



NOTES

Company: Palmer Oil, Inc.

Lease: Willis 23-7

Field: Willis

Location: SE-NW-NW-SE (2250' FSL & 2300' FEL)

Sec: 23 Twsp: 32S Rge: 37W

County: Stevens State: Kansas

KB: 3117' GL: 3104'

API #: 15-189-22832-00-00

Contractor: Duke Drilling Inc. (Rig #9)

Spud: 2/03/2014 Comp: 2/13/2014

RTD: 6500' LTD: 6506'

Mud Up: 4500' Type Mud: Chemical

Samples Saved From: 4600' to RTD
 Drilling Time Kept From: 4100' to RTD
 Samples Examined From: 4600' to RTD
 Geological Supervision from: 4600' to RTD
 Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@ 1740'

Electronic Surveys: Logged by Pioneer Energy Services, DIL, CNL/CDL, MEL

Palmer Oil, Inc.
well comparison sheet

Formation	DRILLING WELL				COMPARISON WELL				COMPARISON WELL				
	Palmer Oil, Inc. - Willis 23-7				Palmer Oil, Inc. - Willis 23-6				EOG Resources - 23-1 Willis				
	SE-NW-NW-SE 23-32-37W				NE-SE-SW-NE 23-32S-37W				W2-SE-NW-SE 23-32S-37W				
	3117 KB				3119 KB			Structural Relationship		3122 KB		Structural Relationship	
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log	
Heebner										4147	-1025		
Lansing	4256	-1139											
Marmaton	4952	-1835	4930	-1813	4969	-1850	15	37	4948	-1826	-9	13	
Cherokee	5118	-2001	5122	-2005	5127	-2008	7	3	5121	-1999	-2	-6	
Atoka	5530	-2413	5534	-2417									
Morrow	5625	-2508	5631	-2514	5632	-2513	5	-1	5636	-2514	6	0	
St. Gen.	6172	-3055	6172	-3055	6178	-3059	4	4					
St. Louis	6300	-3183	6294	-3177	6298	-3179	-4	2	6356	-3234	51	57	
St. Louis B	6345	-3228	6347	-3230	6361	-3242	14	12	6372	-3250	22	20	
RTD	6500	-3383	6500	-3383	6500	-3381	-2	-2					
LTD	6506	-3389	6506	-3389									



DRILL STEM TEST REPORT

Palmer Oil, Inc. **23-32s-37w Stevens Co.**

3118 N. Cummings Rd. **Willis #23-7**
 P.O. Box 399

Job Ticket: 51931 DST#: 1

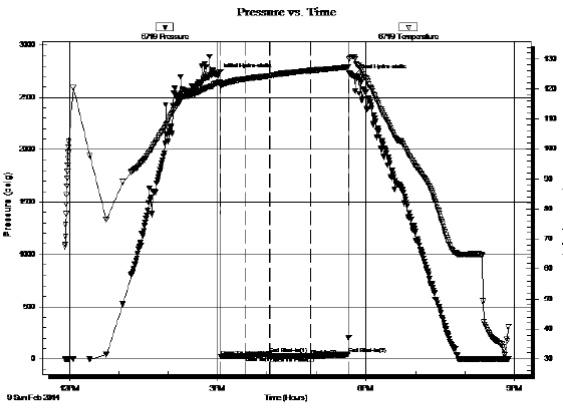


GENERAL INFORMATION:

Formation: **Morrow Sand**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 15:03:57
 Time Test Ended: 20:53:12
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 53
 Interval: **5595.00 ft (KB) To 5670.00 ft (KB) (TVD)**
 Total Depth: 5670.00 ft (KB) (TVD)
 Reference Elevations: 3117.00 ft (KB)
 3104.00 ft (CF)
 Hole Diameter: 7.88 inches-Hole Condition: Fair
 KB to GR/CF: 13.00 ft

Serial #: 6719 Outside
 Press@RunDepth: 30.04 psig @ 5596.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.09 End Date: 2014.02.09 Last Calib.: 2014.02.09
 Start Time: 11:54:32 End Time: 20:53:12 Time On Btm: 2014.02.09 @ 15:01:12
 Time Off Btm: 2014.02.09 @ 17:44:57

TEST COMMENT: IF: Weak blow . Surf., - 3 1/2 ".
 ISt No blow .
 FF: Weak blow . Surf., - 3/4 ".
 FSt No blow .



PRESSURE SUMMARY

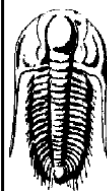
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2713.10	122.23	Initial Hydro-static
3	23.16	120.88	Open To Flow (1)
34	29.70	123.41	Shut-In(1)
62	49.41	124.41	End Shut-In(1)
63	25.54	124.44	Open To Flow (2)
112	30.04	126.19	Shut-In(2)
158	45.21	127.29	End Shut-In(2)
164	2704.78	130.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	drig mud	0.05

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palmer Oil, Inc.
 3118 N. Cummings Rd.
 P.O. Box 399
 Garden City, Ks.
 ATTN: Wyatt Urban

23-32s-37w Stevens Co.
Willis #23-7
 Job Ticket: 51932 **DST#: 2**
 Test Start: 2014.02.11 @ 22:15:03

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 02:05:43
 Time Test Ended: 10:55:43
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Matt Smith
 Unit No: 53
 Interval: **6325.00 ft (KB) To 6385.00 ft (KB) (TVD)**
 Total Depth: 6385.00 ft (KB) (TVD)
 Reference Elevations: 3117.00 ft (KB)
 3104.00 ft (CF)
 Hole Diameter: 7.88 inches-Hole Condition: Fair
 KB to GR/CF: 13.00 ft

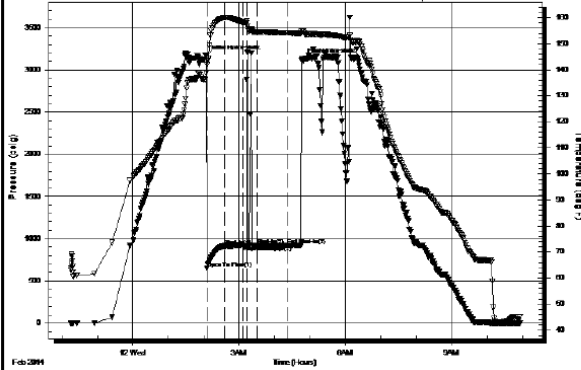
Serial #: 6719 Outside
 Press@RunDepth: 921.61 psig @ 6326.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.11 End Date: 2014.02.12 Last Calib.: 2014.02.12
 Start Time: 22:15:03 End Time: 10:55:43 Time On Btm: 2014.02.12 @ 02:04:13
 Time Off Btm: 2014.02.12 @ 04:46:58

TEST COMMENT: IF: Strong blow . B.O.B. in 2 mins.
 ISt No blow .
 FF: No blow .
 FSt No blow .

