



Scale 1:240 Imperial

Well Name: Reece-Riffey #1-5H  
 Surface Location: 330' FSL\_2490' FWL, Sec. 5-T29S-R12W  
 Bottom Location: Sec. 6-T29S-R12W  
 API: 15-151-22463-01-00  
 License Number: 31725  
 Spud Date: 7/28/2017 Time: 8:30 PM  
 Region: Pratt County  
 Drilling Completed: 8/15/2017 Time: 2:44 PM  
 Surface Coordinates: 319703 & 1954411  
 Bottom Hole Coordinates:  
 Ground Elevation: 1899.00ft  
 K.B. Elevation: 1910.00ft  
 Logged Interval: 3280.00ft To: 4917.00ft  
 Total Depth: 7983.00ft  
 Formation: Viola  
 Drilling Fluid Type:

**OPERATOR**

Company: Shelby Resources, LLC  
 Address: 13949 W Colfax Ave, Ste 120  
 Lakewood, CO 80401

Contact Geologist: Jeff Zoller / Janine Sturdavant  
 Contact Phone Nbr: 620-786-0807 / 303-907-2209  
 Well Name: Reece-Riffey #1-5H  
 Location: 330' FSL\_2490' FWL, Sec. 5-T29S-R12W  
 API: 15-151-22463-01-00  
 Pool: Field: Wildcat  
 State: Kansas Country: USA

**LOGGED BY**

Company:  
 Address:

Phone Nbr: 203-671-6034 / 620-617-4091  
 Logged By: Geologist

Name: Jeremy Schwartz / Keith Reavis

**CONTRACTOR**

Contractor: Sterling Drilling Co  
 Rig #: 4  
 Rig Type: mud rotary  
 Spud Date: 7/28/2017 Time: 8:30 PM  
 TD Date: 8/15/2017 Time: 2:44 PM  
 Rig Release: Time:

**ELEVATIONS**

K.B. Elevation: 1910.00ft Ground Elevation: 1899.00ft  
 K.B. to Ground: 11.00ft

		OIL - TA				OIL - P&A				OIL - P&A							
		HUMMON CORP.				HUMMON CORP.				HUMMON CORP.							
		PRIDE #2				KESSLER #1				RIFFEY #2							
		Reece-Riffey #1-5H				NW-NE-NW 8-T29S-R12W				SW-SW-SW 5-T29S-R12W				W/2-E/2-SE 6-T29S-R12W			
		KB		1910		KB		1906		KB		1902		KB		1900	
		LOG TOPS		SAMPLE TOPS		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.	
		DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
FORMATION																	
WAUBANSEE				2825	-915	2825	-919										
HOWARD				3180	-1270	3179	-1273							3179	-1279		9
TOPEKA				3291	-1381	3291	-1385			3278	-1376		5	3282	-1382		1
HEEBNER				3656	-1746	3658	-1752			3646	-1744		2	3648	-1748		2
TORONTO				2676	-1766	2677	-1771			2660	-1768		8	2664	-1764		2

TORONTO			3676	-1766	3677	-1771			+	3	3680	-1738			-	8	3684	-1764			-	2
DOUGLAS			3688	-1778	3690	-1784			+	6	3676	-1774			-	4	3679	-1779			+	1
BROWN LIME			3836	-1926	3839	-1933			+	7	3844	-1942			+	16	3835	-1935			+	9
LANSING			3856	-1946	3860	-1954			+	8	3856	-1954			+	8	3850	-1950			+	4
BKC (TVD)			4240	-2330	4238	-2332			+	2	4228	-2326			-	4	4228	-2328			-	2
MARMATON (TVD)			4247	-2337	4254	-2348			+	11	4233	-2331			-	6	4240	-2340			+	3
MISSISSIPPIAN (TVD)			4318	-2408	4324	-2418			+	10	4313	-2411			+	3	4321	-2421			+	13
KINDERHOOK (TVD)			4393	-2483	4391	-2485			+	2	4380	-2478			-	5	4384	-2484			+	1
VIOLA (TVD)			4447	-2537	4447	-2541			+	4	4436	-2534			-	3	4434	-2534			-	3
RTD (TVD)			4457	-2547	4700	-2794			+	247	4685	-2783			+	236	4545	-2645			+	98

### ROCK TYPES

Cht	Chtcong	Lmst fw<7	shale, gry	shale, red
Cht vari	Dolprim	shale, grn	Carbon Sh	

