

***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

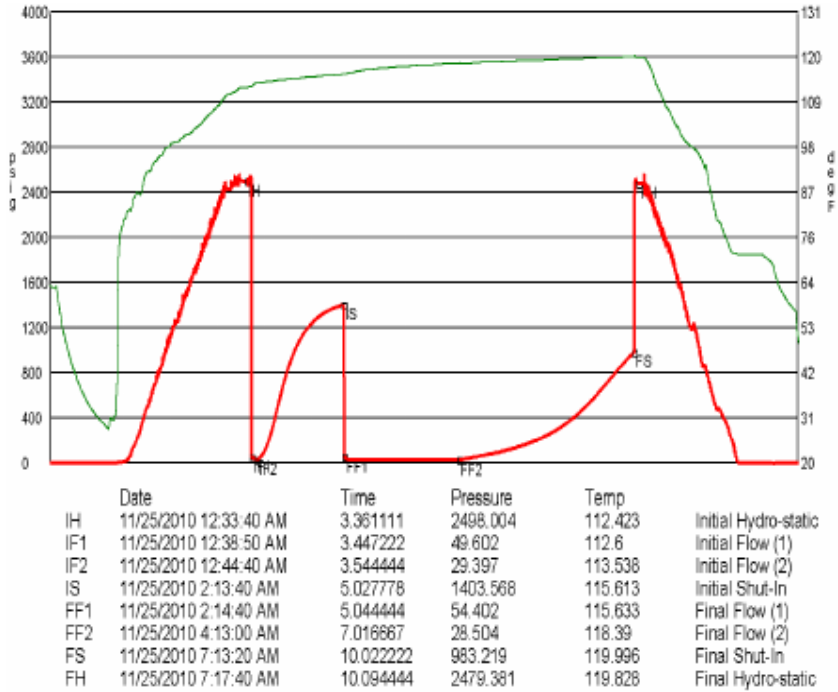
Company	<b>Falcon Exploration, Inc.</b>	Lease Name	<b>Nuss</b>
Address	<b>125 N. Market, Ste. 1252</b>	Lease #	<b>1-4</b>
CSZ	<b>Wichita, KS 67202</b>	Legal Desc	<b>See Comments</b>
Attn.	<b>Keith Reavis</b>	Section	<b>4</b>
		Township	<b>28S</b>
		County	<b>Gray</b>
		Drilling Cort	<b>Val Energy, Inc. 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**

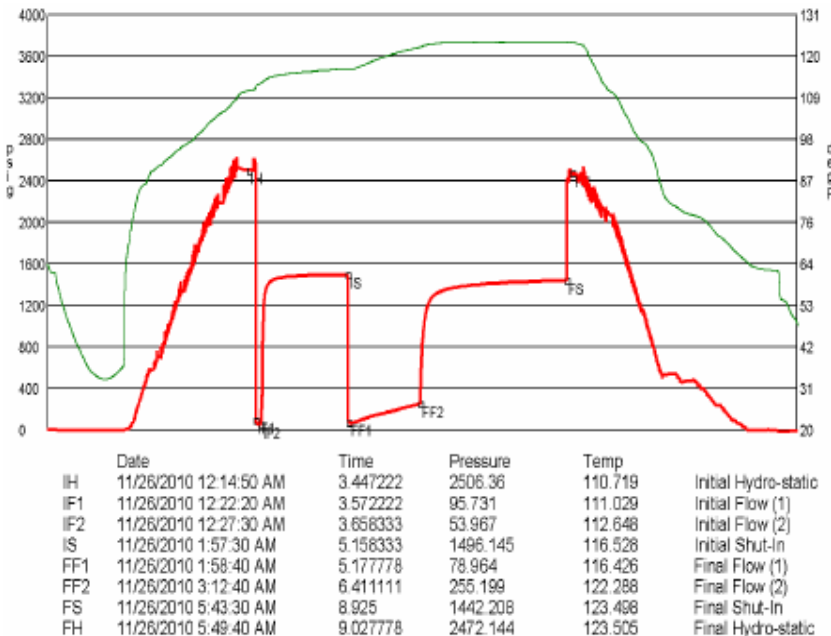
Comments **Legal Description: 330' FNL & 2070' FWL  
 Diamond dld DST #1**

