Keith Reavis
Consulting Geologist

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

Well Name:	**Dirks #1-12**		
Location:	**Section 12 - T28S - R30W, Gray County, KS**		
License Number:	**API # 15-069-20333-0000**	**Region:**	**Wildcat**
Spud Date:	**November 27, 2010**	**Drilling Completed:**	**December 10, 2010**
Surface Coordinates:	**2020' FSL & 770' FWL (3-D loc.)**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**2793'**	**K.B. Elevation (ft):**	**2806'**
Logged Interval (ft):	**2600' To: 5400'**	**Total Depth (ft):**	**5400' RTD**
Formation:	**Mississippian**		
Type of Drilling Fluid:	**Chemical/Polymer/Gel**		

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

Based on the results of DST #1, review and analysis of electrical logs and gas detector levels, it was determined that production casing be set and the Chase Group, Stotler and Tarkio be further tested through perforations.

The samples were submitted 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

DATE	7:00 AM DEPTH	REMARKS
12/1/2010		Geologist Keith Reavis on location @ 1000 hrs, 2507 ft. Rig down to change out swivel packing, resume drilling, anhydrite/salt section to Chase, Winfield, Towanda
12/2/2010	3059	drilling ahead, Fort Riley, Cottonwood, Neva, Foraker, Stotler, gas kick and show warrant DST, short trip
12/3/2010	3531	TOH for DST #1, conduct DST #1, complete DST #1, successful test, TIH w/bit and junk basket, ctch, resume drilling, Tarkio
12/4/2010	3782	drilling ahead Bern, Topeka, Lecompton, Heebner, Toronto
12/5/2010	4258	drilling ahead Douglas, Lansing
12/6/2010	4616	drilling ahead Lower KC, Stark, Huspuckney, bit trip @ 4670, resume drilling
12/7/2010	4827	drilling ahead, Marmaton, Pawnee, show in Pawnee warrants DST, TOH for DST #2, conduct and complete DST #2, successful test, resume drilling
12/8/2010	4944	drilling ahead, Cherokee, Mississippian (St. Gen)
12/9/2010	5213	drilling ahead, Mississippian St. Gen and into St. Louis, show in St. Louis TOH and conduct DST #3, successful test, on bottom with bit, ctch
12/10/2010	5314	drilling ahead Mississippian, TD @ 5400 ft, 1620 hrs, ctch, TOH for logs conducting logging operations
12/11/2010	5400	complete logging operations

Falcon Exploration, Inc.

WELL COMPARISON SHEET

	DRILLING WELL Falcon Dirks #1-12 2020' FSL & 770' FWL Sec. 12 T28S R30W				COMPARISON WELL Falcon - Goossen #1-14 1310' FSL & 880' FEL Sec. 14 T28S R30W				COMPARISON WELL Falcon Love #1-1 330' FSL & 2200' FEL Sec. 1 T28S R30W			
	2806 KB				2806 KB		Structural Relationship		2808 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Chase	2651	155	2654	152	2657	149	6	3	2646	162	-7	-10
Winfield	2727	79	2729	77	2728	78	1	-1	2718	90	-11	-13
Towanda	2771	35	2774	32	2772	34	1	-2	2762	46	-11	-14
Ft. Riley	2819	-13	2827	-21	2820	-14	1	-7	2816	-8	-5	-13
Cottonwood	3069	-263	3070	-264	3082	-276	13	12	3066	-258	-5	-6
Neva	3151	-345	3151	-345	3145	-339	-6	-6	3142	-334	-11	-11
Foraker	3257	-451	3260	-454	3254	-448	-3	-6	3250	-442	-9	-12
Stotler	3492	-686	3495	-689	3486	-680	-6	-9	3488	-680	-6	-9
Tarkio	3567	-761	3568	-762	3561	-755	-6	-7	3562	-754	-7	-8
Bern	3659	-853	3663	-857	3656	-850	-3	-7	3660	-852	-1	-5
Topeka	3764	-958	3768	-962	3760	-954	-4	-8	3759	-951	-7	-11
Lecompton	3934	-1128	3935	-1129	3932	-1126	-2	-3	3939	-1131	3	2
Heebner	4117	-1311	4119	-1313	4112	-1306	-5	-7	4118	-1310	-1	-3
Lansing	4214	-1408	4217	-1411	4208	-1402	-6	-9	4216	-1408	0	-3
Stark	4551	-1745	4553	-1747	4550	-1744	-1	-3	4549	-1741	-4	-6
Marmaton	4711	-1905	4709	-1903	4710	-1904	-1	1	4710	-1902	-3	-1
Pawnee	4795	-1989	4798	-1992	4796	-1990	1	-2	4793	-1985	-4	-7
Cherokee	4842	-2036	4845	-2039	4838	-2032	-4	-7	4845	-2037	1	-2
Miss St. Gen.	5082	-2276	5085	-2279	5090	-2284	8	5	5055	-2247	-29	-32
St. Louis por	5180	-2374	5184	-2378	5198	-2392	18	14	5156	-2348	-26	-30
Warsaw	np				5554	-2748			np			
Osage	np				5844	-3038			np			
Viola	np				6100	-3294			np			
Arbuckle	np				6278	-3472			np			
Total Depth	5400	-2594	5406	-2600	6379	-3573	979	973	5632	-2824	230	224

	COMPARISON WELL Apache – Harvey #1 C NE SE Sec. 14 T28S R30W			
	2799 KB		Structural Relationship	
Formation	Log	Sub-Sea	Sample	Log
Chase	2658	141	14	11
Winfield	2726	73	6	4
Towanda	2773	26	9	6
Ft. Riley	2822	-23	10	2
Cottonwood	3068	-269	6	5
Neva	3148	-349	4	4
Foraker	3258	-459	8	5
Stotler	3492	-693	7	4
Tarkio	3568	-769	8	7
Bern	3666	-867	14	10
Topeka	3770	-971	13	9
Lecompton	3943	-1144	16	15
Heebner	4122	-1323	12	10
Lansing	4219	-1420	12	9
Stark	4568	-1769	24	22
Marmaton	4720	-1921	16	18
Pawnee	4811	-2012	23	20
Cherokee	4854	-2055	19	16
Miss St. Gen.	5124	-2325	49	46
St. Louis por	5220	-2421	47	43
Warsaw	np			
Osage	np			
Viola	np			
Arbuckle	np			
Total Depth	5507	-2708	114	108

Company	**Falcon Exploration, Inc.**	Lease Name	**Dirks**
Address	**125 N. Market, Ste. 1252**	Lease #	**1-12**
CSZ	**Wichita, KS 67202**	Legal Desc	**See Comments**
Attn.	**Keith Reavis**	Section	**12**
		Township	**28S**
		County	**Gray**
		Drilling Cont	**Sterling Drilling Co. Rig #5**

Job Ticket **2130** Range **30W** State **KS**

Comments **Legal Description: 2020' FSL & 770' FWL**

GENERAL INFORMATION

Test # **1** Test Date **12/3/2010**
Tester **Tim Venters**
Test Type **Conventional Bottom Hole**
Successful Test
# of Packers **2.0** Packer Size **6 3/4**

Mud Type **Gel Chem**
Mud Weight **8.9** Viscosity **49.0**
Filtrate **8.0** Chlorides **3000**

Drill Collar Len **277.0**
Wght Pipe Len **0**

Formation **Stotler**
Interval Top **3458.0** Bottom **3531.0**
Anchor Len Below **73.0** Between **0**
Total Depth **3531.0**

Chokes **3/4** Hole Size **7 7/8**
Top Recorder # **W1119**
Mid Recorder # **W1022**
Bott Recorder # **13310**

Mileage **224** Approved By
Standby Time **0**
Extra Equipmnt **Jars & Safety joint**
Time on Site **1:10 AM**
Tool Picked Up **3:35 AM**
Tool Layed Dwn **2:15 PM**

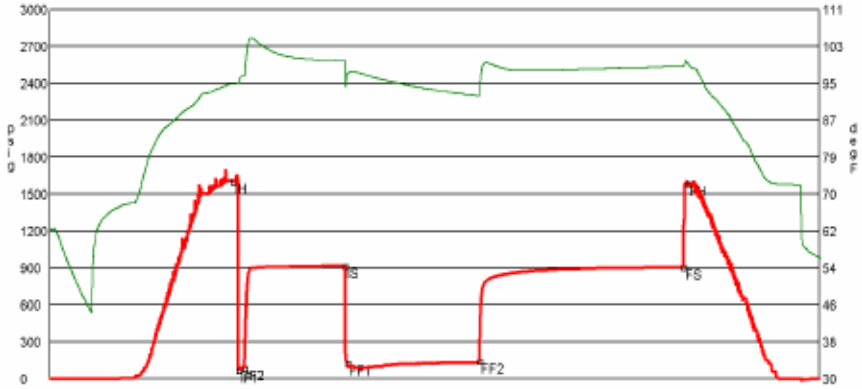
Elevation **2793.00** Kelley Bushings **2806.00**

Start Date/Time **12/3/2010 2:54 AM**
End Date/Time **12/3/2010 2:19 PM**

Blow Type **Strong blow throughout the intial flow period, hitting BOB instantaneously. We ak surface blow back about 4 min. after we bled line off (9 min.) during the ini tial shut-in period, lasting about 15-20 min. Very strong blow throughout the f inal flow period, hitting the BOB instantaneously. Gas to surface, 1 min. Weak surface blow back 5 min. after we bled line off (20 min.) during the final shut-in period, lasting the rest of the period. Times: 5, 90, 120, 180.**

RECOVERY

Feet	Description	Gas	Oil	Water	Mud
3210	Gas in Pipe	100% 3210ft	0% 0ft	0% 0ft	0% 0ft
225	Mud	0% 0ft	0% 0ft	0% 0ft	100% 225ft



	Date	Time	Pressure	Temp	
IH	12/3/2010 5:35:50 AM	2.697222	1609.033	94.689	Initial Hydro-static
IF1	12/3/2010 5:41:10 AM	2.786111	70.637	94.96	Initial Flow (1)
IF2	12/3/2010 5:46:10 AM	2.869444	85.743	96.405	Initial Flow (2)
IS	12/3/2010 7:16:00 AM	4.366667	917.734	99.686	Initial Shut-In
FF1	12/3/2010 7:17:50 AM	4.397222	125.076	96.684	Final Flow (1)
FF2	12/3/2010 9:15:50 AM	6.363889	143.743	92.036	Final Flow (2)
FS	12/3/2010 12:17:00 PM	9.383333	906.701	98.514	Final Shut-In
FH	12/3/2010 12:21:20 PM	9.455556	1585.151	99.122	Final Hydro-static

GAS FLOWS

Min Into IFP	Min Into FFP	Gas Flows	Pressure	Choke
0	10	101.00 mcf	8.00 psig	0.50 in
0	20	205.00 mcf	25.00 psig	0.50 in
0	30	231.00 mcf	30.00 psig	0.50 in
0	40	265.00 mcf	36.00 psig	0.50 in
0	50	279.00 mcf	39.00 psig	0.50 in
0	60	290.00 mcf	41.00 psig	0.50 in
0	70	296.00 mcf	42.00 psig	0.50 in
0	80	306.00 mcf	44.00 psig	0.50 in
0	90	306.00 mcf	44.00 psig	0.50 in
0	100	311.00 mcf	45.00 psig	0.50 in
0	110	315.00 mcf	46.00 psig	0.50 in
0	120	315.00 mcf	46.00 psig	0.50 in

Company	**Falcon Exploration, Inc.**	Lease Name	**Dirk**		
Address	**125 North Market, Suite 1252**	Lease #	**1-12**		
CSZ	**Wichita, KS 67202**	Legal Desc	**SW NE NW SW**	Job Ticket	**3406**
Attn.	**Keith Reavis**	Section	**12**	Range	**30W**
		Township	**28S**		
		County	**Gray**	State	**KS**
		Drilling Cont	**Sterling Drilling #5**		
Comments	**Field: WC**				

