



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1075588  
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: \_\_\_\_\_

1075588

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> _____ _____
--	--	---

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	WAGNER FAMILY 1-5
Doc ID	1075588

All Electric Logs Run

ARRAY IND
DEN-NEUT
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  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

March 02, 2012

TOM FERTAL  
Samuel Gary Jr. & Associates, Inc.  
1515 WYNKOOP, STE 700  
DENVER, CO 80202

Re: ACO1  
API 15-009-25634-00-00  
WAGNER FAMILY 1-5  
NW/4 Sec.05-16S-15W  
Barton 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 AT 303-831-4673.

Respectfully,  
TOM FERTAL



**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: 11/16/2011  
 Invoice # 523

P.O.#:  
 Due Date: 12/16/2011  
 Division: *Russell*

# Invoice

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

DRLG  COMP  W/O  LOE  GG

Account	8200-138
Well/Prospect	WAGNER FAMILY TRUST 1-5
Deck	
AFE	
Approval	
Description	

**Reference:**  
 WAGNER FAMILY TRUST 1-5

**Description of Work:**  
 LONG SURFACE JOB

**Services / Items Included:**

	Quantity	Price	Taxable
Labor		\$ 963.85	No
Common-Class A	370	\$ 4,764.78	Yes
8 5/8" Basket	3	\$ 1,000.67	Yes
Bulk Truck Matl-Material Service Charge	390	\$ 823.33	No
Calcium Chloride	13	\$ 516.78	Yes
Pump Truck Mileage-Job to Nearest Camp	22	\$ 231.76	No
8 5/8" Centralizer	3	\$ 202.67	Yes
Flo Seal	92	\$ 194.22	Yes
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$ 135.62	No
Premium Gel (Bentonite)	7	\$ 120.29	Yes
8 5/8" Top Rubber Plug	1	\$ 111.89	Yes

Item	Quantity	Price	Taxable
Baffle Plate Aluminum, 8 5/8"	1	\$95.00	Yes

**Invoice Terms:**

Net 30

SubTotal: \$ 9,160.85  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,374.13)

SubTotal for Taxable Items:	\$ 5,955.35
SubTotal for Non-Taxable Items:	\$ 1,831.37
Total:	\$ 7,786.72
Tax:	\$ 434.74

7.30% Barton County Sales Tax

**Amount Due: \$ 8,221.46**  
**Applied Payments:**  
**Balance Due: \$ 8,221.46**

**Thank You For Your Business!**

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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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 523

Cell 785-324-1041

Date	11/11/11	Sec.	5	Twp.	16	Range	15	County	Darton	State	KS	On Location		Finish	5:30 PM
------	----------	------	---	------	----	-------	----	--------	--------	-------	----	-------------	--	--------	---------

Lease **WAGNER FAMILY** Well No. **1-S** Location **Gorham, S to Ch, 1 E, Sinto**

Contractor **VAL #6** Owner

Type Job **Surface** To Quality Oilwell Cementing, Inc.

Hole Size **12 1/4"** T.D. **1022'** You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Csg. **8 5/8" 23#** Depth **1022'** Charge To **Sam Gary Jr. + Associates**

Tbg. Size Depth Street

Tool Depth City State

Cement Left in Csg. **42'** Shoe Joint **42'** The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line Displace **62 1/2 Bbls.** Cement Amount Ordered **370 sacks 30% 20% 20%**

**EQUIPMENT**

Pumptrk	9	No.	Cementer		1/4" # FLOOR
			Helper	<b>Paul</b>	Common
Bulktrk	7	No.	Driver		370
			Driver	<b>Matt</b>	Poz. Mix
Bulktrk	0	No.	Driver		Gel. 7
			Driver	<b>Doug</b>	Calcium 13

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal <b>92#</b>
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
Est. Circ.	Sand
Mix 370 sx	Handling <b>390</b>
Displace	Mileage
Land Plug	
Cement Circulated	

**FLOAT EQUIPMENT**

Guide Shoe	<b>8 5/8"</b>
Centralizer	<b>3</b>
Baskets	<b>3</b>
AFU Inserts	
Float Shoe	
Latch Down	
Head + Manifold	
Rubber Plug + Ruffle Plate	
Pumptrk Charge	<b>Long Surface</b>
Mileage	<b>22</b>

Thank You!!

X Signature *[Handwritten Signature]*

Tax  
Discount  
Total Charge



**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: 11/20/2011  
 Invoice # 67

P.O.#:  
 Due Date: 12/20/2011  
 Division: Russell

# Invoice

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

DRLG  COMP  W/O  LOE  GG

Account	8200-145
Well/Prospect	WAGNER FAMILY 1-5
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

**Reference:**  
 WAGNER FAMILY 1-5

**Description of Work:**  
 PLUG JOB

**Services / Items Included:**

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 963.85	Yes				
Common-Class A	126	\$ 1,622.60	Yes				
Bulk Truck Mat-Material Service Charge	217	\$ 458.11	Yes				
POZ Mix-Standard	84	\$ 407.87	Yes				
Pump Truck Mileage-Job to Nearest Camp	22	\$ 231.76	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$ 135.62	Yes				
Premium Gel (Bentonite)	7	\$ 120.29	Yes				
Flo Seal	50	\$ 105.56	Yes				
Dry Hole Plug	1	\$ 59.11	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 4,104.76  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (615.71)

SubTotal for Taxable Items: \$ 3,489.05  
 SubTotal for Non-Taxable Items: \$ -

Total: \$ 3,489.05  
 Tax: \$ 254.70

7.30% Barton County Sales Tax

Amount Due: \$ 3,743.75  
 Applied Payments:  
 Balance Due: \$ 3,743.75

**Thank You For Your Business!**

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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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 067

Cell 785-324-1041

Date	11-16-11	Sec.	5	Twp.	16	Range	15	County	Barber	State		On Location		Finish	6:45 PM
Lease	Wagner Family			Well No.	1-5			Location							
Contractor								Owner							
Type Job								To Quality Oilwell Cementing, Inc.							
Hole Size								You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Csg.								Charge To							
Tbg. Size								Street							
Tool								City State							
Cement Left in Csg.								Shoe Joint							
Meas Line								Displace							
								The above was done to satisfaction and supervision of owner agent or contractor.							
								Cement Amount Ordered							

**EQUIPMENT**

Pumptrk	1	No.	Cementer	Helper	Common
Bulktrk		No.	Driver	Driver	Poz. Mix
Bulktrk	10	No.	Driver	Driver	Gel.

**JOB SERVICES & REMARKS**

Remarks:	Calcium
Rat Hole	Hulls
Mouse Hole	Salt
Centralizers	Flowseal
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
1st	CFL-117 or CD110 CAF 38
2nd	Sand
3rd	Handling
4th	Mileage

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	9 5/8 in. Ken Plug
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

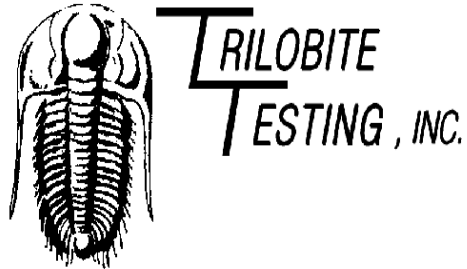
*Thanks*

Pumptrk Charge *Plug*  
Mileage *22*

X Signature *Randy D. ...*

Tax  
Discount  
Total Charge





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates**

1515 Wynkoop  
Suite  
Denver, CO. 80202

ATTN: Tom Fertal

### **Wagner Family #1-5**

#### **5-16s-15w-Barton**

Start Date: 2011.11.14 @ 15:41:34

End Date: 2011.11.14 @ 20:33:49

Job Ticket #: 44689                      DST #: 1

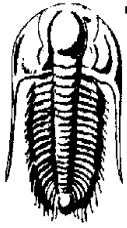
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2011.11.16 @ 11:15:50

Samuel Gary Jr. & Associates  
5-16s-15w-Barton  
Wagner Family #1-5  
DST # 1  
D  
2011.11.14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

1515 Wynkoop  
Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44689 **DST#: 1**  
Test Start: 2011.11.14 @ 15:41:34

## GENERAL INFORMATION:

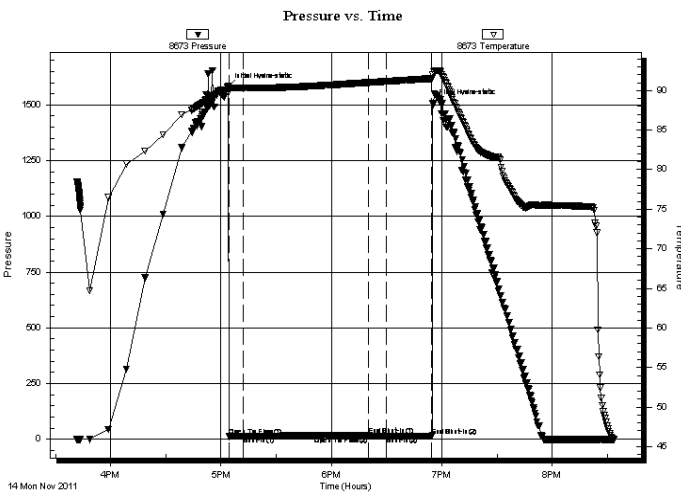
Formation: **D**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 17:04:19  
 Time Test Ended: 20:33:49  
 Interval: **3250.00 ft (KB) To 3265.00 ft (KB) (TVD)**  
 Total Depth: 3265.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jason McLemore  
 Unit No: 54  
 Reference Elevations: 1950.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8673

Inside

Press@RunDepth: 13.29 psig @ 3252.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.11.14 End Date: 2011.11.14 Last Calib.: 2011.11.14  
 Start Time: 15:41:36 End Time: 20:33:49 Time On Btm: 2011.11.14 @ 17:04:04  
 Time Off Btm: 2011.11.14 @ 18:55:04

TEST COMMENT: IFP-5 Min, Surge On Open, Dead After  
 IS-60 Min. Dead  
 FFP-10 Min. Dead  
 FSI-30 Min. Dead



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1582.17	90.56	Initial Hydro-static
1	12.47	89.82	Open To Flow (1)
8	13.14	90.33	Shut-In(1)
76	18.82	91.01	End Shut-In(1)
77	12.94	91.01	Open To Flow (2)
86	13.29	91.15	Shut-In(2)
111	14.31	91.52	End Shut-In(2)
111	1508.67	92.02	Final Hydro-static

## Recovery

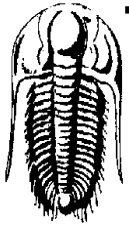
Length (ft)	Description	Volume (bbl)
0.00	Mud in Sampler	0.00

## Gas Rates

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







**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

1515 Wynkoop  
Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44689      **DST#: 1**  
Test Start: 2011.11.14 @ 15:41:34

