3/20/2017 |
| Well Name: Thomas & Reed Farms "A" | | Number: 1-21 | API/UWI: |
| County: Gray | City: | | State: Kansas |
| Cust. Rep: | Phone: | Rig Phone: | 0 |
| Distance 45 miles (one way) | | Supervisor | 0 |


| TIME | PRESSURE - (PSI) | | FLUID PUMPED DATA | | COMMENTS |
|---|---|---|---|---|---|
| AM/PM | CASING | ANNULUS | VOLUME | RATE (BPM) | |
| 21:30 | | | | | Arrive on Location |
| 21:15 | | | | | Pre_Rig up Safety Meeting |
| 21:30 | | | | | Rig up Equipment |
| 21:50 | | | | | Wait on Customer |
| 23:40 | | | | | Safety Meeting |

BJ

# Cement Job Summary

| | | | | | |
|---|---|---|---|---|---|
| 0:05 | | | | | Test Lines |
| 0:10 | 350 | | 10 | 2 | Spacer 1 |
| 0:16 | 290 | | 13 | 3 | Plug 1 / 6400ft / 50 sks @ 13.8ppg |
| 0:27 | 350 | | 86 | 8.5 | Displacement / Rig Fluid |
| 0:50 | | | | | Clean Lines |
| 1:00 | | | | | Wait on Customer |
| 3:02 | 660 | | 100 | 6 | Circulate Well |
| 3:10 | | | | | Wait on Customer |
| 5:20 | 110 | | 13 | 3 | Plug 2 / 1740ft / 50 sks @ 13.8ppg |
| 5:30 | 310 | | 25 | 8.5 | Displacement / Rig Fluid |
| 5:35 | | | | | Wait on Customer |
| 6:15 | 90 | | 13 | 3 | Plug 3 / 750ft / 50 sks @ 13.8ppg |
| 6:20 | 80 | | 11 | 3 | Displacement / H2o |
| 6:25 | | | | | Wait on Customer |
| 7:15 | 50 | | 5 | 3 | Plug 4 / 60ft / 20 sks @ 13.8 ppg |
| 7:35 | 50 | | 10 | 3 | Plug Rat and Mouse Hole / 20sks @ 13.8ppp |
| 7:40 | | | | | Clean Lines |
| 8:00 | | | | | End Job |
| 8:15 | | | | | Pre-Rig Down Safety Meeting |
| 8:30 | | | | | Rig down Equipment |
| 8:45 | | | | | Journey Management |
| 9:00 | | | | | Depart from Location |