

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1241011
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

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
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

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

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical 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

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1241011

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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> _____	PRODUCTION INTERVAL: _____ _____
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Federal Tax I.D. # 20-8851475

REMIT TO P.O. BOX 93999
 SOUTHLAKE, TEXAS 76092

316 267 4383

SERVICE POINT:

MEO COOPER

DATE <u>10-8-14</u>	SEC <u>76</u>	TWP <u>35</u>	RANGE <u>12</u>	CALLED OUT <u>6:30</u>	ON LOCATION <u>4:00</u>	JOB START <u>10:17</u>	JOB FINISH <u>11:30</u>
LEASE <u>Chklos</u>	WELL # <u>"2"</u>	LOCATION <u>Hoodburn K 1.5 East</u>			COUNTY <u>Garza</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>		S ₁ th 11th			1-01		

CONTRACTOR Fossil OWNER Woodkey Oper Co. LLC
 TYPE OF JOB Surface
 HOLE SIZE 17 1/2 T.D. 216
 CASING SIZE 1 3/8 40' DEPTH 216
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT 20
 CEMENT LEFT IN CSG. 20
 PERFS. _____
 DISPLACEMENT _____

CEMENT AMOUNT ORDERED 300x Class A
246 GAL 360 L

COMMON	<u>300</u>	@	<u>17.90</u>	<u>5370.00</u>
POZMIX		@		
GEL	<u>564 #</u>	@	<u>50</u>	<u>282.00</u>
CHLORIDE	<u>846 #</u>	@	<u>1.10</u>	<u>930.60</u>
ASC		@		
HANDLING		@		
MILEAGE		@		
20% = 1316.52				TOTAL <u>6582.60</u>

EQUIPMENT

PUMP TRUCK CEMENTER	<u>T-928A</u>	<u>1</u>
# <u>419-372</u>	HELPER	<u>ST'S Gibson</u>
BULK TRUCK		
# <u>364</u>	DRIVER	<u>Carl B</u>
BULK TRUCK		
#	DRIVER	

REMARKS:
Ren 6 1/4's 133/8 40' CSG
1.5 = 216'
CSG on bottom float up to CSG & Posnk Cal Wks
Ramp to 1266 H23
mk & Pump 300x 24 Gal 31.6 15.2' gal
Dispa 75.5 246 total 1.34 H23
plus down 2 11:00
Close Valve and 200
Good Cal the 23 Cal out to Rd
 CHARGE TO: Woodkey Oper Co. LLC
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	<u>216</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE	<u>20</u>	@	<u>4.10</u> <u>82.00</u>
MILEAGE	<u>20</u>	@	<u>7.75</u> <u>154.00</u>
MANIFOLD		@	
<u>Handling 324.90</u>		@	<u>2.48</u> <u>801.51</u>
<u>Mileage 15.25</u>		@	<u>2.75</u> <u>838.51</u>
20% = 674.96			
			TOTAL <u>3397.53</u>

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		

To: Allied Oil & Gas Services, 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 THARP
 SIGNATURE Mike Tharp

TOTAL _____
 SALES TAX (if Any) 470.65
 TOTAL CHARGES 9979.9392
 DISCOUNT 1995.99 IF PAID IN 30 DAYS
NET 7983.94
93

NOV 14 2014

ALLIED OIL & GAS SERVICES, LLC 064483

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Medicine Lodge Ks
10-26 10-26

DATE <u>10-19-14</u>	SEC. <u>16</u>	TWP. <u>35</u>	RANGE <u>12</u>	CALLED OUT	ON LOCATION <u>7:00 P</u>	JOB START <u>12:35 A</u>	JOB FINISH <u>1:36 A</u>	
LEASE <u>OH/SON</u>		WELL # <u>2</u>	LOCATION <u>Hardtner Ks 1.5 G</u>			COUNTY <u>Barber</u>	STATE <u>Ks</u>	
OLD OR <u>(NEW)</u> (Circle one)		South into						

CONTRACTOR Fossil
 TYPE OF JOB Production
 HOLE SIZE 7 7/8 T.D. 5424
 CASING SIZE 5 1/2 DEPTHS 5422
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT 37.85
 CEMENT LEFT IN CSG. 37.85
 PERFS.
 DISPLACEMENT 126 2% KCL
 EQUIPMENT

PUMP TRUCK CEMENTER JAL Heard
 # 548/545 HELPER Justin Bower
 BULK TRUCK
 # 351/252 DRIVER Wayne Rucker
 BULK TRUCK
 # DRIVER

REMARKS:

On Location Safety Meeting
Pressure Test Pump Spacer
Cmt R+M Hole M.S. + pump
Lead + Tail Wash pump + lines
Displace Catch Cmt Sealift
Slow Rate Pump plus floats
held wash up truck

CHARGE TO: Woolsey
 STREET
WELL FILE STATE ZIP

Regulatory Correspondence
 Drig / Comp Workovers
 Tests / Meters Operations 5 1/2

To: Allied Oil & Gas Services, 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 THAAP

SIGNATURE Mike Thapp

OWNER Woolsey
 CEMENT
 AMOUNT ORDERED 90sx 60:40:4% Gel
125sx Class H + 10% Gyp + 10% Salt
6# Kalseal + 8% FL-160 + 1/4# Floseal
 COMMON # 125 sx @ 27.24 3405.00
 POZMIX @
 GEL @
 CHLORIDE @
 ASC @
 60:40:4% Gel 90sx @ 18.43 1658.70
 Gyp 1175# @ .88 1034.00
 Salt 675# @ .68 459.00
 Kalseal 750# @ .98 735.00
 Floseal 31# @ 18.83 92.07
 FL-160 94# @ 18.90 1776.6
 Clapro 12 GAL @ 34.40 412.80
 HANDLING @
 MILEAGE @

20% = 1914.63 TOTAL 9573.17

SERVICE

DEPTH OF JOB 5422
 PUMP TRUCK CHARGE 3099.25
 EXTRA FOOTAGE L.V. 20 @ 4.40 88.00
 MILEAGE 20 @ 7.70 154.00
 MANIFOLD + Head @ 275.00
 Handling 264.91 colt # @ 2.48 656.97
 Drayage 11-262/225:24 @ 2.75 619.41

20% = 978.53 TOTAL 4892.63

PLUG & FLOAT EQUIPMENT

1 LDP @ 660.00
1 AFU Flat Shoe @ 545.00
13 Turbolizers @ 95.00 1235.00
28 Scrapers @ 89.00 2492.00

TOTAL 4932.00

SALES TAX (If Any)

TOTAL CHARGES 19397.80

DISCOUNT 16504.64 IF PAID IN 30 DAYS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Woolsey Operating Company

16-35s-12w Barber Co., Ks

125 N. Market STE 1000
Wichita Ks. 67202

Ohlson # 2

Job Ticket: 57786

DST#: 1

ATTN: Bill Klaver

Test Start: 2014.10.16 @ 12:18:23

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 14:50:08

Time Test Ended: 22:59:38

Test Type: Conventional Bottom Hole (Initial)

Tester: Matt Smith

Unit No: 53

Interval: 4836.00 ft (KB) To 4896.00 ft (KB) (TVD)

Reference Elevations: 1393.00 ft (KB)

Total Depth: 4896.00 ft (KB) (TVD)

1381.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 6773

Inside

Press@RunDepth: 75.84 psig @ 4837.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.16

End Date:

2014.10.16

Last Calib.:

2014.10.16

Start Time: 12:18:28

End Time:

22:59:38

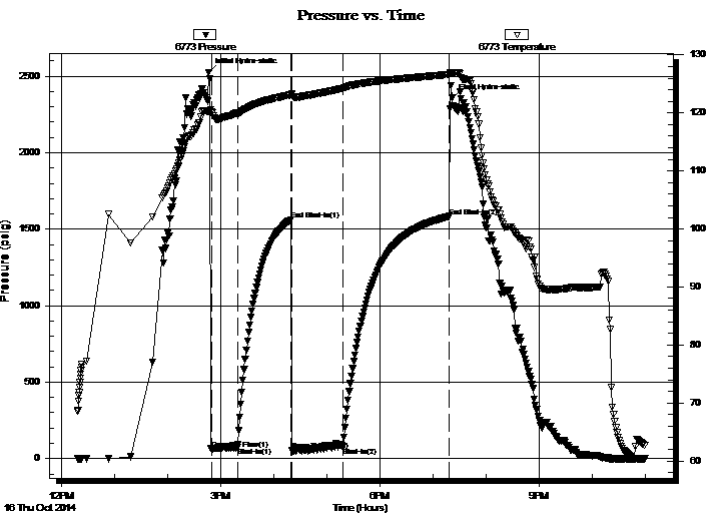
Time On Btm:

2014.10.16 @ 14:46:38

Time Off Btm:

2014.10.16 @ 19:21:38

TEST COMMENT: IF: Strong blow . B.O.B. in 30 secs.
IS: No blow . Bleed off in 5 mins.
FF: Strong blow . B.O.B., Immediate. G.T.S. in 9 mins. Gauged gas, see gas report.
FS: No blow . Bleed off for 10 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2525.29	120.31	Initial Hydro-static
4	59.57	120.21	Open To Flow (1)
33	71.84	120.02	Shut-In(1)
93	1561.26	123.12	End Shut-In(1)
94	53.08	123.24	Open To Flow (2)
152	75.84	124.25	Shut-In(2)
272	1583.28	126.61	End Shut-In(2)
275	2356.30	126.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	GOCM 5%o 10%g 85%m	0.30
61.00	GOCM 5%o 35%g 60%m	0.30
127.00	GOCM 5%g 5%o 90%m	0.92
0.00	G.T.S. G.I.P. 100%g	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	6.00	32.36
Last Gas Rate	0.13	8.00	8.38
Max. Gas Rate	0.13	8.00	8.38



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company

16-35s-12w Barber Co., Ks

125 N. Market STE 1000
Wichita Ks. 67202

Ohlson # 2

Job Ticket: 57786

DST#: 1

ATTN: Bill Klaver

Test Start: 2014.10.16 @ 12:18:23

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: 68.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
61.00	GOCM 5%o 10%g 85%m	0.300
61.00	GOCM 5%o 35%g 60%m	0.300
127.00	GOCM 5%g 5%o 90%m	0.916
0.00	G.T.S. G.I.P. 100%g	0.000

Total Length: 249.00 ft

Total Volume: 1.516 bbf

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: MAS Pratt

Laboratory Name: Caraway

Laboratory Location:

Recovery Comments: G.T.S. G.I.P. remainder of drill pipe.



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Woolsey Operating Company

16-35s-12w Barber Co., Ks

125 N. Market STE 1000
Wichita Ks. 67202

Ohlson # 2

Job Ticket: 57786

DST#: 1

ATTN: Bill Klaver

Test Start: 2014.10.16 @ 12:18:23

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.25	6.00	32.36
2	20	0.25	4.00	29.19
2	30	0.25	3.00	27.60
2	40	0.13	4.50	7.07
2	50	0.13	6.00	7.63
2	60	0.13	8.00	8.38

Serial #: 6773

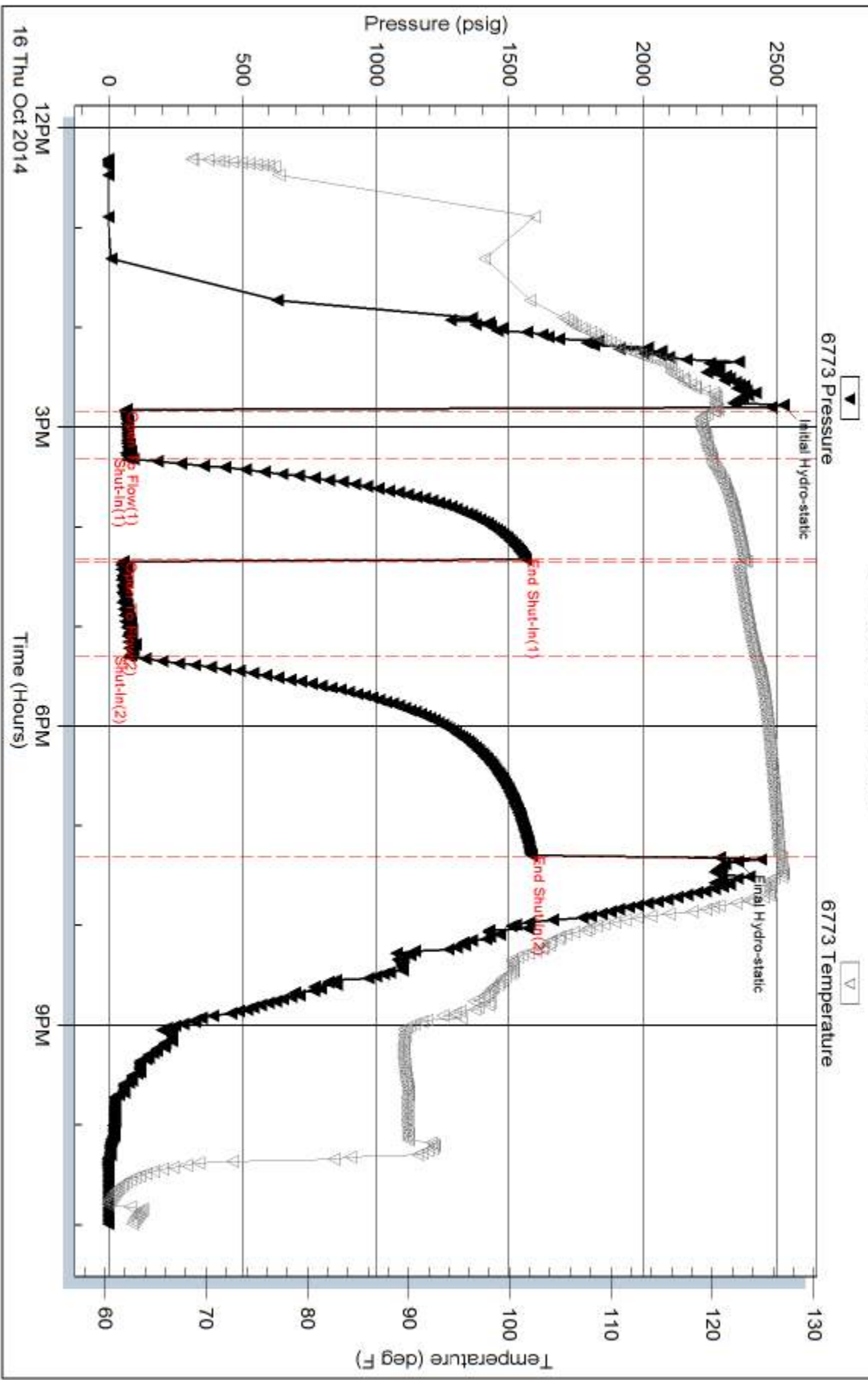
Inside

Woodsey Operating Company

Ohlson # 2

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 57786

Printed: 2014.10.17 @ 11:55:30



Woolsey Operating Company, LLC

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

Well Name: OHLSON #2
Location: Section 16 - Township 35 South - Range 12 West
License Number: 15-007-2423-0000 Region: Barber County, Kansas
Spud Date: October 8, 2014 Drilling Completed: October 19, 2014
Surface Coordinates: FNL 1300' and 600' FEL
C of E 1/2 NE
Bottom Hole
Coordinates:
Ground Elevation (ft): 1381' K.B. Elevation (ft): 1393'
Logged Interval (ft): 4000' To: 5424' Total Depth (ft): 5424,
Formation: Kansas City Group ---> Simpson Group
Type of Drilling Fluid: Chemical Mud

Printed by MUD.LOG 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: Spud at 4:30 pm on October 8, 2014, set 6 joints of new 13 3/8" X 48#/ft casing at 216' KB (tally 201.11'). Cemented with 300 sx Class A, 2% gel, 3% cc (by Allied). Plug down at 11 pm on October 8, 2014, cement did circulate.

