



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1209316  
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: \_\_\_\_\_

1209316

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 <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  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Shelby Resources LLC
Well Name	Eubanks 1-5
Doc ID	1209316

All Electric Logs Run

Dual Induction
Compensated Neutron
Sonic
Micro

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 3686

785-483-2025  
85-324-1041

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

Date	5-19-10	Sec.	5	Twp.	29	Range	14	County	PRATT	State	KS	On Location		Finish	4:15 AM
Lease	EUBANK'S		Well No.	1-5		Location PRATT SW 85 3W 1/8 NE 10									

Contractor	STERLING 4	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	PTA	Charge To	LAPTIVA
Hole Size	7 3/4	T.D.	4998
Csg.	4 1/2	Depth	
Tbg. Size		Depth	
Tool		Depth	
Cement Left in Csg.		Shoe Joint	
Meas Line		Displace	

The above was done to satisfaction and supervision of owner agent or contractor.

EQUIPMENT				CEMENT	
Pumptrk	5 No.	Cement Helper	TODD	Amount Ordered	265 60/40 4% GEL 1/4 cellofibre
Bulktrk	4 No.	Driver	TODD	Common	159 @
Bulktrk	PA No.	Driver	DAVE	Poz. Mix	106 @
		Driver		Gel.	9 @

**JOB SERVICES & REMARKS**

Remarks:

1<sup>st</sup> Plug 50 SKS 60/40 4% GEL  
1/4 cellofibre @ 4996'

2<sup>nd</sup> Plug 50 SKS 60/40 4% GEL  
1/4 cellofibre @ 900'

3<sup>rd</sup> Plug 75 ~~SKS~~ 60/40 4% GEL  
1/4 cellofibre @ 330'

Calcium

Hulls

Salt

Flowseal 66 @

Handling 224

Mileage 16

4<sup>th</sup> Plug 40 SKS 60/40 4% GEL  
1/4 cellofibre @ 60'

RAT HOLE 30 SKS 60/40 4% 1/4 cellofibre

MOUSE HOLE 70 SKS 60/40 4% 1/4 cellofibre

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

THANK YOU  
TODD + DAVE  
PLEASE CALL AGAIN

Pumptrk Charge PTA

Mileage 16

X Signature Terry S. Saloy

Tax

Discount

Total Charge

Pratt

**RICKETTS TESTING**

(620) 326-5830

Page 1

Company **Captiva Energy, LLC**  
 Address **455 Union Blvd. Ste. 208**  
 CSZ **Lakewood, CO 80228**  
 Attn **Derek Patterson**

Lease Name **Eubanks**  
 Lease # **1-5**  
 Legal Desc **See Comments**  
 Section **5**  
 Township **29S**  
 County **Pratt**  
 Drilling Cont **Sterling Drilling Co. Rig #4**  
 Job Ticket **2107**  
 Range **14W**  
 State **KS**

Comments **Legal Description: 896' FSL & 300' FWL**

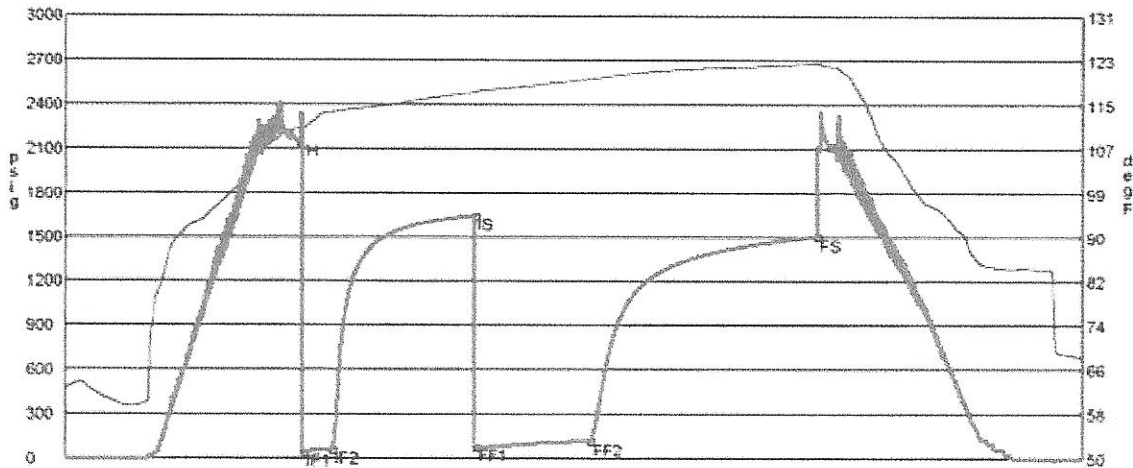
**GENERAL INFORMATION**

Test # 1 Test Date **5/16/2010** Chokes **3/4** Hole Size **7 7/8**  
 Tester **Tim Venters** Top Recorder # **W1119**  
 Test Type **Conventional Bottom Hole** Mid Recorder #  
**Successful Test** Bot Recorder # **13564**  
 # of Packers **2.0** Packer Size **6 3/4** Mileage **32** Approved By  
 Mud Type **Gel Chem** Standby Time **0**  
 Mud Weight **9.2** Viscosity **45.0** Extra Equipmnt **Jars & Safety joint**  
 Filtrate **11.2** Chlorides **6000** Time on Site **8:55 AM**  
 Drill Collar Len **218.0** Tool Picked Up **11:00 AM**  
 Wght Pipe Len **0** Tool Layed Dwn **7:25 PM**  
 Elevation **2023.00** Kelley Bushings **2032.00**  
 Formation **Basal Penn Conglomerate & Miss** Start Date/Time **5/16/2010 10:30 AM**  
 Interval Top **4557.0** Bottom **4616.0** End Date/Time **5/16/2010 7:24 PM**  
 Anchor Len Below **59.0** Between **0**  
 Total Depth **4616.0**  
 Blow Type **Weak surface blow at the start of the initial flow period, building to 3 inches.**  
**Weak surface blow at the start of the final flow period, building to 4 1/2 inches. Times: 15, 75, 60, 120.**

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
205	Mud cut water	0% Off	0% Off	65% 133 Off	35% 71 Off
20	Mud	0% Off	0% Off	0% Off	100% 20 Off

DST Fluids **53000**



	Date	Time	Pressure	Temp		
IH	5/16/2010	12:32:00 PM	2:033333	2148.178	110.409	Initial Hydro-static
IF1	5/16/2010	12:34:20 PM	2:072222	45.378	110.459	Initial Flow (1)
IF2	5/16/2010	12:49:10 PM	2:319444	62.134	113.427	Initial Flow (2)
IS	5/16/2010	2:04:20 PM	3:572222	1646.936	117.045	Initial Shut-in
FF1	5/16/2010	2:04:50 PM	3:580556	82.585	117.001	Final Flow (1)
FF2	5/16/2010	3:05:10 PM	4:586111	120.664	119.445	Final Flow (2)
FS	5/16/2010	5:04:20 PM	6:572222	1503.882	122.246	Final Shut-in
FH	5/16/2010	5:11:00 PM	6:683333	2122.438	121.796	Final Hydro-static

# **MAX-HENRY** **OPERATING, LLC**

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

Well Name: Eubanks #1-5  
Location: Sec. 5 - T29S - R14W, Pratt County, KS  
Licence Number: API #15-151-22353-0000  
Spud Date: May 10, 2010  
Surface Coordinates: 896' FSL & 330' FWL (3-D Seismic Loc)

Region: Wildcat  
Drilling Completed: May 18, 2010

## Bottom Hole Coordinates:

Ground Elevation (ft): 2023'                      K.B. Elevation (ft): 2032'  
Logged Interval (ft): 2700'              To: 4998'              Total Depth (ft): 5000' (LTD)  
Formation: Arbuckle  
Type of Drilling Fluid: Chemical/Polymer

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

## OPERATOR

Company: Captiva Energy, LLC  
Address: 445 Union Blvd. Suite 208  
Lakewood, CO 80228

## GEOLOGIST

Name: Derek W. Patterson  
Company: Max-Henry Operating, LLC  
Address: 133 N. Glendale  
Wichita, KS 67208

## REMARKS

After review of the Open Hole Logs, DST Results, and Geological Log, it was agreed upon by all interested parties to plug and abandon the Eubanks #1-5 as a dry hole.

