



**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1120482

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Black Diamond Oil, Inc.
Well Name	S&W 1
Doc ID	1120482

All Electric Logs Run

Micro Log
Neutron / Density Log
Gamma Ray
Dual Induction

Form	ACO1 - Well Completion
Operator	Black Diamond Oil, Inc.
Well Name	S&W 1
Doc ID	1120482

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3633-37	250 Gal 15% MCA	
1	3600	1000 gal 15% MCA	
1	3587	1000 gal 15% MCA	
1	3568	1000 gal 15% MCA	
4	3521-3525	250 gal 15% MCA, 750 gal 20% NE	
2	3452-3454	500 gal 15% MCA, 1500 gal 28% NE	



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Home Office P.O. Box 32 Russell, KS 67665

No. 6152

Cell 785-324-1041

Phone 785-483-2025

County	State	On Location	Finish
NORTON	KANSAS		4:45pm
Range	Twp.	Sec.	Date
aa	4	28	10-24-12

Location **Edmund-le-3n-w/INTO**

Well No. **#1**

Owner **BLACK DIAMOND**

Lease **S&L**

To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish center and helper to assist owner or contractor to do work as listed.

Charge To **BLACK DIAMOND**

Street **PO BOX 441**

City **HAYS** State **KS, 67101**

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered **175 com - 10 salt - 5% admix**

Meas Line

Contractor **L1415 #10**

Type Job **ROD-STRENG**

Hole Size **7 3/8**

Csg. **4 1/2-11.6-NEW**

Tbg. Size

Tool **PORT COLLAR**

Depth **1,847'**

Shoe Joint **16.76"**

Displace **573 bbls**

EQUIPMENT

No.	Cementer	#15
No.	Helper	NICK
No.	Driver	LOANIE
No.	Driver	DU

Common **173**

Job Services & Remarks

Remarks:

Rat Hole **30 SKS**

Mouse Hole

Centralizers **3,5,7,9,11,43**

Baskets **3,9,44**

Over Port Collar @ **Collar of Joint #45**

DEEPER BALL - ESTABLISHED CEMENTATION

CREATED ON BOTTOM 45 MIN. - DISC

INVERTED - PUMPED 500 GAL. OF MUD

MADE CONNECTION TO 4 1/2" - MIXED

PUMPER 175 SKS - DEEPEO PUG

WASHED PUMP - DISPLACED PUG

LANDED & HELD

Left pressures @ **1,000 #**

LANDED @ **1500 - PRESSURE**

57

THANK YOU!

Signature **X**

Total Charge

Discount

Tax

Mileage

Pumptrk Charge **56 Prod Kong String**

Float Shoe **1-4 1/2"**

Latch Down **1-4 1/2" w/pug**

AFU Inserts

Baskets **3-4 1/2"**

Centralizer **6-4 1/2" TURBOS**

Guide Shoe

FLOAT EQUIPMENT

Mileage

Handling **199**

Sand

CFL-117 or CD110 CAF 38

Mud CLR 48 **500 GAL**

Kol-Seal **875 #**

Flowseal

Salt **15**

Hulls

Calcium

Gel.

Poz. Mix

Common **173**









# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Home Office P.O. Box 32 Russell, KS 67665

No. 6907

Phone 785-483-2025  
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
6-3-13				Norton	KS		4:00 p.m.

Location *Edmond 2E 2 1/2 W into*

Lease	Well No.	Owner
<i>SW</i>	<i>1</i>	To Quality Oilwell Cementing, Inc.