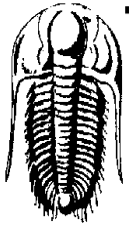
**Tool Information**

Drill Pipe:	Length: 3225.00 ft	Diameter: 3.80 inches	Volume: 45.24 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 45.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3250.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Recorder	0.00	6755	Fluid	3216.00	
Change Over Sub	5.00			3221.00	
Shut In Tool	5.00			3226.00	
Sampler	2.00			3228.00	
Hydraulic tool	5.00			3233.00	
Jars	5.00			3238.00	
Safety Joint	2.00			3240.00	
Packer	5.00			3245.00	34.00 Bottom Of Top Packer
Packer	5.00			3250.00	
Stubb	1.00			3251.00	
Perforations	1.00			3252.00	
Recorder	0.00	8673	Inside	3252.00	
Recorder	0.00	8736	Outside	3252.00	
Perforations	10.00			3262.00	
5	3.00			3265.00	15.00 Bottom Packers & Anchor

**Total Tool Length: 49.00**



**TRILOBITE**  
**TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

1515 Wynkoop  
Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44689      **DST#: 1**  
Test Start: 2011.11.14 @ 15:41:34

## 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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5700.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Mud in Sampler	0.000

Total Length: ft      Total Volume: bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Sampler, 0#, 2000ml Mud

