



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1074776
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: _____

1074776

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <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> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	ELSIE 1-13
Doc ID	1074776

All Electric Logs Run

ARRAY-IND
DEN-NEUT
MICRO
SONIC

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

February 21, 2012

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

Re: ACO1
API 15-165-21948-00-00
ELSIE 1-13
NE/4 Sec.13-16S-17W
Rush 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: 11/4/2011
 Invoice # 58
 P.O.#:
 Due Date: 12/4/2011
 Division: Russell

Invoice

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

Reference:
 ELSIE 1-13

Description of Work:
 SURFACE JOB

DRLG COMP W/O LOE GG

Account	8200-138
Well/Prospect	
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 977.42	No	Baffle Plate Aluminum, 8 5/8"	1	\$96.34	Yes
Common-Class A	370	\$ 4,831.89	Yes				
8 5/8" Basket	3	\$ 1,014.76	Yes				
Bulk Truck Matl-Material Service Charge	390	\$ 834.93	No				
Calcium Chloride	13	\$ 524.06	Yes				
Pump Truck Mileage-Job to Nearest Camp	27	\$ 288.44	No				
8 5/8" Centralizer	3	\$ 205.52	Yes				
Flo Seal	92	\$ 196.96	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	27	\$ 168.78	No				
Premium Gel (Bentonite)	7	\$ 121.99	Yes				
8 5/8" Top Rubber Plug	1	\$ 113.46	Yes				

Invoice Terms:

Net 30

	SubTotal:	\$	9,374.55
	Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$	(1,406.18)
SubTotal for Taxable Items:		\$	6,039.23
SubTotal for Non-Taxable Items:		\$	1,929.14

6.30% Rush County Sales Tax

Total:	\$	7,968.36
Tax:	\$	380.47
Amount Due:	\$	8,348.84
Applied Payments:		
Balance Due:	\$	8,348.84

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
Cell 785-324-1041

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

No. 058

Date	10-31-11	Sec.	13	Twp.	16	Range	17	County	Rush	State	KS	On Location		Finish	11:15 p.m.
Lease	Elsie			Well No.	1-13			Location	Loretta JE 120 Winto						
Contractor	Val #6							Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.						
Type Job	Surface							Charge To	Sam Gary Jr & Assoc						
Hole Size	12 1/4			T.D.	1125			Depth	1125						
Csg.	8 5/8			Tbg. Size				Depth							
Tool				Depth				City	State						
Cement Left in Csg.				Shoe Joint	42.41			The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line				Displace	68 3/4 BBL			Cement Amount Ordered	370 cum 30 all 24061 149710						

EQUIPMENT

Pumptrk	1	No.	Cement Helper	Common	370
Bulktrk		No.	Driver	Poz. Mix	
Bulktrk	13	No.	Driver	Gel.	7

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal 92#
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling 390
	Mileage

FLOAT EQUIPMENT

Guide Shoe	8 5/8
Centralizer	3
Baskets	3
AFU Inserts	6 1/2" Plug
Float Shoe	Baffle Plate
Latch Down	
Pumptrk Charge	Long Surface
Mileage	27

Tax
Discount
Total Charge

Signature: *[Handwritten Signature]*

8 5/8 on bottom Bit Circulation.
Mix 370 cum Displace Plug
Plug down @ 200' Hole? Shut in
Pressure 5000
Cement Circulated?



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: 11/12/2011
 Invoice # 114

P.O.#:

Due Date: 12/12/2011

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	8300-238
Well/Prospect	ELSIE 1-13
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Reference:

ELSIE 1-13

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	\$ 2,857.81	Yes	Pump Truck Mileage-Job to Nearest Camp	27	\$280.53	No
Gilsonite	1057	\$ 1,650.66	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$233.21	Yes
CFL 117	176	\$ 1,128.71	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	27	\$164.16	No
5 1/2" Basket	3	\$ 718.36	Yes	Flo Seal	56	\$116.60	Yes
CD-110	117	\$ 487.23	Yes	KCL	2	\$62.17	Yes
5 1/2" Turbolizer	8	\$ 483.07	Yes				
Bulk Truck Mat-Material Service Charge	204	\$ 424.77	No				
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: \$ 10,902.23

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,635.33)

SubTotal for Taxable Items: \$ 7,719.81

SubTotal for Non-Taxable Items: \$ 1,547.09

Total: \$ 9,266.90

Tax: \$ 486.35

Amount Due: \$ 9,753.24

Applied Payments:

Balance Due: \$ 9,753.24

6.30% Rush County Sales Tax

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
Cell 785-324-1041

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

No. 114

Date	Sec.	Twp.	Range	County	State	On Location	Finish
11-8-11	13	16	17	Rush	Kansas		11:15p

Lease	Well No.	Location
Elsie	1-13	Lanetta 2E W Wicks

Contractor	Owner
V.A. Energy Rig 6	To Quality Oilwell Cementing, Inc.

Type Job	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	T.D.	Charge To
7 7/8	31600	Stammal Gray S. & Associates

Csg.	Depth	Street
5 1/2 15.50 lb	3653	

Tbg. Size	Depth	City	State

Tool	Depth	City	State

Cement Left in Csg.	Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.	
22	22		

Meas Line	Displace	Cement Amount Ordered
	86 1/2 Bbl	225 Q-Pro-C 10 3/4 Salt

EQUIPMENT

Pumptrk	No.	Cementer	Helper	Driver	Driver	Driver
5		Steve	Steve	Chris	Chris	Chris
Bulktrk	No.	Driver	Driver	Driver	Driver	Driver
14		Chris	Chris	Chris	Chris	Chris
Bulktrk	No.	Driver	Driver	Driver	Driver	Driver
		Chris	Chris	Chris	Chris	Chris

JOB SERVICES & REMARKS

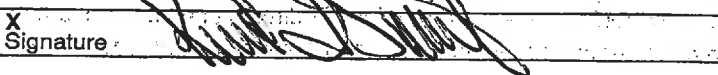
Remarks:	Calcium
Rat Hole	CD-110 117#
Mouse Hole	Halls RCL 2 gal
Centralizers	Salt 19
Baskets	Flowseal 56#
D/V. or Port Collar	Kol-Seal 1057#
30sx Rat Hole	Mud CLR 48 500 gal
20sx Mouse Hole	CFL-117 or CD110 CAF 38 50A
Pump 500 Gal Mud Clean	Sand CFL-117 176#
175sx cement Release Plug	Handling 204
	Mileage

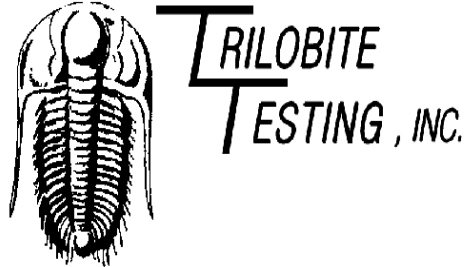
FLOAT EQUIPMENT

Displace 86 1/2 Bbl HD 1st 20 Bbl RCL	Guide Shoe
Land plug @ 1500# psi	Centralizer 8 Turbas
Float Head	Baskets 3
	AFU Inserts
	Float Shoe 1
	Latch Down 1
	Rotating Head

Pumptrk Charge	Mileage
Prod Long String	27

Tax	Discount	Total Charge

X Signature: 



DRILL STEM TEST REPORT

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

1515 Wynkoop st
suite 700
Denver Co 80202

ATTN: Tom Fertal

Elsie 1-13

13-16s-17w-Rush

Start Date: 2011.11.03 @ 21:40:02

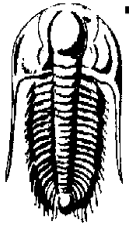
End Date: 2011.11.04 @ 06:27:02

Job Ticket #: 44867 DST #: 1

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

Printed: 2011.11.04 @ 16:46:44

Samuel Gary, Jr & Associates
13-16s-17w-Rush
Elsie 1-13
DST # 1
Topeka
2011.11.03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44867

DST#: 1

Test Start: 2011.11.03 @ 21:40:02

GENERAL INFORMATION:

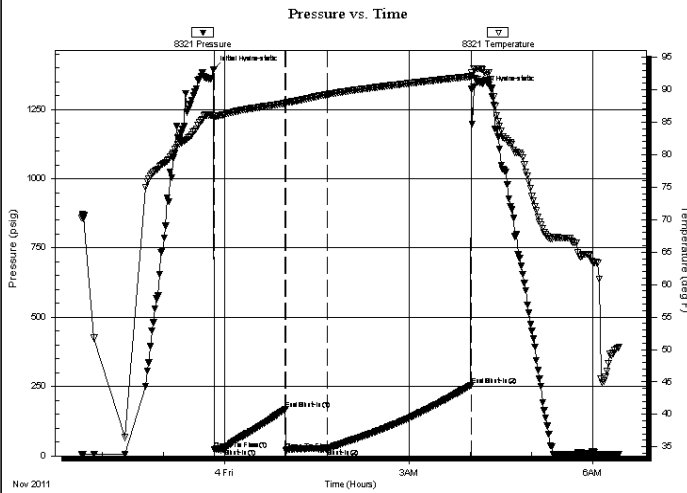
Formation: **Topeka**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:49:32
 Time Test Ended: 06:27:02
 Interval: **2972.00 ft (KB) To 3012.00 ft (KB) (TVD)**
 Total Depth: 3012.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jeff Brown
 Unit No: 44
 Reference Elevations: 1983.00 ft (KB)
 1973.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8321

Inside

Press@RunDepth: 26.53 psig @ 2976.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.11.03 End Date: 2011.11.04 Last Calib.: 2011.11.04
 Start Time: 21:40:03 End Time: 06:26:02 Time On Btm: 2011.11.03 @ 23:49:02
 Time Off Btm: 2011.11.04 @ 04:01:32

TEST COMMENT: IFI-10-min-Weak blow built to 3 1/4 in
 ISI-60-min-Dead no blow back
 FFP-40-min-Fair blow built to 6 1/4 in
 FSI-140-min-Dead no blow back



PRESSURE SUMMARY

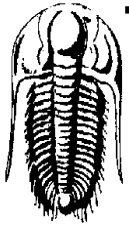
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1393.22	86.08	Initial Hydro-static
1	23.43	85.55	Open To Flow (1)
11	27.66	86.21	Shut-In(1)
70	169.66	87.89	End Shut-In(1)
71	19.55	87.95	Open To Flow (2)
111	26.53	89.27	Shut-In(2)
252	255.57	92.05	End Shut-In(2)
253	1322.54	92.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud with oil spots	0.14
2.00	VSOCM 3%O97%M	0.03

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44867

DST#: 1

Test Start: 2011.11.03 @ 21:40:02

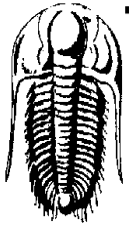
Tool Information

Drill Pipe:	Length: 2946.00 ft	Diameter: 3.80 inches	Volume: 41.32 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 41.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	2972.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	74.00 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	8679	Fluid	2938.00	
Stubb	5.00			2943.00	
Shut In Tool	5.00			2948.00	
Sampler	2.00			2950.00	
Hydraulic tool	5.00			2955.00	
Jars	5.00			2960.00	
Safety Joint	3.00			2963.00	
Packer	4.00			2967.00	34.00 Bottom Of Top Packer
Packer	5.00			2972.00	
Stubb	1.00			2973.00	
Perforations	3.00			2976.00	
Recorder	0.00	8321	Inside	2976.00	
Recorder	0.00	8737	Outside	2976.00	
Perforations	33.00			3009.00	
Bullnose	3.00			3012.00	40.00 Bottom Packers & Anchor

Total Tool Length: 74.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44867

DST#: 1

Test Start: 2011.11.03 @ 21:40:02

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud with oil spots	0.140
2.00	VSOCM 3%O97%M	0.028

Total Length: 12.00 ft Total Volume: 0.168 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 2000 ml of Mud with a scum of oil
200 PSI

Serial #: 8321

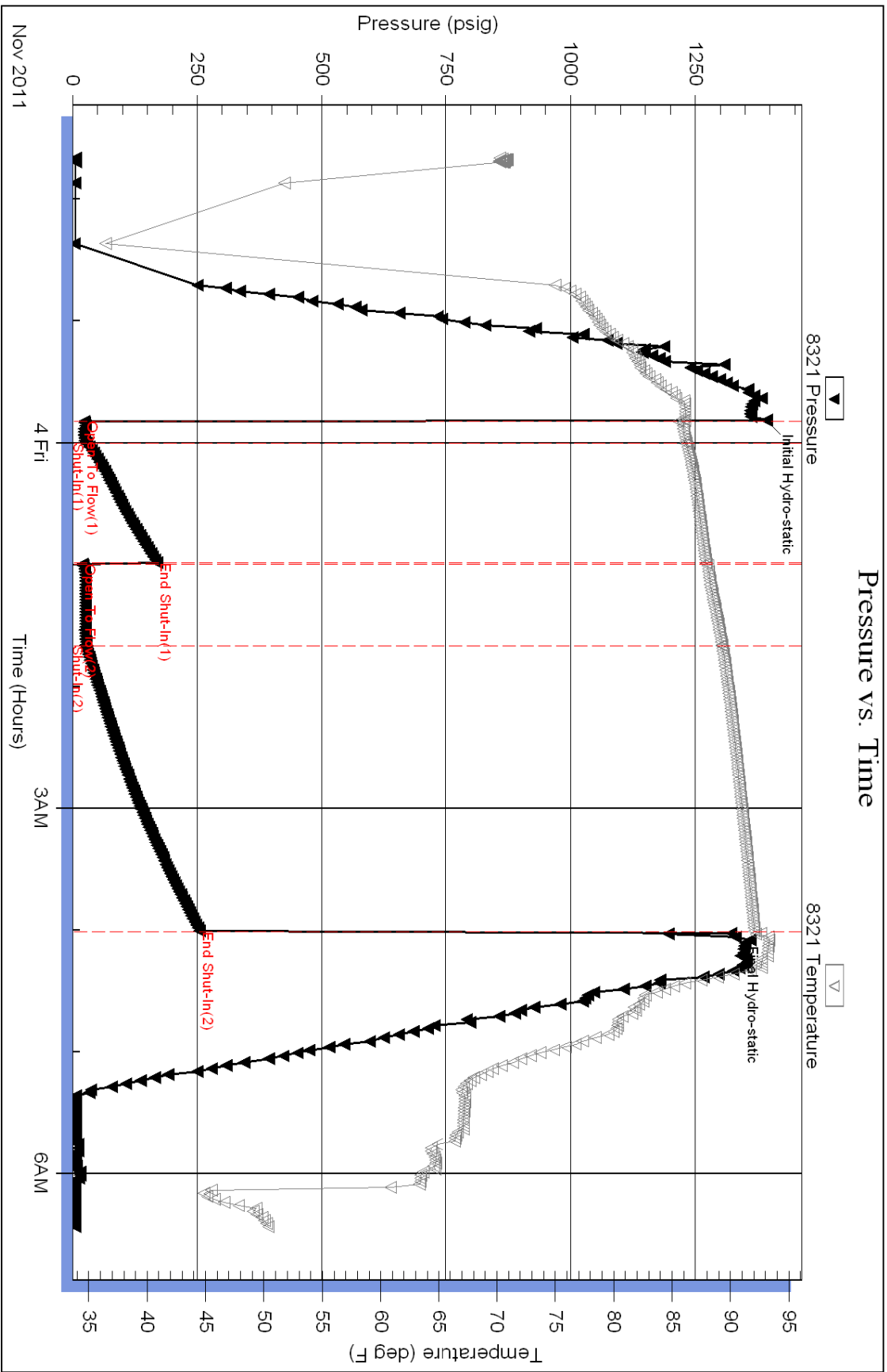
Inside

Samuel Gary, Jr & Associates

Esle 1-13

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 44867

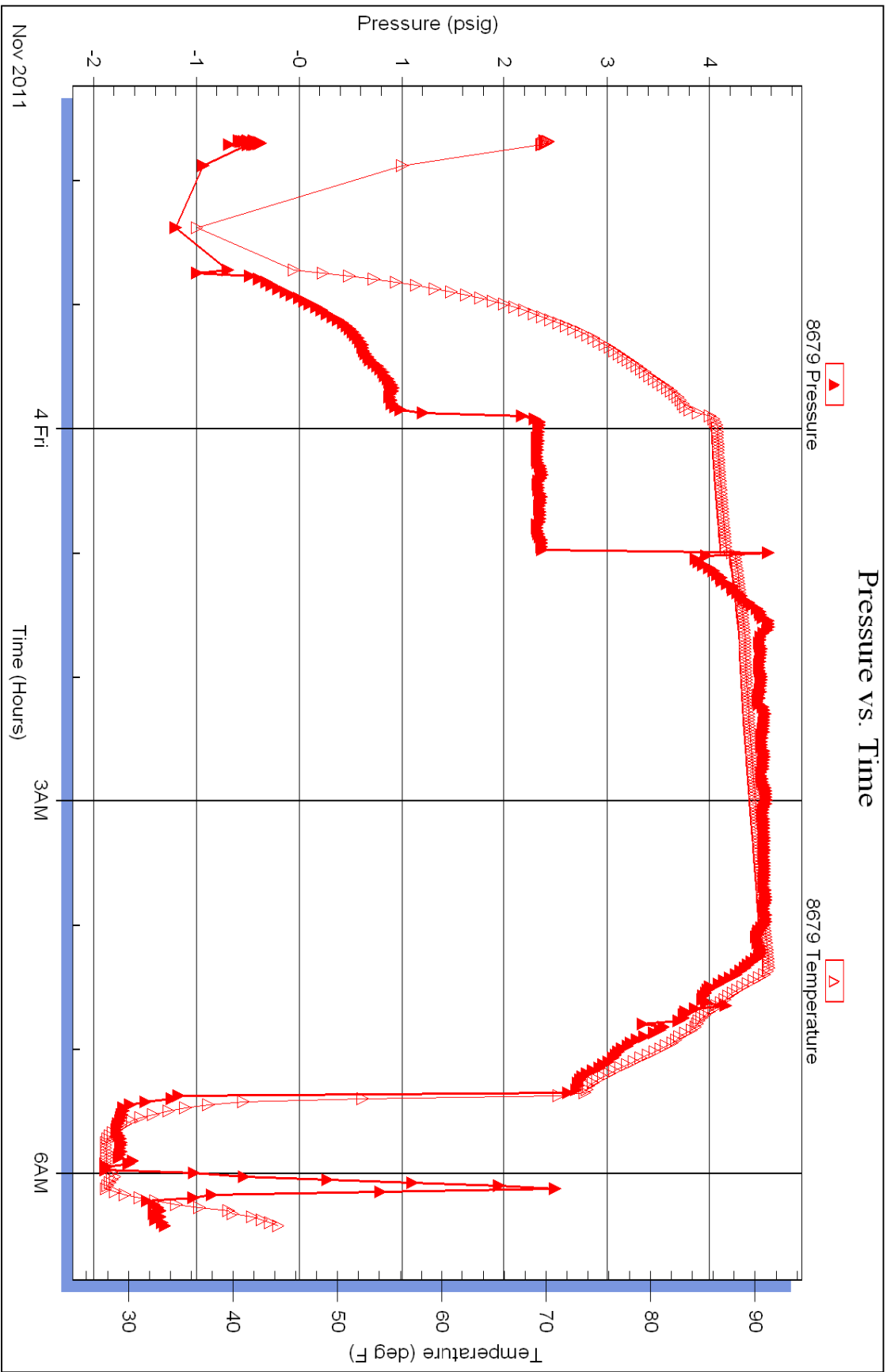
Printed: 2011.11.04 @ 16:46:49

Serial #: 8679

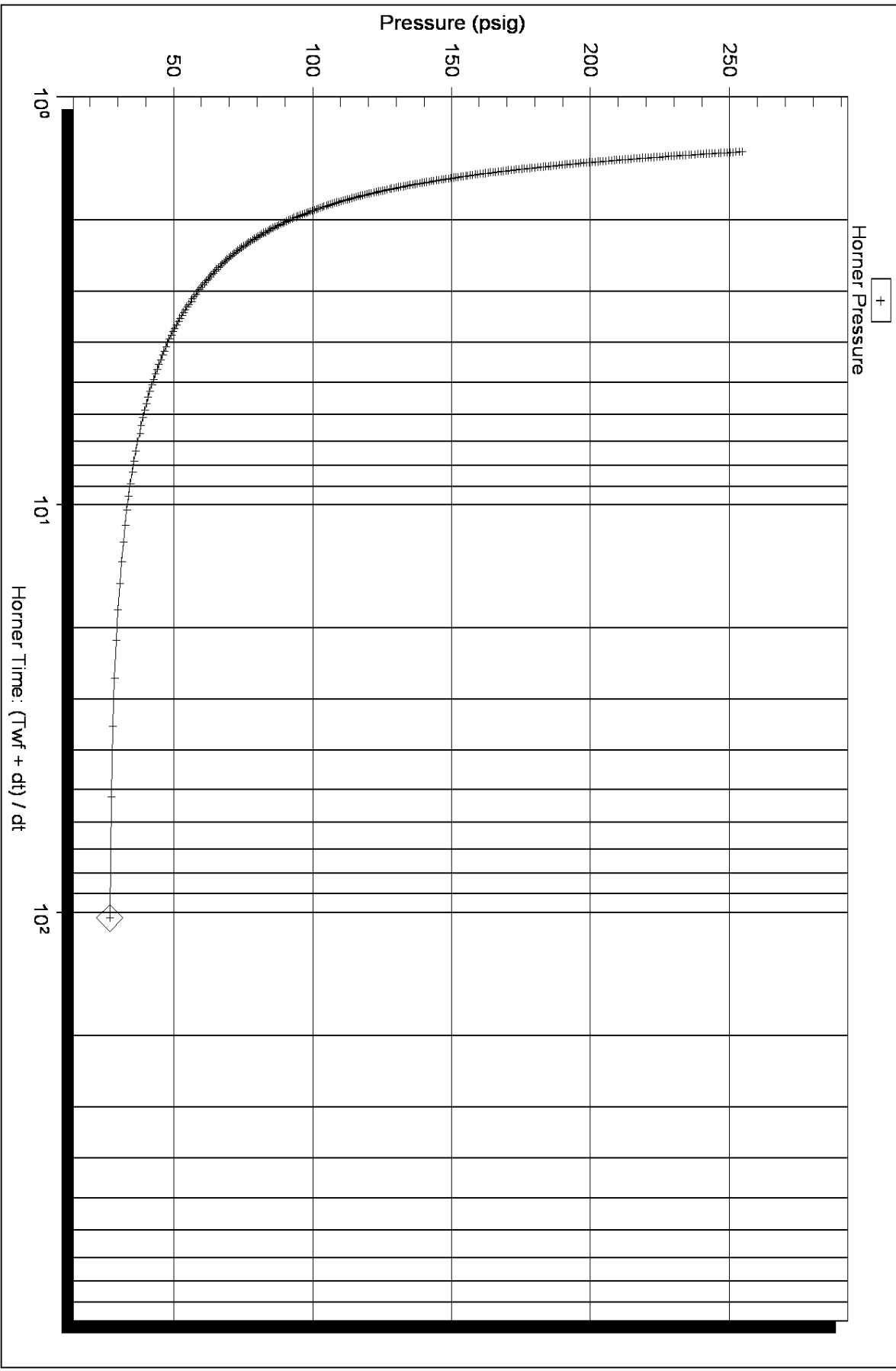
Fluid Samuel Gary, Jr & Associates

Esle 1-13

DST Test Number: 1



Horner Plot



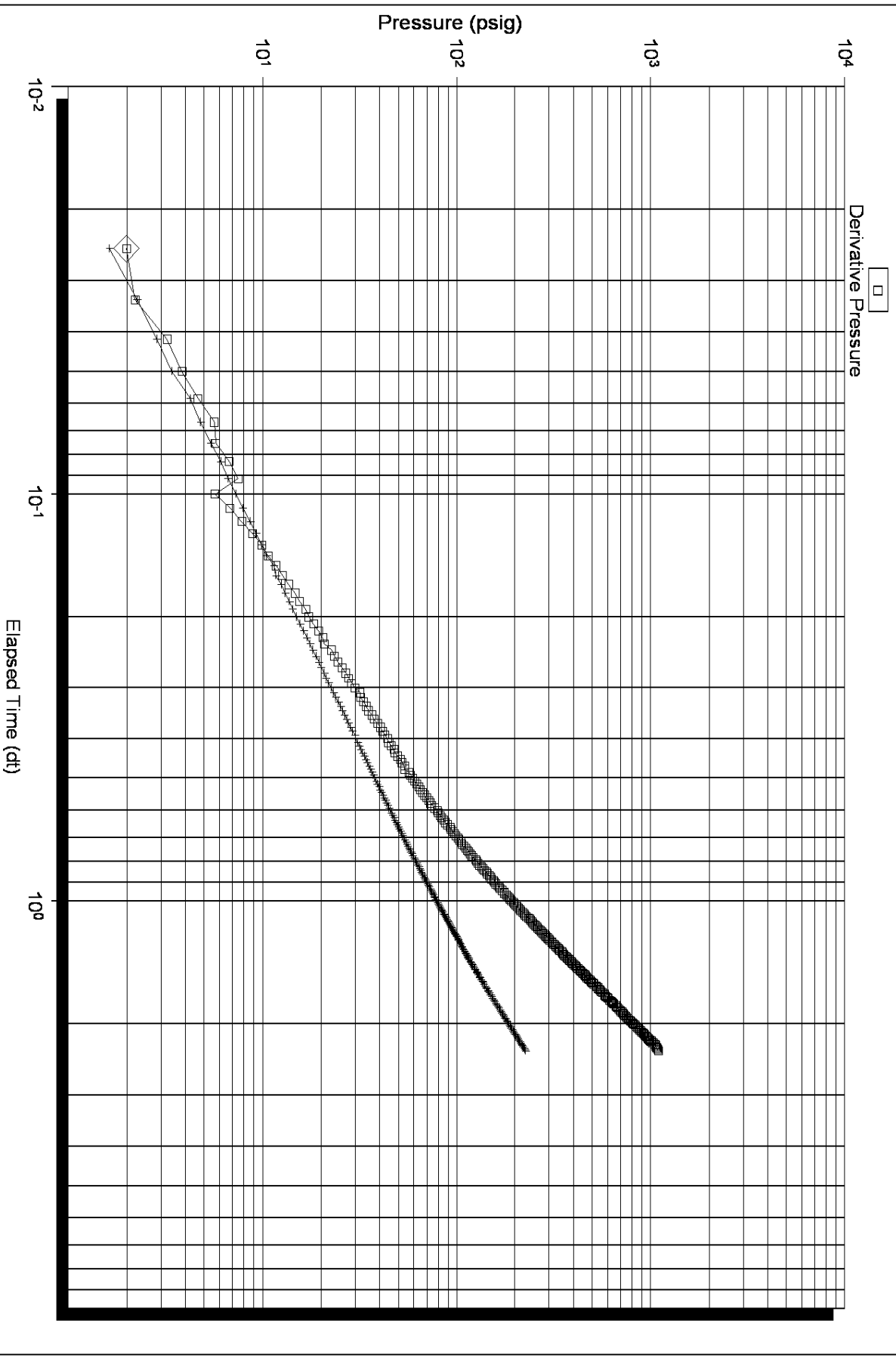
Serial Number: 8321 (Inside)