Production Casing: 5 1/2" X 10.5#/ft

Deviation Surveys: 1 1/2 at 216', 3/4 at 1013', 3/4 at 1520', 3/4 at 1993', 3/4 at 3005', 3/4 at 3513', 1 at 4021', 1 1/4 at 4242', 1 1/4 at 4495', 1 1/2 at 4749', 1/4 at 4896', 1/8 at 5424'

Fossil Drilling Rig 3 Bit Record:

- 1) 17 1/2" Smith Tool RR, in a 0' out at 216'. 1 3/4 hours
- 2) 7 7/8" Varel HE-21 in at 216' out at 4896', 125 3/4 hours
- 3) 7 7/8" Varel HE-29 RR in at 4896' out at 5424', 38 hours

Gas Detector: Woolsey Operating Co. Gas Shack #2

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

Company Man: Mike Tharp, Woolsey Operating Co.

DSTs: Trilobite Testing, Matt Smith, Tester

E-Logs: Nabors Completion and Production Services, Dual Induction Laterolog w/SP, CNL/FDC w/PE, Gamma Ray and Caliper. Jeff Groneweg, Engineer.




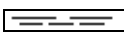
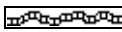



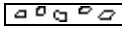







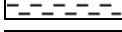




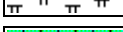
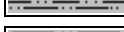


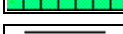
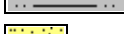


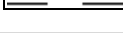
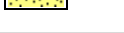

DSTs

DST #1 4836'-4896', 30"-60"-60"-120". SB BOB in 30 seconds. GTS 9 minutes into second flow period. (39 minutes). Recovered: 127' GOCM (5%G, 5%O, 90%M), 61' GOCM (35%G, 5%O, 60%M), 61' GOCM (10%G, 5%O, 85%M). Gas flow rates 2nd flow period: 10"-32.4 MCF, 20"-29.2 MCF, 30"-27.9 MCF, 40" 7.1 MCF, 50"-7.6 MCF, 60"-8.4 MCF. IHP 2525, IFP 59-71, ISIP 1561, FFP 53-75, FSIP 1583, FHP 2356. BHT 127 degrees.

CREWS

Jim Wenrich, Toolpusher (rarely seen)
 Daniel Orrantea, Daylights
 Ron Burns, Evening
 Kirk Shuman, Morning
 Chris Slatts, Relief

ROCK TYPES

	Anhy		Shy dolo		Sltst		Shale 3
	Bent		Dol		Ss		Silty dol
	Brec		Gyp		Black sh		Dol lmst
	Cht		Sdy lmst		Gry sh		Dol 2
	Clyst		Lmst		Shale		Granite wash
	Coal		Mrlst		Shysltst		Lmst
	Congl		Salt		Slysh		Calc dol
	Sdy dolo		Shale		Ss 2		Shale 3

ACCESSORIES

MINERAL

- Anhy
- Arg
- Bent
- Bit
- Breccfrag
- 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

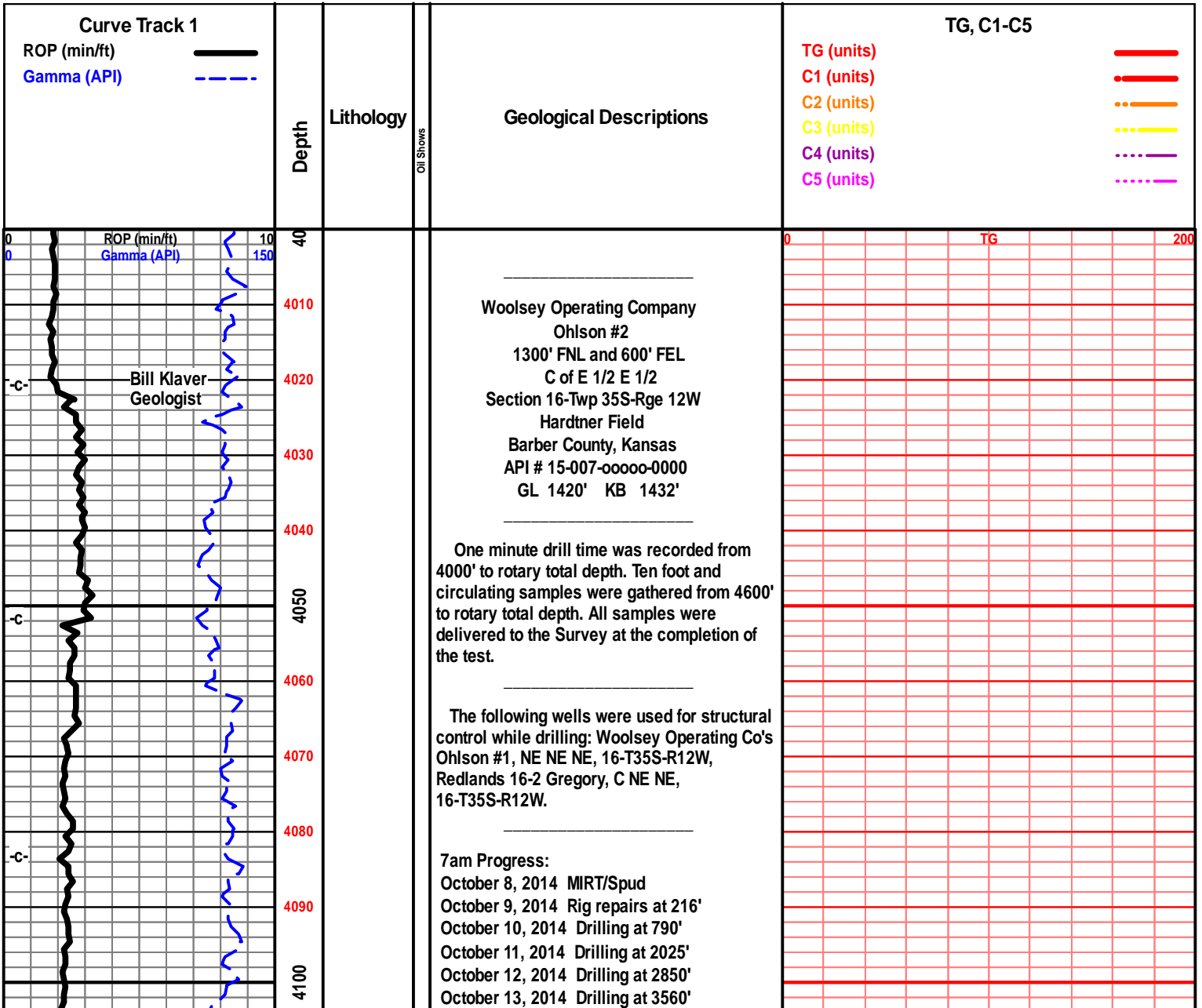
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol

