



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

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1051224

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

|   |   |
|---|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(If no, Submit Copy)</i><br><br>List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>Name Top Datum |
|---|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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 |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |

| 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 |                  |                |              |                            |
|  |                  |                |              |                            |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ 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:<br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION:<br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i><br><input type="checkbox"/> Other (Specify) _____ | PRODUCTION INTERVAL:<br>_____<br>_____ |
|---|---|--|

|           |                                |
|-----------|--------------------------------|
| Form      | ACO1 - Well Completion         |
| Operator  | Woolsey Operating Company, LLC |
| Well Name | LEWIS 1                        |
| Doc ID    | 1051224                        |

Casing

| Purpose Of String | Size Hole Drilled | Size Casing Set | Weight | Setting Depth | Type Of Cement | Number of Sacks Used | Type and Percent Additives  |
|-------------------|-------------------|-----------------|--------|---------------|----------------|----------------------|---|
| CONDUCTOR         | 30                | 20              | 52.75  | 43            | GROUT          | 4                    | (4 yds grout, not 4 sx)   |
| SURFACE           | 14.75             | 10.75           | 32.75  | 225           | CLASS A        | 230                  | 2% gel, 3% cc   |
| PRODUCTION        | 7.875             | 5.5             | 15.5   | 5192          | POZ            | 50                   | 4% gel, 1/4# Celoflake  |
| PRODUCTION        | 7.875             | 5.5             | 15.5   | 5192          | CLASS H        | 175                  | 10% salt, 10% Gypseal, 6# Kolseal, 1/4# Celoflake, .8% fluid loss |

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



phone: 316-337-6200  
fax: 316-337-6211  
<http://kcc.ks.gov/>

Thomas E. Wright, Chairman  
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

February 23, 2011

DEAN PATTISSON  
Woolsey Operating Company, LLC  
125 N MARKET STE 1000  
WICHITA, KS 67202-1729

Re: ACO1  
API 15-077-21708-00-00  
LEWIS 1  
SE/4 Sec.23-34S-09W  
Harper County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
DEAN PATTISSON

# ALLIED CEMENTING CO., LLC. 040526

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
*Medicine Lodge, KS*

|                                    |                |   |                  |            |                       |                 |                           |
|------------------------------------|----------------|---|------------------|------------|-----------------------|-----------------|---------------------------|
| DATE <i>10 27 10</i>               | SEC. <i>23</i> | TWP. <i>34s</i>                         | RANGE <i>09w</i> | CALLED OUT | ON LOCATION           | JOB START       | JOB FINISH <i>8:15 AM</i> |
| LEASE <i>Lewis</i>                 | WELL #/        | LOCATION <i>Corwin Camp Station 2E,</i> |                  |            | COUNTY <i>Hempden</i> | STATE <i>KS</i> |                           |
| OLD OR NEW (Circle one) <i>NEW</i> |                | <i>1/10N, W/S</i>                       |                  |            |                       |                 |                           |

CONTRACTOR *Dulce #10*

TYPE OF JOB *Surface*

HOLE SIZE *14 3/4* T.D. *228*

CASING SIZE *10 3/4* DEPTH *225*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX *250* MINIMUM *—*

MEAS. LINE SHOE JOINT *N/A*

CEMENT LEFT IN CSG. *20'*

PERFS.

DISPLACEMENT *20 Bbls Fresh H<sub>2</sub>O*

EQUIPMENT

OWNER: *Woolsey Oper.*

CEMENT AMOUNT ORDERED *230sx class "A" + 3% cc + 2% gel*

PUMP TRUCK # *352* CEMENTER *D. Felis*  
HELPER *D. Felis*

BULK TRUCK # *364* DRIVER *R. Gilley*

BULK TRUCK # DRIVER

**WELL FILE**  
Regulatory Correspondence  
Drill / Comp Workovers  
Tests / Meters Operations

|                  |             |         |
|------------------|-------------|---------|
| COMMON class "A" | @ 15.45     | 3553.50 |
| POZMIX           | @           |         |
| GEL              | 5sx @ 20.00 | 104.00  |
| CHLORIDE         | 8sx @ 58.20 | 465.60  |
| ASC              | @           |         |
| HANDLING         | 243 @ 2.40  | 583.20  |
| MILEAGE          | 243x.10x25  | 607.50  |
| TOTAL            |             | 5313.00 |

REMARKS:

*Pipe on Bttm, Break Circ., Pump Spacers, Mix 230sx A 3% cement, Start Disp. w/ Fresh H<sub>2</sub>O, See increase in P.S.I. Slow Rate, Stop Pump at 20 Bbls total Disp., Shut in, cement Did Circ.*

SERVICE

|                   |           |         |
|-------------------|-----------|---------|
| DEPTH OF JOB      | 225       |         |
| PUMP TRUCK CHARGE | 1018.00   |         |
| EXTRA FOOTAGE     | @         |         |
| MILEAGE           | 25 @ 7.00 | 175.00  |
| MANIFOLD          | N/A       |         |
| TOTAL             |           | 1193.00 |

CHARGE TO: *Woolsey Oper*

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

*None*

|       |   |   |
|-------|---|---|
|       | @ |   |
|       | @ |   |
|       | @ |   |
|       | @ |   |
| TOTAL |   | 0 |

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)

TOTAL CHARGES *[scribble]*

DISCOUNT *[scribble]* IF PAID IN 30 DAYS

PRINTED NAME *MIKE THARP*

SIGNATURE *[Signature]*

*[scribble]*

# ALLIED CEMENTING CO., LLC. 040538

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
*Medicine Lodge, KS*

|                                |                 |  |                  |            |                      |                 |            |
|--------------------------------|-----------------|--|------------------|------------|----------------------|-----------------|------------|
| DATE <i>11/09/10</i>           | SEC. <i>23</i>  | TWP. <i>34s</i>                              | RANGE <i>09w</i> | CALLED OUT | ON LOCATION          | JOB START       | JOB FINISH |
| LEASE <i>Lewis</i>             | WELL # <i>1</i> | LOCATION <i>Corwin KS, 2s, 2E, 1/4N, w/s</i> |                  |            | COUNTY <i>Harper</i> | STATE <i>KS</i> |            |
| OLD OR <u>NEW</u> (Circle one) |                 |  |                  |            |                      |                 |            |

CONTRACTOR *Duke #10*

TYPE OF JOB *Production Casing*

HOLE SIZE *7 7/8* T.D. *5310*

CASING SIZE *5 1/2* DEPTH *5192*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX *1550* MINIMUM *—*

MEAS. LINE SHOE JOINT *43*

CEMENT LEFT IN CSG. *43'*

PERFS.

DISPLACEMENT *122 Bbls 2% KCL Water*

OWNER *Woolsey Oper.*

CEMENT

AMOUNT ORDERED *90sx 60:40:4% gel \$*  
*125sx class H + 10% gyp + 10% salt +*  
*6# Kolseal + 1/4# Floseal + .8% FL-160 \$ 13 gals*  
*Clapro.*

|                |                  |   |              |                      |
|----------------|------------------|---|--------------|----------------------|
| COMMON         | <i>A 54sx</i>    | @ | <i>15.45</i> | <i>834.30</i>        |
| POZMIX         | <i>36 sx</i>     | @ | <i>8.00</i>  | <i>288.00</i>        |
| GEL            | <i>4 sx</i>      | @ | <i>20.80</i> | <i>83.20</i>         |
| CHLORIDE       |                  | @ |              |                      |
| ASC            |                  | @ |              |                      |
| <i>Class H</i> | <i>125 sx</i>    | @ | <i>16.75</i> | <i>2093.75</i>       |
| <i>Gypseal</i> | <i>12 sx</i>     | @ | <i>29.20</i> | <i>350.40</i>        |
| <i>Salt</i>    | <i>675 #</i>     | @ | <i>12.00</i> | <i>168.00</i>        |
| <i>Kolseal</i> | <i>750 #</i>     | @ | <i>.89</i>   | <i>667.50</i>        |
| <i>FL-160</i>  | <i>94 #</i>      | @ | <i>13.30</i> | <i>1250.20</i>       |
| <i>Floseal</i> | <i>31.25 #</i>   | @ | <i>2.50</i>  | <i>78.12</i>         |
| <i>Clapro</i>  | <i>13 Gals</i>   | @ | <i>31.25</i> | <i>406.25</i>        |
|                |                  | @ |              |                      |
| HANDLING       | <i>265</i>       | @ | <i>2.40</i>  | <i>636.00</i>        |
| MILEAGE        | <i>265/10/25</i> |   |              | <i>662.50</i>        |
|                |                  |   |              | TOTAL <i>7518.22</i> |

EQUIPMENT

PUMP TRUCK CEMENTER *D. Felio*

# *352* HELPER *M. Thimesch*

BULK TRUCK

# *381-290* DRIVER *C. Balding*

BULK TRUCK

# DRIVER

**WELL FILE**

Regulatory Correspondence  
Drill Comp Workovers  
Tests / Meters Operations

**REMARKS:**

*Pipe on Btm, Break Circ, Plug Rat & Mouse  
Holes w/ 40sx 60:40 cement Blend, Pump 50sx  
Saverex Cement, Mix 125sx tail Cement,  
Stop Pump, Wash pump & Lines, Release Plug, Start  
Disp. w/ 2% KCL Water, See increase in PST, Slow  
Rate, Bump Plug at 122 Bbls Total Disp.  
Release PST, Floats Did Hold 1'*

**SERVICE**

DEPTH OF JOB *5192*

PUMP TRUCK CHARGE *2185.00*

EXTRA FOOTAGE @

MILEAGE *25* @ *7.00* *175.00*

MANIFOLD *Headrental* @

TOTAL *2360.00*

CHARGE TO: *Woolsey Oper.*

STREET

CITY STATE ZIP

**PLUG & FLOAT EQUIPMENT**

|                                |   |               |
|--------------------------------|---|---------------|
| <i>1-AFUF/out Shoe</i>         | @ | <i>214.20</i> |
| <i>1-Latch down Plug ASSY.</i> | @ | <i>163.80</i> |
| <i>9-turbolizers</i>           | @ | <i>40.60</i>  |
| <i>41-Recip. Scratchers</i>    | @ | <i>23.94</i>  |
|                                | @ |               |

TOTAL *1724.94*

To Allied Cementing Co., LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)

TOTAL CHARGES ~~7518.22~~

DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME *Heeb Durant*

SIGNATURE *Heeb Durant*

*5 1/2"*

~~7518.22~~



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Woolsey Operating Co.LLC

**Lewis#1**

125 N.Market,Ste.1000  
Wichita ks.67202

**23-34s-9w Harper Ks.**

ATTN: Bill Klaver

Job Ticket: 039219

**DST#: 1**

Test Start: 2010.11.04 @ 01:50:10

## GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:43:10

Time Test Ended: 10:34:25

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 45

**Interval: 4598.00 ft (KB) To 4618.00 ft (KB) (TVD)**

Reference Elevations: 1289.00 ft (KB)

Total Depth: 4618.00 ft (KB) (TVD)

1278.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6798**

**Inside**

Press @RunDepth: 70.34 psig @ 4599.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.11.04

End Date:

2010.11.04

Last Calib.: 2010.11.04

Start Time: 01:50:11

End Time:

10:34:25

Time On Btm: 2010.11.04 @ 03:38:10

Time Off Btm: 2010.11.04 @ 08:16:40

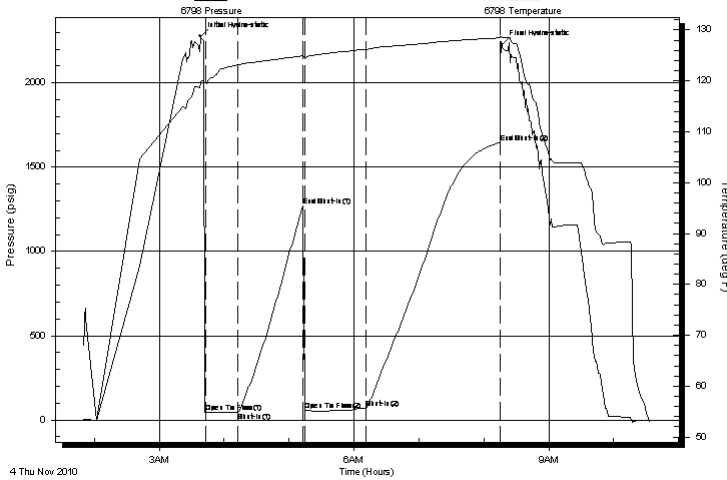
**TEST COMMENT:** IF:Fair to strong blow . B.O.B. in 12 1/2 mins.

IS:No blow .

FF:Strong blow . B.O.B. in 2 - 3 secs.

FS:No blow .

