

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

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

Well Name: Giles Ranch #4-10  
Location: Section 10 - T31S - R22W, Clark County, KS  
License Number: API # 15-025-21519-0000  
Spud Date: October 17, 2010  
Surface Coordinates: 700' FNL & 660' FEL  
Region: Liberty River  
Drilling Completed: October 27, 2010

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 2179'                      K.B. Elevation (ft): 2189'  
Logged Interval (ft): 3950'              To: 5872'              Total Depth (ft): 5872' RTD  
Formation: Mississippian  
Type of Drilling Fluid: Chemical/Polymer/Gel

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

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

**GEOLOGIST**

Name: Keith Reavis, KLG #136 & Brian Fisher KLG #103  
Company: Consulting Geologist  
Address: 3420 22nd Street  
Great Bend, KS 67530

# Falcon Exploration, Inc.

## DAILY DRILLING REPORT

DATE	7:00 AM DEPTH	Last 24 Hour Operations
10/22/2010	4187	geologist on location @ 4058 ft, 0130 hrs, check Tooke system, correlate/tie in, drilling ahead drill King Hill, Heebner, Toronto, Douglas and into Lansing
10/23/2010	4696	drilling ahead through Lansing, geologist Brian Fisher relieve geologist Keith Reavis drill Stark, Lower KC
10/24/2010	5071	drilling ahead Marmaton, Pawnee, Cherokee and into Morrow Shale, short trip
10/25/2010	5210	geologist Keith Reavis relieve geologist Brian Fisher, drill Morrow Sand, gas kick warrants DST TOH for DST #1, conduct and complete DST #1, successful test, trip out tools and in with bit, resume drilling, cut into Mississippian
10/26/2010	5355	drilling ahead Mississippian, bit trip at 5455 ft, resume drilling
10/27/2010	5629	drilling ahead, Mississippian, Cowley, TD @ 1910 hrs at 5872 ft., condition hole, TOH for logs
10/28/2010	5872	Draw-works chain broke during trip, out, fix, re-mob logging truck, conducting logging Operations @ 1300 hrs, geologist off location @ 1430 hrs

# Falcon Exploration, Inc.

## WELL COMPARISON SHEET

Drilling Contractor: Val Energy, Inc. Rig #1 ph. 316-772-0848 Walt Purcell, Toolpusher, cell: 620-253-0646

Formation	DRILLING WELL Giles Ranch #4-10 700' FNL & 660' FEL Sec. 10 - 31S - 22W 2189 KB				COMPARISON WELL Giles Ranch #2-10 490' FNL & 1660' FEL Sec. 10 - 31S - 22W 2188 KB				COMPARISON WELL Giles Ranch #3-10 1880' FNL & 1680' FEL Sec. 10 - 31S - 22W 2164 KB			
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
King Hill	4084	-1895	4082	-1893	4078	-1890	-5	-3	4047	-1883	-12	-10
Heebner	4242	-2053	4242	-2053	4235	-2047	-6	-6	4201	-2037	-16	-16
Lansing	4449	-2260	4448	-2259	4443	-2255	-5	-4	4408	-2244	-16	-15
Muncie Creek	4638	-2449	4638	-2449	4632	-2444	-5	-5	4585	-2431	-18	-18
Stark Shale	4801	-2812	4799	-2810	4784	-2596	-18	-14	4747	-2583	-29	-27
Marmaton	4912	-2723	4914	-2725	4901	-2713	-10	-12	4884	-2700	-23	-25
Pawnee	4994	-2805	4997	-2808	4982	-2794	-11	-14	4942	-2778	-27	-30
Cherokee	5048	-2859	5049	-2859	5032	-2844	-15	-15	4992	-2828	-31	-31
Morrow Shale	5166	-2967	6157	-2968	5140	-2962	-15	-16	6098	-2934	-33	-34
Morrow Sand	5194	-3005	5196	-3007	5163	-2975	-30	-32	-20 to the #3-11			
Mississippian	5211	-3022	5212	-3023	5222	-3034	12	11	5126	-2962	-60	-61
Cowley Facies	5638	-3449	5640	-3451	not reached				5510	-3346	-103	-105
Kinderhookian	not reached								5898			
Viola									6019			
Simpson Shale									6308			
Arbuckle									6389			
Total Depth	5872	-3683	5877	-3688	5400	-3212	-471	-476	6505	-4341	658	653

**RECOMMENDATIONS:** Based on the results of DST #1 and electrical log analysis, it was recommended that the Giles Ranch #4-10 be plugged and abandoned as a dry test.

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

Respectfully submitted  
Keith Reavis and Brian Fisher

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

Lease Name **Giles Ranch**  
 Lease # **4-10**  
 Legal Desc **N/2 S/2 NE NE**  
 Section **10**  
 Township **31S**  
 County **Clark**  
 Drilling Cont **Val Drilling #1**

Job Ticket **3402**  
 Range **22W**  
 State **KS**

Comments **Field: Liberty River**

**GENERAL INFORMATION**

Test #1  
 Tester **Jimmy Ricketts**  
 Test Type **Conventional Bottom Hole Successful Test**  
 # of Packers **2.0** Packer Size **6 3/4**  
 Mud Type **Gal Chem**  
 Mud Weight **9.3** Viscosity **70.0**  
 Filtrate **11.6** Chlorides **11200**

Chokes **3/4** Hole Size **7 7/8**  
 Top Recorder # **13787**  
 Mid Recorder #  
 Bot Recorder # **w1023**  
 Mileage **182** Approved By  
 Standby Time **0**  
 Extra Equipmt **Jars, Safety Joint, and Large Packer**  
 Time on Site **4:00 AM**  
 Tool Picked Up **5:40 AM**  
 Tool Layed Down **4:30 PM**  
 Elevation **2178.00** Kelly Bushings **2189.00**

Drill Collar Len **0**  
 Wght Pipe Len **0**  
 Formation **Morrow Sand**  
 Interval Top **5154.0** Bottom **5210.0**  
 Anchor Len Below **58.0** Between **0**  
 Total Depth **5210.0**

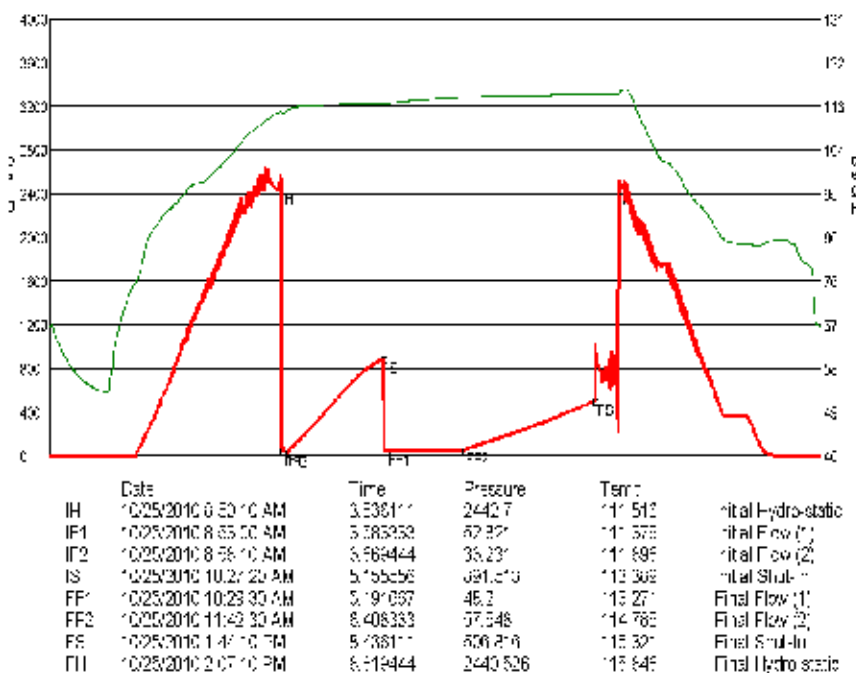
Start Date/Time **10/25/2010 5:18 AM**  
 Enc Date/Time **10/25/2010 5:15 PM**

Flow Type **Weak blow building to strong blow 4 minutes into initial flow period. Strong blow throughout final flow period. Times: 5, 90, 75, 121.**

