



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: _____

1065011



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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ 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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Hess Oil Company
Well Name	Pfister 2-6
Doc ID	1065011

All Electric Logs Run

Micro
Dual Induction
Compensated Density/Neutron
Sonic

Form	ACO1 - Well Completion
Operator	Hess Oil Company
Well Name	Pfister 2-6
Doc ID	1065011

Tops

Name	Top	Datum
Topeka	2904	-975
Heebner	3253	-1324
Toronto	3264	-1335
Douglas Shale	3283	-1354
Brown Lime	3355	-1426
Lansing	3366	-1437
Muncie Creek	3481	-1552
Stark Shale	3541	-1612
Hushpuckney	3567	-1638
Base Kansas City	3584	-1655
Viola	3620	-1691
Simpson Shale	3641	-1712
Simpson Sand	3659	-1730
Arbuckle	3690	-1761
RTD & LTD	3830	-1901



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

HESS OIL CO

PFISTER # 2-6

PO BOX 1009
McPHERSON KS 67460

6-21S-14W STAFFORD

ATTN: DEREK PATTERSON

Job Ticket: 42529

DST#: 1

Test Start: 2011.07.11 @ 08:25:43

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:46:58

Time Test Ended: 17:58:28

Test Type: Conventional Bottom Hole

Tester: RANDY WILLIAMS

Unit No: #34

Interval: 3634.00 ft (KB) To 3706.00 ft (KB) (TVD)

Reference Elevations: 1929.00 ft (KB)

Total Depth: 3706.00 ft (KB) (TVD)

1924.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press @ Run Depth: 954.21 psig @ 3635.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.07.11

End Date:

2011.07.11

Last Calib.:

2011.07.11

Start Time: 08:25:48

End Time:

17:58:28

Time On Btm:

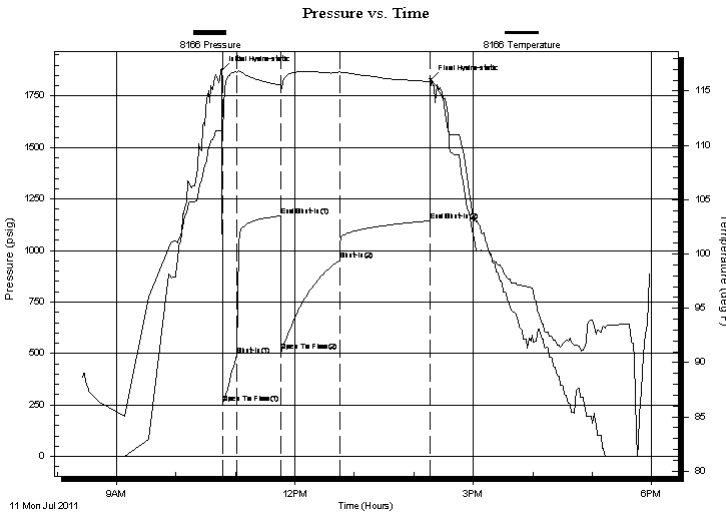
2011.07.11 @ 10:46:28

Time Off Btm:

2011.07.11 @ 14:17:13

TEST COMMENT: IF-SBB,BOTTOM BUCKET 1 MIN
ISI-ONE INCH BLOW BACK
FF-SBB,BOTTOM BUCKET 1 MIN
FSI-WEAK 1 INCH BLOW BACK

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1874.43	111.47	Initial Hydro-static
1	259.88	111.14	Open To Flow (1)
16	492.31	116.69	Shut-In(1)
60	1168.47	115.55	End Shut-In(1)
60	514.11	115.29	Open To Flow (2)
119	954.21	116.77	Shut-In(2)
210	1144.37	115.87	End Shut-In(2)
211	1831.09	116.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
693.00	WATER 1.5 @ 110 DEG = 3,200	7.50
1543.00	GOWM, 60% G, 10% O, 15% W, 15% M	21.64
0.00	315 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL CO

PFISTER # 2-6

PO BOX 1009
McPHERSON KS 67460

6-21S-14W STAFFORD

Job Ticket: 42529

DST#: 1

ATTN: DEREK PATTERSON

Test Start: 2011.07.11 @ 08:25:43

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

3200 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
693.00	WATER 1.5 @ 110 DEG = 3,200	7.498
1543.00	GOWM, 60% G, 10% O, 15% W, 15% M	21.644
0.00	315 GIP	0.000

Total Length: 2236.00 ft Total Volume: 29.142 bbl

Num Fluid Samples: 0

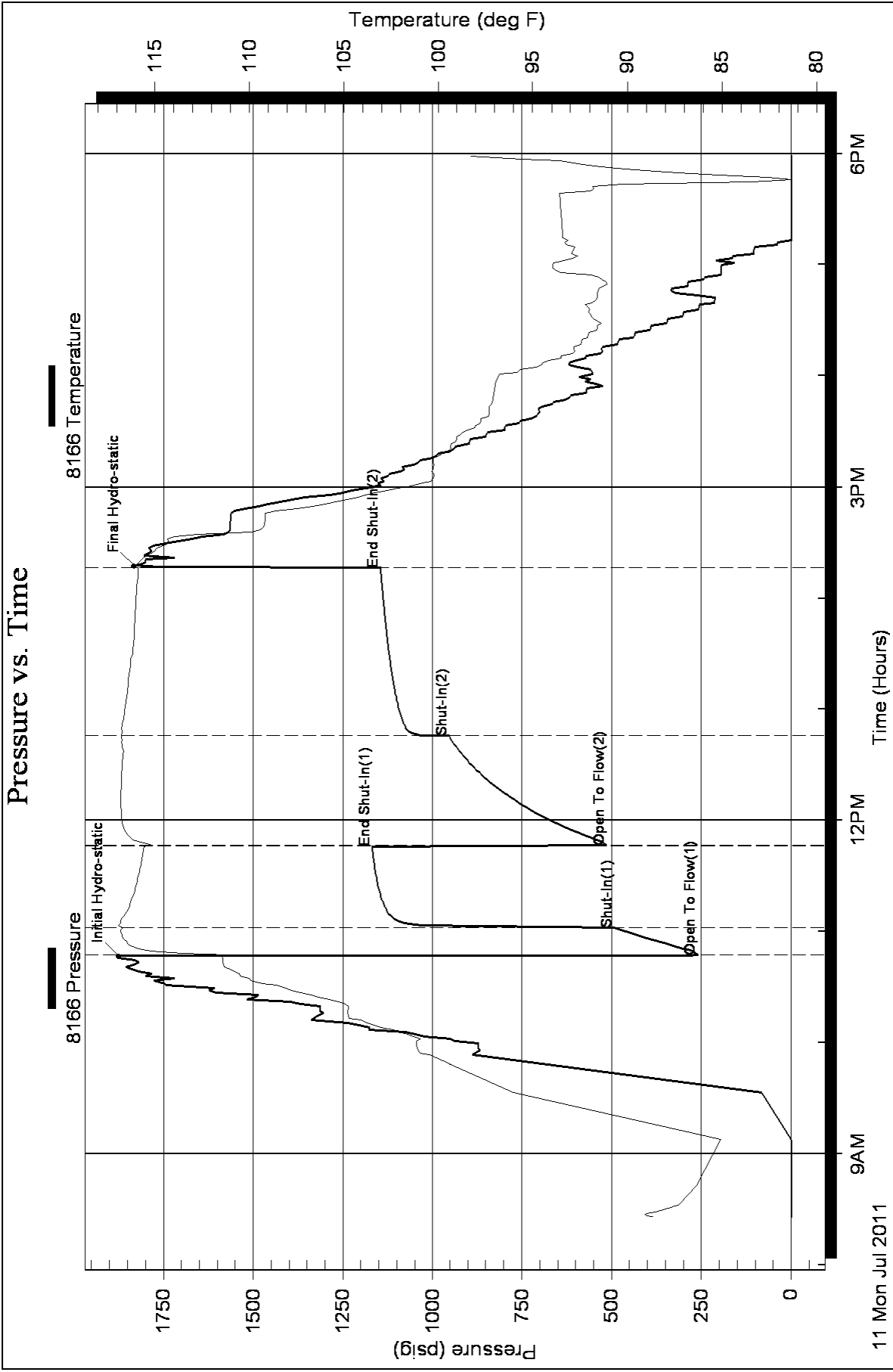
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: WATER= 1.5 @ 110 DEG



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 11, 2011

Bryan Hess
Hess Oil Company
PO BOX 1009
MCPHERSON, KS 67460-1009

Re: ACO1
API 15-185-23687-00-00
Pfister 2-6
SE/4 Sec.06-21S-14W
Stafford 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,
Bryan Hess