Note the RTD was 4998' & LTD was 5000'.

The samples will be delivered, processed and available for review at the KGS Sample Library located in Wichita, Kansas.

Respectfully submitted,

# Captiva Energy, LLC

## DAILY DRILLING REPORT

Company: Captiva Energy, LLC  
455 Union Blvd., Suite 208  
Lakewood, CO 80228

Well: Eubanks #1-5  
Location: 896' FSL & 330' FWL  
Sec. 5 - 29S - 14W  
Pratt Co., KS

Jim Waechter Cell: 785.623.1525

Operations Manager: Chris Gottschalk 785.623.1524

Wellsite Geologist: Derek W. Patterson  
Cell: 316.655.3550  
Office: 316.558.5202

Elevation: 2023' GL & 2032' KB  
Field: Wildcat  
API#: 15-151-22353-00-00  
Surface Casing: 13 3/8" set @ 305.68' KB

Drilling Contractor: Sterling Drilling, Co. Rig #4 620.388.4192 Toolpusher: Lanny Saloga - 620.388.4397

DATE	7:00 AM DEPTH	Last 24 Hour Operations
5/16/2010	4595'	Drilling and connections Lansing. Geologist Derek W. Patterson on location @ 1220 hrs 5/15/10. CFS @ 4379 ft (LKC 'K'). Resume drilling lower Lansing. Drilling and connections Lansing, BKC, Marmaton, Basal Penn Conglomerate, and into Mississippian. CFS @ 4578 ft (BPCG-MISS), CFS 4595 ft (MISS), CFS 4616 ft (MISS), shows and gas kick warrant DST. Short trip @ 4616 ft. CTCH. Drop survey, strap out, TOH for DST #1, testing Basal Penn Conglomerate and Mississippian. Deviation Survey @ 4616 ft: 3/4 deg, Strap: 0.14' long to board. DMC: \$1,469.90 CMC: \$11,765.05
5/17/2010	4706'	TOH for DST #1, conducting DST #1, test successful. Resume drilling 0000 hrs 5/17/10. Drilling and connections Gilmore City, Kinderhook, and into Kinderhook Chert. CFS @ 4679 ft (KIND CHERT). Resume drilling Kinderhook Chert. DMC: \$1,833.25 CMC: \$13,598.30
5/18/2010	RTD - 4998'	Drilling and connections Kinderhook Chert, Kinderhook Sand, Viola, Simpson, and into Arbuckle. Rathole ahead to TD @ 4998 ft, 0700 hrs 5/18/10. DMC: \$1,572.95 CMC: \$15,171.25
5/19/2010	RTD - 4998' LTD - 5000'	CTCH, drop survey, TOH for logging operations. Superior Well Services on location 1130 hrs 5/18/10. Short trip due to pulling tight, CTCH. TOH for logging operations. Logging operations commenced 1250 hrs 5/18/10. Logging operations complete 1715 hrs 5/18/10. Orders received to plug and abandon hole on 5/18/10. Deviation Survey @ 4998 ft: 2 deg. Geologist Derek W. Patterson off location 1745 hrs 5/18/10.

# Captiva Energy, LLC

## WELL COMPARISON SHEET

DRILLING WELL				COMPARISON WELL				COMPARISON WELL				COMPARISON WELL			
Captiva Energy - Eubanks #1-5 896' FSL & 330' FWL Sec. 5 - 29S - 14W				Lotus - Steizer #1 1486' FSL & 1486' FWL Sec. 7 - 29S - 14W DRY w/ OIL SHOW				Tilco - Leban Drilling - Hutchins #1 3300' FSL & 3300' FEL Sec. 8 - 29S - 14W DRY				Newman - Jenkins #1 'OWWO' 2310' FSL & 2970' FEL Sec. 5 - 29S - 14W DRY w/ OIL SHOW			
Formation	Sample	Sub-Sea	Log	Formation	Sample	Sub-Sea	Log	Formation	Sample	Sub-Sea	Log	Formation	Sample	Sub-Sea	Log
Topoka	3610	-1478	3611	3926	40	-1884	3949	3856	3856	-1824	3874	3856	3856	-1824	3874
Heebner	3976	-1844	3890	3940	30	-1898	3888	3874	3874	-1843	3800	3874	3874	-1843	3800
Toronto	3900	-1868	3903	3956	26	-1914	3856	3800	3800	-1869				-1869	
Douglas	3920	-1888	3921	4020	41	-1978	3954								
Douglas Sand	3969	-1937	3969	4088	31	-2046	4017	4018	4018	-1987				-1987	
Brown Lime	4047	-2015	4047	4101	33	-2069	4032	4036	4036	-2004				-2004	
Lansing	4068	-2026	4061	4130	32	-2088	4062								
'G' Zone	4088	-2066	4092	4240	28	-2198	4188								
Muncie Creek	4202	-2170	4203	4269	28	-2227	4199								
Stark Shale	4234	-2202	4231	4397	26	-2355	4326								
'K' Zone - Swope	4365	-2323	4363	4477	32	-2435	4406								
Base Kansas City	4440	-2408	4441	4496	27	-2453	4416								
Marmaton	4463	-2421	4454	4562	32	-2520	4481								
Basal Penn Cglim	4557	-2525	4558	4619	5	-2620	4481								
Miss Chert	4573	-2541	4575	4619	36	-2677	4522	4493	4493	-2462				-2462	
Kindertrock	4668	-2626	4705	4696	28	-2654	4556	4533	4533	-2602				-2602	
Viola	4736	-2703	4722	4712	33	-2670	4562	4559	4559	-2628				-2628	
Simpson Shale	4860	-2828	4850	4866	4	-2824	4617	4657	4657	-2626				-2626	
Atbuckle	4944	-2912	4950	4961	7	-2919		4731	4731	-2700				-2700	
Total Depth	4998	-2966	5000	5021	13	-2979	4703	4770	4770	-2739				-2739	

### COMPARISON WELL

Lotus - Carver #1

390' FSL & 1210' FEL Sec. 5 - 29S - 15W

OIL - MISSISSIPPIAN

Formation	Log	Sub-Sea	Sample	Relationship	Log
Topoka	3934	-1902	68	54	
Heebner	3962	-1930	62	59	
Toronto	3968	-1936	48	47	
Douglas	3995	-1963	26	26	
Brown Lime	4088	-2066	41	41	
Lansing	4108	-2076	60	47	
'B' Zone	4131	-2099	43	39	
'G' Zone	4248	-2216	46	45	
Muncie Creek	4266	-2234	32	35	
Stark Shale	4440	-2408	86	77	
'K' Zone - Swope	4449	-2417	86	79	
Base Kansas City	4481	-2449	41	40	
Marmaton	4498	-2466	45	44	
Basal Penn Cglim	4615	-2663	68	67	
Miss Chert	4633	-2601	60	68	
Kindertrock	4721	-2689	63	16	
Viola	4792	-2760	67	70	
Simpson Shale	4883	-2861	23	33	
Atbuckle	4976	-2944	32	26	
Total Depth	5019	-2987	21	19	



Company **Captiva Energy, LLC**  
 Address **455 Union Blvd. Ste. 208**  
 CSZ **Lakewood, CO 80228**  
 Attn. **Derek Patterson**

Lease Name **Eubanks**  
 Lease # **1-5**  
 Legal Desc **See Comments**  
 Section **5**  
 Township **29S**  
 County **Pratt**  
 Drilling Cont **Sterling Drilling Co. Rig #4**  
 Job Ticket **2107**  
 Range **14W**  
 State **KS**

