



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1107101  
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
-----------------------------------	-----------------	---

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: \_\_\_\_\_



1107101

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	DUMLER-KRAFT ET AL 1-29
Doc ID	1107101

All Electric Logs Run

DENSITY-NEUTRON
INDUCTION
MICRO
SONIC
SPECTRAL GR

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  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

January 08, 2013

CHRISTOPHER MITCHELL  
Samuel Gary Jr. & Associates, Inc.  
1515 WYNKOOP, STE 700  
DENVER, CO 80202

Re: ACO1  
API 15-167-23824-00-00  
DUMLER-KRAFT ET AL 1-29  
SW/4 Sec.29-15S-15W  
Russell 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,  
CHRISTOPHER MITCHELL



**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665  
 Phone: 785-324-1041 fax: 785-483-1087  
 Email: cementing@ruraltel.net

Date: 9/21/2012  
 Invoice # 6545  
 P.O.#:  
 Due Date: 10/21/2012  
 Division: Russell

# Invoice

**Contact:**  
 Samuel Gary Jr & Associates Inc  
**Address/Job Location:**  
 Samuel Gary Jr & Associates Inc  
 1815 11th Street  
 Great Bend, KS 67530

**RECEIVED**

SEP 27 2012

SAMUEL GARY JR.  
 & ASSOCIATES, INC.

DRLG  COMP  W/O  LOE  GG

Account	8200.138
Well/Prospect	
Deck	
AFE	<i>[Signature]</i>
Approval	
Description	

**Reference:**  
 DUMLER KRAFT ETAL 1-29

**Description of Work:**  
 LONG SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 963.85	No	Baffle Plate Aluminum, 8 5/8"	1	\$95.00	Yes
Common-Class A	350	\$ 4,632.83	Yes				
Bulk Truck Mat-Material Service Charge	370	\$ 781.11	No				
8 5/8" Basket	2	\$ 667.11	Yes				
Calcium Chloride	13	\$ 654.00	Yes				
Pump Truck Mileage-Job to Nearest Camp	19	\$ 200.15	No				
Flo Seal	87	\$ 183.67	Yes				
8 5/8" Centralizer	2	\$ 135.11	Yes				
Premium Gel (Bentonite)	7	\$ 120.29	Yes				
8 5/8" Top Rubber Plug	1	\$ 111.89	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	19	\$ 117.12	No				

**Invoice Terms:**

Net 30

SubTotal: \$ 8,662.14  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,299.32)

SubTotal for Taxable Items:	\$ 5,609.92
SubTotal for Non-Taxable Items:	\$ 1,752.90
<b>Total:</b>	<b>\$ 7,362.82</b>
Tax:	\$ 465.62

8.30% Russell County Sales Tax

**Thank You For Your Business!**

**Amount Due: \$ 7,828.44**  
**Applied Payments:**  
**Balance Due: \$ 7,828.44**

Past Due Invoices are subject to a service charge (annual rate of 24%)  
 This does not include any applicable taxes unless it is listed.  
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(discount for waiting) - 200.00  
 7,628.44

# 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. 6545

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-19-12	29	15	15	Russell	KS		10:30 AM
Lease <b>Domler Kraft ETAL</b>				Location <b>Corham S Michaelis RD 1/2 E Vinto</b>			
Well No. <b>1-29</b>				Owner			
Contractor <b>Uel #16</b>				To Quality Oilwell Cementing, Inc.			
Type Job <b>Surface</b>				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 <b>12 1/4</b>		T.D. <b>729</b>		Charge To <b>Sam Gandy Jr &amp; Assoc</b>			
Csg. <b>8 5/8</b>		Depth <b>729</b>		Street			
Tbg. Size		Depth		City		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. <b>42.20</b>		Shoe Joint <b>42.20</b>		Cement Amount Ordered <b>350 lbm 39 bcc 29 bcc 1</b>		<b>1/4 #10</b>	
Meas Line		Displace <b>43 1/2 B C</b>					
<b>EQUIPMENT</b>				Common <b>350</b>			
Pumptrk <b>16</b>		No. Cementer <b>Craig</b>		Poz. Mix			
		No. Helper <b>Travis</b>		Gel. <b>7</b>			
Bulktrk		No. Driver <b>Travis</b>		Calcium <b>13</b>			
Bulktrk <b>4</b>		No. Driver <b>Heath</b>		Hulls			
<b>JOB SERVICES &amp; REMARKS</b>				Salt			
Remarks:				Flowseal <b>870</b>			
Rat Hole				Kol-Seal			
Mouse Hole				Mud CLR 48			
Centralizers				CFL-117 or CD110 CAF 38			
Baskets				Sand			
D/V or Port Collar				Handling <b>370</b>			
<b>8 5/8 on bottom. Est. Circulation.</b>				Mileage			
<b>Mix 350 SC cement + Displace Plug.</b>				<b>FLOAT EQUIPMENT</b>			
<b>Cement Circulate. Plug landed</b>				Guide Shoe <b>8 5/8</b>			
<b>@ 600#</b>				Centralizer <b>B2</b>			
				Baskets <b>B2</b>			
				AFU Inserts <b>Rattle Plate</b>			
				Float Shoe <b>Rubber Plug</b>			
				Latch Down			
				Pumptrk Charge <b>Long Surface</b>			
				Mileage <b>19</b>			
				Tax			
				Discount			
				Total Charge			
Signature <b>Randy Smart</b>							



**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665  
 Phone: 785-324-1041 fax: 785-483-1087  
 Email: cementing@ruraltel.net

Date: 9/28/2012  
 Invoice # 5367

P.O.#:  
 Due Date: 10/28/2012  
 Division: Russell

# Invoice

*signed by  
Wirt*

**Contact:**  
 Samuel Gary Jr & Associates Inc  
**Address/Job Location:**  
 Samuel Gary Jr & Associates Inc  
 1815 11th Street  
 Great Bend, KS 67530

**Reference:**  
 DUMLER-KRAFT ET AL 1-29

**Description of Work:**  
 PROD LONG STRING

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 950.65	No	Salt (Fine)	19	\$276.14	Yes
Common-Class A	225	\$ 2,937.45	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$233.21	Yes
Gilsonite	1057	\$ 1,650.66	Yes	Pump Truck Mileage-Job to Nearest Camp	19	\$197.41	No
CFL 117	176	\$ 1,128.71	Yes	Flo Seal	56	\$116.60	Yes
5 1/2" Basket	3	\$ 718.36	Yes	8 5/8" Top Rubber Plug	1	\$110.36	Yes
Bulk Truck Mat-Material Service Charge	254	\$ 528.88	No	Bulk Truck Mileage-Job to Nearest Bulk Plant	19	\$115.52	No
CD-110	117	\$ 487.23	Yes	KCL	2	\$62.17	Yes
5 1/2" Turbolizer	8	\$ 483.07	Yes				
Mud Clear	500	\$ 385.21	Yes				
Defoamer A or CAF-38	50	\$ 364.38	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$ 318.58	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 11,064.58

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,659.69)

SubTotal for Taxable Items: \$ 7,881.31

SubTotal for Non-Taxable Items: \$ 1,523.59

Total: \$ 9,404.89

Tax: \$ 654.15

8.30% Russell County Sales Tax

Amount Due: \$ 10,059.04

Applied Payments:

Balance Due: \$ 10,059.04

Past Due Invoices are subject to a service charge (annual rate of 24%)

This does not include any applicable taxes unless it is listed.

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DRLG  COMP  W/O  LOE  GG

**RECEIVED**

OCT 08 2012

SAMUEL GARY JR.  
& ASSOCIATES, INC.

Account	8300.238
Well/Prospect	
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

# 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. 5367

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-25-12	29	15	15	Russell	Ks		12:00 PM

Lease *See Remarks* Well No. *---* Location *Gorham Ks - S to Michealis Rd, 1/2 E*

Contractor *Ual Energy #6* Owner *Minto*

Type Job *Production* 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.

Hole Size *7 7/8"* T.D. *3590'*

Csg. *5 1/2" 15 1/2# New* Depth *3580.40'* Charge To *Sam Gansy Jr. + Associates*

Tbg. Size \_\_\_\_\_ Depth \_\_\_\_\_ Street \_\_\_\_\_

Tool \_\_\_\_\_ Depth \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Cement Left in Csg. *43 36'* Shoe Joint *43.36'* The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line \_\_\_\_\_ Displace *84 BLS* Cement Amount Ordered *225 ss @ 10% salt 3% Wilsonite 3% CD-110, 8% CFL-117, CAF 38.25%*

**EQUIPMENT**

Pumptrk *16* No. *16* Cementer *Travis* Helper *Travis* Common *225*

Bulktrk *8* No. *8* Driver *Lonnie* Poz. Mix \_\_\_\_\_

Bulktrk *p.u.* No. *1* Driver *Rick* Gel. *KCL 290#*

**JOB SERVICES & REMARKS**

Remarks: *Dumler - Kraft ET AL #1-29* Hulls \_\_\_\_\_

Rat Hole *pipe on bottom break Circulation* Salt *19*

Mouse Hole *pump 500 gal mud Clear 48* Flowseal *56*

Centralizers *plug Rathole w/ 30 ss plug* Kol-Seal *1057#*

Baskets *make hole w/ 15 ss, Hook to* Mud CLR 48 *500 gal*

D/V or Port Collar *5 1/2" Casing + mix 180 ss* CFL-117 or CD110 CAF 38 *50#*

*Cement. shut down wash pump* Sand *176#*

*+ lines. Released plug + Displaced* Handling *254*

*w/ 84 BLS of water.* Mileage \_\_\_\_\_

*Released + held*

**FLOAT EQUIPMENT**

*Lift pressure 800#* Guide Shoe \_\_\_\_\_

*Land plug to 1400 #* Centralizer *8 turbo's*

Baskets *3*

AFU inserts \_\_\_\_\_

Float Shoe *1*

Latch Down *1*

*1-Rotating head Assy*

Pumptrk Charge \_\_\_\_\_

Mileage *19 Prod Long String*

Tax

Discount

Total Charge

X Signature *[Signature]*





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Assoc Inc**

1515 Wynkoop Ste700  
Denver CO 80202

ATTN: Chris Mitchell

### **Dumler-Kraft etal #1**

### **29-15s-15w Russell,KS**

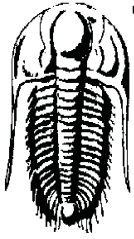
Start Date: 2012.09.22 @ 21:00:10

End Date: 2012.09.23 @ 04:50:34

Job Ticket #: 48685                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.09.27 @ 13:17:11



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

ATTN: Chris Mitchell

Job Ticket: 48685

**DST#: 1**

Test Start: 2012.09.22 @ 21:00:10

## GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:10:05

Time Test Ended: 04:50:34

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

**Interval: 3198.00 ft (KB) To 3228.00 ft (KB) (TVD)**

Reference Elevations: 1919.00 ft (KB)

Total Depth: 3228.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8369**

**Inside**

Press@RunDepth: 16.69 psig @ 3199.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.22

End Date:

2012.09.23

Last Calib.: 2012.09.23

Start Time: 21:00:10

End Time:

04:50:34

Time On Btm: 2012.09.22 @ 23:05:35

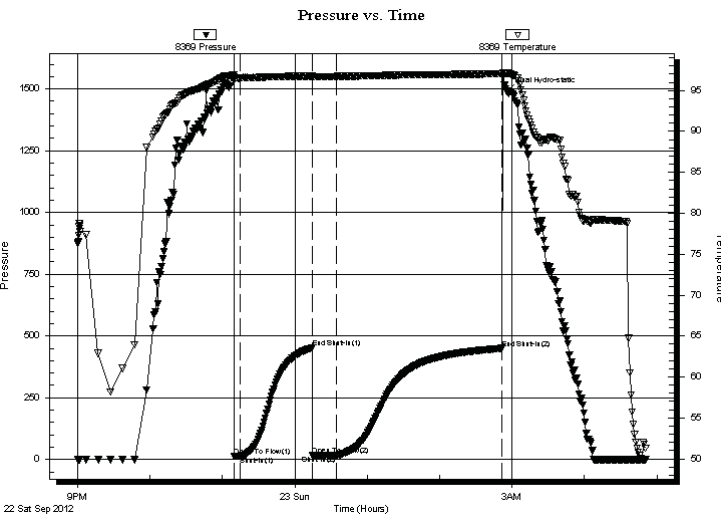
Time Off Btm: 2012.09.23 @ 02:56:04

TEST COMMENT: 5-IFP-very w k surface bl

60-ISIP-no bl

20-FFP-no bl

135-FSIP-no bl



## PRESSURE SUMMARY

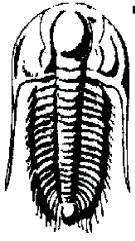
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1504.38	96.80	Initial Hydro-static
5	13.55	96.59	Open To Flow (1)
10	14.51	96.52	Shut-In(1)
69	452.26	96.76	End Shut-In(1)
69	16.45	96.57	Open To Flow (2)
89	16.69	96.72	Shut-In(2)
226	450.06	97.02	End Shut-In(2)
231	1488.52	97.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud w/show of oil	0.03

## Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

29-15s-15w Russell,KS

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

ATTN: Chris Mitchell

Job Ticket: 48685

**DST#: 1**

Test Start: 2012.09.22 @ 21:00:10

### GENERAL INFORMATION:

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Reference Elevations: 1919.00 ft (KB)

Total Depth: 3228.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8700 Outside**

Press@RunDepth: psig @ 3199.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.22

End Date: 2012.09.23

Last Calib.: 2012.09.23

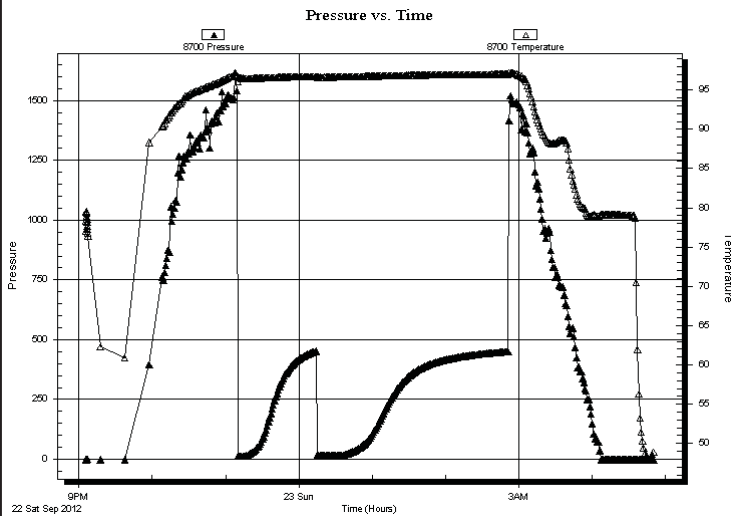
Start Time: 21:05:40

End Time: 04:50:04

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 5-IFP-very w k surface bl  
60-ISIP-no bl  
20-FFP-no bl  
135-FSIP-no bl



### PRESSURE SUMMARY

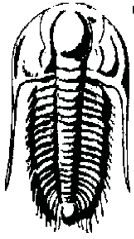
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud w /show of oil	0.03

### Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

29-15s-15w Russell,KS

1515 Wynkoop Ste700  
Denver CO 80202

Dumler-Kraft etal #1

Job Ticket: 48685

DST#: 1

ATTN: Chris Mitchell

Test Start: 2012.09.22 @ 21:00:10

## GENERAL INFORMATION:

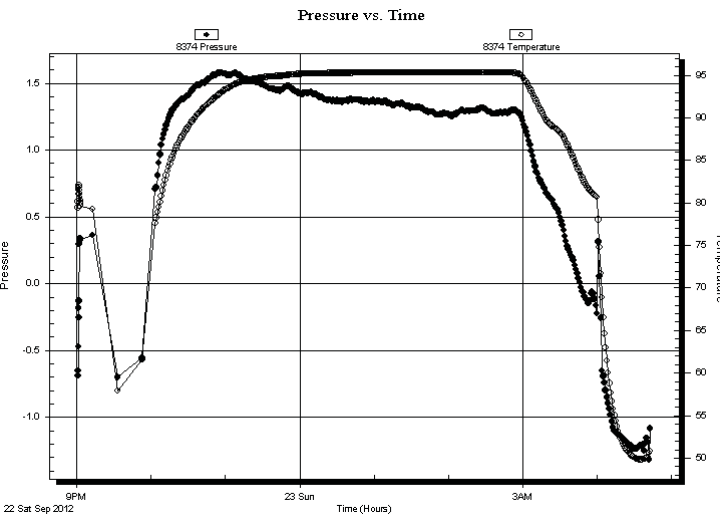
Formation: **LKC C-D**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:10:05  
 Time Test Ended: 04:50:34  
 Interval: **3198.00 ft (KB) To 3228.00 ft (KB) (TVD)**  
 Total Depth: 3228.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ray Schwager  
 Unit No: 42  
 Reference Elevations: 1919.00 ft (KB)  
 1909.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8374

### Fluid

Press@RunDepth: psig @ 3163.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.09.22 End Date: 2012.09.23 Last Calib.: 2012.09.23  
 Start Time: 21:00:49 End Time: 04:43:43 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 5-IFP-very w k surface bl  
 60-ISIP-no bl  
 20-FFP-no bl  
 135-FSIP-no bl



## PRESSURE SUMMARY

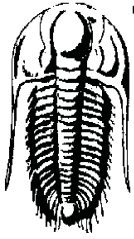
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud w/show of oil	0.03

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

Job Ticket: 48685

**DST#: 1**

ATTN: Chris Mitchell

Test Start: 2012.09.22 @ 21:00:10

## Tool Information

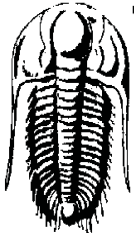
Drill Pipe:	Length: 3188.00 ft	Diameter: 3.80 inches	Volume: 44.72 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 44.72 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3198.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Recorder	0.00	8374	Fluid	3163.00	
Blank Spacing	5.00			3168.00	
Change Over Sub	1.00			3169.00	
Shut In Tool	5.00			3174.00	
Sampler	2.00			3176.00	
Hydraulic tool	5.00			3181.00	
Jars	5.00			3186.00	
Safety Joint	2.00			3188.00	
Packer	5.00			3193.00	35.00 Bottom Of Top Packer
Packer	5.00			3198.00	
Stubb	1.00			3199.00	
Recorder	0.00	8369	Inside	3199.00	
Recorder	0.00	8700	Outside	3199.00	
Perforations	26.00			3225.00	
Bullnose	3.00			3228.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 65.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

Job Ticket: 48685

**DST#: 1**

ATTN: Chris Mitchell

Test Start: 2012.09.22 @ 21:00:10

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud w/show of oil	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data: 60PSI 1500ML Mud trace of oil