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4671

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-6-11	6	21	14	Stafford	Kansas		7:00 PM
Lease <i>Plister</i>	Well No. <i>26</i>		Location <i>Radium SW 1/4 N14</i>				
Contractor <i>Mallard Drilling</i>				Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job <i>Surface</i>	Hole Size <i>12 1/4</i>		T.D. <i>875</i>	Charge To <i>Hess Oil Co.</i>			
Csg. <i>83</i>	Tbg. Size		Depth	Street			
Tool <i>Baffle Plate</i>	Depth <i>833</i>		City		State		
Cement Left in Csg. <i>42</i>	Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.				
Meas Line	Displace <i>5.33</i>		Cement Amount Ordered <i>425 Common 3000 2000</i>				
EQUIPMENT				<i>1/4 # flow seal part</i>			
Pumptrk <i>1</i>	No.	Cementer <i>Steve</i>	Common <i>425</i>				
Bulktrk <i>12</i>	No.	Driver <i>Lisa</i>	Poz. Mix				
Bulktrk	No.	Driver <i>Doug</i>	Gel. <i>8</i>				
JOB SERVICES & REMARKS				Calcium <i>15</i>			
Remarks:	Hulls						
Rat Hole	Salt						
Mouse Hole	Flowseal <i>200#</i>						
Centralizers	Kol-Seal						
Baskets	Mud CLR 48						
D/V or Port Collar	CFL-117 or CD110 CAF 38						
<i>Cement did Circulate</i>			Sand				
			Handling <i>450</i>				
			Mileage				
FLOAT EQUIPMENT							
Guide Shoe							
Centralizer							
Baskets <i>1</i>							
AFU Inserts							
Float Shoe							
Latch Down							
<i>Baffle Plate</i>							
<i>Rubber Plug</i>							
Pumptrk Charge <i>long Surface</i>							
Mileage <i>15</i>							
Tax							
Discount							
Total Charge							
Signature <i>Paul Jurgensen</i>							

JOB LOG

SWIFT Services, Inc.

DATE 7-12-11 PAGE NO.

CUSTOMER HESS OIL CO. WELL NO. #2 LEASE PFISTER JOB TYPE 5/2" LONGSTRING TICKET NO. 20888

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1700							ON LOCATION
	1830							START 5/2" CASING IN WELL
								TD-3830 SET= 3817'
								TP-3820 5/2" 15.5
								ST-17'
								CENTRALIZER (TURBO)- 1,2,3,4,5
								CMT BSKT - 6
	2015						1100	DROP BALL - CIRCULATE - SET PACKERSHOE
	2048	6	12		✓		400	PUMP 500 GAL MUDFLUSH
	2050	6	20		✓		400	PUMP 20 BBLs KCL-FLUSH
	2055		7.5					PLUG RH (30SKS) MH (20SKS)
	2100	4	36		✓		250	MIX CEMENT 150 SKS EA-2 = 15.4 PPG
	2110							WASH OUT PUMP - LOWER
	2111							RELEASE LATCH DOWN PLUG
	2115	7	0		✓			DISPLACE PLUG
	2120	6	90.5				1500	PLUG DOWN - PSE UP LATCH IN PLUG
	2130						OK	RELEASE PSE-HEW
								WASH TRUCK
	2200							JOB COMPLETE

THANK YOU
WAYNE, JEFF, ROB



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

Well Name: Pfister #2-6
Location: Sec. 6 - T21S - R14W , Stafford County, KS
License Number: API No.: 15-185-23687-0000
Spud Date: July 5, 2011
Surface Coordinates: 330' FSL & 1650' FEL
Region: Frey
Drilling Completed: July 12, 2011

Bottom Hole Coordinates:

Ground Elevation (ft): 1924' K.B. Elevation (ft): 1929'
Logged Interval (ft): 2200' To: 3830' Total Depth (ft): 3830' (LTD)
Formation: Arbuckle
Type of Drilling Fluid: Chemical Gel/Polymer

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

OPERATOR

Company: Hess Oil Company
Address: 2080 E. Kansas
McPherson, KS 67460

GEOLOGIST

Name: Derek W. Patterson
Company: Valhalla Exploration, LLC
Address: 133 N. Glendale
Wichita, KS 67208

REMARKS

After review of the Open Hole Logs, DST info, structural position, and sample evaluation, it was decided by operator to run 5 1/2" production casing to further evaluate the multiple Arbuckle zones encountered while drilling the Pfister #2-6.

The well samples were saved, and will be submitted and available for review at the Kansas Geological Survey Well Sample Library located in Wichita, KS.

Respectfully Submitted,
Derek W. Patterson

COMMENTS

Please Note: the drill time has been shifted in various locations throughout the geologic log to correspond to the electric log curves. Shifting was done on a range from 2' shallow/higher to 1' deep/lower. The lower portion of the drill time was shifted a total of 1' shallow/higher, thus the test interval for DST #1 was shifted 1' shallow/higher as well.

Hess Oil Company

DAILY DRILLING REPORT

Company: Hess Oil Company
2080 E. Kansas
McPherson, KS 67460
Contact: Bryan Hess (Hess Oil Co)
Office: 620.241.4640
David Withrow (Edison Operating Co)
Cell: 316.613.1544
Geologist: Derek W. Patterson
Cell: 316.655.3550
Office: 316.558.5202
Drilling Contractor: J V Mallard, Inc., Rig - 785.731.5161
Toolpusher: Levon Urban

Well: Pfister #2-6
Location: 330' FSL & 1650' FEL
Sec. 6 - T21S - R14W
Stafford Co., KS
Elevation: 1924' GL - 1929' KB
Field: Frey
API: 15-185-23687-0000
Surface Casing: 868' of 8 5/8" set @ 875' KB
Spud Date: July 5, 2011
Drilling Complete: July 12, 2011

DATE	7:00 AM DEPTH	PREVIOUS 24 HOURS OF OPERATIONS
7.10.2011	3349'	Drilling and connections Severy and Topeka (online monitoring from home). Geologist Derek W. Patterson on location, 2240 hrs 7.9.11. Reset Tooke Daq, rezero gas detector, test gas detector with positive response. Drilling and connections Topeka, Heebner, Toronto, and into Douglas. Made 630' over past 24 hrs of operations. DMC: \$1,279.40 CMC: \$5,530.60
7.11.2011	3706'	Drilling and connections Douglas, Brown Lime, and into Lansing. CFS @ 3446' (LKC 'F'), resume drilling Lansing. Drilling and connections Lansing. Rig down to repair clicker connection from geologist to Tooke Daq. Resume drilling and connections Lansing, Base Kansas City, Viola, Simpson, and into Arbuck CFS @ 3706', shows warrant DST. CTCH, short trip (12 stands), CTCH, drop survey, strap out for DST #1 0630 hrs 7.11.11. Made 357' over past 24 hrs of operations. DMC: \$1,045.95 CMC: \$6,576.55
7.12.2011	RTD - 3830' LTD - 3830'	Strap out for DST #1, TIH with tool. Conducting DST #1, test successful. TIH w/ bit, CTCH, resume drilling Arbuckle, 2145 hrs 7.11.11. Drilling and connections Arbuckle, ahead to RTD of 3830'. RTD reached 0255 hrs 7.12.11. CTCH, drop survey, TOH for open hole logging operations 0445 hrs 7.12.11. Made 124' over past 24 hrs of operations. DMC: -\$457.05 CMC: \$6,119.50
7.13.2011	RTD - 3830' LTD - 3830'	Commence open hole logging operations, 0700 hrs 7.12.11. Open hole logging operations complete, 1115 hrs 7.12.11. Orders received to run 5 1/2" production casing to further evaluate Arbuckle. Geologist Derek W. Patterson off location, 1245 hrs 7.12.11.