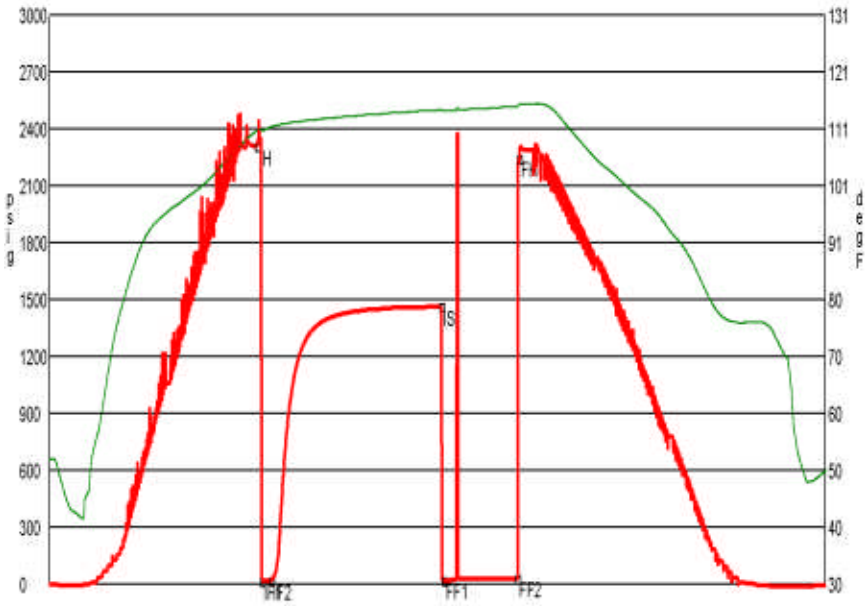
GENERAL INFORMATION

Test #	**2**	Test Date	**12/7/2010**	Chokes	**3/4**	Hole Size	**7 7/8**
Tester	**Jimmy Ricketts**			Top Recorder #	**13676**		
Test Type	**Conventional Bottom Hole**			Mid Recorder #			
	Successful Test			Bott Recorder #	**w1023**		
# of Packers	**2.0**	Packer Size	**6 3/4**	Mileage	**224**	Approved By	
				Standby Time	**0**		
Mud Type	**Gel Chem**			Extra Equipmnt	**Jars & Safety Joint**		
Mud Weight	**9.2**	Viscosity	**56.0**	Time on Site	**10:20 AM**		
Filtrate	**8.0**	Chlorides	**1400**	Tool Picked Up	**11:20 AM**		
				Tool Layed Dwn	**5:15 PM**		
Drill Collar Len	**287.0**						
Wght Pipe Len	**0**			Elevation	**2793.00**	Kelley Bushings	**2806.00**
Formation	**Pawnee**			Start Date/Time	**12/7/2010 10:59 AM**		
Interval Top	**4790.0**	Bottom	**4827.0**	End Date/Time	**12/7/2010 5:47 PM**		
Anchor Len Below	**37.0**	Between	**0**				
Total Depth	**4827.0**						

Blow Type **Weak surface blow throughout initial flow period. No blow final flow period, flushed tool, very weak surface blow. Times: 5, 90, 41, 0.**

RECOVERY

Feet	Description	Gas		Oil		Water		Mud
20	Drilling mud	0%	0ft	0%	0ft	0%	0ft	100%20ft



	Date	Time	Pressure	Temp	
IH	12/7/2010 12:47:10 PM	1.802778	2310.385	110.386	Initial Hydro-static
IF1	12/7/2010 12:49:50 PM	1.847222	18.41	110.508	Initial Flow (1)
IF2	12/7/2010 12:54:40 PM	1.927778	20.102	111.161	Initial Flow (2)
IS	12/7/2010 2:24:20 PM	3.422222	1464.969	114.193	Initial Shut-In
FF1	12/7/2010 2:25:40 PM	3.444444	22.305	113.995	Final Flow (1)
FF2	12/7/2010 3:04:20 PM	4.088889	32.95	114.803	Final Flow (2)
FH	12/7/2010 3:05:10 PM	4.102778	2248.391	115.145	Final Hydro-static

Company	**Falcon Exploration, Inc.**	Lease Name	**Dirk**		
Address	**125 North Market, Suite 1252**	Lease #	**1-12**		
CSZ	**Wichita, KS 67202**	Legal Desc	**SW NE NW SW**	Job Ticket	**2130**
Attn.	**Keith Reavis**	Section	**12**	Range	**30W**
		Township	**28S**		
		County	**Gray**	State	**KS**
		Drilling Cont	**Sterling Drilling Rig #5**		
Comments	**Field: WC**				

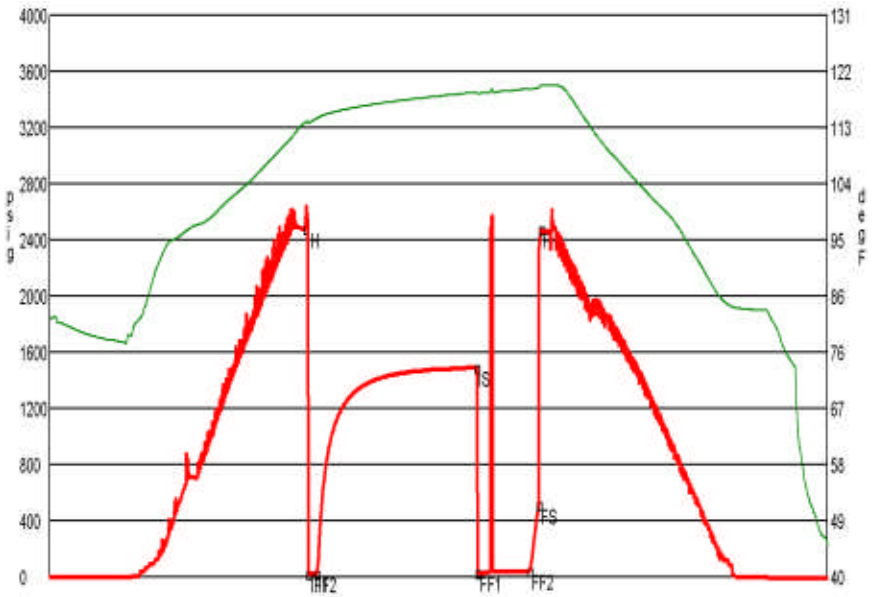
GENERAL INFORMATION

Test #	**3**	Test Date	**12/9/2010**	Chokes	**3/4**	Hole Size	**7 7/8**
Tester	**Jimmy Ricketts**			Top Recorder #	**13767**		
Test Type	**Conventional Bottom Hole**			Mid Recorder #			
	Successful Test			Bott Recorder #	**w1023**		
# of Packers	**2.0**	Packer Size	**6 3/4**	Mileage	**0**	Approved By	
				Standby Time	**4**		
Mud Type	**Gel Chem**			Extra Equipmnt	**Jars & Safety Joint**		
Mud Weight	**9.2**	Viscosity	**59.0**	Time on Site	**12:00 PM**		
Filtrate	**8.0**	Chlorides	**2200**	Tool Picked Up	**2:00 PM**		
				Tool Layed Dwn	**8:30 PM**		
Drill Collar Len	**277.0**						
Wght Pipe Len	**0**			Elevation	**2793.00**	Kelley Bushings	**2806.00**
Formation	**Mississippian**			Start Date/Time	**12/9/2010 1:39 PM**		
Interval Top	**5174.0**	Bottom	**5232.0**	End Date/Time	**12/9/2010 8:56 PM**		
Anchor Len Below	**58.0**	Between	**0**				
Total Depth	**5232.0**						

Blow Type **Weak blow building to 1 inch initial flow period. No blow final flow period, fl ushed tool, no help. Times: 5, 90, 30, 5.**

RECOVERY

Feet	Description	Gas	Oil	Water	Mud
40	Drilling mud	0% 0ft	0% 0ft	0% 0ft	100%40ft



	Date	Time	Pressure	Temp	
IH	12/9/2010 4:01:15 PM	2.370833	2481.562	113.628	Initial Hydro-static
IF1	12/9/2010 4:03:00 PM	2.4	21.476	113.604	Initial Flow (1)
IF2	12/9/2010 4:07:30 PM	2.475	25.283	114.245	Initial Flow (2)
IS	12/9/2010 5:37:45 PM	3.979167	1490.825	118.531	Initial Shut-In
FF1	12/9/2010 5:38:30 PM	3.991667	29.431	118.363	Final Flow (1)
FF2	12/9/2010 6:07:45 PM	4.479167	44.053	119.071	Final Flow (2)
FS	12/9/2010 6:13:00 PM	4.566667	512.691	119.262	Final Shut-In
FH	12/9/2010 6:14:00 PM	4.583333	2473.582	119.601	Final Hydro-static

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

MINERAL

- Slty
- 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
- Grysltt
- Grysh
- Dol
- Clystn
- Carbsh
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

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

OIL SHOW

- Gas show
- Good
- Fair
- Poor
- Dead

INTERVAL

- Dst
- Core
- Dst
- Straddle test tail pipe

EVENT

- Rft
- Sidewall
- Dst
- Open hole
- Perforations

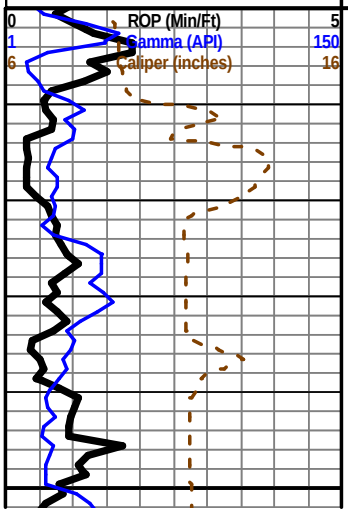
Curve Track 1

- ROP (Min/Ft)
- Gamma (API)
- Caliper (inches)

Depth | **Lithology** | **Oil Shows** | **Geological Descriptions**

Engineering Data

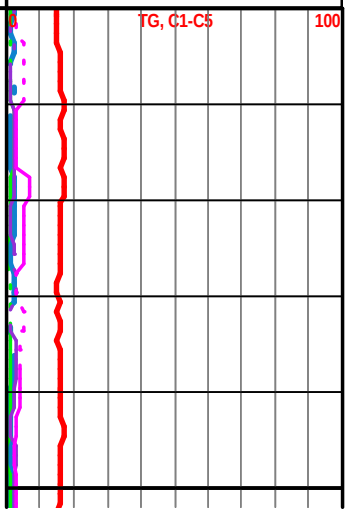
- TG (Units)
- C1 (units)
- C2 (units)
- C3 (units)
- C4 (units)
- C5 (units)

