



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



1051234

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other (Explain) \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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<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 (Specify) _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	NUSS 1-4
Doc ID	1051234

All Electric Logs Run

MEL
DIL
CNL/CDL
BHCS

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	NUSS 1-4
Doc ID	1051234

Tops

Name	Top	Datum
STOTLER	3530	-711
TARKIO	3590	-771
HEEBNER	4134	-1315
LANSING	4240	-1421
STARK	4581	-1762
MARMATON	4720	-1901
PAWNEE	4814	-1995
CHEROKEE	4859	-2040
MORROW SH	5039	-2220
MISS	5129	-2310
MISS-ST LOUIS	5261	-2442

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/>

Thomas E. Wright, Chairman  
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

February 24, 2011

MICHEAL MITCHELL  
Falcon Exploration, Inc.  
125 N MARKET STE 1252  
WICHITA, KS 67202-1719

Re: ACO1  
API 15-069-20330-00-00  
NUSS 1-4  
NW/4 Sec.04-28S-30W  
Gray 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,  
MICHEAL MITCHELL

Company	<b>Falcon Exploration, Inc.</b>	Lease Name	<b>Nuss</b>	
Address	<b>125 N. Market, Ste. 1252</b>	Lease #	<b>1-4</b>	
CSZ	<b>Wichita, KS 67202</b>	Legal Desc	<b>See Comments</b>	Job Ticket <b>2129</b>
Attn.	<b>Keith Reavis</b>	Section	<b>4</b>	Range <b>30W</b>
		Township	<b>28S</b>	
		County	<b>Gray</b>	State <b>KS</b>
		Drilling Cont	<b>Val Energy, Inc. Rig #1</b>	
Comments	<b>Legal Description: 330' FNL &amp; 2070' FWL Diamond did DST #1</b>			

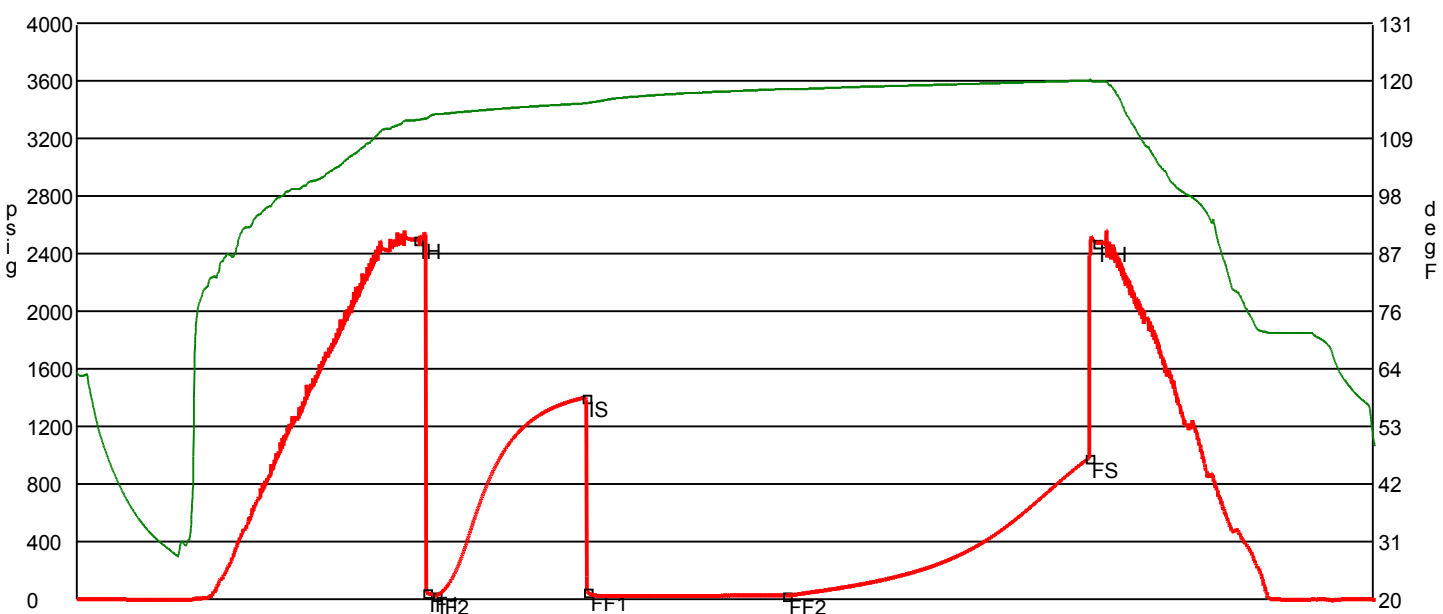
**GENERAL INFORMATION**

Test # <b>2</b>	Test Date <b>11/25/2010</b>	Chokes <b>3/4</b>	Hole Size <b>7 7/8</b>
Tester <b>Tim Venters</b>		Top Recorder # <b>W1119</b>	
Test Type <b>Conventional Bottom Hole Successful Test</b>		Mid Recorder # <b>W1022</b>	
# of Packers <b>2.0</b>	Packer Size <b>6 3/4</b>	Bott Recorder # <b>13310</b>	
Mud Type <b>Gel Chem</b>		Mileage <b>76</b>	Approved By
Mud Weight <b>9.2</b>	Viscosity <b>44.0</b>	Standby Time <b>0</b>	
Filtrate <b>7.2</b>	Chlorides <b>1200</b>	Extra Equipmnt <b>Jars &amp; Safety joint</b>	
Drill Collar Len <b>0</b>		Time on Site <b>7:10 PM</b>	
Wght Pipe Len <b>0</b>		Tool Picked Up <b>10:20 PM</b>	
		Tool Layed Dwn <b>9:55 AM</b>	
Formation <b>Mississippian</b>		Elevation <b>2809.00</b>	Kelley Bushings <b>2819.00</b>
Interval Top <b>5166.0</b>	Bottom <b>5275.0</b>	Start Date/Time <b>11/24/2010 9:12 PM</b>	
Anchor Len Below <b>109.0</b>	Between <b>0</b>	End Date/Time <b>11/25/2010 10:03 AM</b>	
Total Depth <b>5275.0</b>			
Blow Type <b>Weak 1/4 inch blow at the start of the initial flow period, building to 1/2 inch . Weak 1/4 inch blow at the start of the final flow period, building, reaching the bottom of the bucket in 95 minutes. It never did blow water out of the buck et. Times: 5, 90, 120, 180.</b>			

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
395	Gas in Pipe	100% 395ft	0% 0ft	0% 0ft	0% 0ft
45	Slight oil cut mud	0% 0ft	10% 4.5ft	0% 0ft	90% 40.5ft

DST Fluids **0**



	Date	Time	Pressure	Temp	
IH	11/25/2010 12:33:40 AM	3.361111	2498.004	112.423	Initial Hydro-static
IF1	11/25/2010 12:38:50 AM	3.447222	49.602	112.6	Initial Flow (1)
IF2	11/25/2010 12:44:40 AM	3.544444	29.397	113.538	Initial Flow (2)
IS	11/25/2010 2:13:40 AM	5.027778	1403.568	115.613	Initial Shut-In
FF1	11/25/2010 2:14:40 AM	5.044444	54.402	115.633	Final Flow (1)
FF2	11/25/2010 4:13:00 AM	7.016667	28.504	118.39	Final Flow (2)
FS	11/25/2010 7:13:20 AM	10.022222	983.219	119.996	Final Shut-In
FH	11/25/2010 7:17:40 AM	10.094444	2479.381	119.828	Final Hydro-static

**GAS FLOWS**

Min Into IFP   Min Into FFP   Gas Flows   Pressure   Choke

Company	<b>Falcon Exploration, Inc.</b>	Lease Name	<b>Nuss</b>	
Address	<b>125 N. Market, Ste. 1252</b>	Lease #	<b>1-4</b>	
CSZ	<b>Wichita, KS 67202</b>	Legal Desc	<b>See Comments</b>	Job Ticket <b>2129</b>
Attn.	<b>Keith Reavis</b>	Section	<b>4</b>	Range <b>30W</b>
		Township	<b>28S</b>	
		County	<b>Gray</b>	State <b>KS</b>
		Drilling Cont	<b>Val Energy, Inc. Rig #1</b>	
Comments	<b>Legal Description: 330' FNL &amp; 2070' FWL Diamond did DST #1</b>			

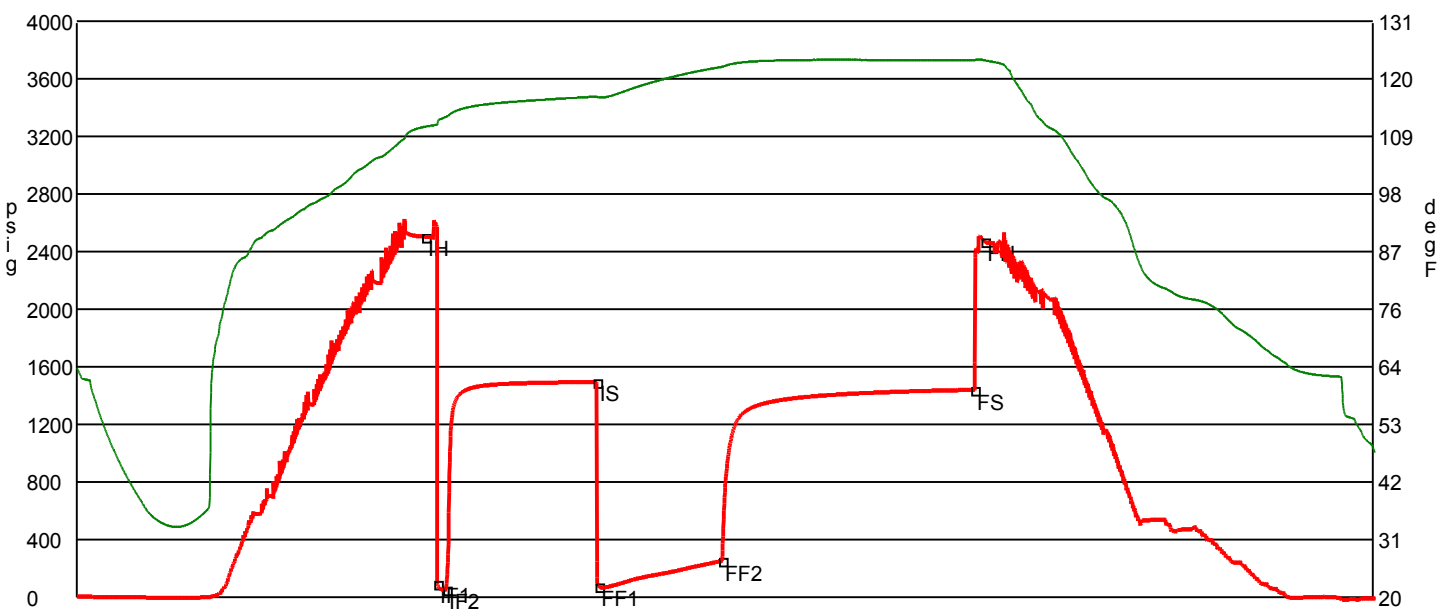
**GENERAL INFORMATION**

Test # <b>3</b>	Test Date <b>11/26/2010</b>	Chokes <b>3/4</b>	Hole Size <b>7 7/8</b>
Tester <b>Tim Venters</b>		Top Recorder # <b>W1119</b>	
Test Type <b>Conventional Bottom Hole Successful Test</b>		Mid Recorder # <b>W1022</b>	
		Bott Recorder # <b>13310</b>	
# of Packers <b>2.0</b>	Packer Size <b>6 3/4</b>	Mileage <b>76</b>	Approved By
		Standby Time <b>0</b>	
Mud Type <b>Gel Chem</b>		Extra Equipmnt <b>Jars &amp; Safety joint</b>	
Mud Weight <b>9.2</b>	Viscosity <b>44.0</b>	Time on Site <b>6:55 PM</b>	
Filtrate <b>7.2</b>	Chlorides <b>1200</b>	Tool Picked Up <b>10:05 PM</b>	
		Tool Layed Dwn <b>9:40 AM</b>	
Drill Collar Len <b>0</b>		Elevation <b>2809.00</b>	Kelley Bushings <b>2819.00</b>
Wght Pipe Len <b>0</b>			
Formation <b>Mississippian</b>		Start Date/Time <b>11/25/2010 8:48 PM</b>	
Interval Top <b>5278.0</b>	Bottom <b>5305.0</b>	End Date/Time <b>11/26/2010 9:43 AM</b>	
Anchor Len Below <b>27.0</b>	Between <b>0</b>		
Total Depth <b>5305.0</b>			
Blow Type <b>Strong blow throughout the inital flow period, reaching the bottom of the bucket in 1 minute. Weak surface blow back throughout the initial shut-in period. Very strong blow throughout the final flow period, hitting the bottom of the bucket instantaneously. Weak surface blow back 4 minutes after we bled line off (20 min.) that built, reaching the bottom of the bucket in 37 minutes. Times: 5, 90, 75, 150. Oil Gravity: 26.</b>			

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
3670	Gas in Pipe	100% 3670ft	0% 0ft	0% 0ft	0% 0ft
865	Gassy clean oil	0% 0ft	100% 865ft	0% 0ft	0% 0ft
125	Gassy, very slight mud cut oil	0% 0ft	97% 121.2ft	0% 0ft	3% 3.8ft
65	Gassy, slight oil cut mud	3% 2ft	84% 54.6ft	0% 0ft	13% 8.4ft
DST Fluids	<b>0</b>				





	Date	Time	Pressure	Temp	
IH	11/26/2010 12:14:50 AM	3.447222	2506.36	110.719	Initial Hydro-static
IF1	11/26/2010 12:22:20 AM	3.572222	95.731	111.029	Initial Flow (1)
IF2	11/26/2010 12:27:30 AM	3.658333	53.967	112.648	Initial Flow (2)
IS	11/26/2010 1:57:30 AM	5.158333	1496.145	116.528	Initial Shut-In
FF1	11/26/2010 1:58:40 AM	5.177778	78.964	116.426	Final Flow (1)
FF2	11/26/2010 3:12:40 AM	6.411111	255.199	122.288	Final Flow (2)
FS	11/26/2010 5:43:30 AM	8.925	1442.208	123.498	Final Shut-In
FH	11/26/2010 5:49:40 AM	9.027778	2472.144	123.505	Final Hydro-static

**GAS FLOWS**

Min Into IFP   Min Into FFP   Gas Flows   Pressure   Choke

# ALLIED CEMENTING CO., LLC. 30850

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

Liberal KS.