P* :

Slope (m) : kpa/log cycle

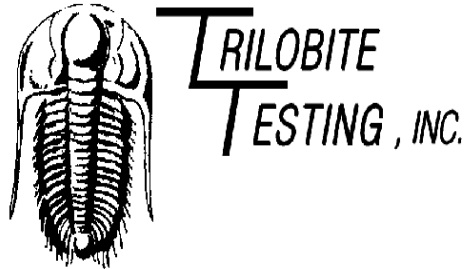
Flow Cycle: 2

Log-Log and Pseudo-Derivative



Serial Number: 8321 (Inside)

Flow Cycle: 2



DRILL STEMTEST REPORT

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

1515 Wynkoop st
suite 700
Denver Co 80202

ATTN Tom Feral

Elsie 1-13

13-16s-17wRush

Start Date 2011.11.05 @01:44:15

End Date 2011.11.05 @10:48:45

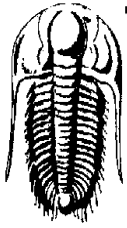
Job Ticket #: 44868 DST #: 2

Trilobite Testing Inc

PO Box 362 Hays, KS 67601

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

Printed 2011.11.06 @08:11:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN: Tom Fernald

Elsie 1-13

Job Ticket: 44868

DST# 2

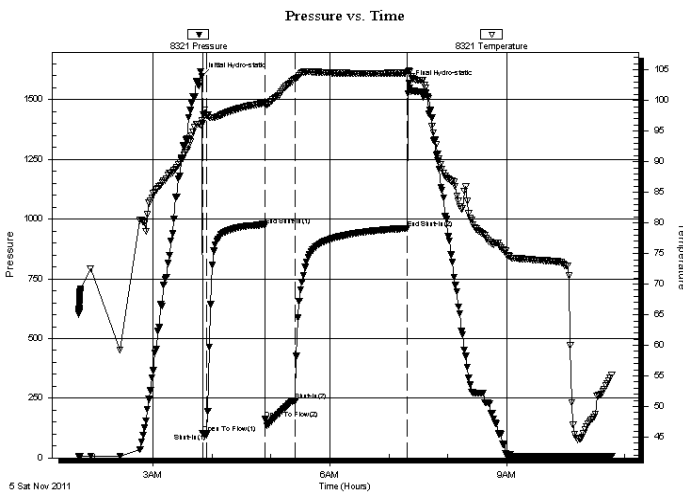
Test Start: 2011.11.05 @01:44:15

GENERAL INFORMATION

Formation: **Lansing -A & C**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 03:50:15
 Time Test Ended: 10:48:45
 Interval: **3247.00 ft (KB) To 3303.00 ft (KB) (TVD)**
 Total Depth: 3303.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jeff Brown
 Unit No: 44
 Reference Elevations: 1983.00 ft (KB)
 1973.00 ft (CF)
 KB to GRCF: 10.00 ft

Serial #: 8321 Inside
 Press@RunDepth: 240.07 psig @ 3285.00 ft (KB)
 Start Date: 2011.11.05 End Date: 2011.11.05 Capacity: 8000.00 psig
 Start Time: 01:44:16 End Time: 10:47:45 Last Calib.: 2011.11.05
 Time On Btm: 2011.11.05 @03:49:45
 Time Off Btm: 2011.11.05 @07:20:15

TEST COMMENT: FP5-min-Strong blow BOB in 1 min
 IS-60-min-Weak blow back built to 1 1/4 in
 FP30-min-Strong blow BOB in 30 sec
 FS-105-min-Strong blow Back BOB in 1 1/2 min Gas to surface in 6 min Ded back to a surface blow

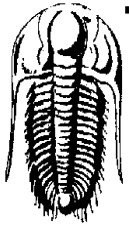


PRESSURE SUMMARY			
Time (Mh)	Pressure (psig)	Temp (deg F)	Action
0	1597.80	96.69	Initial Hydro-static
1	104.23	96.32	Open To Flow(1)
5	102.52	97.51	Shut-h(1)
64	972.99	99.60	End Shut-h(1)
65	163.61	99.45	Open To Flow(2)
95	240.07	103.50	Shut-h(2)
209	961.12	104.51	End Shut-h(2)
211	1567.38	104.90	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (lb)
31.00	00M10%/080%/M	0.43
63.00	003M15%/020%/065%/M	0.88
68.00	H003/M5%/M8%/M80%/060%/G	0.95
315.00	M03/M05%/M8%/M25%/065%/O	4.42
0.00	2754 GP	0.00

Gas Rates			
	Orde (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN: Tom Fernal

Elsie 1-13

Job Ticket: 44868

DST# 2

Test Start: 2011.11.05 @01:44:15

Tool Information

Drill Pipe:	Length: 3226.00 ft	Diameter: 3.80 inches	Volume: 45.25 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.25 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3247.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	90.00 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	8679	Fluid	3213.00	
Stub	5.00			3218.00	
Shut In Tool	5.00			3223.00	
Sampler	2.00			3225.00	
Hydraulic tool	5.00			3230.00	
Jars	5.00			3235.00	
Safety Joint	3.00			3238.00	
Packer	4.00			3242.00	34.00 Bottom of Top Packer
Packer	5.00			3247.00	
Stub	1.00			3248.00	
Perforations	4.00			3252.00	
Change Over Sub	1.00			3253.00	
Drill Pipe	31.00			3284.00	
Change Over Sub	1.00			3285.00	
Recorder	0.00	8321	Inside	3285.00	
Recorder	0.00	8737	Outside	3285.00	
Perforations	15.00			3300.00	
Bullnose	3.00			3303.00	56.00 Bottom Packers & Anchor

Total Tool Length: 90.00

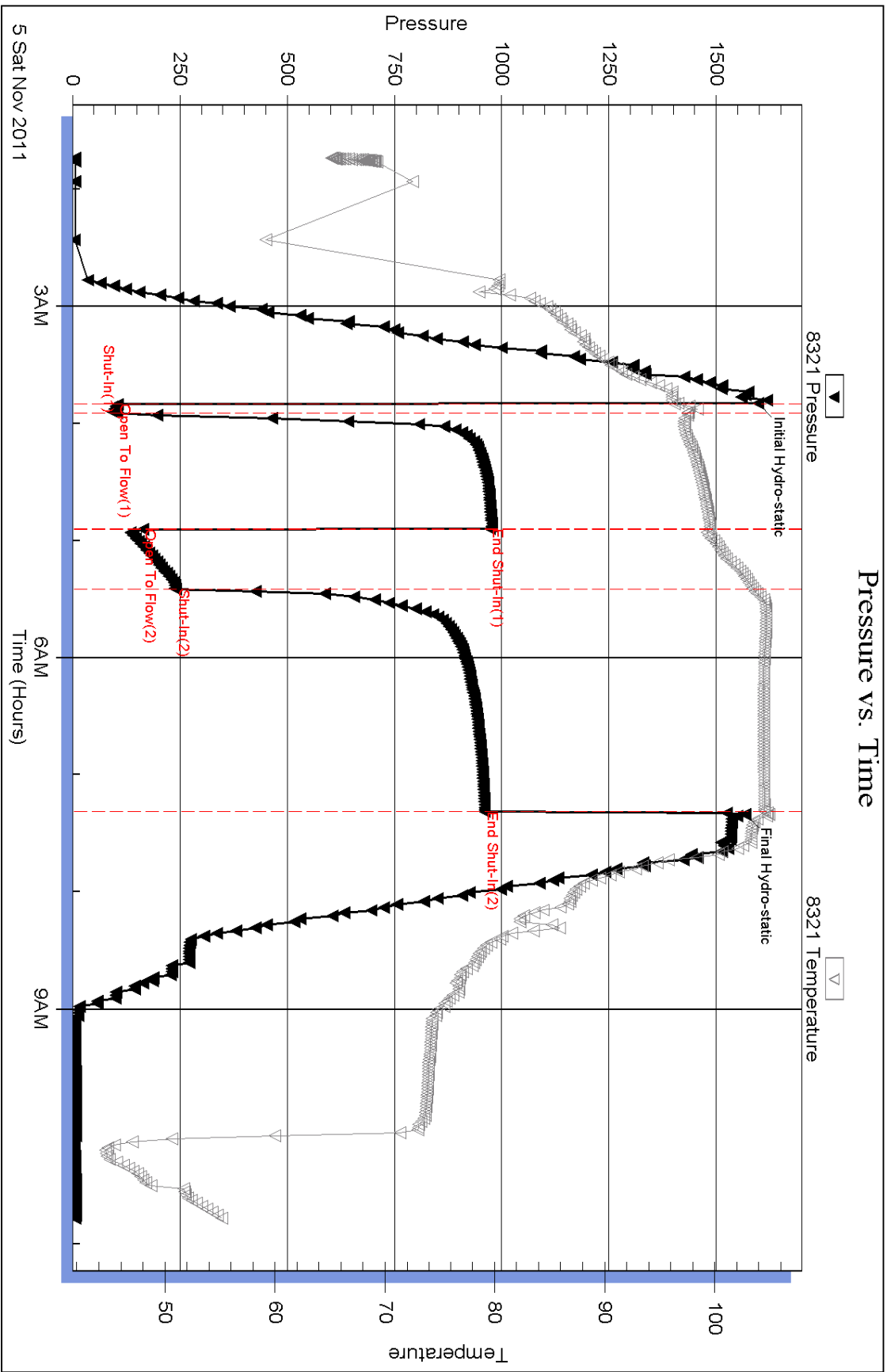
Serial #: 8321

Inside Samuel Gary, Jr. & Associates

Esle 1-13

DST Test Number: 2

Pressure vs. Time



Trioxide Testing, Inc

Ref. No: 44868

Printed: 2011.11.06 @08:11:24

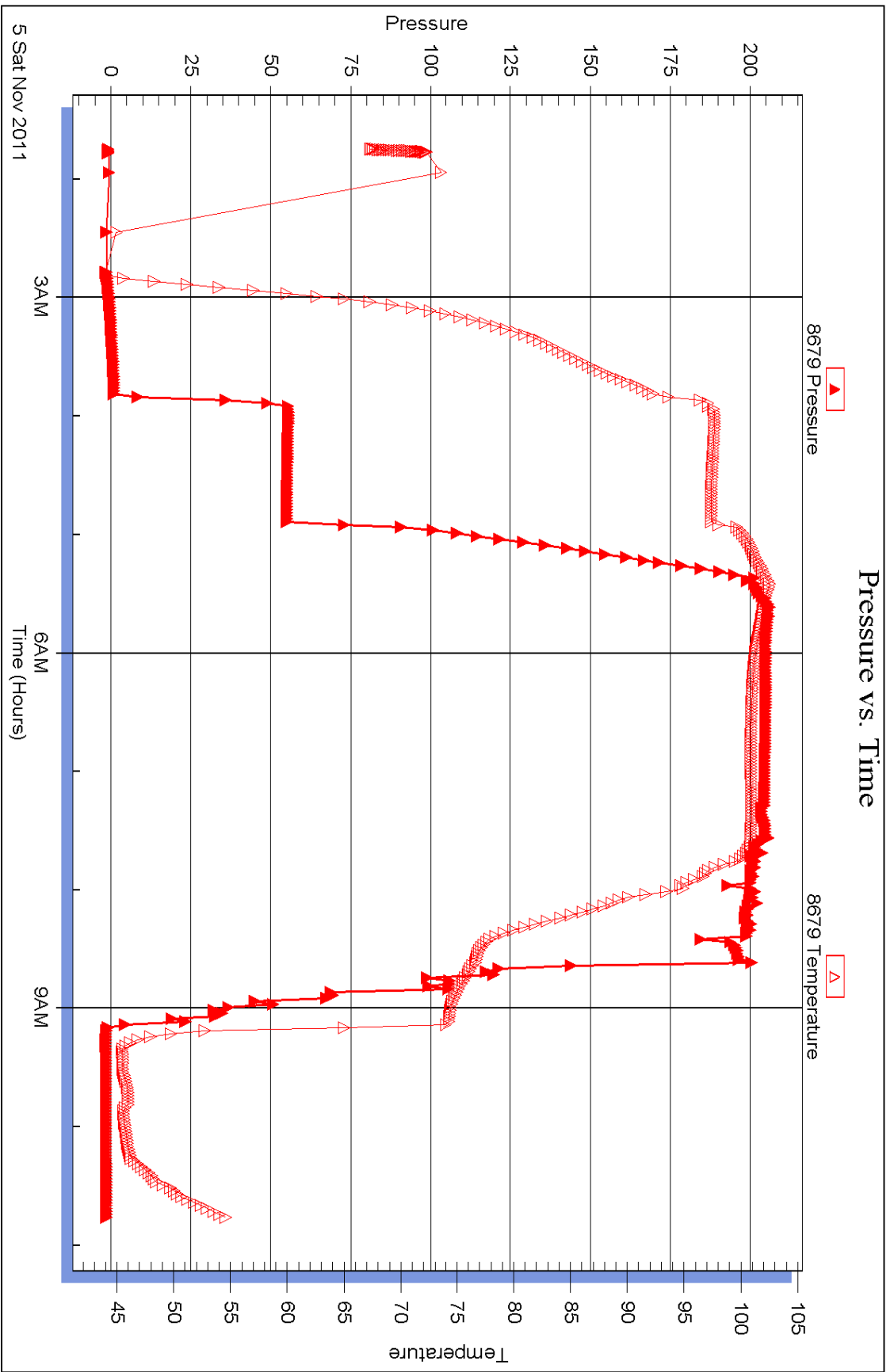
Serial #: 8679

Fluid

Samuel Gary, Jr. & Associates

Est# 1-13

DST Test Number: 2



Triobite Testing, Inc.

Ref. No: 44868

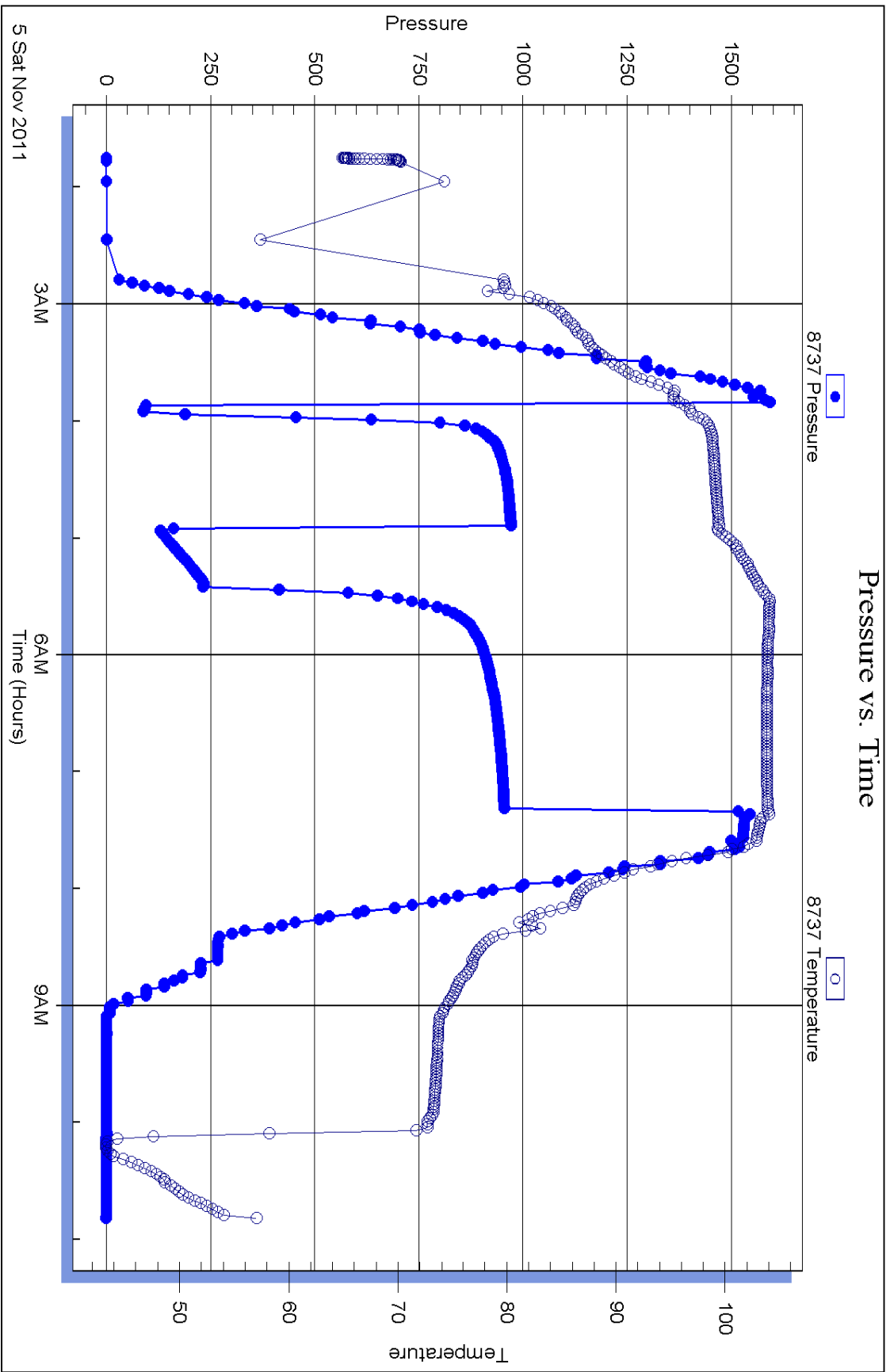
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Serial #: 8737

Outside Samuel Gary, Jr. & Associates

Esle 1-13

DST Test Number: 2

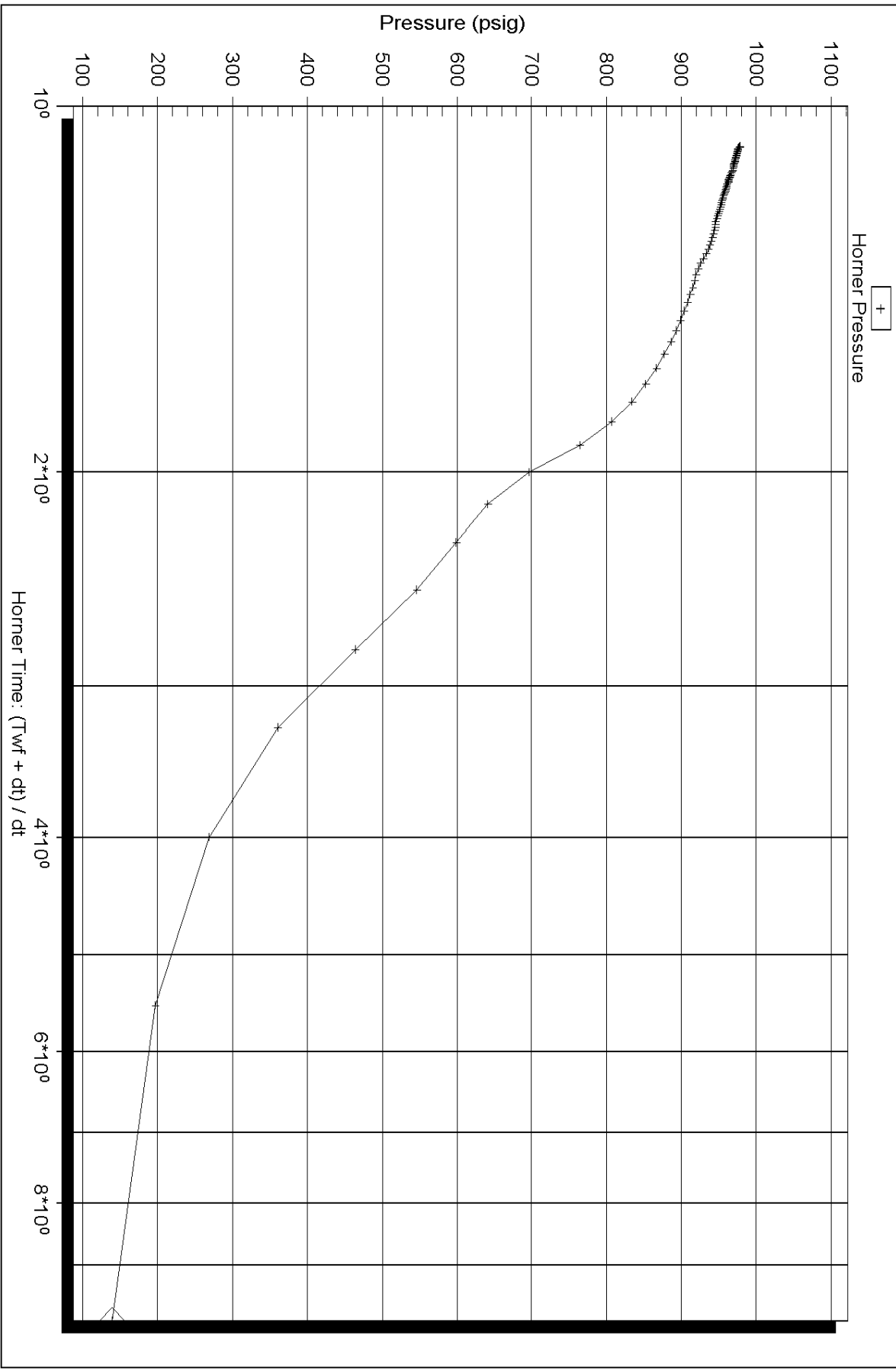


Trioxide Testing, Inc.