Contractor	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
<i>Caschler</i>		

Type Job	Charge To
<i>1" Backside</i>	<i>Black Diamond</i>

Hole Size	T.D.	Street
<i>2 7/8</i>		

Csg.	Depth	City	State
<i>4 1/2</i>			

Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
<i>1"</i>	<i>825'</i>		

Tool	Depth	Cement Amount Ordered
		<i>350 60/40 40/60 EL</i>

Cement Left in Csg.	Shoe Joint	

Meas Line	Displace	Common
		<i>210</i>

EQUIPMENT		Poz. Mix
Pumptrk	No. Cementer/Helper	<i>140</i>
<i>17</i>	<i>Craig</i>	
Bulktrk	No. Driver	Gel.
	<i>Bob</i>	<i>13</i>
Bulktrk	No. Driver	Calcium
<i>12</i>	<i>David</i>	

JOB SERVICES & REMARKS		Hulls
		Salt

Remarks:	Flowseal
	Kol-Seal

Rat Hole	Mud CLR 48
Mouse Hole	CFL-117 or CD110 CAF 38

Centralizers	Sand
Baskets	Handling
	<i>364</i>

D/V or Port Collar	Mileage

*1" size 825' mix 350SK & Displace.*

*Cement Did NOT Circulate!*

FLOAT EQUIPMENT	
Guide Shoe	

Centralizer	
Baskets	

AFU Inserts	
Float Shoe	

Latch Down	

Pumptrk Charge	<i>Cir Cement</i>
Mileage	<i>55</i>

Tax	
Discount	

Total Charge	
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*[Handwritten Signature]*

X Signature



# ALLIED OIL & GAS SERVICES, LLC 0 119

Federal Tax I.D.# 20-5975804

REMIT TO: P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Russell KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
5-31-13	28	4	22			5:00pm	5:30pm
LEASE <u>S&amp;W</u>	WELL# <u>1</u>	LOCATION <u>Edmond Ks 2 E 2 1/2 N W into</u>			COUNTY <u>Worton</u>	STATE <u>Ks</u>	
OLD OR (NEW) (Circle one)							

CONTRACTOR Gaschler Pulling Service OWNER \_\_\_\_\_  
 TYPE OF JOB Squeeze  
 HOLE SIZE 7 7/8 T.D. \_\_\_\_\_  
 CASING SIZE 4 1/2 DEPTH 3705  
 TUBING SIZE 2 7/8 DEPTH 1650 1592  
 DRILL PIPE DEPTH \_\_\_\_\_  
 TOOL packer DEPTH 1650 1592  
 PRES. MAX MINIMUM \_\_\_\_\_  
 MEAS. LINE SHOE JOINT \_\_\_\_\_  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. 1650  
 DISPLACEMENT \_\_\_\_\_

CEMENT  
 AMOUNT ORDERED 350 AMD 10 gel a side  
 COMMON @ \_\_\_\_\_  
 POZMIX @ \_\_\_\_\_  
 GEL 10 @ 23.40 234.00  
 CHLORIDE @ \_\_\_\_\_  
 ASC @ \_\_\_\_\_  
 AMD 350 @ 25.90 9065.00  
 HANDLING 575.44 8/3 @ 2.48 1427.09  
 MILEAGE 1271.75 4/m 2.60 3306.55  
 TOTAL 14032.64

**EQUIPMENT**

PUMP TRUCK CEMENTER Glenn G  
 # 417 HELPER Woody O  
 BULK TRUCK  
 # 481 DRIVER Joe G  
 BULK TRUCK  
 # DRIVER \_\_\_\_\_

**REMARKS:**

1542  
run tubing and set packer at 1650 ft try  
to circulate mud up annulus mix 10 gel mix  
350 AMD & washup displace 6 1/2 bbl  
squeeze to

**SERVICE**

DEPTH OF JOB 1650  
 PUMP TRUCK CHARGE 2249.84  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 MILEAGE 50 HV.M.T @ 7.70 385.00  
 MANIFOLD @ \_\_\_\_\_  
50 LV.M.T @ 4.40 220.00  
 TOTAL 2854.84

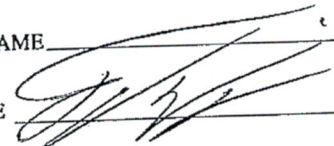
CHARGE TO: Black Diamond  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

\_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 16897.48  
 DISCOUNT 4221.87 IF PAID IN 30 DAYS  
net 12,665.61  
before tax

PRINTED NAME \_\_\_\_\_  
 SIGNATURE 



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6938

Date	5-29-13	Sec.	28	Twp.	4	Range	22	County	Norton	State	KS	On Location		Finish	12:30pm
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Lease SW SW Well No. #1 Location Edmond 2E 2 1/2 N Winto

Owner by tank battery  
To Quality Oilwell Cementing, Inc.

