



Scale 1:240 Imperial

Well Name: MP 1-23  
 Surface Location: 980' FNL, 1754' FWL, Sec. 23-18S-14W  
 Bottom Location:  
 API: 15-009-26139-0000  
 License Number:  
 Spud Date: 2/22/2016 Time: 7:45 PM  
 Region: Barton County  
 Drilling Completed: 2/26/2016 Time: 10:25 PM  
 Surface Coordinates:  
 Bottom Hole Coordinates:  
 Ground Elevation: 1906.00ft  
 K.B. Elevation: 1917.00ft  
 Logged Interval: 2800.00ft To: 3500.00ft  
 Total Depth: 3520.00ft  
 Formation: Penn Sand/Chert  
 Drilling Fluid Type: Chemical/Fresh Water Gel

**OPERATOR**

Company: Shelby Resources, LLC  
 Address: 621 17th St, Suite 1155  
 Denver, CO 80293  
 Contact Geologist: Janine Sturdavant  
 Contact Phone Nbr: 303-907-2209 / 720-274-4682  
 Well Name: MP 1-23  
 Location: 980' FNL, 1754' FWL, Sec. 23-18S-14W  
 API: 15-009-26139-0000  
 Pool:  
 State: Kansas Field: Laud  
 Country: USA

**LOGGED BY**



Company: Shelby Resources, LLC  
 Address: 621 17th St. Suite 1155  
 Denver, CO 80293  
 Phone Nbr: 203-671-6034  
 Logged By: Geologist Name: Jeremy Schwartz

**NOTES**

The Shelby Resources, LLC MP #1-23 was drilled to a total depth of 3520', bottoming in the Arbuckle. A TookeDaq gas detector was employed in the drilling of said well.

1 DST was conducted in the Penn Conglomerate. The DST Report can be found at the bottom of this log.

Due to negative DST Results, lack of sample shows, gas kicks, and log analysis it was determined by all parties involved that the well be plugged and abandoned. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.

Respectfully Submitted,  
 Jeremy Schwartz  
 Geologist

**CONTRACTOR**

Contractor: Sterling Drilling Co  
 Rig #: 4

Rig Type: mud rotary  
 Spud Date: 2/22/2016  
 TD Date: 2/26/2016  
 Rig Release:

Time: 7:45 PM  
 Time: 10:25 PM  
 Time:

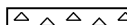






### ELEVATIONS

K.B. Elevation: 1917.00ft      Ground Elevation: 1906.00ft  
 K.B. to Ground: 11.00ft

DATE	DEPTH	ACTIVITY
Thursday, February 25, 2016	3000'	Geologist Jeremy Schwartz on location @ 0330hrs, 3000', Drlg ahead through Heebner,
	3165'	Toronto, Douglas Shale, Brown Lime, CFS @ 3165', Drop Survey, Strap Out,
		Conduct Bit Trip, Swap PDC for Button Bit, Successful Bit Trip, Resume Drlg ahead
Friday, February 26, 2016	3390'	through LKC, LKC "G", Muncie Creek Shale, LKC "H", Stark Shale, LKC "K", CFS @ 3390'
	3390'	Conduct DST #1 in the Penn Conglomerate, Successful Test, Resume Drlg ahead
	3433'	through Ar buckle, CFS @ 3422', Resume Drlg, CFS @ 3430', Resume Drlg, CFS @ 3433',
	3520'	Resume Drlg ahead to TD @ 3520', TD of 3520' reached @ 2225hrs, CTCH 1hr,
Saturday, February 27, 2016	3520'	Drop Survey, OOH for logs, Conduct Logging Operations, Logging Operations
		Complete @ 0545hrs, Geologist Jeremy Schwartz off location @ 0715hrs



