



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1084008  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

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
- Plug Back       Conv. to GSW       Conv. to Producer
- 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

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

Total Vertical 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

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

1084008

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

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

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

<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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	JOSSERAND 2-16
Doc ID	1084008

All Electric Logs Run

DIL
MEL
BHCS
CNL/CDL

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	JOSSERAND 2-16
Doc ID	1084008

Tops

Name	Top	Datum
STOTLER	3524	-705
TARKIO	3598	-779
LANSING	4244	-1425
STARK	4602	-1783
PAWNEE	4827	-2008
CHEROKEE	4872	-2053
MORROW SH	5064	-2245
MISS CHESTER	5070	-2251
MISS ST GEN	5182	-2363
UP ST LOUIS B	5310	-2491

# ALLIED CEMENTING CO., INC.

Federal Tax I.D.# 48-0727860

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

SERVICE POINT: 27162  
L. BETHEL, K

DATE <u>2-26-12</u>	SEC <u>16</u>	TWP. <u>28</u>	RANGE <u>35W</u>	CALLED OUT	ON LOCATION	JOB START <u>12:00</u>	JOB FINISH <u>2:30 PM</u>
LEASE <u>Jossand</u>	WELL# <u>3-16</u>	LOCATION <u>Coplad N Water</u>			COUNTY <u>GRAY</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR <u>Stealing #5</u>	OWNER <u>SAME</u>
TYPE OF JOB <u>PTA</u>	
HOLE SIZE <u>7 7/8</u>	T.D.
CASING SIZE <u>8 1/2</u>	DEPTH <u>1875</u>
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2 V4</u>	DEPTH <u>1900'</u>
TOOL	DEPTH
PRES. MAX <u>300 PSI</u>	MINIMUM <u>0</u>
MEAS. LINE	SHOE JOINT <u>N/A</u>
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT	
AMOUNT ORDERED <u>170 SIL</u>	
<u>60/40 4 1/2 GEL</u>	
COMMON	@
POZMIX	@
GEL	@
CHLORIDE	@
ASC	@
<u>170 60ND</u>	@ <u>1.85 2465.00</u>
<u>40662</u>	@
HANDLING <u>170</u>	@ <u>2.25 382.50</u>
MILEAGE <u>SKXMI x.11</u>	@ <u>93.50</u>
	TOTAL <u>3782.50</u>

**EQUIPMENT**

PUMP TRUCK	CEMENTER <u>R. Bryan</u>
# <u>710/1484</u>	HELPER <u>CEASAR</u>
BULK TRUCK	
# <u>457/251</u>	DRIVER <u>A. B. W.</u>
BULK TRUCK	
#	DRIVER

**REMARKS:**

Thank You

CHARGE TO: FALCON EXP

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

DEPTH OF JOB	
PUMP TRUCK CHARGE	<u>1250.00</u>
EXTRA FOOTAGE	@
MILEAGE <u>100 mi</u>	@ <u>7.00 700.00</u>
MANIFOLD	@
<u>ST USE mi 100 mi</u>	@ <u>4.00 400.00</u>
	@
	TOTAL <u>2350.00</u>

**PLUG & FLOAT EQUIPMENT**

<u>N/A</u>	
	@
	@
	@
	@
	@
	TOTAL _____

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment and furnish cementer and helper 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 & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX \_\_\_\_\_

TOTAL CHARGE 6132.50

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE Alan Loftis

ALAN LOFTIS  
PRINTED NAME

# ALLIED OIL & GAS SERVICES, LLC 053368

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
Liberal KS.

DATE <u>2-17-12</u>	SEC. <u>16</u>	TWP. <u>28S</u>	RANGE <u>30W</u>	CALLED OUT	ON LOCATION	JOB START <u>10:30 Am</u>	JOB FINISH <u>11:30 Am</u>
<u>Josserand</u> LEASE	WELL # <u>2-16</u>	LOCATION <u>Ver Cooplant KS</u>	COUNTY <u>Craw</u>	STATE <u>KS</u>			
OLD OR (NEW) (Circle one)							

CONTRACTOR STERLING #5

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 1875

CASING SIZE 8 5/8 24# DEPTH 1870.37

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 40.78

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 116.5

OWNER

CEMENT

AMOUNT ORDERED 675 SK 65/35/6

2nd 3% CC 1/4# Fla

150 SK Class A 3/16 2 1/2

COMMON	<u>150</u>	@	<u>16.25</u>	<u>2437.50</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>21.25</u>	<u>63.75</u>
CHLORIDE	<u>27</u>	@	<u>58.20</u>	<u>1571.40</u>
ASC		@		
Light weight		@	<u>15.00</u>	<u>10125.00</u>
Floread	<u>169</u>	@	<u>2.70</u>	<u>456.30</u>
Sugar	<u>50</u>	@	<u>1.75</u>	<u>87.50</u>
		@		
		@		
HANDLING	<u>855</u>	@	<u>2.25</u>	<u>1923.75</u>
MILEAGE				<u>4702.50</u>
				TOTAL <u>21367.70</u>

EQUIPMENT

PUMP TRUCK CEMENTER Kenny & Vergil

#470-484 HELPER Lenny

BULK TRUCK

#456-198 DRIVER Jasc

BULK TRUCK

#472-467 DRIVER Jeremiah

REMARKS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

THANK YOU!!!

**SERVICE**

DEPTH OF JOB			
PUMP TRUCK CHARGE			<u>1925.00</u>
EXTRA FOOTAGE	@		
MILEAGE	<u>100</u>	@	<u>7.00</u> <u>700.00</u>
MANIFOLD	<u>1</u>	@	<u>200.00</u> <u>200.00</u>
	<u>100</u>	@	<u>4.00</u> <u>400.00</u>
		@	

TOTAL 3225.00

CHARGE TO: FALCON EXPLORATION

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

Baskets	<u>3</u>	@	<u>314.00</u>	<u>942.00</u>
Centralizers	<u>3</u>	@	<u>67.00</u>	<u>201.00</u>
AFU Insert	<u>1</u>	@	<u>238.00</u>	<u>238.00</u>
Guide Shoe	<u>1</u>	@	<u>404.00</u>	<u>404.00</u>
Rubber Plug	<u>1</u>	@	<u>102.00</u>	<u>102.00</u>

TOTAL 1886.00

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 \$26478.70

DISCOUNT \$19859.02 IF PAID IN 30 DAYS

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

SIGNATURE \_\_\_\_\_

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

June 11, 2012

CYNDE WOLF  
Falcon Exploration, Inc.  
125 N MARKET STE 1252  
WICHITA, KS 67202-1719

Re: ACO1  
API 15-069-20365-00-00  
JOSSERAND 2-16  
NE/4 Sec.16-28S-30W  
Gray County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
CYNDE WOLF

# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** FALCON EXPLORATION, INC.  
**Contact** MIKE MITCHELL  
**Well Name** JOSSERAND #2-16  
**Unique Well ID** DST #1, STOTLER, 3494-3562  
**Surface Location** SEC 16-28S-30W  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #1, STOTLER, 3494-3562  
**Well Fluid Type** 02 Gas

**Representative** TIM VENTERS  
**Well Operator** FALCON EXPLORATION, INC.  
**Report Date** 2012/02/20  
**Prepared By** TIM VENTERS  
**Qualified By** DAVE WILLIAMS

**Start Test Date** 2012/02/20  
**Final Test Date** 2012/02/20

**Start Test Time** 02:50:00  
**Final Test Time** 12:38:00

### Test Recovery:

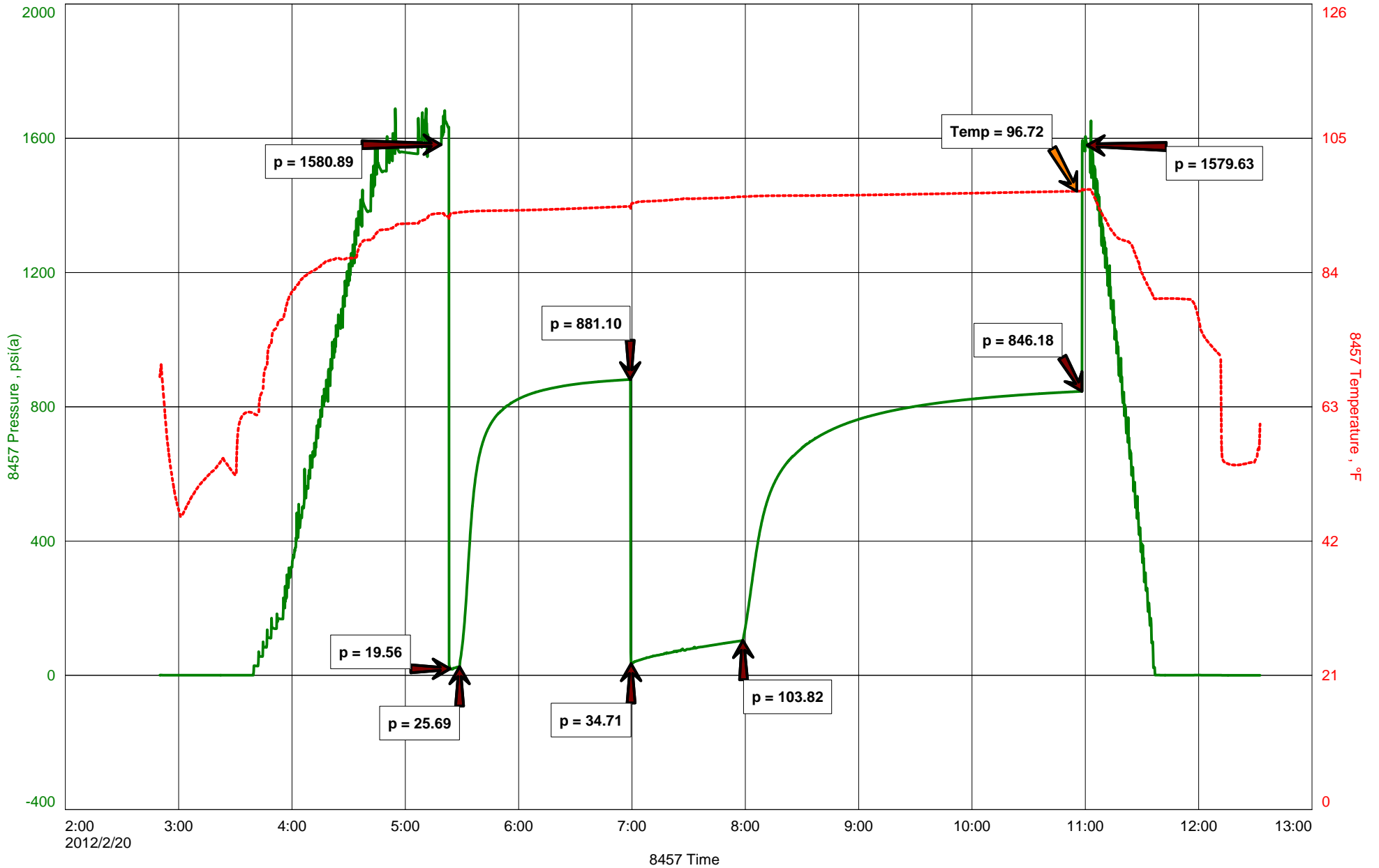
**RECOVERED: 10' MUD**  
120' GM, 2% GAS, 98% MUD  
60' G, WCM, 7% GAS, 37% WATER, 56% MUD  
400' GAS IN PIPE

**TOOL SAMPLE: 7% OIL, 28% WATER, 65% MUD**

**CHLORIDES: 17,000 ppm**  
**PH: 7.0**  
**RW: .4 @ 70 deg.**



# JOSSERAND #2-16







**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: \_\_\_\_\_

TIME ON: \_\_\_\_\_  
TIME OFF: \_\_\_\_\_

Company \_\_\_\_\_ Lease & Well No. \_\_\_\_\_  
Contractor \_\_\_\_\_ Charge to \_\_\_\_\_  
Elevation \_\_\_\_\_ Formation \_\_\_\_\_ Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
Date \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Range \_\_\_\_\_ W County \_\_\_\_\_ State **KANSAS**  
Test Approved By \_\_\_\_\_ Diamond Representative \_\_\_\_\_

Formation Test No. \_\_\_\_\_ Interval Tested from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Total Depth \_\_\_\_\_ ft.  
Packer Depth \_\_\_\_\_ ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth \_\_\_\_\_ ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.  
Bottom Recorder Depth (Outside) \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type \_\_\_\_\_ Viscosity \_\_\_\_\_ Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight \_\_\_\_\_ Water Loss \_\_\_\_\_ cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides \_\_\_\_\_ P.P.M. Drill Pipe Length \_\_\_\_\_ ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number \_\_\_\_\_ Test Tool Length \_\_\_\_\_ ft. Tool Size 3 1/2-IF in.  
Did Well Flow? \_\_\_\_\_ Reversed Out \_\_\_\_\_ Anchor Length \_\_\_\_\_ ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: \_\_\_\_\_  
2nd Open: \_\_\_\_\_

Recovered _____ ft. of _____	Price Job Other Charges Insurance Total
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Remarks: _____	

Time Set Packer(s) \_\_\_\_\_ A.M. P.M. Time Started Off Bottom \_\_\_\_\_ A.M. P.M. Maximum Temperature \_\_\_\_\_  
Initial Hydrostatic Pressure..... (A) \_\_\_\_\_ P.S.I.  
Initial Flow Period..... Minutes \_\_\_\_\_ (B) \_\_\_\_\_ P.S.I. to (C) \_\_\_\_\_ P.S.I.  
Initial Closed In Period..... Minutes \_\_\_\_\_ (D) \_\_\_\_\_ P.S.I.  
Final Flow Period..... Minutes \_\_\_\_\_ (E) \_\_\_\_\_ P.S.I. to (F) \_\_\_\_\_ P.S.I.  
Final Closed In Period..... Minutes \_\_\_\_\_ (G) \_\_\_\_\_ P.S.I.  
Final Hydrostatic Pressure..... (H) \_\_\_\_\_ P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# DIAMOND TESTING

## General Information Report

### General Information

<b>Company Name</b>	FALCON EXPLORATION, INC.	<b>Representative</b>	TIM VENTERS
<b>Contact</b>	MIKE MITCHELL	<b>Well Operator</b>	FALCON EXPLORATION, INC.
<b>Well Name</b>	JOSSERAND #2-16	<b>Report Date</b>	2012/02/25
<b>Unique Well ID</b>	DST #2, ST. LOUIS "B", 5304-5336	<b>Prepared By</b>	TIM VENTERS
<b>Surface Location</b>	SEC 16-28S-30W, GRAY CO. KS.	<b>Qualified By</b>	DAVE WILLIAMS
<b>Field</b>	WILDCAT		
<b>Well Type</b>	Vertical		
<b>Test Type</b>	CONVENTIONAL		
<b>Formation</b>	DST #2, ST. LOUIS "B", 5304-5336		
<b>Well Fluid Type</b>	01 Oil		
<b>Start Test Date</b>	2012/02/24	<b>Start Test Time</b>	20:06:00
<b>Final Test Date</b>	2012/02/25	<b>Final Test Time</b>	07:24:00
<b>Gauge Name</b>			
<b>Gauge Serial Number</b>			

### Test Recovery:

RECOVERED: 60' SLT. O&WCM, 1% OIL, 15% WATER, 84% MUD  
60' SPOTTY OIL, HWCM, SPOTTY OIL, 40% WATER, 60% MUD

TOOL SAMPLE: 4% OIL, 32% WATER, 64% MUD

CHLORIDES: 36,000 ppm  
PH: 5.5  
RH: .2 @ 60 deg.