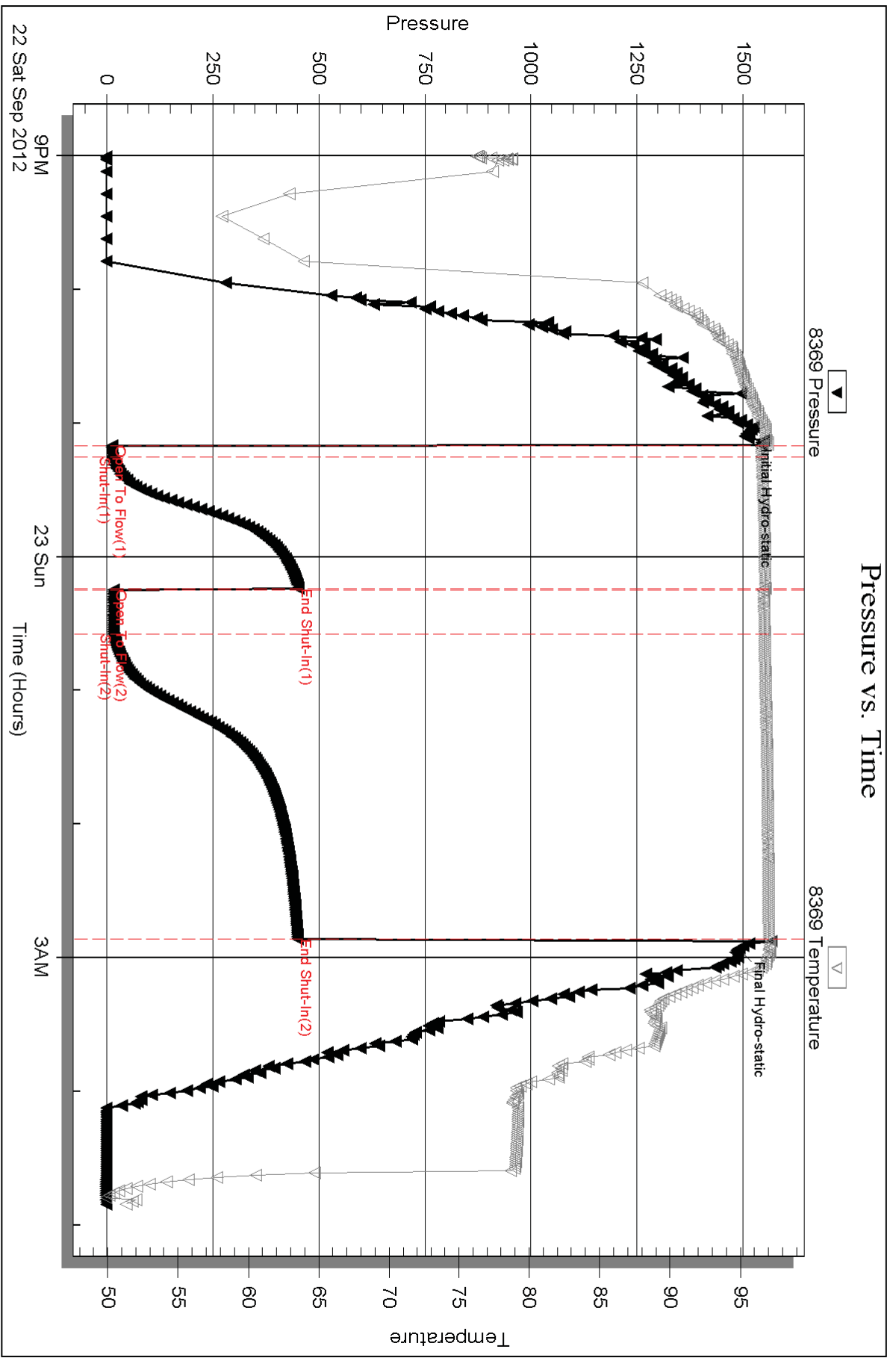
Serial #: 8369

Inside

Samuel Gary Jr & Assoc Inc

Dunbar-Kraft etal #1

DST Test Number: 1

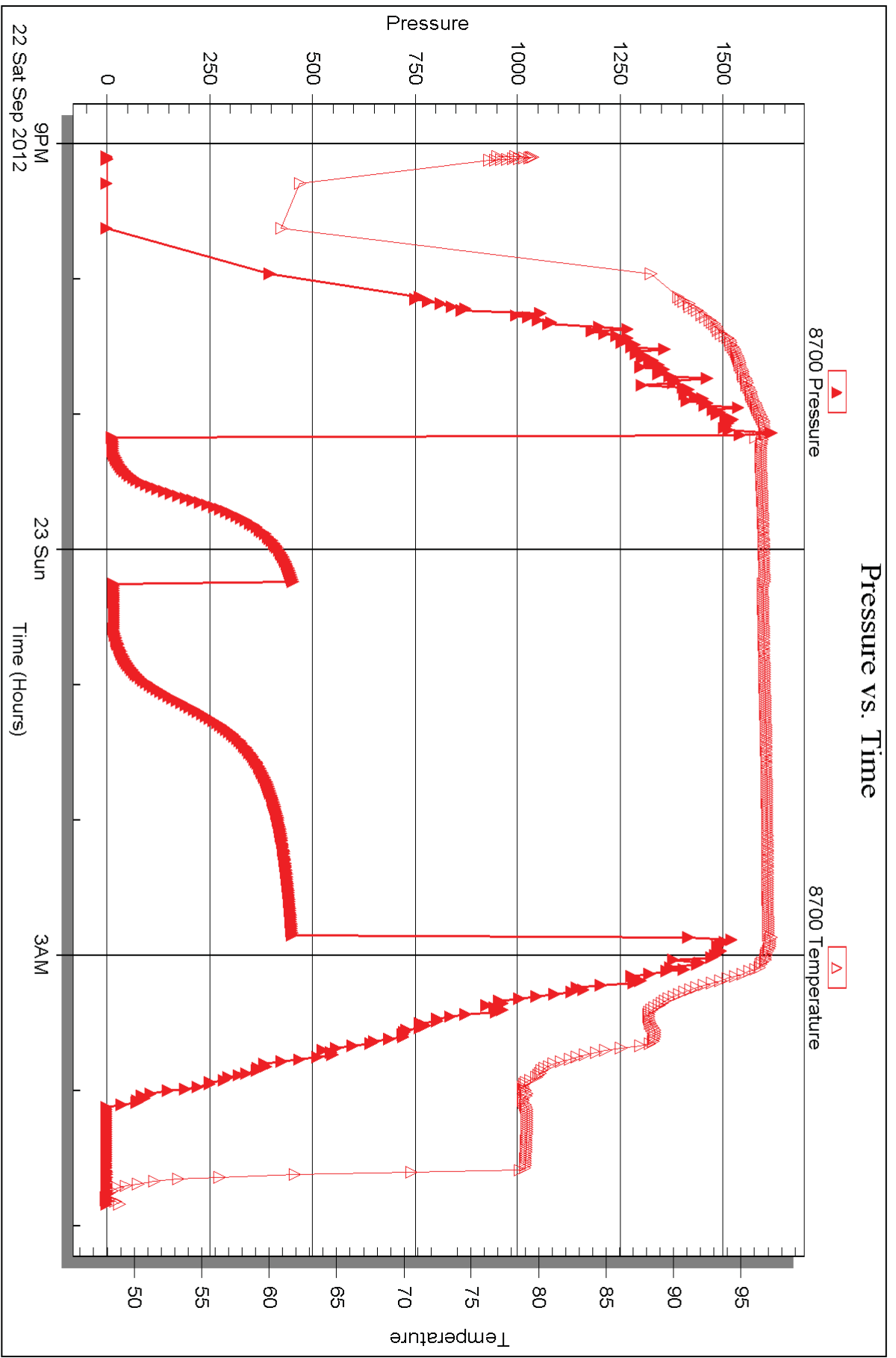


Serial #: 8700

Outside Samuel Gary Jr & Assoc Inc

Dunler-Kraft etal #1

DST Test Number: 1





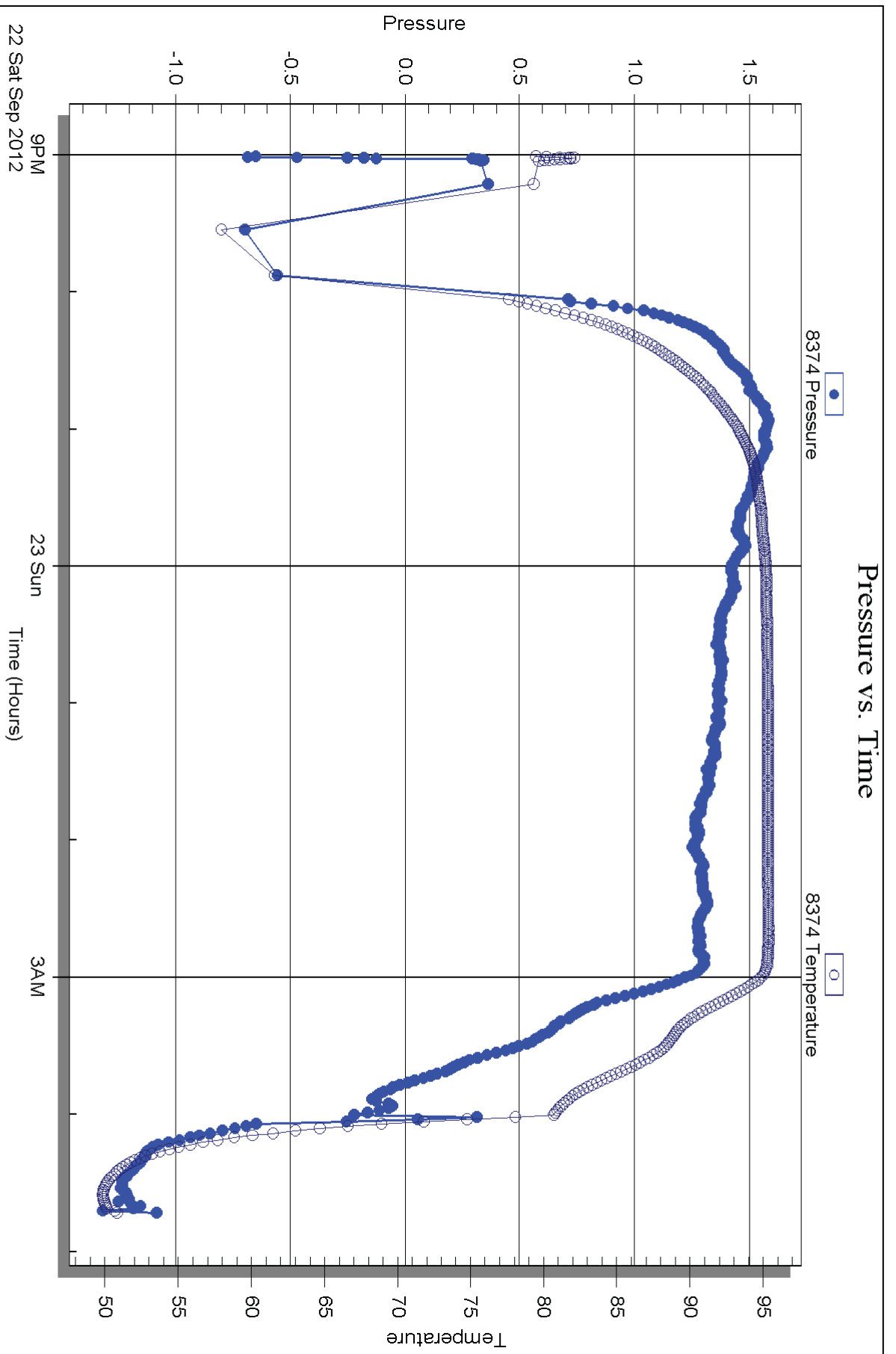
Serial #: 8374

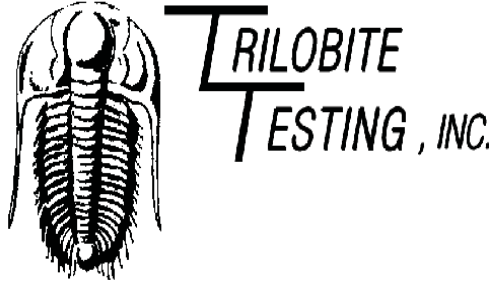
Fluid

Samuel Gary Jr & Assoc Inc

Dumler-Kraft etal #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Assoc Inc**

1515 Wynkoop Ste700  
Denver CO 80202

ATTN: Chris Mitchell

### **Dumler-Kraft etal #1**

#### **29-15s-15w Russell,KS**

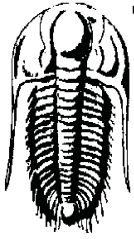
Start Date: 2012.09.24 @ 14:45:08

End Date: 2012.09.24 @ 23:26:33

Job Ticket #: 48686                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.09.27 @ 13:16:21



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

ATTN: Chris Mitchell

Job Ticket: 48686

**DST#: 2**

Test Start: 2012.09.24 @ 14:45:08

## GENERAL INFORMATION:

Formation: **LKC I-base**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:33

Time Test Ended: 23:26:33

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 42

**Interval: 3330.00 ft (KB) To 3418.00 ft (KB) (TVD)**

Reference Elevations: 1919.00 ft (KB)

Total Depth: 3587.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8369**

**Inside**

Press@RunDepth: 93.23 psig @ 3336.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.24

End Date:

2012.09.24

Last Calib.:

2012.09.24

Start Time: 14:45:08

End Time:

23:26:33

Time On Btm:

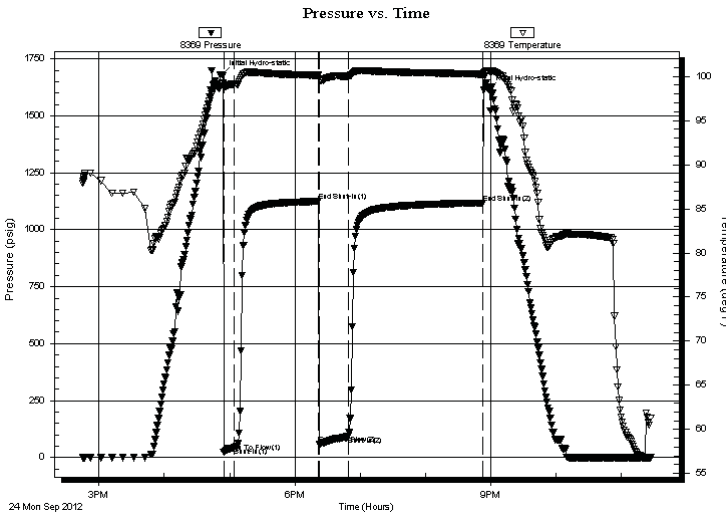
2012.09.24 @ 16:52:33

Time Off Btm:

2012.09.24 @ 20:58:02

**TEST COMMENT:** 10-IFP-w k to a gd bl 1/2" to 8" bl  
75-ISIP-no bl  
30-FFP-1/4" to bottom of bucket in 14 min  
120-FSIP-3/4" bl bk

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1680.49	99.20	Initial Hydro-static
2	23.42	98.73	Open To Flow (1)
12	44.63	99.13	Shut-In(1)
89	1124.84	100.14	End Shut-In(1)
90	58.58	99.71	Open To Flow (2)
117	93.23	100.04	Shut-In(2)
240	1118.03	100.26	End Shut-In(2)
246	1613.56	100.61	Final Hydro-static

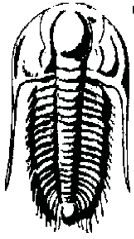
## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	255' Gip	0.00
55.00	O&GCM 5%G15%O80%M	0.77
130.00	GMO 15%G10%M75%O	1.82

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

1515 Wynkoop Ste700  
Denver CO 80202

ATTN: Chris Mitchell

**29-15s-15w Russell,KS**

**Dumler-Kraft etal #1**

Job Ticket: 48686

**DST#: 2**

Test Start: 2012.09.24 @ 14:45:08

## GENERAL INFORMATION:

Formation: **LKC I-base**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:54:33  
 Time Test Ended: 23:26:33  
 Interval: **3330.00 ft (KB) To 3418.00 ft (KB) (TVD)**  
 Total Depth: 3587.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Ray Schwager  
 Unit No: 42  
 Reference Elevations: 1919.00 ft (KB)  
 1909.00 ft (CF)  
 KB to GR/CF: 10.00 ft

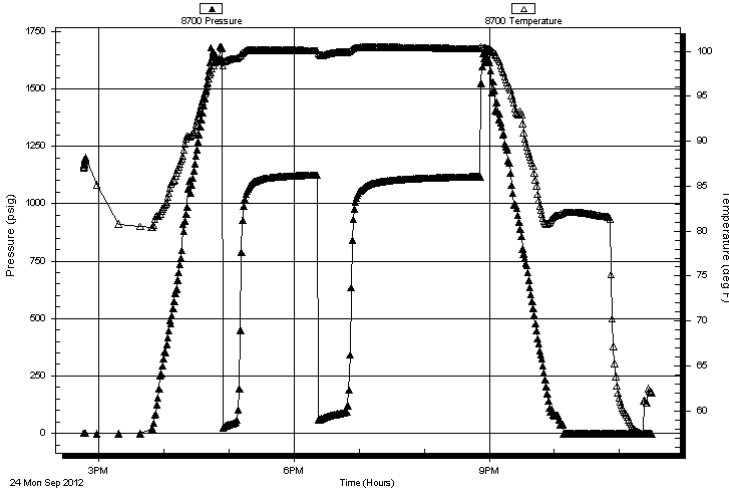
**Serial #: 8700**

**Outside**

Press@RunDepth: psig @ 3336.00 ft (KB)  
 Start Date: 2012.09.24 End Date: 2012.09.24  
 Start Time: 14:46:08 End Time: 23:30:03  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.09.24  
 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 10-IFP-w k to a gd bl 1/2" to 8" bl  
 75-ISIP-no bl  
 30-FFP-1/4" to bottom of bucket in 14 min  
 120-FSIP-3/4" bl bk

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

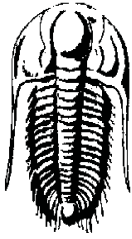
## Recovery

Length (ft)	Description	Volume (bbl)
0.00	255' Gip	0.00
55.00	O&GCM 5%G15%O80%M	0.77
130.00	GMO 15%G10%M75%O	1.82

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr & Assoc Inc

29-15s-15w Russell, KS

1515 Wynkoop Ste700  
Denver CO 80202

Dumler-Kraft etal #1

ATTN: Chris Mitchell

Job Ticket: 48686

DST#: 2

Test Start: 2012.09.24 @ 14:45:08

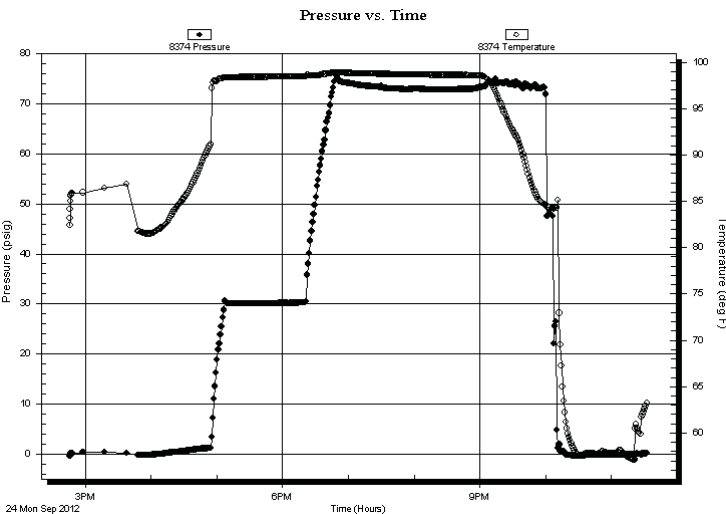
## GENERAL INFORMATION:

Formation: **LKC I-base**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 16:54:33  
Time Test Ended: 23:26:33  
Interval: **3330.00 ft (KB) To 3418.00 ft (KB) (TVD)**  
Total Depth: 3587.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Straddle (Reset)  
Tester: Ray Schwager  
Unit No: 42  
Reference Elevations: 1919.00 ft (KB)  
1909.00 ft (CF)  
KB to GR/CF: 10.00 ft

## Serial #: 8374 Below (Straddle)

Press@RunDepth: psig @ 3430.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2012.09.24 End Date: 2012.09.24 Last Calib.: 2012.09.24  
Start Time: 14:45:58 End Time: 23:32:23 Time On Btm:  
Time Off Btm:

TEST COMMENT: 10-IFP-w k to a gd bl 1/2" to 8" bl  
75-ISIP-no bl  
30-FFP-1/4" to bottom of bucket in 14 min  
120-FSIP-3/4" bl bk



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

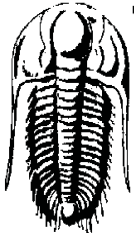
## Recovery

Length (ft)	Description	Volume (bbl)
0.00	255' Gip	0.00
55.00	O&GCM 5%G15%O80%M	0.77
130.00	GMO 15%G10%M75%O	1.82

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell, KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

Job Ticket: 48686

**DST#: 2**

ATTN: Chris Mitchell

Test Start: 2012.09.24 @ 14:45:08

**GENERAL INFORMATION:**

Formation: **LKC I-base**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:33

Time Test Ended: 23:26:33

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3330.00 ft (KB) To 3418.00 ft (KB) (TVD)**

Reference Elevations: 1919.00 ft (KB)

Total Depth: 3587.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8736 Fluid**

Press@RunDepth: psig @ 3295.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.24

End Date: 2012.09.24

Last Calib.: 2012.09.24

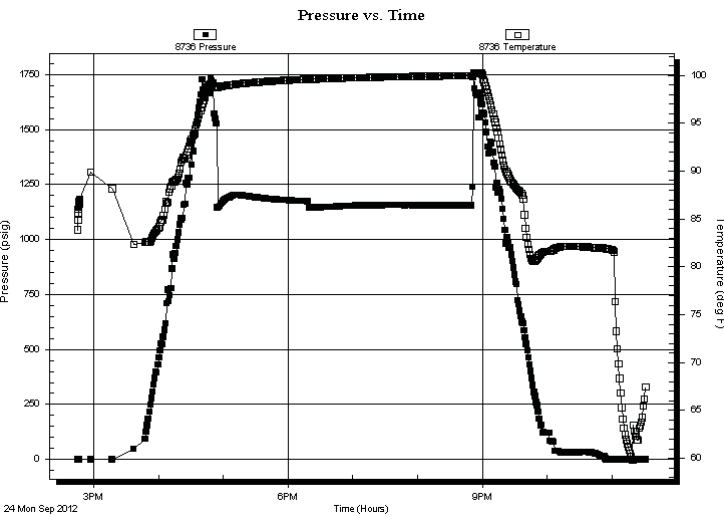
Start Time: 14:45:24

End Time: 23:30:49

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 10-IFP-w k to a gd bl 1/2" to 8" bl  
75-ISIP-no bl  
30-FFP-1/4" to bottom of bucket in 14 min  
120-FSIP-3/4" bl bk



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

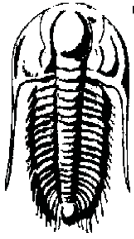
**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	255' Gip	0.00
55.00	O&GCM 5%G15%O80%M	0.77
130.00	GMO 15%G10%M75%O	1.82

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

Job Ticket: 48686

**DST#: 2**

ATTN: Chris Mitchell

Test Start: 2012.09.24 @ 14:45:08

## Tool Information

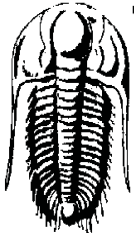
Drill Pipe:	Length: 3301.00 ft	Diameter: 3.80 inches	Volume: 46.30 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 46.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3330.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	3418.00 ft			
Interval between Packers:	88.00 ft			
Tool Length:	296.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Recorder	0.00	8736	Fluid	3295.00		
Blank Spacing	5.00			3300.00		
Change Over Sub	1.00			3301.00		
Shut In Tool	5.00			3306.00		
Sampler	2.00			3308.00		
Hydraulic tool	5.00			3313.00		
Jars	5.00			3318.00		
Safety Joint	2.00			3320.00		
Packer	5.00			3325.00	35.00	Bottom Of Top Packer
Packer	5.00			3330.00		
Stubb	1.00			3331.00		
Perforations	5.00			3336.00		
Recorder	0.00	8369	Inside	3336.00		
Recorder	0.00	8700	Outside	3336.00		
Blank Spacing	64.00			3400.00		
Perforations	14.00			3414.00		
Blank Off Sub	1.00			3415.00		
Blank Spacing	3.00			3418.00	88.00	Tool Interval
Packer	5.00			3423.00		
Stubb	1.00			3424.00		
Perforations	6.00			3430.00		
Recorder	0.00	8374	Below	3430.00		
Blank Spacing	158.00			3588.00		
Bullnose	3.00			3591.00	173.00	Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>296.00</b>					



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Samuel Gary Jr & Assoc Inc

**29-15s-15w Russell,KS**

1515 Wynkoop Ste700  
Denver CO 80202

**Dumler-Kraft etal #1**

Job Ticket: 48686

**DST#: 2**

ATTN: Chris Mitchell

Test Start: 2012.09.24 @ 14:45:08

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.74 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5900.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	255' Gip	0.000
55.00	O&GCM 5%G15%O80%M	0.772
130.00	GMO 15%G10%M75%O	1.824

