



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1157285  
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: \_\_\_\_\_



1157285

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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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  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 04, 2013

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

Re: ACO1  
API 15-007-24021-00-00  
BENEFIEL 3  
SW/4 Sec.35-31S-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

Customer Woolsey Operating Company, LLC.		Lease No.		Date 5-7-13	
Lease Benefiel		Well # 3			
Field Order # 8452	Station Pratt, Kansas	Casing 10.75"	Depth 205 Feet	County Barber	State Kansas
Type Job C.N.W. - Surface			Formation	Legal Description 3-315-12W	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 10.75 32.75 LB/FT.	Tubing Size 32.75 LB/FT.	Shots/Ft 200	Acid sacks 60/40 Poz with	RATE	PRESS	ISIP		
Depth 205 Feet	Depth	From	To 28 Gal. Pre-Pad	Max	25 LB/stk. Cellulose	5 Min.		
Volume 20.7 Bbl	Volume	From	To 14.86 Gal. 5.18 Gal. Rad	Min	1.21 CU.FT./STK.	10 Min.		
Max Press 300 PSI	Max Press	From	To	Avg		15 Min.		
Well Connection Wedge and Valve	Annulus Vol.	From	To	HHP Used		Annulus Pressure		
Plug Depth 190 Feet	Packer Depth	From	To	Flush 20 Bbl. Fresh Water	Gas Volume	Total Load		

Customer Representative Don Boyd			Station Manager David Scott			Treater Clarence R. Messich		
Service Units	37,216	19,903	19,905	70,959	19,918			
Driver Names	Messich	Young	Melhorn					

Time P.M.	Casing Pressure	Tubing Pressure	Bbbs. Pumped	Rate	Service Log
6:45					Trucks on location and hold safety meeting.
8:00					Fossil Drilling start to run 5 Joints new 32.75 LB/FT. 10.75" casing.
9:00					Casing in well. Circulate for 5 minutes.
9:15	250			5	Start Fresh water Pre-Flush.
	275		10	5	Start Mixing 200 sacks 60/40 Poz cement.
	150		63	5	Start Fresh water Displacement.
9:38	300		83		Plugdown. Shut in well.
					Circulated 10 sacks cement to the pit.
					Wash up pump truck.
10:30					Job Complete.
					Thank You
					Clarence, Steve, Tom

Customer <i>4700/804 OPLC</i>		Lease No.		Date <i>05-15-13</i>	
Lease <i>BENEFICIAL</i>		Well # <i>7</i>			
Field Order # <i>8377</i>	Station <i>PRATT KS</i>	Casing <i>7 7/8</i>	Depth <i>4786</i>	County <i>BARBER</i>	State <i>KS</i>
Type Job <i>CN W 4 1/2 long string</i>			Formation	Legal Description <i>3-31-12</i>	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
<i>4 1/2</i>				Pre Pad	Max		5 Min.
<i>4 1/2</i>		From	To	Pad	Min		10 Min.
<i>4 1/2</i>		From	To	Frac	Avg		15 Min.
<i>4 1/2</i>		From	To		HHP Used		Annulus Pressure
<i>4 1/2</i>		From	To	Flush	Gas Volume		Total Load

Customer Representative		Station Manager <i>DAVE SCOTT</i>		Treater <i>Robert Fullwood</i>	
Service Units	<i>37900</i>	<i>33708</i>	<i>20920</i>	<i>19802</i>	<i>19862</i>
Driver Names	<i>Sullivan</i>	<i>Romine</i>	<i>Gibson</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>10:00</i>					<i>on loc soft, meeting</i>
					<i>Run 119 5 + 5 4 1/2 # 10.5 csg</i>
					<i>cont 2, 3, 4, 5, 7, 8, 9, 10, 13, 14</i>
					<i>Scratchers 2, 3, Bottom 4, 9, 9, 10, 13, 14</i>
<i>1:50</i>					<i>CASING and Bottom</i>
<i>2:05</i>					<i>Hook up to csg.</i>
<i>2:50</i>	<i>200</i>		<i>12</i>	<i>4.5</i>	<i>At 50 sk 60/40 net cont 14, 14</i>
					<i>At 125 sk AA-2 cont 14, 2, 100</i>
			<i>37</i>		<i>cont mixed slurr downed with pumpkins</i>
					<i>Balance Plug</i>
				<i>6</i>	<i>At Disp</i>
	<i>150</i>		<i>54</i>		<i>LIFT PS</i>
	<i>500</i>			<i>3</i>	<i>Slow Rate</i>
<i>3:30</i>	<i>1700</i>		<i>75</i>	<i>3.0</i>	<i>Plug Down</i>
			<i>7</i>		<i>plug 211-1/2</i>
			<i>9</i>		<i>plug 21.4</i>
					<i>50 B complete</i>
					<i>THANK YOU</i>



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Woolsey Operating Co  
 125 N Market Ste 1000  
 Wichita, KS 67202  
 ATTN: Scott Alberg

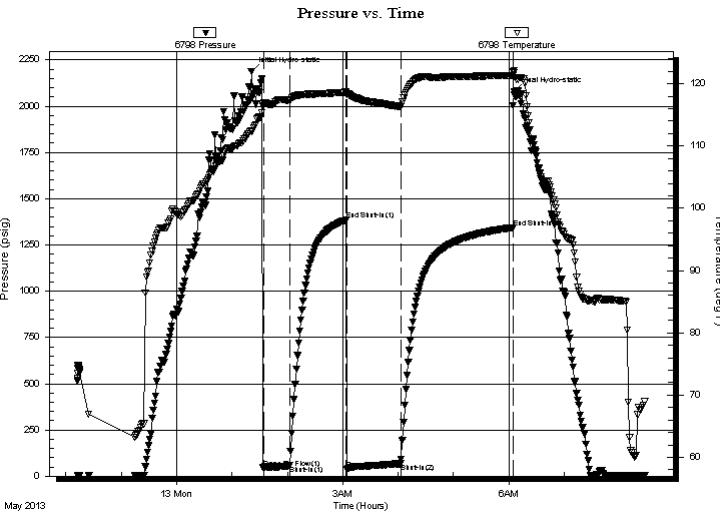
**35-31S-12W Barber**  
**Benefiel 3**  
 Job Ticket: 50924      **DST#: 1**  
 Test Start: 2013.05.12 @ 22:12:36

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:33:51  
 Time Test Ended: 08:27:36  
 Interval: **4377.00 ft (KB) To 4405.00 ft (KB) (TVD)**  
 Total Depth: 4405.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 45  
 Reference Elevations: 1631.00 ft (KB)  
 1619.00 ft (CF)  
 KB to GR/CF: 12.00 ft

**Serial #: 6798      Inside**  
 Press @ Run Depth: 68.42 psig @ 4378.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.05.12      End Date: 2013.05.13      Last Calib.: 2013.05.13  
 Start Time: 22:12:37      End Time: 08:27:36      Time On Btm: 2013.05.13 @ 01:20:51  
 Time Off Btm: 2013.05.13 @ 06:05:36

**TEST COMMENT:** IF: Strong Blow , BOB in 45 seconds  
 IS: No Blow Back  
 FF: Strong Blow , BOB immediate, GTS in 4 minutes, Gauged Gas  
 GS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2188.81	112.37	Initial Hydro-static
13	45.15	116.77	Open To Flow (1)
42	56.71	117.29	Shut-In(1)
103	1383.39	118.65	End Shut-In(1)
104	36.63	118.33	Open To Flow (2)
162	68.42	116.28	Shut-In(2)
284	1344.20	121.37	End Shut-In(2)
285	2080.82	122.14	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4158 GIP	0.00
63.00	GSY WOCM 18%G 20%W 30%O 32%M	0.31
140.00	GSY WOCM 30%G 15%W 30%O 25%M	1.15