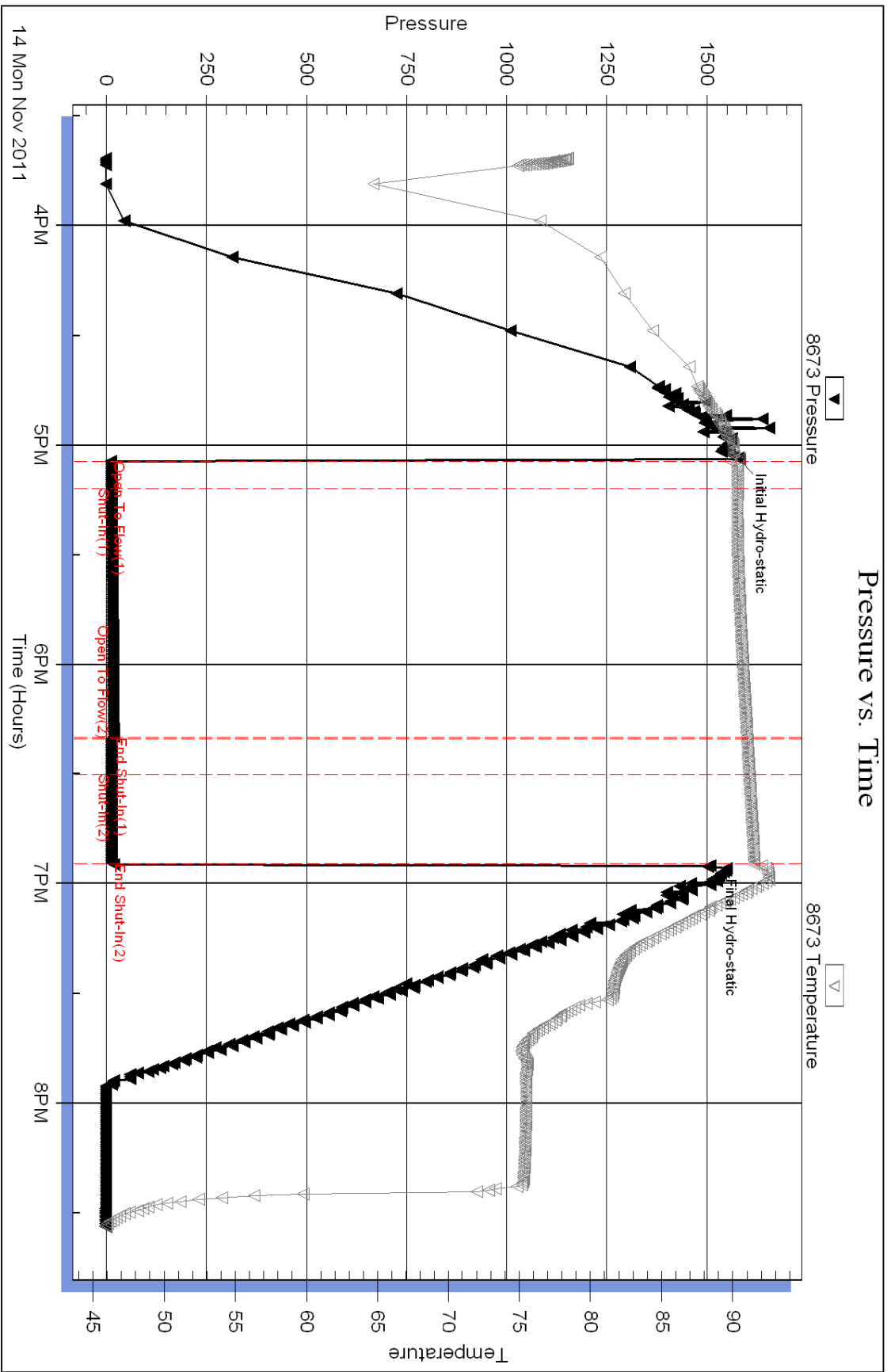
Serial #: 8673

Inside

Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 1



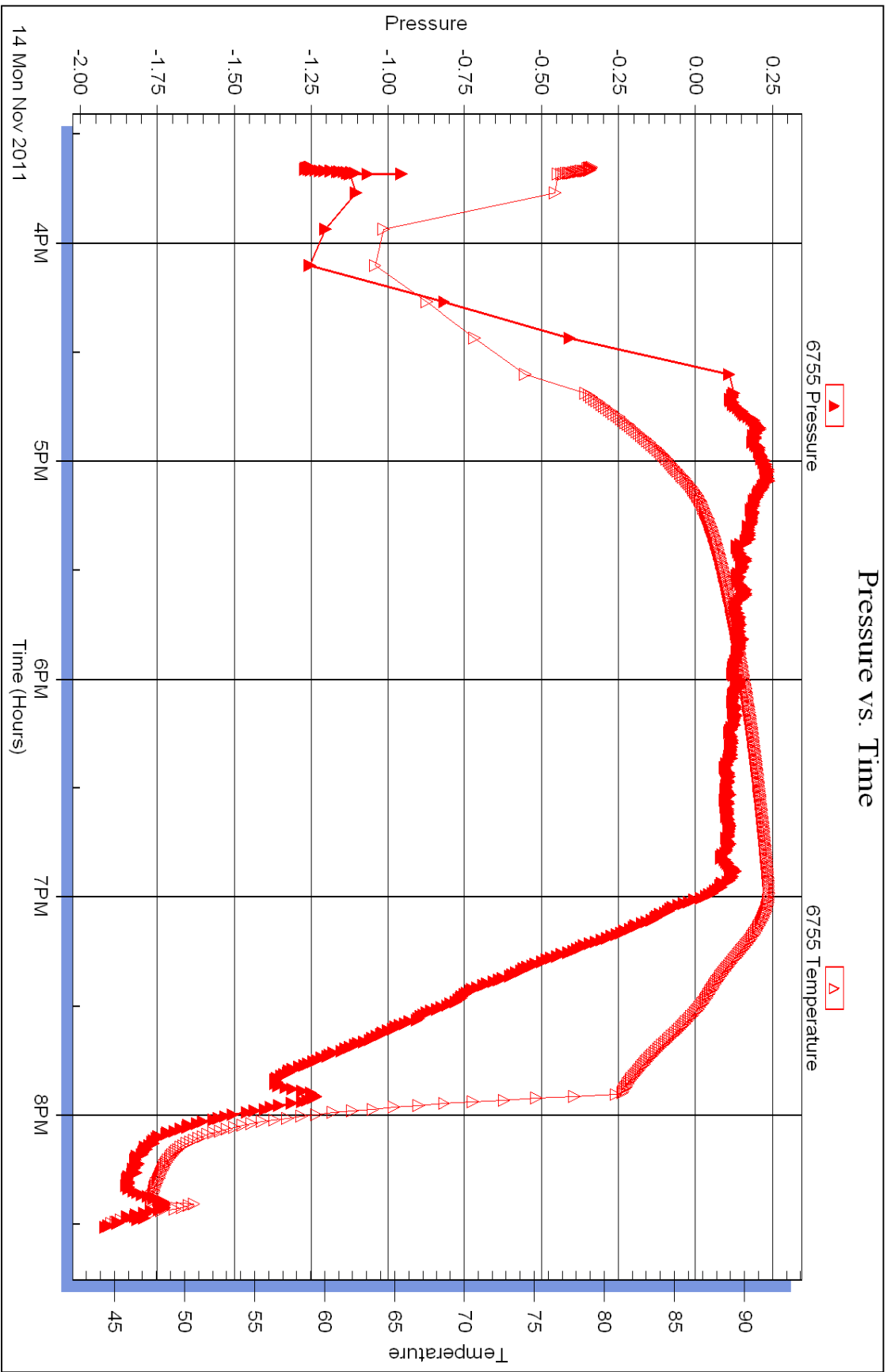
Serial #: 6755

Fluid

Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 44689

Printed: 2011.11.16 @ 11:16:00

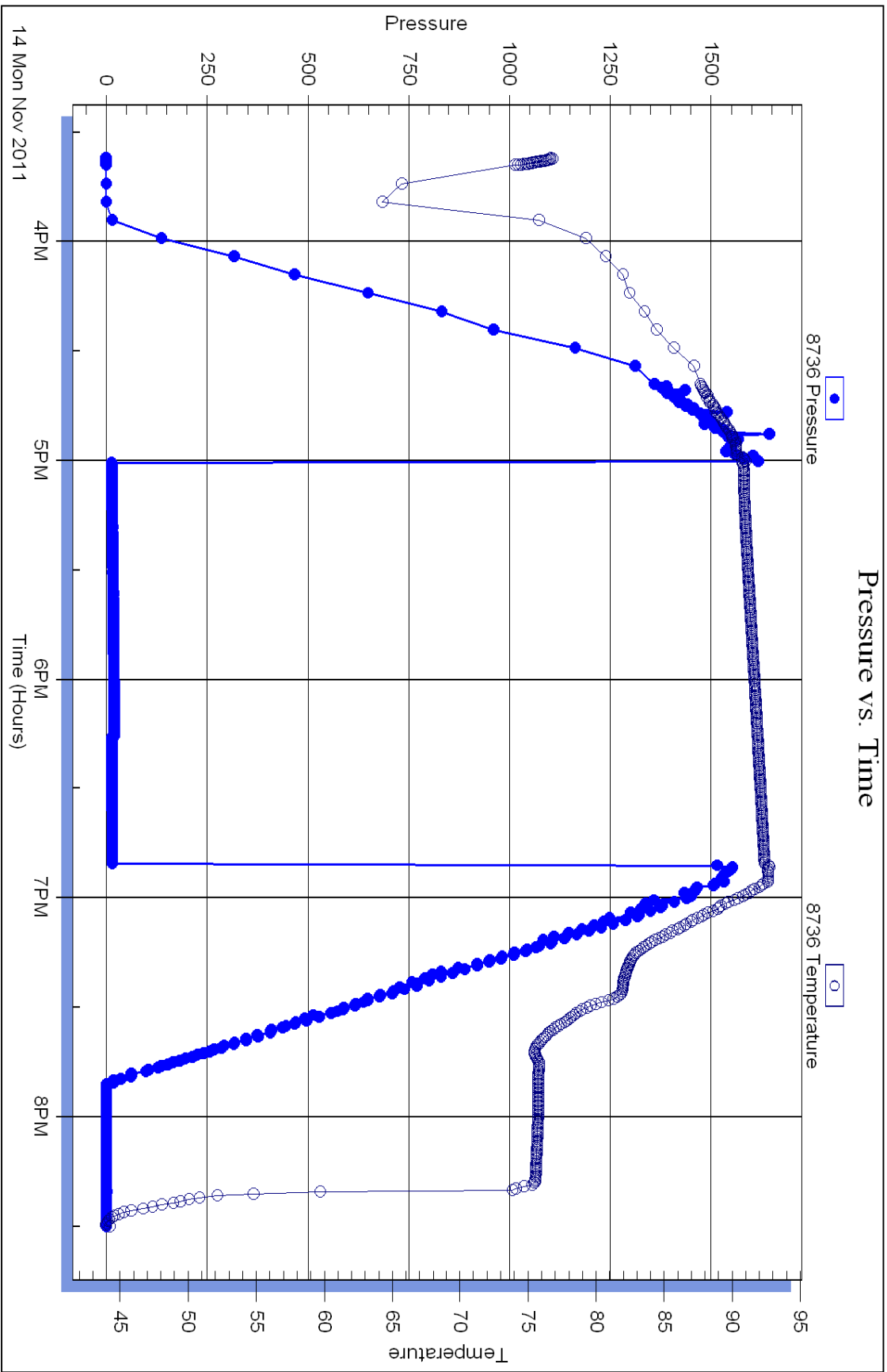


Serial #: 8736

Outside Samuel Gary Jr. & Associates

Wagner Family #1-5

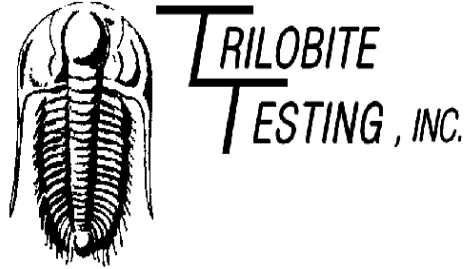
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 44689

Printed: 2011.11.16 @ 11:16:01



## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates**

1515 Wynkoop  
Suite  
Denver, CO. 80202

ATTN: Tom Fertal

### **Wagner Family #1-5**

#### **5-16s-15w-Barton**

Start Date: 2011.11.16 @ 04:51:00

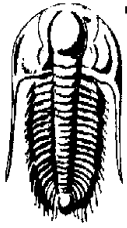
End Date: 2011.11.16 @ 11:39:00

Job Ticket #: 44671                      DST #: 2

Trilobite Testing, Inc

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

Printed: 2011.11.16 @ 11:17:29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates  
 1515 Wynkoop Suite  
 Denver, CO. 80202  
 ATTN: Tom Fertal

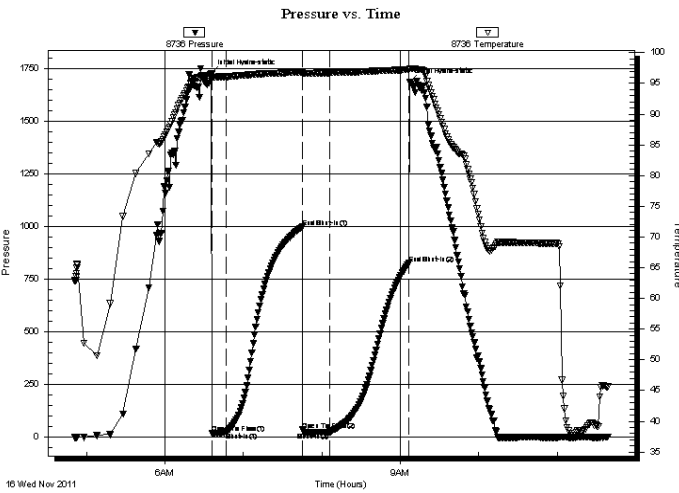
**5-16s-15w-Barton**  
**Wagner Family #1-5**  
 Job Ticket: 44671 **DST#: 2**  
 Test Start: 2011.11.16 @ 04:51:00

## GENERAL INFORMATION:

Formation: **Lansing "J-K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:36:00  
 Time Test Ended: 11:39:00  
 Test Type: Conventional Straddle (Reset)  
 Tester: Cody Bloedorn  
 Unit No: 54  
 Interval: **3390.00 ft (KB) To 3430.00 ft (KB) (TVD)**  
 Total Depth: 3590.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Reference Elevations: 1950.00 ft (KB)  
 1940.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8736** **Outside**  
 Press@RunDepth: 24.63 psig @ 3391.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.11.16 End Date: 2011.11.16 Last Calib.: 2011.11.16  
 Start Time: 04:51:05 End Time: 11:38:59 Time On Btm: 2011.11.16 @ 06:35:30  
 Time Off Btm: 2011.11.16 @ 09:07:30

TEST COMMENT: 10 - IF- 1/2" blow  
 60 - IS- No blow back  
 20 - FF- 1" blow  
 60 - FS- No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1728.17	96.41	Initial Hydro-static
1	17.45	95.95	Open To Flow (1)
11	22.72	96.07	Shut-In(1)
70	998.44	96.83	End Shut-In(1)
