

OPERATOR

Company: Murfin Drilling Company
 Address: 250 N. Water
 Suite 300
 Wichita, KS 67202
 Contact Geologist: Shauna Gunzelman
 Contact Phone Nbr: 316-267-3241
 Well Name: Venwin # 1-30
 Location: Sec. 30 - T29S - R40W
 API: 15-187-21337-0000
 Pool:
 State: Kansas

Field: un-named
 Country: USA



Scale 1:240 Imperial

Well Name: Venwin # 1-30
 Surface Location: Sec. 30 - T29S - R40W
 Bottom Location:
 API: 15-187-21337-0000
 License Number: 30606
 Spud Date: 10/17/2017 Time: 6:00 PM
 Region: Stanton County
 Drilling Completed: 10/25/2017 Time: 1:45 PM
 Surface Coordinates: 660' FNL & 1650' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 3302.00ft
 K.B. Elevation: 3313.00ft
 Logged Interval: 3550.00ft To: 5750.00ft
 Total Depth: 5750.00ft
 Formation: Mississippian
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: 101.731871388
 Latitude: 37.502967876
 N/S Co-ord: 660' FNL
 E/W Co-ord: 1650' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
 Address: 3420 22nd Street
 Great Bend, KS 67530

Phone Nbr: 620-617-4091
 Logged By: KLG #136 Name: Keith Reavis

CONTRACTOR

Contractor: Murfin Drilling Company
 Rig #: 21
 Rig Type: mud rotary
 Spud Date: 10/17/2017 Time: 6:00 PM
 TD Date: 10/25/2017 Time: 1:45 PM
 Rig Release: Time:

ELEVATIONS

K.B. Elevation: 3313.00ft
K.B. to Ground: 11.00ft

Ground Elevation: 3302.00ft

NOTES

There were no shows and no DST's were conducted on this well. After review of electrical logs, it was determined the Venwin #1-30 should be plugged and abandoned as a dry hole.

A Bloodhound gas detection system operated by Bluestem Labs was employed during the drilling of this well. ROP and gas data were imported into this log from the Bloodhound system.

The 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

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
10/20/2017		set up Bloodhound gas detection system, operational 1803' @ 1620 hrs
10/21/2017	2584	drilling ahead, displace mud system at 3450', 2300 hrs
10/22/2017	3718	on location to run samples, 0500 hrs, re-calibrate Bloodhound, drilling ahead, Topeka, Heebner, Lansing, Marmaton
10/23/2017	4437	drilling ahead, Marmaton, Ft. Scott, run wiper trip, drill ahead, Cherokee group
10/24/2017	4862	drilling ahead, Cherokee, Atoka, Morrow, Mississippian
10/25/2017	5515	drilling ahead, Mississippian, St. Louis, Spergen, TD 5750' @ 1345 hrs, cfs, short trip, ctch, TOH for logs, conduct logging operations
10/26/2017	5750	complete logging operations, off location 0430 hrs

well comparison sheet

DRILLING WELL					COMPARISON WELL			
Murfin - Venwin #1-30 660' FNL & 1650' FEL Sec. 30 - T29S - R40W 3313 KB					H & L - Julian Farms #1-29 1980' FSL & 330' FSL Sec. 29 - T29S - R40W 3312 KB			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Structural Relationship	
							Sample	Log
Heebner	3630	-317	3626	-313	3656	-344	27	31
Toronto	3653	-340	3648	-335	3676	-364	24	29
Lansing	3696	-383	3688	-375	3718	-406	23	31
Muncie Creek	3972	-659	3968	-655	3998	-686	27	31
Stark Shale	4139	-826	4131	-818	4164	-852	26	34
Pleasanton	4278	-965	4278	-965	4300	-988	23	23
Marmaton	4303	-990	4302	-989	4324	-1012	22	23
Ft. Scott	4464	-1151	4466	-1153	4483	-1171	20	18
Atoka	4734	-1421	4732	-1419	4758	-1446	25	27
Atoka Shale	4849	-1536	4850	-1537	4880	-1568	32	31
Morrow	5026	-1713	5022	-1709	5046	-1734	21	25
Mid Morrow LS	5310	-1997	5309	-1996	5319	-2007	10	11
Keyes Sand	np				np			
Morrow Sand	np				np			
Mississippian	5373	-2060	5373	-2060	5392	-2080	20	20
St. Louis	5430	-2117	5434	-2121				

Total Depth	5750	-2437	5750	-2437	5802	-2490	53	53
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ROCK TYPES

Dolprim	Lmst fw7>	Carbon Sh	Sltst
sdy lmst	shale, grn	shale, red	
Lmst fw<7	shale, gry	Ss	