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	7.00	33.95
Last Gas Rate	0.25	8.00	35.54
Max. Gas Rate	0.25	10.00	38.71



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Woolsey Operating Co  
125 N Market Ste 1000  
Wichita, KS 67202  
ATTN: Scott Alberg

**35-31S-12W Barber**  
**Benefiel 3**  
Job Ticket: 50924      **DST#: 1**  
Test Start: 2013.05.12 @ 22:12:36

## 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: 110000 ppm	
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4158 GIP	0.000
63.00	GSY WOCM 18%G 20%W 30%O 32%M	0.310
140.00	GSY WOCM 30%G 15%W 30%O 25%M	1.153

Total Length: 203.00 ft      Total Volume: 1.463 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW w as .075 @ 70 degrees



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Woolsey Operating Co

**35-31S-12W Barber**

125 N Market Ste 1000  
Wichita, KS 67202

**Benefiel 3**

Job Ticket: 50924

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2013.05.12 @ 22:12:36

### Gas Rates Information

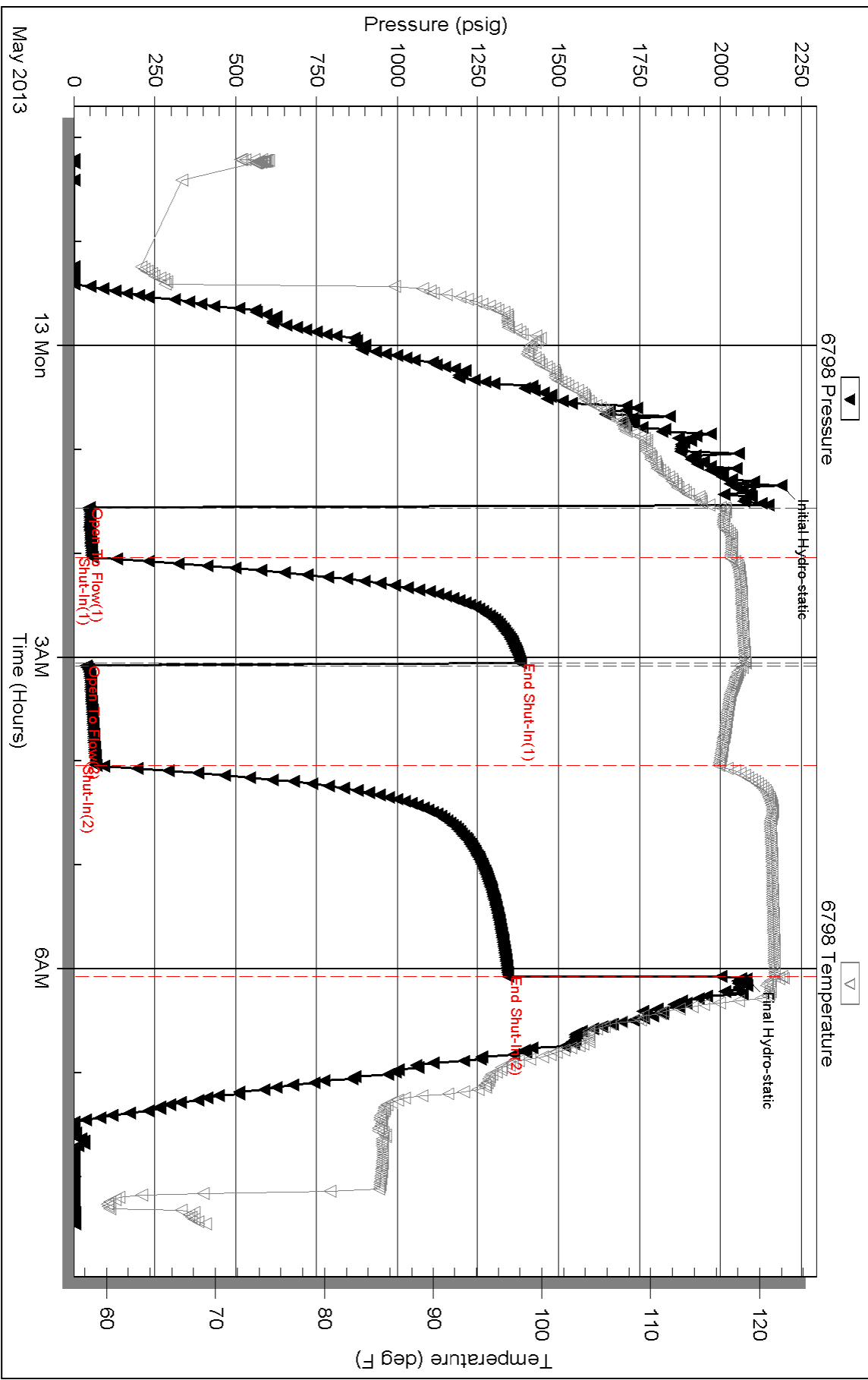
Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.25	7.00	33.95
2	20	0.25	10.00	38.71
2	30	0.25	8.00	35.54
2	40	0.25	8.00	35.54
2	50	0.25	8.00	35.54
2	60	0.25	8.00	35.54



# Pressure vs. Time





**Woolsey Operating Company, LLC**

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

Measured Depth Log

Well Name: BENEFIEL #3  
Location: APPROX SW NE NE SW  
License Number: API: 15-007-24021-00-00  
Spud Date: May 7, 2013  
Surface Coordinates: Section 35-T31S-R12W, 2035' FSL, 2090' FWL  
Pike South  
Bottom Hole Vertical Hole  
Coordinates:  
Ground Elevation (ft): 1619 K.B. Elevation (ft): 1631  
Logged Interval (ft): 3000 To: RTD Total Depth (ft): 4875  
Formation: Simpson  
Type of Drilling Fluid: Chemical Mud, Displace at 3382'.  
Region: Barber County, Kansas  
Drilling Completed: May 14, 2013  
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: W. Scott Alberg  
Company: Alberg Petroleum, LLC  
Address: 609 Meadowlark Lane  
Pratt, Kansas 67124

## FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
LECOMPTON	3470(-1839)	3469(-1838)
KANWAKA	3501(-1870)	3499(-1868)
HEEBNER	3628(-1997)	3627(-1996)
M. DOUGLAS SAND	3758(-2127)	3756(-2125)
BROWN LIME	3806(-2175)	3805(-2174)
LANSING	3813(-2182)	3811(-2180)
STARK SHALE	4190(-2559)	4188(-2557)
HUSHPUCKNEY SHALE	4229(-2598)	4227(-2596)
B/KC	4290(-2659)	4290(-2659)
PAWNEE	4354(-2723)	4352(-2721)
MISSISSIPPIAN	4375(-2744)	4274(-2743)
KINDERHOOK SHALE	4575(-2944)	4573(-2742)
WOODFORD SHALE	4663(-3032)	4660(-3029)
VIOLA	4699(-3068)	4697(-3066)
SIMPSON SHALE	4799(-3168)	4797(-3166)
SIMPSON SAND	4831(-3200)	4822(-3191)
RTD	4875(-3244)	
LTD		4874(-3243)

## COMMENTS

Surface Casing: Set 5 joints 10 3/4" at 204' with 200 sxs Class A, 2% gel, 3% cc, plug down at 9:30 pm on May 7, 2013. Cement did Circulate.

Production Casing: Ran 4 1/2" Casing.

Deviation Surveys: 1/2 - 217', 1 - 814', 3/4 1384'. 3/4 1767', 1 - 2275', 1/2 - 2811', 1 - 3446', 1/2 - 3951', 3/4 - 4405', 3/4 - 4875'.