Pressure vs. Time



## PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2275.71         | 119.56       | Initial Hydro-static |
| 5           | 44.16           | 119.71       | Open To Flow (1)     |
| 35          | 47.78           | 123.14       | Shut-In(1)           |
| 95          | 1270.92         | 124.92       | End Shut-In(1)       |
| 96          | 58.21           | 124.62       | Open To Flow (2)     |
| 154         | 70.34           | 126.14       | Shut-In(2)           |
| 277         | 1647.20         | 128.47       | End Shut-In(2)       |
| 279         | 2228.25         | 128.57       | Final Hydro-static   |

## Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 55.00       | GOCM 22%g 18%o 60%m | 0.50         |
| 0.00        | 2590 ft.of GIP      | 0.00         |
|             |                     |              |
|             |                     |              |
|             |                     |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Woolsey Operating Co.LLC

**Lewis#1**

125 N.Market, Ste.1000  
Wichita ks.67202

**23-34s-9w Harper Ks.**

Job Ticket: 039219

**DST#: 1**

ATTN: Bill Klaver

Test Start: 2010.11.04 @ 01:50:10

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

5000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

**Recovery Information**

Recovery Table

| Length<br>ft | Description         | Volume<br>bbl |
|--------------|---------------------|---------------|
| 55.00        | GOCM 22%g 18%o 60%m | 0.498         |
| 0.00         | 2590 ft.of GIP      | 0.000         |

Total Length: 55.00 ft Total Volume: 0.498 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

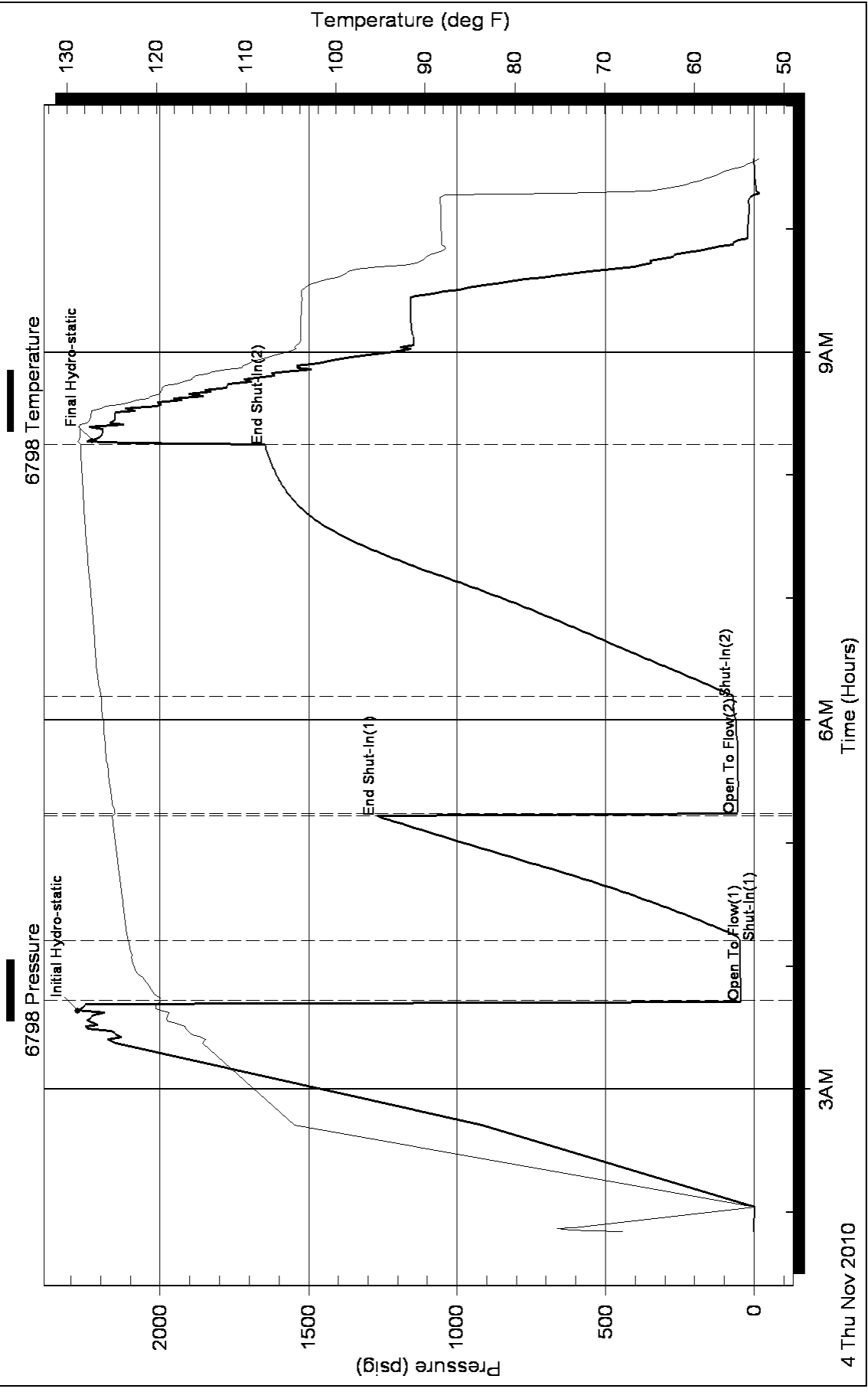
Laboratory Name:

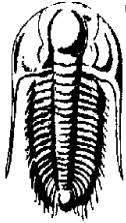
Laboratory Location:

Recovery Comments:



### Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Woolseey Operating Co.LLC  
 125 N.Market,Ste.1000  
 Wichita ks.67202  
 ATTN: Bill Klaver

**Lewis#1**  
**23-34s-9w Harper Ks.**  
 Job Ticket: 039220 **DST#: 2**  
 Test Start: 2010.11.05 @ 02:10:30

## GENERAL INFORMATION:

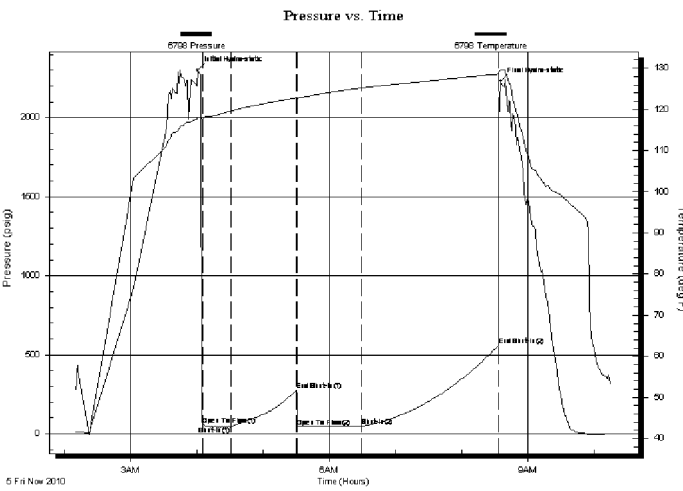
Formation: **Miss.**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:05:15  
 Time Test Ended: 10:16:00  
 Test Type: Conventional Bottom Hole  
 Tester: Gary Pevoteaux  
 Unit No: 45  
 Interval: **4631.00 ft (KB) To 4685.00 ft (KB) (TVD)**  
 Reference Elevations: 1289.00 ft (KB)  
 Total Depth: 4685.00 ft (KB) (TVD) 1278.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 11.00 ft

## Serial #: 6798

Inside

Press @RunDepth: 47.42 psig @ 4632.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2010.11.05 End Date: 2010.11.05 Last Calib.: 2010.11.05  
 Start Time: 02:10:31 End Time: 10:16:00 Time On Btm: 2010.11.05 @ 04:00:45  
 Time Off Btm: 2010.11.05 @ 08:35:15

TEST COMMENT: IF:Weak blow . Slow increase to 4".  
 ISI:No blow .  
 FF:Weak to fair blow . Slow increase to 6 1/2".  
 FSI:No blow .



## PRESSURE SUMMARY

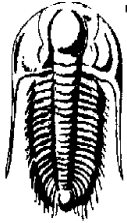
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2301.60         | 118.06       | Initial Hydro-static |
| 5           | 55.77           | 117.67       | Open To Flow (1)     |
| 31          | 46.04           | 119.59       | Shut-In(1)           |
| 90          | 274.39          | 122.84       | End Shut-In(1)       |
| 91          | 43.93           | 122.76       | Open To Flow (2)     |
| 149         | 47.42           | 125.19       | Shut-In(2)           |
| 273         | 555.05          | 128.55       | End Shut-In(2)       |
| 275         | 2230.73         | 129.51       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                 | Volume (bbl) |
|-------------|-----------------------------|--------------|
| 40.00       | GCM w trace of oil 5%g 95%m | 0.29         |
| 0.00        | 150 ft.of GIP               | 0.00         |
|             |                             |              |
|             |                             |              |
|             |                             |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolseey Operating Co.LLC

**Lewis#1**

125 N.Market,Ste.1000  
Wichita ks.67202

**23-34s-9w Harper Ks.**

Job Ticket: 039220

**DST#: 2**

ATTN: Bill Klaver

Test Start: 2010.11.05 @ 02:10:30

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

3000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                 | Volume<br>bbl |
|--------------|-----------------------------|---------------|
| 40.00        | GCM w trace of oil 5%g 95%m | 0.288         |
| 0.00         | 150 ft.of GIP               | 0.000         |

Total Length: 40.00 ft      Total Volume: 0.288 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

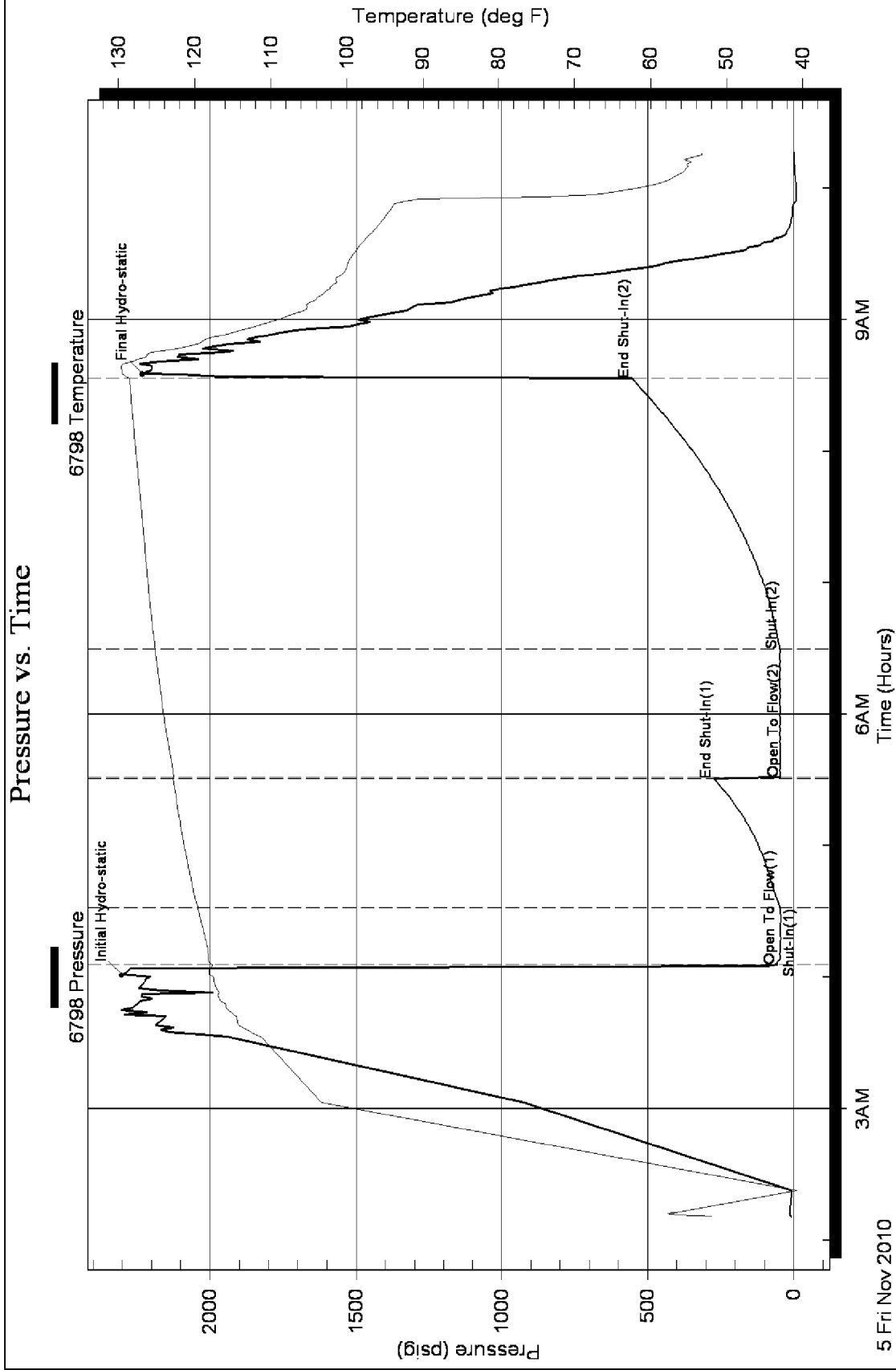
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Woolseey Operating Co.LLC

**Lewis#1**

125 N.Market, Ste.1000  
Wichita ks.67202

**23-34s-9w Harper Ks.**

ATTN: Bill Klaver

Job Ticket: 039221

**DST#: 3**

Test Start: 2010.11.05 @ 23:48:34

## GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:04

Time Test Ended: 06:45:04

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 45

**Interval: 4687.00 ft (KB) To 4765.00 ft (KB) (TVD)**

Reference Elevations: 1289.00 ft (KB)

Total Depth: 4765.00 ft (KB) (TVD)

1278.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6798**

**Inside**

Press @ Run Depth: 70.31 psig @ 4688.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.11.05

End Date:

2010.11.06

Last Calib.:

2010.11.06

Start Time:

23:48:35

End Time:

06:45:04

Time On Btm:

2010.11.06 @ 01:47:04

Time Off Btm:

2010.11.06 @ 04:46:49

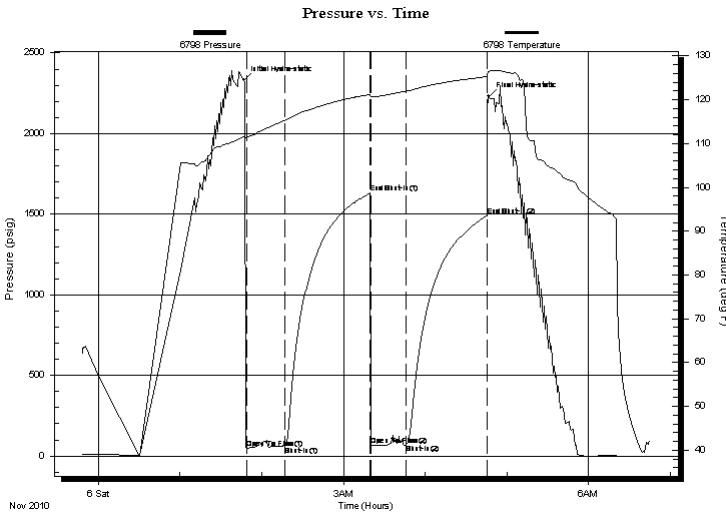
TEST COMMENT: IF:Weak blow . 1/2 - 1".

IS:No blow .

FF:Weak blow . (surface) Dead in 1 min.

FS:No blow .