**RECOVERY**

Feet	Description	Gas	Oil	Water	Mud
285	Part gassy smel in pipe	100% 235ft	0% 0ft	0% 0ft	0% 0ft
30	Drilling mud	0% 0ft	0% 0ft	0% 0ft	100% 30ft
65	Gassy oil cut mud	8% 5.9ft	8% 3.9ft	0% 0ft	86% 55.2ft

DST Fluids **0**



**ROCK TYPES**

**LITHOLOGY**

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

**FOSSIL**

- Oomoldic
- Fuss
- Algae

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 

**MINERAL**

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

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

**STRINGER**

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

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

**TEXTURE**

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

**OIL SHOW**

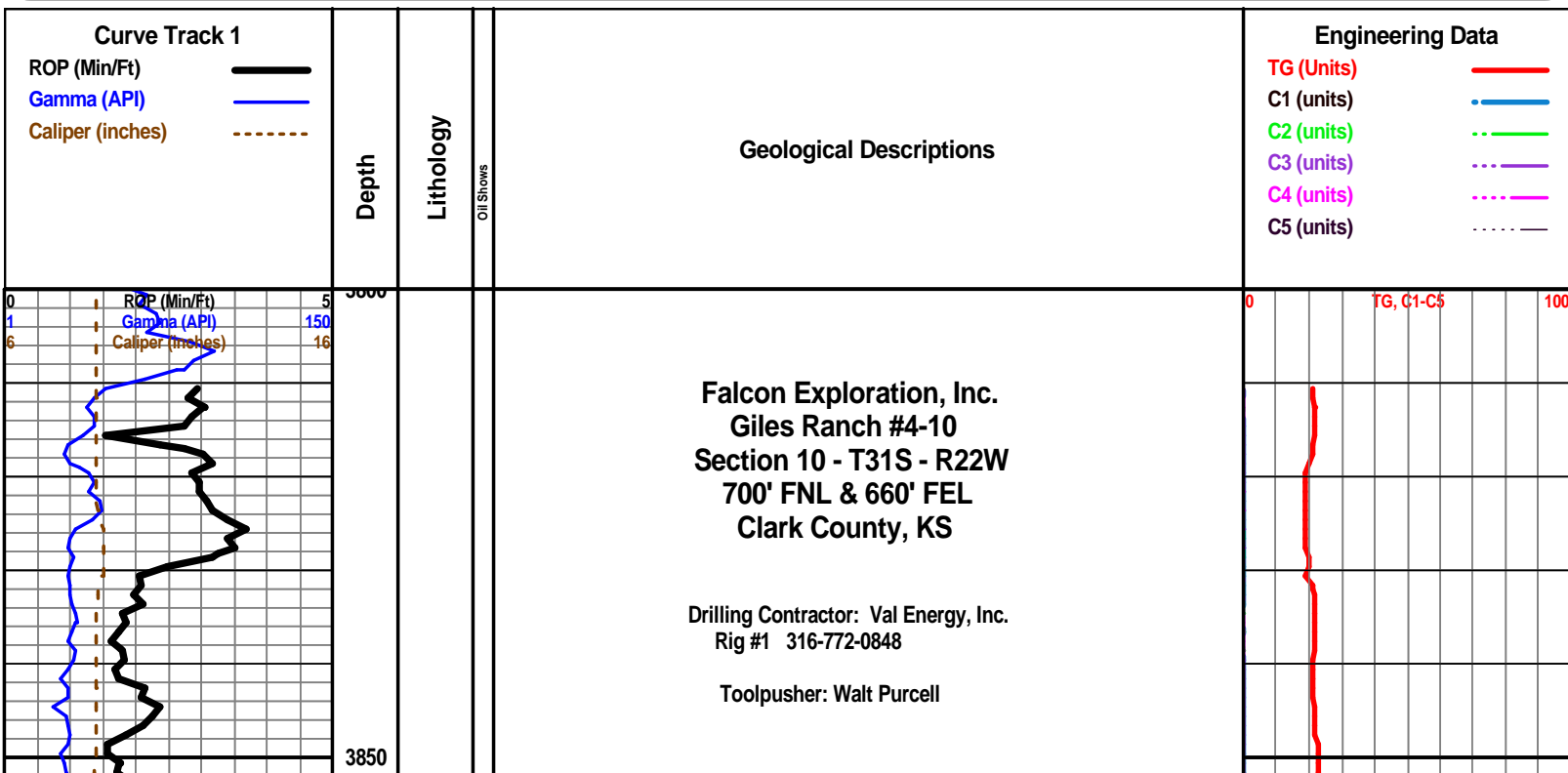
- Gas show
- Good
- Fair
- Poor
- Dead

**INTERVAL**

- Dst
- Core
- Dst
- Straddle test tail pipe

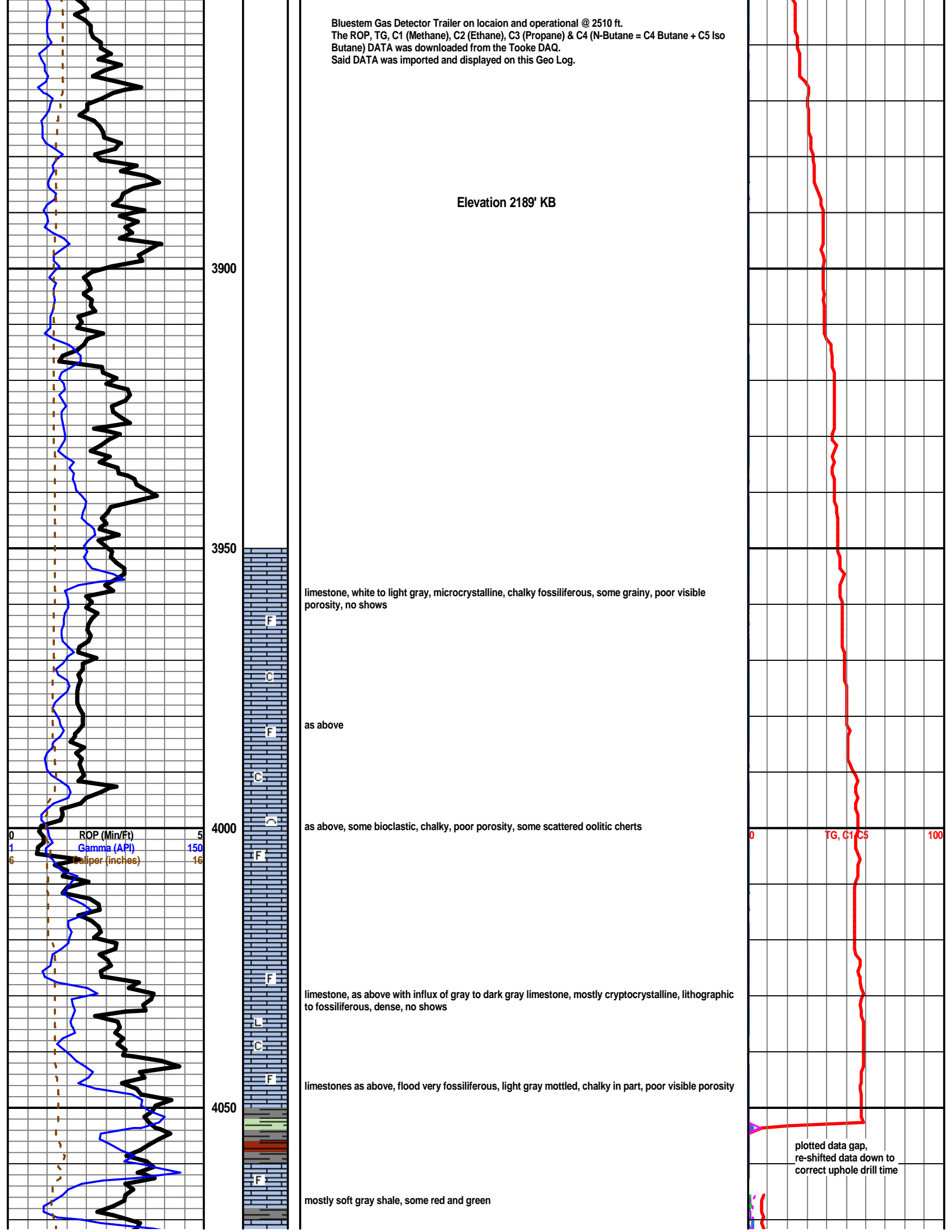
**EVENT**

- Rft
- Sidewall
- Dst
- Open hole
- Perforations



Bluestem Gas Detector Trailer on location and operational @ 2510 ft.  
 The ROP, TG, C1 (Methane), C2 (Ethane), C3 (Propane) & C4 (N-Butane + C5 Iso Butane) DATA was downloaded from the Tooke DAQ.  
 Said DATA was imported and displayed on this Geo Log.