		D&A															
		WILKINSON DRILLING CO.								L.D. DRILLING, INC							
		LAUDICK #1								SKOLAUT #1-24							
		MP #1-23				SW-NE-NW 23-18S-14W				SE-NW-SE-SW 14-18S-14W							
		KB		1917		KB		1911		KB		1918					
		LOG TOPS		SAMPLE TOPS		COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.	
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	
ANHYDRITE TOP	849	1068	851	1066	845	1066	+	2	+	0	857	1061	+	7	+	5	
BASE	876	1041	880	1037	874	1037	+	4	+	0	882	1036	+	5	+	1	
TOPEKA	2864	-947	2866	-949					2873	-955	+	8	+	6			
HEEBNER SHALE	3082	-1165	3082	-1165	3076	-1165	+	0	+	0	3088	-1170	+	5	+	5	
TORONTO	3093	-1176	3093	-1176	3088	-1177	+	1	+	1	3097	-1179	+	3	+	3	
DOUGLAS SHALE	3108	-1191	3109	-1192	3103	-1192	+	1	+	0	3112	-1194	+	3	+	2	
BROWN LIME	3160	-1243	3161	-1244	3154	-1243	+	0	-	1	3163	-1245	+	2	+	1	
LKC	3170	-1253	3170	-1253	3164	-1253	+	0	+	0	3172	-1254	+	1	+	1	
LKC G	3250	-1333	3250	-1333	3244	-1333	+	0	+	0	3244	-1326	-	7	-	7	
MUNCIE CREEK	3294	-1377	3296	-1379	3285	-1374	-	3	-	5	3299	-1381	+	4	+	2	
LKC H	3302	-1385	3304	-1387	3294	-1383	-	2	-	4	3307	-1389	+	4	+	2	
STARK SHALE	3350	-1433	3354	-1437	3343	-1432	-	1	-	5	3355	-1437	+	4	+	0	
LKC K	3354	-1437	3359	-1442	3348	-1437	+	0	-	5	3359	-1441	+	4	-	1	
BKC	3373	-1456	3374	-1457	3367	-1456	+	0	-	1	3378	-1460	+	4	+	3	
PENN SAND/CHERT	3373	-1456	3374	-1457	3367	-1456	+	0	-	1	3378	-1460	+	4	+	3	
ARBUCKLE	3419	-1502	3417	-1500	3400	-1489	-	13	-	11	3410	-1492	-	10	-	8	
RTD	3520	-1603	3520	-1603	3456	-1545	-	58	-	58							
LTD	3520	-1603			3456	-1545	-	58			3415	-1497	-	106			

### ROCK TYPES

 Cht     
  Dolprim     
  shale, gry     
  shale, red  
 Congl     
  Lmst fw<7     
  Carbon Sh

