

**OPERATOR**

Company: BLACK DIAMOND OIL, INC.  
 Address: P.O. BOX 641  
 HAYS, KS 67601

Contact Geologist: KENNETH VEHIGE  
 Contact Phone Nbr: (785) 625-5891  
 Well Name: HUGHES #1  
 Location: NE NW SW NW Sec. 21 - 8S - 27W  
 API: 15-179-21388-00-00  
 Pool:  
 State: KANSAS

Field: UNKNOWN  
 Country: USA

**Scale 1:240 Imperial**

Well Name: HUGHES #1  
 Surface Location: NE NW SW NW Sec. 21 - 8S - 27W  
 Bottom Location:  
 API: 15-179-21388-00-00  
 License Number: 7076  
 Spud Date: 1/2/2015 Time: 5:15 PM  
 Region: SHERIDAN COUNTY KANSAS  
 Drilling Completed: 1/9/2014 Time: 8:42 AM  
 Surface Coordinates: 3646' FSL & 605' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2582.00ft  
 K.B. Elevation: 2587.00ft  
 Logged Interval: 3200.00ft To: 4390.00ft  
 Total Depth: 4390.00ft  
 Formation: UPPER AND LOWER PENNSYLVANIAN  
 Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -100.3466788  
 Latitude: 39.3456531  
 N/S Co-ord: 3646' FSL  
 E/W Co-ord: 605' FWL

**LOGGED BY**

Company: BIG CREEK CONSULTING, INC.  
 Address: 1909 MAPLE  
 ELLIS, KS 67637

Phone Nbr: (785) 259-3737  
 Logged By: Geologist Name: JEFF LAWLER

**CONTRACTOR**

Contractor: WW DRILLING, LLC  
 Rig #: 6  
 Rig Type: MUD ROTARY  
 Spud Date: 1/2/2015 Time: 5:15 PM  
 TD Date: 1/9/2014 Time: 8:42 AM  
 Rig Release: 1/10/2015 Time: 3:15 PM

**ELEVATIONS**

K.B. Elevation: 2587.00ft Ground Elevation: 2582.00ft  
 K.B. to Ground: 5.00ft


**NOTES**

THE HUGHES #1 RUN STRUCTURALLY HIGH TO THE ERIC WADELL CO., LLS HUGHES #1 WHICH WAS THE ONLY OTHER WELL DRILLED IN THIS SECTION. THERE WAS POOR RESERVOIR DEVELOPMENT THROUGHOUT THE WELL WITH LACK OF POROSITY OR HYDROCARBONS. AFTER LOG ANALYSIS AND DUE TO LACK OF ECONOMICAL RECOVERY ON TWO DRILL STEM TESTS IT WAS DECIDED TO PLUG AND ABANDON THE HUGHES #1.

**WELL COMPARISON SHEET**

FORMATION	HUGHES #1				W2 NE NE SW 21-08-27				S2 N2 SE NW 20-8-27				N2 SW SE 16-8-27				P&A 8-58			
	KB		GL		KB		GL		KB		GL		KB		GL		KB		GL	
	2587		2582		2623		2667		2528		2534		2528		2534		2528		2534	
	LOGTOPS	SAMPLETOPS	COMP. CARD	LOG	SMPL.	LOG	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	
ANHYDRITE TOP	2244	343	2249	338	2313	310	+ 33	+ 28	2332	335	+ 8	+ 3	2182	346	- 3	- 8				
BASE	2278	309	2280	307	2348	275	+ 34	+ 32	2367	300	+ 9	+ 7	2218	310	- 1	- 3				
HOWARD	3415	-828	3393	-806	3460	-837	+ 9	+ 31												
TOPEKA	3518	-931	3504	-917	3562	-939	+ 8	+ 22	3605	-938	+ 7	+ 21	3467	-939	+ 8	+ 22				
HEEBNER	3733	-1146	3729	-1142	3776	-1153	+ 7	+ 11	3816	-1149	+ 3	+ 7	3687	-1159	+ 13	+ 17	3657	-1123	- 23	- 19
TORONTO	3760	-1173	3750	-1163	3800	-1177	+ 4	+ 14	3843	-1176	+ 3	+ 13	3712	-1184	+ 11	+ 21	3684	-1150	- 23	- 13
LKC	3774	-1187	3768	-1181	3814	-1191	+ 4	+ 10	3857	-1190	+ 3	+ 9	3726	-1198	+ 11	+ 17	3696	-1162	- 25	- 19
BKC	3998	-1411	4002	-1415	4046	-1423	+ 12	+ 8	4082	-1415	+ 4	+ 0	3950	-1422	+ 11	+ 7				
PLEASANTON	4006	-1419			4049	-1426	+ 7													
MARMATON	4050	-1463	4056	-1469	4098	-1475	+ 12	+ 6												
ALTAMONT	4125	-1538	4123	-1536	4170	-1547	+ 9	+ 11												
PAWNEE	4165	-1578	4165	-1578	4210	-1587	+ 9	+ 9												
FT. SCOTT	4227	-1640	4224	-1637	4274	-1651	+ 11	+ 14												
CHEROKEESAND					4331	-1708														
MISSISSIPPIAN	4336	-1749	4336	-1749	4377	-1754	+ 5	+ 5												
TOTAL DEPTH	4390	-1803	4390	-1803	4397	-1774	- 29	- 29	4131	-1464	- 339	- 339	3962	-1434	- 369	- 369	3930	-1396	- 407	- 407