Comments **Legal Description: 896' FSL & 300' FWL**

**GENERAL INFORMATION**

Test # 1 Test Date **5/16/2010**

Tester **Tim Venters**  
 Test Type **Conventional Bottom Hole Successful Test**

# of Packers **2.0** Packer Size **6 3/4**

Mud Type **Gel Chem**  
 Mud Weight **9.2** Viscosity **46.0**  
 Filtrate **11.2** Chlorides **6000**

Drill Collar Len **218.0**  
 Wght Pipe Len **0**

Formation **Basal Penn Conglomerate & Miss**  
 Interval Top **4557.0** Bottom **4616.0**  
 Anchor Len Below **59.0** Between **0**  
 Total Depth **4616.0**

Blow Type **Weak surface blow at the start of the initial flow period, building to 3 inches.  
 Weak surface blow at the start of the final flow period, building to 4 1/2 inches. Times: 15, 75, 60, 120.**

Chokes **3/4** Hole Size **7 7/8**

Top Recorder # **W1119**  
 Mid Recorder #  
 Bott Recorder # **13564**

Mileage **32** Approved By

Standby Time **0**  
 Extra Equipmnt **Jars & Safety joint**  
 Time on Site **8:55 AM**  
 Tool Picked Up **11:00 AM**  
 Tool Layed Dwn **7:25 PM**

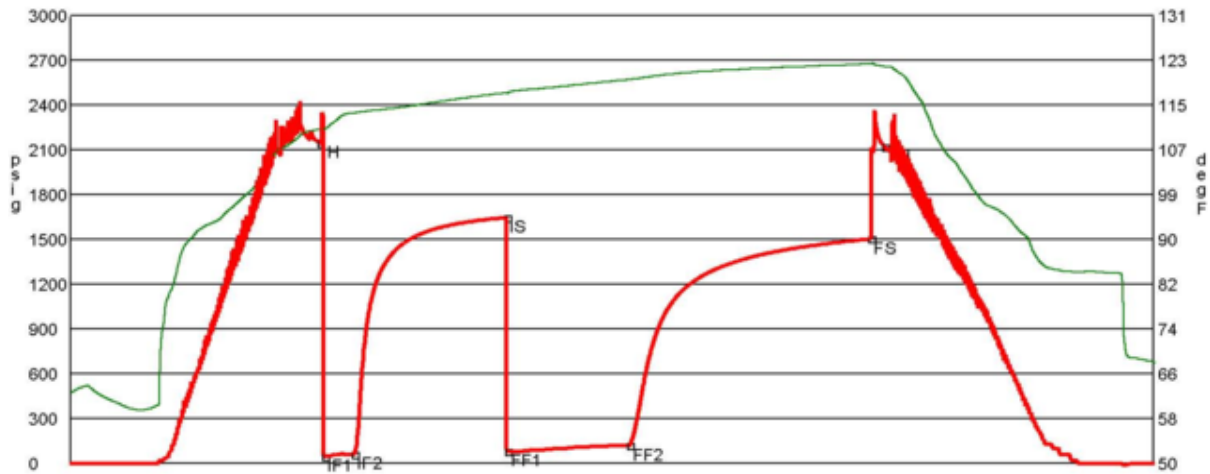
Elevation **2023.00** Kelley Bushings **2032.00**

Start Date/Time **5/16/2010 10:30 AM**  
 End Date/Time **5/16/2010 7:24 PM**

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
205	Mud cut water	0% 0ft	0% 0ft	65% 133.2ft	35% 71.8ft
20	Mud	0% 0ft	0% 0ft	0% 0ft	100% 20ft

DST Fluids **53000**



	Date	Time	Pressure	Temp	
IH	5/16/2010	12:32:00 PM	2.033333	110.409	Initial Hydro-static
IF1	5/16/2010	12:34:20 PM	2.072222	110.459	Initial Flow (1)
IF2	5/16/2010	12:49:10 PM	2.319444	113.427	Initial Flow (2)
IS	5/16/2010	2:04:20 PM	3.572222	117.045	Initial Shut-In
FF1	5/16/2010	2:04:50 PM	3.580556	82.585	Final Flow (1)
FF2	5/16/2010	3:05:10 PM	4.586111	120.664	Final Flow (2)
FS	5/16/2010	5:04:20 PM	6.572222	1503.882	Final Shut-In
FH	5/16/2010	5:11:00 PM	6.683333	2122.438	Final Hydro-static

## ROCK TYPES

### LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrst
- Salt
- Shale
- Shcol
- Shgy
- Slstst
- Ss
- Till
- Slststn
- Shale
- Sandylms
- Lms
- Gry sh
- Dtd
- Dol
- Carb sh
- pipesymbol