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2330.90         | 111.59       | Initial Hydro-static |
| 2           | 49.04           | 111.42       | Open To Flow (1)     |
| 31          | 61.07           | 115.33       | Shut-In(1)           |
| 93          | 1631.04         | 121.21       | End Shut-In(1)       |
| 94          | 68.00           | 120.69       | Open To Flow (2)     |
| 119         | 70.31           | 121.91       | Shut-In(2)           |
| 179         | 1489.76         | 125.28       | End Shut-In(2)       |
| 180         | 2230.09         | 126.48       | Final Hydro-static   |

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 35.00       | Heavy mud   | 0.22         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolseey Operating Co.LLC

**Lewis#1**

125 N.Market, Ste.1000  
Wichita ks.67202

**23-34s-9w Harper Ks.**

Job Ticket: 039221

**DST#: 3**

ATTN: Bill Klaver

Test Start: 2010.11.05 @ 23:48:34

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

5500 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 35.00        | Heavy mud   | 0.218         |

Total Length: 35.00 ft      Total Volume: 0.218 bbl

Num Fluid Samples: 0

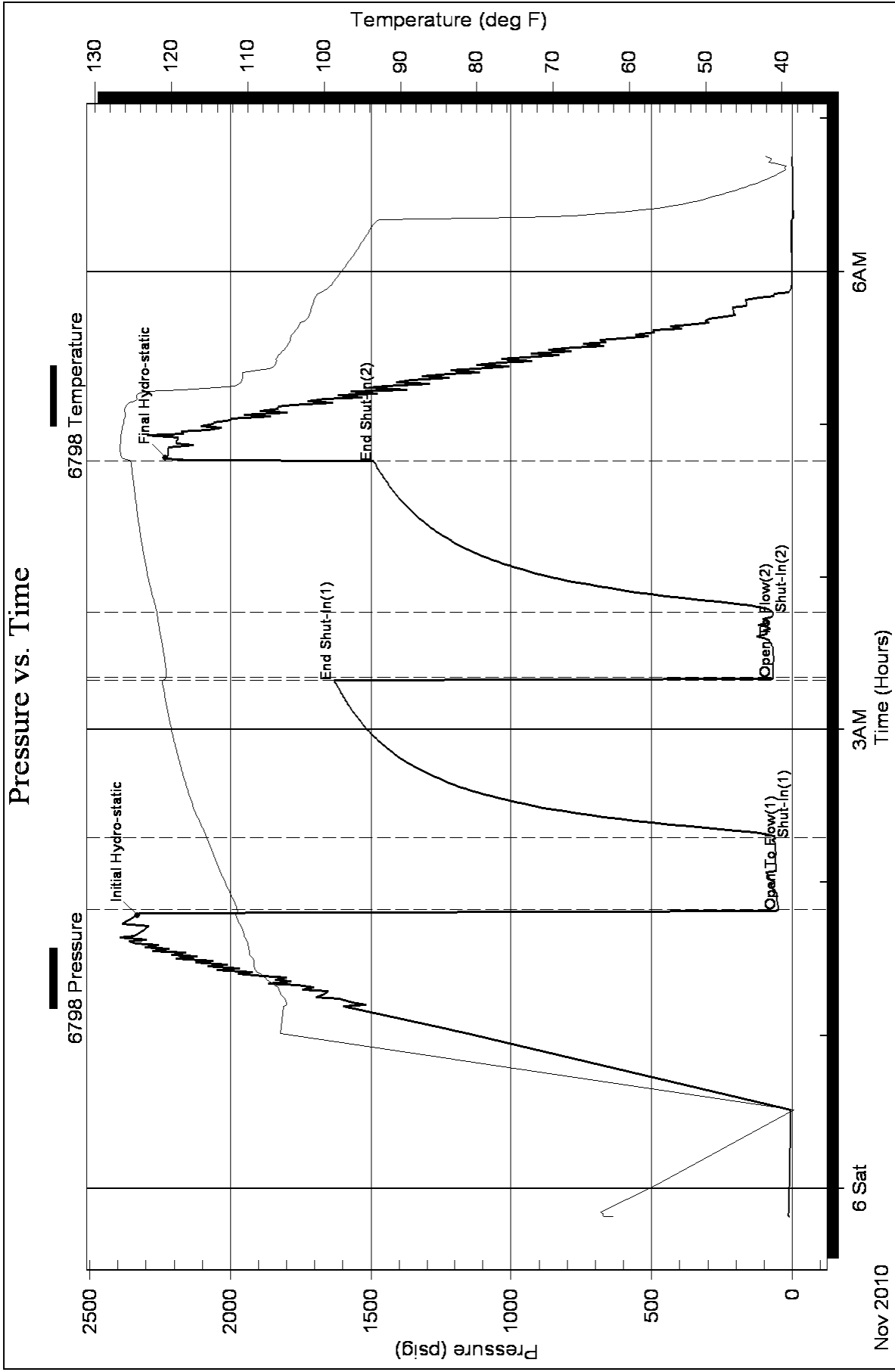
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:





## Woolsey Operating Company, LLC

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

Well Name: Lewis #1  
Location: Approx. SE SE SE  
License Number: 15-077-21708  
Spud Date: October 27, 2010  
Surface Coordinates: 2140' FSL & 2140' FEL    Sec 23 Twp 34S-Rge 9W  
Field: Hibbard  
Bottom Hole Coordinates: Verticle Hole  
Region: Barber Co, KS  
Drilling Completed:  
Ground Elevation (ft): 1278'    K.B. Elevation (ft): 1289'  
Logged Interval (ft):                      To:                      Total Depth (ft):  
Formation: Total Depth in Arbuckle  
Type of Drilling Fluid: Chemical Mud Displaced at 3186'  
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: Woolsey Operating Company,LLC  
Address: 125 N. Market, Suite 1000  
Wichita, KS 67202

### GEOLOGIST

Name: Bill Klaver  
Company: Woolsey Operating Co. LLC  
Address: 125 N. Market, Wichita Kansas, 67202

### COMMENTS

Surface Casing: Set 20" conductor to 43' in 30" hole with 4 yards of grout. Ran 6 joints 10 3/4" X 32.75# new casing to 225' KB (tally 215') w/230 sx Class A, 2% gel, 3% cc. Cement did circulate.

Production Casing:

Deviation Surveys: 1/2 at 228', 1/2 at 751', 1/2 at 1253', 1/2 at 1781', 1/2 at 2249', 1/2 at 2749', 1/2 at 3249', 1/2 at 3749', 1/2 at 4250', 1/2 at 4618'

Pipe Strap @ 4618', Strap:4597.54', Board: 4595.93', Strap 1.61' long, No correction was made to the board.

Duke Drilling Rig 10 Bit Record:

#1 14 3/4" HTC RR in at 43', out at 228'. 185' / 3 hours

#2 7 7/8" JZ J-85 in at 228' out at

Gas Detector: Woolsey Operating Co. Gas Trailer #2

Mud System: Mud Co. Brad Bortz, Aaron Rush, Engineers

DSTs: Trilobite Testing Inc. Gary Pevoteaux, Tester

OH Logs: Halliburton, Dual Induction Laterolog-Micro Log w/SP, CNL-FDC w/PE GR & Caliper, Full Wave Sonic w/GR



### DSTs

DST #1 Mississippi, 4598'-4618'. 30"-60"-60"-120", SB BOB 12 minutes into IFP. SB BOB 2-3 seconds into FFP. Rec: 2590' GIP, 55' GOCM (22%G, 18%O, 60%M). IHP 2275, IFP 44-47, ISIP 1270, FFP 58-70, FSIP 1647, FHP 2228. BHT 128.





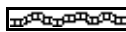



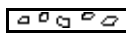

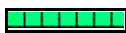



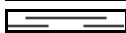

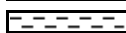




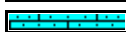


DST #2 Mississippi, 4631'-4685'. 30"-60"-60"-120", Wk blow built to 4" on IFP, Fair blow built to 6" on FFP. Rec; 150' GIP, 40' SGCM/SO, (5%G, 95%M). IHP 2301, IFP 55-46, ISIP 274, FFP 43-47, FSIP 555, FHP 2230. BHT 129.

DST #3 Mississippi, 4687'-4765', 30"-60"-30"-60". Weak 1/2" blow on IFP, No blow on FFP. Rec: 35' Heavy mud. IHP 2330, IFP 49-61, ISIP 1631, FFP 68-70, FSIP 1489, FHP 2230. BHT 125.

### CREWS

Joe Livingston, Tool Pusher (Semi-Retired)  
 Scott Edwards, Days  
 Colby Crawford, Evening  
 Alex Ordonez, Morning  
 Lyle Cason, Relief

### ROCK TYPES

|  |       |   |          |   |       |   |          |
|--|-------|---|----------|---|-------|---|----------|
|  | Anhy  |  | Congl    |  | Lmst  |  | Black sh |
|  | Bent  |  | Sdy dolo |  | Mrlst |  | Gry sh   |
|  | Brec  |  | Shy dolo |  | Salt  |  | Shale    |
|  | Cht   |  | Dol      |  | Shale |  | Shyltst  |
|  | Clyst |  | Gyp      |  | Sltst |  | Sltst    |
|  | Coal  |  | Sdy lmst |  | Ss    |  | Sltst    |

## ACCESSORIES

### MINERAL

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt

- Chlorite
- Dol
- Sand
- Slty

### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra

- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

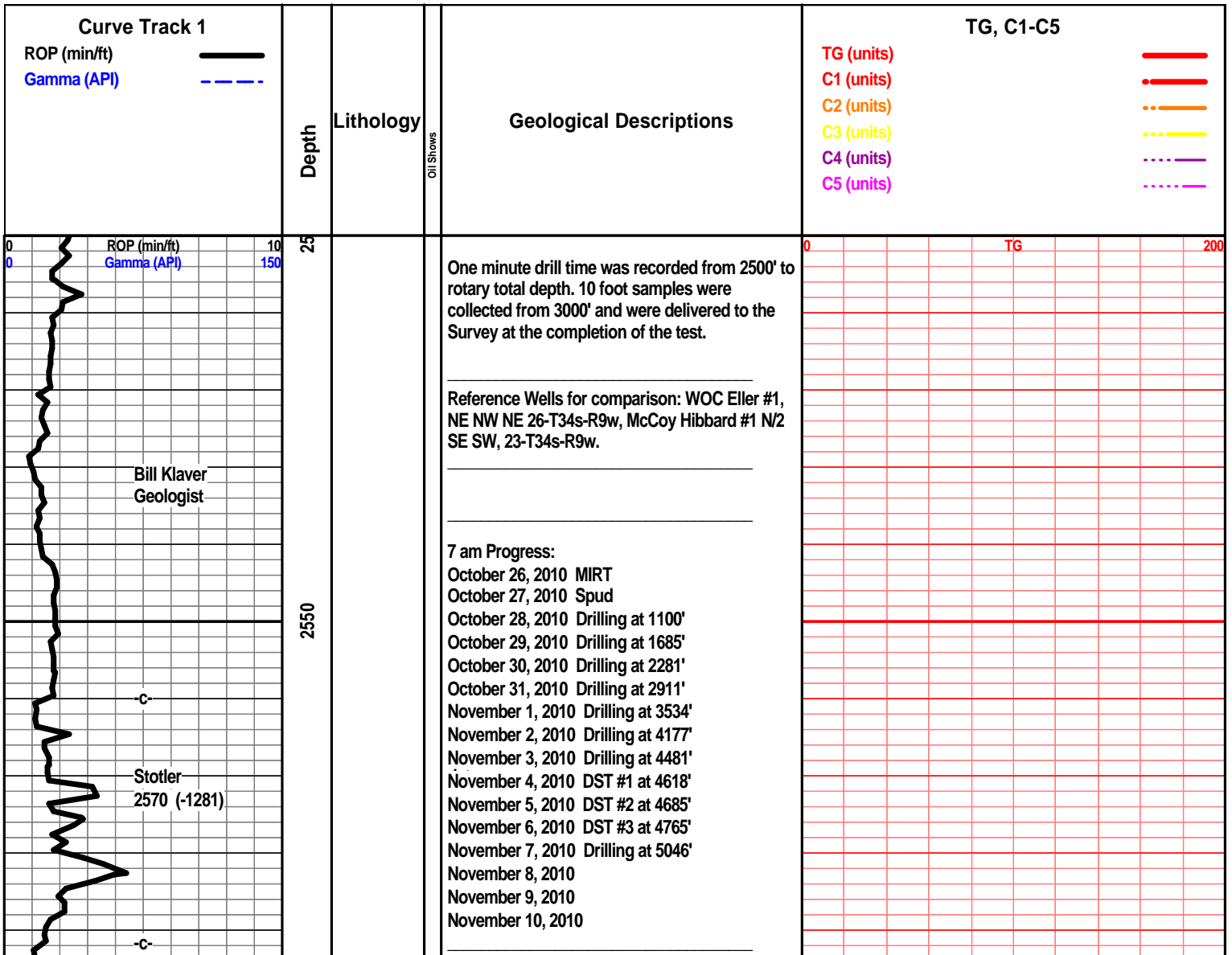
### STRINGER

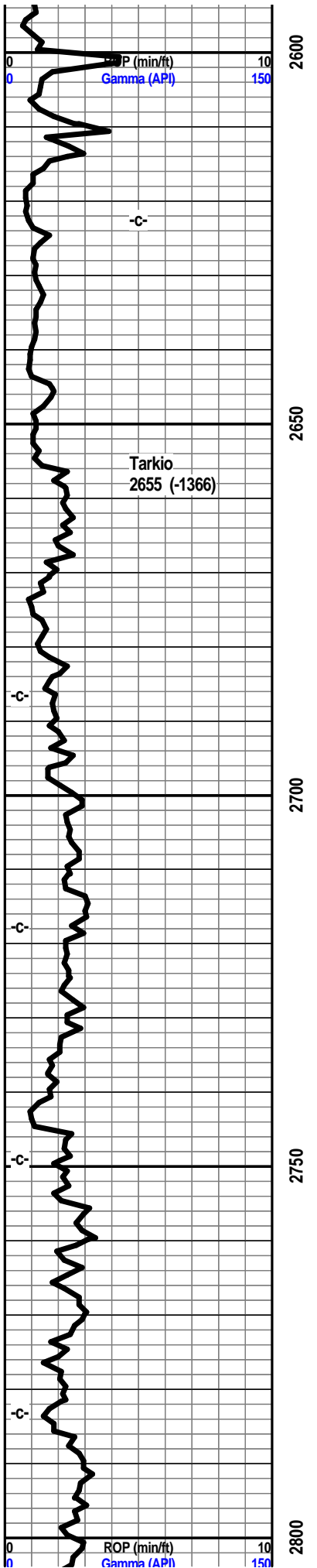
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Slststrg
- Ssststrg
- Carbsh
- Clystn
- Dol

- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Slstsn

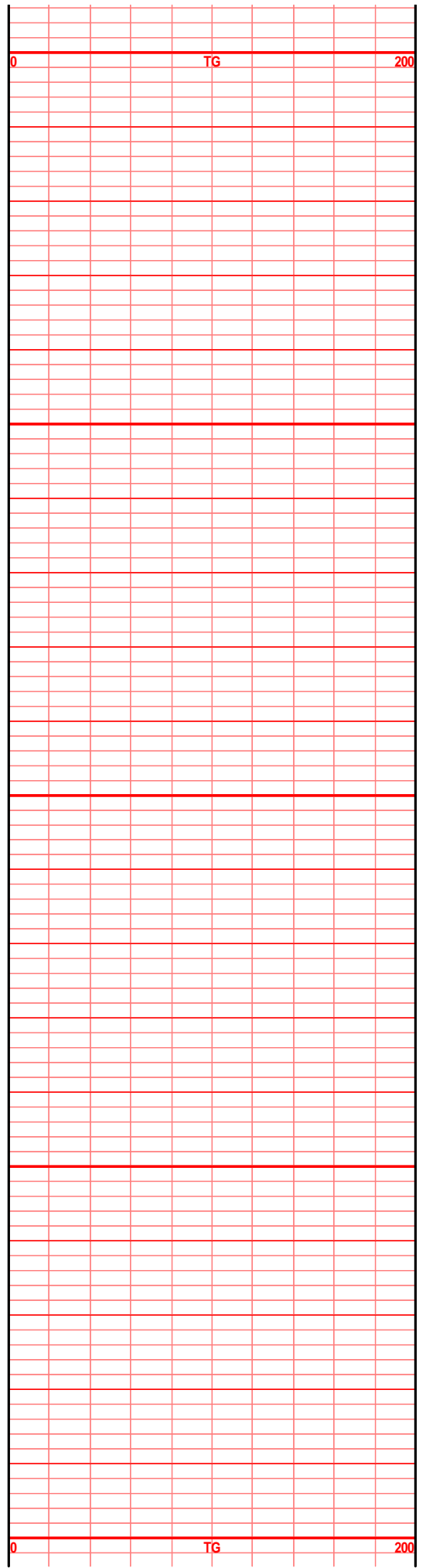
### TEXTURE

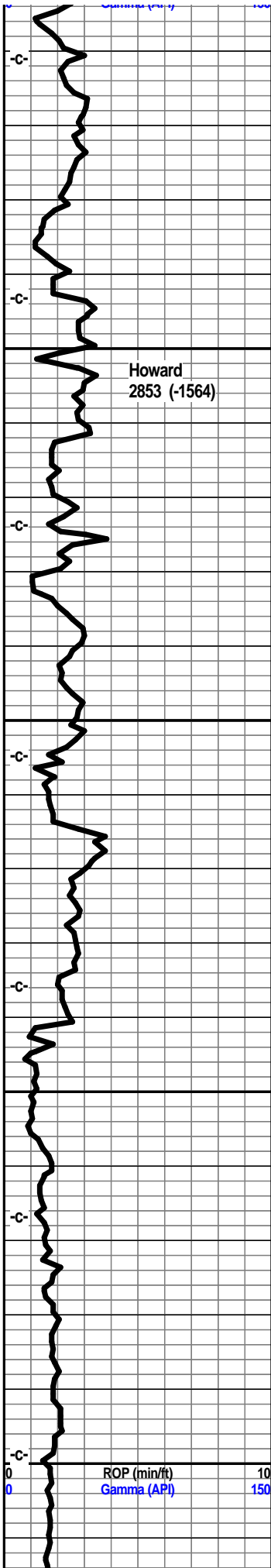
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest





- E-Log Tops:
- Herington
  - Onaga
  - Wabaunsee
  - LeCompton
  - Kanwaka
  - Elgin Sand
  - Heebner
  - Toronto
  - Douglas Shale
  - Haskell
  - Stalnaker Sand
  - Quindaro Shale
  - KC 'F'
  - KC 'Iola'
  - KC 'Dennis'
  - Stark
  - KC 'Swope'
  - Hushpuckney
  - KC 'Hertha'
  - B/Kansas City
  - Pawnee
  - Cherokee Grp
  - Mississippi
  - Kinderhook
  - Woodford
  - Viola
  - Simpson Grp
  - Wilcox
  - McLish Shale
  - McLish Sand
  - Arbuckle
  - LTD



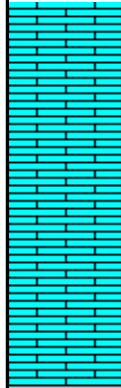


2850

2900

2950

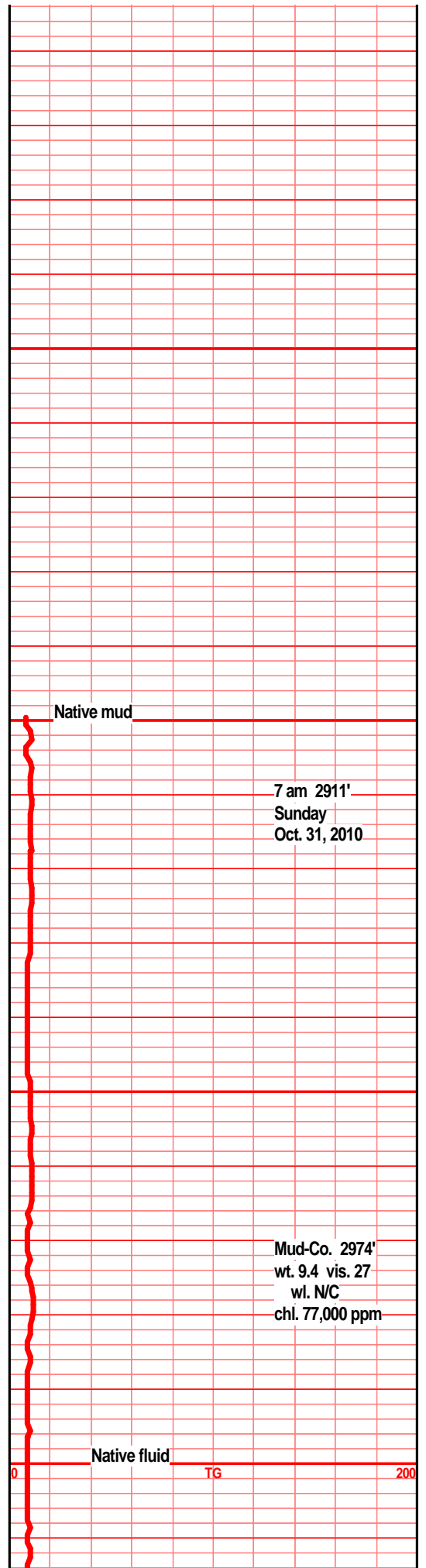
3000

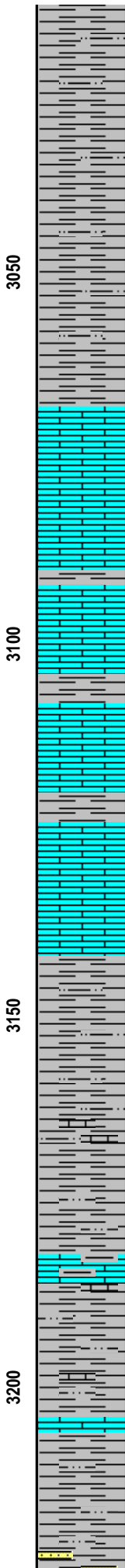
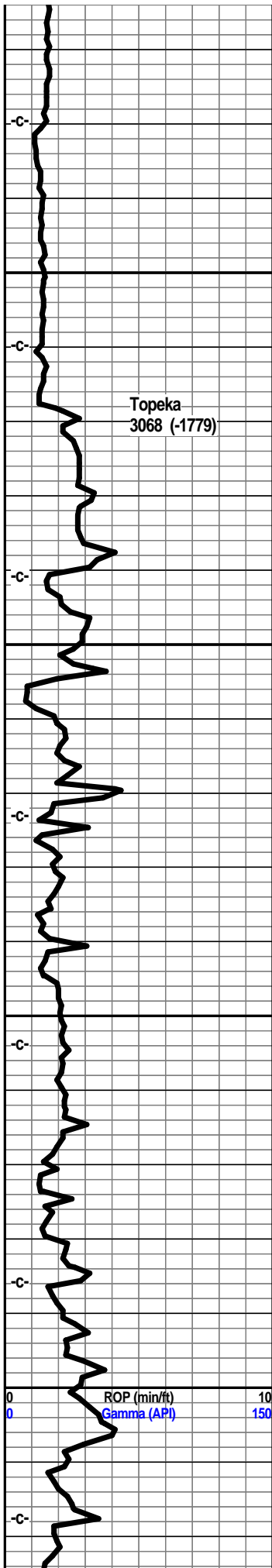


- Oil/Gas Show Legend**
- ⊗ Gas
  - Even Stain/Saturation
  - ◐ Spotted Stain/Saturation
  - Questionable
  - ◑ Dead/Gilsonitic

20' samples

shl gry lt gry silty gritty





shl gry med gry silty gritty soft gran

shl gry med gry silty gritty soft mic

shl gry med gry soft silty gritty pp spls

lst wht off wht f vf xln gran soft sub chlky

lst wht off wht soft f xln gran sub chlky calc fill arg

shl gry calc, silty, lst wht off wht f xln gran blkly calc fill sub chlky tr foss frags

lst off wht lt gry f xln gran soft sub chlky tr foss frags, calc xln fill arg, shl gry med gry silty calc pp spls

lst wht off wht lt gry f xln gran soft sub chlky foss frags, calc fill arg, silty shl aa

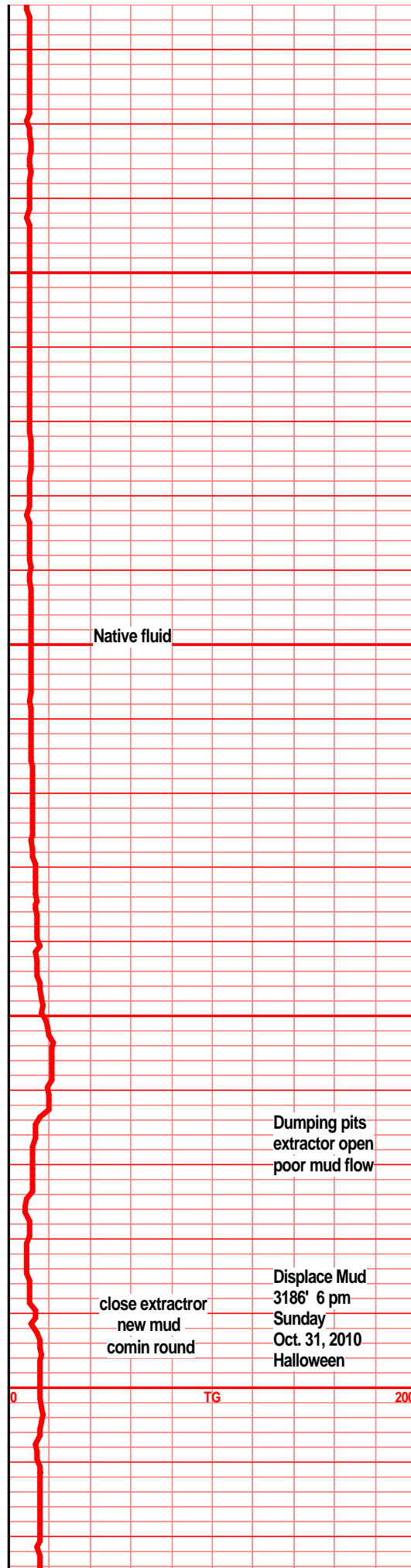
shl gry med gry silty gritty soft

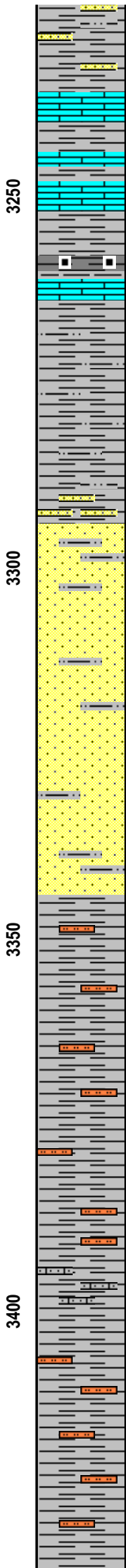
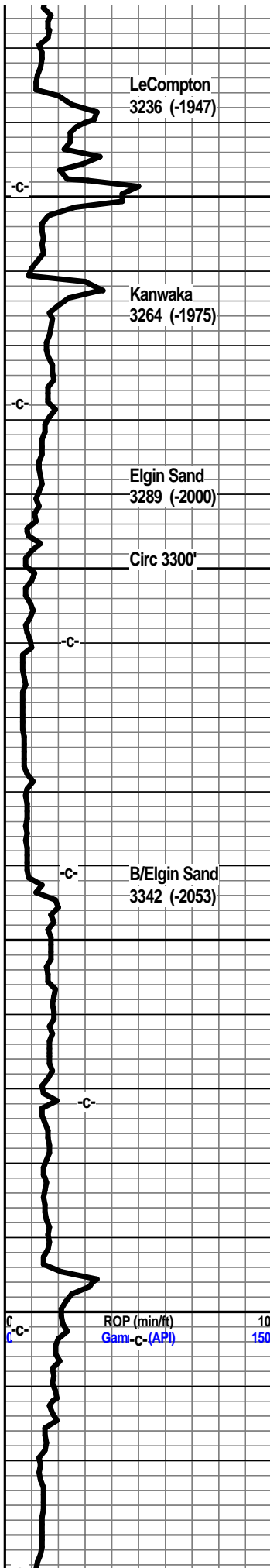
shl gry med gry silty gritty calc, lst tan brn vf xln dns hrd arg ang

shl gry med gry soft silty gritty calc edge

shl gry lt gry silty sndy, sst gry vf grnd ang grns prly srtd, prly cem calc fill clay fill

shl gry gritty silty sndy, sst aa





shl gry silty, sndy, sst lt gry vf grnd sub ang grns, prly srted, prly cem, calc fill clay fill fria min fill

shl gry silty aa, lst tan crm f sli med xln blk ang sub chlky calc fill arg

lst tan brn vf xln dns hrd blk foss frags, calc fill, arg silty, tr chrt brn foss

shl gry blk tr blk carb tr gas bubs

lst tan gry brn f vf xln dns hrd blk ang arg sub chlky foss frags, shl gry med gry silty soft

shl gry lt gry gritty sndy, mic, carb flks, sst lt gry vf grnd sub ang grns, prly srted, fria hvy clay fill tr mic

shl gry lt gry silty sndy gritty, much blk carb flks, gas bubs

sst gry lt gry f vf grnd, sub ang/ang grns, prly srted, prly cem, fria, calc fill, calc cem, clay fill, min fill, much blk carb fill,

sst gry lt gry f grnd sub ang grns, prly srted, sub fria, w/prly cem calc cem, mic, min fill, clay fill, arg

sst lt gry gry f grnd sub ang grns, prly srted, prly cem, calc cem, arg, clay fill, mic, min fill tr glau, blk carb fill/flks