**DST #1 FT SCOTT 4210' - 4255'**



**DRILL STEM TEST REPORT**

Black Diamond Oil, Inc. 21-8-27, Sheridan, KS

PO Box 641 **Hughes #1**  
Hays KS 67601 Job Ticket: 53836 **DST#: 1**

ATTN: Jeff Lawler Test Start: 2015.01.08 @ 15:20:00

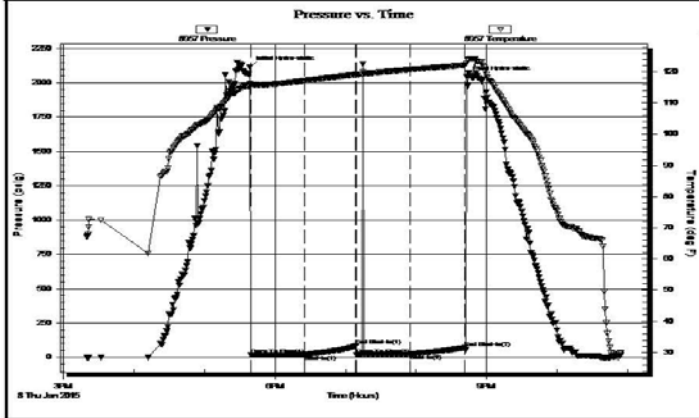
**GENERAL INFORMATION:**

Formation: **Ft. Scott**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:39:15  
 Tester: Brett Dickinson  
 Time Test Ended: 22:54:30  
 Unit No: 59  
 Interval: **4210.00 ft (KB) To 4255.00 ft (KB) (TVD)**  
 Reference Elevations: 2587.00 ft (KB)  
 Total Depth: 4255.00 ft (KB) (TVD)  
 2582.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

**Serial #: 8957 Inside**

Press@RunDepth: 24.36 psig @ 4211.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.01.08 End Date: 2015.01.08 Last Calib.: 2015.01.08  
 Start Time: 15:20:05 End Time: 22:54:29 Time On Btm: 2015.01.08 @ 17:38:45  
 Time Off Btm: 2015.01.08 @ 20:43:00

**TEST COMMENT:** IF-1/4in blow died in 25min  
 ISI-No blow  
 FF-No blow Flush tool No blow  
 FSI-No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2114.52	116.20	Initial Hydro-static
1	16.35	115.70	Open To Flow (1)
46	19.89	117.18	Shut-In(1)
90	83.65	119.11	End Shut-In(1)
91	19.34	119.12	Open To Flow (2)
136	24.36	120.73	Shut-In(2)
183	71.00	122.12	End Shut-In(2)
185	2042.93	122.83	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	V/SOCM 2%O 98%M	0.10


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


Trilobite Testing, Inc

Ref. No: 53836

Printed: 2015.01.09 @ 05:56:43

**DST #2 (STRADDLE) LKC E - J 3827' - 3971**

 <p><b>TRILOBITE TESTING, INC.</b></p>	<b>DRILL STEM TEST REPORT</b>	
	Black Diamond Oil, Inc. PO Box 641 Hays KS 67601 ATTN: Jeff Lawler	<b>21-8-27, Sheridan, KS</b>  <b>Hughes #1</b> Job Ticket: 53837 <b>DST#: 2</b> Test Start: 2015.01.09 @ 18:50:00

**GENERAL INFORMATION:**

Formation: **KC "E-J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:22:30  
 Time Test Ended: 04:28:45

Interval: **3827.00 ft (KB) To 3971.00 ft (KB) (TVD)**  
 Total Depth: 4400.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59

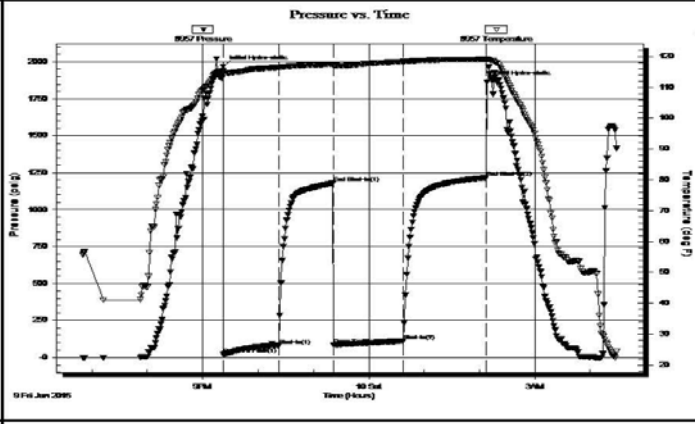
Reference Elevations: 2587.00 ft (KB)  
 2582.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8957      Inside**

Press@RunDepth: 112.33 psig @ 3828.00 ft (KB)  
 Start Date: 2015.01.09      End Date: 2015.01.10  
 Start Time: 18:50:05      End Time: 04:28:45

Capacity: 8000.00 psig  
 Last Calib.: 2015.01.10  
 Time On Btm: 2015.01.09 @ 21:22:00  
 Time Off Btm: 2015.01.10 @ 02:08:30

**TEST COMMENT:** IF-6in blow  
 ISI-No blow  
 FF-5in blow  
 FSI-No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.97	115.33	Initial Hydro-static
1	19.29	114.46	Open To Flow (1)
61	81.69	116.40	Shut-In(1)
120	1181.22	117.47	End Shut-In(1)
120	84.96	116.85	Open To Flow (2)
196	112.33	118.31	Shut-In(2)
286	1216.38	119.09	End Shut-In(2)
287	1863.31	119.27	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
180.00	MCVW 60%W 40%M	1.43
30.00	Mud	0.42