70	34.34	96.54	Open To Flow (2)
91	24.63	96.75	Shut-In(2)
151	825.54	97.25	End Shut-In(2)
152	1685.52	97.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	VSOCM, 5%M, 95%M	0.28
0.00	Sampler: 1000ML, 900ML of Mud, 100 ML	0.00

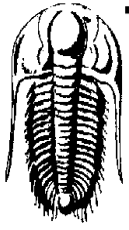
## Gas Rates

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

\* Recovery from multiple tests







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

1515 Wynkoop  
Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44671      **DST#: 2**  
Test Start: 2011.11.16 @ 04:51:00

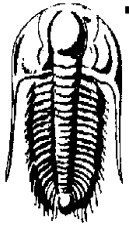
**Tool Information**

Drill Pipe:	Length: 3380.00 ft	Diameter: 3.80 inches	Volume: 47.41 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 49000.00 lb
			<u>Total Volume: 47.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3390.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	3430.00 ft			
Interval between Packers:	40.00 ft			
Tool Length:	239.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	5.00			3361.00	
Shut In Tool	5.00			3366.00	
Sampler	2.00			3368.00	
Hydraulic tool	5.00			3373.00	
Jars	5.00			3378.00	
Safety Joint	2.00			3380.00	
Packer	5.00			3385.00	34.00 Bottom Of Top Packer
Packer	5.00			3390.00	
Stubb	1.00			3391.00	
Recorder	0.00	8673	Inside	3391.00	
Recorder	0.00	8736	Outside	3391.00	
Perforations	38.00			3429.00	
Blank Off Sub	1.00			3430.00	40.00 Tool Interval
Packer	5.00			3435.00	
Change Over Sub	1.00			3436.00	
Recorder	0.00	6755	Below	3436.00	
Drill Pipe	155.00			3591.00	
Change Over Sub	1.00			3592.00	
5	3.00			3595.00	165.00 Bottom Packers & Anchor

**Total Tool Length: 239.00**



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

**5-16s-15w-Barton**

1515 Wynkoop  
Suite  
Denver, CO. 80202  
ATTN: Tom Fertal

**Wagner Family #1-5**

Job Ticket: 44671      **DST#: 2**  
Test Start: 2011.11.16 @ 04:51:00

## 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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.60 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5900.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	VSOCM, 5%M, 95%M	0.281
0.00	Sampler: 1000ML, 900ML of Mud, 100 ML of	0.000

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

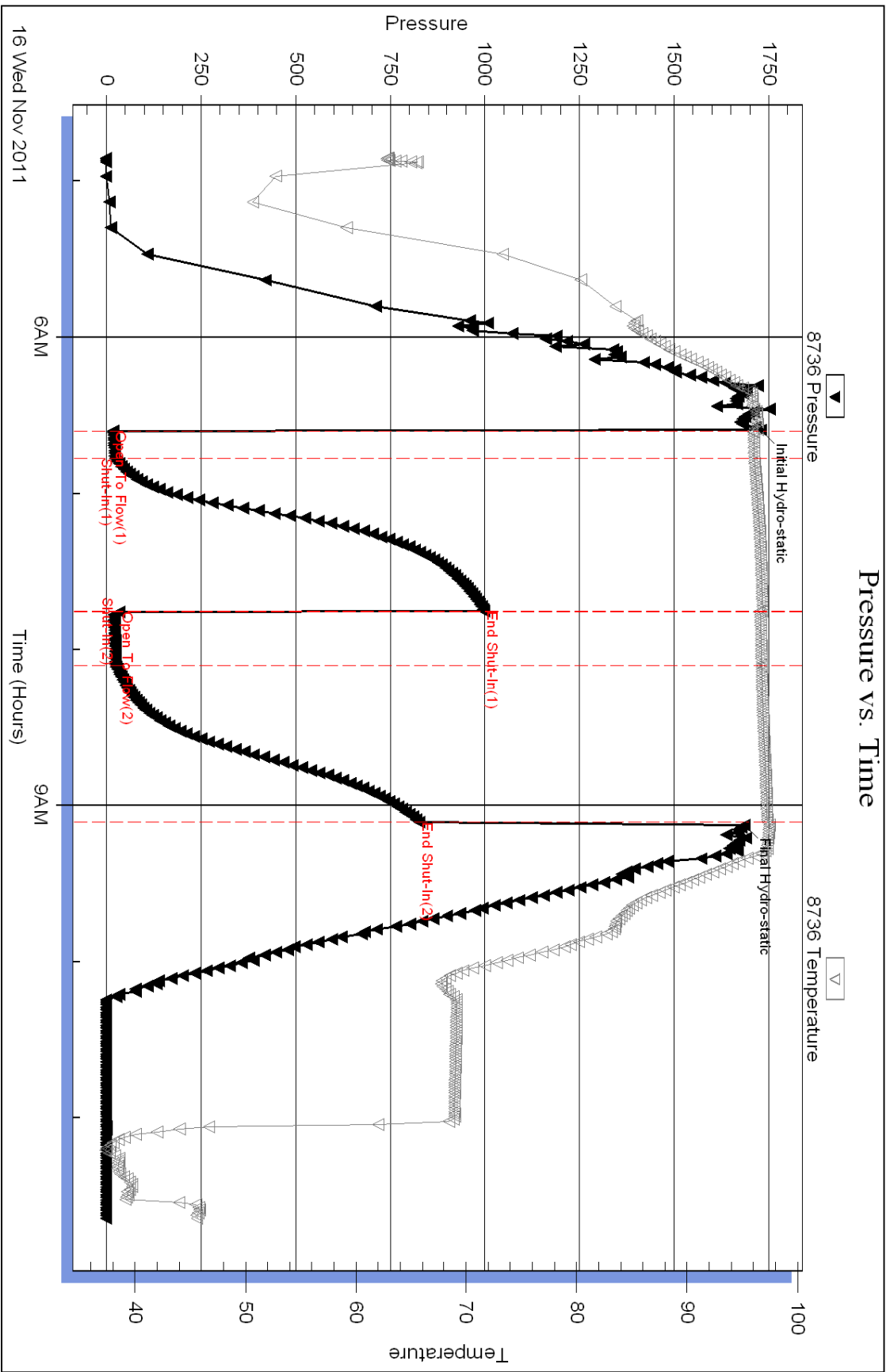
Recovery Comments:

Serial #: 8736

Outside Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 44671

Printed: 2011.11.16 @ 11:17:36



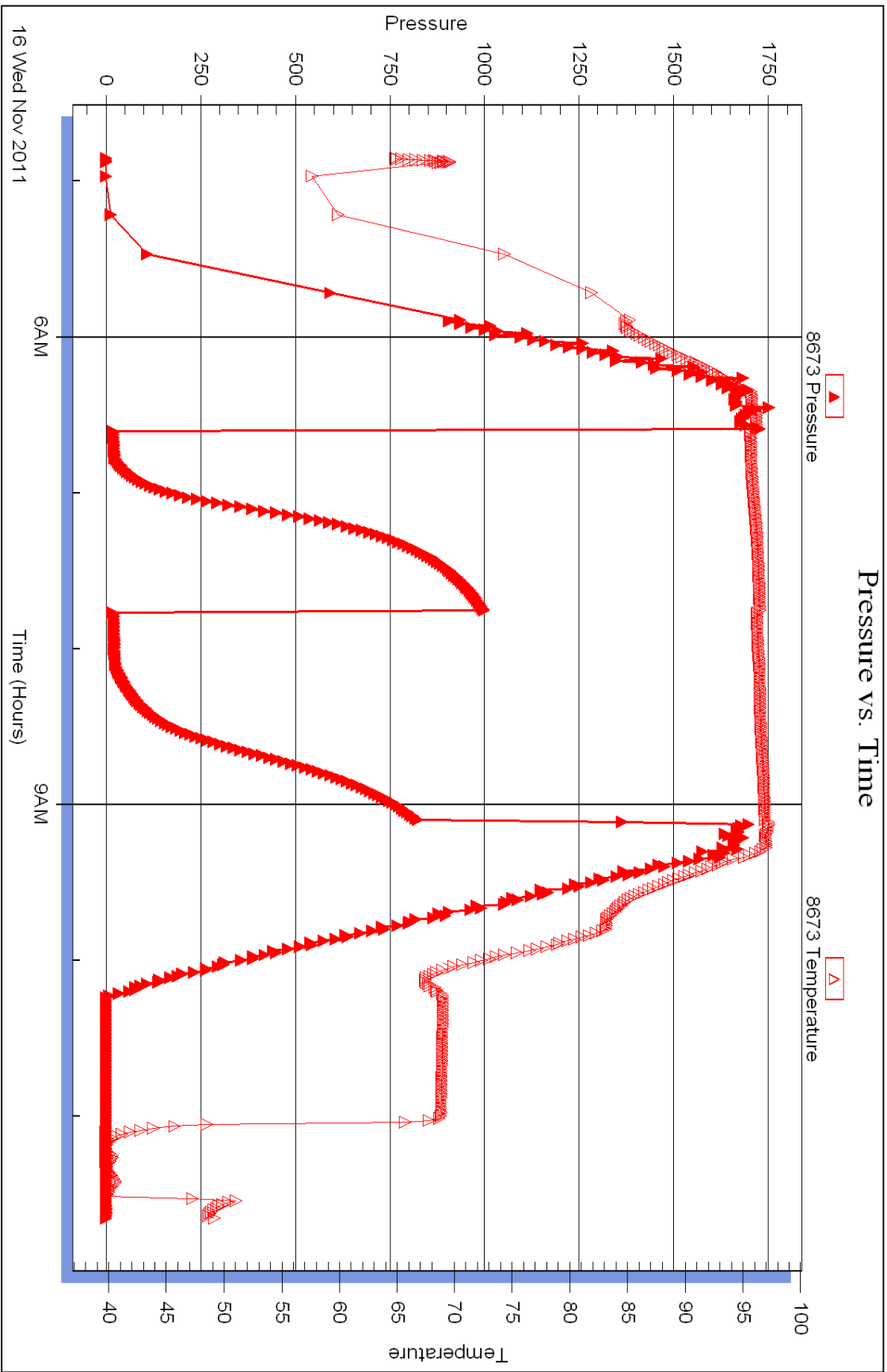
Serial #: 8673

Inside

Samuel Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 44671

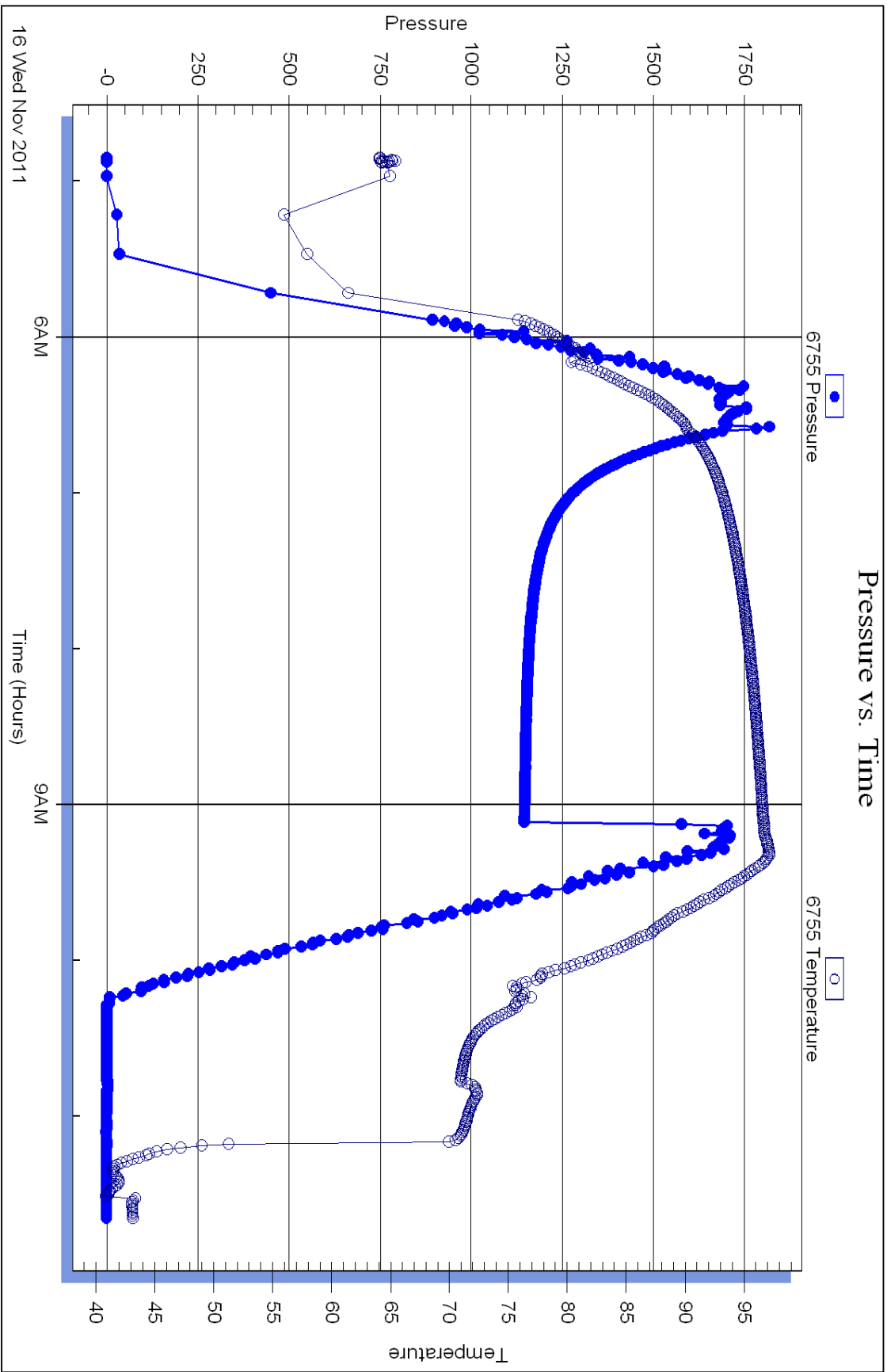
Printed: 2011.11.16 @ 11:17:37

Serial #: 6755

Below (Str ~~at~~) Gary Jr. & Associates

Wagner Family #1-5

DST Test Number: 2

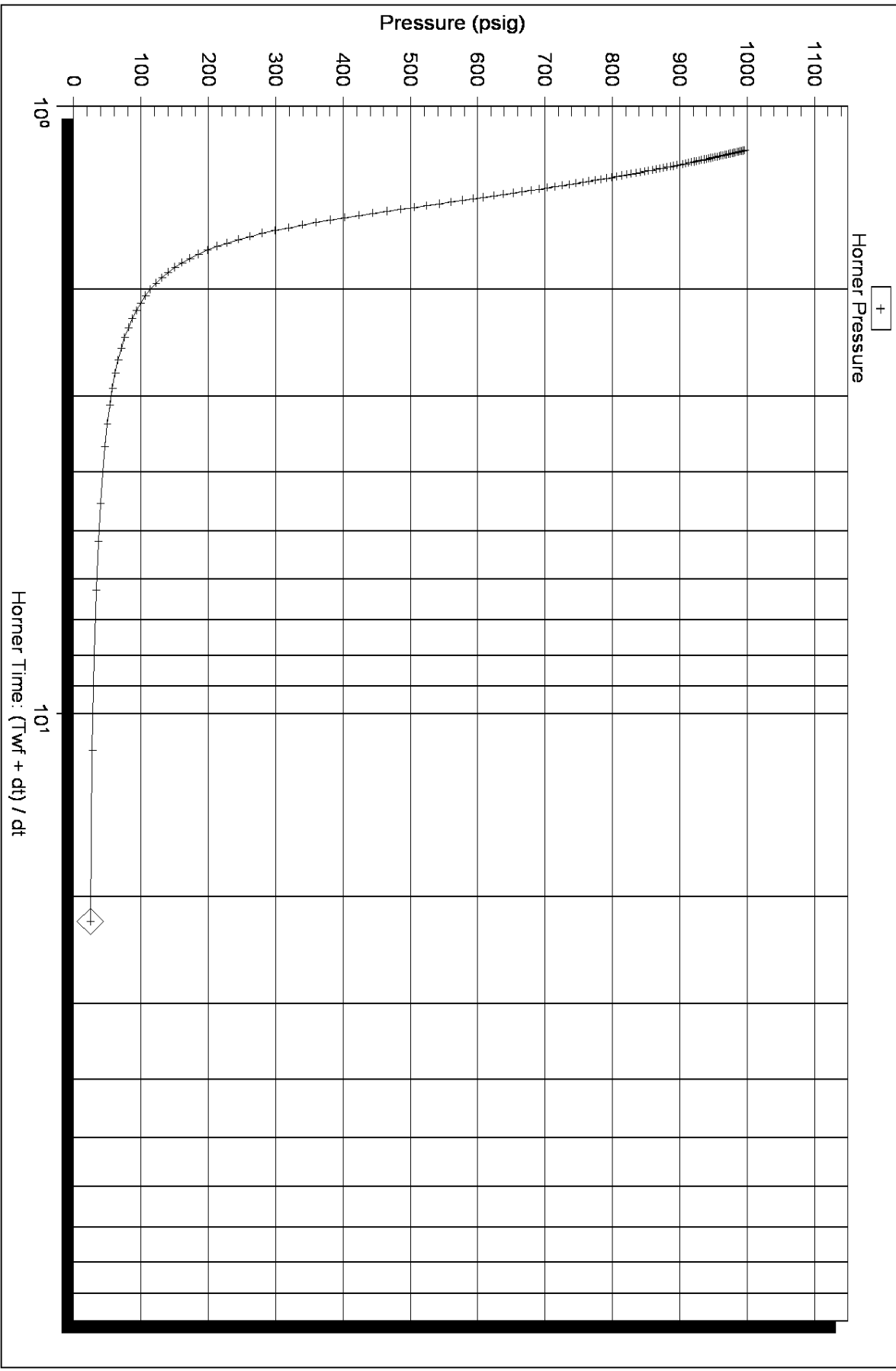


Triobite Testing, Inc

Ref. No: 44671

Printed: 2011.11.16 @ 11:17:39

# Horner Plot



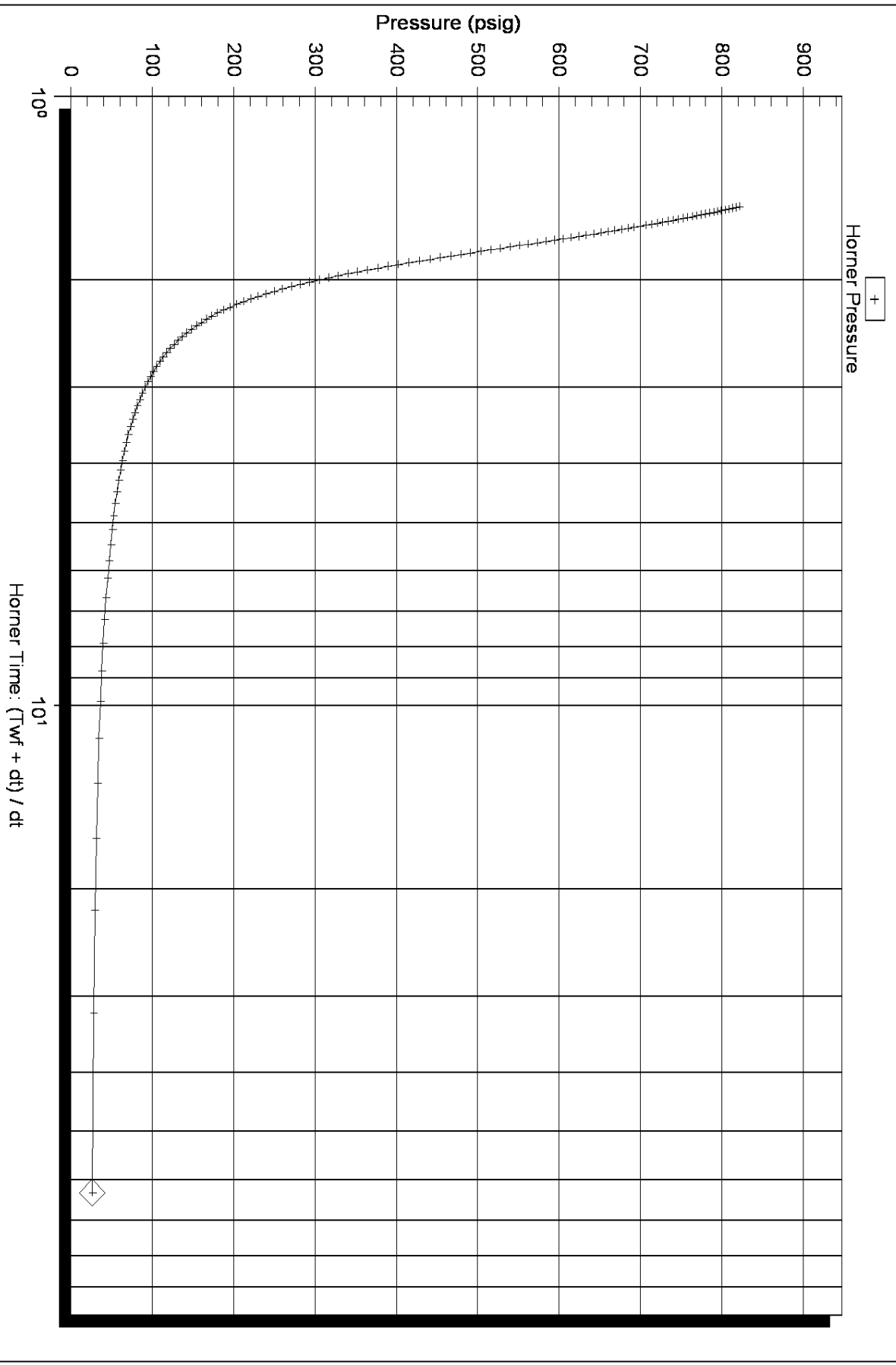
Serial Number: 8736 (Outside)

P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

# Horner Plot



Serial Number: 8736 (Outside)

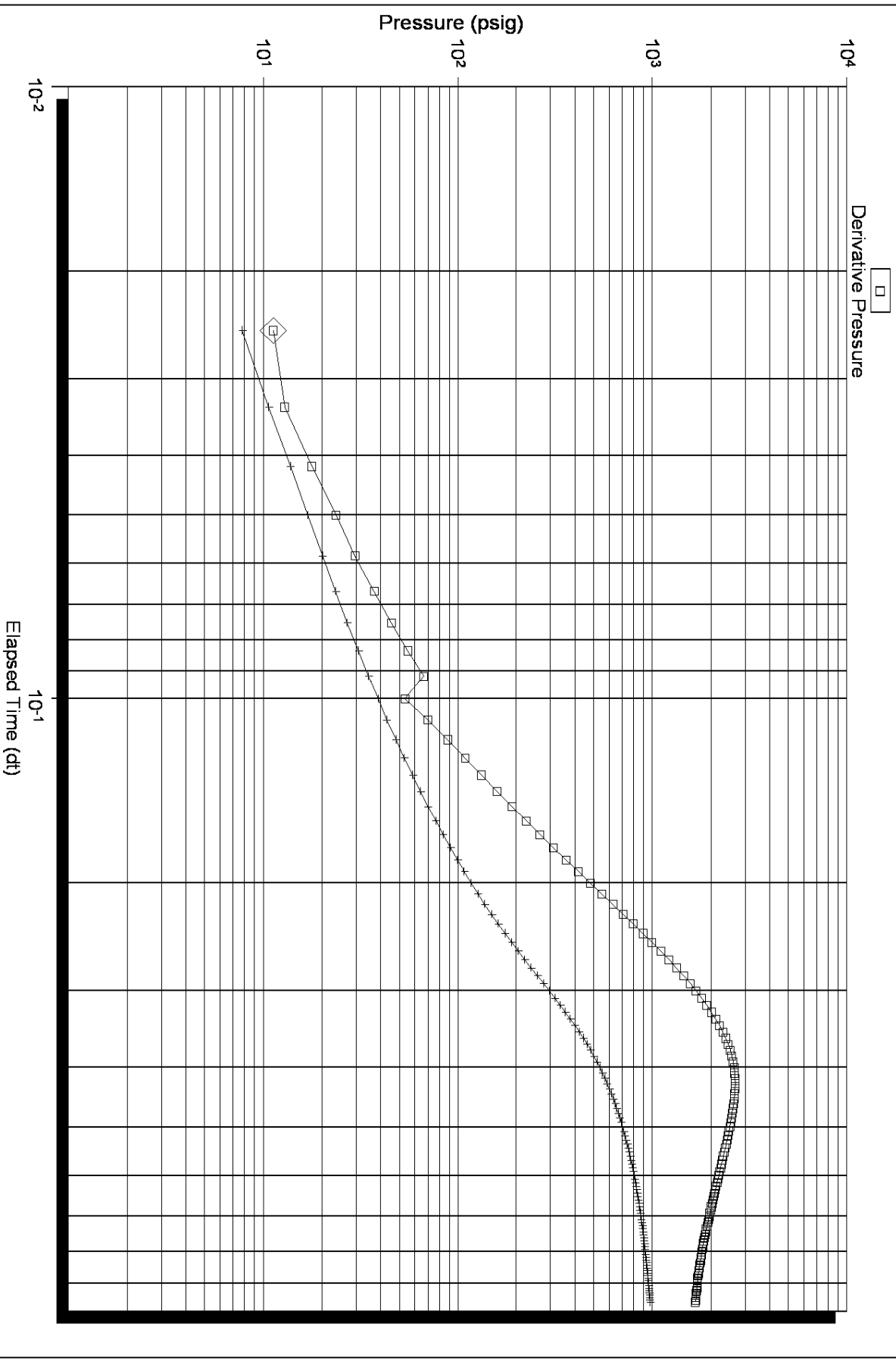
P\* :