Contractor Blacklex  
Type Job port / squeeze plug at 3245  
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 4 1/2 T.D. Black Diamond  
Csg. 2 Depth Black Diamond  
Tbg. Size 2 Depth Black Diamond

Street Black Diamond  
City \_\_\_\_\_ State \_\_\_\_\_

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. \_\_\_\_\_ Shoe Joint \_\_\_\_\_  
Cement Amount Ordered Qmcl 350 lbs

Meas Line \_\_\_\_\_ Displace 6.4 1/4 flow

**EQUIPMENT**  
Common 350 Amoc

Pumptrk	5	No.	Cementor	<u>note</u>
			Helper	
Bulktrk	13	No.	Driver	<u>Bret</u>
			Driver	
Bulktrk	04	No.	Driver	<u>Billy</u>
			Driver	

**JOB SERVICES & REMARKS**

Remarks: \_\_\_\_\_

Rat Hole pack hole 1676 Flowseal 82#

Mouse Hole peets 1770 Kol-Seal \_\_\_\_\_

Centralizers \_\_\_\_\_ Mud CLR 48 \_\_\_\_\_

Baskets \_\_\_\_\_ CFL-117 or CD110 CAF 38 \_\_\_\_\_

D/V or Port Collar \_\_\_\_\_ Sand \_\_\_\_\_

80 BBL of mud mix 350 Handling 350

500 Squeeze part to Mileage \_\_\_\_\_

1500 washed clean pills **FLOAT EQUIPMENT**

4 joints pressed up to 12:00ps Guide Shoe \_\_\_\_\_

Shut in Rigged down Centralizer \_\_\_\_\_

Baskets \_\_\_\_\_

AFU Inserts \_\_\_\_\_

Float Shoe \_\_\_\_\_

Latch Down \_\_\_\_\_

Cement did not Circulate Pumptrk Charge Squeez

Mileage 55 Tax \_\_\_\_\_  
Discount \_\_\_\_\_  
Total Charge \_\_\_\_\_

X Signature



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Home Office P.O. Box 32 Russell, KS 67665

No. 6857

Phone 785-483-2025

Cell 785-324-1041

Date	5-24-13	Sec.	28	Twp.	45	Range	22	County	Norton	State	KS	On Location		Finish	5:15 AM
Lease	STW		SAW		Well No. 1		Location Edmond 2E to Rd E5, 2 1/2 N, to cattle guard								
Contractor	Express		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.												
Type Job	Port collar		T.D.		Charge To Black Diamond										
Hole Size	7 7/8		Depth		Street										
Csg.	4 1/2		Depth		City State										
Tbg. Size	2'		Depth		The above was done to satisfaction and supervision of owner agent or contractor.										
Tool	Port Collar		Depth		Cement Amount Ordered 350 QMDC 1/4 flt										
Cement Left in Csg.			Shoe Joint												
Meas Line	Displace														
<b>EQUIPMENT</b>															
Pumptrk	9	No.	Cementer	Common 350											
			Helper	Poz. Mix											
Bulktrk	12	No.	Driver	Gel.											
			Driver	Calcium											
Bulktrk	PU	No.	Driver	Hulls											
			Driver	Salt											
<b>JOB SERVICES &amp; REMARKS</b>															
Remarks:	Flowseal 82#														
Rat Hole	Kol-Seal														
Mouse Hole	Mud CLR 48														
Centralizers	CFL-117 or CD110 CAF 38														
Baskets	Sand														
D/V or Port Collar	Handling 350														
Port collar @ 1805	Mileage														
Plng @ 3245	<b>FLOAT EQUIPMENT</b>														
circulated oil out of the hole with 80 bbls w	Guide Shoe														
Tested tool to 1000 psi held, opened port collar	Centralizer														
Mix 350 sx QMDC 1/4 flt displaced with 5 3/4 bbl	Baskets														
presherd up to 1,000 psi to test tool, Ran 5 joints	AFU Inserts														
washed out	Float Shoe														
	Latch Down														
	Pumptrk Charge port Collar														
	Mileage 55														
	Tax														
	Discount														
	Total Charge														