Hess Oil Company

WELL COMPARISON SHEET

DRILLING WELL					COMPARISON WELL				COMPARISON WELL				COMPARISON WELL				
Hess Oil Company - Pfister #2-6 Sec. 6 - 21S - 14W 330' FSL & 1650' FEL 1929 KB					Hess Oil Company - Pfister #1-6 Sec. 6 - 21S - 14W 990' FSL & 470' FEL Oil - Arb Structural 1927 KB Relationship				Vickers - Frey 'B' #1 Sec. 6 - 21S - 14W SW SE SE Oil - Arb Structural 1928 KB Relationship				Hess Oil Company - Wood #1-7 Sec. 7 - 21S - 14W 330' FNL & 2310' FEL Oil - Arb Structural 1932 KB Relationship				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Sample	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log	
Topeka	2903	-974	2904	-975	2896	-969	-5	-6						2921	-989	15	14
Heebner	3255	-1326	3253	-1324	3245	-1318	-8	-6	3252	-1324	-2	0		3273	-1341	15	17
Toronto	3268	-1339	3264	-1335	3256	-1329	-10	-6						3286	-1354	15	19
Douglas Shale	3285	-1356	3283	-1354	3274	-1347	-9	-7						3303	-1371	15	17
Brown Lime	3356	-1427	3355	-1426	3349	-1422	-5	-4	3355	-1427	0	1		3376	-1444	17	18
Lansing	3363	-1434	3366	-1437	3357	-1430	-4	-7	3366	-1438	4	1		3386	-1454	20	17
Muncie Creek	3485	-1556	3481	-1552	3474	-1547	-9	-5						3506	-1574	18	22
Stark Shale	3543	-1614	3541	-1612	3536	-1609	-5	-3						3566	-1634	20	22
Hushpuckney	3568	-1639	3567	-1638	3561	-1634	-5	-4						3593	-1661	22	23
Base Kansas City	3585	-1656	3584	-1655	3579	-1652	-4	-3						3608	-1676	20	21
Viola	3622	-1693	3620	-1691	3611	-1684	-9	-7	3621	-1693	0			3643	-1711	18	20
Simpson Shale	3636	-1707	3641	-1712	3636	-1709	2	-3	3648	-1720	13	8		3682	-1750	43	38
Simpson Sand	3655	-1726	3659	-1730	3644	-1717	-9	-13	Not Called In Field					3695	-1763	37	33
Arbuckle	3691	-1762	3690	-1761	3680	-1753	-9	-8	3690	-1762	0	1		3733	-1801	39	40
Total Depth	3830	-1901	3830	-1901	3800	-1873	-28	-28	3704	-1776	-125	-125		3842	-1910	9	9

PLEASE NOTE: DST #1 INTERVAL NEEDS TO BE SHIFTED 1' SHALLOW/HIGHER TO CORRESPOND WITH THE ELECTRIC LOG CURVES.

BIT RECORD

Bit #	Size	Make	Type	Serial Number	Depth In	Depth Out	Feet	Hours
A	12 1/4"	Smith	RT	RR	0'	875'	875'	17
1	7 7/8"	Smith	F-27	PS 6343	875'	3706'	2831'	79.4
2	7 7/8"	Smith	F-27	RR	3706'	3830'	124'	4.50

SURFACE CASING RECORD

7.6.2011 Ran 23 joints of new 23#/ft 8 5/8" casing, tallying 868', set @ 875' KB. Cemented with 425 sacks of common, 3% CC, 2% gel, cement did circulate. Plug down, 1900 hrs 7.6.11. Drill out cement and plug, 0300 hrs 7.7.11.

PRODUCTION CASING RECORD

7.12.2011 Ran 92 joints of 15.5# 5 1/2" production casing, tallying 3,813', set @ 3,818' KB with landing joint. Cement rat hole with 30 sacks, mouse hole with 20 sacks, 5 1/2" casing with 150 sacks EA-2. Plug down, 2130 hrs 7.12.11 by Swift.

DEVIATION SURVEY RECORD

<u>Depth</u>	<u>Survey</u>
875'	1/2°
3706'	1/2°
3830'	3/4°

PIPE STRAP RECORD

<u>Depth</u>	<u>Pipe Strap</u>
3706'	0.12' Short to Board



Weatherford® Completion Systems

DRILL STEM TEST REPORT

HESS OIL CO

PFISTER # 2-6

PO BOX 1009
McPHERSON KS 67460

6-21S-14W STAFFORD

ATTN: DEREK PATTERSON

Job Ticket: 42529

DST#: 1

Test Start: 2011.07.11 @ 08:25:43

GENERAL INFORMATION:

Formation: **ARBUCKLE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:46:58

Time Test Ended: 17:58:28

Test Type: Conventional Bottom Hole

Tester: RANDY WILLIAMS

Unit No: #34

Interval: 3634.00 ft (KB) To 3706.00 ft (KB) (TVD)

Total Depth: 3706.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1929.00 ft (KB)

1924.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 954.21 psig @ 3635.00 ft (KB)

Start Date: 2011.07.11

End Date:

2011.07.11

Capacity: 8000.00 psig

Last Calib.:

2011.07.11

Start Time:

08:25:48

End Time:

17:58:28

Time On Btm:

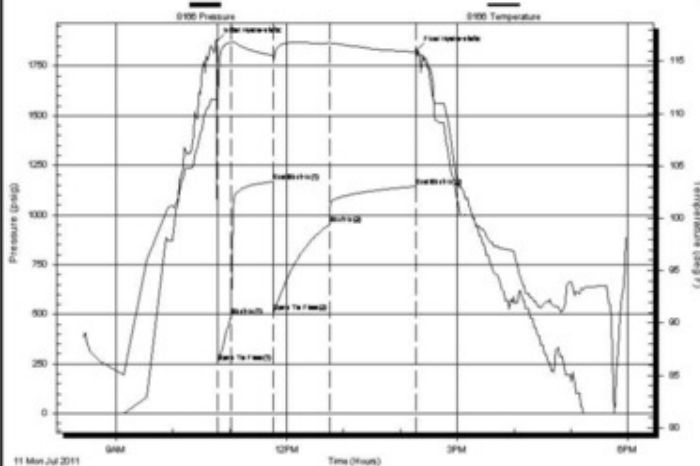
2011.07.11 @ 10:46:28

Time Off Btm:

2011.07.11 @ 14:17:13

TEST COMMENT: IF-SBB,BOTTOM BUCKET 1 MIN
ISI-ONE INCH BLOW BACK
FF-SBB,BOTTOM BUCKET 1 MIN
FSI-WEAK 1 INCH BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1874.43	111.47	Initial Hydro-static
1	259.88	111.14	Open To Flow (1)
16	492.31	116.69	Shut-in(1)
60	1168.47	115.55	End Shut-in(1)
60	514.11	115.29	Open To Flow (2)
119	954.21	116.77	Shut-in(2)
210	1144.37	115.87	End Shut-in(2)
211	1831.09	116.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
693.00	WATER 1.5 @ 110 DEG = 3,200	7.50
1543.00	GOWM, 60% G, 10% O, 15% W, 15% M	21.64
0.00	315 GIP	0.00

Gas Rates

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

ROCK TYPES

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Sltstn
- Shale
- Sandylms
- Lms
- Gry sh
- Dtd
- Dol
- Carb sh
- pipesymbol
- unknown lith
- Red shale

FOSSIL

- Oomoldic
- Fuss
- Algae

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MINERAL

- Silty
- Sand
- Dol
- Chlorite
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol

STRINGER

- Red shale
- Sh
- Sandylms
- Lms
- Gryslt
- Grysh
- Dol
- Clystn
- Carbsh
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst

- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

- Sltstrg
- Ssstrg

TEXTURE

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

OIL SHOW

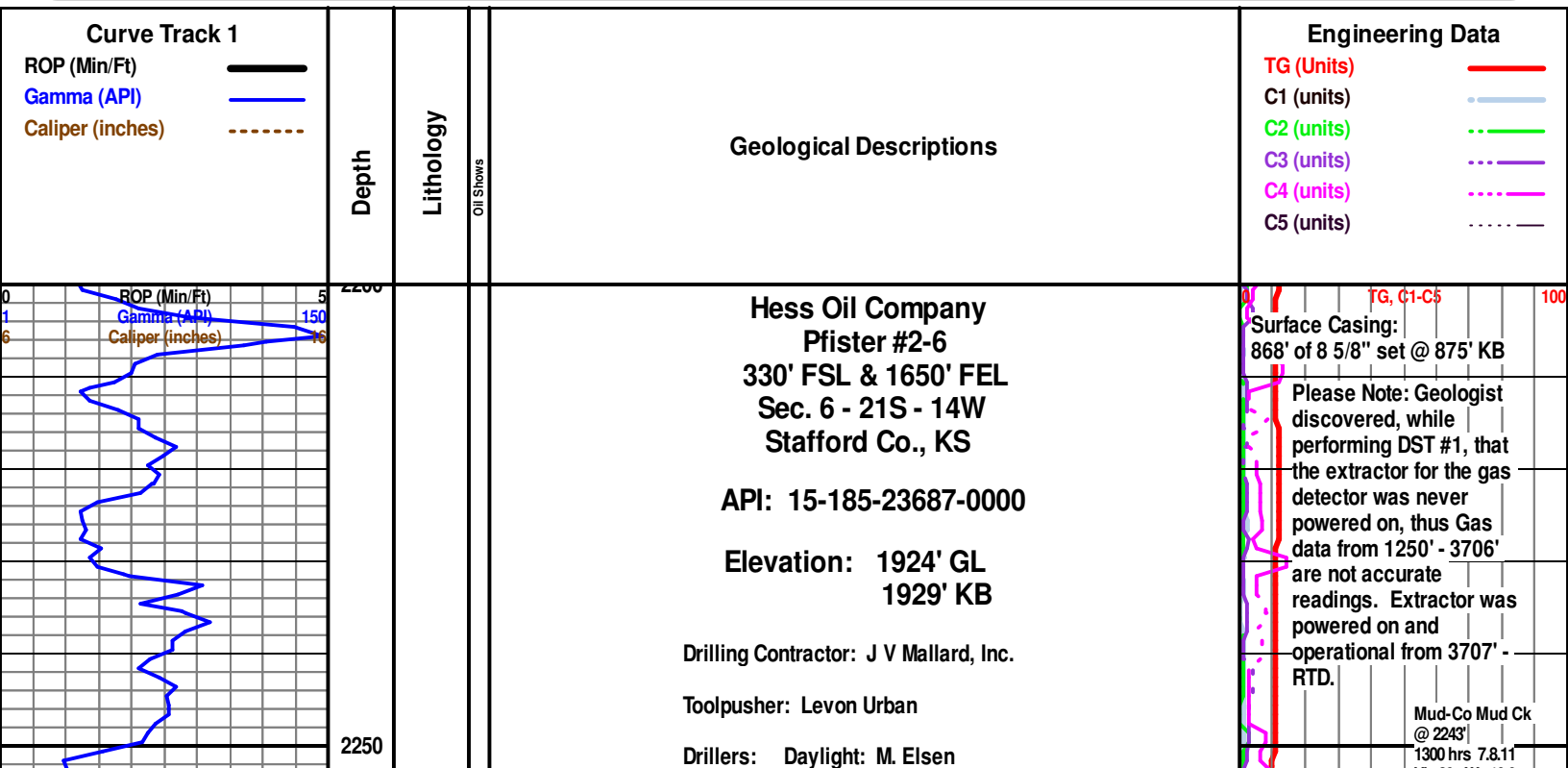
- Gas show
- Good
- Fair
- Poor
- Dead

INTERVAL

- Dst
- Core
- Dst
- Straddle test tail pip

EVENT

- Rft
- Sidewall
- Dst
- Open hole
- Perforations



Evening: L. Juergensen
Morning: D. Brewer

Mud Company: Mud-Co/Service Mud
Mud Engineer: Rick Hughes

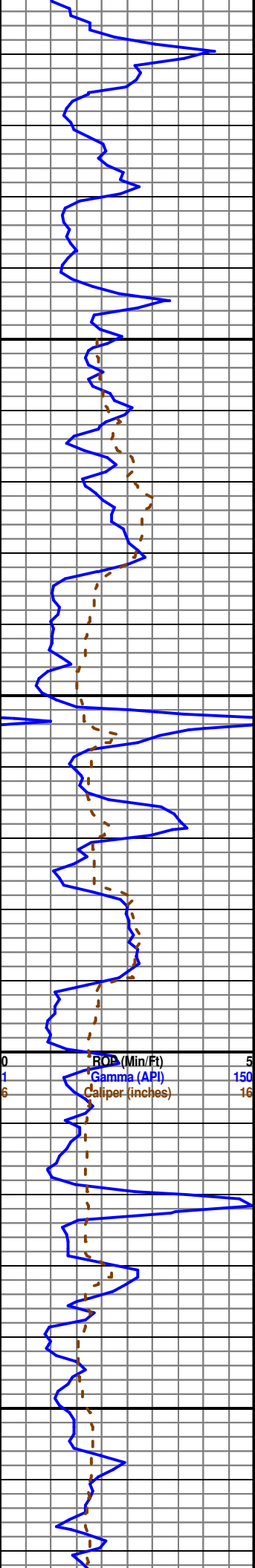
Testing Company: Trilobite Testing
Tester: Randy Williams

Logging Company: Superior Well Services
Logging Engineer: Mitch Rupp

Geologist: Derek W. Patterson

Vis 29 Wt 10.0
PV 1 YP 1
WL n/c
Cake 0/32
pH 7.0
CHL 80,000 ppm
Cal Hvy
Sol 7.3
LCM: 0 #/bbl
DMC: \$2,909.10
CMC: \$4,251.20

Bluestem Gas Detector Trailer on location and operation @ 1250 ft.
The ROP, TG, C1 (Methane), C2 (Ethane), C3 (Propane) & C4 (N-Butane + C5 Iso Butane) DATA was downloaded from the Tooke Daq System.
Said DATA was imported and displayed on this Geo Log.