Slope (m) : kpa/log cycle

Flow Cycle: 2

Horner Time: (Twr + dt) / dt

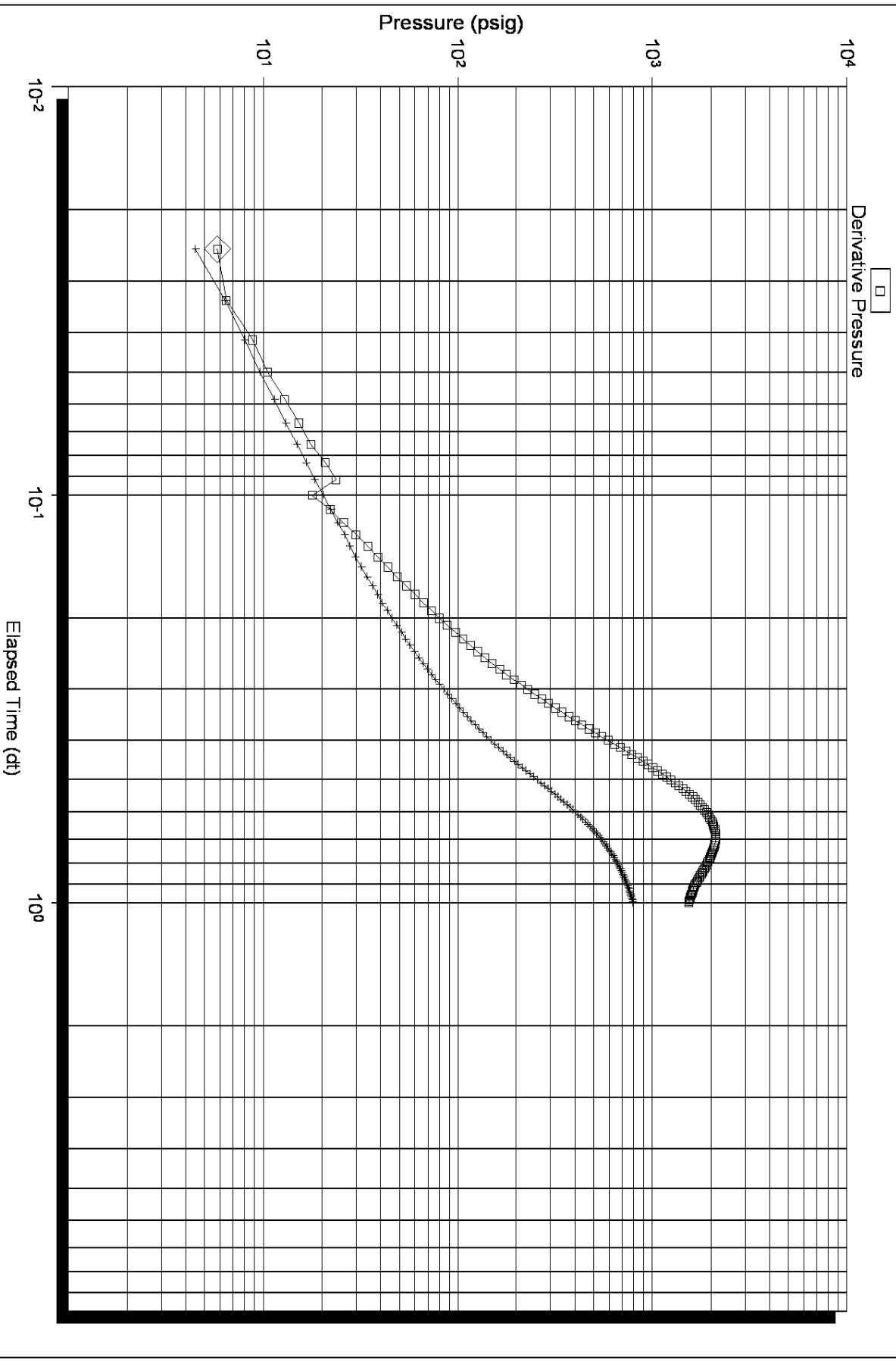
# Log-Log and Pseudo-Derivative



Serial Number: 8736 (Outside)

Flow Cycle: 1

# Log-Log and Pseudo-Derivative



Serial Number: 8736 (Outside)

Flow Cycle: 2



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

Well Name: WAGNER FAMILY 1-5  
 Location: SEC 5, 16S, 15W, BARTON Co. , Kansas  
 License Number: 15-009-25634  
 Spud Date: 11/10/2011  
 Surface Coordinates: 980' FNL & 1000' FWL  
 Region: Wildcat  
 Drilling Completed: 11/16/2011

Bottom Hole Coordinates:  
 Ground Elevation (ft): 1940' K.B. Elevation (ft): 1950'  
 Logged Interval (ft): 1800' To: 3590' Total Depth (ft): 3590'  
 Formation: Lansing, Arbuckle  
 Type of Drilling Fluid:

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: Tom Fertal

**GEOLOGIST**

Name: TIM HEDRICK  
 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 3250-3265 5 60 10 30  
 IF- SURGE ON OPEN,DIED/ ISI-NB./ FF-NB/ FSI-NB  
 IH- 1582, FH- 1509/ IF- 12 TO 13, FF- 13 TO 13/ ISI-19, FS- 14  
 RECOVERED 0' /  
 SAMPLER- 2000 ML MUD IN SAMPLER/ PIT CHL- 5700  
 NO BHT RECORDED

DST#2 STRADDLE 3390' - 3430' 10 60 20 60  
 IF- 1/2 " BLOW/ISI- NB/ FF- 1' BLOW/ FSI- NB  
 IH- 1728, FH-1685/ IF- 17 TO 22, FF- 34 TO 24/ISI-998, FSI- 825  
 RECOVERED-20' TF, VSOCM 5% OIL, 95%M.  
 SAMPLER- 1000 ML, 900 ML MU, 100 ML OIL/ BHT 97 DEG.  
 PIT CHL-5900

**ROCK TYPES**

Anhy  
 Bent  
 Brec  
 Cht  
 Clyst  
 Coal  
 Congl  
 Dol

Gyp  
 Igne  
 Lmst  
 Meta  
 Mrlst  
 Salt  
 Shale  
 Shcol

Shgy  
 Sltst  
 Ss  
 Till  
 Carb sh  
 Dol  
 Dtd  
 Gry sh

Sandylms  
 Shale  
 Sltstn  
 Shlyslts  
 Sltyslts  
 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**

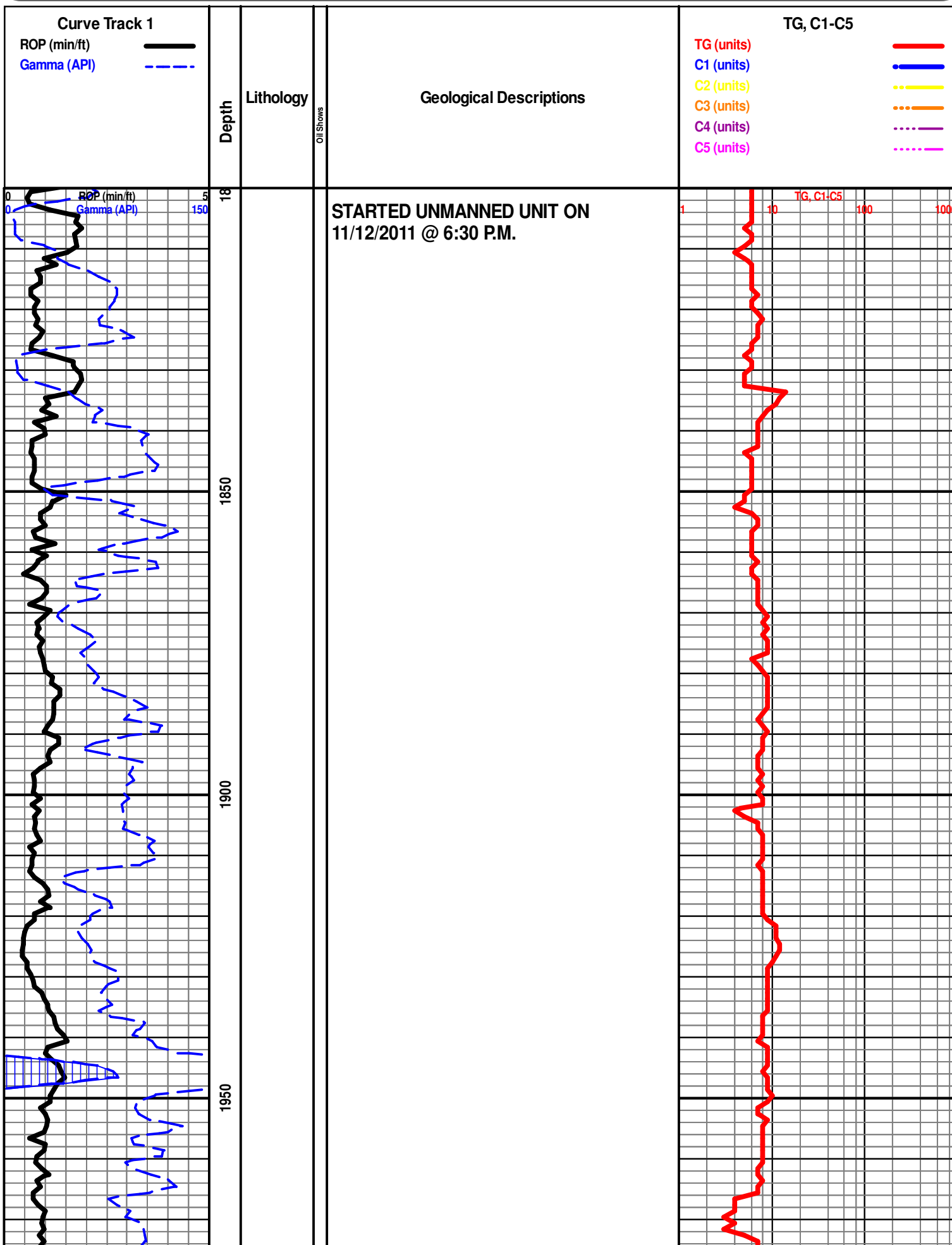
- Even
- Spotted
- Ques
- Dead
- Gas show

**INTERVALS**

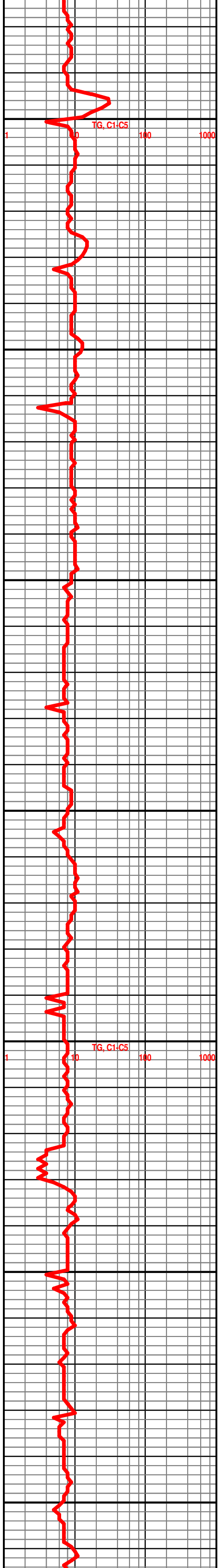
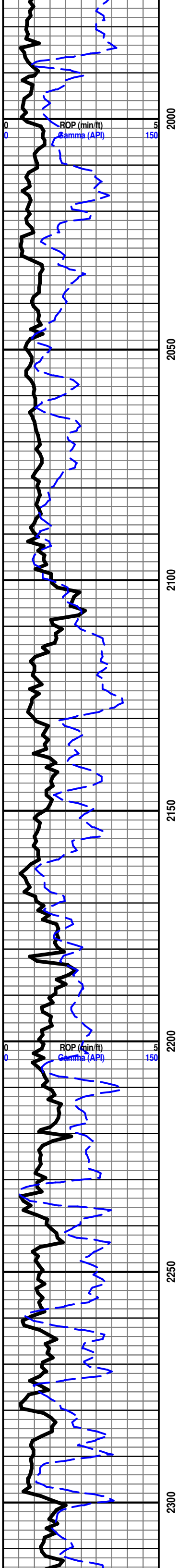
- Core
- Dst
- Dst