X Signature



**S & W #1**  
**Back Side Cement from Port Collar to Surface**  
2425' FSL & 1875' FEL Sec. 28-4-22W  
Norton County, Kansas

**May 24, 2013**

Port collar at 1805', 350 sacks of cement. Cement did not circulate.

**May 25, 2013**

Temp survey: Top of cement 1800'.

**May 28, 2013**

Perforations at 1770', 350 sacks of cement. Cement did not circulate.

**May 30, 2013**

Temp survey: Top of cement at 1690', perforate at 1650'.

**May 31, 2013**

Pump 350 sacks of cement. Cement did not circulate.

**June 1, 2013**

Temp survey: Top of cement 1380'.

**June 3, 2013**

Ran 1" tubing between 8 5/8 and 4 1/2, stacked out 848'. Pumped 325 sacks of cement at 825'.  
Cement did not circulate.

**June 4, 2013**

Temp survey: Top of cement at 550'.

**June 6, 2013**

Ran 1", stacked out at 520'. Pumped 135 sacks of cement. Cement circulated to surface.



**OPERATOR**

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

Contact Geologist: KENNETH VEHIGE  
 Contact Phone Nbr: (785) 625-5891  
 Well Name: SW #1  
 Location: NW NE NW SE 28-4S-22W  
 Pool:  
 State: KANSAS

API: 15-137-20622-0000  
 Field: HANSON ESTATE NORTHWEST  
 Country: USA

Scale 1:240 Imperial

Well Name: SW #1  
 Surface Location: NW NE NW SE 28-4S-22W  
 Bottom Location:  
 API: 15-137-20622-0000  
 License Number: 7076  
 Spud Date: 10/20/2012 Time: 5:30 PM  
 Region: NORTON  
 Drilling Completed: 10/23/2012 Time: 5:02 PM  
 Surface Coordinates: 2425' FSL & 1875' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2261.00ft  
 K.B. Elevation: 2266.00ft  
 Logged Interval: 3050.00ft To: 3704.00ft  
 Total Depth: 3703.00ft  
 Formation:  
 Drilling Fluid Type: CHEMICAL/FRESH WATER

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.8024385 Latitude: 39.6749206  
 N/S Co-ord: 2425' FSL  
 E/W Co-ord: 1875' FEL

**LOGGED BY**



Company: SOLUTIONS CONSULTING  
 Address: 108 W 35TH  
 HAYS, KS 67601

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

**CONTRACTOR**

Contractor: WW DRILLING, LLC  
 Rig #: #6  
 Rig Type: MUD ROTARY  
 Spud Date: 10/20/2012 Time: 5:30 PM  
 TD Date: 10/23/2012 Time: 5:02 PM  
 Rig Release: 10/24/2012 Time: 3:00 PM

**ELEVATIONS**

K.B. Elevation: 2266.00ft Ground Elevation: 2261.00ft  
 K.B. to Ground: 5.00ft

**NOTES**

DUE TO LOG ANALYSIS DECISION WAS MADE TO RUN 4 1/2" PRODUCTION CASING AND FURTHER EVALUATE ZONES WITH PERFORATION. AFTER LOGGING THE WELL WAS DEEPEMED 3'.