- unknown lith
- Red shale

### FOSSIL

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

### MINERAL

- Silty

- Sand
- Dol
- Chlorite
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil

### STRINGER

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

### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln

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

- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

### OIL SHOW

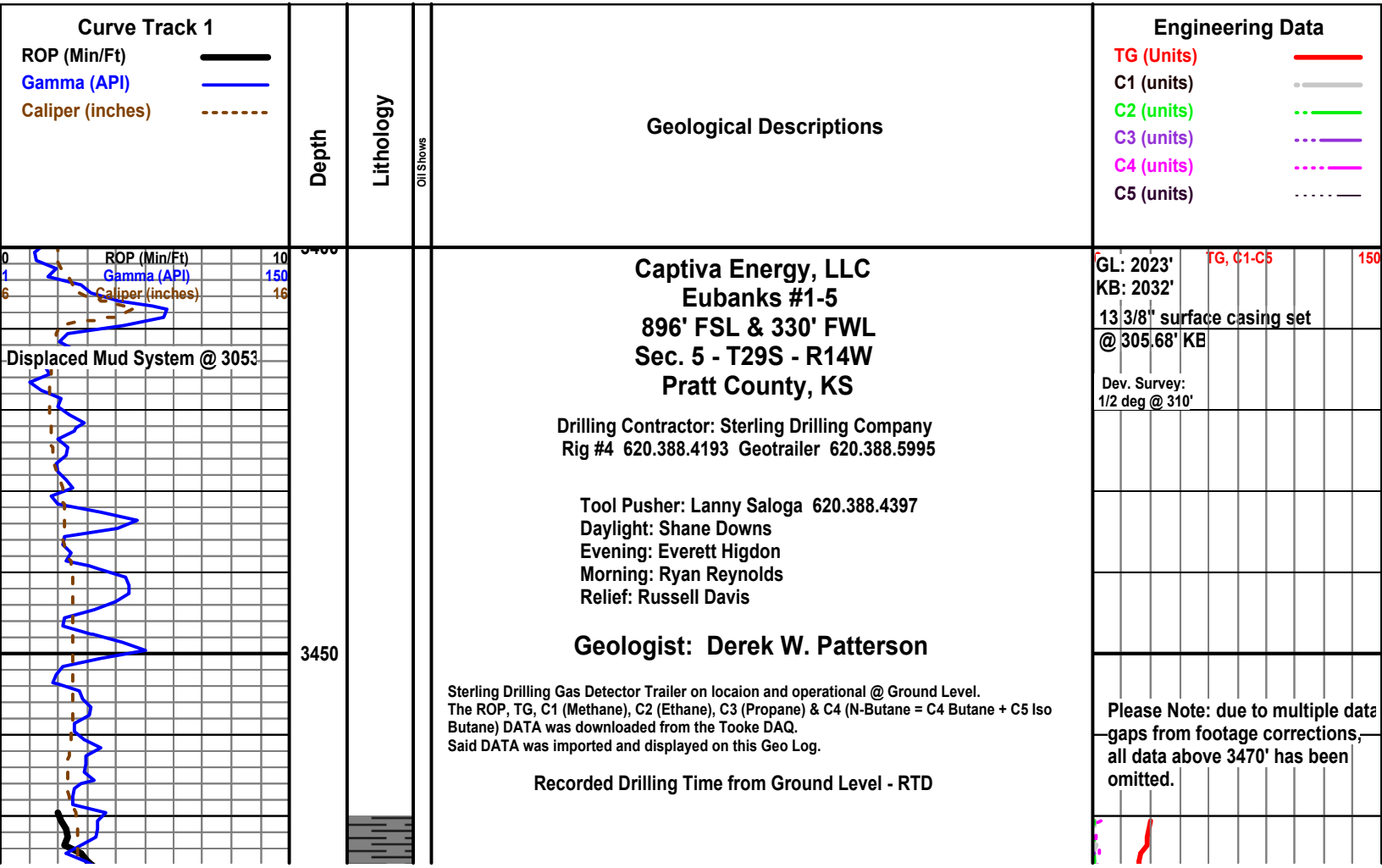
- Gas show
- Good
- Fair
- Poor
- Dead

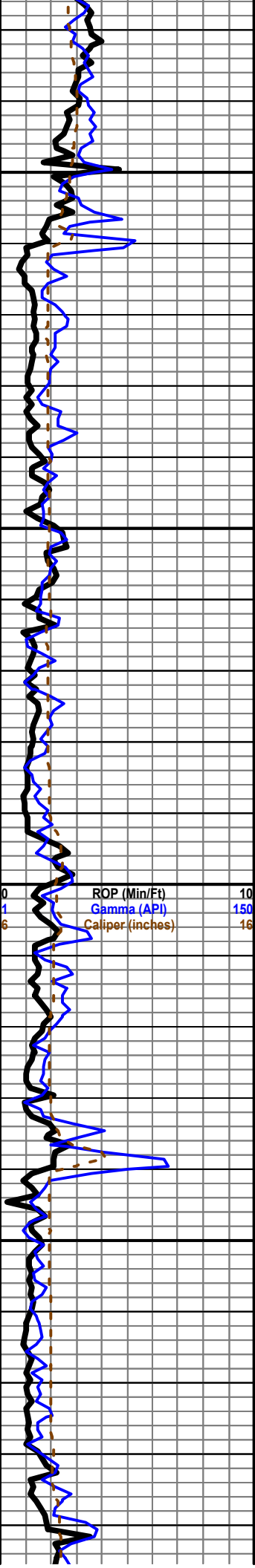
### INTERVAL

- Dst
- Core
- Dst
- Straddle test t

### EVENT

- Rft
- Sidewall
- Dst
- Open hole
- Perforations





3500

Start 20' wet & dry samples @ 3500'

**Topeka 3511 (-1479)**



Limestone: gray lt gray cream, dense, microxn, fossiliferous, poor visible porosity, no shows noted with abundant Shale from above: gray dk gray, round to blocky, soft to hard.

Limestone: lt gray lt cream, dense, microxn, fossiliferous with scattered oolitic, poor interxn/oolitic porosity, no shows noted.

Limestone: gray lt gray lt cream, dense, microxn, fossiliferous, poor visible porosity, no shows noted.

3550

Limestone: lt cream lt gray gray, dense, microxn, fossiliferous, poor interxn porosity, no shows noted, with scattered Chalk in tray.

Limestone: lt cream off white lt gray, dense to chalky, microxn, mixed barren and fossiliferous, poor interxn porosity, no shows noted, with abundant Chalk in tray.

3600

ROP (Min/Ft) 10  
Gamma (API) 150  
Caliper (inches) 16

Limestone: as above, no shows noted, with continued abundant Chalk in tray.

TG, C1-C5 150

Limestone: cream lt cream lt gray, dense, slightly chalky, microxn-vfxln, fossiliferous, grainy texture, poor interxn porosity, no shows noted, with slight decrease in Chalk as above.

Limestone: lt cream lt gray, dense, slightly chalky, microxn-vfxln, fossiliferous, scattered grainy texture, poor interxn porosity, no shows noted, with abundant Chalk in tray.

**King Hill 3638 (-1606)**

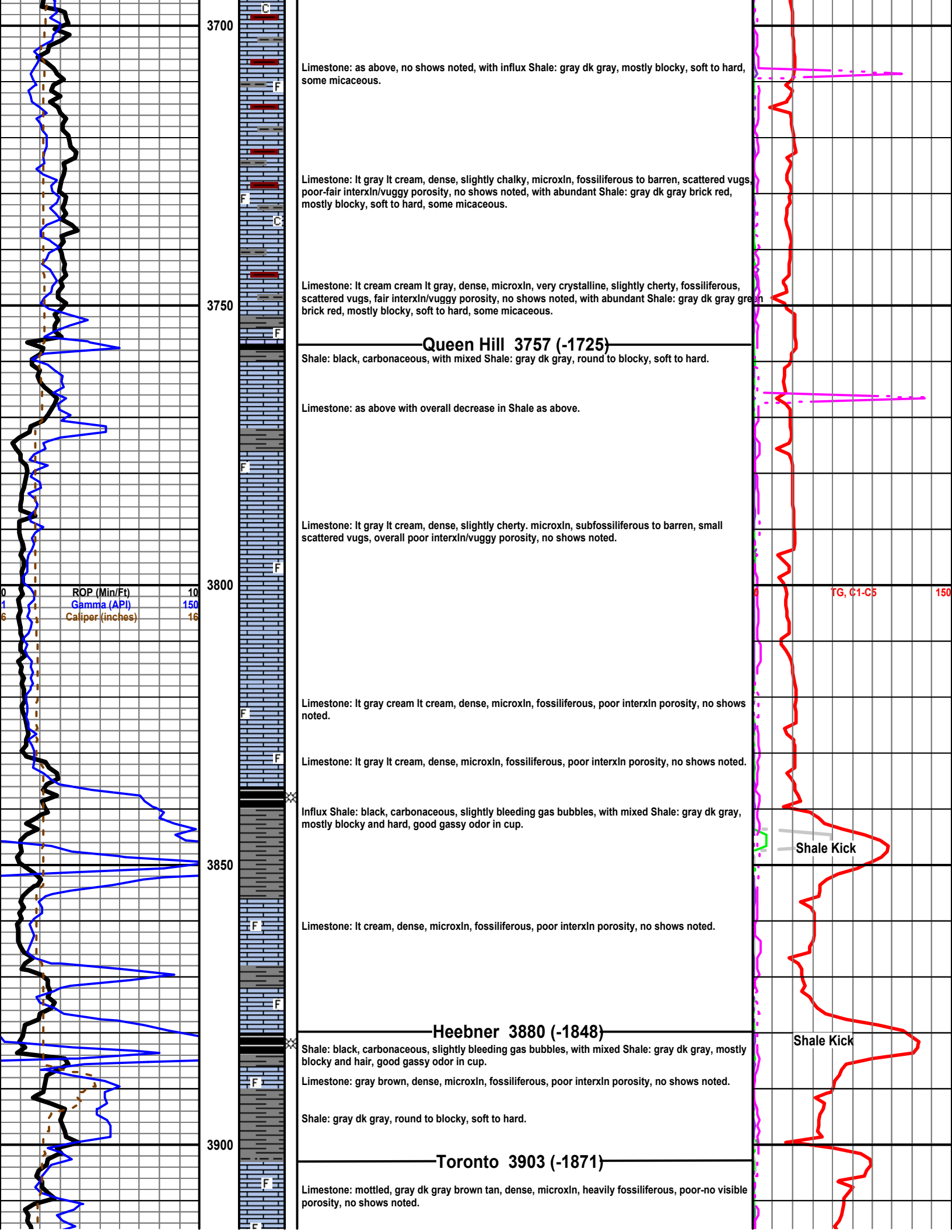
Shale: black, carbonaceous.