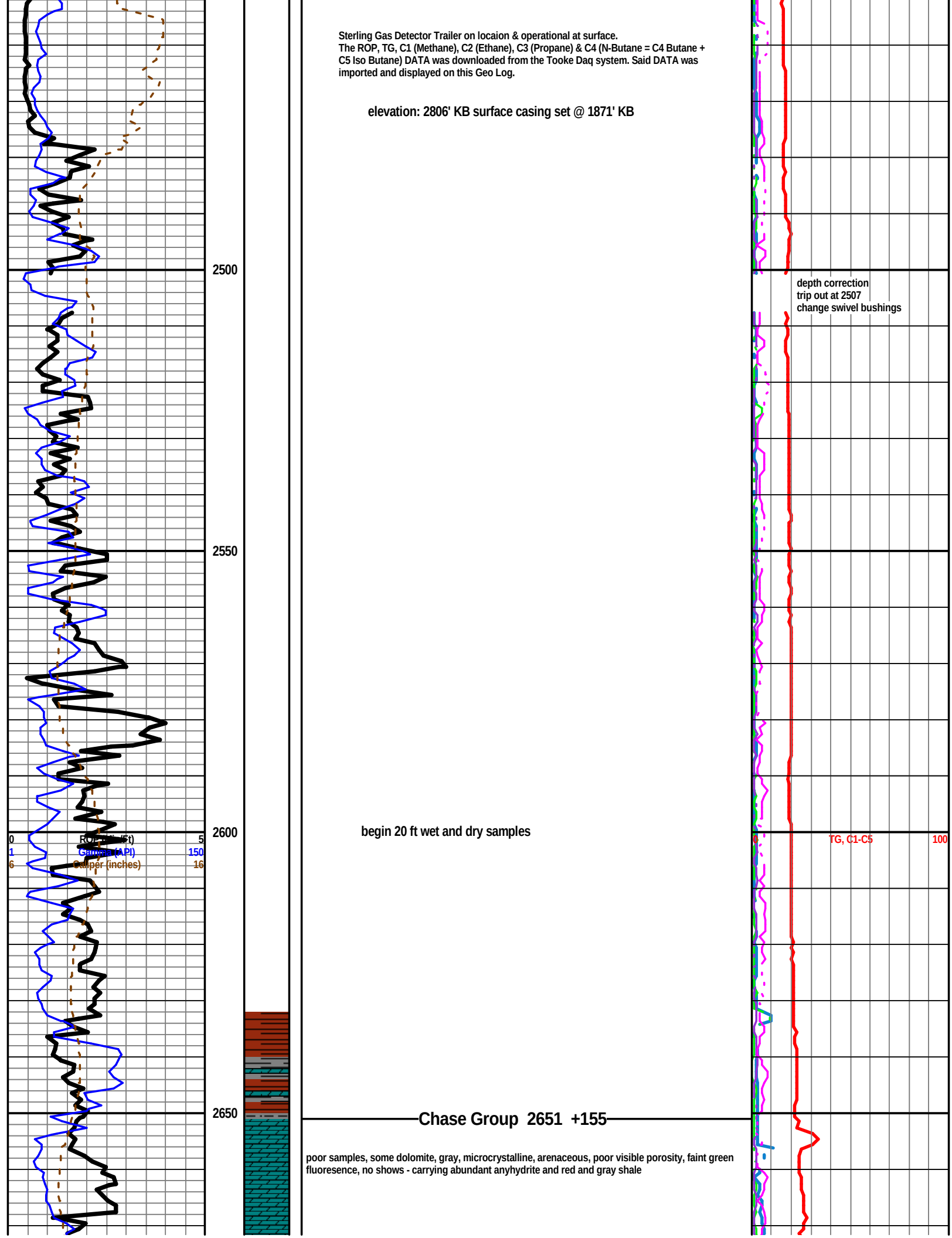


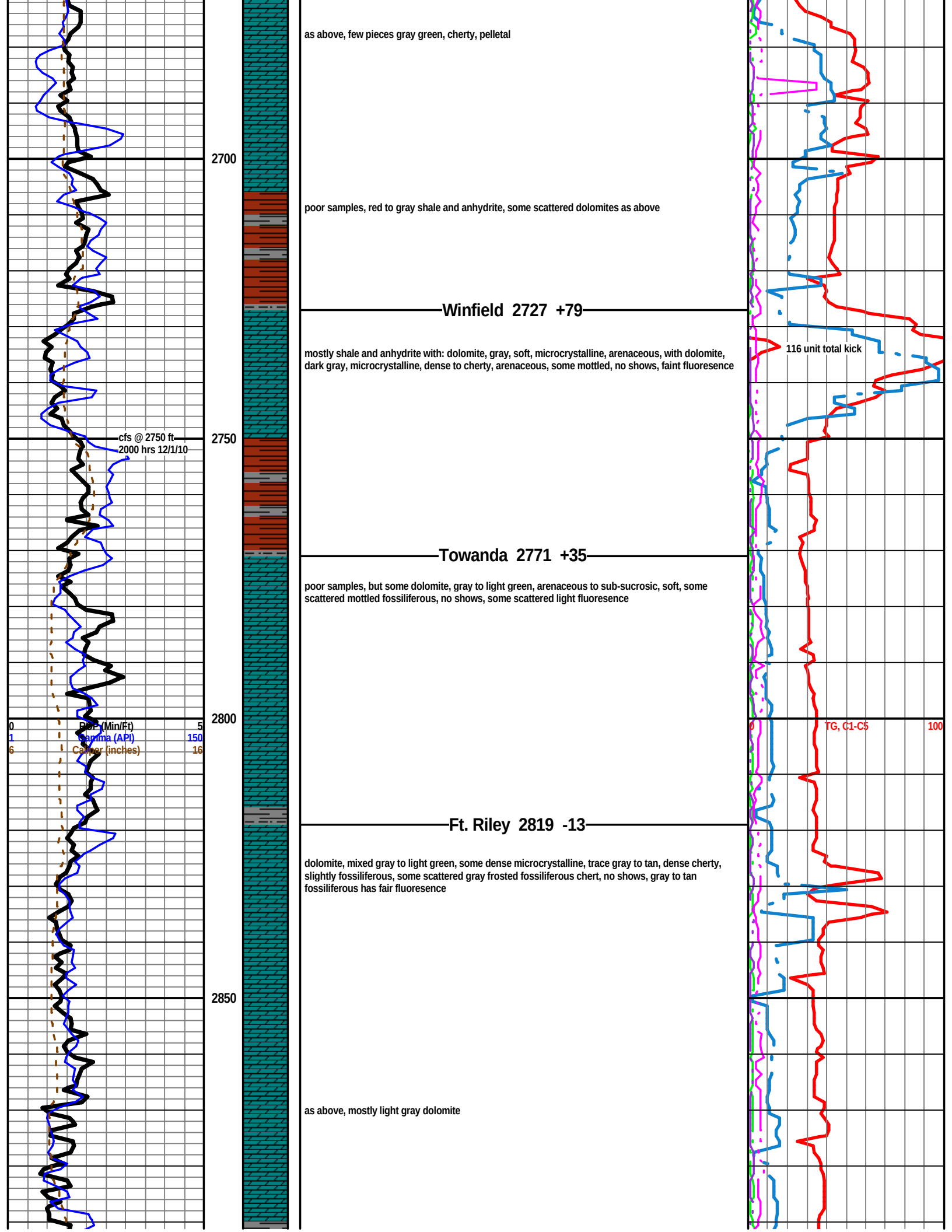
Falcon Exploration, Inc.
Dirks #1-12
2020' FSL & 770' FWL
Sec. 12-28S-30W
Gray County, KS

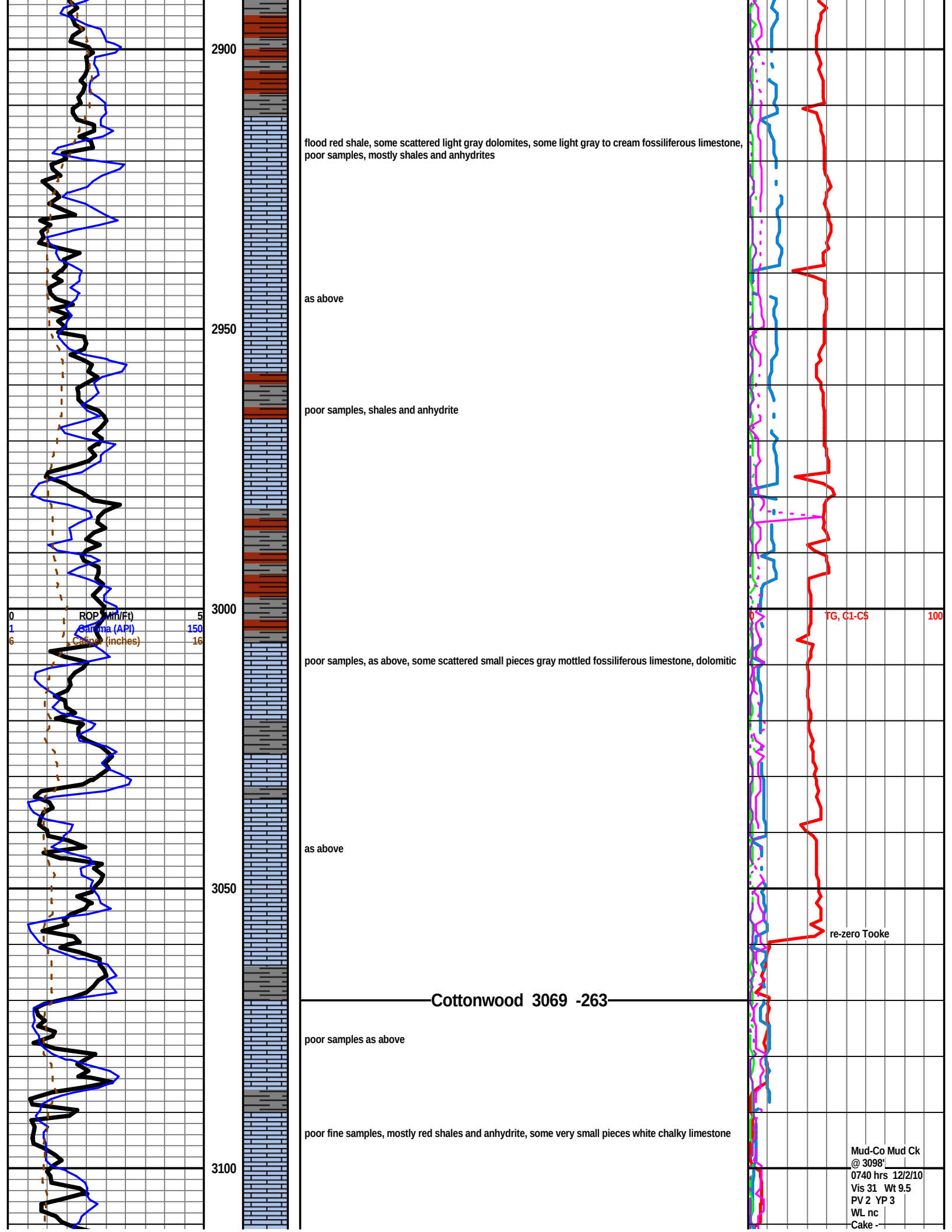
Drilling Contractor - Sterling Drilling Rig #5
Cell #620-388-5433
Toolpusher: Alan Loftis