Total Length: 185.00 ft      Total Volume: 2.596 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler Data: 380 PSI 330MLgas 1650MLOil 220ML mud



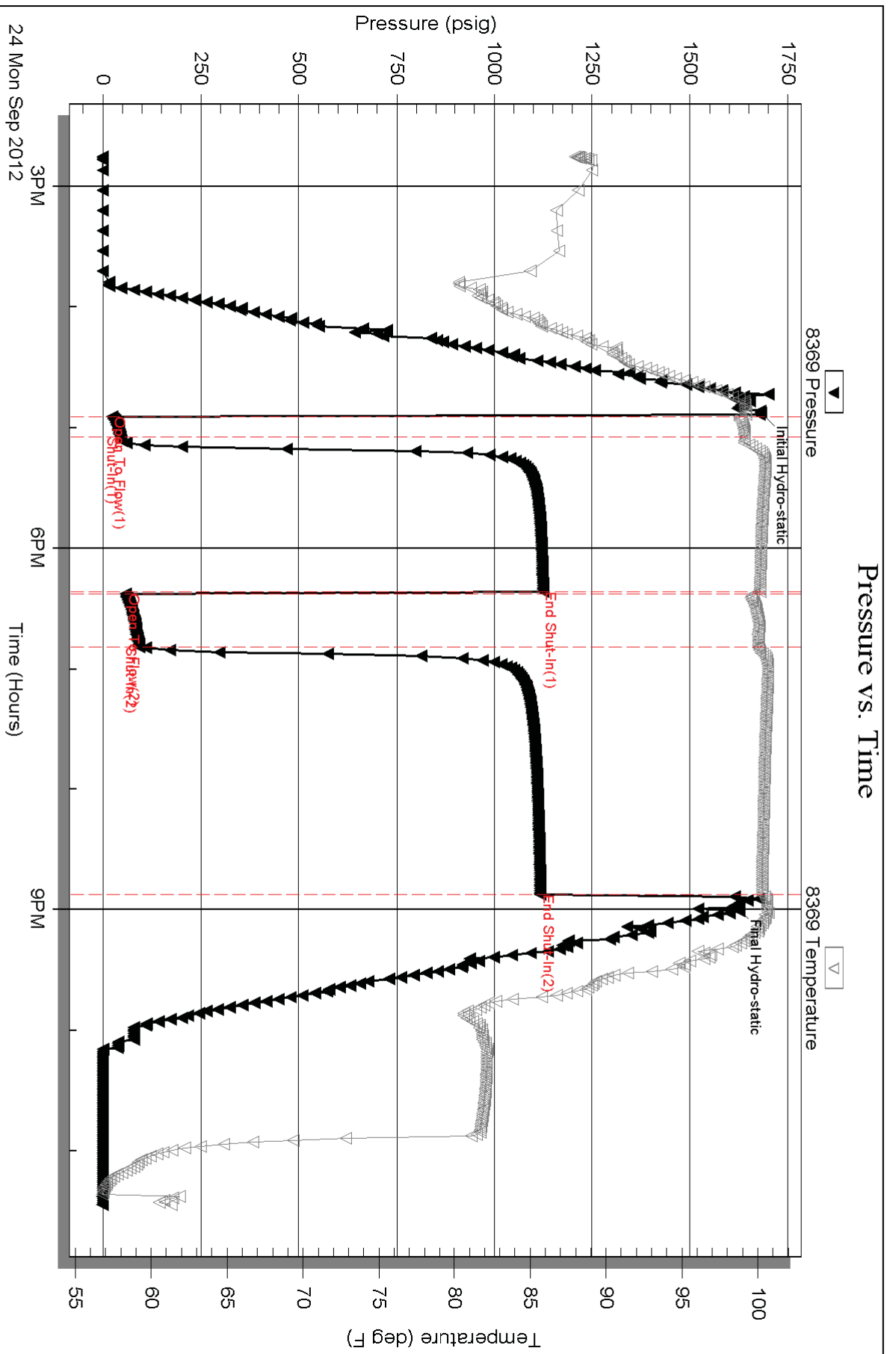
Serial #: 8369

Inside

Samuel Gary Jr & Assoc Inc

Dunbar-Kraft etal #1

DST Test Number: 2

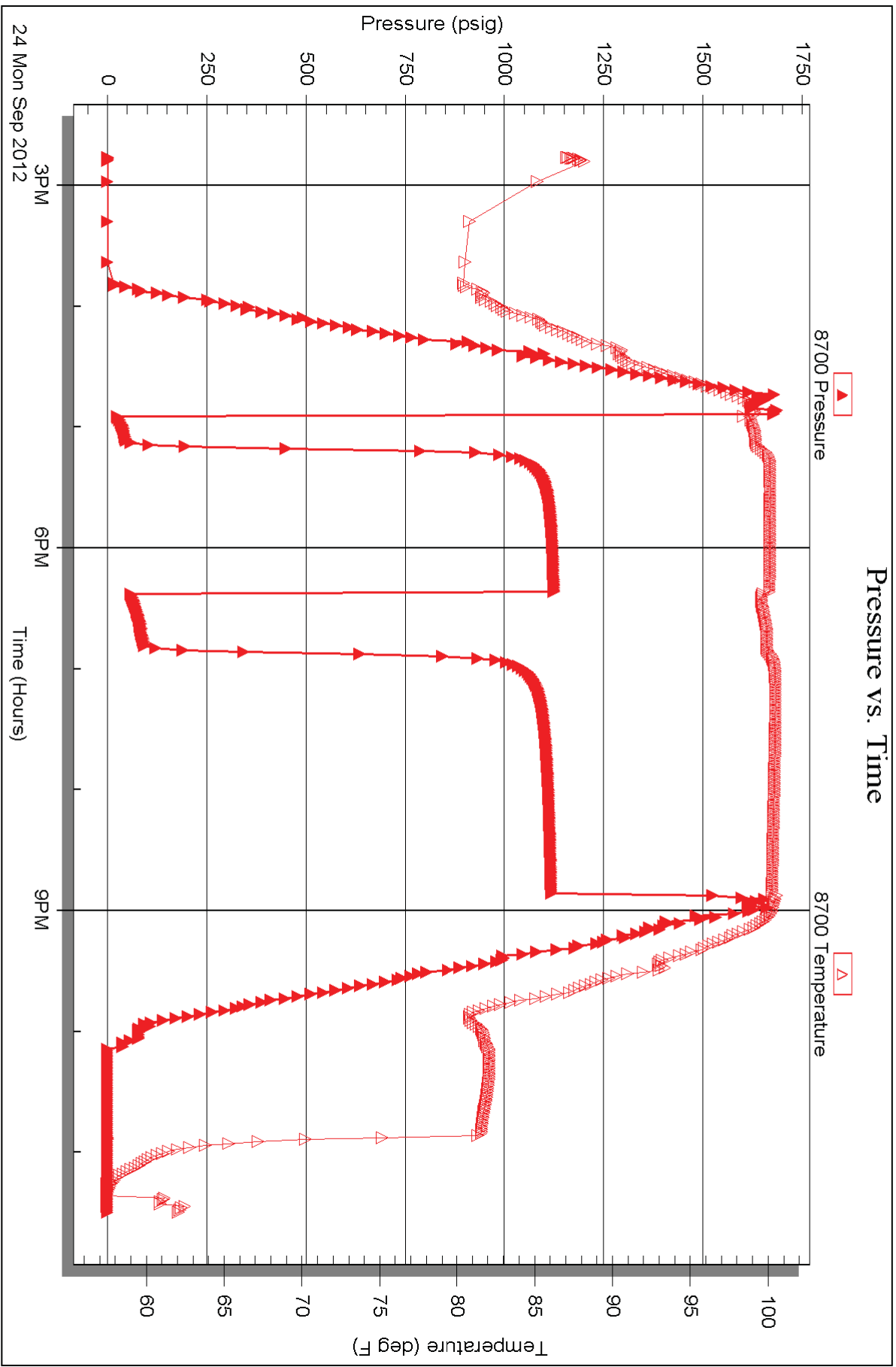


Serial #: 8700

Outside Samuel Gary Jr & Assoc Inc

Dumler-Kraft etal #1

DST Test Number: 2

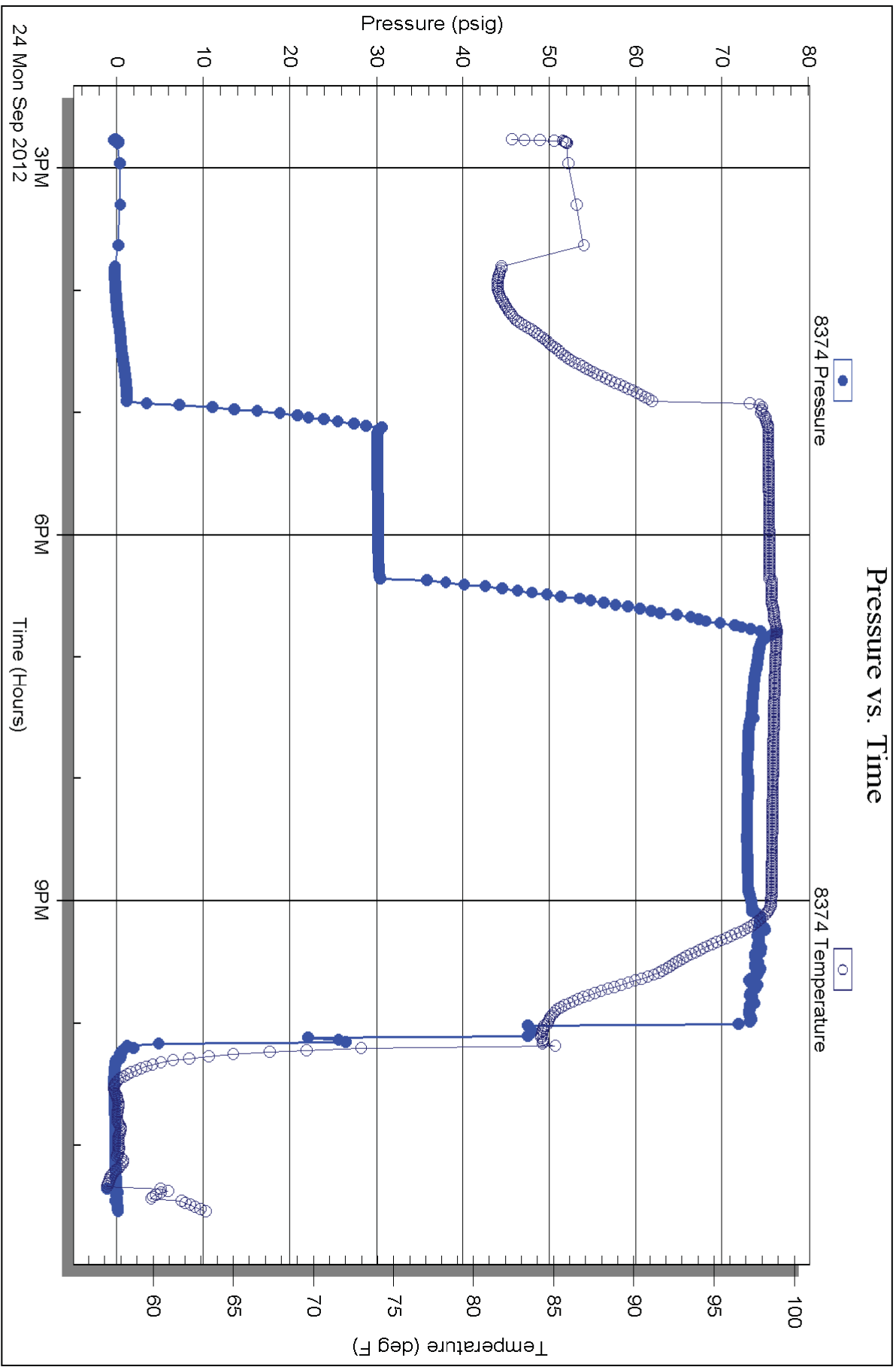


Serial #: 8374

Below (Stratton) Gary Jr & Assoc Inc

Dumler-Kraft etal #1

DST Test Number: 2



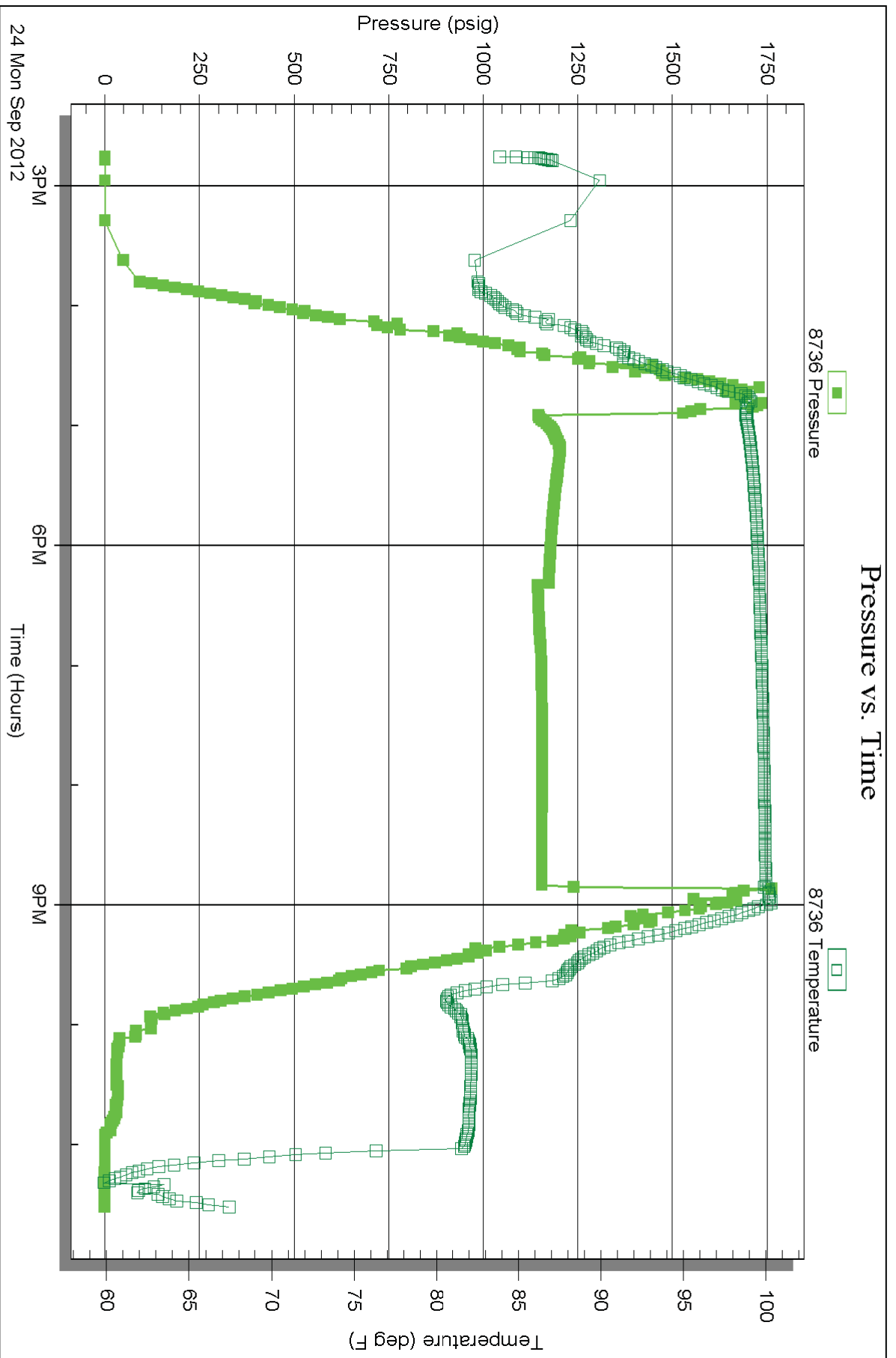
Serial #: 8736

Fluid

Samuel Gary Jr & Assoc Inc

Dumler-Kraft etal #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 48686

Printed: 2012.09.27 @ 13:16:28



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

Well Name: SGA DUMLER-KRAFT ET AL 1-29  
 Location: SEC. 29 - 15S - 15W RUSSELL CO., KANSAS  
 License Number: 15-167-23824-0000  
 Spud Date: SEPT 18, 2012  
 Surface Coordinates: 330 FSL/ 2666 FEL  
 Region: Wildcat  
 Drilling Completed: SEPT 24, 2012

Bottom Hole Coordinates:  
 Ground Elevation (ft): 1909' K.B. Elevation (ft): 1919'  
 Logged Interval (ft): 2850' To: 3590' Total Depth (ft): 3590'  
 Formation: Lansing, Arbuckle  
 Type of Drilling Fluid: Natural Chemical

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