sst tan gry lt gry f grnd, sub ang/ang grns, prly srted, prly cem, calc cem, mic, min fill/glau, clay fill blk carb fill

shl gry med gry silty sndy gritty mic

shl gry med gry silts, gritty in prt, mic

shl gry med gry silty mic

shl gry med gry silty soft

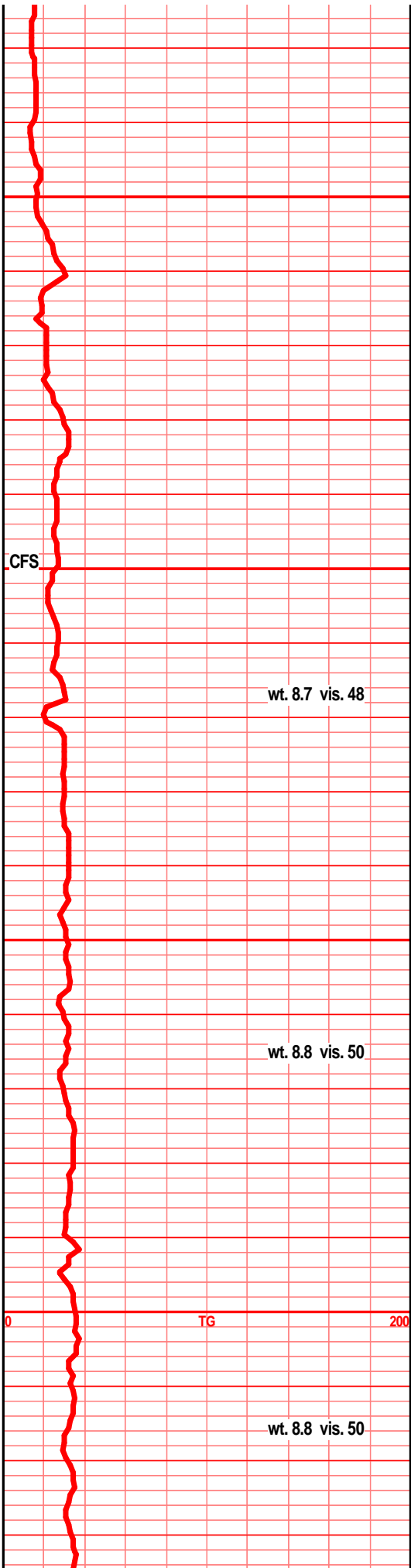
shl gry med gry silty gritty mic

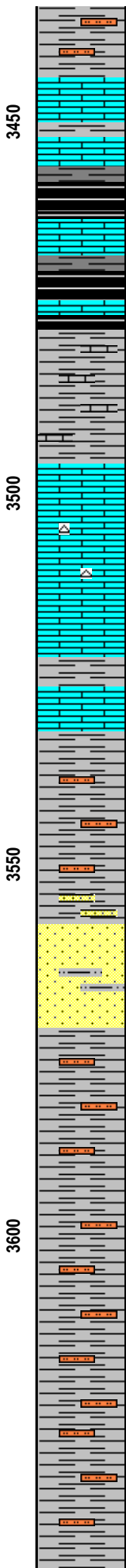
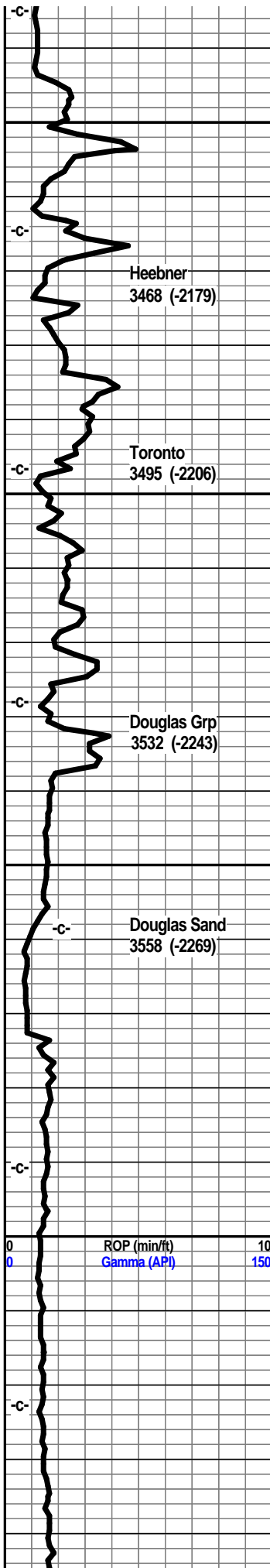
shl gry silty soft gran

shl gry med gry soft silty

shl gry med gry silty

shl gry med gry soft silty, blk carb flks





shl gry med gry drk gry silty soft

lst tan brn, gry brn vf xln dns hrd blk massive, arg, tr foss frags, tr calc xln fill

shl gry blk, blk carb, lst tan gry brn vf xln dns hrd blk arg, calc xln fill

lst brn gry brn vf xln dns hrd blk arg silty, shl gry blk blk carb wxy gsy bedded, gas bubs

shl drk gry blk tr carb, shl gry med gry calc fill, lst drk tan brn vf xln dns hrd arg tr foss frags

shl gry med gry/brn silty, calc

lst wht crm tan f xln sub chlky gran tr micro foss frags, tr wht opa frsh chrt,

lst wht crm tan f xln gran blk sub chlky tr micro foss frag, tr chrt wht opa, shrp frsh, spls wsh wht

lst tan crm f xln gran blk an sub chlky tr foss frags, shl gry med drk gry silty calc

shl gry med dkr gry, silty mic in prt

shl gry gry/green silty soft silty

shl gry gry/green silty gritty mic

sst off wht tan clrts, f vf grnd sub ang grns, prly srtd, prly cem sub fria, calc fill, min fill, blk carb flks, clay fill, arg

shl gry gry/green silty sndy

shl gry gry green silty gritty mic soft

shl gry drk med gry silty mic

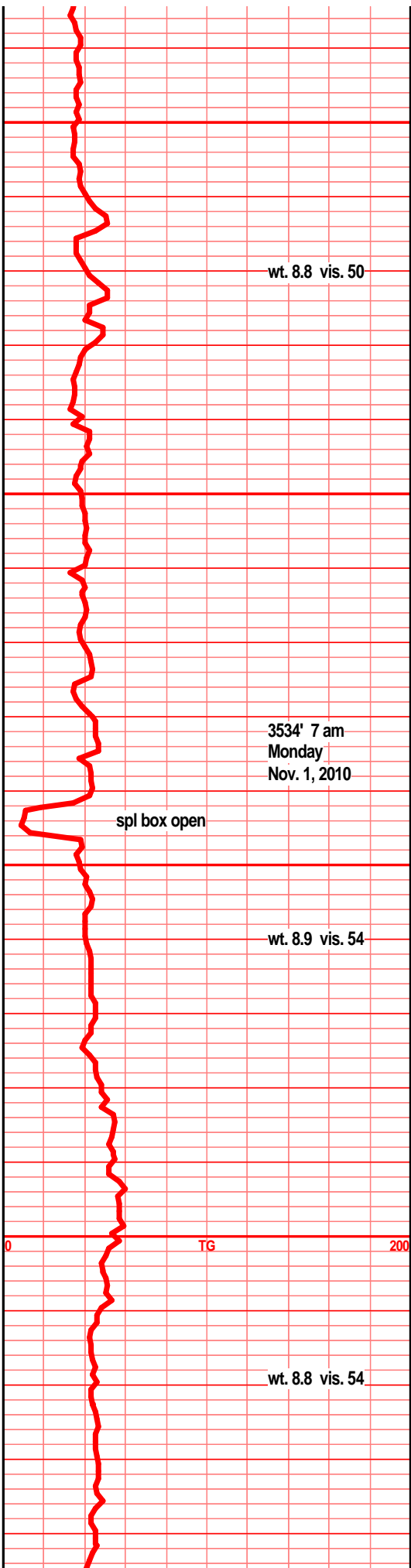
shl gry med gry silty mic blk carb flks

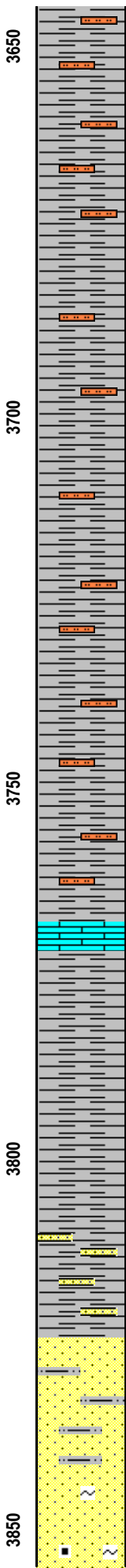
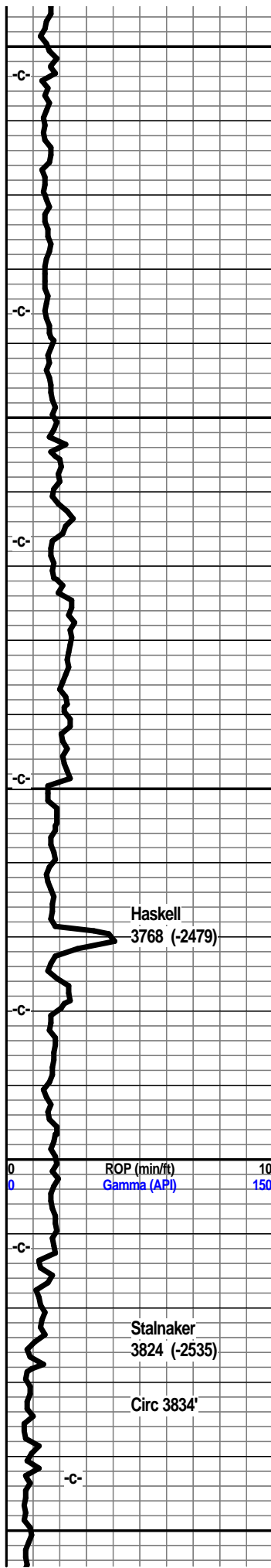
shl gry med gry silty muddy

shl gry med gry silty gritty mic

shl gry med gry green silty mic gritty

shl arv med arv silty soft





shl gry med gry silty blk carb flks

shl gry med gry silty blk carb flks

shl gry med gry silty gritty

shl gry med gry green silty gritty mic

shl gry med gry silty, blk carb flks

shl gry med gry silty mic

shl gry med/lt gry silty soft mic

shl gry med gry silty gritty mic

shl gry med gry tr gry green silty gritty mic, tr blk carb flks

shl gry med gry tr silty, mic

shl gry med gry silty mic

shl gry med gry silty mic gritty muddy

lst tan brn f sli med xln blk ang hrd dns calc fill tr foss frags, shls aa

shl gry drk gry, tr gry blk, silty, gritty, blk carb flks/fill

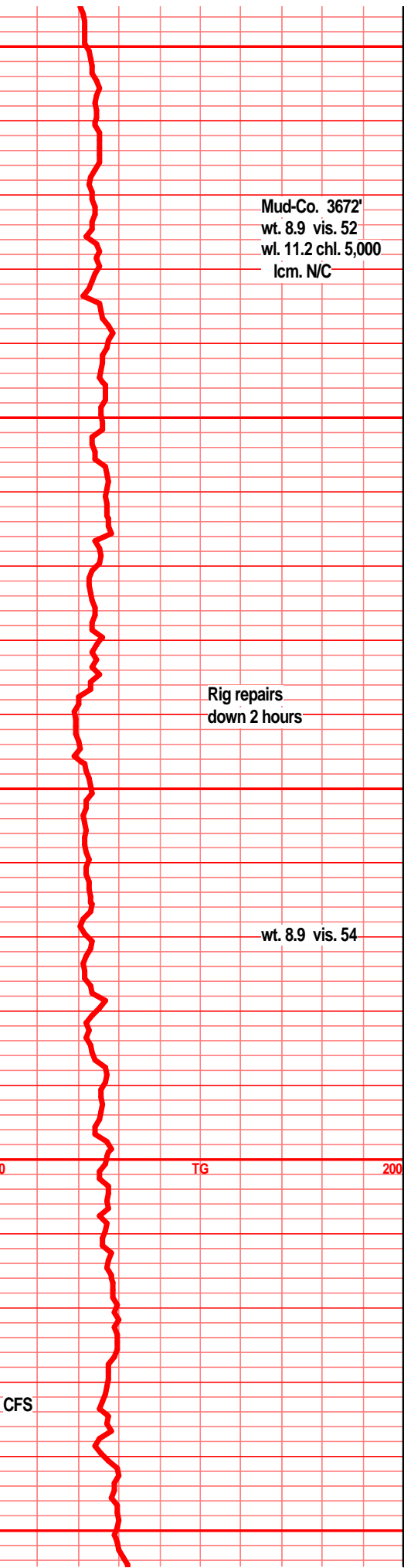
shl gry, gry blk, blk carb fill, silty gritty

shl gry drk gry, blk, bk carb fill/flks, sndy gritty, snd grn inclu

shl gry drk gry blk, tr blk carb, blk carb flks/beds, silty, vry sndy mic gritty

sst tan crm off wht, f vf grnd sub ang/ang grns, prly srted, f/well cem, sub fria to tite, blk ang clstrs, tr mic, tr min fill, tr glau, tr blk carb shl lens

sst crm tan off wht clstrs, f vf grnd, rded/sub ang grns, prly srted, f/cem sub fria, calc cem, calc fill, clay fill, min fill, tr mic, glau,