Ref. No: 44868

Printed: 2011.11.06 @08:11:26

Horner Plot



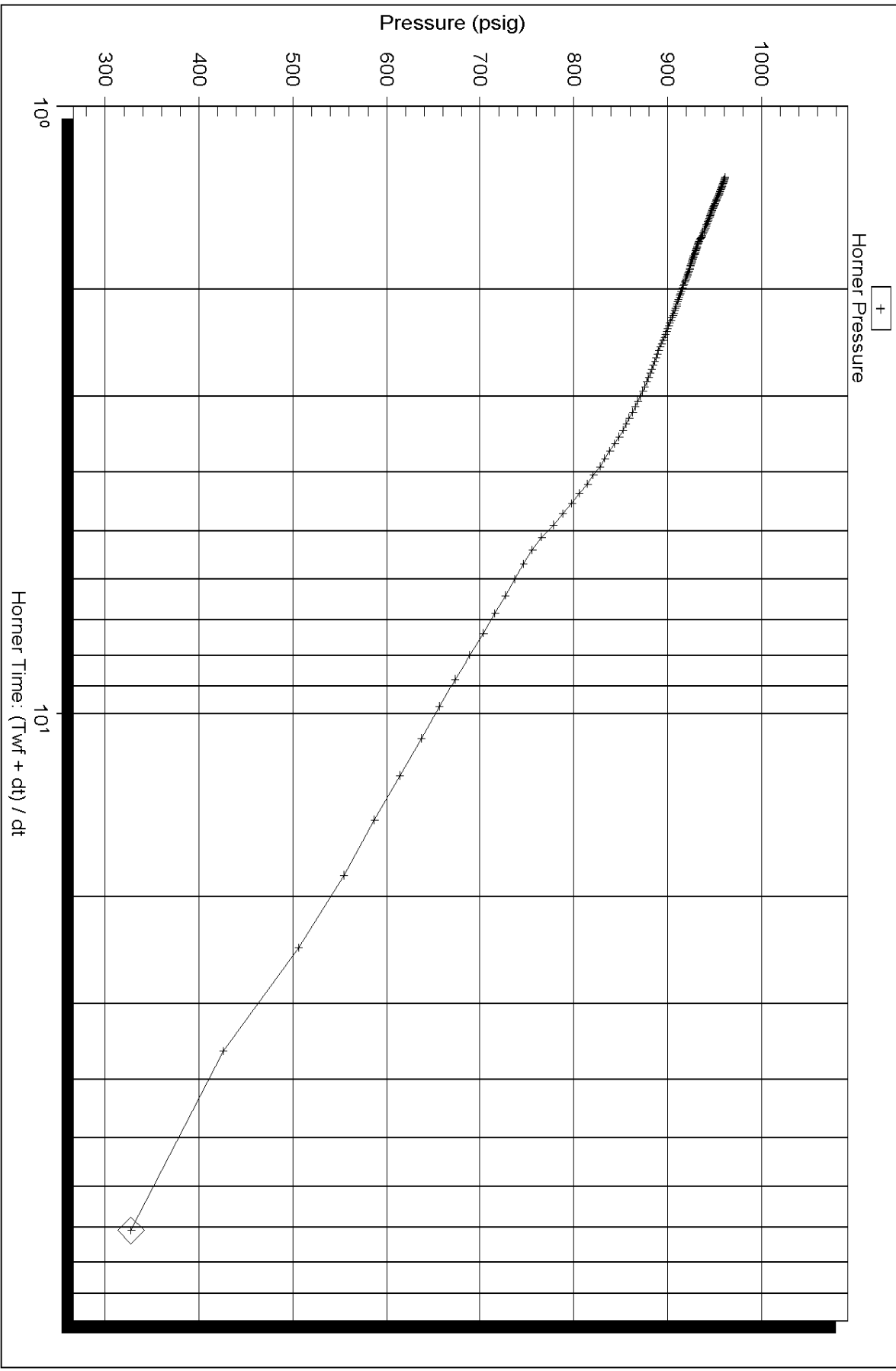
Serial Number: 8821 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



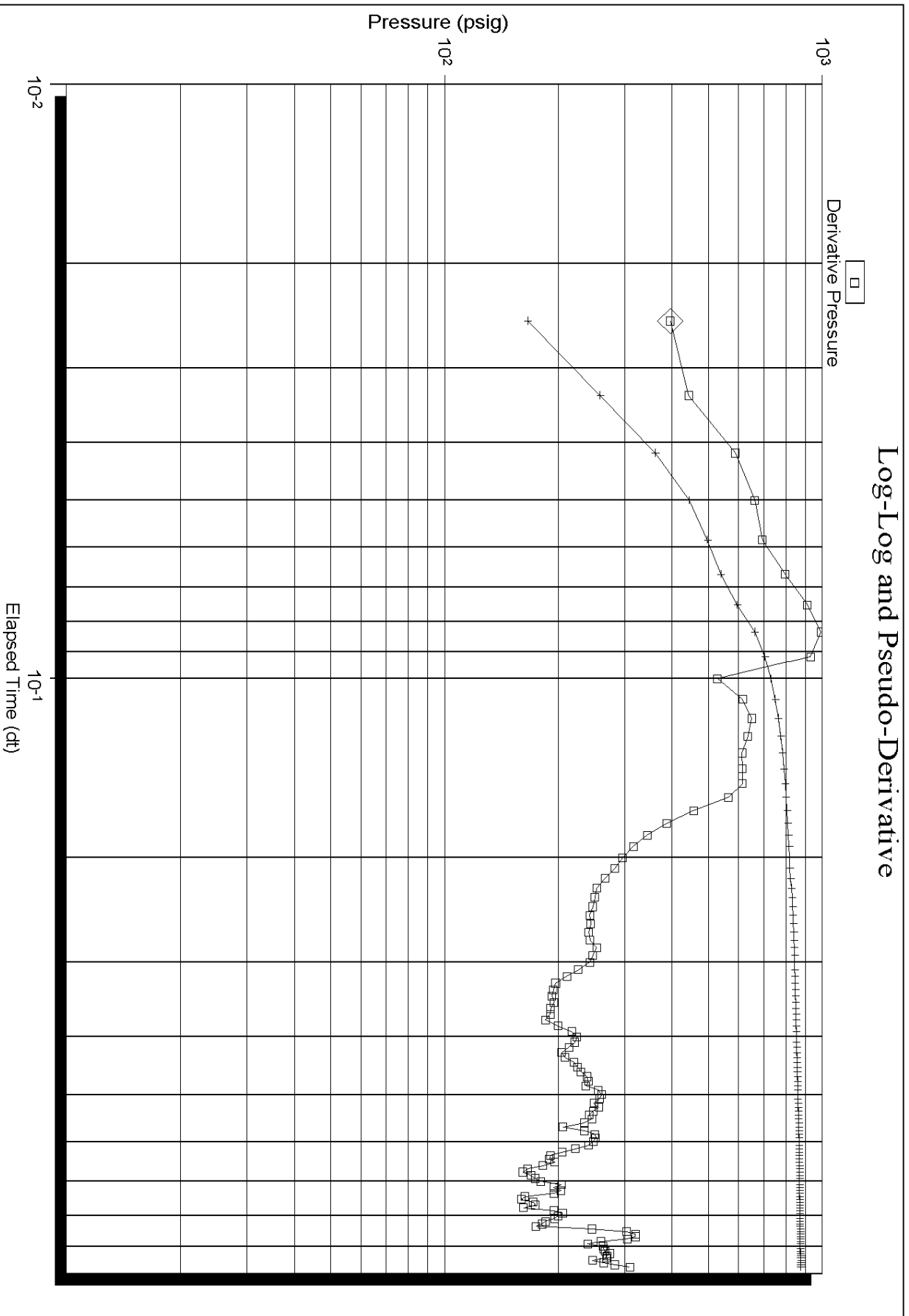
Serial Number: 8821 (Inside)

P_w:

Slope (m) : kpa/log cycle

Flow Cycle: 2

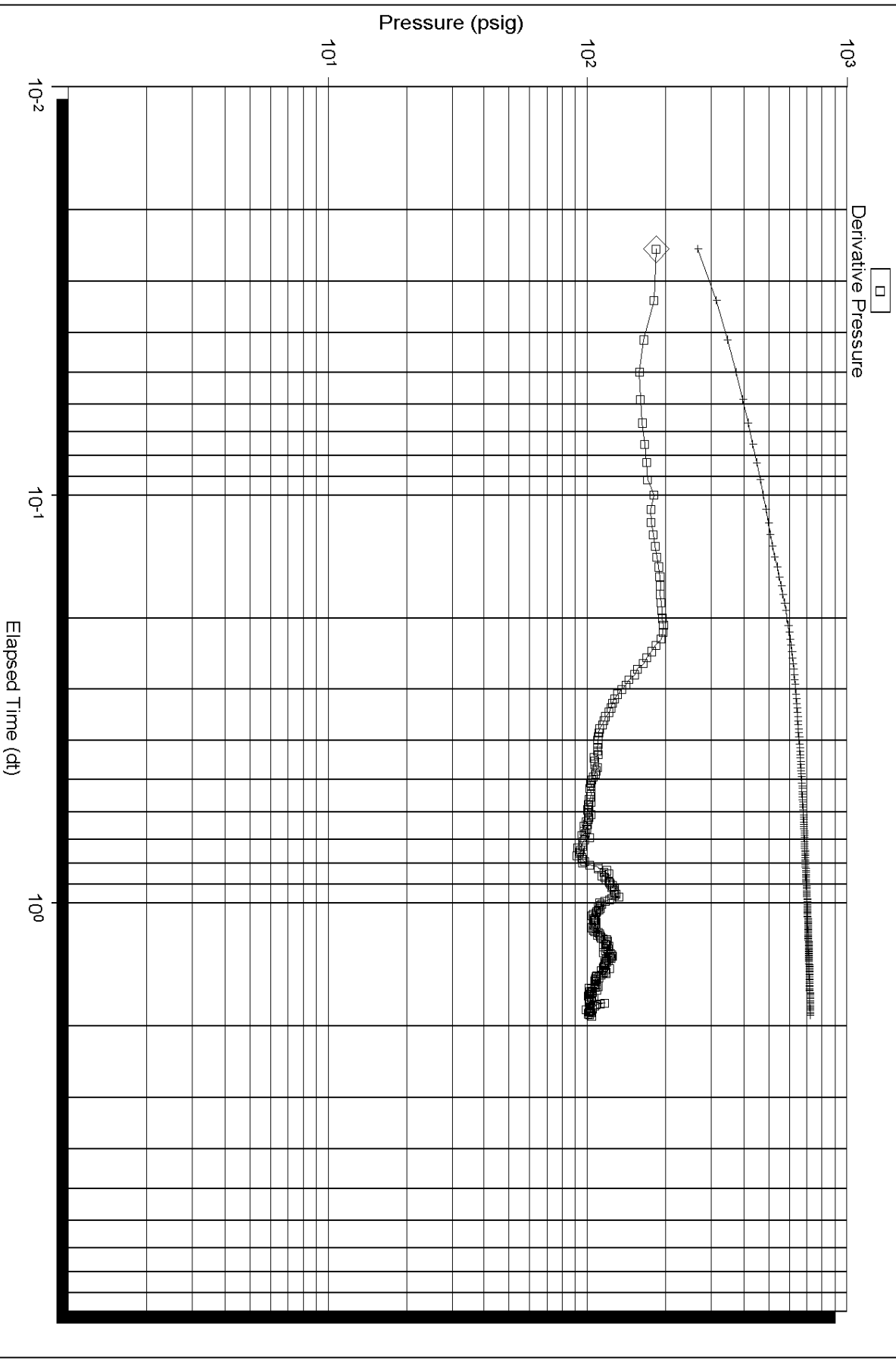
Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

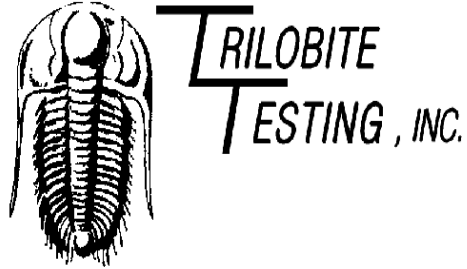
Flow Cycle: 1

Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

Flow Cycle: 2



DRILL STEMTEST REPORT

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

1515 Wynkoop st
suite 700
Denver Co 80202

ATTN Tom Feral

Elsie 1-13

13-16s-17wRush

Start Date 2011.11.05 @ 22:30:17

End Date 2011.11.06 @ 07:00:47

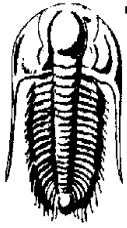
Job Ticket #: 44869 DST #: 3

Trilobite Testing Inc

PO Box 362 Hays, KS 67601

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

Printed 2011.11.06 @ 08:13:12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkopp st
suite 700
Denver Co 80202
ATTN: Tom Feral

Elsie 1-13

Job Ticket: 44869

DST# 3

Test Start: 2011.11.05 @ 22:30:17

GENERAL INFORMATION

Formation: **Lansing-F&G**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 00:37:47

Time Test Ended: 07:00:47

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 44

Interval: **3328.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1983.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GRCP: 10.00 ft

Serial #: **8321**

Inside

Press@Run Depth: 421.39 psig @ 3364.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.05 End Date: 2011.11.05

Last Calib.: 2011.11.05

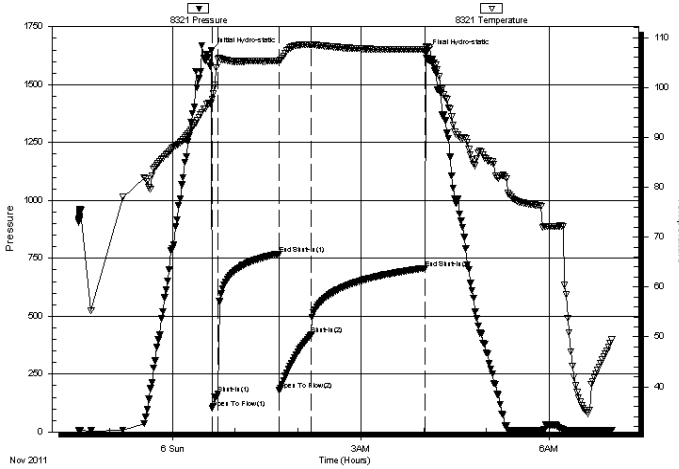
Start Time: 22:30:18 End Time: 08:59:47

Time On Btm: 2011.11.06 @ 00:37:17

Time Off Btm: 2011.11.06 @ 04:02:17

TEST COMMENT: FP5-min-Strong blow BOB in 1 1/2 min
IS-60-min-Weak surface blow back ded out in 6 min
FP30-min-Strong blow BOB in 2 min
FS-105-Min-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min)	Pressure (psig)	Temp (deg F)	Action
0	1646.16	96.88	Initial Hydro-static
1	102.29	97.64	Open To Flow(1)
6	164.08	105.72	Shut-h(1)
65	769.37	105.36	End Shut-h(1)
65	181.06	105.25	Open To Flow(2)
96	421.39	108.58	Shut-h(2)
204	707.37	107.62	End Shut-h(2)
205	1634.28	108.09	Final Hydro-static

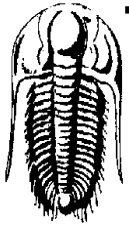
Recovery

Length (ft)	Description	Volume (bbl)
504.00	MW with oil spots 10% M80% N	7.07
126.00	GMW with a sound of oil 10% G10% M80% N 1.77	
63.00	GM 10% G25% N 65% M	0.88
108.00	GM with a sound of oil 5% G35% M	1.51
0.00	50 GP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEMTEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN TomFertal

Elsie 1-13

Job Ticket: 44869

DST# 3

Test Start: 2011.11.05 @22:30:17

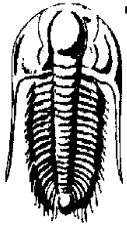
Tool Information

Drill Pipe:	Length: 3321.00 ft	Diameter: 3.80 inches	Volume: 46.58 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 46.58 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3328.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	86.00 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	8679	Fluid	3294.00	
Stub	5.00			3299.00	
Shut In Tool	5.00			3304.00	
Sampler	2.00			3306.00	
Hydraulic tool	5.00			3311.00	
Jars	5.00			3316.00	
Safety Joint	3.00			3319.00	
Packer	4.00			3323.00	34.00 Bottom of Top Packer
Packer	5.00			3328.00	
Stub	1.00			3329.00	
Perforations	2.00			3331.00	
Change Over Sub	1.00			3332.00	
Drill Pipe	31.00			3363.00	
Change Over Sub	1.00			3364.00	
Recorder	0.00	8321	Inside	3364.00	
Recorder	0.00	8737	Outside	3364.00	
Perforations	13.00			3377.00	
Bullnose	3.00			3380.00	52.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN Tom Fernal

Elsie 1-13

Job Ticket: 44869

DST# 3

Test Start: 2011.11.05 @22:30:17

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		CI AP:	deg AP
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbd		
Water Loss:	6.80 in ³	Gas Cushion Type:			
Resistivity:	ohmm	Gas Cushion Pressure:	psig		
Salinity:	2900.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbd
504.00	MW with oil spots 10% (M80%) (V)	7.070
126.00	GMW with a sound of oil 10% (G10%) (M80%) (V)	1.767
63.00	GMW 10% (G25%) (M65%) (M)	0.884
108.00	GMW with a sound of oil 5% (G5%) (M)	1.515
0.00	50 GP	0.000

Total Length: 801.00 ft Total Volume: 11.236 bbd

Num Fluid Samples: 0

Num Gas Bontis: 0

Serial #

Laboratory Name:

Laboratory Location:

Recovery Comments: 2500 ML MW with a sound of oil
360 PSI
2450 ML of Water 50 ML of Mud