Elevation 2189' KB



**King Hill Shale 4084 -1895**

black carbonaceous shale

4100

gray shales

limestone, cream to gray to light gray, mottled to grainy, micro-cryptocrystalline, fossiliferous to very fossiliferous, chalky in part poor visible porosity, no shows, poor fluorescence, some chalk

4150

as above, some increase in chalk

4200

limestone, white to light gray, microcrystalline, chalky, fossiliferous, some scattered pinpoint porosity, with limestone, gray, mottled, microcrystalline, fossiliferous, chalky to weathered, poor visible porosity, no shows, abundant chalk in samples

TG, C1-C5 100

Mud-Co Mud Ck @ 4208'  
0805 hrs 10/22/10  
Vis 64 Wt 9.4  
PV 20 YP 26  
WL 16.4  
Cake 1/32  
PH 10.0  
CHL 11500 ppm  
Cal 120  
Sol 7.1  
LCM: 0 #/bbl  
DMC: \$2107.15  
CMC: \$11256.90

black carbonaceous shale

4270 sample, flood brick red to orange silty shale and siltstone, friable, wash red, appx 50% of sample

**Heebner 4242 -2053**

black carbonaceous shale

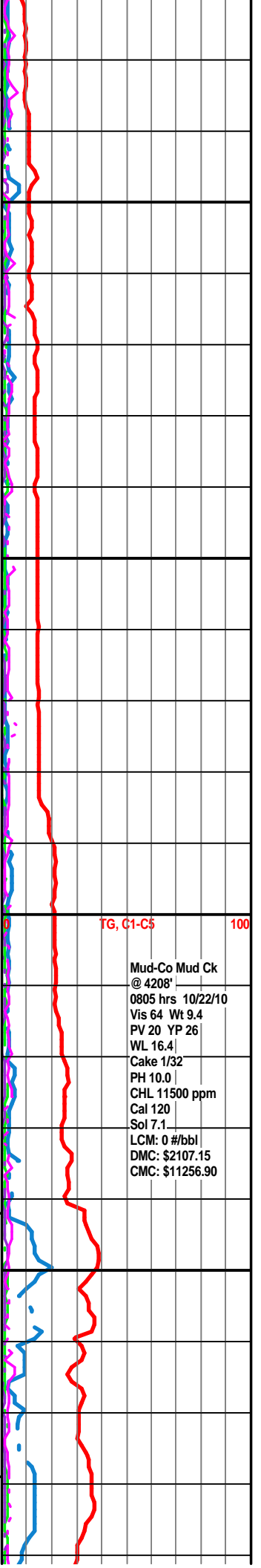
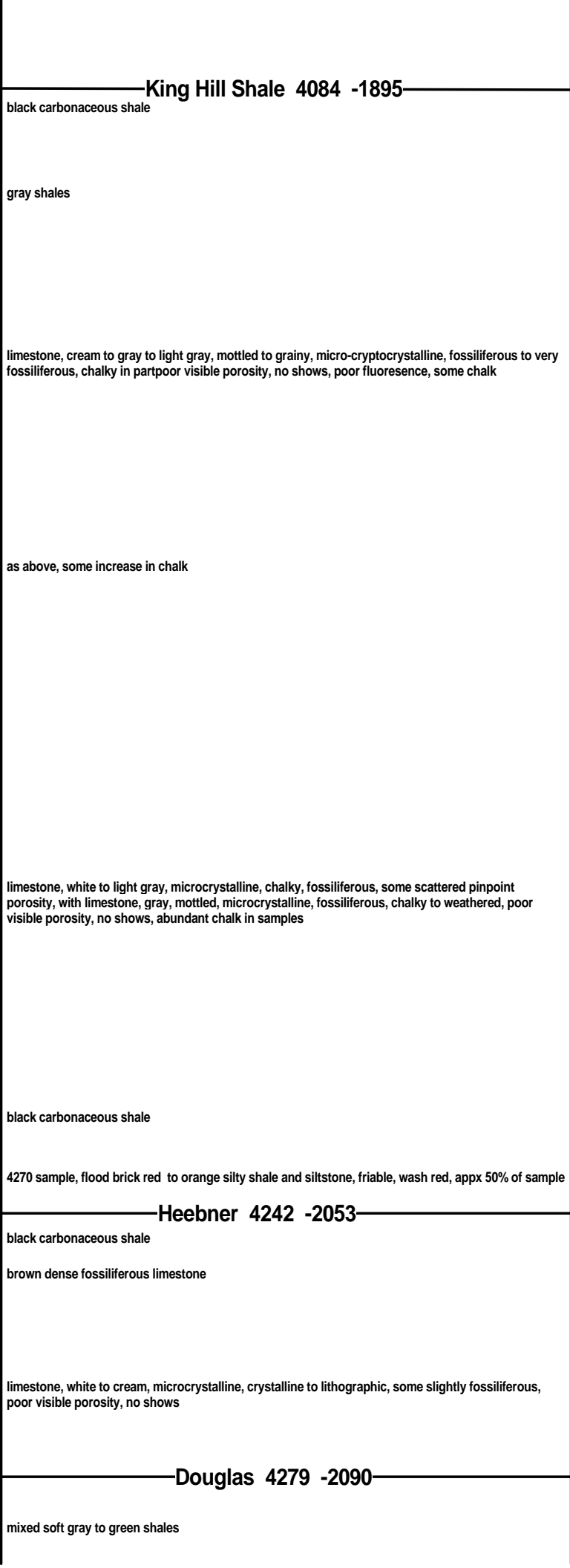
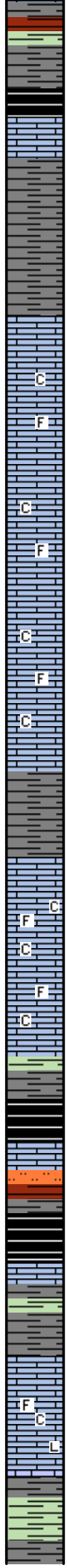
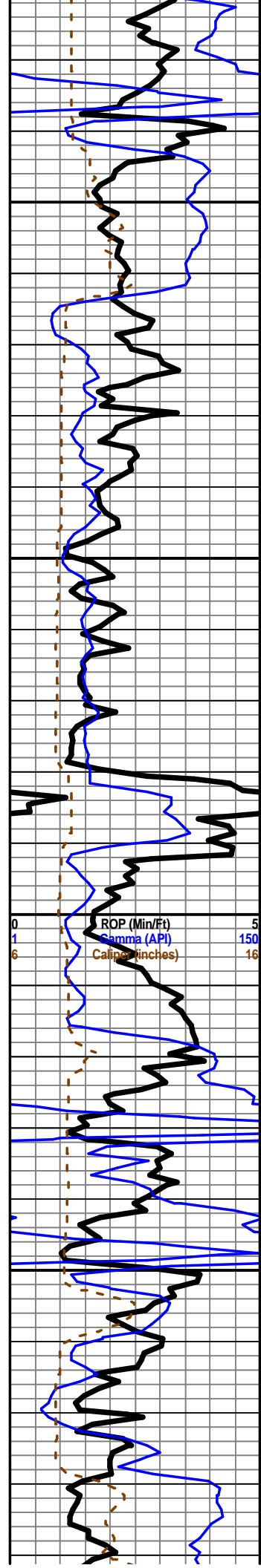
4250