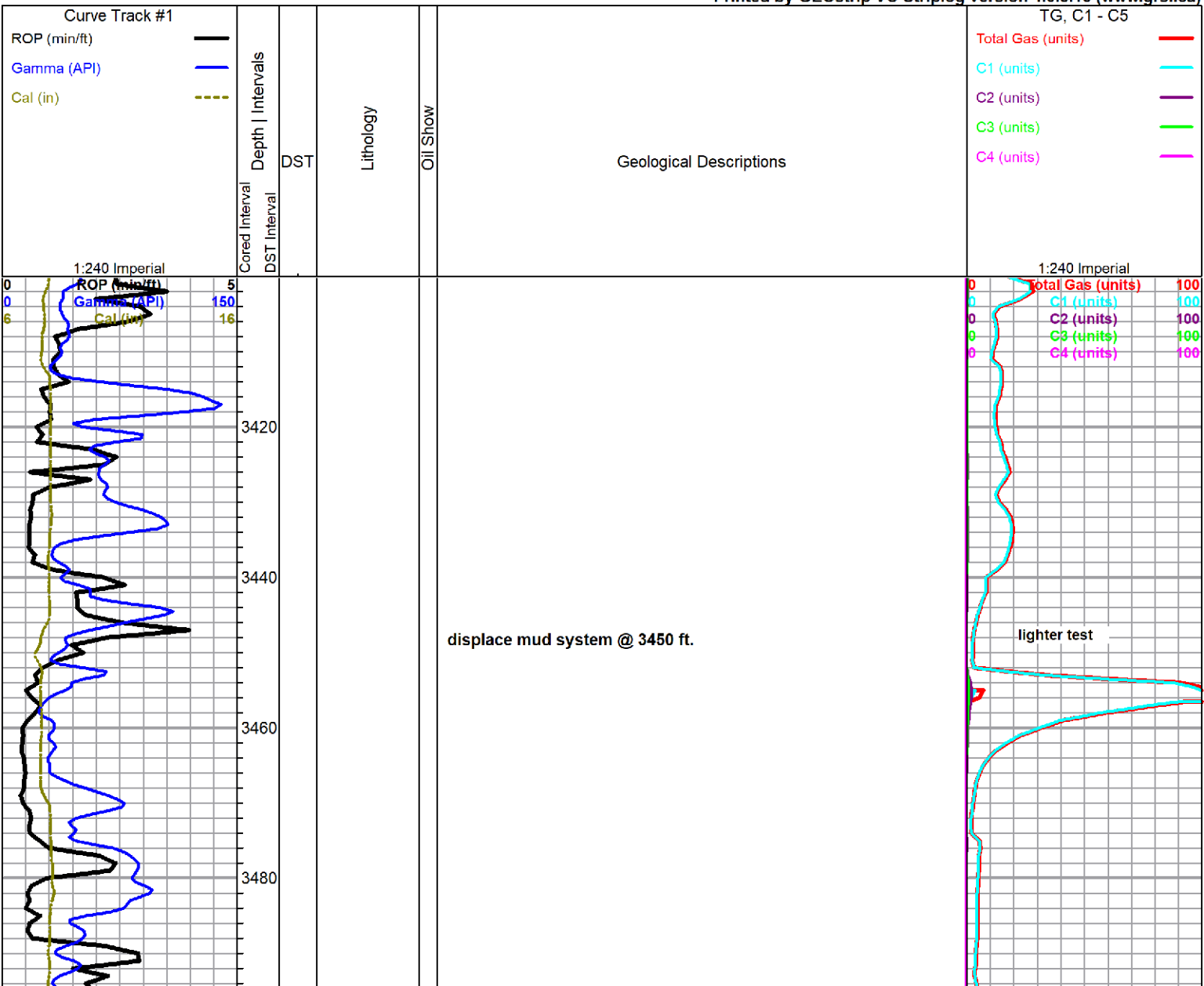
ACCESSORIES

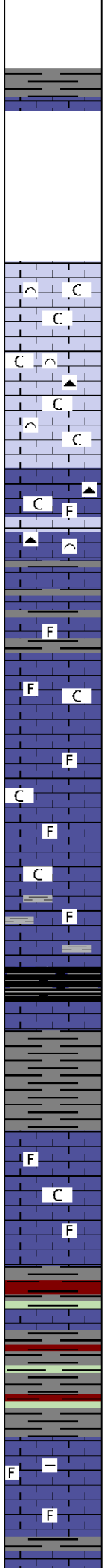
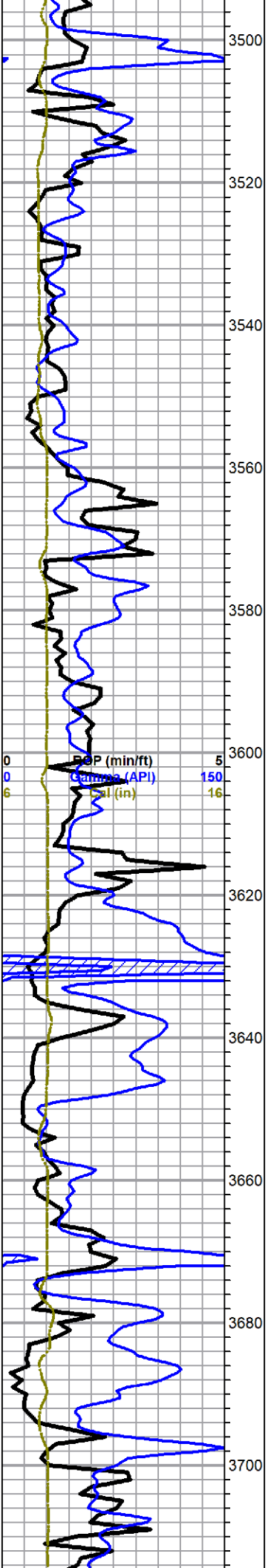
MINERAL	FOSSIL	STRINGER	TEXTURE
— Argillaceous	∩ Bioclastic or Fragmental	Anhydrite	C Chalky
▲ Chert, dark	F Fossils < 20%	Limestone	L Lithogr
∩ Glauconite	⊘ Oolite	Sandstone	
P Pyrite	⊘ Pellets	Siltstone	
• Sandy	⊘ Oomoldic	Shale	
△ Chert White			

OTHER SYMBOLS

Oil Show	DST
● Good Show	DST Int
● Fair Show	DST alt
● Poor Show	Core
○ Spotted or Trace	tail pipe
○ Questionable Stn	
D Dead Oil Stn	
■ Fluorescence	
* Gas	

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limestone, cream to light gray, very chalky bioclastic, poor visible porosity, appx 30% chalk, with gray mottled fossiliferous chert, noshows

begin 10 ft wet and dry samples @ 3550'

limestone, gray, microcrystalline, fossiliferous to bioclastic, chalky to cherty, poor visible porosity, with chert, gray, mottled in part, fossiliferous, no shows

limestone, variable gray, microcrystalline, fossiliferous, chalky to argillaceous, with shale, gray, micaceous, no shows

limestone, light gray to cream, microcrystalline, fossiliferous, grainy, chalky in part, poor visible porosity, abundant chalk, no shows