Mud-Co. 3672'  
wt. 8.9 vis. 52  
wl. 11.2 chl. 5,000  
lcm. N/C

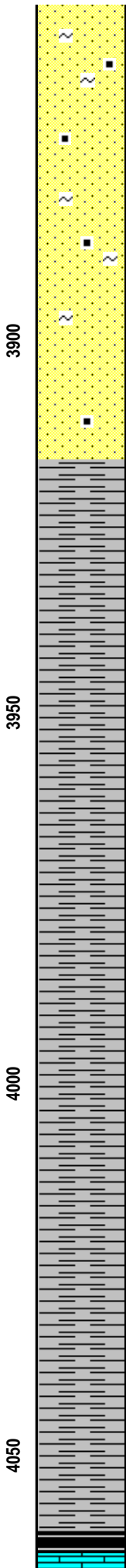
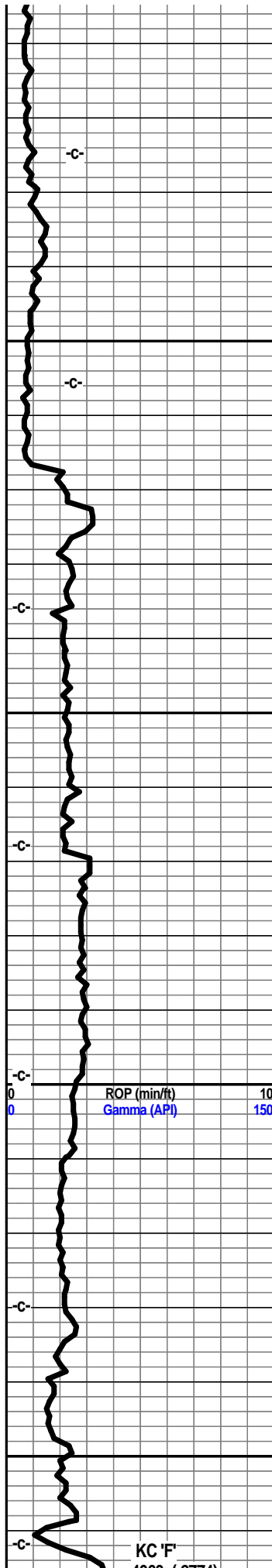
Rig repairs  
down 2 hours

wt. 8.9 vis. 54

TG 200

CFS





sst crm off wht tan f vf grnd, rded sub ang grns, prly srted prly to w/cem sub fria to tite, calc cem, calc fill, min fill, glau, mic, tr blk carb fill

sst tan crm off wht f vf grnd, sub rded to sub ang grns, prly srted, fair/well cem calc cem, sub fria to tite blk ang clstrs, min fill, mic, glau, tr blk carb bed/fill

sst crm tan off wht f vf grnd clstrs, sub ang/rded grns prly srted, f/well cem, calc cem, calc fill, min fill, mic in prt, tr glau,

shl gry drk gry, silty hrd blk pcs

shl gry med gry silty

shl gry med gry silty hrd blk pcs

shl gry drk gry silty

shl gry med gry silty blk ang pcs

shl gry med drk gry silty hrd muddy

shl gry med drk gry aa

aa

shl gry med drk gry silty gritty mic, tr blk carb specks

shl gry med grey

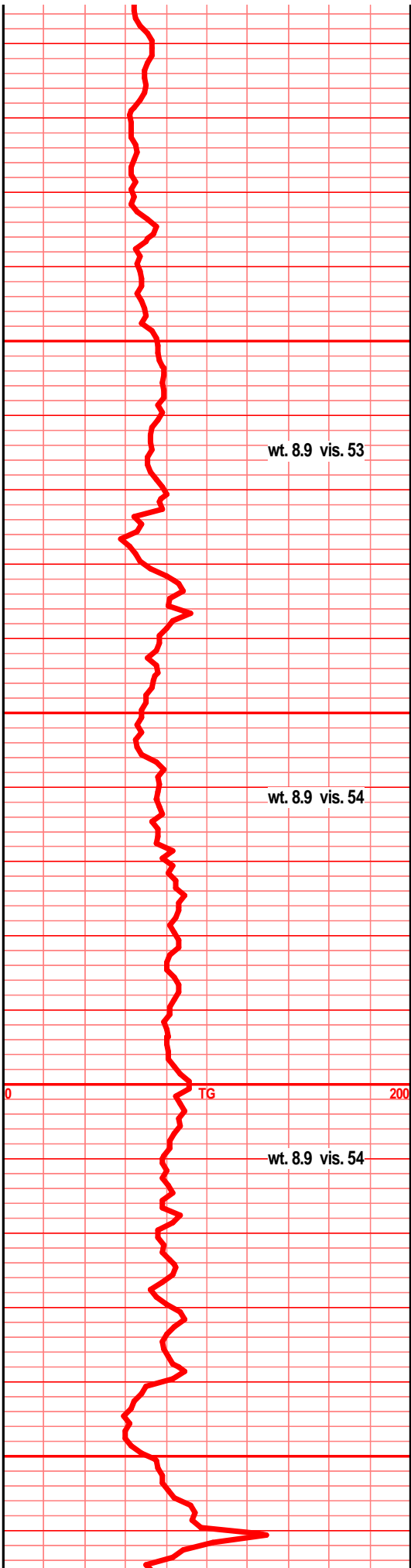
shl gry drk gry

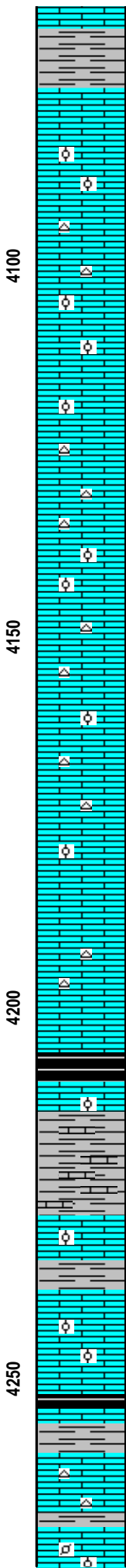
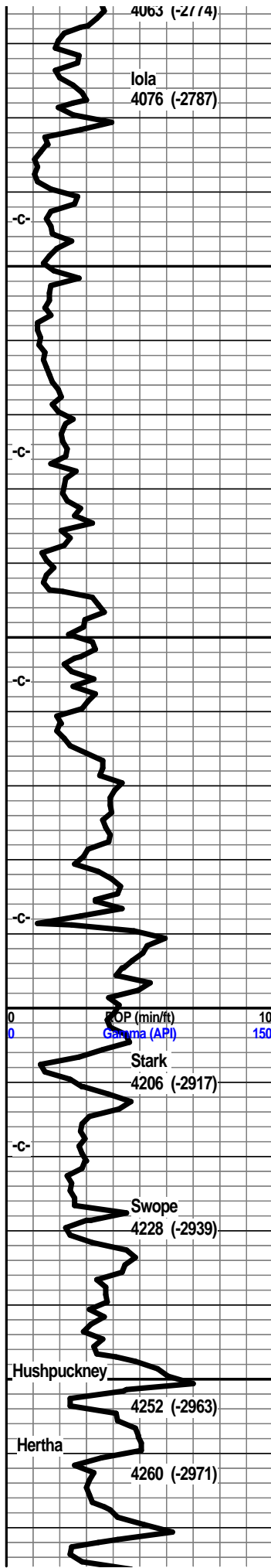
shl gry med drk gry silty gritty

shl gry med gry drk, silty gritty mic in prt

shl gry, gry blk silty soft

lst crm tan brn f vf xln blk dns ang sub chky tr





micro foss frags, blk carb sni in spi

shl gry brn, lst tan brn vf xln blk dns hrd arg, tr foss frags,

lst crm wht f xln sub chlky soft gran, foss frags, ool/pelletal, foss mold por, inter xln por

lst wht f xln sub chlky, gran soft, foss frags, foss ool, pelletal, foss mold por, inter xln por, calc xln fill, chrt wht opaq frsh

lst wht off wht f xln gran soft, sub chlky foss frags, ool/pelletal, foss mold por, inter xln por calc xln fill, chrt wht opaq

lst off wht crm, f xln gran soft sub chlky foss frags, tr ool/pelletal foss mold por, chrt wht shrp frsh opaq

lst wht crm f vf xln gran soft chlky foss frags, foss ool, pelletal, chrt wht shrp frsh opaq foss

lst crm wht f xln sub chlky gran soft, calc xln fill, foss frags, ool, foss mold por chrt wht shrp frsh opaq

lst crm off wht f vf xln sub chlky, soft gran, calc xln fill, foss frags, foss ool, foss mold por chrt wht shrp opaq

lst tan buff off wht f xln gran soft chlky foss frags, chrt tan gry shrp frsh foss

lst tan buff f xln blk ang hrd dns tr sub chlky gran foss frags, chrt gry tan shrp frsh w/foss frags

lst buff tan off wht f xln blk ang gran dns sub chlky foss frags, foss ool, pelletal, chrt tan gry shrp frsh foss

lst buff tan off wht f xln blk ang hrd dns sub chlky foss frags, chrt tan lt gry shrp frsh opaq

lst an buff vf xln dns hrd blk tr chlky, foss frags, chrt tan gry shrp opaq

shl blk, blk carb, gas bubs, lst aa

lst tan brn vf xln dns blk ang arg, foss frags, shl gry drk gry brn calc

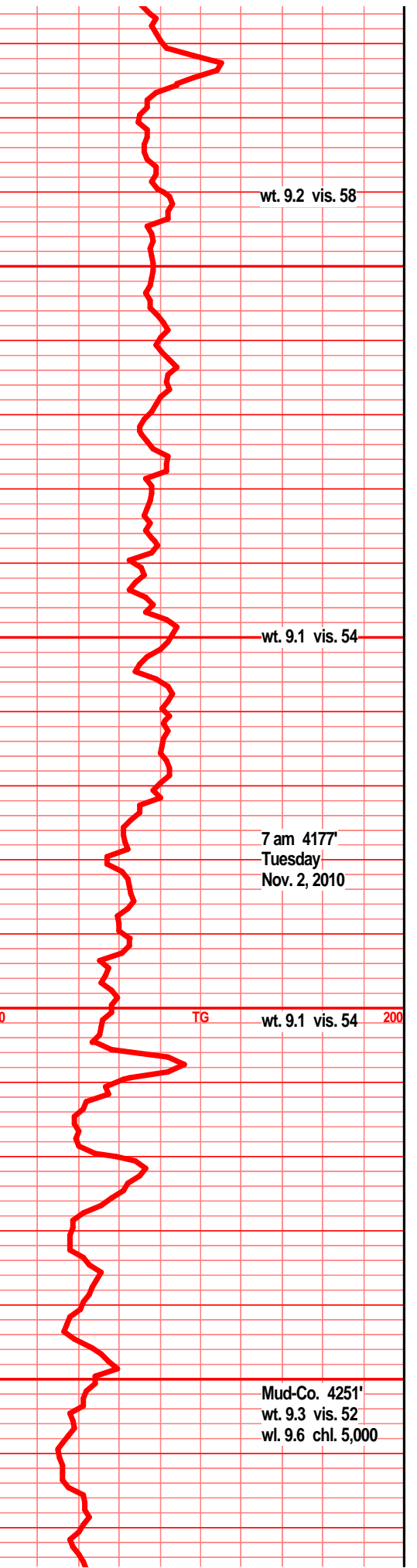
lst tan brn f xln blk ang hrd pcs, tr sub chlky tr foss frags, calc xln fill, tr pp por, tr inter xln por, NS

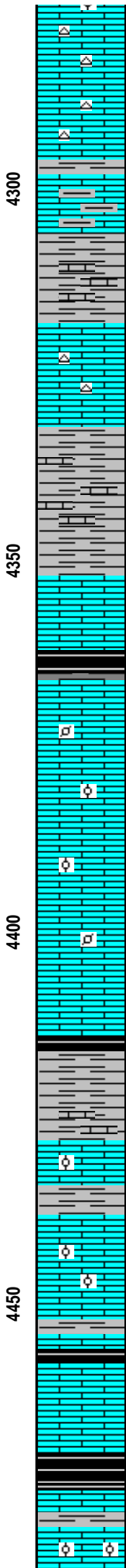
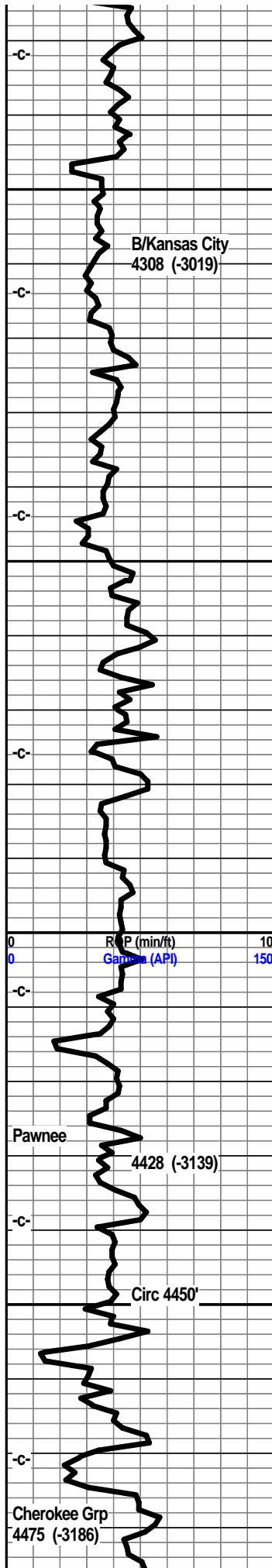
lst tan brn f vf xln gran soft sub chlky foss frags, calc xln fill, tr inter xln por, foss mold por NS

lst tan lt brn f vf lxn dns hrd blk calc xln fill, foss frags, mstly dns hrd

shl gry drk gry brn, lst tan buff brn f vf xln dns hrd, sub chlky foss frags, foss ool, chrt tan shrp frsh opaq

lst tan lt brn f vf lxn dns hrd blk ang arg tr sub chlky tr foss frags, calc xln fill





lst rm buff tan f xln blk ang tr sub chlky, foss frags, foss ool, chrt tan gry lt brn shrp frsh foss opa

lst tan brn f vf xln dns hrd blk arg ang tr foss frags, calc fill, shls, gry green brn silty calc

lst tan gry brn f vf xln dns hrd blk arg ang arg silty, shl gry brn silty calc dns ang pcs

shl gry, lt green/blue brn, lst tan drk brn mic xln dns hrd arg, ang calc fill micro foss

lst tan buff f vf xln blk ang dns hrd, foss frags, micro foss, calc xln fill, tr chrt tan brn shrp frsh foss

shl gry brn, blk/gry/green blk ang calc pcs, lst brn f mic xln dns hrd blk calc fill tr chrt brn shrp foss opa

shl gry, gry/green silty gritty calc, tr foss frags,, lst aa

lst crm buff tan f micro xln blk ang hrd pcs, micro foss frags. calc fill

tr blk carb shl, lst tan buff crm f micro xln dns hrd blk pcs, tr micro foss, calc xln fill

lst crm buff tan f vf xln blk ang hrd sub chlky in prt, tr micro foss, calc fill

lst buff tan f vf xln blk dna hrd, sub chlky in prt, foss frags, foss ool, micro pelletal, calc xln fill

lst crm buff tan f vf xln dns hrd, blk sub chlky in prt, foss frag, micro ool, pelletal, calc xln fill

lst tan buff crm f vf xln dns hrd blk tr sub chlky micro foss, ool, calc xln fill, rare oomold/foss mold por

lst buff tan vf xln blk dns sub chlky foss frag, ool, calc xln fill tr oomold por