2300

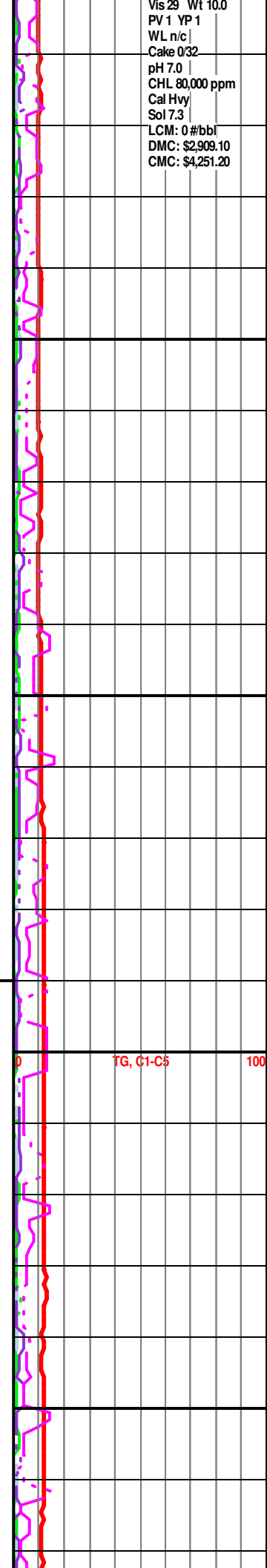
2350

2400

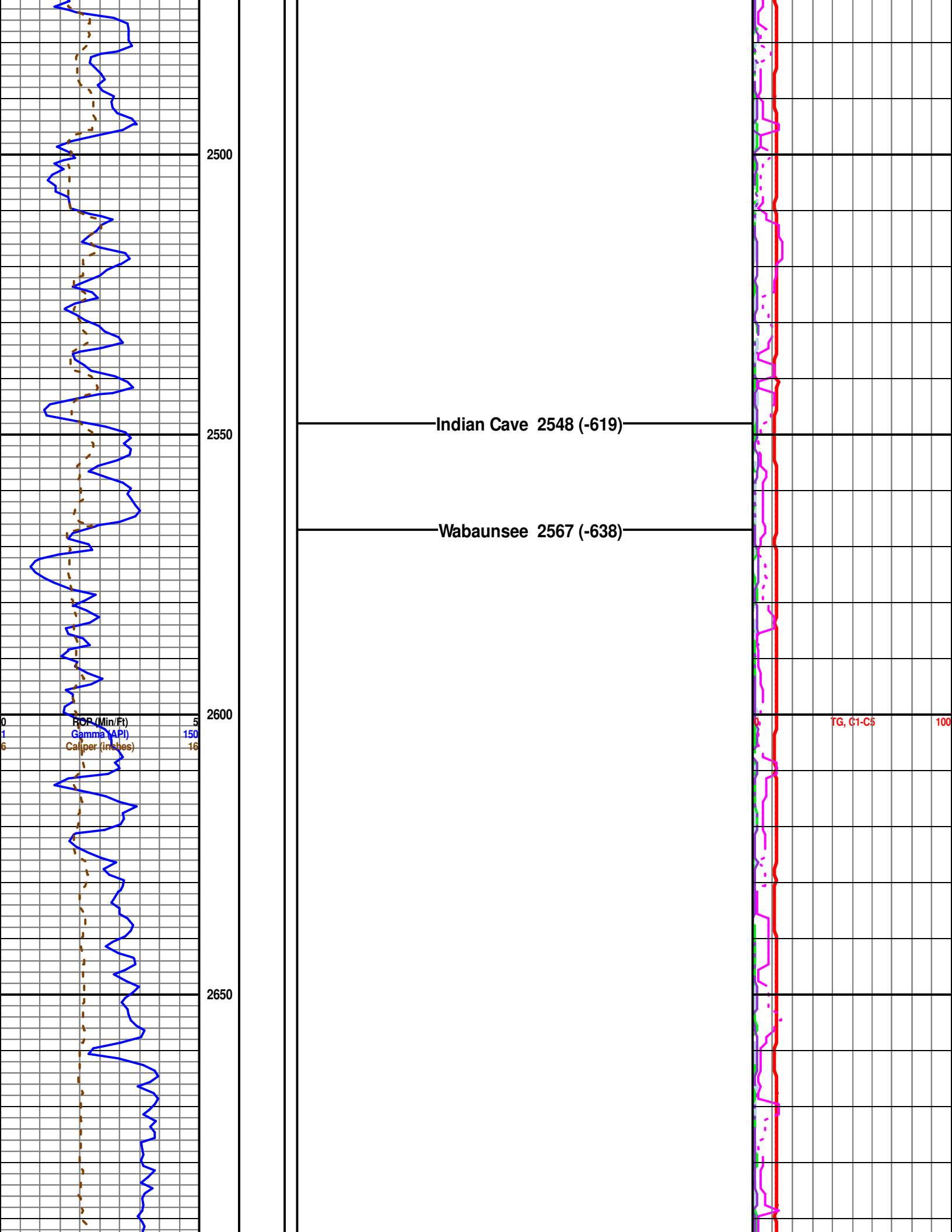
2450

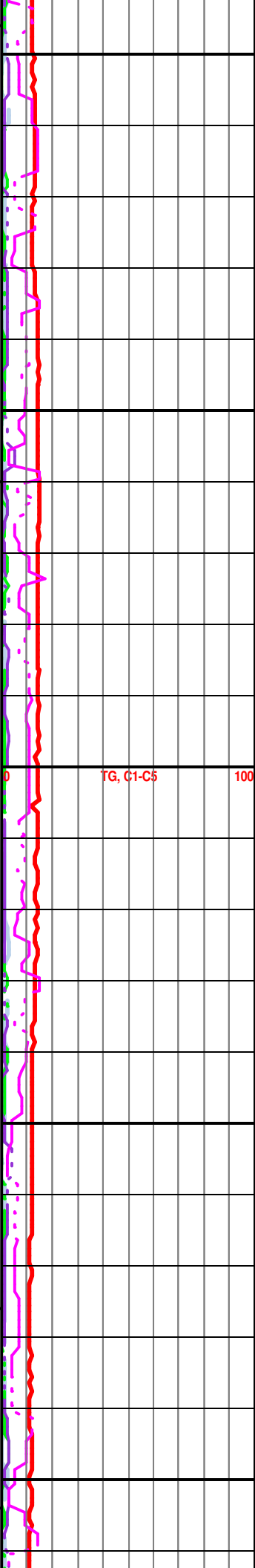
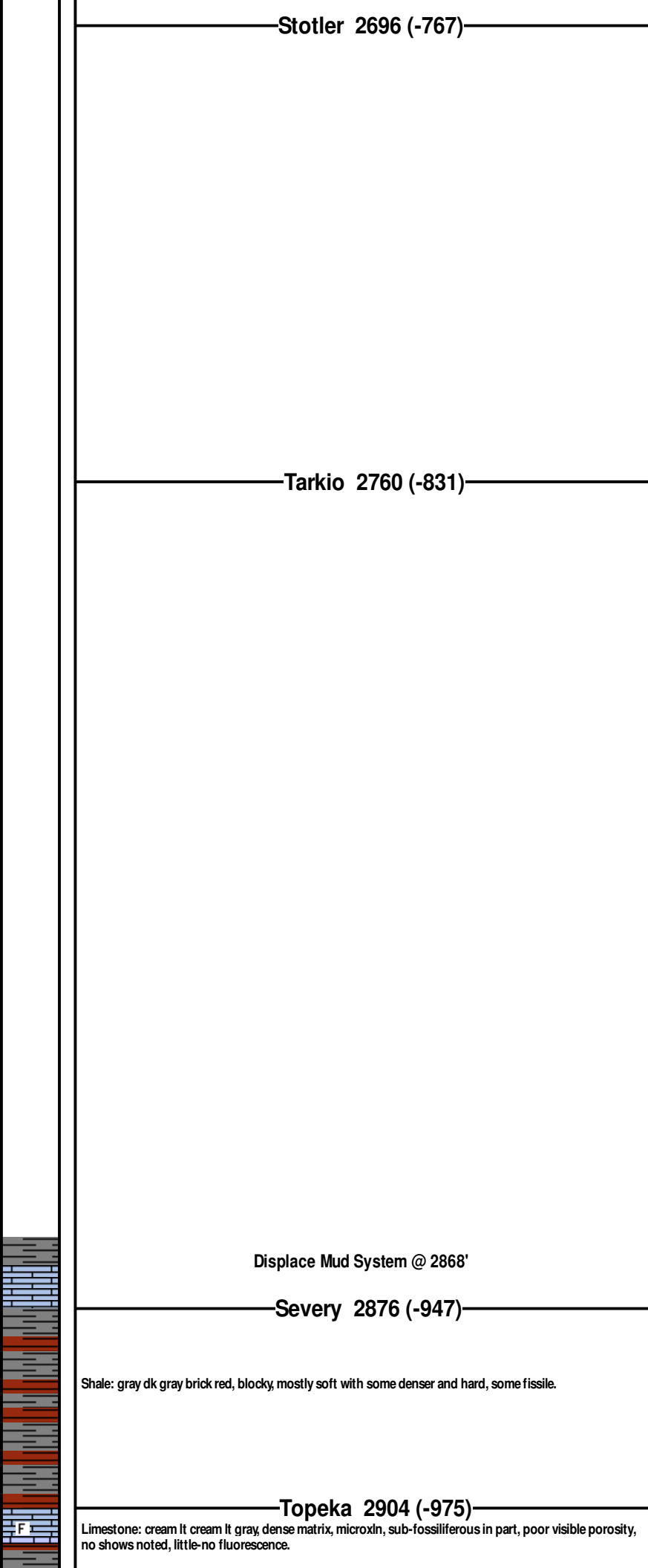
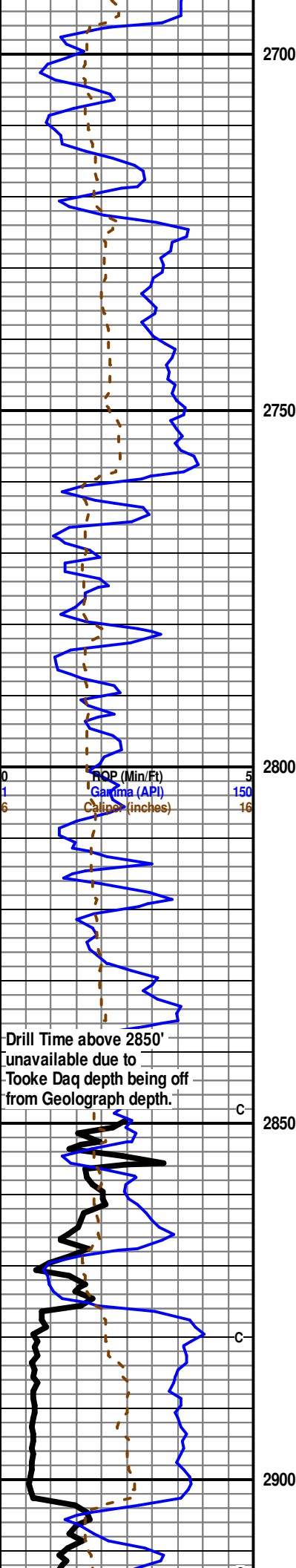
Red Eagle 2390 (-461)

0 ROP (Min/Ft) 5
1 Gamma (API) 150
6 Caliper (inches) 16



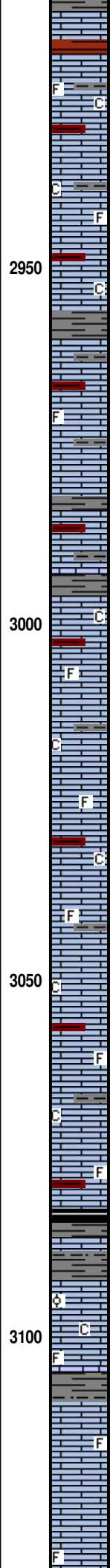
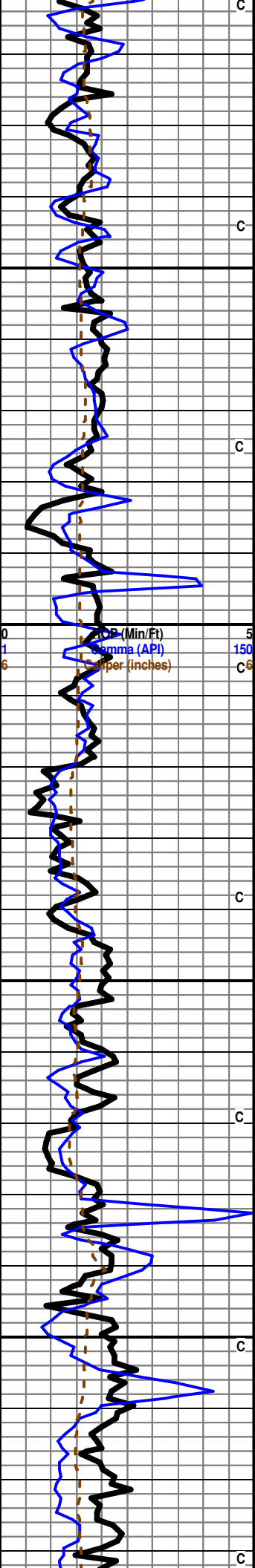
0 TG, C1-C5 100





Start 20' Wet & Dry Samples @ 2920'

Mud-Co Mud Ck
 @ 2918'
 1310 hrs 7.9.11
 Vis 38 Wt 8.7
 PV 8 YP 8
 WL 10.2
 Cake 1/32
 pH 12.0
 CHL 2,200 ppm
 Cal 20
 Sol 2.7
 LCM: 0 #/bbl
 DMC: \$1,279.40
 CMC: \$5,530.60



Limestone: It gray lt cream, softer chalky matrix, vfxln, fossiliferous, fair interxn porosity in most, no shows noted, little-no fluorescence, with abundant Shale: gray dk gray brick red, blocky, mostly soft with some hard, some fissile.