Contractor Bit Record:

1- 14 3/4" out at 217'.

2- 7 7/8" out at 4405'.

3- 7 7/8" out at 4875'.

Pipe Strap at 4405'

Board 4426.64'

Strap 4424.01'

Short 2.63'

Gas Detector: Woolsey Operating Company, Trailer #1

Mud System: Mud Co, Brad Bortz, Engineer

DSTs: Trilobite Testing, Leal Cason

Logged by Nabors Completion and Production Services

LTD - 4874'.

## DSTs

**DST #1 4377 to 4405 Mississippi**

**Times 30-60-60-120**

**1st Opening - Strong Blow BOB in 45 Seconds - no blow back**

**2nd Opening - Strong Blow - GTS 4 minutes - no blow back**

**Recovery: Gas Gauge**

**10 min 34 MCFPD    40 min 35 MCFPD**

**20 min 29 MCFPD    50 min 35 MCFPD**

**30 min 35 MCFPD    60 min 35 MCFPD**

**4158' GIP**

**140' GWOCM (30% G, 30% O, 15% W, 25% M)**

**63' GWOCM ( 18% G, 30% O, 20% W, 32% M)**

**Chlorides 110,000, Temp 122**

**IFP 45-57#    FFP 37-68#**

**ISIP 1383#    FSIP 1344#**

**IHP 2189#    FHP 2081#**

## CREWS

**Fossil Drilling, Inc Rig #3**

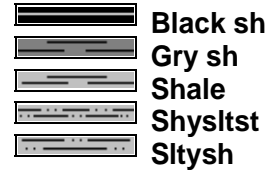
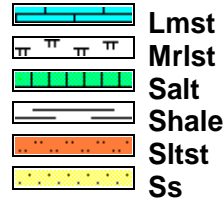
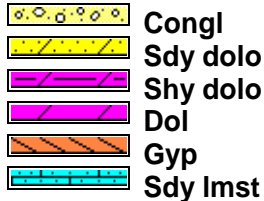
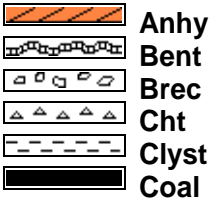
**Tool Pusher - Craig Eubank- Jim Wenrich**

**Drillers - Days - Daniel Orranta**

**Evening - Jim Wenrich - Allen Collins**

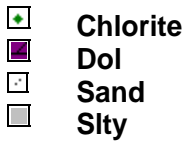
**Morning - Andres Maestas**

## ROCK TYPES

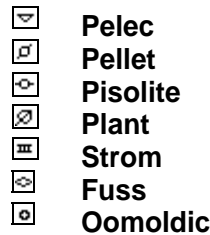
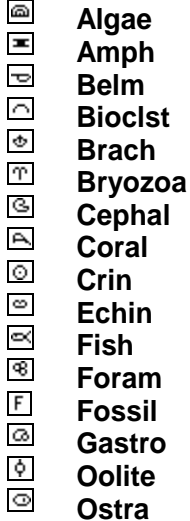