**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

	Slt
--	-----

	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

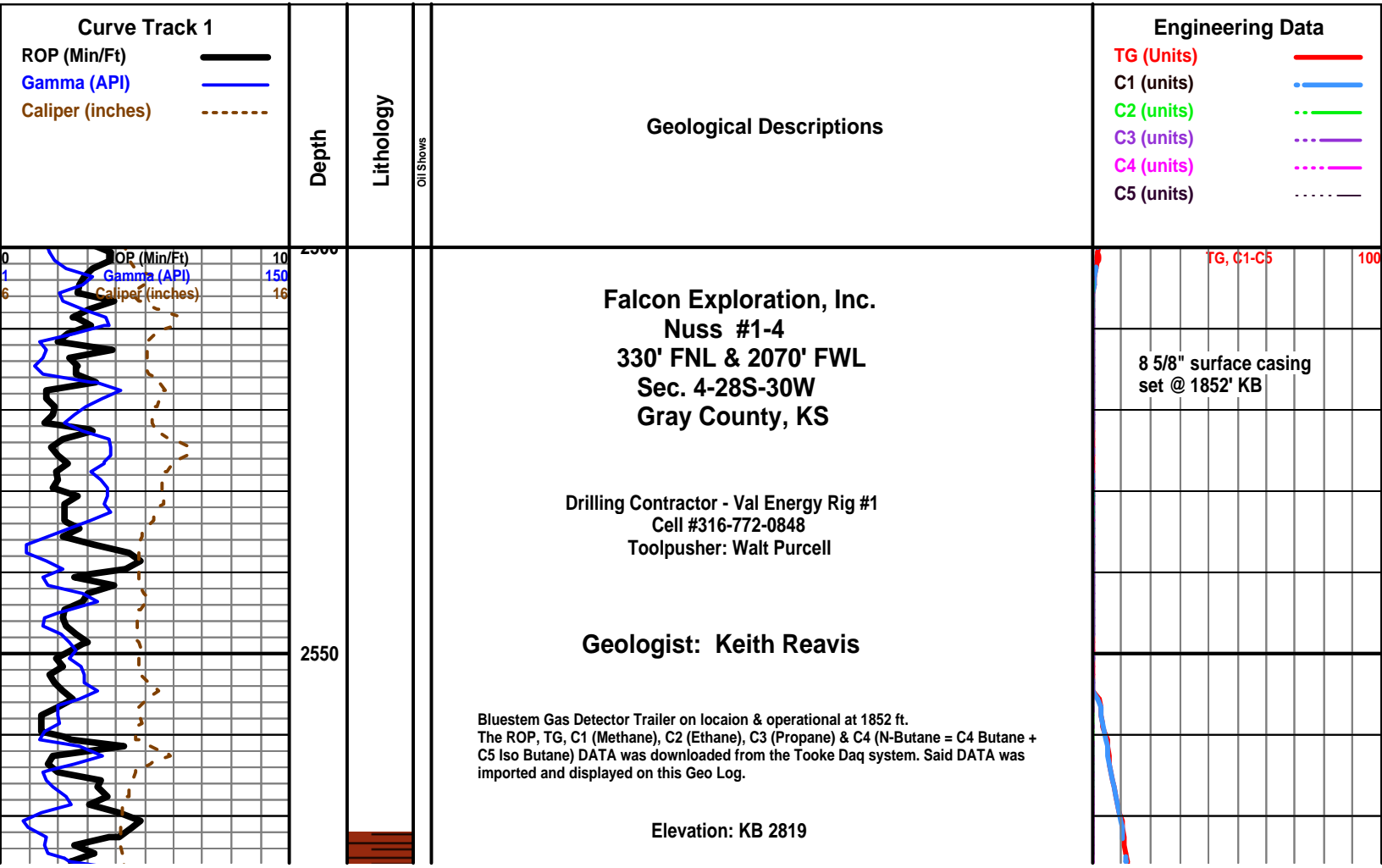
### INTERVAL

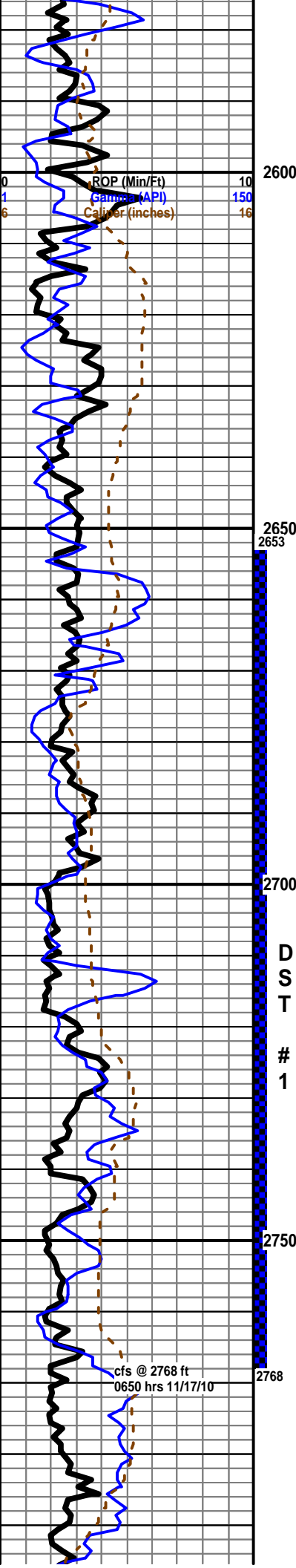
	Dst
	Core
	Dst
	Straddle test t

### 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

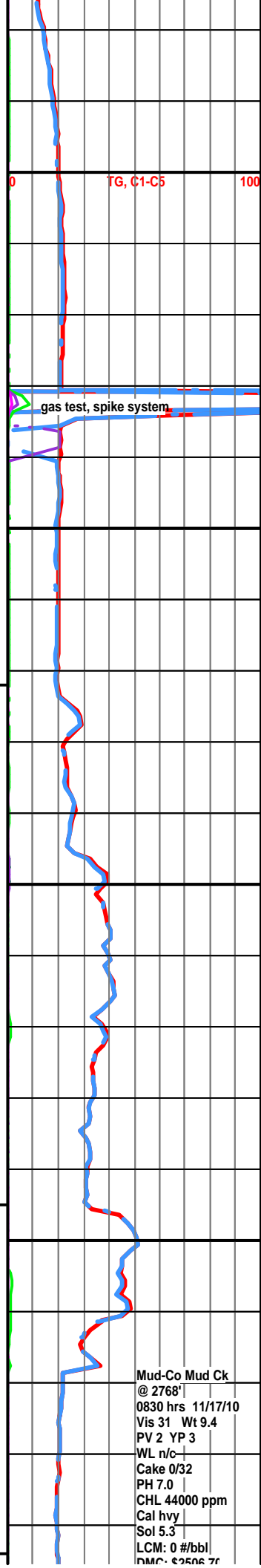
as above, some fair fluorescence

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

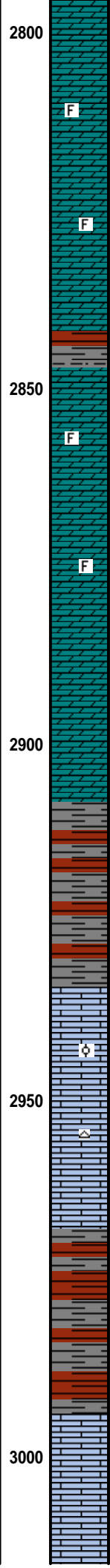
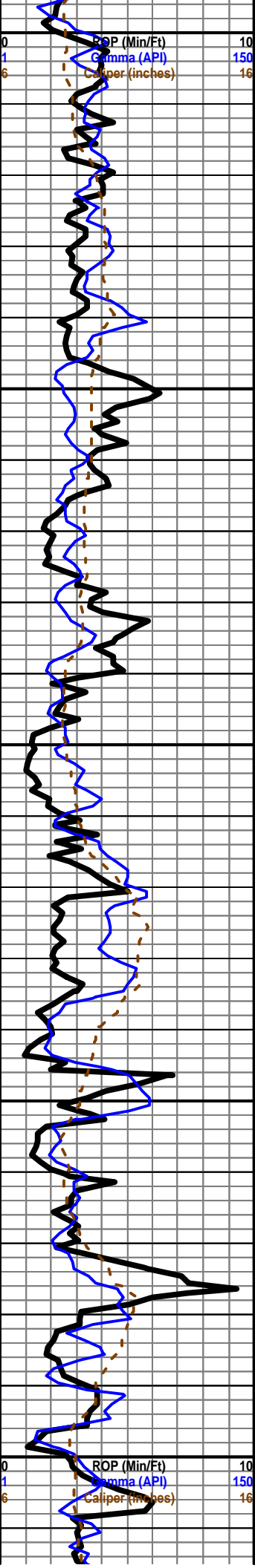
**Winfield 2745 +74**