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: \_\_\_\_\_

TIME ON: \_\_\_\_\_  
TIME OFF: \_\_\_\_\_

Company \_\_\_\_\_ Lease & Well No. \_\_\_\_\_  
Contractor \_\_\_\_\_ Charge to \_\_\_\_\_  
Elevation \_\_\_\_\_ Formation \_\_\_\_\_ Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
Date \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Range \_\_\_\_\_ W County \_\_\_\_\_ State **KANSAS**  
Test Approved By \_\_\_\_\_ Diamond Representative \_\_\_\_\_

Formation Test No. \_\_\_\_\_ Interval Tested from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Total Depth \_\_\_\_\_ ft.  
Packer Depth \_\_\_\_\_ ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth \_\_\_\_\_ ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.  
Bottom Recorder Depth (Outside) \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type \_\_\_\_\_ Viscosity \_\_\_\_\_ Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight \_\_\_\_\_ Water Loss \_\_\_\_\_ cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides \_\_\_\_\_ P.P.M. Drill Pipe Length \_\_\_\_\_ ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number \_\_\_\_\_ Test Tool Length \_\_\_\_\_ ft. Tool Size 3 1/2-IF in.  
Did Well Flow? \_\_\_\_\_ Reversed Out \_\_\_\_\_ Anchor Length \_\_\_\_\_ ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: \_\_\_\_\_  
2nd Open: \_\_\_\_\_

Recovered _____ ft. of _____	Price Job Other Charges Insurance Total
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Remarks: _____	

Time Set Packer(s) \_\_\_\_\_ A.M. P.M. Time Started Off Bottom \_\_\_\_\_ A.M. P.M. Maximum Temperature \_\_\_\_\_  
Initial Hydrostatic Pressure..... (A) \_\_\_\_\_ P.S.I.  
Initial Flow Period..... Minutes \_\_\_\_\_ (B) \_\_\_\_\_ P.S.I. to (C) \_\_\_\_\_ P.S.I.  
Initial Closed In Period..... Minutes \_\_\_\_\_ (D) \_\_\_\_\_ P.S.I.  
Final Flow Period..... Minutes \_\_\_\_\_ (E) \_\_\_\_\_ P.S.I. to (F) \_\_\_\_\_ P.S.I.  
Final Closed In Period..... Minutes \_\_\_\_\_ (G) \_\_\_\_\_ P.S.I.  
Final Hydrostatic Pressure..... (H) \_\_\_\_\_ P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





**Scale 1:240 (5"=100') Imperial  
Measured Depth Log**

**Well Name:** JOSSERAND #2-16 (NE)  
**Location:** S2-SE-SE-NE 1/4 of SEC. 16 - 28 S. - 30 W.  
**License Number:** 15-069-20365-00-00  
**Spud Date:** 2/15/12  
**Surface Coordinates:** 2330' FNL & 330' FEL

**Region:** Gray Co., Kansas  
**Drilling Completed:** 2/26/12

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 2806'                      **K.B. Elevation (ft):** 2819'  
**Logged Interval (ft):** Ssurface C:To: 5381'      **Total Depth (ft):** 5380'  
**Formation:** Mississippian "St. Louis" Formation  
**Type of Drilling Fluid:** Chemical Mud

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

**Company:** FALCON EXPLORATION, INC.  
**Address:** 125 N. Market Stret, Suite #1252  
Wichita, Kansas 67202

**GEOLOGIST**

**Name:** David P. Williams, P.G.  
**Company:** DW Energy, LLC  
**Address:** 312 N. Broadview Street  
Wichita, Kansas 67208

**Casing & Deviation Surveys**

Ran 46 jts of new 24#, 8 5/8 casing. Tallied 1855.07'. Set at 1870' KB. Welded straps on GS & bottom 3 joints. Centralizes (3) set at 1, 5, 41. Baskets (3) set at 1, 40, 42. Cemented with 675 sks 65/35 POZ; 6% Gel; 3% CC, 1/4 # FS. Tailed in with 150 Sks Class A; 2% Gel; 3% CC. Cement By Allied (Ticket # 53368) and did circulate to pit. Plug down at 11:30 AM on 2/17/12.

**Blaine Formation Sample Top = 1126' (+ 1693).**  
**Blaine Formation Sample Base = 1230' (+ 1589).**

**Stone Coral Anhydrite Sample Top = 1717' (+1102).**  
**Stone Coral Anhydrite Sample Base= 1829' (+ 990).**

**Deviation Survey's Taken: @ 1875'= 1/2 degree; @ 3562'= 1/2 degree; @ 4610' = 1 degree; @ 5336' = 1 degree; @ 5380' = 1 degree.**

## DSTs

**DST # 1 3494'-3562'.** Times: 5"-90"-60"-180"; Blow: IF Strong Blow BOB/5". FF Weak Building to Strong Blow / 17"). Recovery: 400' GIP; 190' DM: (10' M; 120' GM (2% G); 60' GCWM (7% G; 37% Wtr (17,000 Ppm Chl)). Tool Spl. : 7% O; 28% Wtr; 65% M). Pressures: IH =1581#; FH=1580#; IF=20-26#; FF=35-104#; ISIP= 881#; FSIP= 846#; Temp= 97 degrees. F.

**DST # 2 5304'-5336'.** Times: 5"-90"-60"-120"; Blow: IF Weak Surface Blow /1". FF Weak Slowly Building/2.5"). Recovery:120' DM: 60' SOWCM; (1%O; 15% Wtr; 84% M); & 60' Spotted OWCM (60% M; 40% Wtr; Tr O; 36,000 Ppm Chl). Tool Spl: (4% O; 32% Wtr; 64%). Pressures: IH = 2657#; FH = 2657#; IF = 5-4#; FF = 63-76#; ISIP = 1457#; FSIP = 1419#; Temp= NA (Electronic Chart Failed).

## Comments

After review of all of the pertinent geological and structural data, drill test recoveries and reservoir pressures including electric log analyses it was recommended by all parties to plug and abandon this well.

Respectfully submitted,

David P. Williams, P. G.

## ROCK TYPES

	Anhy		Clyst		Gry shale		Red shale		Shgy
	Bent		Coal		Gyp		Mrlst		Sltst
	Brec		Congl		Igne		Salt		Ss
	Carb sh		Dol		Lmst		Shale		Till
	Cht		Grn sh		Meta		Shcol		Grn sh

## ACCESSORIES

<b>MINERAL</b>		Hvymin		Belm		Pellet	<b>TEXTURE</b>
	Anhy		Kaol		Bioclst		Boundst
	Arggrn		Marl		Brach		Chalky
	Arg		Minxl		Bryozoa		Cryxln
	Bent		Nodule		Cephal		Earthy
	Bit		Phos		Coral		Finexln
	Brecfrag		Pyr		Crin		Grainst
	Calc		Salt		Echin		Lithogr
	Carb		Sandy		Fish		Microxln
	Chtdk		Silt		Foram		Mudst
	Chtlt		Sil		Fuss		Packst
	Dol		Sulphur		Fossil		Wackest
	Feldspar				Gastro		
	Ferrpel				Oomold		
	Ferr	<b>FOSSIL</b>			Oolite		
	Glau		Algae		Ostra		
	Gyp		Amph		Pelec		
						<b>STRINGER</b>	
							Anhy
							Arg
							Bent
							Coal
							Dol
							Gyp
							Ls
							Mrst
							Sltstrg
							Ssstrg
							Grysh

## OTHER SYMBOLS

<b>POROSITY</b>		Vuggy	<b>ROUNDING</b>		Even		Dst		
	Earthy			Rounded		Spotted		Dst	
	Fenest	<b>SORTING</b>			Subrnd		Ques		
	Fracture		Well		Subang		Dead	<b>EVENT</b>	
	Inter		Moderate		Angular				Rft
	Moldic		Poor			<b>INTERVAL</b>			Sidewall
	Organic			<b>OIL SHOW</b>			Core		
	Pinpoint				Gas show		Dst_alt		

Curve Track 1

ROP (min/ft) ———  
Gamma (API) - - - -

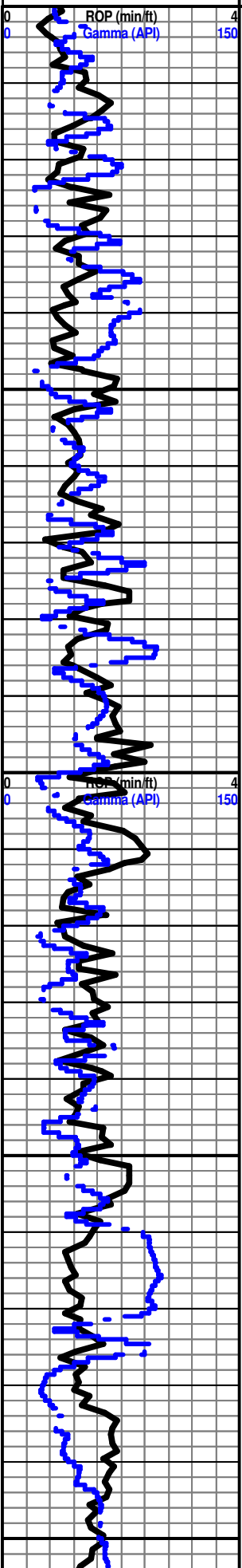
TG, C1-C5  
TG (Units) ———  
C1 (units) - - - -

Depth

Lithology

Oil Shows

Geological Descriptions



**FALCON EXPLORATION, INC.**  
**JOSSERAND #2-16 (NE)**  
**2330' FNL & 330' FEL (S2-SE-SE-NE 1/4)**  
**SEC. 16 - 28 S. - 30 W.**  
**GRAY COUNTY, KANSAS**  
**API #15-069-20365-00-00**

**CONTRACTOR: STERLING DRILLING - RIG # 5**

**ELEVATION : 2819' K.B. ; 2806' G.L.**

**Geologist: David P. Williams. P.G.**  
**On Location @ 8:00 PM 2-18-12 @ 2650'**

Blaine Formation Sample Top = 1126' (+ 1693)  
 Blaine Formation Sample Base = 1230 (+ 1589)'

Stone Coral Anhydrite Sample Top = 1717' (+1102):  
 Stone Coral Anhydrite Sample Base = 1829' (+ 990).

Deviation Survey's Taken: @ 1875'= 1/2 degrees; @ 3562'= 1/2 degree; @ 4610' = 1 degree; @ 5336' = 1 degree; @ 5380' = 1 degree..

Note: All samples have been lagged to depth by calculated time.

Begin 20' Sample Examination @ 2660'.

Anhy/Gyp Abd Sh Red-Gry Abd Soft No Stn No Flor NS

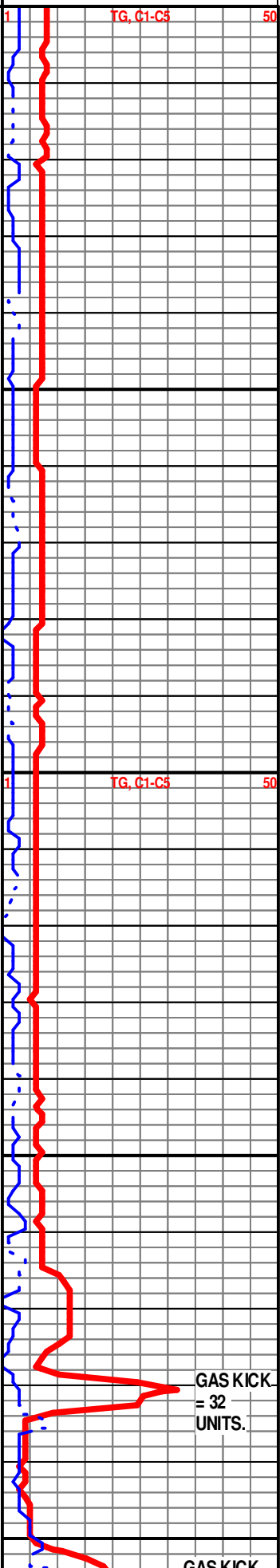
Anhy/Gyp Abd AA Sh Red-Gry Abd AA Soft No Stn No Flor NS

**CHASE GROUP 2670' (+ 149)**

Dolo Gry-Crm FxIn-MicroXIn Poor lXIn Por Grad Sli Ls Gry Sh Red-Gry Soft  
 Abd No Odor No Stn Sli Tr ? Flor (Lt Grn) ? SG NS