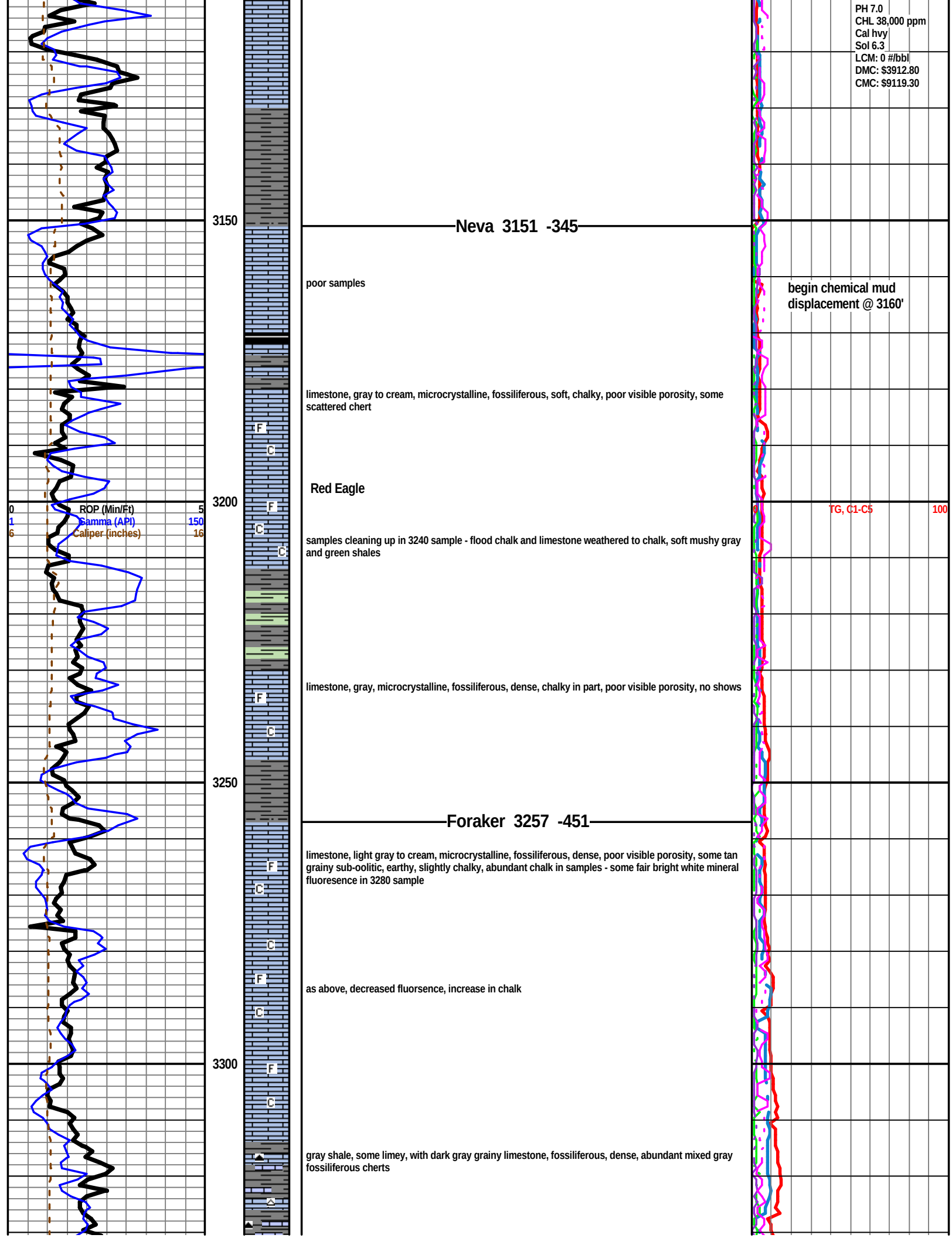
Geologist: Keith Reavis

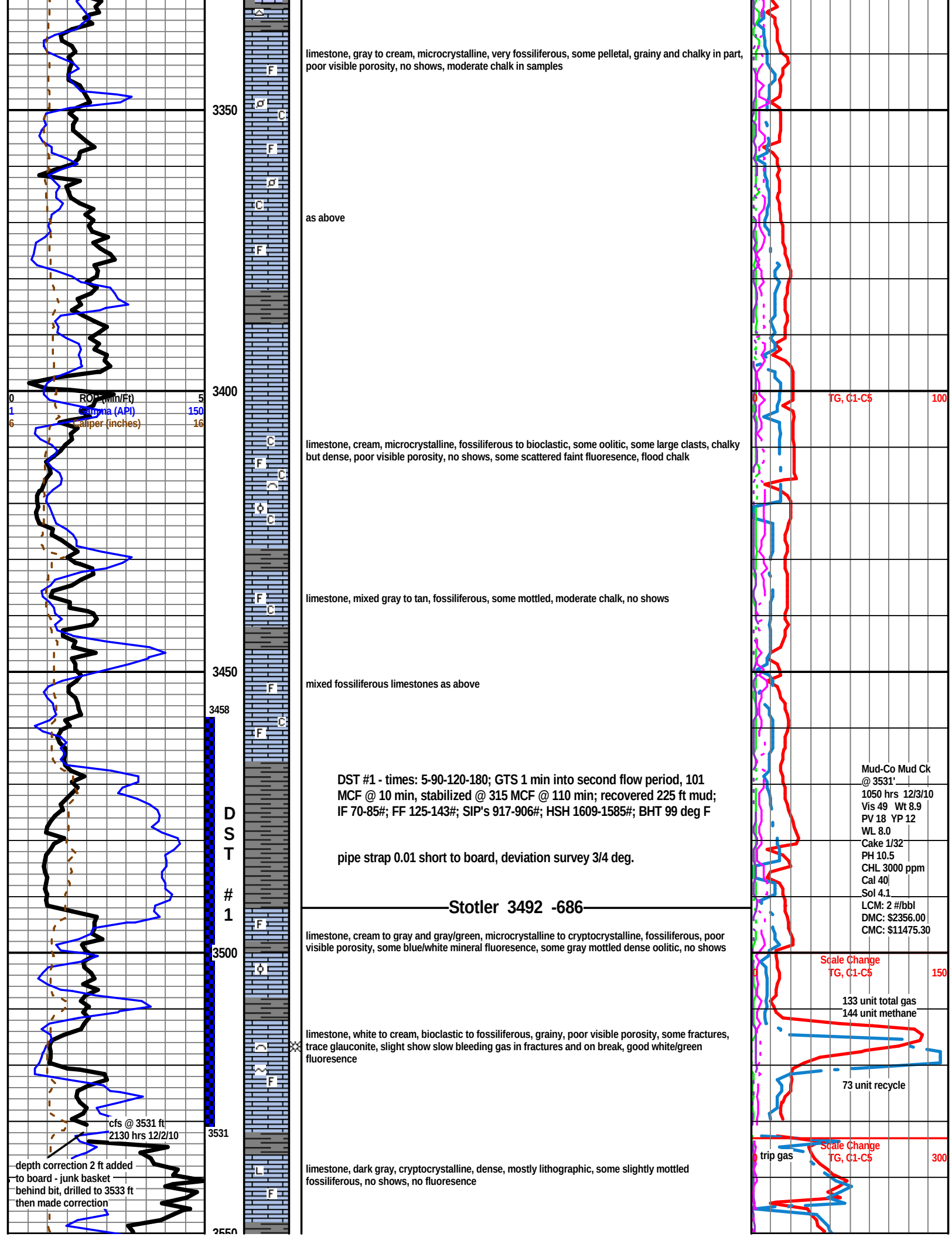


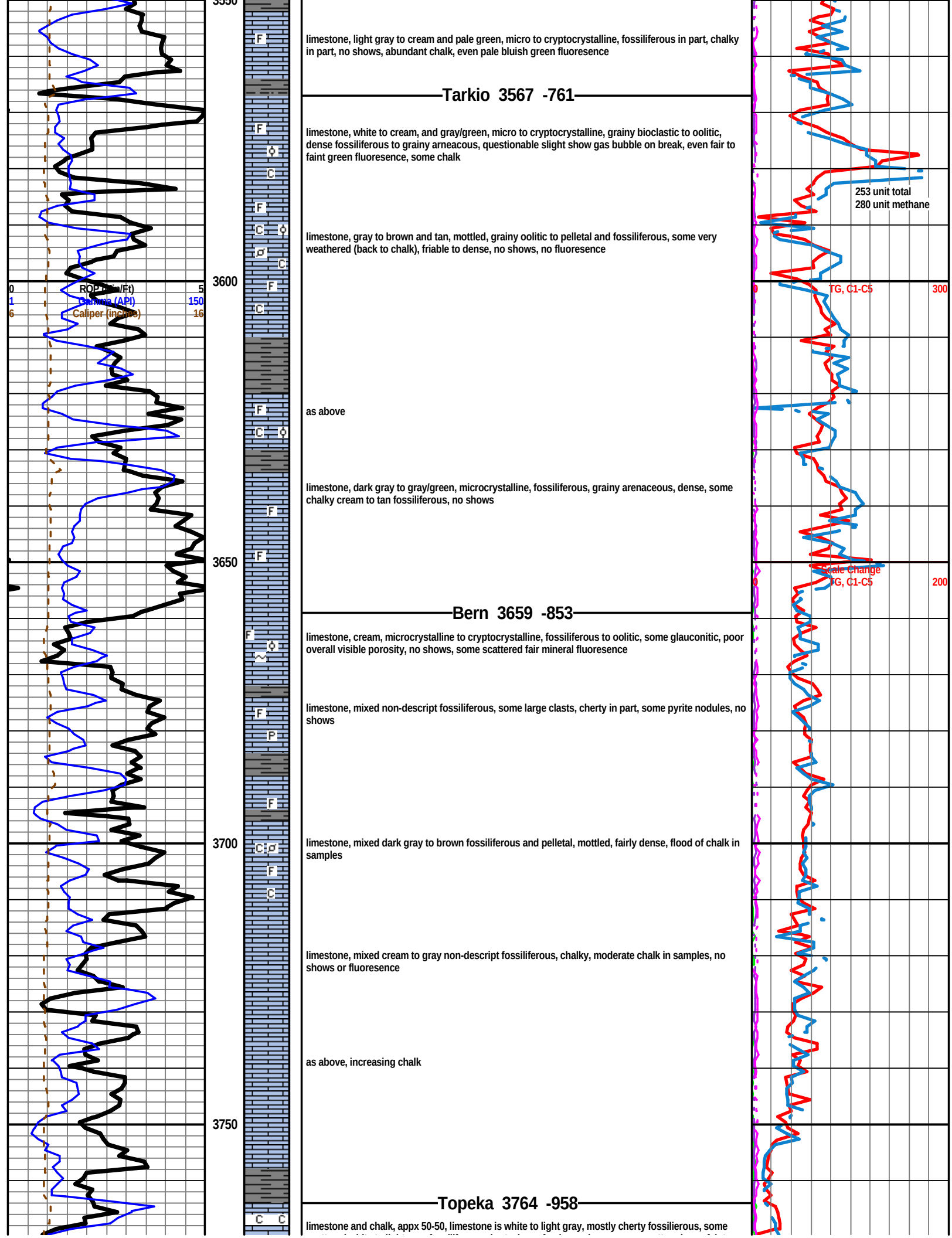

Sterling Gas Detector Trailer on locaion & operational at surface.
The ROP, TG, C1 (Methane), C2 (Ethane), C3 (Propane) & C4 (N-Butane = C4 Butane + C5 Iso Butane) DATA was downloaded from the Tooke Daq system. Said DATA was imported and displayed on this Geo Log.
elevation: 2806' KB surface casing set @ 1871' KB
2500
depth correction
trip out at 2507
change swivel bushings
2550
2600
begin 20 ft wet and dry samples
0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
0
TG, C1-C5
100
2650
Chase Group 2651 +155
poor samples, some dolomite, gray, microcrystalline, arenaceous, poor visible porosity, faint green fluoresence, no shows - carrying abundant anyhydrite and red and gray shale

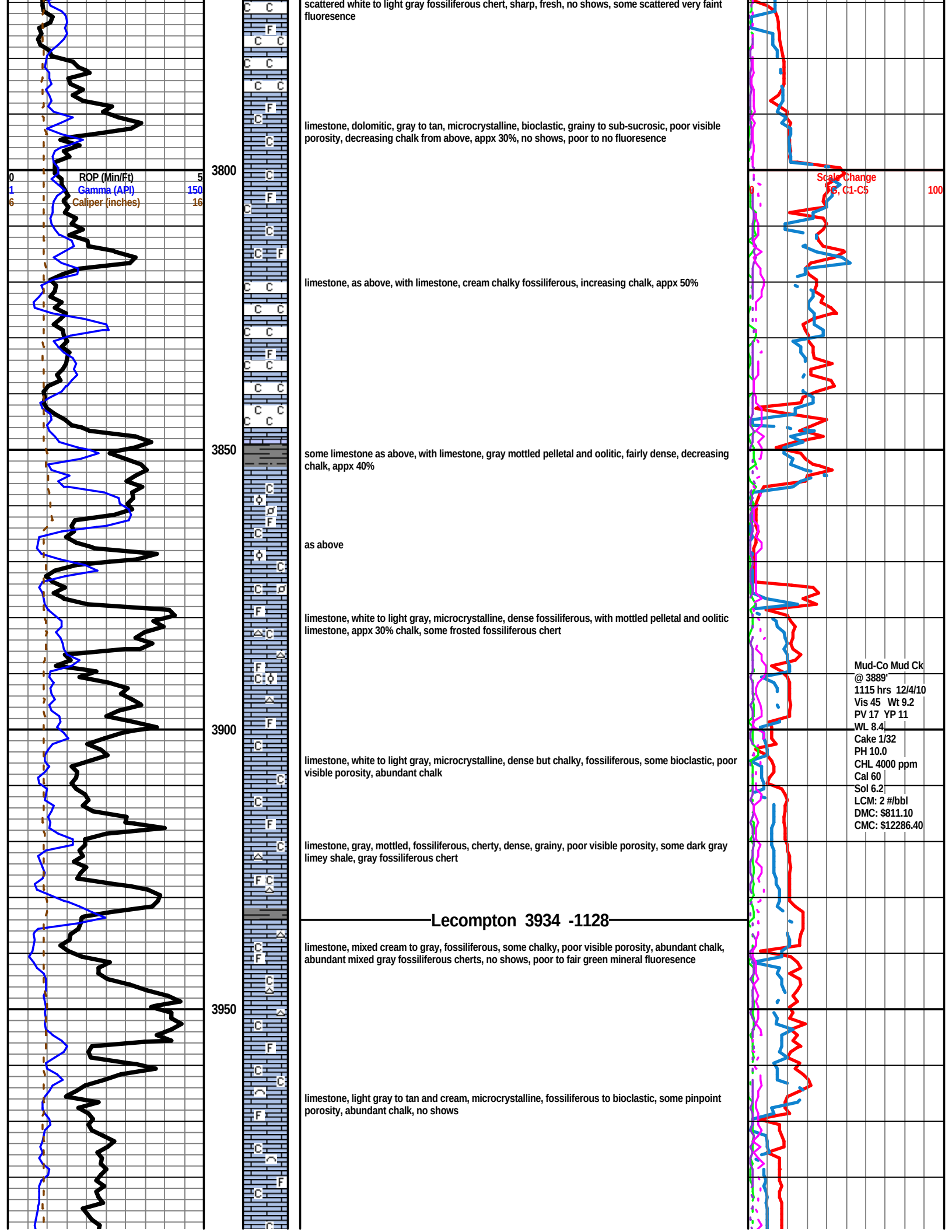

as above, few pieces gray green, cherty, pelletal
2700
poor samples, red to gray shale and anhydrite, some scattered dolomites as above
Winfield 2727 +79
mostly shale and anhydrite with: dolomite, gray, soft, microcrystalline, arenaceous, with dolomite, dark gray, microcrystalline, dense to cherty, arenaceous, some mottled, no shows, faint fluoresence
116 unit total kick
cfs @ 2750 ft
2000 hrs 12/1/10
2750
Towanda 2771 +35
poor samples, but some dolomite, gray to light green, arenaceous to sub-sucrosic, soft, some scattered mottled fossiliferous, no shows, some scattered light fluoresence
2800
0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
0
TG, C1-C5
100
Ft. Riley 2819 -13
dolomite, mixed gray to light green, some dense microcrystalline, trace gray to tan, dense cherty, slightly fossiliferous, some scattered gray frosted fossiliferous chert, no shows, gray to tan fossiliferous has fair fluoresence
2850
as above, mostly light gray dolomite