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



very poor samples, very fine - dolomite, gray, mottled, fossiliferous, no visible shows mostly red and gray shales and anhydrite

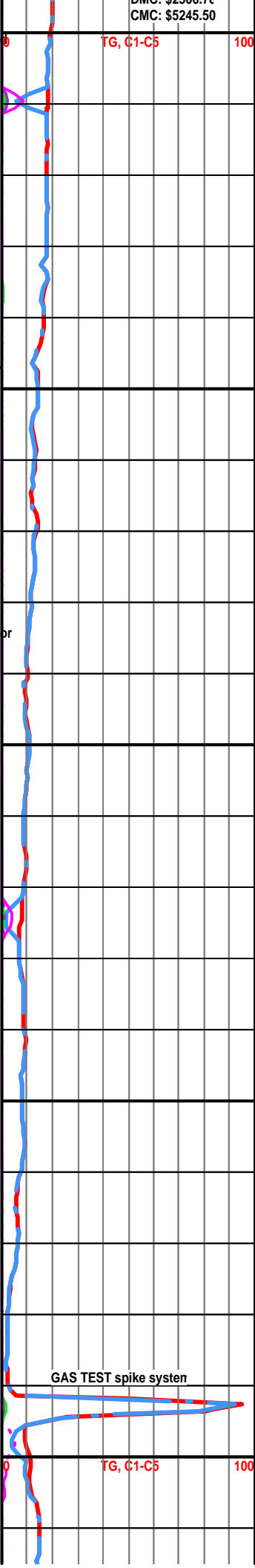
Fort Riley 2847 -28

shale and anyhdrite as above, very poor samples, small cuttings - dolomite, gray, mottled, fossiliferous, no noted shows

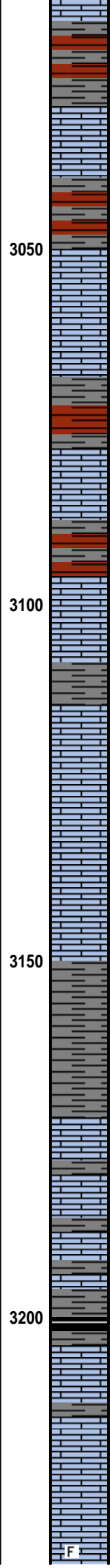
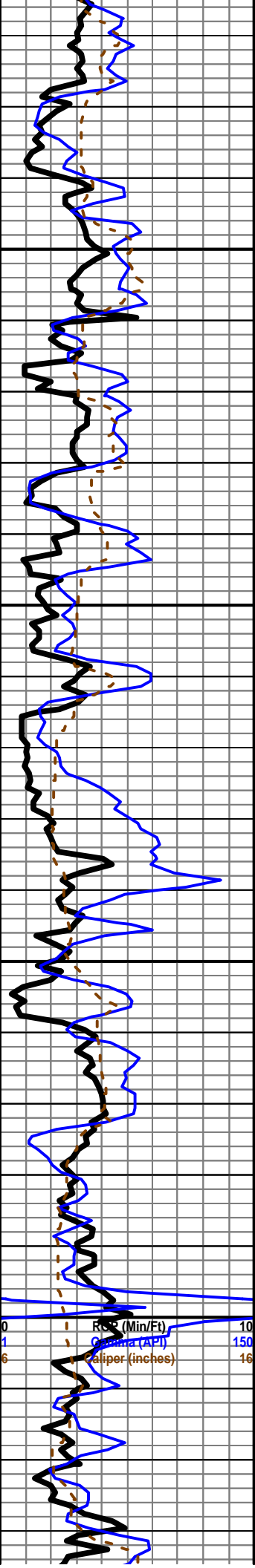
as above, some dark gray arenaceous dolomite and tan sub-sucrosic dolomite, no shows noted, poor samples

poor samples as above, some scattered small pieces white to cream limestones, trace oolitic, few shards white oolitic chert

very poor samples, almost dust, mostly red shale and anyhdrite, some with limestone,