RESPECTFULLY SUBMITTED,  
 JEFF LAWLER

**WELL COMPARISON SHEET**

FORMATION	S&W #1				N2 N2 S2 28-4-22				NW SW SW NE 28-4-22				S2 NESW NE 28-4-22				S2 SW SE NE 28-4-22			
	LOG TOPS		SAMPLE TOPS		LOG TOPS		SAMPLE TOPS		LOG TOPS		SAMPLE TOPS		LOG TOPS		SAMPLE TOPS		LOG TOPS		SAMPLE TOPS	
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM
ANHYDRITE TOP	1897	369	1898	368	1950	363	+ 6	+ 5	1904	368	+ 1	+ 0	1885	368	+ 1	+ 0	1890	371	- 2	- 3
BASE	1927	339	1928	338																
TOPEKA	3209	-943	3214	-948	3258	-945	+ 2	- 3	3209	-937	- 6	- 11					3204	-943	+ 0	- 5
HEEBNER SHALE	3405	-1139	3405	-1139	3453	-1140	+ 1	+ 1	3437	-1165	+ 26	+ 26	3391	-1138	- 1	- 1	3400	-1139	+ 0	+ 0
TORONTO	3433	-1167	3434	-1168													3429	-1168	+ 1	+ 0
LKC	3450	-1184	3450	-1184	3499	-1186	+ 2	+ 2	3452	-1180	- 4	- 4	3436	-1183	- 1	- 1	3446	-1185	+ 1	+ 1
STARK SHALE																				
BKC	3643	-1377	3643	-1377	3687	-1374	- 3	- 3	3637	-1365	- 12	- 12	3620	-1367	- 10	- 10				
GORHAM SAND					3740	-1427														
ARBUCKLE									3705	-1433			3691	-1438			34718	-32457		
REAGAN SAND																	3755	-1494		
RTD			3703	-1437					3710	-1438	+ 1						3796	-1535		+ 98
LTD	3704	-1438															3796	-1535	+ 97	