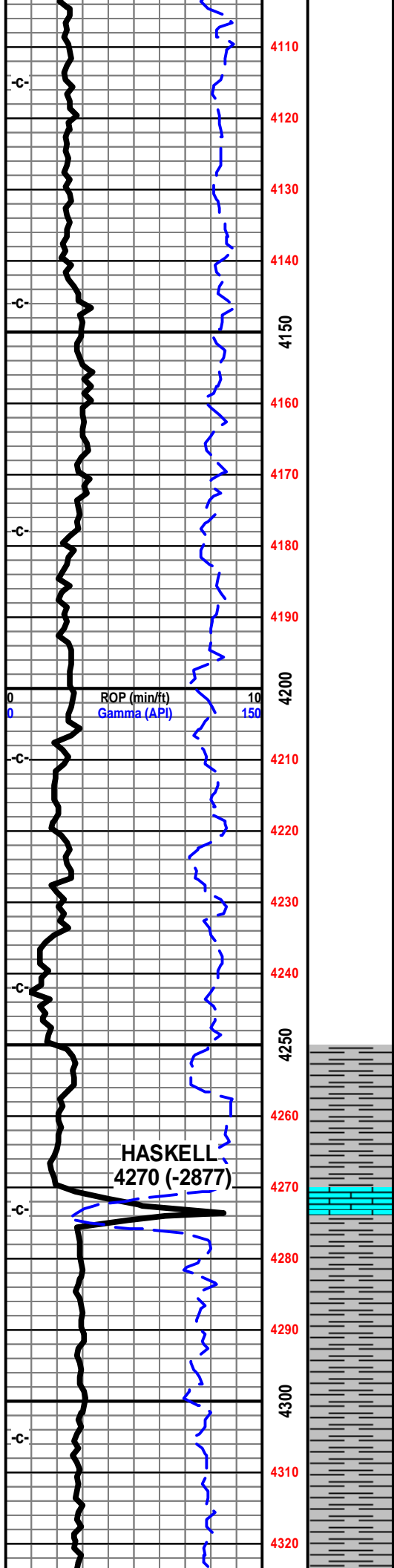
TEXTURE

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



October 14, 2014 Drilling at 4170'
 October 15, 2014 Drilling at 4605'
 October 16, 2014 CFS in Miss at 4852'
 October 17, 2014 Drilling at 4968'
 October 18, 2014 Drilling at 5235'
 October 19, 2014 Rig up loggers/5424'

- E-Log Tops:**
- Herington 1928 (-535)
 - Onaga 2806 (-1413)
 - Wabaunsee 2864 (-1471)
 - Stotler 3015 (-1622)
 - Topeka 3206 (-1813)
 - LeCompton 3629 (-2236)
 - Kanwaka 3654 (-2261)
 - Elgin Sand DND
 - Heebner 3854 (-2461)
 - Toronto 3864 (-2471)
 - Douglas Group 3896 (-2503)
 - Douglas Shale 3942 (-2549)
 - Haskell 4271 (-2878)
 - Quindaro 4382 (-2989)
 - Iola 4420 (-3027)
 - Drum 4470 (-3077)
 - Dennis 4500 (-3107)
 - Stark 4548 (-3155)
 - Swope 4563 (-3170)
 - Hushpuckney 4580 (-3187)
 - Hertha 4594 (-3201)
 - B/Kansas City 4627 (-3234)
 - Pawnee 4732 (-3339)
 - Cherokee Group 4776 (-3383)
 - Mississippi Unc. 4834 (-3441)
 - C3 4834 (-3441)
 - C2A 4850 (-3457)
 - C2 4898 (-3505)
 - C1 5001 (-3608)
 - Osage 5074 (-3681)
 - Northview Shale 5092 (-3699)
 - Compton 5108 (-3715)
 - Kinderhook 5125 (-3732)
 - Woodford 5198 (-3805)
 - Viola 5252 (-3859)
 - Simpson Group 5371 (-3978)
 - Simpson 'F' Dolomite 5371 (-3978)
 - Wilcox 5396 (-4003)
 - LTD 5426 (-4033)



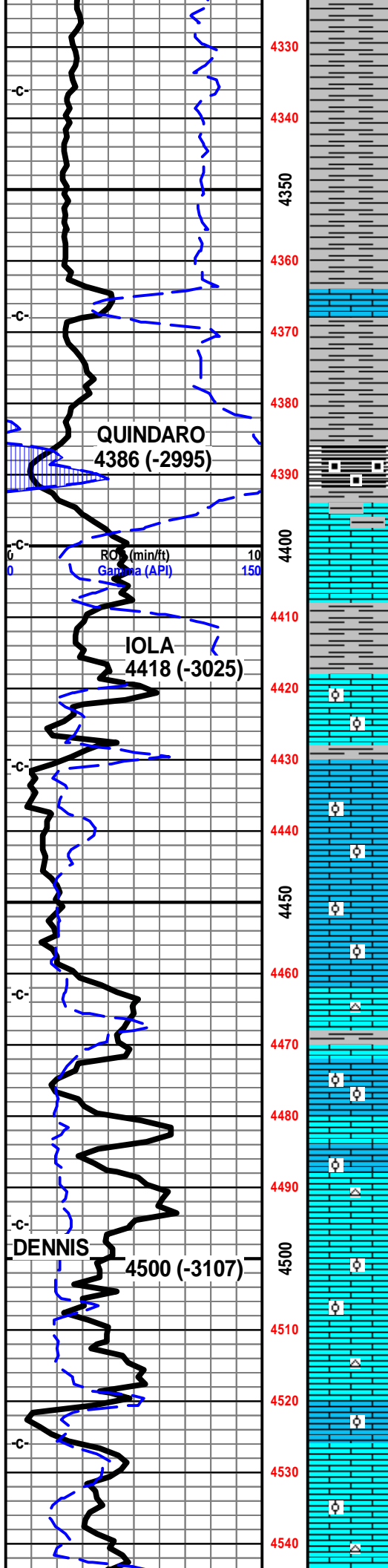
4170' 7 am
 Tuesday
 October 14, 2014

Scale Change
 TG

Survey at 4242'
 1 1/4 degrees
 decrease WOB

Mud-Co. 4299'
 wt. 9.3 vis. 63
 wl. 8.8 chl. 3,000

1% Methane Test



shl gry med gry, silty soft

shl aa, tr 1st tan brn f vf xln dns hrd blkly tr sndy, gritty, arg silty

shl gry med drk gry soft silty

shl drk gry blk, blk carb in prt, blkly ang pcs, abun gas bubs

1st off wht crm tan f vf xln dns hrd blkly, tr sub chlky, micro foss frags,

1st crm tan lt gry/tan f xln dns hrd blkly ang sli chlky foss frags,

shl gry dkr gry brn silty gritty calc, 1st tan crm off wht f xln gran sub chlky, foss frags, foss ool, pelletal

1st crm tan off wth f xln gran blkly dns sub chlky, foss frags, foss ool, pelletal, inter xln foss mold por

1st off wth crm tan f xln gran blkly sub chlky foss frags, foss ool/pelletal, inater xln por, foss mold por

1st crm tan f xln blkly dns sub chlky foss frags, tr foss ool, tr inter xln por, calc xln fill,

1st crm wht tan lt gry tan, f xln blkly ang dns hrd, tr sub chlky, foss frags, calc xln fill

1st crm off wht tan f xln gran sub chlky tr soft foss frags, tr foss ool, calc xln fill, tr chrt wht shrp frsh opa

