



# EDISON OPERATING COMPANY<sub>LLC</sub>

Scale 1:240 Imperial

Well Name: Miller Trust #1-13  
 Surface Location: 880' FSL and 1580' FWL  
 Bottom Location:  
 API: 15-063-22096-0000  
 License Number: 34434  
 Spud Date: 4/16/2013 Time: 7:00 PM  
 Region: Gove County  
 Drilling Completed: 4/23/2013 Time: 10:40 PM  
 Surface Coordinates:  
 Bottom Hole Coordinates:  
 Ground Elevation: 2612.00ft  
 K.B. Elevation: 2617.00ft  
 Logged Interval: 3400.00ft To: 4351.00ft  
 Total Depth: 4351.00ft  
 Formation: Marmaton  
 Drilling Fluid Type: Chemical/Fresh Water Gel

### OPERATOR

Company: Edison Operating Company, LLC  
 Address: 8100 E. 22nd St. North  
 Building 1900  
 Wichita, KS 67226  
 Contact Geologist: David Withrow  
 Contact Phone Nbr: 316.613.1544  
 Well Name: Miller Trust #1-13  
 Location: 880' FSL and 1580' FWL  
 Pool: API: 15-063-22096-0000  
 State: Kansas Field: Wildcat  
 Country: USA

### LOGGED BY



Company: Valhalla Exploration, LLC  
 Address: 8100 E. 22nd St. North  
 Building 1800-2  
 Wichita, KS 67226  
 Phone Nbr: 316.655.3550  
 Logged By: Geologist Name: Derek W. Patterson

### REMARKS

After review of the geologic report and open hole logs for the Miller Trust #1-13, it was decided upon by operator to plug and abandon the well as a dry hole. Said well was plugged on 4.24.13.

The drill time and gas curves have been shifted 2' shallow/higher to correspond with the electric log curves. All circulation and connection points have also been moved to match the overall shift.

The well samples were saved, submitted, and will be available for review at the Kansas Geologic Survey's Well Sample Library located in Wichita, KS.

Respectfully submitted,

Derek W. Patterson

### GENERAL INFORMATION

#### Service Companies

Drilling Contractor: Mallard J.V. #1

Tool Pusher: Lavon Urban

Daylight Driller: Mark Elsen

Evening Driller: Justin McDonald

Drilling Fluid: Mud-Co/Service Mud

Engineer: Reid Atkins

Logging Company: Pioneer Well Services

Evening Driller: Justin McDonald  
 Morning Driller: Frank Symank  
 Relief: Kent Urban

Logging Company: Pioneer Well Services  
 Engineer: Jason Cappellucci  
 Logs Ran: DI, CDNL, Sonic

Gas Detector: Bluestem Environmental  
 Engineer: Sidney Edelbrock  
 Unit: 0735  
 Operational By: 2200'

Testing Company: No DSTs  
 Tester: N/A

Deviation Survey	
Depth	Survey
259'	1/2°
4351'	1 1/4°

Pipe Strap	
Depth	Pipe Strap
None Performed	

Bit Record								
Bit #	Size	Make	Type	Serial Number	Depth In	Depth Out	Feet	Hours
1	12 1/4"	Smith	RT	RR	0'	259'	259'	--
2	7 7/8"	Smith	F27	PY0370	259'	4351'	4092'	104.5

Surface Casing	
4.17.2013	Ran 8 joints of new 8 5/8" casing, tallying 252', set @ 259' KB. Cemented with 195 sacks 60/40 Poz (3% CC, 2% gel). Cement did circulate. Plug down @ 0200 hrs 4.17.13. By Basic Energy Services.

