



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1070510
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: _____

1070510

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	HERL 1-34
Doc ID	1070510

All Electric Logs Run

DEN
IND
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

December 19, 2011

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

Re: ACO1
API 15-051-26176-00-00
HERL 1-34
SE/4 Sec.34-14S-17W
Ellis County, Kansas

Dear Production Department:

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

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

Respectfully,
THOMAS G. 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: 8/25/2011
 Invoice # 5145

P.O.#:
 Due Date: 9/24/2011
 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	HERL 1-34
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Reference:
 HERL 1-34

Description of Work:
 LONG SURFACE JOB

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 977.42	No	Bulk Truck Mileage-Job to Nearest Bulk Plant	16	\$100.02	No
Common-Class A	400	\$ 5,223.66	Yes				
Bulk Truck Matl-Material Service Charge	422	\$ 903.44	No				
5 1/2" Basket	3	\$ 738.59	Yes				
Calcium Chloride	14	\$ 564.37	Yes				
Flo Seal	100	\$ 214.08	Yes				
8 5/8" Centralizer	3	\$ 205.52	Yes				
Pump Truck Mileage-Job to Nearest Camp	16	\$ 170.93	No				
Premium Gel (Bentonite)	8	\$ 139.41	Yes				
8 5/8" Top Rubber Plug	1	\$ 113.46	Yes				
Baffle Plate Aluminum, 8 5/8"	1	\$ 96.34	Yes				

Invoice Terms:

Net 30

	SubTotal:	\$ 9,447.25
	Discount Available <u>ONLY</u> if Invoice is Paid & Received within listed terms of invoice:	\$ (1,417.09)
SubTotal for Taxable Items:		\$ 6,201.13
SubTotal for Non-Taxable Items:		\$ 1,829.04

6.30% Ellis County Sales Tax

Total:	\$ 8,030.16
Tax:	\$ 390.67
Amount Due:	\$ 8,420.83
Applied Payments:	
Balance Due:	\$ 8,420.83

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

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

No. 5145

Date	8-23-11	Sec.	34	Twp.	14	Range	17	County	Ellis	State	Ks	On Location		Finish	6:45 AM
Lease	Hesl		Well No.	1-34		Location Victoria, Ks - 45 to Butterfield trail,									
Contractor	Discovery #2					Owner 2W, 1/2 S, W/4									
Type Job	Surface					To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.									
Hole Size	12 1/4"		T.D.	1106'		Charge To Sam Gary Jr + Associates									
Csg.	8 5/8" 23# New		Depth	1106'		Street									
Tbg. Size			Depth			City									
Tool			Depth			State									
Cement Left in Csg.	29.76'		Shoe Joint	29.76'		The above was done to satisfaction and supervision of owner agent or contractor.									
Meas Line			Displace	68 1/2 BLS		Cement Amount Ordered 400 SX Common 3%CC 2%Gel									

EQUIPMENT

Pumptrk	1	No.	Cementer	Mike	Y4# Flo-seal
			Helper		Common 400
Bulktrk	13	No.	Driver	Rick	Poz. Mix
			Driver		Gel. 8
Bulktrk		No.	Driver		Calcium 14
			Driver		Hulls

JOB SERVICES & REMARKS

Remarks:	Cement did Circulate.	Salt
Rat Hole		Flowseal 100#
Mouse Hole		Kol-Seal
Centralizers	1, 15, 24	Mud CLR 48
Baskets	2, 16, 25	CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
		Handling 422
		Mileage

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	3
Baskets	3
AFU Inserts	
Float Shoe	
Latch Down	
	1- Baffle plate
	1- Rubber plug
Pumptrk Charge	Long Surface
Mileage	16

Tax
Discount
Total Charge

X Signature 



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: 8/31/2011
 Invoice # 5149

P.O.#:
 Due Date: 9/30/2011
 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	8800-238
Well/Prospect	HERL 1-34
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Reference:
 HERL 1-34

Description of Work:
 PROD LONG STRING

Services / Items Included:

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 963.85	No				
Common-Class A	225 \$ 2,897.50	Yes	Salt (Fine)	19	\$279.98	Yes
Gilsonite	1057 \$ 1,673.58	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$236.44	No
CFL 117	176 \$ 1,144.39	Yes	Pump Truck Mileage-Job to Nearest Camp	16	\$168.55	No
5 1/2" Basket	3 \$ 728.33	Yes	Flo Seal	56	\$118.22	Yes
Bulk Truck Matl-Material Service Charge	255 \$ 538.33	No	Bulk Truck Mileage-Job to Nearest Bulk Plant	16	\$98.63	No
CD-110	117 \$ 494.00	Yes	KCL	2	\$63.04	Yes
5 1/2" Turbolizer	8 \$ 489.78	Yes				
Mud Clear	500 \$ 390.56	Yes				
Defoamer A or CAF-38	50 \$ 369.44	Yes				
Auto Fill Float Shoe, 5 1/2"	1 \$ 323.00	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 10,977.63
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,646.64)

SubTotal for Taxable Items: \$ 7,827.03
 SubTotal for Non-Taxable Items: \$ 1,503.96

6.30% Ellis County Sales Tax

Total: \$ 9,330.99
 Tax: \$ 493.10

Thank You For Your Business!

Amount Due: \$ 9,824.09
 Applied Payments:
 Balance Due: \$ 9,824.09

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. 5149

Date	8-29-11	Sec.	34	Twp.	14	Range	17	County	Ellis	State	Ks	On Location		Finish	8:00 PM				
Lease	Hert	Well No.	1-34		Location		Victoria, Ks - 45 to Butterfield Rd,												
Contractor	Discovery #2				Owner		200, 25, 106												
Type Job	Production				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.														
Hole Size	7 7/8"		T.D.		3620'														
Csg.	5 1/2" 15 3/4" New		Depth		3590.34'														
Tbg. Size			Depth		Charge To Sam Gacy Jr + Associates														
Tool			Depth		Street														
Cement Left in Csg.	22.23'		Shoe Joint		22.23'														
Meas Line			Displace		85. BLS														
												Cement Amount Ordered				225 0 Pri-C 10% Salt, 5% Gribonite			

EQUIPMENT

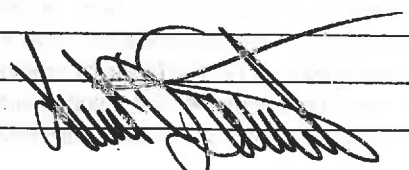
Pumptrk	1	No.	Cementer	Cisco	Common
Bulktrk	14	No.	Driver	Mike	Poz. Mix
Bulktrk	pin.	No.	Driver	Rick	Gel.

JOB SERVICES & REMARKS

Remarks:	3604.57 total pipe					Calcium	CD 110 117#				
Rat Hole	303x					Hotts	20 BLS KCL				
Mouse Hole	155x					Salt	19				
Centralizers	1, 3, 5, 7, 9, 12, 15, 17					Flowseal	56#				
Baskets	3, 9, 15					Kol-Seal	1057#				
D/V or Port Collar						Mud CLR 48	500 gal				
Drop ball, break circulation pump 500 gal						CFL-117 or CD110 CAF 30	50 #				
mud clear 48, Plug Rathole w/36sx						Sand	CFL-117 176#				
plug mousehole 155x, mix 180 SX						Handling	255				
Cement down casing, shut down						Mileage					
wash pump + lines, Released plug						FLOAT EQUIPMENT					
+ Displaced with 85 BLS of water.						Guide Shoe					
						Centralizer	8 turbos				
						Baskets	3				
						AFU Inserts					
						Float Shoe	1				
						Latch Down	1				
						1- Rotating head Assy					
						Pumptrk Charge	prod long string				
						Mileage	16				

Lift pressure 200 #
Land plug to 1300 # ~~100~~

Released + float held,
Rigged down

X Signature 

Tax	
Discount	
Total Charge	



DRILL STEM TEST REPORT

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

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Tom Fertal

34-14s-17w-Ellis

Herl #1-34

Start Date: 2011.08.26 @ 04:37:22

End Date: 2011.08.26 @ 12:32:52

Job Ticket #: 43567 DST #: 1

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

Printed: 2011.11.08 @ 14:47:26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43567

DST#: 1

Test Start: 2011.08.26 @ 04:37:22

GENERAL INFORMATION:

Formation: **A-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:27:52
 Time Test Ended: 12:32:52
 Interval: **3204.00 ft (KB) To 3255.00 ft (KB) (TVD)**
 Total Depth: 3255.00 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: 1959.00 ft (KB)
 1951.00 ft (CF)
 KB to GR/CF: 8.00 ft

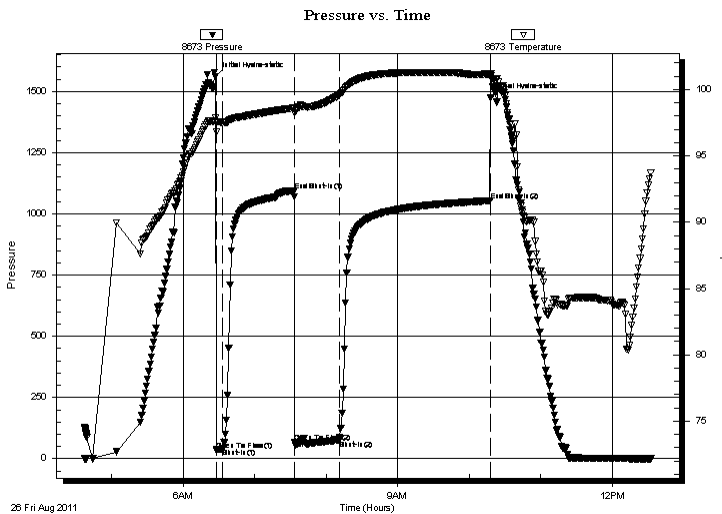
Serial #: 8673

Inside

Press @ Run Depth: 77.00 psig @ 3239.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.26 End Date: 2011.08.26 Last Calib.: 2011.08.26
 Start Time: 04:37:24 End Time: 12:32:52 Time On Btm: 2011.08.26 @ 06:27:22
 Time Off Btm: 2011.08.26 @ 10:18:07

TEST COMMENT: IFP-Good Blow ,Built to 7"
 ISI-Dead
 FFP-Strong,BOB in 30 Seconds
 FSI-Dead

PRESSURE SUMMARY



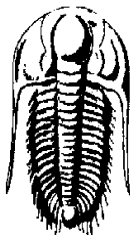
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1561.30	97.84	Initial Hydro-static
1	33.00	96.79	Open To Flow (1)
6	40.96	97.52	Shut-In(1)
66	1094.70	98.60	End Shut-In(1)
67	67.79	98.22	Open To Flow (2)
104	77.00	99.59	Shut-In(2)
231	1053.78	101.17	End Shut-In(2)
231	1473.80	101.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	Gassy Oil Cut Mud-30%G-25%O-45%M	1.75
0.00	480' Gas In Pipe	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates
1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

Herl #1-34
34-14s-17w-Ellis
Job Ticket: 43567 **DST#: 1**
Test Start: 2011.08.26 @ 04:37:22

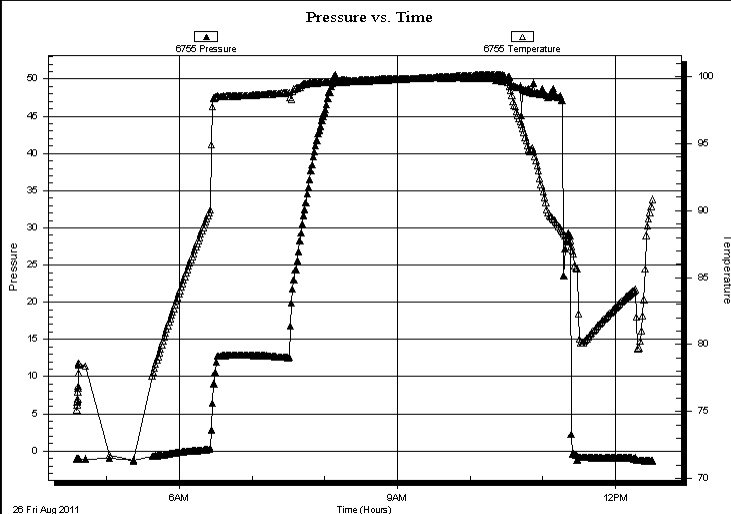
GENERAL INFORMATION:

Formation: **A-C**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 06:27:52 Tester: Jason McLemore
Time Test Ended: 12:32:52 Unit No: 54

Interval: **3204.00 ft (KB) To 3255.00 ft (KB) (TVD)** Reference Elevations: 1959.00 ft (KB)
Total Depth: 3255.00 ft (KB) (TVD) 1951.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 6755 Fluid
Press @ Run Depth: psig @ 3170.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.08.26 End Date: 2011.08.26 Last Calib.: 2011.08.26
Start Time: 04:35:17 End Time: 12:31:00 Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Good Blow ,Built to 7"
ISI-Dead
FFP-Strong,BOB in 30 Seconds
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
125.00	Gassy Oil Cut Mud-30%G-25%O-45%M	1.75
0.00	480' Gas In Pipe	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

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43567

DST#: 1

Test Start: 2011.08.26 @ 04:37:22

Tool Information

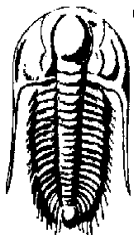
Drill Pipe:	Length: 3187.00 ft	Diameter: 3.80 inches	Volume: 44.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 44.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3204.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3170.00	
Recorder	0.00	6755	Fluid	3170.00	
Change Over Sub	4.00			3174.00	
Shut In Tool	5.00			3179.00	
Sampler	3.00			3182.00	
Hydraulic tool	5.00			3187.00	
Jars	5.00			3192.00	
Safety Joint	2.00			3194.00	
Packer	5.00			3199.00	35.00 Bottom Of Top Packer
Packer	5.00			3204.00	
Stubb	1.00			3205.00	
Perforations	1.00			3206.00	
Change Over Sub	1.00			3207.00	
Blank Spacing	31.00			3238.00	
Change Over Sub	1.00			3239.00	
Recorder	0.00	8673	Inside	3239.00	
Recorder	0.00	6668	Outside	3239.00	
Perforations	13.00			3252.00	
Bullnose	3.00			3255.00	51.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43567

DST#: 1

Test Start: 2011.08.26 @ 04:37:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
125.00	Gassy Oil Cut Mud-30%G-25%O-45%M	1.753
0.00	480' Gas In Pipe	0.000

Total Length: 125.00 ft Total Volume: 1.753 bbf

Num Fluid Samples: 0

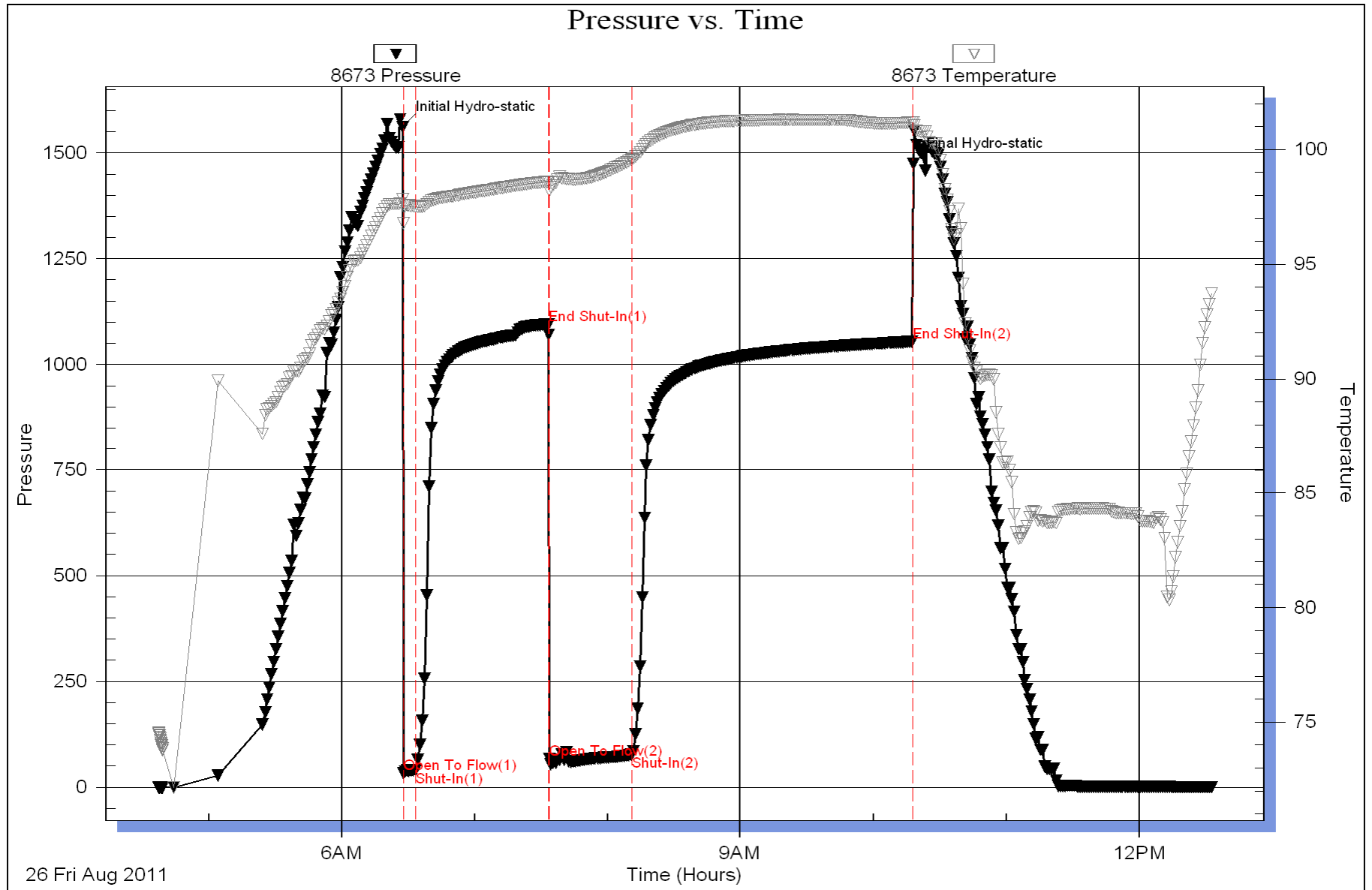
Num Gas Bombs: 0

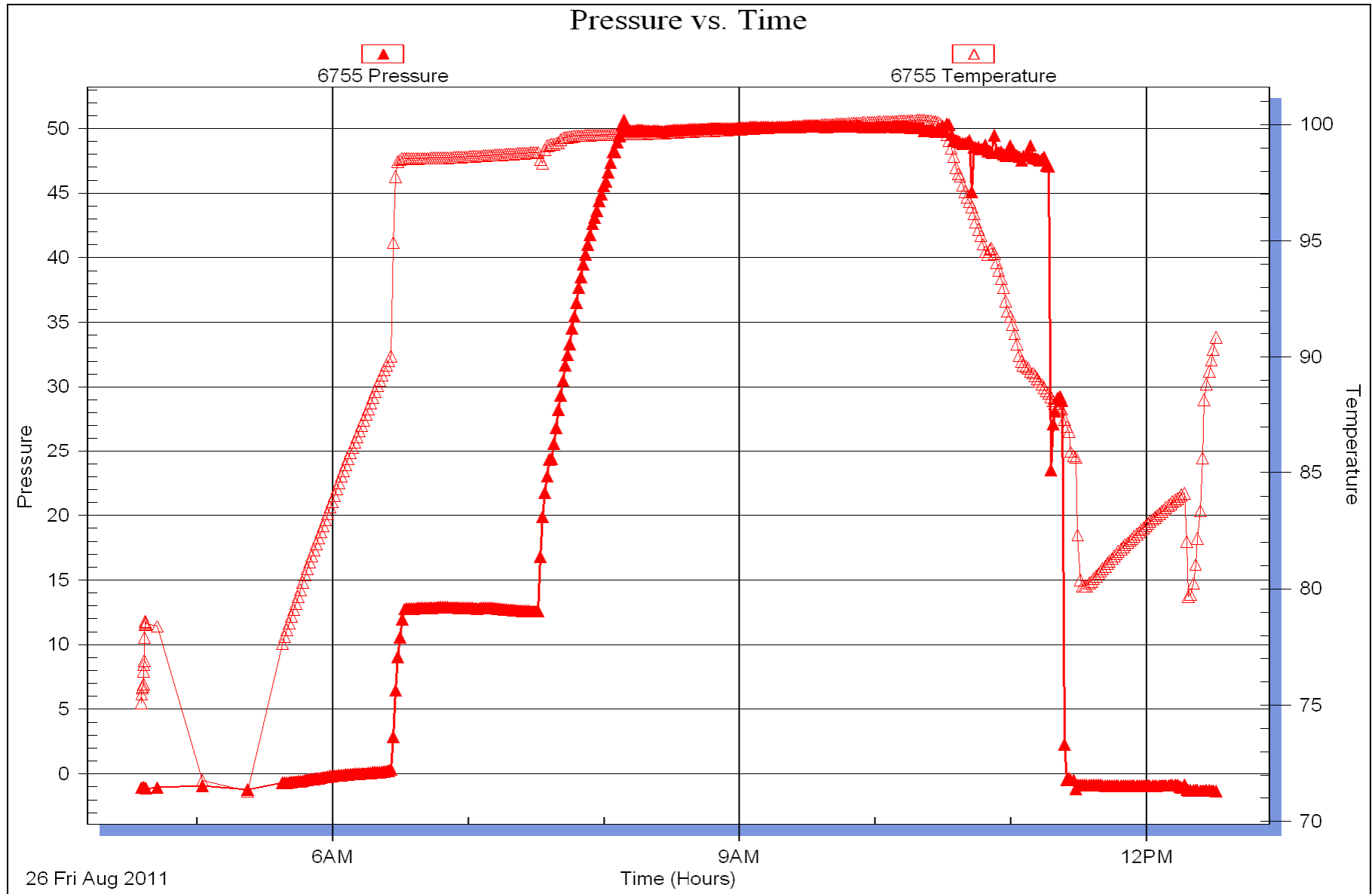
Serial #:

Laboratory Name:

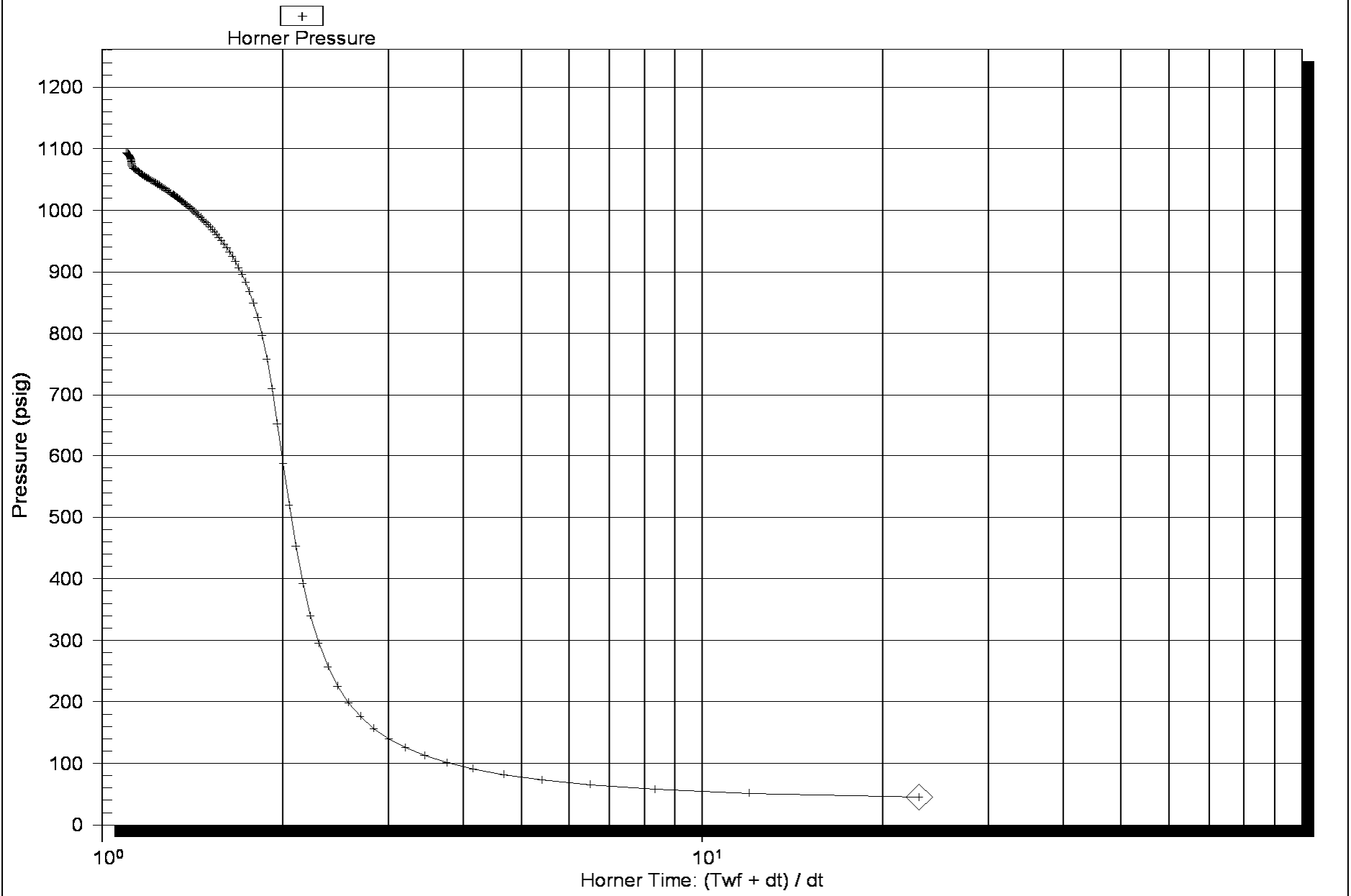
Laboratory Location:

Recovery Comments: Sampler: 275#,3000ml Muddy Gassy Oil-30%G69%O-1%M

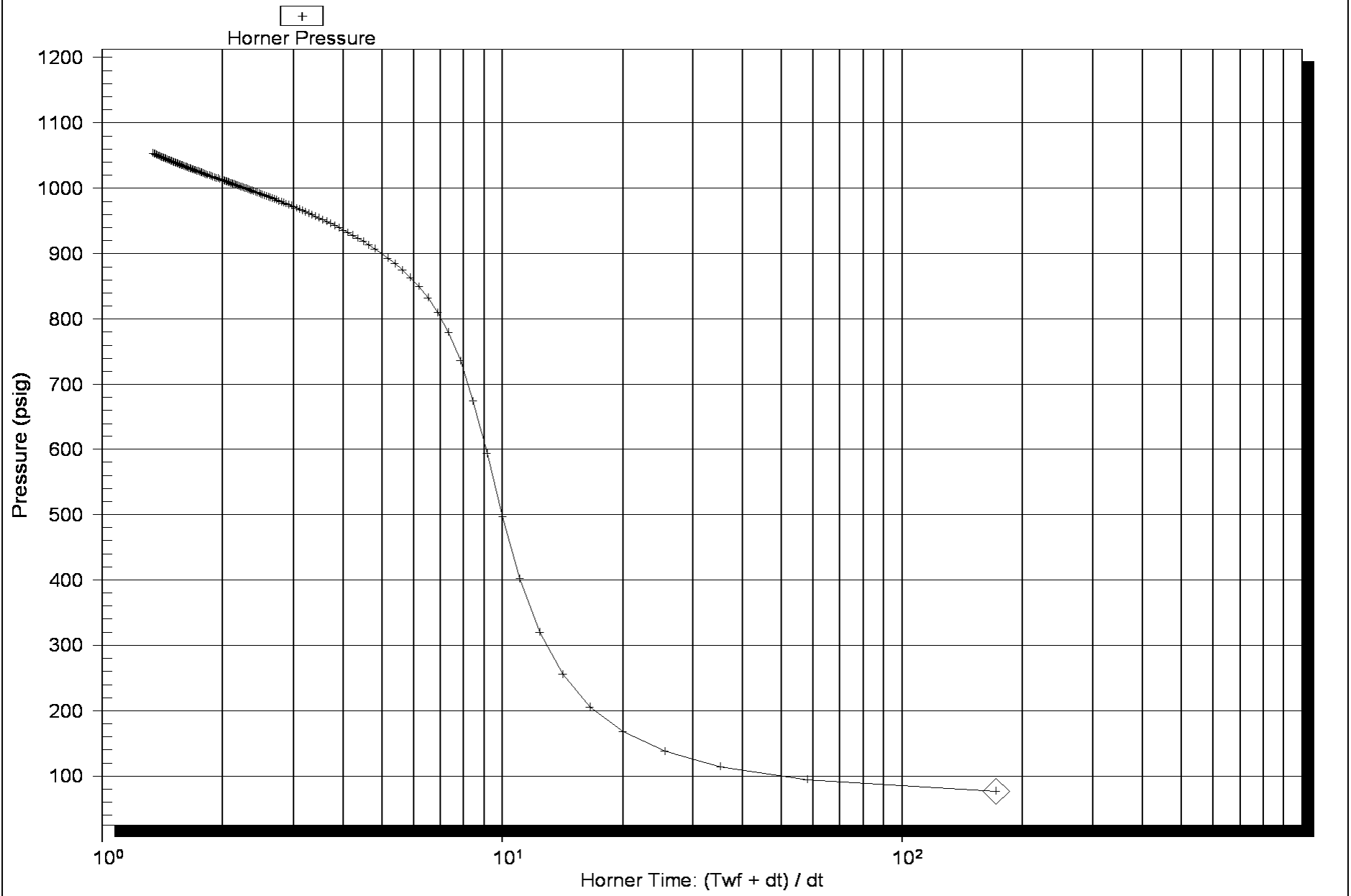




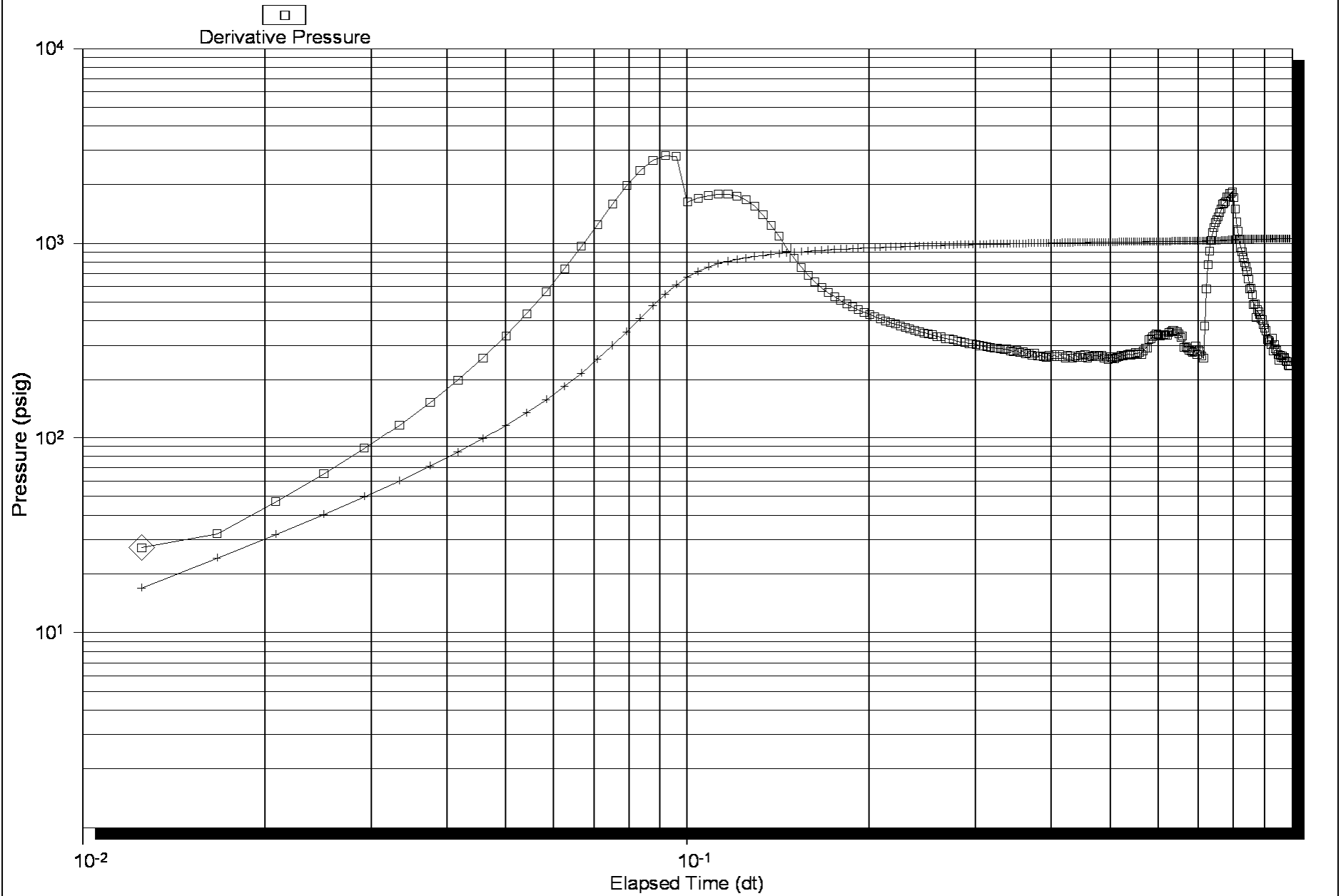
Horner Plot

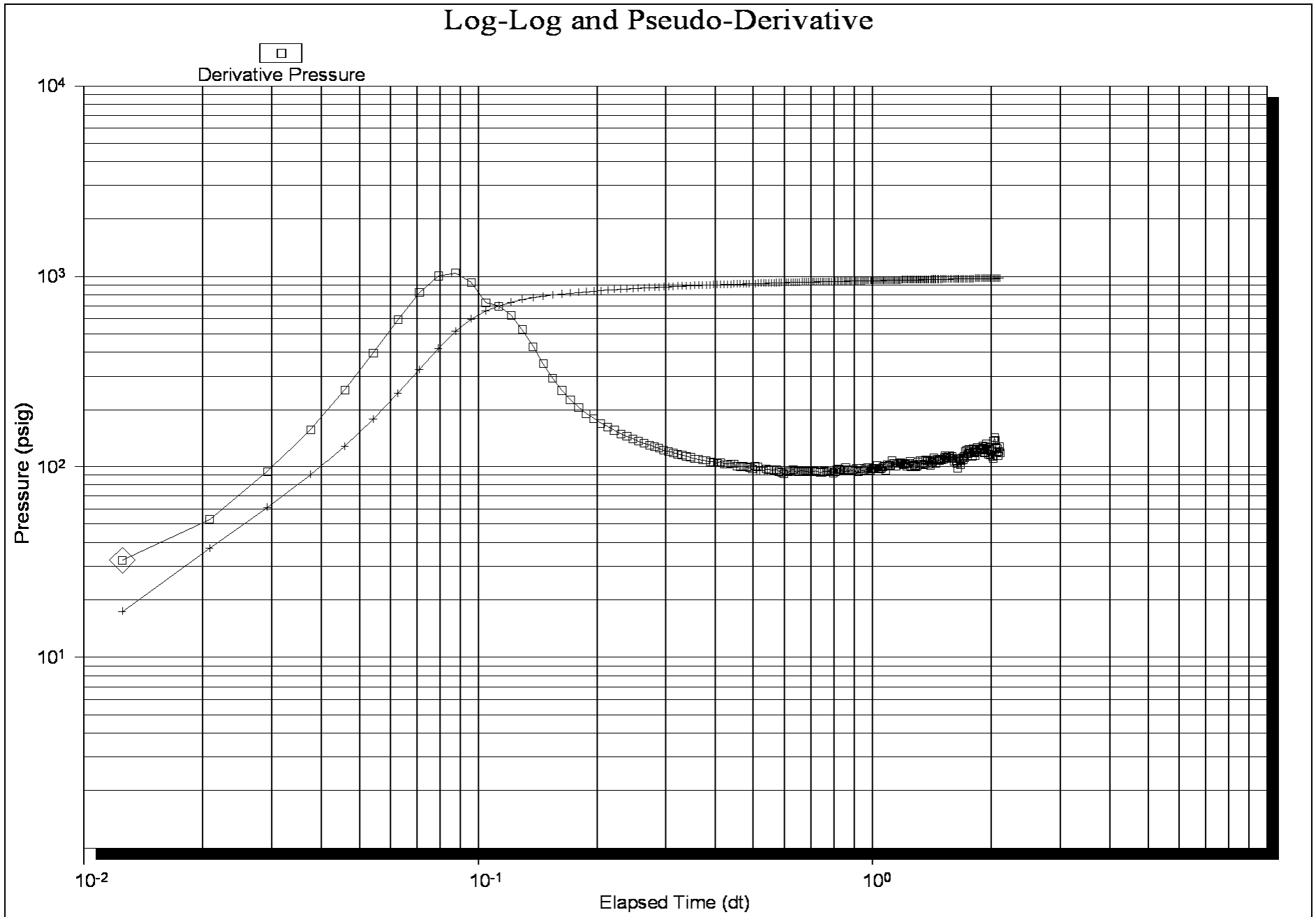


Horner Plot



Log-Log and Pseudo-Derivative







DRILL STEM TEST REPORT

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

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Tom Fertal

34-14s-17w-Ellis

Herl #1-34

Start Date: 2011.08.26 @ 21:53:15

End Date: 2011.08.27 @ 05:49:45

Job Ticket #: 43568 DST #: 2

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

Printed: 2011.11.08 @ 15:01:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43568

DST#: 2

Test Start: 2011.08.26 @ 21:53:15

GENERAL INFORMATION:

Formation: **D-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:44:15
 Time Test Ended: 05:49:45
 Interval: **3259.00 ft (KB) To 3308.00 ft (KB) (TVD)**
 Total Depth: 3308.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jason McLemore
 Unit No: 54
 Reference Elevations: 1959.00 ft (KB)
 1951.00 ft (CF)
 KB to GR/CF: 8.00 ft

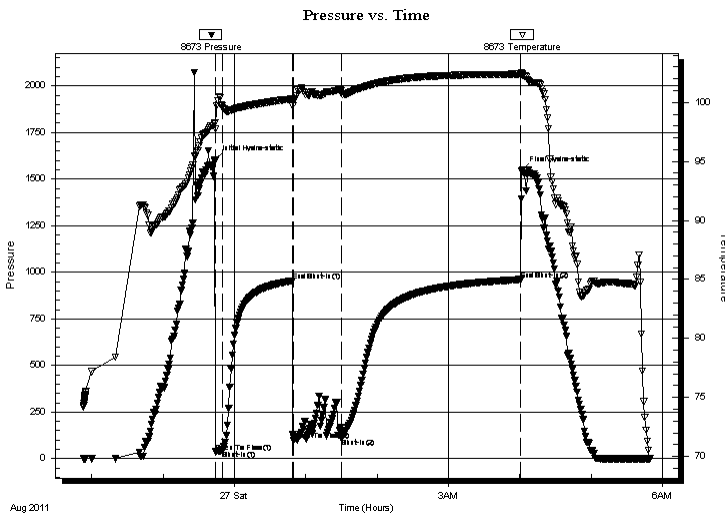
Serial #: 8673

Inside

Press @ Run Depth: 109.36 psig @ 3294.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.26 End Date: 2011.08.27 Last Calib.: 2011.08.27
 Start Time: 21:53:17 End Time: 05:49:45 Time On Btm: 2011.08.26 @ 23:43:45
 Time Off Btm: 2011.08.27 @ 04:01:45

TEST COMMENT: IFP-5 min-Built to 2-1/8"
 ISI-60 min.-Dead
 FFP-45min-Built to 2-1/8"
 FSI-150min-Dead

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1601.23	98.24	Initial Hydro-static
1	36.73	97.73	Open To Flow (1)
6	44.66	99.55	Shut-In(1)
66	954.45	100.29	End Shut-In(1)
66	100.96	100.34	Open To Flow (2)
106	109.36	100.97	Shut-In(2)
257	960.85	102.40	End Shut-In(2)
258	1544.53	102.40	Final Hydro-static

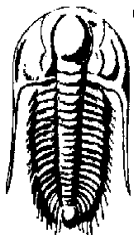
Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling Mud	0.98

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

Herl #1-34

34-14s-17w-Ellis

Job Ticket: 43568 **DST#: 2**
Test Start: 2011.08.26 @ 21:53:15

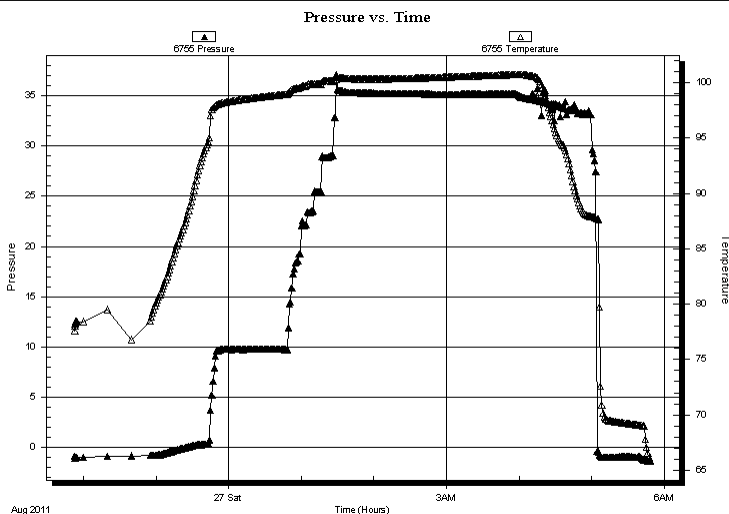
GENERAL INFORMATION:

Formation: **D-G**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 23:44:15
 Tester: Jason McLemore
 Time Test Ended: 05:49:45
 Unit No: 54
Interval: 3259.00 ft (KB) To 3308.00 ft (KB) (TVD)
 Reference Elevations: 1959.00 ft (KB)
 Total Depth: 3308.00 ft (KB) (TVD) 1951.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 6755 Fluid

Press@RunDepth: psig @ 3225.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.26 End Date: 2011.08.27 Last Calib.: 2011.08.27
 Start Time: 21:52:57 End Time: 05:48:55 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP-5 min-Built to 2-1/8"
 ISI-60 min.-Dead
 FFP-45min-Built to 2-1/8"
 FSI-150min-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling Mud	0.98

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43568

DST#: 2

Test Start: 2011.08.26 @ 21:53:15

Tool Information

Drill Pipe:	Length: 3249.00 ft	Diameter: 3.80 inches	Volume: 45.57 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: 50000.00 lb
			<u>Total Volume: 45.57 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3259.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3225.00	
Recorder	0.00	6755	Fluid	3225.00	
Change Over Sub	4.00			3229.00	
Shut In Tool	5.00			3234.00	
Sampler	3.00			3237.00	
Hydraulic tool	5.00			3242.00	
Jars	5.00			3247.00	
Safety Joint	2.00			3249.00	
Packer	5.00			3254.00	35.00 Bottom Of Top Packer
Packer	5.00			3259.00	
Stubb	1.00			3260.00	
Perforations	1.00			3261.00	
Change Over Sub	1.00			3262.00	
Blank Spacing	31.00			3293.00	
Change Over Sub	1.00			3294.00	
Recorder	0.00	8673	Inside	3294.00	
Recorder	0.00	8736	Outside	3294.00	
Perforations	11.00			3305.00	
Bullnose	3.00			3308.00	49.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43568

DST#: 2

Test Start: 2011.08.26 @ 21:53:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 6.40 cm³

Resistivity: ohm.m

Salinity: 3100.00 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
70.00	Drilling Mud	0.982