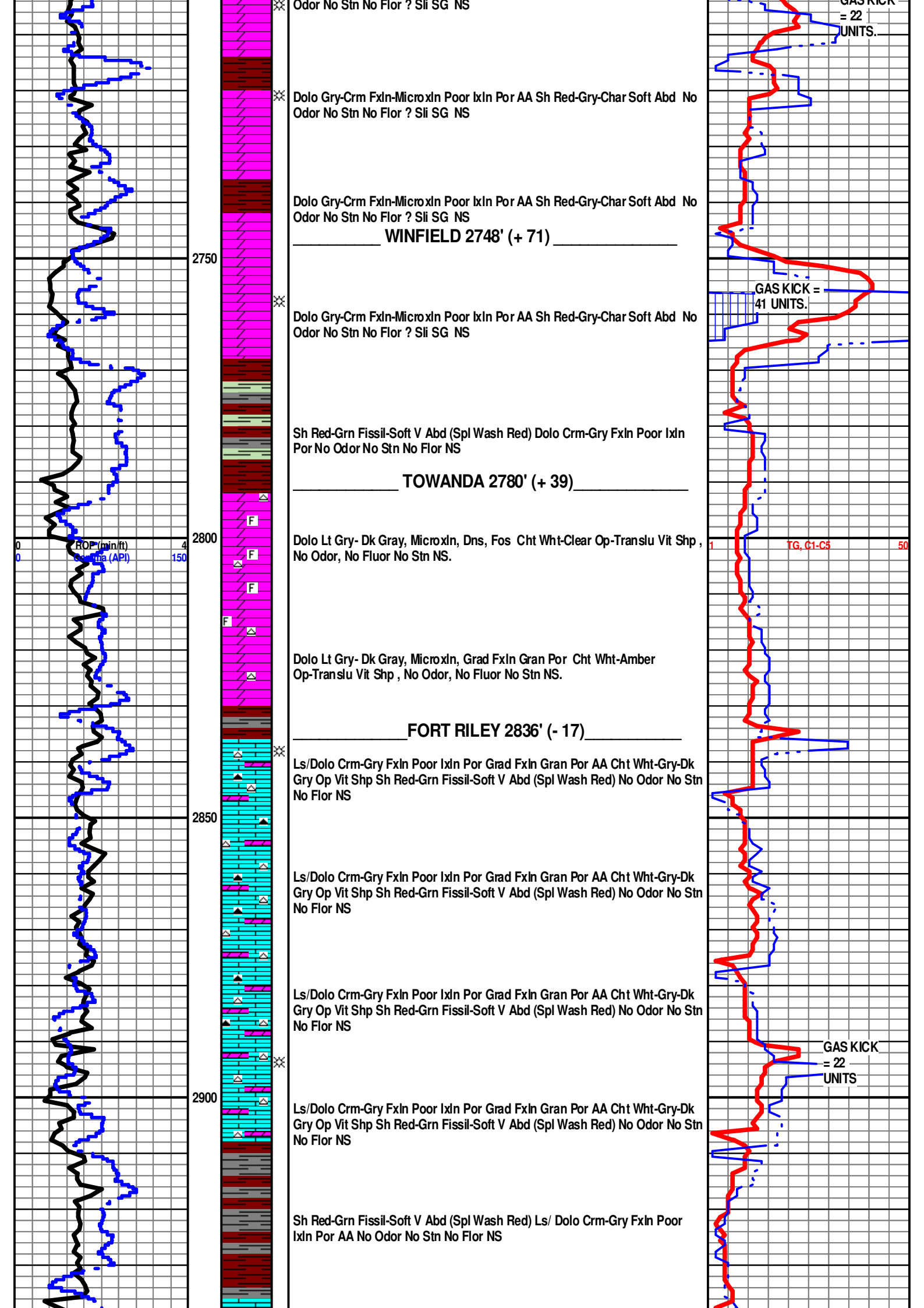
**KRIDER 2700' (+ 119)**

Dolo Gry-Crm FxIn-MicroXIn Poor lXIn Por AA Sh Red-Gry-Char Soft Abd No

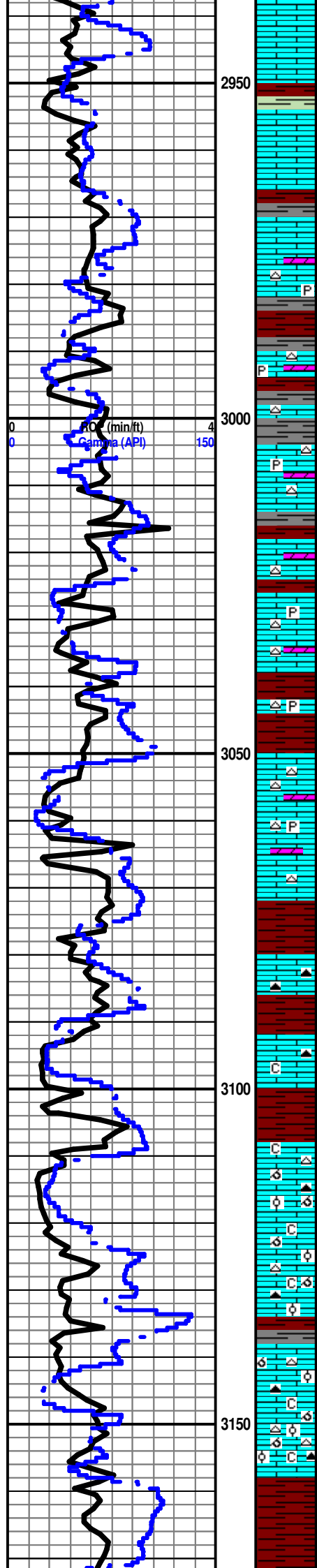


GAS KICK = 32 UNITS.

GAS KICK







LS Crm-Wht FxIn Poor IxIn Por Inc Abd Sh Red-Char-Gry Soft Fissil AA No Odor No Flor No Stn No Flor NS

LS Crm-Wht FxIn Poor IxIn Por Grad Sm Pin-Pt FxIn Por Inc Abd Sh Red-Char-Gry Soft Fissil AA No Odor No Flor No Stn No Flor NS

Ls/Dolo Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Tr w/ Pyr Inclus Cht Wht-Gry-Dk Gry Op Vit Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

Ls/Dolo Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Tr w/ Pyr Inclus Cht Wht-Gry-Dk Gry Op Vit Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

Ls/Dolo Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Tr w/ Pyr Inclus Cht Wht-Gry-Dk Gry Op Vit Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

Ls/Dolo Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Tr w/ Pyr Inclus Cht Wht-Gry-Dk Gry Op Vit Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

**BADER 3063' (- 244)**

Ls/Dolo Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Tr w/ Pyr Inclus Cht Wht-Gry-Dk Gry Op Vit Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Cht Lt-Gry-Dk Gry Op Vit Chk Wht Soft Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Grad FxIn Gran Por Cht Lt-Gry-Dk Gry Op Vit Chk Wht Soft Shp Sh Red-Grn Fissil-Soft V Abd (Spl Wash Red) No Odor No Stn No Flor NS

**COTTONWOOD 3109' (- 290)**

LS Wht-Crm-Gry Poor OOM Por Poor InterOOM Por w/OOL in pl w/Poor Leaching Por Poor Disolu Barren Grad FxIn IxIn Por Grad Sm Pin-Pt FxIn Por Grad Micritic Dsn Barren Sh Red-Char-Grn Soft Fissil Dec Cht Gry Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn No Flor NS

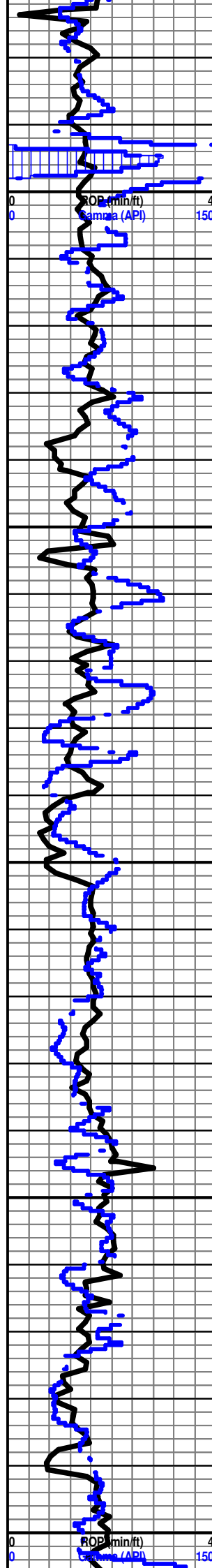
LS Wht-Crm-Gry Poor OOM Por Poor InterOOM Por w/OOL in pl w/Poor Leaching Por Poor Disolu Barren Grad FxIn IxIn Por Grad Sm Pin-Pt FxIn Por Grad Micritic Dsn Barren Sh Red-Char-Grn Soft Fissil Dec Cht Gry Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn No Flor NS

LS Wht-Crm-Gry Poor OOM Por Poor InterOOM Por w/OOL in pl w/Poor Leaching Por Poor Disolu Barren Grad FxIn IxIn Por Grad Sm Pin-Pt FxIn Por Grad Micritic Dsn Barren Sh Red-Char-Grn Soft Fissil Dec Cht Gry Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn No Flor NS

**NEVA 3162' (- 343)**

TG, C1-C5 50

Re-Zero Tooke  
DAQ @ 3080' = 10  
Units Bkgd Gas @  
Geo-Trailer.



LS Wht-Crm-Gry Poor OOM Por Poor InterOOM Por w/OOL in pl w/Poor Leaching Por Poor Disolu Barren Grad FxIn IxIn Por Grad Sm Pin-Pt FxIn Por Grad Micritic Dsn Barren Sh Red-Char-Grn Soft Fissil Dec Cht Gry Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn No Flor NS

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Dsn Barren Grad Poor OOM Por Poor-Fair InterOOM Por Poor-Fair Leaching Fair Disolu Barren Dec Sh Red-Blk Carb-Char-Grn Soft Fissil Dec Cht Amber-Tan Op Shp Vit Chalk Wht Abd No Odor No Flor No Stn No Flor NS

**RED EAGLE 3212' (- 393)**

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Dsn Barren Grad Poor OOM Por Poor-Fair InterOOM Por Poor-Fair Leaching Fair Disolu Barren Dec Sh Red-Blk Carb-Char-Grn Soft Fissil Dec Cht Amber-Tan Op Shp Vit Chalk Wht Abd No Odor No Flor No Stn No Flor NS

Sh Grn-Red-Char Soft "Gummy" Fissil Inc LS Wht-Crm-Grn FxIn IxIn Por Grad Micritic Dsn Barren Grad Poor OOM Por Poor-Fair InterOOM Por Poor-Fair Leaching Fair Disolu Barren AA Cht Wht Op Shp Vit Chalk Wht Abd No Odor No Flor No Stn No Flor NS

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Sh Gm-Red Soft Fissil Tr/Dec Cht Wht-Gry Op Shp Vit Chalk Wht Fos (Brach) No Odor No Flor No Stn No Flor NS

**FORAKER 3276' (- 457)**

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Dsn Barren Grad Poor OOM Por Poor-Fair InterOOM Por Poor Leaching Poor Disolu Barren Dec Sh Red-Char-Grn Soft Fissil Dec Chalk Wht Soft No Odor No Flor No Stn No Flor NS

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Sh Gm-Red Soft Fissil AA Cht Wht Op Shp Vit Chalk Wht No Odor No Flor No Stn No Flor NS

LS Wht-Crm-Gry FxIn IxIn Por Grad Micritic Grad Poor Develop OOM Por w/OOL in pl No Dissolu No Vis Por Sh Grn-Red Soft Fissil AA Chalk Wht No Odor No Flor No Stn No Flor NS

LS Crm-Gry FxIn IxIn Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cht Gry Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

LS Char-Gry-Crm FxIn IxIn Por Grad Micritic Sh Char-Grn Soft Fissil (Tr Only) Cht Drk Gry-Char Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

**FALL CITY 3381' (- 562)**

LS Char-Gry-Crm FxIn IxIn Por Grad Micritic Grad Poor Develop OOM Por w/OOL in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Crm-Gry FxIn IxIn Por Grad Micritic Sh Char-Grn Soft Fissil Cht Drk-Gry Op Shp Vit Chalk Wht Tr No Odor No Flor No Stn No Flor NS

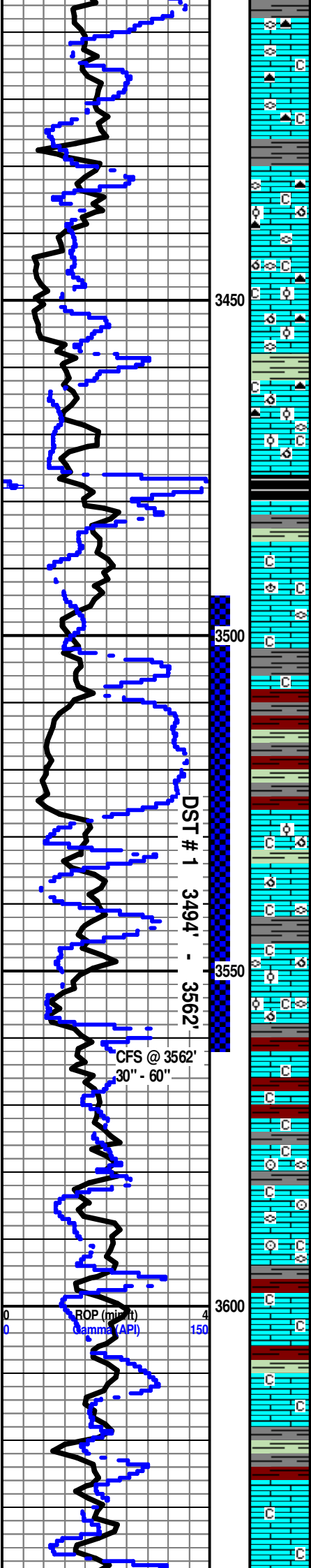
TG, C1-C5 50  
MUD DISPLACEMENT @ 3205'

Mudco Ck @ 3287'  
12:40 PM  
2/19/12 Vis 46; WT= 8.6; PV= 15; YP= 15; WL= 8.0; Cake= 1; Chl= 2200; Cal= 20; Sol= 2.1%; LCM= 2#; DMC=\$ 4106.15; CMC=\$ 11,570.80

GAS TEST @ EXTRACTOR @ 3370' = 252 UNITS.

BKGD GAS = 11 UNITS.