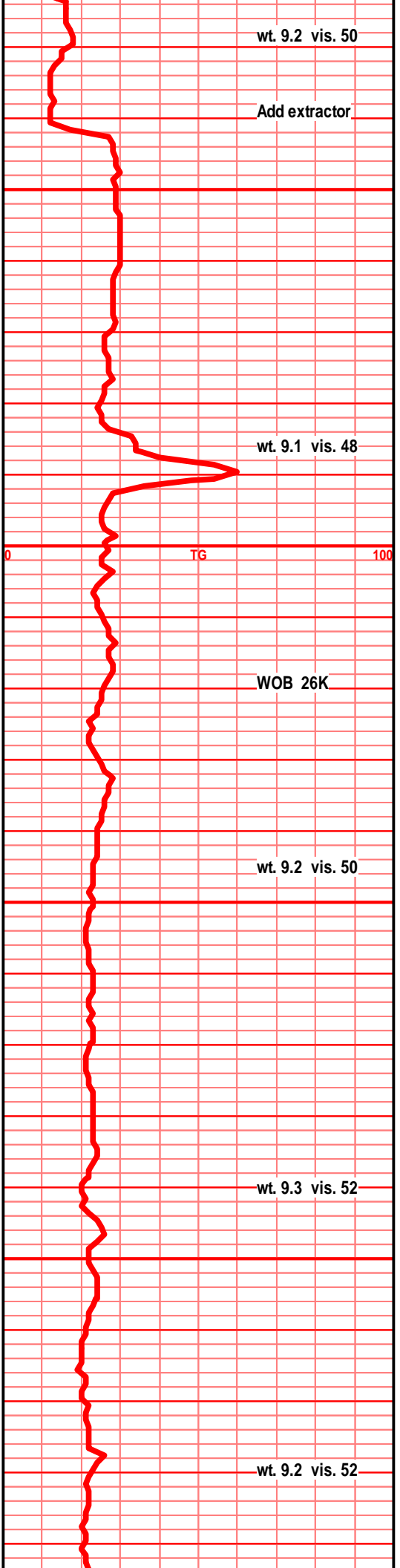
1st off wht tan f xln gran sub chlky foss frags, gritty arg in prt, foss micro ool, tr pelletal, chrt aa

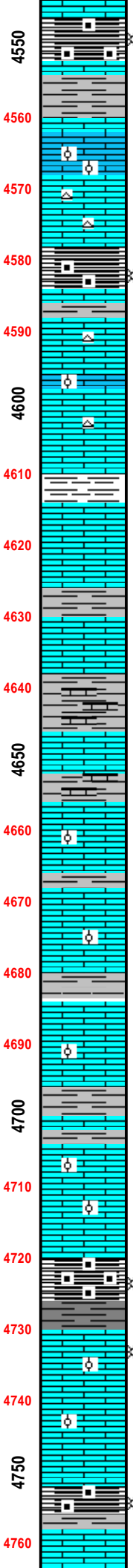
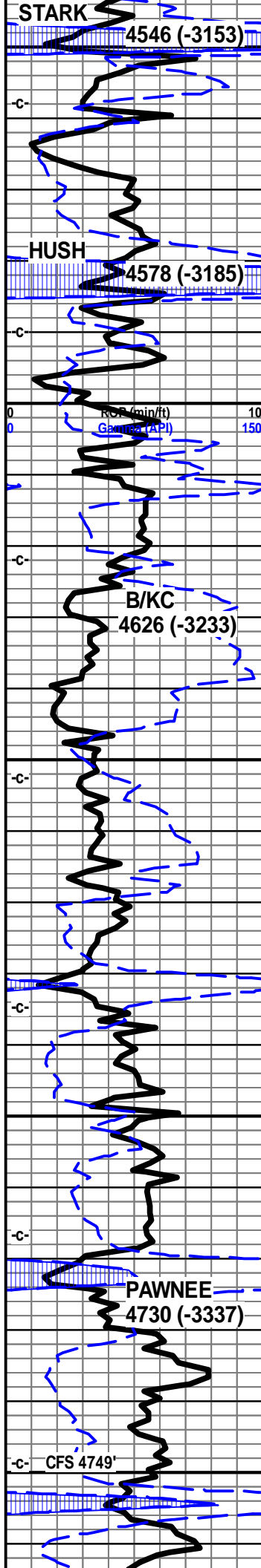
1st crm gry tan f xln dns blkly ang sli arg, sub chlky calc xln fill, tr foss frags, micro foss, chrt wht lt gry shrp frsh

1st crm buff tan f xln blkly ang sub chlky, gran in part, calc xln fill foss frags, micro ool, chrt wht shrp frsh opa

1st crm tan off wht f xln gran soft sub chlky foss frags, foss ool/pelletal, pp foss mold por, omold por, inter xln por,

1st crm tan lt gry/tan f xln gran, blkly ang dns, sub chlky, micro foss frags, foss ool, calc xln por, chrt tan wht shrp frsh





4550 Ist aa, shl drk gry blk, blk carb wxy grsy text, blk ang pcs, mucho gas bubs

4560 shl gry drk gry blk, calc silty foss, 1st tan gry tan lt brn f xln dns hrd blk ang hrd micro foss dns arg

4570 Ist crm, gry/tan f xln dns hrd blk ang sub chlky, micro foss frags, ool, calc xln fill, tr chrt tan gry shrp frsh

4580 Ist tan gry tan f xln dn shrd blk sub chlky calc xln fill, micro foss ool chrt aa

4590 shl gry blk, blk carb, grsy wxy text, gas bubs, 1st tan gry tan lt brn f vf xln blk ang dns hrd arg, calc xln fill

4600 Ist crm tan gry tan, f xln dns hrd blk ang foss frags, micro ool/pelletal, calc xln fill, pp foss mold por

4610 Ist crm gry tan f vf xln dns hrd blk pcs, tr sub chlky, calc xln fill, micro foss frags, chrt tan wht shrp frsh

4620 shl gry blk, tr blk carb text, 1st crm tan/gry f vf xln dns hrd blk ang, foss frags, calc xln fill, tr chrt tan lt gry shrt

4630 Ist crm tan brn f vf xln dns hrd blk ang, arg, crs calc fill, micro foss frags, chrt tan brn shrp frsh

4640 Ist aa, shl drk gry blk, calc, silty gritty, calc inclu, foss frag inclu, arg, 1st drk brn/blk f mic xln dns hrd arg micro foss

4650 Ist buff tan, f xln dns hrd blk ang pcs, tr mic xln, micro foss, micro calc fill, shl gry brn, silty calc, foss frags inclu

4660 Ist crm buff tan f vf xln dns hrd blk ang pcs, micro foss frags, micro ool, calc xln fill,

4670 Ist crm buff tan f vf xln dns hrd blk ang pcs, micro foss frags, micro calc fill, micro ool/pelletal

4680 shl gry blk, 1st tan crm buff f vf xln blk ang dns hrd pcs, micro foss frags, micro ool, calc xln fill,

4690 Ist crm buff lt tan f vf xln dns hrd blk ang pcs, micro foss frags, micro calc fill, micro ool/pelletal

4700 shl gry brn, tan brn silty gritty, calc, 1st tan buff/tan f vf xln hrd blk dns sli sub chlky, micro foss, frags/pelletal, calc fill

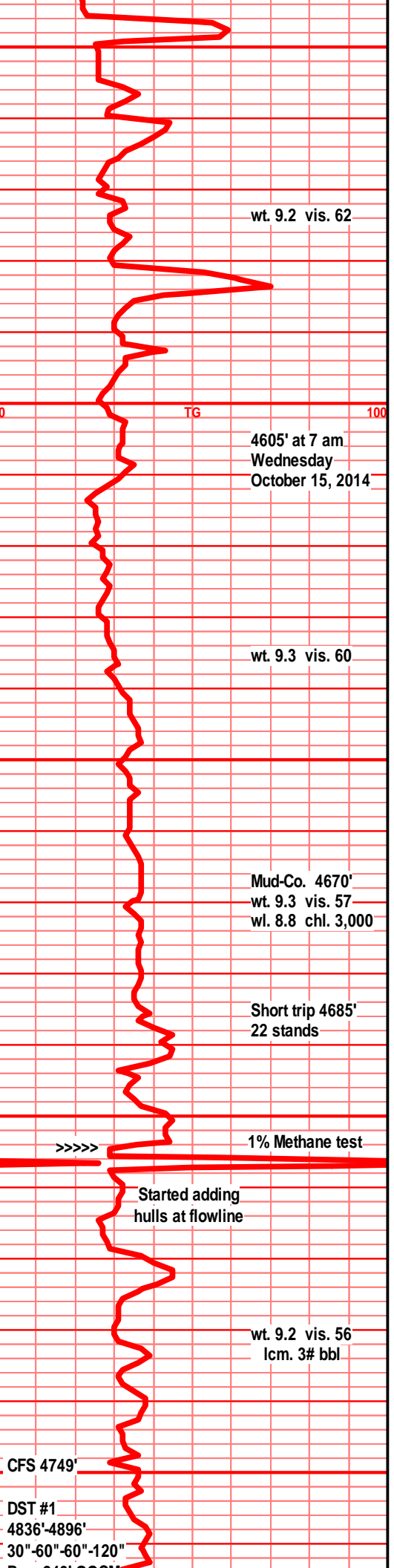
4710 Ist crm buff tan f vf xln dns hrd blk, ang sli sub chlky, micro foss frags, micro ool/pelletal calc xln fill