DATE <u>11-15-10</u>	SEC. <u>4</u>	TWP. <u>28S</u>	RANGE <u>30W</u>	CALLED OUT	ON LOCATION	JOB START 3:30 AM	JOB FINISH 4:45 AM
LEASE <u>Nuc</u>	WELL # <u>1-4</u>	LOCATION <u>Vec Cope land</u>		COUNTY <u>Gray</u>	STATE <u>KS.</u>		
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR Val Rio #1

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 1852

CASING SIZE 8 5/8 DEPTH 1844

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 42.66

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 114.74

EQUIPMENT

PUMP TRUCK CEMENTER Kenan

# 470-487 HELPER Kenan

BULK TRUCK

# 457-251 DRIVER Jose

BULK TRUCK

# 472-468 DRIVER David

REMARKS:

THANK YOU!!!

OWNER \_\_\_\_\_

CEMENT

AMOUNT ORDERED Lead 675 S<sup>KS</sup> 65/35/6

3% CC and .25 Floseed

Tail 150 S<sup>KS</sup> Class A 3% CC 42% gel

COMMON 150 @ 15.45 2317.50

POZMIX @ \_\_\_\_\_

GEL 3 @ 20.80 62.40

CHLORIDE 27 @ 58.20 1571.40

ASC @ \_\_\_\_\_

Lit. weight 675 @ 14.80 9990.00

Floseed 168 @ 2.58 420.00

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING 897 @ 2.40 2152.80

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_ 4485.00

TOTAL 20994.10

SERVICE

DEPTH OF JOB \_\_\_\_\_ @ \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_ @ 1852.44

EXTRA FOOTAGE \_\_\_\_\_ @ 2011.00

MILEAGE 50 @ 7.00 350.00

MANIFOLD 1 @ 113.00 113.00

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

CHARGE TO: Falcon

STREET Box 551

CITY Russell STATE KS ZIP 67665

TOTAL 2474.00

PLUG & FLOAT EQUIPMENT

Guide Shoe 1 @ 282.00 282.00

Tasset/Float 1 @ 377.00 377.00

Cementizer 1 @ 62.00 62.00

Basket 3 @ 248.00 744.00

Top Rubber Plug 1 @ 113.00 113.00

TOTAL 1578.00

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES ~~\_\_\_\_\_~~

DISCOUNT ~~\_\_\_\_\_~~ IF PAID IN 30 DAYS

PRINTED NAME Ken Kuhn

SIGNATURE Ken Kuhn

# BASIC

energy services, L.P.

## TREATMENT REPORT

Customer <i>Falcon Exploration</i>	Lease No.	Date <i>11-28-10</i>	
Lease <i>Nuss</i>	Well # <i>H4</i>		
Field Order # <i>01335</i>	Station <i>Liberal, KS-1717</i>	Casing <i>5 7/8" IS</i>	Depth
Type Job <i>242 5/8 Production</i>	Formation	County <i>Grant</i>	State <i>KS</i>
		Legal Description <i>4-28-30</i>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid <i>150% AA2</i>	RATE	PRESS	ISIP	
Depth	Depth	From	To	Pre Pad	Max		5 Min.	
Volume	Volume	From	To	Pad	Min		10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth	Packer Depth	From	To	Flush <i>Surfact</i>	Gas Volume		Total Load	

Customer Representative	Station Manager <i>J. Bennett</i>	Treater <i>A. Minors</i>
-------------------------	--------------------------------------	-----------------------------

Service Units	<i>34726</i>	<i>30160</i>	<i>10919</i>	<i>10828</i>	<i>10883</i>				
Driver Names	<i>A. Oliver</i>	<i>M. S. Brown</i>	<i>S. Chavez</i>						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:00 AM					run 100-side assessment (laying down DP)
8:30 AM					start case & float equip
					run AF float shoe bit set pt.
					baffle plate top set pt - shoe pt 44.03'
					6 centralizers on - 49.58' to 63.70'
					4 baskets on - 24.58' to 60'
					port collar on 49' @ 2972'
1:15					case on bit, break circ
2:30					surface monitoring
2:40					pressure test pumping lines 2000#
2:42	250		5	4	start w/ 5 bbl 4 1/2 spacer
2:45	250		12	4	run 12 bbl superflush
2:47	250		5	4	switch 5 bbl 4 1/2 spacer
2:50	200		41	4	mix & pump 150 gal AA2 w/ 5% Wt-00 10% salt 5% Gelsol 6% G15, K+ Defoamer
					1.54 bbl 7% gel 6 bbl water @ 148 ppm
3:10	0		0	6	drop case drop 10 1/2 down plug
3:26	900		115	2	slow rate 1st 10 bbl of disp
3:30	1500		125	0	load plug float hold
3:45	50		15	3	plug rat & remove holes w/ 50 gal water
					job complete

Customer Falcon Exploration	Lease No.	Date 12/13/10
Lease Nuss	Well # 1-4	
Field Order #	Station Liberal	Casing 5 1/2
		Depth 2958'
Type Job Port Collar	Formation	County Grau
		State KS

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME	
Casing Size 5 1/2	Tubing Size 2 7/8	Shots/Ft		Acid 500 gal A-Cone	RATE 110	PRESS 2,950	ISIP 2000
Depth 2958	Depth	From	To	Pre Pad 1000 gal AK	Max 270	CaCl 140#	5 Min
Volume	Volume 11.10	From	To	Pad	Min		10 Min.
Max Press	Max Press 1900	From	To	Frac	Avg		15 Min.
Well Connection 11.146	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth 1777	From	To	Flush Fresh	Gas Volume		Total Load

Customer Representative Lyon	Station Manager Jerry Barnett	Treater Mark Hinz
Service Units 19844	301163	19843
Driver Names Cline	R. Dick	J. Cortez

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
07:30					on loc, start truck, set up
11:14	2000	7000			psi test
11:16					ndena Port Collar, want open
					T00H
14:38	400				psi up to 5, open trial
14:42					tool open, hook to the
14:50		300#	3	3	Pump mud flush
14:54		300	12	3	Pump H2O spacer
14:56		300	5	3	start mixing A-cone 11.97
15:30		450			Finish mixing
15:31		100	0	2.6	start Disp
15:34		400	9.6		shot down, close Port Collar
15:35		600	0	2	Rev out
16:13		370	40	-	shot down, Rin in 10 min
16:30		450	0	2.5	Rev out
16:52		0	53	-	shot down, Rin in 10 min
					Solo Constat
					Thank you
					(check + mill)

***Keith Reavis***  
***Consulting Geologist***

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

Well Name: Nuss #1-4  
Location: Section 4 - T28S - R30W, Gray County, KS  
Licence Number: API # 15-069-20330-0000  
Spud Date: November 13, 2010  
Surface Coordinates: 330' FNL & 2070' FWL (3-D Location)

Region: Wildcat  
Drilling Completed: November 26, 2010

**Bottom Hole Coordinates:**

Ground Elevation (ft): 2809'                      K.B. Elevation (ft): 2819'  
Logged Interval (ft): 2600'              To: 5405'              Total Depth (ft): 5406' LTD  
Formation: Mississippian  
Type of Drilling Fluid: Chemical/Polymer/Gel

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

**OPERATOR**

Company: Falcon Exploration, Inc.  
Address: 125 N. Market  
Suite 1252  
Wichita, KS 67202

**GEOLOGIST**

Name: Keith Reavis, KLG #136  
Company: Consulting Geologist  
Address: 3420 22nd Street  
Great Bend, KS 67530

**REMARKS**

After review of results of DST #3 and favorable electrical log evaluation, it was recommended and agreeable by all involved parties that 5 1/2" production casing be set and the Mississippian be tested thru perforations.

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

Respectfully submitted  
Keith Reavis

# Falcon Exploration, Inc.

## DAILY DRILLING REPORT

Drilling Contractor: Val Energy, Inc. Rig #1 ph. 316-772-0848 Walt Purcell, Toolpusher

DATE	7:00 AM DEPTH	REMARKS
11/16/2010		Geologist Keith Reavis on location @ 1330 hrs, 2365 ft., drilling salt section set up and check Bloodhound and communications
11/17/2010	2768	drilling ahead, salt and anhydrite, Chase Group, Winfield, gas kicks warrant DST, TOH for DST #1, conduct DST #1, mis-run, TOH tools back in w/bit resume drilling, Towanda, Ft. Riley
11/18/2010	3020	drilling ahead, Ft. Riley, Cottonwood, Neva, Cottonwood, Red Eagle
11/19/2010	3521	drilling ahead, Foraker, Wabaunsee, Stotler, Tarkio, Bern
11/20/2010	3917	drilling ahead, Topeka, Lecompton, Heebner, Toronto, Lansing
11/21/2010	4341	drilling ahead, Lansing. Charlie Sturdavant on location to relieve Keith Reavis. Currently drilling in Lansing G zone.
11/22/2010	4636	Circulated for samples at 4635'. 79 unit gas kick was from a black shale. 1624 hrs: drilling at 4764, in the Marmaton.
11/23/2010	4938	Drilling ahead in the Atoka. Atoka top @ 4938' (-2119), 9' high to Nichols#1 Drilling at 5068. Drilling in mixed limestones and shales.
11/24/2010	5218	Drilling ahead in the Miss. Had weak oil show at 5174', geologist Keith Reavis relieve Charlie Sturdavant @ 1200 hrs, show and small kick in St. Louis warrants DST, short trip, ctch, TOH for DST #2
11/25/2010	5275	conduct and complete DST #2, successful test, TIH w/bit, resume drilling drill to 5305, show warrants test, dress up mud, TOH and strap for DST #3
11/26/2010	5305	conduct and complete DST #3, successful test, TIH w/bit, resume drilling rathole ahead and TD @ 5405 ft, TD @ 2200 hrs, cfs, ctch, begin TOH
11/27/2010	5405	tripping out, conduct and complete logging operations, geologist off location @ 1100 hrs

# Falcon Exploration, Inc.

## WELL COMPARISON SHEET

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Nuss #1-4 330' FNL & 2070' FWL Sec. 4 T28S R30W					Lanterman #1-8 2030' FNL & 370' FEL Sec. 8 T28S R30W				Falcon -#1 Nichols C SE SW Sec. 3 T28S R30W			
2819 KB					2821 KB		Structural Relationship		2812 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Chase	2672	147	2673	146	2684	137	10	9	2667	145	2	1
Winfield	2745	74	2746	73	2755	66	8	7	2737	75	-1	-2
Towanda	2794	25	2794	25	2798	23	2	2	2784	28	-3	-3
Ft. Riley	2847	-28	2846	-27	2853	-32	4	5	2833	-21	-7	-6
Neva	3172	-353	3173	-354	3176	-355	2	1	3160	-348	-5	-6
Foraker	3285	-466	3283	-464	3286	-465	-1	1	3270	-458	-8	-6
Stotler	3530	-711	3530	-711	3532	-711	0	0	3513	-701	-10	-10
Topeka	3802	-983	3801	-982	3804	-983	0	1	3784	-972	-11	-10
Lecompton	3964	-1145	3963	-1144	3967	-1146	1	2	3942	-1130	-15	-14
Heebner	4134	-1315	4133	-1314	4146	-1325	10	11	4128	-1316	1	2
Lansing	4235	-1416	4240	-1421	4249	-1428	12	7	4226	-1414	-2	-7
Stark	4581	-1762	4581	-1762	4606	-1785	23	23	4572	-1760	-2	-2
Marmaton	4714	-1895	4720	-1901	4743	-1922	27	21	4724	-1912	17	11
Pawnee	4814	-1995	4814	-1995	4837	-2016	21	21	4807	-1995	0	0
Cherokee	4859	-2040	4859	-2040	4881	-2060	20	20	4855	-2043	3	3
Morrow	5039	-2220	5039	-2220	5089	-2268	48	48	5053	-2241	21	21
Miss St. Gen.	5122	-2303	5155	-2336	5244	-2423	120	87	5141	-2329	26	-7
St. Louis A por	5261	-2442	5262	-2443	not reached				5242	-2430	-12	-13
Total Depth	5405	-2586	5406	-2587	5399	-2578	-8	-9	5418	-2606	20	19