TG, C1-C5 50



LS Gry-Crm Fxln Ixln Por Grad Micritic Cht Drk Gry-Char Op Shp Vit Chalk  
Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

**Begin 10' Sample Examination @ 3450'.**

LS Gry-Crm Fxln Ixln Por Grad Micritic Cht Drk Gry-Char Op Shp Vit Chalk  
Wht Sh Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Gry-Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL  
in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh  
Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Gry-Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL  
in pl No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh  
Char-Grn Soft Fissil Fos (Fuss) No Odor No Flor No Stn No Flor NS

LS Crm Fxln Ixln Por Grad Micritic Grad Poor Develop OOM Por w/ OOL in pl  
No Dissolu No Vis Por Cht Drk Gry-Char Op Shp Vit Chalk Wht Sh Char-Grn  
Soft Fissil Fos (Fuss) No Odor Sli ? Min Flor No Stn No Flor NS

LS Crm Fxln Ixln Micritic Cht Drk-Gry Op Shp Vit Chalk Wht Sh Char-Grn  
Soft Fissil No Odor Sli ? Min Flor No Stn No Flor NS

LS Crm-Gry Fxln Ixln Por Micritic Dsn No Vis Por Barren Sh Grn-Red Soft  
Fissil Dec Fos (Brach, Fuss) Chalk Wht Abd No Odor No Flor No Stn Fair ?  
Min Flor (Lt Grn) NS

LS Crm-Gry Fxln Ixln Por Micritic Dsn No Vis Por Barren Sh Grn-Red Soft  
Fissil Dec Fos (Brach, Fuss) Chalk Wht Abd No Odor No Flor No Stn Fair ?  
Min Flor (Lt Grn) NS

**ROOT SHALE 3502' (- 683)**

Sh Red-Gry Fissil-Soft V Abd (Spl Wash Red) LS Crm-Gry Fxln Micritic Poor  
Ixln Por No Odor No Stn ? Min Flor AA NS

Sh Red-Gry Fissil-Soft V Abd (Spl Wash Red) LS Crm-Gry Fxln Micritic Poor  
Ixln Por No Odor No Stn ? Min Flor AA NS

**STOTLER 3526' (- 707)**

LS Wht-Crm-Gry Microxln-Fxln Ixln Por Micritic Dsn Barren Tr/Fair OOM Por w/OOL in pl  
Poor-Fair InterOOM Por Fair Leaching Fair Disolu Sh Grn-Red Soft Chalk Wht Abd No Odor ?  
Fair Min Flor (Lt Grn-Wht) No Stn ? SG

30" CFS @ 3562' LS Wht-Crm-Gry Microxln-Fxln Ixln Por Micritic Dsn Barren  
Grad Tr/Fair OOM Por w/OOL (Small) in pl Fair InterOOM Por Fair-Med  
Leaching Fair-Med Disolu Sh Grn-Red Soft Fos (Fuss) Chalk Wht Abd No  
Odor Good-Excel Flor (Lt Wht -65% of Tray) No Stn ? SG

60" CFS @ 3562' LS Wht-Crm-Gry Microxln-Fxln Ixln Por Micritic Grad /Fair  
OOM Por w/OOL (Small) in pl Poor InterOOM Por Poor Leaching Poor Disolu  
Grad Fxln Pin-Pt Ixln Por Sh Grn-Red Soft Chalk Wht No Odor Good-Excel  
Flor (Lt Wht -50% of Tray) No Stn ? SG

LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Abd Sh  
Gry-Char-Red Soft No Odor Tr/ Min Flor (Lt Wht) No Stn NS

LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Abd Sh  
Gry-Char-Red Soft No Odor Tr/ Min Flor (Lt Wht) No Stn NS

LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Fos (Crim,  
Fuss) Sh Gry Soft No Odor Fair ? Min Flor (Lt Wht) No Stn NS

LS Gry-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht Fos (Crim,  
Fuss) Sh Gry Soft No Odor Fair ? Min Flor (Lt Wht) No Stn NS

**TARKIO 3598' (- 779)**

LS Wht-Crm Microxln-Fxln Ixln Por Micritic Chalk Wht Sh Gry-Char- Maroon  
Soft-Fissil No Odor Fair ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm Microxln-Fxln Ixln Por Micritic Dsn Barren Chalk Wht V Abd Sh  
Gry-Char-Grn-Maroon Soft-Fissil No Odor Sli Dec ? Min Flor (Lt Wht) No Stn  
NS

LS Wht-Crm Microxln-Fxln Ixln Por Micritic Chalk Wht V Abd Sh Gry-  
Char-Grn Soft-Fissil No Odor Fair Inc ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm Microxln-Fxln Ixln Por Micritic Chalk Wht Dec Sh Gry-  
Char-Grn-Maroon Soft-Fissil No Odor Sli ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm Top Microxln-Fxln Ixln Por Micritic Grad Tr/Poor OOM Por

DST # 1 3494'-3562'.

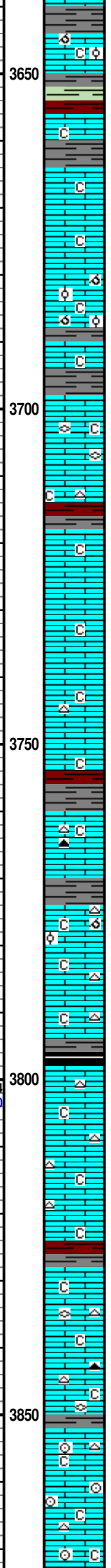
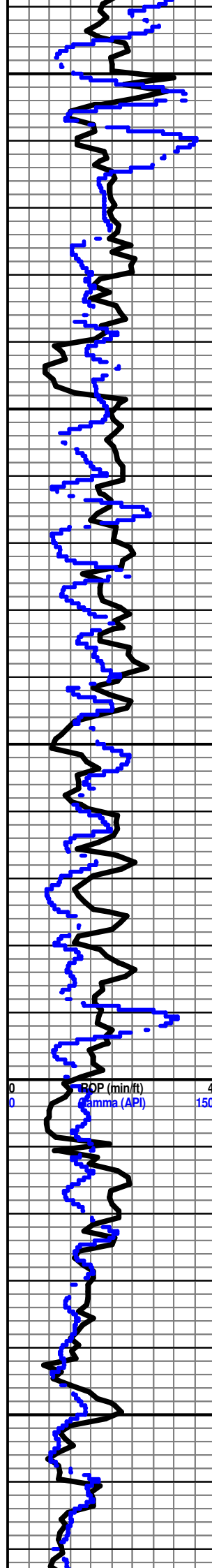
Times:  
5"-90"-60"-180"; Blow:  
IF Strong Blow  
BOB/5". FF Weak  
Building to Strong  
Blow/ 17").

Recovery: 400'  
GIP; 190' DM: (10' M;  
120' GM (2% G); 60'  
GCWM (7% G; 37%  
Wtr (17,000 Ppm Chl)).  
Tool Spl. : 7% O; 28%  
Wtr; 65% M).

Pressures: IH  
= 1581#; FH  
= 1580#; IF=  
20-26#; FF=  
35-104#; ISIP =  
881#; FSIP =  
846#; Temp =  
97 degrees F.

GAS KICK =  
32 UNITS.  
Mudco Ck @  
3652'  
12:40 PM  
2/20/12 Vis  
45; WT=  
7.2; PV=  
13; YP=  
15; WL=  
7.2; Cake=  
1; Chl=  
2700; Cal =  
20; Sol=  
3.4%. LCM=  
2#; DMC=\$  
1021.05  
1 TG, C1-C5 50  
CMC=\$  
12,591.85

ROP (min ft) 4  
Damm (API) 150



LS Wht-Crm-Tan MicroIn-FxIn IxIn Por Micritic Grad Tr/Poor OOM Por w/OOL (Small) in pl Poor InterOOM Por Poor Leaching Poor-No Disolu Sh Char Soft Chalk Wht No Odor Sli ? Min Flor (Dull Wht) No Stn NS

LS Wht-Crm-Gry MicroIn-FxIn IxIn Por Micritic Chalk Wht Abd Sh Gry-Grn-Maroon Soft-Fissil No Odor Sli ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm-Gry MicroIn-FxIn IxIn Por Micritic Chalk Wht Abd Fos (Fuss) Sh Gry-Grn-Maroon Soft-Fissil No Odor Sli ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm MicroIn-FxIn IxIn Por Micritic Chalk Wht Abd Fos (Fuss) Sh Gry-Maroon Soft-Fissil No Odor Sli ? Min Flor (Lt Wht) No Stn NS

LS Wht-Crm-Tan-Gry MicroIn-FxIn IxIn Por Micritic Grad Tr/Poor OOM Por w/OOL (Small) in pl Poor InterOOM Por Poor Leaching Poor-No Disolu Sh Char Soft-Fissil Chalk Wht No Odor Sli ? Min Flor (Dull Wht) No Stn NS

Sh Char Soft-Fissil LS Wht-Crm MicroIn-FxIn IxIn Por Micritic Chalk Wht Abd Fos (Fuss) No Odor Sli ? Min Flor (Lt Wht) No Stn NS

**BERN 3698' (- 879)**

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Fos (Fuss) Sh Gry-Char Soft No Odor No Flor No Stn NS

LS Wht FxIn Poor IxIn Por Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Sh Gry-Grn-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht V Abd Sh Gry-Grn Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Tr/Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Sh Gry-Char Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Sh Char-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Tr/Poor IxIn Por Mostly Micritic AA Dsn Barren Chalk Wht Abd Sh Char-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Amber-Brn Op Shp Vit Sh Char-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm-Gry FxIn Fair IxIn Por Mostly Micritic Dsn Barren Grad Poor OOM Por Poor Develop Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Tr/ Char-Grn-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Tr/Poor IxIn Por Mostly Micritic AA Dsn Barren Chalk Wht Abd Cht Tan Op Shp Vit Sh Tr/ Char-Red Soft No Odor No Flor No Stn NS

LS Wht-Crm FxIn Poor IxIn Por Mostly Micritic AA Dsn Barren Chalk Wht Abd Cht Amber-Gry Transl-Op Shp Vit Sh Tr/ Char-Red Soft No Odor No Flor No Stn NS

**TOPEKA 3798' (- 979)**

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Sh Blk Carb-Char-Grn Fissil Soft No Odor No Flor No Stn NS

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Sh Blk Carb-Char-Grn Fissil Soft No Odor No Flor No Stn NS

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht-Gry Op Shp Vit Sh Char-Red Fissil Soft No Odor No Flor No Stn NS

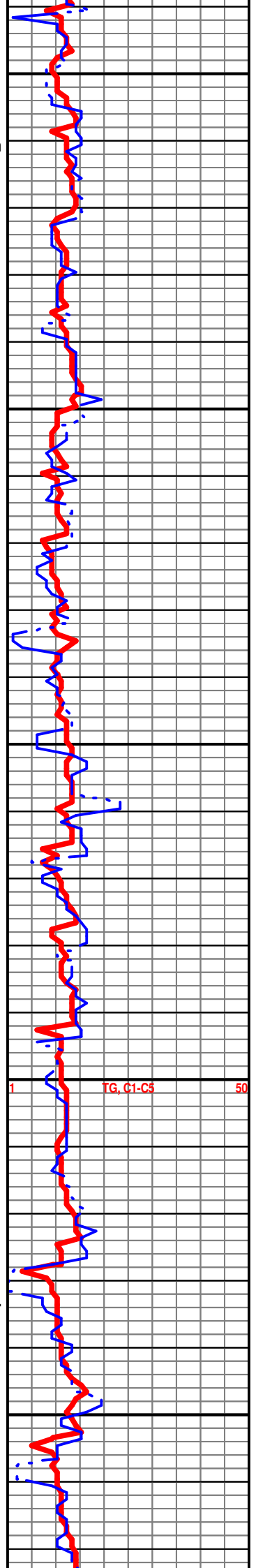
LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Fos (Fuss) Sh Char-Red Fissil Soft No Odor No Flor No Stn NS

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht-Blk Op Shp Vit Fos (Fuss) Sh Char-Red Fissil Soft No Odor No Flor No Stn NS

LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht-Tan-Gry w/Fos Inlus (Crim) Op Shp Vit Pyr Mass Sh Char Fissil No Odor No Flor No Stn NS

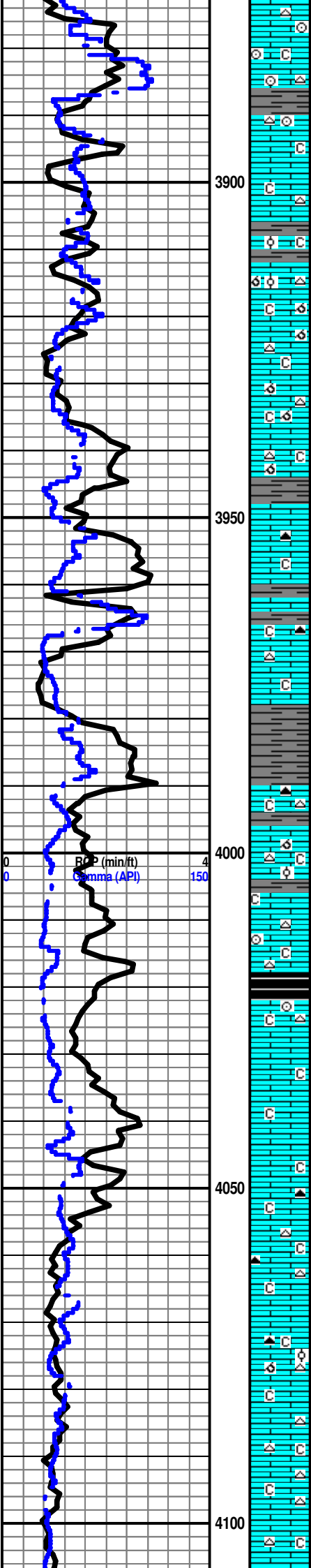
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LS Wht-Crm-Gry FxIn Poor IxIn Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht-Tan-Gry w/Fos Inlus (Crim) Op Shp Vit Pyr Mass Sh Char Fissil No Odor No Flor No Stn NS



TG, C1-C5 50





Abd Cht Wht-Ian-Gry w/Fos inclus (Crin) Op Shp Vit Pyr Mass Sh Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor Ixln Por Mostly Micritic Dsn Barren Chalk Wht Abd Cht Wht Op Shp Vit Fos(Crin) Sh Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor Ixln Por Chalk Wht Abd Cht Wht-Tan-Gry w/Fos Includ (Crin) Op Shp Vit Pyr Mass Sh Char Fissil No Odor No Flor No Stn NS