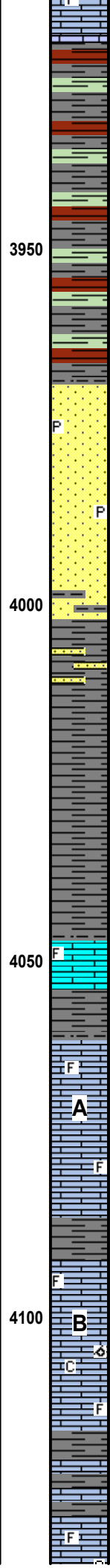
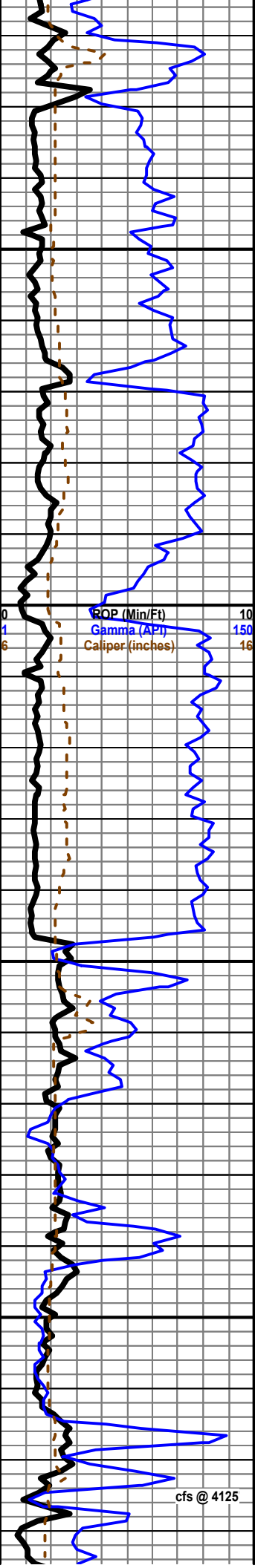
3650

Limestone: lt gray lt cream off white, dense, slightly chalky, microxn, fossiliferous, small scattered vugs, poor interxn/vuggy porosity, no shows noted, with Limestone: lt gray off white, dense, lithographic, barren, poor visible porosity, no shows noted, and abundant Chalk in tray.

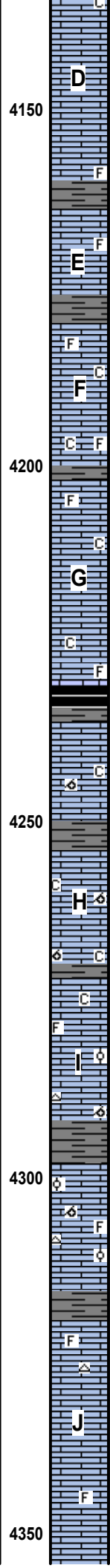
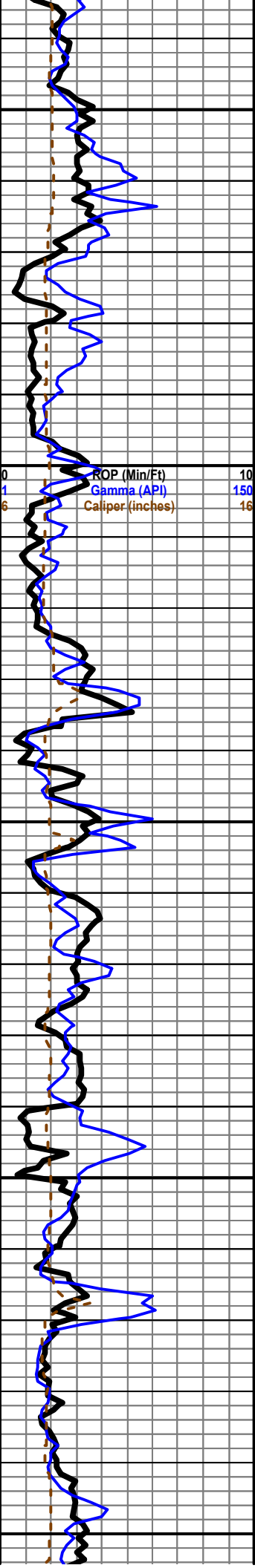
Limestone: lt cream lt gray off white, mostly dense, microxn, some grainy, fossiliferous, trace oomoldic, overall poor interxn/oomoldic porosity, no shows noted, with scattered Chalk in tray.

Mud-Co Mud Ck @  
3656' |  
0700 hrs 5/14/10  
Vis 49 Wt 9.1  
PV 10 YP 22  
WL 11.2  
Cake 1/32  
PH 9.5  
CHL 4,000 ppm  
Cal 80 ppm  
Sol 5.5  
LCM: 0 #/bbl  
DMC: \$2,537.00  
CMC: \$7,211.30





	<p><b>Douglas 3921 (-1889)</b></p> <p>Shale: gray olive green dk gray brick red brown, round to blocky, hard to soft, some micaceous, some silty and sandy.</p>	
3950	<p>Shale: gray olive green dk gray brick red brown, round to blocky, hard to soft, some micaceous, some silty and sandy.</p>	
	<p><b>Douglas Sand 3969 (-1937)</b></p>	
	<p>Sandstone: gray lt gray, quartz, vf grained, well sorted and cemented, subrounded to subangular, medium dirty clusters, micaceous and pyritic, no shows noted,</p>	
	<p>Sandstone: gray lt gray some clear, quartz, vf grained, well sorted and well cemented, subrounded to subangular grains, medium dirty clusters, micaceous and pyritic, no shows noted.</p>	
4000	<p>Shale: mixed gray dk gray black, round to blocky, soft to hard, silty and micaceous, with abundant Sandstone sluff from above.</p>	<p>150</p>
	<p><b>Brown Lime 4047 (-2015)</b></p>	
	<p>Limestone: tan brown, dense, microxln, heavily fossiliferous, poor interxln porosity, no shows noted.</p>	
	<p><b>Lansing 4061 (-2029)</b></p>	
	<p>Limestone: cream lt cream, dense, microxln, fossiliferous in part, poor interxln porosity, no shows noted, no fluorescence.</p>	
	<p>Limestone: cream lt brown lt gray, dense, microxln, fossiliferous, poor interxln porosity, no shows noted, no fluorescence.</p>	
	<p>Limestone: lt gray cream, dense, microxln-vfxln, some grainy texture, fossiliferous, poor interxln porosity, no shows noted, no fluorescence.</p>	
4100	<p><b>Start 10' wet &amp; dry samples @ 4100'</b></p>	
	<p>4125' cfs 30" - Limestone: lt gray lt cream tan, softer matrix, microxln-vfxln, slightly chalky in part, fossiliferous with some oolitic, poor oomoldic porosity in some pieces, poor interxln porosity, no shows noted, scattered bright pale yellow-white fluorescence, no cut fluorescence.</p>	<p>30 Unit Gas Kick</p>
	<p>Shale: mixed gray dk gray, round to blocky, soft to hard, with scattered Limestone as above.</p>	
	<p>Limestone: lt gray lt cream, mostly dense, microxln, slightly chalky in part, mostly barren, poor interxln porosity, no shows noted.</p>	



Limestone: as above, no shows noter

Limestone: mottled dk gray brown, very dense and hard, microxn, subfossiliferous, poor-no visible porosity, no shows noted.

Limestone: cream tan, dense and hard, microxn, fossiliferous, poor interxn porosity, no shows noted.

Limestone: It gray It cream tan some mottled, dense, microxn, slightly chalky, fossiliferous with some scattered fossiliferous hash, poor interxn porosity, no shows noted.

Limestone: cream tan It brown, dense, microxn-vfxln, grainy texture, slightly chalky, fossiliferous in part, poor interxn porosity, no shows noted.

Limestone: It cream cream tan, dense, microxn-vfxln, grainy texture, slightly chalky, fossiliferous in part, poor interxn porosity, no shows noted.

**Muncie Creek 4231 (-2199)**

Shale: black, carbonaceous, with Shale: gray dk gray, round to blocky, soft to hard.

Limestone: cream It cream, dense, microxn, chalky in part, oomoldic, fair-good oomoldic porosity in most pieces, no shows noted, with influx Chalk in tray.