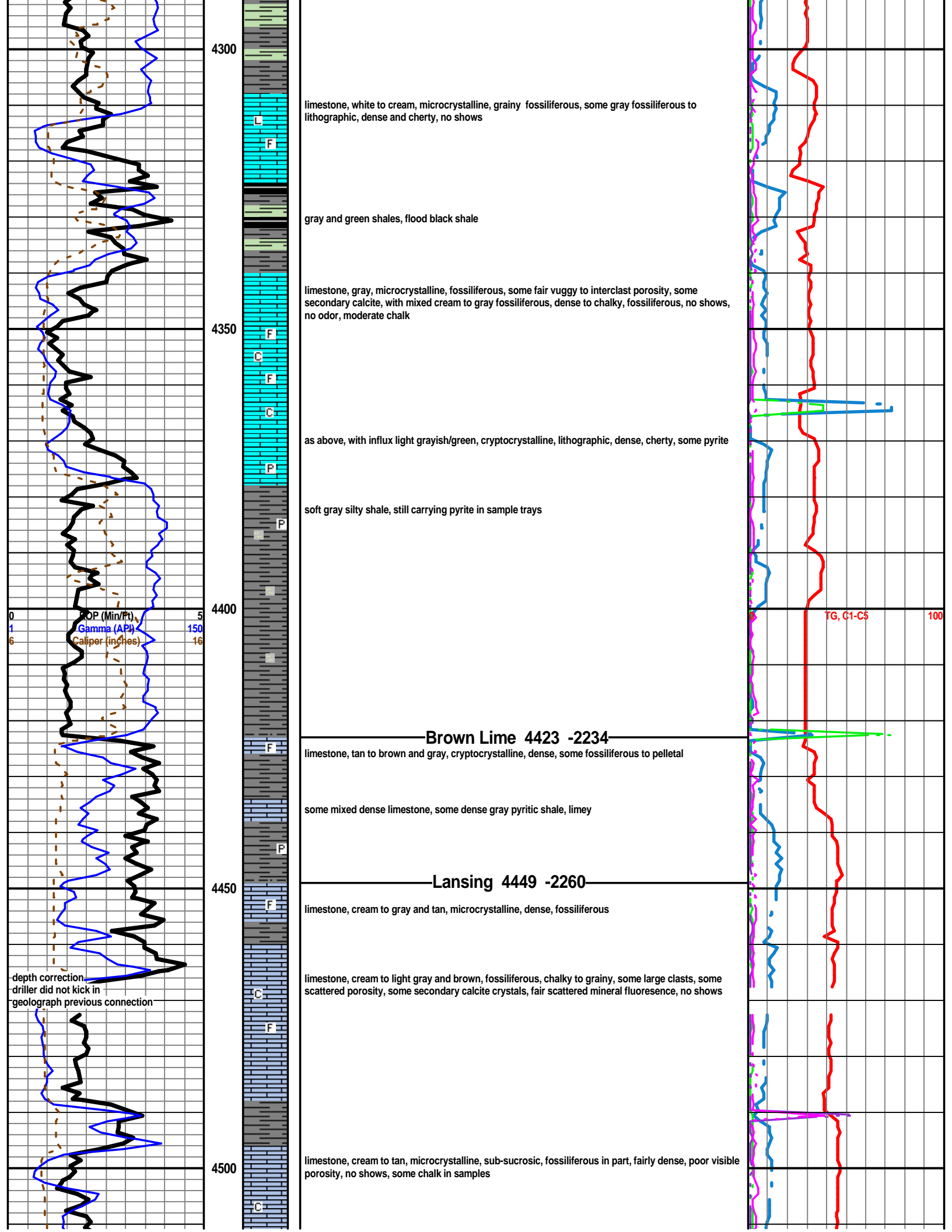
brown dense fossiliferous limestone

limestone, white to cream, microcrystalline, crystalline to lithographic, some slightly fossiliferous, poor visible porosity, no shows

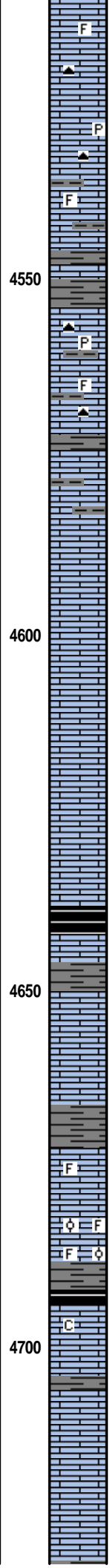
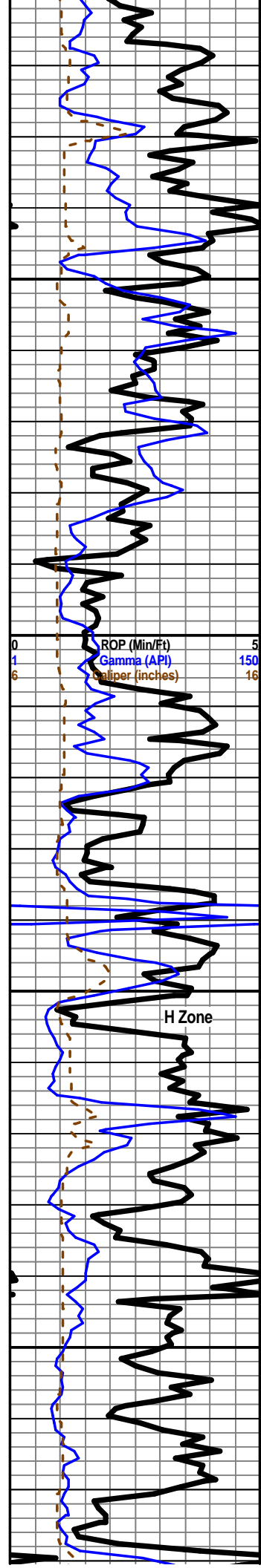
**Douglas 4279 -2090**

mixed soft gray to green shales









limestones, mixed dense fossiliferous, some dark gray lithographic, pyrite nodules, some scattered gray chert, no shows, scattered gray shale and limey shales

as above, increasing cherts

as above, mostly darker grays and brown limestones, moderate cherts, still carrying pyrite

limestone, tan to gray, microcrystalline, fossiliferous, chalky, poor visible porosity, no shows

limestone, gray to brown, micro-cryptocrystalline, dense, cherty, fossiliferous, no shows

limestone, mixed fossiliferous, some chalky, earthy, some secondary calcite, poor visible porosity, no shows

**MUNCIE CREEK SHALE**

limestone, some cream to tan, fossiliferous, bioclastic, abundant secondary calcite, poor visible porosity, with limestone, dense gray to tan fossiliferous, cherty, abundant chalk in samples, no shows

**Brian Fisher on location at 11:45 am, Meet with Keith Reavis, go over equipment and procedures. Dump water jar, check extrat., Rezero to 5 units back ground. 10/23/10.**

Sh. med gray, Ls. med gray, dnse, lith to med xln, no vis por, Ls. off wh. lith dnse no vis por, few pieces Ls. med gray, sl foss in part, no vis por, all no shows.

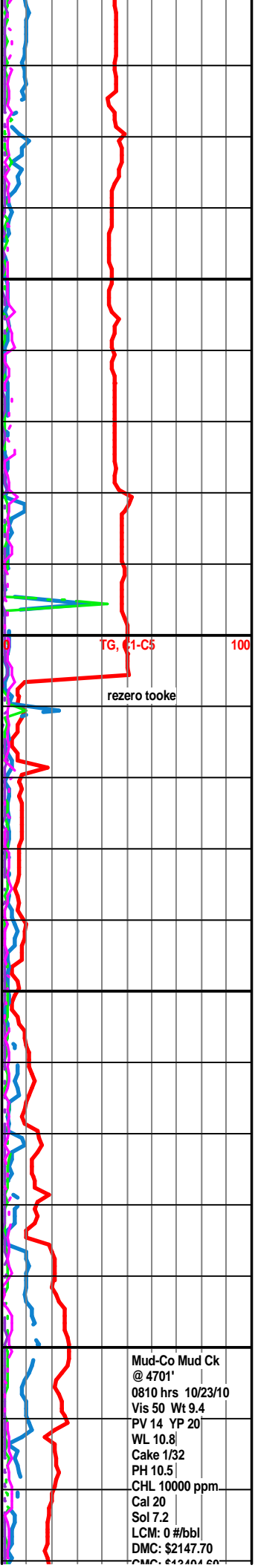
Ls med gray, very foss and oolitic inpart, rest vfxln, well cmted, no vis por, No shows, rest as abv.