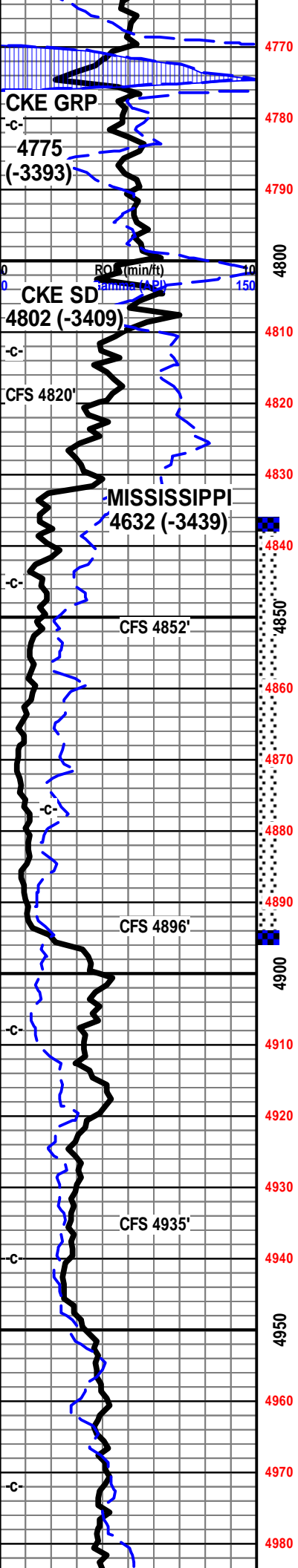
4720 shl drk gry blk, blk carb, wxy grsy text, blk ang pcs, abun gas bubs, shl drk gry brn/blk silty gritty calc

4730 Ist crm tan lt tan buff f xln blk ang dns hrd, micro xln in prt, micro foss frags, micro ool, much calc xln fill NVP, tr gas bubs on break 3-4 pcs, mineral UV, nodor NSFO

4740 Ist crm buff tan f vf xln hrd dns blk ang pcs, sli sub chlky, micro foss frags/ool pelletal, calc xln fill, shl drk gry blk, tr carb text, wxy gry, blk ang pcs

4750 Ist crm buff tan drk tan f mic xln dns hrd





1st crm dull, tan, drk tan, f mic xln, dns hrd blk ang pcs, sli sub chlky, micro xln in prt, micro foss frags, calc xln fill

shl drk gry, gry blk, carb in prt, wxy grsy text, blk ang pcs, gas bubs, 1st tan drk tan, tr buff, f vf tr micro xln, dns hrd blk, micro foss frags, calc xln fill

1st crm tan lt gry, gry/ltbrn, f mic xln dns hrd blk pcs, micro xln, micro foss frags, tr arg, silty gran text

1st crm buff tan/gry f vf xln dns hrd blk arg, sub chlky, gran, tr foss frags

sst tan gry, gry brn mott, drk tan brn, vf grnd, sub rded grns, w/srtd, w/cem, calc fill, sub fria tr mushy, mstly blk ang dns clstrs, filmy SFO/brk, gas bubs, nodor

shls gry, gry brn green silty gritty, tr sndy, snd grn inclu,

shl lt gry, gry/green, tr yellow/maroon, silty soft, tr gran gritty, clays, tr spintery

chrt wht, off wht, bone wht, shrp frsh opa, shrp blk ang shards, tr with tan brn sli weath edge, pp/moldic por, stain. chrt wht tan brn mott, weath gran sli spongy trip text, gran, pp vug moldic por, brn stain, SSFO, gas bubs, fair odor in all

chrt wht, off wht bone wht, shrp frsh blk ang pcs, sub opa w/drk tan brn stained edges, pp moldic por, chrt wht tan/brn mott, weath gran sli spongy trip text, weath pp moldic, vug por, tan brn stain, gas bubs, filmy RBSFO on spl water, fair odor in all, tr blk gilson stain

chrt wht off wht, bone wht, shrp frsh blk ang pcs, sub opa, tr with tan brn sli weath edge, brn stain, gas bubs, drk SFO, chrt wht tan, drk tan brn mott with weath gran sli spongy trip text, gd weath pp moldic vug por, stain, SFO, filmy RBSFO on spl water, fair odor in all, chrt lt gry smokey shrp frsh opa with weath spongy sli trip text edges, stain SFO gas bubs

dolo chrty dolo, crm tan, lt gry/tan, f vf xln gran blk dns hrd, tr soft sli chlky gran, tr small snd grn inclu, sli sucr text in prt, tr glau, sli inter xln por, wht lt smokey gry chrt inclu, shrp frsh sub opa, tr weath gran edge text, pp moldic por, tan brn stain, vssfo, gas bubs, sli odor. dull UV

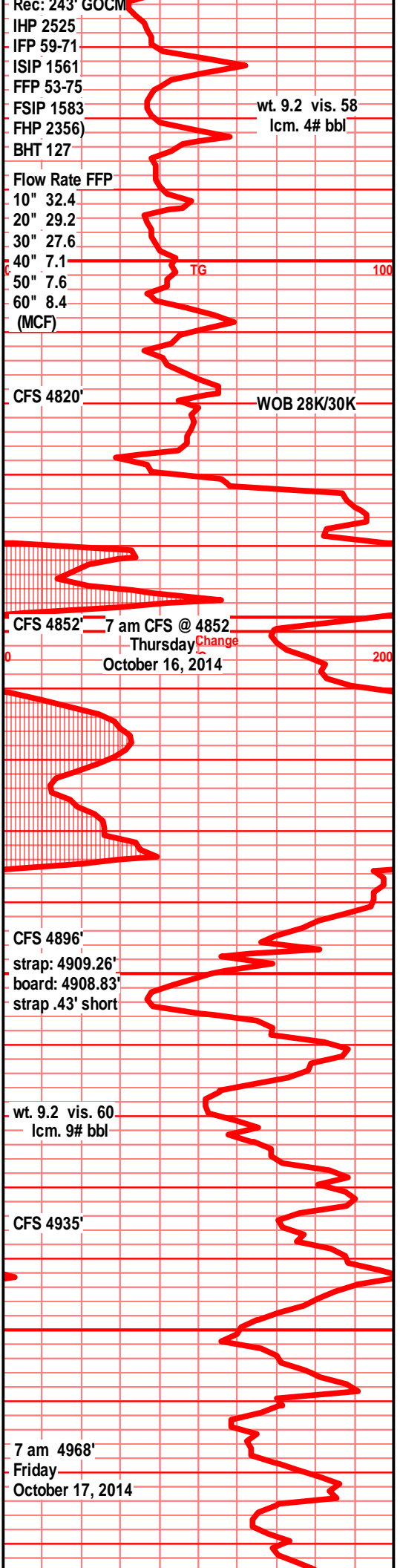
dolo crm tan, lt gry/tan f vf xln, blk ang dns, sli gran, tr snd grn inclu, sli fnly sucr, tr inter xln por, chrty, chrt wht lt gry smokey shrp frsh tr weath edge text, sli stain, sli odor,