### ACCESSORIES

#### MINERAL

- △ Chert White
- ▲ Chert, dark
- ∠ Dolomitic
- Sandy
- Silty

#### FOSSIL

- Oolite
- Oolites
- ⊕ Oomoldic

#### STRINGER

- Dolomite
- Limestone
- Sandstone
- Siltstone
- green shale

#### TEXTURE

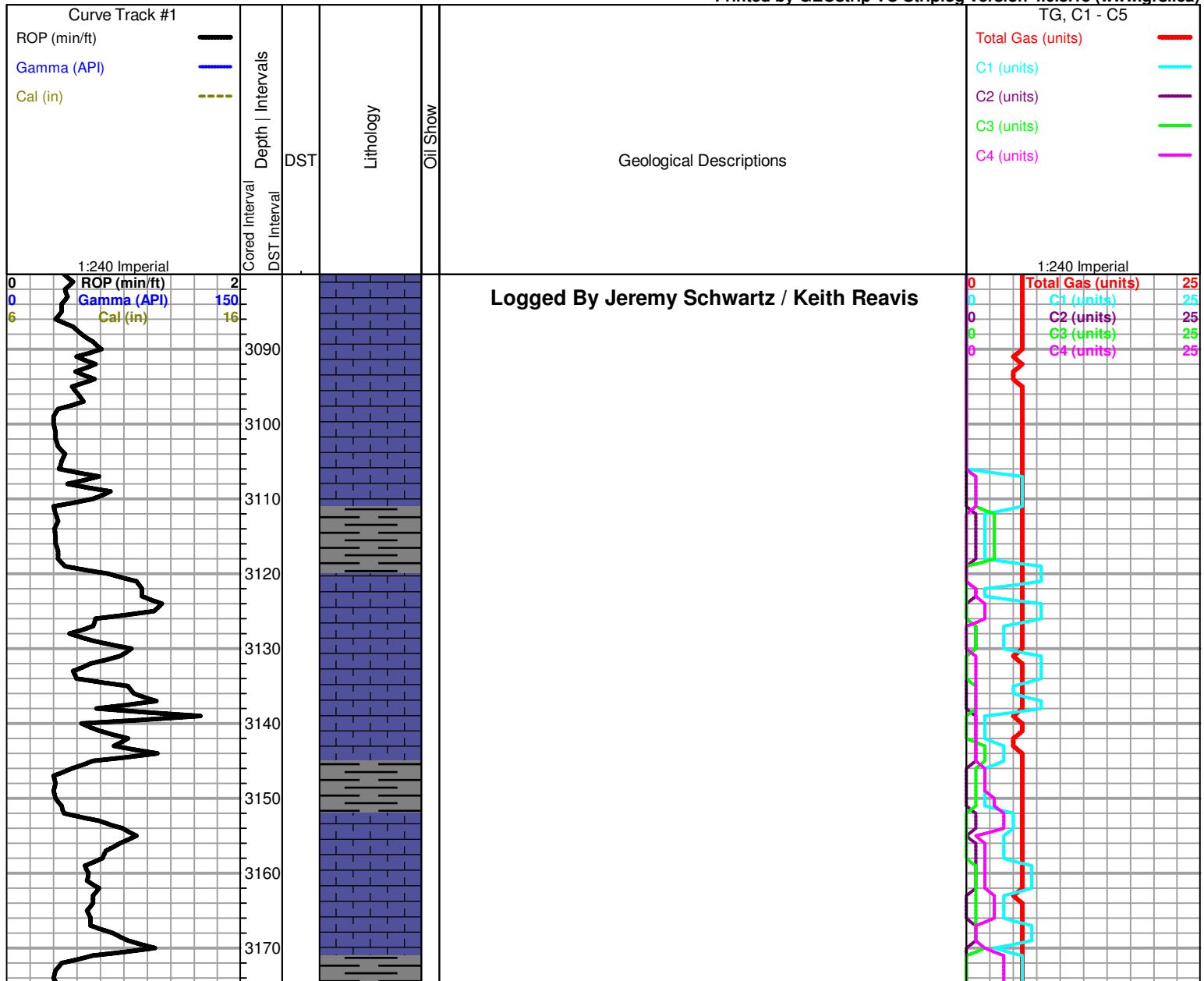
- C Chalky

### OTHER SYMBOLS

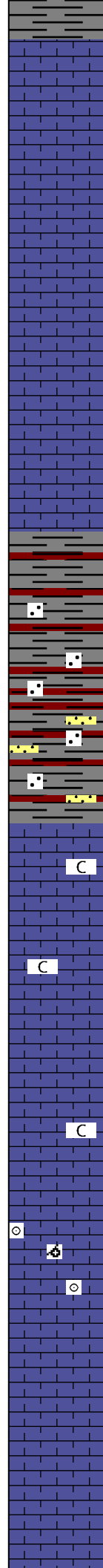
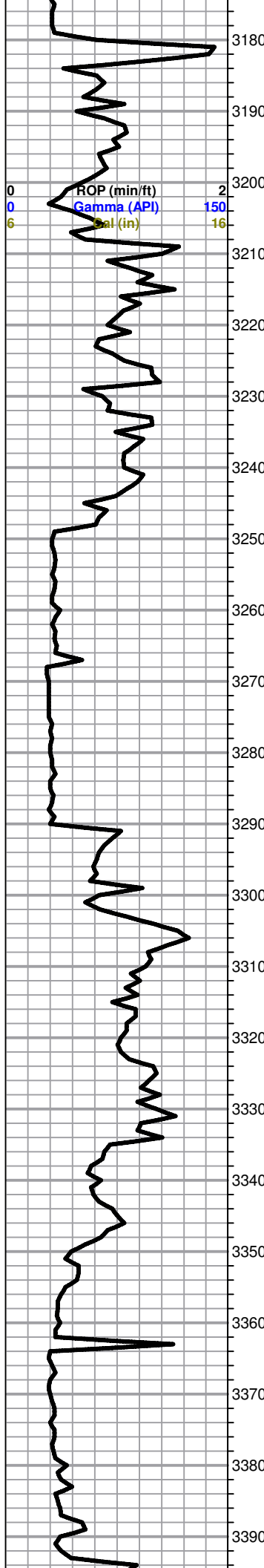
#### DST

- DST Int
- DST alt

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**Howard 3180 (-1270)**



**20' Wet and Dry Samples begin @ 3300'**

**Geologist Jeremy Schwartz on location @ 0330hrs, 3315', 7/31/17**

Shale, gray and red, mostly soft and waxy, some red sandy

**Topeka 3291 (-1381)**

Shale as above, with some scattered SS clusters, clear to gray, fine grained, sub-rounded to sub-angular, poorly sorted and mostly friable, with some scattered shale inclusions, barren, also with influx LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, some slightly soft and chalky in part, no show or odor