### DAILY DRILLING REPORT

Date	0700 Hrs Depth	Previous 24 Hours of Operations
4.22.2013	3881'	Drilling and connections Topeka. Geologist Derek W. Patterson on location, 1400 hrs 4.21.13. Test system with positive response. Drilling and connections Topeka, Heebner, Toronto, and into Lansing. CFS @ 3812' (LKC 'G'). Resume drilling and connections Lansing. Rig down for repairs @ 3848' to replace swivel packing, 0200 hrs 4.22.13. Resume drilling and connections Lansing following repairs, 0500 hrs 4.22.13. Drilling and connections Lansing. Made 450' over past 24 hrs of operations. WOB: 40k RPM: 65 PP: 800 SPM: 60 DMC: \$900.10 CMC: \$7,983.80
4.23.2013	4175'	Drilling and connections Lansing. CFS @ 3915' (LKC 'I'), CFS @ 3595' (LKC 'K'), CFS @ 4016' (LKC 'L'). Resume drilling and connections lower Lansing, Base Kansas City, upper Marmaton, and into Pawnee. Made 294' over past 24 hrs of operations. WOB: 45k RPM: 65 PP: 1000 SPM: 60 DMC: \$763.40 CMC: \$8,747.20
4.24.2013	RTD - 4351' LTD - 4350'	Drilling and connections Pawnee and into Myrick Station. CFS @ 4178' (Myrick Station). Resume drilling and connections. CFS @ 4196' (Myrick Station). Resume drilling and connections Myrick Station, Fort Scott, Cherokee, and into Johnson Zone. CFS @ 4285' (Johnson). drilling and connections Johnson, Mississippian, and ahead to RTD of 4351'. RTD reached, 2240 hrs 4.23.13. CTCH, run short trip, CTCH back on bottom. Drop survey, TOH for open hole logging operations, 0215 hrs 4.23.13. Conduct open hole logging operations. Made 176' over past 24 hrs of operations. WOB: 45k RPM: 65 PP: 1000 SPM: 60 DMC: \$1690.00 CMC: \$10,437.20
4.25.2013	RTD - 4351' LTD - 4350'	Conduct open hole logging operations. Orders received to plug and abandon the Miller Trust #1-13 as a dry hole. Said well was plugged on 4.24.13. Geologist Derek W. Patterson off location, 1100 hrs 4.24.13.

### WELL COMPARISON SHEET

Formation	Drilling Well				Comparison Well				Comparison Well				Comparison Well			
	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
	Edison Operating - Miller Trust #1-13 Sec. 13 - T15S - R31W 880' FSL & 1580' FWL 2617 KB				Phillips Petroleum - Fick #1 Sec. 24 - T15S - R31W NE NE SW Dry 2638 KB				White & Ellis - HCR #1 Sec. 23 - T15S - R31W SW NE SE Dry 2598 KB				L D Drilling - Roemer B-A Unit #1 Sec. 20 - T15S - R30W 2600' FSL & 1480' FWL Dry 2649 KB			
Heebner	3644	-1027	3643	-1026	3673	-1035	8	9	3634	-1036	9	10	3686	-1037	10	11
Toronto	3663	-1046	3664	-1047	3691	-1053	7	6	3654	-1056	10	9	3706	-1057	11	10
Lansing	3682	-1065	3683	-1066	3709	-1071	6	5	3672	-1074	9	8	3725	-1076	11	10
LKC 'B'	3720	-1103	3718	-1101					3708	-1110	7	9	3764	-1115	12	14
LKC 'C'	3734	-1117	3730	-1113					3721	-1123	6	10	3775	-1126	9	13
LKC 'F'	3776	-1159	3777	-1160					3756	-1158	-1	-2	3810	-1161	2	1
LKC 'G'	3794	-1177	3794	-1177					3771	-1173	-4	-4	3820	-1171	-6	-6
Muncie Creek	3851	-1234	3849	-1232					3844	-1246	12	14	3887	-1238	4	6
LKC 'H'	3853	-1236	3852	-1235					3847	-1249	13	14	3890	-1241	5	6

LKC 'I'	3888	-1271	3888	-1271					3883	-1285	14	14	3926	-1277	6	6
LKC 'J'	3928	-1311	3924	-1307					3916	-1318	7	11	3959	-1310	-1	3
Stark	3948	-1331	3946	-1329					3938	-1340	9	11	3986	-1337	6	8
LKC 'K'	3963	-1346	3959	-1342					3954	-1356	10	14	3998	-1349	3	7
Hushpuckney	3985	-1368	3979	-1362					3974	-1376	8	14	4017	-1368	0	6
LKC 'L'	3990	-1373	3982	-1365					3978	-1380	7	15	4022	-1373	0	8
Base Kansas City	4023	-1406	4016	-1399					4017	-1419	13	20	4055	-1406	0	7
Marmaton	4050	-1433	4048	-1431					4050	-1452	19	21	4090	-1441	8	10
Pawnee	4146	-1529	4140	-1523					4141	-1543	14	20	4178	-1529	0	6
Myrick Station	4179	-1562	4177	-1560					4174	-1576	14	16	4214	-1565	3	5
Fort Scott	4200	-1583	4196	-1579					4192	-1594	11	15	4236	-1587	4	8
Cherokee	4224	-1607	4222	-1605	4242	-1604	-3	-1	4217	-1619	12	14	4262	-1613	6	8
Johnson	4263	-1646	4263	-1646					4259	-1661	15	15	4303	-1654	8	8
Mississippian	4312	-1695	4312	-1695	4369	-1731	36	36	4313	-1715	20	20	4347	-1698	3	3
Kinderhook																
Viola	Not Penetrated				4892	-2254	N/A		Not Penetrated				Not Penetrated			
Simpson	Not Penetrated				4938	-2300	N/A		Not Penetrated				Not Penetrated			
Arbuckle	Not Penetrated				4946	-2308	N/A		Not Penetrated				Not Penetrated			
Total Depth	4351	-1734	4350	-1733	5003	-2365	631	632	4350	-1752	18	19	4400	-1751	17	18