Total Length: 70.00 ft Total Volume: 0.982 bbl

Num Fluid Samples: 0

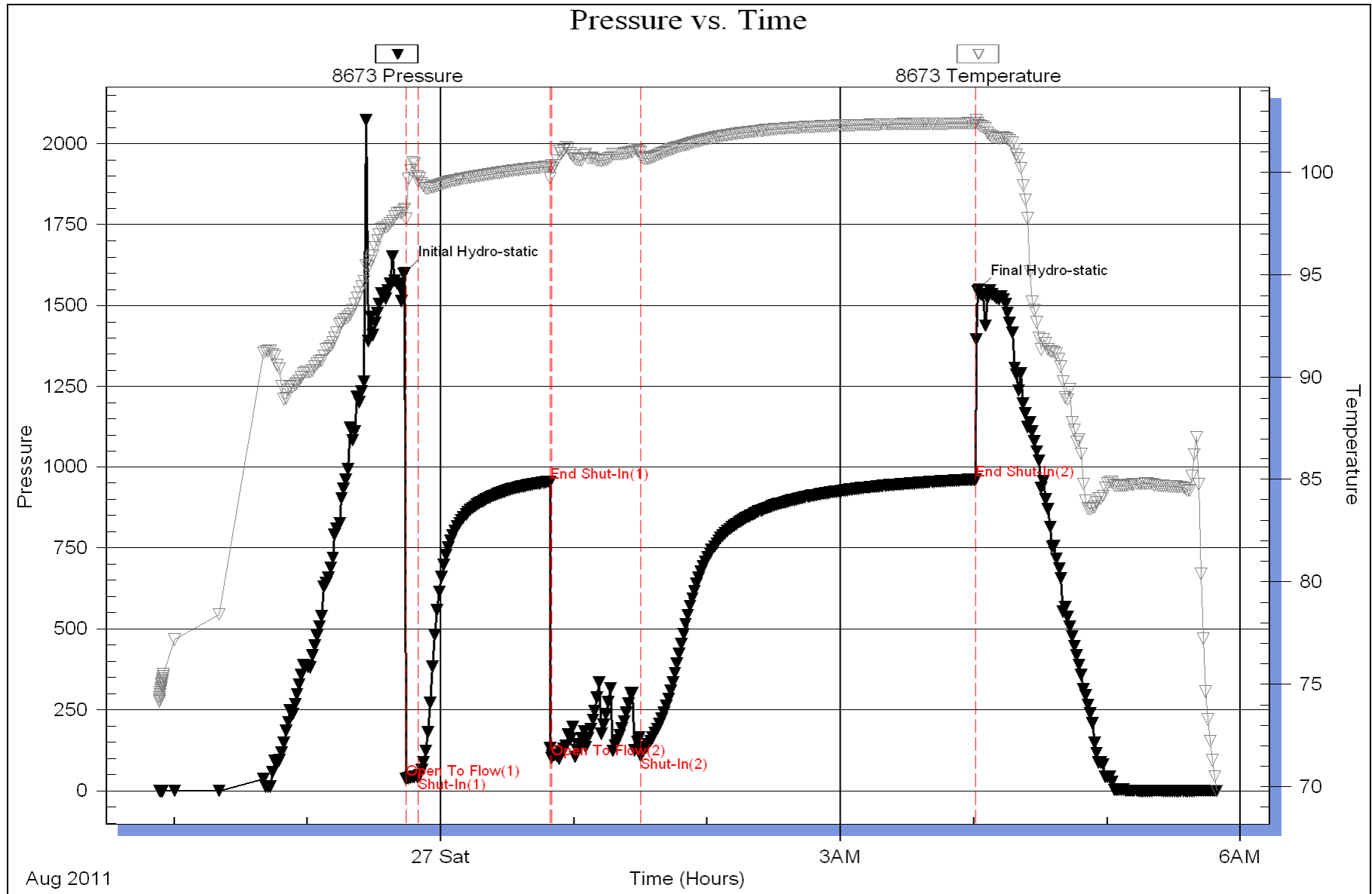
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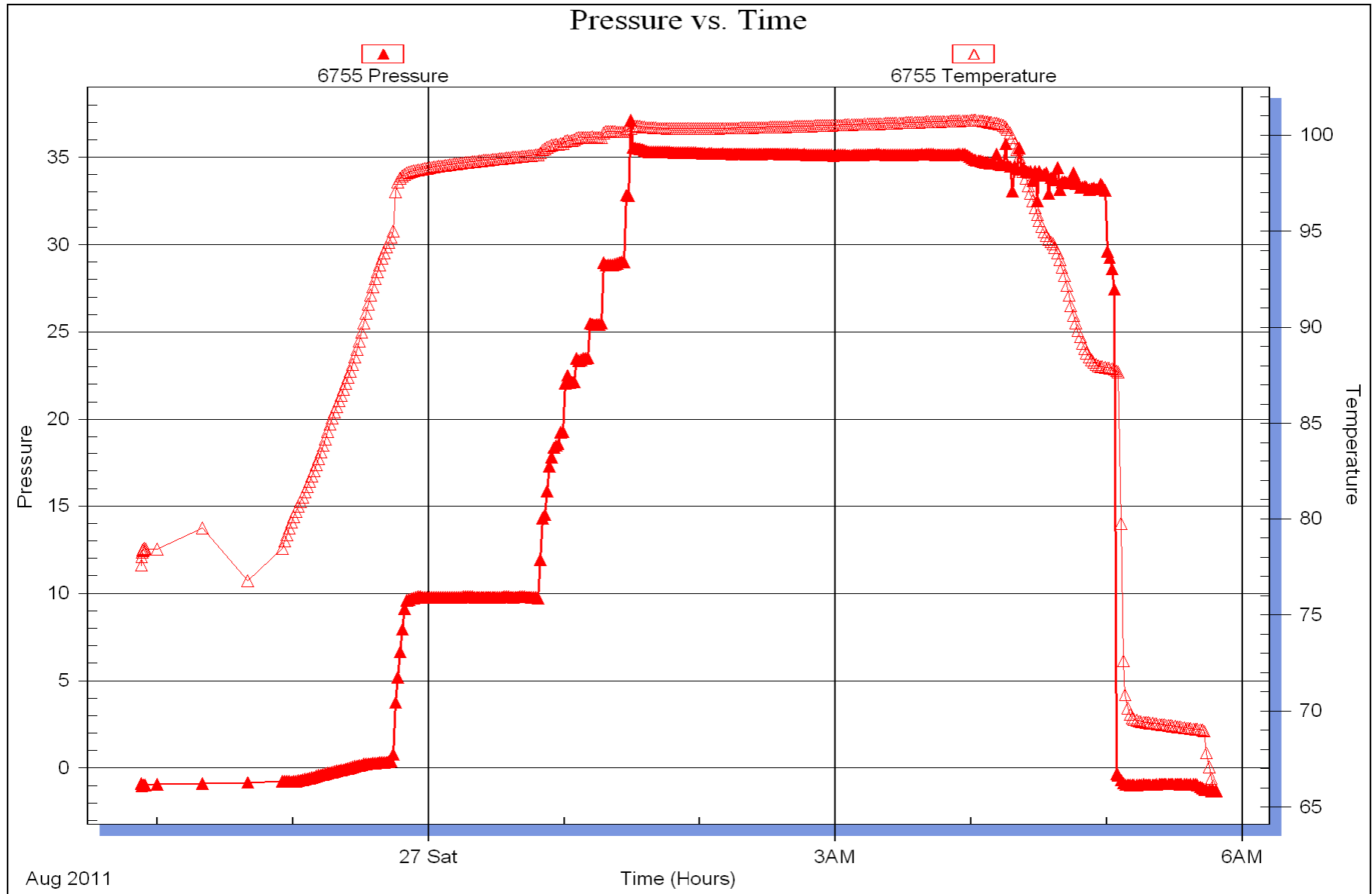
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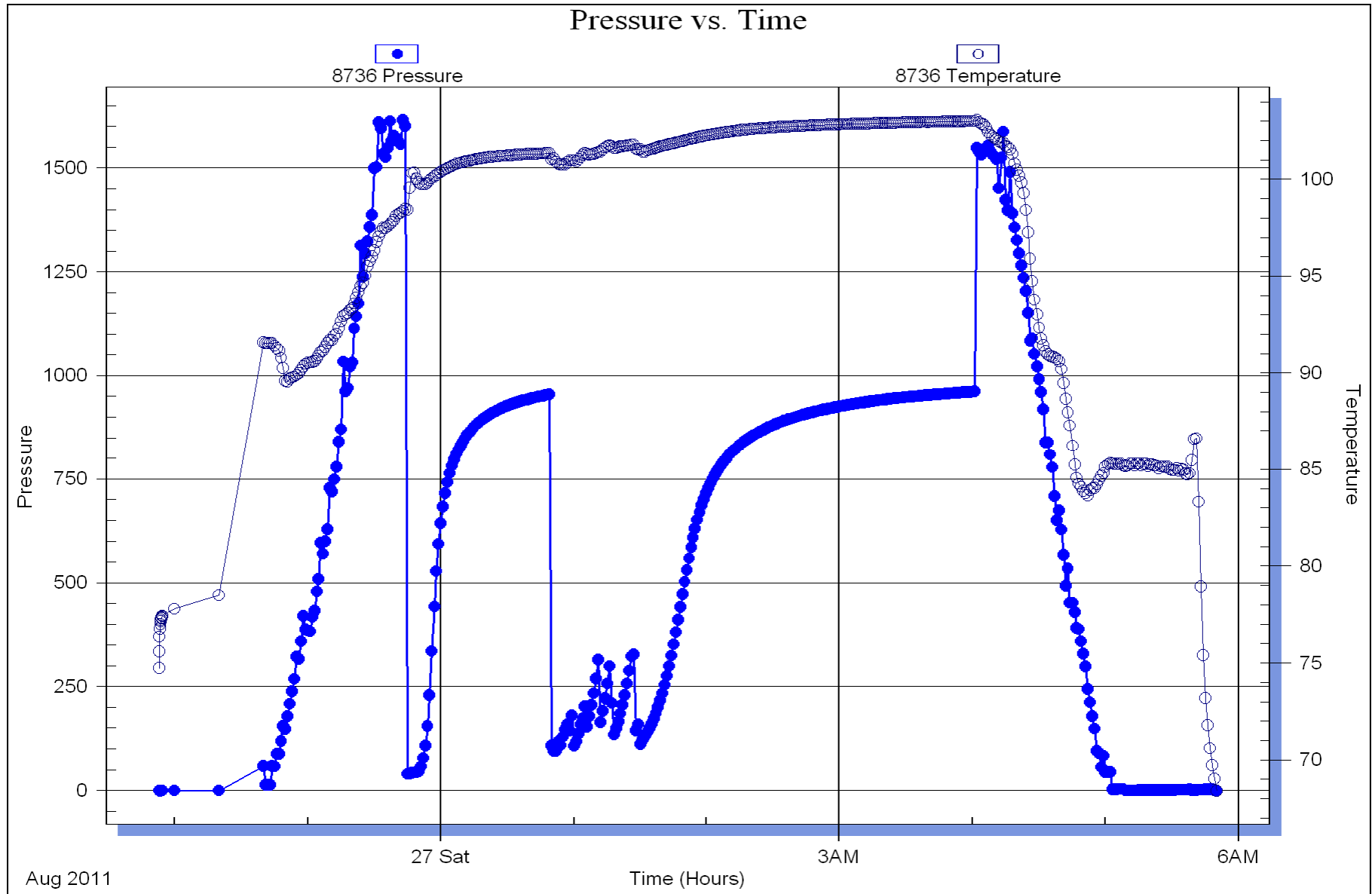
Laboratory Name:

Laboratory Location:

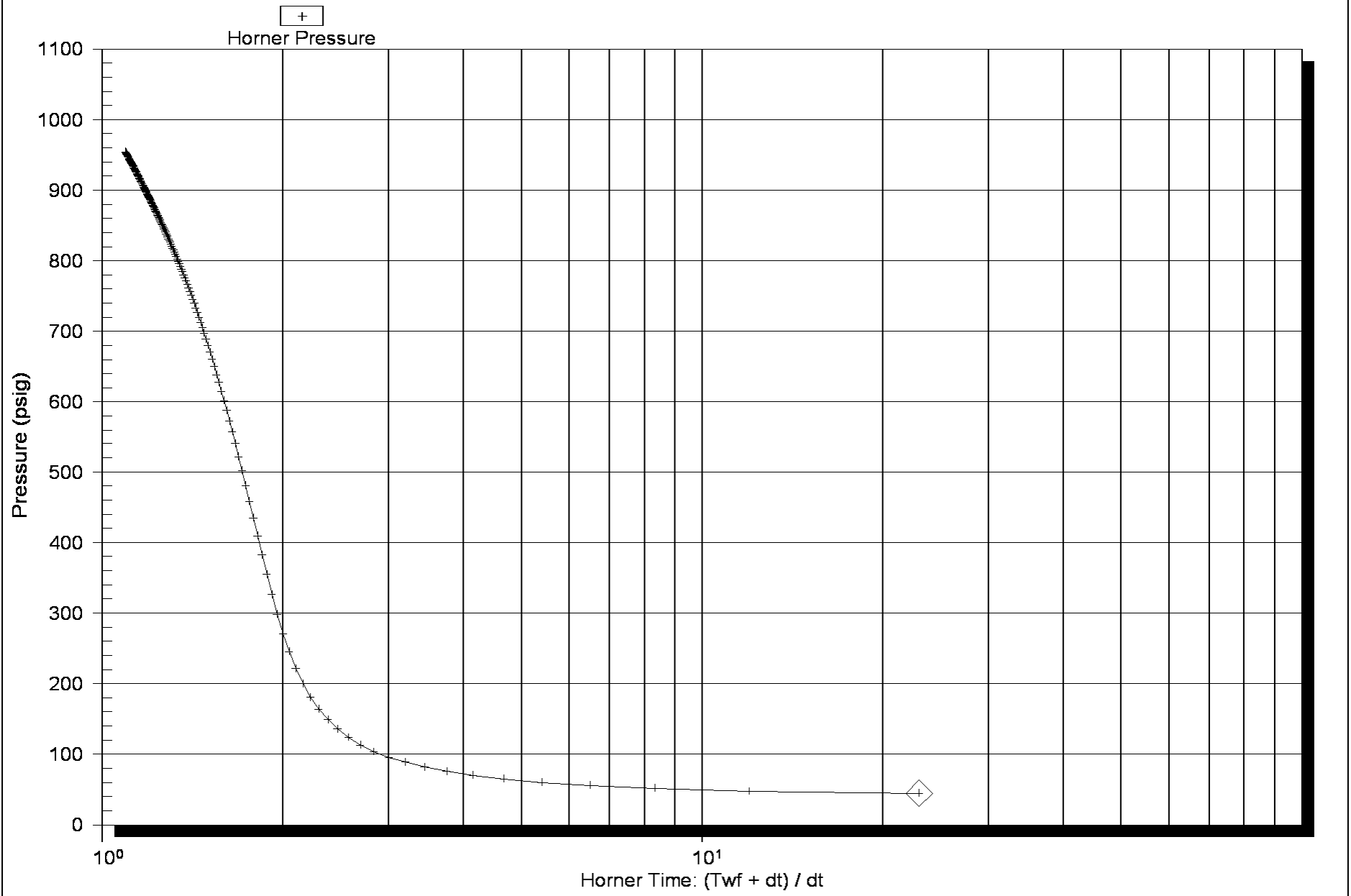
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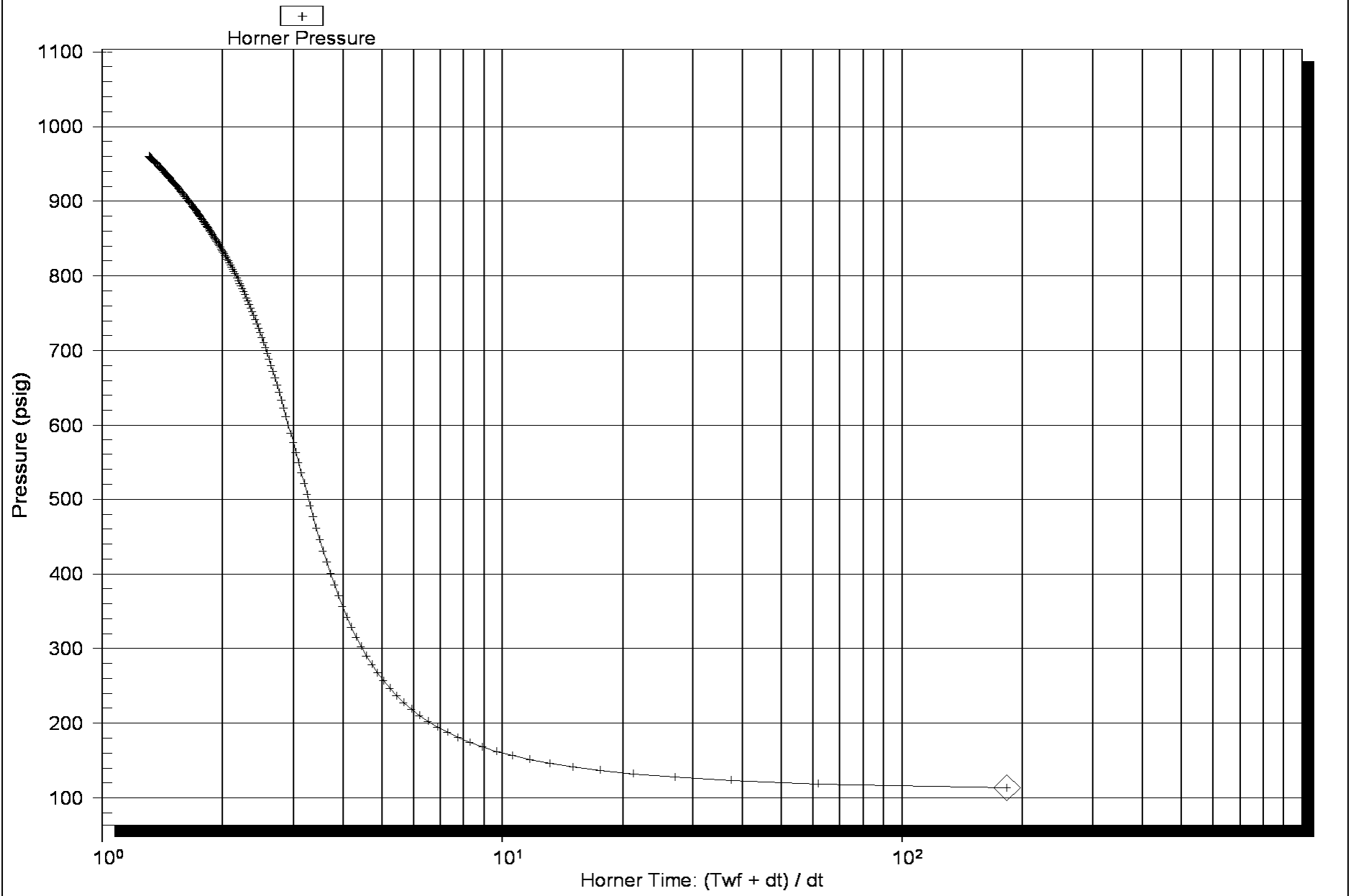




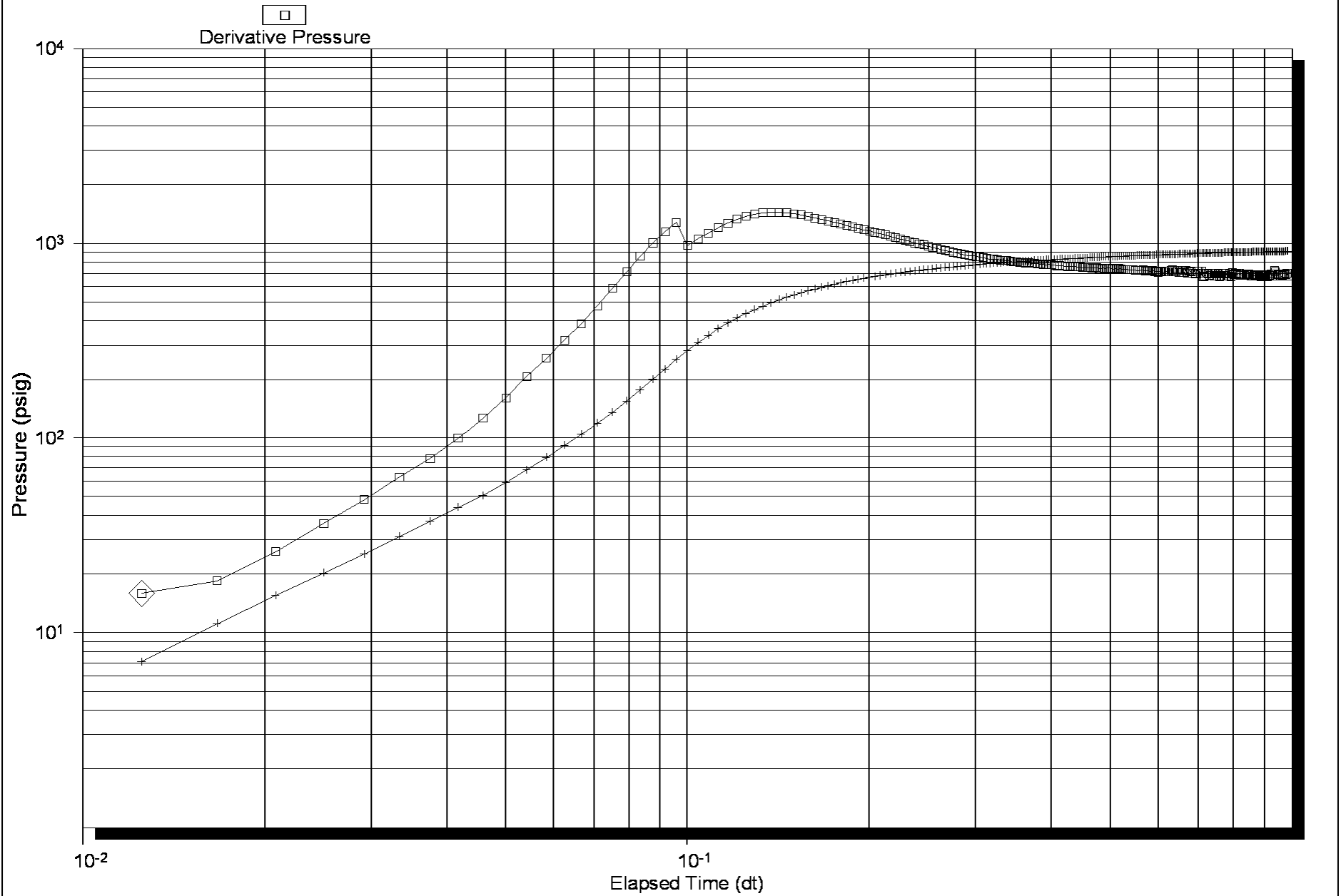
Horner Plot

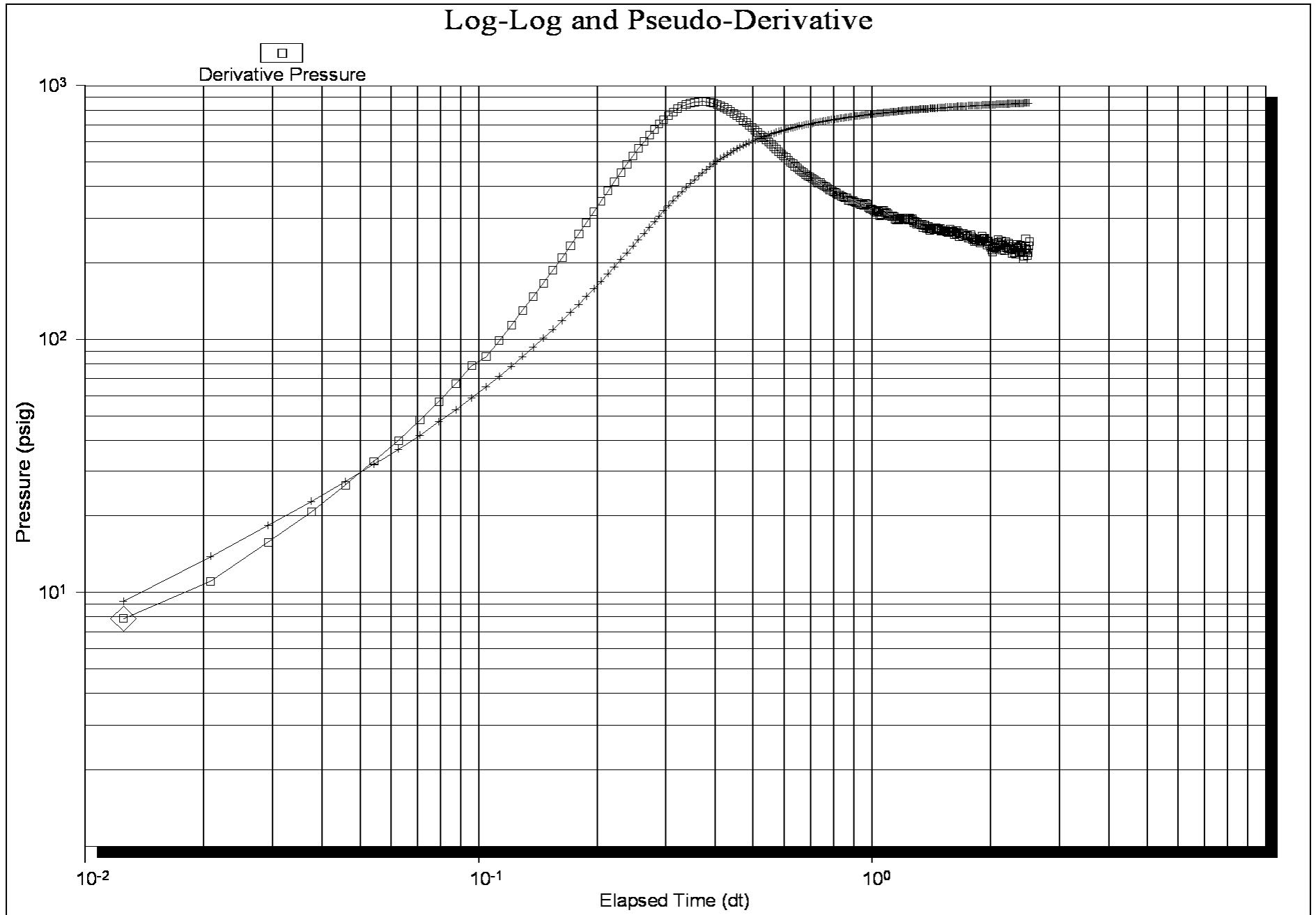


Horner Plot



Log-Log and Pseudo-Derivative







DRILL STEM TEST REPORT

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

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Tom Fertal

34-14s-17w-Ellis

Herl #1-34

Start Date: 2011.08.27 @ 12:21:46

End Date: 2011.08.27 @ 20:40:46

Job Ticket #: 43569 DST #: 3

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

Printed: 2011.11.08 @ 15:03:48



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43569

DST#: 3

Test Start: 2011.08.27 @ 12:21:46

GENERAL INFORMATION:

Formation: **Lower G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:02:31

Time Test Ended: 20:40:46

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3312.00 ft (KB) To 3325.00 ft (KB) (TVD)

Reference Elevations: 1959.00 ft (KB)

Total Depth: 3325.00 ft (KB) (TVD)

1951.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8673 Inside

Press @ Run Depth: 71.64 psig @ 3314.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.27 End Date: 2011.08.27

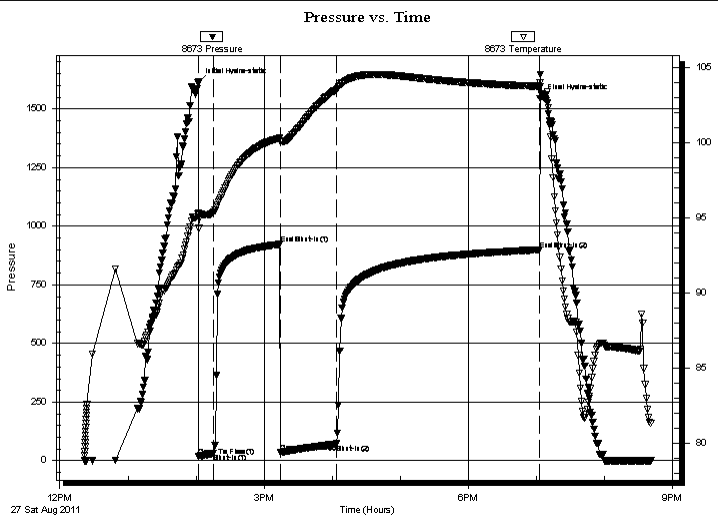
Last Calib.: 2011.08.27

Start Time: 12:21:48 End Time: 20:40:46

Time On Btm: 2011.08.27 @ 14:02:16

Time Off Btm: 2011.08.27 @ 19:03:16

TEST COMMENT: IFP-Fair Blow ,Built to 3"
ISI-Dead
FFP-Fair Blow , Built to 7-1/2"
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1613.69	95.30	Initial Hydro-static
1	17.86	94.30	Open To Flow (1)
14	31.02	95.36	Shut-In(1)
72	922.75	100.29	End Shut-In(1)
73	35.72	100.01	Open To Flow (2)
122	71.64	103.51	Shut-In(2)
301	899.62	103.72	End Shut-In(2)
301	1545.43	103.99	Final Hydro-static