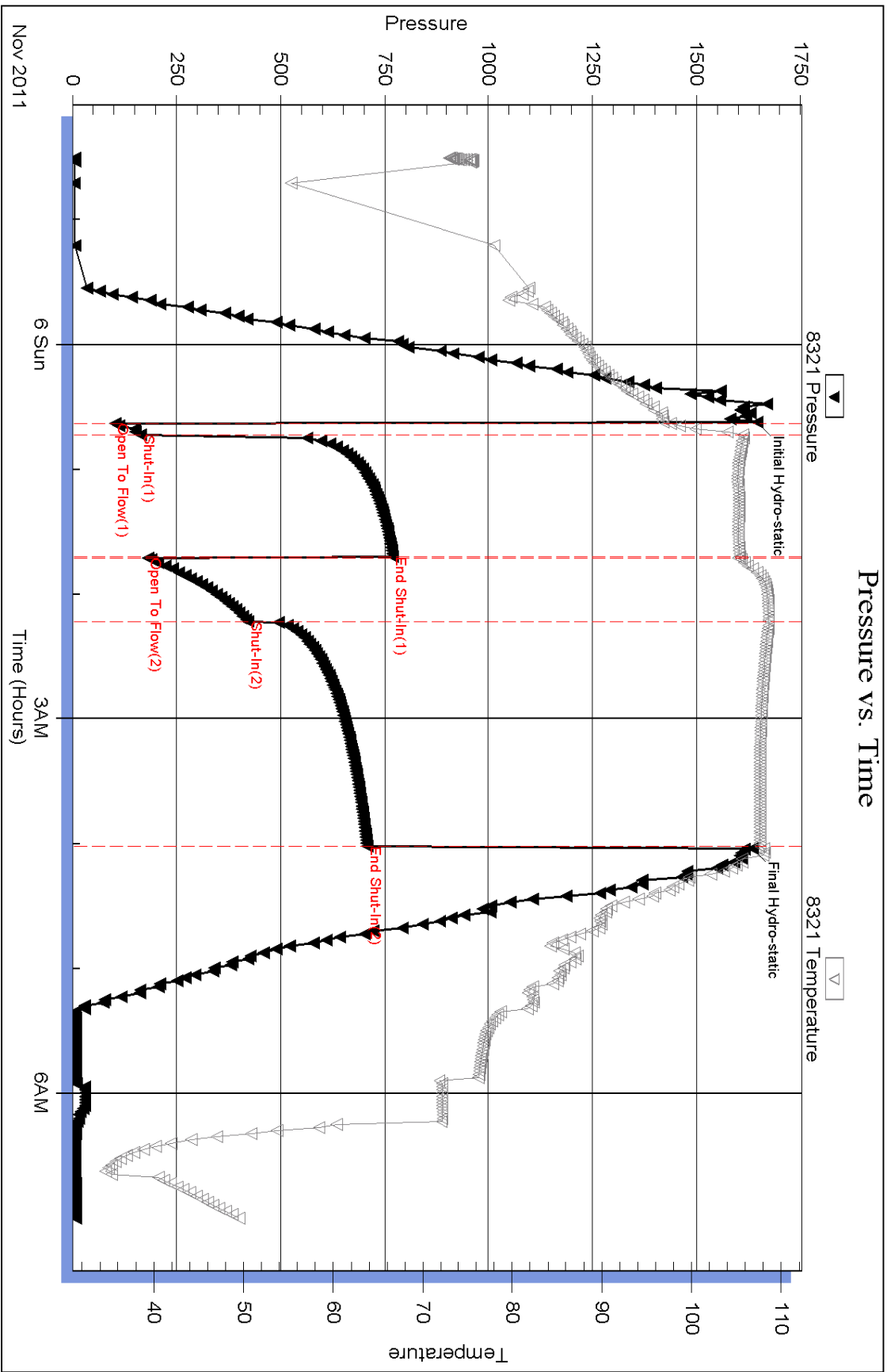
Serial #: 8321

Inside Samuel Gary, Jr. & Associates

Esle 1-13

DST Test Number: 3

Pressure vs. Time



Trioxide Testing, Inc

Ref. No: 44869

Printed: 2011.11.06 @08:13:18

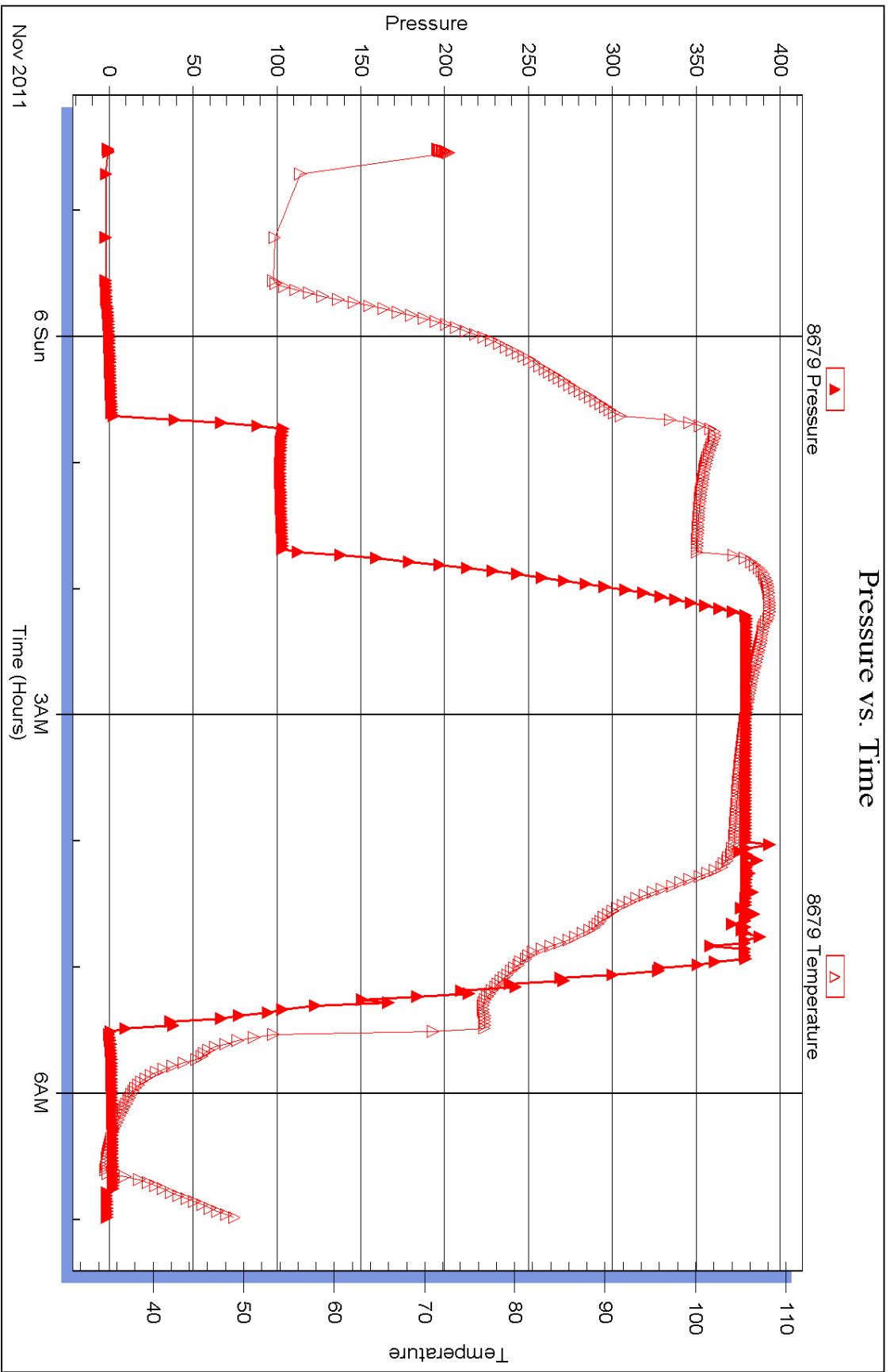
Serial #: 8679

Fluid

Samuel Gary, Jr. & Associates

Est# 1-13

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 44869

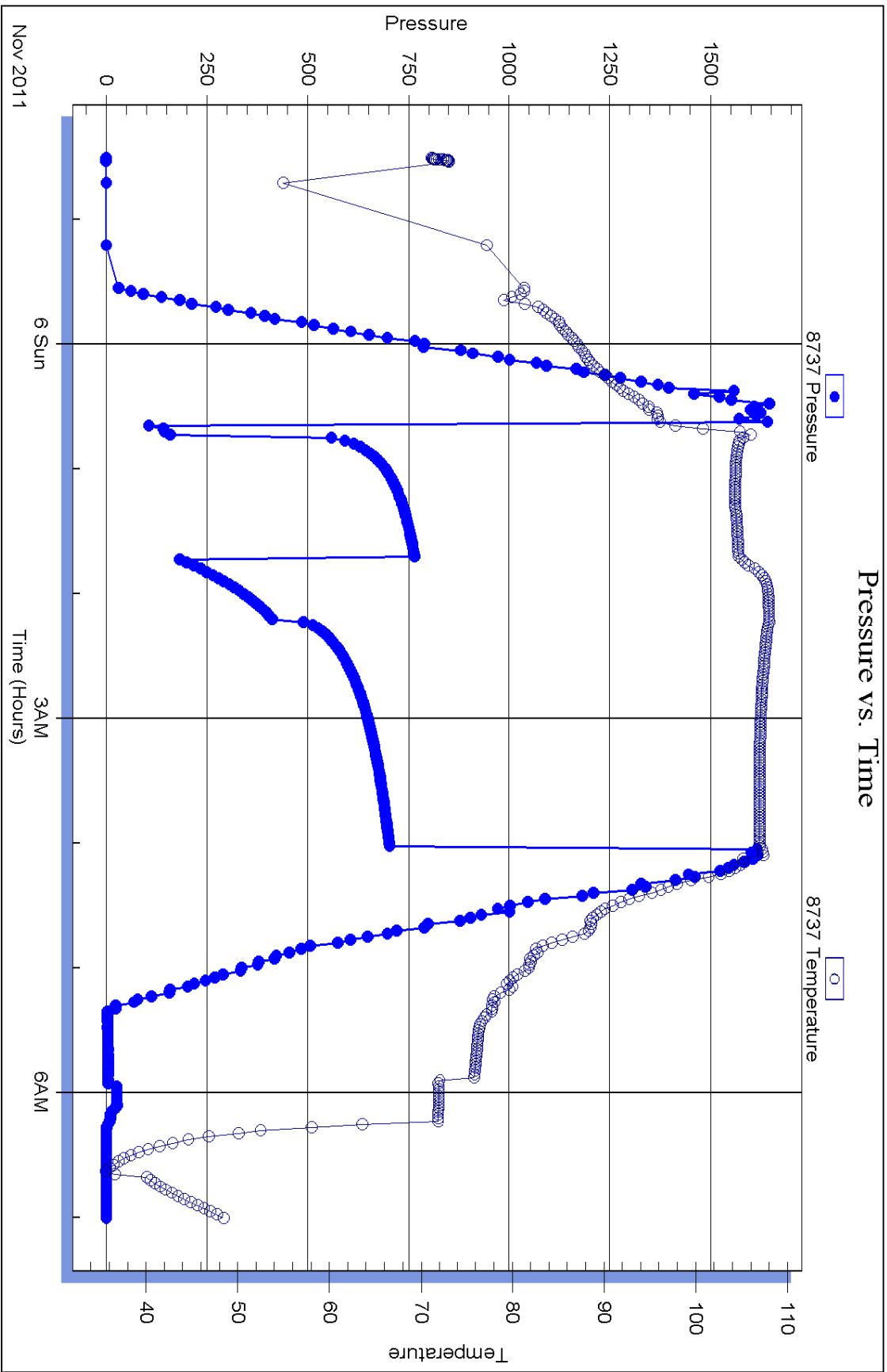
Printed: 2011.11.06 @08:13:19

Serial #: 8737

Outside Samuel Gary, Jr. & Associates

Est# 1-13

DST Test Number: 3

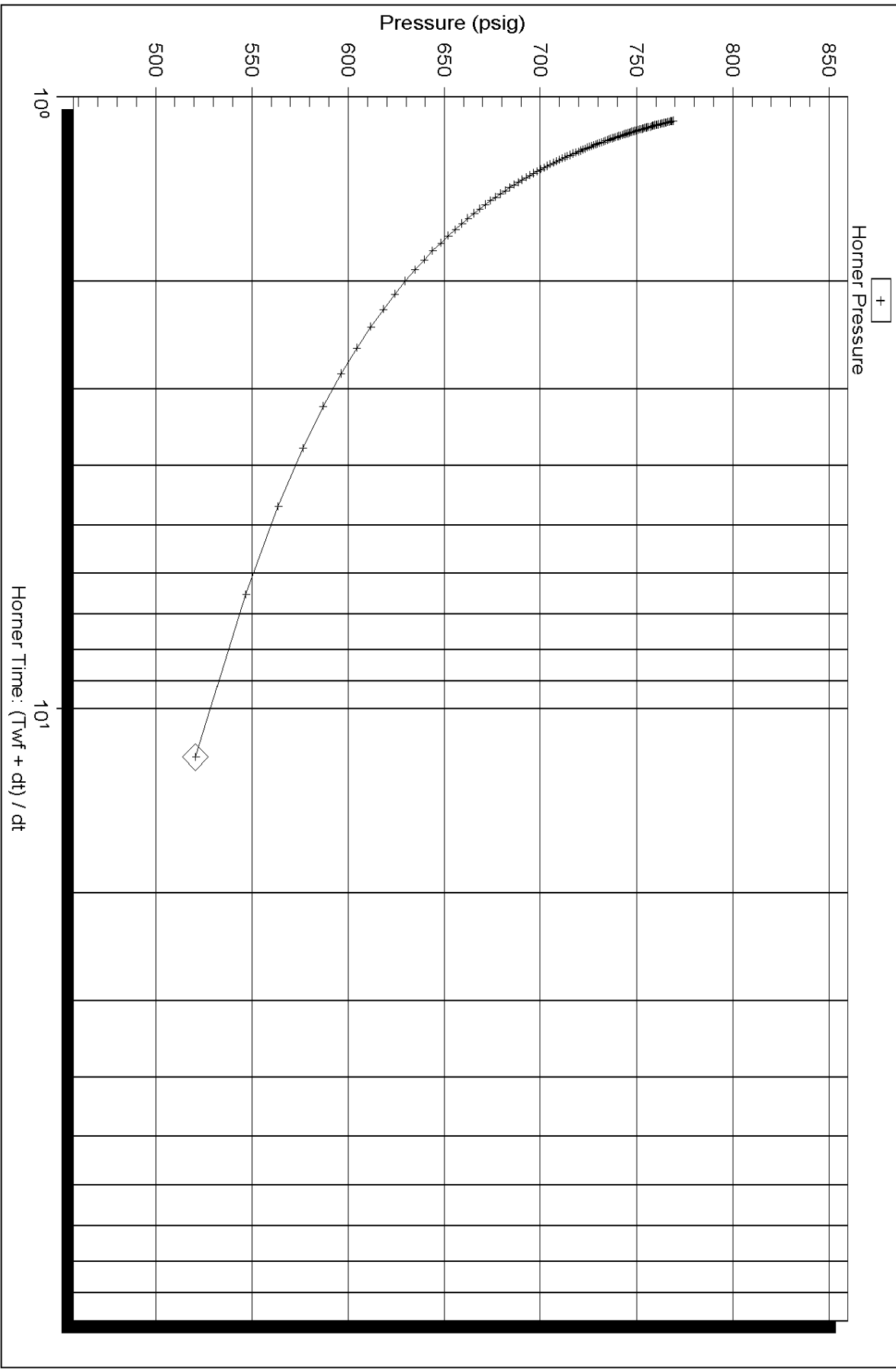


Tridotte Testing, Inc.

Ref. No: 44869

Printed: 2011.11.06 @08:13:20

Horner Plot



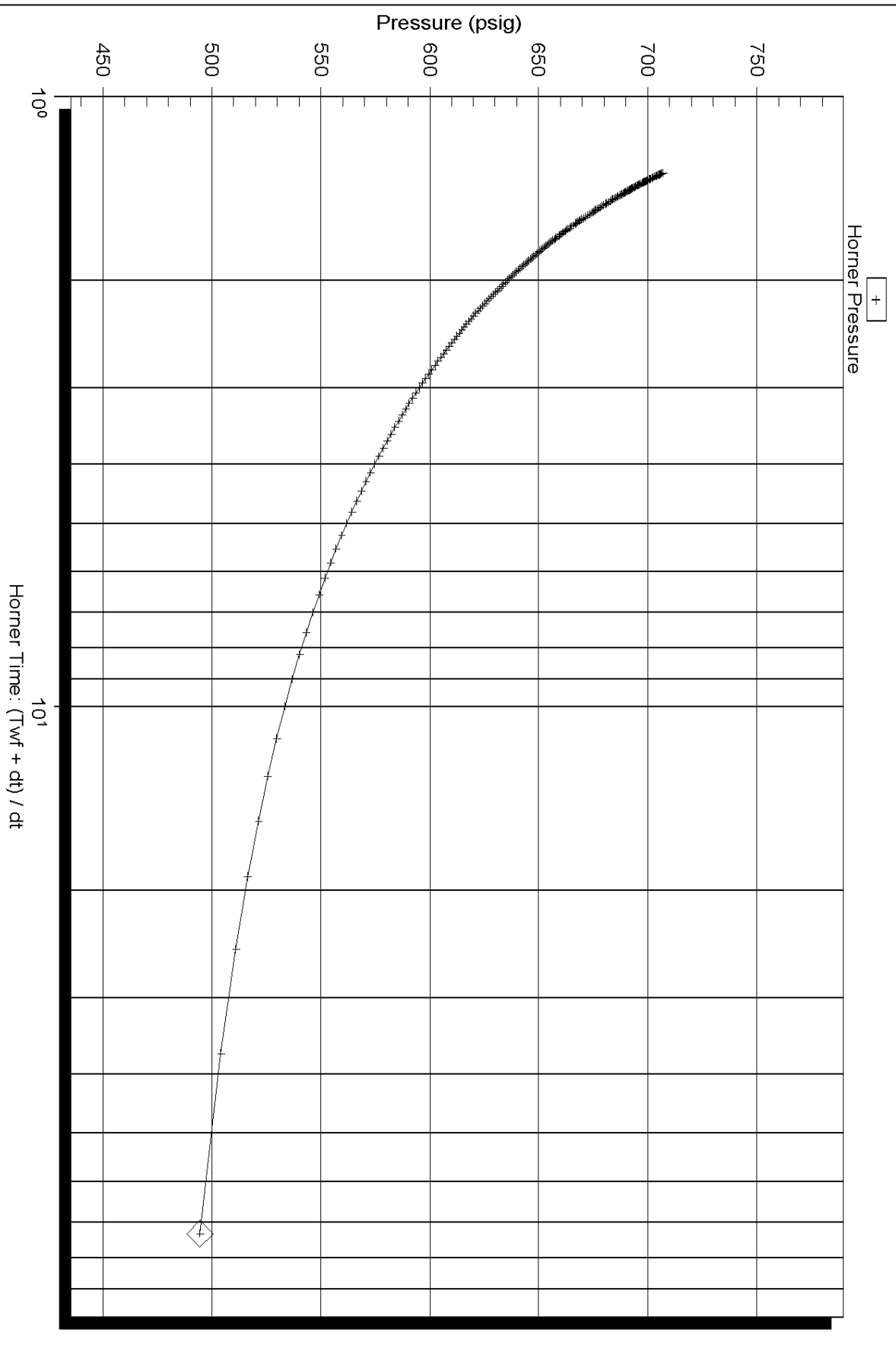
Serial Number: 8821 (Inside)

P* :

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



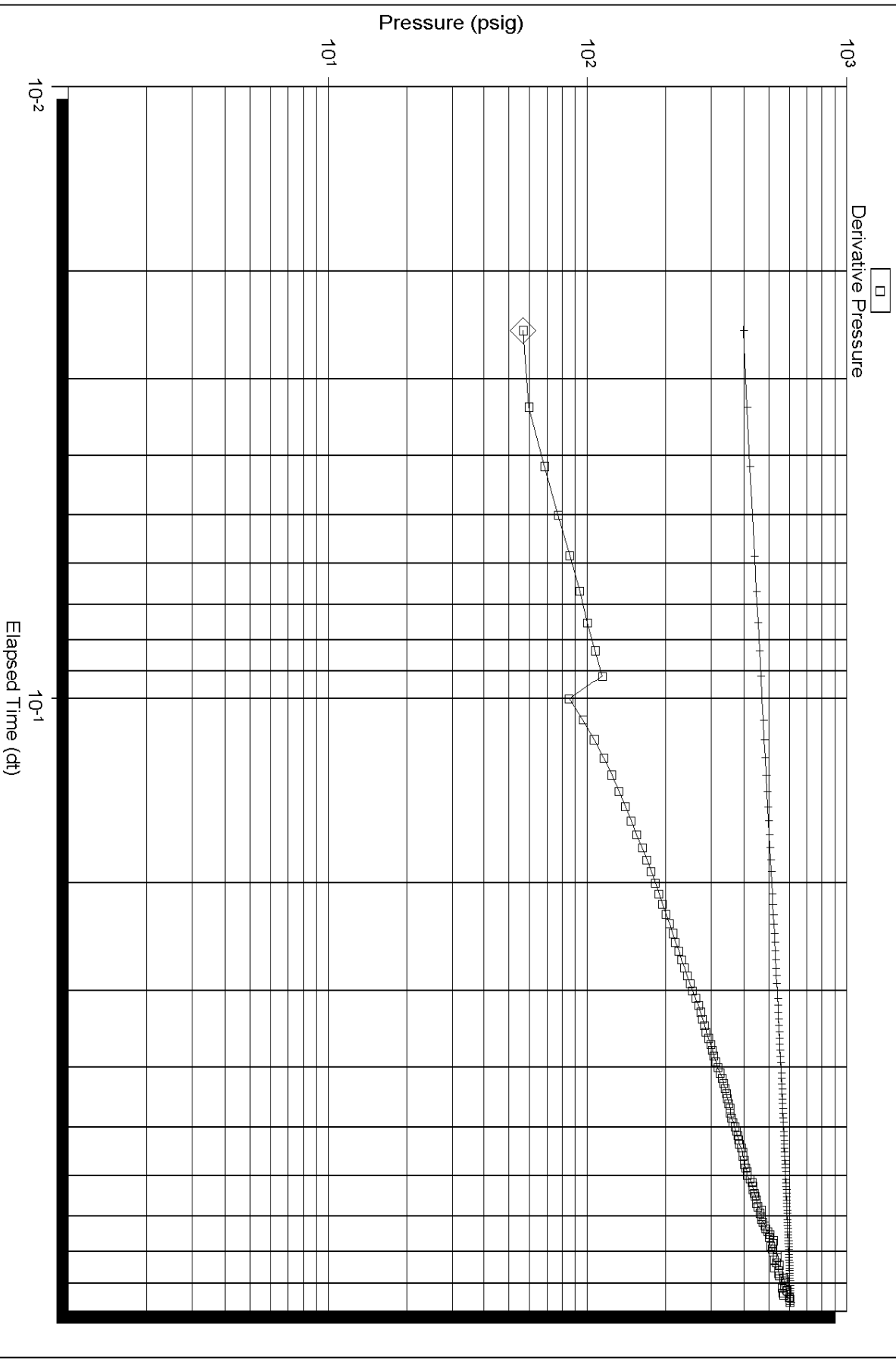
Serial Number: 8821 (Inside)

P*:

Slope (m) : kpa/log cycle

Flow Cycle: 2

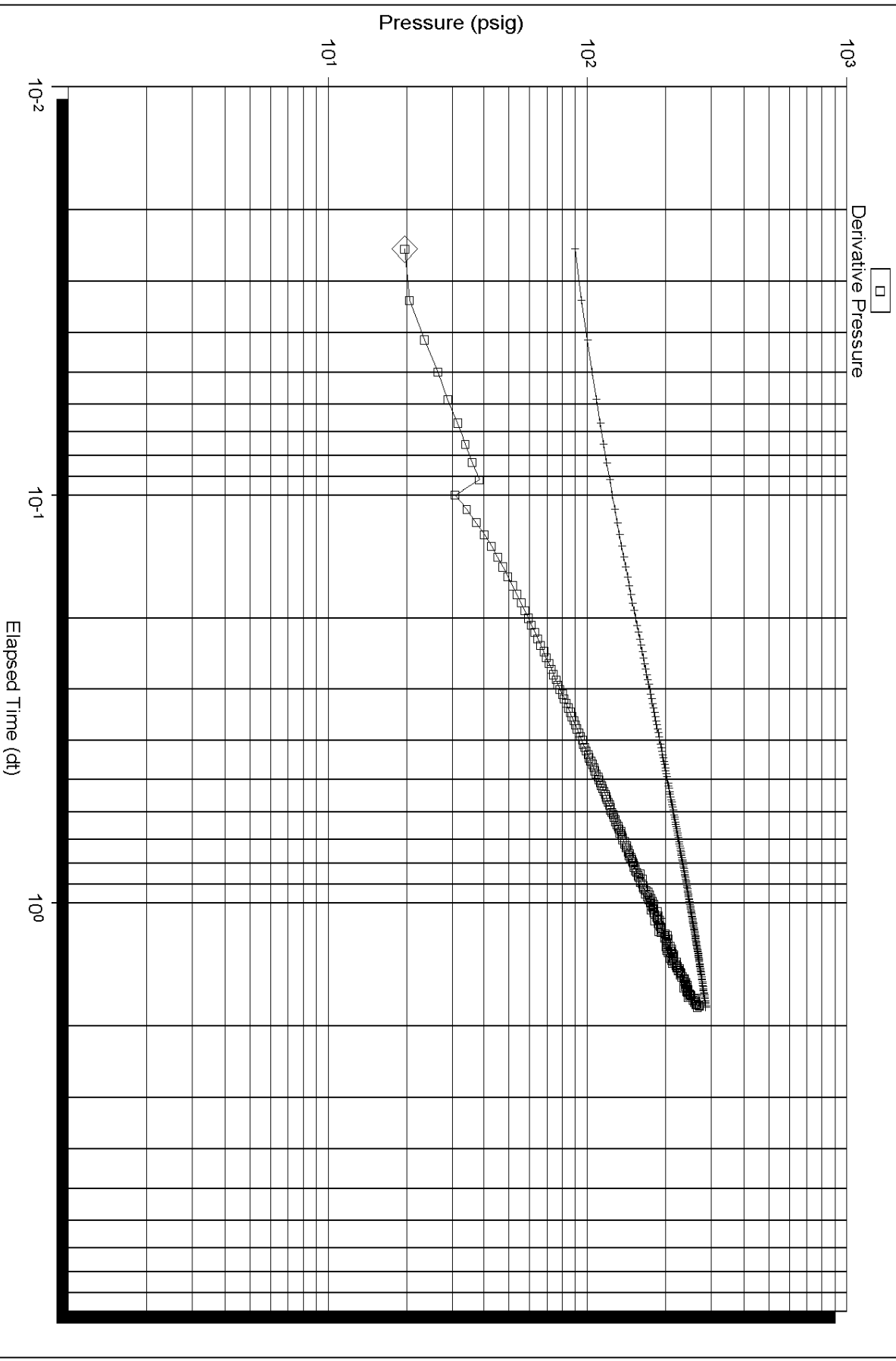
Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

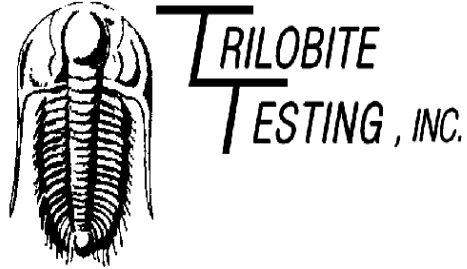
Flow Cycle: 1

Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

Flow Cycle: 2



DRILL STEMTEST REPORT

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

1515 Wynkoop st
suite 700
Denver Co 80202

ATTN Tom Feral

Elsie 1-13

13-16s-17wRush

Start Date 2011.11.06 @ 13:54:09

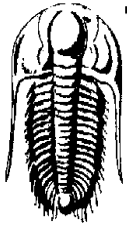
End Date 2011.11.06 @ 21:57:09

Job Ticket # 44870 DST # 4

Trilobite Testing Inc

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

Printed 2011.11.06 @ 21:35:56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN: Tom Feral

Elsie 1-13

Job Ticket: 44870

DST# 4

Test Start: 2011.11.06 @ 13:54:09

GENERAL INFORMATION

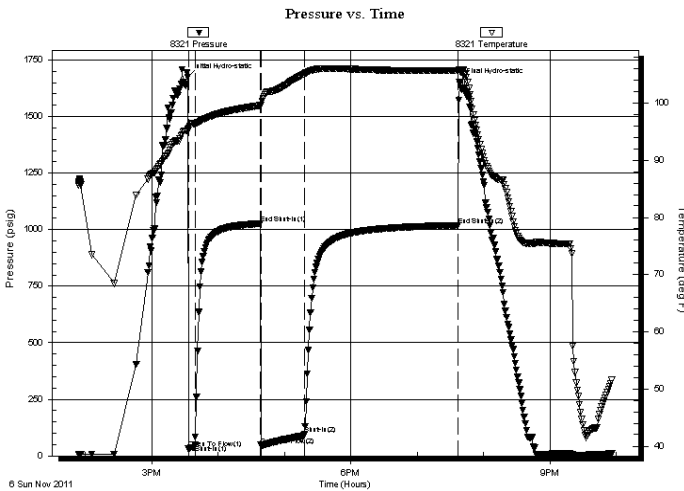
Formation: **Lansing-H**
 Deviated: **No Whipstock** ft (KB)
 Time Tool Opened: **15:33:09**
 Time Test Ended: **21:57:09**
 Interval: **3397.00 ft (KB) To 3422.00 ft (KB) (TVD)**
 Total Depth: **3422.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: **Jeff Brown**
 Unit No: **44**
 Reference Elevations: **1983.00 ft (KB)**
1973.00 ft (CF)
 KB to GRCP: **10.00 ft**

Serial #: 8321

Inside

Press@Run Depth: **9662 psig @ 3399.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.11.06** End Date: **2011.11.06** Last Calib.: **1899.12.30**
 Start Time: **13:54:10** End Time: **21:56:09** Time On Btm: **2011.11.06 @ 15:32:39**
 Time Off Btm: **2011.11.06 @ 19:38:09**

TEST COMMENT: FF-5-min-Strong blow built to 7 1/2 in
 IS-60-min-Weak surface blow back ded out in 5 min
 FF-40-min-Good blow BOB in 13 1/2 min
 FS-135-min-Dead no blow back



PRESSURE SUMMARY

Time (Min)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.67	95.40	Initial Hydro-static
1	31.43	95.29	Open To Flow(1)
7	48.62	96.40	Shut-in(1)
66	1026.84	99.59	End Shut-in(1)
66	47.45	99.62	Open To Flow(2)
106	96.62	105.11	Shut-in(2)
244	1019.16	105.73	End Shut-in(2)
246	1650.79	105.73	Final Hydro-static

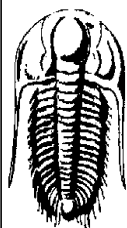
Recovery

Length (ft)	Description	Volume (bbl)
63.00	Mw with a sound of oil 20% A80% A/V	0.88
73.00	CO3/M10%/G10%/C80%/A80%/M	1.02
3.00	HCO3/M10%/C20%/A80%/G40%/M	0.04
0.00	157-GP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44870

DST#: 4

Test Start: 2011.11.06 @ 13:54:09

GENERAL INFORMATION

Formation: **Lansing-H**

Deviated: **No Whipstock** ft (KB)

Time Tool Opened: 15:33:09

Time Test Ended: 21:57:09

Test Type: **Conventional Bottom Hole (Reset)**

Tester: **Jeff Brown**

Unit No: **44**

Interval: **3397.00 ft (KB) To 3422.00 ft (KB) (TVD)**

Total Depth: **3422.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1983.00 ft (KB)**

1973.00 ft (CF)

KB to GRCP: **10.00 ft**

Serial #: 8679 Fluid

Press@Run Depth: **psig @ 3363.00 ft (KB)**

Start Date: **2011.11.06**

End Date:

2011.11.06

Capacity: **8000.00 psig**

Last Calib: **1899.12.30**

Start Time: **13:15:42**

End Time:

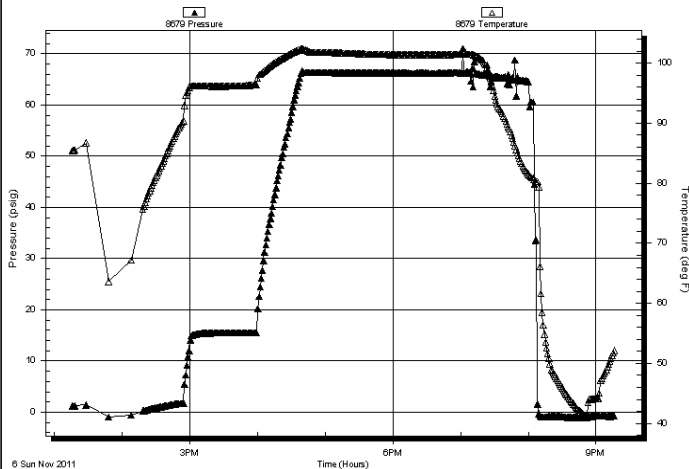
21:16:11

Time On Btm

Time Off Btm

TEST COMMENT: FF-5-min-Strong blow built to 7 1/2 in
IS-60-min-Weak surface blow back ded out in 5 min
FFP-40-min-Good blow BO in 13 1/2 min
FS-135-min-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Mh)	Pressure (psig)	Temp (deg F)	Annotation

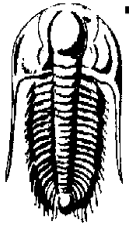
Recovery

Length (ft)	Description	Volume (bbl)
63.00	Mw with a sound of oil 20% M80% V	0.88
73.00	CO3/M10%/G10%/C80%/A50%/M	1.02
3.00	HCO3/M10%/C20%/A50%/G40%/M	0.04
0.00	157-GP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEMTEST REPORT

TOOL DIAGRAM

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN Tom Fernal

Elsie 1-13

Job Ticket: 44870

DST# 4

Test Start: 2011.11.06 @ 13:54:09

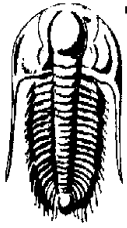
Tool Information

Drill Pipe:	Length: 3383.00 ft	Diameter: 3.80 inches	Volume: 47.45 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.45 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3397.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	59.00 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	8679	Fluid	3363.00	
Stub	5.00			3368.00	
Shut In Tool	5.00			3373.00	
Sampler	2.00			3375.00	
Hydraulic tool	5.00			3380.00	
Jars	5.00			3385.00	
Safety Joint	3.00			3388.00	
Packer	4.00			3392.00	34.00 Bottom of Top Packer
Packer	5.00			3397.00	
Stub	1.00			3398.00	
Perforations	1.00			3399.00	
Recorder	0.00	8321	Inside	3399.00	
Recorder	0.00	8737	Outside	3399.00	
Perforations	20.00			3419.00	
Bullnose	3.00			3422.00	25.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wyrkoop st
suite 700
Denver Co 80202
ATTN: Tom Feral