Limestone: gray lt gray, slightly dense matrix, micro-vfxln, fossiliferous in part, poor visible porosity, no shows noted, no fluorescence, with continued Shale:

Limestone: It gray gray, dense sub-chalky matrix, vfxln, grainy in part, fossiliferous, fair interxn porosity in most, no shows noted, little-no fluorescence, with continued Shale.

Limestone: off white lt gray lt cream, softer chalky matrix, vfxln, sub-fossiliferous, fair pinpoint porosity in most, few pieces with very poor dk brown dead staining along edges, no live shows noted, very poor fluorescence, with Shale stringers: gray dk gray brick red, mostly blocky and soft.

Limestone: It cream lt gray, softer chalky matrix, vfxln, sub-fossiliferous, fair pinpoint porosity in few pieces, no shows noted, little-no fluorescence, with continued Shale stringers.

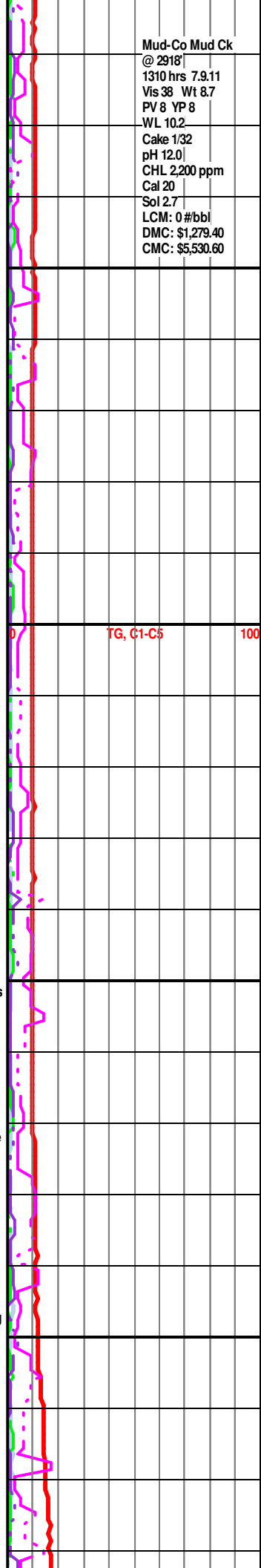
Limestone: It gray cream, slightly softer chalky matrix, vfxln, fossiliferous, poor interxn porosity, no shows noted, little-no fluorescence, with continued Shale.

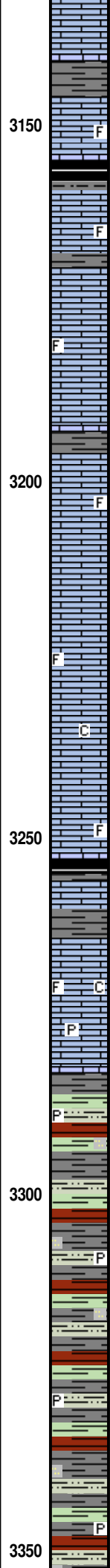
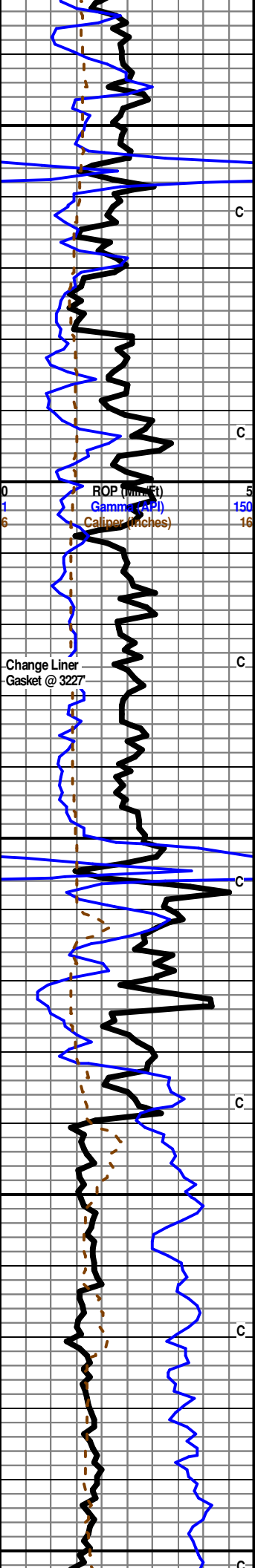
Limestone: gray lt gray lt cream, slightly chalky matrix, vf-microxn, some grainy, fossiliferous in part, some interxn porosity with overall poor visible porosity, no shows noted, no fluorescence.

Shale: black dk gray, carbonaceous, mostly blocky and softer, waxy in part.

Limestone: It cream cream lt gray, chalky matrix in most pieces, vfxln, some slightly grainy, sub-fossiliferous to fossiliferous with trace sub-oolitic, overall poor visible porosity with few pieces having fair-poor interxn porosity, no shows noted, no fluorescence.

POOR SAMPLE QUALITY -- Limestone: cream lt cream, mostly dense matrix, vf-microxn, heavily fossiliferous, scattered medium imbedded calcite crystals, very xln with some 2ndary xln along edges, overall poor visible porosity, no shows noted, no fluorescence.





POOR SAMPLE QUALITY -- cream tan gray, mostly dense, microxn, heavily fossiliferous in part, scattered 2ndary xln along edges in most pieces, poor visible porosity, no shows noted, no fluorescence, with scattered Chalk in sample.

3150
F
Shale: black, carbonaceous, mostly round and soft, waxy in part, no show gas bubbles.

C
F
Limestone: cream lt cream tan, dense matrix, vf-microxn, heavily fossiliferous, very xln, poor visible porosity, no shows noted, no fluorescence.

Geologist Derek W. Patterson on location, 2240 hrs 7.9.11

C
F
Limestone: cream tan lt cream, dense tight matrix, micro-cryptoxln, fossiliferous in part, poor visible porosity, no shows noted, no fluorescence.

C
F
Limestone: lt cream tan, dense to sub-chalky matrix, micro-cryptoxln, fossiliferous in part, poor visible porosity, few pieces with very poor dk brown-black dead staining along edges, no live shows noted, very poor-no fluorescence.

Start 10' Wet & Dry Samples @ 3240'

C
F
Limestone: cream tan lt brown, dense tight very xln matrix, micro-cryptoxln, fossiliferous in part, poor visible porosity, no shows noted, very poor-no fluorescence.

Heebner 3253 (-1324)

C
F
Shale: black, carbonaceous, mostly blocky and hard, some fissile, no show gas bubbles, with Shale: gray dk gray, mostly blocky, soft to hard, some fissile.

Toronto 3264 (-1335)

C
F
Limestone: off white lt cream, dense slightly chalky matrix, vf-microxn with some cryptoxln, fossiliferous to barren, pyritic in part, fair 2ndary xln in most pieces, overall poor visible porosity, no shows noted, little-no fluorescence.

Douglas Shale 3283 (-1354)

C
P
Shale: gray dk gray dk green brick red, mostly blocky, soft to hard, some slightly silty, with trace of interbedded Siltstone: gray lt gray, vf grained, poor visible porosity, pyritic in part, no shows noted, sample washes dk gray.

