



**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: \_\_\_\_\_

1066135



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 <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <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
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Woolsey Operating Company, LLC
Well Name	WECKWORTH 4
Doc ID	1066135

Tops

Name	Top	Datum
CHASE	1954	-525
ELGIN SD	3758	-2329
DOUGLAS	3926	-2494
PAWNEE LS	4737	-3308
MISSISSIPPIAN	4835	-3406
KINDERHOOK SH	5142	-3713
VIOLA	5278	-3849
SIMPSON	5395	-3977

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/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

October 26, 2011

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

Re: ACO1  
API 15-007-23723-00-00  
WECKWORTH 4  
SW/4 Sec.09-35S-12W  
Barber 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. 042108

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
*Medicine Lake KS*

DATE <i>06-29-11</i>	SEC <i>09</i>	TWP <i>35s</i>	RANGE <i>12w</i>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <i>2:00 PM</i>
BASE <i>Wachtel</i>		WELL # <i>4</i>	LOCATION <i>Haroldview ES 4 1/2, Sinto</i>	COUNTY <i>Barber</i>	STATE <i>KS</i>		
OLD OR NEW (Circle one)							

CONTRACTOR *Duke #10*

TYPE OF JOB *Surface*

HOLE SIZE *14 3/4* TD *225*

CASING SIZE *10 5/8* DEPTH *211 + (13' 8 3/4)*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

FOOL DEPTH

PRES. MAX *250* MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *20'*

PERFS.

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

OWNER *Woolsey*

CEMENT AMOUNT ORDERED *240sk Class A + 7%acc + 2%add*

COMMON *A 240 sk @ 16.25 3900.00*

POZMIX @

GEL *5 sk @ 21.25 106.25*

CHLORIDE *9 sk @ 23.20 208.80*

ASC @

HANDLING *254 @ 2.25 571.50*

MILEAGE *254/20/11 258.80*

TOTAL *5665.35*

EQUIPMENT

PUMP TRUCK CEMENTER *D. Felin*

*1360-265* HELPER *M. Thimesch*

BULK TRUCK

*1421-252* DRIVER *E. Piper*

BULK TRUCK

DRIVER

**WELL FILE**

Regulatory Correspondence  
Drill / Comp Workovers  
Tests / Meters Operations

REMARKS:

*Pipe on Bottom, Break Circ, w/ travel Mix  
240sk class A - 392 cement, Start Disp w/  
fresh H<sub>2</sub>O, See Steady increase in PST, Slow  
3000, Stop Pump at 20 Bbls total Disp,  
shut in, Cement Dip Circ.*

SERVICE

DEPTH OF JOB *224'*

PUMP TRUCK CHARGE *1125.00*

EXTRA FOOTAGE @

MILEAGE *20 @ 7.00 280.00*

MANIFOLD *N/A @ N/A*

*Light Vehicle 20 @ 4.00 140.00*

TOTAL *1565.00*

CHARGE TO: *Woolsey Oper.*

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

*None*

@

@

@

@

TOTAL

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.

PRINTED NAME *MIKE THARR*

SIGNATURE *Mike Tharr*

SALES TAX (if Any)

TOTAL CHARGES *7225.35*

DISCOUNT *20%* IF PAID IN 30 DAYS

*NET 5780.28*

AUG -1 2011

# ALLIED CEMENTING CO., LLC. 042116

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
*Medicine Lodge KS*

DATE <u>07-12-11</u>	SEC. <u>09</u>	TWP. <u>35s</u>	RANGE <u>12w</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>8:15 PM</u>
LEASE <u>Week Worth</u>	WELL # <u>4</u>	LOCATION <u>Hardover KS 1/4 c, split</u>			COUNTY <u>Barber</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Duke #10  
 TYPE OF JOB Production Casing  
 HOLE SIZE 7 7/8 T.D. 5524  
 CASING SIZE 5K 15.5" DEPTH 5331  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX 1700# MINIMUM —  
 MEAS. LINE SHOE JOINT 42.53  
 CEMENT LEFT IN CSG. 43'  
 PERFS.  
 DISPLACEMENT 127 Bbls 2% KCL Water

OWNER Woolsey Oper.  
 CEMENT  
 AMOUNT ORDERED 90sx 60' 40' 4% gel & 150sx  
Class H + 10% sup + 10% salt + .8% FL-160 + 1/4" Fl. seal  
& 13 gals Clap w.

EQUIPMENT  
 PUMP TRUCK CEMENTER D. Felio  
 # 360-265 HELPER J. Thimmes  
 BULK TRUCK  
 # 363-290 DRIVER E. Piper  
 BULK TRUCK  
 # DRIVER

COMMON	<u>A 54 sx</u>	@	<u>16.25</u>	<u>877.50</u>
POZMIX	<u>36 sx</u>	@	<u>8.50</u>	<u>306.00</u>
GEL	<u>3 sx</u>	@	<u>21.25</u>	<u>63.75</u>
CHLORIDE		@		
ASC		@		
H	<u>150 sx</u>	@	<u>19.25</u>	<u>2887.50</u>
Gyl Seal	<u>14 sx</u>	@	<u>34.20</u>	<u>478.80</u>
FL-160	<u>112#</u>	@	<u>17.20</u>	<u>1926.40</u>
Ko Seal	<u>900#</u>	@	<u>.89</u>	<u>801.00</u>
Flo Seal	<u>37.5#</u>	@	<u>2.70</u>	<u>99.90</u>
Clap w	<u>13 Gals</u>	@	<u>31.25</u>	<u>406.25</u>
salt	<u>16 sx</u>	@	<u>12.00</u>	<u>192.00</u>
HANDLING	<u>295</u>	@	<u>2.25</u>	<u>663.75</u>
MILEAGE	<u>25.11/295</u>			<u>811.25</u>
				TOTAL <u>9514.10</u>

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

REMARKS:

Pipe on Bttm, Break Circ., Plug Rate Mouse  
Holes w/ 40sx 60' 40 cement, Pump 50sx Scavenger  
Cement, Mix 150sx tail Cement, Stop, Wash  
Pump & Lines Release Plug, Start Disp. w/ 2% KCL  
Water. See Steady increase in PSI, Slow Rate,  
Bump Plug at 127 Bbls total Disp. to  
1700#, Release PSI, Floats Did Hold

SERVICE

DEPTH OF JOB	<u>5331'</u>		
PUMP TRUCK CHARGE			<u>2695.00</u>
EXTRA FOOTAGE	@		
MILEAGE	<u>50</u>	@	<u>7.00</u> <u>350.00</u>
MANIFOLD <u>Hand rental</u>	@		<u>200.00</u>
<u>light vehicle</u>	@	<u>4.00</u>	<u>200.00</u>
TOTAL <u>3445.00</u>			

CHARGE TO: Woolsey Oper.  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

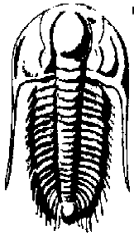
PLUG & FLOAT EQUIPMENT

1- AFU Float Shoe	@	<u>349.00</u>	<u>349.00</u>
1- Latch down plug	@	<u>277.00</u>	<u>277.00</u>
12- tubolizer	@	<u>80.00</u>	<u>960.00</u>
16- Recip. Scatchers	@	<u>76.00</u>	<u>1216.00</u>
TOTAL <u>2802.00</u>			

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 \$ 15761.10  
 DISCOUNT 20% IF PAID IN 30 DAYS  
Net \$ 12608.88

PRINTED NAME MIKE THARP  
 SIGNATURE Mike Tharp



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Woolsey Operating Co  
125 N Market Ste 1000  
Wichita, KS 67202  
ATTN: Bill Klaver