Company: Samuel Gary Jr. & Assoc.  
 Address: 1515 Wynkoop, Ste. # 700  
 Denver, Colo. 80202  
 Geo: Chris Mitchell

**GEOLOGIST**

Name: Aaron Suelter  
 Company: Earth Tech OGL, Inc.  
 Address: PO Box 683  
 Hooker, Okla . 73945  
 Off. 888-543-8378 Cell- 580-754-0062

**DST's Report**

DST#1 3198'-3228' 5 60 20 135

IH- 1504, FH- 1488/ IF-13 TO 16/ FF- 14 TO 16/ ISI- 452, FSI 450  
 IF- V/W SURFACE BLOW/ ISI- N/B/ FF- N/B/ FSI- N/B  
 RECOVERY- 2' MUD W/SHOW OF OIL  
 SAMPLER- MUD 1500 ML, TR OIL

**DST's Report**

**DST's Report**

**ROCK TYPES**

Anhy  
 Bent  
 Brec  
 Cht  
 Clyst  
 Coal  
 Congl  
 Dol

Gyp  
 Igne  
 Lmst  
 Meta  
 Mrlst  
 Salt  
 Shale  
 Shcol

Shgy  
 Slst  
 Ss  
 Till  
 Carb sh  
 Dol  
 Dtd  
 Gry sh

Sandylms  
 Shale  
 Slstn  
 Shlyslts  
 Sltysh  
 Lms

**ACCESSORIES**

**MINERAL**

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Slty

**FOSSIL**

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

**STRINGER**

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

**TEXTURE**

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

**OTHER SYMBOLS**

**POROSITY TYPE**

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

**SORTING**

- Well
- Moderate
- Poor

**ROUNDING**

- Rounded
- Subrnd
- Subang

- Angular

**OIL SHOWS**

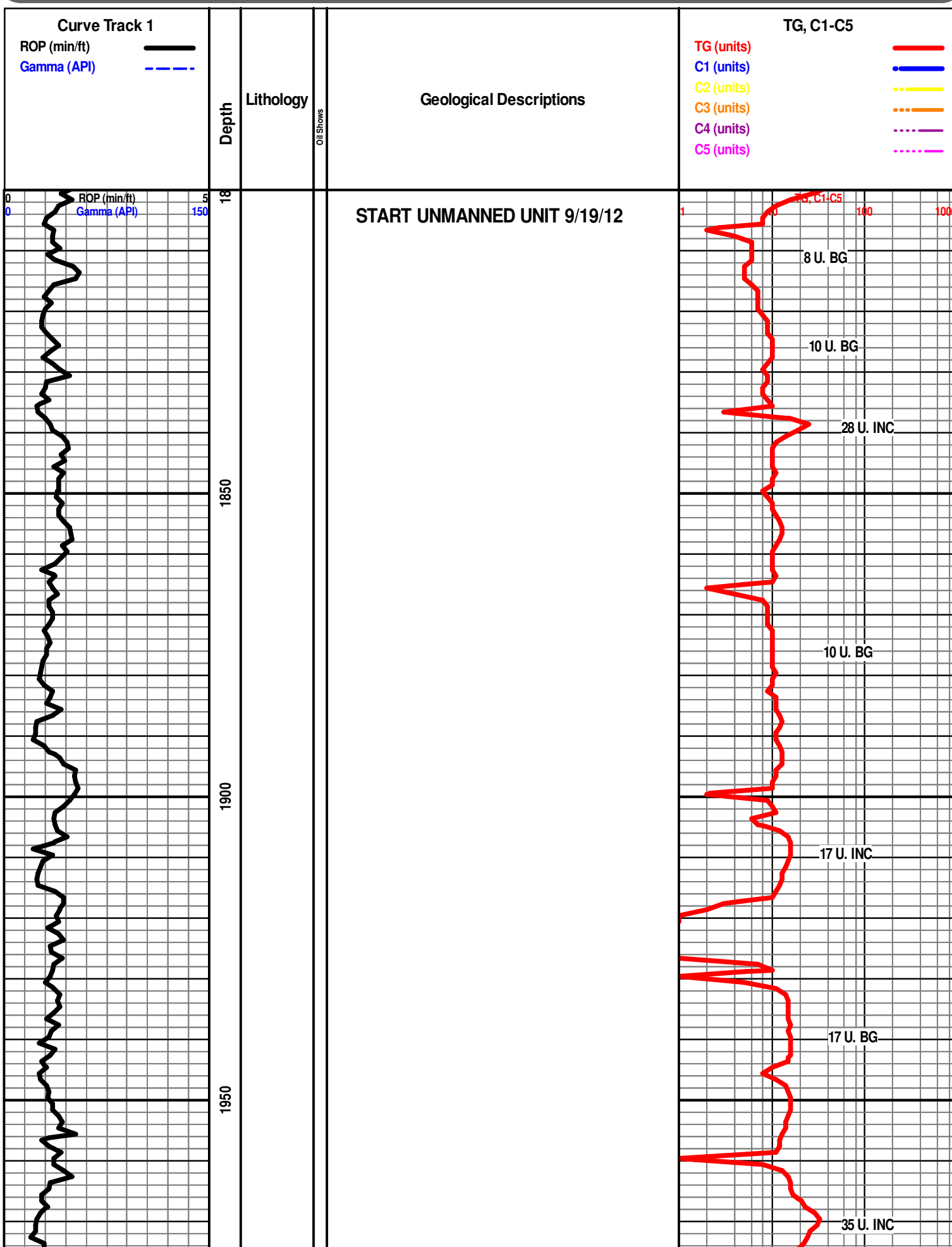
- Even
- Spotted
- Ques
- Dead
- Gas show