**ROCK TYPES**

Cht	shale, gry	shale, red	Ss
Lmst fw7>	Carbon Sh	Shcol	Lscongl

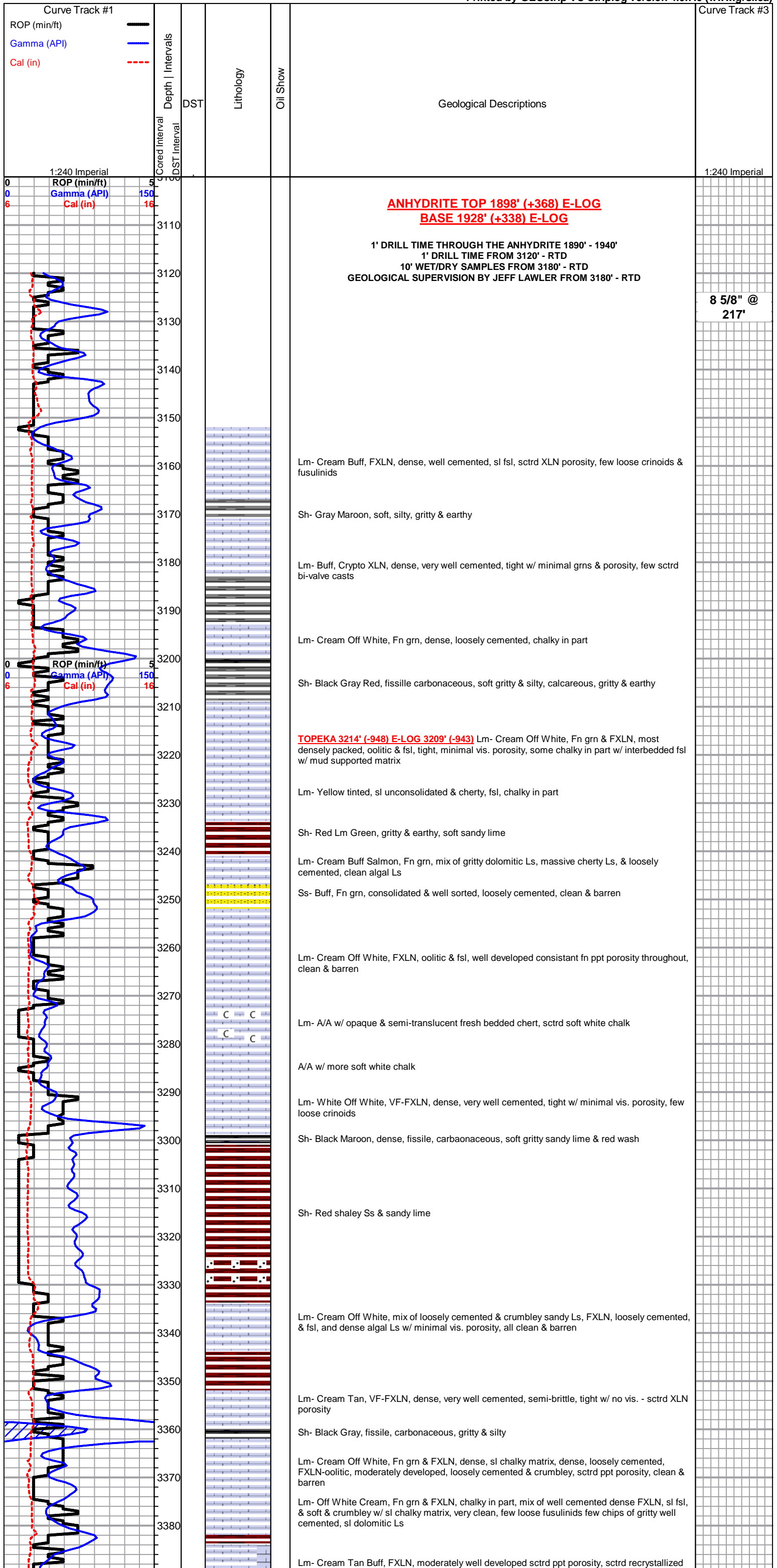
**ACCESSORIES**

**MINERAL**  
 \* Sandy

**TEXTURE**  
 C Chalky

**OTHER SYMBOLS**

DST  
 ■ DST Int  
 ■ DST alt



**ANHYDRITE TOP 1898' (+368) E-LOG  
 BASE 1928' (+338) E-LOG**

1' DRILL TIME THROUGH THE ANHYDRITE 1890' - 1940'  
 1' DRILL TIME FROM 3120' - RTD  
 10' WET/DRY SAMPLES FROM 3180' - RTD  
 GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 3180' - RTD

8 5/8" @  
 217'

Lm- Cream Buff, FXLN, dense, well cemented, sl fsl, sctrd XLN porosity, few loose crinoids & fusulinids

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

Lm- Buff, Crypto XLN, dense, very well cemented, tight w/ minimal grns & porosity, few sctrd bi-valve casts

Lm- Cream Off White, Fn grn, dense, loosely cemented, chalky in part

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

**TOPEKA 3214' (-948) E-LOG 3209' (-943)** Lm- Cream Off White, Fn grn & FXLN, most densely packed, oolitic & fsl, tight, minimal vis. porosity, some chalky in part w/ interbedded fsl w/ mud supported matrix

Lm- Yellow tinted, sl unconsolidated & cherty, fsl, chalky in part

Sh- Red Lm Green, gritty & earthy, soft sandy lime

Lm- Cream Buff Salmon, Fn grn, mix of gritty dolomitic Ls, massive cherty Ls, & loosely cemented, clean algal Ls

Ss- Buff, Fn grn, consolidated & well sorted, loosely cemented, clean & barren

Lm- Cream Off White, FXLN, oolitic & fsl, well developed consistant fn ppt porosity throughout, clean & barren

Lm- A/A w/ opaque & semi-translucent fresh bedded chert, sctrd soft white chalk

A/A w/ more soft white chalk

Lm- White Off White, VF-FXLN, dense, very well cemented, tight w/ minimal vis. porosity, few loose crinoids

Sh- Black Maroon, dense, fissile, carbonaceous, soft gritty sandy lime & red wash