**#4 Weckworth**  
**9-35S-12W Barber**  
Job Ticket: 042473 **DST#: 1**  
Test Start: 2011.07.07 @ 16:18:04

## GENERAL INFORMATION:

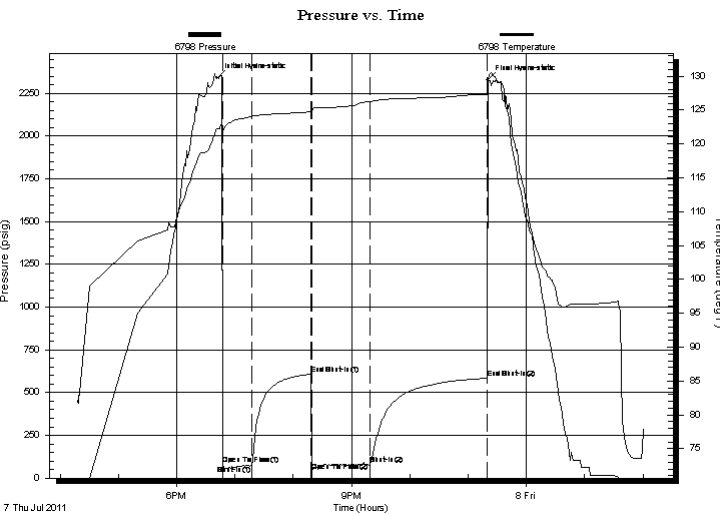
Formation: **Mississippi**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:47:19  
Time Test Ended: 02:02:19  
Interval: **4840.00 ft (KB) To 4910.00 ft (KB) (TVD)**  
Total Depth: 4910.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Leal Cason  
Unit No: 45  
Reference Elevations: 1429.00 ft (KB)  
1418.00 ft (CF)  
KB to GR/CF: 11.00 ft

## Serial #: 6798

Inside

Press @ Run Depth: 81.38 psig @ 4841.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.07.07 End Date: 2011.07.08 Last Calib.: 2011.07.08  
Start Time: 16:18:05 End Time: 02:02:19 Time On Btm: 2011.07.07 @ 18:41:49  
Time Off Btm: 2011.07.07 @ 23:20:34

TEST COMMENT: IF: Strong Blow , BOB in 2 minutes  
IS: Bled Off, No Blow back  
FF: Strong Blow , BOB in 10 seconds, GTS in 2 minutes, Gauged Gas & Caught Sample  
FSI: Bled Off, No Blow back



## PRESSURE SUMMARY

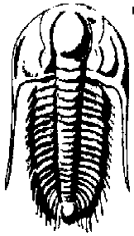
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2339.20	122.25	Initial Hydro-static
6	79.08	122.30	Open To Flow (1)
36	75.69	124.05	Shut-In(1)
97	608.09	124.74	End Shut-In(1)
98	38.14	124.62	Open To Flow (2)
158	81.38	126.27	Shut-In(2)
278	583.80	127.32	End Shut-In(2)
279	2327.10	129.67	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4622 GIP	0.00
210.00	GCM 2%G 98%M	1.29

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	4.00	29.35
Last Gas Rate	0.25	2.00	26.18
Max. Gas Rate	0.25	4.00	29.35



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co

**#4 Weckworth**

125 N Market Ste 1000  
Wichita, KS 67202

**9-35S-12W Barber**

Job Ticket: 042473

**DST#: 1**

ATTN: Bill Klaver

Test Start: 2011.07.07 @ 16:18:04

## 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:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4622 GIP	0.000
210.00	GCM 2%G 98%M	1.288

Total Length: 210.00 ft      Total Volume: 1.288 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

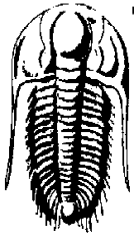
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

Woolsey Operating Co

**#4 Weckworth**

125 N Market Ste 1000  
Wichita, KS 67202

**9-35S-12W Barber**

Job Ticket: 042473

**DST#: 1**

ATTN: Bill Klaver

Test Start: 2011.07.07 @ 16:18:04

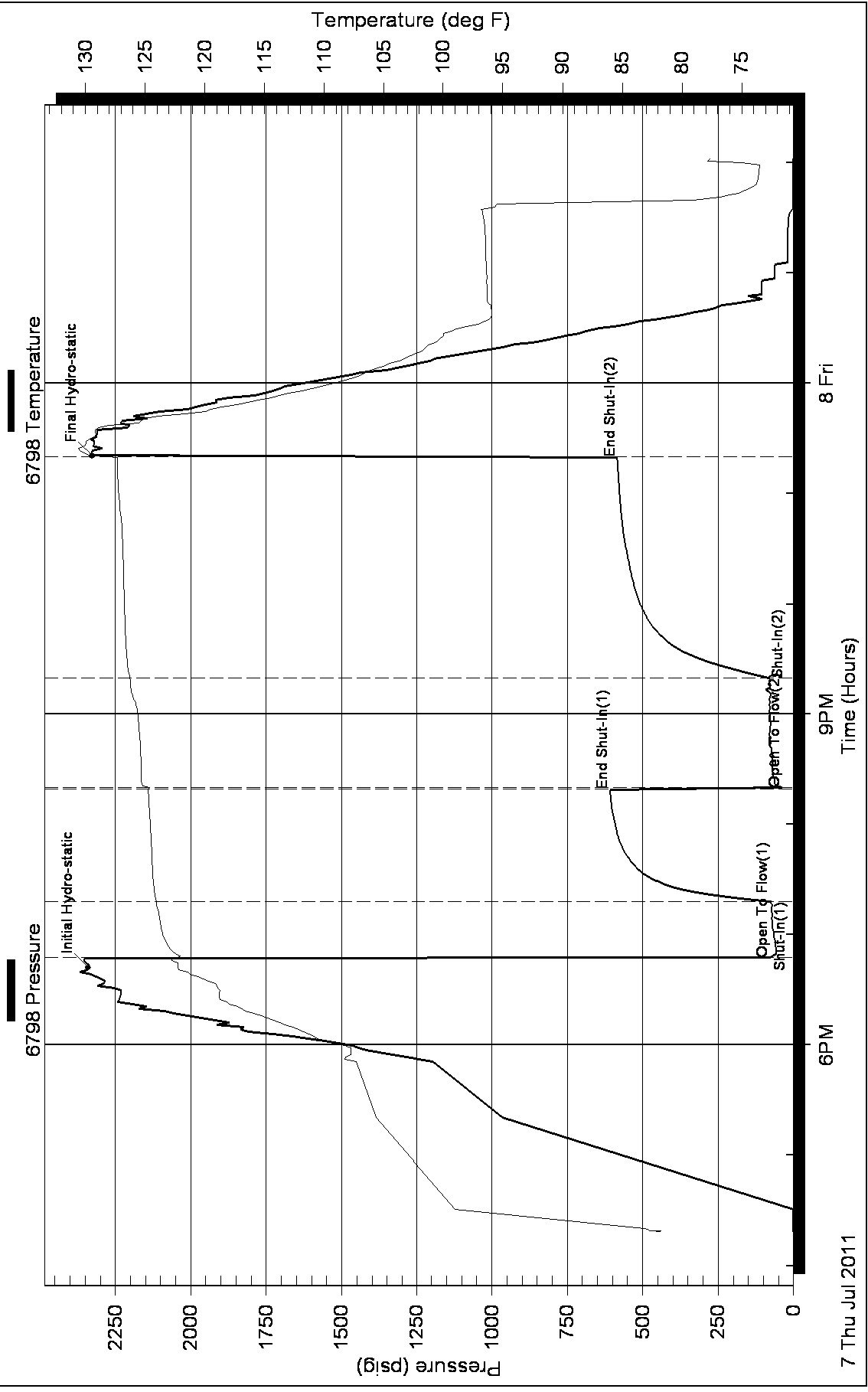
## Gas Rates Information

Temperature: 59 deg C  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
2	10	0.25	4.00	29.35
2	20	0.25	4.00	29.35
2	30	0.25	3.00	27.76
2	40	0.25	3.00	27.76
2	50	0.25	3.00	27.76
2	60	0.25	2.00	26.18

# Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Woolsey Operating Co.LLC

**Weckworth#4**

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

**9-35s-12w Barber Ks.**

Job Ticket: 042512

**DST#: 2**

ATTN: Bill Klaver

Test Start: 2011.07.10 @ 01:07:00

## GENERAL INFORMATION:

Formation: **Misener Sd.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:28:00

Time Test Ended: 10:43:45

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 56

**Interval: 5136.00 ft (KB) To 5250.00 ft (KB) (TVD)**

Reference Elevations: 1429.00 ft (KB)

Total Depth: 5250.00 ft (KB) (TVD)

1418.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

**Serial #: 8167 Inside**

Press @RunDepth: 321.90 psig @ 5137.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.10

End Date:

2011.07.10

Last Calib.:

2011.07.10

Start Time:

01:07:05

End Time:

10:43:45

Time On Btm:

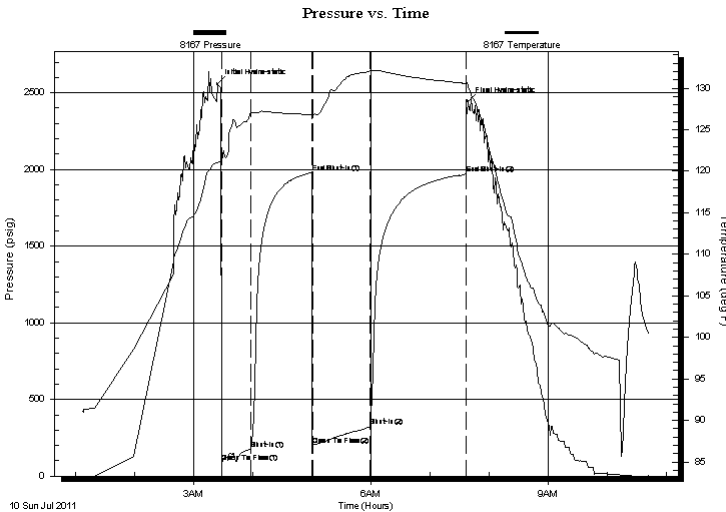
2011.07.10 @ 03:24:15

Time Off Btm:

2011.07.10 @ 07:38:30

**TEST COMMENT:** IF:Strong blow . B.O.B. in 2 mins.  
IS:Weak blow . 1/4".  
FF:Strong blow . B.O.B. in 14 mins.  
FS:Weak blow . 1 - 2".