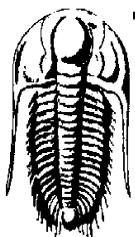
Recovery

Length (ft)	Description	Volume (bbl)
89.00	Salt Water	1.25
1.00	Free Oil	0.01

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

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43569

DST#: 3

Test Start: 2011.08.27 @ 12:21:46

GENERAL INFORMATION:

Formation: **Lower G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:02:31

Time Test Ended: 20:40:46

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3312.00 ft (KB) To 3325.00 ft (KB) (TVD)

Reference Elevations: 1959.00 ft (KB)

Total Depth: 3325.00 ft (KB) (TVD)

1951.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 6755 Outside

Press @RunDepth: psig @ 3314.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.27 End Date: 2011.08.27

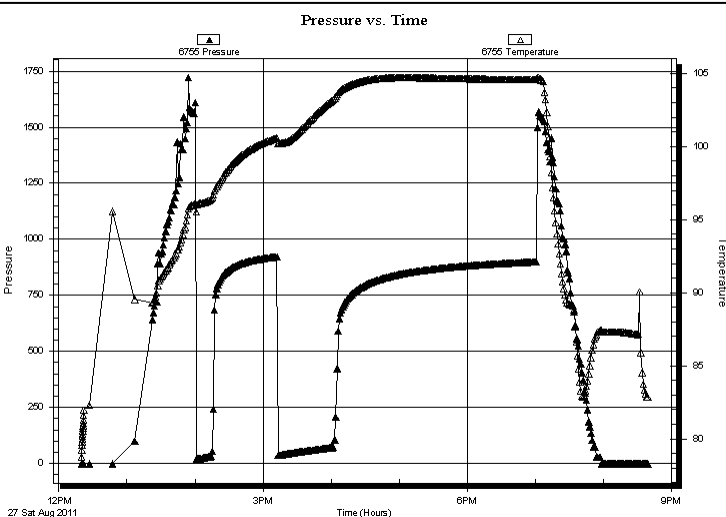
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Start Time: 12:20:00 End Time: 20:39:43

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-Fair Blow ,Built to 3"
ISI-Dead
FFP-Fair Blow , Built to 7-1/2"
FSI-Dead



PRESSURE SUMMARY

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

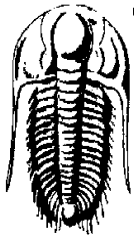
Recovery

Length (ft)	Description	Volume (bbl)
89.00	Salt Water	1.25
1.00	Free Oil	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43569

DST#: 3

Test Start: 2011.08.27 @ 12:21:46

GENERAL INFORMATION:

Formation: **Lower G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:02:31

Time Test Ended: 20:40:46

Interval: 3312.00 ft (KB) To 3325.00 ft (KB) (TVD)

Total Depth: 3325.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Reference Elevations: 1959.00 ft (KB)

1951.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8736

Fluid

Press @RunDepth: psig @ 3278.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.08.27

End Date: 2011.08.27

Last Calib.: 2011.08.27

Start Time: 12:17:22

End Time: 20:36:20

Time On Btm:

Time Off Btm:

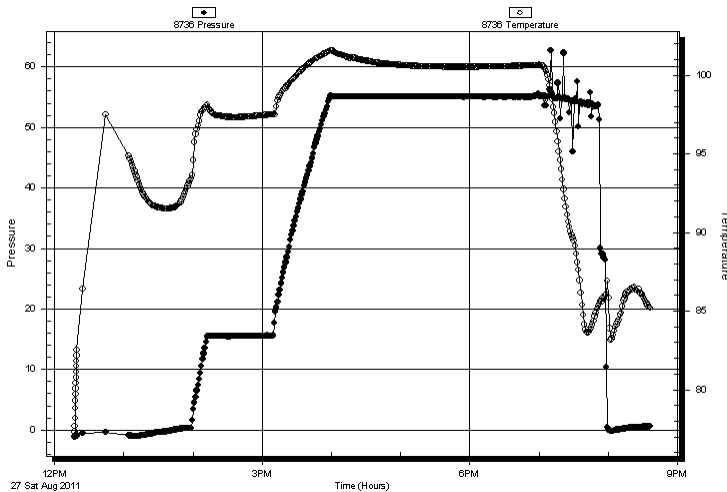
TEST COMMENT: IFP-Fair Blow ,Built to 3"

ISI-Dead

FFP-Fair Blow , Built to 7-1/2"

FSI-Dead

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
89.00	Salt Water	1.25
1.00	Free Oil	0.01

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

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43569

DST#: 3

Test Start: 2011.08.27 @ 12:21:46

Tool Information

Drill Pipe:	Length: 3281.00 ft	Diameter: 3.80 inches	Volume: 46.02 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: 50000.00 lb
			<u>Total Volume: 46.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3312.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3278.00	
Recorder	0.00	8736	Fluid	3278.00	
Change Over Sub	4.00			3282.00	
Shut In Tool	5.00			3287.00	
Sampler	3.00			3290.00	
Hydraulic tool	5.00			3295.00	
Jars	5.00			3300.00	
Safety Joint	2.00			3302.00	
Packer	5.00			3307.00	35.00 Bottom Of Top Packer
Packer	5.00			3312.00	
Stubb	1.00			3313.00	
Perforations	1.00			3314.00	
Recorder	0.00	8673	Inside	3314.00	
Recorder	0.00	6755	Outside	3314.00	
Perforations	8.00			3322.00	
Bullnose	3.00			3325.00	13.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43569

DST#: 3

Test Start: 2011.08.27 @ 12:21:46

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:

75000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
89.00	Salt Water	1.248
1.00	Free Oil	0.014

Total Length: 90.00 ft Total Volume: 1.262 bbl

Num Fluid Samples: 0

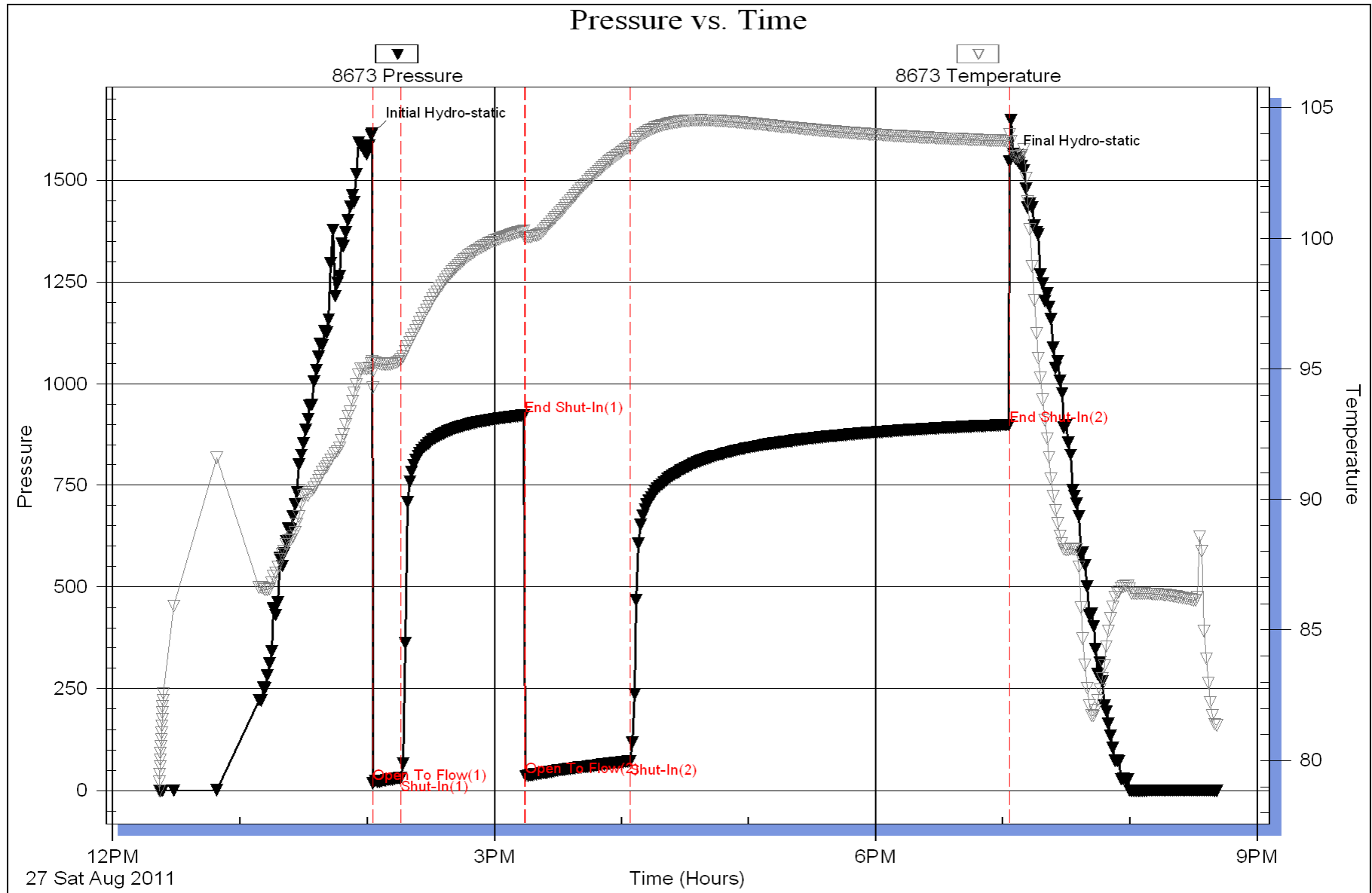
Num Gas Bombs: 0

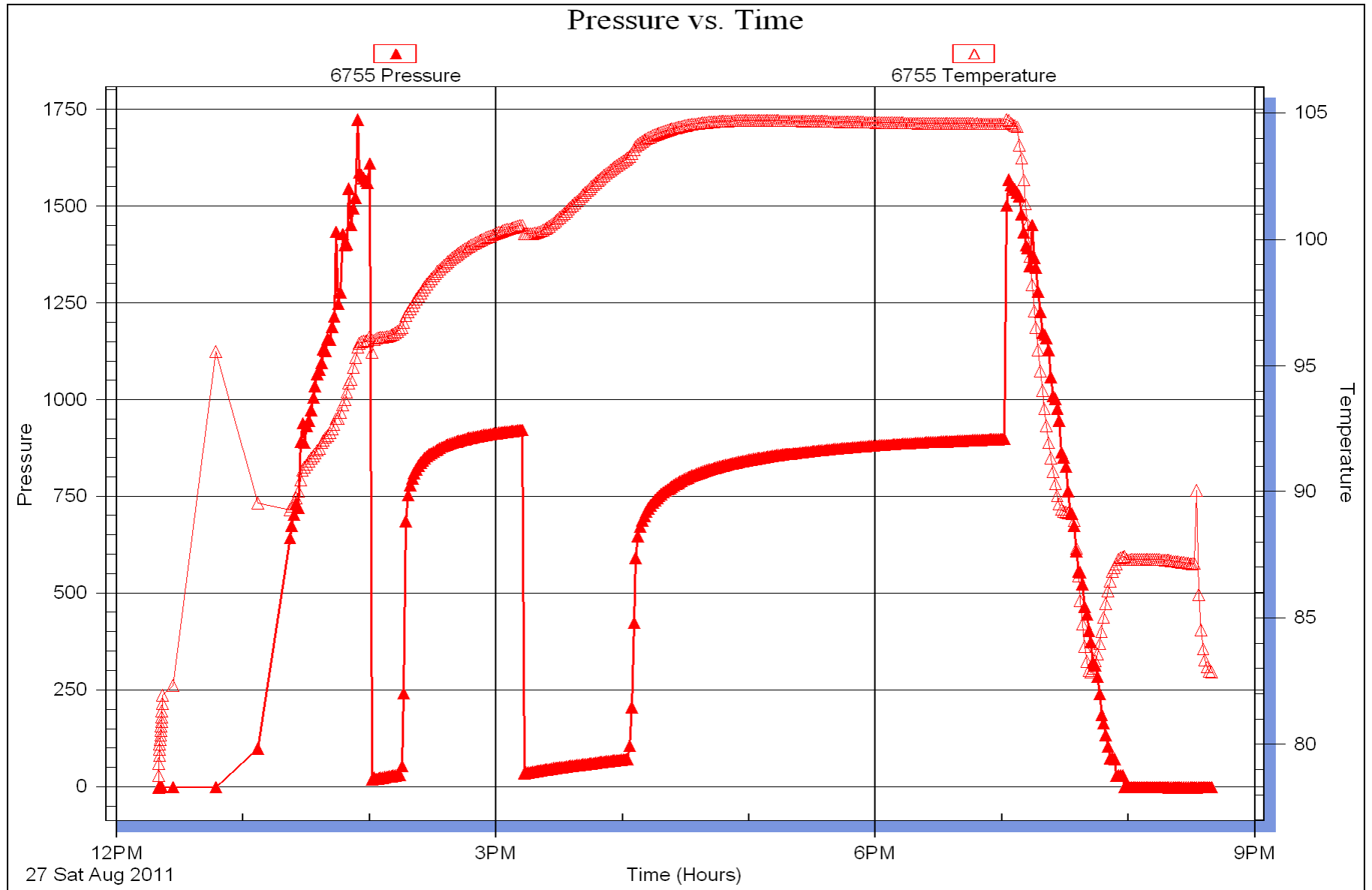
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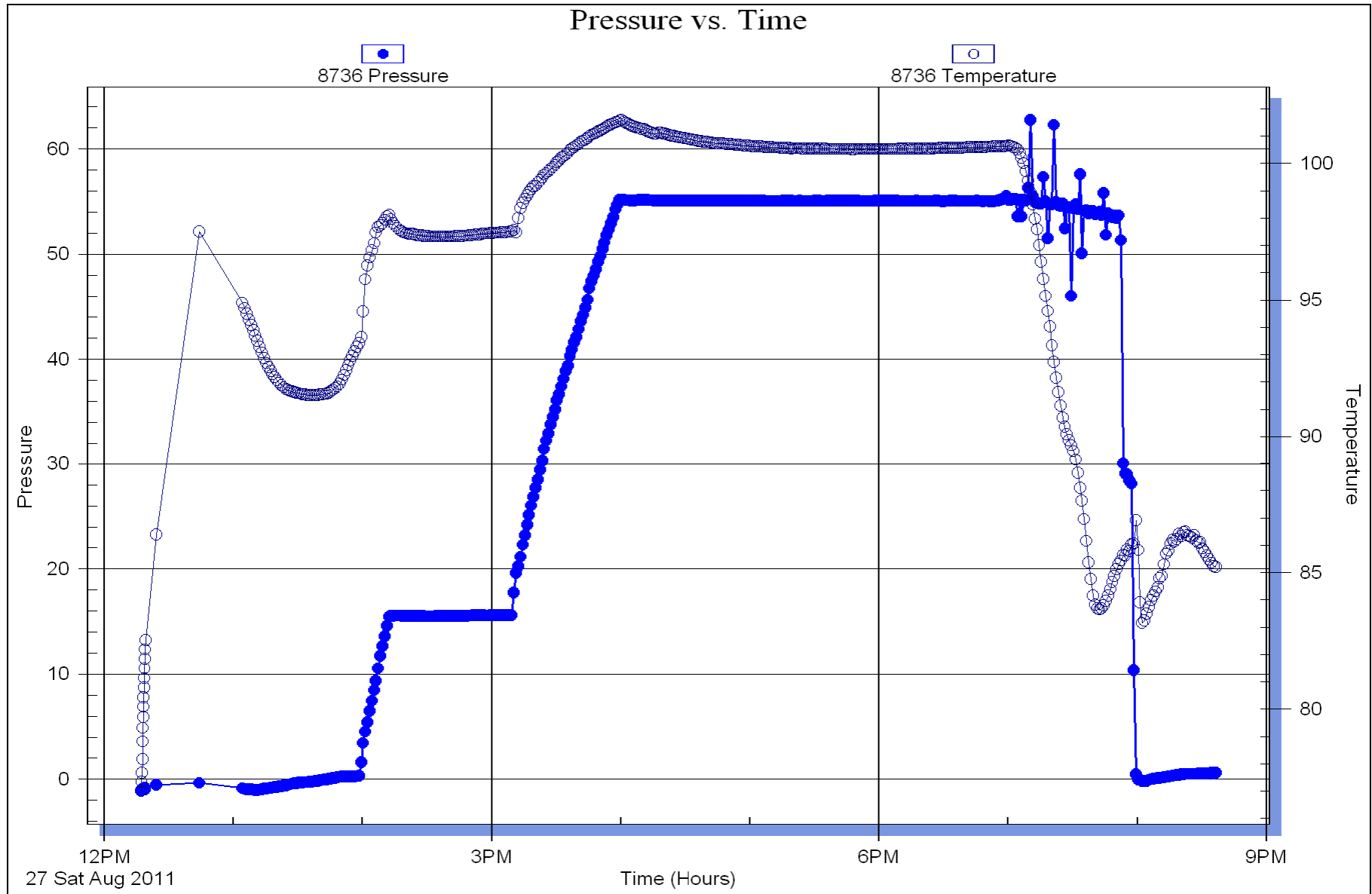
Laboratory Name:

Laboratory Location:

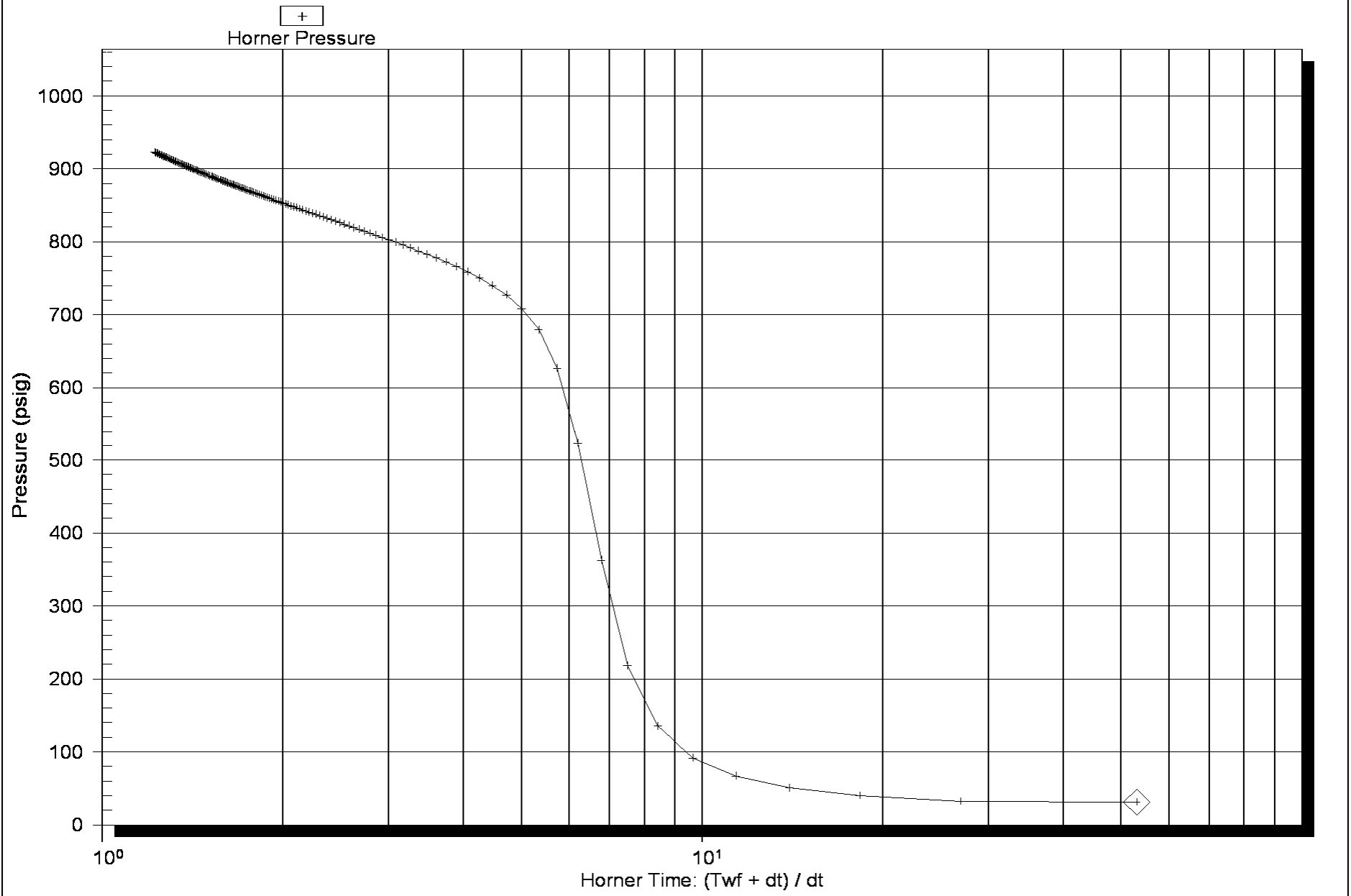
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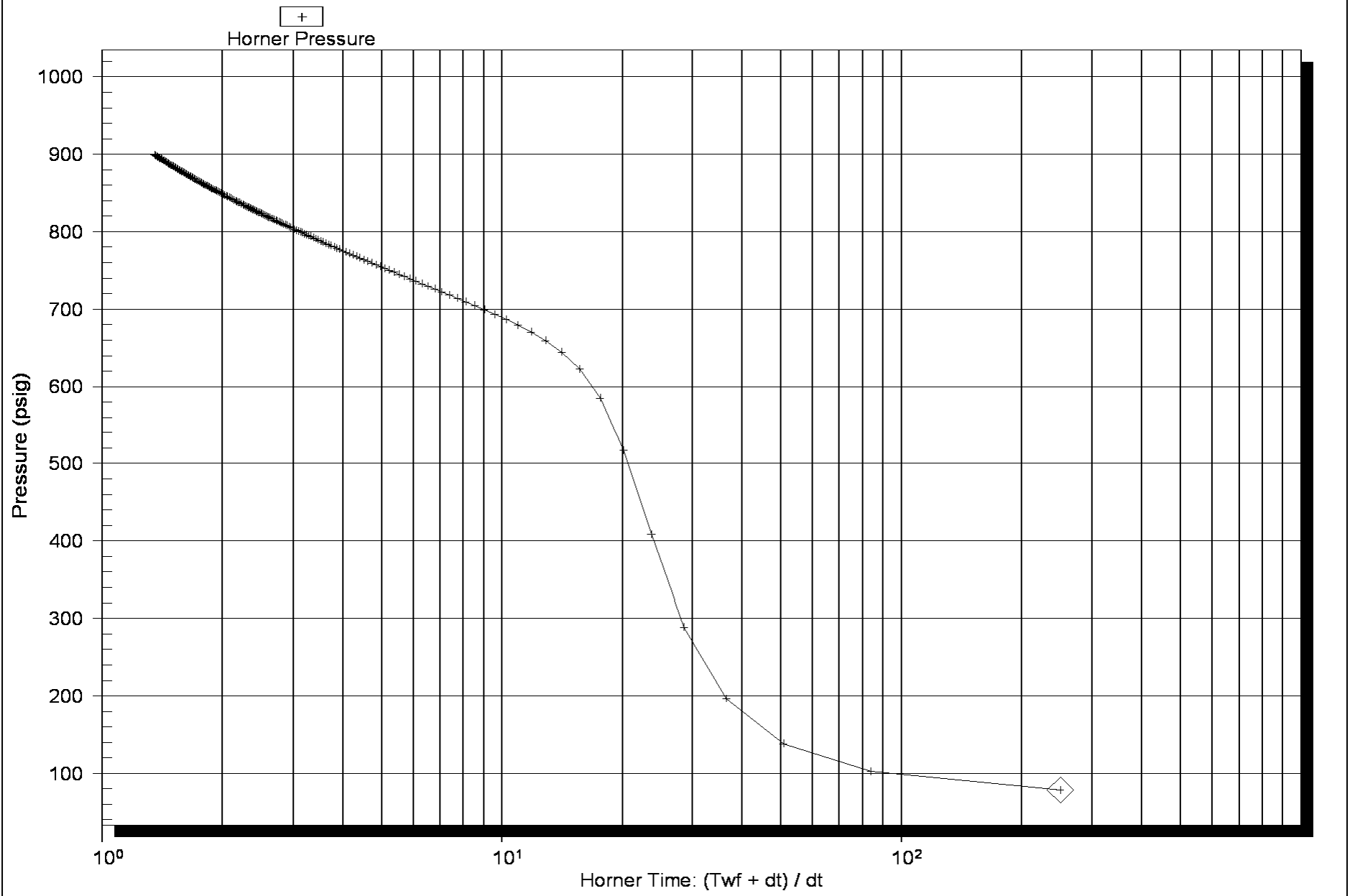