## ACCESSORIES

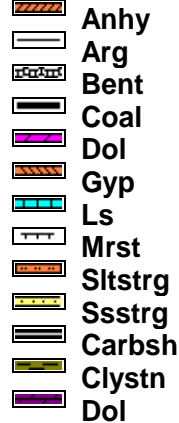
### MINERAL



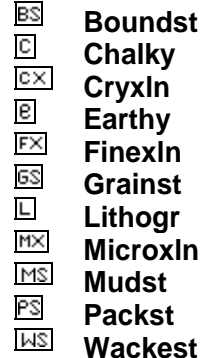
### FOSSIL

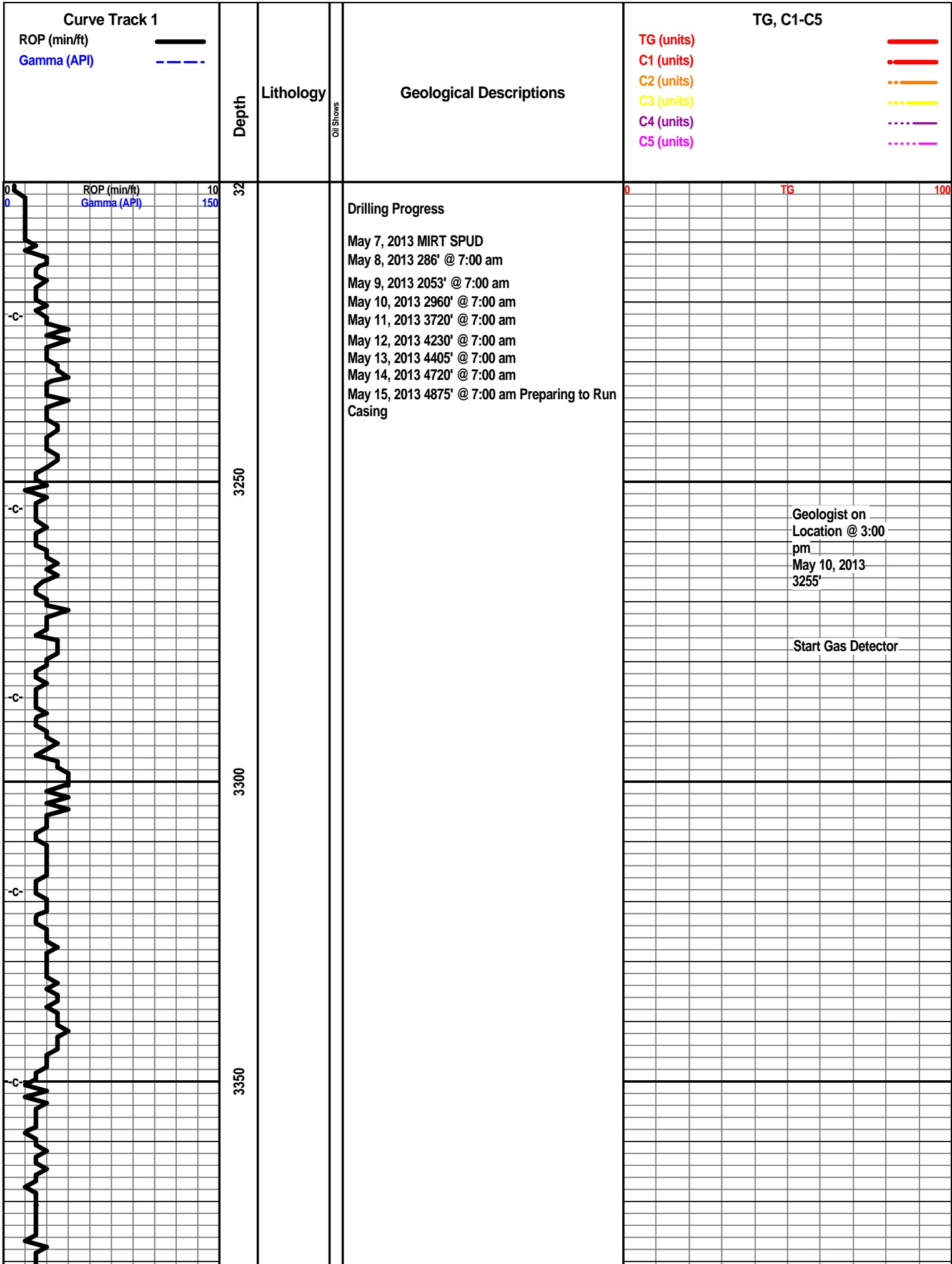


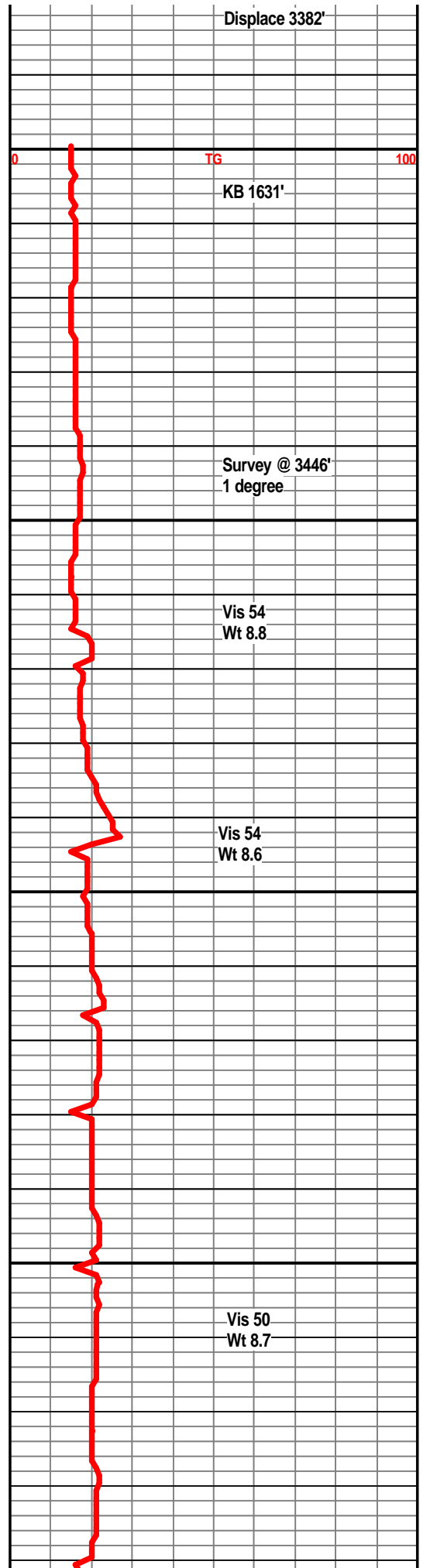
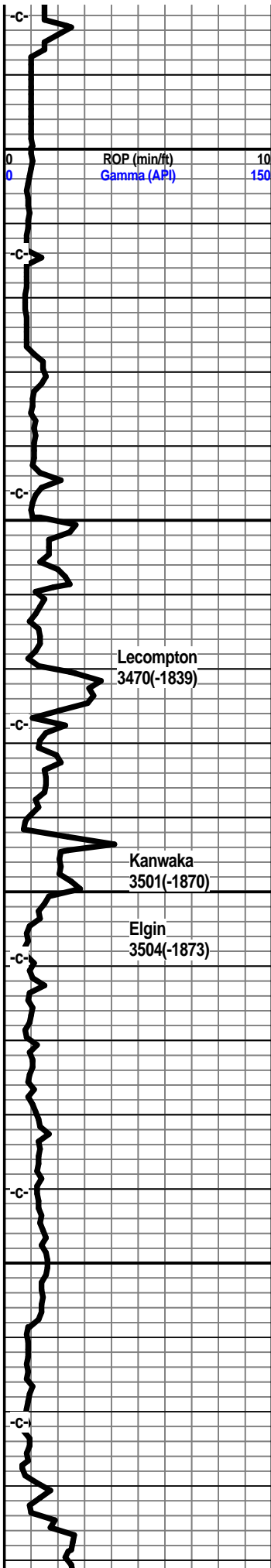
### STRINGER

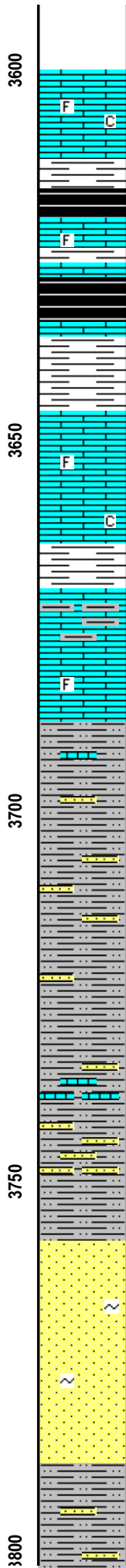
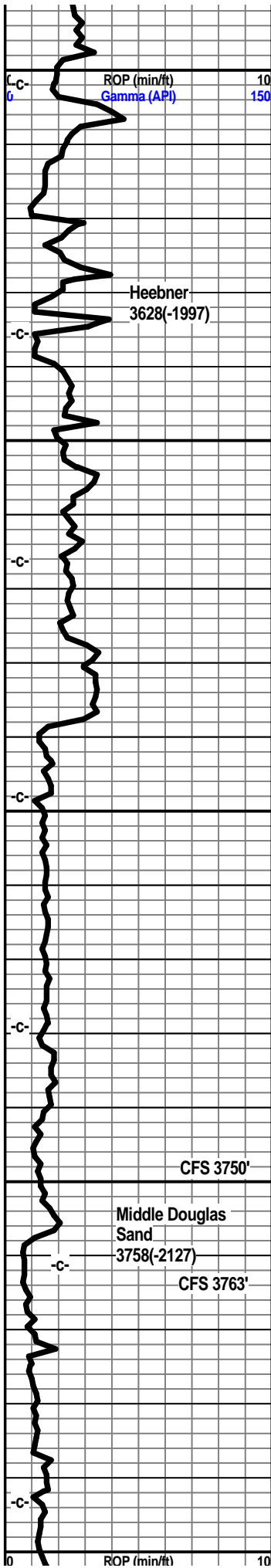


### TEXTURE









Limestone, cream-tan, xln, dense in part, trace fossils, subchalky, abundant silty sand clusters from above.

Shale, grey, dark grey, trace gas bubbles.

Limestone, cream, tan, finely crystalline, dense, trace fossils.

Shale, grey-black, fissile, trace gas bubbles.

Limestone, cream, tan-white, finely crystalline, dense in part, subchalky, trace pin point porosity, trace fossils, no visible shows.

Limestone, tan, tan-brown, crystalline, trace of fossils, shaley in part, no visible shows.

Shale light grey, very silty to sandy, few scattered sand stringers, no visible shows, no kick.

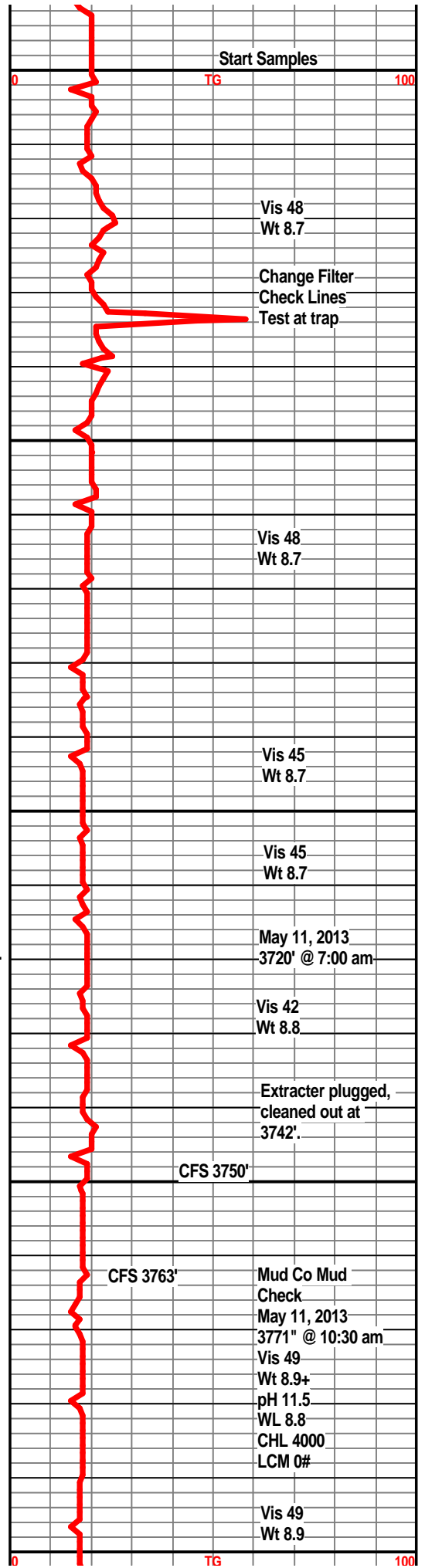
Shale, light grey, very silty to sandy, no shows.