Limestone: cream, dense, microxn, chalky in part, oomoldic, trace 2ndary xln in porosity, fair oomoldic porosity in most pieces, no shows noted, with Chalk as above.

Limestone: cream tan, dense, microxn, some suboomoldic, overall decrease in oomoldic porosity from above, no shows noted, with Chalk as above.

Limestone: cream It tan It brown, dense, chalky, mostly barren, poor interxn porosity, no shows noted, with scattered Chalk in tray.

Limestone: It cream, dense to soft matrix, microxn, slightly cherty in part, fossiliferous with some scattered oolitic, trace oomoldic, fair-poor interxn/oomoldic porosity, no shows noted.

Shale: gray dk gray, round to blocky, mostly soft.

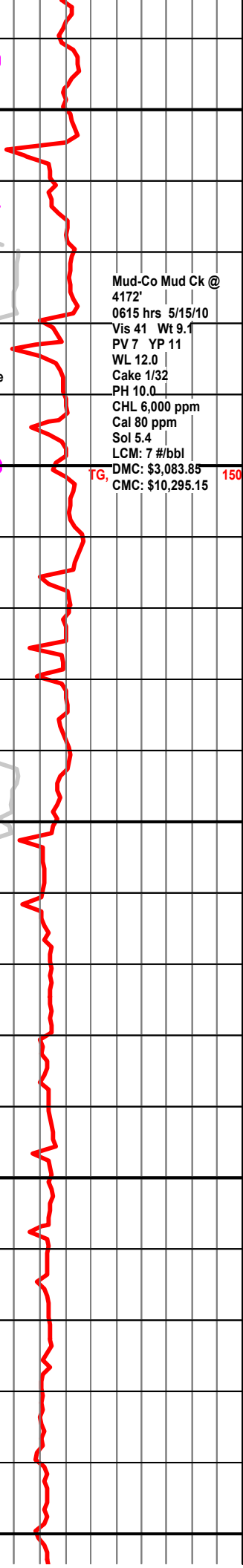
Limestone: as above, no shows noted, with scattered Chert: tan It brown, subfossiliferous, sharp, no shows noted.

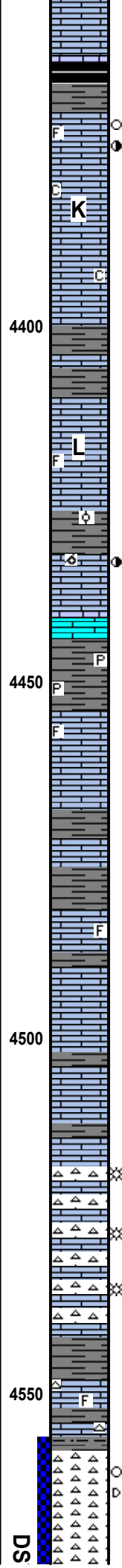
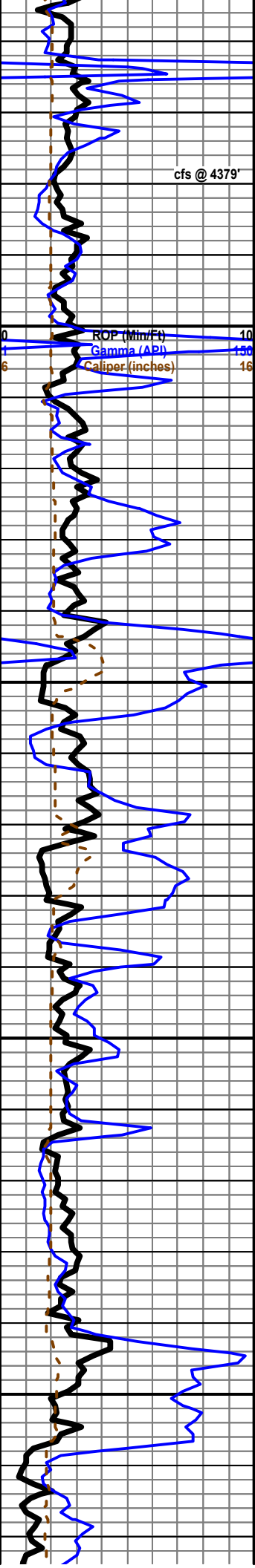
**Geologist Derek W. Patterson on location 1220 hrs 5/15/10**

Shale: mixed gray dk gray, round to blocky, mostly soft.

Limestone: cream tan It brown, dense, microxn, slightly cherty in part, fossiliferous, poor interxn porosity, no shows noted

Limestone: It gray It cream cream, dense, microxn-vfxln, fossiliferous, scattered oolitic, poor interxn porosity, no shows noted





**Stark Shale 4363 (-2331)**

Shale: black, carbonaceous, with mixed Shale: gray dk gray green, round to blocky, soft to hard.

4379' cfs 30" - Limestone: cream It cream, softer matrix but mostly dense, fossiliferous in part, poor pinpoint/interxn porosity, very slight show golden brown oil upon break, no show free oil in tray, good odor in cup, even bright yellow fluorescence, only few pieces with show/fluorescence in sample.

4379' cfs 45"/60" - Limestone: It gray It cream, dense, slightly chalky, mostly barren, poor interxn porosity, no shows noted, with Chalk in tray.

Limestone: It cream It gray, dense, slightly chalky, subfossiliferous to barren, poor interxn porosity no shows noted, with Chalk in tray.

Shale: gray dk gray, round to blocky, soft to hard, with Limestone: cream It tan, dense, cryptoxn with lithographic, mostly barren, poor interxn porosity, no shows noted.

Limestone: cream tan gray, dense, microxn-vfxln, fossiliferous, poor interxn porosity, no shows noted.

Limestone: cream It tan, dense, vfxln, slightly dolomitic, subfossiliferous with some oolitic, grainy texture, small oomolds, fair interxn/oomoldic porosity, show golden brown free oil, even bright yellow fluorescence, fair-good odor in cup

**Base Kansas City 4441 (-2409)**

Shale: mixed gray dk gray green, round to blocky, soft to hard, some micaceous, some pyritic.

**Marmaton 4454 (-2422)**

Limestone: cream It cream tan, dense, microxn, slightly cherty in part, fossiliferous with oolitic, poor interxn porosity, faint odor in cup, no other shows noted.

Limestone: tan It brown, dense, mostly barren and lithographic, some 2ndary xln, overall poor visible porosity, no shows noted.

Limestone: It cream off white, dense, slightly dolomitic and subsucrosic in part, slightly chalky, breaks fairly easily, subfossiliferous to barren, poor interxn porosity, some 2ndary xln, no shows noted.

Limestone: It cream tan It brown, dense, fossiliferous, scattered 2ndary xln in porosity, overall poor interxn porosity, no shows noted.

POOR SAMPLE QUALITY: appears to be mixed Limestone and Shale as above.

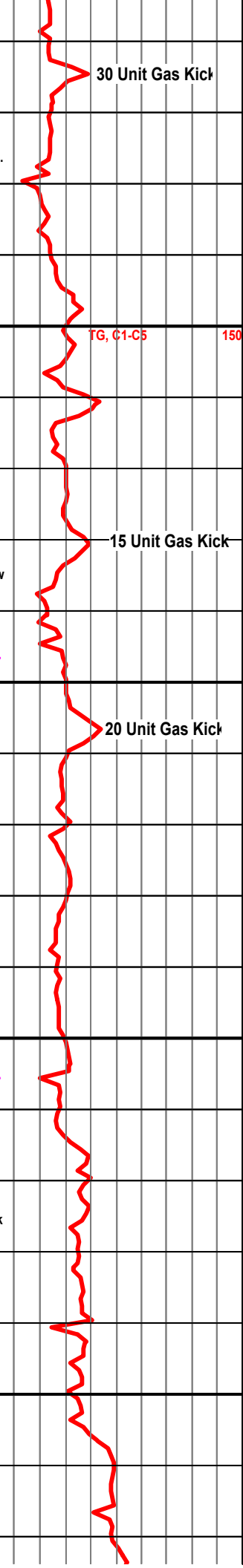
Limestone: cream tan, dense, mostly lithographic non descript, poor visible porosity, no shows no

Limestone: tan It brown, mostly dense and hard, microxn, mostly barren, poor interxn porosity, with Chert: tan It brown off white, tripolitic, poor tripolitic porosity, fair-good show gas bubbles upon break with slight gassy sheen, no show oil, fair gassy odor in cup, even bright light yellow-white fluorescence, and Chert: cream off white It gray, opaque, sharp and fresh, mostly barren with some subfossiliferous, poor visible porosity, no shows noted.