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2557.01	121.08	Initial Hydro-static
4	87.63	120.98	Open To Flow (1)
34	177.99	127.00	Shut-In(1)
96	1979.44	126.81	End Shut-In(1)
97	202.78	126.46	Open To Flow (2)
155	321.90	132.07	Shut-In(2)
253	1969.72	130.57	End Shut-In(2)
255	2443.67	130.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW/w o specs 12%m 88%w	0.89
0.00	Rw .08 ohms @84 deg.	0.00
185.00	GOCMW 9%g 7%o 28%m 56%w	2.60
185.00	GOCWM 28%g 11%o 29%w 32%m	2.60
65.00	Mud w oil specs	0.91

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co.LLC

**Weckworth#4**

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

**9-35s-12w Barber Ks.**

Job Ticket: 042512

**DST#: 2**

ATTN: Bill Klaver

Test Start: 2011.07.10 @ 01:07:00

## 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:

78000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.99 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 ft	Description	Volume bbf
180.00	MW/w o specs 12%m 88%w	0.885
0.00	Rw .08 ohms@84 deg.	0.000
185.00	GOCMW 9%g 7%o 28%m 56%w	2.595
185.00	GOCWM 28%g 11%o 29%w 32%m	2.595
65.00	Mud w oil specs	0.912

Total Length: 615.00 ft

Total Volume: 6.987 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

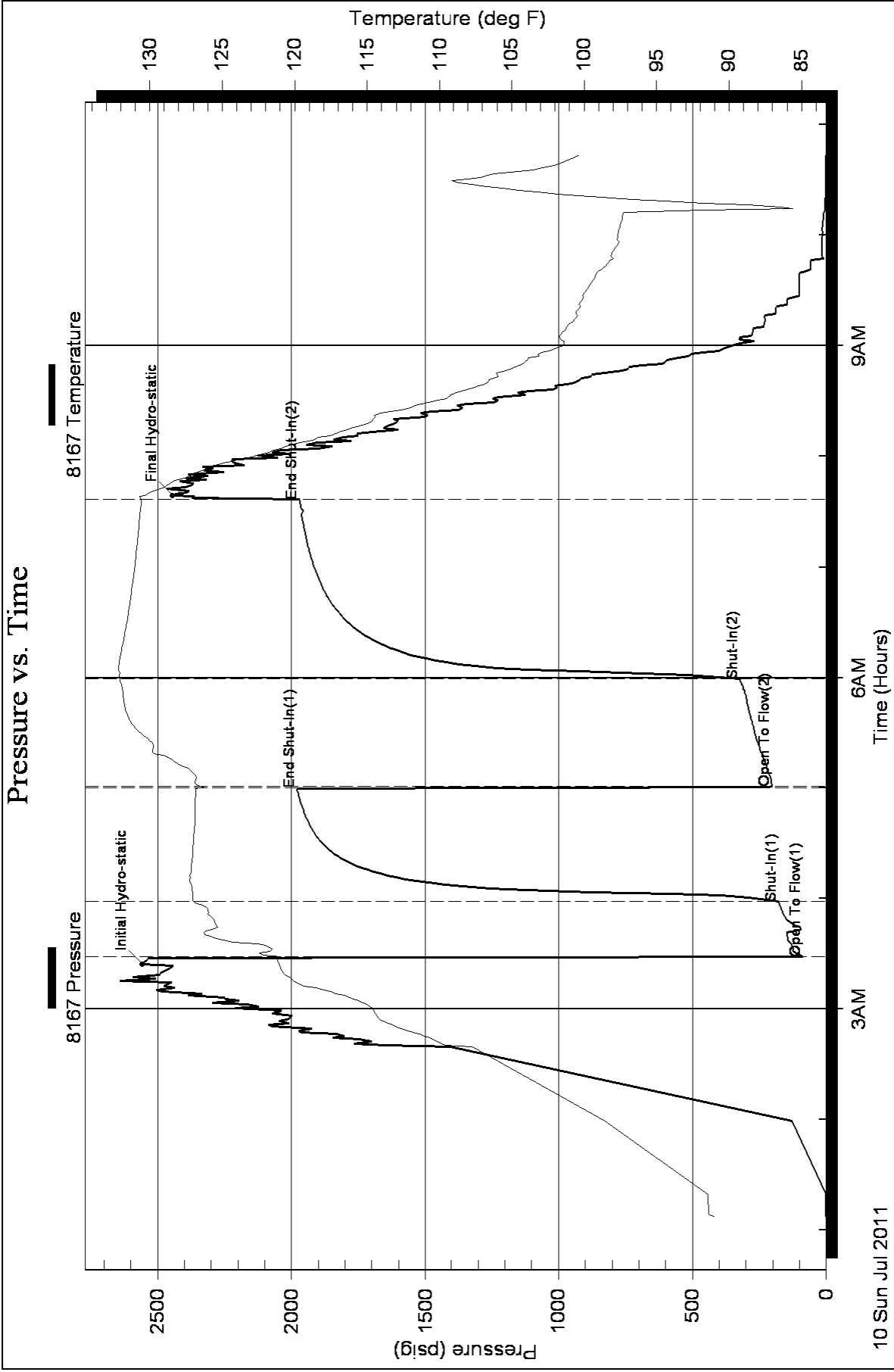
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





## Woolsey Operating Company, LLC

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

Measured Depth Log

Well Name: Weckworth #4

Location: Section 9 - Township 35 South - Range 12 West

License Number: 15-007-23723-0000

Region: Barber County, KS

Spud Date: June 30, 2011

Drilling Completed: July 11, 2011

Surface Coordinates: 2310' FSL, 10' FWL or 320' W of NW NW SW

Hardtner Field

Bottom Hole Coordinates: Verticle Hole

Ground Elevation (ft): 1418'

K.B. Elevation (ft): 1429'

Logged Interval (ft): 4000' To: 5520' Total Depth (ft): 5520'

Formation: Kansas City Goup ----> Simpson Group

Type of Drilling Fluid: Chemical Mud Displaced at 3293'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://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: Spud 5:45 pm on 6/29/2011, set 5 joints 10 3/4" X 32.75#/ft casing at 224' KB, 240 sx Class A, 2% gel, 3% cc. Cement did circulate. Plug down 2 am on 6/30/2011.

Production Casing:

Deviation Surveys: 3/4 at 228', 1/2 at 1205'. 1/2 at 1706', 1/2 at 2209', 3/4 at 2716', 1/2 at 3201', 3/4 at 3697', 7/8 at 4696', 3/4 at 4910', 3/4 at 5250', 3/4 at 5520'.

Pipe Strap @ 4910', Strap: 4912.52', Board: 4912.73', strap .21' short to the board. No correction was made to the board.

Duke Drilling Rig 10 Bit Record:

#1 14 3/4" HTC RR in at 0' out at 288'. 288' in 2.5 hours

#2 7 7/8" Varel HE-29 in at 288', out at 4910', 4622' in 117 hours, average footage of 39.5'/hour.

#3 7 7/8" Varel HE-21 in at 4910', out at 5520', 610' in 45 1/2 hours, average footage of 13'/hour.

Gas Detector: Woolsey Operating Company, Gas Trailer #2

Mud System: Mud-Co., Brad Bortz, Engineer

DSTs: Trilobite Testing Co. Leal Cason, Gary Pevoteaux, Testers

OH Logs: Superior Well Service, Dual Induction Laterolog w/SP, CNL-FDC w/PE, GR, Caliper. Jeff Luebbers, Engineer.