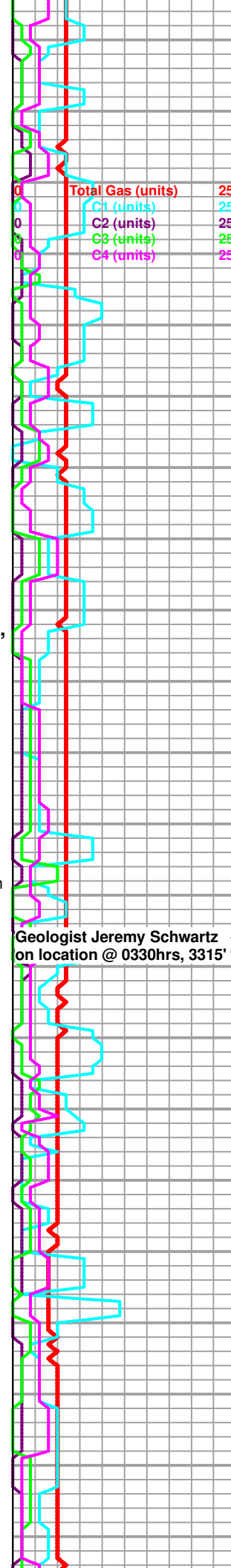
LS, gray to cream, micro-xln, mostly lithographic and dense with poor visible porosity, few chips cream with few very scattered vugs, overall poor visible porosity, some soft and slightly chalky in part, no show or odor

LS as above, no show or odor

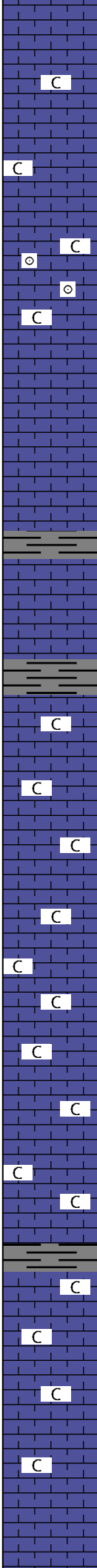
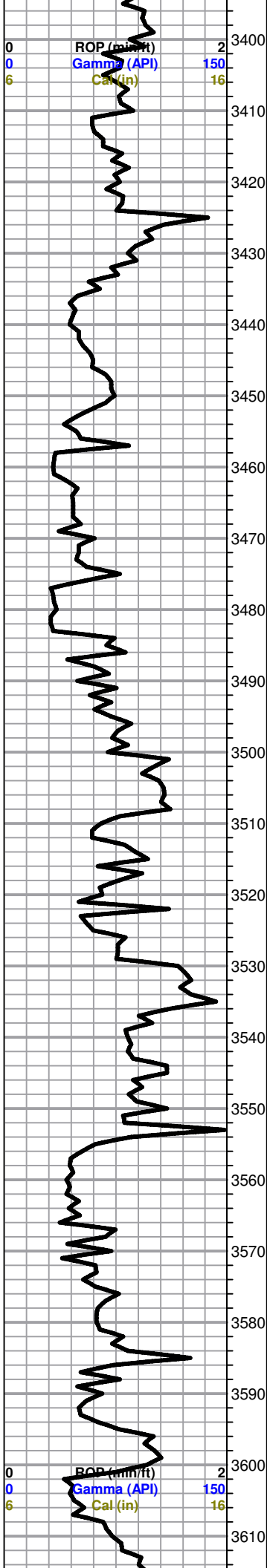
LS, gray to cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some very scattered cream oolitic to sub-oomoldic with poor visible porosity, no show or odor

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips with re-crystallized edges and few small vugs, overall poor visible porosity, no show or odor

LS as above, no show or odor



**Geologist Jeremy Schwartz on location @ 0330hrs, 3315'**



LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, slightly chalky, no show or odor

LS, mostly cream with some very scattered gray, lithographic and dense with poor visible porosity, some very scattered chips with several small vugs, overall poor visible porosity, barren, with trace gray oolitic, slightly chalky, no show or odor

LS as above, no show or odor

LS, mostly cream with some very scattered gray, micro-xln, lithographic and dense with poor visible porosity, some scattered chips with one to two small vugs, barren, no odor