Elsie 1-13

Job Ticket: 44870

DST# 4

Test Start: 2011.11.06 @ 13:54:09

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		CI AP:	deg AP
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbd		
Water Loss:	7.20 in ³	Gas Cushion Type:			
Resistivity:	ohm-cm	Gas Cushion Pressure:	psig		
Salinity:	3100.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	Mw with a sound of oil 20% N80% A/V	0.884
73.00	COG/M10%/G10%/C80%/A80%/M	1.024
3.00	HCOG/M10%/G20%/A80%/C40%/M	0.042
0.00	157-GP	0.000

Total Length: 139.00 ft Total Volume: 1.950 bbl

Num Fluid Samples: 0

Num Gas Bonts: 0

Serial #

Laboratory Name:

Laboratory Location:

Recovery Comments: 2500 ML of total fluid
380 PSI
200 ML of oil 2400 ML of water

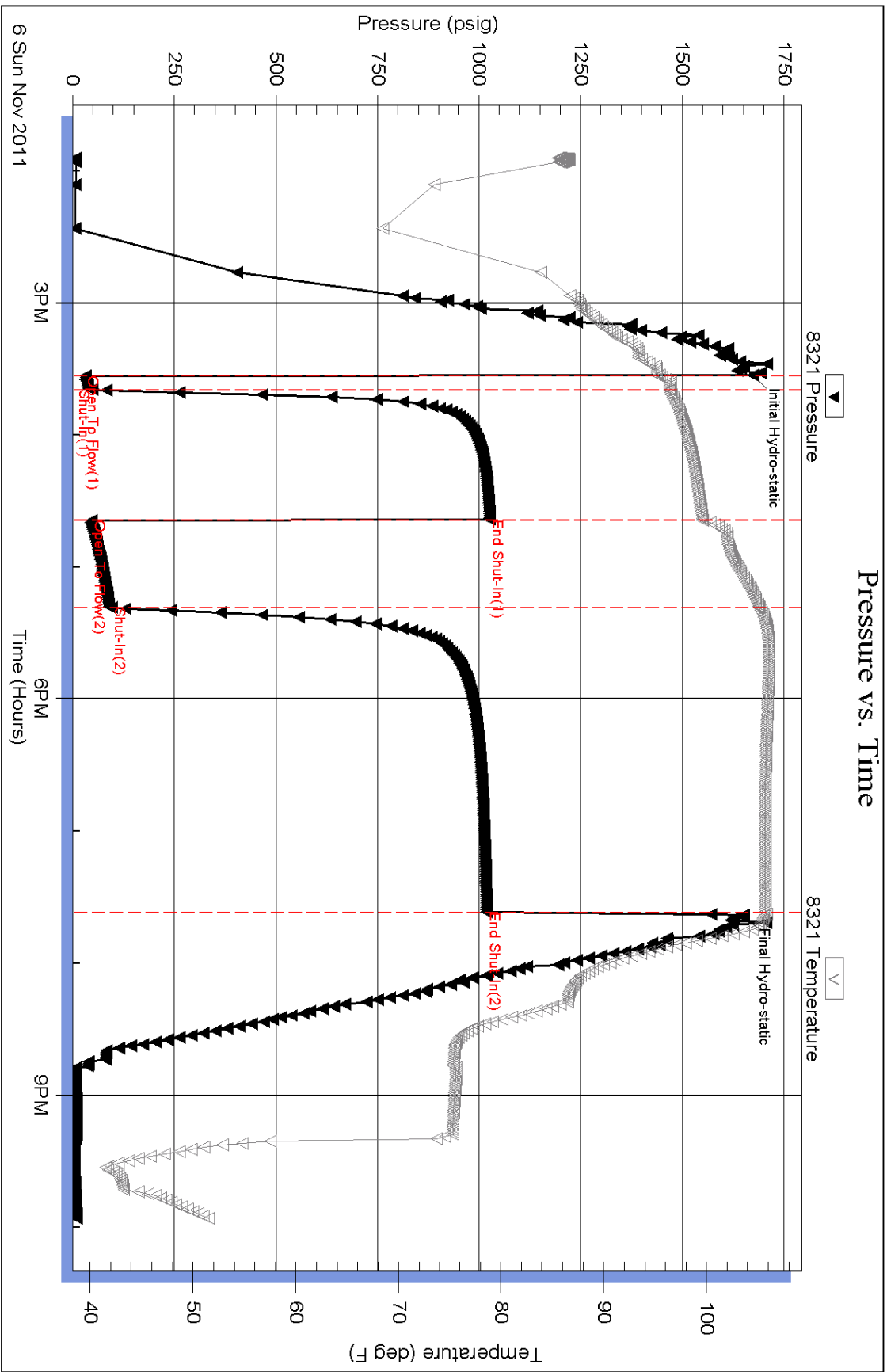
Serial #: 8321

Inside Samuel Gary, Jr. & Associates

Esle 1-13

DST Test Number: 4

Pressure vs. Time



Tridotte Testing, Inc

Ref. No: 44870

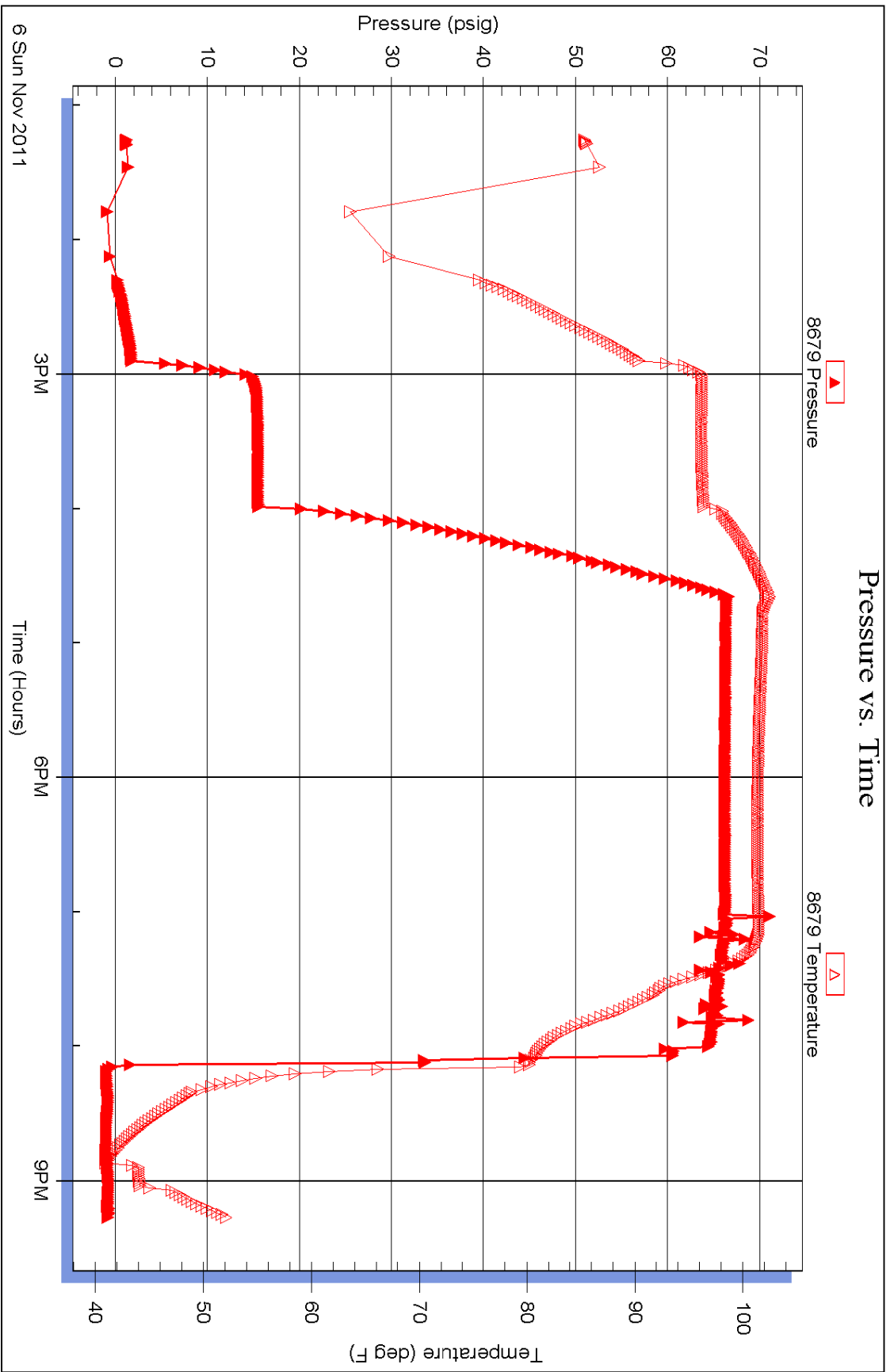
Printed: 2011.11.06 @ 21:36:02

Serial #: 8679

Fluid: Samuel Gary, Jr. & Associates

Esle 1-13

DST Test Number: 4



Tridatix Testing, Inc

Ref. No: 44870

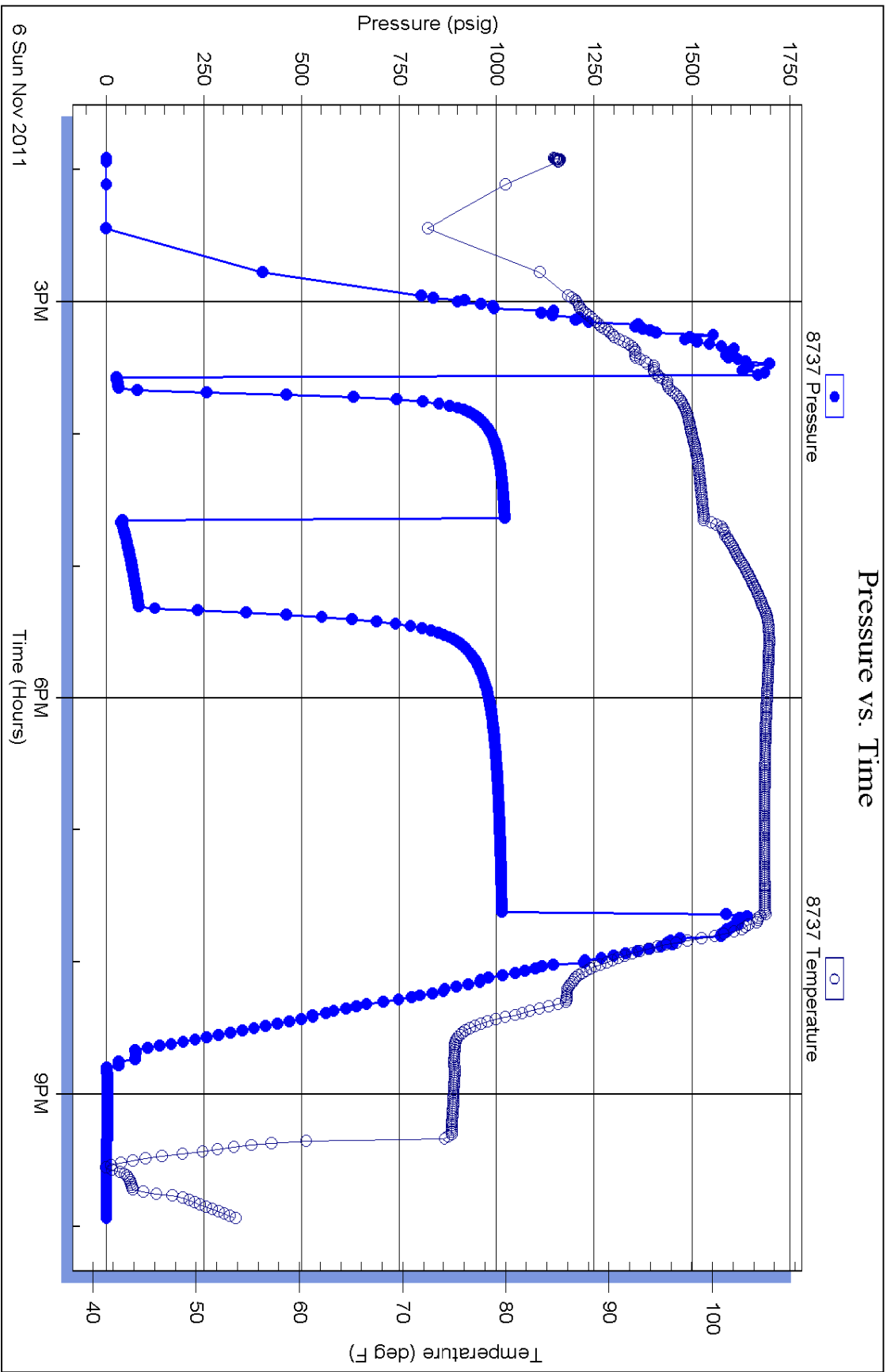
Printed: 2011.11.06 @ 21:36:03

Serial #: 8737

Outside Samuel Gary, Jr. & Associates

Est: 1-13

DST Test Number: 4

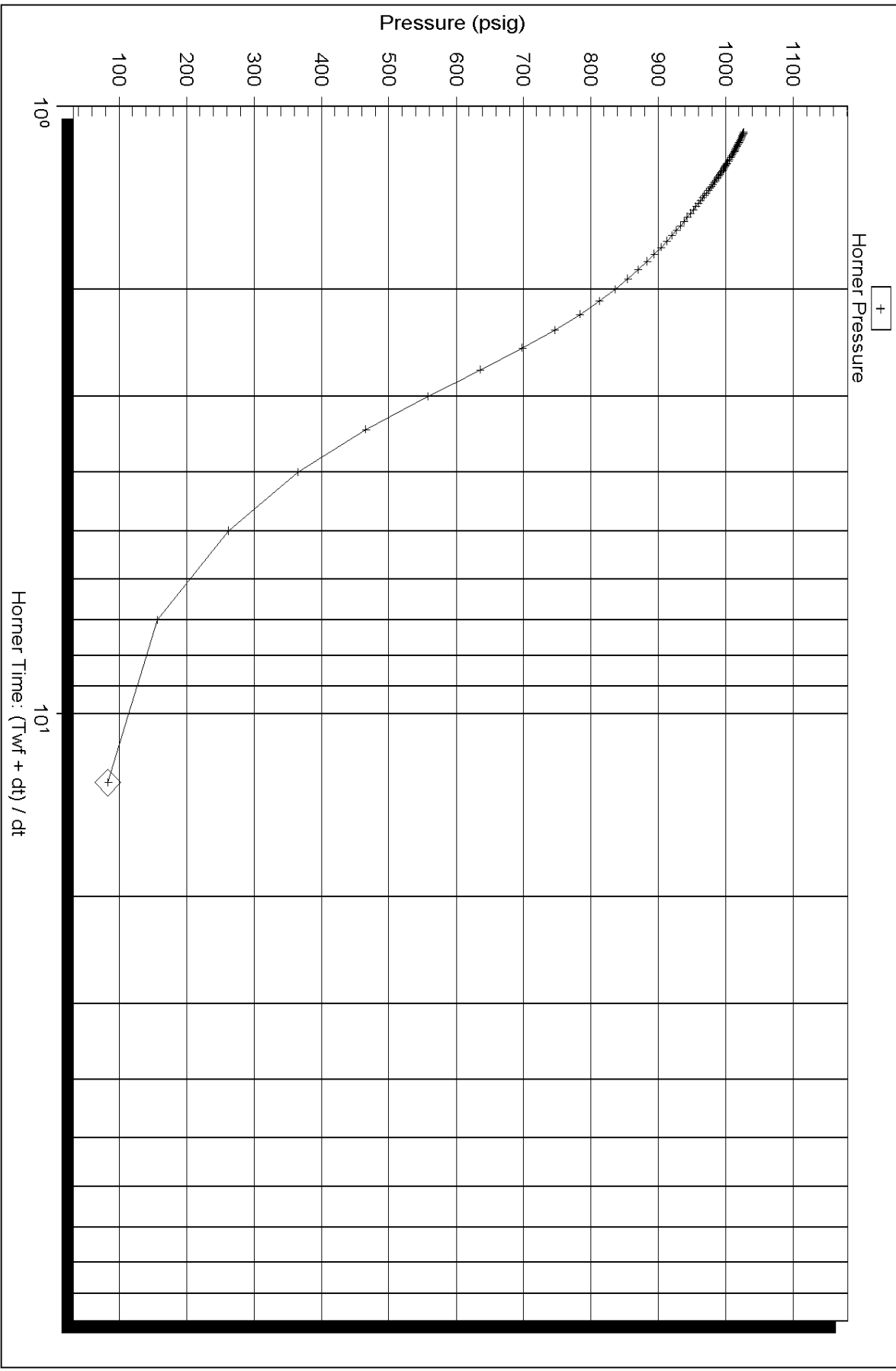


Trioxide Testing, Inc.

Ref. No: 44870

Printed: 2011.11.06 @ 21:36:04

Horner Plot



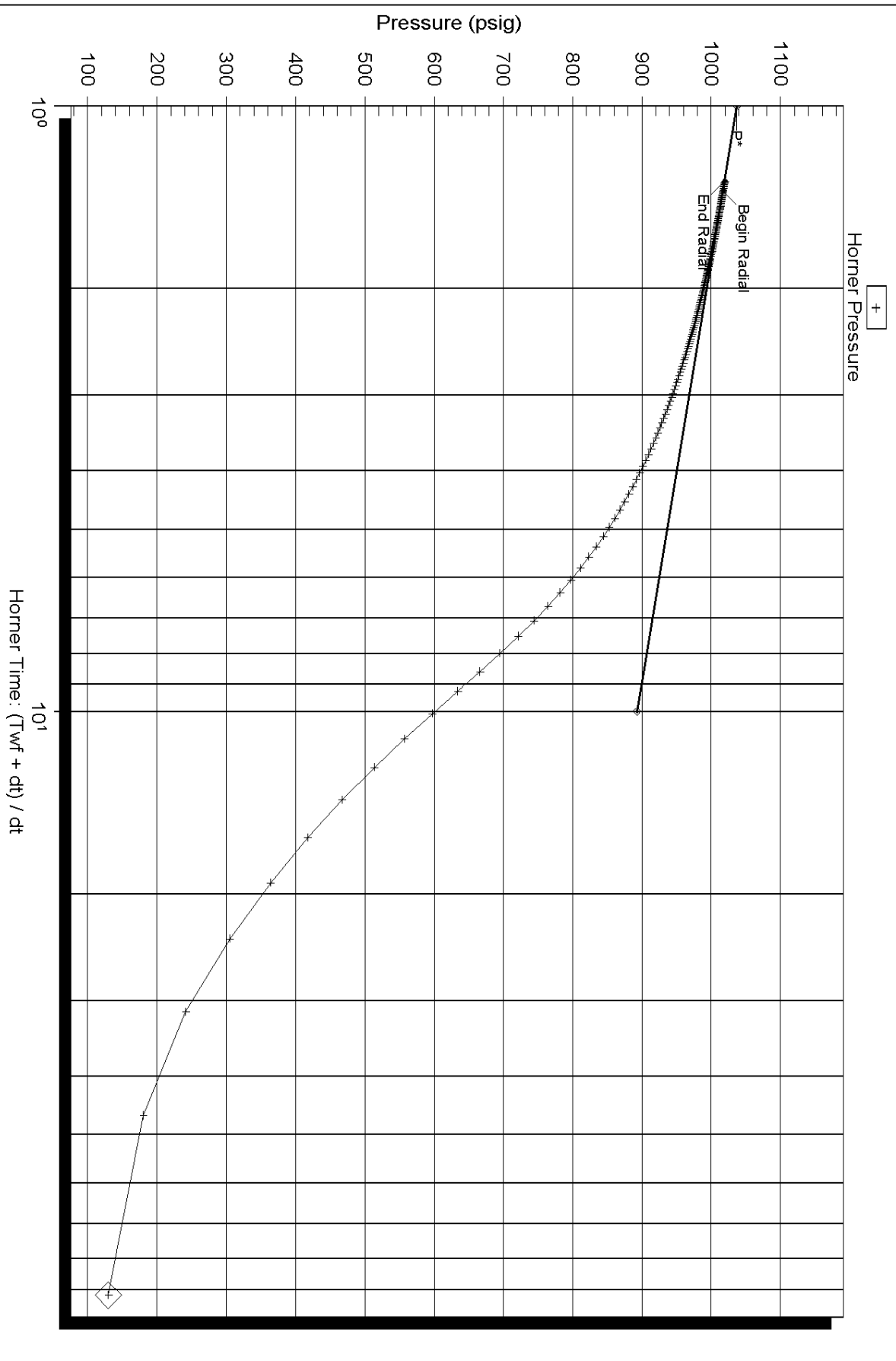
Serial Number: 8821 (Inside)

P*:

Slope (m) : kpa/log cycle

Flow Cycle: 1

Horner Plot



Serial Number: 8821 (Inside)

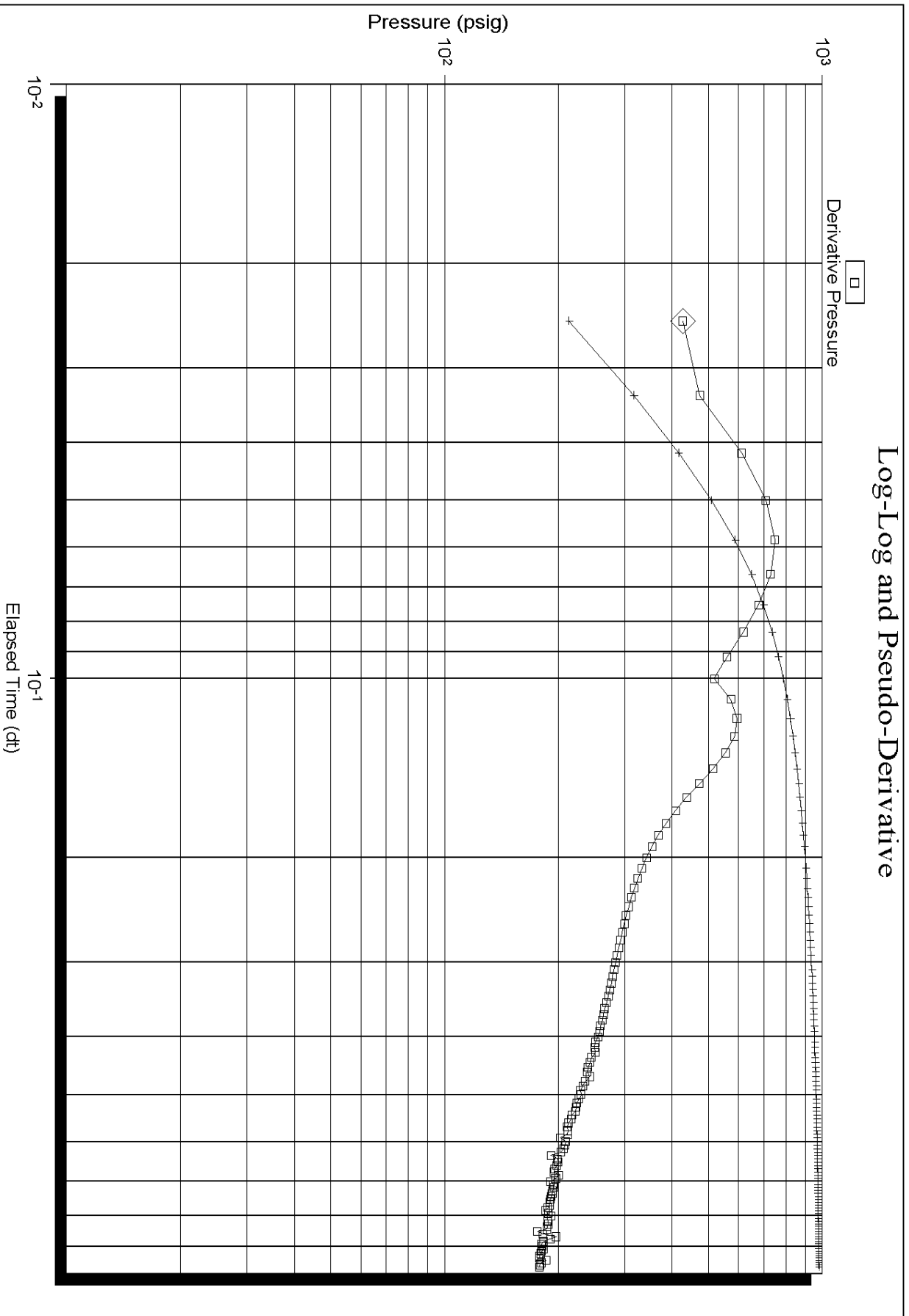
P* : 1036.95

Slope (m) : 144.01 kpa/log cycle

Flow Cycle: 2

Horner Time: (T_{wf} + dt) / dt

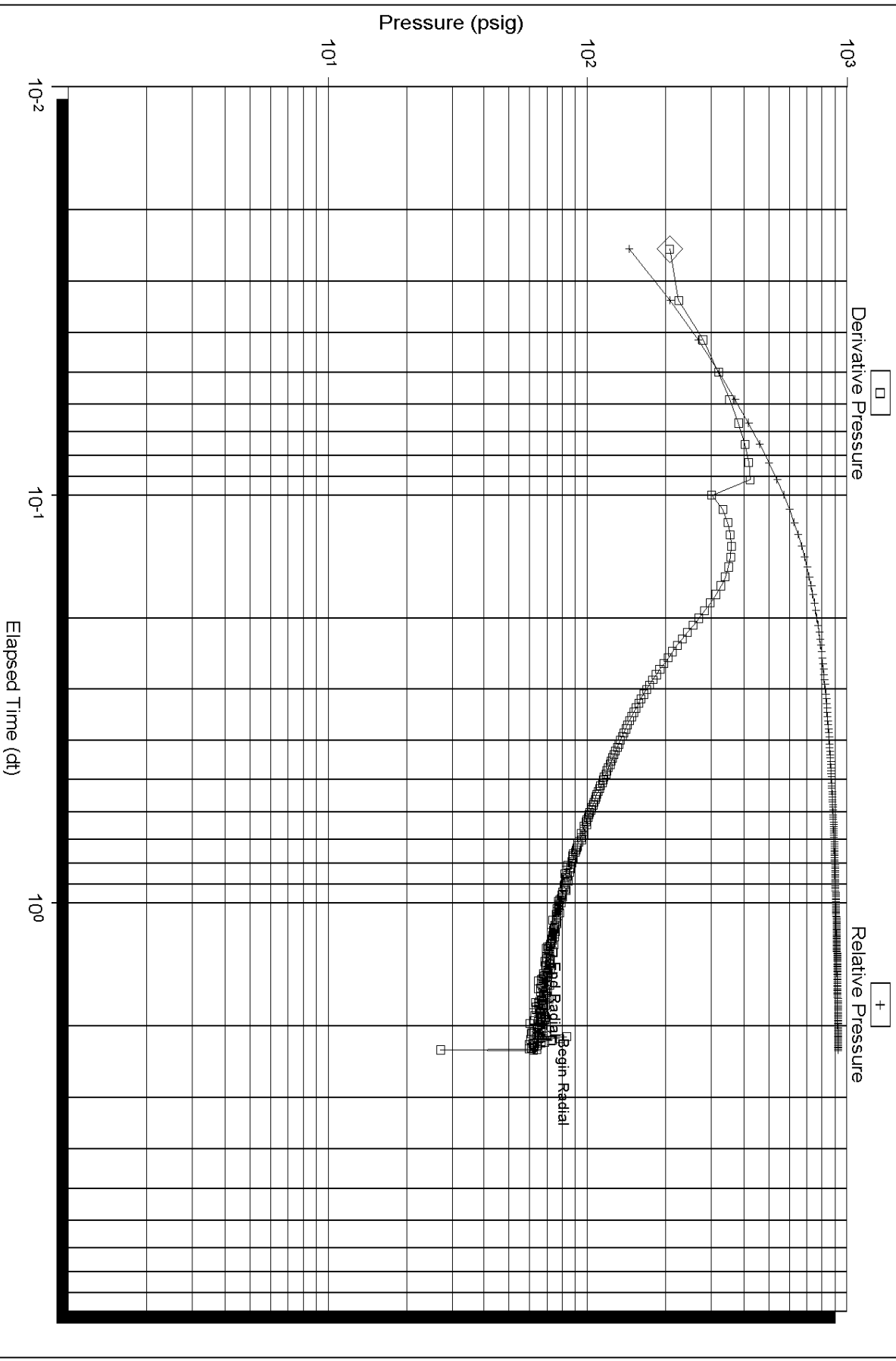
Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