Ls as abv, with a few pieces of Ls med gray vfxln dnse, no vs por, no shows, few pieces of Ls. off wh. very chlky, No shows. Sml amt of Sh. dk gray, Sml amt of Sh. black carb.

Ls. off wh. vfxln, no vis por., few pieces of Sh. dk gray

Ls. off wh to very lt br. lith dnse to vxln, sml amt of Chert, no vis por, no shows. Sml amt of Sh. dk gray, Ls. off wh vfxln no vis por, No shows

Ls. off wh, vfxln to fxln, no vis por, No shows



Mud-Co Mud Ck @ 4701'  
 0810 hrs 10/23/10  
 Vis 50 Wt 9.4  
 PV 14 YP 20  
 WL 10.8  
 Cake 1/32  
 PH 10.5  
 CHL 10000 ppm  
 Cal 20  
 Sol 7.2  
 LCM: 0 #/bbl  
 DMC: \$2147.70  
 CMC: \$1200.00

Ls off wh. vfxln, sl foss in part, no vis por, decrease in Ls. Sml amt of Sh dk gray, also saw Ls. Ls off wh. fxlN to med xln no vis por no show, Also saw red SS or very sndy soft sh., red vfxln, very soft, prob cavings.

4750

Ls. off wh. vfxln, sl foss as abv, Ls. off wh vfxln to med xln, no vis por no shows, Ls. v lt br to tan, lith to vfxln, no vis por, several pieces frag with lt br. incls , no vis por No shows

Re Zero to 5 units back ground, test unit, dump condensate jar. Check agitator.

As abv, now with Ls. off wh, sl chky to vfxln, no vis por, No shows

Ls. off wh, dnse no vis por no shows, some Ls. off wh, soft to chlky, No shows

Ls. off off, soft, wh very chlky, also with Ls. very lt br, dnse no vis por no shows, sml amt of Ls. med br, very frag, no vis por, No shows.

Ls. very lt br to tan, dnse to a few pieces with vfxln, no vis por, Ls off wh vfxln, to dnse, no vis por, all No shows

4800

**Stark Shale 4801 (-2612)**

Shale Kick

TG, C1-C5

100

Sh. dk gray, sml amt of Sh. bl., sample was mostly Ls. med gray lith. no vis por., Ls off wh. vfxln, no vis No show.

Sh. dk gray

Ls. med gray as abv., Ls. off wh. med xln, no vis por, no show, also saw some Chert very lt gray, no vis por, with sml inclusions of foss or min. No shows.

Mainly Ls. med gray, lith to vfxln, no vis por, no shows, Ls. wh to off wh, vfg also lith to vfxln no vis por, No shows. Few pieces Sh bl carb, note saw 1 piece of bl Sh and med br Ls as a single rock fragment.

Shale Kick

Mainly Ls. off wh vfxln to very chlky, some with med size rnded cal grains, soft, no vis por, Ls. med br lith dnse, no vis por, sml amt of Sh. bl carb. All no shows.

4850

Ls. med br, lith dnse no vis por, Ls. off wh. vfxln to med xln no vis por, all no shows, trace Sh. bl. carb.

General back ground increase, no shows seen in rocks

Ls. med to lt br. lith dense no vis por, Ls. off wh. vfxln to med xln no vis por, Ls. med br, vfxln to med xln, no vis por, All rocks had no shows.

Mixture of Ls. med br., lith to med grained with trace relic oolites, trace intergran por on edges, no vis show, no flor, no odor, Ls. cream to off wh, lith no vis por, trace Ls. off wh chlky, No shows., trace Sh bl carb.

Ls. med br., lith dense no vis por, No show, also some Ls. med br., lith, grading to med xln on some edges - poss trace vug por ?? No stain no odor, no solvent cut, no flor (No shows), few pieces of Chert br., no vis por, Ls. off wh., vfxln to med xln, poor por, All no shows.

Ls. med br to lt br, lith to off wh in part, trace med xln, but wellcmtd, also with some med cryst in a few pieces indicating poss. vug por, Ls. med to lt br, lith grading to vfxln, no vis por, Some Ls. off wh. fxlN, w/ no vis por, also granular to frag in part, no vis por, Sml amt of Ls. dk gray, med xln no vis por., All with no shows.

4900

Ls. off wh, med grain, gran, poss recry oolites, also with clear calcite grains, no vis por seen, Also Ls. lt br, lith no vis por, also Cherty in part, with no vis por. All with no shows seen. Trace of Sh. bl. carb.

**Marmaton Limestone 4912 (-2723)**

Conn. at 4915'.

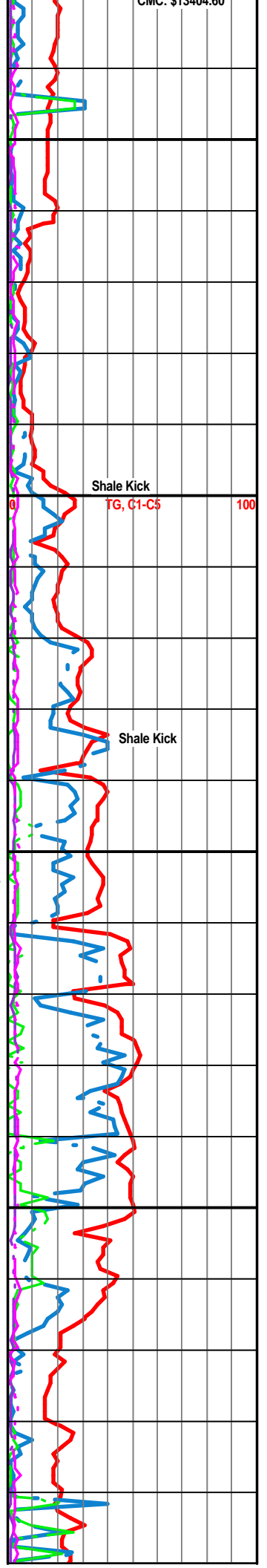
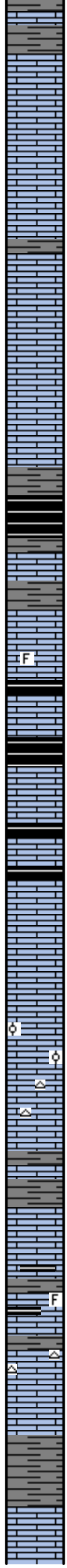
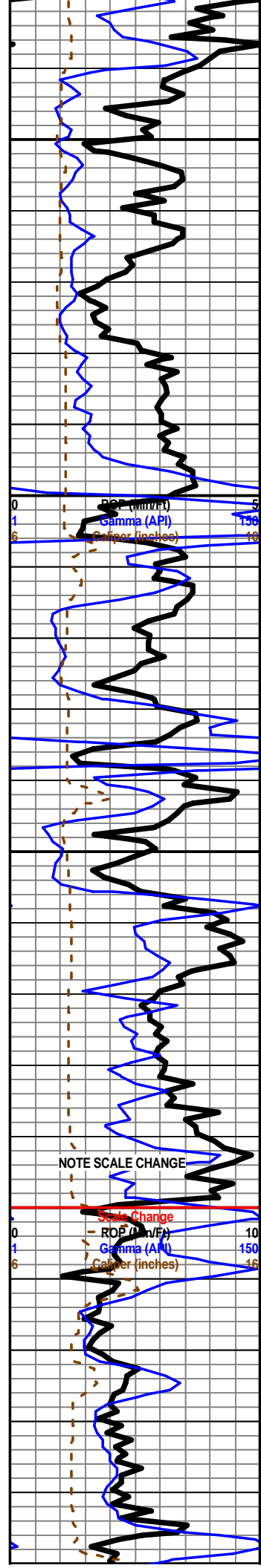
Ls. lt br. med xln, gran in part, few pieces are fossiliferous, with a few pyr xlms, med to vfg, no vis por, Ls. med br lith some w/ med xlms, no vis por, some w/ trace med xlms on edges suggest poss vug por., few pieces Chert med br, trans, no vis por, All no shows. Sh. dk gray, trace Sh. bl. carb.

Ls. off wh, gran to med xln, very poor por in pieces, few had very lt wh. calcite min. flor, No shows, Ls lt br., lith dense no vis por, No shows.