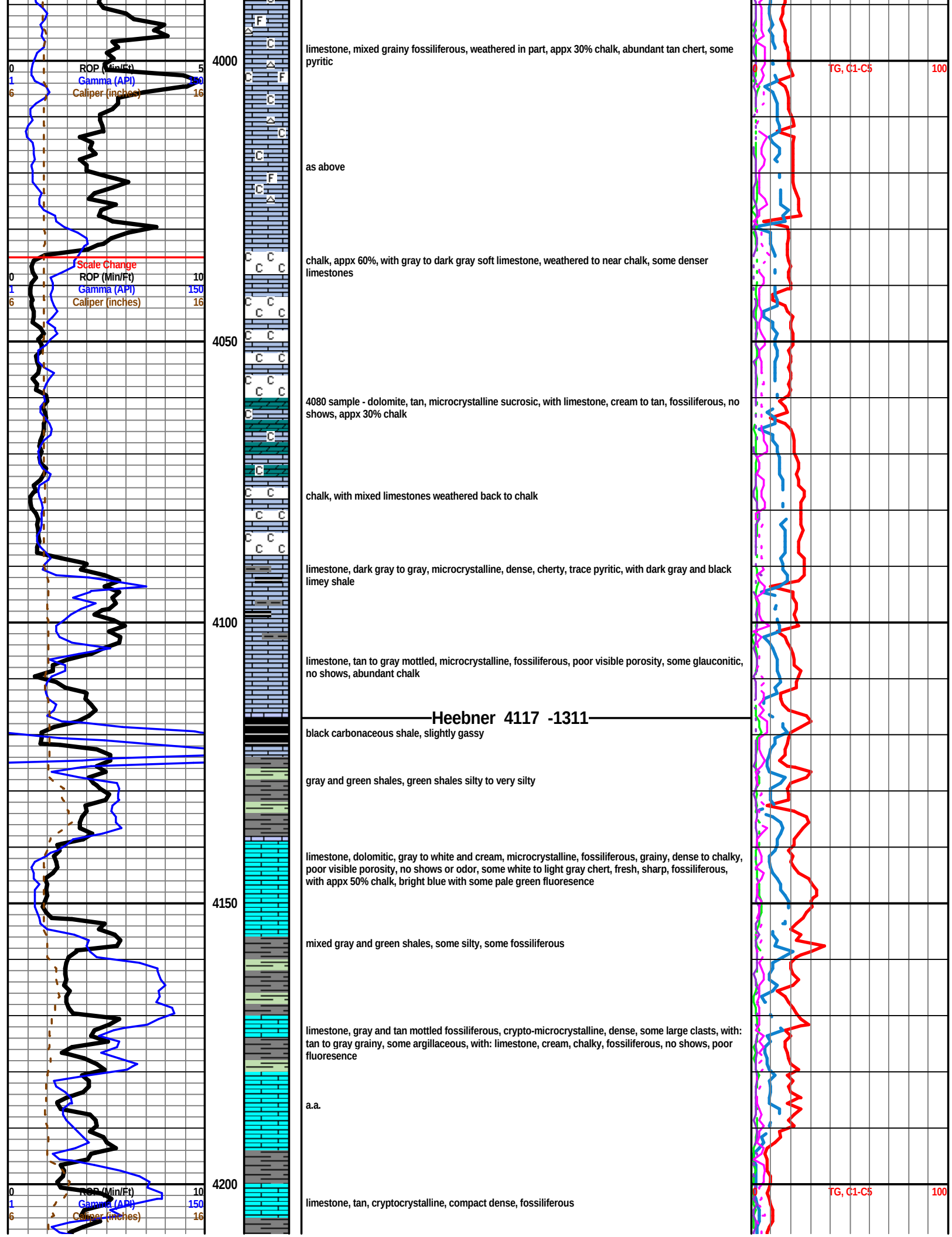

2900
2950
3000
3050
3100
0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
0
TG, C1-C5
100
flood red shale, some scattered light gray dolomites, some light gray to cream fossiliferous limestone, poor samples, mostly shales and anhydrites
as above
poor samples, shales and anhydrite
poor samples, as above, some scattered small pieces gray mottled fossiliferous limestone, dolomitic
as above
re-zero Tooke
Cottonwood 3069 -263
poor samples as above
poor fine samples, mostly red shales and anhydrite, some very small pieces white chalky limestone
Mud-Co Mud Ck
@ 3098'
0740 hrs 12/2/10
Vis 31 Wt 9.5
PV 2 YP 3
WL nc
Cake -

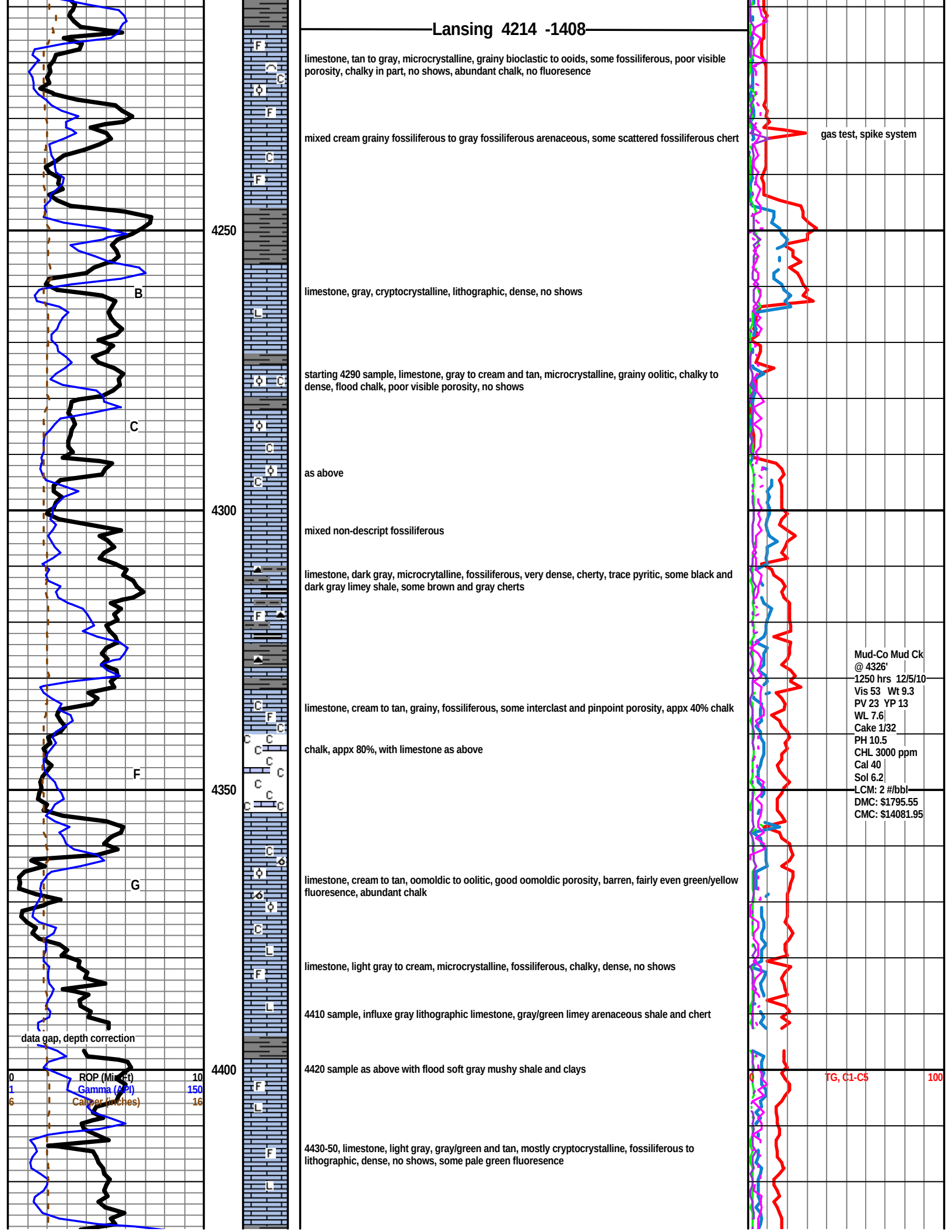

PH 7.0
CHL 38,000 ppm
Cal hvy
Sol 6.3
LCM: 0 #/bbl
DMC: $3912.80
CMC: $9119.30
3150
Neva 3151 -345
poor samples
begin chemical mud displacement @ 3160'
limestone, gray to cream, microcrystalline, fossiliferous, soft, chalky, poor visible porosity, some scattered chert
Red Eagle
3200
0 ROP (Min/Ft) 5
1 Gamma (API) 150
6 Caliper (inches) 16
TG, C1-C5
samples cleaning up in 3240 sample - flood chalk and limestone weathered to chalk, soft mushy gray and green shales
limestone, gray, microcrystalline, fossiliferous, dense, chalky in part, poor visible porosity, no shows
3250
Foraker 3257 -451
limestone, light gray to cream, microcrystalline, fossiliferous, dense, poor visible porosity, some tan grainy sub-oolitic, earthy, slightly chalky, abundant chalk in samples - some fair bright white mineral fluoresence in 3280 sample
as above, decreased fluorsence, increase in chalk
3300
gray shale, some limey, with dark gray grainy limestone, fossiliferous, dense, abundant mixed gray fossiliferous cherts