Shale: gray dk gray, round to blocky, mostly hard, with Limestone: It cream tan, dense, microxn-cryptoxn, fossiliferous, some 2ndary xln, poor interxn porosity, with mixed Chert: off white tan cream, some sharp and fresh, some weathered, some tripolitic, overall poor porosity, no shows noted.

**Basal Penn Conglomerate 4558 (-2526)**

4578' cfs 20" - Chert: off white tan It brown, tripolitic, fair to good tripolitic porosity, slight show golden brown free oil upon break in few pieces, fair-good golden brown staining, with Chert: boney white, sharp to weathered, some black dead tarry staining in porosity, no show oil or gas upon break in these pieces, scattered bright yellowish green fluorescence in most pieces and poor-no cut fluorescence in all Chert.



# Mississippian 4575 (-2543)

cfs @ 4578'

4578' cfs 40"/60" - Chert: as above with slight increase in pieces having oil show upon break.

cfs @ 4595'

4595' cfs 40"/60" - Chert: boney white, sharp to weathered, medium-large scattered vugs, fair-good vuggy porosity, golden brown staining in most pieces, with Chert: tan lt brown cream off white, tripolitic, fair-good tripolitic porosity, golden brown staining in most pieces, fair show golden brown free oil and slight show gas bubbles upon break, scattered brown-golden brown free oil droplets in tray, faint odor in cup, scattered bright light yellow fluorescence in some pieces, poor-no cut fl.

cfs @ 4600'

4616' cfs 20" - Chert: mostly boney white, sharp to rounded with slight weathering on edges, scattered medium vugs, fair-poor vuggy porosity, golden brown staining in most pieces, some black dead tarry staining along edges, few pieces very slight show free oil upon break, spotty bright yellow fluorescence, with overall decrease in tripolitic Chert from above, faint odor in cup.

cfs @ 4616'

4616' cfs 40"/60" - Chert: boney white pale yellow, sharp to rounded with slight weathering on edges, overall decrease in porosity from above, scattered golden brown staining and black dead tarry staining along edges, very slight trace free oil in few pieces when broken, spotty bright yellow fluorescence, poor-no odor in cup.

## Resume Drilling 0000 hrs 5/17/10

Short Trip @ 4616'

TOH for DST #1 0815 hrs 5/16/10

Limestone: gray lt brown tan cream, dense, microxln, subfossiliferous to barren, poor interxln porosity, no shows noted, some pieces having medium-large imbedded calcite crystals, with abundant Shale from above: gray dk gray green brown brick red, round to blocky, mostly hard, and scattered Chalk, sample washes brown.

Limestone: cream tan lt brown, dense, microxln-cryptoxln, slightly cherty, mostly barren, poor visible porosity, no shows noted, with mixed Shale: gray dk gray brown green tan, round to blocky, soft to hard, mixed Chert: orange brown tan gray bone white, most sharp and fresh, barren, no shows noted and abundant Chalk, sample washes lt brown.

Limestone: lt brown tan lt gray cream, dense, cryptoxln, cherty in part, barren, poor visible porosity no shows noted, with mixed Shale: gray dk gray brown green tan brick red, round to blocky, mostly hard, some pyritic, scattered mixed Chert: off white lt gray tan, mostly sharp and fresh, barren, no shows noted, scattered large Pyrite nodules, and abundant Chalk.

Limestone, Shale, and scattered Chert as above, no shows noted, with scattered Limestone: cream with red speckles, softer matrix, very chalky, no shows noted.

cfs @ 4679'

4679' cfs 30" - Chert: mixed off white lt gray cream pale yellow tan, some opaque, mostly sharp and fresh, some slightly fossiliferous, poor visible porosity, no shows noted.

4679' cfs 45"/60" - Chert: mixed off white lt gray cream, some opaque, mostly sharp and fresh, grading to scattered Chert: off white tan, some tripolitic and some slightly weathered, poor visible porosity, overall poor amount of these in sample, no shows noted.

# Gilmore City 4687 (-2655)

Limestone: pink lt red cream, dense, microxln, barren, poor interxln porosity, no shows noted.

# Kinderhook 4705 (-2673)

Shale: black, carbonaceous, with Shale: gray dk gray, mostly blocky and hard.

# Kinderhook Sand 4712 (-2680)

Sandstone: lt gray off white clear, quartz, vf grained, well sorted and cemented, rounded to subrounded, small-large clean clusters, some slightly glauconitic, calcareous matrix, poor-fair intergranular porosity, no shows noted.

# Viola 4722 (-2690)

Dolomite: cream lt cream off white, fairly soft chalky matrix, vfxln, sandy in part, poor crystalline development, poor interxln porosity, no shows noted, with Shale: gray dk gray, blocky and hard.

Dolomite: cream lt cream off white, fairly soft chalky matrix, vfxln, sandy in part, poor crystalline development, poor interxln porosity, no shows noted, with Chert: off white pale yellow, mostly sharp and fresh, some slightly fossiliferous, poor visible porosity, no shows noted, and large slivers of Shale: gray dk gray, blocky and hard.

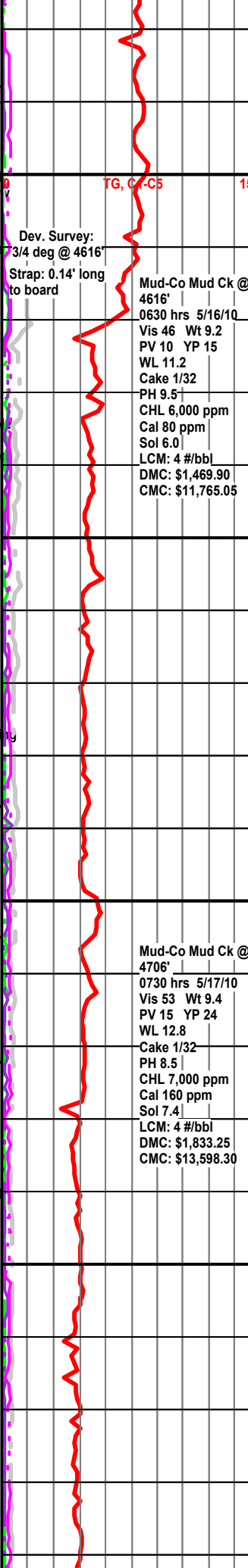
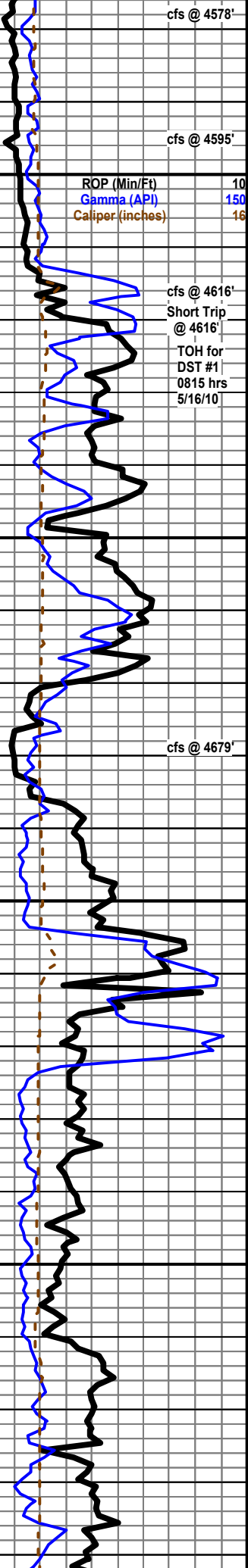
Mixed Dolomite and Chert as above, with some scattered Shale as above.