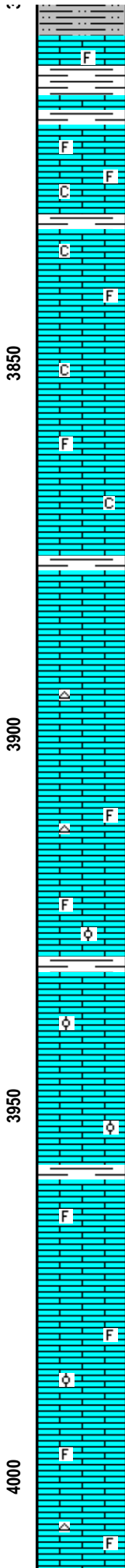
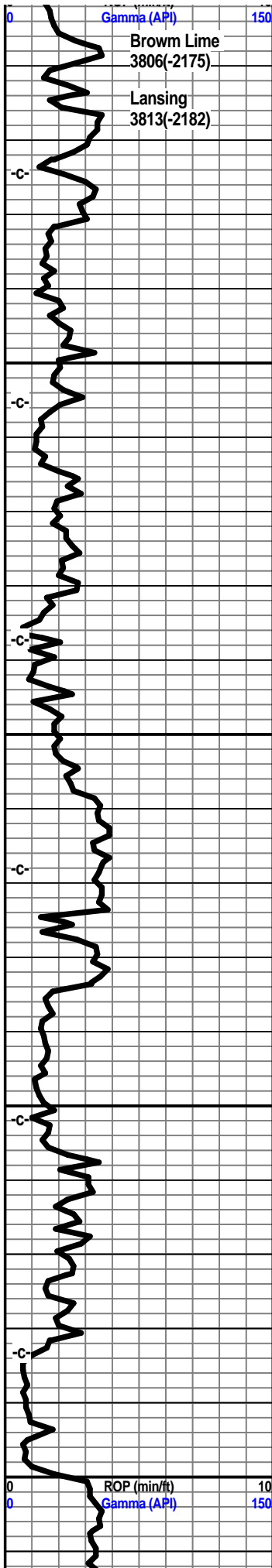
Shale, light grey, silty, some light grey to clear silty sand clusters, mica, friable in part, no visible shows.

Sandstone, clear to grey-white, fine grained, very silty in part, friable in part, mica, fair sorting, no visible shows, no odor, no kick.

Sandstone, clear to grey-white, silty in part, angular grained, fair sorted, mica, some well cemented, no visible show, no odor, no fluor.

Shale, light grey, silty to sandy.





Limestone, tan-brown, dense, slightly fossiliferous.  
Shale, grey-green.

Limestone, cream, tan-white, finely crystalline, partly dense, traces of crystalline porosity, subchalky, dull scattered fluor., no odor, no show oil, no visible show gas, slight gas indication from detector.

Shale, grey-green.

Limestone, cream, buff-white, crystalline, fossiliferous in part, trace fossiliferous porosity, trace pin point porosity, chalky in part, scattered dull mineral fluor, no visible shows oil or gas.

Limestone, tan-white, buff, crystalline, subchalky, trace fossils.

Limestone, cream, buff-white, crystalline, fossils, trace fossiliferous porosity, pin point porosity, subchalky in part.

Shale, light grey.

Limestone, grey-white, crystalline, few scattered vugs, pin point porosity, trace grey chert, no visible shows, no odor.

Limestone, grey-white, buff, crystalline, dense in part, fossils, subchalky, trace grey chert.

Limestone, buff-tan, fossils, trace vugular porosity, some fossiliferous porosity, oolites, barron, no visible shows.

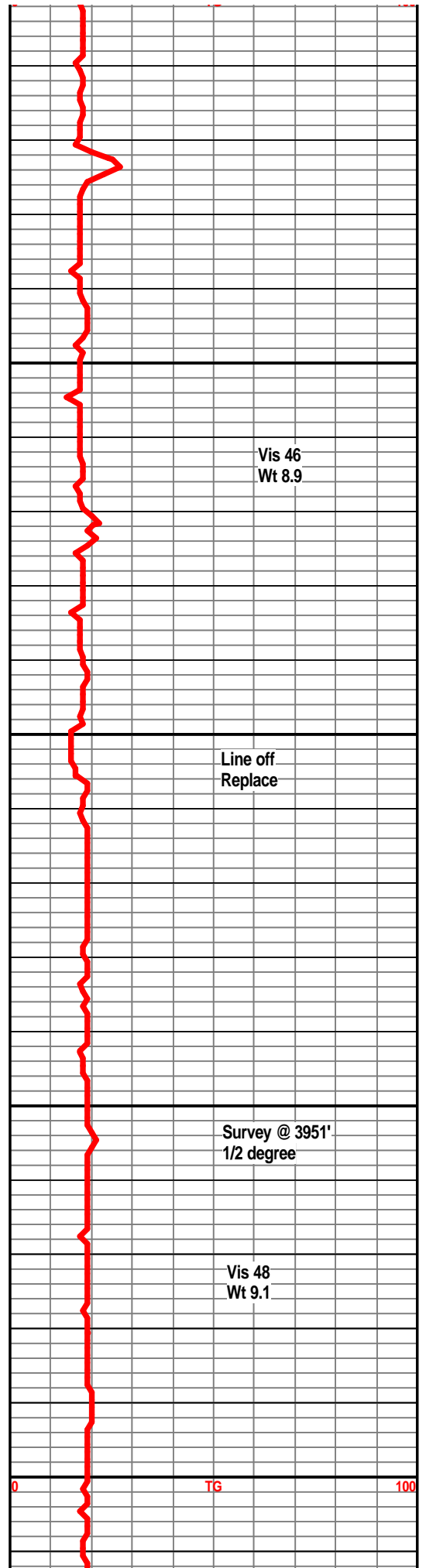
Limestone, tan, buff, crystalline, oolitic, traces of oolitic porosity, some vugs, no visible shows, no odor, no kick.

Shale, light grey.