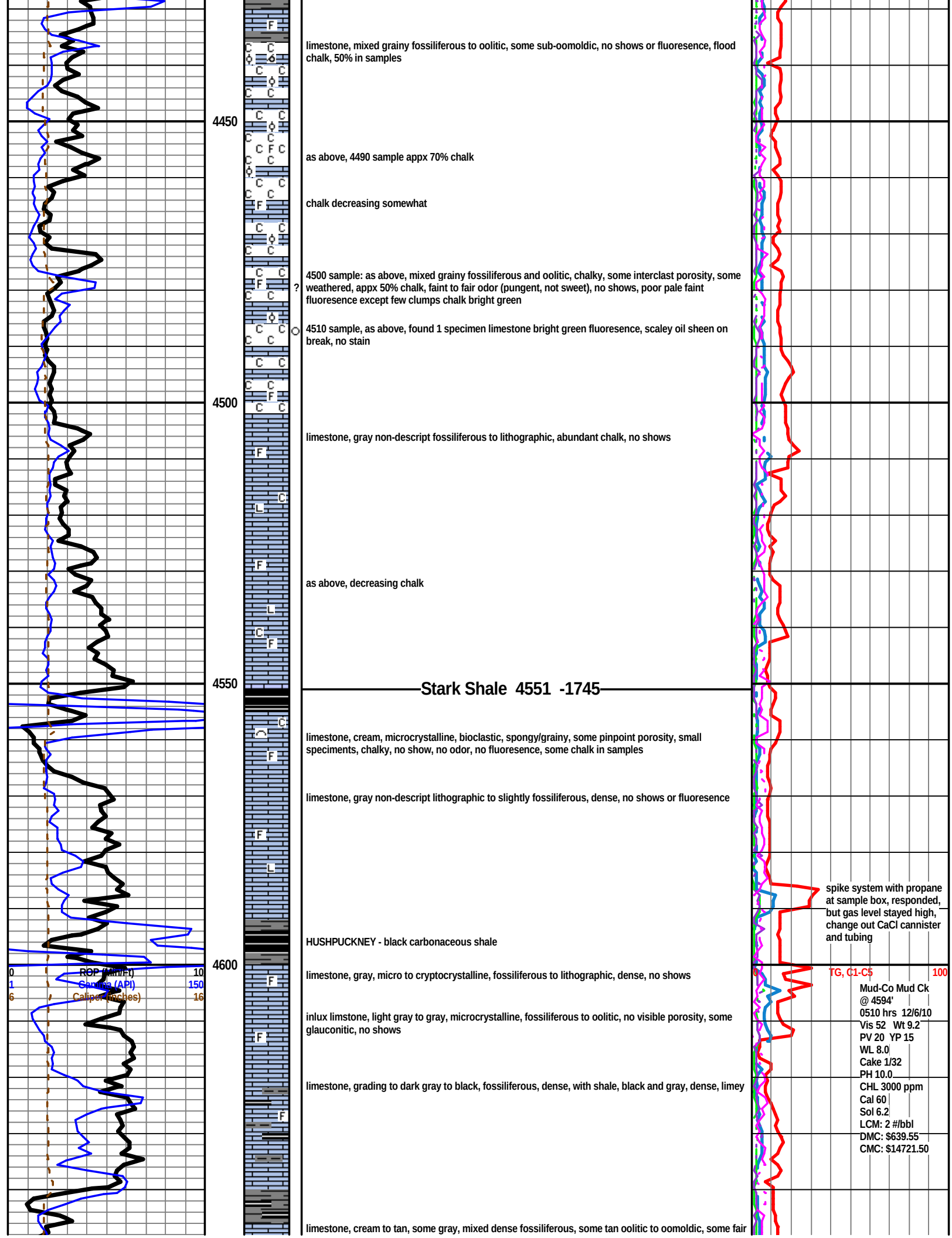

3350
3400
3450
3500
3531
3458
0
ROP (min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
DST #1
cfs @ 3531 ft
2130 hrs 12/2/10
depth correction 2 ft added
to board - junk basket
behind bit, drilled to 3533 ft
then made correction
limestone, gray to cream, microcrystalline, very fossiliferous, some pelletal, grainy and chalky in part, poor visible porosity, no shows, moderate chalk in samples
as above
limestone, cream, microcrystalline, fossiliferous to bioclastic, some oolitic, some large clasts, chalky but dense, poor visible porosity, no shows, some scattered faint fluoresence, flood chalk
limestone, mixed gray to tan, fossiliferous, some mottled, moderate chalk, no shows
mixed fossiliferous limestones as above
DST #1 - times: 5-90-120-180; GTS 1 min into second flow period, 101 MCF @ 10 min, stabilized @ 315 MCF @ 110 min; recovered 225 ft mud; IF 70-85#; FF 125-143#; SIP's 917-906#; HSH 1609-1585#; BHT 99 deg F
pipe strap 0.01 short to board, deviation survey 3/4 deg.
Stotler 3492 -686
limestone, cream to gray and gray/green, microcrystalline to cryptocrystalline, fossiliferous, poor visible porosity, some blue/white mineral fluoresence, some gray mottled dense oolitic, no shows
limestone, white to cream, bioclastic to fossiliferous, grainy, poor visible porosity, some fractures, trace glauconite, slight show slow bleeding gas in fractures and on break, good white/green fluoresence
limestone, dark gray, cryptocrystalline, dense, mostly lithographic, some slightly mottled fossiliferous, no shows, no fluoresence
0
TG, C1-C5
100
Mud-Co Mud Ck
@ 3531'
1050 hrs 12/3/10
Vis 49 Wt 8.9
PV 18 YP 12
WL 8.0
Cake 1/32
PH 10.5
CHL 3000 ppm
Cal 40
Sol 4.1
LCM: 2 #/bbl
DMC: $2356.00
CMC: $11475.30
Scale Change
TG, C1-C5
0
150
133 unit total gas
144 unit methane
73 unit recycle
trip gas
Scale Change
TG, C1-C5
0
300

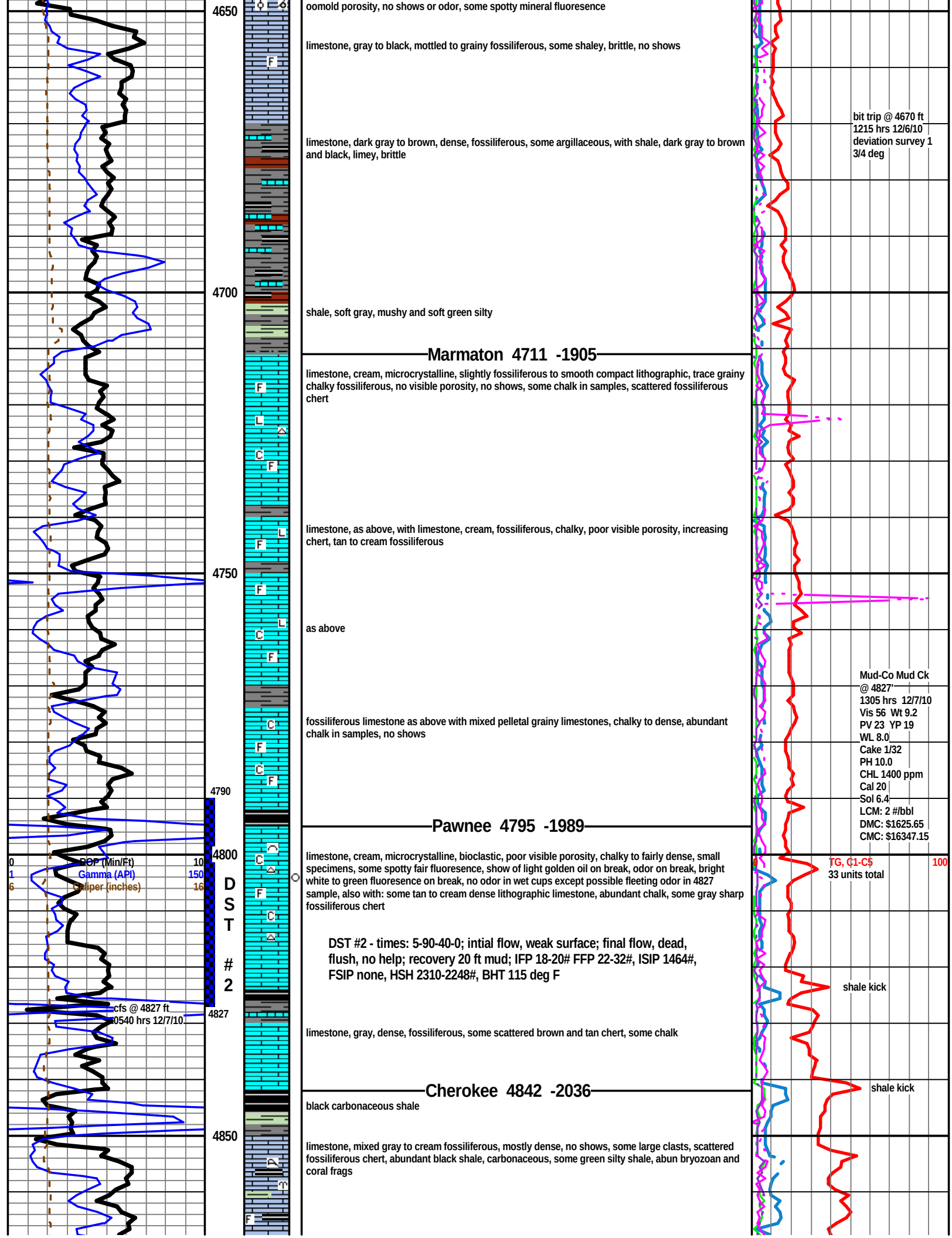

0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
3550
3600
3650
3700
3750
limestone, light gray to cream and pale green, micro to cryptocrystalline, fossiliferous in part, chalky in part, no shows, abundant chalk, even pale bluish green fluoresence
Tarkio 3567 -761
limestone, white to cream, and gray/green, micro to cryptocrystalline, grainy bioclastic to oolitic, dense fossiliferous to grainy arneacous, questionable slight show gas bubble on break, even fair to faint green fluoresence, some chalk
253 unit total
280 unit methane
limestone, gray to brown and tan, mottled, grainy oolitic to pelletal and fossiliferous, some very weathered (back to chalk), friable to dense, no shows, no fluoresence
0
TG, C1-C5
300
as above
limestone, dark gray to gray/green, microcrystalline, fossiliferous, grainy arenaceous, dense, some chalky cream to tan fossiliferous, no shows
Scale Change
0
TG, C1-C5
200
Bern 3659 -853
limestone, cream, microcrystalline to cryptocrystalline, fossiliferous to oolitic, some glauconitic, poor overall visible porosity, no shows, some scattered fair mineral fluoresence
limestone, mixed non-descript fossiliferous, some large clasts, cherty in part, some pyrite nodules, no shows
limestone, mixed dark gray to brown fossiliferous and pelletal, mottled, fairly dense, flood of chalk in samples
limestone, mixed cream to gray non-descript fossiliferous, chalky, moderate chalk in samples, no shows or fluoresence
as above, increasing chalk
Topeka 3764 -958
limestone and chalk, appx 50-50, limestone is white to light gray, mostly cherty fossilierous, some