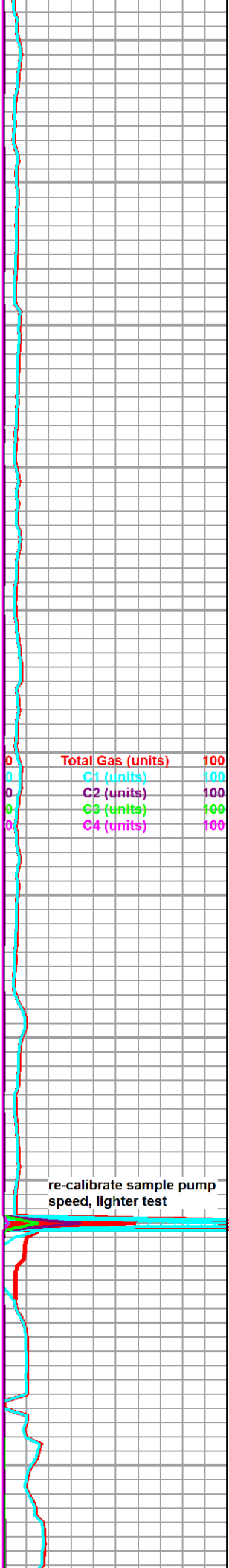
a.a. influx gray shale

Heebner 3630 -317
shale, black carbonaceous

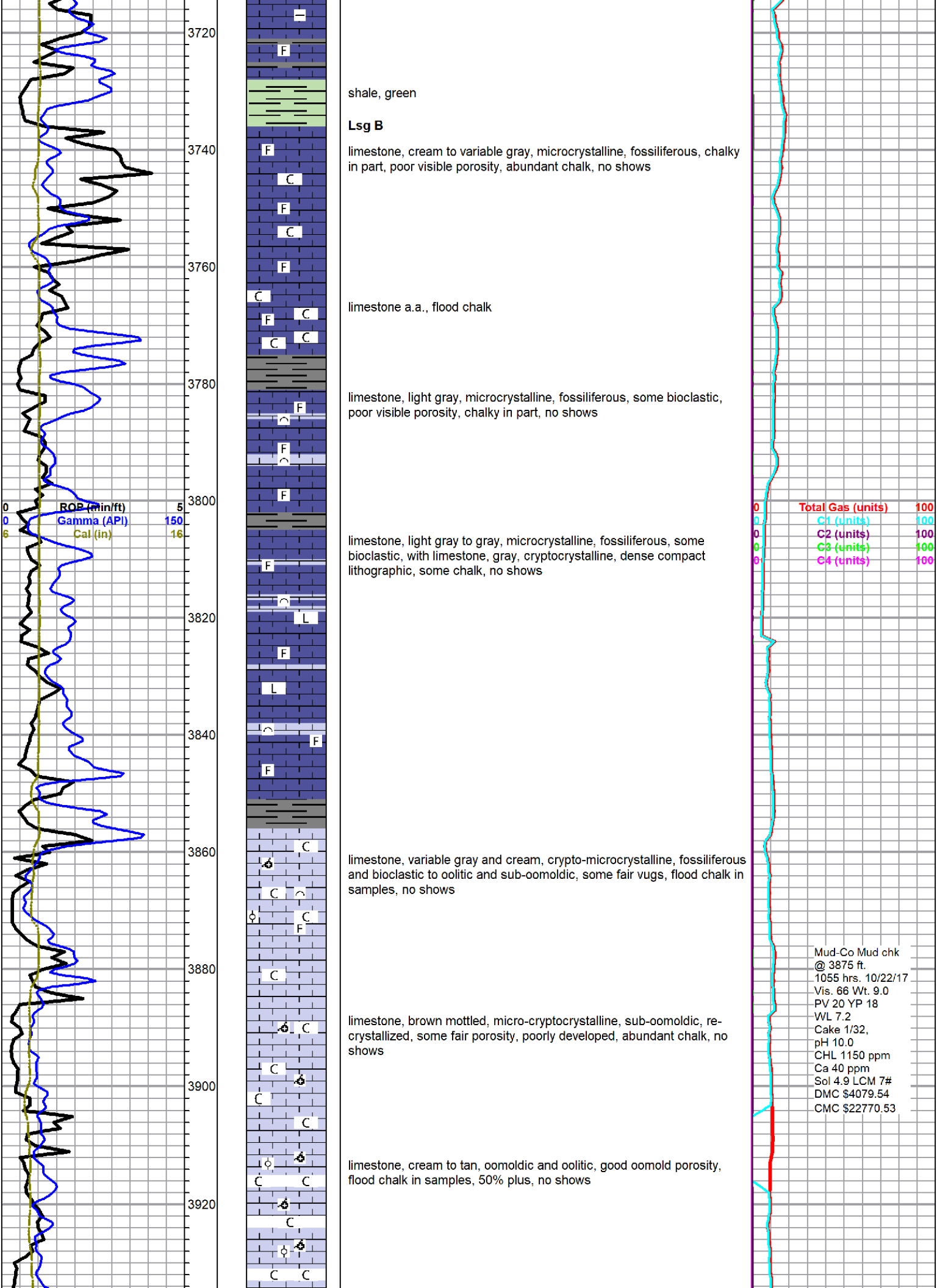
Toronto 3653 -340
limestone, light gray, micro-cryptocrystalline, fossiliferous to lithographic, chalky in part, poor visible porosity, some chalk, no shows

shales, gray, red/maroon and green

Lansing 3696 -383
limestone, gray to dark gray, microcrystalline, fossiliferous to argillaceous, some pelletal, fairly dense, poor visible porosity, with gray shales, no shows



re-calibrate sample pump speed, lighter test



shale, green

Lsg B

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

limestone a.a., flood chalk

limestone, light gray, microcrystalline, fossiliferous, some bioclastic, poor visible porosity, chalky in part, no shows

limestone, light gray to gray, microcrystalline, fossiliferous, some bioclastic, with limestone, gray, cryptocrystalline, dense compact lithographic, some chalk, no shows

limestone, variable gray and cream, crypto-microcrystalline, fossiliferous and bioclastic to oolitic and sub-oomoldic, some fair vugs, flood chalk in samples, no shows

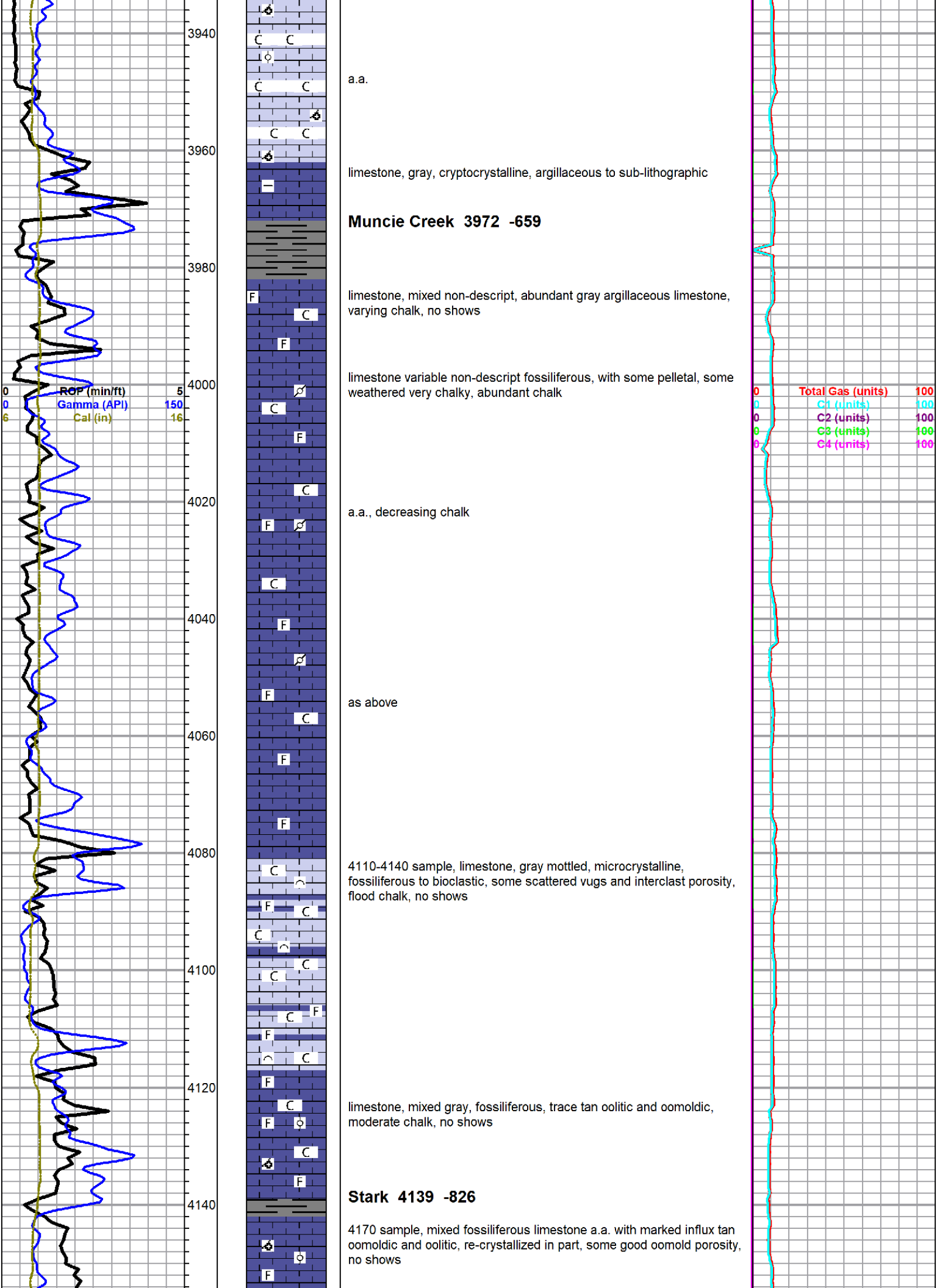
limestone, brown mottled, micro-cryptocrystalline, sub-oomoldic, re-crystallized, some fair porosity, poorly developed, abundant chalk, no shows