Sh- Red shaley Ss & sandy lime

Lm- Cream Off White, mix of loosely cemented & crumbley sandy Ls, FXLN, loosely cemented, & fsl, and dense algal Ls w/ minimal vis. porosity, all clean & barren

Lm- Cream Tan, VF-FXLN, dense, very well cemented, semi-brittle, tight w/ no vis. - sctrd XLN porosity

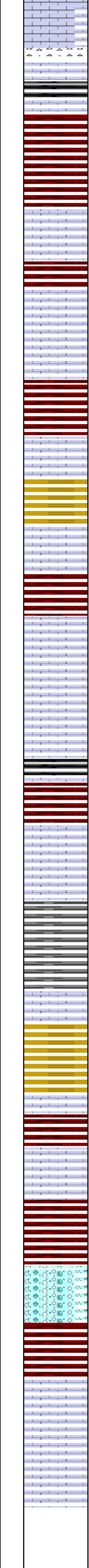
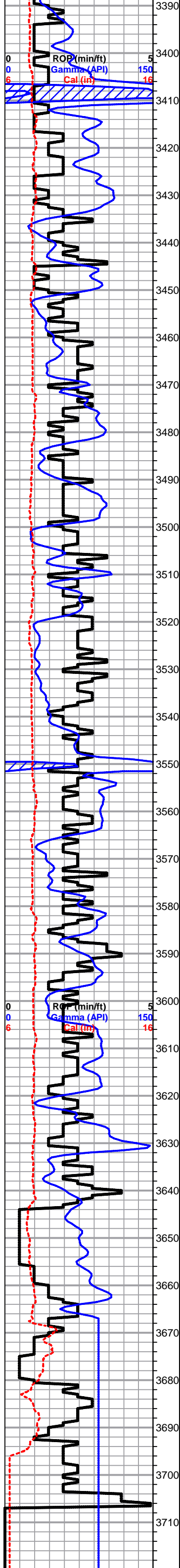
Sh- Black Gray, fissile, carbonaceous, gritty & silty

Lm- Cream Off White, Fn grn & FXLN, dense, sl chalky matrix, dense, loosely cemented, FXLN-oolitic, moderately developed, loosely cemented & crumbley, sctrd ppt porosity, clean & barren

Lm- Off White Cream, Fn grn & FXLN, chalky in part, mix of well cemented dense FXLN, sl fsl, & soft & crumbley w/ sl chalky matrix, very clean, few loose fusulinids few chips of gritty well cemented, sl dolomitic Ls

Lm- Cream Tan Buff, FXLN, moderately well developed sctrd ppt porosity, sctrd recrystallized





secondary porosity, sl fsl, loosely-well cemented, clean & barren, interbedded earthy red shale

Chert- Smokey White sl fresh bedded cherty Ls

**HEEBNER 3405' (-1139) E-LOG 3405' (-1139)** Sh- Black Gray, much soft, fissile, carbonaceous, few gritty & earthy gray chips

Sh- Maroon Brown Lm Green, red wash & mix of various colored sandy lime

**TORONTO 3434' (-1168) E-LOG 3433' (-1167)** Lm- Cream Off White, FXLN, dense, sctrd ppt porosity, chips of lightly pyrite speckled fresh bedded chert

Lm- Tan, F-Med XLN, oolitic, sctrd GD ppt porosity, SCTRD DRK GSY STN, FR-GD SFO, FR GSY ODR

Sh- Red, soft gritty & earthy

**LKC 3450' (-1184) E-LOG 3450' (-1184)** Lm- Cream Off White, FXLN, dense, well cemented, mostly tight w/ sctrd XLN & fn ppt porosity, clean & barren

Lm- Cream Off White, FXLN, dense, tight w/ minimal vis. porosity, fsl & sl oolitic, semi-brittle

Sh- Maroon, gritty & earthy

Lm- Cream Off White, FXLN, dense, sl oolitic, sctrd ppt porosity, 1-2 pcs w/ VRY WK STN, SL GSY SHN, VRY FNT ODR, DULL FLOR. NO WET CUT, much smokey white & semi-translucent fresh bedded chert