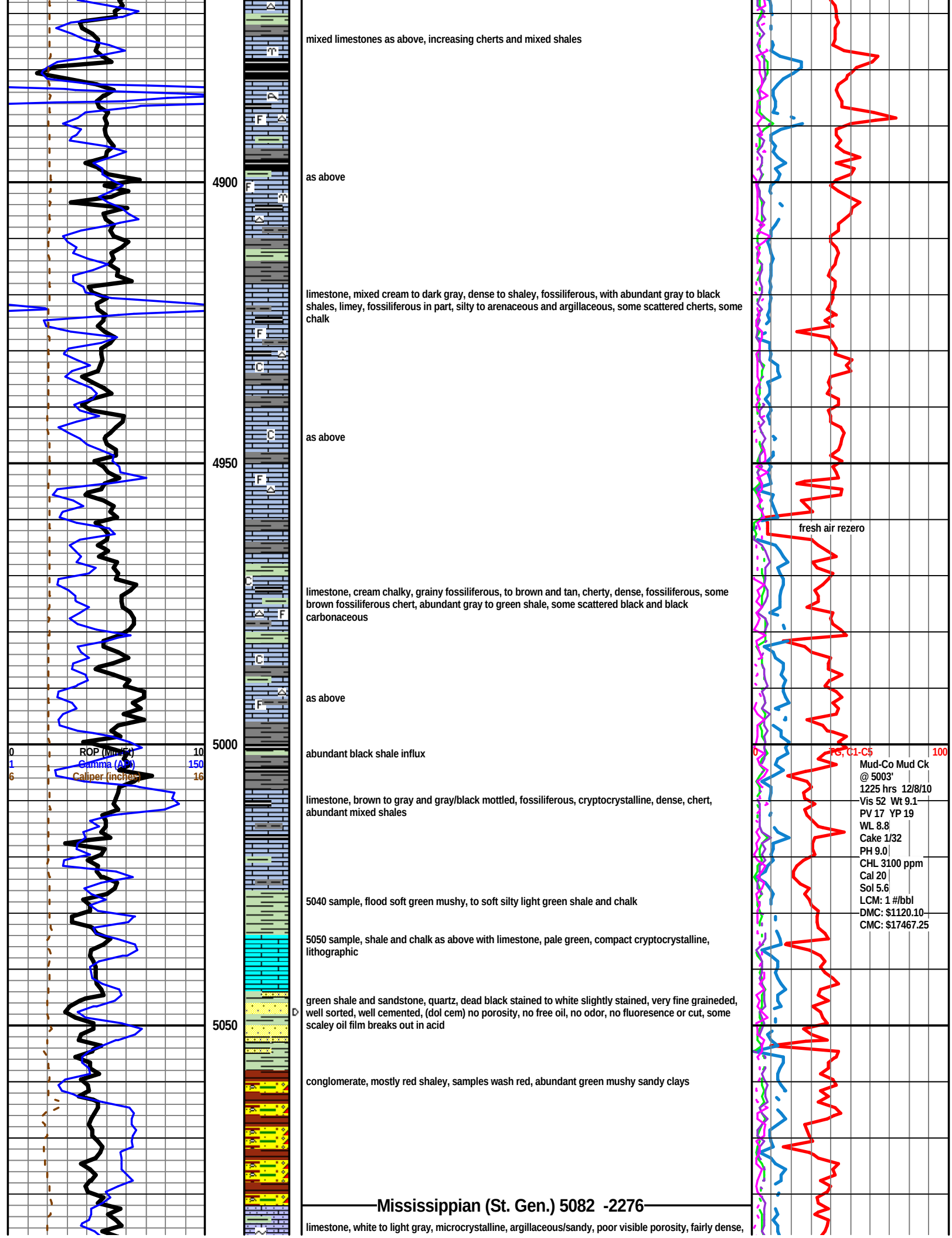

0 ROP (Min/Ft) 5
1 Gamma (API) 150
6 Caliper (inches) 16
3800
3850
3900
3950
scattered white to light gray fossiliferous chert, sharp, fresh, no shows, some scattered very faint fluoresence
limestone, dolomitic, gray to tan, microcrystalline, bioclastic, grainy to sub-sucrosic, poor visible porosity, decreasing chalk from above, appx 30%, no shows, poor to no fluoresence
limestone, as above, with limestone, cream chalky fossiliferous, increasing chalk, appx 50%
some limestone as above, with limestone, gray mottled pelletal and oolitic, fairly dense, decreasing chalk, appx 40%
as above
limestone, white to light gray, microcrystalline, dense fossiliferous, with mottled pelletal and oolitic limestone, appx 30% chalk, some frosted fossiliferous chert
limestone, white to light gray, microcrystalline, dense but chalky, fossiliferous, some bioclastic, poor visible porosity, abundant chalk
limestone, gray, mottled, fossiliferous, cherty, dense, grainy, poor visible porosity, some dark gray limey shale, gray fossiliferous chert
Lecompton 3934 -1128
limestone, mixed cream to gray, fossiliferous, some chalky, poor visible porosity, abundant chalk, abundant mixed gray fossiliferous cherts, no shows, poor to fair green mineral fluoresence
limestone, light gray to tan and cream, microcrystalline, fossiliferous to bioclastic, some pinpoint porosity, abundant chalk, no shows
Scale Change
TG, C1-C5
0
100
Mud-Co Mud Ck
@ 3889'
1115 hrs 12/4/10
Vis 45 Wt 9.2
PV 17 YP 11
WL 8.4
Cake 1/32
PH 10.0
CHL 4000 ppm
Cal 60
Sol 6.2
LCM: 2 #/bbl
DMC: $811.10
CMC: $12286.40

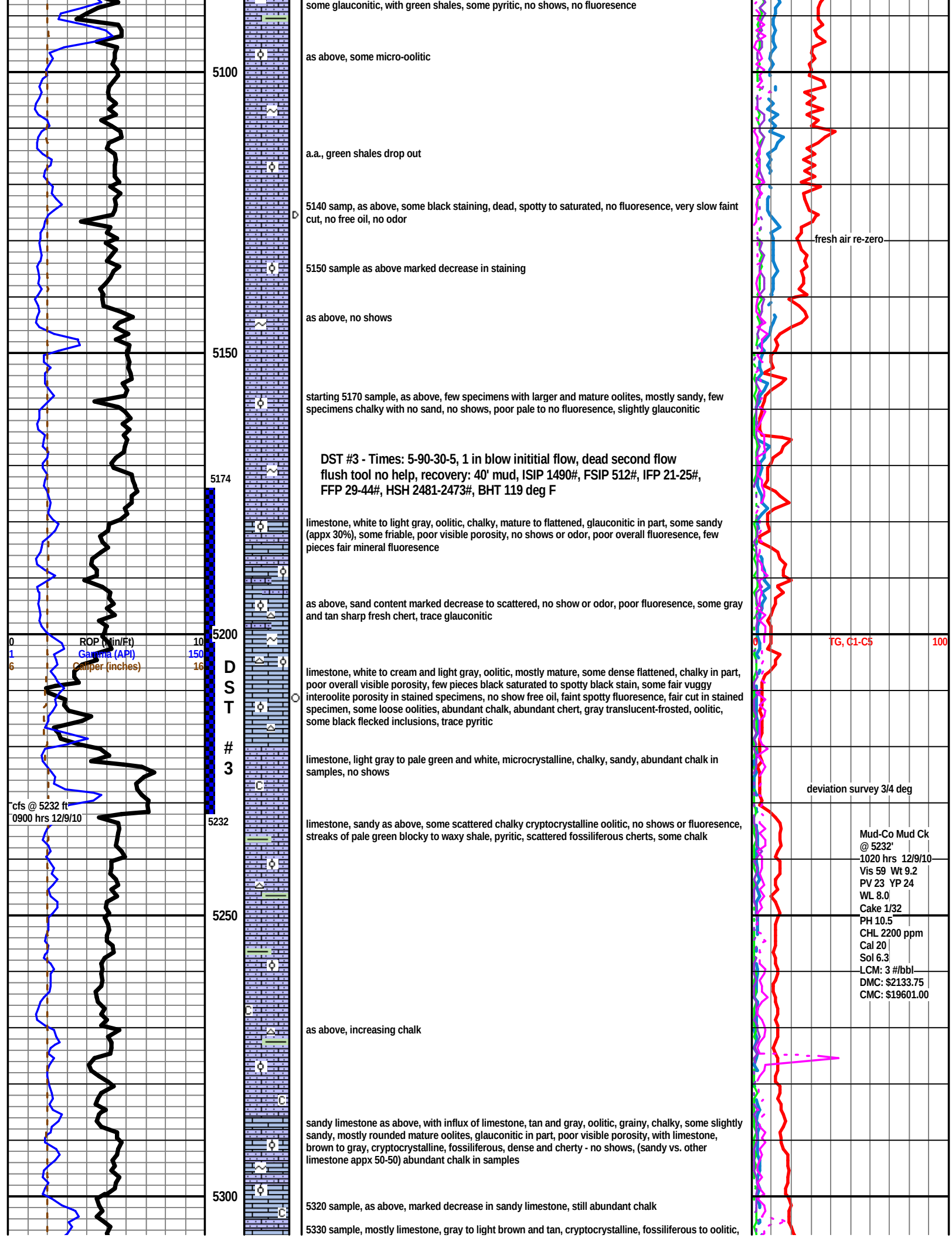

0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
Scale Change
0
ROP (Min/Ft)
10
1
Gamma (API)
150
6
Caliper (inches)
16
0
ROP (Min/Ft)
10
1
Gamma (API)
150
6
Caliper (inches)
16
4000
4050
4100
4150
4200
limestone, mixed grainy fossiliferous, weathered in part, appx 30% chalk, abundant tan chert, some pyritic
as above
chalk, appx 60%, with gray to dark gray soft limestone, weathered to near chalk, some denser limestones
4080 sample - dolomite, tan, microcrystalline sucrosic, with limestone, cream to tan, fossiliferous, no shows, appx 30% chalk
chalk, with mixed limestones weathered back to chalk
limestone, dark gray to gray, microcrystalline, dense, cherty, trace pyritic, with dark gray and black limey shale
limestone, tan to gray mottled, microcrystalline, fossiliferous, poor visible porosity, some glauconitic, no shows, abundant chalk
Heebner 4117 -1311
black carbonaceous shale, slightly gassy
gray and green shales, green shales silty to very silty
limestone, dolomitic, gray to white and cream, microcrystalline, fossiliferous, grainy, dense to chalky, poor visible porosity, no shows or odor, some white to light gray chert, fresh, sharp, fossiliferous, with appx 50% chalk, bright blue with some pale green fluoresence
mixed gray and green shales, some silty, some fossiliferous
limestone, gray and tan mottled fossiliferous, crypto-microcrystalline, dense, some large clasts, with: tan to gray grainy, some argillaceous, with: limestone, cream, chalky, fossiliferous, no shows, poor fluoresence
a.a.
limestone, tan, cryptocrystalline, compact dense, fossiliferous
0
TG, C1-C5
100
0
TG, C1-C5
100

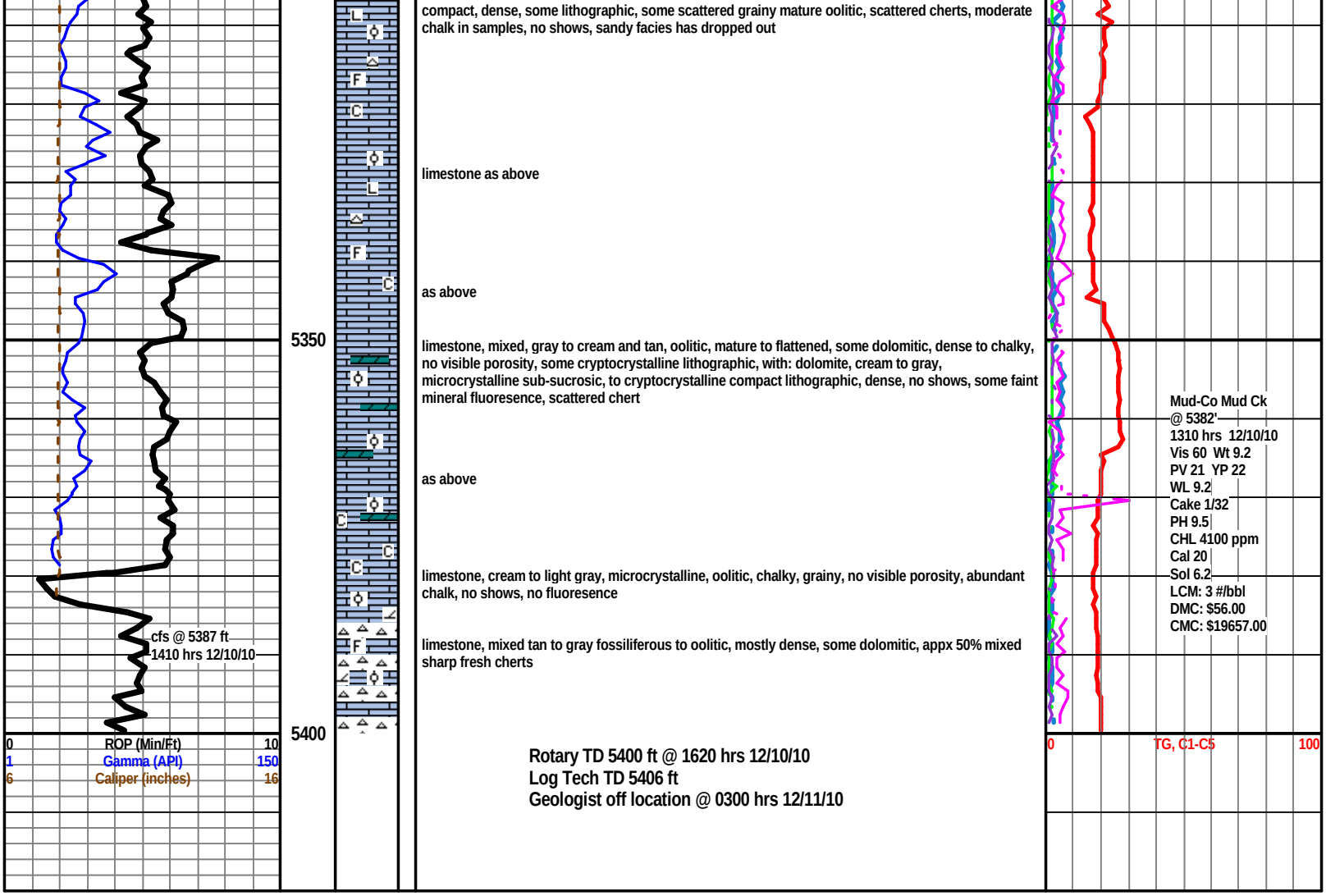

Lansing 4214 -1408
limestone, tan to gray, microcrystalline, grainy bioclastic to ooids, some fossiliferous, poor visible porosity, chalky in part, no shows, abundant chalk, no fluoresence
mixed cream grainy fossiliferous to gray fossiliferous arenaceous, some scattered fossiliferous chert
gas test, spike system
4250
limestone, gray, cryptocrystalline, lithographic, dense, no shows
B
starting 4290 sample, limestone, gray to cream and tan, microcrystalline, grainy oolitic, chalky to dense, flood chalk, poor visible porosity, no shows
C
as above
4300
mixed non-descript fossiliferous
limestone, dark gray, microcrytalline, fossiliferous, very dense, cherty, trace pyritic, some black and dark gray limey shale, some brown and gray cherts
Mud-Co Mud Ck
@ 4326'
1250 hrs 12/5/10
Vis 53 Wt 9.3
PV 23 YP 13
WL 7.6
Cake 1/32
PH 10.5
CHL 3000 ppm
Cal 40
Sol 6.2
LCM: 2 #/bbl
DMC: $1795.55
CMC: $14081.95
limestone, cream to tan, grainy, fossiliferous, some interclast and pinpoint porosity, appx 40% chalk
chalk, appx 80%, with limestone as above
F
4350
limestone, cream to tan, oomoldic to oolitic, good oomoldic porosity, barren, fairly even green/yellow fluoresence, abundant chalk
G
limestone, light gray to cream, microcrystalline, fossiliferous, chalky, dense, no shows
4410 sample, influxe gray lithographic limestone, gray/green limey arenaceous shale and chert
data gap, depth correction
4400
4420 sample as above with flood soft gray mushy shale and clays
0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (inches) 16
0 TG, C1-C5 100
4430-50, limestone, light gray, gray/green and tan, mostly cryptocrystalline, fossiliferous to lithographic, dense, no shows, some pale green fluoresence