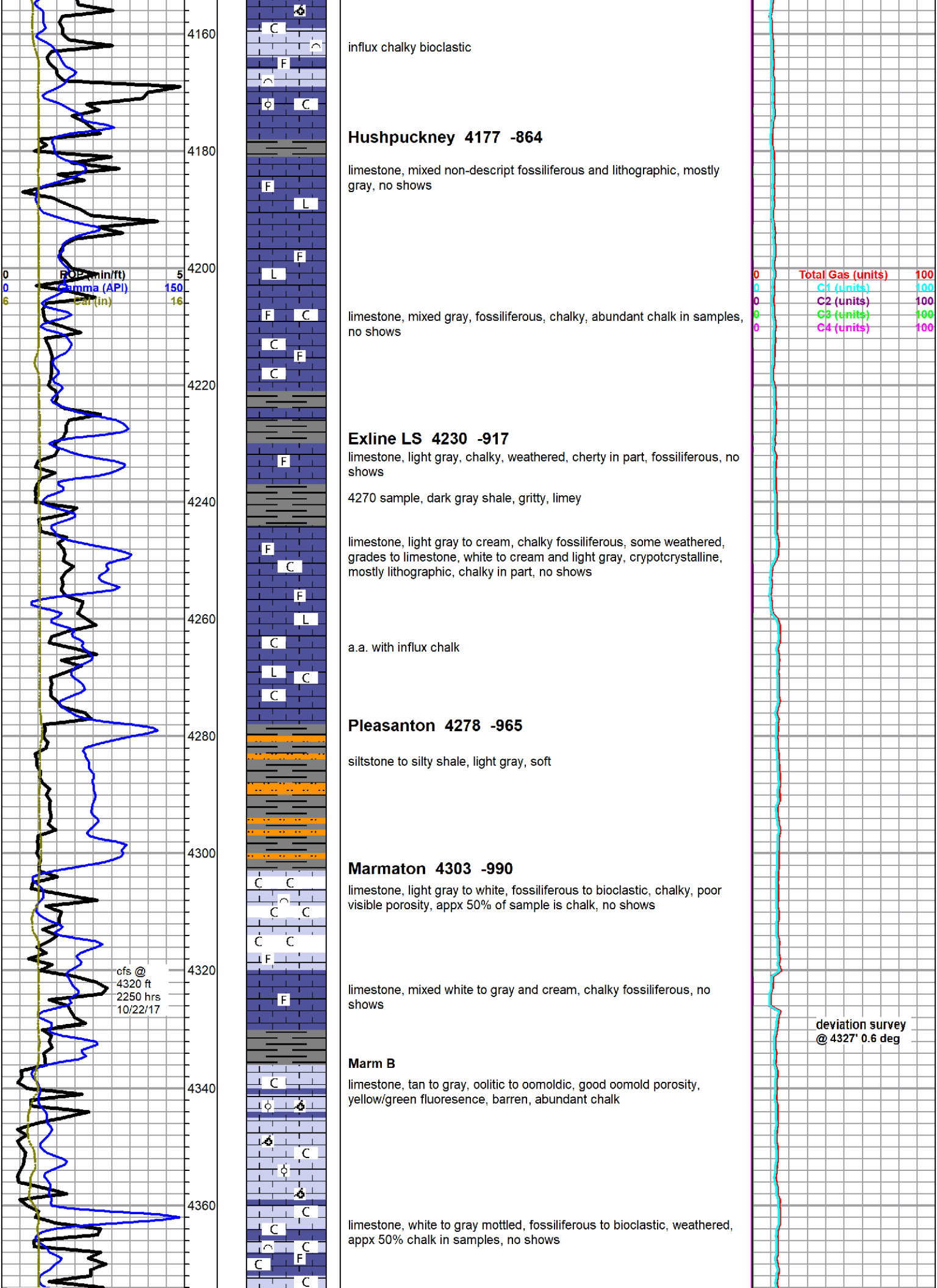
limestone, cream to tan, oomoldic and oolitic, good oomold porosity, flood chalk in samples, 50% plus, no shows

ROP (min/ft) 5
 Gamma (API) 150
 Cal (in) 16

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Mud-Co Mud chk
 @ 3875 ft.
 1055 hrs. 10/22/17
 Vis. 66 Wt. 9.0
 PV 20 YP 18
 WL 7.2
 Cake 1/32
 pH 10.0
 CHL 1150 ppm
 Ca 40 ppm
 Sol 4.9 LCM 7#
 DMC \$4079.54
 CMC \$22770.53





4160
4180
4200
4220
4240
4260
4280
4300
4320
4340
4360

influx chalky bioclastic

Hushpuckney 4177 -864

limestone, mixed non-descript fossiliferous and lithographic, mostly gray, no shows

limestone, mixed gray, fossiliferous, chalky, abundant chalk in samples, no shows

Exline LS 4230 -917

limestone, light gray, chalky, weathered, cherty in part, fossiliferous, no shows

4270 sample, dark gray shale, gritty, limey

limestone, light gray to cream, chalky fossiliferous, some weathered, grades to limestone, white to cream and light gray, cryptocrystalline, mostly lithographic, chalky in part, no shows

a.a. with influx chalk

Pleasanton 4278 -965

siltstone to silty shale, light gray, soft

Marmaton 4303 -990

limestone, light gray to white, fossiliferous to bioclastic, chalky, poor visible porosity, appx 50% of sample is chalk, no shows

limestone, mixed white to gray and cream, chalky fossiliferous, no shows

Marm B

limestone, tan to gray, oolitic to oomoldic, good oomold porosity, yellow/green fluorescence, barren, abundant chalk