### ACCESSORIES

**FOSSIL**  
 ^ Bioclastic or Fragmental  
 F Fossils < 20%







**STRINGER**  
 Chert  
 Limestone  
 Shale  
 red shale

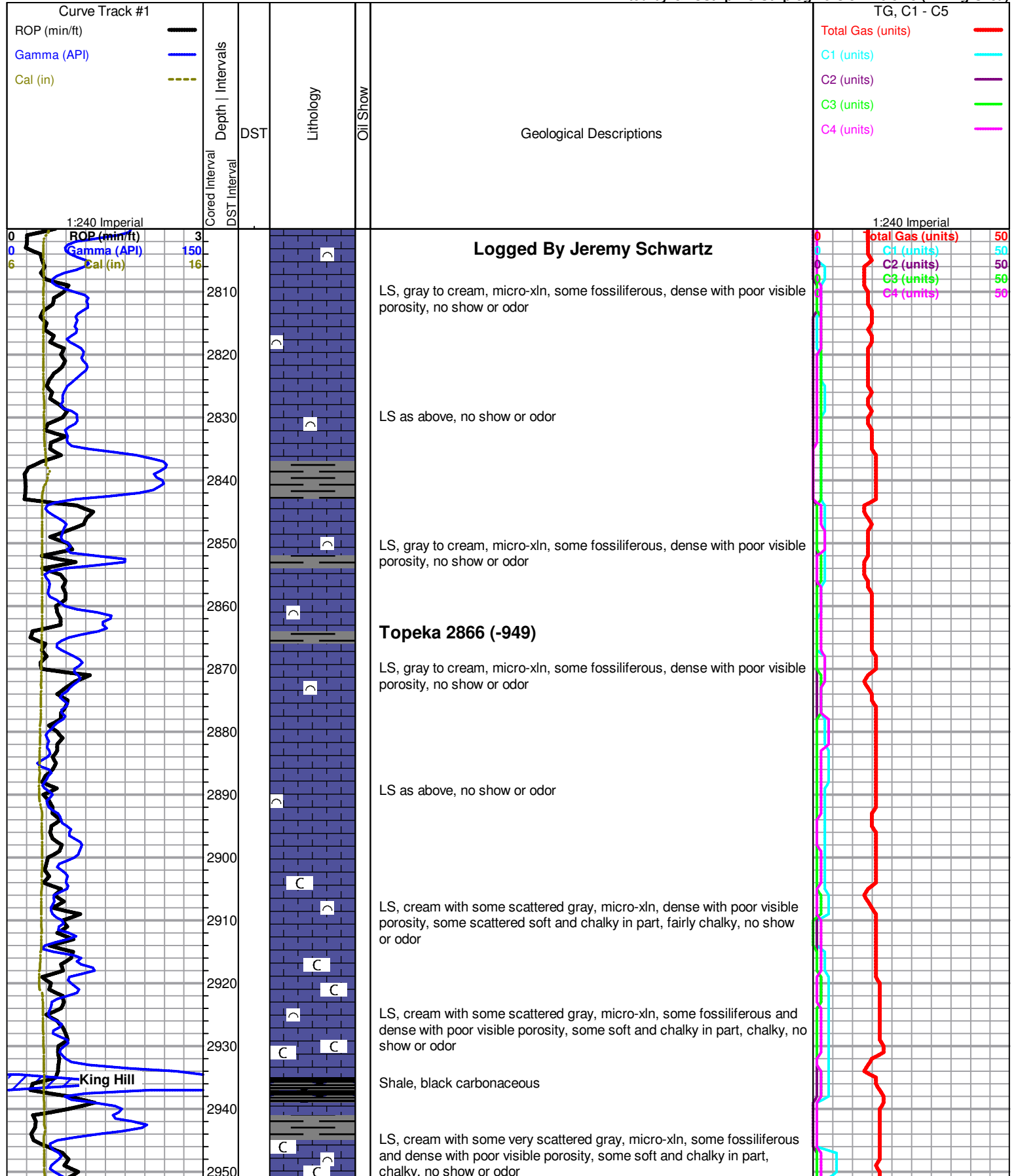
**TEXTURE**  
 C Chalky

### OTHER SYMBOLS

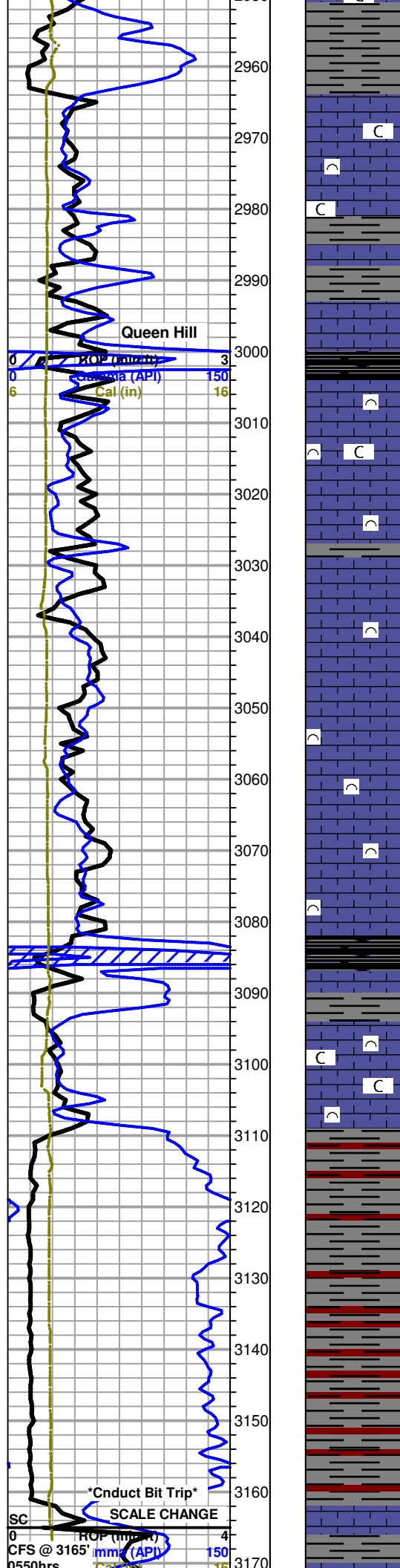
**MISC**  
 Daily Report  
 Digital Photo  
 Document