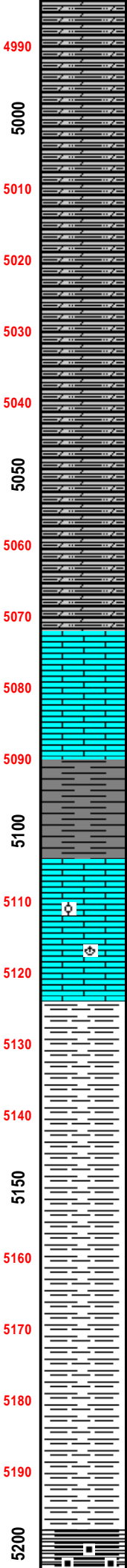
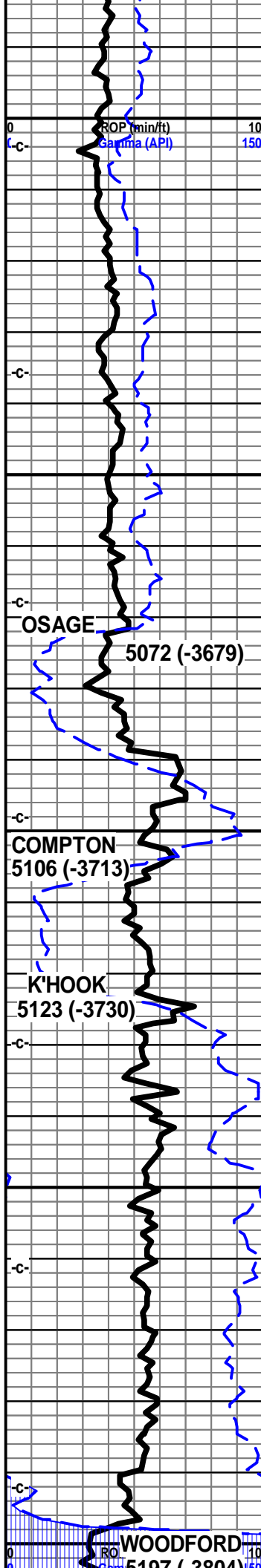
dolo crm lt gry, f vf xln dns hrd blk ang pcs, tr glau, tr snd grn inclu, tr inter xln por, sub chlky/gran in prt, tr stain, tr gas bubs, chrt lt gry smokey shrp frsh sub opa

dolo drk gry tan, gry, f vf xln blk ang dns hrd pcs, tr glau, tr gran sub chlky text, tr micro sucr text, bec drk gry incr arg text, chrt gry drk gry shrp frsh sub opa

dolo dilty dolo gry med drk gry f vf xln gran silty gritty arg, chrt drk gry shrp sub opa

dolo, silty dolo, drk gry med/drk gry f vf xln gran dns hrd, grittv, arg, shls drk gry gritty





calc, xln text

dolo, silty dolo, med gry, med/drk gry, f vf xln dns hrd blk ang pcs, gran gritty, silty, chrt med gry shrp frsh sub opa

dolo, silty shly dolo, med drk gry, f vf xln dns calc, silty gritty

dolo, silty shly dolo, med/drk drk gry silty gritty, silic in most

dolo silty shly silic dolo, f vf xln gran gritty dns hrd

dolo, silty silic shly dolo, f vf xln dns hrd blk ang pcs, gritty

dolo, silty silic dolo, f vf xln blk ang dns fnly gran, gritty, shl gry med drk gry slty hrd calc

dolo silty silic dolo, drk gry, med gry f vf xln dns hrd blk, shls aa

lst wht f med xln blk ang pcs, tr sub chlky, crs calc xln fill, chrt lt gry smokey gry shrp frsh sub opa

lst off wht dull tan, f vf xln dns hrd blk ang vry dns pcs, tr foss frags, tr micro ool, micro calc xln fill

lst dull tan, sli gry tint f vf xln dns hrd blk ang pcs, foss frags, tr micro ool, micro calc xln fill, tr pyritic

shl gry/green, blue/green, silty gritty wxy text,

lst dull tan/gry off wth f vf xln dns hrd blk, sli sub chlky, micro foss frags,

lst off wht dull tan, dull tan/gry f vf xln dns hrd blk ang pcs, sli sub chlky, tr micro foss frags, tr pyritic

shl med/drk gry, gry reddish brn/blk, silty gran in prt, gas bubs

shl gry dry med gry, gry blk w/reddish tint, silty gritty,

shl drk gry, med drk gry reddish brn tint silty gritty bedded/banded

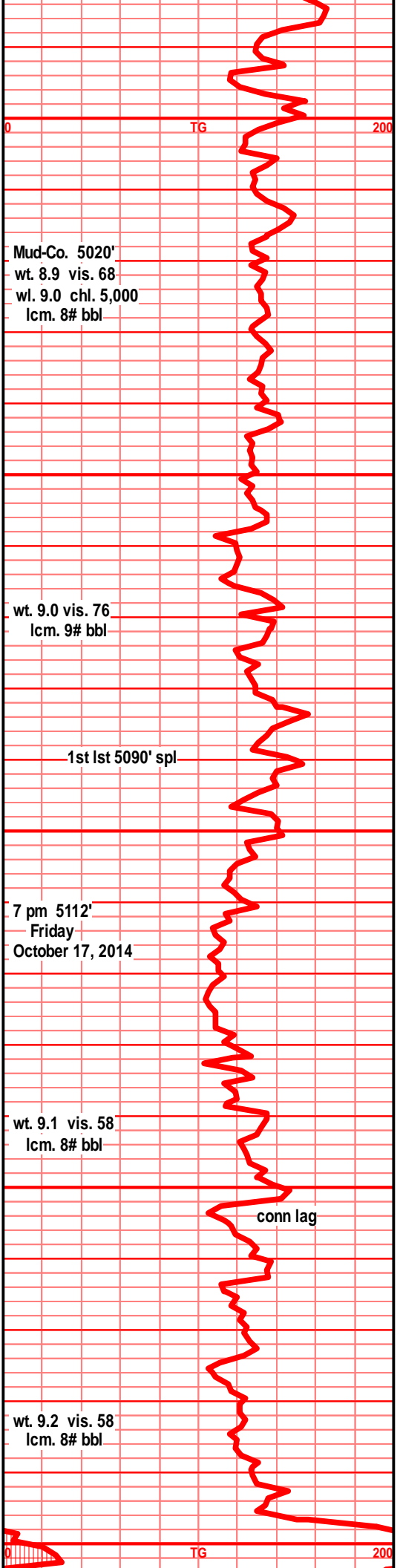
shl drk gry, drk brn, silty gritty,

shl drk gry/red brn silty gritty, bedded, banded tr pyritic tr gas bubs

shl drk gry/brnish red, blk, silty gritty bedded/banded

shl gry drk gry/blk, brnish red tint, silty gritty, bedded/banded, tr splintery

shl, silic dolo shl, drk gry blk, mstly drk blk, deep/drk brn/reddish blk, carb text, wxy grsy