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

3050

poor samples

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

**Cottonwood**

3100

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

3150

**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

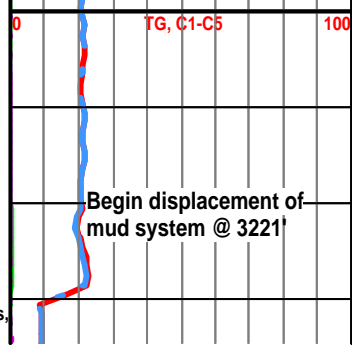
3200

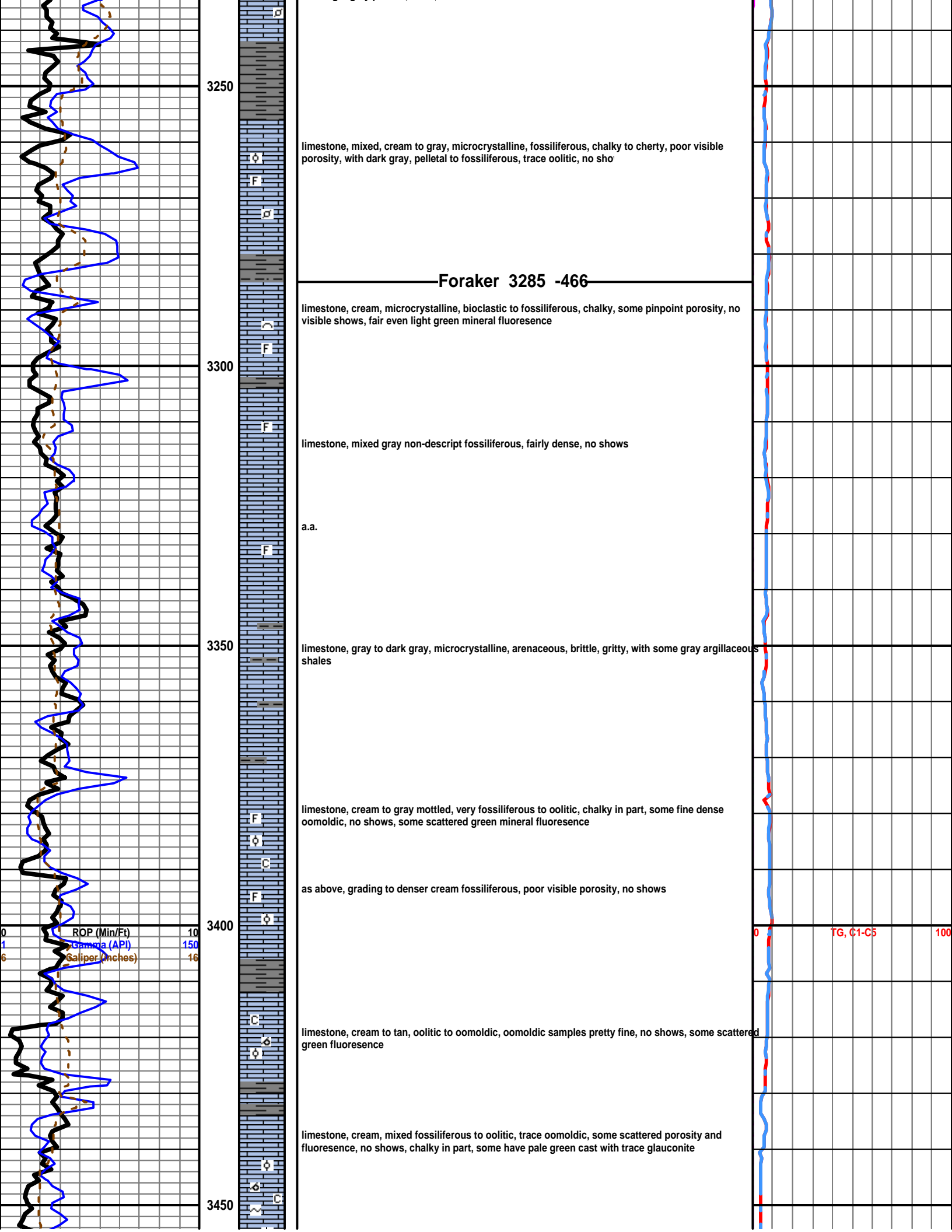
**Red Eagle**

poor samples

Begin displacement of mud system @ 3221'

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





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

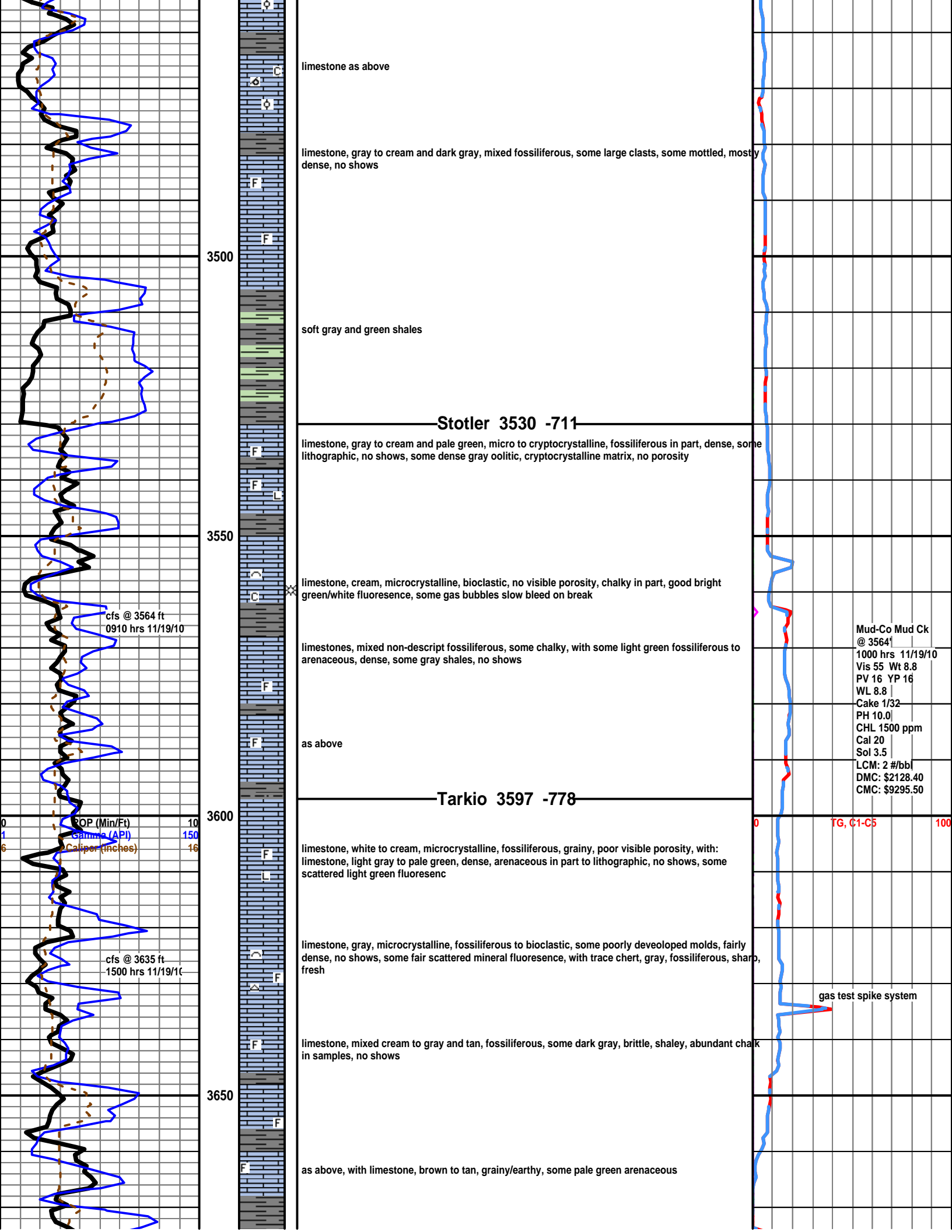
limestone, cream to tan, oolitic to oomoldic, oomoldic samples pretty fine, no shows, some scattered green fluorescence