**DST**  
 DST Int  
 DST alt

-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt



King Hill



LS, mostly same as above, with slight influx cream, crypto-xln, lithographic and dense with poor visible porosity, slightly less chalky, no show or odor

Shale, black carbonaceous

LS, cream, micro-xln, fossiliferous and dense with poor visible porosity, with some scattered crypto-xln, lithographic and dense with poor visible porosity, slightly chalky, no show or odor

LS as above, no show or odor

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

LS as above, no show or odor

**Heebner 3082 (-1165)**  
Shale, black carbonaceous

**Toronto 3093 (-1176)**

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

**Douglas Shale 3109 (-1192)**

Shale, mostly gray with some scattered red, mostly soft and waxy with some blocky and dense

Shale as above, with slight influx red

**Brown Lime 3161 (-1244)**

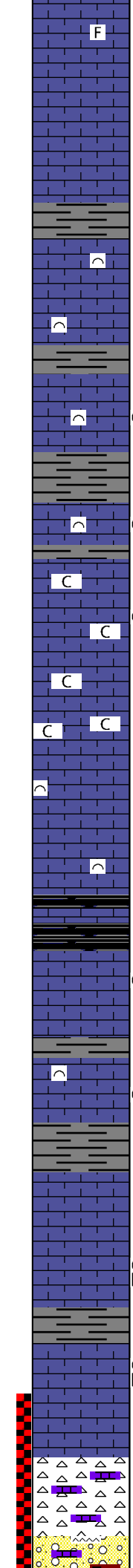
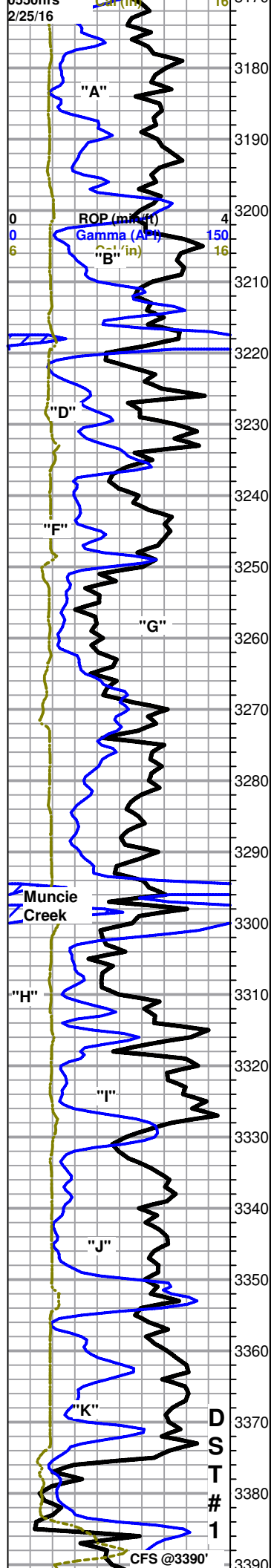
LS, brown to gray, micro-xln, fossiliferous and dense with no visible porosity, no show or odor

**Lansing 3170 (-1253)**

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

Mud-Co Mud chk  
3165'  
2/25/16  
Vis: 55 Wt: 9.1  
PV: 18 YP: 18  
WL: 7.6  
Cake: 2/32  
pH: 11  
Ca: 20ppm  
CHL: 3200ppm  
Sol: 5.6 LCM: 1/2  
DMC: \$2,108.54  
CMC: \$6,202.63

Survey @ 3165'  
3/4degree  
Strap = 0.14LTB



LS, cream to tan with some scattered gray, some slightly fossiliferous, dense with poor visible porosity, no show or odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, few very scattered chips with very slight poor edge pinpoint porosity, no show or odor