Pressure vs. Time

PRESSURE SUMMARY

Time	Pressure	Temp	Annotation



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3161.50	138.61	Initial Hydro-static
2	652.07	141.82	Open To Flow (1)
32	917.18	159.96	Shut-h(1)
62	920.68	158.29	End Shut-h(1)
69	920.87	157.82	Open To Flow (2)
86	921.61	154.48	Shut-h(2)
138	920.89	154.15	End Shut-h(2)
163	3123.22	154.76	Final Hydro-static

Length (ft)	Description	Volume (bbl)
180.00	V SLI OCMW 42% m 58% w	0.89
1420.00	V SLI OCMW 2% m 98% w	19.92

* Recovery from multiple tests

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

ROCK TYPES

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

ACCESSORIES

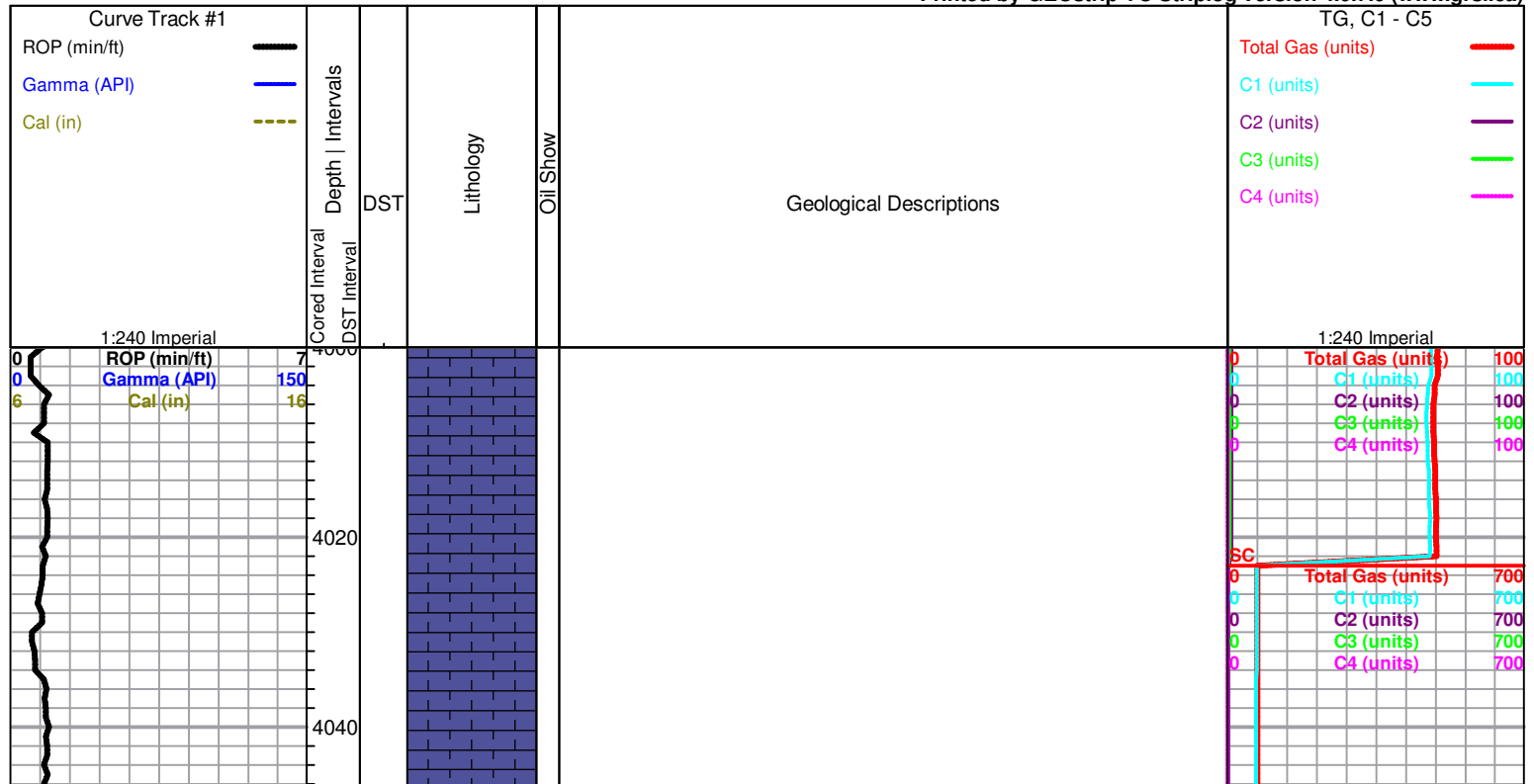
FOSSIL

- Oolite

OTHER SYMBOLS

<p>Oil Show</p> <ul style="list-style-type: none"> ● Good Show ● Fair Show ● Poor Show ○ Spotted or Trace ○ Questionable Trace D Dead Oil Strn ■ Fluorescence * Gas 	<p>DST</p> <ul style="list-style-type: none"> ■ DST Int ■ DST alt ■ Core ■ tail pipe
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4060
4080
4100
4120
4140
4160
4180
4200
4220
4240
4260

B. Heebner 4136 (-1019)

Lansing 4256 (-1139)