3900

LS Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Abd Cht Wht Op Shp Vit Sh Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOL Por w/ OOL in pl Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm-Gry Fxln Poor-Fair Ixln Por Grad Tr/OOM Por Poor InterOOM Por Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Wht Op Shp Vit Sh Char Fissil No Odor No Flor No Stn NS

3950

LS Crm-Wht-Gry Fxln Poor-Fair Ixln Wht Abd Cht Gry-Drk Gry Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

**LeCOMPTON 3966' (- 1147)**

LS Crm-Wht Fxln Poor-Fair Ixln Cht Drk Gry-Gry Op Shp Vit Sh Char-Red Fissil No Odor No Flor No Stn NS

LS Crm-Wht Fxln Poor-Fair Ixln Cht Wht Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

LS Crm-Wht Fxln Poor-Fair Ixln Cht Wht Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

4000

LS Crm-Wht Fxln Poor-Fair Ixln Cht Blk-Wht Op Shp Vit Sh Blk Carb - Char Fissil No Odor No Flor No Stn NS

LS Wht-Crm Fxln Micritic Grad Poor-Fair Ixln Por Grad Tr/OOM Por w/ OOL (Small) in pl Poor-Fair Develop Poor-Fair Dissolu Poor-Fair Leaching Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin, Spic) Sh Char Fissil No Odor No Flor No Stn NS

LS Crm-Gry Fxln Micritic Grad Poor-Fair Ixln Por Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin) Sh Char Fissil No Odor No Flor No Stn NS

LS Crm-Gry Fxln Micritic Grad Poor-Fair Ixln Por Chalk Wht Abd Cht Wht-Tan Transl-Op Shp Vit Fos (Crin) Sh Blk Carb Char Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft Abd Sh Char-Grn-Tr/Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft Abd Sh Char-Grn Fissil No Odor No Stn No Flor NS

4050

LS Crm-Wht Fxln Poor-Fair Ixln Cht Blk-Wht Op Shp Vit Sh Blk Carb - Char Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft Abd Cht Blk-Tan Op Shp Vit Sh Char-Grn Fissil No Odor No Stn No Flor NS

Ls Crm-Wht Fxln Grad Poor Ixln Por Grad Tr/OOM Por w/ OOL (Small) in pl Poor Develop Poor Dissolu Poor Leaching Chalk Wht Abd Cht Blk-Tan Op Shp Vit Fos (Crin) Sh Char Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Fxln Poor-Fair Ixln Por Chalk Wht Soft Abd Tr/Cht Wht-Tan (Banded) Op Shp Vit Sh Char-Grn Fissil No Odor No Stn No Flor NS

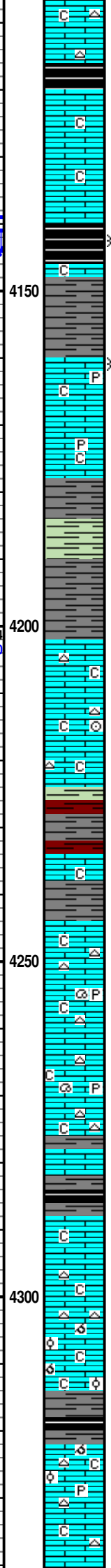
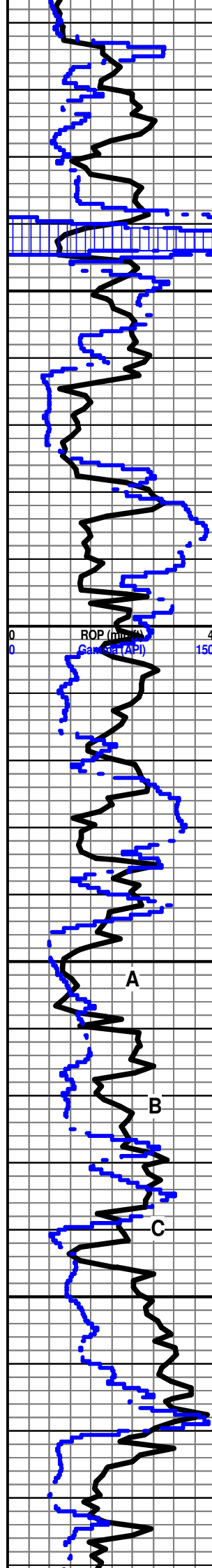
4100

Ls Gry-Crm Fxln Poor-Fair Ixln Por Grad Dns Micrite AA Chalk Wht Soft Cht Wht-Tan (Banded) Op Shp Vit Sh Char-Grn Fissil No Odor No Stn No Flor NS

Ls Gry-Crm Fxln Poor-Fair Ixln Por Grad Dns Micrite AA Chalk Wht Soft Cht Wht-Tan (Banded) Op Shp Vit Sh Char-Grn Fissil No Odor No Stn No Flor NS

TG, C1-C5

Mudco Ck @ 4053' 8:00 AM 2/21/12 Vis 53; WT= 9.2; PV= 16; YP= 16; WL= 8.0; Cake= 1; ChI= 2900; Cal = 20; Sol= 6.3%; LCM=2.5#; DMC=\$ 1047.05 CMC=\$ 13,368.90



Sh Blk Carb-Char-Grn Fissil Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Cht Wht Transl-Op Shp Vit Fos (Crin) No Odor No Stn No Flor FSG (in Sh Blk Carb)

Ls Gry-Crm Fxln Dns Micrite Poor-No Vis Ixln Por Chalk Wht Soft Sh Blk Carb-Char-Red Fissil No Odor No Stn No Flor NS

Ls Gry-Crm Fxln Dns Micrite Poor-No Vis Ixln Por Chalk Wht Soft Sh Blk Carb-Char-Red Fissil No Odor No Stn No Flor NS

**HEEBNER 4140' (- 1321)**

Sh Blk Carb Fissil w/GSG Ls Gry-Crm Fxln Dns Micrite Poor-No Vis Ixln Por Chalk Wht Soft No Odor No Stn No Flor SG

Sh Blk Carb-Char Fissil AA Ls Gry-Crm Fxln Dns Micrite Poor-No Vis Ixln Por Chalk Wht Soft No Odor No Stn No Flor SG

**TORONTO 4160' (- 1341)**

Ls Crm-Wht Fxln Dns Micrite w/Pyr Inclus Poor-No Vis Ixln Por Cht Wht Wht Op Shp Vit Chalk Wht Abd Soft Sh Char-Red Fissil No Odor No Stn No Flor ? Sli SG

Ls Crm-Wht Fxln Dns Micrite w/Pyr Inclus Poor-No Vis Ixln Por Cht Wht Wht Op Shp Vit Chalk Wht Abd Soft Sh Char-Red Fissil No Odor No Stn No Flor NS

**DOUGLAS 4178' (- 1359)**

Sh Gry-Grn Soft-Fissli Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn No Flor NS

Sh Gry-Grn Soft-Fissli Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn No Flor NS

Ls Wht-Crm MicroIn-Fxln Poor-Fair Ixln Por Cht Wht-Tan Op Shp Vit Chalk Wht Soft Abd Sh Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Gry-Crm MicroIn-Fxln Poor-Fair Ixln Por Cht Wht-Tan Op Shp Vit Fos (Crin) Chalk Wht Soft Abd Sh Gry-Grn Fissil No Odor No Stn No Flor NS

Sh Gry-Grn Soft-Fissli Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn No Flor NS

Sh Gry-Grn Soft-Fissli Ls Crm-Wht-Gry Fxln Dns Micrite Poor Ixln Por Chalk Wht Soft Abd No Odor No Stn No Flor NS

**LANSING 4244' (- 1425)**

Ls Wht-Crm MicroIn-Fxln w/ Fair Pin-Pt Ixln Por Faint ? Scat Stn Flor (Lt Grn-Wht) Cht Wht-Tan Transl-Op Shp Vit Chalk Wht Soft Fos (Pyr Gastro) Sh Char-Gry Fissil AA No Odor SG

Ls Crm-Wht MicroIn-Fxln w/ Fair Pin-Pt Ixln Por Grad Micritic No Flor Cht Wht-Tan Op Shp Vit Chalk Wht Soft Fos (Pyr Gastro) Sh Char-Gry Fissil AA No Odor SG

Ls Crm-Wht MicroIn-Fxln w/ Fair Pin-Pt Ixln Por Grad Micritic No Flor Cht Wht-Tan Transl-Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil AA No Odor SG

Sh Char-Gry Fissil Ls Wht-Crm-Gry MicroIn-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft No Odor No Stn ? Sli Min Flor NS

Ls Crm-Gry MicroIn-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft Cht Wht Op Shp Vit Sh Char-Gry-Grn Fissil No Odor No Stn ? Sli Min Flor NS

Ls Crm-Gry MicroIn-Fxln Poor Ixln Por Grad Micritic Chalk Wht Soft Cht Wht Transl-Op Shp Vit Sh Char-Gry-Grn Fissil No Odor No Stn ? Sli Min Flor NS

Ls Crm Fxln Grad Poor OOM Por OOL Por w/OOL in pl (Wht) Poor- No Dissolu Poor Devel Poor-No Leaching Por Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Sh Char-Gry-Tr Blk Carb (1 Pc) Fissil NS

Ls Crm-Tan MicroIn Grad Poor OOM Por OOL Por w/OOL in pl (Wht) Poor-No Dissolu Poor Devel Poor-No Leaching Por Grad Fxln Poor Ixln Micritic w/Pyr Inclus Chalk Wht Soft V Abd (35% of Spl) Sh Char-Gry-Maroon Fissil No Odor No Stn ? V Sli Min Flor NS

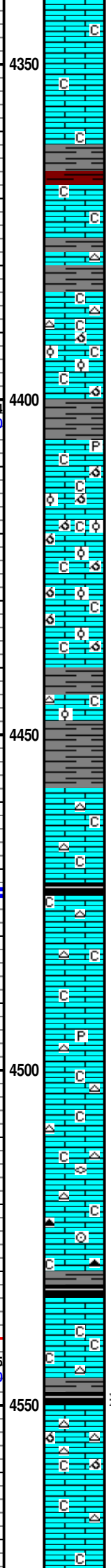
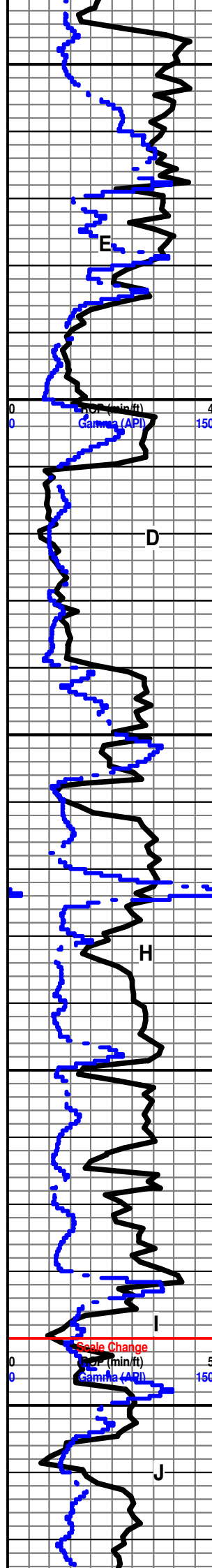
Ls Crm-Tan MicroIn-Fxln Poor Ixln Por Grad Micritic Cht Wht Op Shp Vit Chalk Wht Soft V Abd (20% of Spl) Sh Char-Gry-Grn Fissil No Odor No Stn ? V Sli Min Flor NS

SH GAS KICK = 39 UNITS

GAS KICK = 26 UNITS.

TG, C1-C3 50

GAS TEST @ 4305' @ EXTRACTOR. GAS KICK = 38 UNITS.



Ls Csm-Gry Microxn-Fxn Poor Ixn Por Grad Micritic Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm Microxn-Fxn Poor Ixn Por Grad Micritic Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm-Gry Microxn-Fxn Poor Ixn Por Grad Micritic Cht Tan-Gry-Char Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Gry-Crm Microxn-Fxn Poor Ixn Por Grad Micritic Chalk Wht Soft Sh Char-Gry-Maroon Fissil No Odor No Stn Tr ? Min Flor NS

Ls Csm-Gry Microxn-Fxn Poor Ixn Por Grad Micritic Cht Tan-Gry Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Sh Blk Carb Char-Gry-Maroon AA Fissil NS

Chalk Wht Soft (50% of Tray) Ls Csm-Gry Microxn-Fxn Poor Ixn Por Micritic Grad Poor OOM Por w/OOL in pl (Brn) Poor Dissolu Poor Devel Cht Tan-Gry Op Shp Vit Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Chalk Wht Soft (20% of Tray) Ls Csm-Gry Microxn-Fxn Poor Ixn Por Micritic w/Pyr Inklus Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm Poor OOM Por w/OOL in pl (Brn) Poor InterOOM Por Poor-Fair Dissolu Poor-Fair Devel Chalk Wht Soft AA Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor Sh Char-Gry Fissil NS

Ls Csm Microxn-Fxn Grad Fair OOM Por w/OOL in pl (Wht) Med -Good Dissolu Med-Good Develop Chalk Wht Soft S No Odor No Stn ? Sli Min Flor Sh Char-Gry Fissil NS

Ls Csm Microxn-Fxn Grad Poor OOM Por w/OOL in pl (Wht) Med Dissolu Med Devel Grad Poor Ixn Por Micritic Fos (Crin) Chalk Wht Soft Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm Microxn-Fxn Grad Poor OOM Por w/OOL in pl (Wht) Med Dissolu Med Devel Grad Poor Ixn Por Micritic Cht Wht-Tan Translu-Op Shp Vit w/OOL in pl Chalk Wht Soft AA Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm Microxn-Fxn Grad Poor OOM Por w/OOL in pl (Wht) Med Dissolu Med Devel Grad Poor Ixn Por Micritic Cht Wht-Tan Translu-Op Shp Vit w/OOL in pl Chalk Wht Soft AA Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm-Gry Microxn-Fxn Poor Ixn Por Grad Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft AA Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Csm-Gry Microxn-Fxn Poor Ixn Por Grad Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft AA Sh Char-Gry Fissil No Odor No Stn ? Sli Min Flor NS