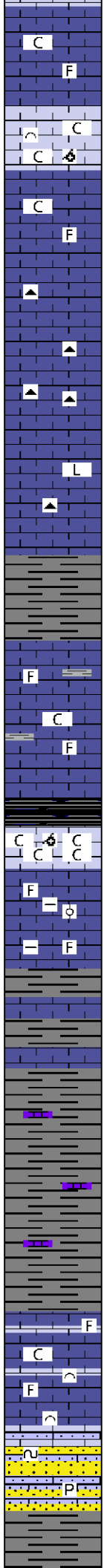
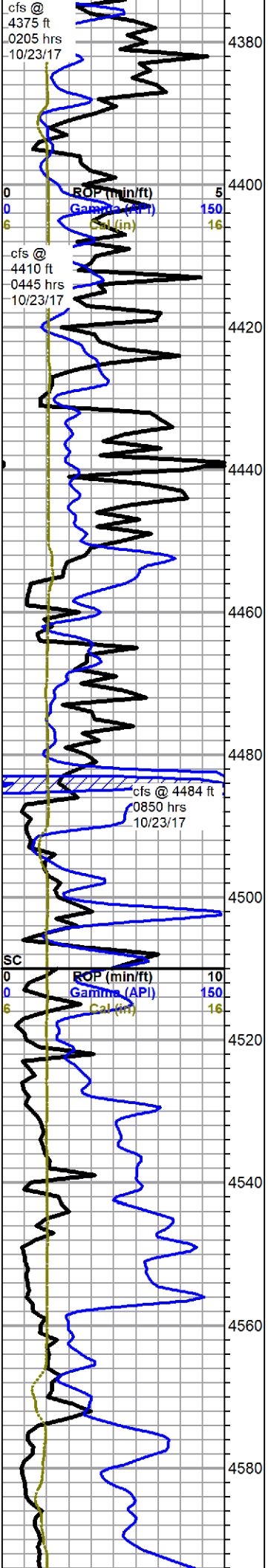
limestone, white to gray mottled, fossiliferous to bioclastic, weathered, appx 50% chalk in samples, no shows

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

deviation survey @ 4327' 0.6 deg

ROP (min/ft)
Gamma (API)
Bar (in)

cfs @
4320 ft
2250 hrs
10/22/17



limestone, mixed gray to white, chalky fossiliferous, with limestone dark gray, cherty, arenaceous, dense, no shows

Marm C

limestone, white, chalky bioclastic with fine oomoldic, weathered, abundant chalk in samples, no shows

limestone, gray to tan and white, some mottled, microcrystalline, fossiliferous, chalky, no shows

limestone, dark gray to black, microcrystalline, gritty, arenaceous, cherty, dense, abundant black and gray chert, sharp, fresh

a.a. with influx gray compact lithographic limestones, cryptocrystalline, smooth

gray shale

Ft. Scott 4464 -1151

limestone, white to cream, gray and tan, mottled, micro-cryptocrystalline, chalky, fossiliferous, poor visible porosity, no shows, carrying abundant gray shale

shale, black/brown, carbonaceous, gassy

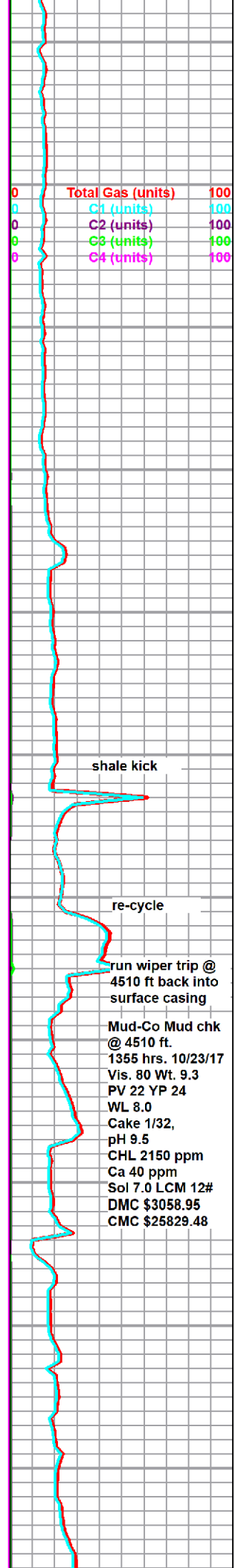
4510 sample, shale a.a. with almost all chalk, trace fine oomoldic, no other shows

grades to limestone, mixed non-descript fossiliferous, oolitic and argillaceous, no shows

shale, gray, with stringers limestone, light gray, microcrystalline, fossiliferous, no shows

limestone, mixed fossiliferous and bioclastic, some chalky and heavily weathered, some sparry, poor visible porosity, no shows

sandstone to sandy limestone, gray, fine grain, angular to rounded, poorly sorted, glauconitic, pyritic, poor visible porosity, no show



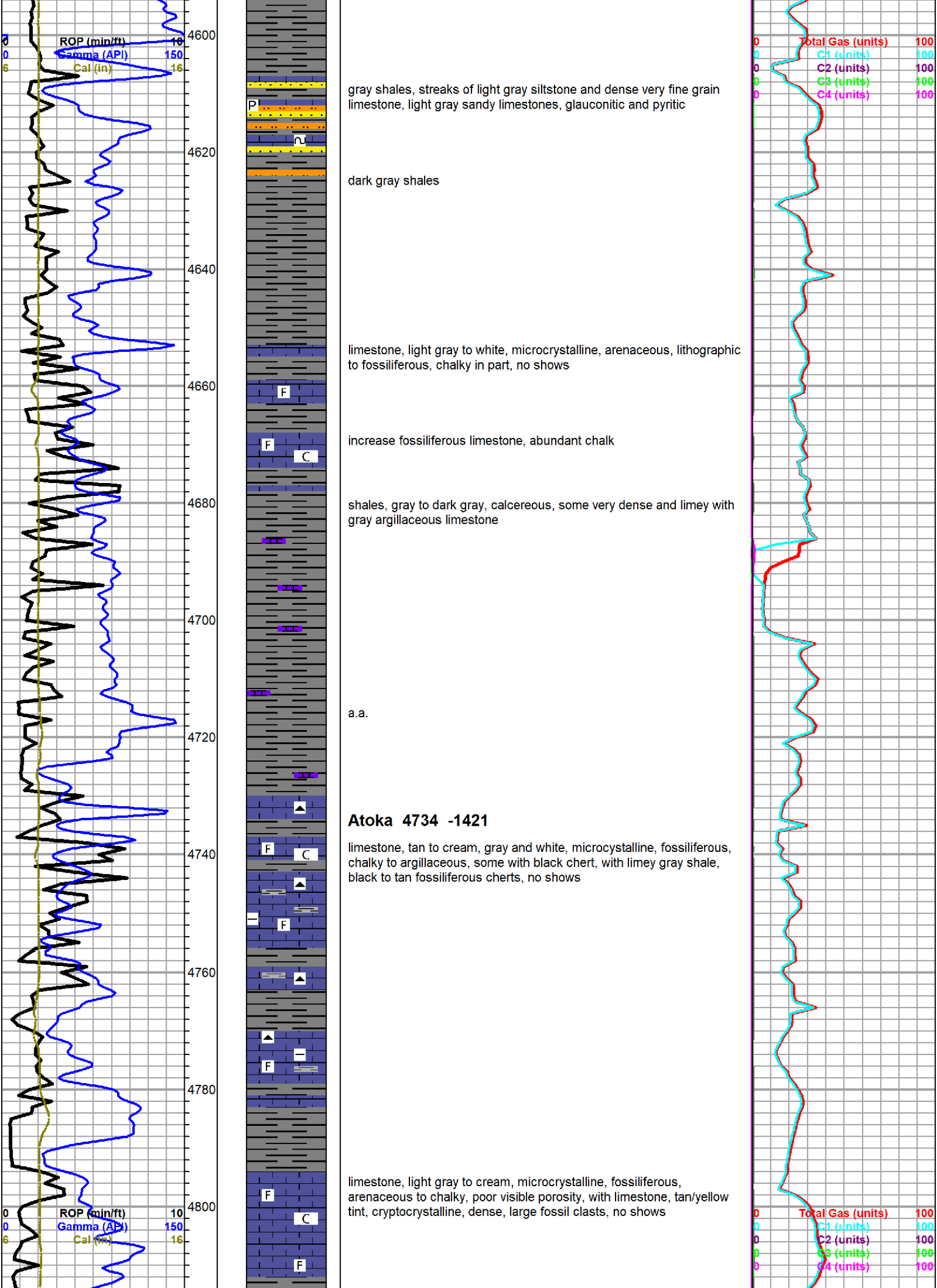
Total Gas (units) 100
C1 (units) 100
C2 (units) 100
C3 (units) 100
C4 (units) 100