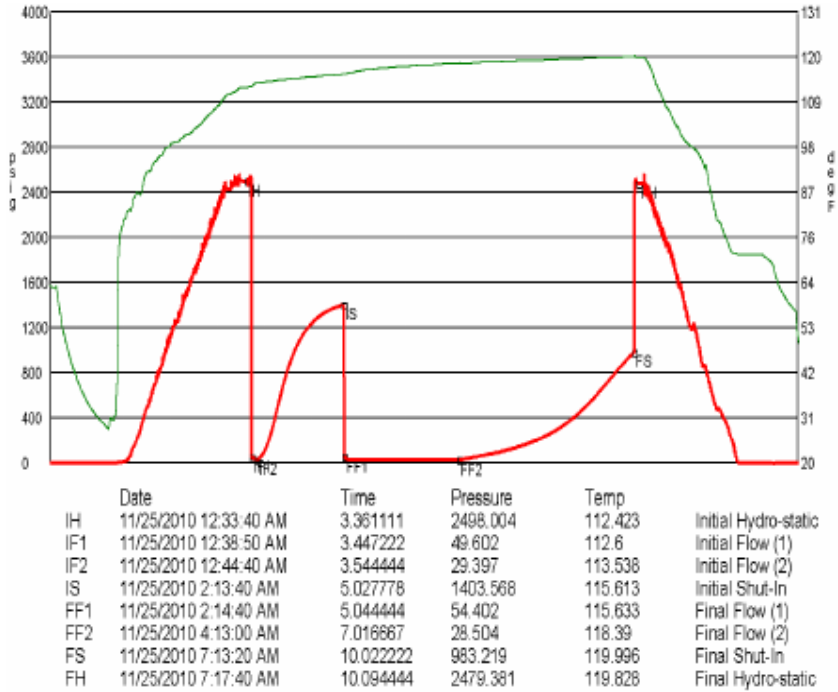
Company	<b>Falcon Exploration, Inc.</b>	Lease Name	<b>Nuss</b>
Address	<b>125 N. Market, Ste. 1252</b>	Lease #	<b>1-4</b>
CSZ	<b>Wichita, KS 67202</b>	Legal Desc	<b>See Comments</b>
Attn.	<b>Keith Reavis</b>	Section	<b>4</b>
		Township	<b>28S</b>
		County	<b>Gray</b>
		Drilling Cort	<b>Val Energy, Inc. Rig #1</b>
Comments	<b>Legal Description: 330' FNL &amp; 2070' FWL Diamond diid DST #1</b>		

**GENERAL INFORMATION**

Test #	<b>2</b>	Test Date	<b>11/25/2010</b>	Chokes	<b>3/4</b>	Hole Size	<b>7 7/8</b>
Tester	<b>Tim Venters</b>			Top Recorder #	<b>W1119</b>		
Test Type	<b>Conventional Bottom Hole Successful Test</b>			Mid Recorder #	<b>W1022</b>		
# of Packers	<b>2.0</b>	Packer Size	<b>6 3/4</b>	Botl Recorder #	<b>13310</b>		
Mud Type	<b>Gel Chem</b>			Mileage	<b>76</b>	Approved By	
Mud Weight	<b>9.2</b>	Viscosity	<b>44.0</b>	Standby Time	<b>0</b>		
Filtrate	<b>7.2</b>	Chlorides	<b>1200</b>	Extra Equipmnt	<b>Jars &amp; Safety joint</b>		
Drill Collar Len	<b>0</b>			Time on Site	<b>7:10 PM</b>		
Wght Pipe Len	<b>0</b>			Tool Picked Up	<b>10:20 PM</b>		
				Tool Layed Dwn	<b>9:55 AM</b>		
Formation	<b>Mississippian</b>			Elevation	<b>2909.00</b>	Kelley Bushings	<b>2819.00</b>
Interval Top	<b>5166.0</b>	Bottom	<b>5275.0</b>	Start Date/Time	<b>11/24/2010 9:12 PM</b>		
Anchor Len Below	<b>109.0</b>	Between	<b>0</b>	End Date/Time	<b>11/25/2010 10:03 AM</b>		
Total Depth	<b>5275.0</b>						
Blow Type	<b>Weak 1/4 inch blow at the start of the initial flow period, building to 1/2 inch . Weak 1/4 inch blow at the start of the final flow period, building, reaching the bottom of the bucket in 95 minutes. It never did blow water out of the buck et. Times: 5, 90, 120, 180.</b>						

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
395	Gas in Pipe	100% 395ft	0% 0ft	0% 0ft	0% 0ft
45	Slight oil cut mud	0% 0ft	10% 4.5ft	0% 0ft	90% 40.5ft





Company **Falcon Exploration, Inc.**  
 Address **125 N. Market, Ste. 1252**  
 CSZ **Wichita, KS 67202**  
 Attn. **Keith Reavis**

Lease Name **Nuss**  
 Lease # **1-4**  
 Legal Desc **See Comments** Job Ticket **2129**  
 Section **4** Range **30W**  
 Township **28S**  
 County **Gray** State **KS**  
 Drilling Cont **Val Energy, Inc. Rig #1**

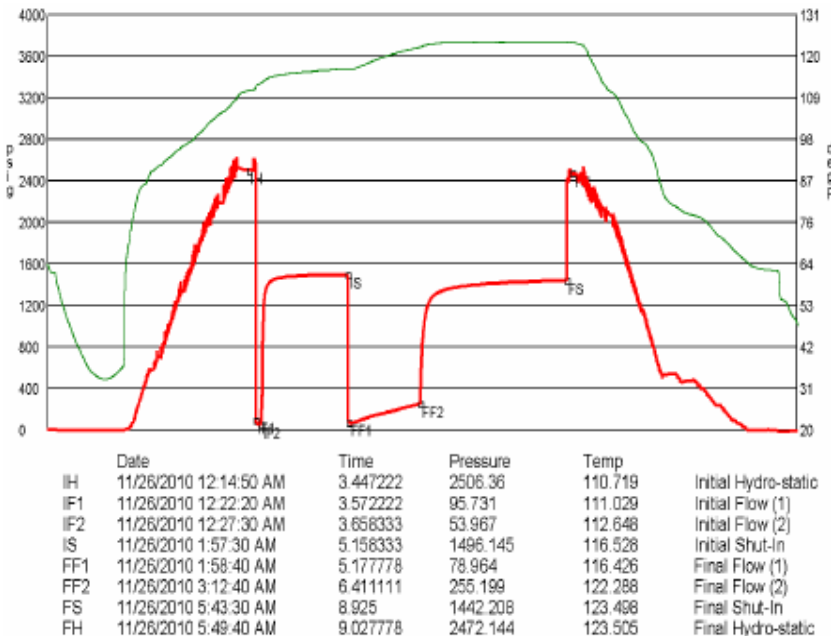
Comments **Legal Description: 330' FNL & 2070' FWL  
 Diamond dld DST #1**

**GENERAL INFORMATION**

Test # **3** Test Date **11/26/2010** Chokes **3/4** Hole Size **7 7/8**  
 Tester **Tim Venters** Top Recorder # **W1119**  
 Test Type **Conventional Bottom Hole** Mid Recorder # **W1022**  
**Successful Test** Bott Recorder # **13310**  
 # of Packers **2.0** Packer Size **6 3/4** Mileage **76** Approved By  
 Standby Time **0**  
 Mud Type **Gel Chem** Extra Equipmnt **Jars & Safety joint**  
 Mud Weight **9.2** Viscosity **44.0** Time on Site **6:55 PM**  
 Filtrate **7.2** Chlorides **1200** Tool Picked Up **10:05 PM**  
 Tool Layed Dwn **9:40 AM**  
 Drill Collar Len **0** Elevation **2809.00** Kelley Bushings **2819.00**  
 Wght Pipe Len **0**  
 Formation **Mississippian** Start Date/Time **11/25/2010 8:48 PM**  
 Interval Top **5278.0** Bottom **5305.0** End Date/Time **11/26/2010 9:43 AM**  
 Anchor Len Below **27.0** Between **0**  
 Total Depth **5305.0**  
 Blow Type **Strong blow throughout the inital flow period, reaching the bottom of the bucket in 1 minute. Weak surface blow back throughout the initial shut-in period. Very strong blow throughout the final flow period, hitting the bottom of the bucket instantaneously. Weak surface blow back 4 minutes after we bled line off (20 min.) that built, reaching the bottom of the bucket in 37 minutes. Times: 5, 9 0, 75, 150. Oil Gravity: 26.**

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
3670	Gas in Pipe	100% 3670ft	0% 0ft	0% 0ft	0% 0ft
865	Gassy clean oil	0% 0ft	100% 865ft	0% 0ft	0% 0ft
125	Gassy, very slight mud cut oil	0% 0ft	97% 121.2ft	0% 0ft	3% 3.8ft
65	Gassy, slight oil cut mud	3% 2ft	84% 54.8ft	0% 0ft	13% 8.4ft



# ROCK TYPES

## LITHOLOGY

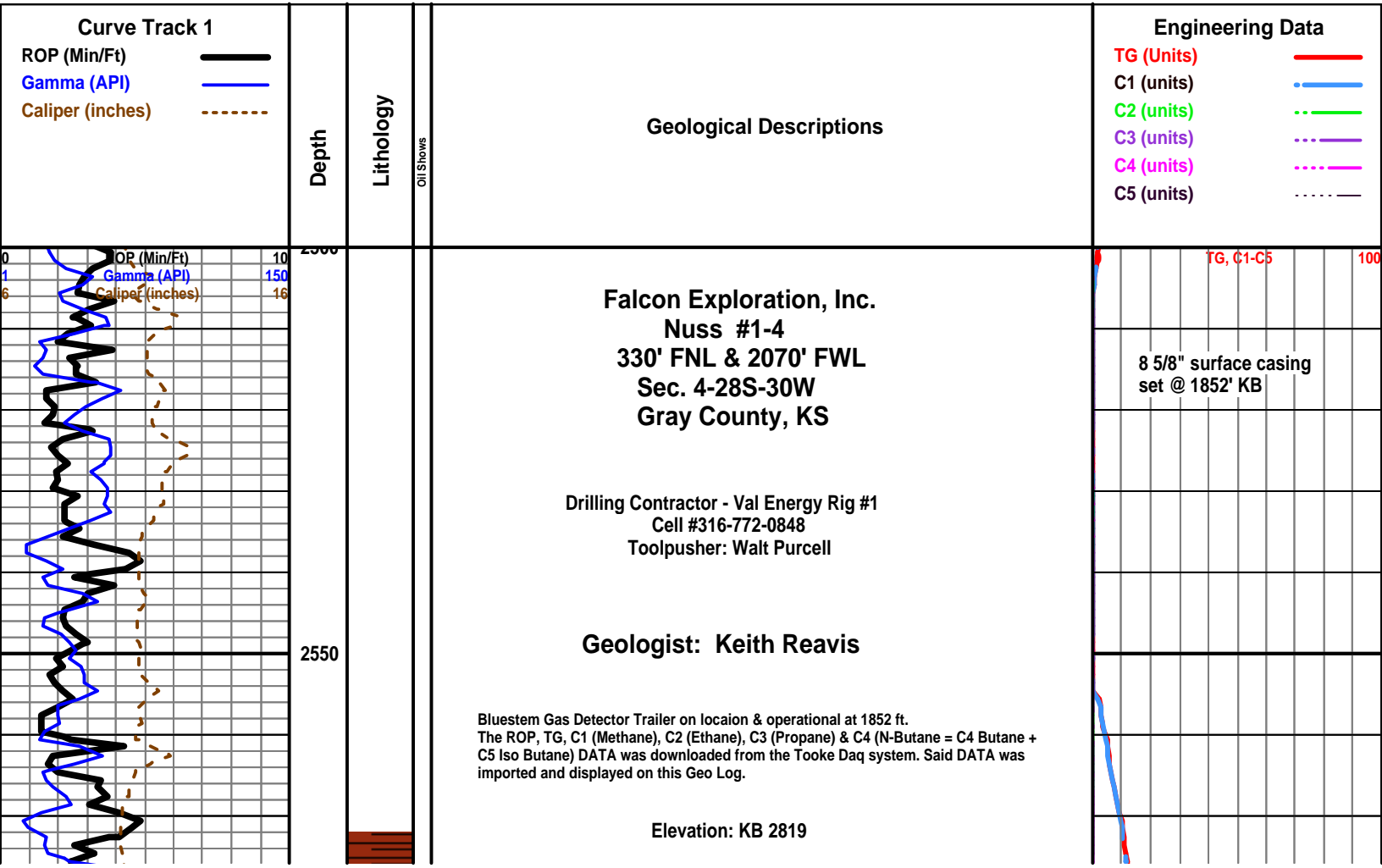
- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol
- Gyp
- Igne
- Lmst
- Meta
- Mrst
- Salt
- Shale
- Shcol
- Shgy
- Slstst
- Ss
- Till
- Slststn
- Shale
- Sandylms
- Lms
- Gry sh
- Dtd
- Dol
- Carb sh
- pipesymbol