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

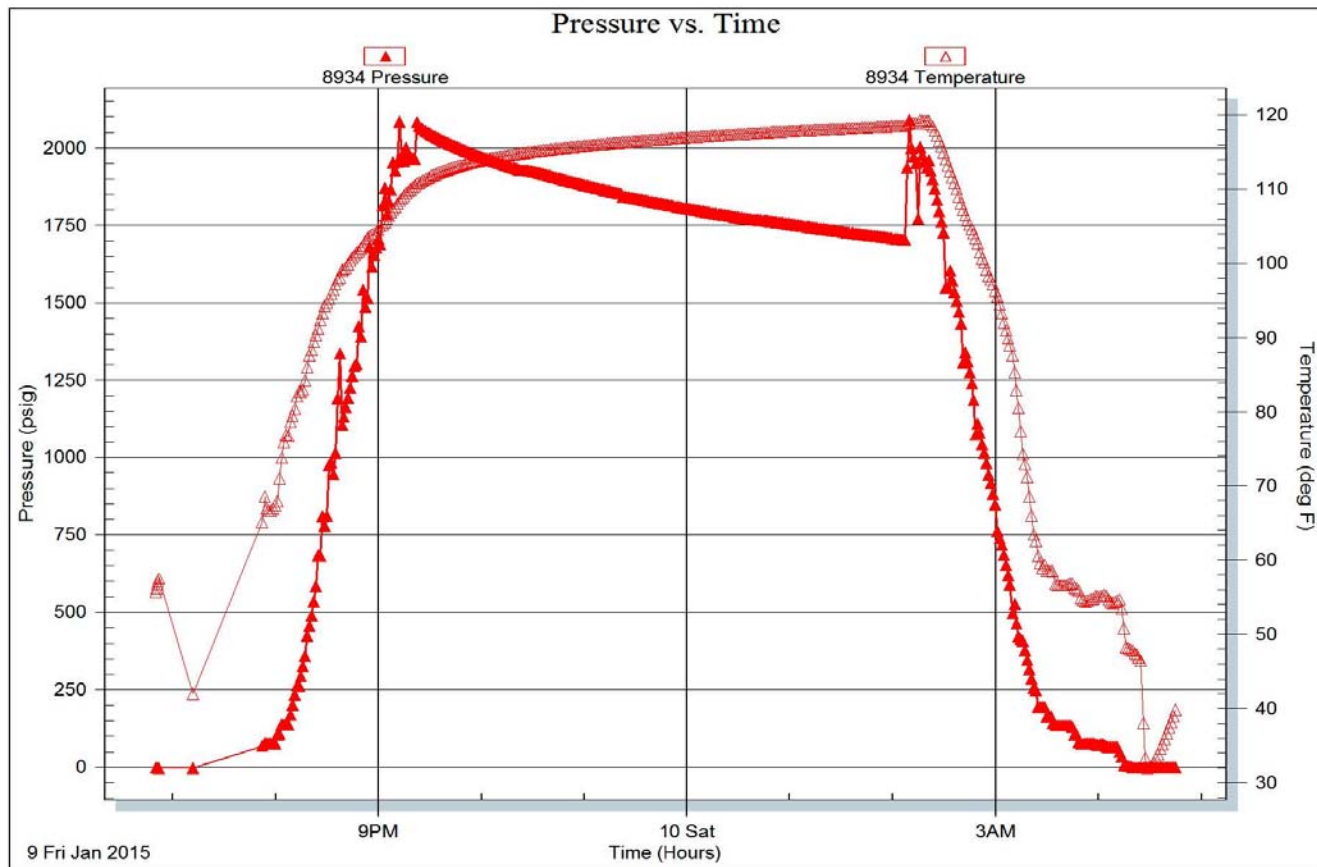
\* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 53837

Printed: 2015.01.10 @ 07:02:51

**DST #2 BOTTOM PACKER CHART**



Trilobite Testing, Inc

Ref. No: 53837

Printed: 2015.01.10 @ 07:02:52

#### ROCK TYPES

Cht	Dolsec	Carbon Sh	Shcol	Slst
Cht vari	Lmst fw7>	Shblk	Arg/Shale	
Dolprim	shale, gry	shale, red	Ss	