ROP (min/ft) 4
Gamma (API) 150
Cal (in) 16

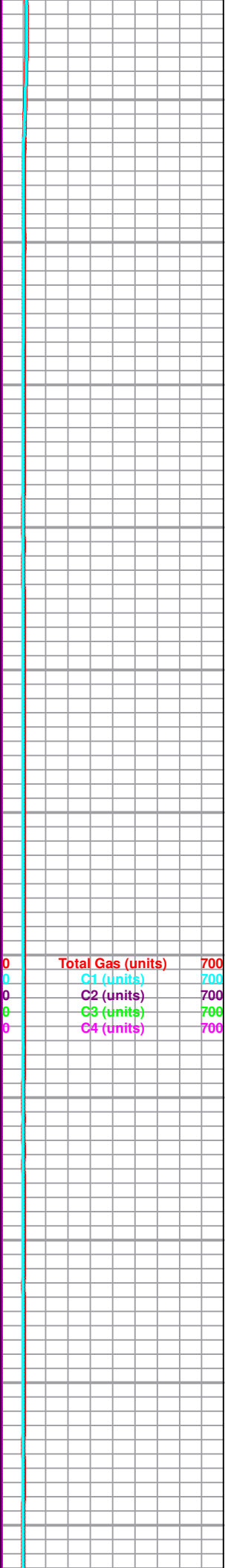
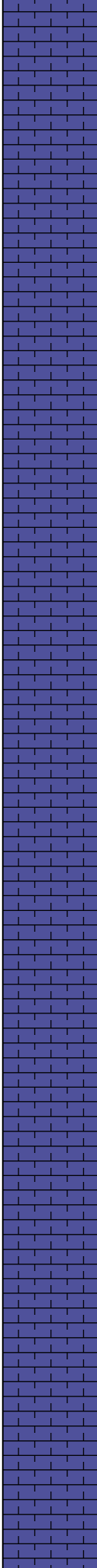
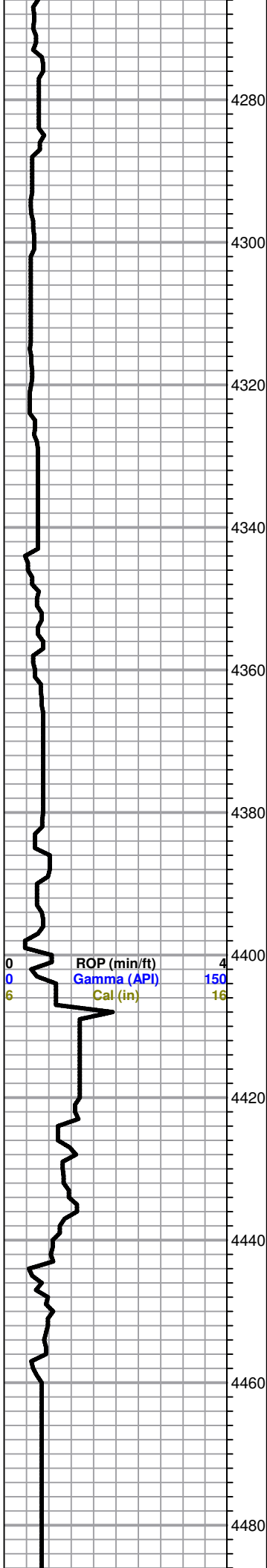
ROP (min/ft) 4
Gamma (API) 150
Cal (in) 16

Total Gas (units) 700
C1 (units) 700
C2 (units) 700
C3 (units) 700
C4 (units) 700

4280
4300
4320
4340
4360
4380
4400
4420
4440
4460
4480

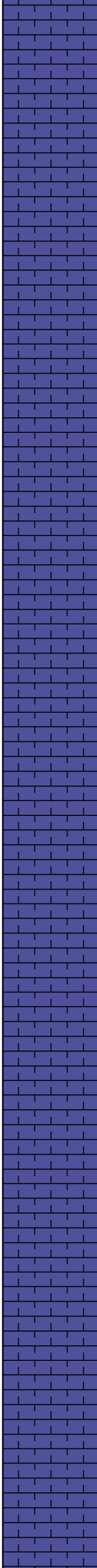
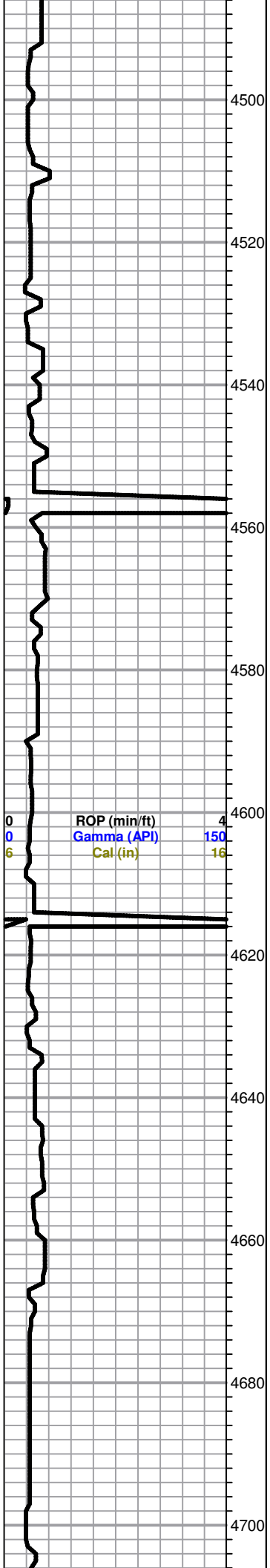
ROP (min/ft) 4
Gamma (API) 150
Cal (in) 16

0
0
6



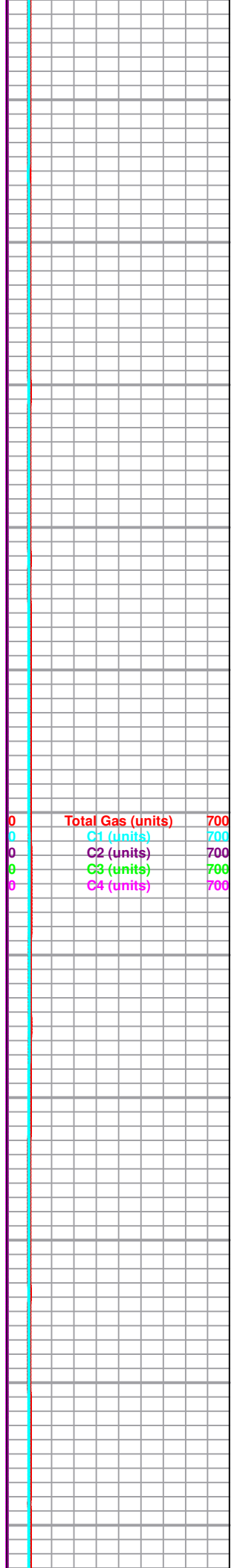
Total Gas (units) 700
C1 (units) 700
C2 (units) 700
C3 (units) 700
C4 (units) 700

0
0
0
0
0



LS, tan to brown, mottled, fxl, dense, poor visible porosity, no shows

LS, tan to cream FX, dense, poor visible porosity, chalky in parts, no shows



4720
4740
4760
4780
4800
4820
4840
4860
4880
4900
4920

LS, tan, ool, poorly deveoped, poor scattered porosity, dense,

Sh. gray to black, silty

black carb Sh.