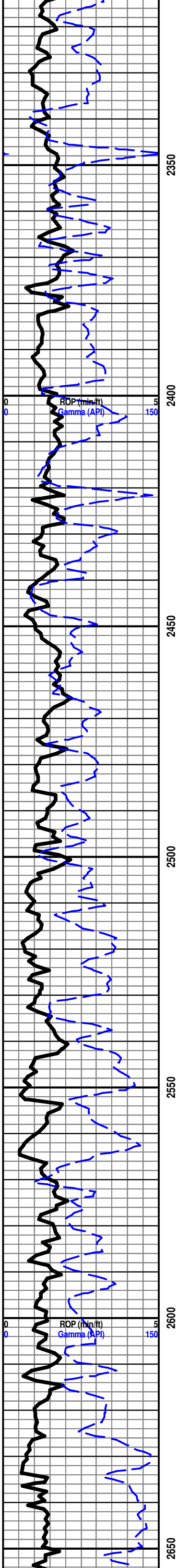
**EVENTS**

- Rft
- Sidewall

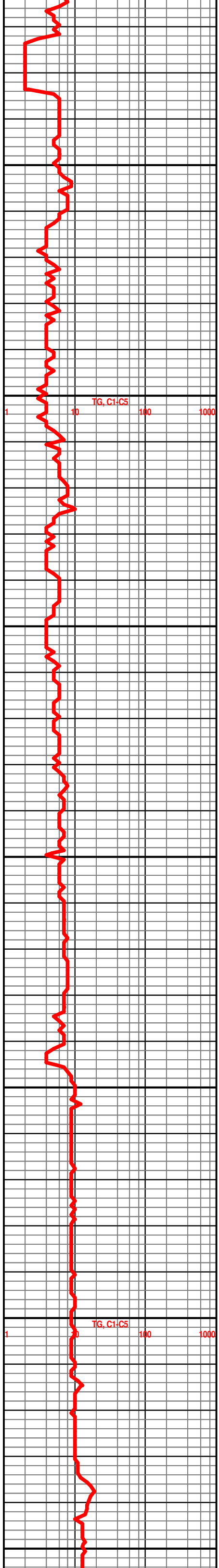




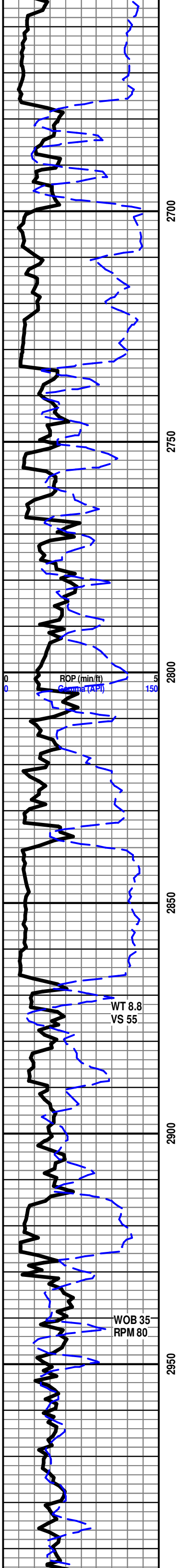




2650 2600 2550 2500 2450 2400 2350



BS. ROOT SH. 2676' - 726'

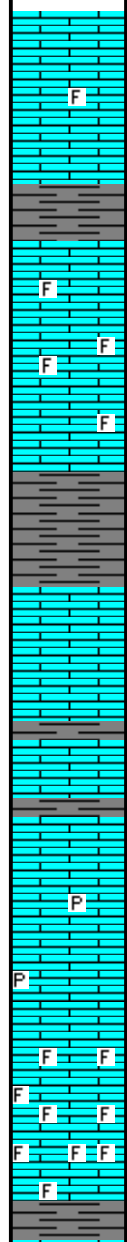


ROP (min/ft)  
Gamma (API)

WT 8.8  
VS 55

WOB 35  
RPM 80

2700  
2750  
2800  
2850  
2900  
2950



HOWARD 2866' - 916'

LS- CRM LT TN TN- HD DNS MD-F-XLN RE-XLN MTRX, FOSS FRGS IMBD IP, LT BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

SH- LT GRN LT GY - FRM BLKY SMTH TXT

LS- OFF WHT CRM BFF- HD TO BRITT, MD-F-XLN RE-XLN MTRX, ABDT IMBD FOSS FRGS IMBD IP, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

SH- LT GY GY- V/ SFT GMMY TXT , SLI TR SLTY IP

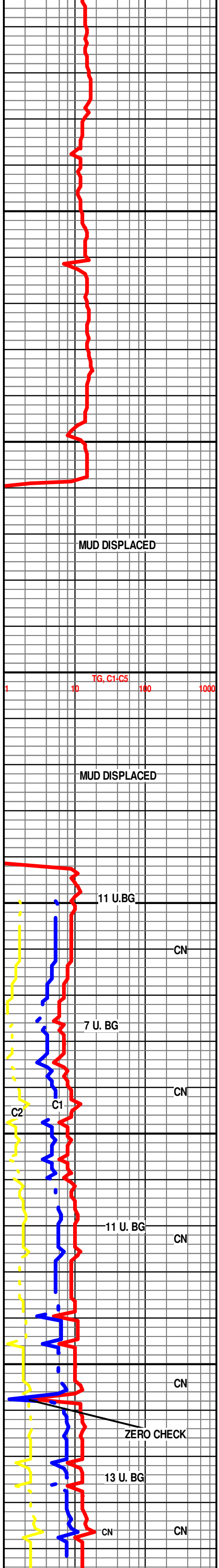
TOPEKA 2928 - 978'

LS- OFF WHT TO CRM- MD HD TO SFT, V/UCRO S-CHLKY TO CHLKY MTRX, ABDT V/V/ SFT WHT CHLK IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM - HD DNS TO TR BRITT IP, F- V/F-XLN SLI TR MD XLN IP, SLI RE-XLN IP, BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM LT TN - HD DNS TO V/ BRITT, MD-XLN, SLI RE-XLN IP TO V/ TT SUCRO MTRX, TR IMBD PYR SCAT IP, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

LS- CRM LT TN TN - HD TO BRITT, MD-XLN TO CRS SUCRO MTRX IP, V/ FOSS THRU, TR FREE FOSS IP, SLI TR WHT CHLK IP, DLL YEL MIN FLO IP , NO VIS POR, NO VIS SHOW



MUD DISPLACED

MUD DISPLACED

11 U.BG

CN

7 U. BG

CN

11 U. BG

CN

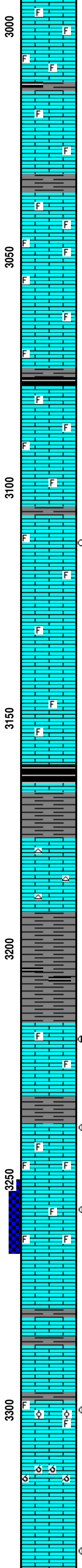
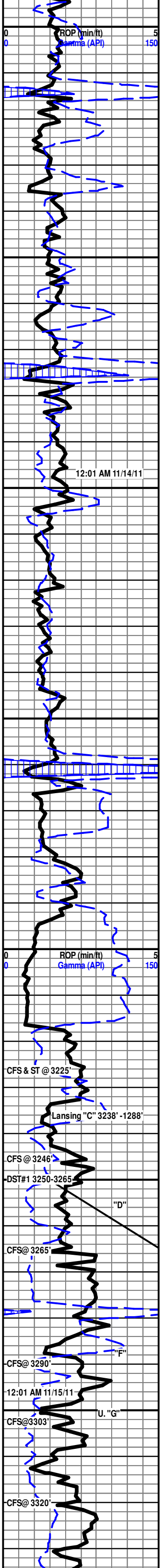
ZERO CHECK

13 U. BG

CN

CN

TG, C1-C5



LS- CRM LT TN - HD DNS TO BRITT IP, MD -XLN RE-XLN MTRX IP, FOSS IMBD THRU, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

**LeCOMPTON 3036' - 1086'**

LS- OFF WHT CRM- HD TO MD HD- V/ SUCRO TO SUCRO S-CHLKY MTRX, ABDT SFT WHT CHLK IMBD, HVY TR SCAT FOSS FRGS IP, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- LT GRN- V/ SFT TXT

LS- CRM LT TN TN- HD DNS TO BRITT, MD-XLN RE-XLN MTRX, ABDT IMBD FOSS FRGS THRU, DLL YEL MIN FLO THRU, NO VIS POR, NO VIS SHOW

LS- CRM BFF- HD DNS TO BRITT IP, F-XLN TO SUCRO MTRX IP, SCAT FOSS FRGS IP, HVY TR SFT WHT CHLK IP, DLL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

SH-BLK SFT CARB

LS- OFF WHT TO CRM- HD DNS SI BRITT IP, MD-XLN RE-XLN IP TO V/ TT SUCRO MTRX ABDT IMBD FOSS FRGS SCAT THRU, DLL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

SH- V/ LT GRN, V/ SFT SLTY TXT

LS- OFF WHT CRM BF- ( TR DOS IP) HD TO MD HD IP, V/ SUCRO MTRX TO SUCRO S-CHLKY IP, SLI TR FOSS FRGS IP, V/ DLL YEL MIN FLO THRU, NO VIS POR IN 90%, TR V/ PR SCAT MICROVUG POR IP, WK FLSH CUT TO V/ WK SLO STRM CUT IN 1 ROCK

LS- OFF WHT TO CRM BFF- MD HD TO SFT, V/ SUCRO S-CHLKY TO CHLKY MTRX, TR FOSS FRGS SCAT IP, TR MD-XLN IP, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM BFFF- MD HD TO FRM, V/ SUCRO S-CHLKY MTRX ABDT FRM WHT CHLK IP, TR PHNTM FOSS FRGS SCAT THRU, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

**HEEBNER 3159' - 1209'**

SH- BLK SFT CARB

SH- LT TO MD GRN- FRM BLKY SMTH TXT

LS- OFF WHT CRM- HD DNS F-XLN TO SUCRO S-CHLKY IP, SCAT WHT CHRT, LT BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

**DOUGLAS 3191' - 1241'**

SH- RED GRN, MOTT FRM BLKY IP TO SFT GMMY TXT IP, W/ FNLY DISS BLK SFT CARB IMBD IP

**LANSING 3217' - 1267'**

LS- LT TN TN ( DK BRN OIL STN SCAT IN 50%) HD DNS TO V/ BRITT, MD-F-XLN RE-XLN MTRX IP TO SUCRO S-CHLKY IP, FOSS IMBD IP, SMLL TO MD CALC XLS IMBD IP, DLL YEL MIN FLO IP, SCAT BRIT YEL GLD FLO SCAT IN 50%, PR VIS MICRO VUG POR IP, TR PR VIS INTER-XLN POR IN 10%, NO ODOR, GD FLSH CUT IN 50%, GD SLO STRM CUT IN 50%, V/LT TN STN ON DISH

3238 TO 3243' LS- OFF WHT CRM LT TN- ( LT TN STN IN 60%) HD V/ BRITT, MD-XLN RE-XLN MTRX, V/FOSS IP, TR SMLL ANG LM GRNS IP, GRDNG TO SUCRO S-CHLKY IP, NO STN, BRIT YEL GLD FLO IN 60-70%, PR TO FR VIS INTER FOSS POR IN 60%, V/LT GSSY FLSH CUT IN 60%, NO CUT IN 40%, FR TO GD SLO STRM CUT IN 60%, NO CUT IN 40%, FR OIL ODOR