Mostly same as above, very fine crushed sample, fairly chalky, no show or odor

LS, cream, micro-xln, very fine crushed sample, chalky, no show or odor

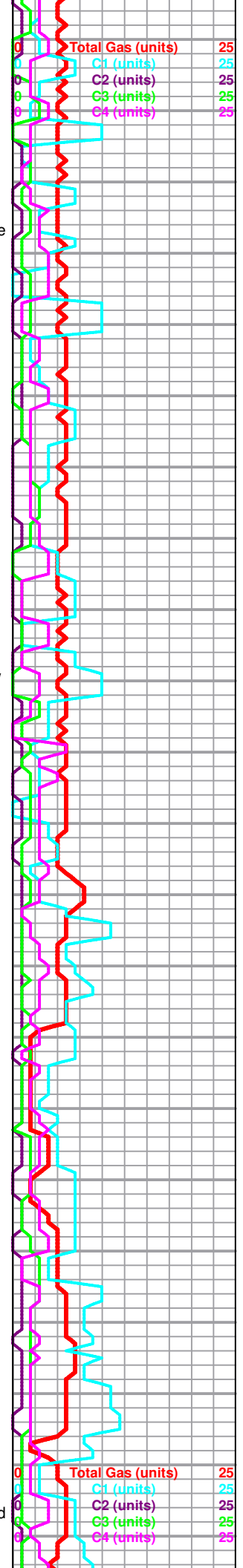
LS as above, chalky, no show or odor

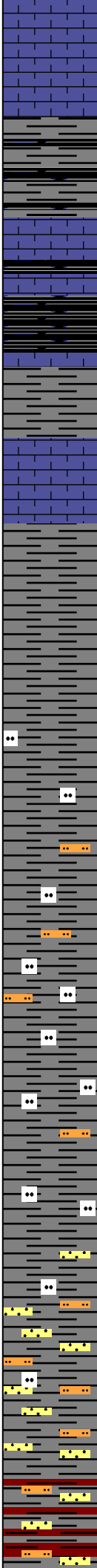
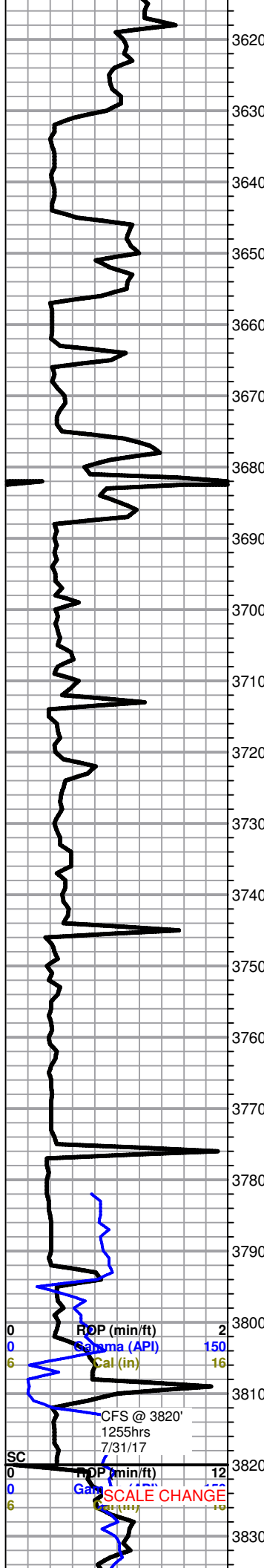
LS, cream, micro-xln, very fine crushed sample, few small chips with scattered mostly poor pinpoint porosity, fairly chalky, no show or odor

LS as above, fairly chalky, no show or odor

LS, cream, micro-xln, very fine crushed sample, lithographic with poor visible porosity, fairly chalky, no show or odor

LS as above, with slight influx gray to light gray and some very scattered brown, micro-xln, lithographic and dense with poor visible porosity, no show or odor





LS, cream to gray with some very scattered brown, micro-xln, lithographic and dense with poor visible porosity, no show or odor

**Heebner 3656 (-1746)**

Shale, black carbonaceous

**Toronto 3676 (-1766)**

LS, cream to light gray, micro-xln. few chips with slightly re-crystallized edges and mostly poor very scattered pinpoint porosity on edges only, no show or odor

**Douglas 3688 (-1778)**

Shale, dark gray to gray, mostly soft and waxy, some dense

Shale as above, with some dark brown, some silty

Shale as above

Shale, dark gray to dark brown, some silty

Shale as above

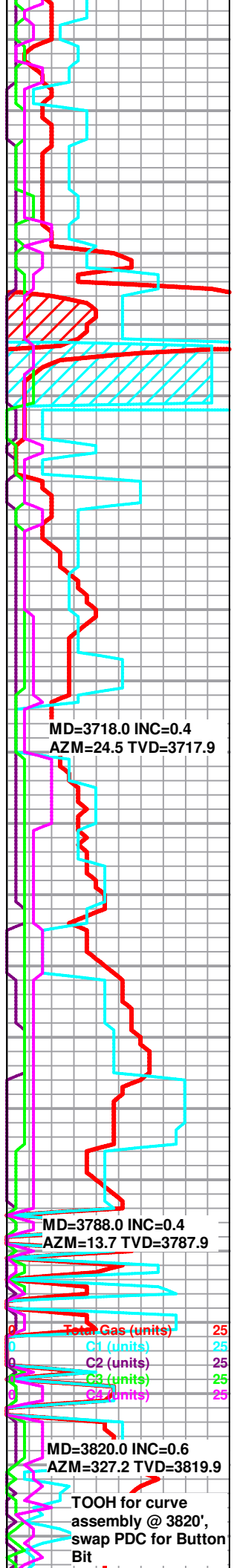
3820' 30" Shale as above, with slight influx scattered SS clusters, clear to light gray, fine-grained, sub-rounded to sub-angular and poorly sorted, fairly friable, barren, some with shale inclusions, no show or odor

3820' 60" mostly gray shale with some scattered brown, some silty, with SS clusters as above, barren, no odor

**10' wet and dry samples begin @ 3830'**

Shale, gray to dark gray and red with some brown, some silty, also with some scattered SS clusters, vf-f grained, gray to light gray, sub-rounded to sub-angular and poorly sorted, fairly friable, barren, no show or odor

**Brown Lime 3826 (-1826)**



MD=3718.0 INC=0.4  
AZM=24.5 TVD=3717.9

MD=3788.0 INC=0.4  
AZM=13.7 TVD=3787.9

Total Gas (units) 25  
C1 (units) 25  
C2 (units) 25  
C3 (units) 25  
C4 (units) 25

MD=3820.0 INC=0.6  
AZM=327.2 TVD=3819.9

TOOH for curve assembly @ 3820'; swap PDC for Button Bit



### Brown Lime 3836 (-1926)

LS, gray to brown with some scattered cream, most oolitic to sub-oolitic and dense with no visible porosity, no show or odor