LS, cream to tan, chalky, dense, poor visible porosity, few foss, no shows

LS, brown to tan, FXL, mottled, few foss, poor scattered porosity,

LS, brown to tan, FXL, cherty, dense, poor visible porosity, few foss, no shows.

SH. black to gray, silty in parts

ROP (min/ft) 4
Gamma (API) 150
Cal (in) 16

Total Gas (units) 700
C1 (units) 700
C2 (units) 700
C3 (units) 700
C4 (units) 700

4940
4960
4980
5000
5020
5040
5060
5080
5100
5120
5140

MARMATON 4952 (-1835)

LS, brown to tan, FXL, dense, chery, poor visible porosity no shows.

LS, tan to brown dense, poor scattered porosity, dense,

LS, cream to tan, FXL, dense, cherty, poor visible porosity, no shows

LS, brown to tan FXL, dense, poor visible porosity no shows

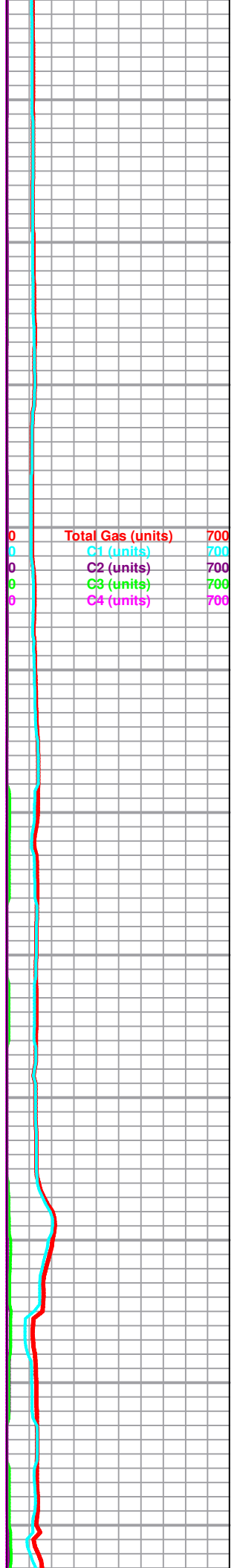
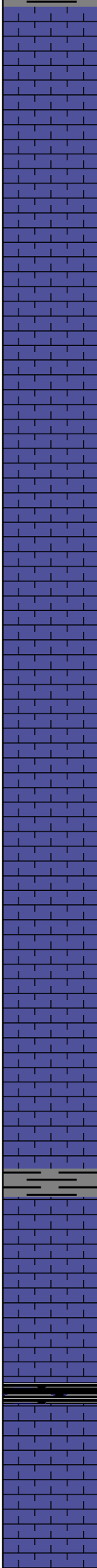
Sh. gray to black, silty, trc. LS, tan FXL cherty, poor visible porosity, no shows

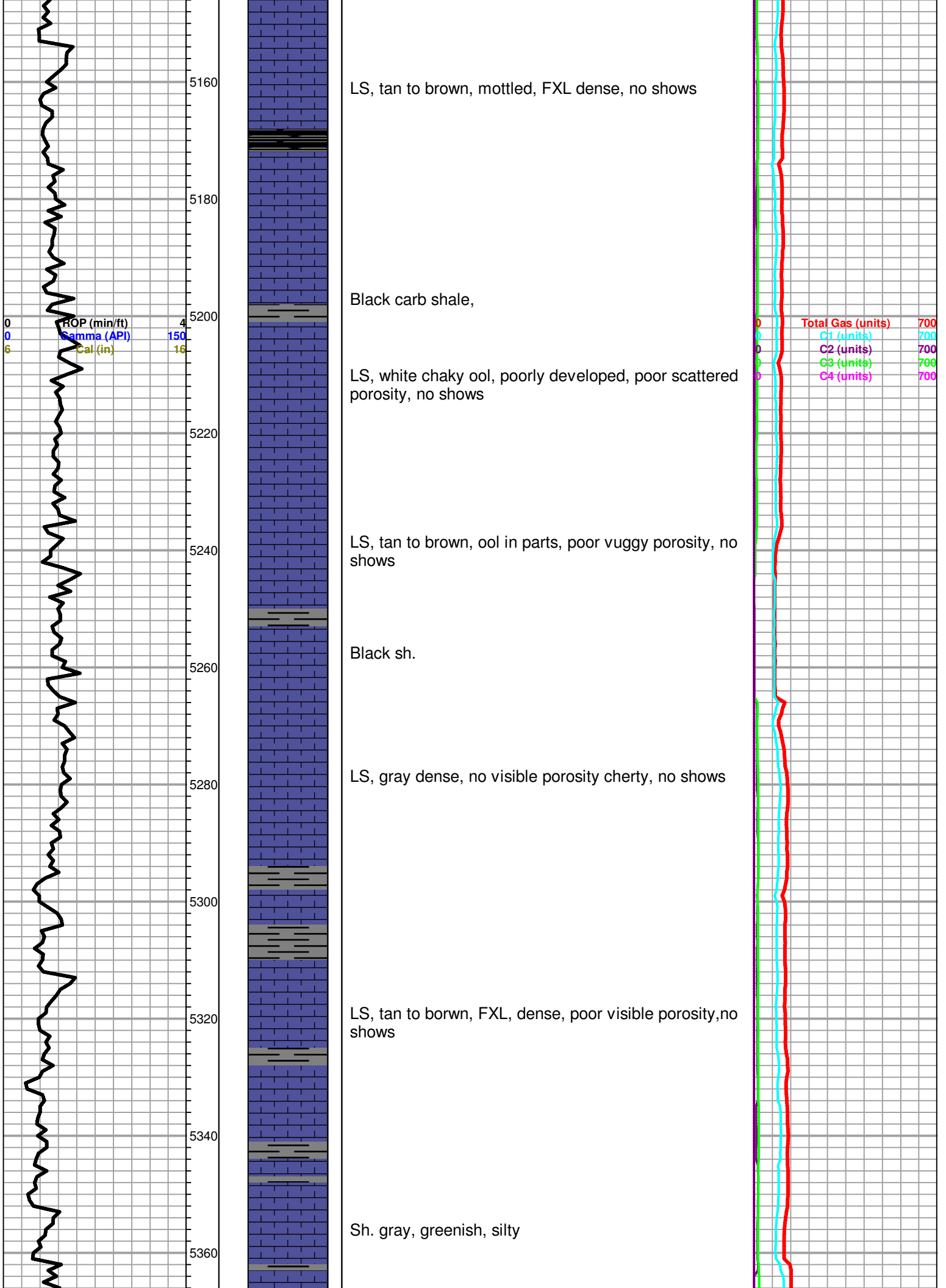
Cherokee Sh. 5118 (-2001)