Ls Wht-Crm Microxn Poor-No Ixn Por Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft (Tr Only) Pyr Mass Sh Char Fissil (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxn Poor-No Ixn Por Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry Fissil (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxn Poor-No Ixn Por Micritic Cht Wht-Gry-Drk Gry w/ Fos (Fuss) Inklus (Banded) Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry-Grn Fissil (Tr Only) No Odor No Stn No Flor NS

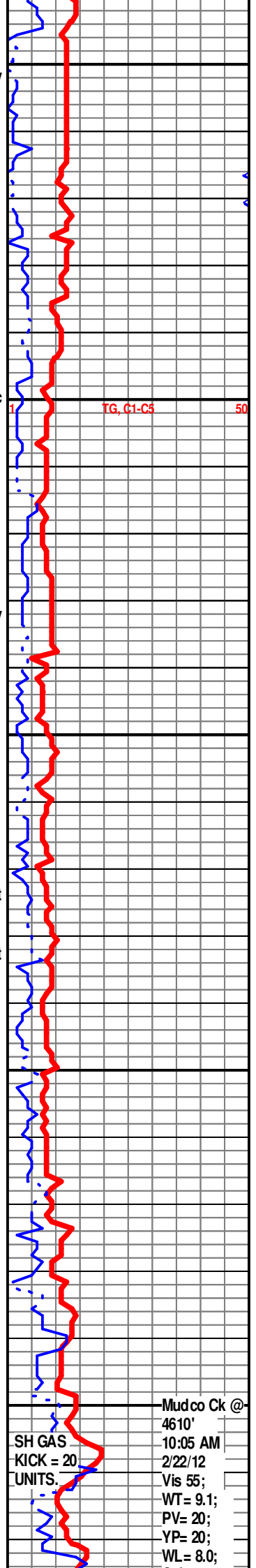
Ls Gry-Crm-Microxn Poor-No Ixn Por Micritic Cht Gry-Drk Gry (Banded) Op Shp Vit Chalk Wht Soft V Abd Fos (Crin) Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Gry-Crm-Microxn Poor-No Ixn Por Micritic Cht Gry-Drk Gry (Banded) Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Wht-Crm Microxn Poor-No Ixn Por Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Blk Carb Fissil No Odor No Stn No Flor NS

Ls Gry-Crm-Microxn Poor-No Ixn Por Micritic Grad Tr Poor OOM Por Poor InterOOM Por Fair Develop Fair Leaching Cht Amber-Gry Transl-Op Shp Vit Chalk Wht Soft V Abd Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

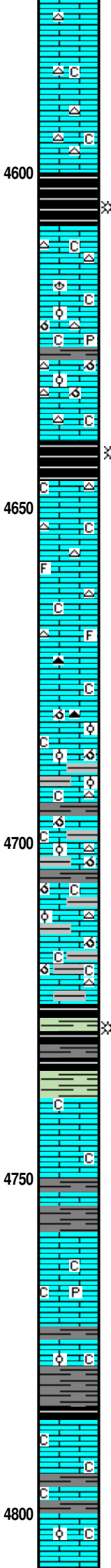
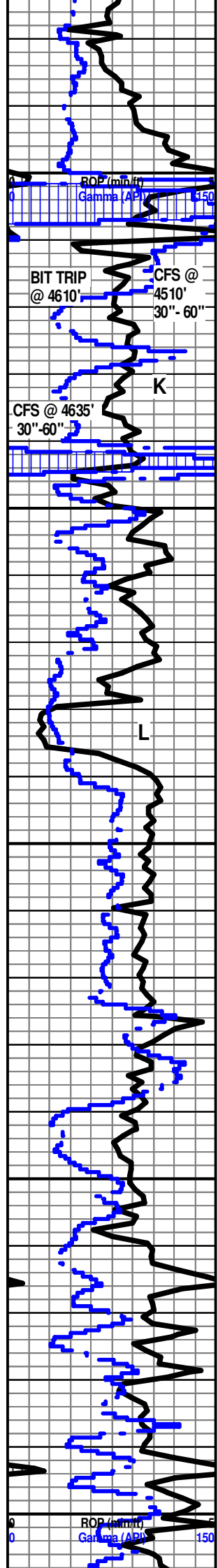
Ls Wht-Crm Microxn Poor-No Ixn Por Micritic Cht Wht-Gry Op Shp Vit Chalk Wht Soft V Abd Sh Char-Blk Carb Fissil Abd No Odor No Stn No Flor NS



TG, C1-C5 50

Mudco Ck @ 4610' 10:05 AM 2/22/12 Vis 55; WT= 9.1; PV= 20; YP= 20; WL= 8.0;





Ls Crm-Tan MicroIn Poor-No IxIn Por Micritic Cht Wht-Gry Op Shp Vit Chalk  
Wht Soft Sh Char Fissil Abd No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Poor-No IxIn Por Micritic Cht Wht-Gry Op Shp Vit Chalk  
Wht Soft Sh Char Fissil Abd No Odor No Stn No Flor NS

30" CFS @ 4610' Sh Blk Carb Fissil Ls Crm FxIn Dns Micrite Barren Chalk  
Wht Soft Cht Wht Transl-Op Shp Vit No Odor No Flor No Stn NS

**STARK 4600' (- 1781)**

60" CFS @ 4610' Sh Blk Carb Fissil GSG Ls Crm FxIn Dns Micrite Barren  
Chalk Wht Soft Cht Wht Transl-Op Shp Vit No Odor No Flor No Stn NS

30" CFS @ 4635' Ls Crm FxIn Dns Micrite Barren Chalk Wht Soft Cht Wht  
Transl-Op Shp Vit Fos (Brach) Sh Blk Carb Fissil No Odor No Flor No Stn NS

60" CFS @ 4635' Ls Gry-Crm-Wht MicroIn w/ Pry Includ Poor-IxIn Por  
Micritic Grad Tr Poor-Fair OOM Por w.OOL in pl Poor (Small-Med OOids)  
InterOOM/OOL Por Poor-Fair Develop Poor-Fair Leaching Cht  
Wht-Amber-Gry Transl-Op Shp Vit Chalk Wht Soft Sh Char-Gry-Blk Carb  
Fissil No Odor No Stn No Flor NS

**HUSHPUCKNEY 4640' (- 1821)**

Sh Blk Carb Fissil GSG Ls Crm-Gry FxIn Dns Micrite Barren Chalk Wht Soft Cht Wht Transl-Op  
Shp Vit No Odor No Flor No Stn NS

**KANSAS CITY "HERTHA" (L) 4646' (- 1827)**

Ls Wht-Crm FxIn Poor IxIn Por Micritic Dns Barren Cht Gry w/Fos (Spic ?)  
Includ Op Shp Vit Chalk Wht Soft Sh Blk Carb-Char-Gry Fissil No Odor No  
Flor No Stn NS

Ls Crm-Gry-Tan-Wht FxIn Poor IxIn Por Micritic Dns Barren Ls Crm-Gry FxIn  
Poor IxIn Por Micritic Dns Barren Cht Gry-Drk Gry w/Abd Fos in pl Op Shp  
Vit Chalk Wht Soft Tr Sh Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Crm-Gry FxIn Poor IxIn Por Micritic Dns Barren Grad Fair-Med OOM Por  
w/ OOL (small) in pl Fair Dissolu Fair Leaching Cht Gry-Drk Gry w/Abd  
OOL/Fos in pl Op Shp Vit Chalk Wht Soft Sh Blk Carb-Gry Fissil AA No Odor  
No Stn No Flor NS

Ls Wht-Crm-Drk Gry FxIn Poor-Fair IxIn Micritic Por Grad OOM Por AA Poor  
Develop Poor Dissolu Fair-Med-Good Leaching Por (Few Pcs) Chalky Wht  
Soft Cht Wht-Gry w/OOL in pl Transl-Op Shp Vit Sh Char-Gry Fissil Abd No  
Odor No Flor No Stn NS

Ls Gry FxIn Poor IxIn Por Micritic Dns Barren Grad OOM Por Poor Develop  
Poor-Fair Dissolu Fair-Med-Good Leaching Por (Few Pcs) Chalky Wht Soft  
Cht Wht-Gry w/OOL in pl Transl-Op Shp Vit Cht Wht-Tan Transl-Op Shp Vit  
Chalk Wht Soft Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Char-Gry Fissil Ls Gry FxIn Poor IxIn Por Micritic Dns Barren Grad OOM  
Por AA Cht Wht-Tan Transl-Op Shp Vit Chalk Wht Soft Fos (Fuss) No Odor  
No Flor No Stn NS

**BASE KANSAS CITY 4726' (- 1907)**

Sh Blk Carb-Gry Fissil-"Gummy-Soft" Ls Gry-Crm FxIn Poor IxIn Por Micritic  
Dns Barren Chalky Wht Soft V Abd No Odor No Flor No Stn NS

**MARMATON 4738' (- 1919)**

Ls Wht-Crm MicroIn-FxIn Poor IxIn Por Micritic Dns Barren Chalk Wht Soft  
Sh Char-Gry-Grn Fissil No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Por Micritic Dns Barren Chalk Wht Soft Sh  
Char-Gry Fissil AA No Odor No Flor No Stn NS

Ls Wht-Crm FxIn Poor IxIn Por Micritic Dns Barren Chalk Wht Soft Sh  
Char-Gry Fissil AA No Odor No Flor No Stn NS

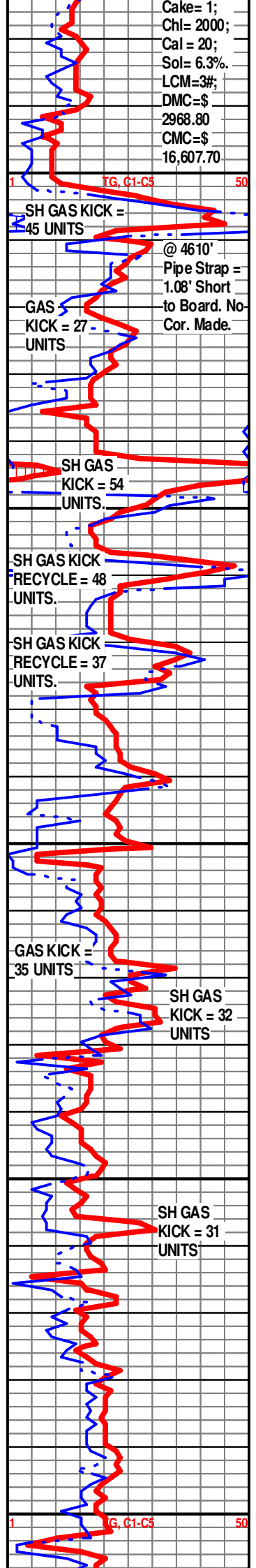
Ls Crm-Wht-Gry FxIn Poor IxIn Por Micritic Dns Barren w/ Pyr Includ Chalk  
Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Ls Gry-Crm FxIn Poor IxIn Por Micritic Dns Barren Grad Poor-Fair OOL Por  
w/OOL in PI Poor Dissolu Poor-Fair Leaching (Few Pcs) Chalky Wht Soft  
Abd Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Sh Char-Gry Fissil Tr Blk Carb Ls Gry-Crm FxIn Poor IxIn Por Micritic Dns  
Barren Chalky Wht Soft Abd No Odor No Flor No Stn NS

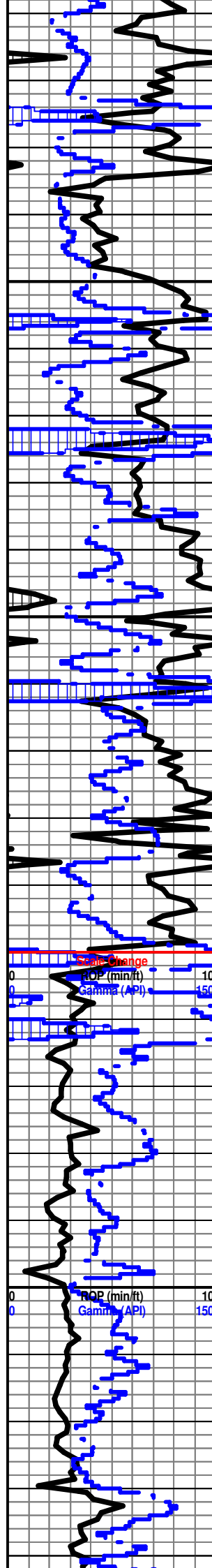
Ls Crm-Brn-Gry FxIn Poor IxIn Por Micritic Dns Barren Grad Poor-Fair OOL  
Por w/OOL in PI Poor Dissolu Poor-Fair Leaching Chalk Wht Soft Sh  
Gry-Grn-Char Fissil No Odor No Flor No Stn NS

Ls Crm-Wht FxIn Poor IxIn Por Micritic Dns Barren Grad Poor-Fair OOL Por



Cake= 1;  
Chl= 2000;  
Cal = 20;  
Sol= 6.3%  
LCM=3#;  
DMC=\$  
2968.80  
CMC=\$  
16,607.70





Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Cht Tan Op Shp Vit Chalk w/OOL in Pl Poor Dissolu Poor-Fair Leaching Chalk Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Cht Tan Op Shp Vit Chalk Wht Soft Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

**PAWNEE 4824' (- 2012)**

Sh Blk Carb-Gry Fissil Ls Crm-Tan-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOL Por w/OOL (Med-Lg Ooids) in pl Poor-No Dissolu Poor-No Leaching Chalk Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Poor-Fair OOL Por w/OOL in pl Poor Dissolu Poor-Fair Leaching (Few Pcs) Fos (Brach) Chalk Wht Soft Sh Gry- Blk Carb AA Fissil No Odor No Flor No Stn NS

**LABETTE 4854' (- 2035)**

Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Cht Tan-Gry Transl-Op Shp Vit Chalk Wht Soft Sh Blk Carb Gry Fissil No Odor No Flor No Stn NS

**CHEROKEE SHALE 4872' (- 2053)**

Sh Blk Carb-Gry Fissil Ls Crm-Brn-Wht Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOL Por w/OOL in Pl Poor Dissolu Poor Leaching Cht Wht-Gry-Tan (Banded) Op Shp Vit Chalk Wht Soft Sh Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Fxln Poor-Fair Ixln Por Micritic Barren Chalk Wht Soft Sh Blk Carb Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Gry Transl-Op Shp Vit Pyr Mass Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