## DSTs

DST #1 Mississippian, 4840'-4910'. 30"-60"-60"-120", Strong blow BOB 2 minutes into IFP. GTS 2 minutes into FFP (GTS 32 Minutes), Rec: 4622' GIP, 210' GCM (2%G, 98%M). IHP 2339, IFP 79-75, ISIP 608, FFP 38-81, FSIP 583. FHP 2327. BHT 127. Gas rates during FFP on 1/4" choke. 10"-20" 29.3 MCF, 30"-50" 27.7 MCF, 60"-26.1 MCF.

DST #2 Misener Sand, 5136'-5250'. 30"-60"-60"-90", SB BOB 2 minutes into IFP, FB BOB 10 minutes into FFP. Rec: 65' OSM (<1%O), 185' GOCWM (28%G, 11%O, 29%W, 32%M), 185' GOCMW (9%G, 7%O, 28%M, 56%W), 180' OSMW (<1%O, 12%M, 88%W). Rw .08 ohms at 84 degrees. Chlorides 78,000 ppm. IHP 2557, IFP 87-177, ISIP 1979, FFP 202-321, FSIP 1969, FHP 2443. BHT 131 degrees.

## CREWS

Joe Livingston, Tool Pusher

Scott Edwards, Days

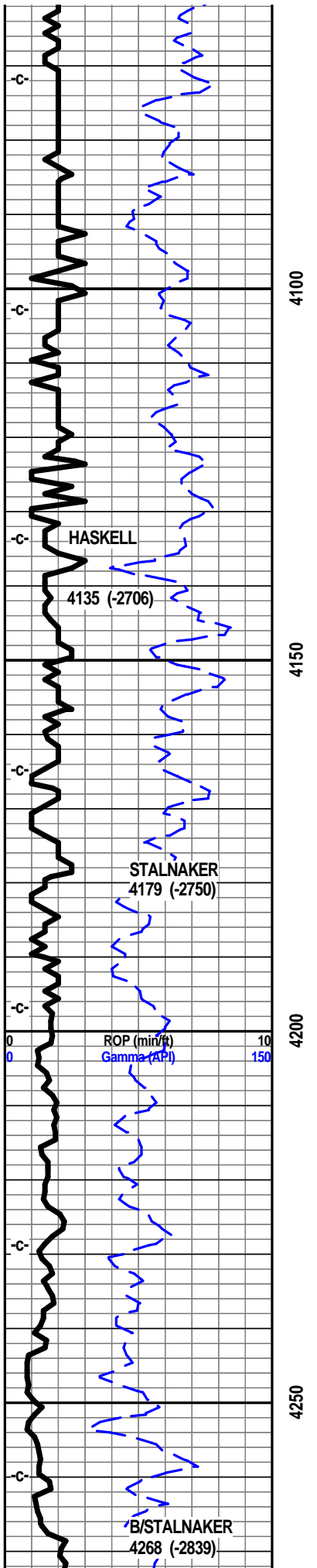
Colby Crawford, Evening

Alex Ordonez, Morning

Ron Burns, Relief







**7 am Progress:**

June 29, 2011 MIRT, Spud 5:45 pm  
 June 30, 2011 WOC, Plug down 2 am  
 July 1, 2011 Drilling at 1738'  
 July 2, 2011 Drilling at 2466'  
 July 3, 2011 Drilling at 2998'  
 July 4, 2011 Drilling at 3275'  
 July 5, 2011 Drilling at 3955'  
 July 6, 2011 Drilling at 4535'  
 July 7, 2011 Drilling at 4808'  
 July 8, 2011 Drilling at 4924'  
 July 9, 2011 Drilling at 5163'  
 July 10, 2011 DST #2 at 5250'  
 July 11, 2011 CFS at 5408'  
 July 12, 2011 E-logs out 4 am

Mud-Co. 4070'  
 wt. 9.2 vis. 51  
 wl. 9.0 chl. 4,000

**E-Log Tops:**

Herington 1953 (-524)  
 Onaga 2824 (-1395)  
 Wabaunsee 2880 (-1451)  
 Stotler 3022 (-1593)  
 Topeka 3486 (-2057)  
 LeCompton 3639 (-2210)  
 Kanwaka 3662 (-2233)  
 Elgin Sand 3757 (-2328)  
 Heebner 3868 (-2439)  
 Toronto 3879 (-2450)  
 Douglas Group 3923 (-2494)  
 Douglas Shale 3944 (-2515)  
 Ireland Sand 4033 (-2604)  
 Haskell 4135 (-2706)  
 Stalnaker Sand 4179 (-2750)  
 Quindaro Shale 4389 (-2960)  
 Kansas City 'F' 4405 (-2976)  
 Kansas City 'G' 4432 (-3003)  
 Kansas City 'H' 4481 (-3052)  
 Kansas City 'I' 4523 (-3094)  
 Stark 4562 (-3133)  
 Swope 4572 (-3143)  
 Hushpuckney 4593 (-3164)  
 Hertha 4605 (-3176)  
 B/Kansas City 4647 (-3218)  
 Pawnee 4736 (-3307)  
 Cherokee Group 4782 (-3353)  
 Cherokee Sand 4804 (-3375)  
 Mississippi 4834 (-3405)  
 C3 4842 (-3413)  
 C2A 4859 (-3430)  
 C2 4915 (-3486)  
 C1 4969 (-3540)  
 Osage 5045 (-3616)  
 Northview Shale 5098 (-3669)  
 Compton 5120 (-3691)  
 Kinderhook 5142 (-3713)  
 Woodford 5215 (-3786)  
 Misener Sand 5240 (-3811)

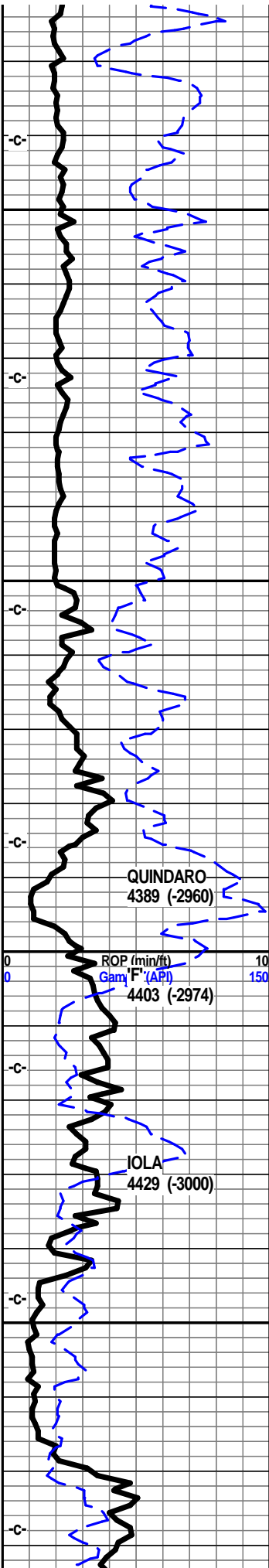
0 TG 200

wt. 9.0 vis. 49

wt. 9.0 vis. 48

Viola 5278 (-3849)  
 Simpson Group 5394 (-3965)  
 Wilcox 5406 (-3977)  
 McLish Shale 5471 (-4042)  
 LTD 5524 (-4095)