Ls. off wh, med xln, very sli por seen, Sh med gray sli pyritic, Ls. off and mottled gray in color, vfxln, some gran in nature, very poor por., No shows.

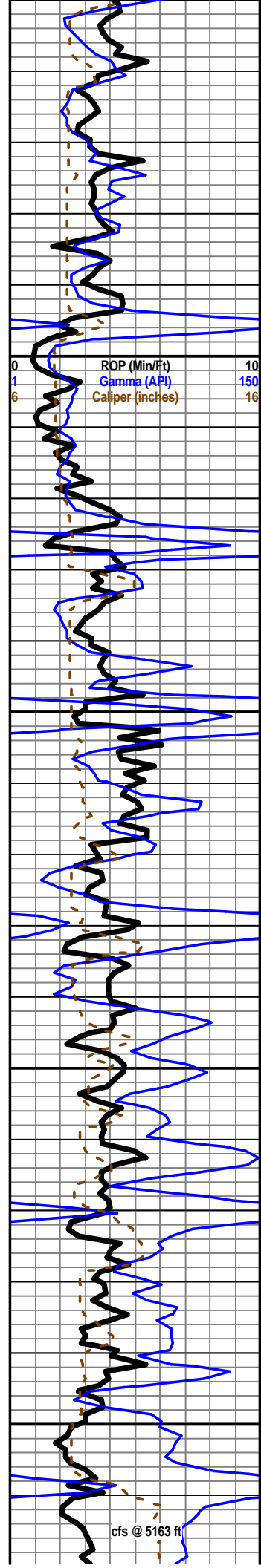
Ls. off wh to sli med br in color, vfxln to lith, no vis por seen. trace br chert

4950



NOTE SCALE CHANGE

Scale Change  
ROP (in/ft) 10  
Gamma (API) 150  
Caliper (inches) 46



Ls. off wh lith no vis por., (few pieces have very pale min flor), Ls. lt br to very Lt gray in color, vfxln, no vis por, All No shows.

Ls. off wh to off wh, lith to vfxln in part, poor por seen in a few of the samples, some (a total of 3) pieces have a bright white flor, no free oil seen, no odor noted, when crushed under black light, a pale solvent cut appears. poss very sli inter gran por seen in these pieces, When dry has slight ring cut, rest of sample: Ls. very lt br, lith No show.

Ls. off as abv with no show, Ls. lt br lith to vfxln no vis por. Trace Sh. med gray, sli pritic, No shows seen

Ls off as abv, few pieces have very poor inter gran por, most with no vis por, Ls. very lt br vfxln, no por., increas in Sh med gray, few pieces are very pyritic. Saw in Ls, very lt br to off white, vfxln gran texture, a total of 4 sml pieces with bright white flor as before very weak as compared in 4960 sample. No odor, no free oil or stain seen. No ring cut when dry.

**Pawnee Limestone at 4994 (-2805)**

Sh. bl carb., (15 unit gas kick above back ground), Ls med br lith, few med xln, no vis por. some with recry oolites, well cmted, no vis por, Few pieces: Ls off wh, vfxln to slightly med xln, one piece seen with poor inter gran por on edge, sample has a brght wh flor over all, poss trace of a br stain, no free oil, poss trace of faint odor, very pale cut under black light. Ring cut when dry.

Cir at 5019 to eval Pawnee Ls. rocks, Ls lt br lith to vfxln poor inter gran por, over all sample has a very faint calcite min flor. no stain, no odor no flor seen. Sh. dk gray, sli pyritic.

30 min sample: Sample only has weak calcite min flor overall, Ls. lt br as before, few are med xln no vis por seen, also fxln to lith, trace vug por, 1 piece seen with poss bl tarry stain - no cut. No odor No other shows. 60 min: increas in Ls lt. br. med grain with no vis por, sample has sl min flor, trace of faint odor?, No other shows seen. No show seen in 90 min sample.

Sh. bl , carb. Sh dk gray, Ls. med br to lt br, trace poor inter gran por, also gradding to lith with no vis por, also with sml coral frag, Ls. off wh vfxln, no por seen, few have bright calcite min flor, no cut, All rocks - no Shows.

Ls. med br, mainly lith, no vis por, few pieces med xln to fine xln no vis inter gran por, few pieces very frag with no por, trace of gray and bl carb sh. No Shows.

**Cherokee Shale 5048 (-2859)**

Sh. bl carb, Ls. as abv., No shows

Ls. lt br, to md br, vfxln, with no vis por, sl foss in part, also frag in part, tarace foss. Ls med br to tan, Ls. lt br, vfg, no vis por, Ls. lt br, lith no vis por, Sh bl. carb, Ls gray green lith, Ls. tan lith, All no ight shows. min flor, All rocks - no Shows.

Ls. off wh to lt br, vfxln as abv, Ls. med br and gray, lith no vis por., Sh bl carb All rocks no Shows.

Ls off wh, mostly lith, few are vfxln, no vis por seen, Ls tan lith, Sh dk gray, Sh. bl carb., Ls. off wh very frag grains, no vis por. No Shows.

Ls. off wh vfxln as abv, Ls. tan lith as abv., Increas in Sh bl carb., Ls. off wh, lith, few pieces have a very faint calcite flor. All rocks no shows.

Ls off wh vfxln to fxln, no vis por- few pieces have very faint calcite min flor, Ls. med br, vfg to fxln, few pieces with poor por on edges, sh bl carb, trace Chert med br. No shows.

Note saw 40 unit gas kick over back ground at 5095' sample caught at 5106: Ls off wh, vfxln, frag, trace good por seen in only 2 pieces, poss dk oil stain on 1 piece, No cut, Flor or odor. Sh bl carb, with sli trace of gas in wet sample.

All as abv, Entire sample No flor, dease of Sh. bl. carb, trace of Chert lt br translucent. trace sh med gray, few pices of Ls. med br med to fxln no vis por. No sample flor except a very wk calcite flor in a few pieces, No other sample shows noted.

All as abv, Sh bl carb - with sml gas bubbles, No other shows seen.

All as abv, All rocks no shows, increase in Sh. bl carb

Ls med to lt br to tan, lith, no vis por, also a few pieces that are fxln to gran - no vis por, Sh bl carb, with pyrite, No shows

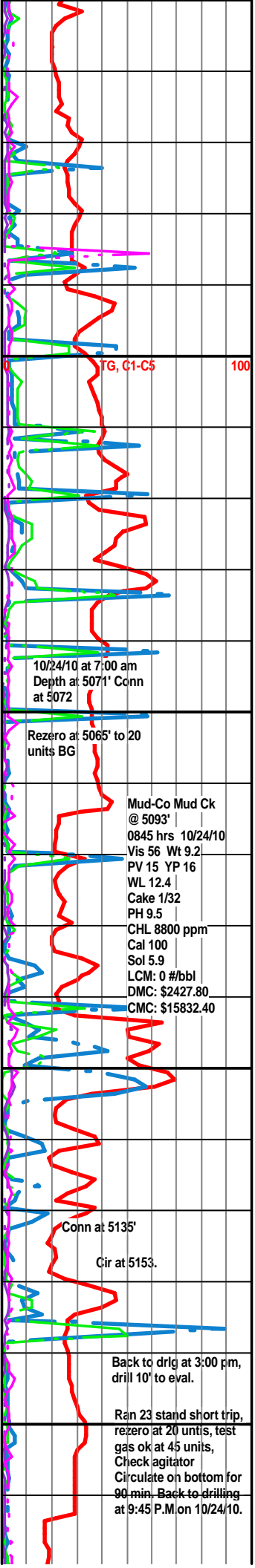
All as abv, increase in Ls. lith dnse, no vis por, also increase in Sh bl carb. No shows.