Begin building curve @ 3840'

### Lansing 3856 (-1946)

LS, gray to cream with some brown, micro-xln, lithographic and dense with poor visible porosity, with some scattered sub-oolitic to oolitic and some very scattered soft and chalky in part, no show or odor

MD=3852.0 INC=3.1  
AZM=6.2 TVD=3851.9

LS, mostly gray to cream with some scattered brown, micro-xln, dense with poor visible porosity, no show or odor

LS as above, no show or odor

MD=3884.0 INC=7.5  
AZM=8.8 TVD=3883.7

LS, cream to gray with some very scattered white, micro-xln, mostly lithographic and dense, some soft and chalky in part, slightly chalky sample, no show or odor

LS, mostly cream to gray with some scattered white, micro-xln with some scattered medium-xln, mostly dense with poor visible porosity, few small chips with one to two small vugs, overall poor visible porosity, with some scattered soft and chalky in part, slightly chalky sample, no show or odor

MD=3915.0 INC=12.3  
AZM=4.6 TVD=3914.3

LS, mostly cream to gray, micro-xln, dense with poor visible porosity, with some scattered soft and chalky in part, no show or odor

LS as above, no show or odor

LS, mostly cream with some light gray to gray, micro-xln, lithographic with poor visible porosity, with some very scattered soft and chalky in part, no show or odor

MD=3947.0 INC=16.1  
AZM=1.6 TVD=3945.3

LS, cream to gray, micro-xln, lithographic with poor visible porosity, with some scattered soft and chalky in part, no show or odor

LS, gray to cream with some scattered brown, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered soft and chalky in part, trace oolitic, no show or odor

MD=3979.0 INC=19.9  
AZM=358.1 TVD=3975.7

LS as above, no show or odor

Total Gas (units) 25  
C1 (units) 25  
C2 (units) 25  
C3 (units) 25

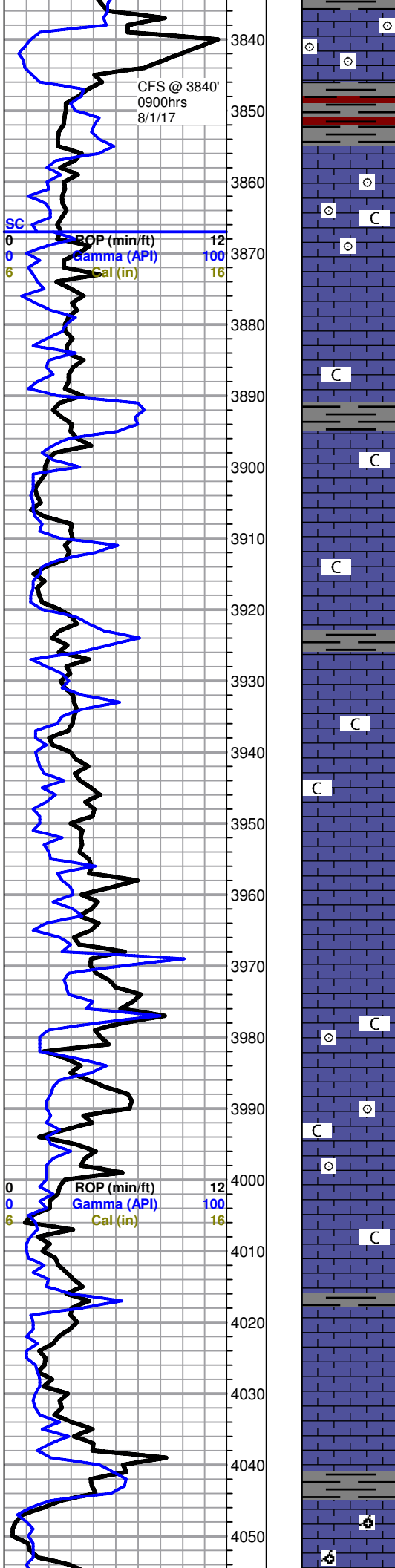
LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, some very scattered soft and chalky in part, no show or odor

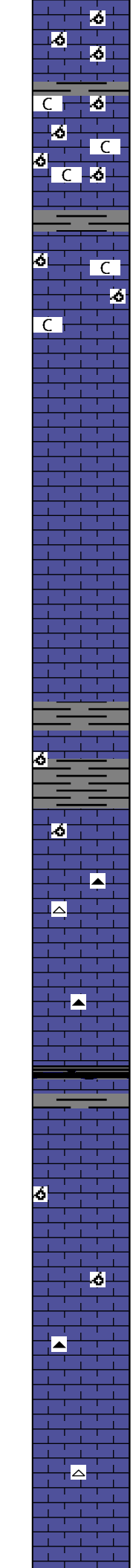
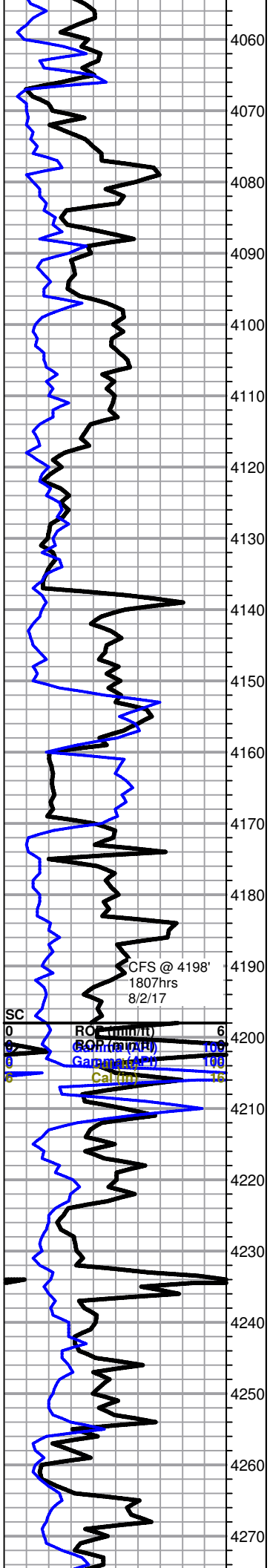
MD=4011.0 INC=23.3  
AZM=352.6 TVD=4005.5