### ROCK TYPES

	LMST1		LMST3		SHALE BRN		SHALE GRN		SHALE RED
	LMST2		Ss		SHALE CAR		SHALE GRA		

### ACCESSORIES

#### MINERAL

- ∟ Dolomitic
- ∩ Glauconite
- × Mineral Crystals
- P Pyrite
- Sandy
- Silty
- △ Chert White
- Mc Mica

#### FOSSIL

- F Fossils < 20%
- Oolite
- ⊕ Oomoldic

#### STRINGER

- Limestone2
- Limestone3
- Shale Green
- Shale Gray
- Shale Teal

#### TEXTURE

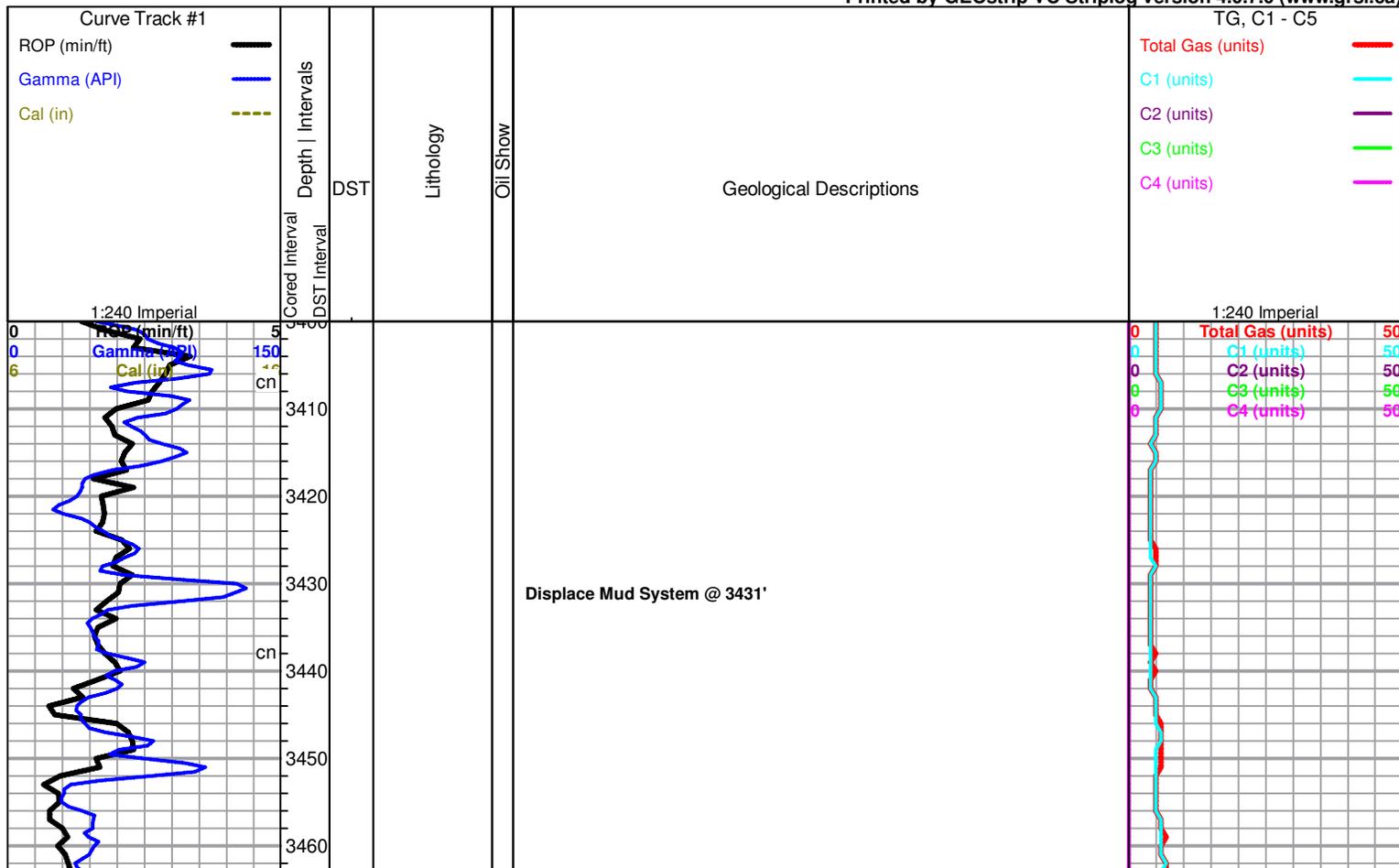
- C Chalky
- L Lithogr

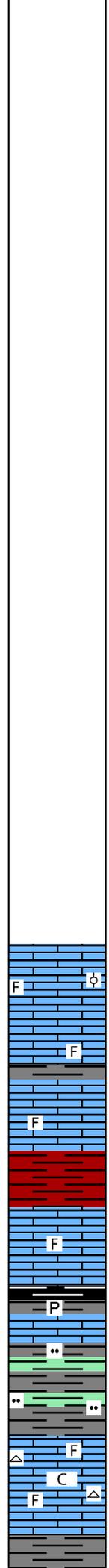
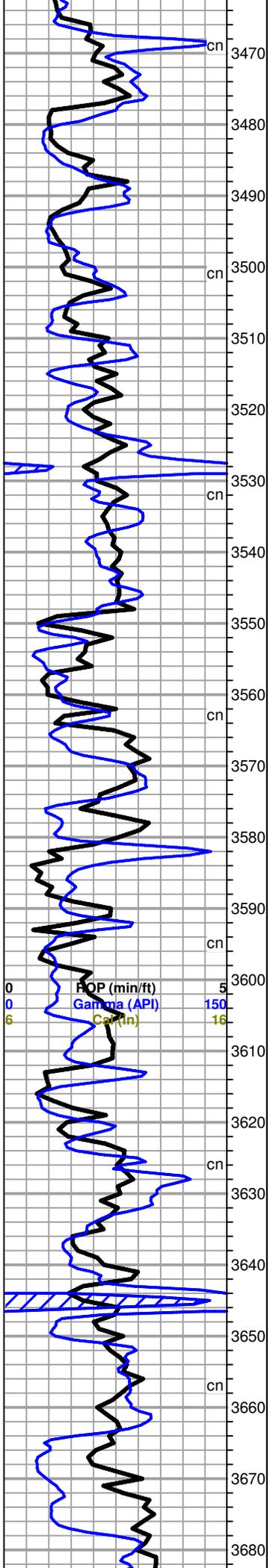
### OTHER SYMBOLS

#### DST

- DST1
- DST2
- Core
- tail pipe

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





**Start 10' Wet & Dry Samples @ 3600'**

Limestone: off white lt cream, dense tight matrix, vfxln, most fossiliferous with some scattered poor oolitic, fair-poor interxln/pinpoint porosity, no shows noted, no fluorescence.

Limestone: off white lt gray lt cream, dense matrix, micro-vfxln, fossiliferous, fair interxln porosity throughout, no shows noted, no fluorescence.

**Geologist Derek W. Patterson On Location, 1400 hrs 4.21.13**

INFLUX - Shale: red brick red, dense and rounded - may be sluff from uphole Viscosity dropped to 44; run in premix.

Limestone: off white lt gray lt cream, dense matrix, micro-vfxln, fossiliferous, fair interxln porosity throughout, no shows noted, no fluorescence.

**HEEBNER 3643' (-1026')**

Shale: black dk gray, carbonaceous, blocky to slightly rounded, hard to waxy, pyritic in part, no gas show.