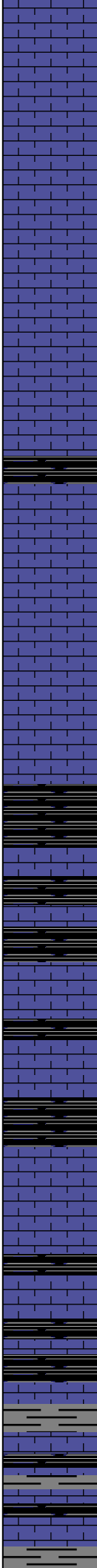
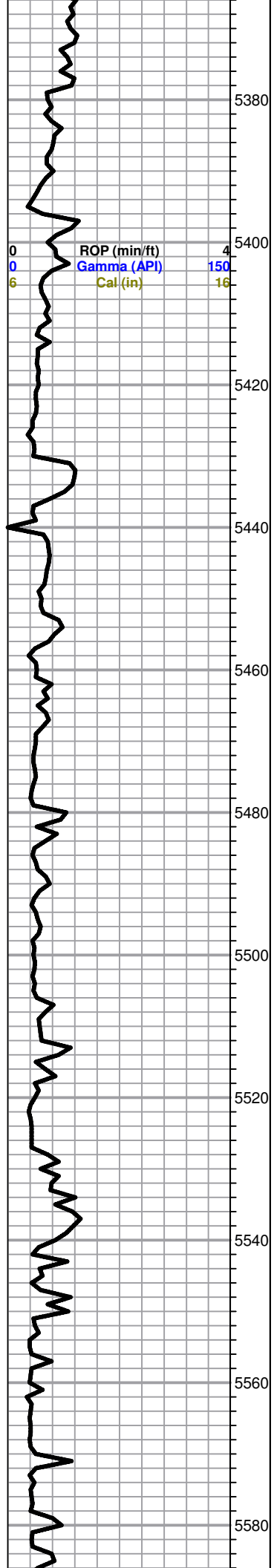
Black carb shale.

ROP (min/ft) 4
Gamma (API) 150
Cal (in) 16

Total Gas (units) 700
C1 (units) 700
C2 (units) 700
C3 (units) 700
C4 (units) 700







5380
5400
LS, cream to tan, FXL, dense, few foss, poor visible porosity, no shows