**Oil/Gas Show Legend**  
 Gas  
 Even Stain/Saturation  
 Spotted Stain/Saturation  
 Questionable  
 Dead/Gilsonitic

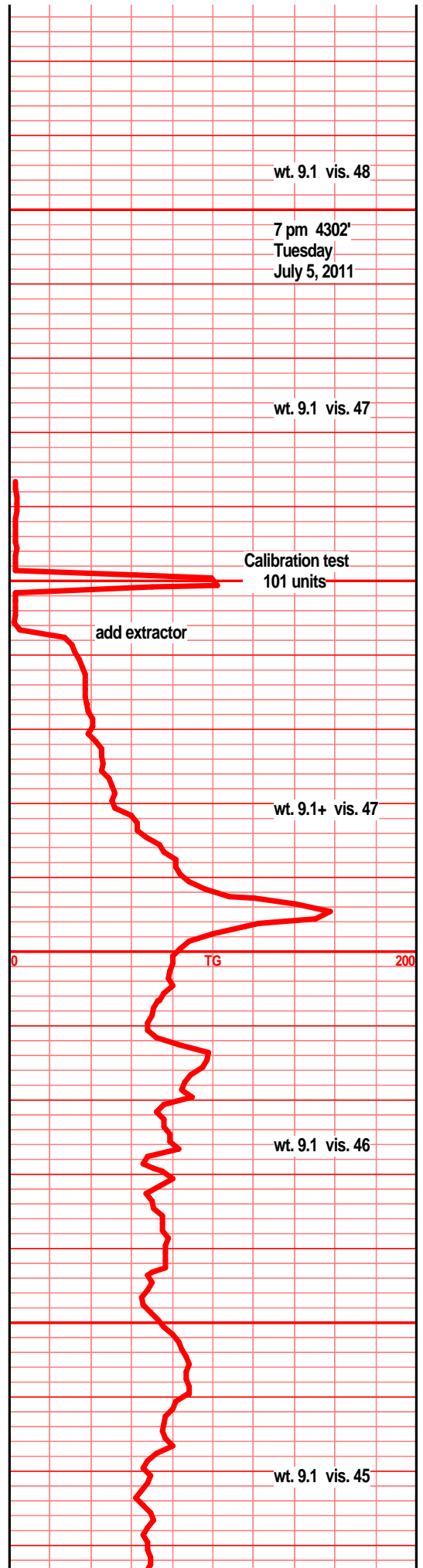
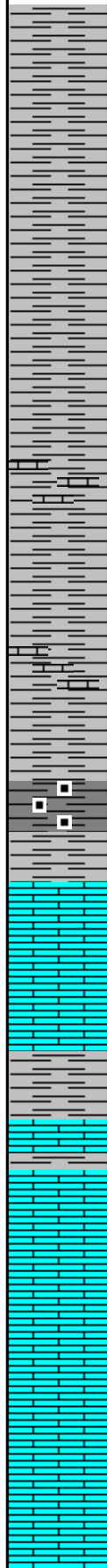


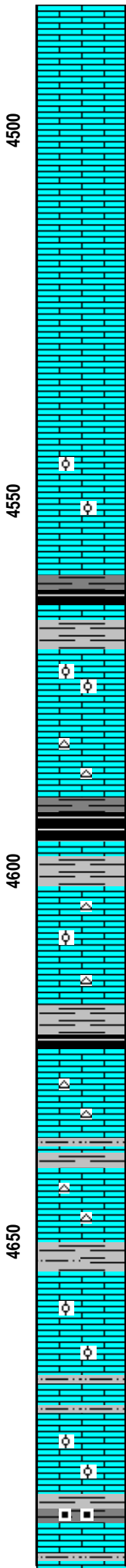
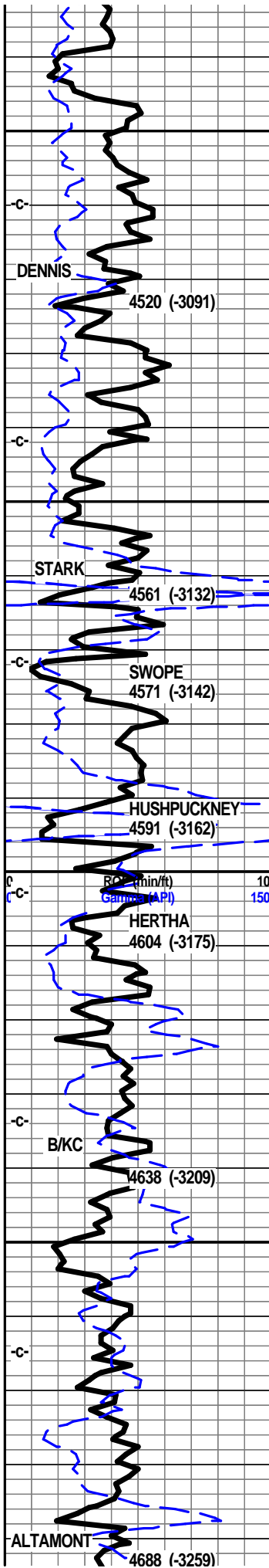
4300

4350

4400

4450





4500  
 Ist crm buff tan f sli med xln gran blkly ang sub chlky calc xln fill, foss frags, crsly in prt

4550  
 Ist crm tan buff f sli med xln blkly ang gran foss frags, crsly foss in prt, frags/ool/pelletal, calc xln fill chlky

4561 (-3132)  
 Ist tan brff crm f xln dns hrd blkly ang foss frags, calc xln fill, foss ool, pelletal

shl gry drk gry blk, blk carb, wxy grsy text, tr gas bubs

4571 (-3142)  
 Ist crm buff tan f sli med xln gran blkly flky sub chlky, foss frags, foss ool/pelletal, calc xln fill, inter xln por

Ist crm tan buff f xln blkly ang dns bec hrd, foss frags, foss ool/pelletal, tr sub chlky, calc xln fill, tr chrt tan shrp frsh

4591 (-3162)  
 shl drk gry blk, blk carb, wxy grsy in prt, gas bubs, lst gry tan vf xln gritty arg, tr foss frags,

4600  
 Ist crm tan brn f vf xln dns hrd blkly ang, calc xln fill, tr arg, foss frags, foss ool, tr chrt tan shrp frsh

Ist buff tan f vf xln blkly dns mstly hrd, tr sub chlky, foss frags, micro ool, calc xln fill,

shl drk gry blk, blk carb, gas bubs, lst tan lt gry f vf xln dns hrd blkly ang, tr arg, tr foss frags, tr calc xln fill

shl gry med gry calc fiss, lst tan lt gry lt brn vf xln dns hrd blkly ang tr foss frags, tr chrt tan wht shrp frsh opa

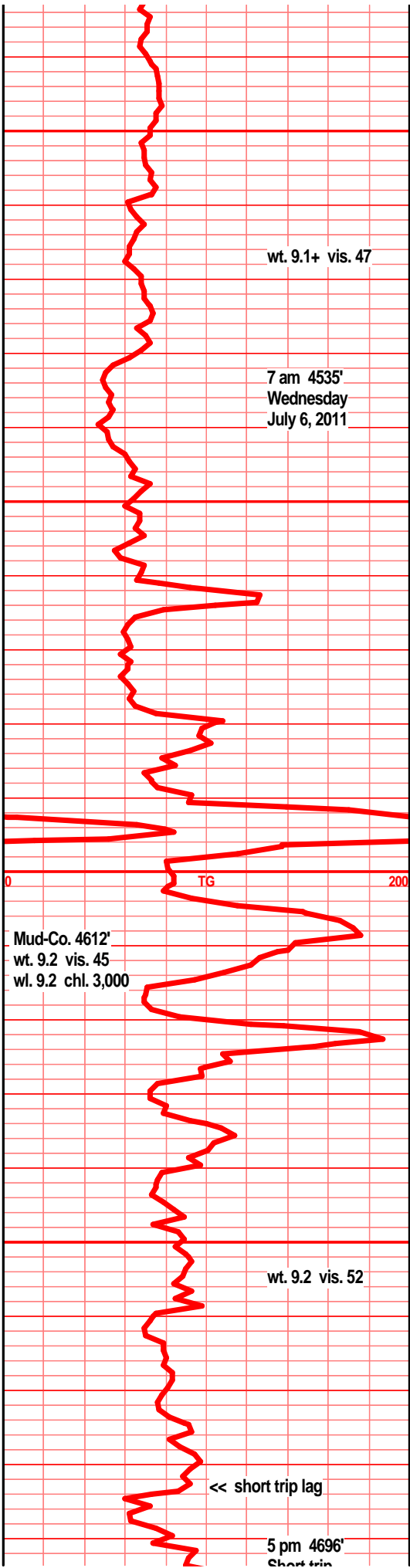
4650  
 Ist crm gry tan f vf xln dns rd blkly ang arg, tr foss frags, tr sub chlky, mstly hrd dns, much gry brn calc shls, chrt gry shrp frsh