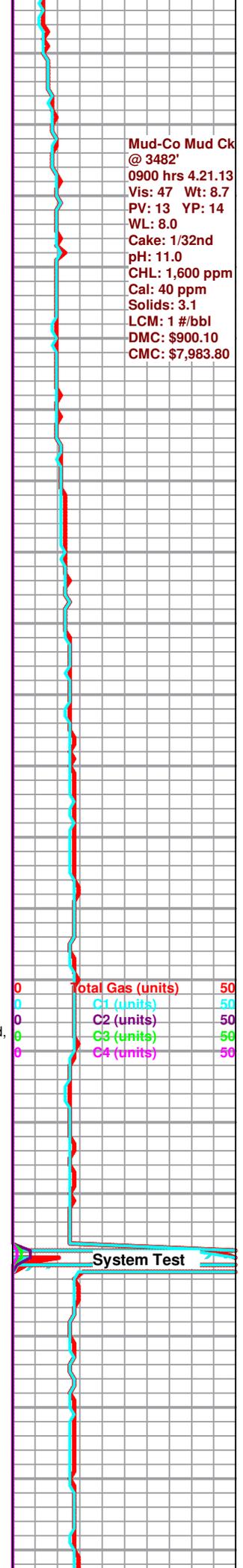
Shale: gray dk gray dk green, blocky to rounded, hard to soft, silty in part.

**TORONTO 3664' (-1047')**

Limestone: lt cream lt gray off white, dense tight slightly cherty to softer sub-chalky matrix, micro-vfxln, fossiliferous, overall poor visible porosity, no shows noted, no fluorescence, with scattered Chert: lt gray lt tan, opaque to translucent, fresh and sharp, barren.

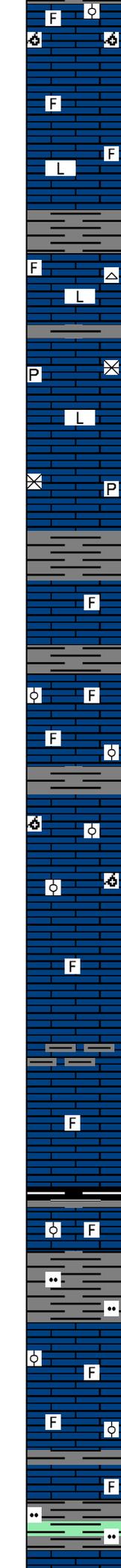
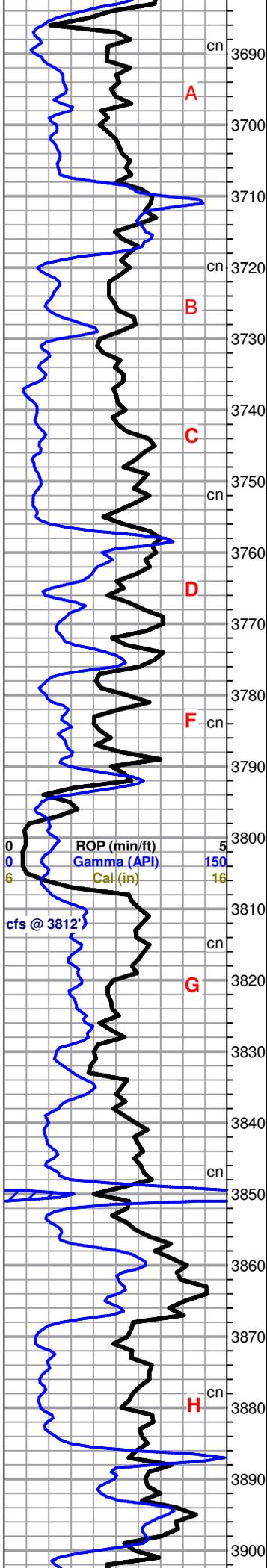
**LANSING 3683' (-1066')**

**Mud-Co Mud Ck @ 3482'**  
 0900 hrs 4.21.13  
 Vis: 47 Wt: 8.7  
 PV: 13 YP: 14  
 WL: 8.0  
 Cake: 1/32nd  
 pH: 11.0  
 CHL: 1,600 ppm  
 Cal: 40 ppm  
 Solids: 3.1  
 LCM: 1 #/bbl  
 DMC: \$900.10  
 CMC: \$7,983.80



**Total Gas (units) 50**  
**C1 (units) 50**  
**C2 (units) 50**  
**C3 (units) 50**  
**C4 (units) 50**

**System Test**



Limestone: It cream It gray, dense matrix, micro-vfxln, most fossiliferous/poor oolitic with trace fair oomoldic development, fair oomoldic porosity in those with development, poor interxln porosity in rest of sample, no shows noted, no fluorescence.