Dolomite: lt gray off white lt cream, soft chalky matrix, some denser matrix, vfxln-microxln, sandy, some subsucrosic, poor interxln porosity, no shows noted, with Chert: mixed lt gray tan opaque, mostly sharp and fresh, some subfossiliferous, and Limestone: pink tan, dense, microxln, fossiliferous in part, poor interxln porosity, no shows noted.

Mixed Dolomite, Chert, and Shale as above, very little Limestone noted, no shows noted.

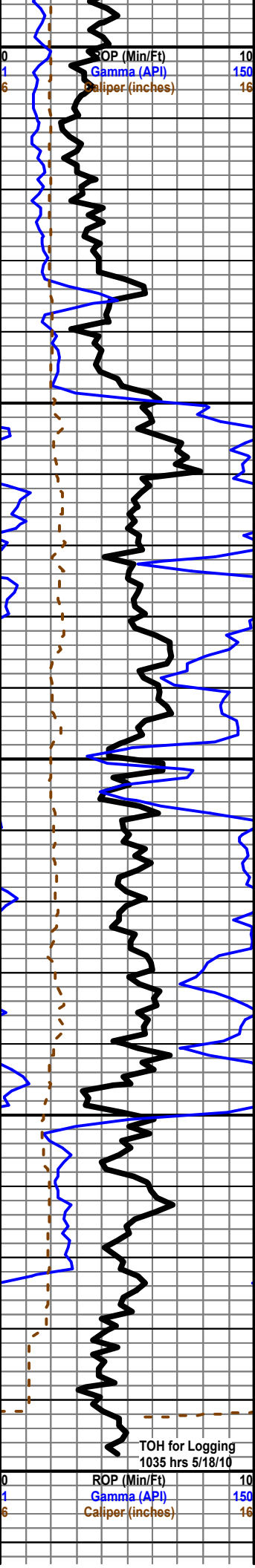
Dolomite: lt gray lt cream, denser and harder than above, vfxln-microxln, some subsucrosic, poor interxln porosity, no shows noted, with overall decrease in Chert from above, and some scattered Sandstone clusters: gray pale green, vf grained, mostly well sorted and cemented, rounded to subrounded clear grains, poor intergranular porosity, no shows noted

T #1 4557' - 4616'



Dev. Survey: 3/4 deg @ 4616' Strap: 0.14' long to board  
Mud-Co Mud Ck @ 4616' 0630 hrs 5/16/10  
Vis 46 Wt 9.2  
PV 10 YP 15  
WL 11.2  
Cake 1/32  
PH 9.5  
CHL 6,000 ppm  
Cal 80 ppm  
Sol 6.0  
LCM: 4 #/bbl  
DMC: \$1,469.90  
CMC: \$11,765.05





4800  
4850  
4900  
4950  
5000



Limestone: It gray cream pale green, dense, microxln-cryptoxln, some very xln, dolomitic, barren, poor interxln porosity, no shows noted, with scattered Dolomite as above, no shows noted, and some scattered Chert as above.

Dolomite: It cream It gray, dense to softer matrix, slightly chalky, vfxln-microxln, subsucrosic in part, poor interxln porosity, no shows noted, with scattered Limestone as above.

Limestone: It cream It gray, dense, vfxln-microxln, dolomitic with subsucrosic in part, poor interxln porosity, no shows noted, with scattered Shale: gray dk gray, mostly blocky and hard.

**Simpson Shale 4850 (-2818)**

Influx Shale: black, carbonaceous, with mixed Shale: gray dk gray green, some silty, round to blocky soft to hard.

Shale: mixed gray dk gray brown green brown some brick red, mostly blocky and hard, some waxy, some fissile.

Shale: mixed as above.

Shale: gray dk gray green, mostly blocky and hard, some waxy, some silty and sandy, with Sandstone: white It gray, quartz, vf grained, well sorted and cemented, round to subrounded grains small clean clusters, calcareous matrix, poor intergranular porosity, no shows noted, with Sandstone: gray It gray pale green, fair-poorly sorted, well cemented, subangular to subrounded, medium-large dirty clusters, calcareous matrix, poor-fair intergranular porosity, no shows noted.

Shale: gray dk gray green, mostly blocky and hard, some waxy, some silty and sandy, with Sandstone: It gray white clear, quartz, vf-f grained, fairly-poorly sorted, well cemented, subangular to subrounded grains, medium to large dirty clusters, some pyritic and glauconitic, calcareous matrix, poor-fair intergranular porosity, no shows noted.

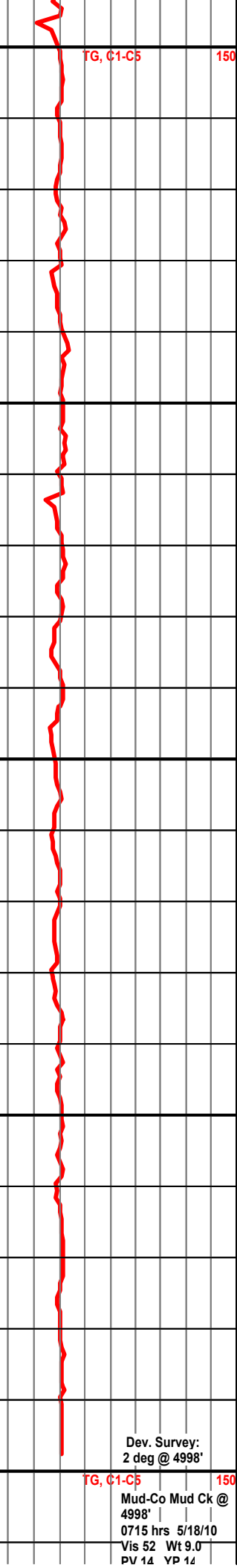
**Arbuckle 4950 (-2918)**

Dolomite: It cream, dense, microxln-vfxln, poor crystalline development, breaks fairly easily, sandy in part, poor interxln porosity, no shows noted, even bright yellow fluorescence.

Dolomite: It cream cream tan It gray, dense, microxln, poor crystalline development, sandy in part, poor interxln porosity, no shows noted, even bright yellow-white fluorescence.

Dolomite: tan cream, dense, microxln, poor crystalline development, sandy in part, some slightly subsucrosic, slightly pyritic, poor interxln porosity, no shows noted, even bright pale yellow-white fluorescence.

Dolomite: cream tan, dense, microxln, poor crystalline development, sandy in part, some slightly subsucrosic, slightly pyritic, poor interxln porosity, no shows noted, even bright pale yellow-white fluorescence.



TOH for Logging  
1035 hrs 5/18/10

ROP (Min/Ft) 10  
Gamma (API) 150  
Caliper (inches) 16

**RTD 4998 (-2966)**  
**LTD 5000 (-2968)**

Dev. Survey:  
2 deg @ 4998'

TG, C1-C5 150

Mud-Co Mud Ck @  
4998'  
0715 hrs 5/18/10  
Vis 52 Wt 9.0  
PV 14 VP 14

Rotary TD @ 4996 0700 hrs 5/18/10  
Superior Well Service Logging TD 5000'  
Complete Logging Operations 1715 hrs 5/18/10  
Plugging Orders Received On 5/18/10

Geologist Derek W. Patterson off location 1745 hrs 5/18/10

WL 9.6  
Cake 1/32  
PH 10.0  
CHL 7,000 ppm  
Cal 80 ppm  
Sol 4.6  
LCM: 4 #/bbl  
DMC: \$1,572.95  
CMC: \$15,171.25

5050