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

0 TG, C1-C5 100



3500

3550

3600

3650

limestone as above

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

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

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

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

as above

**Tarkio 3597 -778**

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

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

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

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

cfs @ 3564 ft  
0910 hrs 11/19/10

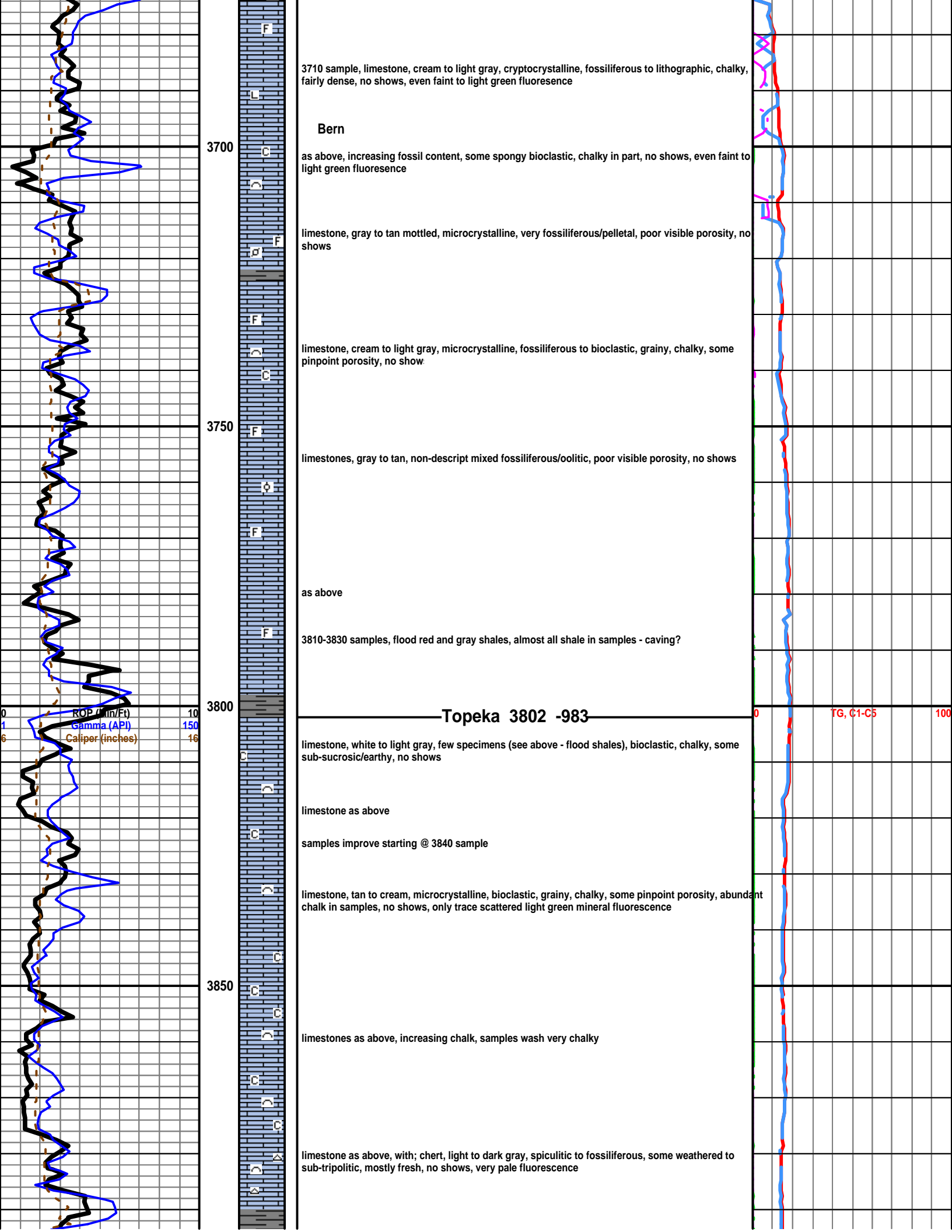
ROP (Min/Ft) 10  
Gamma (API) 150  
Caliper (inches) 16

cfs @ 3635 ft  
1500 hrs 11/19/10

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

gas test spike system

TG, C1-C5 100



3700

3750

3800

3850

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

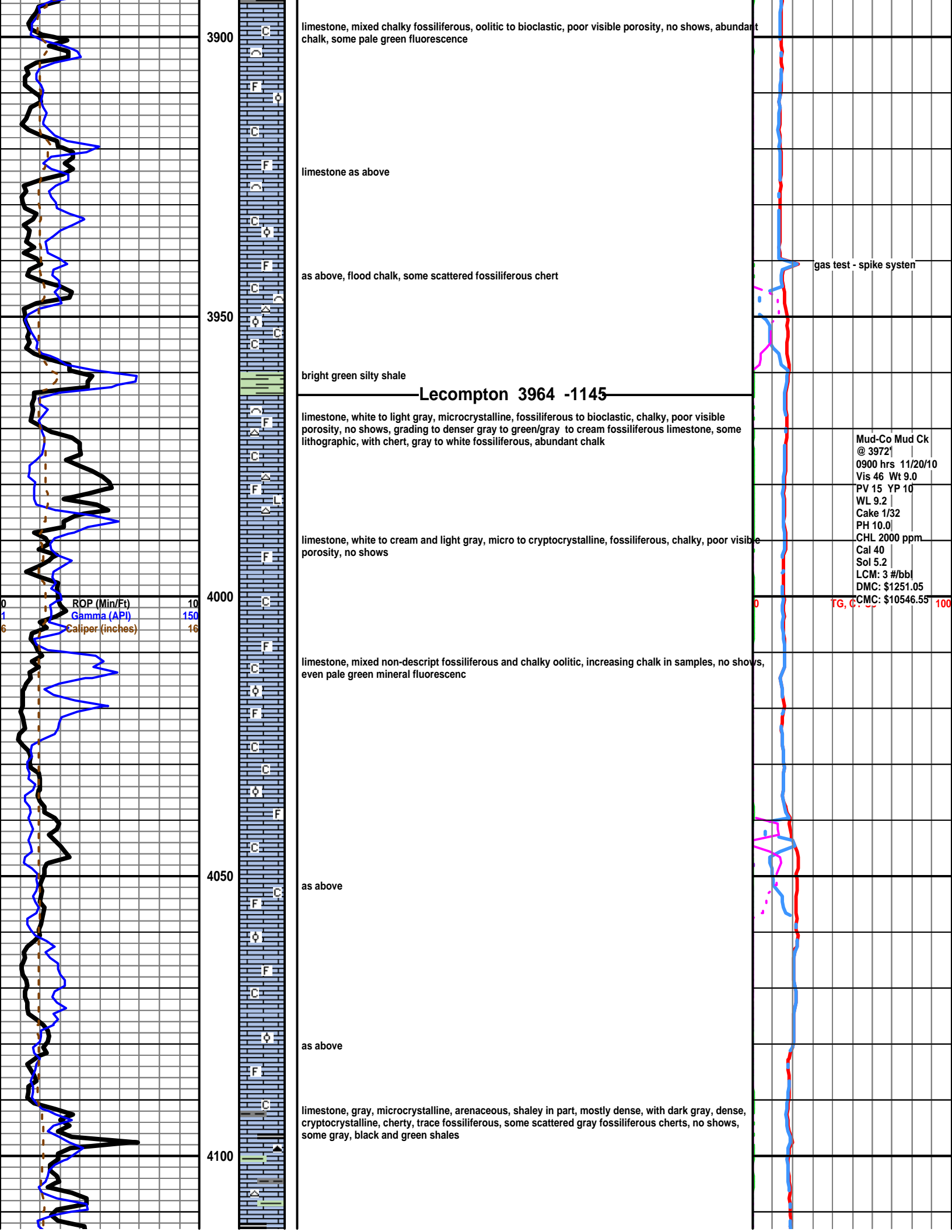
limestone, tan to cream, microcrystalline, bioclastic, grainy, chalky, some pinpoint porosity, abundant chalk in samples, no shows, only trace scattered light green mineral fluorescence