Limestone: off white It gray, dense matrix, micro-cryptoxln, some lithographic non-descript, fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence.

Limestone: off white It gray, dense matrix, micro-cryptoxln, some lithographic non-descript, sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence.

Shale: gray dk gray, blocky and hard.

Limestone: off white It cream, dense tight matrix, micro-cryptoxln, some lithographic non-descript, nearly all barren with trace sub-fossiliferous, little-no visible porosity, no shows noted, no fluorescence, with some scattered Chert: bone white, translucent, fresh and sharp, barren.

Limestone: off white It cream, dense tight matrix, micro-cryptoxln, scattered lithographic non-descript, mostly barren, some pyritic in part, fair amount of imbedded calcite crystals, poor visible porosity, no shows noted, even It white-yellow mineral fluorescence.

Limestone: It gray It cream, dense tight matrix, microxln, scattered sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence.

Limestone: off white It cream, dense matrix, micro-cryptoxln, fossiliferous with fair amount of oolitic pieces, some 2ndary xln fill along edges and around oolites, overall poor interxln/interfossiliferous porosity, no shows noted, spotty It yellow mineral fluorescence.

3812' cfs - Limestone: cream It tan It gray, friable matrix, micro-vfxln, heavily oolitic with excellent oomoldic development, 2ndary xln within molds, overall good-excellent oomoldic porosity, no shows noted, spotty It yellow mineral fluorescence, no cut, no odor.

Limestone: It gray It cream, dense tight matrix, microxln, scattered sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence.

Limestone: It gray It cream, dense tight matrix, microxln, scattered sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence, with scattered Shale stringers: gray It gray, round and soft, some silty.

**Replace Swivel Packer @ 3848'**  
**MUNCIE CREEK 3849' (-1232')**

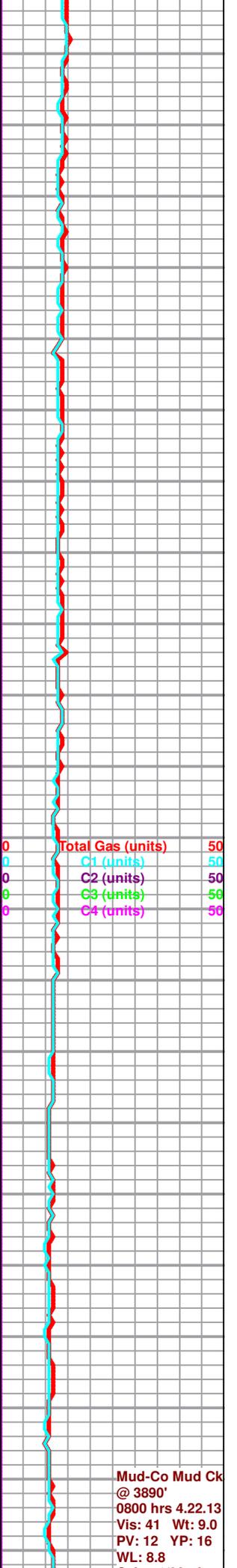
Shale: black dk gray, carbonaceous, blocky and firm, no gas show.

Limestone: It gray It tan, dense tight matrix, microxln, fossiliferous/oolitic, poor visible porosity, no shows noted, no fluorescence.

Shale: gray dk gray, blocky, most firm and dense, abundant splintery/fissile material, silty in part.