#### ACCESSORIES

##### MINERAL

• Sandy

##### FOSSIL

◊ Oolite  
 ⚡ Oomoldic

##### STRINGER

~~~~ Chert

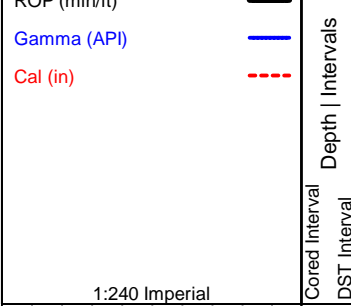
#### OTHER SYMBOLS

##### MISC

- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

##### DST

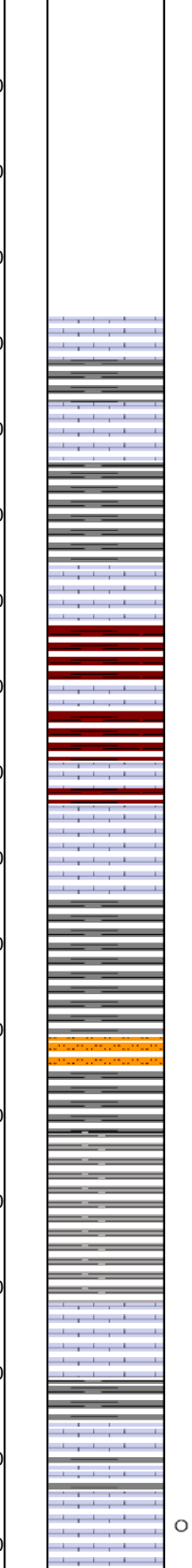
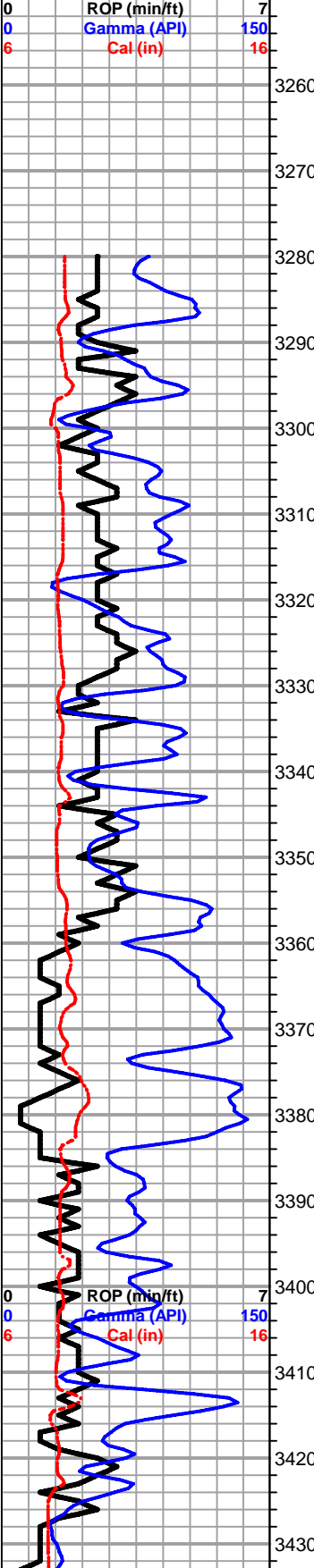
- DST Int
- DST alt



DST  
 Lithology  
 Oil Show

Geological Descriptions

1:240 Imperial



**1' DRILL TIME THROUGH ANHYDRITE FROM 2230' - 2330'**  
**1' DRILL TIME FROM 3280' - RTD**  
**10' WET/DRY SAMPLES FROM 3330' - RTD**

**GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 3280' - RTD**

**8 5/8" SURFACE PIPE SET @ 220' SURVEY 1/2 dgr.**

**DRILLER'S ANHYDRITE TOP 2249' (+338) E-LOG 2244' (+343)**  
**DRILLER'S ANHYDRITE BASE 2280' (+307) E-LOG 2278' (+309)**

Lm- Tan Gray, FXLN, dense fsl, poorly dev. sctrd reXLN & XLN porosity, barren

Sh- Gray Maroon Lm Green, silty & soft, some mud supported Vf Grn Ls w/ no vis. porosity

Lm- Gray Buff, Fn Grn, well cemented, dense, sl arenaceous Ls, consolidated & well sorted, grainy, poor vis. porosity, few pcs of semi-frosted Fn Grn consolidated & well sorted Ss w/ glauconite, all barren

Lm- Cream, VF-FXLN, dense, mostly well cemented, some high-energy bioclastics w/ fsl frag., sctrd XLN & secondary reXLN porosity, barren

Sh- Maroon Gray Lm Green, gritty & sl sandy, gummy argillaceous clumps, silty & calcareous

Lm- Gray Cream, VFXLN, dense, trashy, sl fsl, poor vis. porosity, some fn grn & loosely cemented, chalky in part

Lm- Mustard Yellow Buff, FXLN, chalky, unconsolidated & high-energy fsl, poor vis. porosity, some well cemented Vf Grn, dense w/o vis. porosity

Sh- Gray Maroon Brown Brick Red, silty & calcareous, gritty & earthy, semi sandy

Lm/Ss- Buff Gray, Fn Grn, soft sandy lime/limey Ss, loosely cemented & sl calcareous

Sh- Gray Maroon Brick Red, soft sandy wash, gummy argillaceous clumps, gritty & earthy

Sh- Black Drk Gray, much soft & silty, calcareous, few sl sandy

**HOWARD 3393' (-806) E-LOG 3415' (-828)** Lm- Gray Cream, mix of trashy high-energy fsl bioclastitic w/ sctrd XLN & reXLN porosity & sl chalky w/ fsl & sctrd XLN & fn ppt porosity, clean & barren

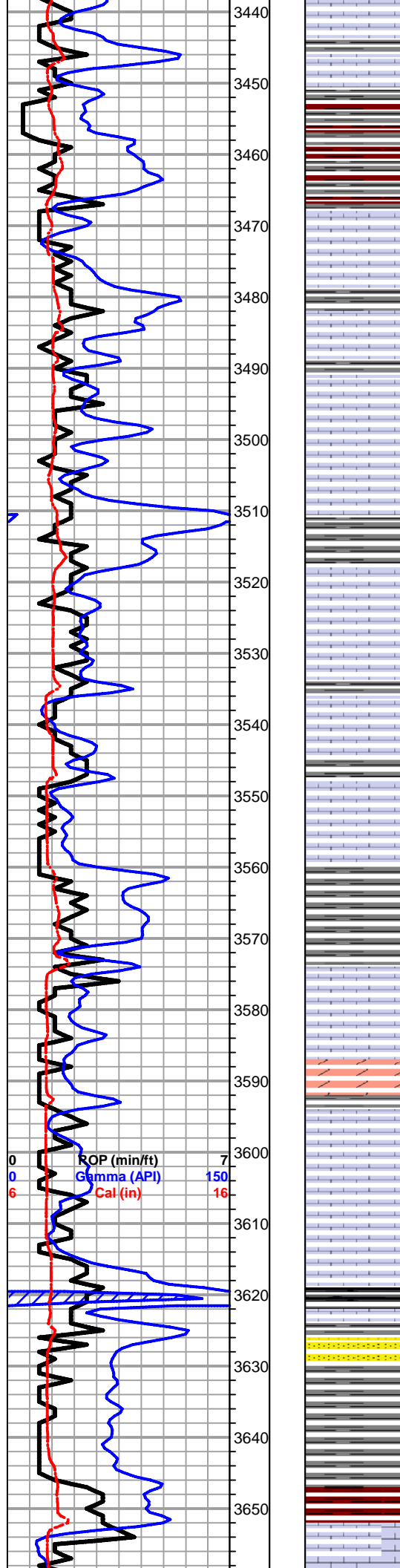
Lm- Cream Lt Pink Buff, VF-FXLN, dense, well cemented, mostly tight w/ poor vis. porosity, few pcs sl sandy, all clean & barren

Lm- A/A w/ soft white chalk & chalky Ls

Lm- Cream Off White, VF-FXLN, dense, well cemented, dense micro XLN porosity, sl dolomitic? w/ mild violent effervescence, grainy, vry clean 2 PCS W/ TR EDGE STN, NO ODR

1:240 Imperial

-3430.jpg



Lm- Cream Off White, FXLN, fsl w/ fusulinids, sctrd XLN porosity, clean & barren, few pcs sl trashy w/ fsl fragments & bioclastic