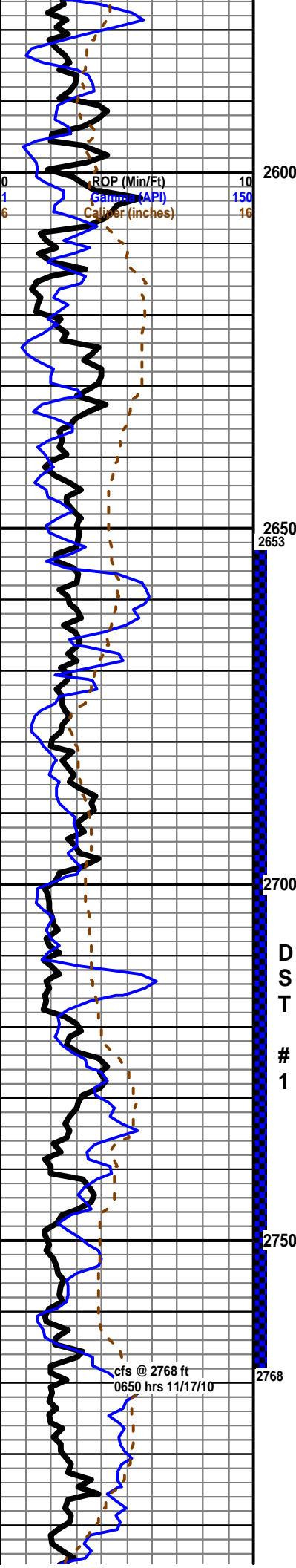
- unknown lith
  - Red shale
- ## FOSSIL
- Oomoldic
  - Fuss
  - Algae
  - Amph
  - Belm
  - Bioclst
  - Brach
  - Bryozoa
  - Cephal
  - Coral
  - Crin
  - Echin
  - Fish
  - Foram
  - Fossil
  - Gastro
  - Oolite
  - Ostra
  - Pelec
  - Pellet
  - Pisolite
  - Plant
  - Strom
- ## MINERAL
- Sltly

- 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

- Sulphur
  - Tuff
- ## 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

- 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





Begin Samples @ 2600', shales, brick red and gray with anhydrite

as above, some light gray arenaceous dolomite and white limestone, very small specimens

**Chase Group 2672 +147**

poor samples, mostly shale and anhydrite as above, some light gray mottled dolomite, very small specimens

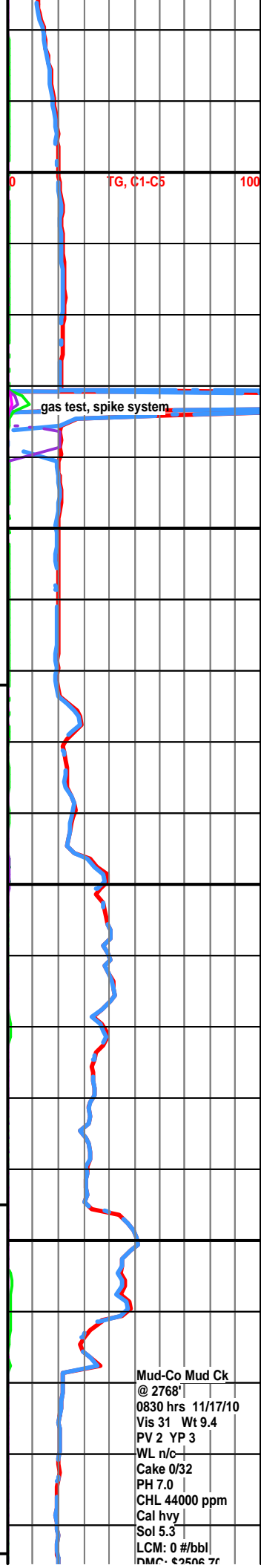
as above, some fair fluorescence

**DST #1 results: Mis-Run Packer Failure**

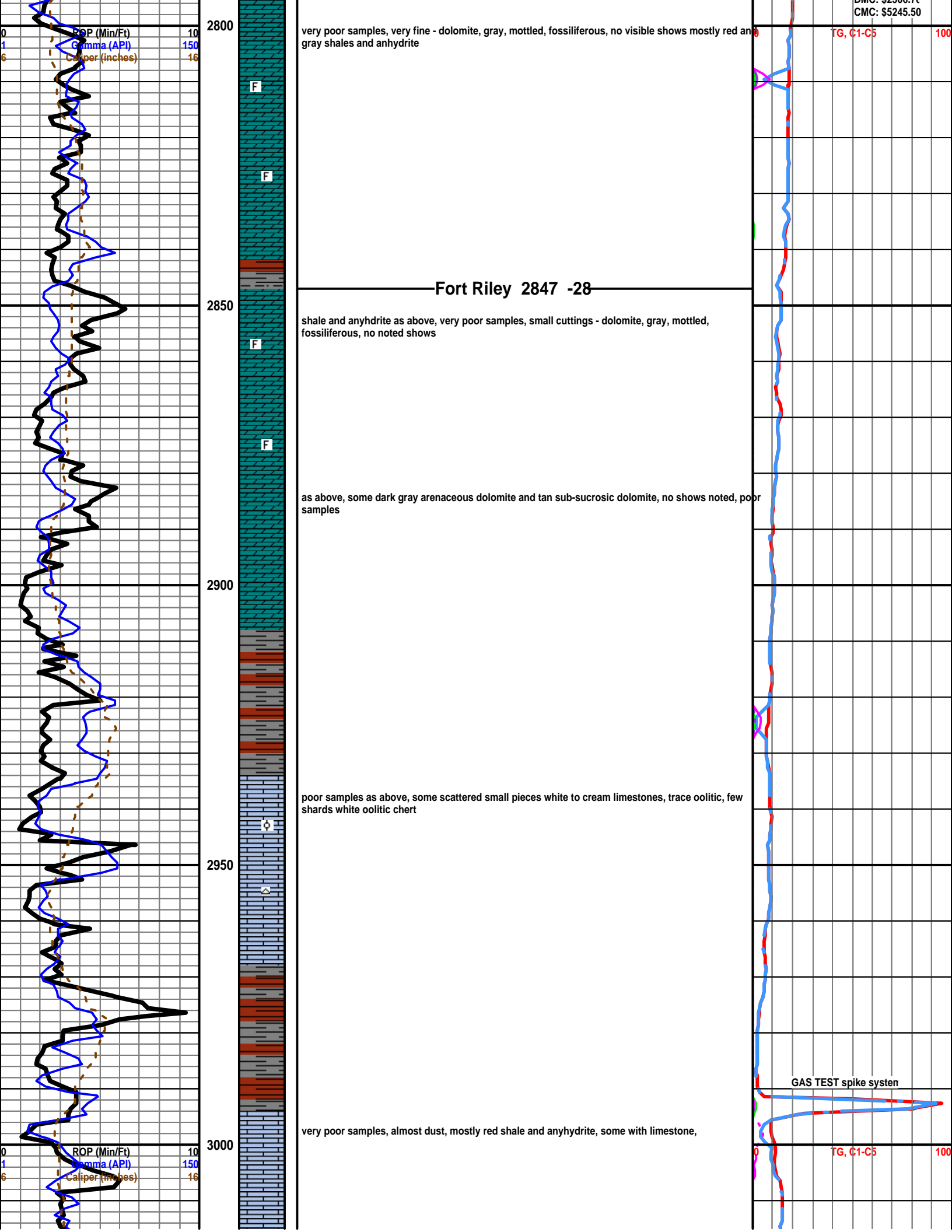
**Winfield 2745 +74**

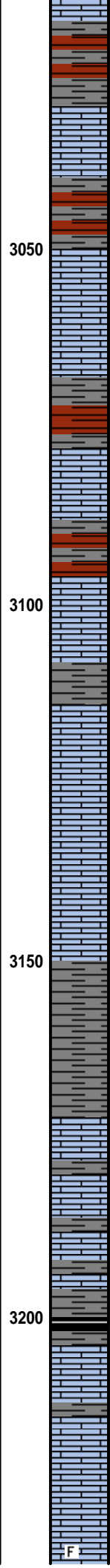
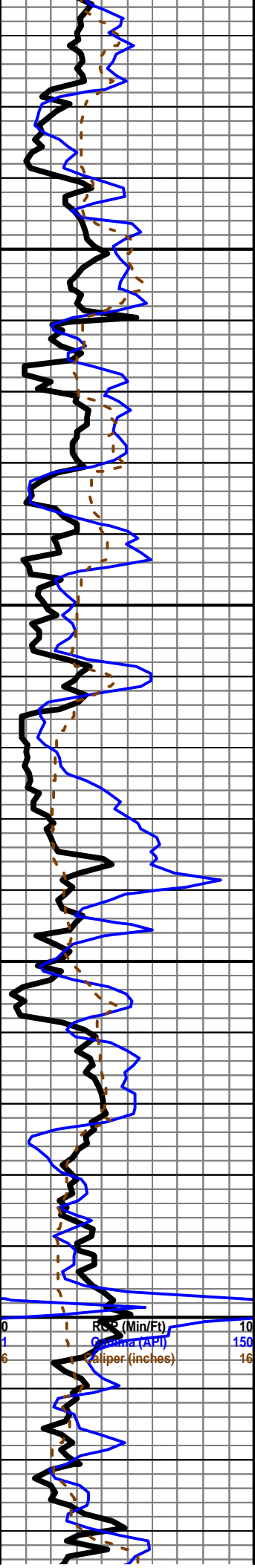
30 and 60 min cfs, some white-gray mottled dolomite, few vugs, small specimens, no show, good fluorescence

**Towanda 2794 +25**



Mud-Co Mud Ck  
@ 2768'  
0830 hrs 11/17/10  
Vis 31 Wt 9.4  
PV 2 YP 3  
WL n/c  
Cake 0/32  
PH 7.0  
CHL 44000 ppm  
Cal hvy  
Sol 5.3  
LCM: 0 #/bbl  
DMC: 22502 7r





poor samples as above - Note samples full of metal shavings beginning at 3040 sample

poor samples

**Cottonwood**

3120 sample, white limestones, very fine, trace fine oomoldic, still abundant gray and red shale with anhydrite

as above, still fine samples, full of metal shavings

**Neva 3172 -353**

samples have larger specimens in 3180 and 3200 samples, metal gone, still mostly red and gray shale and anhydrite, some white fossiliferous limestone, soft, chalky