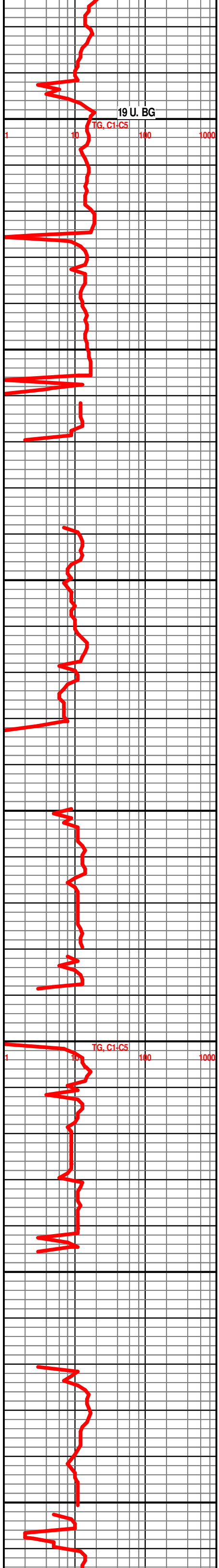
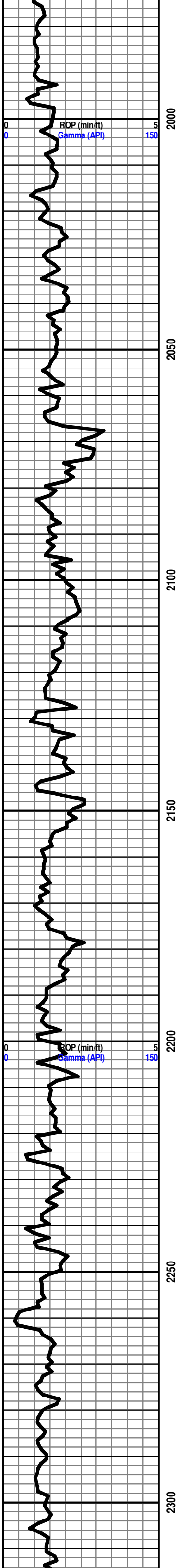
**INTERVALS**

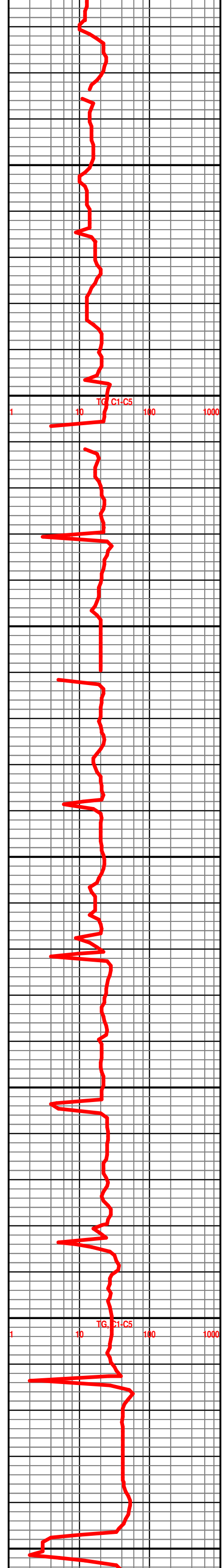
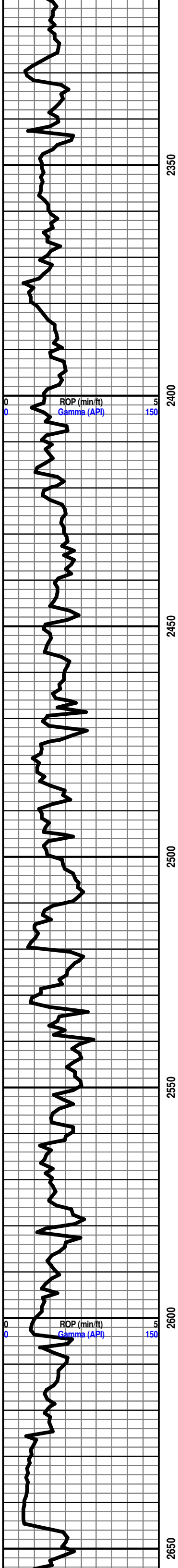
- Core
- Dst
- Dst

**EVENTS**

- Rft
- Sidewall

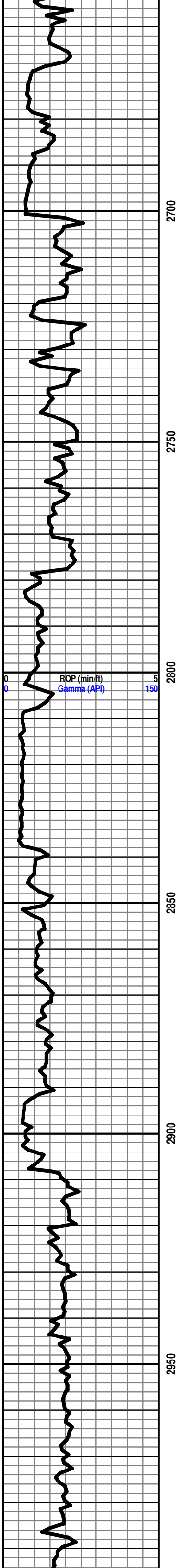






BRS 2645' -726'





2700

2750

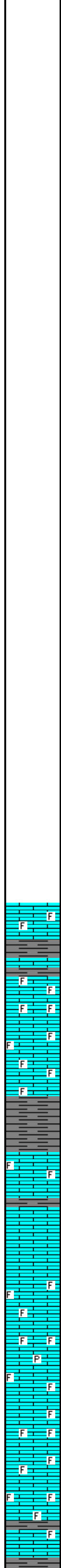
2800

2850

2900

2950

ROP (min/ft)  
Gamma (API)



**HOWARD 2838' -919**

**START 24 HOUR MANNED UNIT 9/21/12**  
 LS- LT TN TO TN, HD DNS TO BRIT, F XLN RE-XLN MTRX,  
 IMBD FOSS FRG IP, TR IMBD CALC XLS IP, NO VIS FLO,  
 NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN RE-XLN MTRX,  
 S-SUCRO IP, ABDT IMBD FOSS FRG THRU, NO VIS FLO,  
 NO VIS POR, NO VIS SHOW

LS- GY LT TN TO TN, HD DNS TO V/BRIT IP, F XLN RE-XLN  
 MTRX, S-SUCRO IP, TR S-CHLKY IP, IMBD FOSS FRG  
 THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

**SEVERY 2892' -973'**

SH- GRN GY TO DK GY, FRM SPLNTY, SLTY TXT

**TOPEKA 2904' -985'**

LS- OFF WHT TO LT TN, FRM DNS TO BRIT, F XLN CHLKY  
 MTRX, S-SUCRO IP, SCAT IMBD FOSS FRG THRU, SFT  
 WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS  
 CUT OR SHOW

LS- OFF WHT TO TN, HD DNS TO BRIT, F XLN SUCRO  
 MTRX, S-CHLKY IP, NO VIS FLO, NO VIS POR, NO VIS  
 SHOW

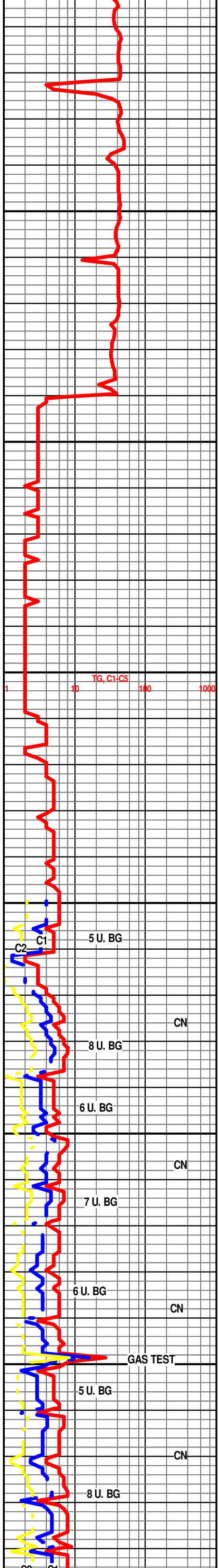
LS- TN TO GY, HD DNS TO BRIT, F XLN SUCRO MTRX,  
 S-CHLKY IP, TR SCAT IMBD FOSS FRG THRU, NO VIS  
 FLO, NO VIS POR, NO VIS SHOW

LS- TN TO GY, HD DNS TO BRIT, F TO MD XLN RE-XLN  
 MTRX, S-SUCRO IP, SCAT IMBD FOSS FRG THRU, SLI TR  
 IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- TN TO GY, HD DNS TO BRIT, F XLN RE-XLN MTRX,  
 ABDT IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR,  
 NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN RE-XLN MTRX,  
 S-SUCRO, ABDT IMBD FOSS FRG THRU, NO VIS FLO, NO  
 VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT, F XLN SUCRO MTRX,  
 SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO  
 VIS SHOW



TG, C1-C5

C2 C1 5 U. BG

CN

8 U. BG

6 U. BG

CN

7 U. BG

6 U. BG

CN

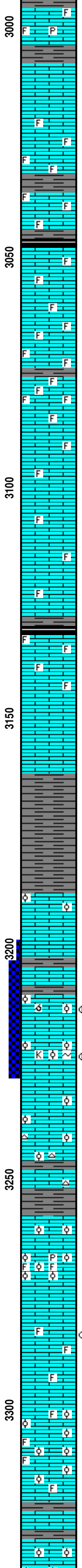
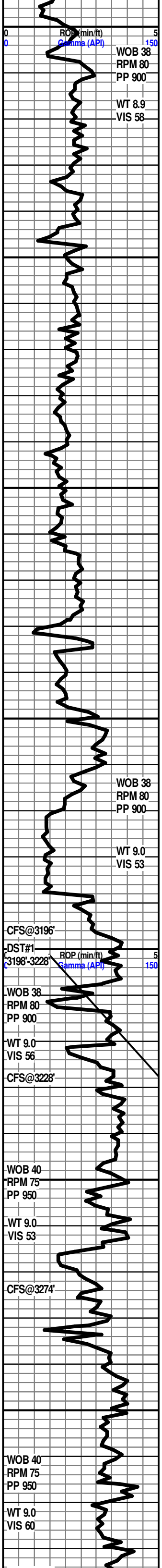
GAS TEST

5 U. BG

CN

8 U. BG

C2 C1



LS- OFF WHT TO LT TN, HD DNS, V/F TO F XLN MTRX, TR IMBD FOSS FRG IP, SLI TR IMBD CALC XLS IP, SLI TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