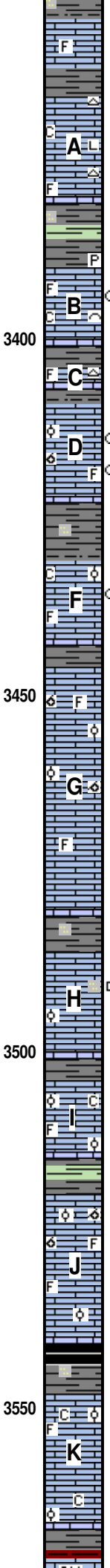
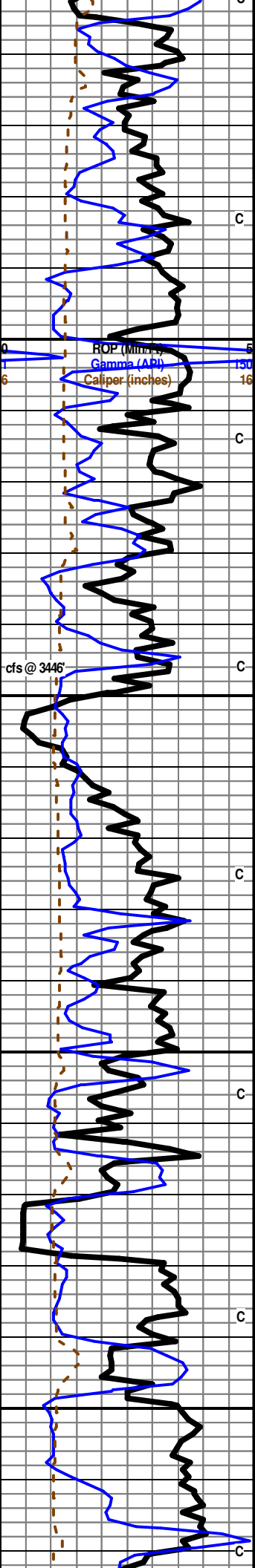
C
P
Shale: gray dk gray green trace brick red, mostly blocky with some rounded, soft to hard, silty to micaceous, some scattered pyritic, with trace interbedded Siltstone as above, no shows noted, and loose Pyrite nodules in sample, sample washes gray-dk gray.

C
P
Shale: gray dk gray some green and brick red, round to blocky, mostly soft and waxy, silty to micaceous, some scattered pyritic, with trace interbedded Siltstone: gray lt gray, vf grained, poor visible porosity, pyritic, no shows noted, and trace loose Pyrite nodules in sample, sample washes gray-dk gray.

Data Gap due to resetting Tooke Daq depth

Rezero Gas Detector 0 = 10 Units

TG, C1-C5 100



Brown Lime 3355 (-1426)

Limestone: brown tan lt brown, dense tight matrix, microxn, fossiliferous, poor visible porosity, no shows noted, no fluorescence.

Lansing 3366 (-1437)

Limestone: off white lt cream, dense sub-chalky to sub-cherty matrix, vf-microxn with some lithographic non-descript, fossiliferous to barren, fair amount of 2ndary xln in most pieces, poor interxn porosity, no shows noted, even dull pale yellow fluorescence.

Shale: gray dk gray dk green, mostly blocky with some rounded, mainly soft, some slightly silty and pyritic.

Limestone: lt cream off white lt gray, dense chalky matrix, vf-microxn, fossiliferous with some bioclastic, fair amount of 2ndary xln along edges in most, poor interxn porosity, few pieces with very poor golden brown staining along edges, no live shows noted, even to spotty pale yellow fluorescence, very faint odor in sample.

Limestone: lt cream lt gray, dense slightly cherty matrix, microxn, fossiliferous in part, abundant 2ndary xln along edges and in porosity, poor interxn porosity, no shows noted, spotty dull pale yellow fluorescence.

Limestone: lt cream cream, dense matrix, micro-vfxln, fossiliferous with some oolitic, trace oomoldic development, fair interxn/oomoldic porosity in few pieces, trace poor golden brown staining in few pieces, little-no show live oil upon break, no other shows noted, even to spotty dull pale yellow fluorescence.

Shale: gray dk gray, mostly blocky and soft, silty in part, some fissile.

3446' cfs 0'2-"/40' - Limestone: cream tan off white, slightly chalky matrix, micro-vfxln some lithographic, fossiliferous with some oolitic, poor visible porosity in most pieces with a few having fair pinpoint porosity, few pieces with very slight golden brown staining, no other shows noted, little-no fluorescence, with scattered Chert: clear translucent, fresh and sharp, barren.

Limestone: cream lt gray off white, xln matrix, microxn-vfxln, sub-fossiliferous with some scattered oolitic, heavily oomoldic with varying small-large molds, fair-good oomoldic porosity with heavy 2ndary xln within, no shows noted, spotty bright yellow fluorescence.

Limestone: cream lt tan lt gray, dense, microxn, very xln, slightly fossiliferous with scattered oolitic, some poor oomoldic development, overall poor interxn/oomoldic porosity, abundant 2ndary xln in porosity and around edges, no shows noted, little-no fluorescence.

Muncie Creek 3481 (-1552)

Shale: gray dk gray, blocky, mostly soft, some fissile, silty in part, with interbedded Limestone.

Limestone: lt gray lt cream, dense tight matrix, micro-vfxln, oolitic in part, overall poor interxn porosity, few pieces with poor dk brown dead staining along edges, no live shows noted, spotty bright lt yellow fluorescence.

Limestone: off white lt gray lt cream, slightly dense sub-chalky matrix, vf-microxn, most heavily oolitic fossiliferous, fair-poor interoolitic porosity, no shows noted, very poor fluorescence, with scattered Chalk in sample.

Shale: gray dk gray dk green, mostly blocky, soft to hard, some fissile.

Limestone: cream lt tan, dense matrix, vf-microxn, fossiliferous with oolitic, very good oomoldic development, fair-good oomoldic porosity, abundant 2ndary xln in porosity, no shows noted, spotty-even bright yellow fluorescence, no cut fluorescence.

Limestone: lt cream off white lt tan, dense tighter matrix, micro-vfxln, fossiliferous with oolitic, scattered sub-oomoldic, overall poor interxn/oomoldic porosity, no shows noted, little-no fluorescence.

Stark Shale 3541 (-1612)

Shale: black dk gray, carbonaceous, mostly soft, no show gas bubbles, with Shale: gray dk gray, mostly blocky, soft to hard, some fissile, slightly silty in part.

Limestone: lt cream off white, dense sub-chalky matrix, microxn, fossiliferous with abundant oolitic, fair amount of 2ndary xln along edges, overall poor visible porosity, no shows noted, spotty poor fluorescence.

Hushpuckney 3567 (-1638)

Shale: gray dk gray brick red, blocky and hard, fissile in part.

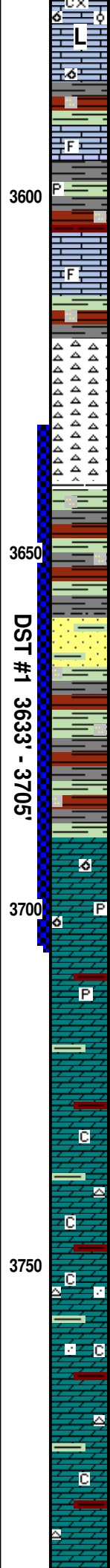
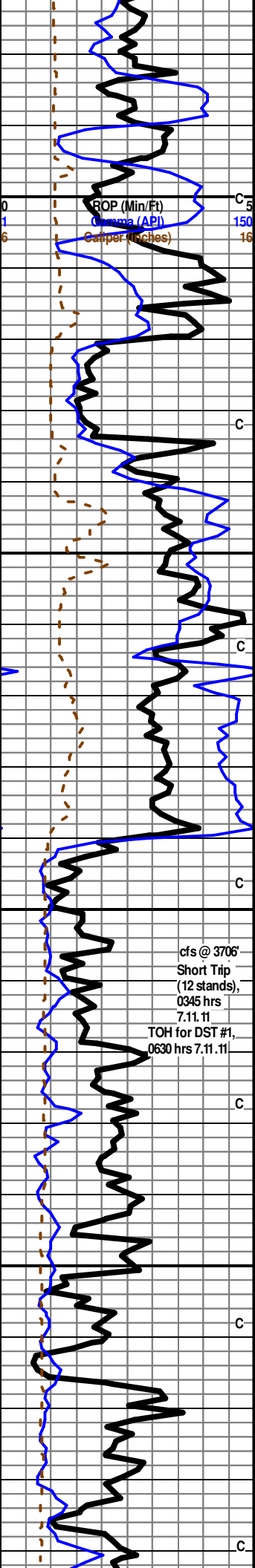
TG, C1-C5 100

Mud-Co Mud Ck @ 3446'
 1215 hrs 7.10.11
 Vis 44 Wt 9.3
 PV 13 YP 10
 WL 10.6
 Cake 1/32
 pH 10.5
 CHL 4,500 ppm
 Cal 20
 Sol 6.8
 LCM: 0 #bbl
 DMC: \$1,045.95
 CMC: \$6,576.55

Lighter Test False Kick

Vis: 50
 Wt: 9.3
 LCM: 0 #bbl

Repair Tooke Daq connection to Geolograph



3600

ROP (Min/Ft)
Gamma (API)
Caliper (Inches)

3650

DST #1 3633' - 3705'

3700

3750

3700' cfs 15" - Dolomite: cream lt cream, dense tight matrix, microxn, poor xln development and porosity, grading to Dolomite: lt cream, softer matrix, f-vfxln, good rhombic development, good rhombic/vuggy/oomoldic porosity, fair-good show lt brown oil and gas from porosity with good increase upon break/left under lamp, good golden saturated stain in most, fair-good bluish-white cut fluorescence, even bright lt yellow fluorescence, very strong odor in sample.