Lm- Cream Tan, VF-FXLN, fsl, some sl granular & sl oolitic, poor effective porosity, dense XLN porosity, few sl unconsolidated w/ fsl fragments, clean & barren

Sh- Gray Maroon, silty & calcareous, gritty & earthy, soft white chalk

Lm- Lt Gray, VFXLN, dense, sl fsl, some sctrd reXLN, tight w/ min. vis. porosity

Lm- Cream Off White, VF-FXLN, sl fsl, poorly dev., some loose & crumbly, vry clean & barren

**TOPEKA 3490' (-903) E-LOG 3518' (-931)** Lm- Cream Tan, VFXLN, dense, well cemented, tight w/ min. vis. porosity, few cream pcs. w/ dense XLN porosity, crumbly, clean & barren

Lm- Buff Cream, mix of VFXLN, dense & tight w/o vis. porosity & sl fsl, poorly dev. loosely cemented & crumbly w/ dense XLN porosity, clean & barren

Lm- Cream Off White, FXLN, sl fsl, well cemented, poorly dev. w/ sctrd to dense XLN porosity, some w/ lt spkng, clean & barren

Lm- Buff Mustard Yellow Lt Purple, mix of tight well cemented w/ min. vis. porosity, fsl high-energy bioclastic, sl unconsolidated, & VFXLN, dense w/o vis. porosity

Lm- Cream Off White, FXLN, well cemented, dense XLN porosity, clean & barren

Sh- Lt Gray Maroon, silty & soft, some sl sandy, gritty & earthy

Lm- Cream Off White, VF-FXLN, mix of tight w/ min. vis. porosity, sl fsl w/ dense XLN & sec. secondary reXLN porosity w/ min. effective porosity, all vry clean & barren, some soft white chalk

Lm- Cream Tan, FXLN, dense, mostly well cemented, some sl crumbly, oolitic, poorly dev., clear replacement cementation, sctrd XLN porosity, barren, much soft white chalk

Dol- Cream, VFXLN, dense, vry well cemented, dense micro XLN porosity, vry clean & barren

Lm- Cream Off White, FXLN, dense, well cemented, sctrd XLN porosity, vry clean & barren

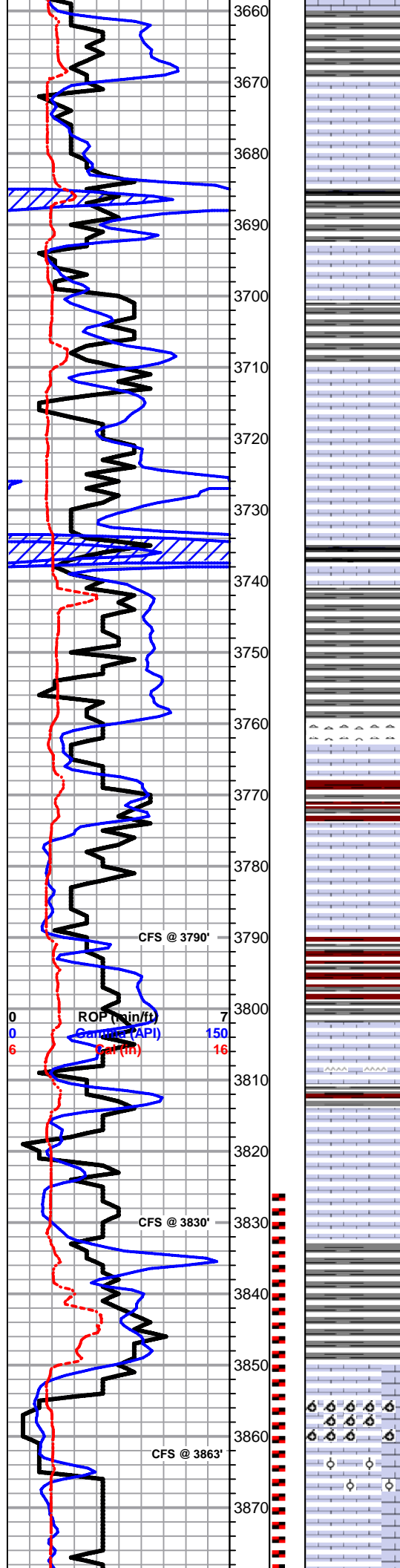
Sh- Black Maroon, dense, fissle & carbonaceous, gritty & earthy

Ss- Dove & Lt Gray Maroon, Fn Grn, mod. cementation, consolidated & well sorted

Sh- Gray Maroon, silty & soft, gritty & earthy, some gummy clumps

Lm- Cream Off White, VFXLN, dense, well cemented, sl dolomitic Ls w/ dense micro XLN porosity, vry clean & barren





Lm- Cream Off White, FXLN, sl fsl, poorly dev., loosely cemented & crumbly, some chalky in part, much soft white chalk

Lm- Cream Off White, FXLN, fsl & sl oolitic, dense, some chalky in part, loosely cemented & crumbly, clean & barren

Sh- Black Gray Maroon, silty & carbonaceous, silty & calcareous, gritty & earthy

Lm- Cream Buff, VF-FXLN, dense, well cemented, mostly tight w/ poor vis. porosity

Lm- Buff Cream, FXLN, fsl, massive, well cemented w/ sctrd clear replacement cementation & reXLN, sctrd XLN & secondary reXLN porosity, barren & dense

Lm- Gray, VF-FXLN, dense tight mix of VFXLN w/o vis. porosity & trashy high-energy bioclastic w/ sctrd XLN porosity