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

LS, cream to gray, micro-xln, some lithographic, some fossiliferous, mostly dense with poor visible porosity, some very scattered with very scattered poor pinpoint porosity and very slight poor black stain in porosity only, few chips with slight inter-fossil staining and VSSF0 upon break, chips with shows <10%, No fluor., poor odor

LS, cream to white, micro-xln, mostly lithographic and dense with poor visible porosity, some very scattered fossiliferous, few chips (<5%) with very slight poor edge pinpoint porosity and poor black stain in porosity only, trace oomoldic with poor visible oomold porosity, no fluor., or odor

LS, cream to white, micro-xln, some lithographic and dense with poor visible porosity, some sub-oolitic to sub-oomoldic with poor visible porosity, few chips (<5%) with very scattered poor black stain in several oomolds only, chalky, NSFO, no fluor., no odor

LS, mostly same as above, chalky, NSFO, no fluor., no odor

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

LS, brown to gray with some cream, micro-xln, mostly lithographic, few chips fossiliferous, very dense with no visible porosity, no show or odor

LS, mostly same as above, no show or odor

LS, cream to gray with some scattered brown, micro-xln, lithographic and dense with poor visible porosity, found few small chips with some poor edge pinpoint porosity and wet black stain in porosity only, chips too dense to break, VSSF0 when agitated, no fluor., poor fleeting odor

LS, cream with some scattered gray, micro-xln, mostly lithographic and dense with poor visible porosity, some very scattered fossiliferous (<10%) with some scattered inter-fossil staining, upon break SSFO, no fluor., or odor

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

LS, cream, micro-xln, lithographic and dense with poor visible porosity, some scattered (~20%) with few very small edge vugs and wet, tarry black to dead stain inside vugs only, no fluor, NSFO, no odor

LS, mostly same as above, few chips with some very scattered edge pinpoint to very slightly vuggy edges with wet, tarry black to dead stain inside porosity only, no fluor., NSFO, no odor

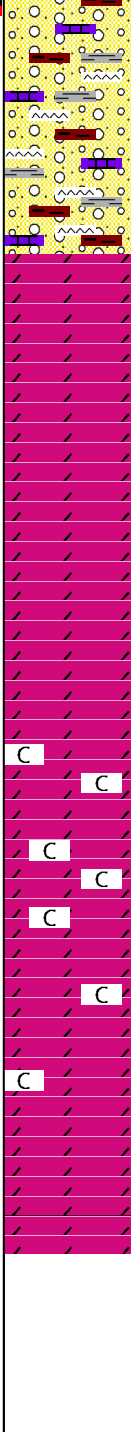
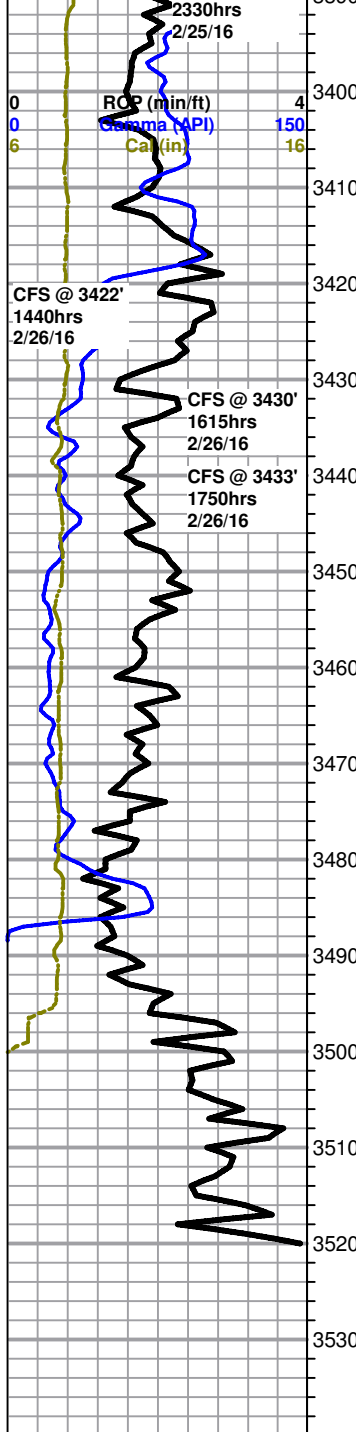
**Penn Conglomerate Chert/SS 3374 (-1457)**  
Shelby MP 1-23 dst1.jpg