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

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

TG, C1-C5 0 100



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

3950

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

4050

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

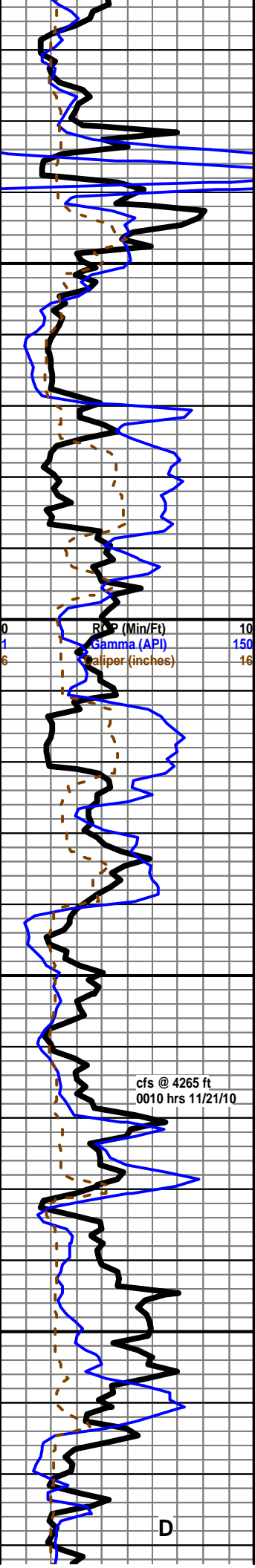
as above

4050

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



4150

4200

4250

4300



limestone, cream to gray, microcrystalline, fossiliferous, chalky in part, poor visible porosity, no shows

**Heebner 4134 -1315**

shale, black carbonaceous shale

shale kick

**Toronto 4154 -1335**

limestone, gray to white, microcrystalline, slightly fossiliferous, grainy, dense to chalky, poor visible overall porosity, no shows, fair even fluorescence, trace chert, abundant chalk

mixed shales, some agrillaceous gray/green

limestone, mixed cream to gray to gray green, dense, fossiliferous to arenaceous, no shows, no fluorescence

TG, C1-C5

**Lansing 4235 -1416**

limestone, cream, microcrystalline, very fossiliferous, some very grainy texture, poor visible porosity, with limestone, white, cryptocrystalline lithographic, moderate chalk, some faint to fair scattered fluorescence, no shows or odor - abundant chert, gray to white, fossiliferous, sharp, fresh

as above

**Charlie Sturdavant on location at 4270', to relieve Keith Reavis.**

Gas test at 4264'.

Shale streak: greenish-gray to gray, calcareous, tr pyrite laminations.

Limestone: grayish-tan, granular, fossil debris, wackestone tp packstone. Fair amount of clay/organic matter in the matrix.

Shale: red, reddish-brown, geen, calcareous, soft

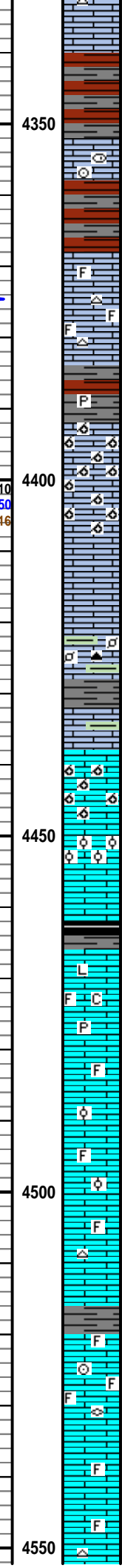
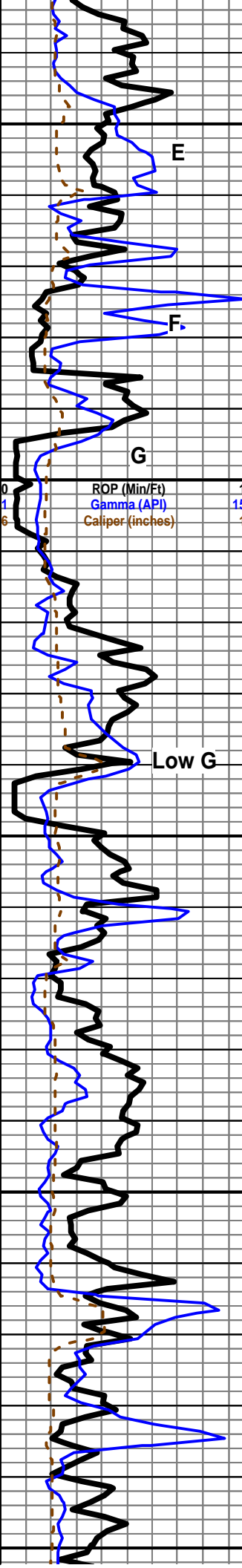
Limestone: tan, lithographic micrite, tite, dense, tr pelets, tr fossils, no shows.

Shale: gray to dark gray, calcareous to tr fossiliferous.

Limestone: tan, microcrystalline, fossil debris, slight intercrystalline porosity, generally tight, no shows. Some chalky fragments. Fossiliferous, cryptocrystalline, vitreous, white to clear chert.

cfs @ 4265 ft  
0010 hrs 11/21/10

D



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.

G 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

4400 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.