shale kick

re-cycle

run wiper trip @ 4510 ft back into surface casing

Mud-Co Mud chk @ 4510 ft.
 1355 hrs. 10/23/17
 Vis. 80 Wt. 9.3
 PV 22 YP 24
 WL 8.0
 Cake 1/32,
 pH 9.5
 CHL 2150 ppm
 Ca 40 ppm
 Sol 7.0 LCM 12#
 DMC \$3058.95
 CMC \$25829.48



ROP (min/ft) 10
 Gamma (API) 150
 Cal (in) 16

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

gray shales, streaks of light gray siltstone and dense very fine grain limestone, light gray sandy limestones, glauconitic and pyritic

P
 2

dark gray shales

limestone, light gray to white, microcrystalline, arenaceous, lithographic to fossiliferous, chalky in part, no shows

F

increase fossiliferous limestone, abundant chalk

F

C

shales, gray to dark gray, calcereous, some very dense and limey with gray argillaceous limestone

a.a.

Atoka 4734 -1421

limestone, tan to cream, gray and white, microcrystalline, fossiliferous, chalky to argillaceous, some with black chert, with limey gray shale, black to tan fossiliferous cherts, no shows

F

C

F

F

limestone, light gray to cream, microcrystalline, fossiliferous, arenaceous to chalky, poor visible porosity, with limestone, tan/yellow tint, cryptocrystalline, dense, large fossil clasts, no shows

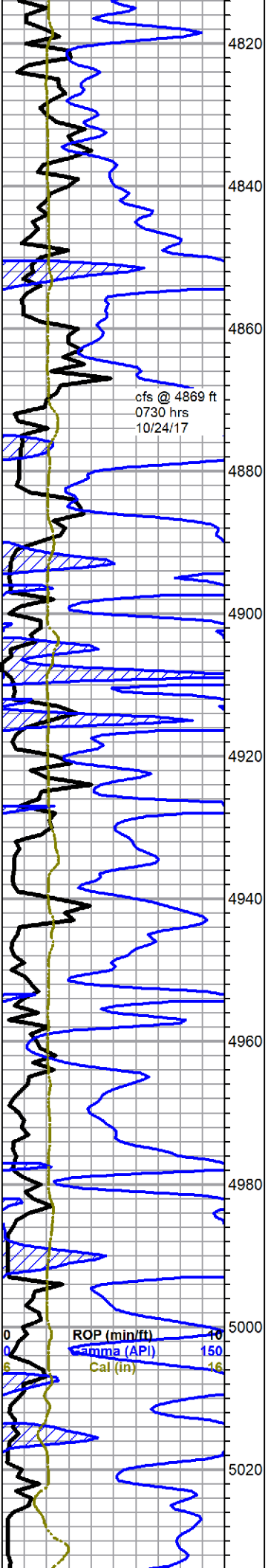
F

C

F

ROP (min/ft) 10
 Gamma (API) 150
 Cal (in) 16

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100



limestone, light gray to cream, microcrystalline, fossiliferous, arenaceous to chalky, poor visible porosity, with light gray sandy limestone and light gray siltstone

Atoka Shale 4849 -1536

shale, black carbonaceous

limestone, light gray to white, chalky fossiliferous and light gray cryptocrystalline, dense lithographic

cfs @ 4869 ft
0730 hrs
10/24/17

black carbonaceous shale and limestone a.a.

black carbonaceous shale and limestone a.a., gray and black shales with some tan and gray mottled limestone, large clasts, no shows

black carbonaceous, black and gray shales, limestone stringers a.a., with scattered black fossiliferous cherts

limestone, mottled gray, microcrystalline, fossiliferous, chalky in part, with gray argillaceous limestone, shales a.a.

a.a.

Morrow 5026 -1713

shale gas kick

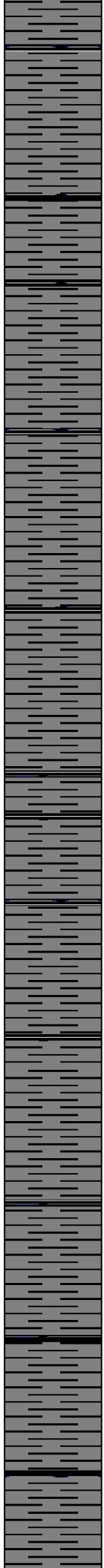
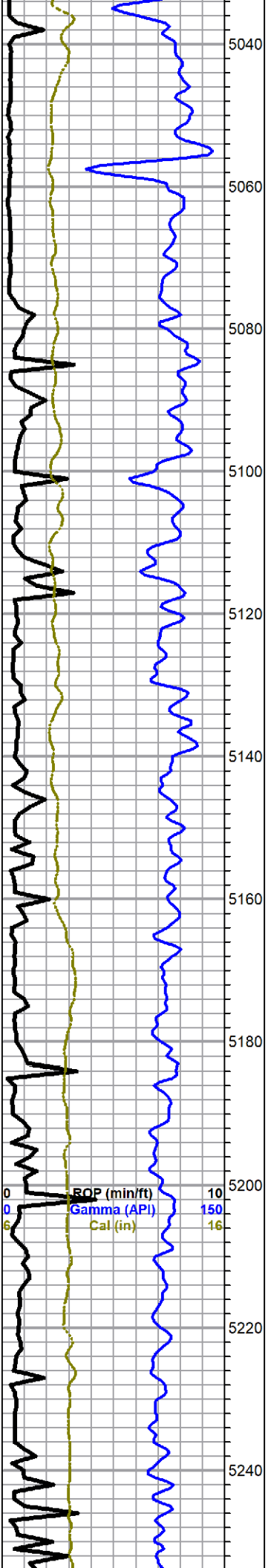
shut down to work on pump