LS, cream, micro-xln, lithographic and dense with poor visible porosity, barren, with influx maroon, red and gray shales as well as vari-colored red to orange and tan to opaque cherts, no show or odor

3390' 30" Mixed LS, shales, and vari-colored cherts, no visible porosity, no visible loose sand grains. no show. fluor., or odor

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

Mud-Co Mud chk  
3390'  
2/26/16  
Vis: 59 Wt: 9.3  
PV: 20 YP: 23  
WL: 7.2  
Cake: 2/32  
pH: 10.0  
Ca: 20ppm  
CHL: 3900ppm  
Sol: 6.9 LCM: 1/2  
DMC: \$739.23



3390' 60" Mixed cream to gray LS, with some scattered red, maroon, and gray shales, as well as vari-colored orange to red and tan to opaque cherts, some fresh and sharp, trace oolitic, no show, fluor., or odor

Mixed LS, shales, and cherts, heavy red wash, no show, fluor., or odor

**Arbuckle 3417 (-1500)**

3422' 30" Mixed LS, shales, and cherts, also with some very scattered dolomite, cream to white, micro-xln, mostly sub-sucrosic and dense with poor visible porosity, some scattered fairly friable, few chips with some very scattered sub-rhombic development on edges with slight poor porosity and very scattered dead black gilsonitic stain, NSFO, red wash, no odor

3422' 60" Mostly same as above, NSFO, no odor

3430' 30" Conglomerate, with some scattered dolomite, white, micro-xln, mostly sub-sucrosic and dense with poor visible porosity, few scattered chips with some sub-rhombic development and scattered black gilsonitic stain, poor visible porosity, some fairly friable, upon break VSSFO in few chips, still carrying red wash, poor fleeting odor

3433' 30" Dolomite, white, micro-xln, mostly sub-rhombic and dense with poor visible porosity, some fairly friable, mostly barren, with some scattered to very scattered fair visible porosity, some with scattered black gilsonitic stain, upon break few chips with VSSFO, poor odor

3433' 60" Mostly same as above, poor odor

~3440' Dolomite, white, micro-xln, some sub-sucrosic and dense with poor visible porosity, some sub-rhombic and fairly friable with scattered poor to fair visible porosity and scattered to very scattered black gilsonitic stain, NSFO, poor odor

~3450' Mostly same as above, with gilsonitic stain slightly dropping out, mostly barren, NSFO, no odor

~3460' Dolomite, white, micro-xln, mostly sub-sucrosic and dense with poor visible porosity, some very scattered sub-rhombic with very scattered gilsonitic stain, NSFO, no odor

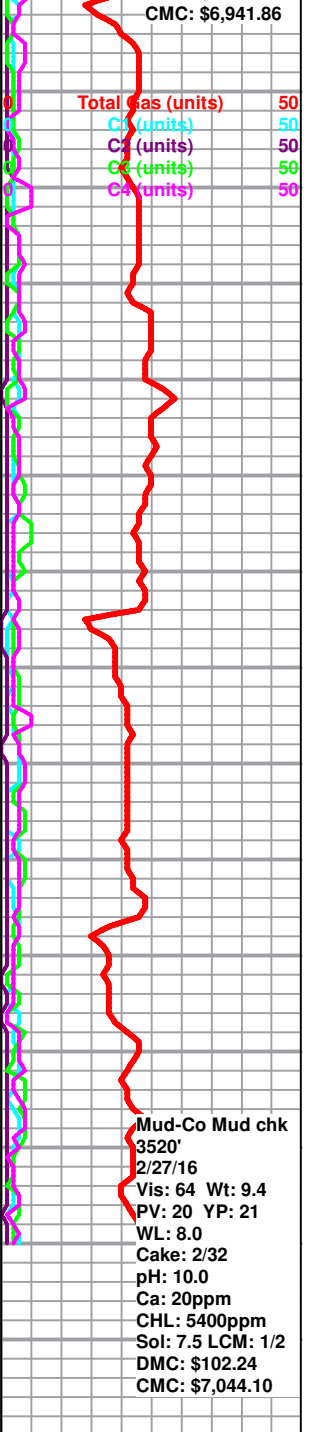
~3470' Dolomite, mostly same as above, chalky, no show or odor