3706' cfs 30"/45"/60" - Dolomite: lt cream lt tan, softer matrix, coarse-fxln, very good rhombic development, trace slightly pyritic, excellent rhombic/vuggy/oomoldic porosity, continued shows as above with decrease in 45"/60" samples, even bright lt yellow fluorescence, very strong odor in sample.

Resume Drilling Following DST #1, 2145 hrs 7.11.11

(3707'-3720') - Dolomite: lt cream tan, dense to soft matrix, vf-fxln, fair-good rhombic development, trace slightly pyritic, good-excellent rhombic/vuggy porosity, poor show lt brown oil from porosity with fair increase upon break/left under lamp, fair cut fluorescence in most, even bright lt yellow fluorescence, moderate odor, with abundant Shale (from up hole?).

(3721'-3740') - Dolomite: cream tan some pink, dense tighter matrix, vf-fxln with some scattered coarsexn, fair-good rhombic development in most with some tighter poor development, fair-good rhombic porosity in most, abundant 2ndary xln and chalk fill in porosity, still carrying fair-poor show in most pieces upon break/left under lamp, poor cut fluorescence, even bright lt yellow fluorescence, moderate odor, with continued Shale in sample.

(3741'-3751') - Dolomite: off white lt cream lt tan, mostly dense matrix, vf-fxln with some scattered coarsexn, fair rhombic development, fair rhombic porosity in with most filled by 2ndary xln and chalk, few pieces with very poor show golden brown oil droplets upon break, poor cut fluorescence in those with shows, even bright lt yellow fluorescence, moderate gassy/sulfur odor, with scattered Chert: bon white, fresh and sharp, barren, and continued Shale: pale green dk red, blocky and hard.

(3752'-3772') - Dolomite: off white lt cream, softer matrix, f-coarsexn, good rhombic development in most, arenaceous to heavily arenaceous, good rhombic/intergranular porosity with slight chalk fill, fair show brown oil from porosity with fair-good increase upon break, even dk brown saturated stain in few pieces, fair cut fluorescence in those with shows, even bright lt yellow-white fluorescence, moderate odor, with continued Chert and Shale, grading to a denser tight Dolomite.

(3773'-3784') - Dolomite: lt cream lt tan, dense tighter matrix, vf-fxln with some microxn, fair rhombic development in most, fair rhombic porosity in most with abundant 2ndary xln and chalk fill, poor show golden brown oil from few pieces, poor-no cut fluorescence, even bright lt yellow-white fluorescence, moderate gassy/sulfur odor, with scattered Chert and Shale as above.

(3785'-3791') - Dolomite: as above with slight increase in rhombic development, still carrying poor-no shows as above.

Base Kansas City 3584 (-1655)

Shale: gray dk gray green brick red, mostly blocky and hard, scattered softer, some fissile, silty in part.

Limestone: brown dk brown tan, dense, microxn, fossiliferous in part, poor interxn porosity, no shows noted, no fluorescence.

Shale: dk gray gray dk green brick red, mostly blocky and hard, trace silty and pyritic.

Limestone: off white lt cream lt gray, dense, micro-vfxln with some cryptoxln, fossiliferous in part, scattered 2ndary xln along edges, overall poor interxn/visible porosity, no shows noted, little-no fluorescence.

Shale: dk green brick red dk gray brown, blocky and hard, trace silty.

Viola 3620 (-1691)

Chert: off white cream tan pale yellow, fresh and sharp, some slightly weathered, nearly all barren, poor visible porosity in most, fair amount of dk black dead staining along edges and golden brown saturated staining in weathered Chert, <5% fair show free dk brown oil with good increase upon break/left under lamp (weathered pieces), spotty bright yellow fluorescence, poor cut fluorescence, no odor in sample.

Simpson Shale 3641 (-1712)

Shale: dk green dk gray gray brick red, blocky to rounded, mostly soft with some harder, scattered fissile, silty in part.

Simpson Sand 3659 (-1730)

Sandstone (trace): clear quartz grains, sub-rounded to sub-angular, well cemented and sorted, very slight trace free lt brown oil in few pieces with fair increase upon break/left under lamp, little-no fluorescence, poor cut fluorescence, no odor in sample, with abundant Shale as above, sample washes dk reddish-brown.

Shale: teal green purple gray dk gray some pale green brick red, blocky and hard, some softer and waxy, fissile in part, silty, sample washes dk reddish-brown.

Shale: teal green purple gray dk gray some pale green brick red, blocky and hard, some softer and waxy, fissile in part, silty, sample washes dk reddish-brown.

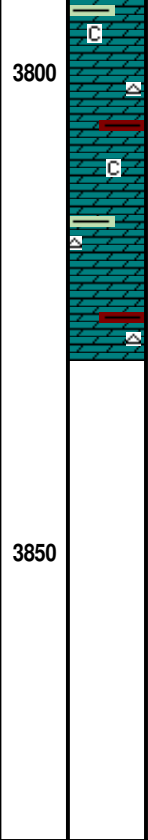
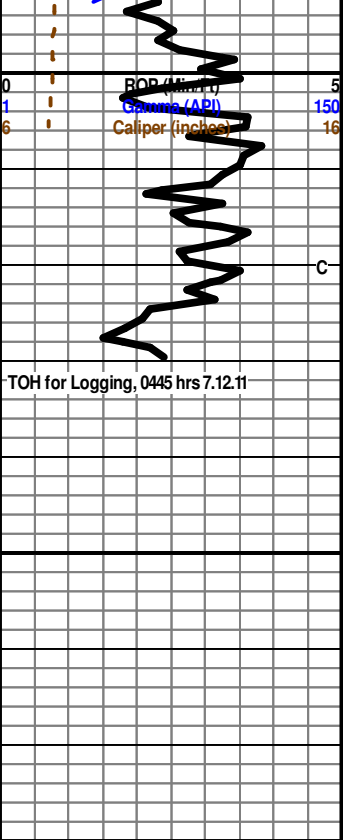
Arbuckle 3690 (-1761)

No gas kick present.
Raises concerns that detector may not be working properly

Vis: 50
Wt: 9.3
LCM: 0 #/bbl
Mud-Co Mud Ck @ 3706'
0715 hrs 7.11.11
Vis 54 Wt 9.7
PV 16 YP 15
WL 10.0
Cake 1/32
pH 10.0
CHL 4,000 ppm
Cal 20
Sol 9.7
LCM: 0 #/bbl
DMC: -\$457.05
CMC: \$6,119.50

cfs @ 3706'
Short Trip
(12 stands),
0345 hrs
7.11.11
TOH for DST #1,
0630 hrs 7.11.11

Vis: 50
Wt: 8.9
LCM: 0 #/bbl



(3792'-3808') - Dolomite: tan lt brown, dense tighter matrix, vf-microxln, fair-poor rhombic development with some scattered sub-sucrosic, poor interxln porosity in most, fair amount 2ndary xln and chalk fill in porosity, no shows noted, even bright lt yellow fluorescence, with continued Chert and Shale as above.

(3809'-3819') - Dolomite: as above, no shows noted, with continued scattered Chert and Shale.

(3820'-3830') - Dolomite: lt cream lt tan brown, dense tighter matrix, vf-microxln with trace fxln, overall poor xln development with some fair sub-rhombic, poor interxln porosity, abundant 2ndary xln fill, no shows noted, even bright lt yellow-white fluorescence, with trace Chert and continued Shale.

0	TG, C1-C5	100
	Vis: 50 Wt: 9.2 LCM: 0 #/bbl	

RTD 3830 (-1901)
LTD 3830 (-1901)

Rotary TD @ 3830', 0255 hrs 3.29.11
Superior Well Services Open Hole Logging TD @ 3830'
Commence Open Hole Logging Operations, 0700 hrs 7.12.11
Complete Open Hole Logging Operations, 1115 hrs 7.12.11
Orders Received to Run 5 1/2" Production Casing

Geologist Derek W. Patterson off location, 1245 hrs 7.12.11

Respectfully Submitted,
Derek W. Patterson