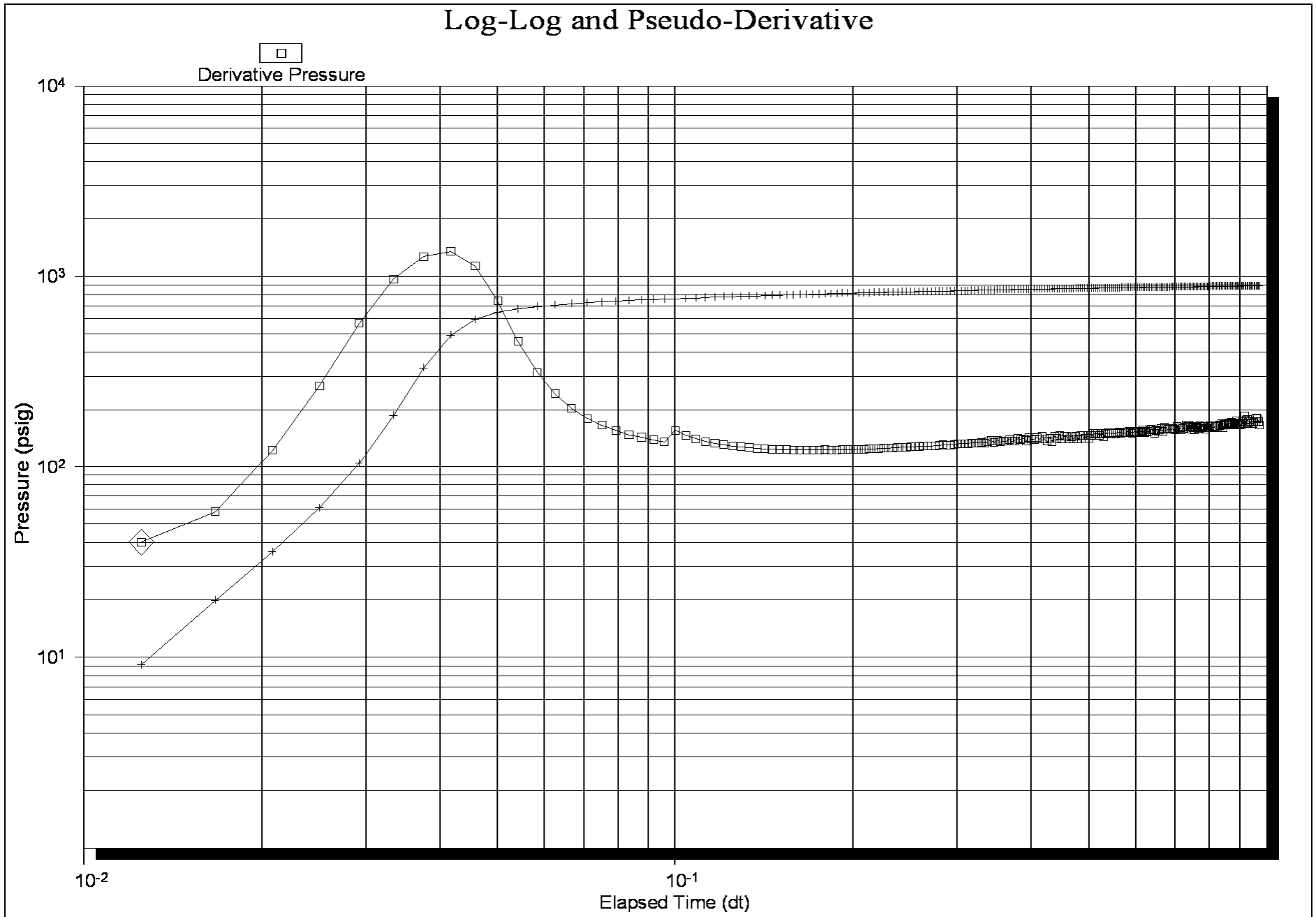


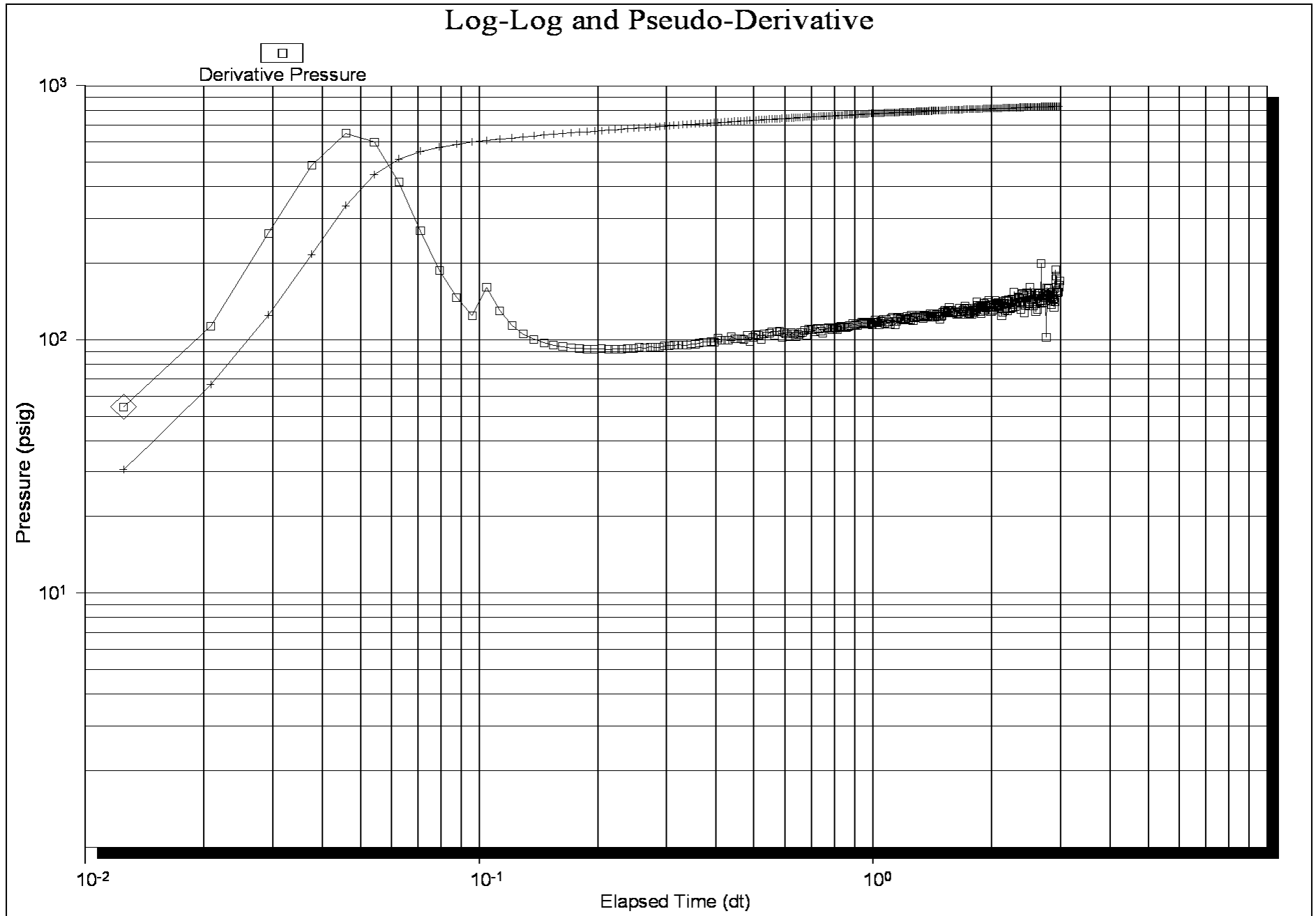
Horner Plot



Horner Plot









DRILL STEM TEST REPORT

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

1515 Wynkoop
Suite 700
Denver, CO. 80202

ATTN: Tom Fertal

34-14s-17w-Ellis

Herl #1-34

Start Date: 2011.08.28 @ 07:07:25

End Date: 2011.08.28 @ 15:03:40

Job Ticket #: 43570 DST #: 4

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

Printed: 2011.11.08 @ 15:05:17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43570

DST#: 4

Test Start: 2011.08.28 @ 07:07:25

GENERAL INFORMATION:

Formation: **I-J**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 08:58:40
 Tester: Jason McLemore
 Time Test Ended: 15:03:40
 Unit No: 54
 Interval: **3372.00 ft (KB) To 3410.00 ft (KB) (TVD)**
 Reference Elevations: 1959.00 ft (KB)
 Total Depth: 3410.00 ft (KB) (TVD)
 1951.00 ft (CF)
 Hole Diameter: 7.80 inches
 Hole Condition: Good
 KB to GR/CF: 8.00 ft

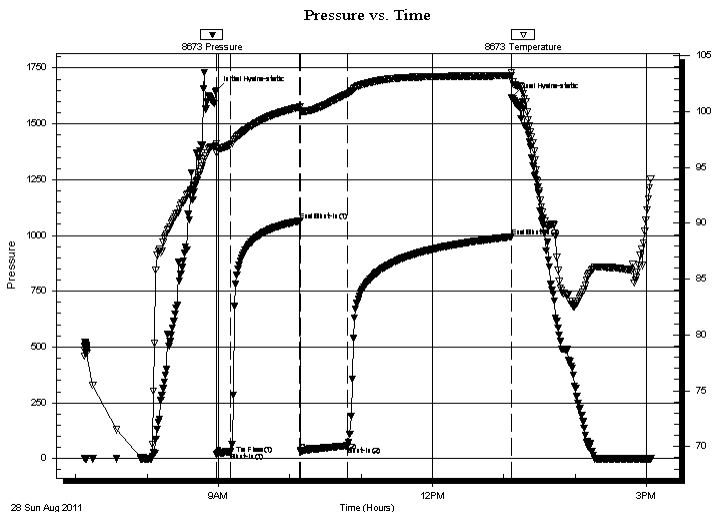
Serial #: 8673

Inside

Press @ Run Depth: 57.43 psig @ 3407.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.28 End Date: 2011.08.28 Last Calib.: 2011.08.28
 Start Time: 07:07:27 End Time: 15:03:40 Time On Btm: 2011.08.28 @ 08:58:10
 Time Off Btm: 2011.08.28 @ 13:06:25

TEST COMMENT: IFP-Fair, Built to 2-1/2"
 ISI-Dead
 FFP-Fair, Built to 3"
 FSI-Dead

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1648.30	97.11	Initial Hydro-static
1	19.08	96.31	Open To Flow (1)
12	30.08	97.05	Shut-In(1)
71	1065.34	100.41	End Shut-In(1)
71	34.37	100.05	Open To Flow (2)
111	57.43	101.61	Shut-In(2)
248	994.07	103.22	End Shut-In(2)
249	1618.81	103.52	Final Hydro-static

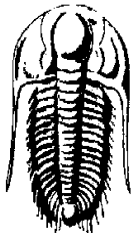
Recovery

Length (ft)	Description	Volume (bbl)
69.00	Muddy Water-95%W-5%M	0.97
1.00	Free Oil	0.01

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

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43570

DST#: 4

Test Start: 2011.08.28 @ 07:07:25

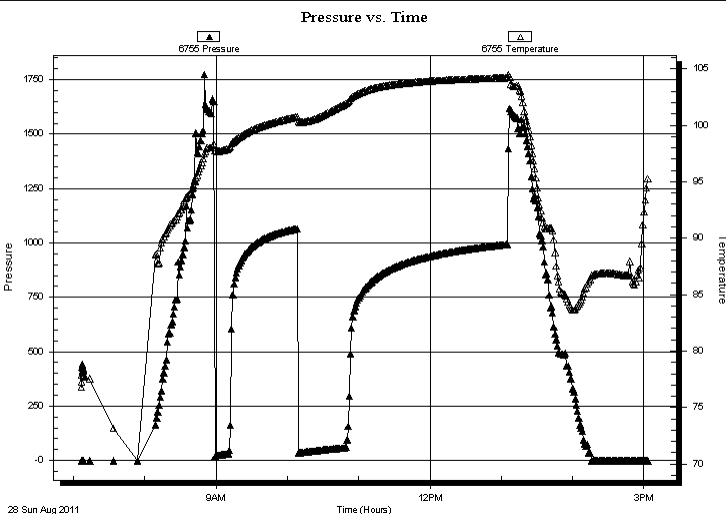
GENERAL INFORMATION:

Formation:	I-J			Test Type:	Conventional Bottom Hole (Reset)
Deviated:	No	Whipstock:	ft (KB)	Tester:	Jason McLemore
Time Tool Opened:	08:58:40			Unit No:	54
Time Test Ended:	15:03:40			Reference Elevations:	1959.00 ft (KB)
Interval:	3372.00 ft (KB) To 3410.00 ft (KB) (TVD)				1951.00 ft (CF)
Total Depth:	3410.00 ft (KB) (TVD)			KB to GR/CF:	8.00 ft
Hole Diameter:	7.80 inches	Hole Condition:	Good		

Serial #: 6755 **Outside**

Press @ Run Depth:	psig @	3407.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2011.08.28	End Date:	2011.08.28	Last Calib.:	2011.08.28
Start Time:	07:06:56	End Time:	15:03:54	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IFP-Fair, Built to 2-1/2"
ISI-Dead
FFP-Fair, Built to 3"
FSI-Dead



PRESSURE SUMMARY

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

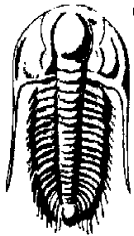
Recovery

Length (ft)	Description	Volume (bbl)
69.00	Muddy Water-95%W-5%M	0.97
1.00	Free Oil	0.01

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

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

Herl #1-34

34-14s-17w-Ellis

Job Ticket: 43570

DST#: 4

Test Start: 2011.08.28 @ 07:07:25

GENERAL INFORMATION:

Formation: **I-J**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Reset)**
 Time Tool Opened: **08:58:40** Tester: **Jason McLemore**
 Time Test Ended: **15:03:40** Unit No: **54**

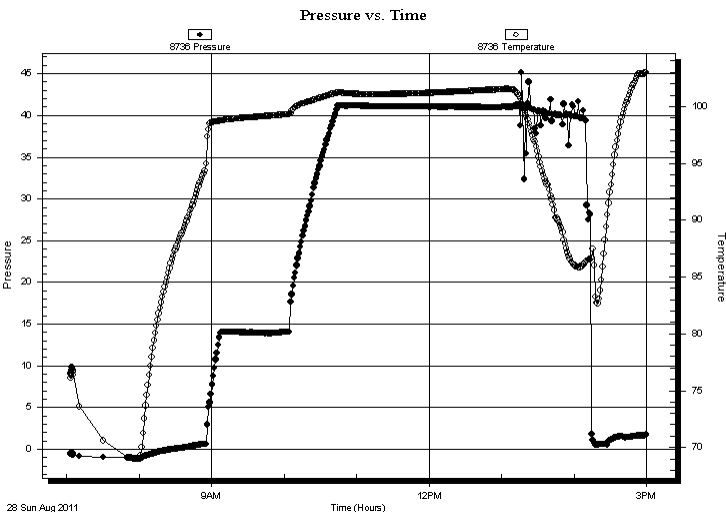
Interval: 3372.00 ft (KB) To 3410.00 ft (KB) (TVD) Reference Elevations: **1959.00 ft (KB)**
 Total Depth: **3410.00 ft (KB) (TVD)** **1951.00 ft (CF)**
 Hole Diameter: **7.80 inches** Hole Condition: **Good** KB to GR/CF: **8.00 ft**

Serial #: 8736

Fluid

Press @RunDepth: **psig @ 3338.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2011.08.28** End Date: **2011.08.28** Last Calib.: **2011.08.28**
 Start Time: **07:03:35** End Time: **14:59:33** Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP-Fair,Built to 2-1/2"
 ISI-Dead
 FFP-Fair,Built to 3"
 FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
69.00	Muddy Water-95%W-5%M	0.97
1.00	Free Oil	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43570

DST#: 4

Test Start: 2011.08.28 @ 07:07:25

Tool Information

Drill Pipe:	Length: 3344.00 ft	Diameter: 3.80 inches	Volume: 46.91 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: 2500.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3372.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3338.00	
Recorder	0.00	8736	Fluid	3338.00	
Change Over Sub	4.00			3342.00	
Shut In Tool	5.00			3347.00	
Sampler	3.00			3350.00	
Hydraulic tool	5.00			3355.00	
Jars	5.00			3360.00	
Safety Joint	2.00			3362.00	
Packer	5.00			3367.00	35.00 Bottom Of Top Packer
Packer	5.00			3372.00	
Stubb	1.00			3373.00	
Perforations	1.00			3374.00	
Change Over Sub	1.00			3375.00	
Blank Spacing	31.00			3406.00	
Change Over Sub	1.00			3407.00	
Recorder	0.00	8673	Inside	3407.00	
Recorder	0.00	6755	Outside	3407.00	
Bullnose	3.00			3410.00	38.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

Herl #1-34

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Tom Fertal

34-14s-17w-Ellis

Job Ticket: 43570

DST#: 4

Test Start: 2011.08.28 @ 07:07:25

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:

50000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
69.00	Muddy Water-95%W-5%M	0.968
1.00	Free Oil	0.014