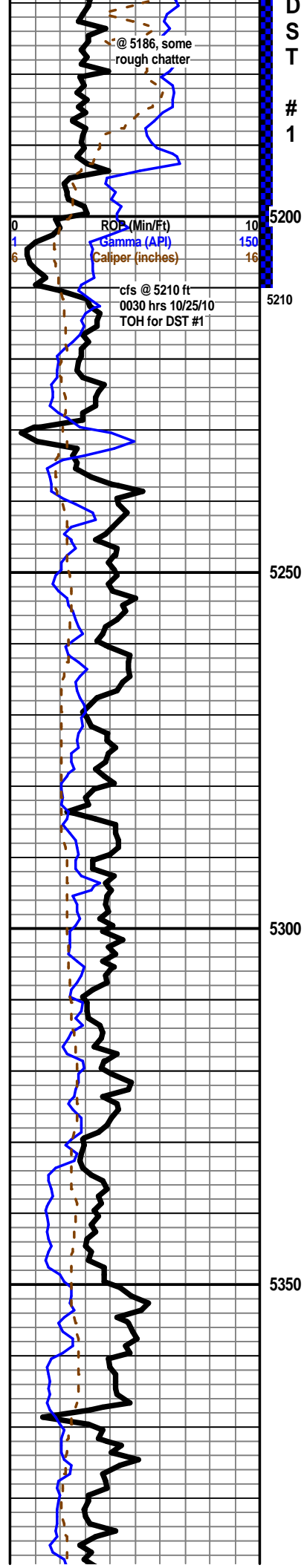
**Inola Limestone 5142 (-2953)**

Ls. off wh, vfxln to fxln, partly grainey in appearance, sl frag. no vis por, Sh bl carb, sl gassy, Ls. lt br lith, no vis por, Some of the sample has a very faint calcite min flor, No Shows.

**Morrow Shale 5156 (-2967)**

Cir at 5153', 30 min: Ls. off wh to lt br, vfxln to gran, no vis por, Ls. lt br, lith no vis por, saw 1 piece with fair por, with poss dead oil stain, No Cut, No flor, No odor in sample. Over all very sl calcite min flor in total sample. Sh. bl carb, pyrit, Trace Ls wh chly soft, Saw 1 piece of of Ls. br & green vfxln, no por, 60 min: same, saw 1 piece: Ls. lt br. lith saw trace of vug por, No shows 90 min: same, saw 3 pieces of gr. shale, poss Morr ? No Shows 120 min: same w/ 3 pieces gray-gr Sh.





shale, olive green to green, some striated, some large sand grains

geologist Keith Reavis relieve geologist Brian Fisher 2200 hrs 10/24/10

shale as above with stringers of sandstone, white to pale green, quartz, very fine grained, sub angular to sub-round, fairly sorted, well cemented, no shows, no fluorescence

---

**Morrow Sand 5194 -3005**

chert, blue gray, mostly sharp and fresh, some weathered, fossiliferous and pyritic in part, no show, with sandstone as above, some chert inclusions to chert loaded, no shows

60 min, as above, increase in sand, fairly pyritic, no shows, odor or fluorescence

---

**Mississippian 5211 -3022**

limestone, white to cream, oolitic, mature, chalky, some glauconitic, with some slightly dolomitic cream fossiliferous to oolitic limestone, dense, some faint fluorescence, abundant chalk, no shows or odor

as above (drill break drilled smoothly) found a few clusters of sandstone (sluff from above?) with trace very light oil droplets on break, still abundant chalk

limestones as above, still carrying some cherts and sandstone from Morrow

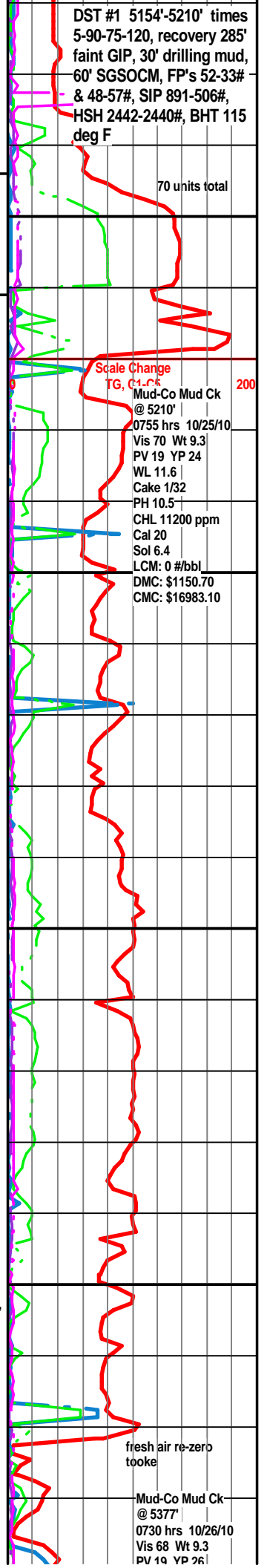
limestone, white to cream mature oolitic, chalky, some glauconitic, to cream to light gray dense flattened oolitic, cryptocrystalline, no shows, some dolomite, gray, microcrystalline, arenaceous, no visible porosity, dense, no shows

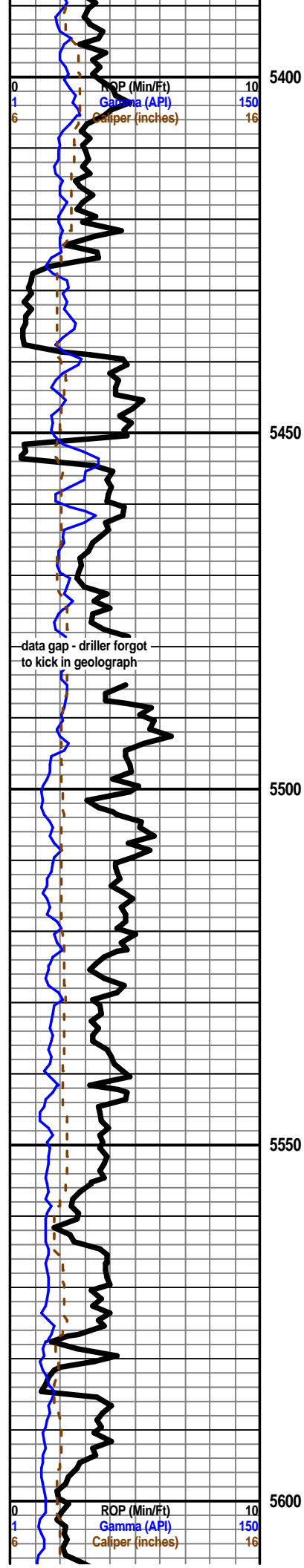
as above, some scattered chert and pyrite

as above

limestone as above, increase in mature chalky oolitic, dolomite drops out, increase in chert and pyrite, chert is light gray fossiliferous to oolitic

as above





as above

5450 sample, flood shale

5450 30 min cfs, limestone, gray and white mottled, pelletal to oolitic, weathered, very chalky, no shows, with dolomite, light gray, microcrystalline, sub sucrosic to arenaceous, poor visible porosity, no shows, fair green mineral fluorescence

as above

poor samples after trip (trip trash) some limestone, mixed limestones, white to gray and cream oolitic, chalky, glauconitic, dense gray to cream oolitic and fossiliferous, no shows

as above - few pieces gray dense fossiliferous limestone, some small vugs, bright fluorescence, trace light oil droplets on break, no odor

5500-5520 samples - limestone, gray to cream, microcrystalline, fossiliferous to oolitic, poor visible porosity, dense to sub-chalky, some scattered fair mineral fluorescence, in 5500 sample found some light free oil droplets under fluorescence, 5520 sample, found 2 bright white fluorescent specimens of cream fossiliferous limestone specimens, no stain, light free oil on break, one had slow bluish cut

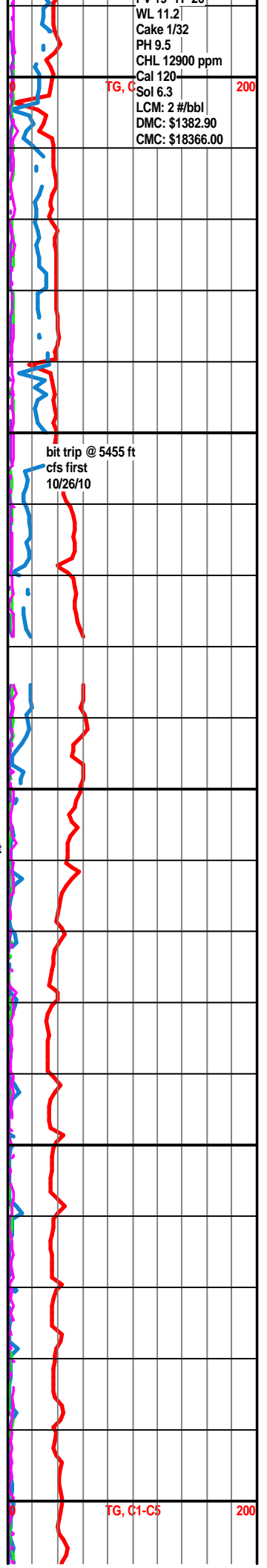
limestone as above, decreasing oolitic, no shows, with some limestone, white to light gray, very dense, fossiliferous in part, cherty, bright green mineral fluorescence, no show - still carrying abundant shale in samples