LS as above, with trace oolitic, few very scattered chips with re-crystallized edges and one to two small vugs on edges only, no show or odor

LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, some soft and chalky in part, with some scattered slightly re-crystallized, some with with several small vugs, overall poor visible porosity, with trace oomoldic with mostly poor and some very scattered fair oomold porosity, barren, no show or odor

MD=4043.0 INC=26.3  
AZM=343.2 TVD=4034.5





LS, cream to gray with some scattered brown, micro-xln, oomoldic, mostly fair with some good oomold porosity, barren, no odor

LS, cream to gray with some scattered brown, micro-xln, some oomoldic as above, some lithographic and dense with poor visible porosity, fairly chalky, no show or odor

LS as above, with oomoldic slightly dropping out and slight influx lithographic and dense, no show or odor

LS, mostly same as above, no show or odor

LS, cream to gray, micro-xln, mostly lithographic and dense with poor visible porosity, with some soft and chalky in part, trace oomoldic, no show or odor

LS, gray to cream, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS, gray to cream, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS as above, with few very scattered chips sub-oomoldic to oomoldic with poor visible oomold porosity, trace white and brown chert, fresh and sharp, no show or odor

LS, gray to cream, lithographic and dense with poor visible porosity, no show or odor

4198' 30" LS, cream to gray, micro-xln, lithographic and dense with poor visible porosity, no show or odor

4198' 60" LS as above, with trace gray to dark gray chert, no show or odor

**Hushpuckney**

LS, cream to gray with some scattered brown, micro-xln, lithographic and dense with poor visible porosity, no show or odor

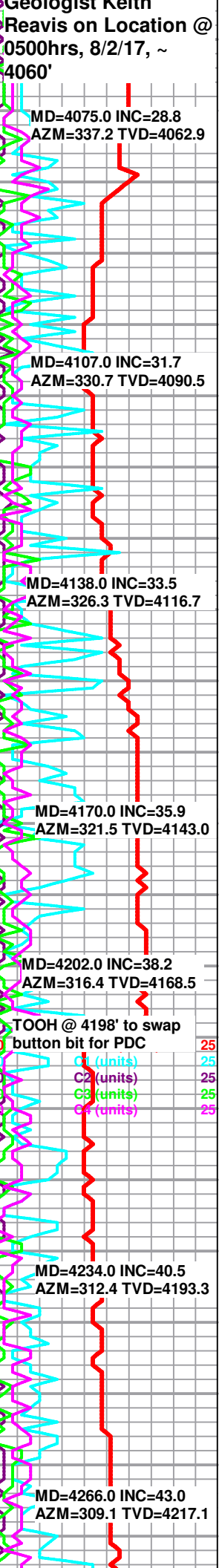
LS, cream to brown, micro-xln, lithographic and dense with poor visible porosity, trace oomoldic with mostly poor and some scattered fair oomold porosity, dense and barren, no odor

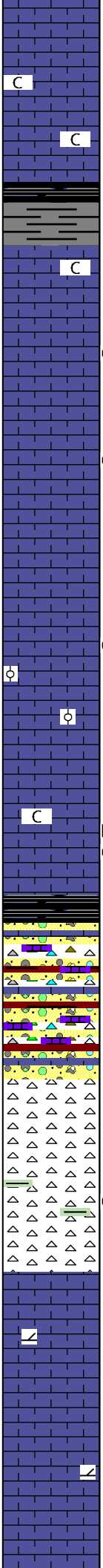
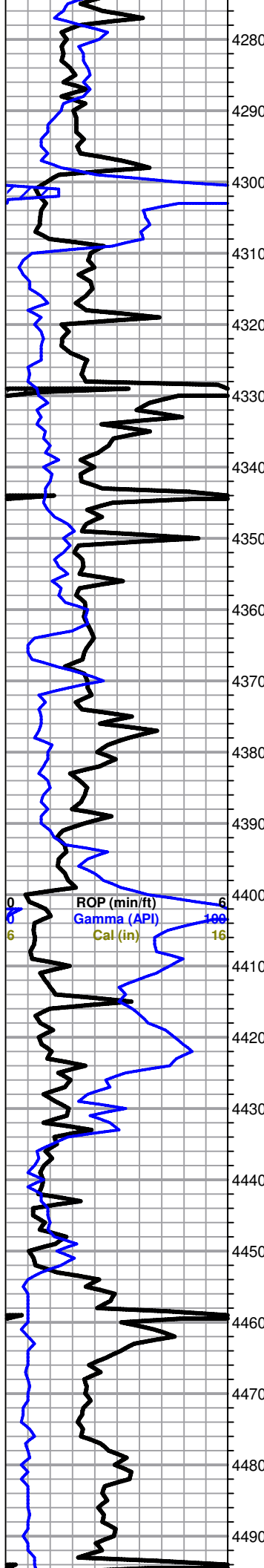
LS, cream to gray with some very scattered brown, lithographic and dense with poor visible porosity, with trace tan to gray chert, no show or odor