**HEEBNER 3729' (-1142) E-LOG 3733' (-1146)** Sh- Black, dense fissile & carbonaceous

Sh- Gray Maroon Lm Green, gummy clumps & sandy lime, gritty & earthy, gummy lime

**TORONTO 3750' (-1163) E-LOG 3760' (-1173)** Lm/Chert- Cream Off White, FXLN, fsl, poorly dev. w/ sctrd XLN porosity, some soft chalky & crumbly, several pcs of fresh bedded dense fsl salmon & white chert

Sh- Gray Maroon, gritty & earthy, silty & calcareous

**LKC 3768' (-1181) E-LOG 3774' (-1187)** Lm- Cream Off White, FXLN, fsl & oolitic, poorly dev., well cemented w/ sctrd clear replacement cementation, sctrd XLN & secondary reXLN porosity, poor effective porosity, clean & barren

Lm- Cream Off White, VF-FXLN, sl fsl, dense, well cemented, mostly tight w/ sctrd XLN porosity, some soft white chalk, vry clean & barren

Sh- Maroon Gray Lm Green, silty & calcareous, gritty & earthy

Chert/Lm- Salmon White, fresh bedded sharp chert mixed w/ cream off white VFXLN w/ min. vis. porosity, some sl chalky in part, vry clean & barren

Lm- Cream Off White, VFXLN, dense, well cemented, mostly tight w/ sctrd XLN porosity, 2-4 PCS W/ BLK GILSONITE EDGE STN/INCLUSION

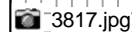
Lm- Buff Gray, VF-FXLN, dense, well cemented, sl fsl w/ fusulinids, mostly tight w/ poor vis. porosity, few w/ sctrd secondary reXLN porosity, barren

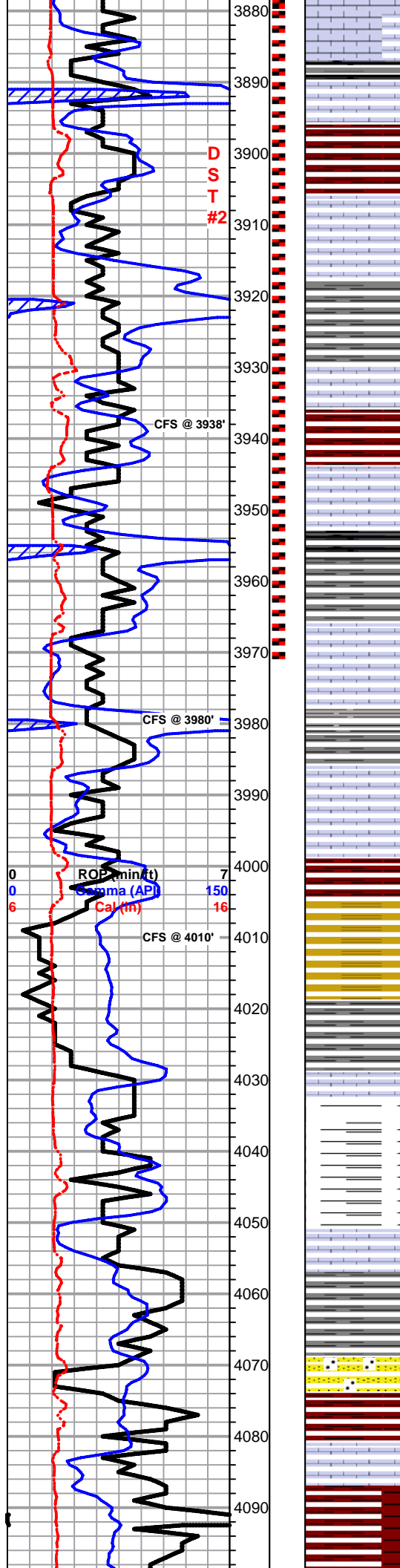
Lm- Cream, VFXLN, dense, tight, no vis. porosity, vry clean & barren

Lm- Cream, FXLN, oomoldic, sctrd vugs & poor to min. intervugular connectivity, barren, sctrd skeletal dissolution

Lm- Cream Off White, FXLN oomoldic w/ sctrd vugs & poor intervugular connectivity, less skeletal dissolution

Lm- Cream Off White, VF-FXLN, dense tight mix, some lithographic w/o vis. porosity, some w/ rare sctrd XLN porosity, some soft white chalk





Lm- A/A w/ some VFXLN cherty Ls w/ micro XLN porosity

Sh- Black Gray Maroon, fissile & carbonaceous, some black wash, silty & soft, gritty & earthy

Sh- Maroon, gritty & earthy

Lm- Cream Buff, VF-FXLN, dense, well cemented, mostly tight w/ sctrd micro XLN porosity, vry clean & barren

Lm- Cream Tan, VFXLN, dense & tight, min. vis. porosity, some sl chalky in part, vry clean & barren

Sh- Gray Maroon Brown Lm Green, silty, gritty & earthy, silty & calcareous

Lm- Cream Tan, VFXLN Vf Grn, dense tight mix, some sl chalky in part, all w/ min. vis. porosity, barren

Sh- Maroon Lm Green, gritty & earthy, dense & semi-waxy

Lm- Cream Off White, VFXLN, dense, well cemented dolomitic Ls w/ dense micro XLN porosity, some chalky Ls, all vry clean & barren

Lm- Cream Off White, VFXLN, dense, well cemented, mostly tight w/ micro XLN porosity mixed w/ fsl & sl oolitic, poorly dev. FXLN w/ sctrd XLN porosity, all clean & barren