**Red Eagle**

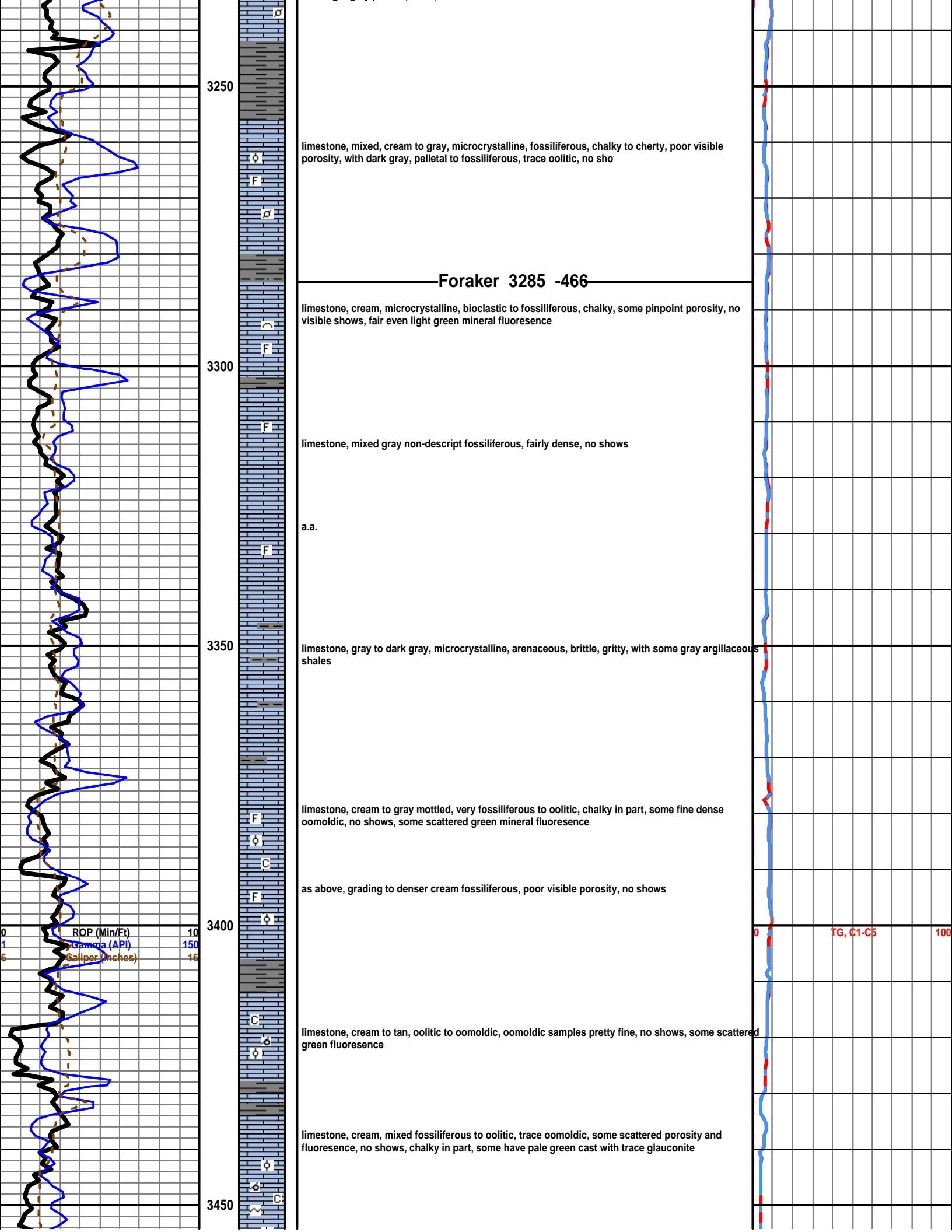
poor samples

limestone, cream, microcrystalline, grainy, slightly fossiliferous, some pinpoint porosity, no shows, trace light gray pelletal, chalk

Mud-Co Mud Ck  
 @ 3059'  
 0850 hrs 11/18/10  
 Vis 33 Wt 9.6  
 PV 2 YP 3  
 WL n/c  
 Cake 0/32  
 PH 7.0  
 CHL 34500 ppm  
 Cal hvy  
 Sol 7.2  
 LCM: 0 #/bbl  
 DMC: \$1921.60  
 CMC: \$7167.10

TG, C1-C5

Begin displacement of mud system @ 3221'



3250

limestone, mixed, cream to gray, microcrystalline, fossiliferous, chalky to cherty, poor visible porosity, with dark gray, pelletal to fossiliferous, trace oolitic, no sho

**Foraker 3285 -466**

3300

limestone, cream, microcrystalline, bioclastic to fossiliferous, chalky, some pinpoint porosity, no visible shows, fair even light green mineral fluorescence

limestone, mixed gray non-descript fossiliferous, fairly dense, no shows

a.a.

3350

limestone, gray to dark gray, microcrystalline, arenaceous, brittle, gritty, with some gray argillaceous shales

limestone, cream to gray mottled, very fossiliferous to oolitic, chalky in part, some fine dense oomoldic, no shows, some scattered green mineral fluorescence

as above, grading to denser cream fossiliferous, poor visible porosity, no shows

3400

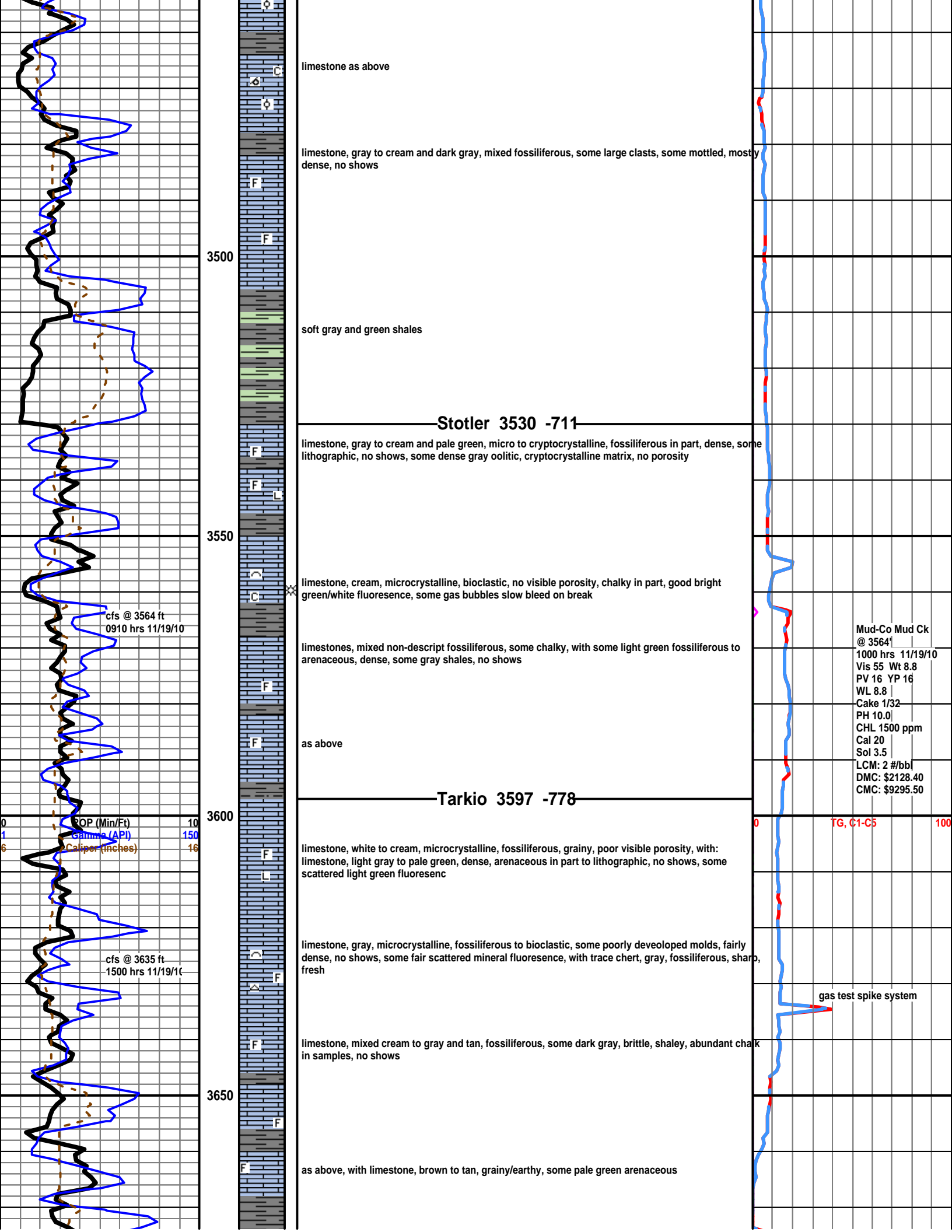
limestone, cream to tan, oolitic to oomoldic, oomoldic samples pretty fine, no shows, some scattered green fluorescence

3450

limestone, cream, mixed fossiliferous to oolitic, trace oomoldic, some scattered porosity and fluorescence, no shows, chalky in part, some have pale green cast with trace glauconite

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

TG, C1-C5



limestone as above

limestone, gray to cream and dark gray, mixed fossiliferous, some large clasts, some mottled, mostly dense, no shows

3500

soft gray and green shales

**Stotler 3530 -711**

limestone, gray to cream and pale green, micro to cryptocrystalline, fossiliferous in part, dense, some lithographic, no shows, some dense gray oolitic, cryptocrystalline matrix, no porosity

3550

limestone, cream, microcrystalline, bioclastic, no visible porosity, chalky in part, good bright green/white fluorescence, some gas bubbles slow bleed on break

cfs @ 3564 ft  
0910 hrs 11/19/10

limestones, mixed non-descript fossiliferous, some chalky, with some light green fossiliferous to arenaceous, dense, some gray shales, no shows

Mud-Co Mud Ck  
@ 3564'  
1000 hrs 11/19/10  
Vis 55 Wt 8.8  
PV 16 YP 16  
WL 8.8  
Cake 1/32  
PH 10.0  
CHL 1500 ppm  
Cal 20  
Sol 3.5  
LCM: 2 #/bb  
DMC: \$2128.40  
CMC: \$9295.50

as above

**Tarkio 3597 -778**

3600

limestone, white to cream, microcrystalline, fossiliferous, grainy, poor visible porosity, with:  
limestone, light gray to pale green, dense, arenaceous in part to lithographic, no shows, some scattered light green fluorescenc

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

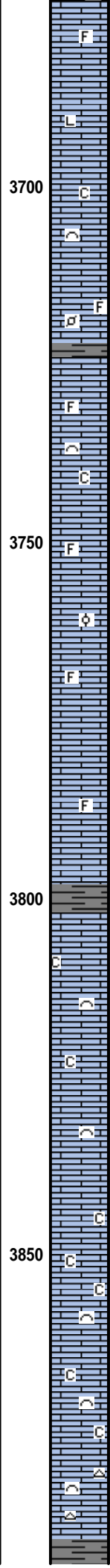
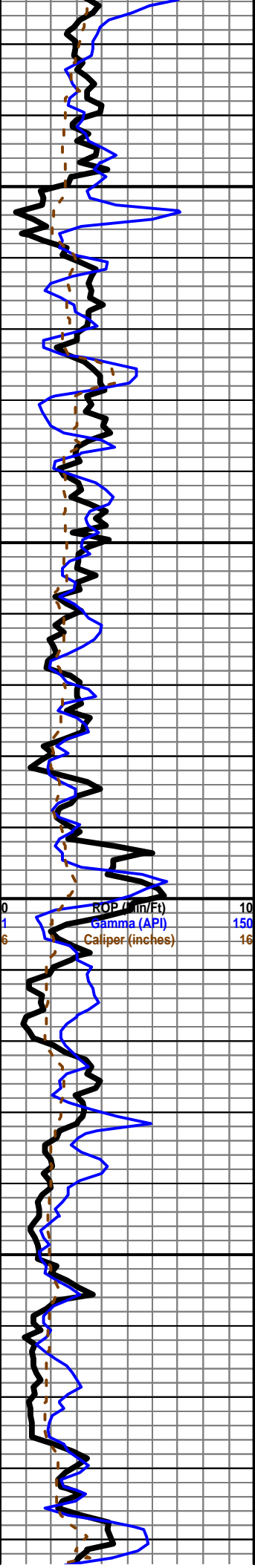
limestone, gray, microcrystalline, fossiliferous to bioclastic, some poorly developed molds, fairly dense, no shows, some fair scattered mineral fluorescence, with trace chert, gray, fossiliferous, sharp, fresh

gas test spike system

limestone, mixed cream to gray and tan, fossiliferous, some dark gray, brittle, shaley, abundant chalk in samples, no shows

3650

as above, with limestone, brown to tan, grainy/earthy, some pale green arenaceous



3710 sample, limestone, cream to light gray, cryptocrystalline, fossiliferous to lithographic, chalky, fairly dense, no shows, even faint to light green fluorescence

**Bern**

as above, increasing fossil content, some spongy bioclastic, chalky in part, no shows, even faint to light green fluorescence

limestone, gray to tan mottled, microcrystalline, very fossiliferous/pelletal, poor visible porosity, no shows

limestone, cream to light gray, microcrystalline, fossiliferous to bioclastic, grainy, chalky, some pinpoint porosity, no show

limestones, gray to tan, non-descript mixed fossiliferous/oolitic, poor visible porosity, no shows

as above

3810-3830 samples, flood red and gray shales, almost all shale in samples - caving?