5560 sample, shales clean up drop out, limestone, gray to light gray, some slightly mottled, microcrystalline, fossiliferous to sub oolitic, some large clasts, chalky in part, no shows, no fluorescence, fairly homogeneous

as above, some recrystallized fossiliferous with small vugs, slightly dolomitic, some scattered light mineral fluorescence, no shows

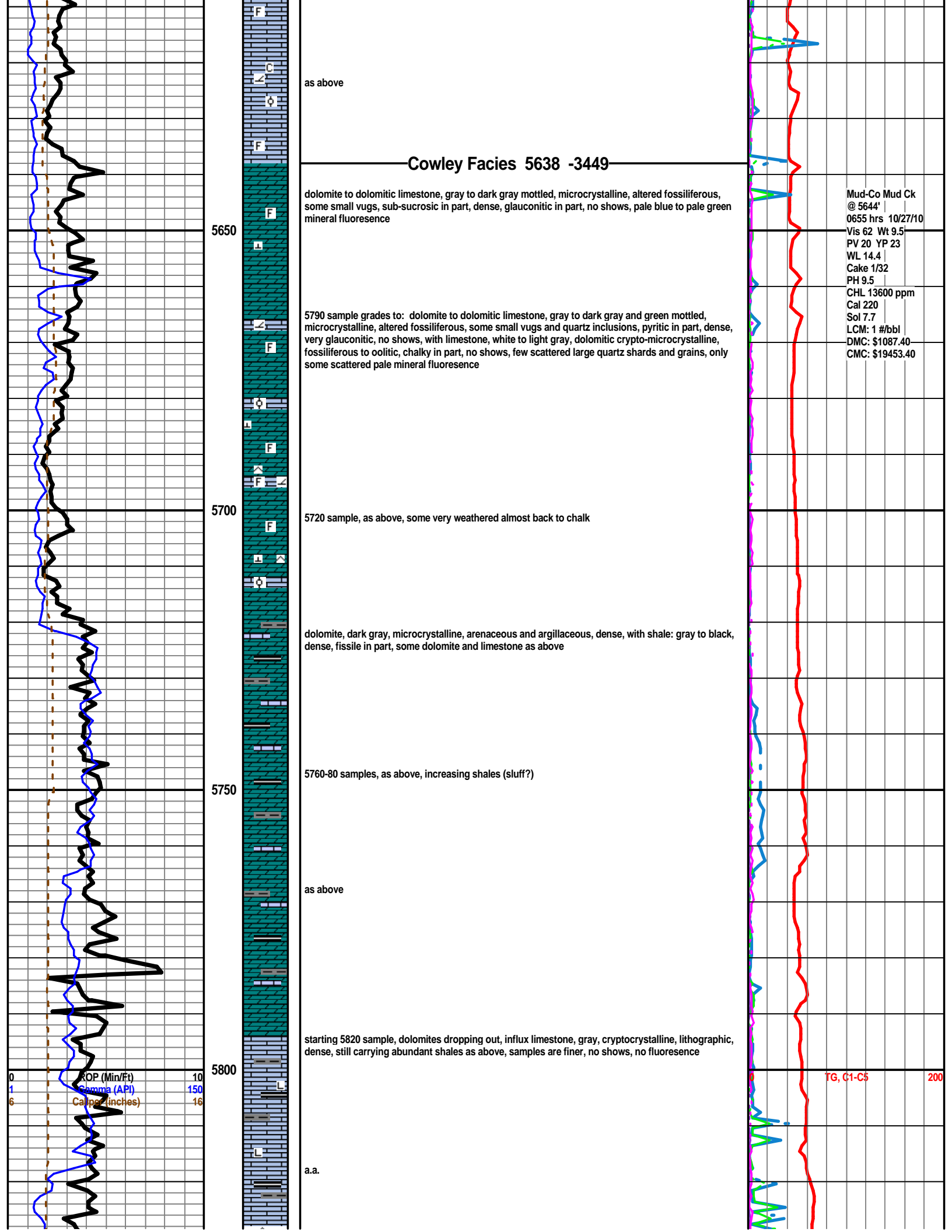
as above, some weathered to chalk, influx of chalk in samples, no show

limestone as above, trace pyritic, with influx light gray to white oolitic, some fairly mature, chalky, some inter-oolite porosity, no shows, scattered light green mineral fluorescence, carrying abundant chalk in samples



200

200



as above

**Cowley Facies 5638 -3449**

dolomite to dolomitic limestone, gray to dark gray mottled, microcrystalline, altered fossiliferous, some small vugs, sub-sucrosic in part, dense, glauconitic in part, no shows, pale blue to pale green mineral fluorescence

Mud-Co Mud Ck  
 @ 5644'  
 0655 hrs 10/27/10  
 Vis 62 Wt 9.5  
 PV 20 YP 23  
 WL 14.4  
 Cake 1/32  
 PH 9.5  
 CHL 13600 ppm  
 Cal 220  
 Sol 7.7  
 LCM: 1 #/bbl  
 DMC: \$1087.40  
 CMC: \$19453.40

5650

5790 sample grades to: dolomite to dolomitic limestone, gray to dark gray and green mottled, microcrystalline, altered fossiliferous, some small vugs and quartz inclusions, pyritic in part, dense, very glauconitic, no shows, with limestone, white to light gray, dolomitic crypto-microcrystalline, fossiliferous to oolitic, chalky in part, no shows, few scattered large quartz shards and grains, only some scattered pale mineral fluorescence

5700

5720 sample, as above, some very weathered almost back to chalk

dolomite, dark gray, microcrystalline, arenaceous and argillaceous, dense, with shale: gray to black, dense, fissile in part, some dolomite and limestone as above

5750

5760-80 samples, as above, increasing shales (sluff?)

as above

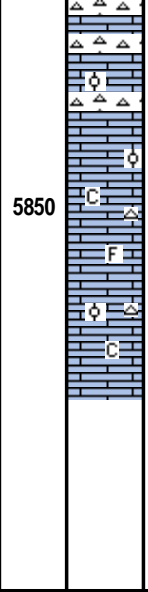
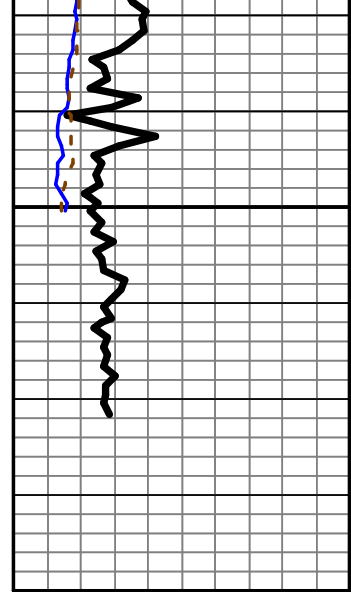
5800

starting 5820 sample, dolomites dropping out, influx limestone, gray, cryptocrystalline, lithographic, dense, still carrying abundant shales as above, samples are finer, no shows, no fluorescence

TG, C1-C5 200

a.a.

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



5850

limestone, white to cream, chalky oolitic, chalky, some scattered interclast porosity, barren, with:  
white to gray fossiliferous cherts, weathered in part, appx 50/50, no fluorescence

limestone as above, chert dropping out to scattered, moderate chalk in samples, no fluorescence or  
shows

a.a.

Rotary TD @ 5872 ft. 1910 hrs 10/27/10  
Log Tech TD 5877 ft.  
Complete Logging Operations 1300 hrs 10/28/10