SC	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

lost gas here, mud diverted around extractor to jet pits

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

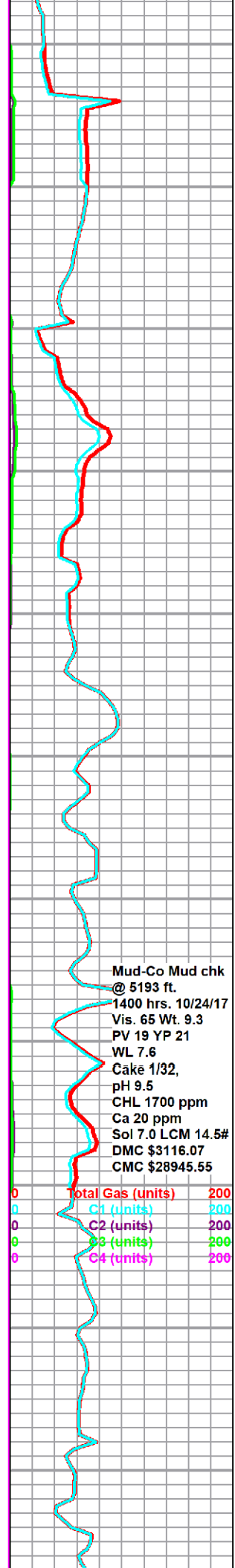
shales, light gray, gray and dark gray, sort, some black



shale a.a.

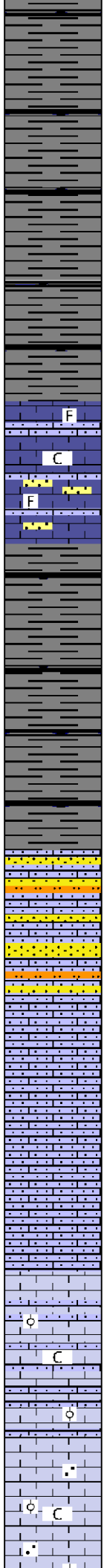
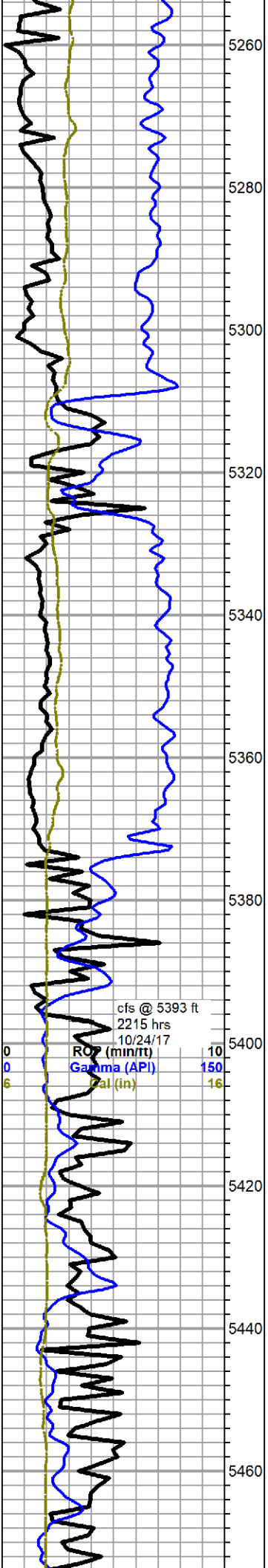
shale a.a.

a.a.



Mud-Co Mud chk
 @ 5193 ft.
 1400 hrs. 10/24/17
 Vis. 65 Wt. 9.3
 PV 19 YP 21
 WL 7.6
 Cake 1/32,
 pH 9.5
 CHL 1700 ppm
 Ca 20 ppm
 Sol 7.0 LCM 14.5#
 DMC \$3116.07
 CMC \$28945.55

Total Gas (units) 200
 C1 (units) 200
 C2 (units) 200
 C3 (units) 200
 C4 (units) 200



Morrow lime marker 5310 -1997

5340 sample, picking up gray mottled limestone, chalky, fossiliferous, chalky, sandy, with pyrite

influx sandstone, very fine grain, gray to salt and pepper, dirty, poorly sorted, pyritic, glauconitic, with pyrite crystals, no shows, still mostly shales

Mississippian 5373 -2060

pale green calcareous siltstone to silty limestone, dense to friable, some sandstone clusters, fine to very fine grain, angular to rounded, poorly sorted, med. cemented, glauconitic, dirty, poor visible porosity, no show or odor, some white chalky limestone, sandy - still mostly shale in samples

5400 sample, a.a.

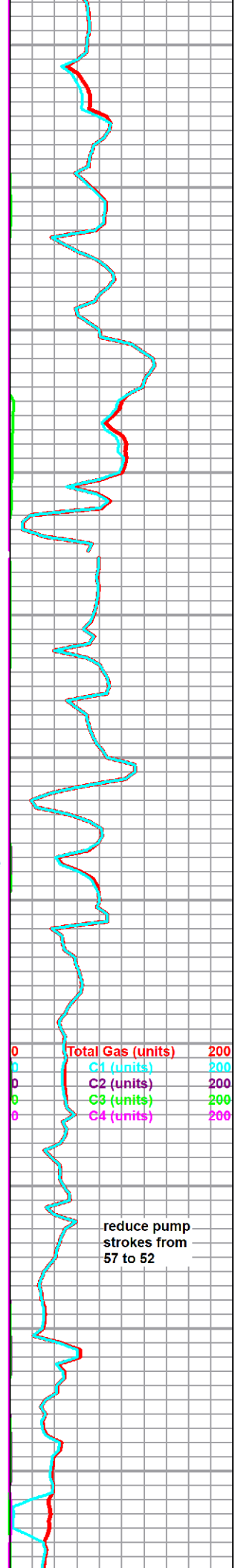
5410 and 5420 samples, almost all shale a.a., poor samples