**Topeka 3802 -983**

limestone, white to light gray, few specimens (see above - flood shales), bioclastic, chalky, some sub-sucrosic/earthy, no shows

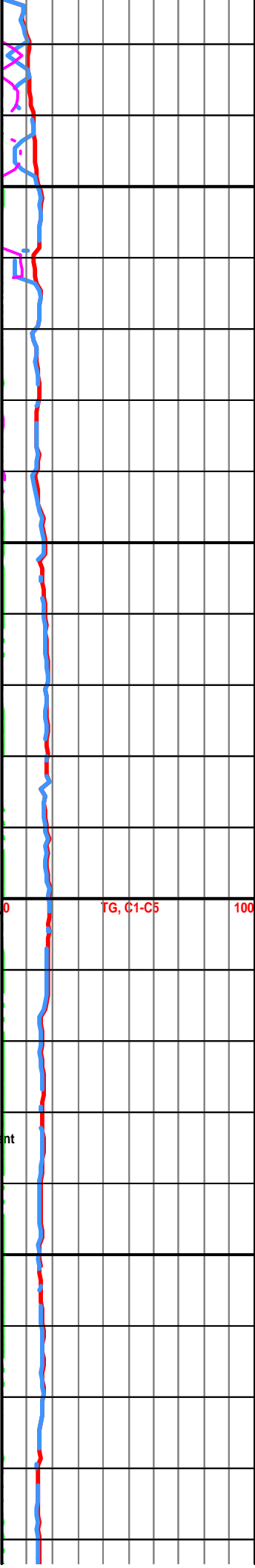
limestone as above

samples improve starting @ 3840 sample

limestone, tan to cream, microcrystalline, bioclastic, grainy, chalky, some pinpoint porosity, abundant chalk in samples, no shows, only trace scattered light green mineral fluorescence

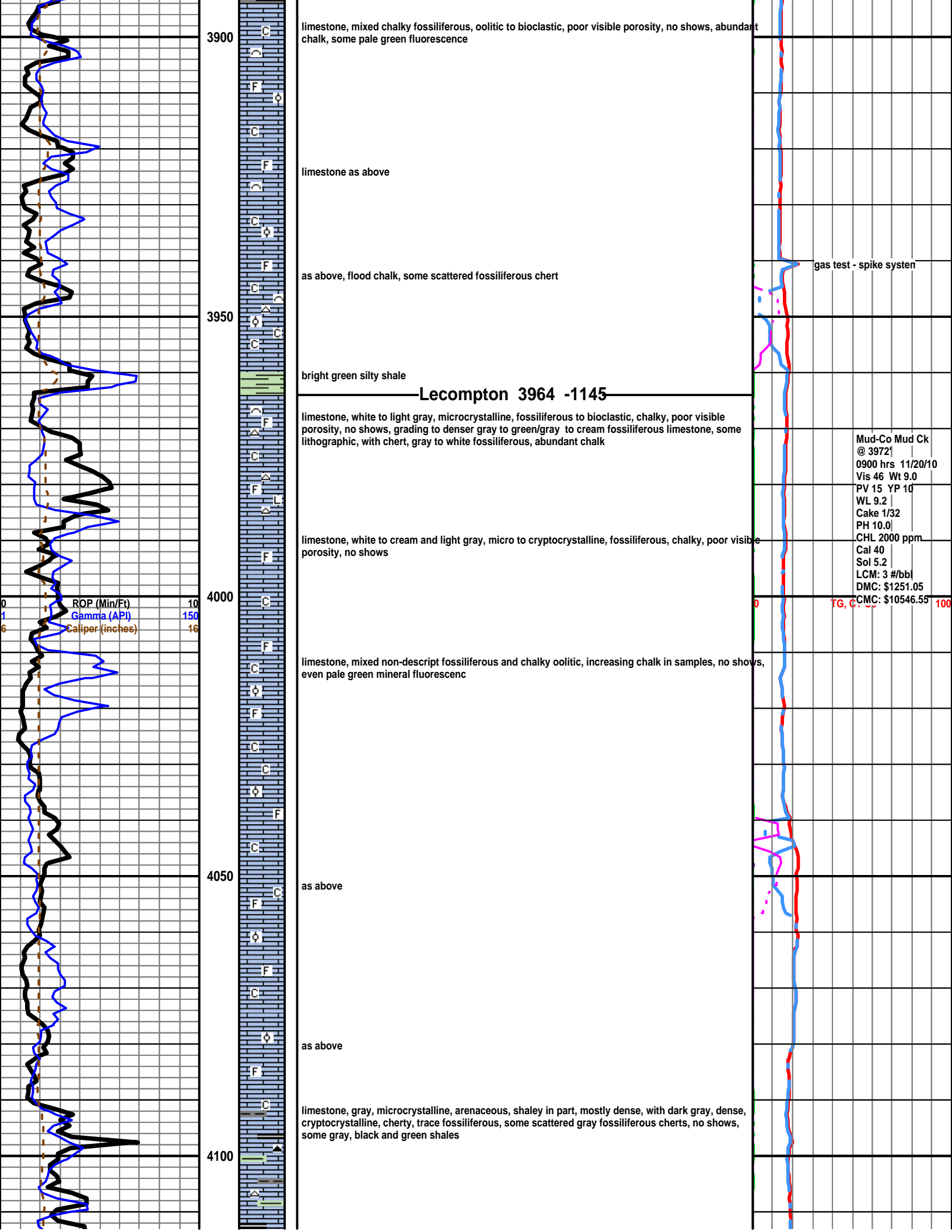
limestones as above, increasing chalk, samples wash very chalky

limestone as above, with; chert, light to dark gray, spiculitic to fossiliferous, some weathered to sub-tripolitic, mostly fresh, no shows, very pale fluorescence



TG, C1-C5 100





3900

limestone, mixed chalky fossiliferous, oolitic to bioclastic, poor visible porosity, no shows, abundant chalk, some pale green fluorescence

3950

limestone as above

as above, flood chalk, some scattered fossiliferous chert

gas test - spike system

bright green silty shale

**Lecompton 3964 -1145**

limestone, white to light gray, microcrystalline, fossiliferous to bioclastic, chalky, poor visible porosity, no shows, grading to denser gray to green/gray to cream fossiliferous limestone, some lithographic, with chert, gray to white fossiliferous, abundant chalk

Mud-Co Mud Ck @ 3972'  
0900 hrs 11/20/10  
Vis 46 Wt 9.0  
PV 15 YP 10  
WL 9.2  
Cake 1/32  
PH 10.0  
CHL 2000 ppm  
Cal 40  
Sol 5.2  
LCM: 3 #/bbl  
DMC: \$1251.05  
CMC: \$10546.55

4000

limestone, white to cream and light gray, micro to cryptocrystalline, fossiliferous, chalky, poor visible porosity, no shows

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

limestone, mixed non-descript fossiliferous and chalky oolitic, increasing chalk in samples, no shows, even pale green mineral fluorescenc

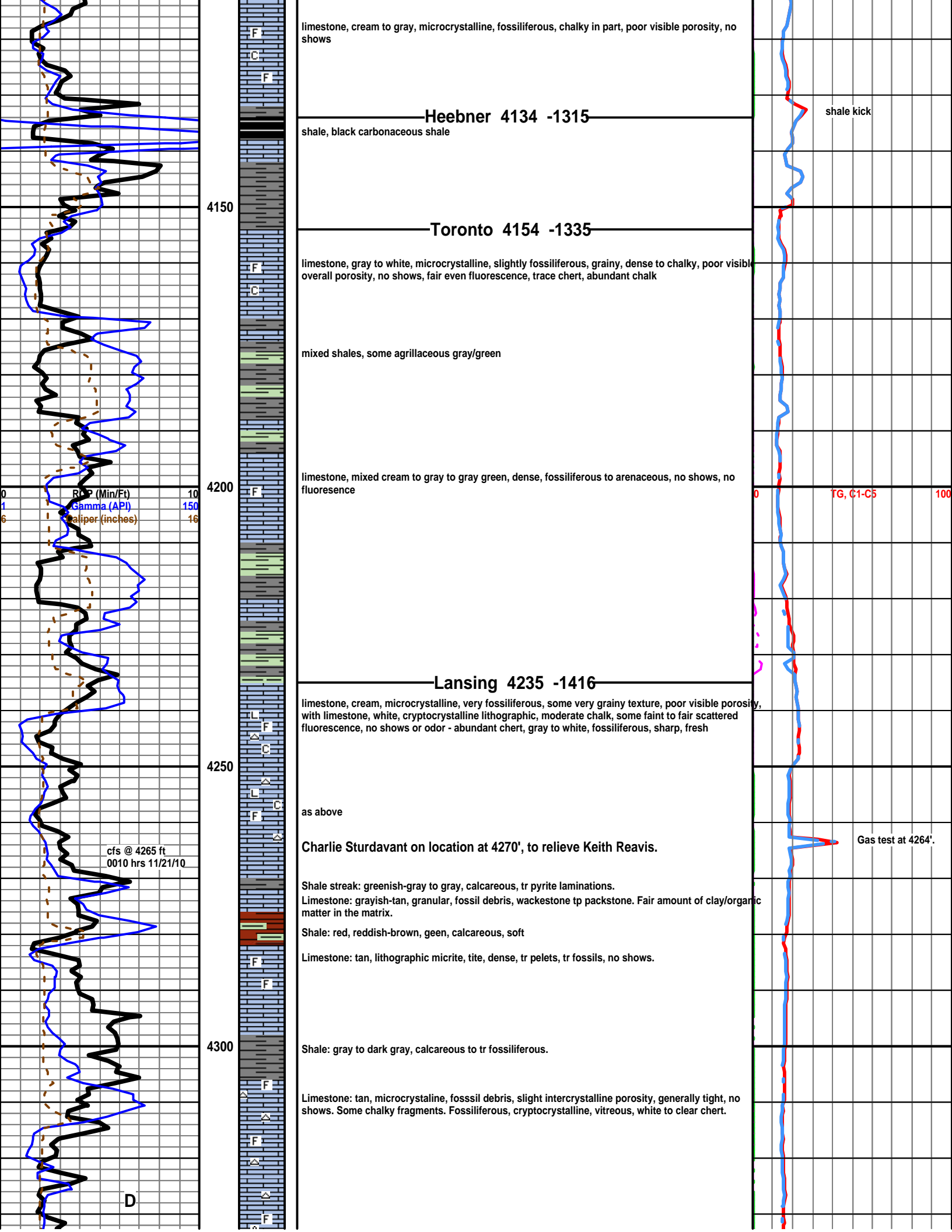
4050

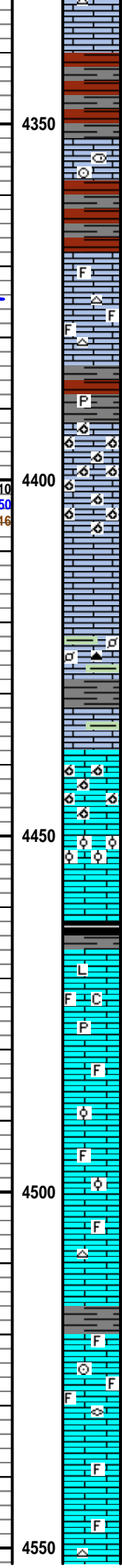
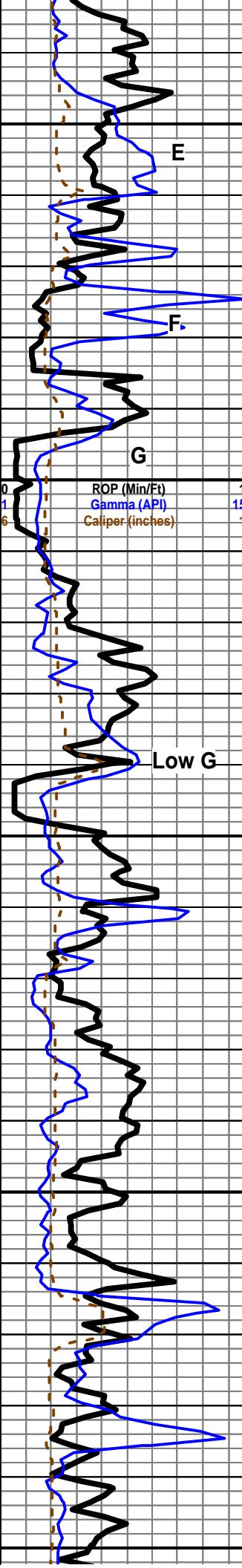
as above

as above

4100

limestone, gray, microcrystalline, arenaceous, shaley in part, mostly dense, with dark gray, dense, cryptocrystalline, cherty, trace fossiliferous, some scattered gray fossiliferous cherts, no shows, some gray, black and green shales





Shale: vari-colored, red, greenish-gray, gray, calcareous, so

4350 Limestone: tan to gray, muddy, fossiliferous, ostracods, crinoids, packstone. Tight, no shows.

Shale: vari-colored as above

F Limestone: cream, fossiliferous, microcrystalline, packstone. White, vitreous, partially fossiliferous chert, with conchoidal fracturing. Tight, no shows.

P Shale: light gray to gray to reddish brown, non-calcareous, tr of pyrite laminations, soft.