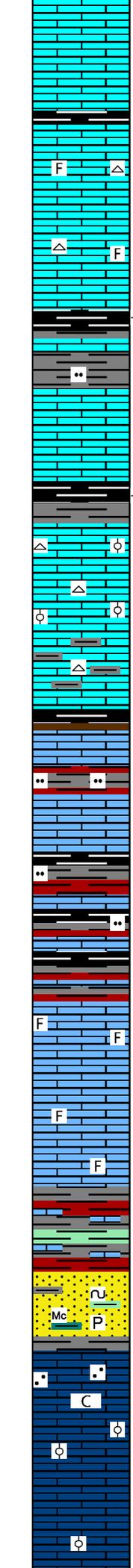
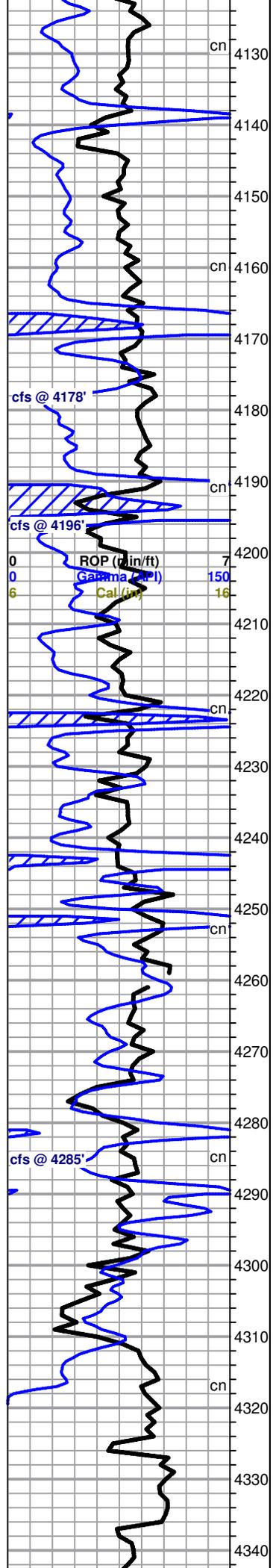
Limestone: It gray It tan, dense tight matrix, microxln, fossiliferous/oolitic, poor visible porosity, no shows noted, no fluorescence.

Shale: gray dk gray dk green, blocky and hard, majority splintery to fissile, silty in part, with interbedded Limestone: cream, It cream, dense tight matrix, microxln, fossiliferous, poor visible porosity, no shows noted, no fluorescence.



Mud-Co Mud Ck  
@ 3890'  
0800 hrs 4.22.13  
Vis: 41 Wt: 9.0  
PV: 12 YP: 16  
WL: 8.8





Limestone: cream lt tan lt gray, dense tight matrix, microxln, barren, no visible porosity, no shows noted, no fluorescence.

**PAWNEE 4140' (-1523')**

Limestone: tan, dense tight sub-cherty matrix, microxln, sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence, with scattered Chert: whit lt gray, opaque to translucent, fresh and sharp, barren.

Limestone: tan, dense tight sub-cherty matrix, microxln, sub-fossiliferous to barren, poor visible porosity, no shows noted, no fluorescence, with scattered Chert: whit lt gray, opaque to translucent, fresh and sharp, barren.

4178' cfs - Shale: black dk gray, carbonaceous, blocky and firm, fissile, very poor gas show in few pieces, grading to Shale: gray dk gray, blocky and hard, some silty, and some interbedded Limestone: no shows noted.

**MYRICK STATION 4177' (-1560')**

4196' cfs - Limestone: cream lt cream, dense sub-chalky to xln matrix, microxln, mostly barren with some scattered sub-fossiliferous, most pyritic, poor-no visible porosity, no shows noted, no fluorescence.

Shale: black dk gray, carbonaceous, blocky and firm, poor show gas.

**FORT SCOTT 4196' (-1579')**

Limestone: cream tan gray, dense tight cherty matrix, micro-cryptoxln, heavily oolitic, fair amount of 2ndary xln around oolites, overall poor visible porosity, no shows noted, no fluorescence, with abundant Chert: gray cream tan, dense fresh and sharp, heavily oolitic, no shows noted.

Limestone: as above, with slight decrease in overall Chert, and abundant Shale stringers: gray dk gray, blocky and firm, fissile.

**CHEROKEE 4222' (-1605')**

Shale: black dk brown dk gray, carbonaceous, blocky and firm, some slightly waxy, abundant splintery material, very poor gas show in few pieces.

Limestone: cream tan, dense tight matrix, microxln, barren, no visible porosity, no shows noted, no fluorescence, with interbedded Shale: gray dk gray brick red, blocky to rounded, most hard and firm, abundant fissile/splintery material, most silty.

Sample nearly all Shale: gray dk gray red dk red dk green black dk brown, some carbonaceous with no gas show, blocky to slightly rounded, most hard and dense, splintery to fissile, silty in part, with some Limestone stringers/interbedded Limestone: cream tan, dense tight matrix, microxln, barren, no visible porosity, no shows noted, no fluorescence.

**JOHNSON 4263' (-1646')**

Limestone: lt cream lt gray, dense sub-cherty matrix, microxln, fossiliferous to sub-fossiliferous, overall poor interxln porosity, no shows noted, very poor-no mineral fluorescence, no cut, no odor.