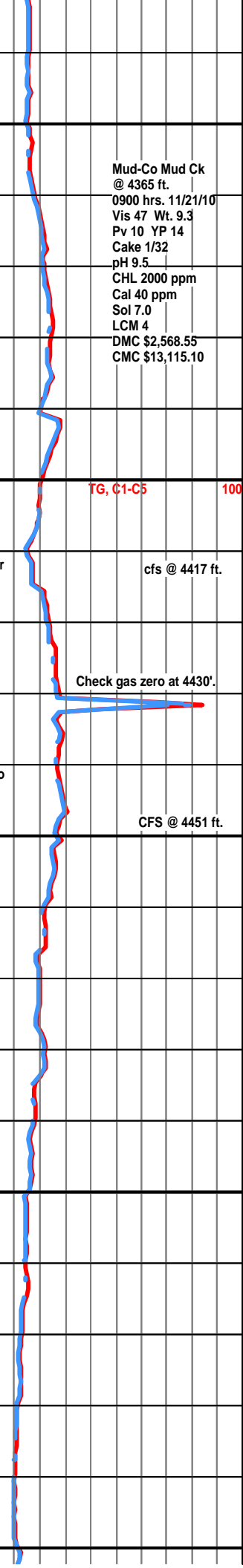
4500 Limestone: as above, but chert is tan to gra:

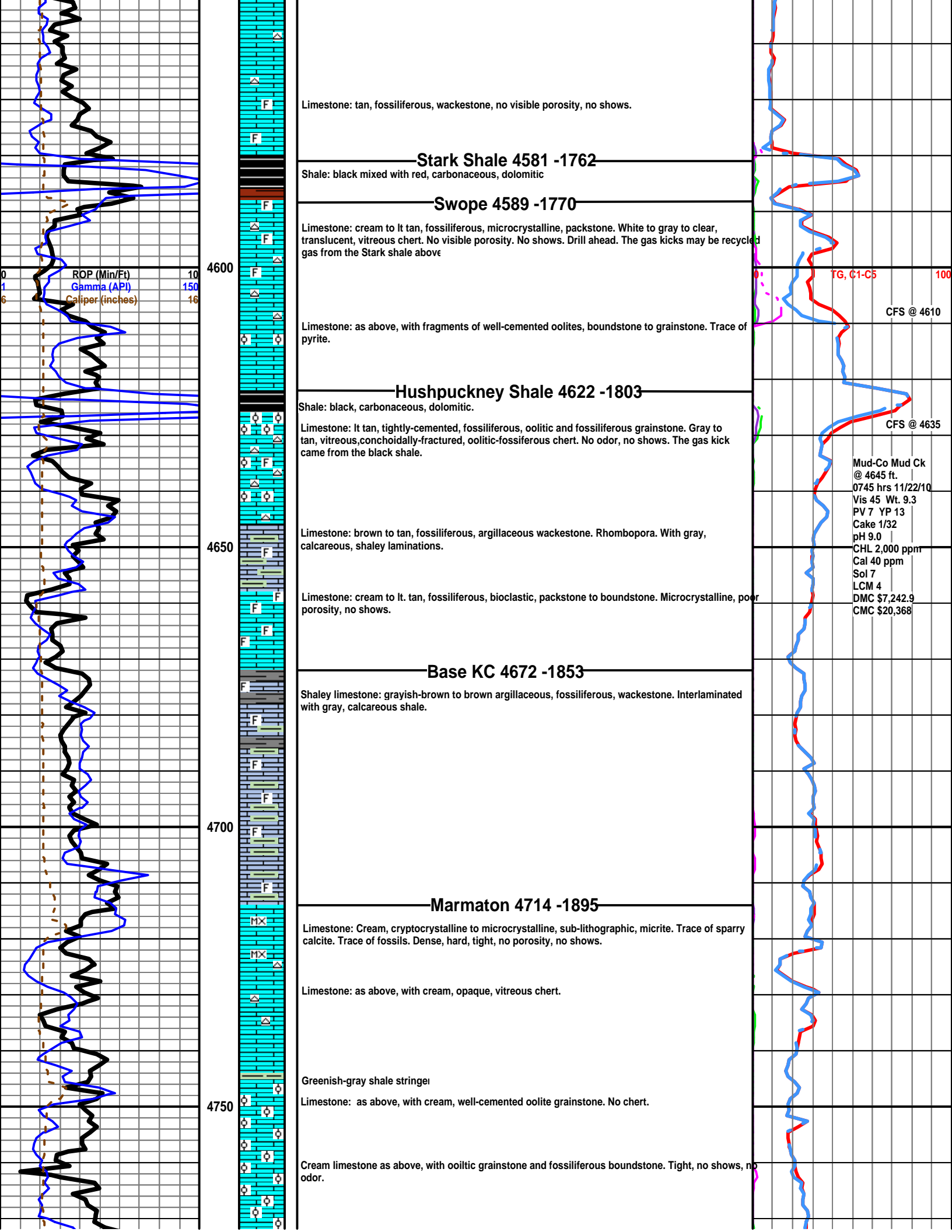
Shale: brown to graish-brown, soft, non-calcareous.

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

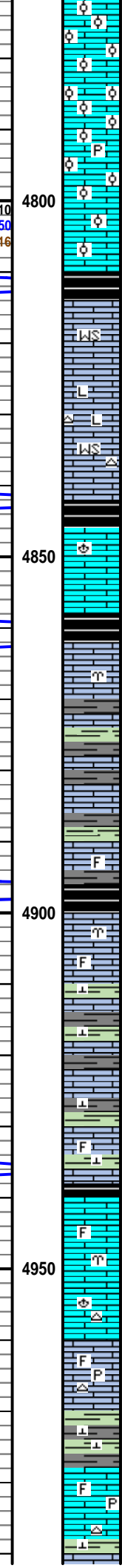
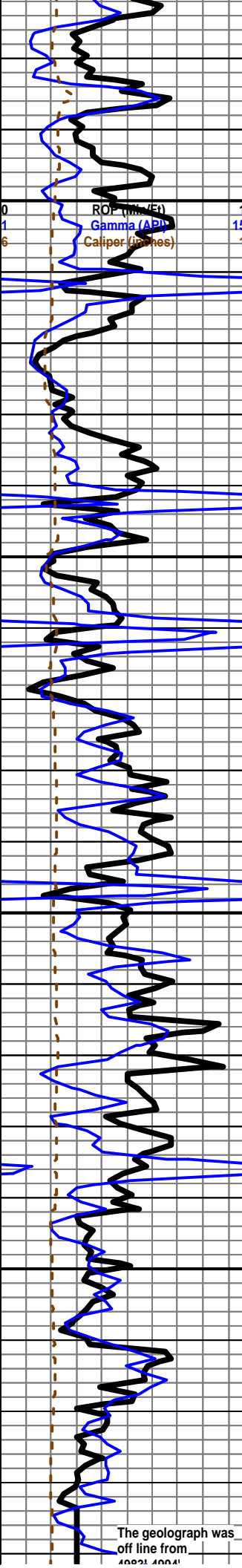
F Limestone: cream, micrite, with tr pyrite, with stylolites. Trace of calcareous shale.

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.









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, fussionilids, 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.