**SECOND CHEROKEE SHALE 4909' (- 2090)**

Ls Gry-Crm Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Fos (Brach) Sh Blk Carb Char-Gry w/Pyr Inclus Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Sh Char-Gry-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Sh Char-Gry-Blk Carb Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Microxln-Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Sh Char-Gry-Blk Carb Fissil AA No Odor No Flor No Stn NS

**THIRD CHEROKEE SHALE 4949' (- 2130)**

Sh Char-Gry-Blk Carb Fissil Ls Crm-Tan-Gry Microxln-Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft No Odor No Flor No Stn NS

Ls Crm-Tan-Gry Microxln-Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Sh Char-Gry-Blk Carb w/Pyr Inclus Fissil No Odor No Flor No Stn NS

Ls Crm-Gry Microxln-Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Drk-Gry Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

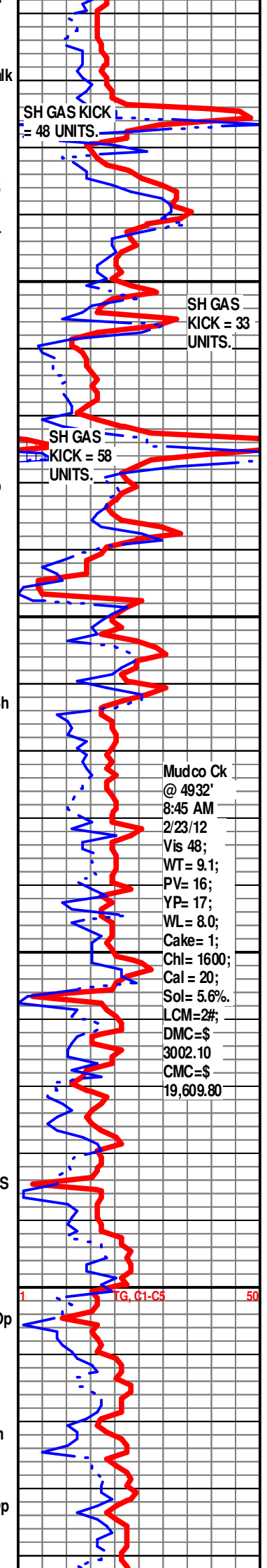
Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Gry-Amber Transl-Op Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Gry-Crm Fxln Poor Ixln Por Micritic Barren w/Pyr Inclus Chalk Wht Soft Cht Amber Translu Shp Vit Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Gry-Crm Fxln Poor Ixln Por Micritic Barren Chalk Wht Soft Cht Drk-Gry Op Shp Vit Sh Char-Gry Fissil No Odor Tr ? Min Flor (1 Pc) No Stn NS

Sh Char-Gry-Brn-Grn Tr Fissil Ls Crm-Tan-Gry-Drk Gry Microxln-Fxln Poor Ixln Por Micritic Barren Cht Drk-Gry-Wht w/OOL in pl No Dissolu No Leaching Op Shp Vit Chalk Wht Soft No Odor Scat ? Min Flor (3 Pcs) No Stn NS

Sh Char-Gry-Grn Tr Fissil Ls Crm-Tan-Gry-Drk Gry Microxln-Fxln Poor Ixln Por Micritic Barren Cht Drk-Gry-Wht w/OOL in pl No Dissolu No Leaching Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn NS



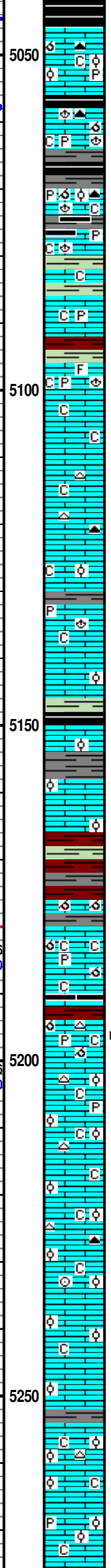
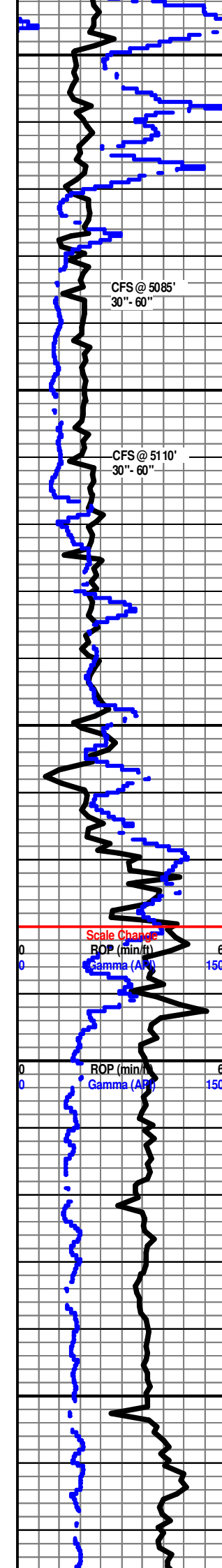
SH GAS KICK = 48 UNITS.

SH GAS KICK = 33 UNITS.

SH GAS KICK = 58 UNITS.

Mudco Ck @ 4932' 8:45 AM 2/23/12 Vis 48; WT= 9.1; PV= 16; YP= 17; WL= 8.0; Cake= 1; Chl= 1600; Cal= 20; Sol= 5.6%. LCM=2#; DMC=\$ 3002.10 CMC=\$ 19,609.80

1 TG, C1-C3 50



Sh Blk Carb Abd-Char-Gry-Grn Tr Fissil Ls Crm-Tan-Gry-Drk Gry MicroIn-FxIn Poor IxIn Por Micritic Barren Cht Amber-Drk-Gry-Wht w/OOL in pl No Dissolu No Leaching Transl-Op Shp Vit Chalk Wht Soft No Odor No Flor No Stn NS

**MORROW 5056' (- 2237)**

Sh Blk Carb Abd-Char-Gry-Grn Tr Fissil Ls Crm-Tan-Gry-Drk Gry MicroIn-FxIn Poor IxIn Por Micritic Grad Poor OOM Por w/OOL (Med-V Small "Sandy") in pl No Dissolu No Leaching Por Cht Drk-Gry-Wht Op Shp vit Chalk Wht Soft Fos (Brach) No Odor ? Faint Scat Min Flor No Stn NS

**MISSISSIPPIAN 5070' (- 2251)**

30" CFS @ 5085' Sh Blk Carb Abd-Gry-Grn Tr Fissil Ls Crm-Tan-Gry-Drk Gry MicroIn-FxIn Poor IxIn Por Micritic Grad Poor OOM Por w/OOL (Med Ooids) in pl Poor Dissolu Poor Leaching Por Pyr Mass Cht Drk-Gry Op Shp Vit Chalk Wht Soft Fos (Brach w/Pyr Includ) No Odor No Flor No Stn NS

60" CFS @ 5085' Sh Blk Carb-Gry-Grn Inc Fissil Ls Crm-Tan-Gry-Drk Gry MicroIn-FxIn Poor IxIn Por Micritic Cht Drk-Gry-Wht Op Shp Vit Chalk Wht Soft Fos (Brach w/Pyr Includ) No Odor No Flor No Stn NS

Ls Wht-Crm MicroIn-FxIn Poor IxIn Por Micritic w/Pyr Includ Grad Poor OOL Por w/OOL in pl (Med-Small "Sandy") Cht Clear - Amber-Yell-Drk-Char w/ Fos (Brach, Spic) Includ Translu- Op Shp Vit Chalk Wht Soft Abd Sh Blk Carb-Aqua-Grn-Maroon Fissil No Odor No Flor No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic w/Pyr Includ Cht Wht-Yell Translu- Op Shp Vit Chalk Wht Soft Sh Aqua- w/Pyr Includ Grn-Char-Maroon Fissil No Odor No Flor No Stn NS

30" CFS @ 5110' Ls Wht MicroIn-FxIn Poor IxIn Por Micritic (90% of Tray) Fos (Crim) Chalk Wht Soft Dec Sh Aqua-Grn-Char-Maroon Fissil (Tr Only) No Odor V Sli Tr Scat ? Min Flor No Stn NS

60" CFS @ 5110' Ls AA Char Grad \*FxIn OOL Por (V Small OOL) Mostly Dns Micrite Cht Abver Transl-Shp-Vit Sh Fos Crin) Sh AA Char-Gry Fissil No Odor No Stn Tr ? Dull Wht Scat Min Flor (Few Pcs) Flor NS

(Ls Wht-Crm-Gry MicroIn-FxIn Poor IxIn Por Micritic (50% of Tray) Cht Wht w/Fos in pl-Amber-Drk-Char Transl-Op Shp-Vit (Few Pcs) Chalk Wht Soft Dec Pyr Mass Sh Char-Blk Carb-Aqua Grn AA Fissil (40% of Tray) (? Trip Trash ?) No Odor Tr ? Dull Wht Scat Min Flor (Few Pcs) Flor No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic (90% of Tray) Grad OOL Por "Sandy" (Small Ooids) (Few Pcs) Chalk Wht Soft Sh Char-Aqua-Blk Carb AA Fissil (< 10% of Tray) No Odor Tr ? Dull Wht Scat Min Flor (Few Pcs) Flor No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic w/Tr Pry Includ (90% of Tray) Chalk Wht Soft Fos (Brach) Sh Char-Aqua-Grn-Blk Carb AA Fissil (< 5% of Tray) No Odor Tr ? Dull Wht Scat Min Flor (Few Pcs) Flor No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic w/Tr Pry Includ (60% of Tray) Chalk Wht Soft Cht Clear-Wht Transl-Op Shp Vit Pyr Mass Sh Char-Aqua-Grn-Blk Carb AA Fissil (< 35% of Tray) No Odor Tr ? Dull Wht Scat Min Flor (Few Pcs) No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic w/Tr Pry Includ (55% of Tray) Chalk Wht Soft Cht Clear-Wht Transl-Op Shp Vit Pyr Mass Sh Char-Aqua-Grn-Blk Carb AA Fissil (< 40% of Tray) No Odor No Flor No Stn NS

Ls Wht MicroIn-FxIn Poor IxIn Por Micritic w/Tr Pry Includ (55% of Tray) Chalk Wht Soft Cht Clear-Wht Transl-Op Shp Vit Pyr Mass Sh Char-Aqua-Grn-Blk Carb-Tr Maroon Fissil (< 40% of Tray) No Odor No Flor No Stn NS

Sh Maroon-Red- Char-Aqua-Grn-Blk Carb Fissil (> 65% of Tray) Wash Red Ls AA Micritic Grad FxIn Gran "Sandy" OOL Por No Odor No Flor No Stn NS

Ls Wht-Crm-Gry FxIn Micrite AA Grad Granular OOL "Sandy" Por (Small Ooids) w/Pyr Includ Poor InterOOL Por Friable Chalk Wht Sh Grn-Char-Maroon (Tr Only) No Odor No Stn No Flor NS

**STE. GEN 5182' (- 2363)**

Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) w/Pyr Includ Poor InterOOL Por Friable w/Tr ? "Dead" Gillsonitic Residue" (3 Pcs) Cht Gry w/Tr Pyr Includ Op Shp Vit Chalk Wht Sh Blk Carb (w/Pyr Includ)-Aqua-Maroon (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Gry Op Shp Vit Chalk Wht Sh Blk Carb (w/Pyr Includ)-Aqua-Maroon (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Gry Org Transl-Op Shp Vit Chalk Wht Sh Blk Carb No Odor No Stn No Flor NS

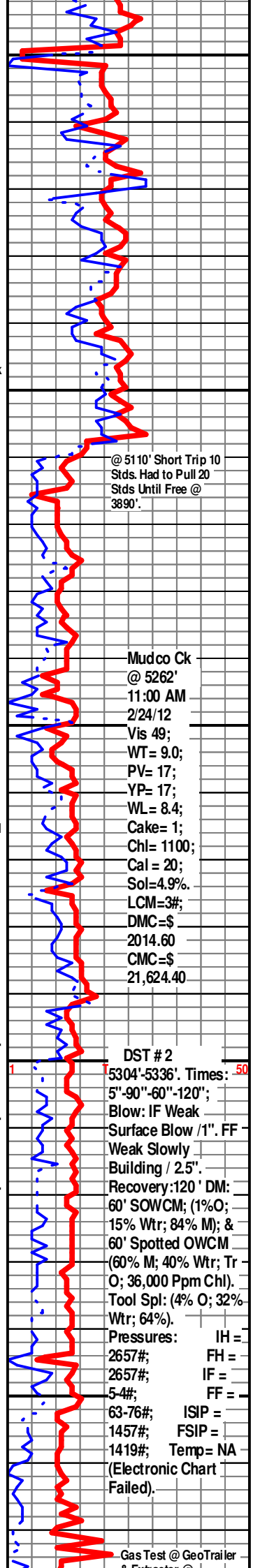
Ls Wht FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Fos (Crim) Chalk Wht Sh Char-Aqua (Tr Only) No Odor No Stn No Flor NS

Ls Wht FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Chalk Wht Sh Blk Carb-Char (Tr Only) No Odor No Stn No Flor NS

**ST. LOUIS 5253' (- 2434)**

Ls Wht- Lt Pink FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Tan (Banded) Transl-Op Shp Vit (Tr Only) Chalk Wht Sh Char (Tr Only) No Odor No Stn No Flor NS

Ls Wht- Lt Pink FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Tan (Banded) Transl-Op Shp Vit (Tr Only) Chalk Wht Sh Char-Grn-Aqua w/Tr Pyr Includ (Tr Only) No Odor No Stn No Flor NS

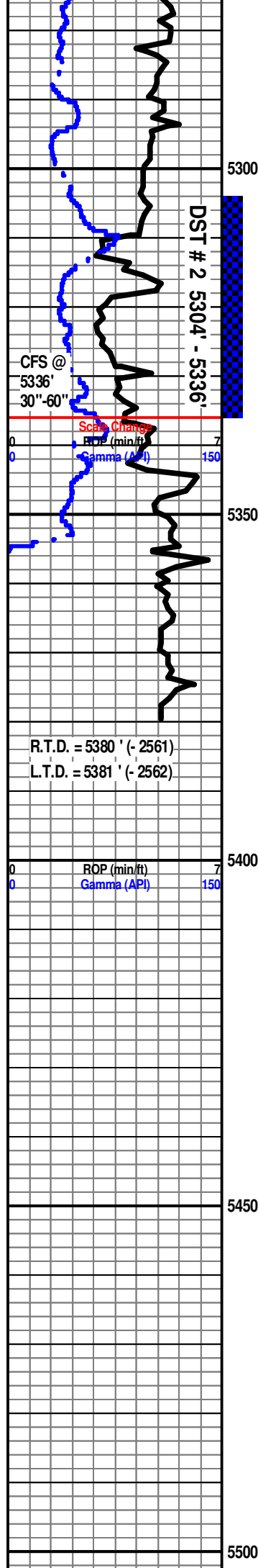


@ 5110' Short Trip 10 Stds. Had to Pull 20 Stds Until Free @ 3890'.