Total Length: 70.00 ft Total Volume: 0.982 bbl

Num Fluid Samples: 0

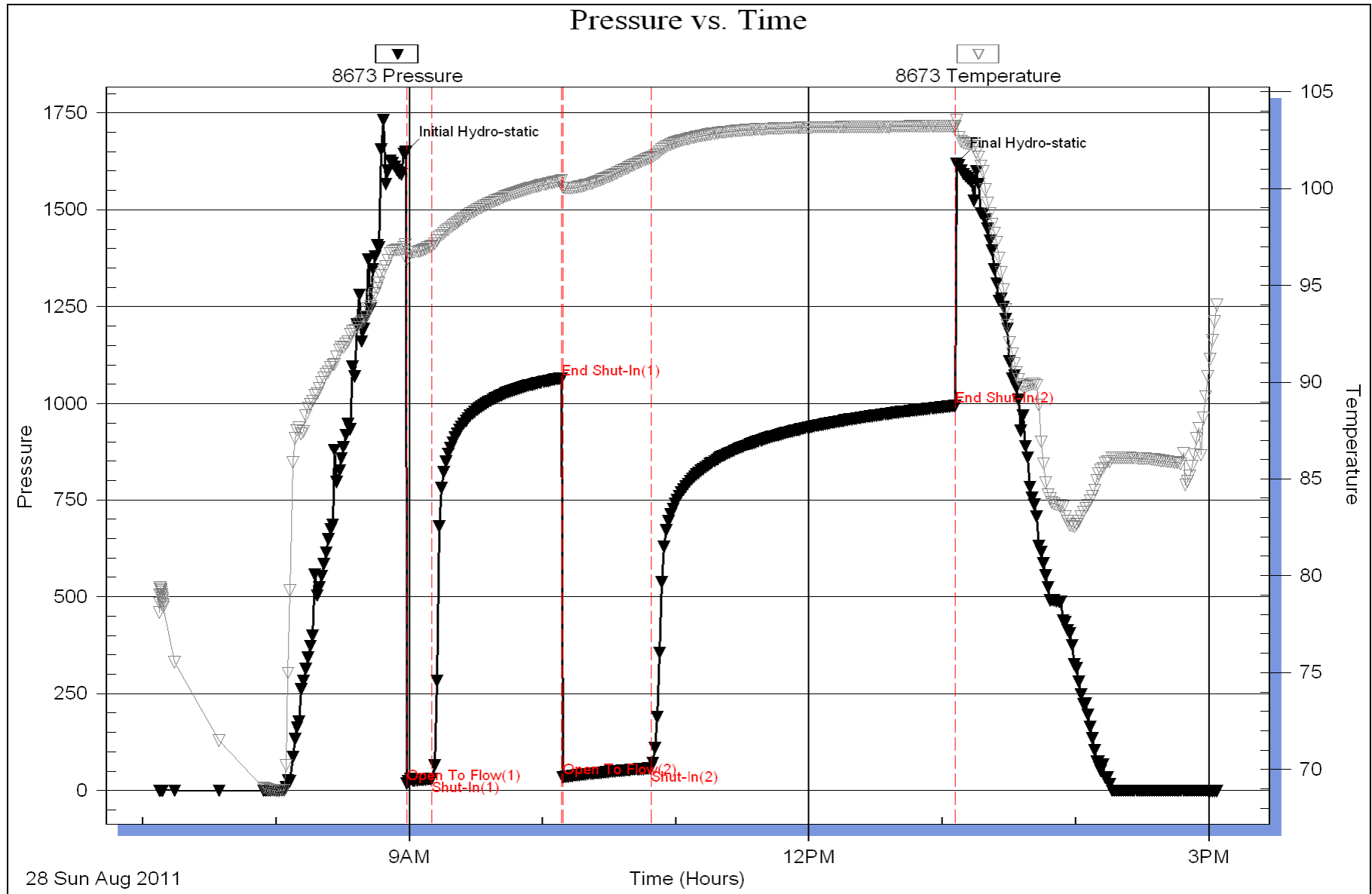
Num Gas Bombs: 0

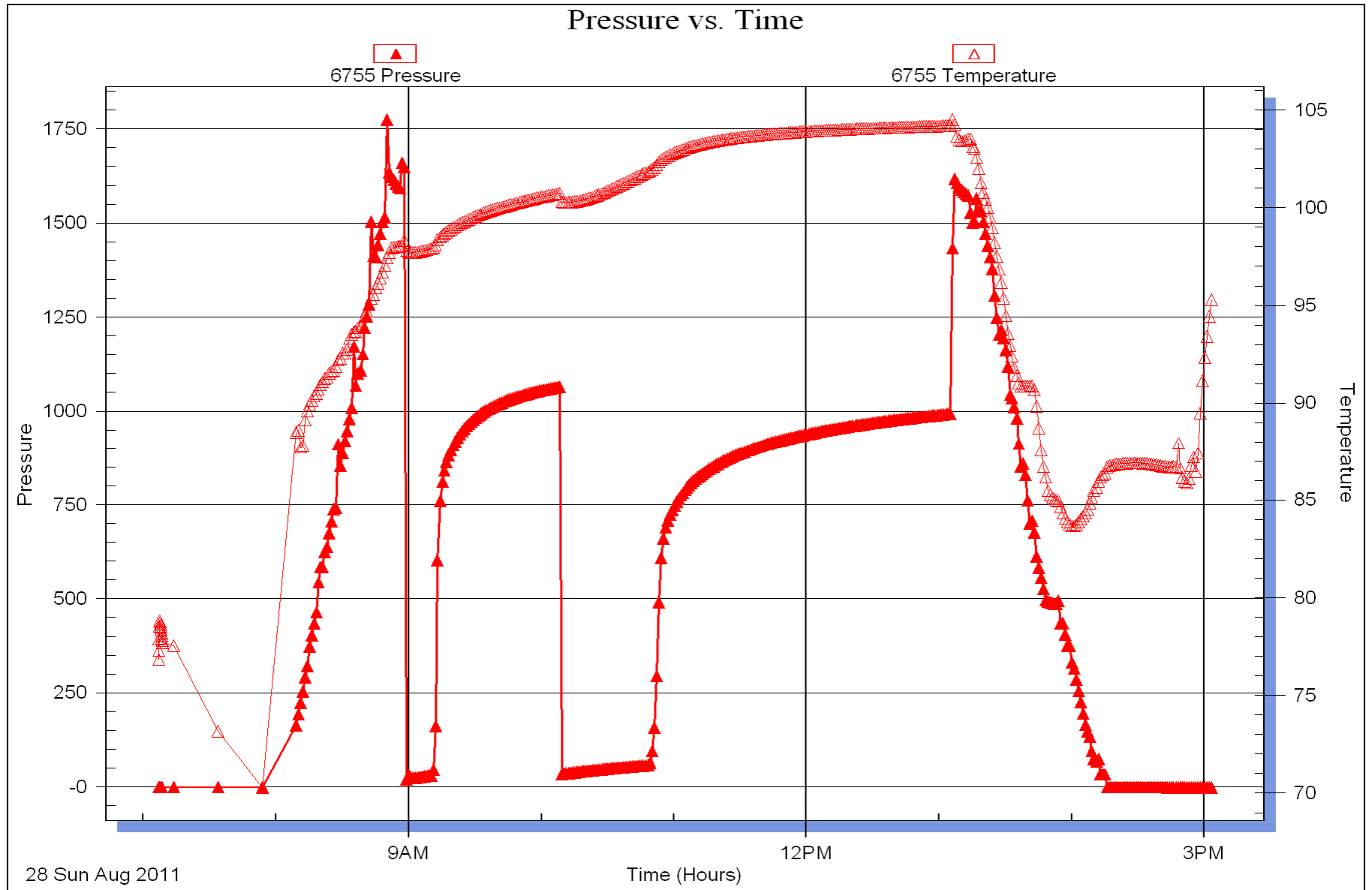
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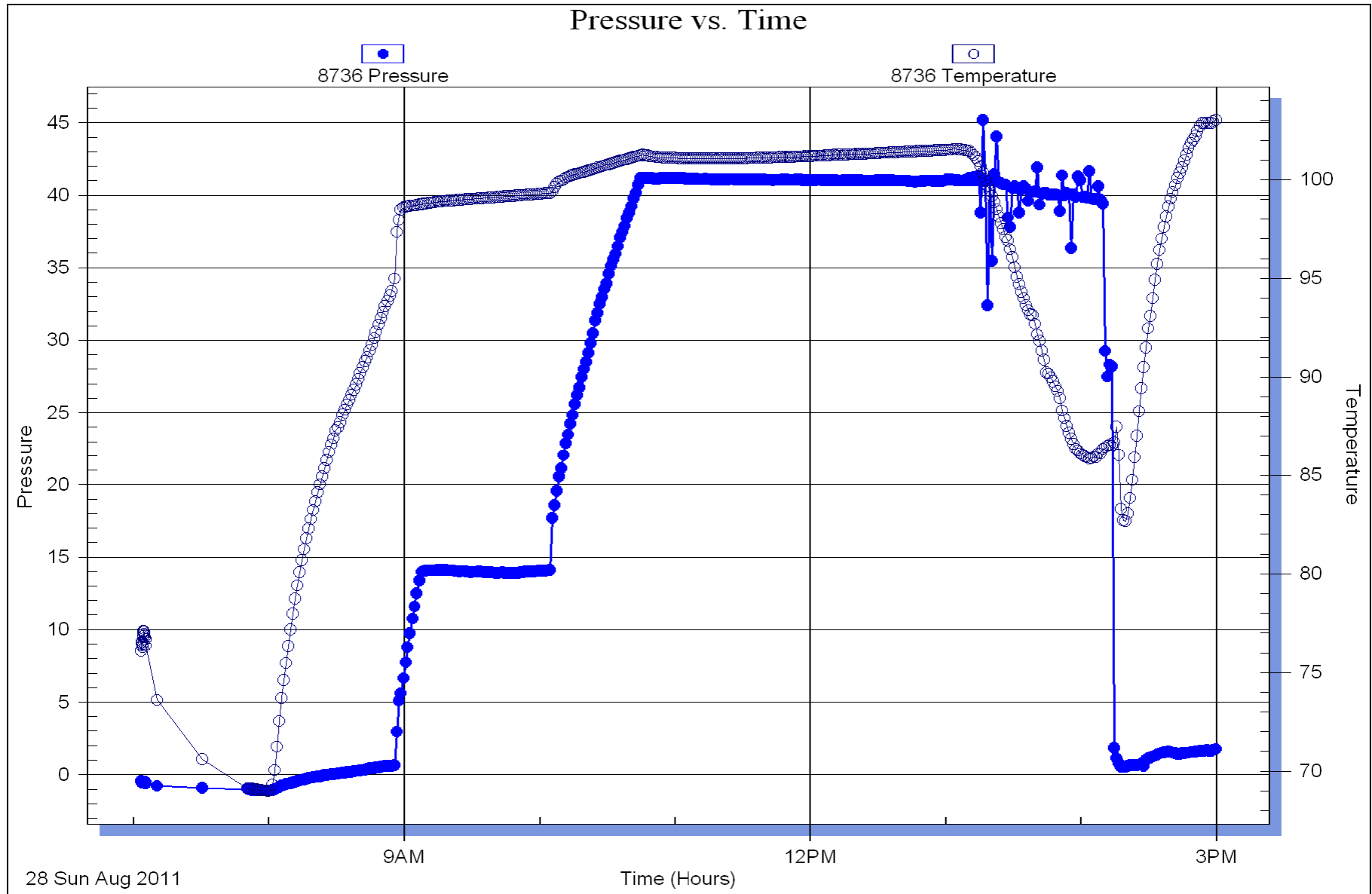
Laboratory Name:

Laboratory Location:

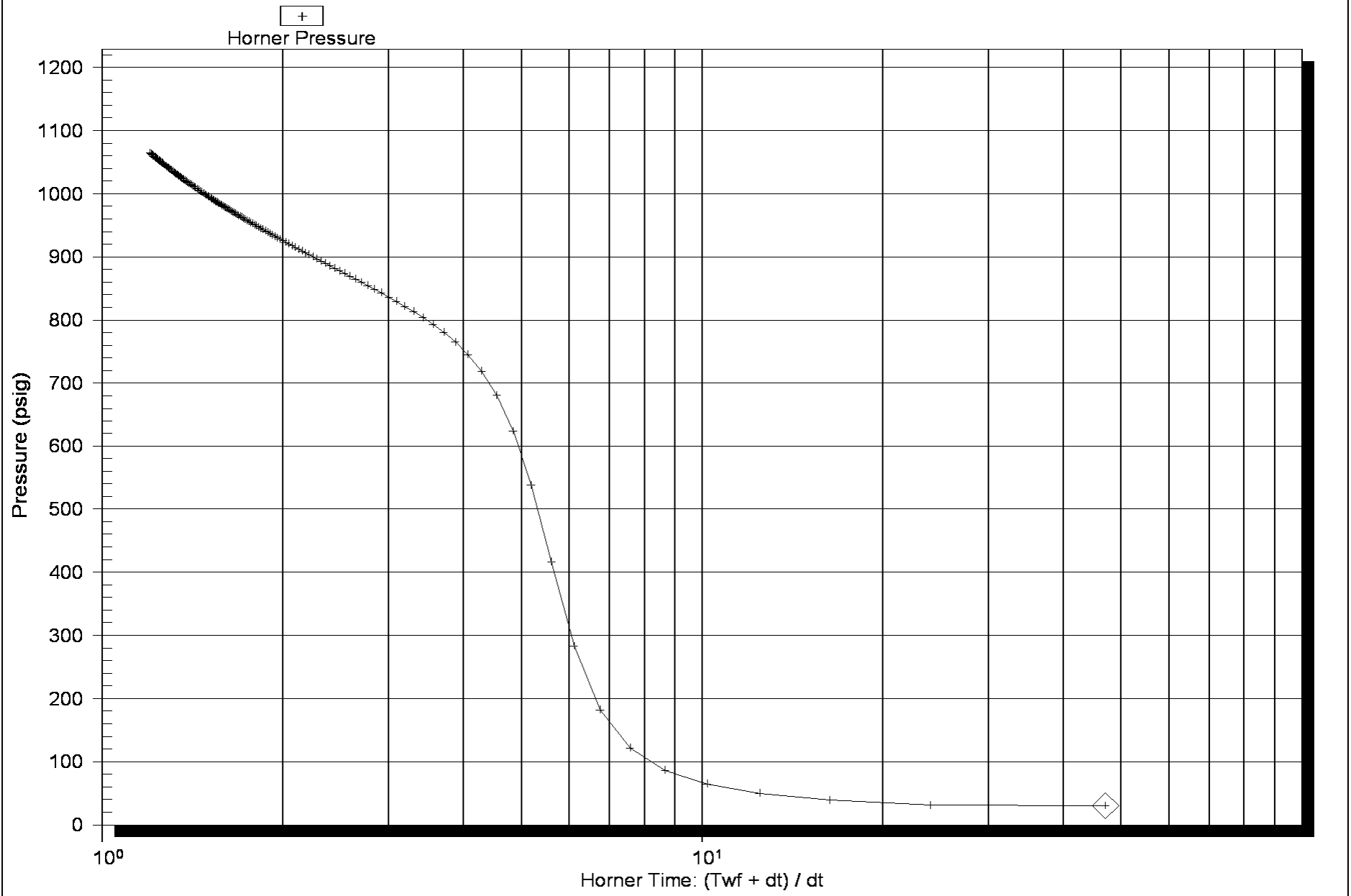
Recovery Comments:



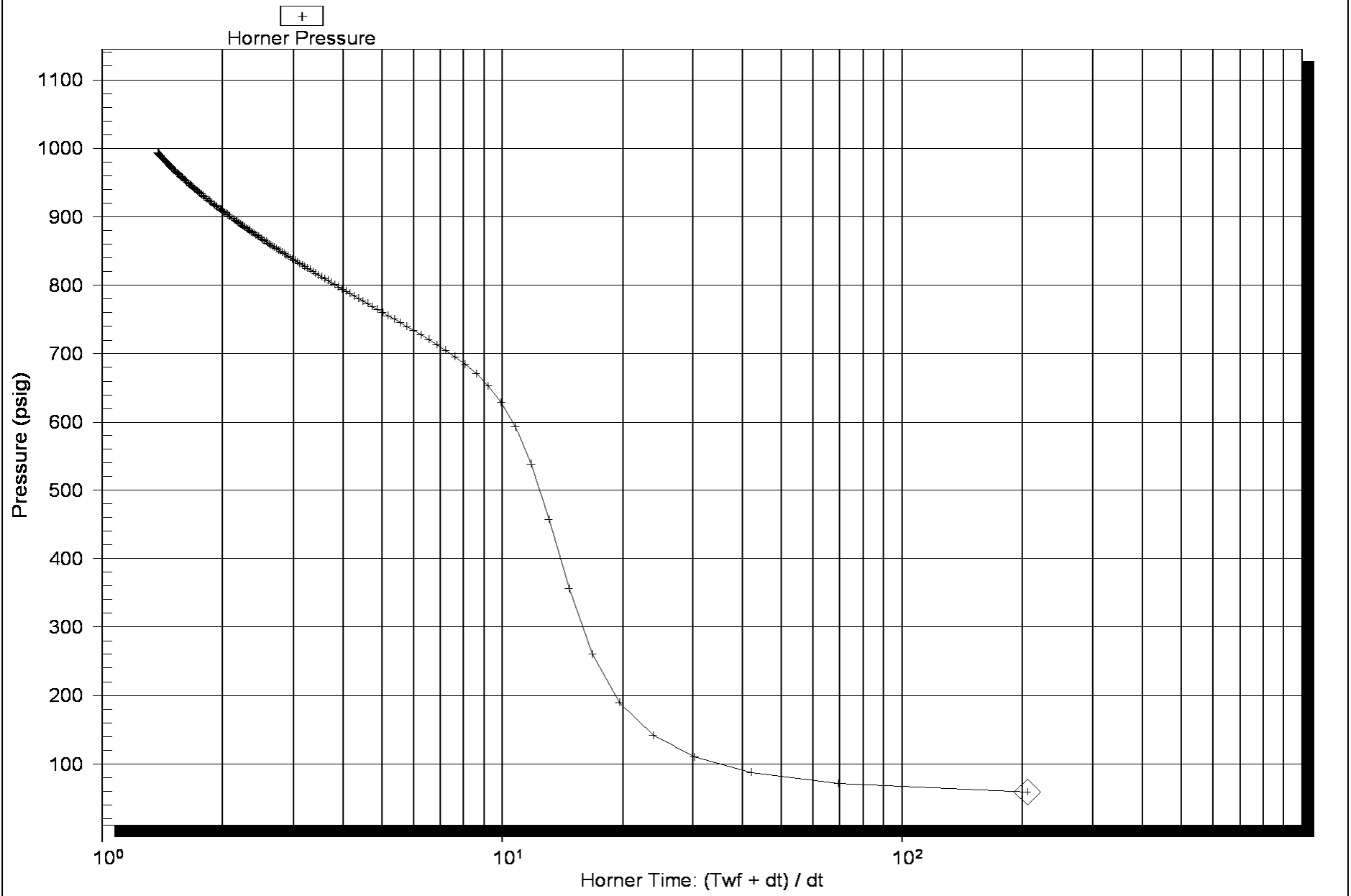


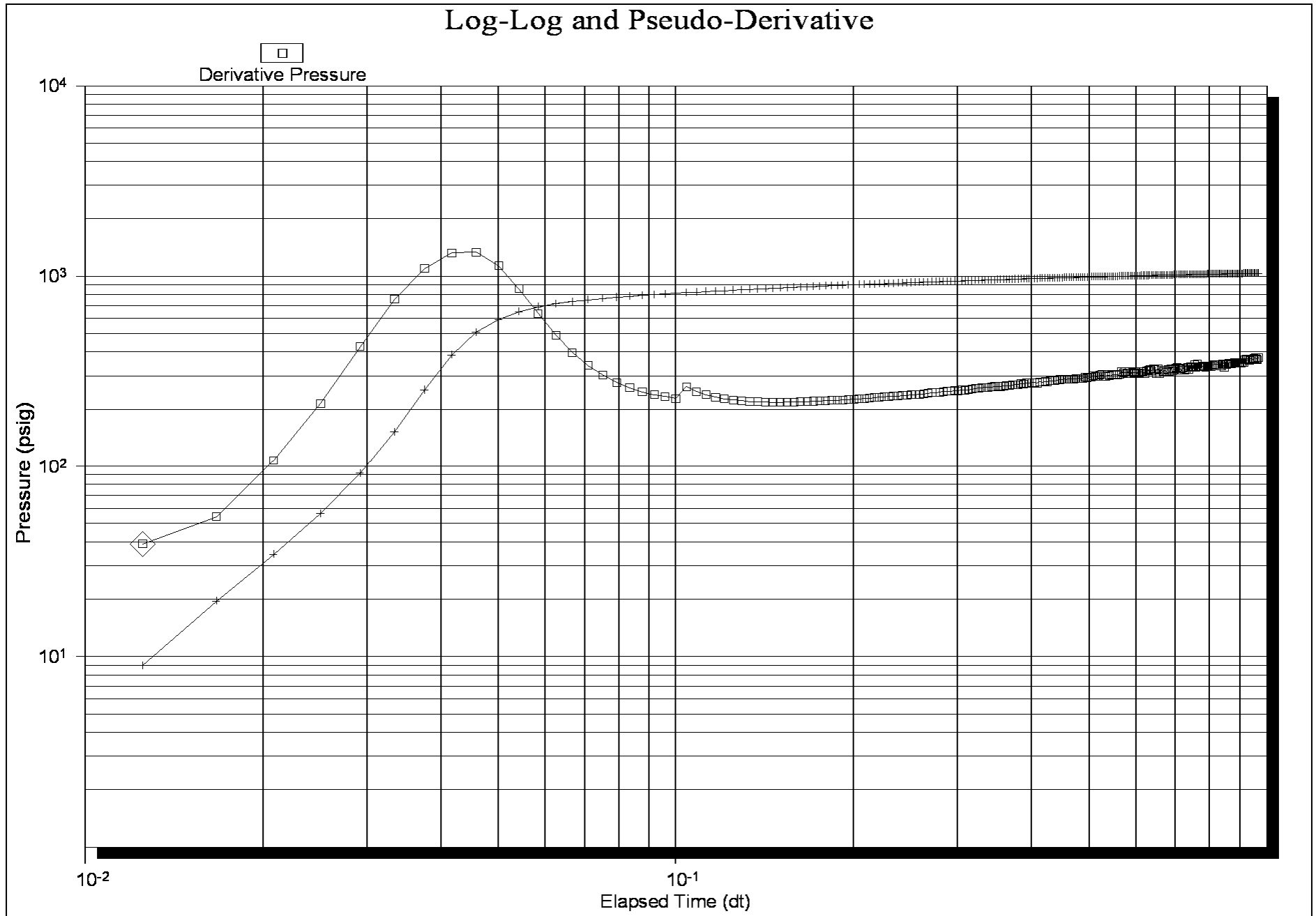


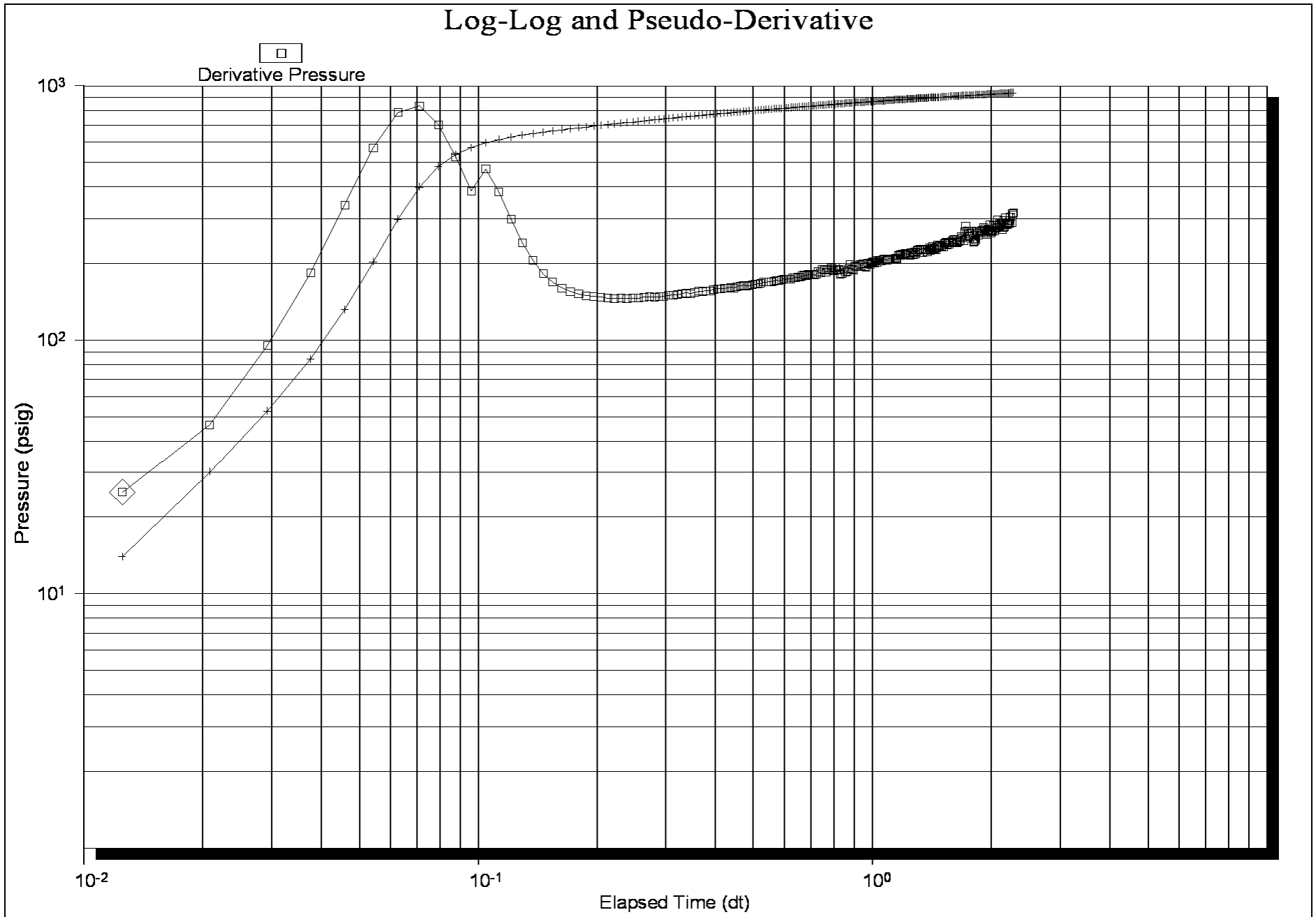
Horner Plot



Horner Plot









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

Well Name: Herl 1-34
Location: Sec 34 -14S-17W Ellis county, Kansas
License Number: 15-051-26176
Spud Date: 8/23/2011
Surface Coordinates: 2100 FSL / 950 FEL
Region: Wildcat
Drilling Completed: 8/29/2011

Bottom Hole Coordinates:

Ground Elevation (ft): 1951' K.B. Elevation (ft): 1959'
Logged Interval (ft): 2900' To: 3620' Total Depth (ft): 3620'
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 Wykoop, Ste. # 700
Denver, Colo. 80202
Geo: NEIL SHARP

GEOLOGIST

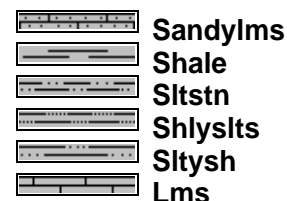
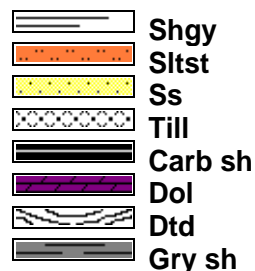
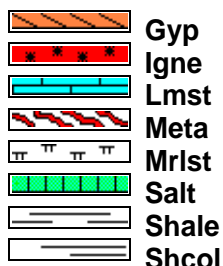
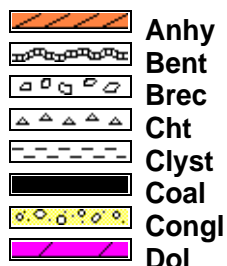
Name:
Company:
Address:

DSTs

DST#3 3312 TO 3325 10 60 50 180
IF-FR BLO TO 3"/ISI-DEAD/FFP-FR BLO TO 7 1/2"/FSI-DEAD
IH-1614, FH-1545/IF-18 TO 31, FF-36 TO 72/ISI-923, FSI-900
REC-89' OF SALT WATER
SAMPLER-275# 3000ml SALT WATER

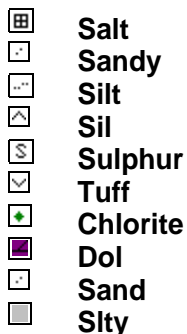
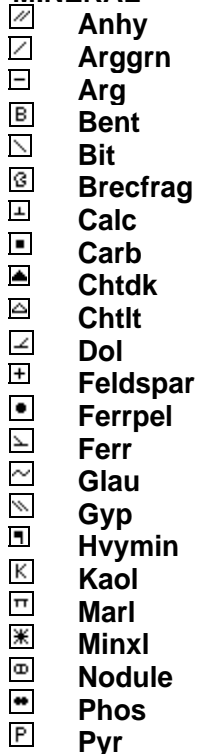
DST #4 3372 TO 3410 10 60 40 135
IF-FR BUILD TO 2.5"/ISI-DEAD/FFP-WK BLO TO 3"/FSI-DEAD
IH-1648, FH-1619/IF-19 TO 30, FF-34 TO 57/ISI-1065, FSI-994
REC-1' FREE OIL, 69' SALT WATER
SAMPLER-225# 3000ml SALT WATER

ROCK TYPES

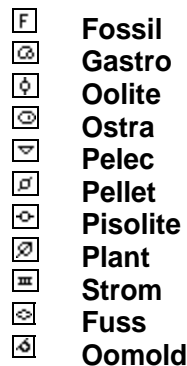
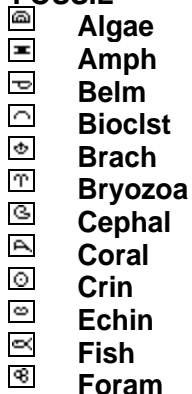


ACCESSORIES

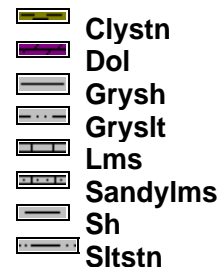
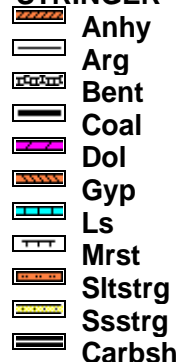
MINERAL