LS, cream to gray with some scattered brown, micro-xln, lithographic and dense with poor visible porosity, no show or odor

LS as above, with some very scattered brown to opaque and trace white chert, no show or odor

LS, cream to gray with some scattered brown, micro-xln, lithographic with poor visible porosity, no show or odor





LS as above, no show or odor

LS, cream to gray with some scattered white, micro-xln, lithographic and dense with poor visible porosity, some soft and chalky in part, no show or odor

**Marmaton 4308 MD / 4240 TVD (-2330)**

LS, cream to gray, micro-xln, mostly lithographic with poor visible porosity, some scattered soft and chalky in part, no show or odor

LS as above, with trace oolitic with fair to good tarry inter-oolite staining as well as as some oolites saturated as well, slow streaming cut, also with few corral fans with mostly saturated to saturated tarry stain, fair odor

Very fine crushed sample, LS, cream, micro-xln, some very small chips slightly yuggy with scattered to mostly saturated tarry black stain, no odor

Very fine crushed sample, LS, cream, micro-xln, lithographic with poor visible porosity, no show or odor

LS as above, no show or odor

Very fine crushed sample, LS, cream, micro-xln, with some very scattered oolitic with scattered tarry inter-oolite stain, no odor

LS, cream, micro-xln, lithographic with poor visible porosity, with trace brown chert, no show or odor

LS, cream to gray, micro-xln, mostly lithographic with poor visible porosity, some very scattered soft and chalky in part with scattered gilsonitic stain, upon break chips show fair show free oil (opaque droplets)

LS, cream to gray, micro-xln, with some scattered small white and opaque and orange chert fragments, fresh and sharp, no show or odor

**Mississippian Chert 4424 MD / 4318 TVD (-2408)**

influx white chert with some scattered opaque, some frosted, fresh and sharp, no show or odor

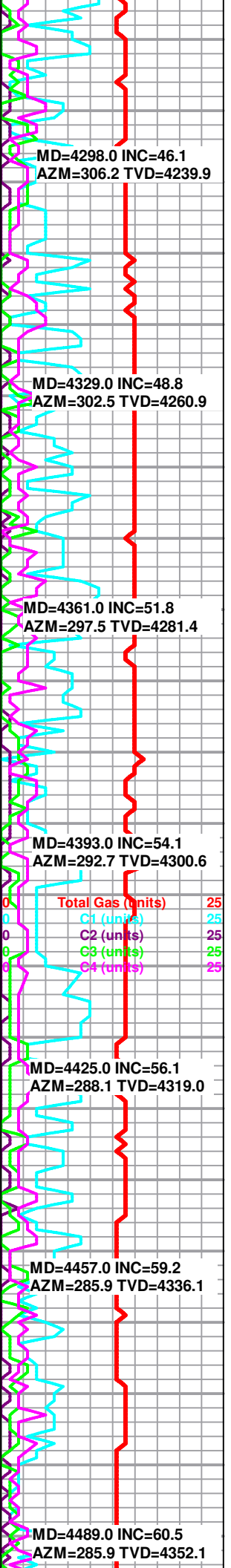
Mostly white chert with some scattered opaque, some frosted, fresh and sharp, few chips slightly tripolitic with poor stain in areas of porosity only, with trace green shale, no show or odor

**Gilmore City**

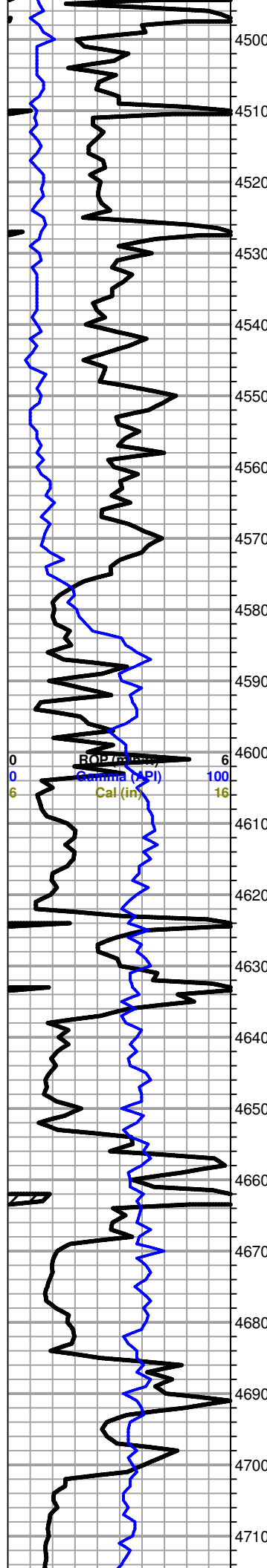
Chert as above, with influx cream LS, lithographic with poor visible porosity, no show or odor

LS, cream, micro-xln, lithographic with poor visible porosity, no show or odor

As above, no show or odor







4500 LS, dolomitic, cream, micro-xln, lithographic with poor visible porosity, no show or odor

4510

4520 LS, gray to cream, micro-xln, lithographic with poor visible porosity, no show or odor

4530 LS, cream to gray, micro-xln, lithographic with poor visible porosity, no show or odor

4540 limestone, dolomitic, cream to gray, micro-cryptocrystalline, mostly lithographic, some microcrystalline dolomitic texture, no visible porosity or shows

4550

4560 LS as above, no show or odor

4570

4580

**Kinderhook 4584 MD / 4393 TVD (-2483)**

4590 very fine samples, shale, gray to brown, some very scattered pale green to maroon, soft, limey, with some scattered light gray dolomite to dolomitic limestone, argillaceous to sub-sucrosic, very soft and friable to trace dense