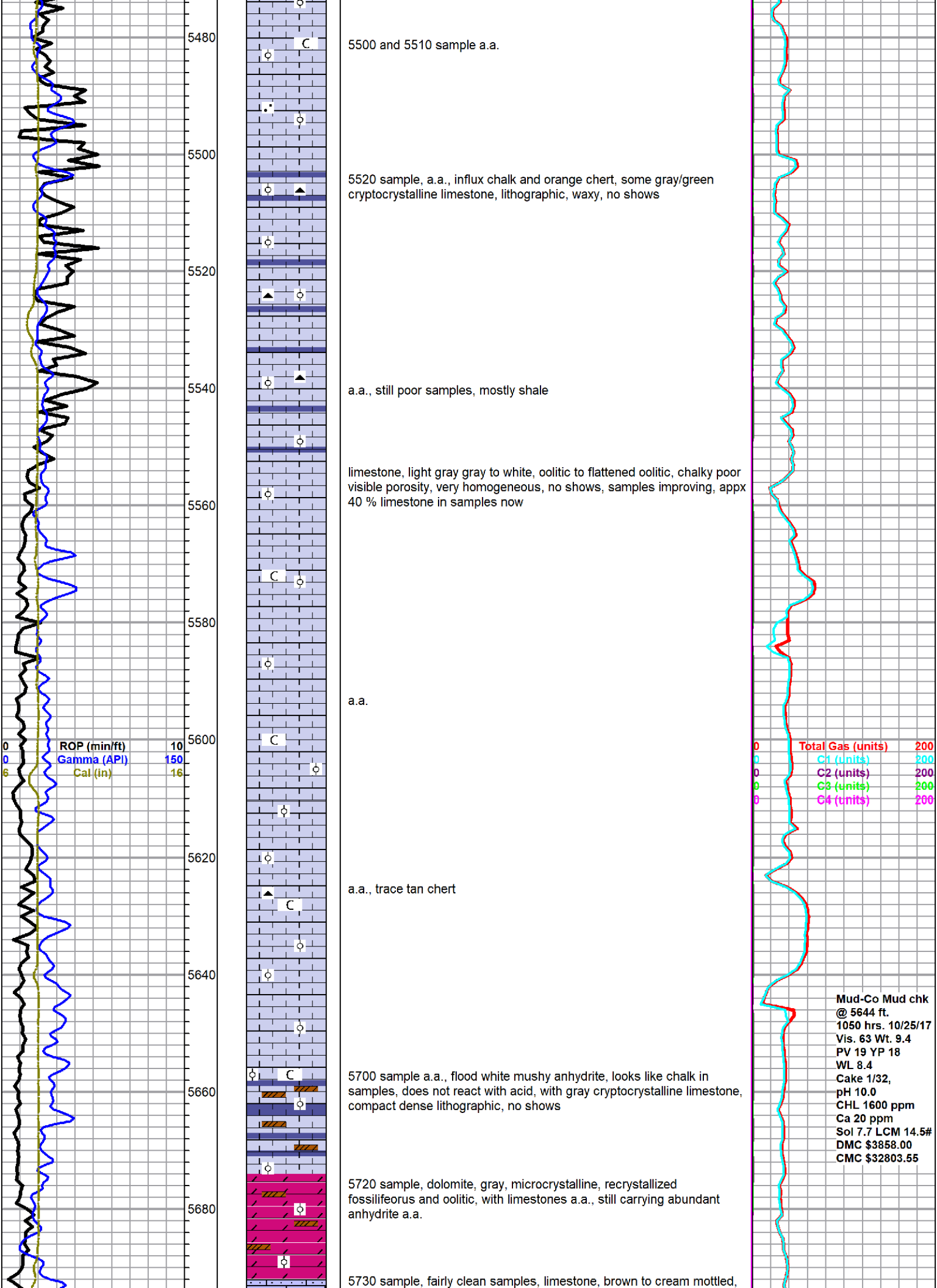
5430 - 5450 sample, marked increase of limestone, pale green, light gray and white, sandy, some chalky, dense to friable, sandstone drops out, still predominant shale in samples

St. Louis 5430 -2117

5460 sample, some small specimens flattened oolitic limestone, white, chalky, sandy, soft, friable, some sandy limestone a.a., still mostly shale, no shows

5470-90 samples, limestone, white, very fine oolitic to flattened oolitic, sandy in part, chalky, soft, friable, poor visible porosity, no shows, still mostly shale but limestone increasing





5500 and 5510 sample a.a.

5520 sample, a.a., influx chalk and orange chert, some gray/green cryptocrystalline limestone, lithographic, waxy, no shows

a.a., still poor samples, mostly shale

limestone, light gray gray to white, oolitic to flattened oolitic, chalky poor visible porosity, very homogeneous, no shows, samples improving, appx 40 % limestone in samples now

a.a.

a.a., trace tan chert

5700 sample a.a., flood white mushy anhydrite, looks like chalk in samples, does not react with acid, with gray cryptocrystalline limestone, compact dense lithographic, no shows

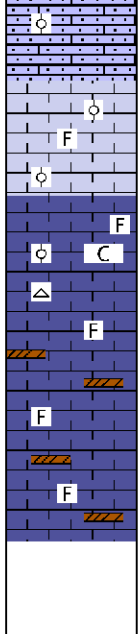
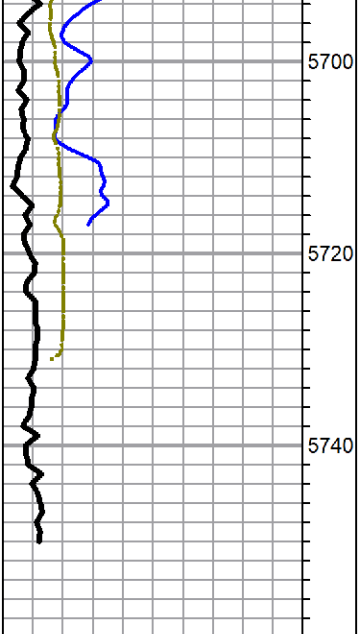
5720 sample, dolomite, gray, microcrystalline, recrystallized fossiliferous and oolitic, with limestones a.a., still carrying abundant anhydrite a.a.

5730 sample, fairly clean samples, limestone, brown to cream mottled,

ROP (min/ft) 10
Gamma (API) 150
Cal (in) 16

Total Gas (units) 200
C1 (units) 200
C2 (units) 200
C3 (units) 200
C4 (units) 200

Mud-Co Mud chk
@ 5644 ft.
1050 hrs. 10/25/17
Vis. 63 Wt. 9.4
PV 19 YP 18
WL 8.4
Cake 1/32,
pH 10.0
CHL 1600 ppm
Ca 20 ppm
Sol 7.7 LCM 14.5#
DMC \$3858.00
CMC \$32803.55



sandy, micro-oolitic, very chalky, no visible porosity, soft, no shows

grades to limestone, gray, cryptocrystalline, fossiliferous to flattened oolitic, slightly chalky, poor visible porosity, no shows

5750 sample, limestone, gray to brown and white mottled, oolitic to fossiliferous, chalky to cherty, heavily weathered, poor visible porosity, no shows

cfs samples, limestone, light gray to tan, cryptocrystalline, fossiliferous, dense, with flood mushy white anhydrite, no shows

Rotary TD @ 5750 ft, 1345 hrs, 10/25/17
Pioneer Wireline TD 5750 ft
Compete Logging Operations 0400 hrs 10/26/17