4285' cfs - Limestone: lt cream lt gray cream, dense xln matrix, micro-vfxln, fossiliferous to sub-fossiliferous, fair interxln porosity, no shows noted, very poor-no mineral fluorescence, no cut, no odor.

Limestone: cream lt cream lt gray, dense xln matrix, microxln, fossiliferous to barren, poor interxln porosity, no shows noted, no fluorescence.

Predominately Shale: gray dk gray dk red dk green, blocky and hard, most fissile to splintery, silty and pyritic in part, with some Limestone stringers.

Sandstone: clear gray silica grains in white gray cream matrix, most dense, f-coarse grained, subrounded, well cemented to friable, shaley/micaceous, pyritic/glaucanitic in part, fair porosity, no shows noted, no fluorescence.

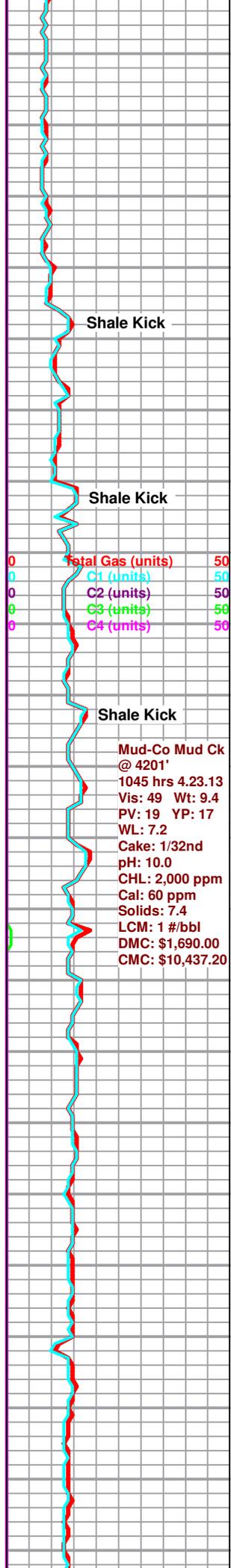
**MISSISSIPPIAN 4312' (-1695)**

Limestone: off white lt cream, dense cherty to chalky matrix, micro-vfxln, arenaceous with imbedded silica grains, fair-poor visible porosity, no shows noted, even poor whitish mineral fluorescence, no cut, no odor.

Limestone: off white lt cream, dense cherty to chalky matrix, micro-vfxln, oolitic to heavily oolitic, fair-poor visible porosity, no shows noted, even poor whitish mineral fluorescence, no cut, no odor.

Limestone: cream lt cream, dense tight matrix, microxln, mostly barren, no visible porosity, no shows noted, poor mineral fluorescence.

Limestone: off white lt cream, dense chalky matrix, micro-vfxln, oolitic to heavily



Shale Kick

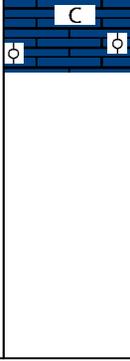
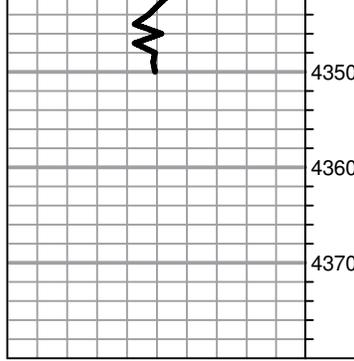
Shale Kick

Shale Kick

Total Gas (units) 50  
 C1 (units) 50  
 C2 (units) 50  
 C3 (units) 50  
 C4 (units) 50

Mud-Co Mud Ck @ 4201'  
 1045 hrs 4.23.13  
 Vis: 49 Wt: 9.4  
 PV: 19 YP: 17  
 WL: 7.2  
 Cake: 1/32nd  
 pH: 10.0  
 CHL: 2,000 ppm  
 Cal: 60 ppm  
 Solids: 7.4  
 LCM: 1 #/bbl  
 DMC: \$1,690.00  
 CMC: \$10,437.20

oolitic, fair-poor visible porosity, no shows noted, even poor whitish mineral fluorescence, no cut, no odor.



**LTD 4350' (-1733')**

**RTD 4351' (-1734')**

**Orders Received To Plug & Abandon Well As A Dry Hole**

**Geologist Derek W. Patterson Off Location, XXXX hrs 4.24.13**

*Respectfully Submitted,  
Derek W. Patterson*