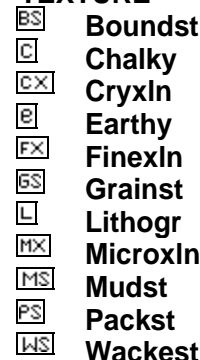
FOSSIL



STRINGER

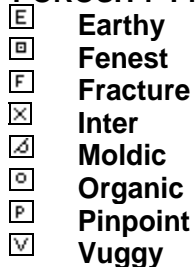


TEXTURE



OTHER SYMBOLS

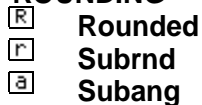
POROSITY TYPE



SORTING



ROUNDING



OIL SHOWS

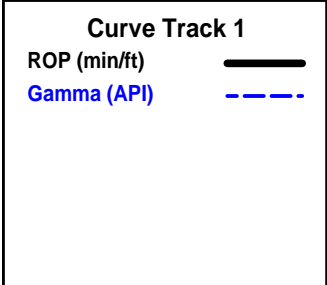


INTERVALS



EVENTS



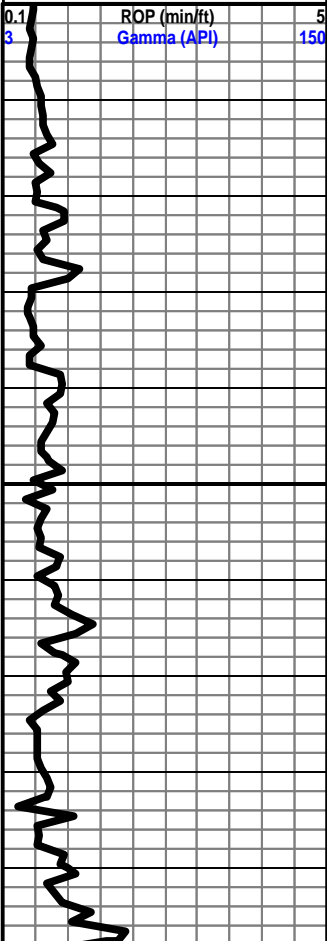
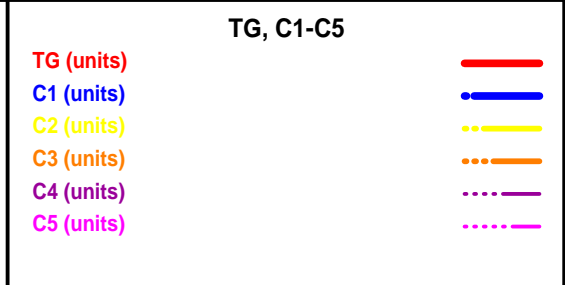


Depth

Lithology

Oil Shows

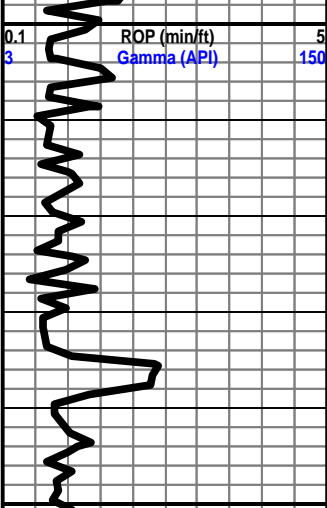
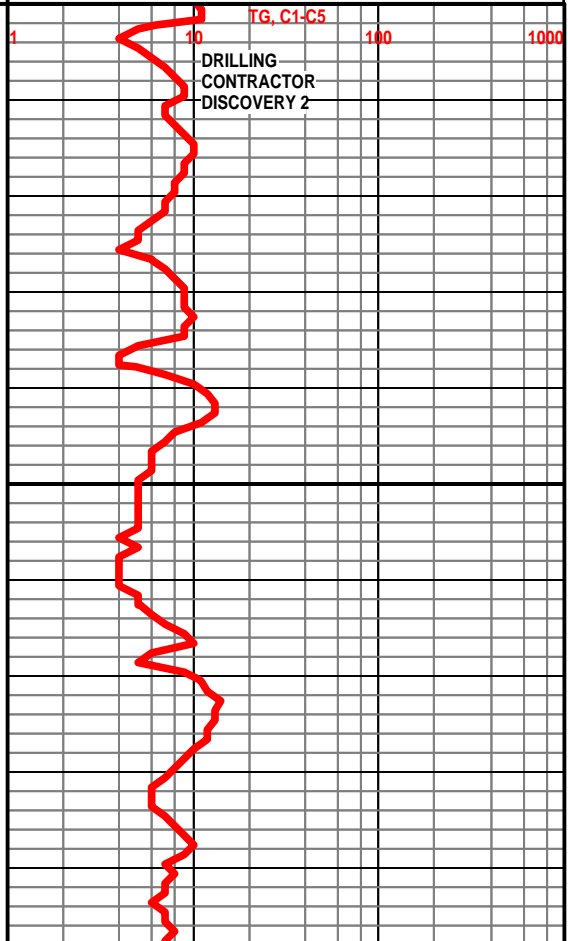
Geological Descriptions



1750

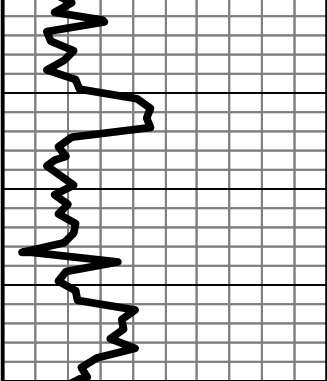
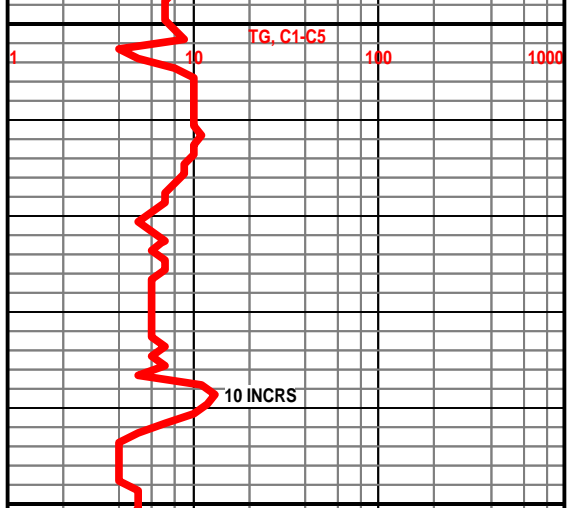
1800

START UNMANNED UNIT
8/23/2011



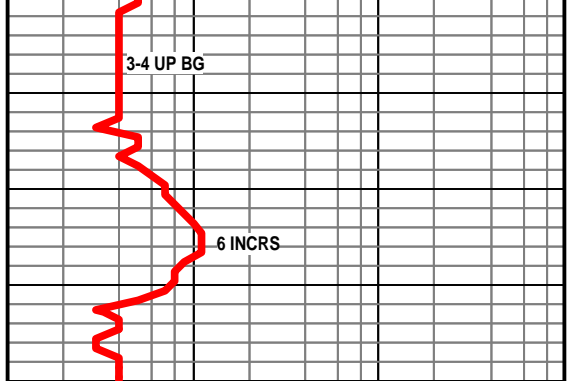
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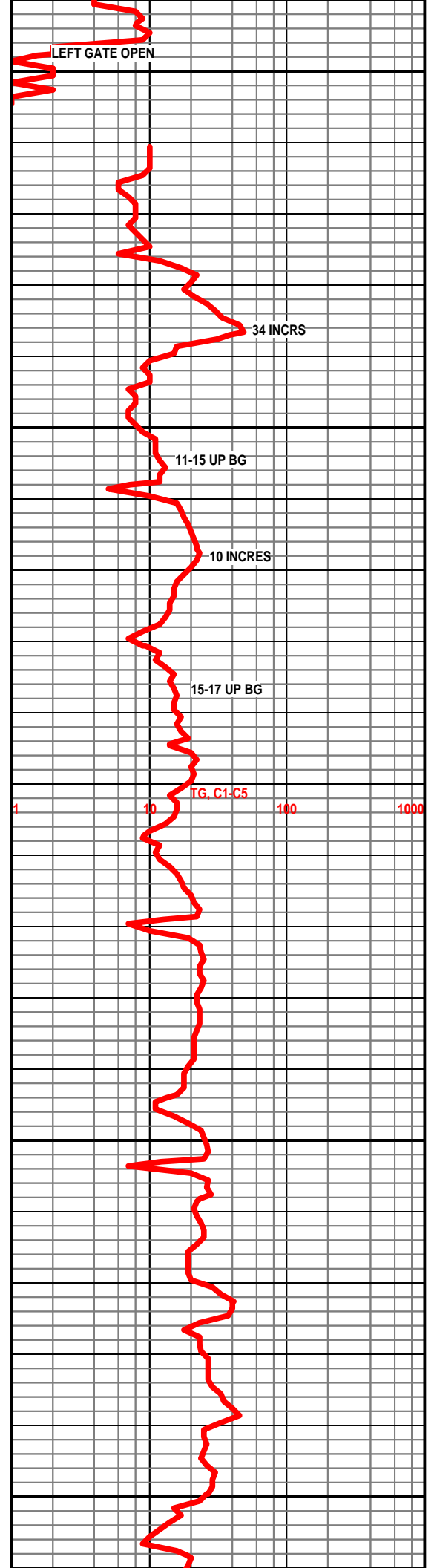
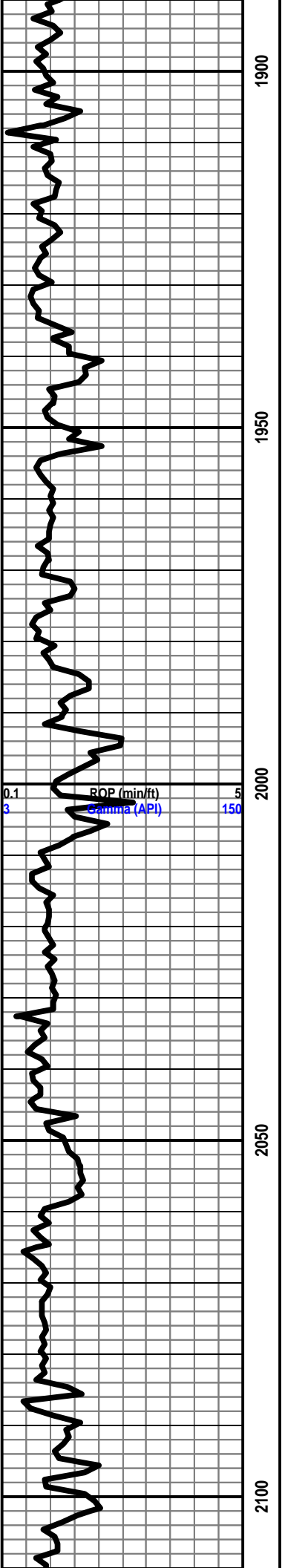
10 INCRS

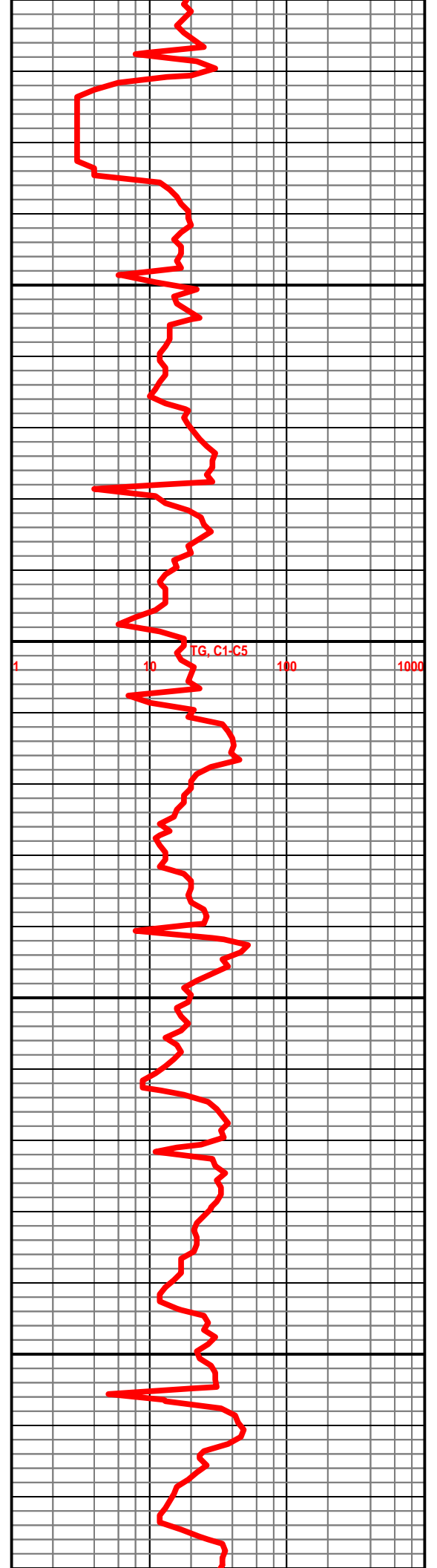
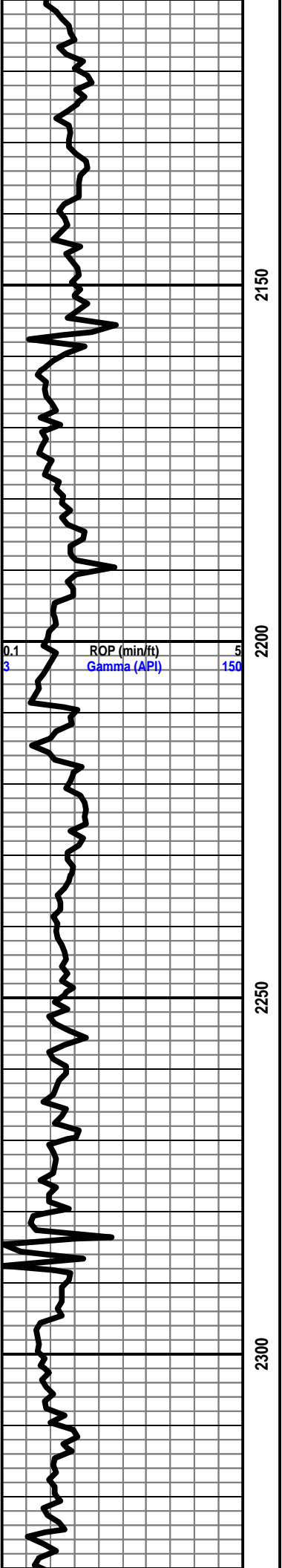


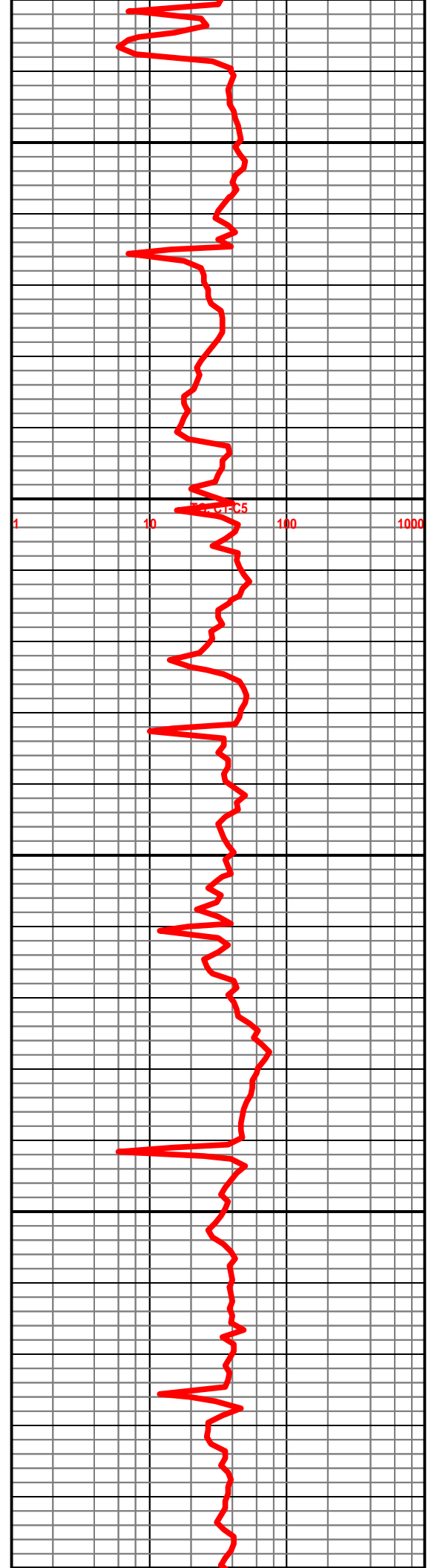
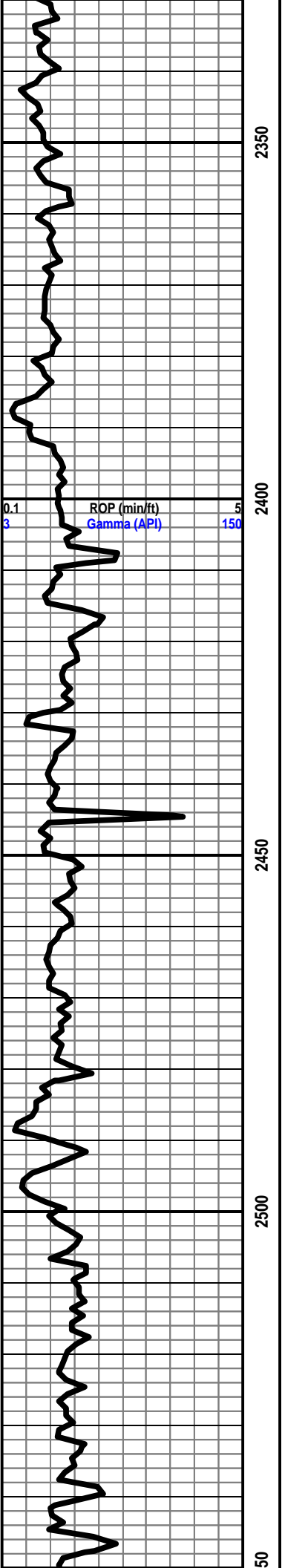
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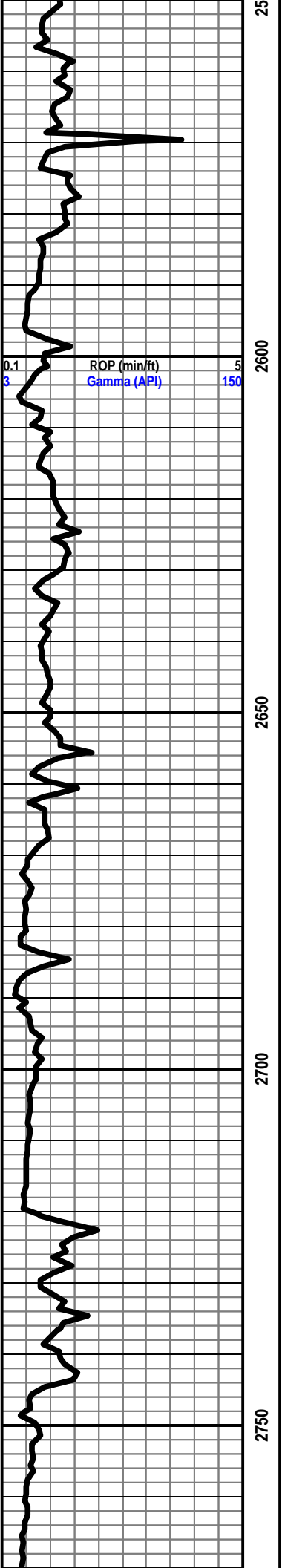
6 INCRS











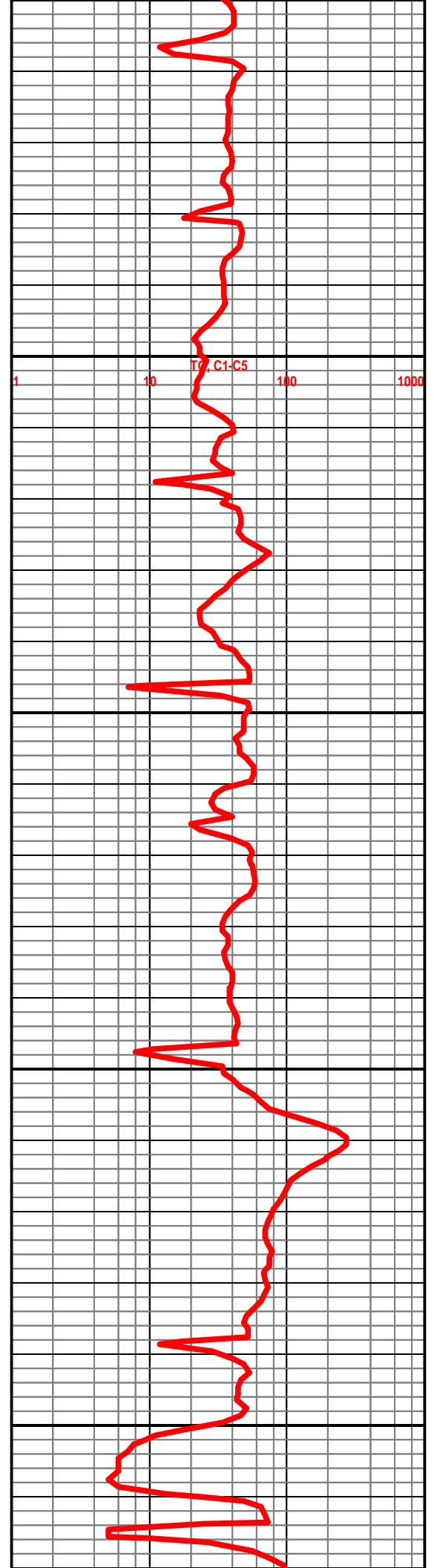
2600

2650

2700

2750

BRS 2721' -762'



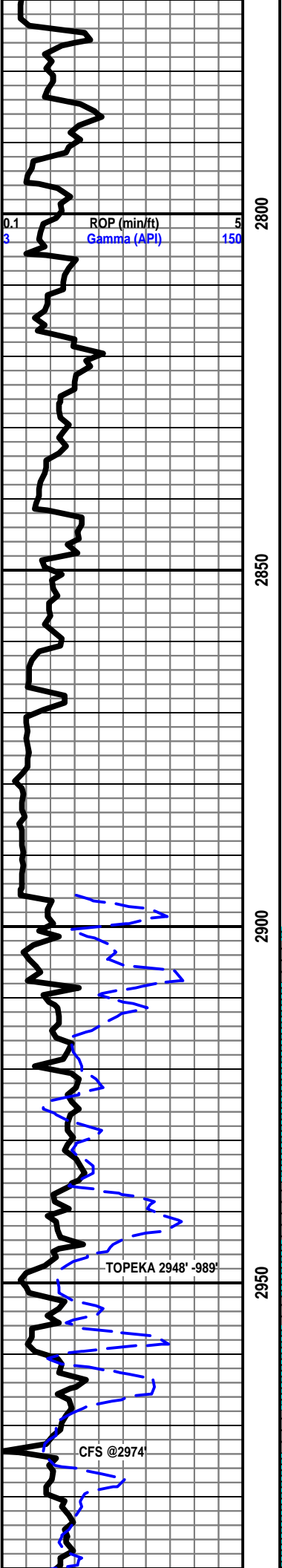
TO, C1-C5

1

10

100

1000



HOWARD 2898' -939'

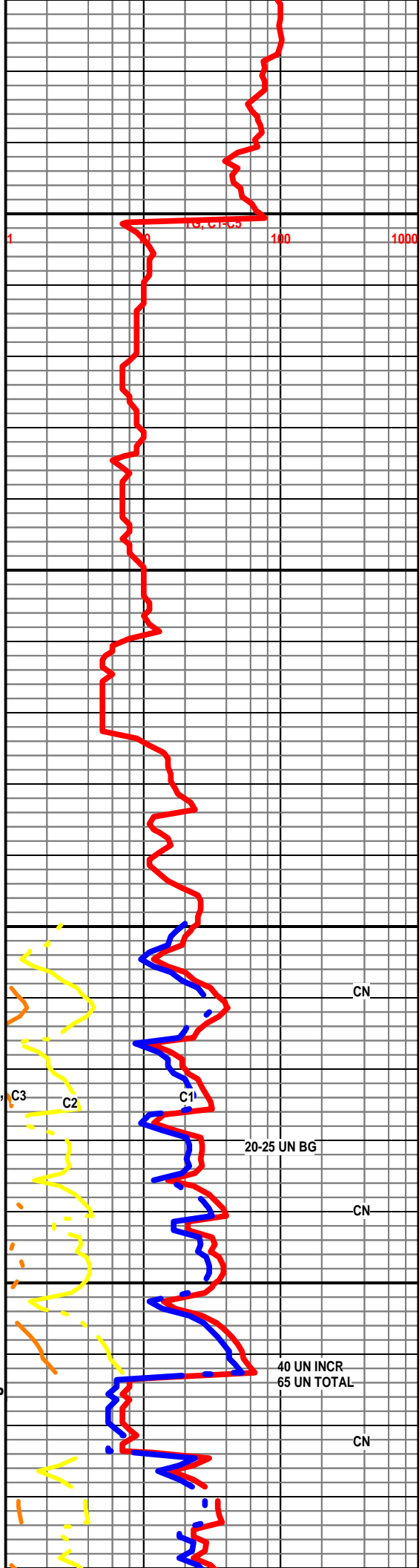
**START ONE MAN LOGGING
UNIT @2900' 8/28/2011
BY KELLY HEDRICK**