Sh- Black Gray Maroon, silty & soft, carbonaceous, silty & calcareous, gritty & earthy

Lm- Tan Gray Buff, VF-FXLN, dense, mostly well cemented, few sl unconsolidated & trashy w/ secondary reXLN porosity, few pcs of chalky mud supported matrix w/ detrital salmon chert inclusions w/ some loose chert, all barren

Lm- Cream Off White, VFXLN, dense, tight w/ min. vis. porosity, some soft white chalk

**BKC 4002' (-1415) E-LOG 3998' (-1411)** Sh- Maroon Brown Gray, gritty & earthy, some gummy clumps, silty & sl sandy

Sh- Maroon Brown, sandy shale/shaley Ss

Sh- Gray Maroon Brick Red Lm Green, dense gritty slivers, gritty & earthy and gummy clumps

Lm- Gray, dense tight mix of VFXLN w/o vis. porosity & soft loosely cemented siltstone

Sh- Gray Maroon White, abundant argillaceous clumps

**MARMATON 4056' (-1469) E-LOG 4050' (-1463)** Lm- White Off White, VFXLN, dense tight mix, some sl fsl, all w/ min. vis to sctrd micro XLN porosity, barren

Sh- Maroon Gray Lt Purple, gritty & earthy, some gummy clumps, dense & gritty, some sandy lime

Sh- Maroon Gray Brown, gritty & earthy, abundant red wash, silty & gritty

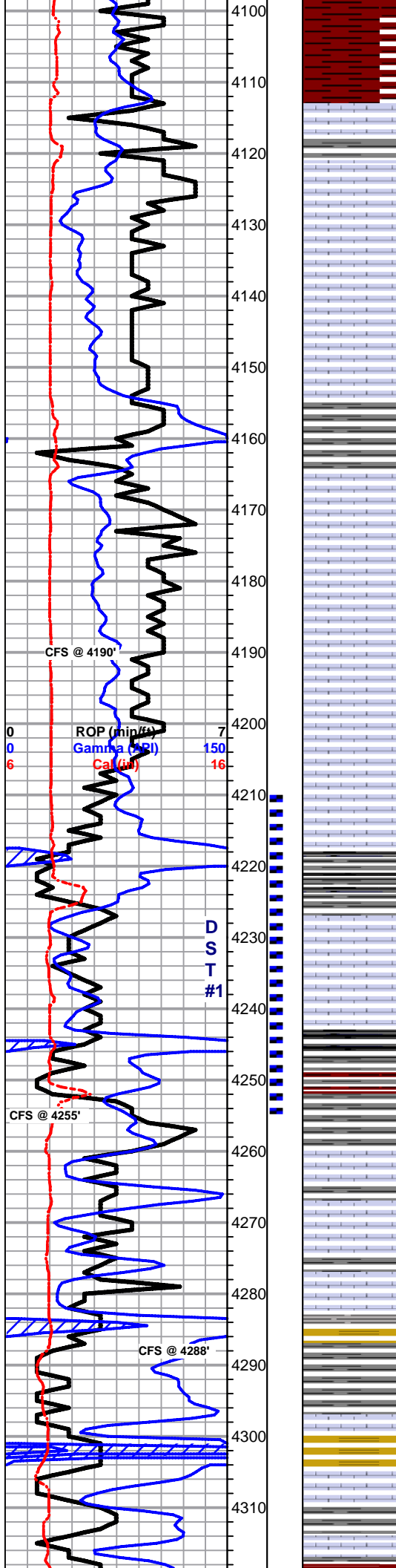
Sh- A/A w/ gritty & pebbly, waxy & dense & some sandy lime

DST #2  
STRADDLE  
LKC E - J  
3827' - 3971'  
60-60-60-60

180' MCW  
(60%W, 40%M)  
30' MUD

IFP: 19-81#  
FFP: 84-112#  
SIP# 1181-1216#





Lm- Buff, Fn Grn, well cemented consolidated & sorted arenaceous Ls w/ consistent intergranular porosity, barren

**ALTAMONT 4123' (-1536) E-LOG 4125' (-1538)** Lm- Buff Tan, VFXLN Vf Grn, dense tight mix of mud supported matrix, sl chalky & loosely cemented and well cemented, sl arenaceous Ls w/ poor vis. to dense micro XLN porosity, all barren

Lm- Cream Gray Purple, VFXLN Vf Grn, dense well cemented tight mix, some loosely cemented siltstone, all w/ poor vis. porosity

Lm- Gray Purple, A/A w/ incr. in loosely cemented siltstone

SHORT TRIP

Lm- Lt & Drk Gray, VFXLN Vr Grn, dense tight mix, brittle & lithographic w/o vis. porosity and loosely cemented siltstone

Sh- Gray Maroon Brick Red Lm Green, soft, dense & semi-waxy, some calcareous, mottled

**PAWNEE 4165' (-1578) E-LOG 4165' (-1578)** Lm- Cream Tan, VFXLN, dense, well cemented, tight w/ sctrd micro XLN & XLN porosity, barren

Lm- Gray, Fn Grn, mud supported matrix, loosely cemented, poor vis. porosity, barren

Lm- Gray, Fn Grn, loosely cemented mud supported matrix, poor vis. porosity, silty & soft, barren

CFS @ 4190'

Lm- A/A

Lm- Drk Gray, Vf-Fn Grn, silty & soft, some calcareous

STRAP +0.25'  
SURVEY 1 1/2 dgr

DST #1 FT SCOTT  
4210' - 4255'  
45-45-45-45

20' VSLOCM  
(2% O, 98% M)

IFP: 16-20#  
FFP: 19-24#  
SIP: 64-71#

4232.jpg