3252-3257' LS- OFF WHT CRM LT TN TN( SCAT LV TN OIL STN IN 80%, STN IN ALL POR. ) HD DNS TO BRITT IP, MD-F-XLN RE-XLN MTRX, FOSS IMBD THRU, TR SMLL OOL IP, BRIT YEL GLD FLO IN 40%, DLL YEL GLD FLO IN 60%, PR TO FR TR GD MICROVUG POR IN 60%, FR SCAT INTERFOSS POR IN 20%, GD OIL ODOR, V/GD FLSH CUT IN 90%, V/ GD SLO STRM VUT IN 95%, TN LCH ON DISH

3260-3265- LS- OFF WHT WHT- MD HD TO SFT IP, ABDT FRM WHT CHLK, SUCRO TXT IP, NO FLO, NO VIS POR, NO VIS SHOW

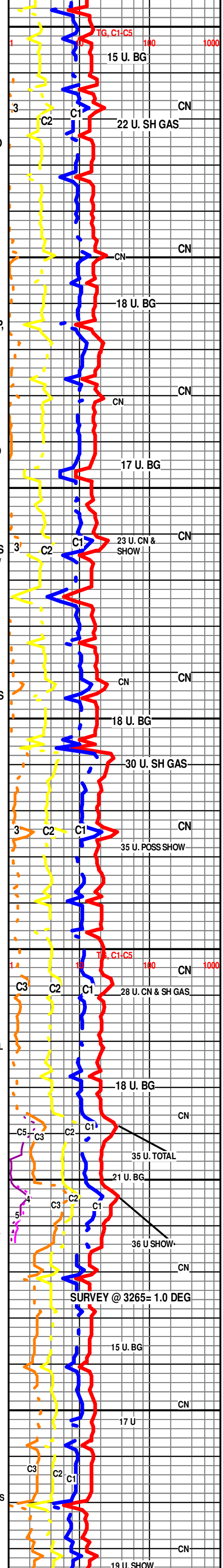
**LANSING "F" 3285' - 1335'**

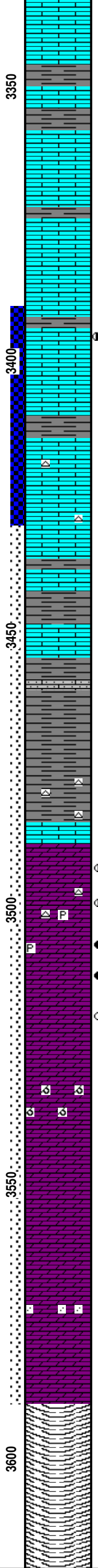
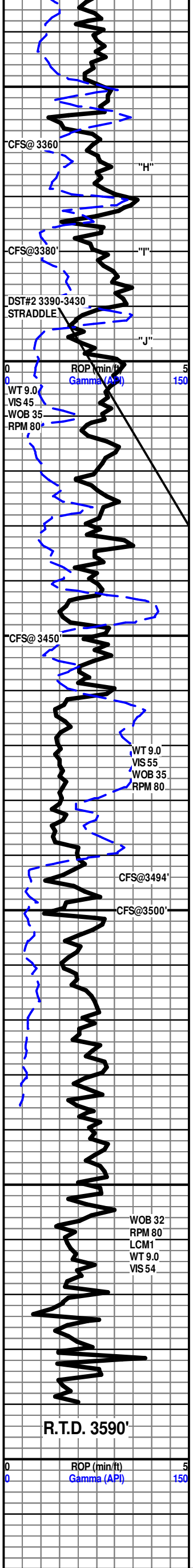
3285-3288' LS- OFF WHT WHT- FRM IPTO V/ SFT, ABDT FRM CHLK TO ABD T V/ SFT GMMY WHT CHLK IP, NO FLO, NO VIS POR, NO VIS SHOW

3300- LS- CRM TN LT BRN( DUE TO BRN OIL STN IN 30%) HD DNS TO SLI BRITT IP, MD-F-XLN RE-XLN MTRX, V/ FOSS, V/ MICRO OOL IP, GRDNG TO ABDT FRM TO SFT WHT CHLK IP, SLI TR STN IN 10%, BRIT YEL GLD FLO IN 30%, DLL YEL FLO IN 50%, TR PR SCAT INTER-XLN PP POR IP, V/ PR TR INTER FOSS POR IP, WK FLSH CUT IN 30%, FR SLO STRM CUT IN 30%, NO ODOR, NO LCH ON DISH

3311-3314' LS- OFF WHT CRM- MD HD TO SFT, V/ SUCRO S-CHLKY TO CHLKY MTRX, V/ OOLMLD FILLED W/ SFT CHLK IP, TR EMBED CALC XLS IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- OFF WHT CRM BFF-(HVY DK BRN STN IP) HD DNS TO BRITT IP, MD-F-XLN RE-XLN MTRX, TR FOSS FRGS IMBD IP, SLI TR CALC XLS IP





BRIT YEL GLD FLO IN 10%, DLL YEL GLD FLO THRU, PR VIS INTER-XLN POR SCAT IP, GD FL SH CUT IN 20%, GD SLO STRM CUT IN 20%, LT OIL ODOR

**LANSING "H" 3358' - 1408'**

LS- OFF WHT CRM - HD DNS TO TR BRITT, MD-F-XLN, SUCRO SLI S-CHLKY TXT IP, NO FLO, NO VIS POR, NO VIS SHOW

LS-OFF WHT TO WHT- HD DNS TO SFT IP, F-XLN IP TO V/ SFT ABDT WHT CHLK IMBD, NO FLO, NO VIS POR, NO VIS CUT OR SHOW

3395-3398' LS- OFF WHT CRM LT BRN DUE TO SCAT OIL STN THRU, HD DNS IP TO TR BRITT, SFT IP, MD-XLN IP TO SUCRO S-CHLKY MTRX, TR IMBD SMLL CALC XLS IP, HVY TR ABDT SFT WHT CHLK IP, BRIT YEL GLD FLO IN 20-30%, DLL YEL FLO IN 60%, PR SCAT MICROVUG POR IN 30% W/ DK BRN OIL STN IN VUGS, WK FL SH CUT IN 30%, FR SLO STRM CUT IN 40%, NO ODOR, LT TN LCH ON DISH

SH- RED, V SFT GMMY TXT TO DK GY FRM IP

LS- OFF WHT WHT- HD DNS TO SLI BRITT, V/ TT SUCRO S-CHLKY MTRX, F-XLN IP, HVY TR ABDT SFT WHT CHLK THRU, TR FRM CHLK IP, TR TN CHRT, NO FLO IP TO DLL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

**BASE KAN.CITY 3443' - 1493'**

LS- OF WHT CRM -HD DNS TO TR BRITT, F-XLN TO SUCRO S-CHLKY IP, TR FOSS FRGS IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

SS- DK GY BLK- HD TT SLI TR FRI, ABDT IMBD MD S-ANG FRSTY QURTZ GRNS, TT CALC CMNT THRU, HVY TR SCAT DOS IP, NO FLO, NO VIS POR, NO VIS CUT OR SHOW

SH- DK RED- V/ SFT GMMY TO SLTY TXT, TR LT TN CHRT IP

3484 TO 3486- LS- WHT - ABDT SFT WHT GMMYCHLK

**ARBUCKLE 3488' - 1538'**

3488-3494' DOLO- TN DK TN TO OFF WHT- (LV OIL STN SCAT THRU 70%) HD DNS TO V/ BRITT, F-XLN TO VFN TO CRS SUCRO MTRX, SCAT IMBD SMLL ANG DOLO GRNS IN 60%, BRIT YEL GLD FLO IN 70%, DLL YEL FLO IN 30%, PR TO TR FR VIS INTER-XLN POR, TR SCAT PR VUG POR IN 10%, V/ GD FL SH CUT IN 80%, V/GD TO EXCEL SLO STRM MLKY BLU CUT, NO ODOR, DK TN LCH ON DISH

3494-3500' DOLO OFF WHT WHT TN BRN IP, (LV OIL DK STN IN 30%) HD DNS TO BRITT, V/ SUCRO MTRX IP TO V/ SUCRO S-CHLKY TO ABDT FRM TO SFT WHT CHLK W/ SCAT DOS AND FINLY DISS PYR IP, TR WHT BLK MOTT IMBD CHRT W/ DOS IP, BRIT YEL DGLD FLO IN 30-40%, DLL YEL GLD FLO IN 50%, GD FL SH CUT TO GD SLO STRM CUT IN 60%, HVY OIL ODOR, BRN LCH ON DISH

3500-3514 DOLO- TN DK TN BRN DUE TO OIL STN IN 80%, LV OIL IN 40%, HD DNS TO BRITT IP, F-XLN TO CRS SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS IN 70%, TR PYR IP, SLI TR WHT SFT CHLK IMBD IP, BRIT YEL GLD FLO IN 50% DLL YEL GLD FLO IN 50%, PR TO FR TO TR GD SCAT INTER-XLN IN 50%, NO POR IN 50%, EXEL INST FL SH CUT IN 80%, EXCEL SLO STRM CUT IN 80-90%, FR OIL ODOR, BRN LCH ON DISH

3514-3530' DOLO- LT TN TN- (SCAT LT BRN STN IN 10%) HD DNS F-XLN TO TT CRS SUCRO MTRX, ABDT IMBD MD ANG DOLO GRNS THRU, SLI TR IMBD SFT WHT CHLK IP, BRIT YEL MIN FLO THRU, SLI TR BRIT YEL GLD FLO IN SCAT 10%, NO VIS POR, V/ LT FL SH CUT IN 20%, LT SLO STRM CUT IN 20%, NO ODOR OR STN ON DISH

3530-3550- DOLO- OFF WHT CRM LT TN- HD DNS TO BRITT IP, F-MD-XLN RE-XLN MTRX, V/OOLMLD, TR IMBD SMLL ANG DOLO GRNS IP SCAT SFT WHT CHLK, BRIT YEL MIN FLO THRU, PR SCAT OOLMLD POR, NO VIS SHOW

3550-3570- DOLO- CRM LT TN- HD DNS TO BRITT IP, F-XLN TO SUCRO MTRX, ABDT IMBD SFT WHT CHLK IP, BRIT YEL MIN FLO THRU, PR TO FR VIS INTER-XLN POR IP, NO VIS CUT OR SHOW

3570-3590 DOLO- CRM LT TN- HD DNS TO BRITT IP, F-XLN TO SUCRO MTRX, IMBD SMLL ANG DOLO GRNS IP, IMBD FN S-RND TO RND CLR QURTZ GRNS IP, ABDT IMBD SFT WHT CHLK IP, BRIT YEL MIN FLO THRU, PR TO FR VIS INTER-XLN POR IP, NO VIS CUT OR SHOW

R.T.D. @ 8:35 PM 11/15/2011

CTCH 1 HR.

TOFL

WEATHERFORD/ LIBERAL

LOGGERS TD 3590'