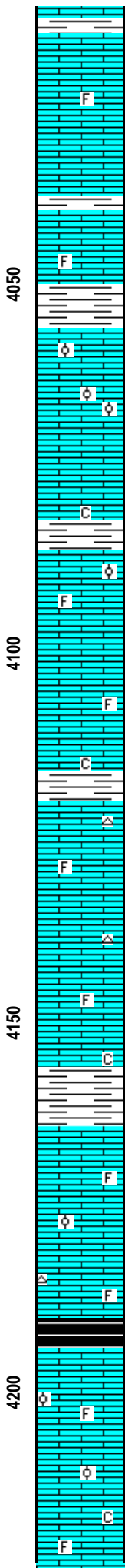
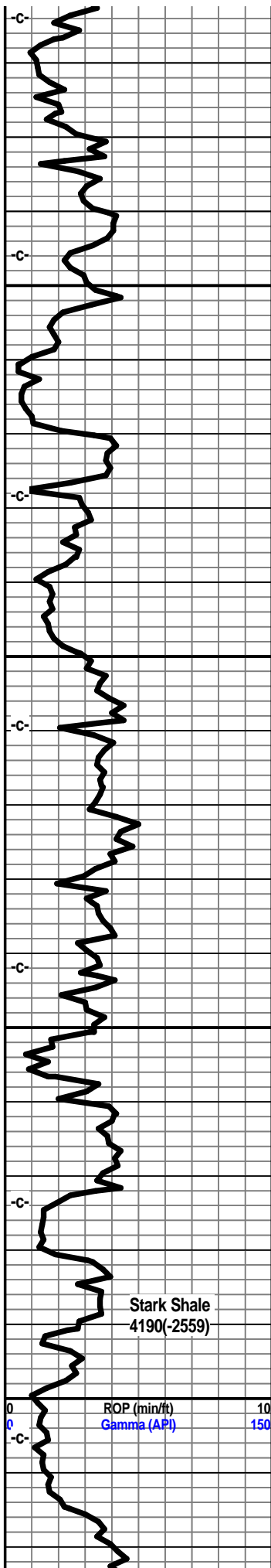
Limestone, tan, buff, cream, crystalline, dense in part, some fossils, no vis shows.

Limestone, cream, buff, crystalline, vugs, crystalline porosity, barron, no visible shows.

Limestone, tan, buff, crystalline, dense, trace tan chert, no shows.







Shale, grey.

Limestone, tan, cream, crystalline, fossiliferous porosity, barron, no visible shows.

Shale, grey.

Limestone, tan, buff, cream, partly dense, fossils, oolites, oolimoldic porosity, barron, no visible shows, no odor, no kick,

Limestone, tan, buff-white, crystalline, fossils, sub chalky.

Limestone, cream, buff, tan, crystalline, vugular porosity, oolitic, oolimoldic porosity, barron, no visible shows, no odor.

Limestone, buff-white, crystalline, subchalky, partly dense, trace fossils.

Limestone, grey, tan, crystalline, dense, traces of chert, some fossils.

Limestone, light grey, tan, crystalline, fossils, traces of tan chert.

Limestone, tan, buff-tan, crystalline, trace fossils, subchalky, no shows.

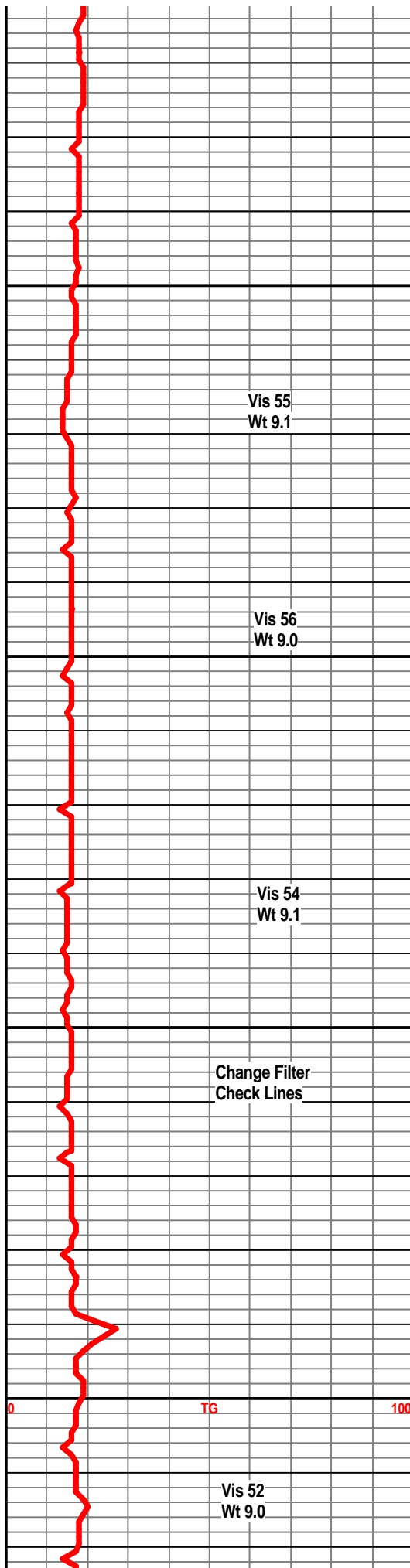
Shale, grey.

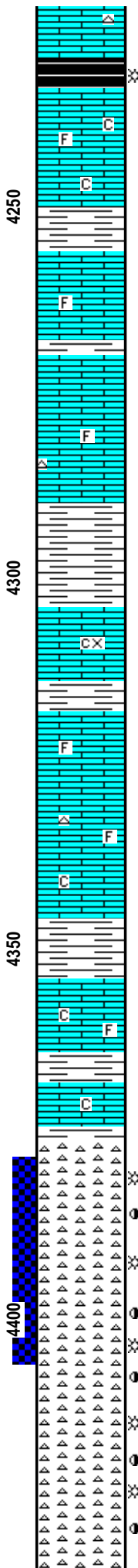
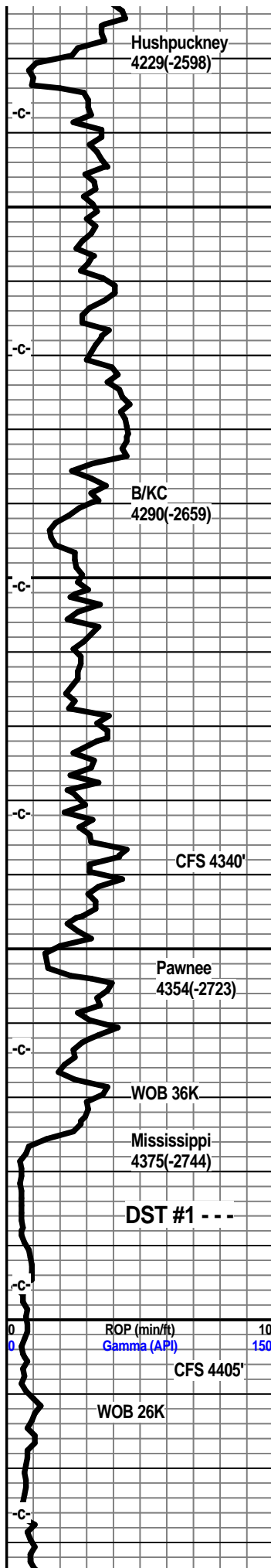
Limestone, cream, tan, buff, crystalline, dense in part, fossils, traces of vugular porosity, slightly oolitic, no visible shows.

Shale, grey-black, slightly carb.

Limestone, tan, buff, crystalline oolitic, fine oolimoldic porosity, barron, no visible shows.

Limestone, tan, buff, crystalline, dense, subchalky, trace fossils.





Hushpuckney 4229(-2598)

Shale, grey-black

Limestone, cream, tan, some light grey, crystalline, subchalky, fossils, mottled in part, no visible shows.

Shale, grey, dark grey.

Limestone, tan, brown, crystalline, dense, trace fossils.

Shale, grey.

Limestone, grey, tan, crystalline, dense, trace fossils, no visible shows.

Limestone, tan, crystalline, trace fossils, dense.

Shale, light grey, pale green, calcitic.

Limestone, tan, buff, light grey-green, crystalline, dense.

Shale, pale green, green.

Limestone, cream, tan, crystalline, trace fossils, no visible shows, no odor.

Limestone, cream, tan, dense, crystalline, trace fossils, subchalky in part.

Shale, dark grey

Limestone cream, tan, crystalline, trace fossils, trace dark asphaltic stain, no visible shows, no odor.