Sh- Black Gray, fissile & carbonaceous, silty & calcareous

**FT SCOTT 4224' (-1637) E-LOG 4227' (-1640)** Lm- Cream Off White, mix of VF-FXLN, dense, well cemented, poorly dev. few sl fsl w/ sctrd to rare dense XLN porosity, barren & soft loosely cemented & crumbly Ls, chalky in part w/ poor vis. porosity

Lm- Cream Off White, VF-FXLN, mix, several w/ sctrd dev., sl granular & oolitic w/ sctrd reXLN, sctrd XLN & secondary reXLN porosity, SCTRD DRK STN, FEW W/ SL GSY FRO UPON CRUSH, FEW SL FLAKEY, WK-MOD ODR, mixed w/ poorly dev., mostly tight w/ poor vis. porosity

**CHEROKEE SHALE 4245' (-1658) E-LOG 4243' (-1656)** Sh- Black Gray Maroon, soft & silty, carbonaceous, silty & calcareous, gritty & sl sandy

Sh- Gray Maroon, gritty & earthy, pebbly, dense & waxy, some mottled, some shaley Ss & sandy lime

**\*POOR SAMPLE QUALITY, MUCH CARRYOVER\***

Lm- Off White Tan, VFXLN Vf Grn, dense tight mix, all vry clean & barren w/ poor vis. porosity, some chalky in part Ss- few loosely cemented Fn-Med Grn sl unconsolidated, immature & poorly sorted clear to frosted clusters, barren

Lm- A/A

Sh- Black Gray Maroon, dense, semi waxy, silty & calaceous

Sh- A/A, some sandy, some deep purple dense shale

Sh- Maroon Gray Purple, A/A, several pcs of sandy shale, few pcs of sl shaley Ss

Lm- Cream Tan, VF-FXLN, dense, well cemented, some sl chalky in part, dense micro XLN & XLN porosity, barren

Lm- Cream Purple, VFXLN, dense & soft, some chalky, all w/ poor vis. porosity, several pcs of purple conglomerate & cherty Ls, several pcs of white limey Ss, min. cementation, fn grn. consolidated & well sorted, barren

CFS @ 4288'

DST #1

ROP (min/ft) 7  
Gamma (API) 150  
Cal (API) 16

CFS @ 4255'

4310

cementation, in grn, consolidated & well sorted, barren

Sh- Maroon Gray Lm Green Purple Mustard Yellow Black, dense & soft, some sl calcareous, dense & waxy, sl sandy, blocky & waxy

**MISSISSIPPIAN 4336' (-1749) E-LOG 4336' (-1749)** Lm/Chert/Dolomite-Cream Salmon Off White, mix of VFXLN, dense tight Ls, few pcs of salmon & tan fsl fresh bedded chert, & VFXLN dolomite w/ dense consistent micro XLN porosity, all clean

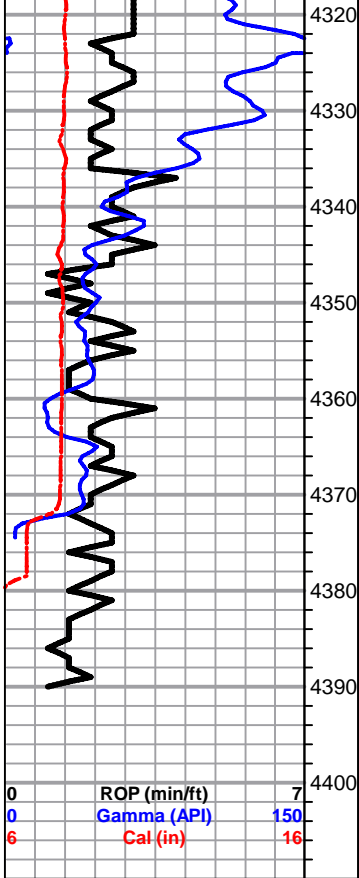
A/A w/ incr. in cream/tan fsl chert w/ sl unconsolidated, loosely cemented & crumbly white/pink Ls w/ dense XLN porosity, sandy soft lime & much soft white chalk & gummy argillaceous lt maroon shale clumps

Lm- large incr. of sl unconsolidated white/pink Ls w/ dense XLN porosity, several pcs of detrital fsl chert & cherty Ls

Lm- A/A w/ incr. of unconsolidated white/pink Ls & soft white chalk

**RTD 4390' (-1803) LTD 4390' (-1803@ 08:42 1/9/2015)**

CFS 60"  
SHORT TRIP  
CTCH 1.5 HR  
SURVEY 1 1/4 dgr  
TOH FOR LOG





0.2 mm  
3430' x 30



3817' X30





0.2 mm

4232' X 30