4400 Limestone: tan to lt brown, oolitic with oomoldic porosity. Mineral floescence, but no oil shows, no cut, no odor, no gas bubbles. Slight gas kic

Limestone: cream to tan, well-cemented oolitic boundstone, bromming less oolitic with depth. More cream-colored, microcrystalline, fossiliferous, packstone with depth. No visible porosity, no shows. Tr stylolites in the tight rock

Limestone: brown to tan, peletal wackestone, shaley laminations, fossiliferous, tight, no porosity, no shows. Trace of dark brown to black, vitreous chert.

Low G Limestone: cream to lt tan, fossil debris includes bryozoans, finely crystalline to microcrystalline, Followed by tan, oolitic boundstone, with oomoldic porosity and no interoolitic porosity. No aroma, oil shows. Slight gas kick of 3-4 units.

4450 Limestone: tan, oolitic. Oomoldic porosity to tightly-cemented non-porous. No shows. Becomes tighter with depth, becoming micritic

Shale: dark gray, dark brown, thinly laminated with greenish-gray shale, non-calcareous.

L Limestone, cream, mixed micritic and fossiliferous, clean wackestone. Sparry calcite (probably fossil fragments) attached to micrite. Trace of pyrite. Some soft, chalky fragments.

C P Limestone: tan to cream, microcrystalline, fossiliferous (bioclastic), wackestone to cryptocrystalline, micritic, lithographic, weakly fossiliferous mudstone. Tr of cream to clear, translucent, vitreous chert.

F Limestone: cream to lt tan, as above, with trace of tightly-cemented oolites and pellets.

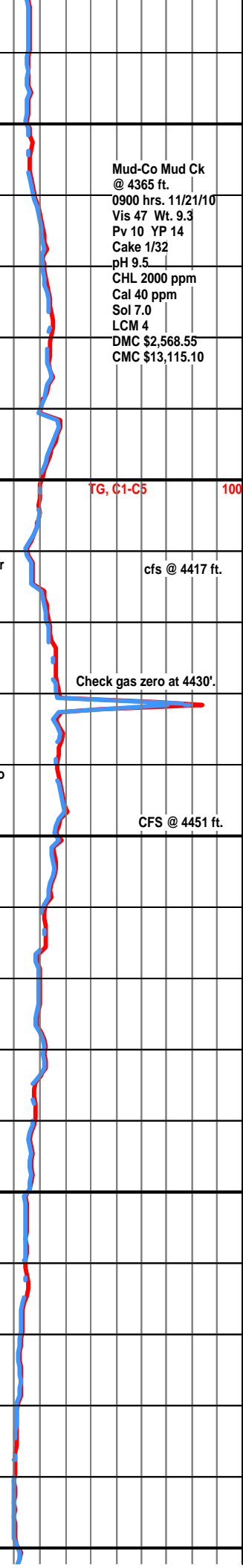
4500 Limestone: as above, but chert is tan to gra

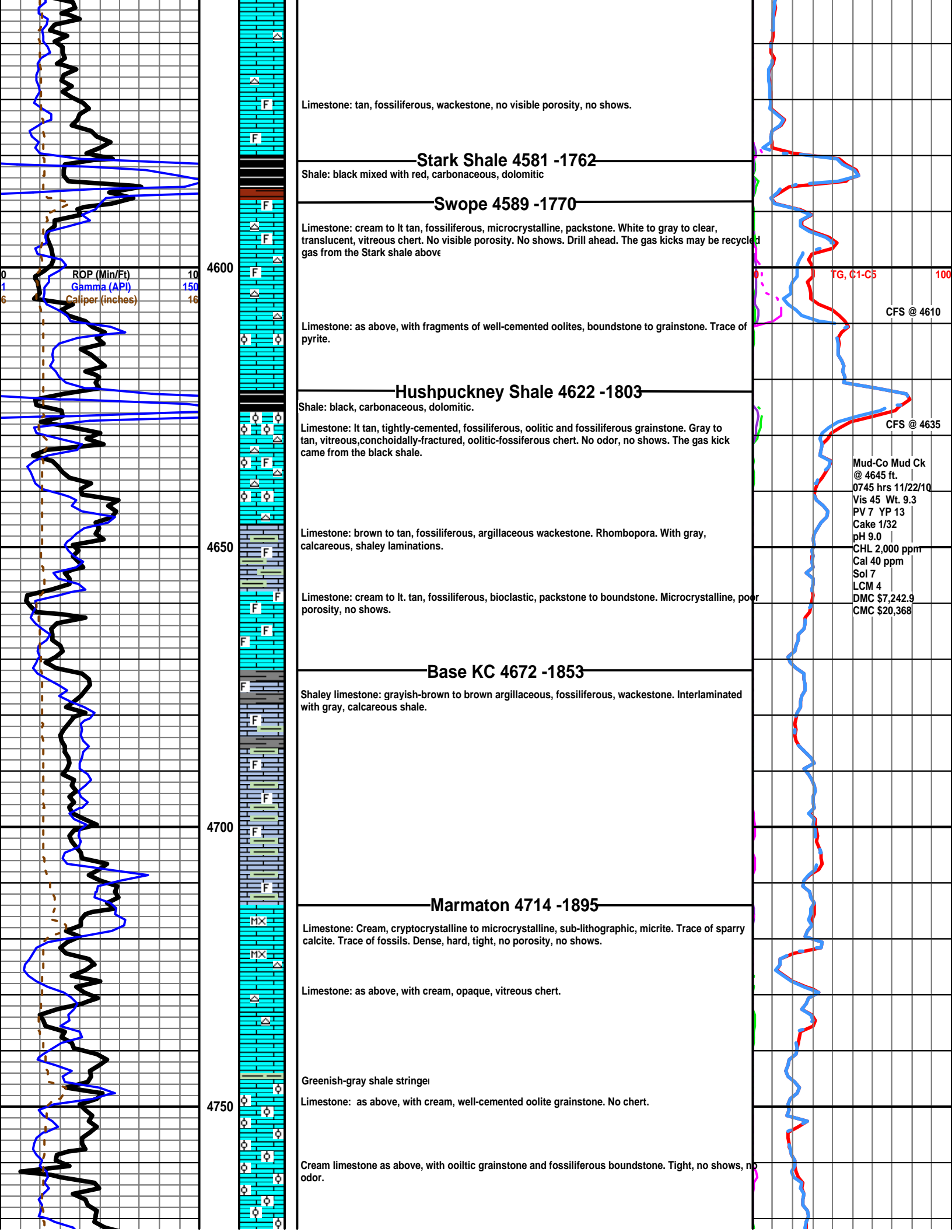
Shale: brown to graish-brown, soft, non-calcareous.

F Limestone: lt tan, fossiliferous (bioclastic), tr oolites, clean packstone to boundstone. Crinoids, fussulinids. Microcrystalline to crystalline, without vivible porosity. Tight. No shows.

F Limestone: cream, micrite, with tr pyrite, with stylolites. Trace of calcareous shale.

4550 Limestone: cream to lt tan, micrite, partially lithographic, cryptocrystalline, tight, no shows, tr sparry calcite, tr fossils. Clear to white to gray, vitreous chert.





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

4600

4650

4700

4750



Limestone: tan, fossiliferous, wackestone, no visible porosity, no shows.

**Stark Shale 4581 -1762**

Shale: black mixed with red, carbonaceous, dolomitic

**Swope 4589 -1770**

Limestone: cream to lt tan, fossiliferous, microcrystalline, packstone. White to gray to clear, translucent, vitreous chert. No visible porosity. No shows. Drill ahead. The gas kicks may be recycled gas from the Stark shale above

Limestone: as above, with fragments of well-cemented oolites, boundstone to grainstone. Trace of pyrite.

**Hushpuckney Shale 4622 -1803**

Shale: black, carbonaceous, dolomitic.

Limestone: lt tan, tightly-cemented, fossiliferous, oolitic and fossiliferous grainstone. Gray to tan, vitreous, conchoidally-fractured, oolitic-fossiliferous chert. No odor, no shows. The gas kick came from the black shale.

Limestone: brown to tan, fossiliferous, argillaceous wackestone. Rhombopora. With gray, calcareous, shaley laminations.

Limestone: cream to lt. tan, fossiliferous, bioclastic, packstone to boundstone. Microcrystalline, poor porosity, no shows.

**Base KC 4672 -1853**

Shaley limestone: grayish-brown to brown argillaceous, fossiliferous, wackestone. Interlaminated with gray, calcareous shale.

**Marmaton 4714 -1895**

Limestone: Cream, cryptocrystalline to microcrystalline, sub-lithographic, micrite. Trace of sparry calcite. Trace of fossils. Dense, hard, tight, no porosity, no shows.

Limestone: as above, with cream, opaque, vitreous chert.

Greenish-gray shale stringer

Limestone: as above, with cream, well-cemented oolite grainstone. No chert.

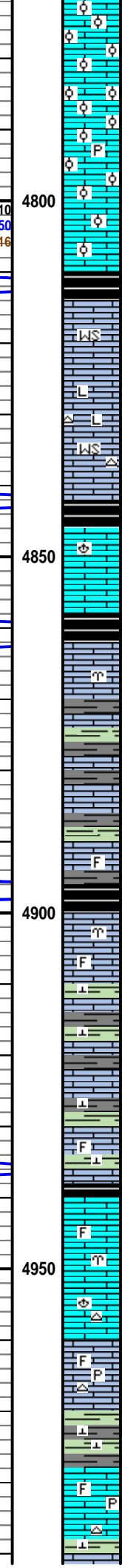
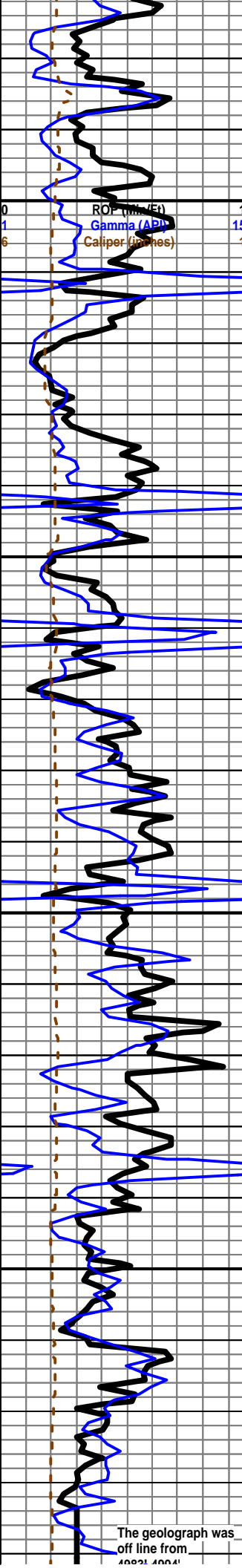
Cream limestone as above, with oolitic grainstone and fossiliferous boundstone. Tight, no shows, no odor.

TG, C1-C5 100

CFS @ 4610

CFS @ 4635

Mud-Co Mud Ck @ 4645 ft.  
0745 hrs 11/22/10  
Vis 45 Wt. 9.3  
PV 7 YP 13  
Cake 1/32  
pH 9.0  
CHL 2,000 ppm  
Cal 40 ppm  
Sol 7  
LCM 4  
DMC \$7,242.9  
CMC \$20,368



Limestone: It tan, oolitic, fossiliferous, grainstone with crinoids, Tight, no porosity, no odor, no oil show.

Limestone: as above, with a trace of pyrite.

Black, carbonaceous shale, dolomitic.

**Pawnee LS 4814 -1995**

Limestone: tan, weakly fossiliferous, tr, oolites, tr, pyrite, wackestone. Tight, no porosity, mineral fluorescence, but no oil shows.

Limestone: cream to tan, lithographic micrite, with stylolites and a few fossils to brown argillaceous fossiliferous wackestone. No shows, tight. Chert fragments, lt gray to tan, fossiliferous, vitreous.

Black, carbonaceous, dolomitic shale.

**Ft. Scott LS 4846 -2027**

Limestone: tan to lt brown, fossiliferous, bioclastic, packstone to boundstone. Brachiopod fragments, fussionulids, tr oolites, microcrystalline, with little porosity.

**Cherokee 4859 -2040**

Black, carbonaceous, dolomitic shale

Limestone: cream to tan, bioclastic to micritic mixed, fenestrate bryozoans, clean, dense, non-porous, no shows.

Interlayered gray to green to brown shales and tan to lt brown, argillaceous, fossiliferous limestone.

Black, carbonaceous, dolomitic shale.

Limestone: cream to tan, bioclastic, brachiopod fragments, microcrystalline, slightly argillaceous in parts, boundstone. Little porosity, no shows.

Mixed shales and limestones. Shales are vari-colored, brown, gray, greenish-gray, and are calcareous. The limestones are variable from brown argillaceous, pellet-bearing wackestone to clean, lt tan, fossiliferous grainstone.

Black, carbonaceous, dolomitic shale.