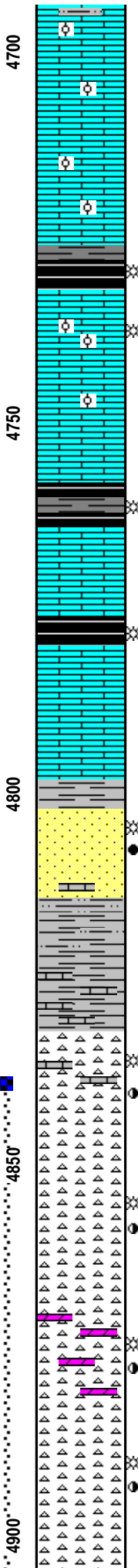
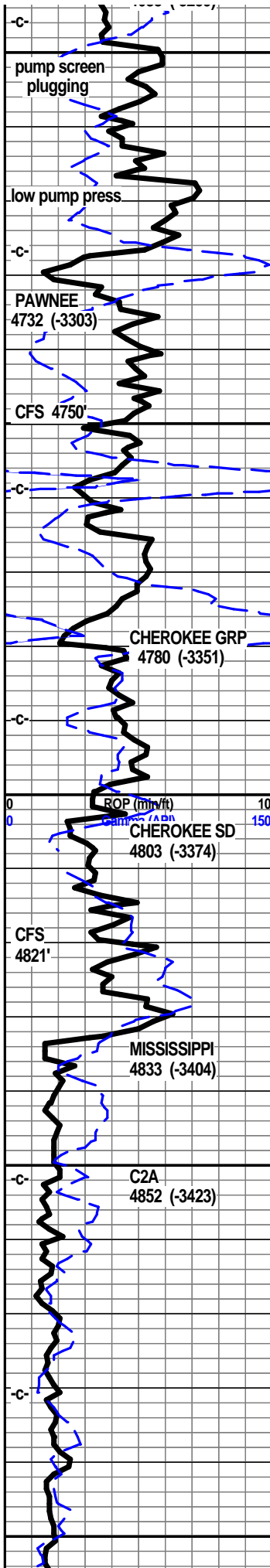
shls gry gry/green silty gritty calc, lst gry tan dull tan vf xln dns hrd ang arg, silty arg -poor spl-

Ist crm tan f vf xln blkly ang dns pcs, tr sub chlky foss frags, micro ool/pelletal, calc xln fill, massive blkly

Ist crm tan buff f vf xln dns hrd blkly calc xln fill, foss frags, micro ool, pelletal, blkly ang pcs, tr sub chlky

shl gry drk gry blk, lst crm buff f vf xln dns hrd blkly, tr sub chlky, foss frags, micro ool/pelletal,





calc xin fill

1st crm tan buff f xln blkly ang tr sub chlky, foss frags, micro ool, calc xin fill, much frsh "splintery" shls in spl

1st tan buff vf xln dns hrd blkly ang pcs, tr sub chlky, tr calc xin fill, micro foss frags, ool/pelletal

1st crm tan tr lt brn vf xln dns hrd blkly massive, calc xin fill, tr sub chlky tr foss frags, micro ool,

shl gry drk gry blk, blk carb, gas bubs, blkly ang pcs

1st crm tan buff f sli med xln, flky blkly ang pcs, sndy/gritty in prt, sub chlky to chlky, foss frags, foss ool, inter xln por, hvy calc xin fill, bright UV, gas bubs, nodor, nsfo/stain. 1st tan gry mott, f sli med xln blkly chlky sli arg pcs, foss frags, crsly ool in prt, calc xin fill

shl gry drk gry blk, blk carb in prt, 1st tan gry vf xln blkly dns hrd ang. sli arg, foss frags

1st tan buff lt brn f xln dns, hrd, blkly, ang, tr micro foss, tr gritty, foss frags

shl gry blk, 1st tan gry tan buff, f vf xln dns, hrd blkly, tr arg, sub chlky/gritty in prt, tr foss frags, calc xin fill

1st crm tan buff off wht, f vf xln blkly dns hrd, sub chlky in prt, foss frags, micro foss, calc xin fill, mstly dns hrd blkly ang

1st tan crm lt gry vf xln dns hrd blkly tr foss, sub chlky, shl gry med gry calc

sst brn drk brn clstrs, vf grnd, sub ang grns, w/srtd, f/prly cem, sub fria, soft/mushy in prt, inter grn por, bleeding oil/gas, gd stain/sat, abun gas bubs, gd odor, dead flky stain

sst wht off wht vf grnd, sub rded grns w/srtd, vry calc, limy, blkly ang clstrs, shls gry drk gry/green silty sndy gritty, 1st tan buff, gry, vf xln blkly dns, hrd sub chlky, pyritic fill,

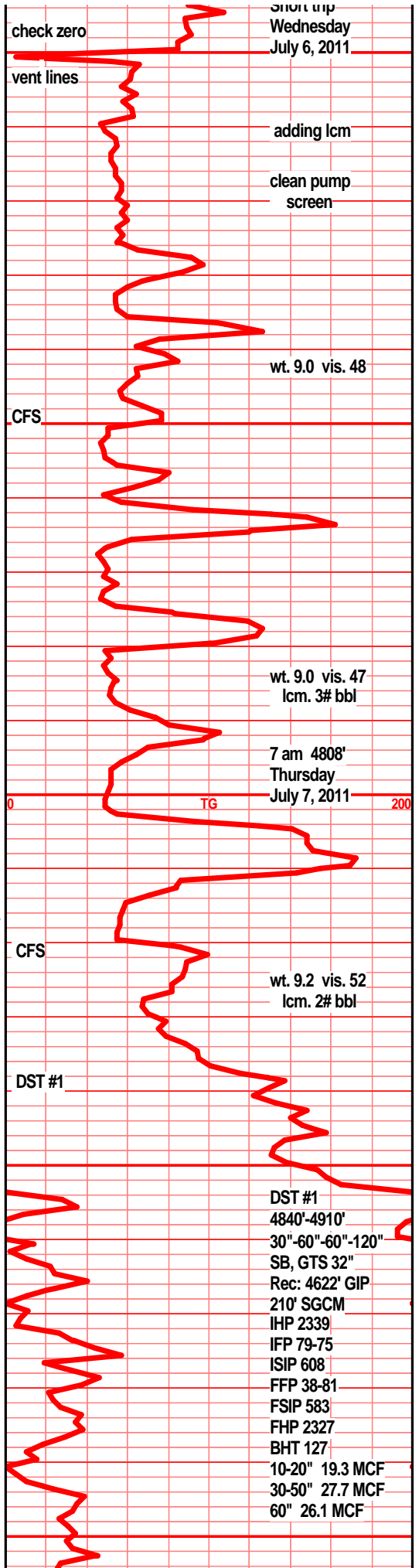
chrt wht tan lt gry, lt smokey, shrp, frsh, opa, blkly-ang pcs, transl, tr frac por, tr weath sli trip text, sli pp/moldic por, sli odor, brn stain, tr gas bubs, vssfo/brkn

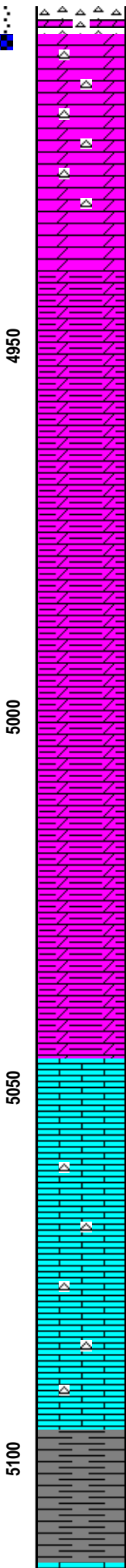
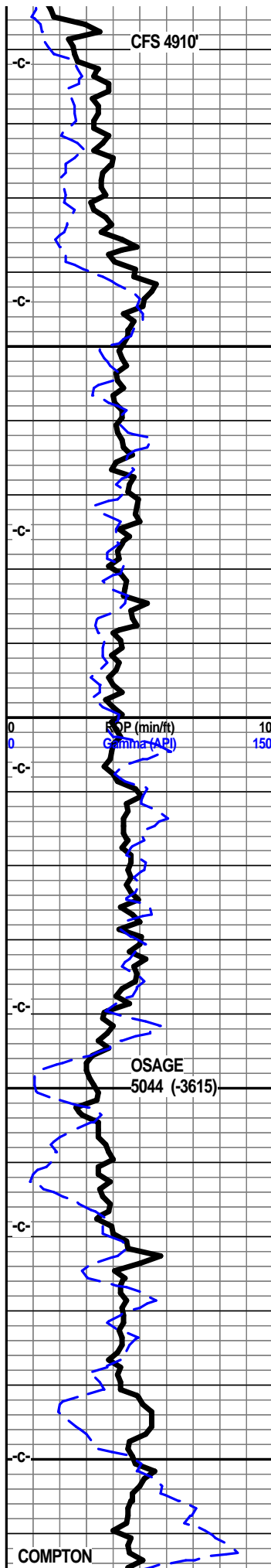
chrt wht off wht, lt gry, smokey, shrp, frsh, opa, transl, blkly, frac por, tr weath trip text, pp/moldic por, gas bubs, brn stain, ssfo, tr druzi qrtz

chrt lt gry, gry brn mott, shrp, frsh, opa, transl, w/gd weath trip text por, gd weath edge pp/moldic por, tr tan brn dolo edge with gd pp/moldic por, inter xln por, gd strong odor in all, "bleeding" oil/gas, dull UV, gd SFO/Stain, free oil on spl cup water, tr druzi qrtz

chrt lt gry, gry off wht, smokey, shrp frsh, blkly, transl, opa, gd weath edge trip text, pp, vug, moldic por, brn stain, brn SFO, gd gas bubs, strong odor, bleeding gas/oil, oil on spl cup water, dolo-dolo chrt tan brn f xln w/gry smokey frsh chrt inclu, gd inter xln/pp por, stain, SFO, gas bubs

chrt lt gry smokey shrp frsh opa, w/weath trip text edges, gd pp, vug, moldic por, gd odor, gd