shl gry gry/brn calc, lst tan brn vf xln dns hrd arg

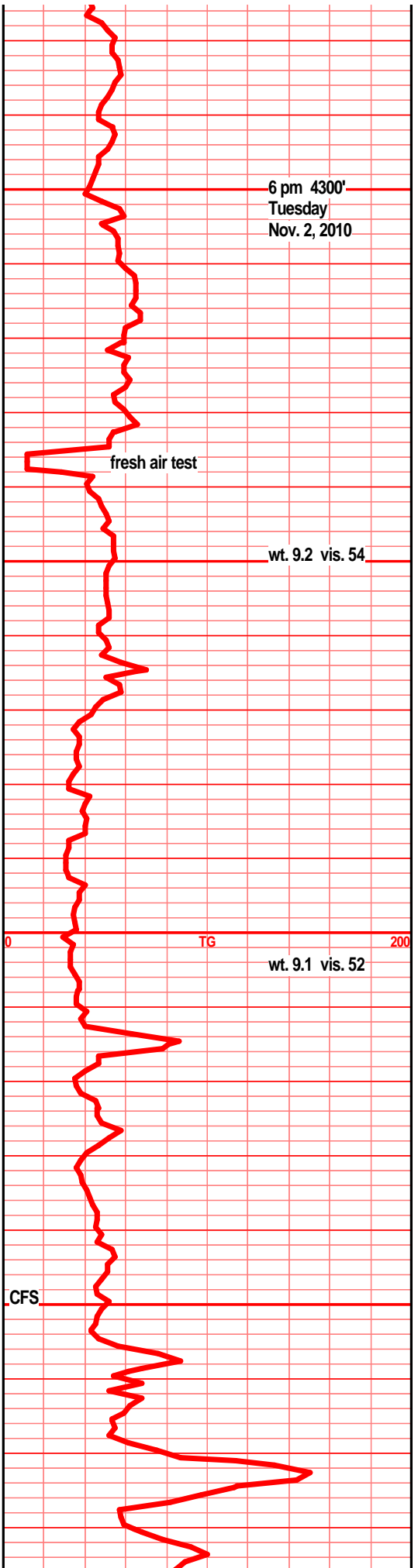
lst crm tan buff lt brn vf xln blk, sub chlky ang dns hrd, foss frags, ool/pelletal, calc xln re-fill, tr oomold por,

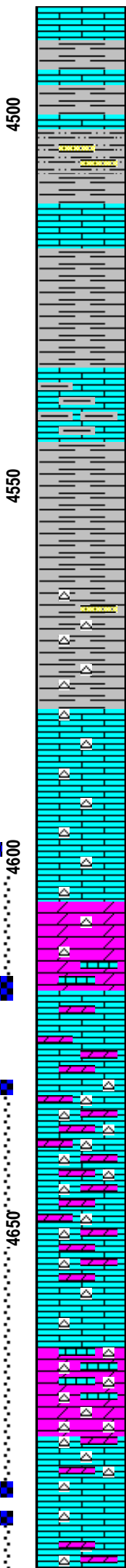
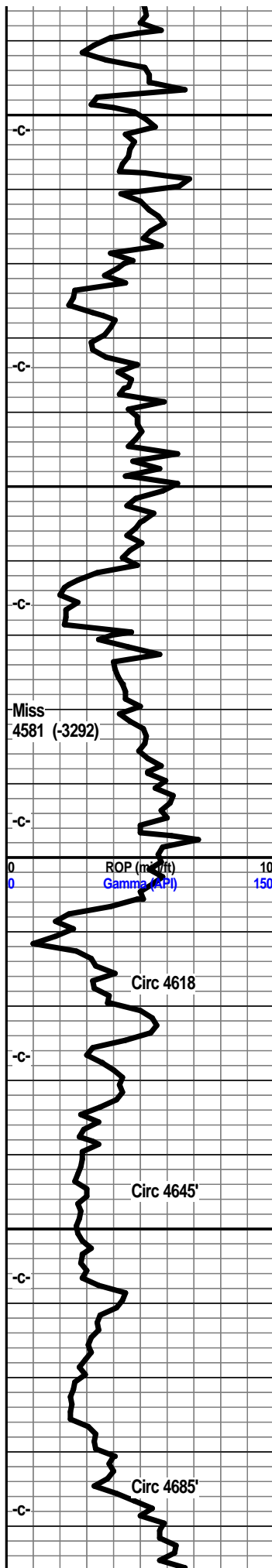
lst buff tan off wht f vf xln sub chlky blk ang dns, foss frags, micro ool, calc xln fill, tr foss mold por NS

shl gry gry/blk, blk carb, tr pyrite beds, lst tan buff brn f vf xln tr sub chlky, dns hrd ang arg, tr foss frags,

lst tan buff gry f mic xln dns hrd blk, tr sub chlky, foss, micro foss, calc xln re-fill,

shl gry blk, blk carb wxy grsy, plenty gas bubs, lst tan gry brn f mic xln dns hrd ang arg silty, tr foss frags,





lst gry tan brn f vf xln dn shr sub chlky foss frag, foss ool, calc xln fill, shl gry brn foss calc

shl gry gry/green silty gritty, calc, lst tan brn gry f mic xln dns hrd blkly arg

sst/sltstn gry blue/gry lt green vf grnd vf grnd, hrd tite blkly ang silty clstrs, shl gry drk gry blk, carb in prt

lst tan gry brn vf xln dns hrd blkly ang arg, tr chlky gran silty

shl gry, gry/blk, calc, lst gry brn f mic xln dns hrd blkly arg silty gritty gran

shl gry brn gry green silty bedded, lst tan gry vf xln gran arg blkly dns hrd

shl lt gry green silty soft, tr foss, shl brn maroon soft gritty, lst dull tan soft gran arg

shl gry gry/green, yllw maroon, vari color, gran gritty silty, chrt tan gry shrp frsh, tr sstwht clr vf grnd clstrs, clay fill sub fria arg, shl blk carb grsy gas bubs

shl vari color, chrt tan yellow brn shrp frsh opa, shl blue green silty gritty

lst wht off wht f sli med xln flky tr sub chlky foss frags, micro foss, tr glau, chrt wht shrp frsh opa

lst crm, wht, off wht f med xln tr sli chlky, blkly flky, foss frags, glau, chrty in prt, chrt wht shrp frsh opa

lst wht off wht crm f sli med xln flky sli chlky micro foss frags, glau, much chrt wht lt gry shrp frsh

dolo crm tan brn f sli med xln gran, sucr text, foss frags, glau, gd inter xln por, foss mold por, f/odor, gd stain/SFO, gas bubs, bright UV, gry chrt inclu,

lst crm off wht w/tan lt brn dolo text, f sli med xln blkly an flky tr foss frag, stain, SSFO, gas bubs, chrt wht shrp opa

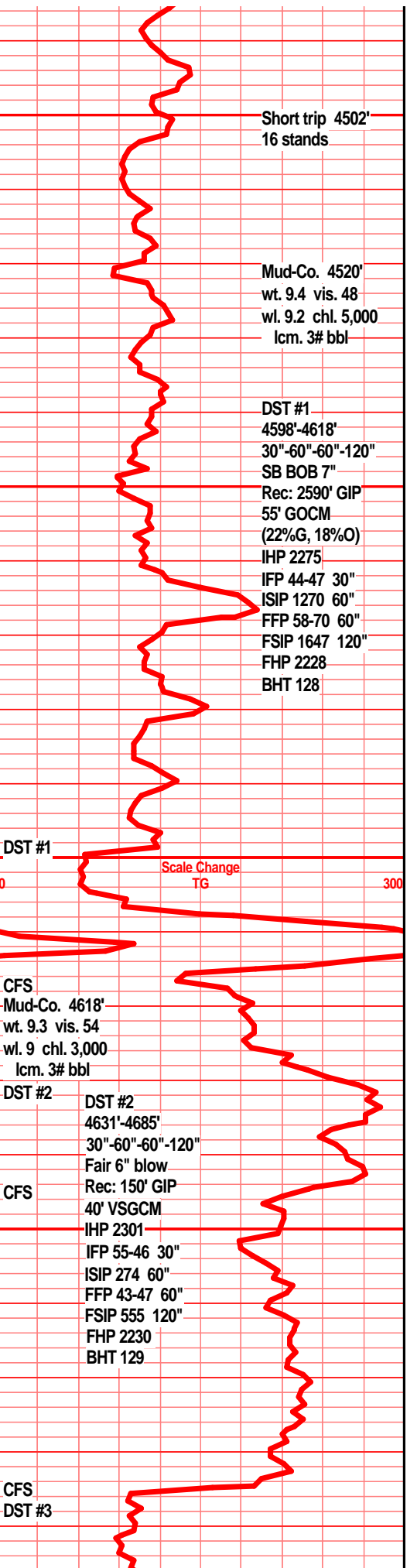
lst off wht lt crm, dolo in prt, f sli med xln gran flky tr foss frags, glau, lt brn stain, SSFO gas bubs, tr odor, chrt wht shrp frsh w/tr blk brn stain

lst/dolo crm lt tan f sli med xln blkly flky, glau, tr foss, gd inter xln por, tr moldic por, sli odor, gas bubs, f/SFO, dull UV, chrt lt gry frsh, w/frac edge, stain, SFO

lst dolo in prt tan buff f sli med xln gran, sli fnly sucr text in prt, blkly flky glau, tr foss frags, inter xln por, tr moldic por, stain, odor, vssfo, dull UV, drk blk/brn stain, chrt wht lt gry shrp frac, tan dolo edge w/shl aa, incr chrt w/depth

dolo crm buff lt tan f xln gran sli sucr text, f/inter xln por, tr moldic por, glau, chrty, tan/brn stain VSSFO, tr gas, sli odor, chrt wht lt gry shrp frsh, frac por, dolo edge with tan brn stain aa, dec live sho incr blk flky stain w/depth

lst tr dolo crm bec lt gry silty, f vf xln dns hrd tr foss tr glau, chrt wht tan shrp frsh opa, tr blk stain nodor NSFO



Short trip 4502'  
16 stands

Mud-Co. 4520'  
wt. 9.4 vis. 48  
wl. 9.2 chl. 5,000  
lcm. 3# bbl

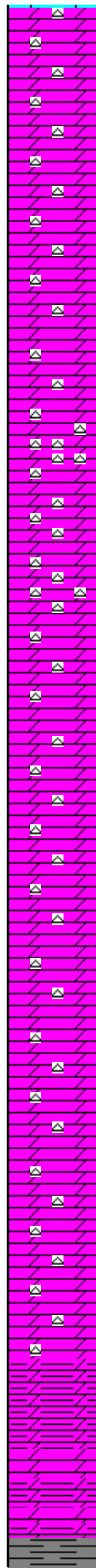
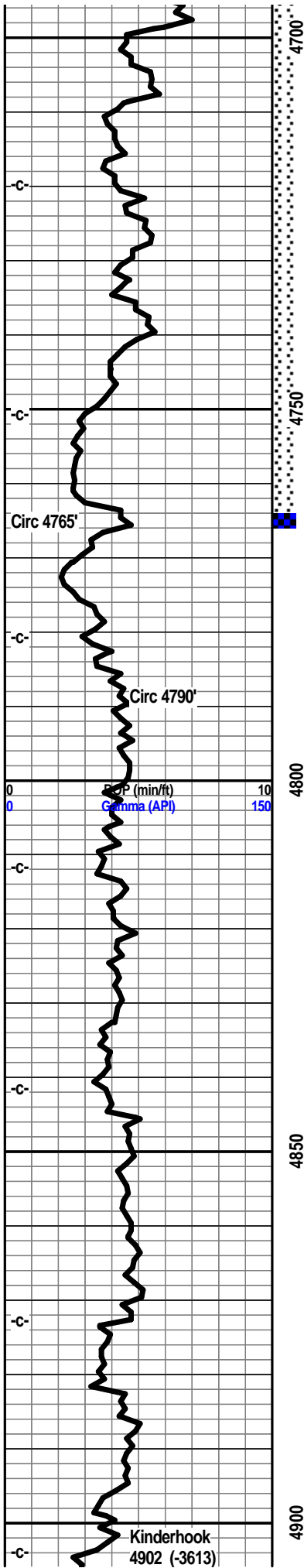
DST #1  
4598'-4618'  
30"-60"-60"-120"  
SB BOB 7"  
Rec: 2590' GIP  
55' GOCM  
(22%G, 18%O)  
IHP 2275  
IFP 44-47 30"  
ISIP 1270 60"  
FFP 58-70 60"  
FSIP 1647 120"  
FHP 2228  
BHT 128

DST #1  
Scale Change TG  
300

CFS  
Mud-Co. 4618'  
wt. 9.3 vis. 54  
wl. 9 chl. 3,000  
lcm. 3# bbl

DST #2  
4631'-4685'  
30"-60"-60"-120"  
Fair 6" blow  
Rec: 150' GIP  
40' VSGCM  
IHP 2301  
IFP 55-46 30"  
ISIP 274 60"  
FFP 43-47 60"  
FSIP 555 120"  
FHP 2230  
BHT 129

CFS  
DST #3



dolo tan gry f vf xln gran silic text, arg, silty gritty, chrt gry shrp foss, blk, w/gry tan dolo edge, tr gas bubs

dolo drk tan lt gry f vf lxn gran silty arg blk, chrt, chrt tan lt gry shrp blk frsh w/silty dolo edge, tr blk stain, 1-2 gas bubs nodor

dolo lt gry tan f vf xln blk ang gran silty chrt, silic text in prt, chrt gry smokey shrp frsh, w/dolo edge

dolo crm lt gry f vf xln gran silty gritty silic in prt, dns, arg, chrt gry lt gry shrp frsh foss, w/gry silty dolo edge, spls vry shly, gry blk lt gry splintery shls gritty

dolo crm lt gry gry f vf xln gran silty gritty, tr silic text, chrt, chrt gry lt gry shrp frsh foss, silty gry dolo edge, NS

dolo chrt dolo, tan gry mott, f vf xln gran, crumbly, silty sli silic text, chrt tan gry lt gry shrp frsh, gry tan silty dolo edge, tr gas bubs, NSFO, nodor no UV

dolo, dolo chrt tan gry vf xln gran, silty sli suc text dolo w/ lt gry gry chrt inclu, chrt lt gry shrp frsh opa w/silty gry gritty dolo edge, tr gas bubs, nodor, NSFO

dolo chrt dolo, tan gry mott, silty, tr silic text, f vf xln gran gritty, chrt tan gry shrp frsh tr foss, w/gry med gry dolo edge, silty gritty. nodor, NSFO.