4600

4610

4620 Shale with scattered dolomite to dolimitic LS as above

4630

4640

4650

4660 As above

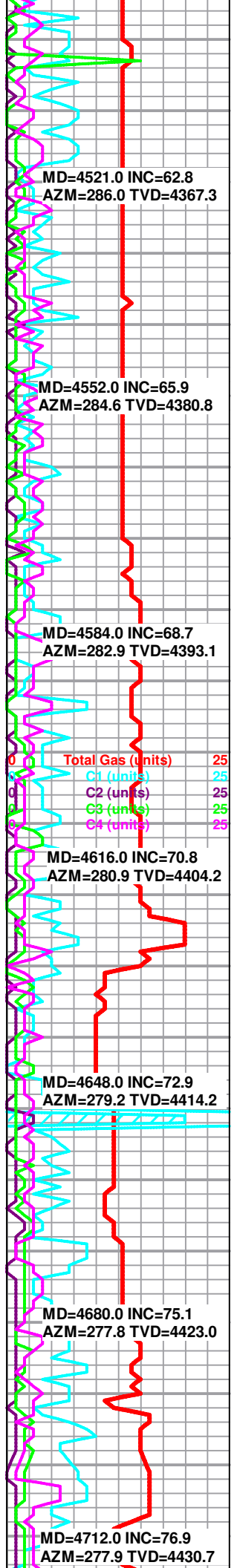
4670

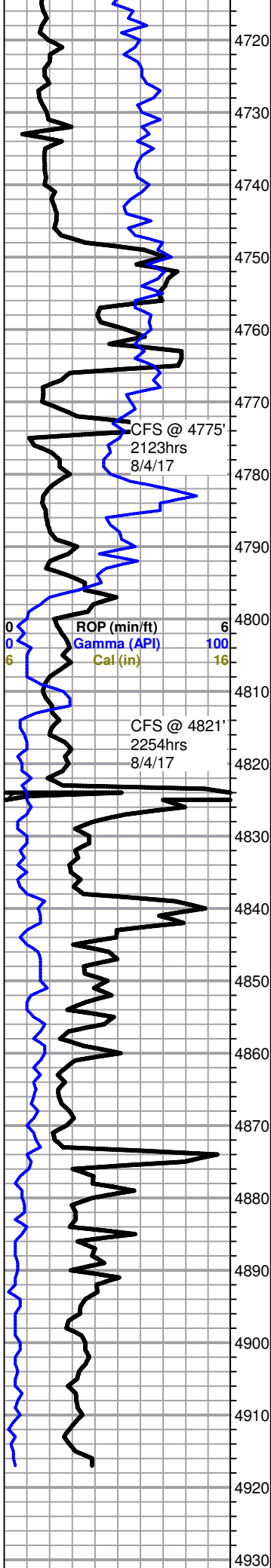
4680

4690

4700 very fine samples, shale, gray to brown, some very scattered pale green to maroon, soft, limey, with some scattered light gray dolomite to dolomitic limestone, argillaceous to sub-sucrosic, very soft and friable to trace dense

4710





Shale and scattered dolomite to dolomitic LS as above

As above

**Viola 4796 MD / 4447 TVD (-2537)**

4821' 30" Dark gray to gray and some brown shales with scattered dolomite to dolomitic LS as above, influx turquoise shales, with some scattered dolomite crystals

4821' 60" Influx very fine crushed dolomite chips, cream to white, micro-xln, most chips too small and fragile to grab with tweezers, some evidence of sub-rhombic to rhombic, some very scattered chips with slight questionable staining, few vf-xln with fair to good visible vuggy porosity and scattered light stain with SSFO on surface, still carrying abundant shale as above, poor odor

4821' 90" Influx very fine crushed dolomite chips as above, some very scattered sub-rhombic to rhombic with slight stain, NSFO, no odor

As above, picking up trace tan to white chert, fresh and sharp, no show or odor

Dolomite, white, very fine crushed chips, some scattered sub-rhombic to rhombic small pieces, some scattered gray sucrosic, friable, most chips appear barren, few with scattered to very scattered stain, chips large enough to test have very slow weak cut with dull milky fluor., NSFO, trace white to opaque chert, still carrying abundant shale, poor fleeting odor

Mostly same as above, shows dropping out, few small chips sub-rhombic to rhombic with very scattered poor inter-xln stain, abundant shale, NSFO, no odor

As above, shows mostly dropping out, few very scattered chips with very scattered poor inter-xln stain, abundant shale, NSFO, no odor

As above

4917' 30" As above

3917' 60" Dolomite, white to cream, micro-xln, very fines crushed chips, some scattered sub-rhombic to rhombic, few with one to two small vugs and poor very scattered inter-xln stain in vugs only, abundant shale, NSFO, no odor

MD=4744.0 INC=78.2  
AZM=278.3 TVD=4437.6

MD=4775.0 INC=80.2  
AZM=278.6 TVD=4443.4

Total Gas (units) 25

MD=4807.0 INC=80.5  
AZM=278.3 TVD=4448.8

C4 (units) 25

MD=4839.0 INC=83.4  
AZM=278.1 TVD=4453.3

MD=4865.0 INC=86.4  
AZM=278.6 TVD=4455.6

Extractor probably not working here

**RTD / EOC @ 4917' MD / 4457' TVD (-2547)**  
**Geologists Jeremy Schwartz & Keith Reavis both**  
**on location from ~4060'MD - 4917' MD**  
**\*\*Begin Lateral Section @ 4457' TVD\*\***