Mudco Ck @ 5262' 11:00 AM 2/24/12 Vis 49; WT= 9.0; PV= 17; YP= 17; WL= 8.4; Cake= 1; Chl= 1100; Cal= 20; Sol=4.9%. LCM=3#; DMC=\$ 2014.60 CMC=\$ 21,624.40

DST # 2 5304'-5336'. Times: 50 5"-90"-60"-120"; Blow: IF Weak Surface Blow /1". FF Weak Slowly Building / 2.5". Recovery:120' DM: 60' SOWCM; (1%O; 15% Wtr; 84% M); & 60' Spotted OWCM (60% M; 40% Wtr; Tr O; 36,000 Ppm Chl). Tool Spl: (4% O; 32% Wtr; 64%). Pressures: IH = 2657#; FH = 2657#; IF = 5-4#; FF = 63-76#; ISIP = 1457#; FSIP = 1419#; Temp= NA (Electronic Chart Failed).

Gas Test @ GeoTrailer & Fracturing



Ls Wht FxIn Granular OOL "Sandy" Por (Small Ooids Inc to Med) Poor-Fair InterOOL Por Friable Cht Wht Op Shp Vit (Tr Only) Chalk Wht Sh Char-Aqua (Tr Only) No Odor No Stn No Flor NS

Ls Wht FxIn Granular OOL "Sandy" Por (Small Ooids Inc to Med) Poor-Fair InterOOL Por Friable Cht Wht Op Shp Vit (Tr Only) Chalk Wht Sh Char-Aqua (Tr Only) No Odor No Stn No Flor NS

Ls Wht FxIn Granular OOL "Sandy" Pin-Pt OOL Por (Med Ooids Inc) Fair InterOOL Por (Few Pcs) w/ Fair Develop & Fair Leaching Por Friable w/ Tr Sli Sat Stn Sli-Inc Odor Cht Wht Op Shp Vit (Tr Only) Chalk Wht Sh Char-Aqua (Tr Only) No Flor Sli SG/SO

**ST. LOUIS UPPER "B" 5310' (- 2491)**

**ST. LOUIS LOWER "B" POR 5318' (- 2499)**

30" CFS @ 5336' Ls Wht FxIn Granular OOL w/Pin-Pt Por ("Salt & Pepper" Stn Sat Around Ooids) (Ooids-Med-Lg) Fair-Med InterOOL Por (20% of Tray) w/ Fair-Med Develop & Fair-Med Leaching Tr/Good Por Friable w/Sli Sat Stn Fair-Med Inc Odor Cht Clear-Wht-Smoky-Gry w/ Blk Includ Translu-Op Shp Vit Abd Pyr Mass Chalk Wht Sh Char-Aqua-Maroon (Tr Only) No Flor (Gas & Oil Do Not Flor) Fair-Med-Tr/Good SG/SO

60" CFS @ 5336' Ls Wht FxIn Granular OOL w/Pin-Pt Por AA Ooids-Med-Lg Fair-Med InterOOL Por (10% of Tray) w/ Fair-Med Develop & Fair-Med Leaching Por Friable w/Tr Sat Stn Med-Good Odor Cht Clear-Wht-Smoky-Gry w/ Blk Includ Translu-Op Shp Vit Abd Pyr Mass Chalk Wht AA Sh Char-Aqua-Maroon AA (Tr Only) No Flor (Gas & Oil Do Not Flor) Fair-Med Dec SG/SO

Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Clear-Gry Transl-Op Shp Vit Chalk Wht Sh Blk Carb-Maroon-Aqua Fissil No Odor No Stn No Flor NS

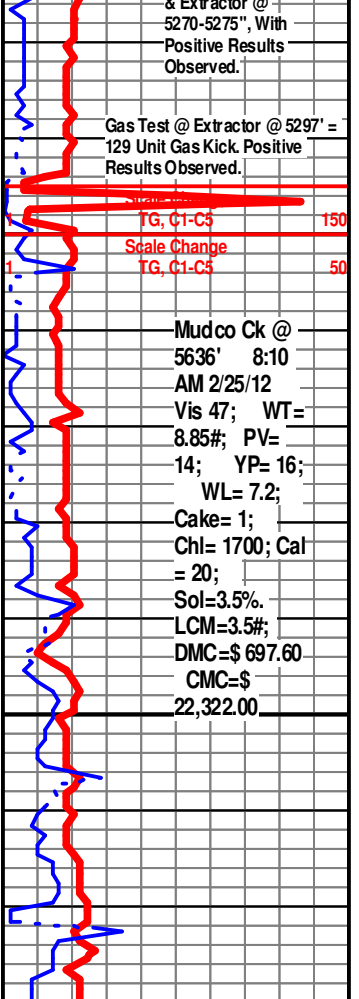
Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Clear-Gry Transl-Op Shp Vit Chalk Wht Sh Blk Carb-Maroon-Aqua Fissil No Odor No Stn No Flor NS

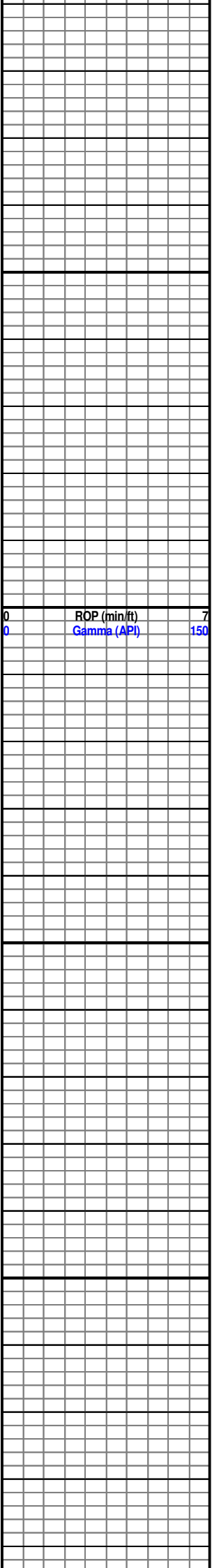
30" CFS @ 5806' Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Clear-Gry Transl-Op Shp Vit Chalk Wht Sh Blk Carb-Maroon-Aqua Fissil No Odor No Stn No Flor NS

60" CFS @ 5380' Ls Wht-Gry FxIn Granular OOL "Sandy" Por (Small Ooids) Poor InterOOL Por Friable Cht Wht-Clear-Gry Transl-Op Shp Vit Chalk Wht Sh Blk Carb-Maroon-Aqua Fissil No Odor No Stn No Flor NS

ELECTRIC LOGS By LOGTECH, INC.: DUAL COMP. POROSITY; DUAL INDUCTION; BOREHOLE COMPENSATED SONIC; MICRORESISTIVITY.

Geologist Left Location @ 8:00 AM on 2/26/12





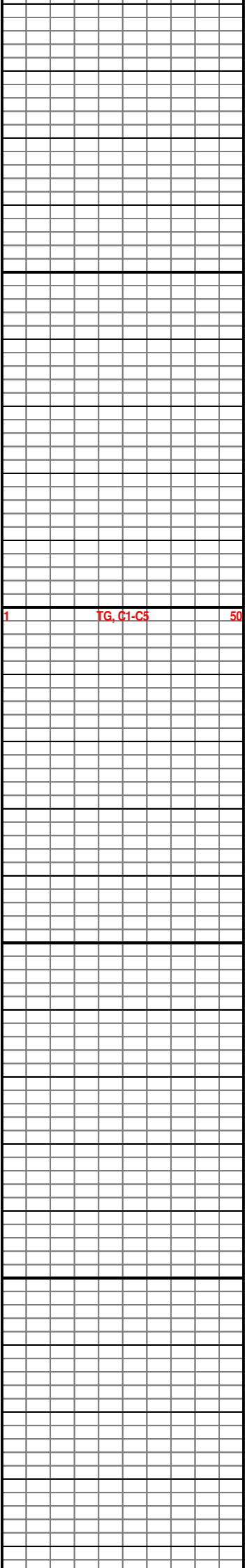
5550

5600

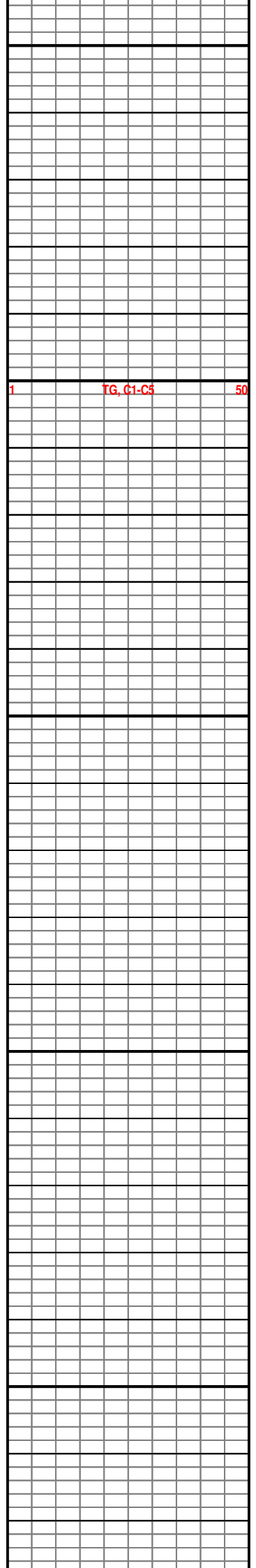
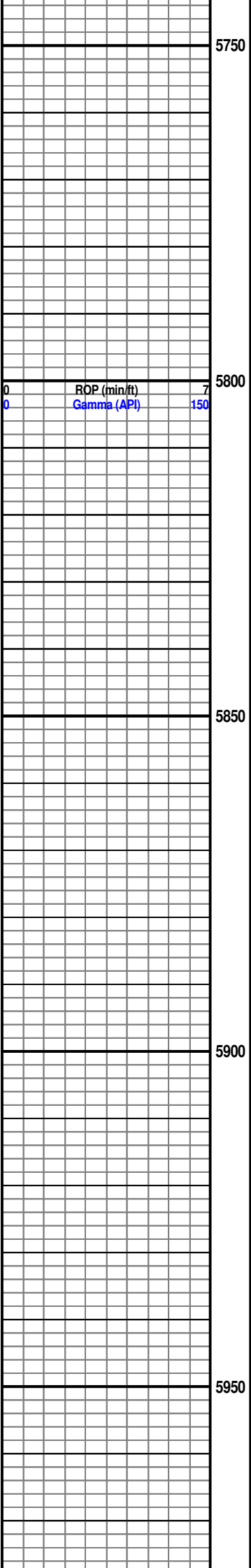
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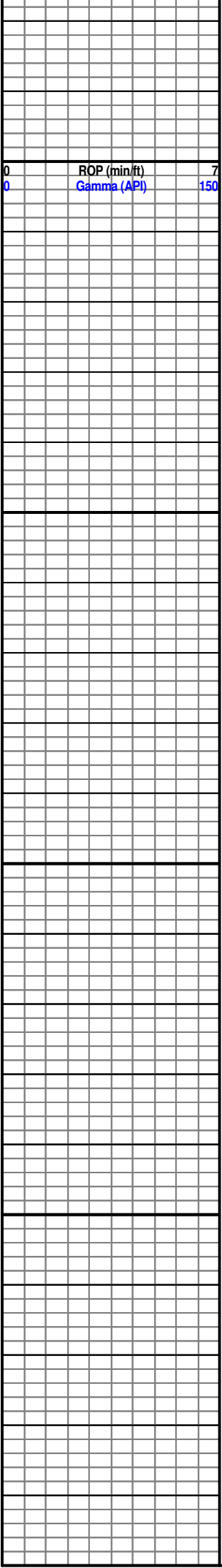
5700

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



TG, C1-C5 50





6000

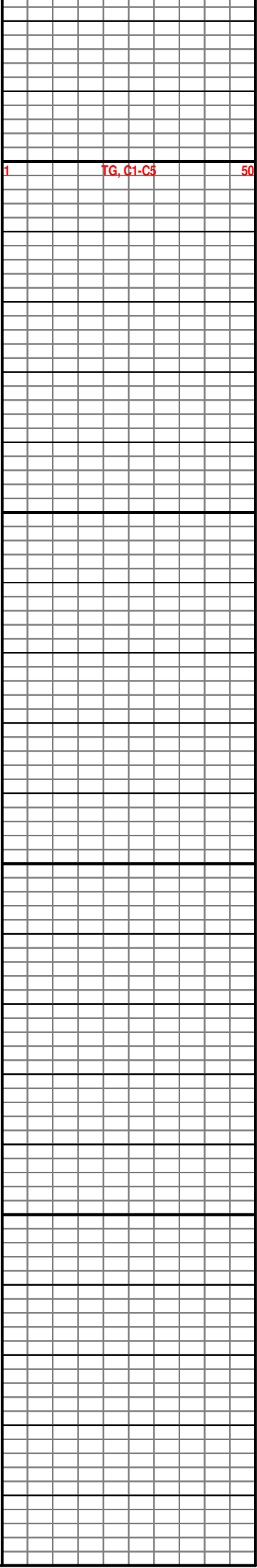
ROP (min/ft) 7  
Gamma (API) 150

6050

6100

6150

6200



TG, C1-C5 50