dolo silty dolo, gry med gry f vf xln gran blk, arg ang chrt, chrt gry smokedy shrp frsh, w/dolo aa edge,

dolo silty dolo, drk tan gry med gry f vf xln gran silty sli suc text, arg, ang, chrt, chrt gry smokey shrp frsh foss, dolo edge aa. NS

dolo silty dolo, gry med gry vf xln blk dns hrd sli silic, arg, chrt, gry dull gry smokey shrp frsh opa

dolo gry med gry vf xln silty gritty gran arg, dns hrd, chrt, chrt gry dull gry smokey shrp frsh opa

dolo gry med gry vf xln gran blk dns hrd silty arg, chrt, chrt dull gry, drk gry shrp frsh, dolo edge aa

dolo silty dolo gry med gry vf xln dns hrd, arg, silic text in prt, chrt, chrt dull gry med gry w/dolo edge, rx appear to darken with depth

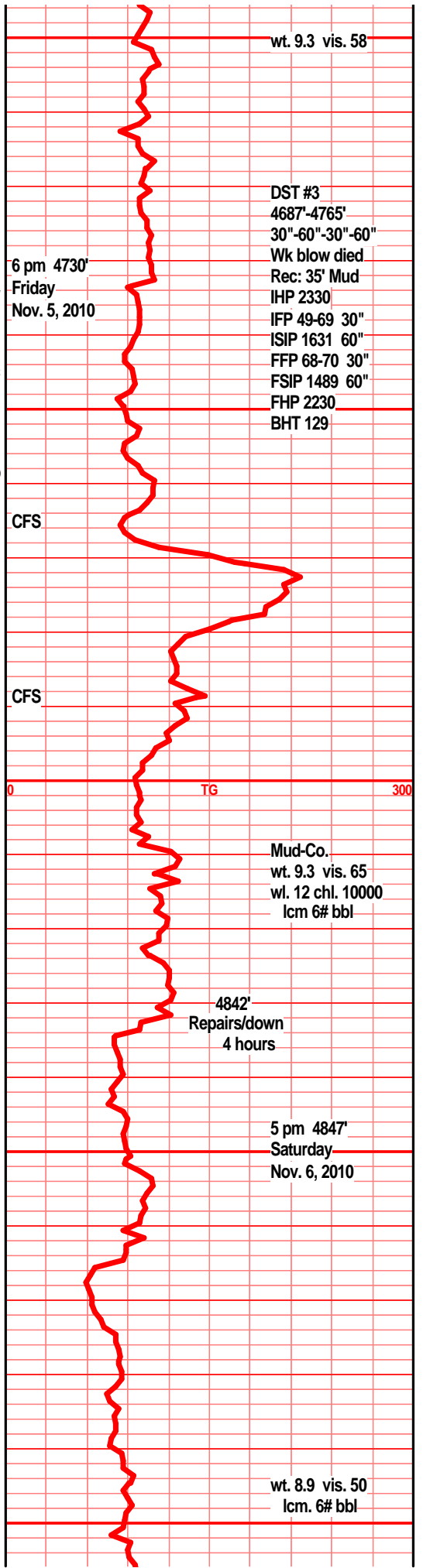
dolo silty dolo, gry med gry f vf xln gran arg ang, silty, tr silic text, chrt dull gry shrp frsh opa

dolo shls, gry drk gry silty tr silic text, blk ang, shls gry blue green silty gritty

dolo gry med drk gry vf xln silty gritty tr silic text, shls gry blk, gry med gry silty tr gry blue green silty

dolo, shly silty dolo gry med gry blk gran hrd tr silic text, chrt drk gry shrp

shl gry med gry, tr gry green silty gritty



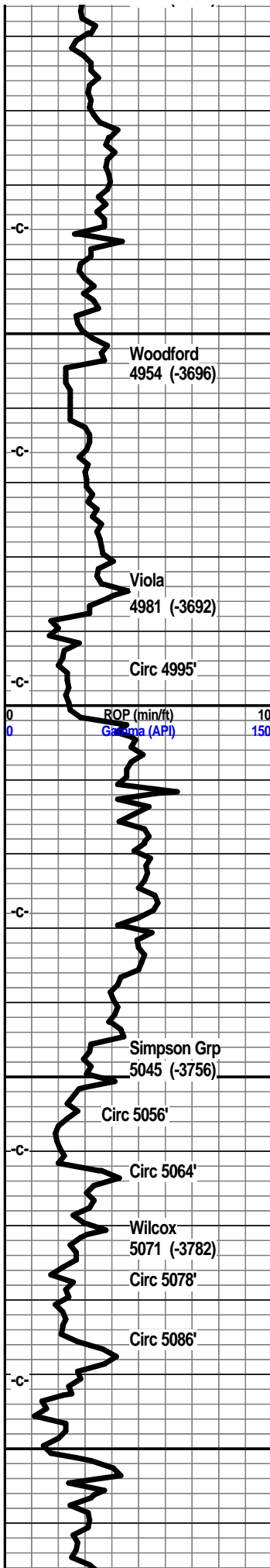
wt. 9.3 vis. 58

DST #3  
4687'-4765'  
30"-60"-30"-60"  
Wk blow died  
Rec: 35' Mud  
IHP 2330  
IFP 49-69 30"  
ISIP 1631 60"  
FFP 68-70 30"  
FSIP 1489 60"  
FHP 2230  
BHT 129

Mud-Co.  
wt. 9.3 vis. 65  
wl. 12 chl. 10000  
lcm 6# bbl

5 pm 4847'  
Saturday  
Nov. 6, 2010

wt. 8.9 vis. 50  
lcm. 6# bbl



4950  
5000  
5050  
5100



shl gry gry brn blk silty blk ang pcs

shl gry, gry brn, blk, silty, tr gas bubs

shl gry gry/brn, blk silty tr gas bubs

shl gry gry brn blk, blk ang pcs, gas bubs

shl gry gry blk, drk gry brn/blk silty

shl blk, blk silty, dolo, tr carb text in prt abun gas bubs

shl blk carb, drk red/brn/blk tr bedded, tr pyritic, blk ang pcs abun gas bubs

shl blk carb, drk red/brn/blk, tr bedded, blk ang pcs, abun gas bubs, sst, clr ang crs grns prly srted, w/cem hvy pyr fill, min/clay fill, arg, NS, 3-4 clstrs only

lst wht off wht lt gry f med xln blk ang flky, soft, chlky, tr foss, pyritic fill, calc xln fill, much gry, dull gry/tan shrp frsh chrt. dolo tan gry vf xln blk dns ang tite, tr stain, lt filmy SFO, tr gas bub, odor?

lst off wht lt gry, f sli med xln blk flky sub chlky, gd inter xln por, pyritic fill, tr foss, chrt dull tan gry shrp frsh foss

lst dolo in prt off wht tan f xln blk dna ang hrd, chrt, chrt gry dull tan shrp frsh opa

dolo tan off wht f xln blk ang dns hrd, chrt tan, gry dull tan shrp frsh opa

dolo tan drk tan lt brn f vf xln gran sndy gritty blk ang, chrt tan dull gry shrp frsh opa, dolo edge tr pyrite fill

dolo tan, lt gry brn f xln gran blk suc text, inter xln por, chrt gry dull tan shrp frsh opa

shl gry blue green silty sndy pyritic, dolo lt brn vf xln gran soft suc text, mushy, inter gran por, tr gas bubs sst clr grd clstrs sub rded, w/srtd, fria, prly cem, gran gd inter grn por,

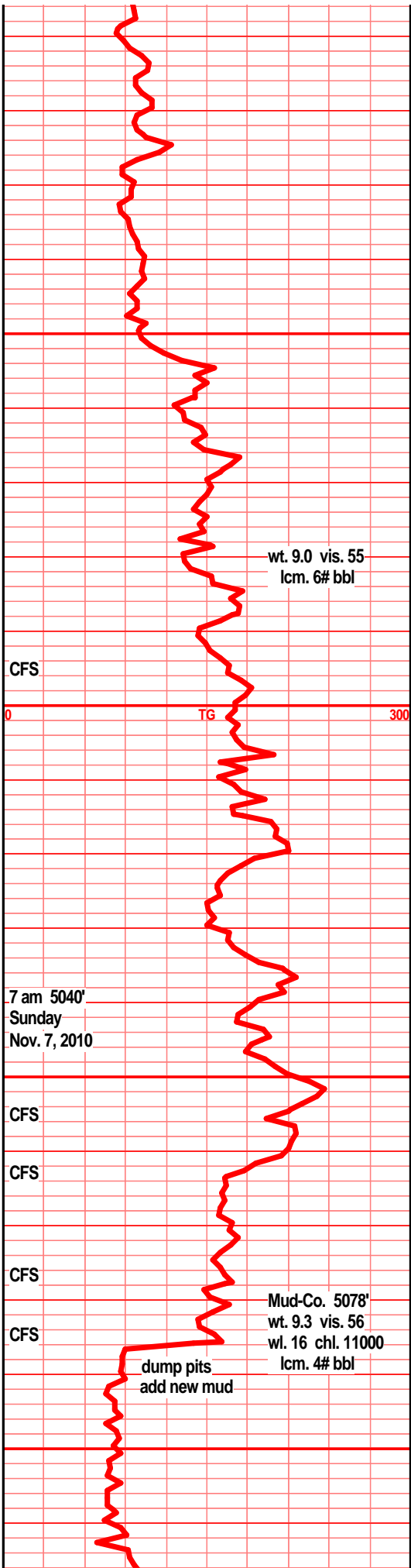
sst clr lt gry, gry rough clstrs, f grd sub ang sub rded grns, fair/well cem, sub fria, tr dolo in prt, tr gas bubs, filmy lt transl SFO & odor w/brkn

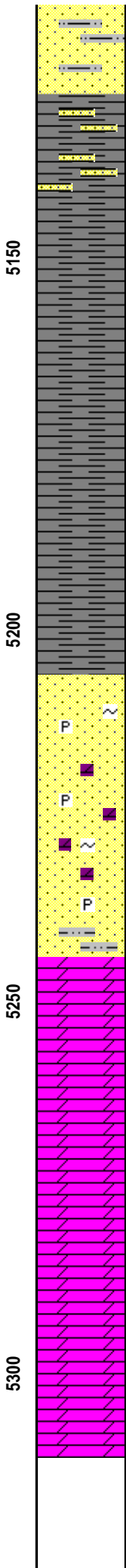
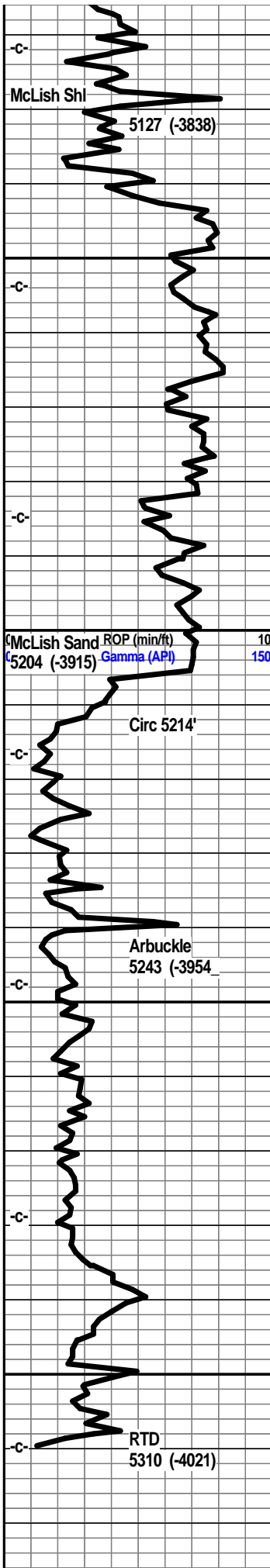
sst off wht clr clstrs, f grd sub rded/rded grns, w/srtd, prly cem v/fria, gd inter grn por, msly barren, 2-3 clstrs w/tr gas bubs, lt transl filmy SFO w/brkn, nodor, abun loose grns in tray

sst clr off wht lt tan clstrs f grd sug rded/rded grns, w/srtd, prly cem, v/fria, gran, gd inter grn por, sndy dolo tan brn vf grd sub rded grns, gran inter grn por, NS

sst wht off wht tr tan clstrs, f grd sub ang/ang grns, w/srtd, f/cem silic cem, sug fria to tite dns, tr clay fill, tr blk min fill, tr tan dolo text in prt, gran soft gritty

sst wht clstrs, f vf grd, sub ang/ang grns, w/srtd, w/cem, sub fria to tite, silic cem, tr min





fill

sst wht clstrs, f vf grnd sub rded grns, w/srtd, w/cem, sub fria, mstly tite dns hrd, tr min fill,

shl drk gry/green, blk, blkly ang pcs

shl gry, drk gry blk, tr green silty sndy, glau inclu, silty tr pyritic

shl drk gry blk, gry green silty sndy, slick, wxy, grsy

shl drk gry blk, green,

shl gry bk green

shl drk gry green silty snd grn inclu, glau

shl drk gry/green silty sndy gritty, snd grn inclu, glau, gritty

shl gry green teal green wxy grsy

sst clr tan tr lt brn grns, f grnd sub ang, tr ang grns, prly srted, w/cem, sub fria, mstly tite, much pyrite fill, min/clay fill, glau fill, dolo in prt, tan lt brn silic cem, tite ang blkly hrd clstrs NS

sst clr tan clstrs, dolo in prt, f grnd sub ang grns prly srted, sub frai to tite, arg, blkly ang hrd clstrs, min fill, pyritic, glau,, tr clay fill

sst tan lt gry tr lt brn f grnd clstrs, sub ang grnd, prly srted, sub frai to tite, w/cem, arg, clay fill, min fill, glau, pyritic, tr dolo text in prt

poor post bit trip spls

dolo crm drk tan, lt gry f vf xln gran blkly, suc text, tr snd grn inclu, tr sndy, f/inter xln por, tr glau, mstly hrd dns, tr rhom xln text.

dolo crm tan lt brn f vf xln gran blkly, slic suc in prt, rhom xln text in prt, tr snd grn inclu, f/gd inter xln por

dolo drk tan crm lt brn f vf xln gran blkly ang hrd suc text in prt, rhom xln text, tr gd inter xln por, tr sndy in prt

dolo tan gry lt brn f vf xln dns hrd blkly, tr suc text, tr inter xln por, rhom xln text, tr foss

dolo tan gry f micro xln dns hrd blkly, tr suc text,

dolo crm tan brn f xln blkly ang, gran, sili text, suc in prt, rhom xln text, f/gd inter xln por,