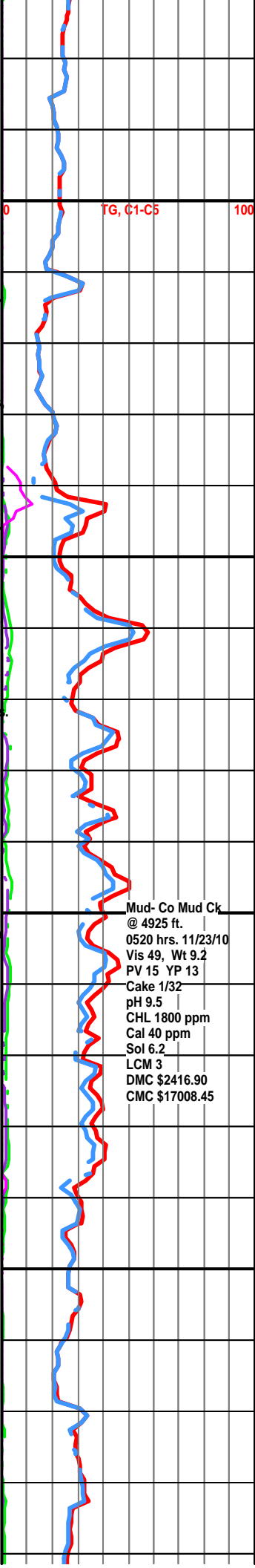
Limestone: cream, finely crystalline, fossiliferous to slightly oolitic, clean, tight grainstone to very dense and tight micrite. No shows. Bryozoans and brachiopoc

Limestone: tan, pelletal packstone. Chert fragments, fossiliferous, white, cream, gray, vitreous, translucent.

Limestone: cream to tan, microcrystalline, fossiliferous, tight, clean packstone. Tr pyrite. Trace of chert, fossiliferous, translucent, vitreous, tan, lt. gray, clear. No shows.

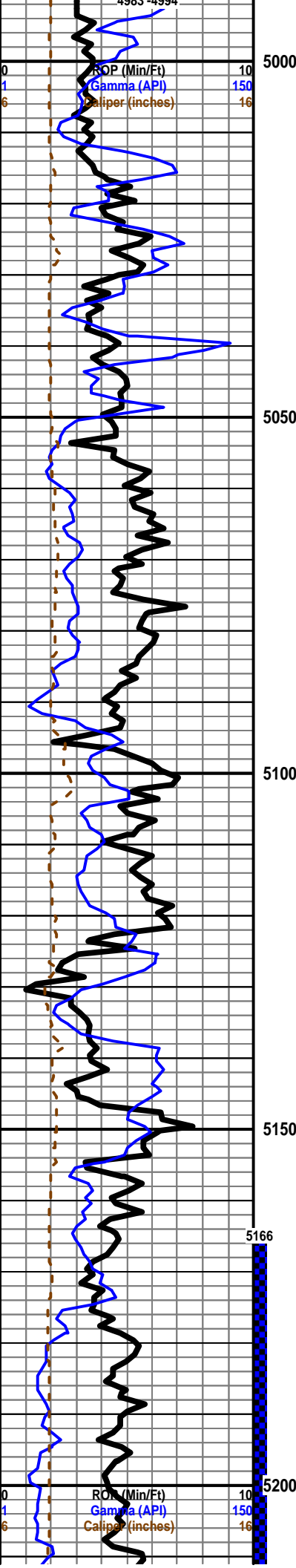
Shale: lt gray, greenish-gray, gray, calcareous.

Limestone: tan, fossiliferous packstone to lt brown to cream micrite. Interlayered with vari-color shales-gray, greenish-gray, bluish-gray, brown, calcareous. Pyrite is present in both the shales and the limestones. Generally tight, microcrystalline, with no shows.



Mud- Co Mud Ck  
 @ 4925 ft.  
 0520 hrs. 11/23/10  
 Vis 49, Wt 9.2  
 PV 15 YP 13  
 Cake 1/32  
 pH 9.5  
 CHL 1800 ppm  
 Cal 40 ppm  
 Sol 6.2  
 LCM 3  
 DMC \$2416.90  
 CMC \$17008.45

The geograph was  
 off line from  
 4821.40 ft



Shale: vari-colored, aqua-colored shale stands out in contrast to the grays, browns, and greenish-grays. Some red shale fragments. Still mixed with limestones as above.

Limestone: tan to lt brown, fossiliferous, microcrystalline packstone to micritite with tr of recrystallized lm (shell fragments), little porosity, no shows. Interbedded with shales as above. Fenestrate bryozoans, brachiopods

Limestone: brown, argillaceous, fossiliferous, packstone to wackestone, microcrystalline, hard, dense, tight, no shows, tr pyrite, tr bryozoans. Trace of brown, opaque, vitreous chert. Some fossiliferous, brown and green shale.

**Morrow 5039 -2220**

As above: mixed argillaceous limestone and shales. Tray washes gray. Trace of red shale.

Mixed shales and argillaceous limestones. Shales are red gray, greenish-gray, and brown. All except for the red are calcareous.

Mostly mixed, vari-colored shales as above.

Limestone: cream to tan to lt gray, finely crystalline, non-porous, oolitic, pelletal, fossiliferous (bryozoans, small intact brachiopods) packstone. Mineral fluorescence, no shows, no odor.

Fenestrate bryozoans:

Shale: an abundance of gray, brown, green, yellow, red, waxy, soft, calcareous with crinoid fragment bryozoans, brachiopods. Tr of light green micritic ls.

Mixed shale and limestones as above.

**Probable Miss Top. 5129 -231t**

Limestone: white to very light greenish-white, granular, finely-crystalline, sandy, tr glauconitic. Up dissolution, a very fine-grained, quartzose sand remains. No gas, no odor, no fluorescence, no cut no show.

5150'-5160 sample was flooded with vari-colored shales. Brown, gray, red, gre

**Miss St. Gen 5155 -2336**

Limestone: white to lt gray, micro-oolitic (0.1mm), with very-finely grained, quartzose sand and tr glauconite. No odor, no gas, no fluor., no shows. Tray is still flooded with vari-colored shales.

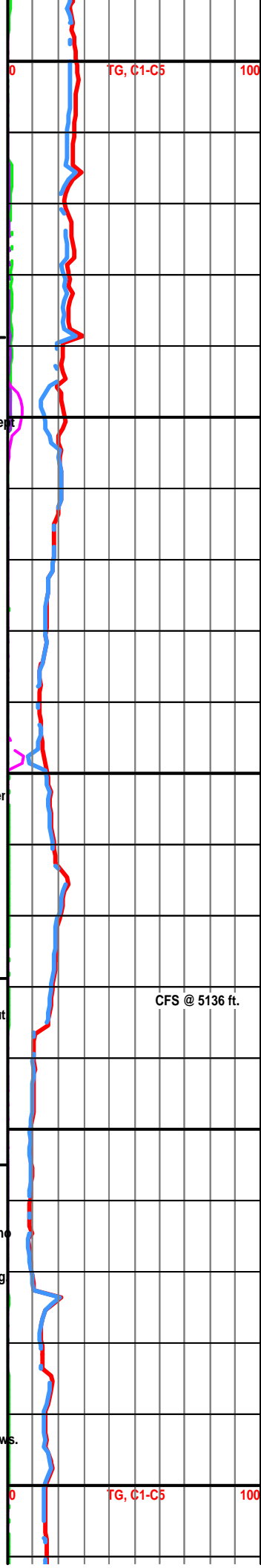
Limestone: Mixed lt reddish-tan to lt gray, silty to sli argillaceous, mineral fluor, but no oil shows, no odor, no cut. Still carrying an abundance of vari-colored shale

Limestone: white to very light green, sandy, finely-crystalline, tr glauconite, with spotty oil staining Oil is heavy, has weak fluorescence, but shows a good streaming cut. The gas kick was twice background.

Limestone as above with spotty oil shows as above.

Limestone: white, sandy, tr fossils, tr oolites, microcrystalline, tr glauconite. The sand fraction is comprised mainly of vf-gr qtz sand, tr orthoclase, and organic matter. No odor, stain or cut. No shows.

DST #2, times: 5- 90-120-180. Weak 1/4 inch initial blow building to 1/2 inch, 2nd open: Weak blow building to the bottom of the bucket in 95 minutes. Rec. 395' Gas in Pipe, 45' Slight oil cut mud (10% oil, 90% mud), IHP 2498# -- IFP'S 50--29# -- ISIP 1404# -- FFP'S 54-29# -- FSIP 983# -- FHP 2479#



BHT 120 deg

Limestone: white, arenaceous, finely crystalline, trace of oolites to 0.5mm in size, tr of glauconite, trace of broken fossil fragments. The oolites are larger here. No shows. Fragments vary in hardness from very dense and hard to relatively friable.

Limestone: as above. The oavrrall grain size is coarsening downward. No shows. No odor.

Limestone: white, arenaceous, more oolitic and fossiliferous than above. A few fragments with oolites up to 1.0mm in size and with well-rounded qtz and kspar sand grains up to 1.0mm. No odor, no staining, no shows.

Limestone: as above. No odor, mineral florescence, but no oil staining and no cut.

Geologist Keith Reavis relieve Charlie Sturdavant 1200 hrs 11/24/

30 min sample, limestone, white to cream oolitic, mature to flattened, very chalky, some glauconitic some pyritic, abundant oolites, poor visible porosity, found 1 specimen with some clingy brown oil droplets, friable, oil between oolites on break, fair odor, no fluorescence - 60 min a.a. no show in roc few droplets free oil in tray

limestone, light gray to cream, some white, flattened to mature oolitic, chalky, some scattered oolitic with interoolite porosity and black to brown staining, friable, some secondary calcite, trace free oil and bleeding gas, fleeting odor in 5305 sample, fair fluorescence, good cut fluorescence

30 min sample, slight increase in oolitic show rocks as above, trace pyritic, fleeting odor, fair odor heating under lamp, flood light gray sandy limestone, no shows

60 min sample, a.a, trace glauconite in sandy facies, fleeting odor

limestone, light gray, micro to cryptocrystalline, sandy, chalky, slightly glauconitic, no visible porosity or shows, no fluorescence, flood chalk in samples, wash white, appx 30%

DST #3: times: 5-90-75-150. Strong initial blow reaching BOB in 1 minute. Stong blow on final flow period. Recovered 3670' GIP, 865' Gassy clean (100% oil), 125' gassy, VSI.MCO (97% Oil, 3% Mud), 65' Gassy, SI.MCO (3% Gas, 84% Oil, 13% Mud). IHP 2506# -- IFP'S 96--54# -- ISIP 1496# -- FFP'S 79-255# -- FSIP 1442# -- FHP 2472#.BHT 124 deg

as above, with influx dolomite to dolomitic limestone, light brown, fossiliferous to oolitic, dense, cherty, no visible porosity or shows, no fluorescence, chalk as above

limestone, tan to gray, micro to cryptocrystalline, chalky to dense oolitic, mostly sandy, poor visible porosity, trace pyritic, with: sandy limestone as above, no visible porosity or shows, no fluorescence, decreasing chalk

oolitic facies as above, sandy facies falls out, some brown cryptocrystalline limestone, lithographic dens

limestone, cream to tan and light gray, microcrystalline, oolitic to fossiliferous, chalky, poor visible porosity, no shows, no fluorescence

as above, some gray frosted fossiliferous cherts

Rotary TD @ 5405 ft 2200 hrs 11/26/10  
Log Tech TD @ 5406  
Complete Logging Operations @ 1015 hrs 11/27/10

CFS @ 5215 ft

Mud-Co Mud Ck @ 5218'  
0700 hrs 11/24/10  
Vis 54 Wt. 9.3  
PV 15 YP 16  
Cake 1/32  
pH 9.5  
CHL 1300 ppm  
Cal 20 ppm  
Sol 7.1  
LCM 3  
DMC \$1,280.15  
CMC \$18,288.60

CFS @ 5256 ft

Mud-Co Mud Ck @ 5275'  
0715 hrs 11/25/10  
Vis 44 Wt. 9.2  
PV 14 YP 14  
WL 7.2  
Cake 1/32  
pH 9.5  
CHL 1200 ppm  
Cal 20 ppm  
Sol 6.4  
LCM 2#  
DMC \$1,349.20  
CMC \$19637.80

Mud-Co Mud Ck @ 5305'  
1045 hrs 11/26/10  
Vis 56 Wt. 9.1  
PV 20 YP 20  
WL 7.6  
Cake 1/32  
pH 8.5  
CHL 4100 ppm  
Cal 60 ppm  
Sol 5.5  
LCM 3#  
DMC \$980.10  
CMC \$20617.90

TC, C1-C5 100

DST # 2

5250

5275

5278

DST # 3

5300

5305

5350

5400

cfs @ 5275 ft.  
1430 hrs 11/24/10  
TOH for DST #2

Pipe Strap  
1.52 ft long  
to board

cfs @ 5305 ft  
1540 hrs 11/25/10  
TOH for DST #3

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