Flow Cycle: 1

Log-Log and Pseudo-Derivative



Serial Number: 8821 (Inside)

Flow Cycle: 2



DRILL STEM TEST REPORT

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

1515 Wynkoop st
suite 700
Denver Co 80202

ATTN: Tom Fertal

Elsie 1-13

13-16s-17w-Rush

Start Date: 2011.11.07 @ 08:49:53

End Date: 2011.11.07 @ 17:25:23

Job Ticket #: 44871 DST #: 5

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

Printed: 2011.12.01 @ 14:01:40

Samuel Gary, Jr & Associates
13-16s-17w-Rush
Elsie 1-13
DST # 5
Lansing-I-J-K
2011.11.07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44871

DST#: 5

Test Start: 2011.11.07 @ 08:49:53

GENERAL INFORMATION:

Formation: **Lansing-I-J-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:41:23

Time Test Ended: 17:25:23

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 44

Interval: 3437.00 ft (KB) To 3472.00 ft (KB) (TVD)

Reference Elevations: 1983.00 ft (KB)

Total Depth: 3472.00 ft (KB) (TVD)

1973.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8321 Inside

Press @ Run Depth: 25.96 psig @ 3440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.07 End Date: 2011.11.07

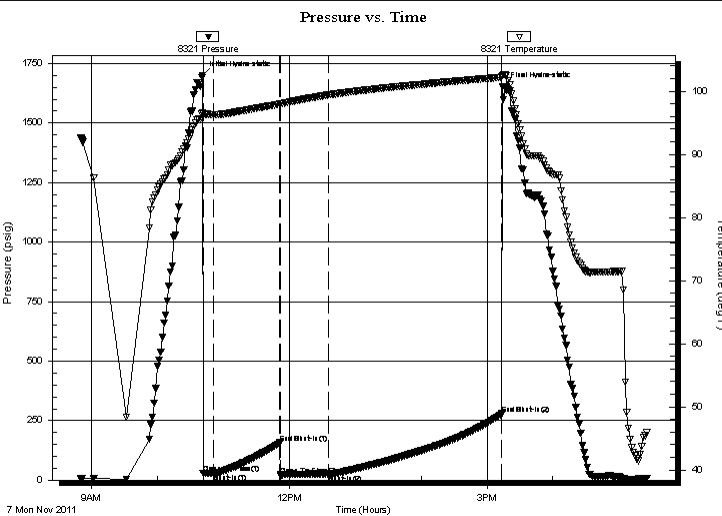
Last Calib.: 2011.11.07

Start Time: 08:49:54 End Time: 17:25:23

Time On Btm: 2011.11.07 @ 10:40:53

Time Off Btm: 2011.11.07 @ 15:14:23

TEST COMMENT: IFP-10-min-Weak blow built to 1 in
ISI-60-Min-Dead no blow back
FFP-45-Min-Fair blow built to 7 1/2 in
FSI-150-min-Ded no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.32	96.65	Initial Hydro-static
1	27.31	96.42	Open To Flow (1)
10	28.32	96.26	Shut-In(1)
71	156.29	97.94	End Shut-In(1)
71	19.34	97.93	Open To Flow (2)
115	25.96	99.41	Shut-In(2)
273	278.88	102.22	End Shut-In(2)
274	1653.36	102.48	Final Hydro-static

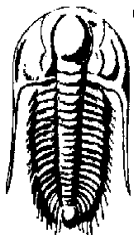
Recovery

Length (ft)	Description	Volume (bbl)
6.00	V SOCM 3% O 97% M	0.08

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44871 **DST#: 5**
Test Start: 2011.11.07 @ 08:49:53

GENERAL INFORMATION:

Formation: **Lansing-I-J-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:41:23

Time Test Ended: 17:25:23

Interval: 3437.00 ft (KB) To 3472.00 ft (KB) (TVD)

Total Depth: 3472.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 44

Reference Elevations: 1983.00 ft (KB)

1973.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8737 Outside

Press @ Run Depth: psig @ 3440.00 ft (KB)

Start Date: 2011.11.07

End Date: 2011.11.07

Capacity: 8000.00 psig

Last Calib.: 2011.11.07

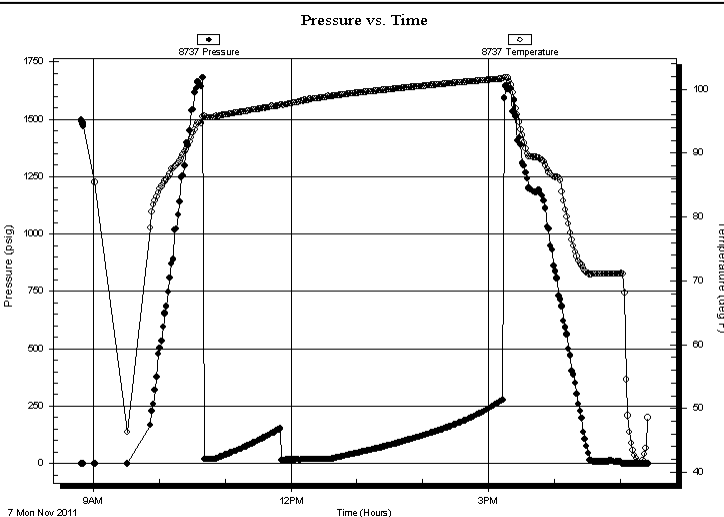
Start Time: 08:49:21

End Time: 17:24:50

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-10-min-Weak blow built to 1 in
ISI-60-Min-Dead no blow back
FFP-45-Min-Fair blow built to 7 1/2 in
FSI-150-min-Ded no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
6.00	V SOCM 3% O 97% M	0.08

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

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44871

DST#: 5

Test Start: 2011.11.07 @ 08:49:53

Tool Information

Drill Pipe:	Length: 3415.00 ft	Diameter: 3.80 inches	Volume: 47.90 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 47.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3437.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	69.00 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	8679	Fluid	3403.00	
Stubb	5.00			3408.00	
Shut In Tool	5.00			3413.00	
Sampler	2.00			3415.00	
Hydraulic tool	5.00			3420.00	
Jars	5.00			3425.00	
Safety Joint	3.00			3428.00	
Packer	4.00			3432.00	34.00 Bottom Of Top Packer
Packer	5.00			3437.00	
Stubb	1.00			3438.00	
Perforations	2.00			3440.00	
Recorder	0.00	8321	Inside	3440.00	
Recorder	0.00	8737	Outside	3440.00	
Perforations	29.00			3469.00	
Bullnose	3.00			3472.00	35.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary, Jr & Associates

13-16s-17w-Rush

1515 Wynkoop st
suite 700
Denver Co 80202
ATTN: Tom Fertal

Elsie 1-13

Job Ticket: 44871

DST#: 5

Test Start: 2011.11.07 @ 08:49:53

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.40 cm³

Resistivity: ohm.m

Salinity: 3500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
6.00	VSOCM 3%O97%M	0.084

Total Length: 6.00 ft Total Volume: 0.084 bbl

Num Fluid Samples: 0

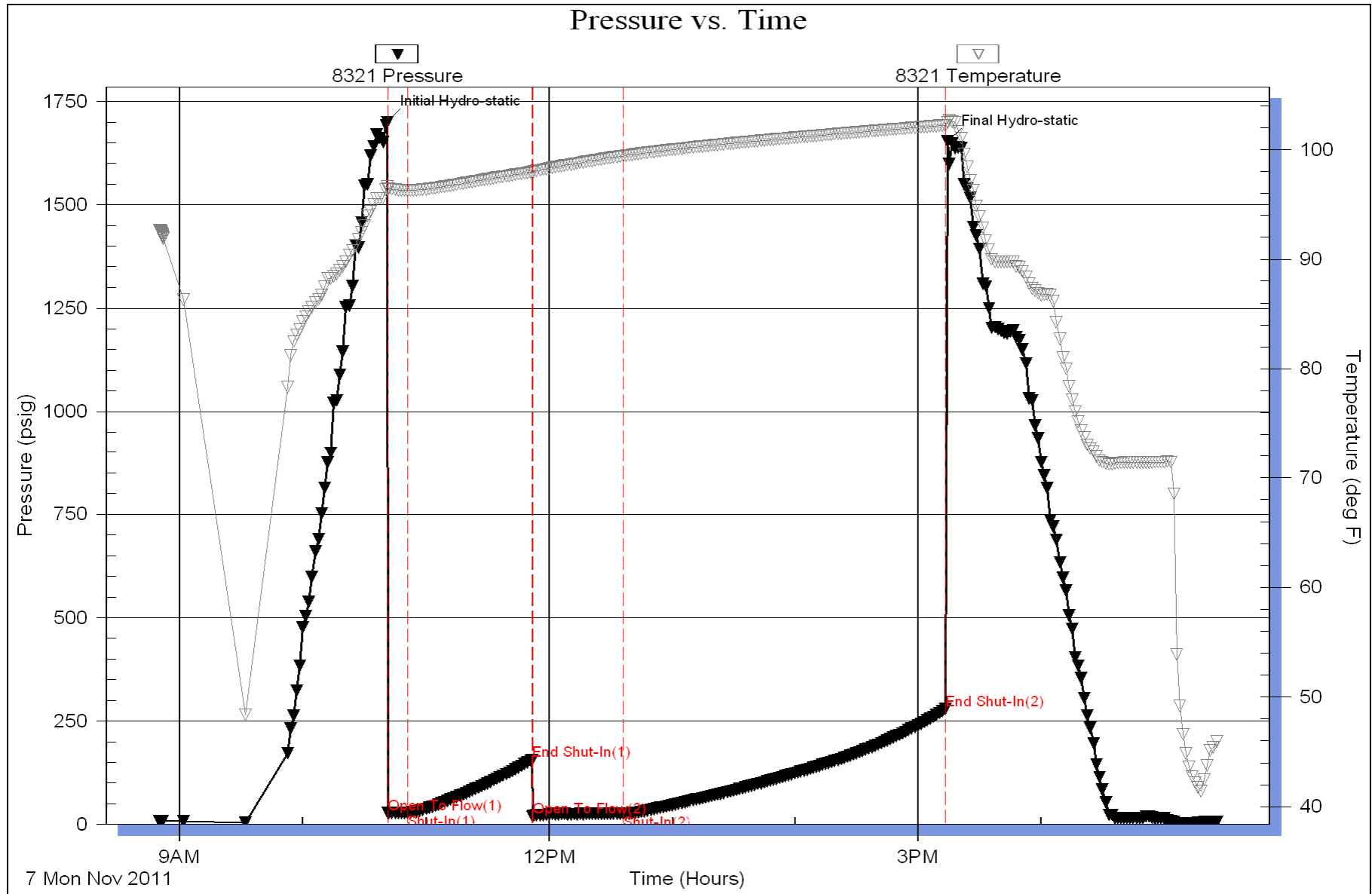
Num Gas Bombs: 0

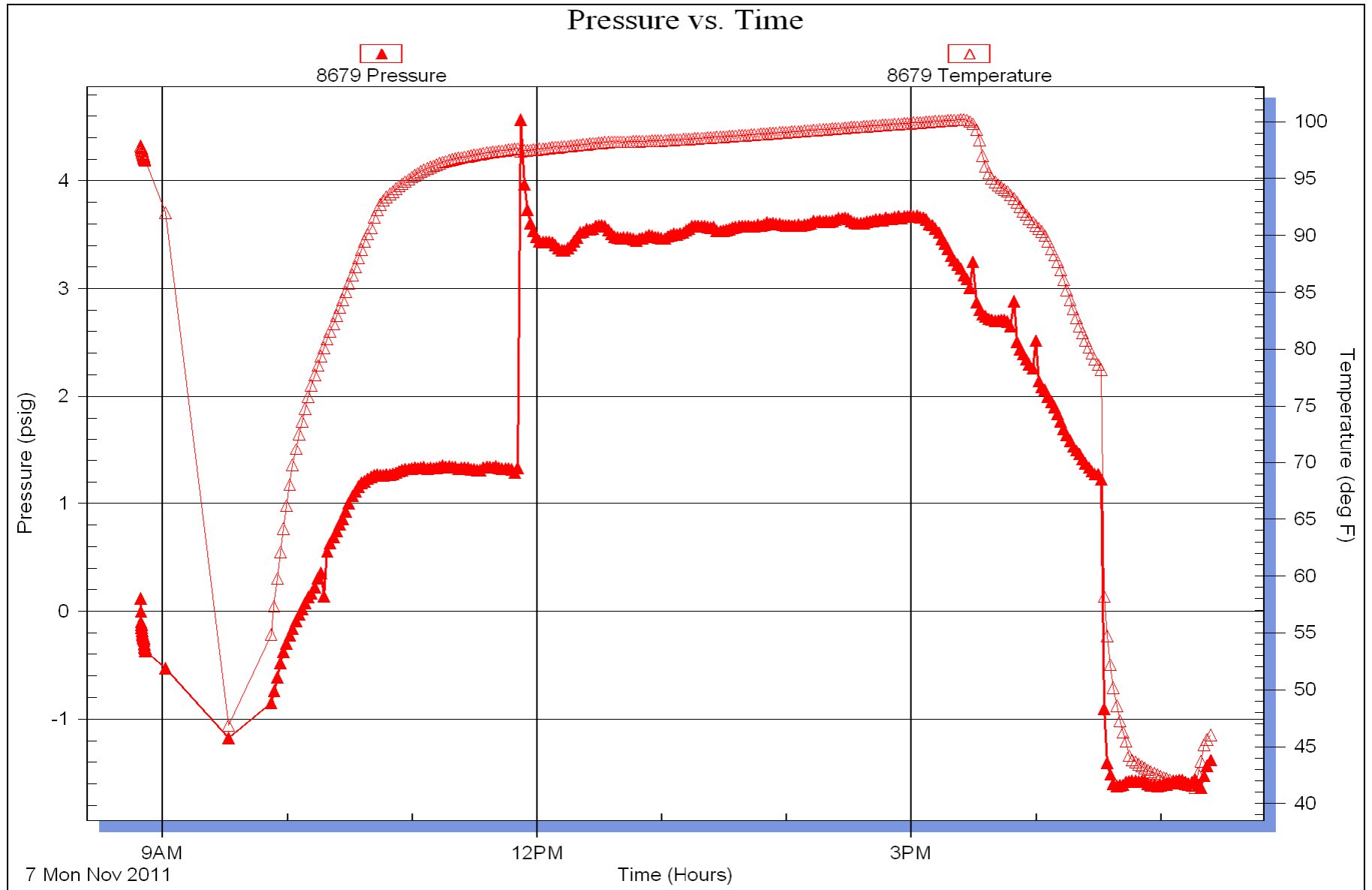
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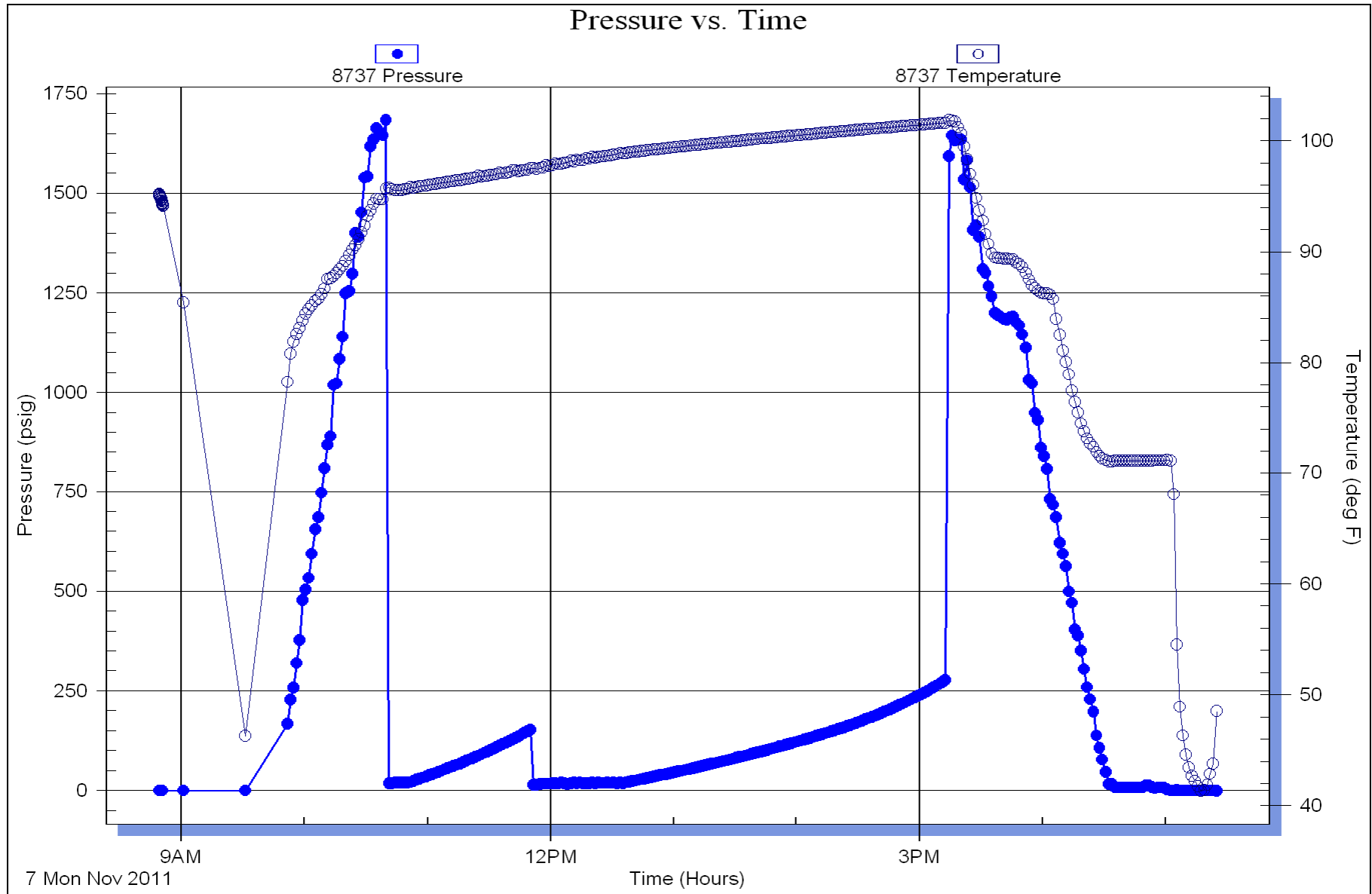
Laboratory Name:

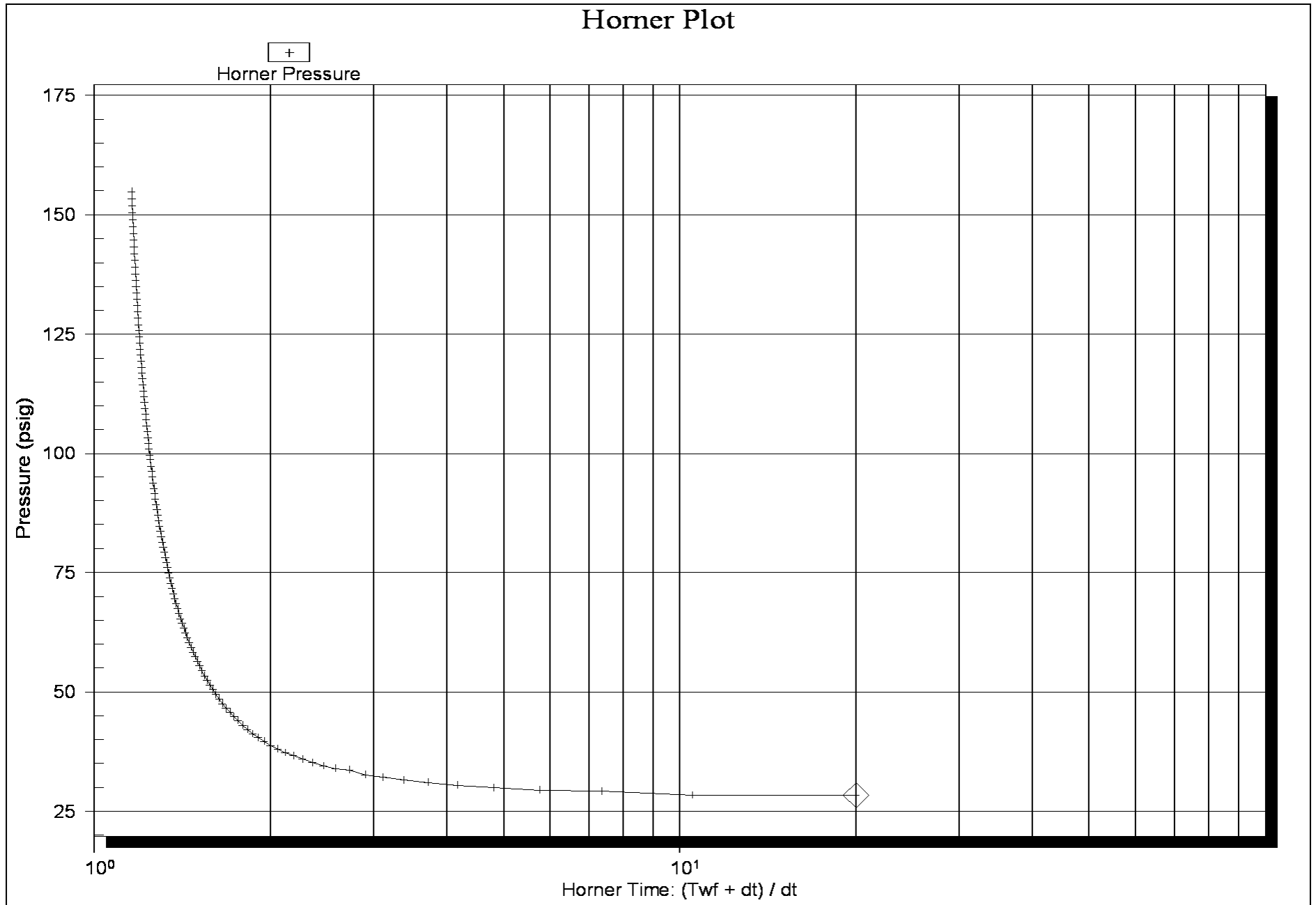
Laboratory Location:

Recovery Comments: 2000 MI Of fluid 110 PSI 300 MI of Oil 1700 ML of Mud HOCM 30%O70%M

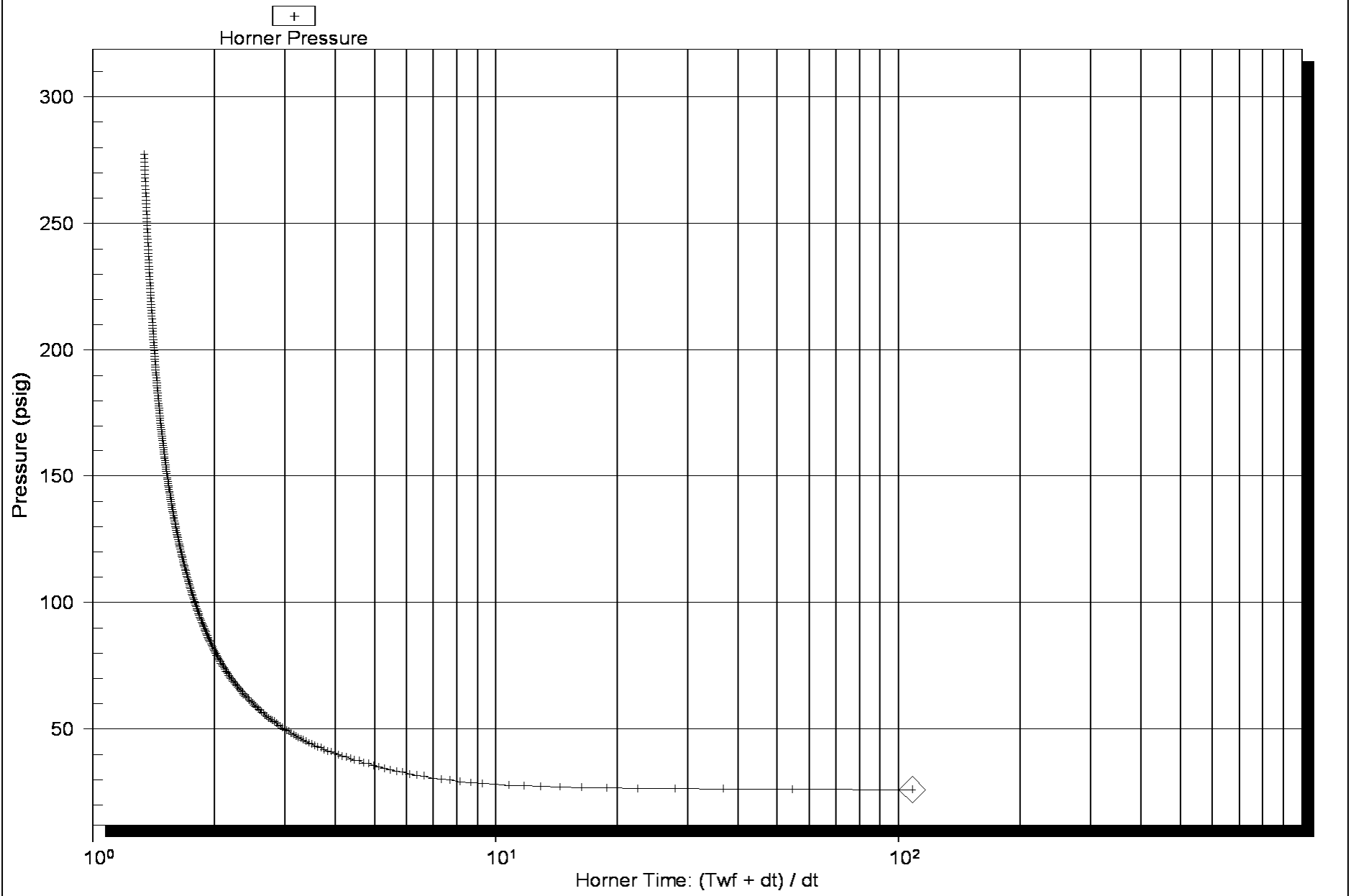


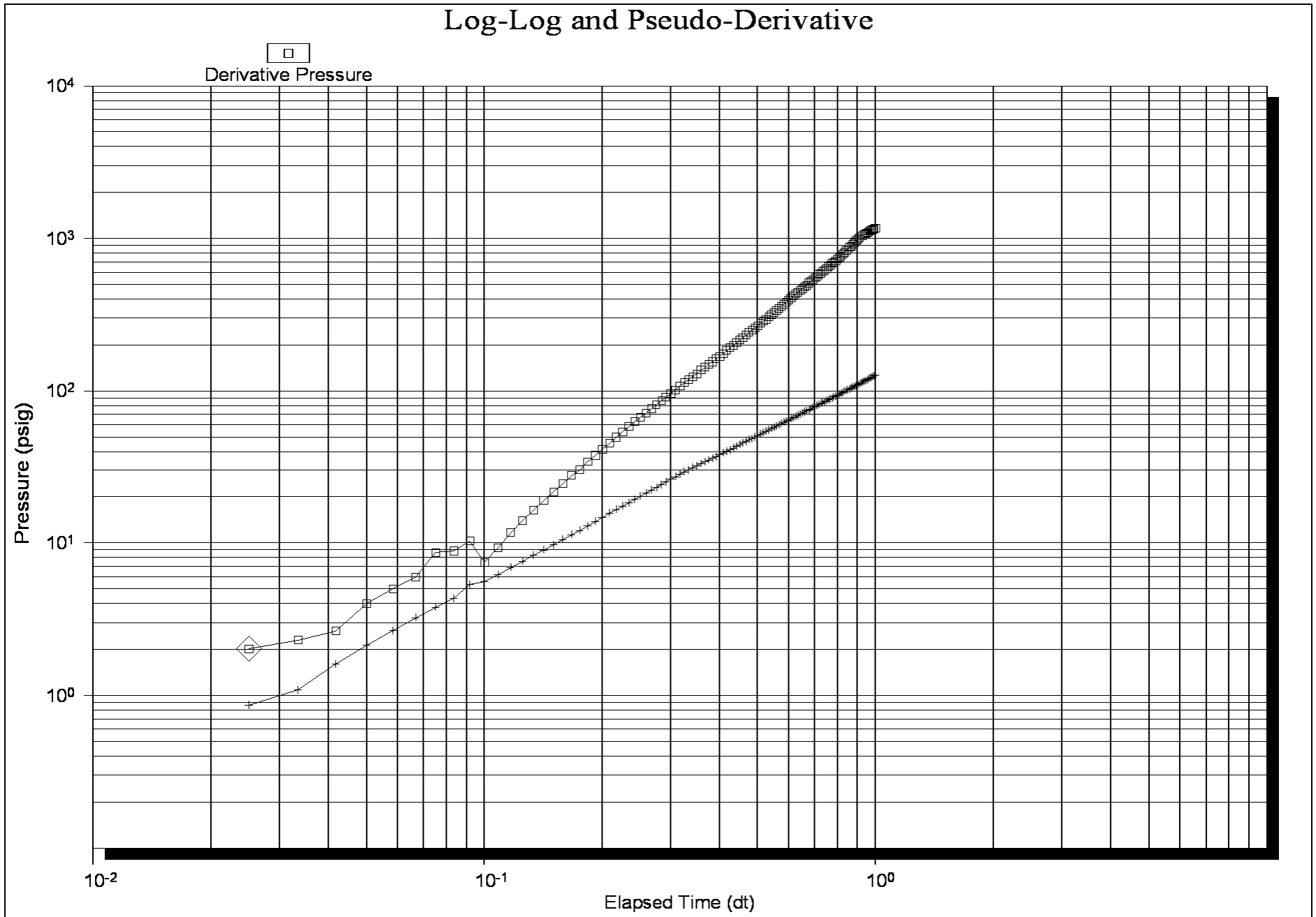


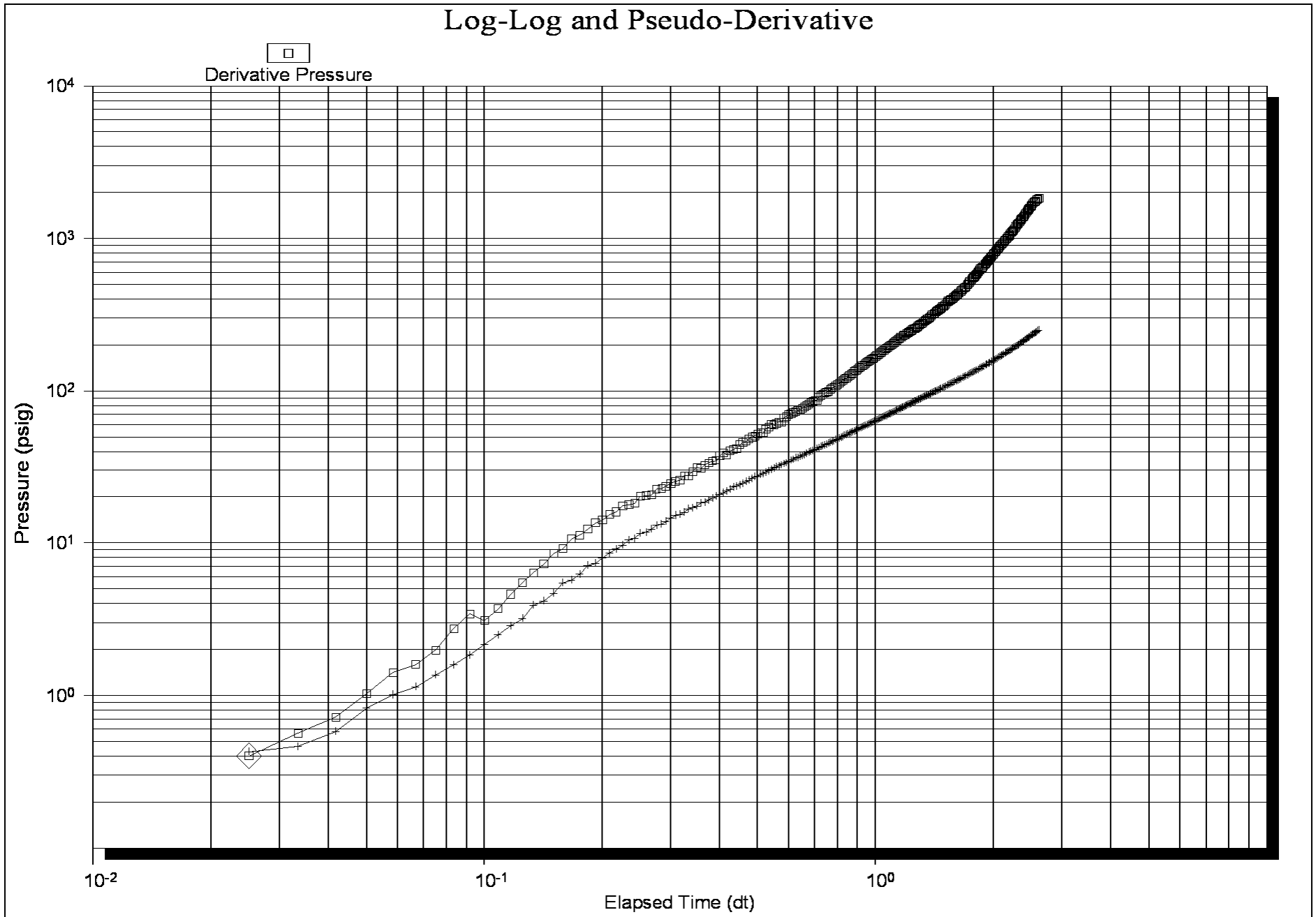




Horner Plot









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

Well Name: Elsie 1-13
Location: Sec 13 16s 17w, Rush County, Kansas
License Number: 15-165-21948-0000
Spud Date: 10/31/2011
Surface Coordinates: 1600' Fnl & 660' fel
Region: Wildcat
Drilling Completed: 11/08/2011
Bottom Hole Coordinates:
Ground Elevation (ft): 1973' K.B. Elevation (ft): 1983'
Logged Interval (ft): 1700' To: 3660' Total Depth (ft): 3660'
Formation: Kansas City, Arbuckle
Type of Drilling Fluid:

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

OPERATOR

Company: Sam Gary Jr. & Assoc
Address: 1515 Wynkoop, # 700
Denver, Co. 80202
Geo: Tom Fertal

GEOLOGIST

Name: Tim Hedrick
Company: EARTH TECH OGL, Inc.
Address: PO Box 683
102 W. Main
Hooker, Okla. 73945

DST'S

DST#1 2972' - 3012' 10 60 40 140
IF- BLT TO 3 1/4" / ISI-NB / FF- BLT TO 6 1/4" / FSI-NB
IH- 1393, FH-1323 / IF- 23 TO 28, FF- 20 TO 27 / ISI- 170, FSI- 256.
RECOVERED- 12' TF / 10' MUD W / OIL SPOTS, 2' VSOCM 3% O., 97% M. BHT 92 DEG.
SAMPLER- SCUM OF OIL, 2000ML M., 200 PSI, SOOO ML TOTAL

DST#2 3247- 3303 5 60 30 105
IF- BOB 1 MIN. / ISI- BLT 1 1/4" / FFF- BOB 30 SEC. / FSI-BON 1.5 MIN, GTS IN 6 MIN AMD DIED BACK TO SRFC
BLO
IH- 1598, FH- 1567 / IF- 104 TO 103, FF- 160 TO 240 / ISI- 973, FSI- 961
RECOVERED- 2754' GIP / 477' TF, 31' OCM, 10%O., 90%M. / 63' OCGM, 15%G., 20%O., 65%M., / 68' HOCGWM,
60%G., 30%O., 5%W., 5%M. /
315' MCWO, 25%G., 65%O., 5%W., 5%M. / PIT CHL 2900 BHT 105 DEG., 31 GR. -
SAMPLER- 1 1/4 QF GAS / 2500 ML OIL / 700 PSI / TOTAL 2500 ML / GR 31 CORR. @ 60 DEG.

DSTs

DST#3 3328-3380 5 60 30 105
IF-BOB 1.5 MIN. / ISI- WK SRFC DIED IN 6 MIN / FF-BOB 2 MIN. / FSI- NB
IH- 1646, FH-1634 / IF-104 TO 164, FF- 181 TO 421 / ISI-769, FSI-707 RECOVERER- 50 GIP, 801' TF- 504' MW W/
O SPOTS, 90%W, 10% M. / 126' GMW W / SCUM OIL, 10%G, 80%W, 10%M / 63' GWM, 10%G., 25%W., 65%M. / 108'
GM W / SCUM OIL, 5%G., 95% M. PIT CHL-2900
SAMPLER-50 ML M., / 2450 ML W., / 350 PSI. / 2500 ML TOTAL
.202 X 40.1= 76,000 CHL

DST#4 3397- 3422 5 60 40 135
IF- 7.5" BLO / ISI-SRFC BLO DIED IN 5 MIN. / FF-BOB 13.5 MIN / FSI- NB / RECOVERED- 157' GIP, / 139' TF- 63'
MW W / SCM OIL 80%W., 20%M. / 73' OCGWM- 10%G., 10% O., 30%W., 50%M. / 3' HOCGWM- 10%G., 30%
O., 20%W., 40%M. / PIT CHL-3100 BHT 106 DEG. / SAMPLER- 200 ML OIL., 2300 ML W., 380 PSI., 2500 ML
TOTAL / .168 @ 42.8= 79,000 CHL

DST'S

DST#5 3437 - 3472 10 60 45 150
IF-WK BLO BLT TO 1.25 / ISI-NB / FF-BLT TO 7" / FSI- NB
IH- 1700, FH-1653 / IF-27 TO 28, FF-19 TO 26 / ISI- 156, FSI- 279
RECOVERED-6' VSOCM, 3% OIL, 97% MUD / BHT 102 DEG, PIT CHL-3500 / SAMPLER- 300 ML OIL, 1700 ML
MUD, 110 PSI, 2000 ML TOTAL HOCM- 30% OIL, 70% MUD

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
- Sitysh
- Lms

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- 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
- Sltly

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

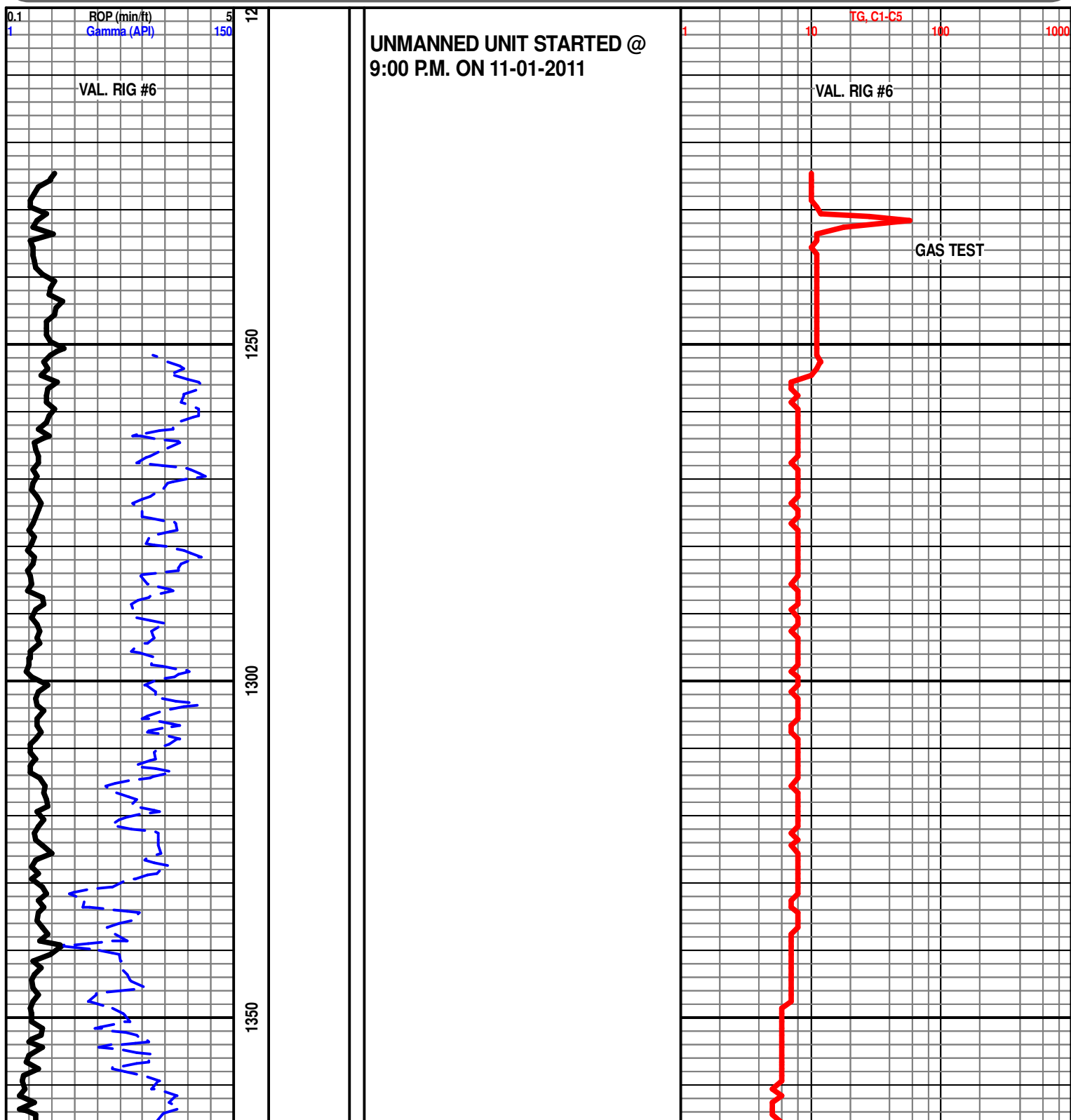
- Even
- Spotted
- Ques
- Dead
- Gas show

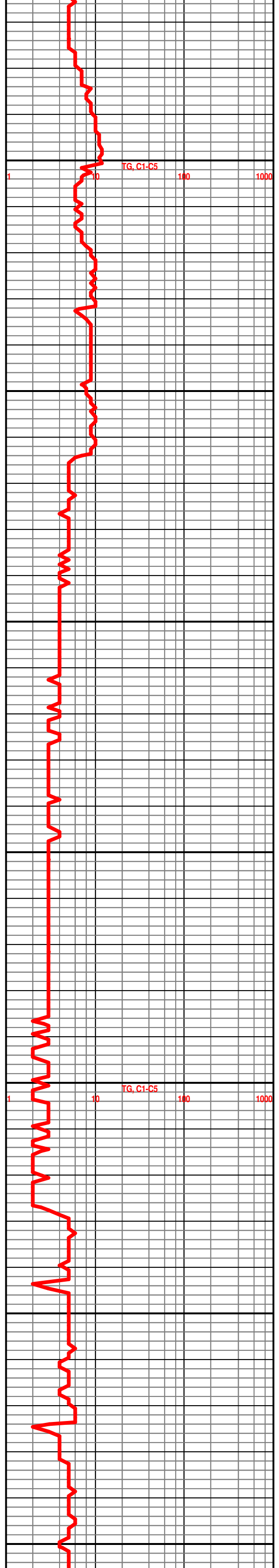
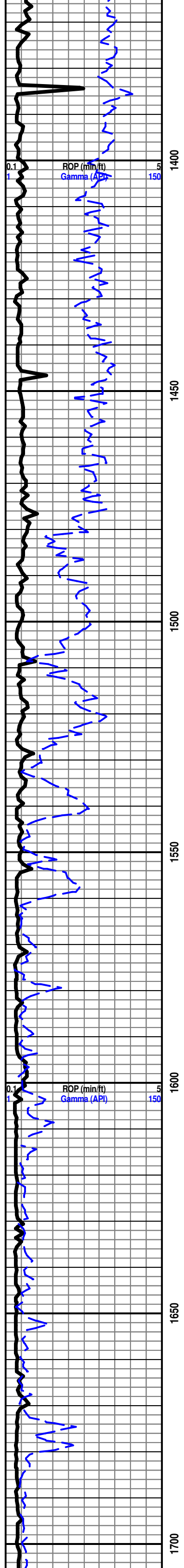
INTERVALS

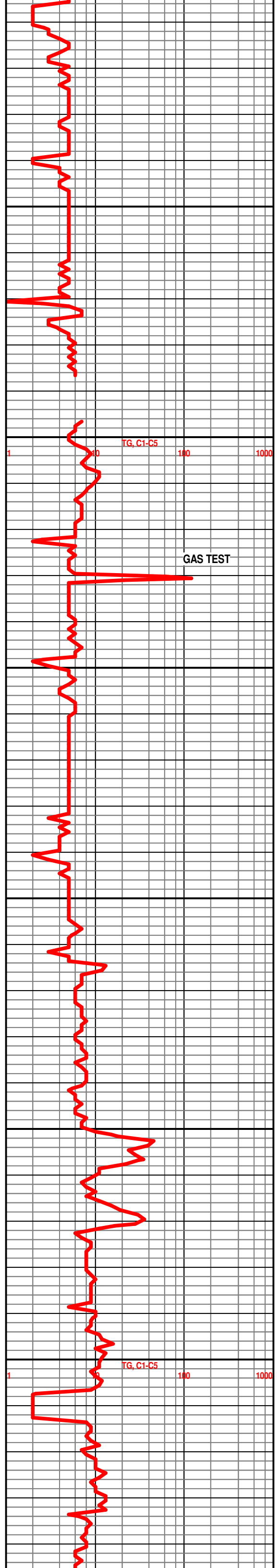
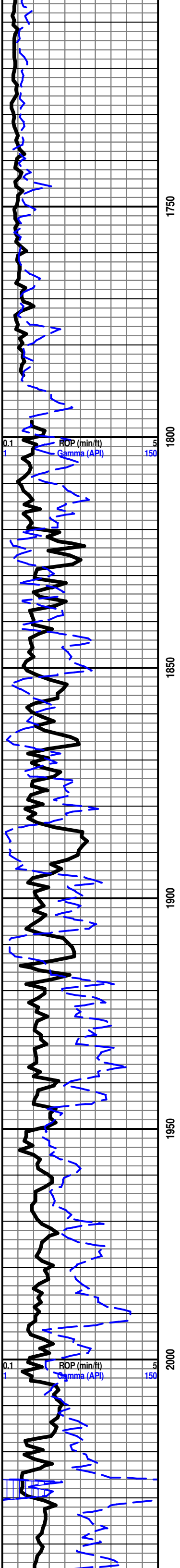
- Core
- Dst
- Dst