**LE COMPTON 3007' -1088**

LS- LT TN TO TN, HD DNS, V/F TO F XLN MTRX, S-CHLKY IP, IMBD FOSS FRG THRU, TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN, HD DNS TO BRIT, F XLN RE-XLN MTRX, S-CHLKY IP, IMBD FOSS FRG THRU, TR IMBD PYR IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN YEL TO BRWN, FRM BLKY, SLTY TXT

LS- GY TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, RE-XLN IP, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- BLCK, SFT CARB

LS- LT TN TO TN, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, S-CHLKY, IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN RE-XLN MTRX, S-CHLKY, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD FOSS FRG THRU, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, FRM DNS TO BRIT, F XLN CHLKY MTRX, SCAT IMBD FOSS FRG THRU, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, SLI TR SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, S-SUCRO IP, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

**HEEBNER 3130' -1211'**

SH- BLCK, SFT, CARB

LS- LT TN TO DK TN, HD DNS, F XLN RE-XLN MTRX, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS, V/F TO F XLN MTRX, S-CHLKY IP, SLI TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

**DOUGLAS 3162' -1243'**

SH- GRN BRWN GY TO DK GY, FRM BLKY, SMTH TXT

**LANSING 3188' -1269'**

LS- LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY, TR IMBD OOL IP, TR IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- LT GY TO GY, FRM BLKY, SMTH TXT

**LANSING "C" 3209' -1290'**

3211'-3213' LS- OFF WHT TO CRM W/ TN OIL STN IN 30%, FRM DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY, IMBD OOL IP, SLI TR OOLMLD IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, PR OOLMLD POR IN 3%, PR MICRO VUG POR IN 2%, PR TO FR FLSH CUT IN 25%, FR SLW STRM IN 25%, NO LCH ON DISH

3221'-3224' LS- OFF WHT TO CRM W/ TN OIL STN IN 20%, LOS IN 1%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY IP, IMBD OOL THRU, SLI TR IMBD KAOL OR GLAUC, BRT YEL GLD FLO IN 3%, PR MICRO VUG POR IN 4%, FR VUG POR IN 2%, FR FLSH CUT IN 30%, FR TO GD SLW STRM IN 30%, V/ LT TN LCH ON DISH

LS- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO IP, IMBD FOSS FRG THRU, TR IMBD CALC XLS IP, OFF WHT TO LT GY CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH-BRWN GRN TO GY, FRM BLKY, SLTY TXT

**LANSING "F" 3258' -1339'**

LS- OFF WHT TO LT TN, HD DNS TO BRIT IP, F XLN MTRX, S-SUCRO, IMBD OOL IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

3266'-3269' LS- LT TN TO TN W/ TN OIL STN IN 15%, HD DNS TO BRIT IP, F XLN MTRX, S-SUCRO IP, S-CHLKY IP, ABDT IMBD OOL THRU, IMBD FOSS FRG IP, TR IMBD PYR IP, DUL YEL GLD FLO IN 10%, FR TO GD VUG POR IN 5%, PR INTR OOL POR IN 1%, WK FLSH CUT IN 10%, PR TO FR SLW STRM IN 20%, NO LCH ON DISH

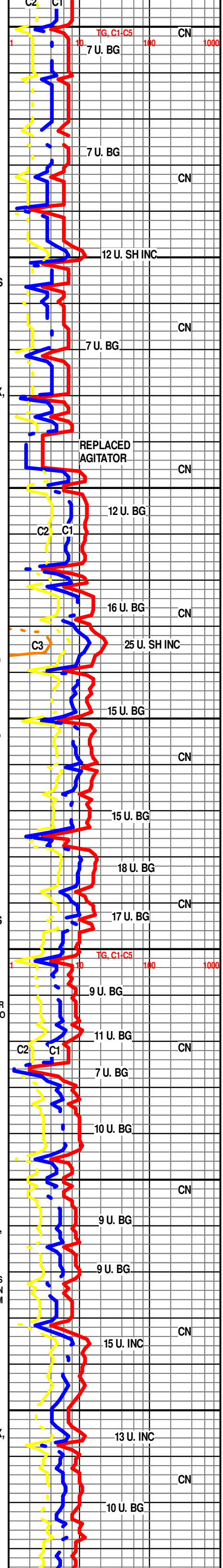
3281'-3282' LS- LT TN TO TN W/ DK TN OIL STN IN 10%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD FOSS FRG IP, DUL YEL GLD FLO IN 5%, PR TO FR VUG POR IN 5%, PR TO FR INTR FOSS POR IN 2%, NO FLSH CUT, FR SLW STRM IN 5%, NO LCH ON DISH

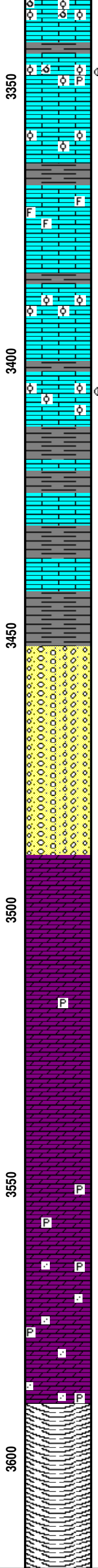
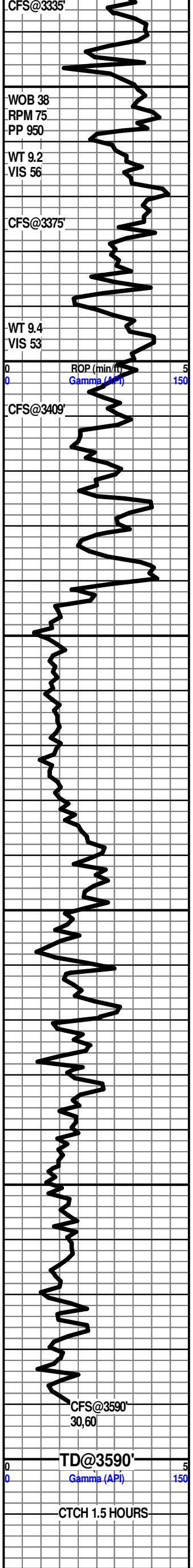
LS- CRM TO LT TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL THRU, IMBD FOSS FRG THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN LT GY TO GY, FRM SPLNT, SLTY TXT

**LANSING "H" 3328' -1409'**

LS- LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, IMBD OOLMLD IP, NO VIS FLO, NO VIS POR, NO VIS SHOW





LS- CRM TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD OOL THRU, OOLMLD IP, NO VIS FLO, PR OOLMLD POR IN 10%, NO VIS SHOW

3346'-3347' LS- OFF WHT TO TN W/ LT TN OIL STN IN 35%, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, IMBD OOL IP, SLI TR OOLMLD IP, SLI TR IMBD PRY IP, SFT WHT CHLK IN TRAY, BRT YEL GLD FLO IN 50%, PR INTR OOL POR IN 3%, PR TO FR VUG POR IN 3%, PR OOLMLD POR IN 1%, WK FLSH CUT IN 20%, PR TO FR SLW STRM IN 40%, NO LCH ON DISH

LS- CRM TO LT TN, HD DNS TO BRIT, F XLN CHLKY MTRX, S-SUCRO IP, IMBD OOL IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO LT TN, HD DNS TO BRIT, F XLN SUCRO MTRX, S-CHLKY IP, IMBD FOSS FRG THRU, TR IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL THRU, TR SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

3404'-3407' LS-CRM TO LT TN W/ TN OIL STN IN 20%, HD DNS TO BRIT IP, F XLN SUCRO MTRX, S- CHLKY IP, ABDT IMBD OOL THRU, SFT WHT CHLK IN TRAY, DUL YEL GLD FLO 20%, BRT YEL GLD FLO IN 5%, PR INTR OOL POR IN 3% FR TO GD INTR OOL POR IN 2%, PR FLSH CUT IN 20%, FR TO GD SLW STRM IN 30%, LT TN LCH ON DISH

**BKC 3412' -1493'**  
SH- BRWN GY, SFT GMMY

LS- LT TN, HD DNS TO BRIT IP, F XLN RE-XLN MTRX, TR IMBD CALC XSL IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- RED BRWN, SFT GMMY

SH- RED BRWN, SFT GMMY

CONG- SH- RED TO BRWN, SFT GMMY, LS- LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, TR IMBD OOL IP, CHR- CLR OFF WHT TO YEL

**ARBUCKLE 3490' -1571'**

DOLO- OFF WHT TO CRM, HD DNS, F XLN SUCRO MTRX, ABDT IMBD SM S-ANG DOLO GRNS THRU, NO VIS FLO, GD INTR GRN POR IN 1%, NO VIS SHOW

DOLO- OFF WHT TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG DOLO GRNS THRU, NO VIS FLO, V/PR INTR GRN POR IN 3%, NO VIS SHOW

DOLO- OFF WHT TO CRM, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S-RND DOLO GRNS THRU, TR IMBD KAOL OR GLAUC, NO VIS FLO, PR INTR GRN POR IN 3%, NO VIS SHOW

DOLO- CRM TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S-RND DOLO GRNS THRU, TR IMBD PYR IP, NO VIS FLO, PR TO FR INTR GRN POR IN 5%, NO VIS SHOW

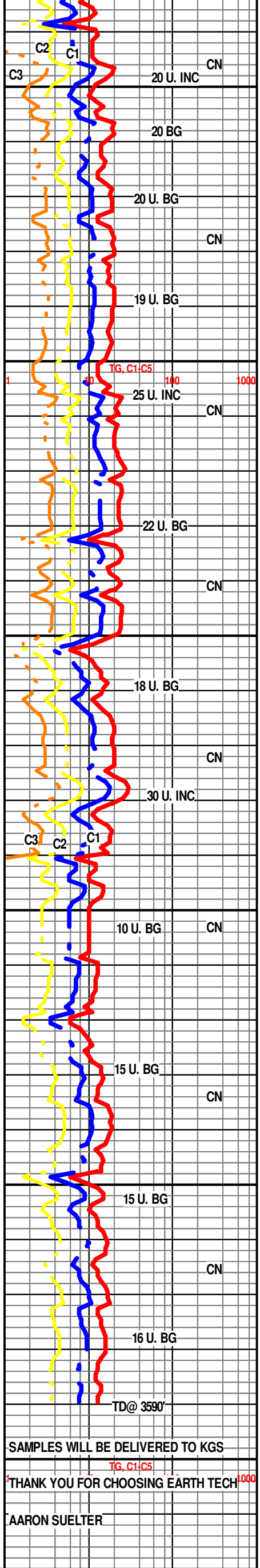
DOLO- OFF WHT TO LT TN, HD DNS TO BRIT IP, F XLN SUCRO MTRX, ABDT IMBD SM TO CRS S-ANG TO S-RND DOLO GRNS THRU, IMBD MD RND QRTZ GRNS IP, TR IMBD PYR IP, NO VIS FLO, FR TO GD INTR GRN POR IN 10%, NO VIS SHOW

R.T.D @ 6:15 AM 9/24/12

DROP SURVEY

TOFL @ 7:45 AM

WEATHERFORD/LIBERAL



SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH

AARON SUELTER