5420
LS, cream to tan, FXL, dense, few foss, poorly developed dense, poor scattered porosity no shows

5460
LS, cream to gray, mottled, dense, poor visible porosity, no shows

5480
Sh. black carb

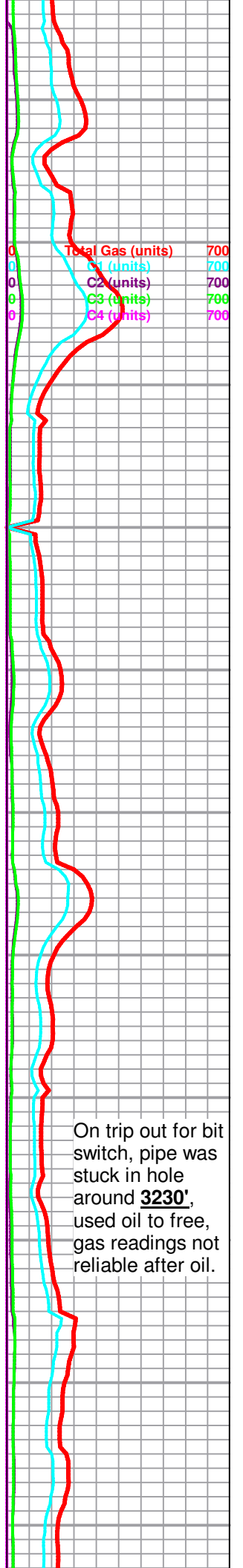
5500
Sh. gray to black carb

5520
Sh. black carb, trace LS, cream chalky poor visible porosity, no shows

5540
Atoka 5530 (-2413)
LS, cream to tan, chalky, poor scattered porosity, few foss, dense, no shows

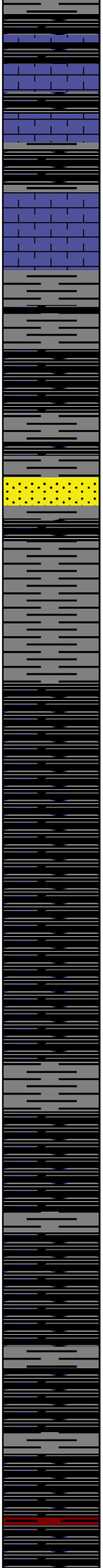
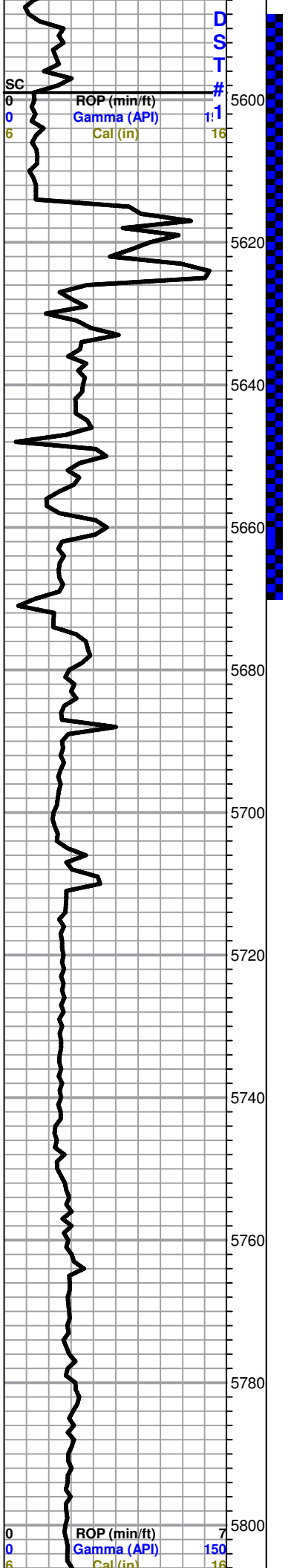
5560
Sh. black and gray

5580
LS, cream to tan, cherty FXL, dense poor visible



On trip out for bit switch, pipe was stuck in hole around **3230'**, used oil to free, gas readings not reliable after oil.

porosity, no shows, Trc. black to gray shale



MORROW 5625 (-2508)

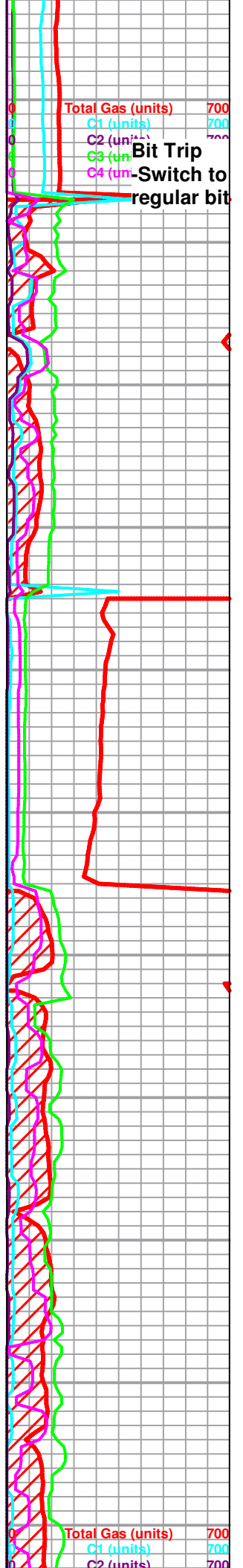
Sh. black carb

Trc.Sd, gray qtz. sub rounded, well sorted, friable, no odor, no flor. cut, no shows.

Sh. black gray silty

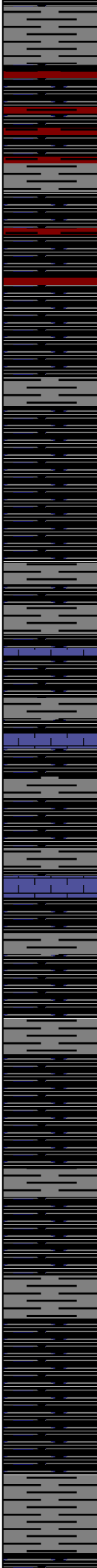
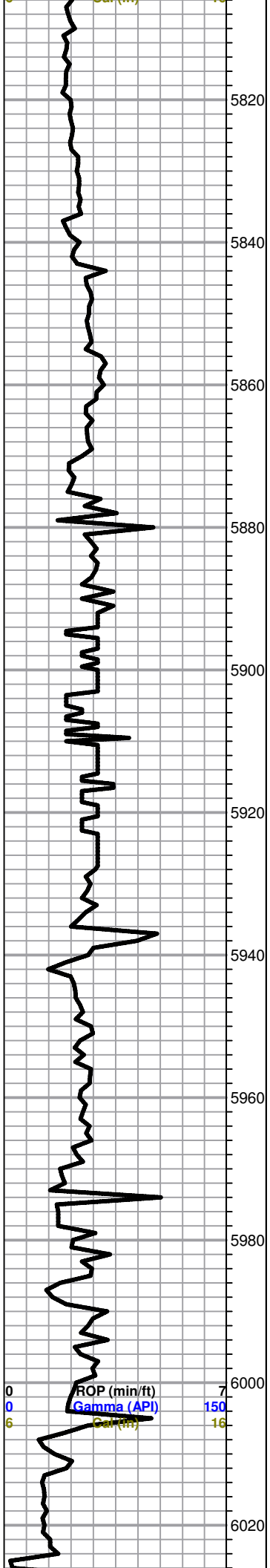
Sh. gray to black

Sh. black to gray,



Bit Trip
Switch to regular bit

Total Gas (units) 700
C1 (units) 700
C2 (units) 700



Sh. gray to black, silty in parts, trace maroon to red sh.