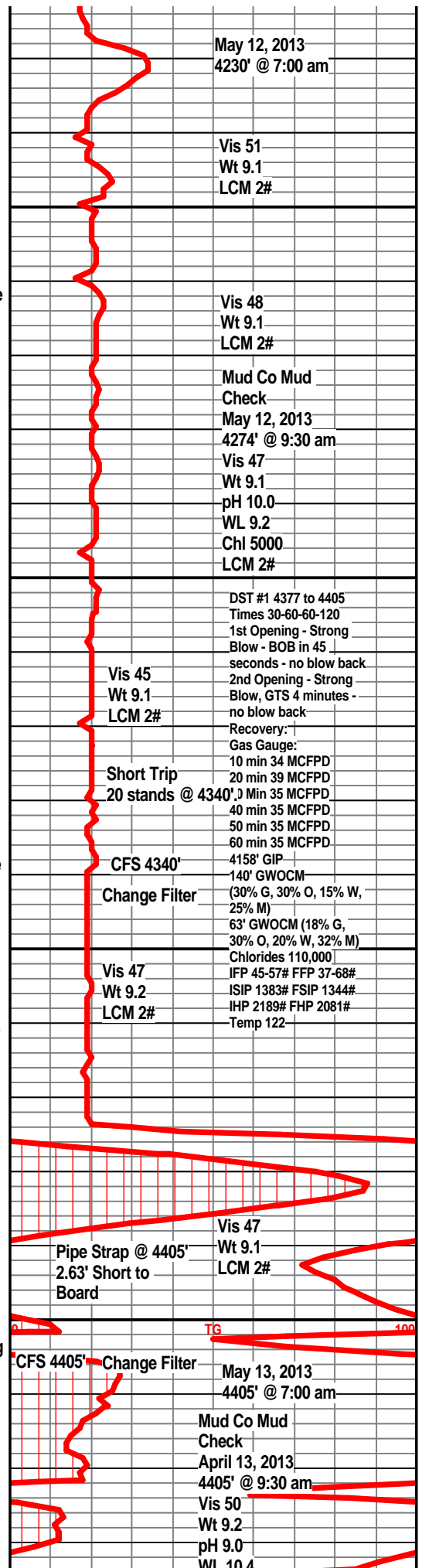
Shale, grey, dark grey.

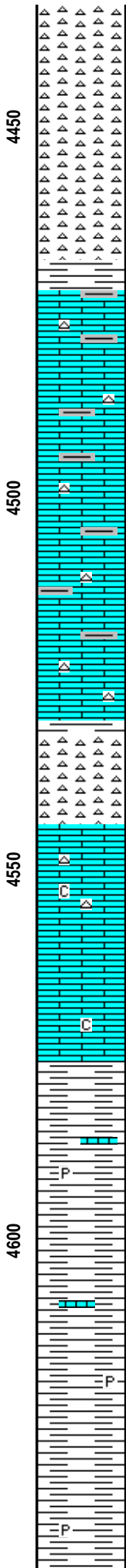
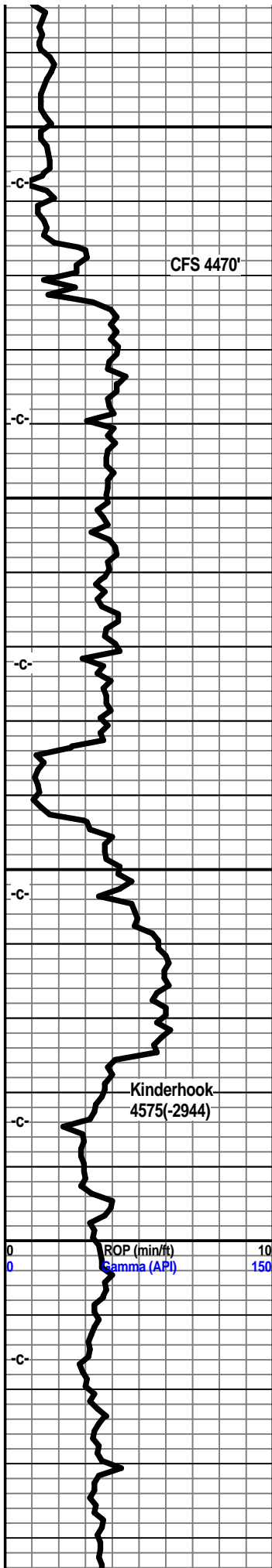
Limestone, tan, buff, crystalline, dense.

Chert, tan, off-white, sharp to weathered, pin point porosity, few small scattered vugs, fair golden stain, fair odor, fair show bleeding oil and gas, trace amounts free oil in tray. fair spotty fluor, good gas indication.

Chert, tan, off-white, bone-white, increase in fresh sharp chert, fair show oil, some edge staining, weathered has pin point and small vug porosity, spotted staining, fair odor, good spotty fluor.

Chert, tan, off-white, bone white, sharp to weathered, pin point porosity, scattered small vugs, fair odor, scattered fluo, edge staining, spotty scattered stain, poor to fair show light oil, trace gas.





Chert, mostly bone white to off-white, some tan, 75% sharp, fresh, 25% weathered, pin point porosity, light odor, slight show oil, scattered spotty staining, scattered light fluor.

Chert, off-white, bone white, sharp, fresh, trace edge staining, trace asphaltic stain, very faint odor, no visible shows, oil, very poor to no fluor.

Chert, off-white, bone, white, sharp, fresh, asphaltic stain, very very faint odor, poor to no fluor, some slight scattered edge stain, no visible shows of free oil.

Limestone, grey, reddish tan, crystalline, shaley, some grey-green shales, cherty in part.

Limestone, reddish-brown, grey, cream, some varicolored shales, cherty in part.

Limestone, reddish-grey, tan buff, crystalline, cherty, varicolored shales.

Chert, bone-white, fresh, sharp.

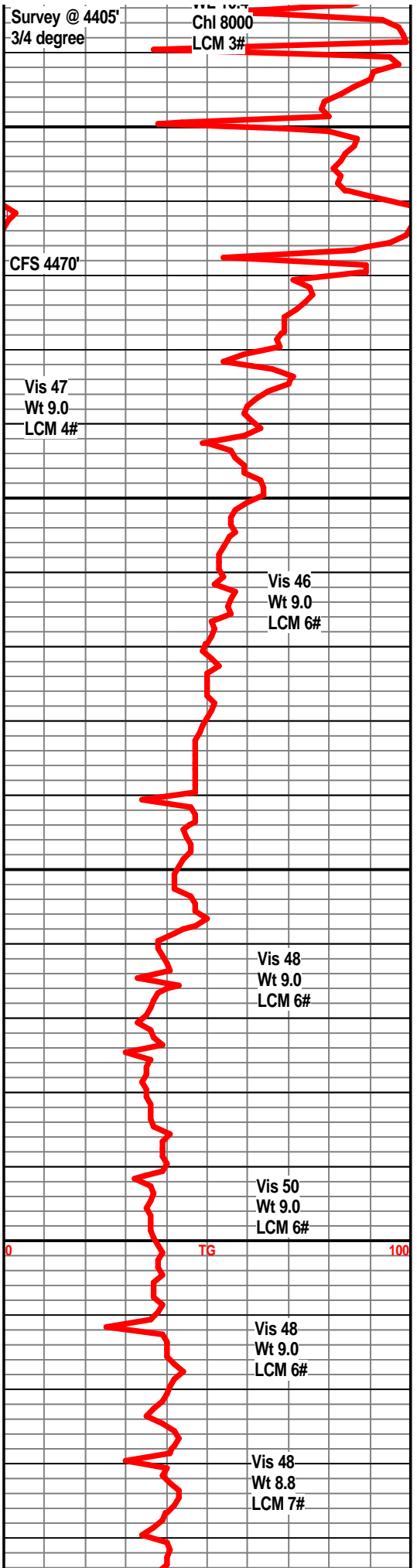
Limestone, tan, buff, crystalline, dense, trace fossils, sub chalky in part, tan chert.