SFO/brn stain, dull UV, gas bubs, doio cnrt, tan brn dolo w/gry smokey chrt inclu, weath text, gd stain, SFO, gas bubs, tr glau

dolo off wht v lt gry, f vf xln dns, silic text, hrd blkly ang pcs, tr glau, tr chrty, chrt wht opa q shrp frsh, tr edge drk edge stain, NSFO, no vis gas

dolo crm tan lt gry vf xln dns hrd blkly ang pcs, silic text, tr glau, tr wht opa q frsh chrt

dolo lt gry bec med gry, vf xln dns hrd, blkly ang, bec arg, silty, gritty,

dolo silty dolo med drk gry f xln gran gritty silty arg, tr silic text, mstly hrd dns

dolo med gry, gry drk gry vf xln silty gritty pyritic in prt, tr silic text, shly dolstn, gritty silty arg

dolo gry med drk gry vf xln dns hrd silty gritty arg, shly dolstn med gry silty gritty arg, pyritic

dolostn, med gry drk gry vf xln gritty silty gran, tr silic text,

dolo, shly silty dolo, drk gry silty gritty shly, shly dolstn, silty gritty gran hrd blkly ang dns pcs

dolo gry med gry vf xln gran gritty silty arg, mudstn, silty gritty

dolostn, silty shly gritty, f xln blkly ang pcs, tr silic text,

dolo, silty shly dolstn, mud stn silty gritty shly, arg tr silic text, hrd blkly ang pcs

shl gry drk gry dolo in prt, silty gritty, dolo drk gry silty gritty arg dns hrd blkly pcs

shl gry drk gry silty gritty hrd blkly pcs, dolo text, pyritic

dolo, dolo shl, silty gritty arg, tr calc, blkly ang dns pcs

lt wht off wht f xln, sli med xln in prt, flky, tr sub chlky, tr chrty, chrt wht shrp frsh opa q, tr glau,

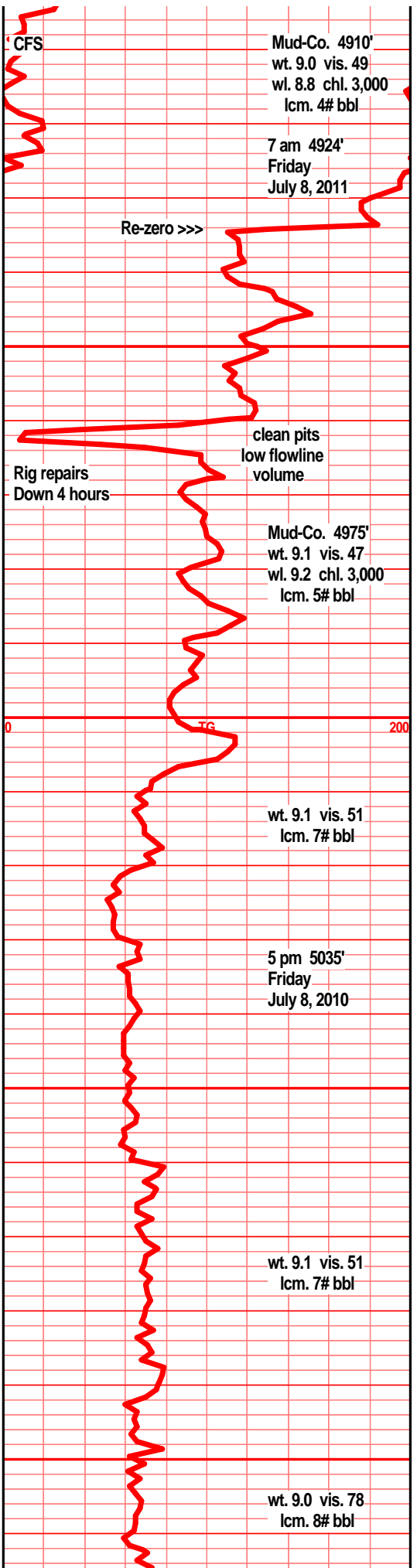
lst wht off wht f sli med xln blkly flky, tr sub chlky, tr chrty, chrt wht opa q shrp

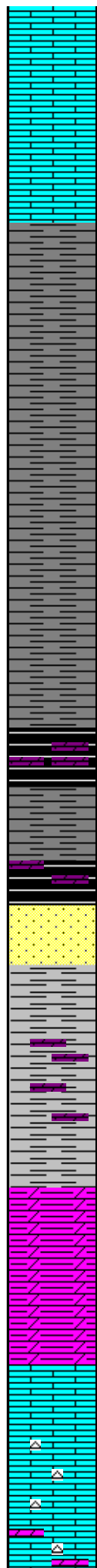
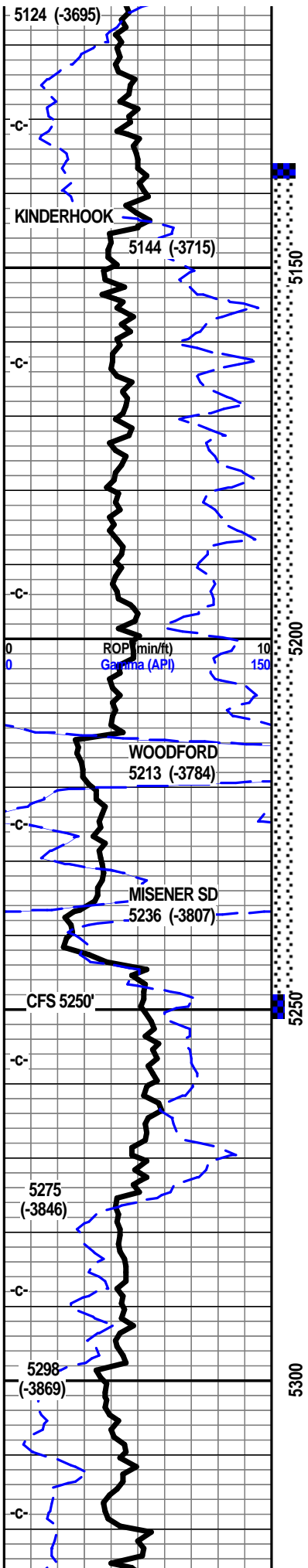
lst wht off wht, f slimed xln blkly flky ang pcs, tr sub chlky, tr chrty

lst wht off wht f sli med xln blkly flky ang pcs, tr sub chlky, tr chrty, chrt wht transl shrp frsh opa q

lst off wht lt gry, f sli med xln blkly ang flky sub chlky pcs, chrty in prt, shl lt gry green, green, silty gritty

shl gry green, green, silty gritty, pyritic, gran, tr calc





shl gry gry green, blue green silty gritty, pyritic, gran, tr calc

lst wht f xln, sli med xln in prt, blk ang dns pcs, tr foss frags, micro foss frags

lst wht off wht off gry wht, f sli med xln blk ang hrd dns, tr foss frags, micro foss

shl drk bry blk, brn blk, silty gritty

shl gry drk gry blk, gry brn silty gritty pyritic

shl gry drk gry/blk, tr blk carb, silty, gritty pyritic

shl drk gry blk, blk carb text, blk, ang, blk platy pcs, tr pyritic, tr gas bubs

shl drk gry, gry/brn, brn/blk, tr blk carb text, blk flky pcs, pyritic, gritty silty

shl gry drk gry brn, brn blk, silty gritty, bedded, pyritic,

shl, shly dolo, drk brn red, reddish blk, gritty, gran, carb, silty, pyritic, tr sndy, abun gas bubs

shl drk gry blk semi carb, shl-shly dolo, drk brn red, reddish blk, semi carb, silty, gritty, sndy, gran, pyritic, abun gas bubs