Sh- Brown Maroon, soft gritty sandy lime

Lm- Off White Cream, VF-FXLN, dense, well cemented, semi-brittle, minimal vis. porosity, sctrd XLN porosity, clean & barren

Lm- Cream Off White, FXLN, sctrd development, mix of massive sl cherty Ls, speckled w/ pyrite, sctrd fn ppt porosity, & dense, well cemented Ls w/ sctrd ppt porosity, DRK SCTRD STN, GD GSY SHN, PR-FR SFO, PR-FR GSY ODR

Sh- Red Maroon, gritty & earthy

Lm- Cream Semi-Translucent, F-Med XLN, sctrd development, some oolitic & sl oolitic, vry sctrd skeletal dissolution, sctrd intercastic connectivity, sctrd ppt-vuggy porosity, ALL W/ GD DRK SCTRD STN, GD GSY SHEEN, FR-GD SFO, GD SULPHURIC GSY ODR

Lm- mix of cream gritty, vry well cemented, dolomitic Ls and chert w/ vry fn consistant ppt porosity, LT GSY STN, FR GSY SHEEN, SL GSY SFO, ODR A/A, & much smokey white/gray fresh bedded chert

Lm- Cream Tan, Fn grn & FXLN, mostly soft, dense, sctrd XLN porosity, sctrd secondary recrystallized porosity, clean & barren

Sh- Black Maroon Lm Green, vry well compacted, fissile, carbonaceous, gritty & earthy

Lm- White Cream Tan, Fn grn & F-Med XLN, mix of dense sl chalky algal Ls, oolitic & well developed w/ GD interoolitic porosity, few unconsolidated sp. w/ pyrite, & tan FXLN w/ consistant vry fn ppt porosity, GD GSY STN, GD SFO, GD GSY ODR, FR GSY SHN

Lm- Buff, Fn grn, much dense, well cemented algal Ls w/ minimal vis. porosity

Sh- Gray Brown Maroon, gritty & earthy, soft gummy gray clumps

Lm- Tan, F-Med XLN, oolitic, mix of densely packed oolitic biomicrite w/ dense cementation/matrix & moderately well developed oolitic w/ good ppt to sub-vuggy interoolitic porosity, LT STN, PR-FR SFO, FNT ODR, fsl eroded & reworked cherty ls, STN/ODR A/A

Sh- Brown Maroon, gritty & earthy, few chips of red ironstone

Lm- Cream Off White, FXLN, loosely cemented, fsl & oolitic, vry well developed w/ GD consistant fn ppt interoolitic porosity throughout, LT GSY STN, SL FLAKEY, SL SFO, GD SULPHURIC ODR

Lm- Cream Tan, Med XLN, sl chalky, loosely cemented, fsl & sl oolitic, sctrd XLN & ppt porosity, DRK SCTRD STN, SL SFO, FR ODR

**BKC 3643' (-1377) E-LOG 3643' (-1377)** Sh- Brick Red, soft, gritty & earthy, red wash shale

Ss- Red gritty Ss, well cemented

Ls Conglomerate, unconsolidated, sl fsl, loosely cemented & crumbley

Ss/Sh- Red & White tinted gritty shaley Ss

Lm- Off White, FXLN, well cemented, oolitic & fsl, well developed w/ GD consistant ppt porosity, GD interstitial connectivity, DRK SAT STN, BLEEDING FO, FNT ODR

Lm- Off White, FXLN, dense, well cemented, sl unconsolidated w/ sctrd sub-rounded qtz. inclusions, clean & barren

Lm- White, Fn grn, sl chalky A/A, few chips of lt purple tinted, loosely cemented Ss

Lm- Tan FXLN, sl sucrosic, dense, vry well cemented w/ dolomitic cementation, moderately well developed consistant fn ppt porosity

SHORT TRIP SURVEY CTCH

**RTD 3706' (-1440) LTD 370' (-1438) @ 17:02 10-23-2012**