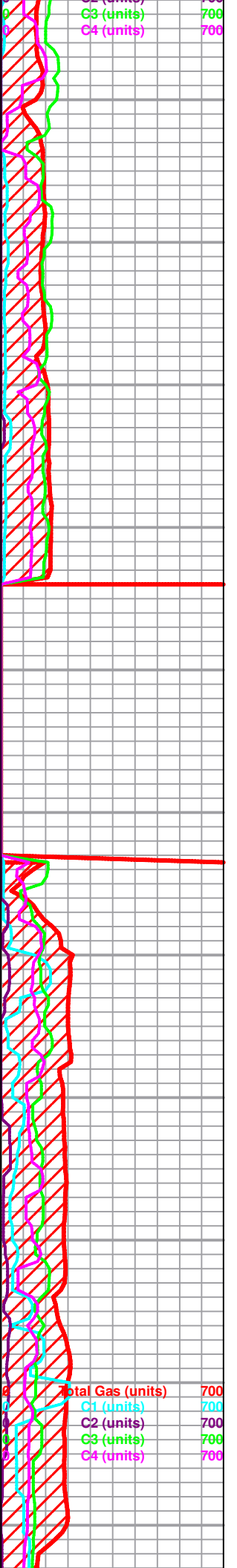
Sh. black carb

Sh. black carb, trace cream to tan, chalky, poorly developed, no shows

Sh. black to gray, trc. LS, cream to gray,

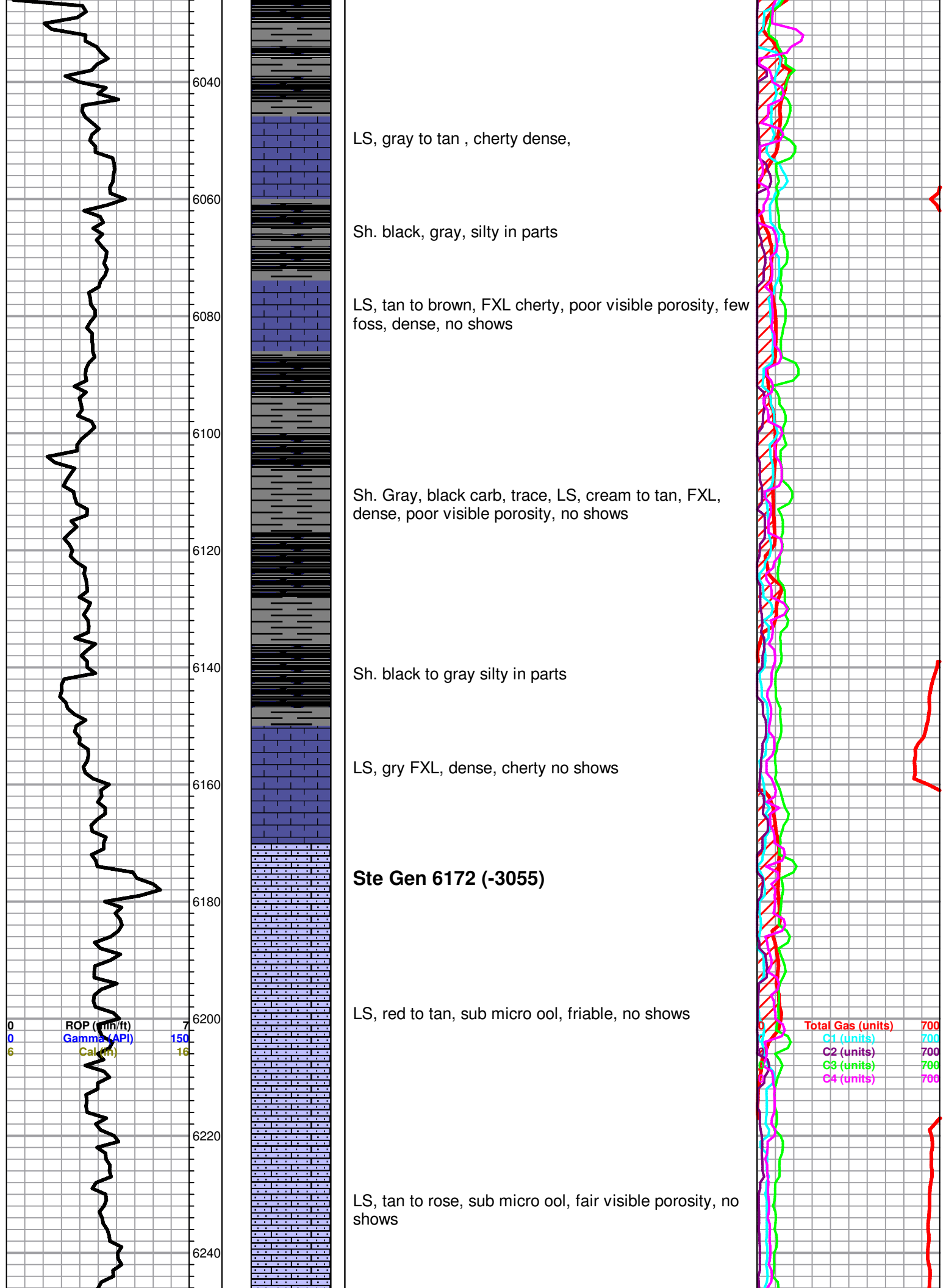
Sh. black, gray, silty, maroon,

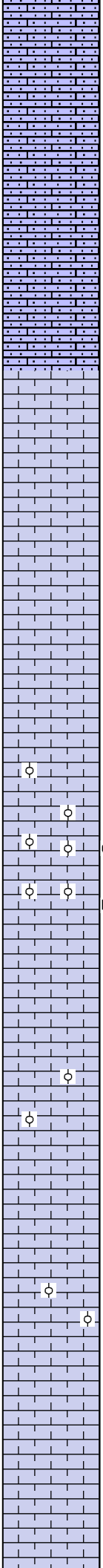
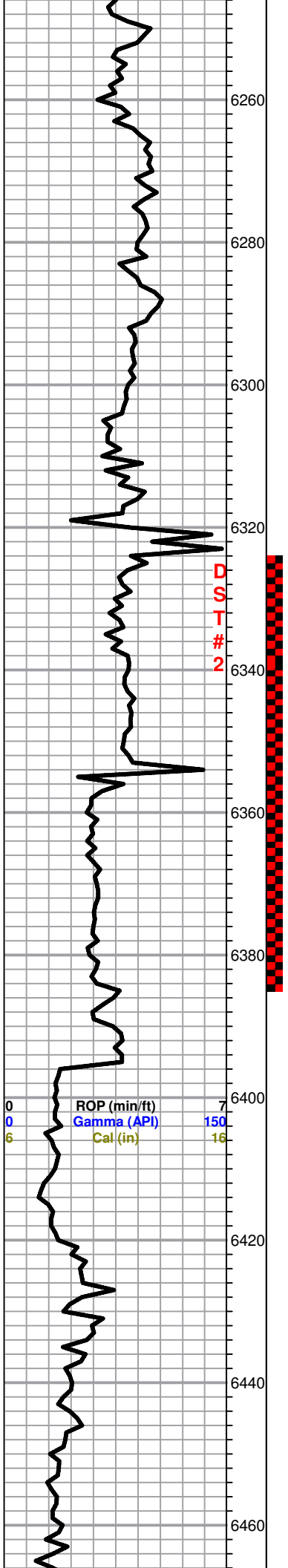
Sh. gray, silty, Black carb sh



C3 (units) 700
C4 (units) 700

Total Gas (units) 700
C1 (units) 700
C2 (units) 700
C3 (units) 700
C4 (units) 700





LS, tan to rose, sub micro ool, friable no shows

St. Louis 6300 (-3183)

LS, white to cream chalky, poor visible porosity, no shows,

LS, cream to white ool, poorly developed, chalky, poor scattered .