sst clr off wht vlt tan clstrs, f med grnd, ang grnd, prly srted, prly to fairly w/cem, mstly sub fria, gd inter grain por, tr min/pyr fill, tr clay clasts, fair odor, fair gas bubs, fair SFO, lt brn SFO, lt transl SFO. Bright yllw UV. FO floating on spl tray,

shl gry drk gry green blk ang hrd pcs, silty gritty in prt, tr pyritic, dolo, shly dolo gry drk red/brn, hrd blk silty dns pcs

shl drk gry/green, brn/red/blk, silty gritty, pyritic, tr carb in prt, gas bubs

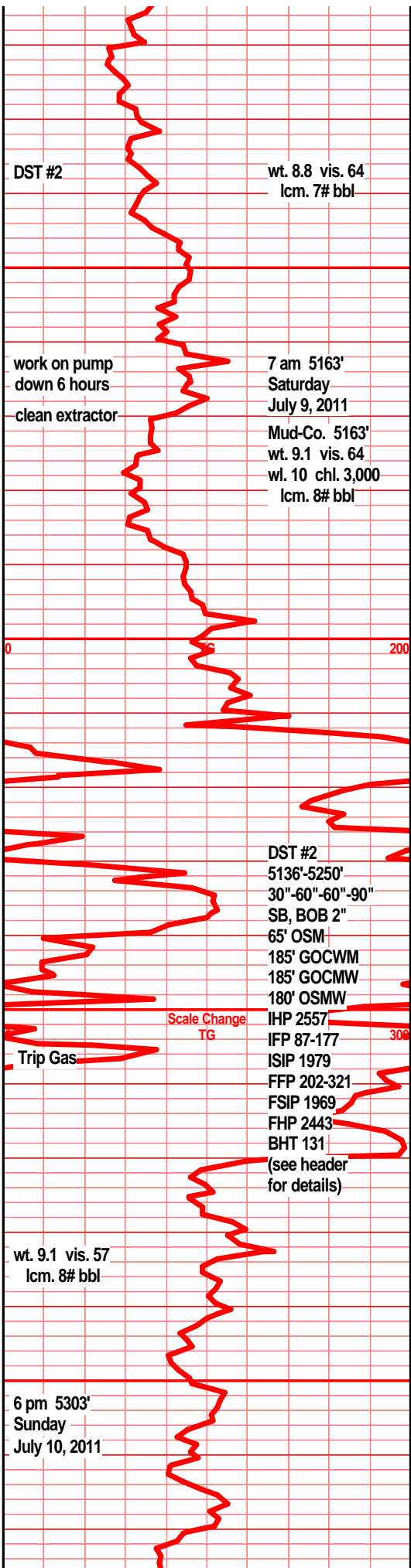
shl, silty shly dolo, gry, lt gry, soft, gran gritty pc, shl brn red/blk, dolo text, blk ang pcs, silty shly

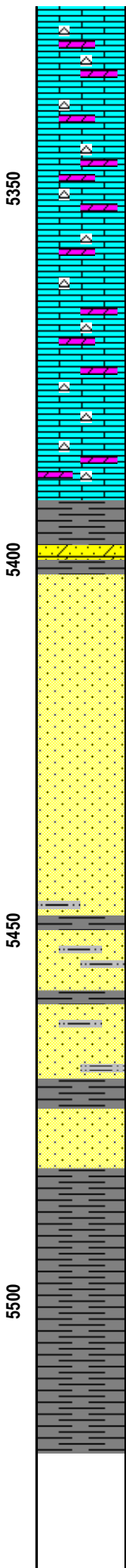
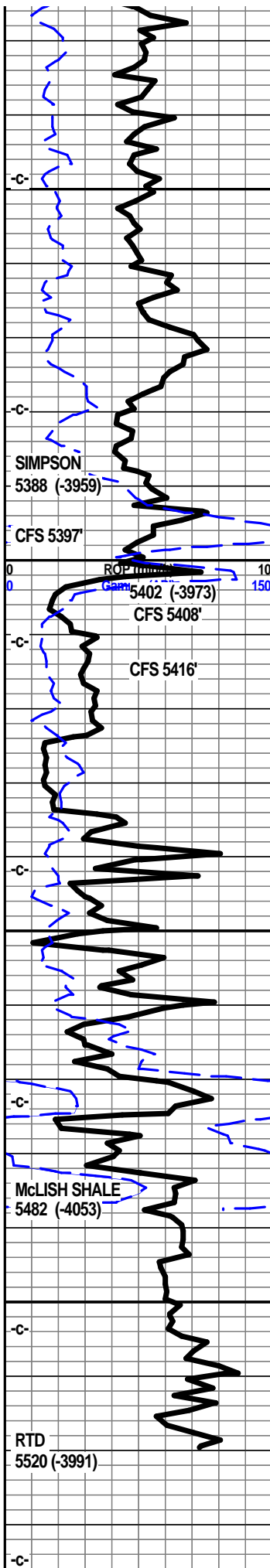
dolo, dolo shl, lt med gry soft gran gritty blk ang pcs, tr pyritic

dolo, shly dolo, gry med gry, silty gritty blk ang pcs, marl in prt, soft mushy

lst wht off wht, tr lt gry tint, f sli med xln blk ang flky, tr pyritic, tr sub chlky, tr micro foss frags, chrt wht shrp opaq transl

lst wht, off wht lt gry mott, f sli med xln, blk, ang, flky, tr sub chlky, tr pyritic, chrt dull tan gry shrp frsh opaq, tr dolo tan brn f med xln, blk ang sndy, inter xln por





lst, dolo in prt, off wht bec lt gry tan f xln blk  
ang dns hrd, sub chlky tr micro foss frags, chrt  
tan dull tan shrp frsh opa q foss

lst crm tan lt brn, dolo in prt, f vf xln dns hrd  
blk, sub chlky in prt, chrt tan lt gry dull tan,  
shrp frsh, opa q foss

lst dolo in prt, tan lt gry brn f vf xln dns hrd, sub  
chlky gran text, tr soft mushy, chrty in prt, chrt  
dull tan shrp frsh foss

lst dolo in prt, f vf xln dns hrd blk tr sub chlky,  
gran, chrty in prt, chrt dull tan shrp frsh opa  
q foss

lst dolo in prt, f vf xln dns hrd, blk ang pcs, sub  
chlky/gran in prt, vry chrty, chrt tan dull tan shrp  
frsh

lst dolo in prt, f vf xln tan off wth, tr tan brn, f vf  
xln dns, blk ang, sub chlky, chrty, chrt tan dull  
tan lt brn shrp frsh opa foss, shl teal green,  
sndy, pyritic, wxy, grsy in 60" spl

shl, gry, teal green, sst gry/green f grnd sub ang  
grns, dolo xln fill, pyritic,  
sst clr lt gry clstrs, f grnd, sub rded grns, w/srtd,  
fria/sub fria, prly to fair cem, tr calc cem, silic  
cem, gd inter grn por, SFO, gas bubs, brn  
droplets, lt transl SFO, nodor. 5416'-sst off wht lt  
gry clstrs, f grnd, sub ang grns, sub fria, prly  
srtd in prt, fair/w cem, blk ang clstrs, nodor, brn  
SFO, lt stain, tr gas bubs,

sst clr lt gry clstrs, f grnd, sub rded grns,  
w/srtd, sub fria to fria, prly to w/cem, silic cem, tr  
calc in prt, min fill tr pyritic, tr arg, brn SFO, dead  
flky stain, nodor, tr gas bubs

sst clr off wht lt gry clstrs, f grnd sub rded grns,  
prly srtd, sub fria, mstly tite blk ang clstrs,  
w/cem, tr calc in prt, min fill, pyritic in prt, dead  
flky stain

sst clr lt gry tr off wht clstrs, f grnd, sub ang/sub  
rded grns, prly strd, sub fria/tite, blk ang hrd  
clsts, min fill, pyritic, tr arg, tr clay fill, tr inter grn  
por, tr dead flky stain, tr drk oil droplets, nodor

shl gry drk gry teal green, sst clr lt tan/gry clstrs,  
f grnd, sub ang/sub rded grns prly srtd, sub fria  
to tite blk ang hrd clstrs, min fill, clay fill in prt

shl dkr gry green, teal green, snd grn inclu,  
pyritic

shl gry drk gry green teal green, snd grn inclu,  
min fill, pyritic

shl gry green, teal green wxy grsy blk pcs, snd  
grn inclu, min fill pyritic