4450
4500
4550
4600
limestone, mixed grainy fossiliferous to oolitic, some sub-oomoldic, no shows or fluoresence, flood chalk, 50% in samples
as above, 4490 sample appx 70% chalk
chalk decreasing somewhat
4500 sample: as above, mixed grainy fossiliferous and oolitic, chalky, some interclast porosity, some weathered, appx 50% chalk, faint to fair odor (pungent, not sweet), no shows, poor pale faint fluoresence except few clumps chalk bright green
4510 sample, as above, found 1 specimen limestone bright green fluoresence, scaley oil sheen on break, no stain
limestone, gray non-descript fossiliferous to lithographic, abundant chalk, no shows
as above, decreasing chalk
Stark Shale 4551 -1745
limestone, cream, microcrystalline, bioclastic, spongy/grainy, some pinpoint porosity, small speciments, chalky, no show, no odor, no fluoresence, some chalk in samples
limestone, gray non-descript lithographic to slightly fossiliferous, dense, no shows or fluoresence
HUSHPUCKNEY - black carbonaceous shale
limestone, gray, micro to cryptocrystalline, fossiliferous to lithographic, dense, no shows
inlux limstone, light gray to gray, microcrystalline, fossiliferous to oolitic, no visible porosity, some glauconitic, no shows
limestone, grading to dark gray to black, fossiliferous, dense, with shale, black and gray, dense, limey
limestone, cream to tan, some gray, mixed dense fossiliferous, some tan oolitic to oomoldic, some fair
spike system with propane at sample box, responded, but gas level stayed high, change out CaCl cannister and tubing
0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (Inches) 16
0 TG, C1-C5 100
Mud-Co Mud Ck
@ 4594'
0510 hrs 12/6/10
Vis 52 Wt 9.2
PV 20 YP 15
WL 8.0
Cake 1/32
PH 10.0
CHL 3000 ppm
Cal 60
Sol 6.2
LCM: 2 #/bbl
DMC: $639.55
CMC: $14721.50


4650
4700
4750
4790
4800
4827
4850
oomold porosity, no shows or odor, some spotty mineral fluoresence
limestone, gray to black, mottled to grainy fossiliferous, some shaley, brittle, no shows
limestone, dark gray to brown, dense, fossiliferous, some argillaceous, with shale, dark gray to brown and black, limey, brittle
bit trip @ 4670 ft
1215 hrs 12/6/10
deviation survey 1 3/4 deg
shale, soft gray, mushy and soft green silty
Marmaton 4711 -1905
limestone, cream, microcrystalline, slightly fossiliferous to smooth compact lithographic, trace grainy chalky fossiliferous, no visible porosity, no shows, some chalk in samples, scattered fossiliferous chert
limestone, as above, with limestone, cream, fossiliferous, chalky, poor visible porosity, increasing chert, tan to cream fossiliferous
as above
fossiliferous limestone as above with mixed pelletal grainy limestones, chalky to dense, abundant chalk in samples, no shows
Mud-Co Mud Ck
@ 4827'
1305 hrs 12/7/10
Vis 56 Wt 9.2
PV 23 YP 19
WL 8.0
Cake 1/32
PH 10.0
CHL 1400 ppm
Cal 20
Sol 6.4
LCM: 2 #/bbl
DMC: $1625.65
CMC: $16347.15
Pawnee 4795 -1989
limestone, cream, microcrystalline, bioclastic, poor visible porosity, chalky to fairly dense, small specimens, some spotty fair fluoresence, show of light golden oil on break, odor on break, bright white to green fluoresence on break, no odor in wet cups except possible fleeting odor in 4827 sample, also with: some tan to cream dense lithographic limestone, abundant chalk, some gray sharp fossiliferous chert
DST #2 - times: 5-90-40-0; intial flow, weak surface; final flow, dead, flush, no help; recovery 20 ft mud; IFP 18-20# FFP 22-32#, ISIP 1464#, FSIP none, HSH 2310-2248#, BHT 115 deg F
limestone, gray, dense, fossiliferous, some scattered brown and tan chert, some chalk
Cherokee 4842 -2036
black carbonaceous shale
limestone, mixed gray to cream fossiliferous, mostly dense, no shows, some large clasts, scattered fossiliferous chert, abundant black shale, carbonaceous, some green silty shale, abun bryozoan and coral frags
0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (inches) 16
DST # 2
cfs @ 4827 ft
0540 hrs 12/7/10
TG, C1-C5 100
33 units total
shale kick
shale kick


mixed limestones as above, increasing cherts and mixed shales
4900
as above
limestone, mixed cream to dark gray, dense to shaley, fossiliferous, with abundant gray to black shales, limey, fossiliferous in part, silty to arenaceous and argillaceous, some scattered cherts, some chalk
as above
4950
fresh air rezero
limestone, cream chalky, grainy fossiliferous, to brown and tan, cherty, dense, fossiliferous, some brown fossiliferous chert, abundant gray to green shale, some scattered black and black carbonaceous
as above
5000
abundant black shale influx
limestone, brown to gray and gray/black mottled, fossiliferous, cryptocrystalline, dense, chert, abundant mixed shales
5040 sample, flood soft green mushy, to soft silty light green shale and chalk
5050 sample, shale and chalk as above with limestone, pale green, compact cryptocrystalline, lithographic
green shale and sandstone, quartz, dead black stained to white slightly stained, very fine graineded, well sorted, well cemented, (dol cem) no porosity, no free oil, no odor, no fluoresence or cut, some scaley oil film breaks out in acid
5050
conglomerate, mostly red shaley, samples wash red, abundant green mushy sandy clays
Mississippian (St. Gen.) 5082 -2276
limestone, white to light gray, microcrystalline, argillaceous/sandy, poor visible porosity, fairly dense,
0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (inches) 16
0 TG, C1-C5 100
Mud-Co Mud Ck
@ 5003'
1225 hrs 12/8/10
Vis 52 Wt 9.1
PV 17 YP 19
WL 8.8
Cake 1/32
PH 9.0
CHL 3100 ppm
Cal 20
Sol 5.6
LCM: 1 #/bbl
DMC: $1120.10
CMC: $17467.25


some glauconitic, with green shales, some pyritic, no shows, no fluoresence
as above, some micro-oolitic
5100
a.a., green shales drop out
5140 samp, as above, some black staining, dead, spotty to saturated, no fluoresence, very slow faint cut, no free oil, no odor
fresh air re-zero
5150 sample as above marked decrease in staining
as above, no shows
5150
starting 5170 sample, as above, few specimens with larger and mature oolites, mostly sandy, few specimens chalky with no sand, no shows, poor pale to no fluoresence, slightly glauconitic
DST #3 - Times: 5-90-30-5, 1 in blow inititial flow, dead second flow flush tool no help, recovery: 40' mud, ISIP 1490#, FSIP 512#, IFP 21-25#, FFP 29-44#, HSH 2481-2473#, BHT 119 deg F
5174
limestone, white to light gray, oolitic, chalky, mature to flattened, glauconitic in part, some sandy (appx 30%), some friable, poor visible porosity, no shows or odor, poor overall fluoresence, few pieces fair mineral fluoresence
as above, sand content marked decrease to scattered, no show or odor, poor fluoresence, some gray and tan sharp fresh chert, trace glauconitic
5200
0
ROP (Min/Ft)
10
1
Gamma (API)
150
6
Caliper (inches)
16
0
TG, C1-C5
100
D
S
T
#
3
limestone, white to cream and light gray, oolitic, mostly mature, some dense flattened, chalky in part, poor overall visible porosity, few pieces black saturated to spotty black stain, some fair vuggy interoolite porosity in stained specimens, no show free oil, faint spotty fluoresence, fair cut in stained specimen, some loose oolities, abundant chalk, abundant chert, gray translucent-frosted, oolitic, some black flecked inclusions, trace pyritic
limestone, light gray to pale green and white, microcrystalline, chalky, sandy, abundant chalk in samples, no shows
deviation survey 3/4 deg
cfs @ 5232 ft
0900 hrs 12/9/10
5232
limestone, sandy as above, some scattered chalky cryptocrystalline oolitic, no shows or fluoresence, streaks of pale green blocky to waxy shale, pyritic, scattered fossiliferous cherts, some chalk
Mud-Co Mud Ck
@ 5232'
1020 hrs 12/9/10
Vis 59 Wt 9.2
PV 23 YP 24
WL 8.0
Cake 1/32
PH 10.5
CHL 2200 ppm
Cal 20
Sol 6.3
LCM: 3 #/bbl
DMC: $2133.75
CMC: $19601.00
5250
as above, increasing chalk
sandy limestone as above, with influx of limestone, tan and gray, oolitic, grainy, chalky, some slightly sandy, mostly rounded mature oolites, glauconitic in part, poor visible porosity, with limestone, brown to gray, cryptocrystalline, fossiliferous, dense and cherty - no shows, (sandy vs. other limestone appx 50-50) abundant chalk in samples
5300
5320 sample, as above, marked decrease in sandy limestone, still abundant chalk
5330 sample, mostly limestone, gray to light brown and tan, cryptocrystalline, fossiliferous to oolitic,


compact, dense, some lithographic, some scattered grainy mature oolitic, scattered cherts, moderate chalk in samples, no shows, sandy facies has dropped out
limestone as above
as above
5350
limestone, mixed, gray to cream and tan, oolitic, mature to flattened, some dolomitic, dense to chalky, no visible porosity, some cryptocrystalline lithographic, with: dolomite, cream to gray, microcrystalline sub-sucrosic, to cryptocrystalline compact lithographic, dense, no shows, some faint mineral fluoresence, scattered chert
as above
limestone, cream to light gray, microcrystalline, oolitic, chalky, grainy, no visible porosity, abundant chalk, no shows, no fluoresence
limestone, mixed tan to gray fossiliferous to oolitic, mostly dense, some dolomitic, appx 50% mixed sharp fresh cherts
5400
cfs @ 5387 ft
1410 hrs 12/10/10
Mud-Co Mud Ck
@ 5382'
1310 hrs 12/10/10
Vis 60 Wt 9.2
PV 21 YP 22
WL 9.2
Cake 1/32
PH 9.5
CHL 4100 ppm
Cal 20
Sol 6.2
LCM: 3 #/bbl
DMC: $56.00
CMC: $19657.00
0 ROP (Min/Ft) 10
1 Gamma (API) 150
6 Caliper (inches) 16
0 TG, C1-C5 100
Rotary TD 5400 ft @ 1620 hrs 12/10/10
Log Tech TD 5406 ft
Geologist off location @ 0300 hrs 12/11/10