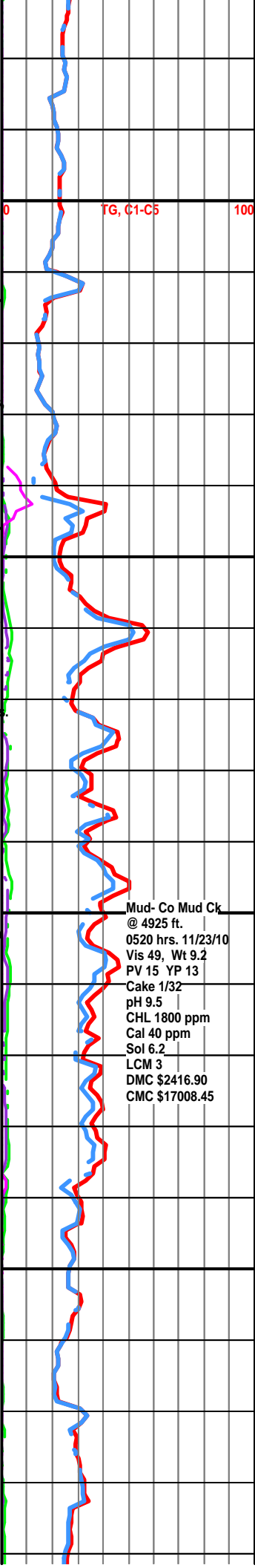
Limestone: cream, finely crystalline, fossiliferous to slightly oolitic, clean, tight grainstone to very dense and tight micrite. No shows. Bryozoans and brachiopoc

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.

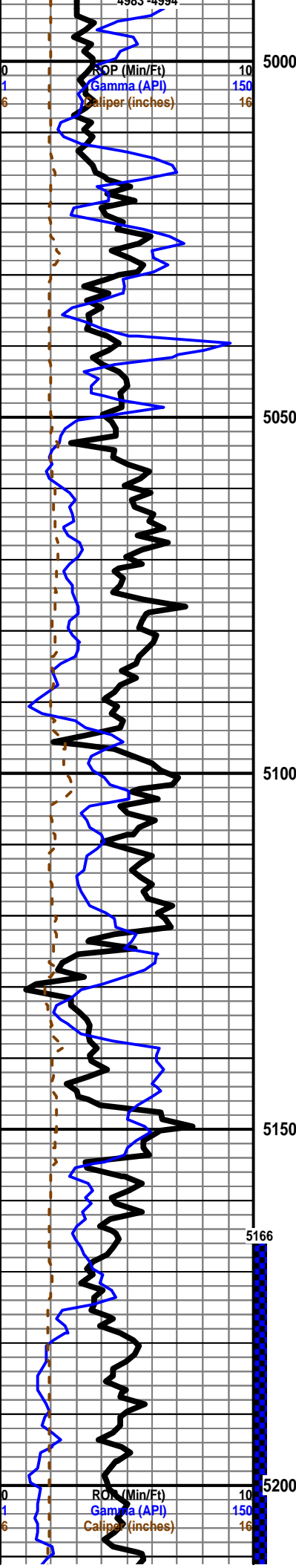
Shale: lt gray, greenish-gray, gray, calcareous.

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.

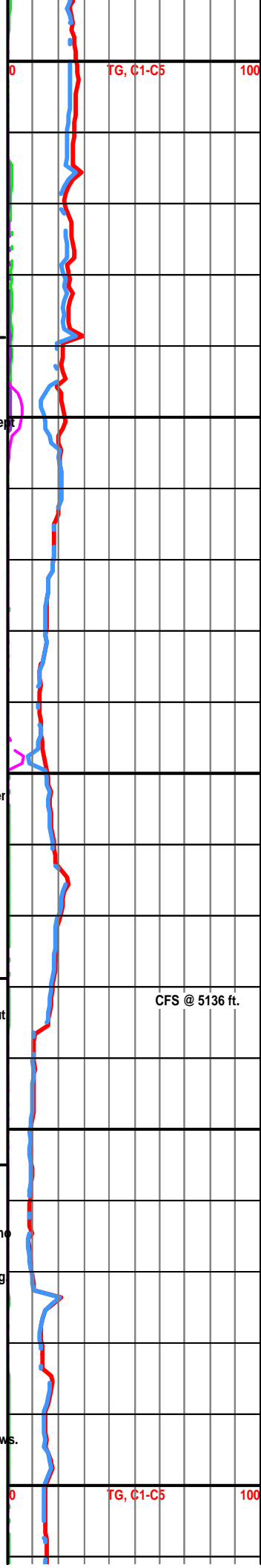
Limestone: Mixed lt reddish-tan to lt gray, silty to sli argillaceous, mineral fluor, but no oil shows, no odor, no cut. Still carrying an abundance of vari-colored shale

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.

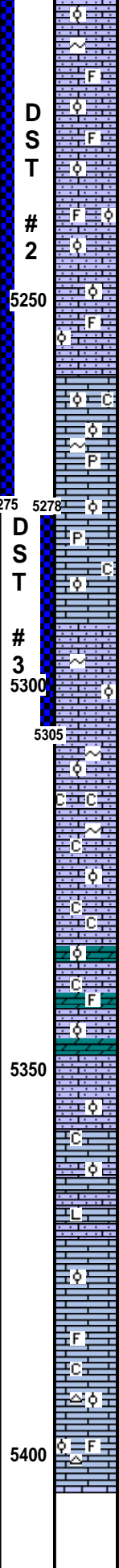
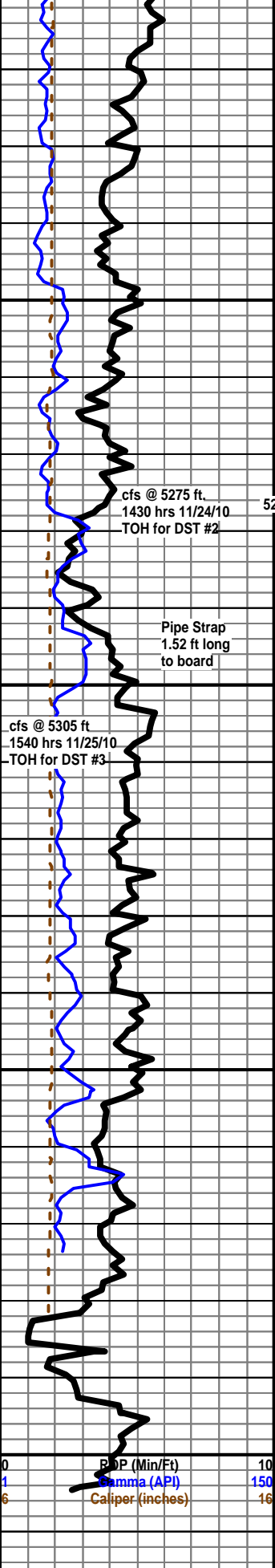
Limestone as above with spotty oil shows as above.

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