Mud-Co. 5020'
wt. 8.9 vis. 68
wl. 9.0 chl. 5,000
lcm. 8# bbl

wt. 9.0 vis. 76
lcm. 9# bbl

1st lst 5090' spl

7 pm 5112'
Friday
October 17, 2014

wt. 9.1 vis. 58
lcm. 8# bbl

conn lag

wt. 9.2 vis. 58
lcm. 8# bbl

shl blk pcs, dull copper brn grns, tr pyritic, abun gas bubs, filmy cond on brk

shl gry med gry silty silic, shls drk red/gry, deep red/brn/blk, blk ang pcs, silty dolo text in prt, soft gran blk ang pcs in prt, abun gas bubs, filmy cond

shl gry drk gry, silty gritty, tr dolo text, sst 1/2 clstrs drk gry/blk f grnd sub ang grns, prly srtd, w/cem, silic cem, pyritic, clay fill, blk filmy gilson stain, gas bubs, nodor

shl lt gry, gry/green, silty gritty soft, grsy, silic text, vry fnly sndy text, vry sm rded snd grn inclu, wxy

shl gry green, blue green, silty gritty, tr fnly sndy, tr silic text. tr soft mush, gry drk gry mott

shl gry med lt gry aa, incr drk brn red, blk ang pcs, gritty gran, silic text in prt, tr gas bubs

shl dolo shl, drk brn redd, blk/red tint, blk ang hrd pcs, silty gritty, silic text, gas bubs

lst crm wht, off wht lt gry mott, tr off wht tan, f med xln, blk ang dns pcs, sub chkiy in prt, crs calc xstl inclu, tr crs foss frags, pyritic, tr chrt dull tan /lt gry shrp frsh sub opa

lst off wht, wht/gry mott f med xln blk ang crsly foss in prt, crs calc xln inclu, pyritic, chrty, lst/dolo off wht dull tan f vf xln dns hrd blk, micro foss, chrty, chrt dull tan shrp frsh, sub opa

lst off wht, wht/gry f sli med xln blk ang, crs foss frags, crs calc xln inclu, chrt wht lt gry shrp, lst dolo, tan dull tan f vf xln dns hrd blk, sli gran sucr text, chrty, foss frags, chrt dull tan blk ang shrp sub opa

lst, dolo in prt, f vf xln dns blk ang, gran, sli sub sucr text, tr sndy text, chrty, chrt dull tan lt brn shrp frsh sug opa

lst, dolo in prt, off wht dull tan, gry/brn f vf xln gran sub sucr text, blk ang tr sub chky, chrty in prt, chrt dull tan lt brn shrp frsh sub opa

lst, dolo in prt, off wht dull tan tr lt gry, f vf xln dns hrd blk, gran sli sucr sndy text, tr sli chky chrt, chrt dull tan shrp frsh sub opa,

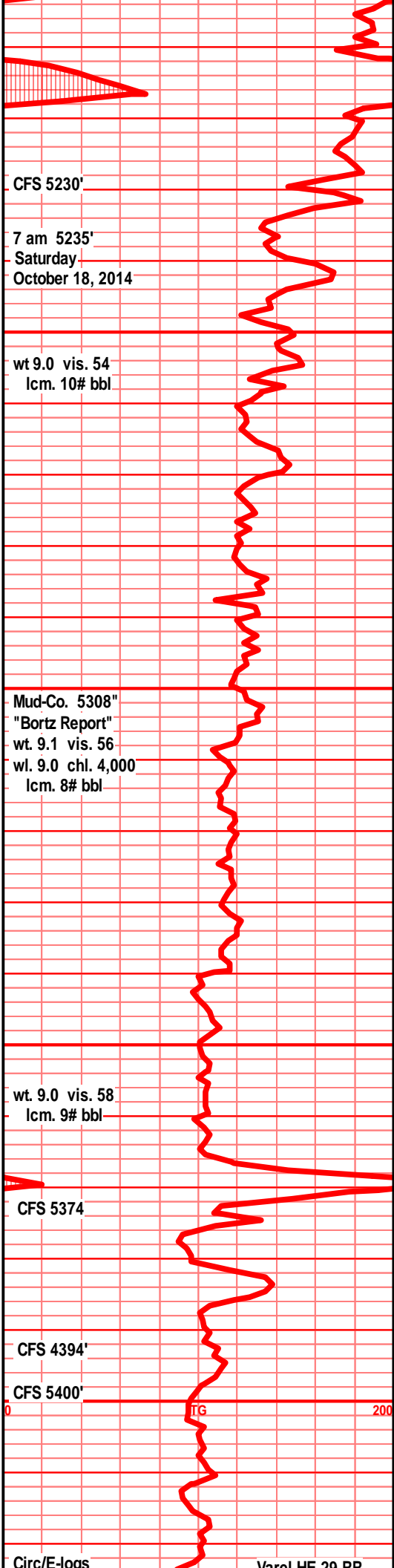
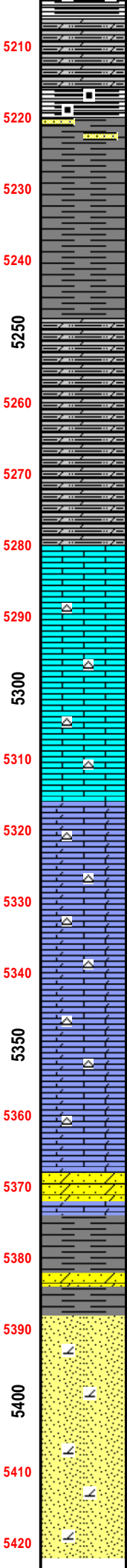
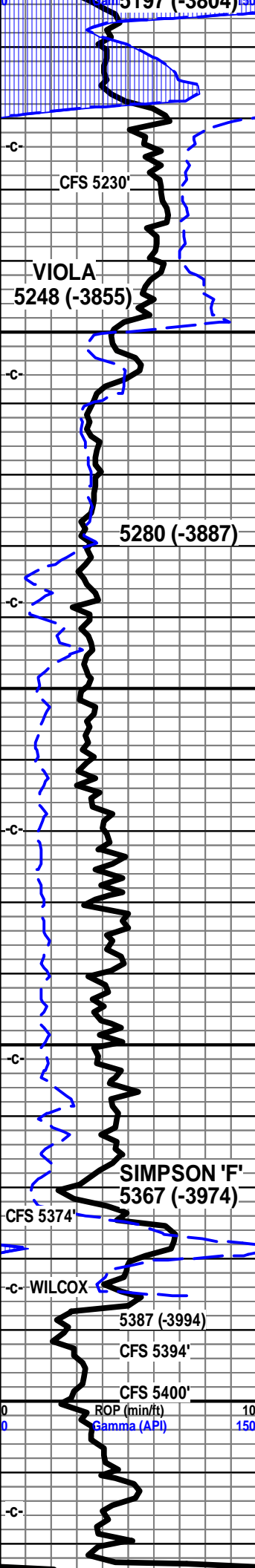
dolo sndy dolo, tan, brn, drk brn, reddish brn, f med xln sucr/sndy text, gd inter xln por, tr vug/sli moldic por, clr fn grnd, sub ang snd grn inclu, bleeding gas bubs, fair odor, lt tranl SFO, dull UV, gd shows on break

shl gry, green, sst, dolo sst, gry, clr/green tint, green, f grnd sub grns, w/srtd blk hard, pyritic, grn clay fill

sst clr off wht, lt tan, semi frosted clstrs, f grnd, sub rded, rded grns, silic cem, poorly cem, fria gran soft, inter grn por, tr gas bubs, drk brn oil smears, filmy SFO, blk gilsonitic stain, nodor

sst clr semi frosted, tr wht clstrs, f grnd, sub ang/sub rded grns, w/srtd, fair to prly cem, silic cem, tr dolo text/fill, mstly fria, gran soft, inter gran por, dead gilsonitic stain, tr brn oil smears, nodor

sst wht/clear, semi frosted clstrs, f grnd, sub rded/sub ang grns, w/srtd, mstly prly cem, silic cem, dolo text fill, mstlv soft fria, inter



RTD
5424 (-4031)

5430
5440
5450
5460
5470
5480
5490
5500
5510
5520
5530
5540
5550
5560
5570
5580
5590
00

gran por, tr dead gilsonitic flakes, nodor,
NSFO

7 am 5424'
Sunday
October 19, 2014
varel NE-29 RR
shells out. 39 hrs

Woolsey Operation Company
Ohlson #2
1300' FNL and 600' FEL
C of E 1/2 E 1/2
Sec. 16 - Twp 35S - Rge 12W
Hardtner Field
Barber County, Kansas
API # 15-007-000000-0000
GL 1420' KB 1432"

Bill Klaver

Geologist

Bill Klaver

Geologist