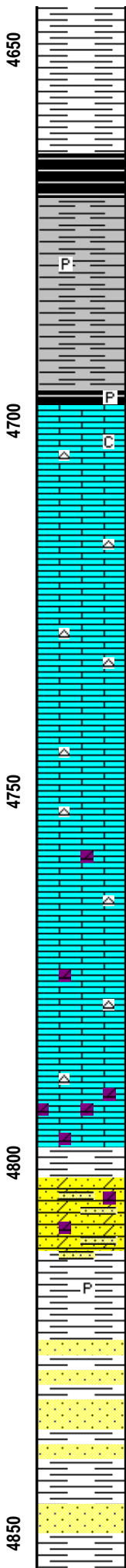
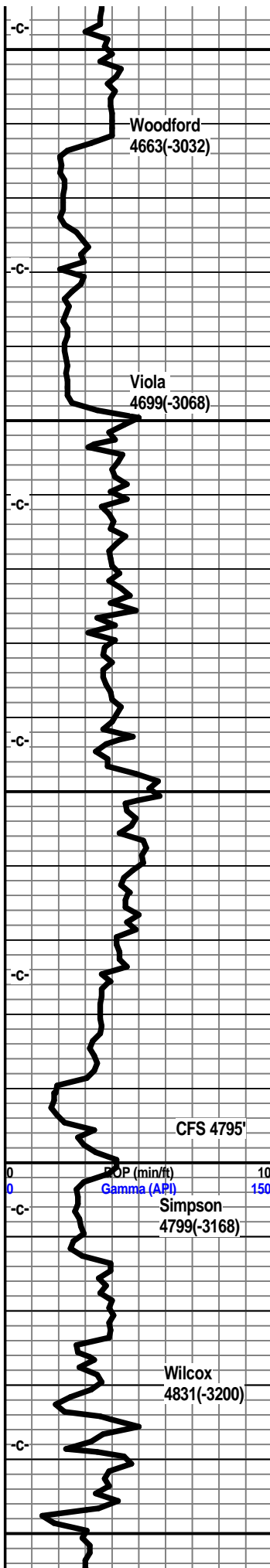
Limestone, cuff, tan, crystalline, trace chert, subchalky in part.

Shale, grey, dark grey, trace pyrite, ls frags.

Shale, grey, dark grey, silty, traces pyrite.

Shale, grey, light grey, silty.





Shale, grey, light grey, silty, firm.

Shale, grey, dark grey-black.

Shale, dark grey.

Shale, dark grey-black. few sand clusters at base, pyritic.

Limestone, grey-white, tan, crystalline, coarse, chalky in part, trace tan chert, poor to no visible porosity.

Limestone, tan, buff, grey-white, coarse, crystalline, traces of sharp tan chert, chalky in part, no visible shows.

Limestone, tan, buff, crystalline, granular, tan sharp cherts, trace chalky, no visible shows.

Limestone, tan, ran-white, crystalline, granular, tan sharp cherts, trace green shales, slightly dolo in part.

Limestone, tan, crystalline, dense, slightly dolo, traces of tan sharp cherts.

Limestone, brown, tan, granular, crystalline, dolo in part, traces crystalline porosity, trace pin point porosity, no visible shows, no odor.

Shale, sandy dolo, dark green, aqua, firm, trace pyrite, few sand clusters, very dolomitic, tite, well cemented, no visible shows.

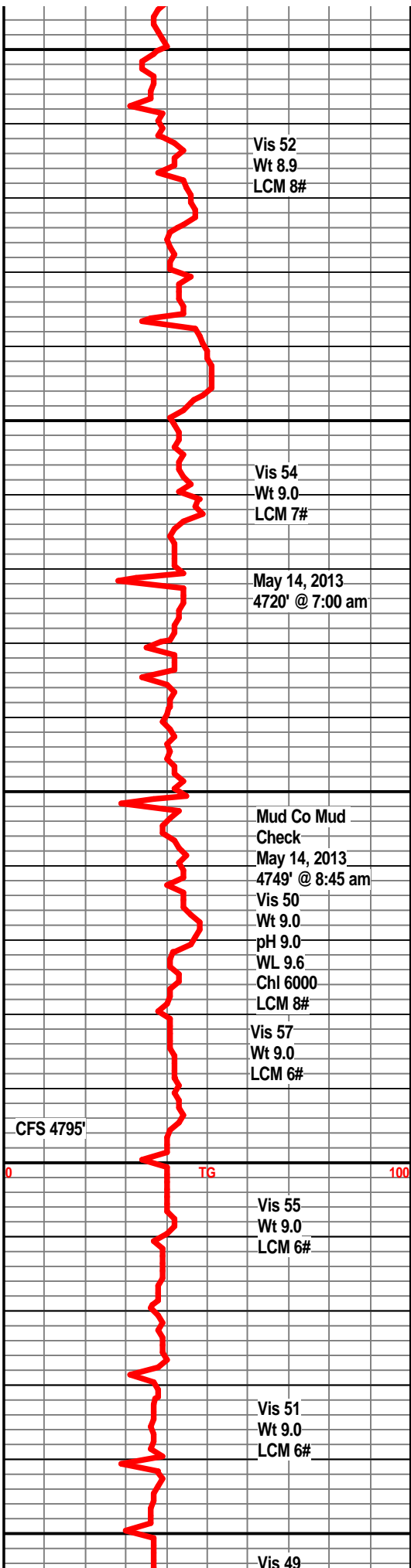
Shale, teal green, firm, few sand clusters, trace pyrite.

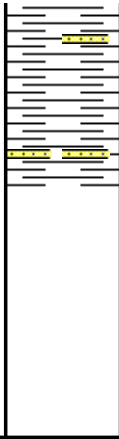
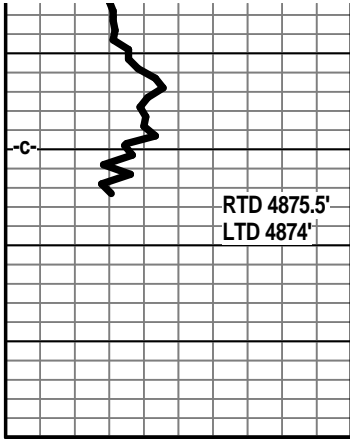
Sandstone, clear to grey-white, sa to sr, most well cemented, few friable, trace pyrite, no visible shows, no odor, no fluor.

Sandstone, clear to grey-white, well cemented, poorly sorted, sa to sr, trace friable, no visible shows, no odor, no fluor.

Shale, teal green, firm.

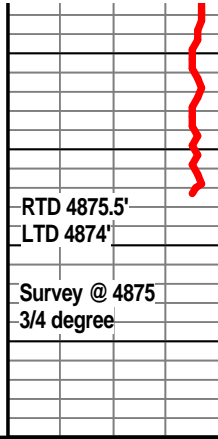
Sandstone, clear to grey-white, shaley, dolomitic, sa to sr, well cemented, no visible shows.





shows.

Shale, teal green, firm, waxey, trace pyrite. few sand stringers.



Wt 9.0  
LCM 6#

RTD 4875.5'  
LTD 4874'

Short Trip 12  
Stands @ 4875'

Survey @ 4875  
3/4 degree

Vis 51  
Wt 9.0  
LCM 6#

May 15, 2013  
2875' @ 7:00 am