~3480' Dolomite, white, micro-xln, mostly sub-sucrosic and dense with poor visible porosity, some very scattered sub-rhombic, with some very scattered poor to fair visible porosity, barren, chalky, no odor

~3490 Dolomite as above, less chalky, no show or odor

~3500-3520' Dolomite, white to cream, micro-xln, sub-sucrosic and dense with poor visible porosity, some sandy, with some very scattered sub-rhombic, fairly friable, barren, no odor

**Rotary TD 3520' @ 2225hrs 2/26/16**  
**Casedhole Solutions Logging TD @ 3520'**  
**Complete Logging Operations @ 0545hrs 2/27/16**  
**Geologist Jeremy Schwartz off location @ 0715hrs 2/27/16**



# DRILL STEM TEST REPORT

Shelby Resources LLC

**23/18S/14W/Barton**

2717 Canal Blvd  
Hays Kansas 67601

**MP #1-23**

Job Ticket: 65080

**DST#: 1**

ATTN: Jeremy Schwartz

Test Start: 2016.02.26 @ 02:28:56



**TRILOBITE TESTING, INC**

## GENERAL INFORMATION:

Formation: **Pennsylvania Conglom**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:15:56

Time Test Ended: 10:08:56

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72 Great Bend/24

Interval: **3366.00 ft (KB) To 3390.00 ft (KB) (TVD)**

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3390.00 ft (KB) (TVD)

1906.00 ft (CF)

Hole Diameter: inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8960**

**Outside**

Press@RunDepth: 142.98 psig @ 3387.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.02.26 End Date: 2016.02.26

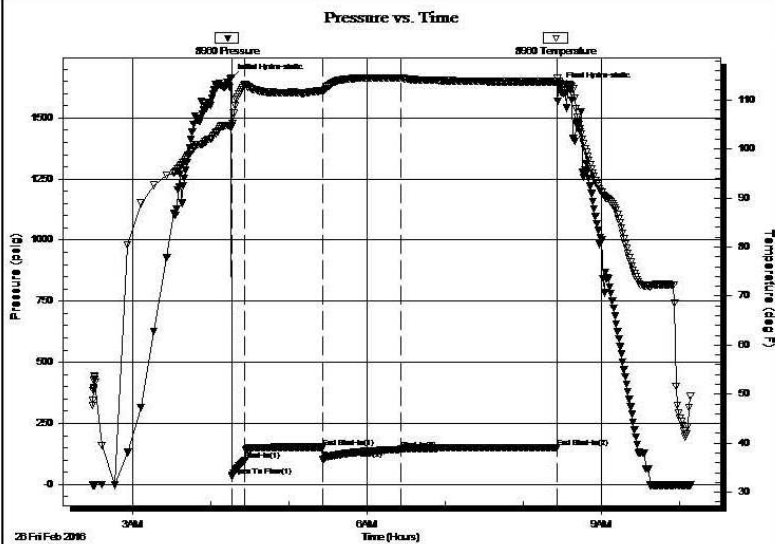
Last Calib.: 1899.12.30

Start Time: 02:28:56 End Time: 10:08:56

Time On Btm: 2016.02.26 @ 04:14:56

Time Off Btm: 2016.02.26 @ 08:27:56

TEST COMMENT: Initial Flow 10 minutes/Blow built to 11 inches  
Initial Shut In 60 minutes/Surface blow back died in 20 minutes  
Final Flow 60 minutes/Blow built to 10 inches  
Final Shut In 120 minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1660.14	104.75	Initial Hydro-static
1	32.78	104.50	Open To Flow (1)
11	97.86	113.03	Shut-In(1)
71	152.16	111.83	End Shut-In(1)
71	101.82	111.84	Open To Flow (2)
131	142.98	114.43	Shut-In(2)
251	151.90	113.67	End Shut-In(2)
253	1623.73	113.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
280.00	Oil cut Muddy Water	1.94
0.00	Oil 1% Mud 20% Water 79%	0.00
3.00	Clean oil 100%	0.04

## Gas Rates

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