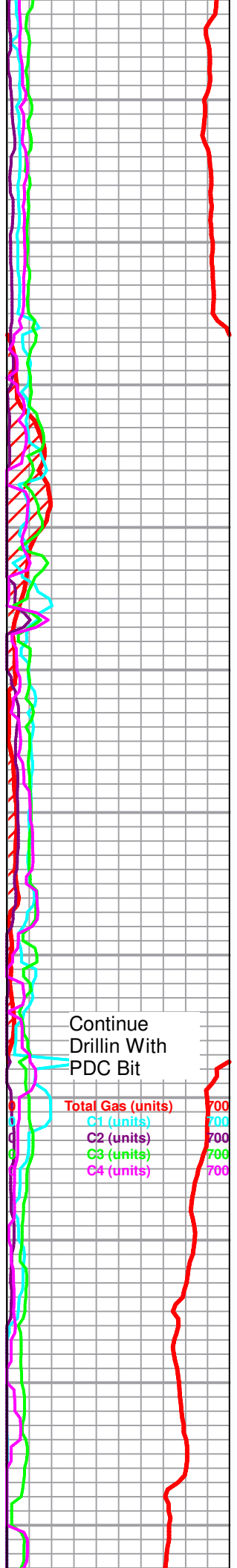
LS, cream to white, ool, chalky poor visible porosity, no shows.

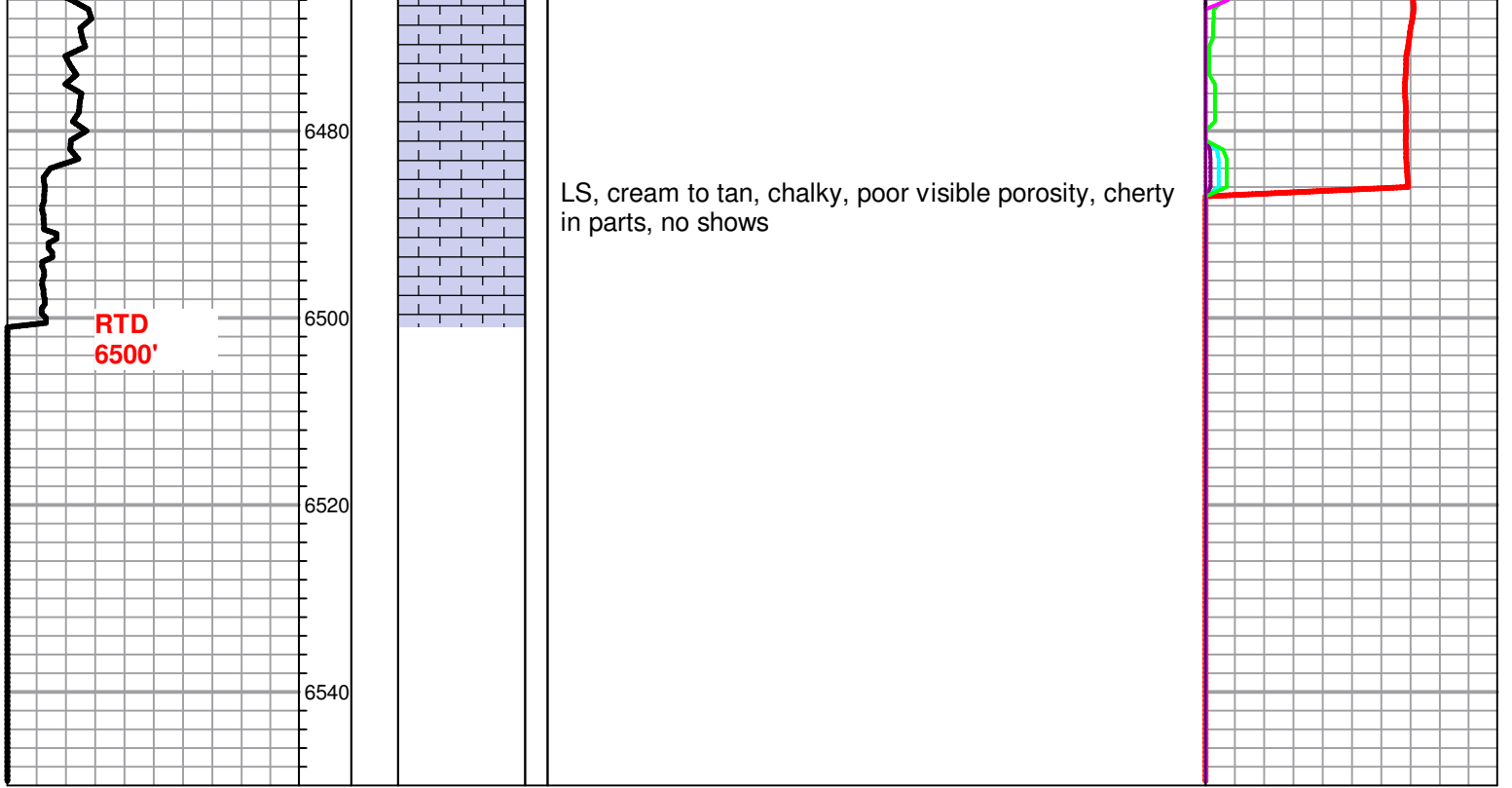
LS, tan ool, well developed, good scattered porosity, fair odor, light show of free oil, good for.

LS, cream to tan, ool, poorly developed, chalky, poor visible porosity, no shows

LS, cream, chalky, few ool, poorly developed, poor scattered porosity, no shows

LS, cream to tan, dense, cherty in parts, poor visible porosity, no shows





RTD
6500'

6480

6500

6520

6540

LS, cream to tan, chalky, poor visible porosity, cherty
in parts, no shows