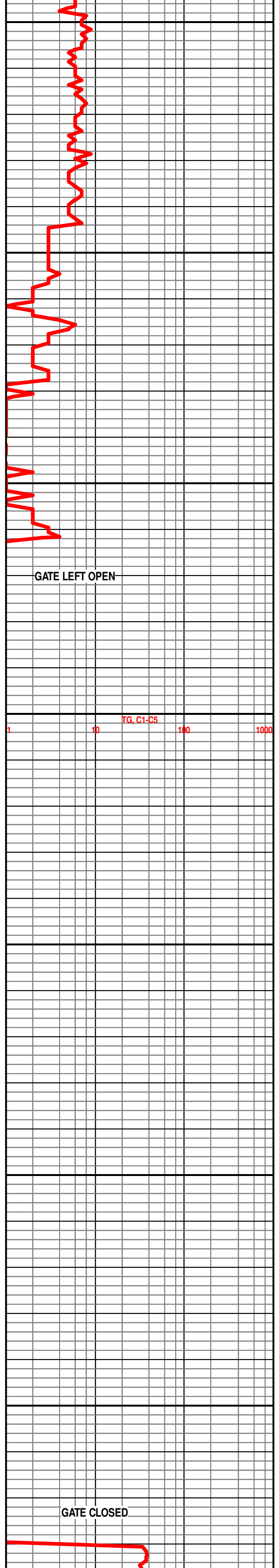
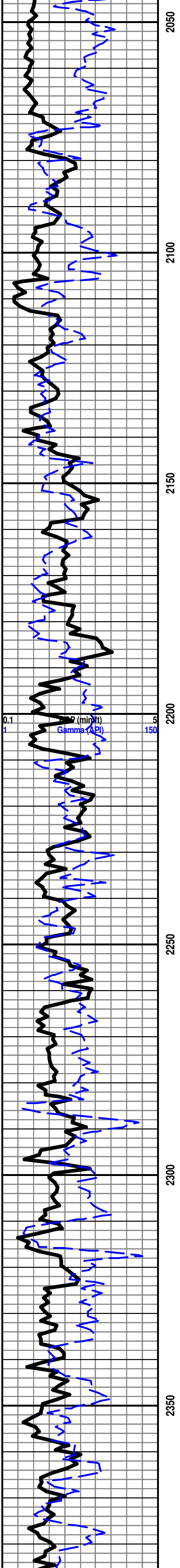
EVENTS

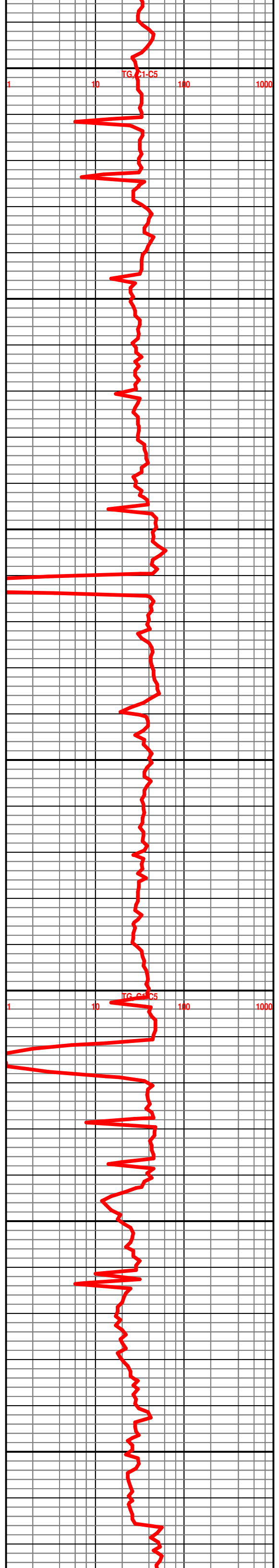
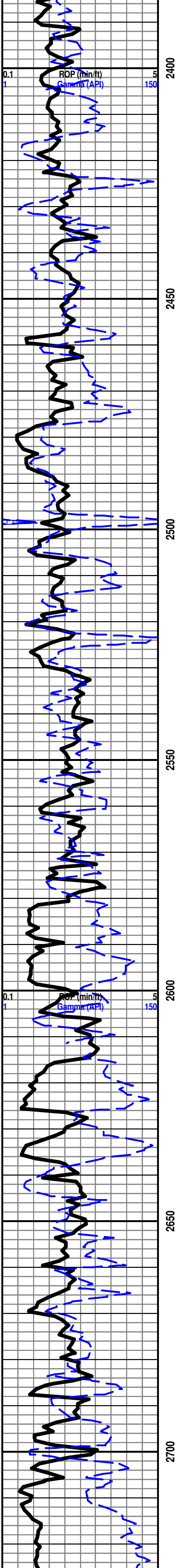
- Rft
- Sidewall

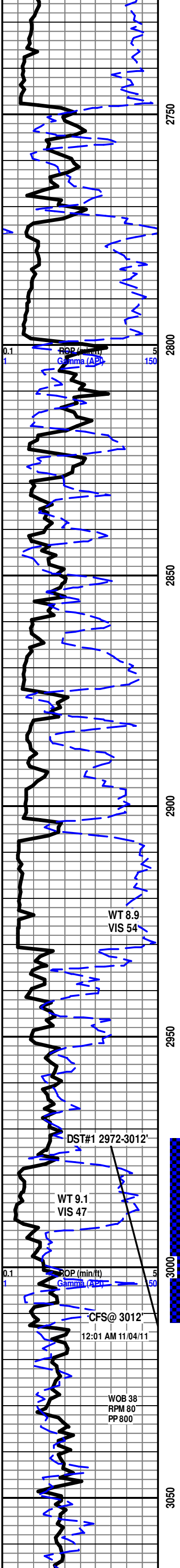












BS ROOT SHALE 2748' - 765'

START 24 HR MANNED UNIT 11/03/2011

SH- LT TO D GY- FRM IP TO V/ SFT SLTY AND GMMY IP

HOWARD 2931' - 948'

LS- LT TN TN- HD DNS F-XLN TO MD-XLN IP, TR IMBD LT GY SH, NO FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT WHT- V/ SFT WHT GMMY CHLK, TR FOSS FRGS IP, NO FLO, NO VIS POR, NO VIS SHOW

LS- CRM BFF- HD DNS TO BRITT IP, MD-F-XLN, FOSS FRGS SCAT IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

SEVERY 2978' - 995'

SH- LT TO MD GY- V/ SFT GMMY TO SLI SLTY

TOPEKA 2990' - 1007'

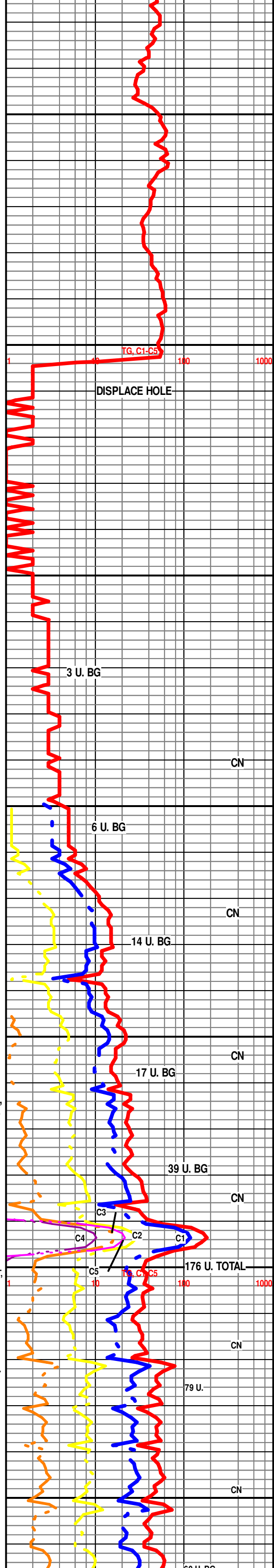
LS- BRN- DUE TO OIL STN THRU, HD DNS TO BRITT, V/ SUCRO MTRX THRU, SLI TR DISS PYR IP, BRIT YEL GLD FLO THRU, PR VIS MICRO PP POR THRU, TR FR SCAT MICRO PP POR IP, EXCEL ACID CUT AND EXCEL FLSH CUT, EXCEL SLO STRM CUT, STRNG OIL ODOR, LT TN LCH ON DISH

DOLO- LT TN TN TN- HD DNS TR BRITT, MD-XLN TO CRS SUCRO MTRX IP, TR IMBD LT GRN SH IP, NO FLO, NO VIS POR, NO VIS CUT OR SHOW

LS- CRM LT TN- HD DNS F-V/F-XLN SLI TR SFT WHT CHLK IP, FRLY NON DESCRIPT, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

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

LS- OFF WHT CRM BFF- HD DNS TO SLI BRITT IP, CRS SUCRO MTRX, TO MD-XLN IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT



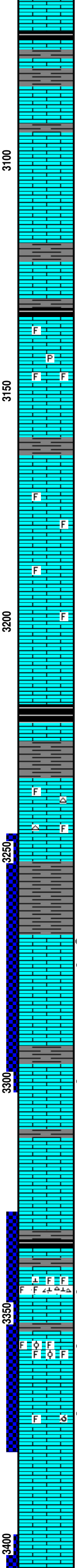
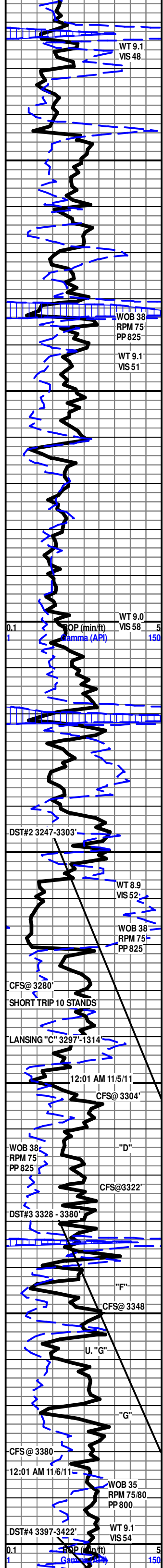
WT 8.9
VIS 54

DST#1 2972-3012'

WT 9.1
VIS 47

CF@ 3012'
12:01 AM 11/04/11

WOB 38
RPM 80
PP 800



SH- BLK SFT CARB

SH- LT GRN - FRM BLKY TO SLI SLTY TXT IP, SLI CALC IP

LeCOMPTON 3094' - 1111'

LS- CRM BFF LT TN- HD DNS TO BRITT, MD-FXLN, TR CRYPTO -XLN IP, TR SFT WHT CHLK IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

SH- LT GY TO GY- FRM IP TO HD SPLNTY

SH- BLK SFT CARB

LS- CRM OFF WHT BFF- HD DNS TO BRITT, MD-FXLN RE-XLN, FOSS FRGS IP, HVY TR FNLY DIS PYR SCAT THRU, HVY TR IMBD SFT WHT CHLK, NO FLO, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY- FRM BLKY IP TO HD SPLNTY

LS- LS- OFF WHT CRM LT TN- HD DNS MOTT, F-XLN TO SUCRO SLI S-CHLKY IP, SCAT IMBD FOSS FRGS IP, NO FLO, NO VIS PR, NO VIS SHOW OR CUT

LS- OFF EHT TO CRM MD HD TO DFT, SUCRO S-CHLKY MRTX TO CHLKY IP, TR ABDT SFT WHT CHLK, TR SCAT FOSS IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

HEEBNER 3219' - 1236'

SH- BLK SFT CARB

SH- LT GRN, V/ SFT GMMY

LS- OFF WHT CRM- HD DNS, MD-F-XLN RE-XLN MTRX, TR FOSS TR LT GY CHRT, TR WHT CHLK IP, BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

DOUGLAS 3252' - 1269'

SH RED GRY - SFT GMMY

LANSING 3268' - 1285'

3268-3272' LS- CRM BFF LT TN- LT OIL STN IP, HD TO MD HD, V/ SUCRO MTRX TO MD-XLN IP RE-XLN TR, FOSS IP, TR SMLL CALC XLS IP, DLL YEL GLD FLO IP TO V/ BRIT YEL GL FLO IN 60%, NO VIS POR, LT FLSH CUT TO FR SLO STRM CUT, NO ODOR

3272-75 LS- LT TN TN BRN (DUE TO OIL STN THRU). HD V/ BRITT TO DNS IP, MD-XLN V/ RE-XLN MTRX, SCAT FOSS FRGS IMBD IP, ABDT IMBD SMLL ANG LM GRNS IP, BRIT YEL GLD FLO THRU, GD VIS INTER-XLN POR, GD SCAT VIS MICRO VUG PR, TR PR INTERFOSS POR IP, GD OIL ODOR EXCEL INST FLSH CUT, EXCEL SLO STRM MLKY BLUE CUT THRU 4 ROCKS, TN OIL STN ON DISH

3297-3301 LS- TN BRN- (OIL STN THRU) HD DNS TO BRITT IP, MD-F-XLN, RE-XLN MTRX, FOSS FRGS IMBD IP, ABDT IMBD SMLL TO MD CALC XLS, TR CALC XLS CLSTRS IP, BRIT YEL GLD FLO IN 60%, DLL YEL GLD FLO IN 20%, FR TO TR GD INTER-XLN POR IP, PR TO FR VIS MICRO VUG POR SCAT THRU, TR PR TO FR INTERFOSS POR IP, NO POR IN 20%, EXCEL INST FLSH CUT TO EXCEL RICH MLKY BLUE STRM CUT IN 80%, FR OIL ODOR, BRN LCH ON DISH

3310-3316 LS- CRM OFF WHT TO WHT- HD IP F-XLN TO SUCRO S-CHLKY MTRX, ABDT FRM TO SFT WHT CHLK IP, LRG CALC XLS IP, NO FLO, NO VIS POR, NO VIS SHOW

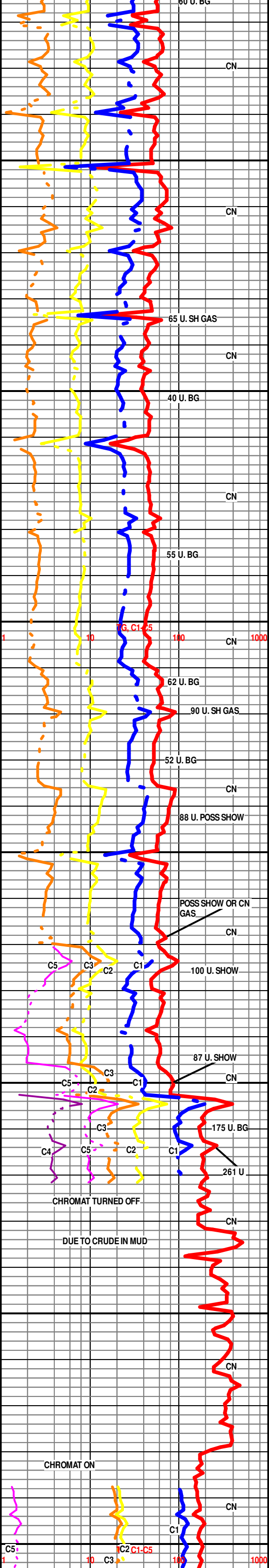
LANSING "F" 3341' - 1358'

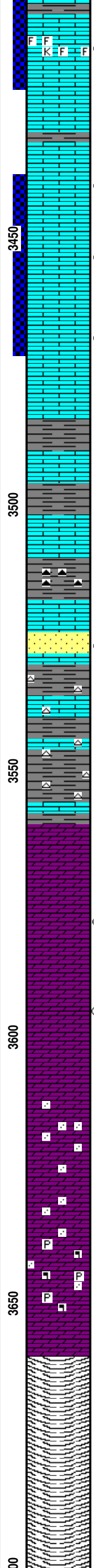
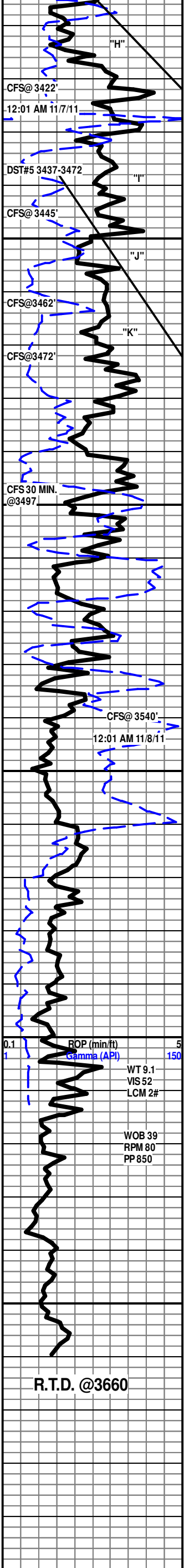
3343- 3346 CHRT & LS INTERBEDS- TN WHT BRN (DUE TO OIL STN IN 50%) HD DNS IP TO V/ BRITT, MD-XLN RE-XLN MTRX, ABDT IMBD FOSS SCAT THRU, ABDT CHRT IMBD THRU, BRIT YEL GLD FLO IN 50%, DLL YEL GLD FLO IN 20%, NO FLO IN 30%(CHRT), FR TO GD VIS INTER FOSS POR, GD VIS VUG POR IP, FR VIS INTER-XLN POR IP, TR FREE CRIN STEMS W/ OIL STN, GD FLSH IN 60%, GD SLO STRM CUT IN 60%, ALL POR CUT, FR OIL ODOR, TN LCH ON DISH

3356-3360 LS- OFF WHT CRM LT TN TN(LT TN STN IN 70%) HD V/ BRITT, MD-XLN RE-XLN MTRX, V/ FOSS THRU, TR SMLL IMBD OOL IP, SLI TR IMBD CHLK IP, BRIT YEL GLD FLO IN 80-90%, GD VIS INTER-XLN POR, FR TO GD VIS INTER FOSS POR, IN 40%, GD INST FLSH CUT TO GD SLO STRM CUT THRU, GD OIL ODOR, LT TN LCH ON DISH

3370-3372- LS OFF WHT TO WHT, (DK TN TO BLK OIL STN SCAT IN 50%), HD DNS TO BRITT IP, MD-F-XLN, RE-XLN MTRX, ABDT FRM TO SFT CHLK IP, TR FOSS IP, TR MICRO OOLMLD IP, BRIT YEL GLD FLO IN 50%, NO FLO IN 50%, PR VIS INTER-XLN POR, IP, TR PR MICRO OOLMLD POR IP, GD FLSH CUT IN 80%, GD SLO STRM CUT IN 80%, FR OIL ODOR, NO STN ON DISH

LANSING "H" 3410' - 1427'





LS- LT TN TN (EVEN OIL STN THRU) HD V/ BRITT, MD-XLN, VV/RE-XLN MTRX, V/ FOSS TO TR FOSS HSH, IMBD SMLL OOL IP, TR KAOL IP, BRIT YEL GLD FLO 80%, DLL YEL GLD FLO IN 20%, ABDT FR TO GD VIS INTER-FOSS POR SCAT IN 60%, TR V/ GD INTERFOSS POR IN 20%, SCAT FR MICROVUG POR IP, GD OIL ODOR, EXCEL INST FLSH CUT TO EXCEL SLO STRM MLKY BLU CUT, TN LCH ON DISH

3436- 3642' LS- OFF WHT CRM (W/ SCAT DOS THRU) HD DNS TO TR BRITT, F-XLN TO MD -XLN IP, TR FOSS FRGS SCAT IP, SLI TR IMBD WHT OOL IP, BRIT YEL GLD FLO IN 40%, DLL YEL GLD FLO IN 50%, PR TO TR FR INTEROOL POR IP, PR TO FR MICRO VUG POR IN 30%, LT OIL ODOR, LT FLSH CUT THRU, TO FR TO GD SLO STRM MILKY BLU CUT IN 50%, NO LCH ON DISH

3450-3455' LS-LT TN TN BRN IP (DUE TO SCAT OIL STN & SCAT DOS SCAT THRU ON ONE FACES OF ROCK) HD DNS F-CRYPTO-XLN MD-XLN IP, RE-XLN IP, FOSS FRGS IN 10%,SLI TR S-CHLKY IP, BRIT YEL GLD FLO IN 80%, DLL YEL GLD FLO IN 20%, PR TO FR VIS INTER-XLN POR, FR VIS MICRO VUG POR SCAT IN 30%, FR OIL ODOR, GD FLSH CUT TO GD SLO STRM CUT SCAT IN 80%, NO LCH ON DISH

3467-3468' LS- TN BRN (DUE TO OIL LV RN OIL STN THRU), HD BRITT, MD-F-XLN, V/ RE-XLN MTRX, ABDT IMBD FOSS FRGS THRU , SMLL CALC XLS IMBD TR FREE CALC XLS IP, BRIT YEL GLD FLO IN 60% DLL YEL GLD FLO IN 20%, PR TO FR VIS INTERFOSS POR IN 50% TO TR GD VIS SCAT INTERFOSS POR IN 10%, PR SCAT MICRO VUG POR IN 20%, GD OIL ODOR, EXCEL INST FLSH CUT THRU TO EXCEL SLO STRM CUT THRU, TN STN ON DISH

BKC 3498' - 1515'

SH- RED GY- MOTT, FRM IP TO V/ SFT

LS- CRM BFF- HD DNS F-CRYPTO-XLN , FRLY NON DESCRIPT, NO FLO, NO VIS POR, NO VIS SHOW

SH RED - V/ SFT GMMY TXT W/ IMBD TN CHRT THRU

SS- TN DK TN(TN OIL STN IN 90% HD V/ FRI, F-MD GRN, CLR GRNS, FR TO GD SRT, S- ANG TO S-RND, LOOSE CALC CMNT IN 50%, SIL CMNT IN 50%, DLL YEL GLD FLO IN 60% , BRIT YEL GLD SPTTD FLO IN 20%, PR TO FR VIS INTER-GRN POR IN 30%, TR GD VIS INTER-GRN POR IN 10%, V/WK FLSH CUT IN 30%, NO FLSH CUT IN 70%, GD SLO STRM CUT IN 30% V/ WK SLO STRM CUT IN 70%, NO ODOR, DK BRN STN ON DISH

SH- AND LS INTERBEDS- SH- RED SFT GMMY TXT W/ ABDT IMBD CRM LT TN CHRT, LS - OFF WHT CRM, V/ SFT ABDT WHT CHLK, NO FLO, NO VIS POR, NO VIS SHOW

ARBUCKLE 3560' - 1577'

DOLO- WHT OFF WHT, HD DNS TO BRITT IP, ABDT IMBD ANG DOLO GRNS, BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW

DOLO- WHT OFF WHT, HD DNS TO BRITT IP, (HVY TR DOS IP) ABDT IMBD ANG DOLO GRNS, HVY TR IMBD SFT WHT CHLK , BRIT YEL MIN FLO, NO VIS POR, WK FLSH TO PR SLO STRM CUT IN 10%, NO CUT IN 90%

DOL- WHT OFF WHT-SCAT DOS IN 70%, HD DNS TO BRIT, F-XLN TP V/ CRS SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU, BRIT YEL MIN FLO THRU, PR VIS INTER-XLN POR, FR OIL ODOR, GD FLSH CUT IN 50%, GD SLO STRM CUT IN 50%, NO CUT IN 50%

DOL-WHT- HD DNS TO BRITT IP, F-XLN TO SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU , HVY TR CLR MD S-RND TO RND QURTZ GRNS IP, BRIT YEL MIN FLO, NO VIS POR TO PR INTER-XLN POR IP, NO VIS SHOW

DOL-WHT- HD DNS TO BRITT IP, F-XLN TO SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU , HVY TR CLR MD S-RND TO RND QURTZ GRNS IP, HVY TR SCAT IMBD PYR & HVY MIN, BRIT YEL MIN FLO, NO VIS POR TO PR INTER-XLN POR IP, NO VIS SHOW

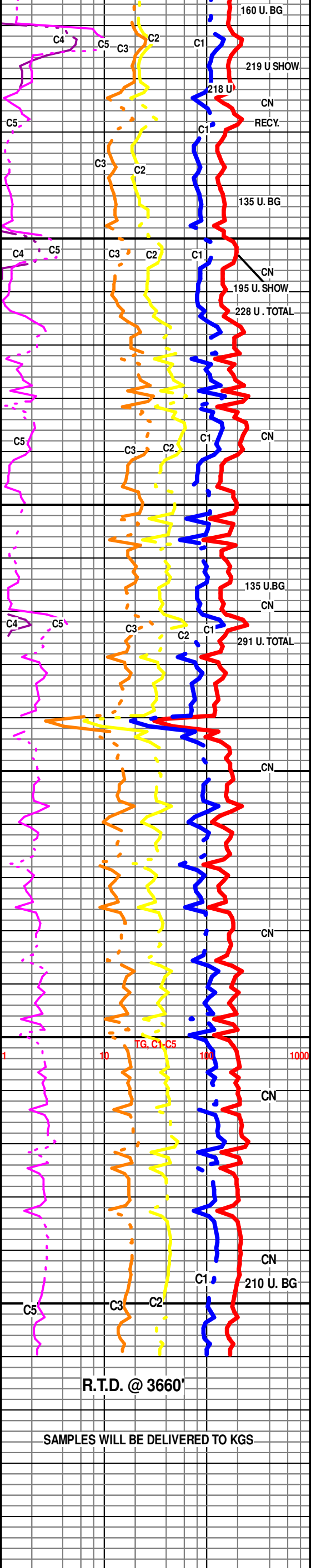
DOLO- OFF WHT LT TN HD DNS TO BRITT, F-XLN TO SUCRO MTRX, ABDT IMBD ANG DOLO GRNS THRU, TR IMBD SFT CHLK, DLL YEL TO BRIT YEL MIN FLO, PR VIS INTER XLN POR IP, NO VIS SHOW OR CUT

R.T.D. @ 3:59 AM 11/08/2011

CTCH 1.5 HR.

TOFL

WEATHERFORD/ LIBERAL



R.T.D. @ 3660'

SAMPLES WILL BE DELIVERED TO KGS