LS- LT GRY, CRM, LT TN TO TN, HD DNS TO BRITT, FN XLN, REXLN MTRX, SUCRO TXT IP, IMBD FOSS FRAGS, SLI TR CHLK SCAT THRU, DLL TO BRIT YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- CRM OFF WHT LT TN TO TN, HD DNS TO BRITT, FN XLN, REXLN MTRX THRU, IMBD FOSS FARGS THRU, IMBD CALC XLS, DISS PYR IP, DLL YELL MIN FLO, NO VIS POR, NO VIS CUT, NO VIS SHOW

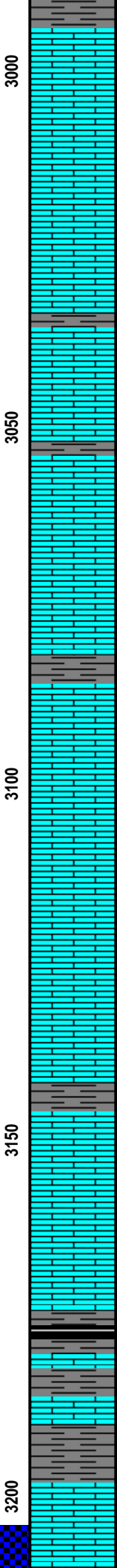
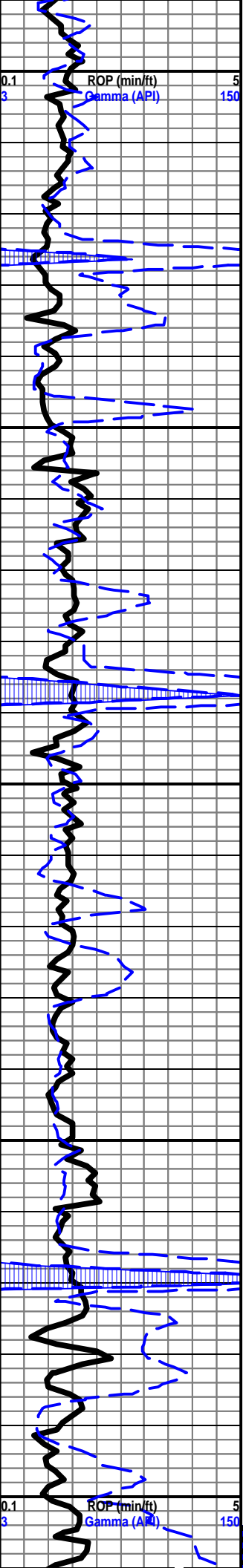
LS- CRM OFF WHT LT TN TO TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, IMBD FOSS FRAGS THRU, IMBD CALC XLS IP SCATT BRT YEL FLO THRUOUT, V/SLI TR PR INTR XLN POR TO NO VIS POR, V/SLO STRM CUT/ EXCLNT FLUSH CUT UPON CRUSH, NO OIL ODOR

LS- CRM OFF WHT TO TN, HD DNSE TO BRITT, MD XLN, REXLN THRU, IMBD FOSS FRAGS SCATT, DLL YEL FLO, NO POR NO CUT



TOPEKA 2948' -989'

CFS @2974



SH- BLK FRM SPLNTY PYR IP

LS- OFF WHT TO TN, HD DNSE, F-XLN ,
REXLN MATRX THRU, IMBD FOSS FRAGS
THRU, IMBD CALC XLS IP, SCATT DLL YELL
FLO, NO CUT NO POR

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

LE COMPTON 3056' -1097'

LS- WHT TO OFF WHT, HD DNSE, F-XLN, SLI
S-CHLKY IP, PYR IP, BRIT YEL FLO, NO POR,
NO SHOW

SH- GRY, SFT, SMT, PYR IP

LS- CRM LT TN TO TN, HD DNS TO BRITT, FN
TO MD XLN TO REXLN MTRX, IMBD FOSS
FRAGS THRU, SM CALC XLS THRU, TR LT
YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO BRN, HD DNSE TO BRITT,
MD XLN TO F-XLN, IMBD FOSS FRAGS THRU,
DLL YEL FLO, NO POR, NO CUT

LS- OFF WHT TO CRM TN, HD V/BRITT, MD
XLN TO REXLN IP, SLI SUCRO S/CHLKY IP,
IMBD FOSS FRAGS IP, NO VIS FLO, NO VIS
POR, NO VIS SHOW

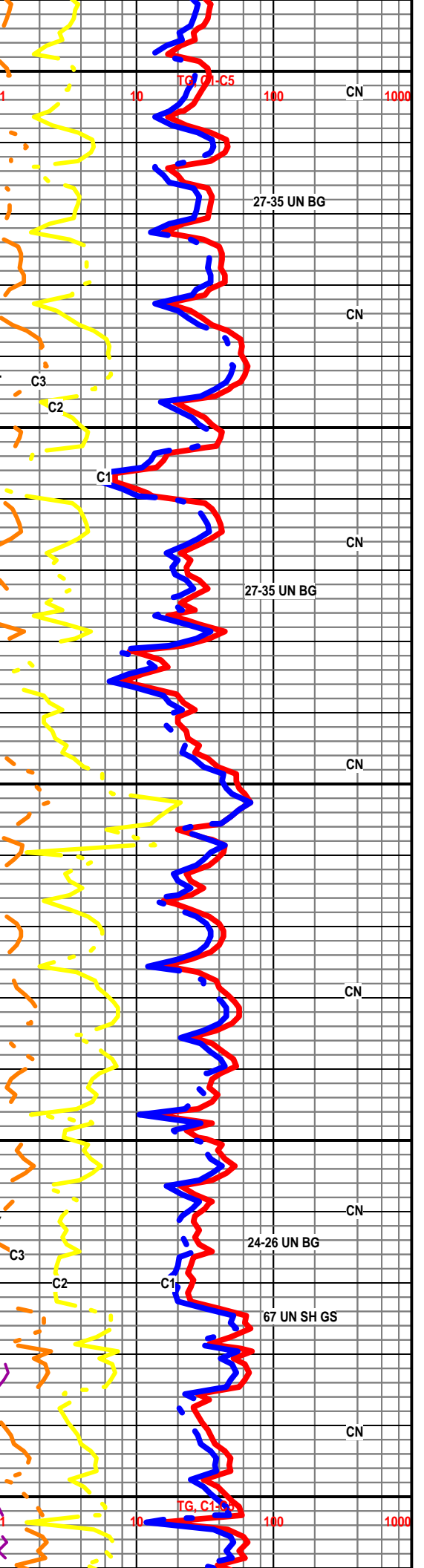
LS- OFF WHT CRM , HD DNS TO TR BRITT,
MD-XLN F-XLN IP, WHT CHRT, IP, TR S-CHLKY
IP, LT YEL MIN FLO, NO VIS POR, NO VIS
SHOW

HEEBNER 3175' -1214'

SH-BLK SFT CARB

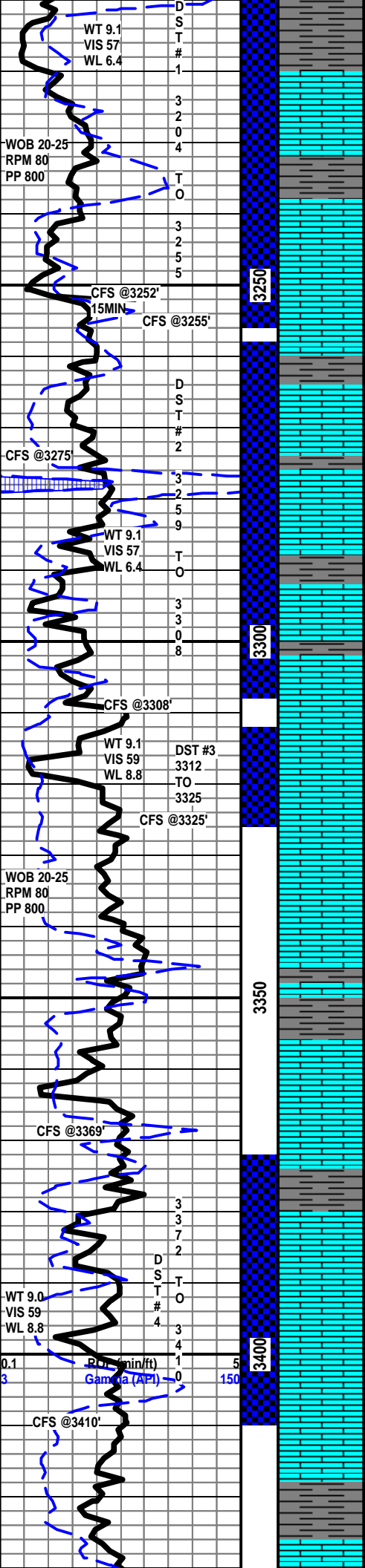
SH- LT GY GY- FRM IP TO V/ SFT SLTY TXT IP

LS- CRM LT TN TO TN, HD DNS TO BRITT, FN
TO MD XLN TO REXLN MTRX, IMBD FOSS
FRAGS THRU, SM CALC XLS THRU, TR LT
YEL MIN FLO, NO VIS POR, NO VIS SHOW



0.1 ROP (min/ft) 5
3 Gamma (API) 150

TG, C1, C2, C3
10 100 1000
CN



LANSING 3221' -1262'

LS- CRM OFF WHT LT TN- MD HD TO SFT IP, V/ SUCRO S-CHLKY MTRX , IMBD FOSS FRG IP, GRDNG TO ABDT FRM WHT CHLK, FEW SCATT BRT YEL FLO, NO VIS POR, V/POOR STRM CUT TO FR FLUSH CUT UPON CRUSH

LANSING "C" 3241' -1282'

LS- OFF WHT CRM TR TN OIL STN IP, HD TO MD HD , MD-XLN IP , W/ SLI TR IMBD FOSS FRGS ,GRDNG TO S-CHLKY, SLI TR IMBD CALC XLS IP, DLL YEL GLD FLO IN 10%, BRT YEL FLO IN 50%, EXCEL VIS INTR XLN POR TO GD VIS PP POR, V/GD STRM CUT TO FR FLUSH CUT IN 30%, FNT OIL ODOR

LS- OFF WHT TO CRM TO BUFF, HD DNS TO BRITT, MD XLN, SUCRO TO S/CHLKY TO CHLKY IP, IMBD FOSS FRAGS IP, IMBD SM CALC IP, DLL YEL FLO IN 30%, FR VIS INTR XLN POR IN 10% EXCEL VIS VUG POR, SLO MLKY BLU STRM CUT TO FR FLUSH CUT, TR MICRO GS BBL UPON CRSH

3285'-3290' LS- OFF WHT CRM LT TN TN (STN IN 30%) HD DNS TO BRITT, F-MD-XLN , RE-XLN MTRX THRU, SUCRO IP, FOSS FRGS SCAT IP, SMLL IMBD CALC XLS IMBD THRU, TR FRM WHT CHLK IMBD IP, BRIT YEL GLD FLO IN 40%, GD SCAT VUG POR IP, GD STRNG MLKY BLU STRM CUT IN 30%, FNT OIL ODOR

3290'-3300' LS- CRM LT TN TN (STN IN 40%) HD DNS TO BRITT, MD XLN , RE-XLN MTRX THRU, SUCRO TXT IP, FOSS FRGS SCAT THRU, IMBD CALC XLS THRU, SLI TR FRM WHT CHLK SACT IP, BRIT YEL GLD FLO IN 25%, FR INTR-XLN POR IN 20%, EXEL INTER FOSS POR 25% EXCL FLUSH CUT THRU, FR OIL ODOR, LT STN ON DSH

3300'-3308' LS- OFF WHT CRM LT TN TN (STN IN 35%) HD DNS TO BRITT, MD XLN , RE-XLN MTRX THRU, SUCRO TXT IP, FOSS FRGS SCAT IP, IMBD CALC XLS THRU, TR FRM WHT CHLK SACT IP, BRIT YEL GLD FLO IN 30%, EXCL INTR-XLN POR IN 20%, PR FLUSH CUT THRU, TO GD MLKY BLUE STREAM CUT IN 20%, STRNG OIL ODOR

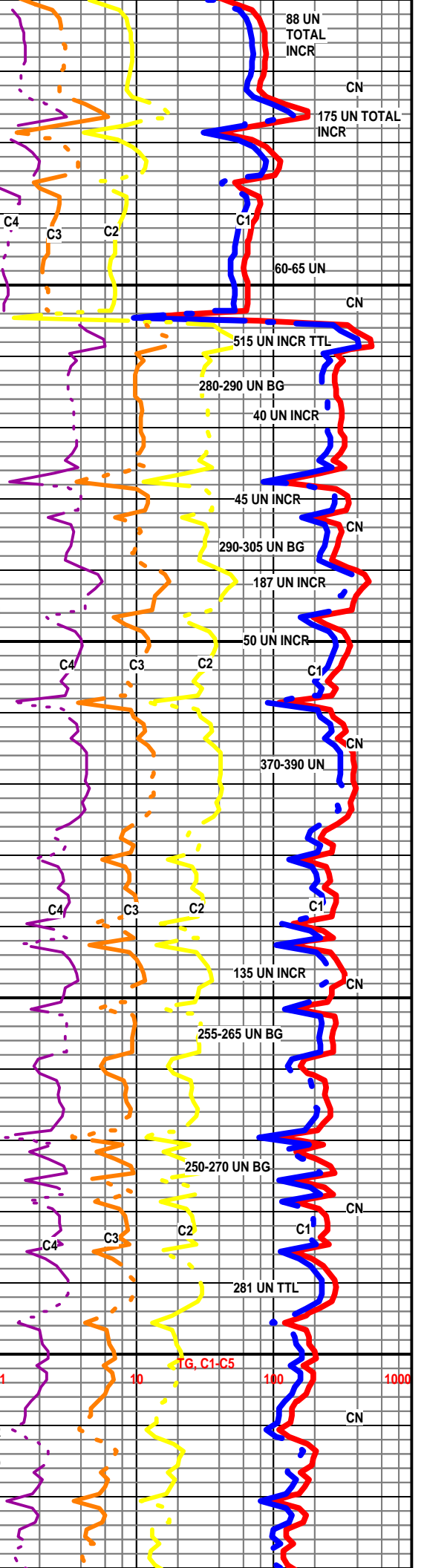
3310'-3320 LS- OFF WHT CRM LT TN TN (STN IN 40%) HD DNS TO BRITT, FN TO MD XLN , RE-XLN MTRX THRU, SUCRO TXT IP, FOSS FRAGS SCAT IP, SMLL IMBD CALC XLS THRU, TR FRM WHT CHLK IP, BRIT YEL GLD FLO IN 30%, FR INTER-XLN POR SCAT IP, GD SCAT VUG POR IP, GD FLUSH CUT IN 40% TO GD STRONG STREAM CUT IN 30%, GD OIL ODOR

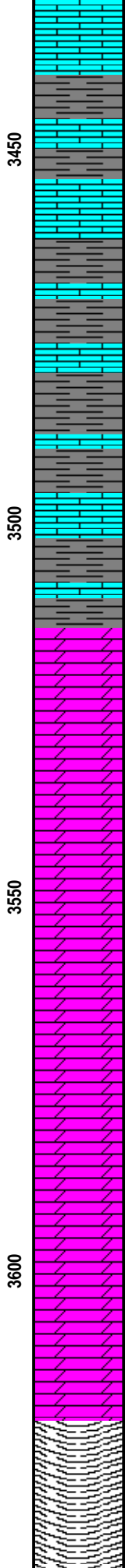
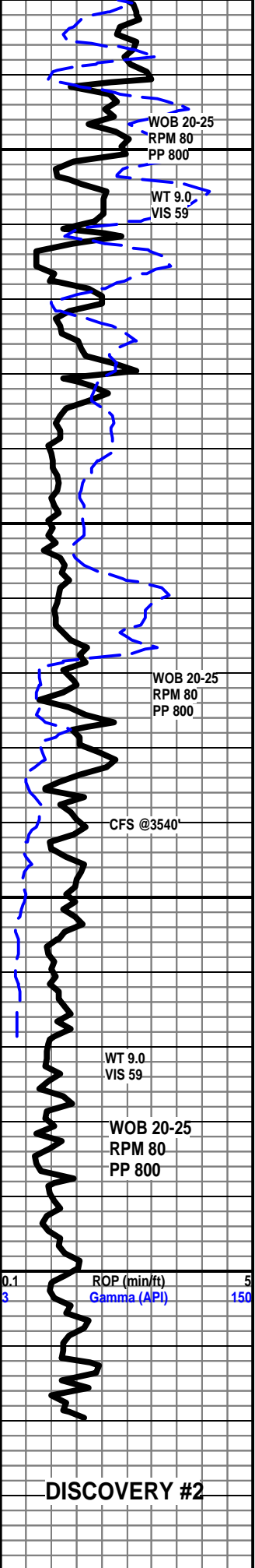
LS- OFF WHT CRM LT TN - HD DNS MD-F-XLN SLI TR IMBD FOSS FRGS IP, HVY TR ABDT FRM TO SLI SFT WHT CHLK, BRIT YEL FLO IN 30% TO NO FLO IN 70%, NO VIS POR TO TR INTR XLN POR IP, FWK SLO STRM CUT IN 30%, LT OIL ODOR , NO STN

3380'-3385' LS- OFF WHT TO CRM TO BUFF, HD DNS TO BRITT, MD XLN, SUCRO TO S/CHLKY TO CHLKY IP, IMBD FOSS FRAGS IP, IMBD SM CALC IP, DLL YEL FLO IN 30% TR GD PP POR IN 20%, NO VIS CUT, NO VIS SHOW

3385'-3390' LS- OFF WHT CRM LT TN TN (STN IN 35%) HD DNS TO BRITT, MD XLN , RE-XLN MTRX THRU, SUCRO TXT IP, FOSS FRGS SCAT IP, IMBD CALC XLS THRU, TR FRM WHT CHLK SACT IP, BRIT YEL GLD FLO IN 25%, FR INTR-XLN POR IN 20%, GD FLUSH CUT THRU, TO FR MLKY BLUE STREAM CUT IN 10%, PR OIL ODOR

3395'-3400' LS- WHT TO OFF WHT, CRM TN, (STN IN 30%) HD DNS TO BRITT, MD XLN, RE-XLN MTRX THRU, V/SLI TR SUCRO TXT SCAT THRU, IMBD CALC XLS SCAT THRU, TR FRM WHT CHLK SCAT IP, TR LIVE OIL IN 15%, GLD TO BRIT YEL FLO IN 45%, FR INTR-XLN POR TO TR GD PP POR, GD INST FLUSH CUT THRU, TO GD STRONG MLKY BLUE STREAM CUT IN 40%, GD OIL ODOR





LS- CRM BFF- HD DNS ,F-V/F-XLN, RE-XLN MTRX IP, SLI TR IMBD LT GY SH, TR SCAT DISS PYR IP, NO FLO,NO VIS POR,NO VIS SHOW

LS- OFF WHT TO CRM BUFF, HD DNSE, SCATT FOSS FRAGS, F-XLN, NO FLO, NO VIS POR, NO CUT

BKC 3463' -1504'
SH- GRY TO DK GRY TO REDSH BRN, SFT GUMMY, BLKY, V/CALC THRU

SH- GRY TO DK GRY TO REDSH BRN, SFT GUMMY, BLKY LIMMY THRU

SH- GRY TO DK GRY TO REDSH BRN, SFT GUMMY, BLKY LIMMY THRU, WHT CHRT SCAT THRU

LS- CRM OFF WHT LT TN, HD DNS TO BRITT, MD XLN TO REXLN MTRX SCAT THRU, SUCRO TXT SCAT THRU, IMBD OOL SCAT THRU, IMBD CALC XLS SCAT THRU, FOSS FRAGS IP, IMBD CHRTS SCAT THRU, DLL YEL FLO THRU TR INTR-XLN POR, NO VIS CUT NO VIS SHOW

ARBUCKLE 3517' -1558'

DOLO- WHT OFF WHT CRM, HD DNS TO BRITT, V/ SUCRO TO CRS SUCRO MTRX, ABDT IMBD SMLL TO MD ANG DOLO GRNS THRU, ABDT WHT OFF WHT CHRT, HVY TR SFT WHT CHLK IP,TR FLDSPR, BRT YEL MIN FLO THRU, PR TO TR FR INTER-XLN POR, NO VIS SHOW

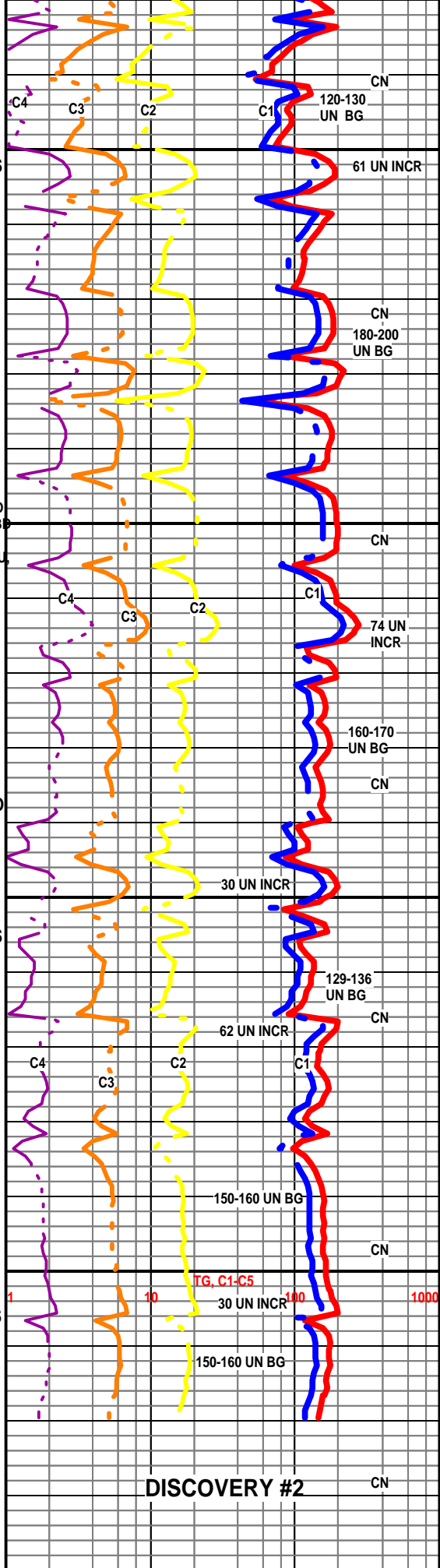
DOL- WHT TO TR LT TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, SUCRO TXT SCAT THRU, IMBD MD S/ANG DOL GRNS SCAT THRU, DLL GLD FLO IN 10%, TR FR INTR-XLN POR, NO VIS CUT TO NO VIS SHOW NO ODOR

DOL- CRM OFF WHT TO WHT, HD DNS TO BRITT, FN TO MD XLN, SUCRO MTRX SCAT THRU, IMBD MD S/ANG TO ANG DOL GRNS SCAT THRU, DLL GLD FLO THRU, NO VIS POR, NO VIS CUT, NO VIS SHOW

DOL- WHT TO OFF WHT, HD DNS TO BRITT, MD XLN, REXLN MTRX THRU, SUCRO TXT IP, IMBD ABDT MD ANG DOL GRNS, DLL GLD FLO THRU, FR INTR-XLN POR IN 15%, NO VIS CUT NO VIS SHOW

TD OF 3620' REACHED @1:30AM ON 8/29/2011
THANK YOU FOR USING EARTH TECH OGL. INC.

CIRC. 1.5HRS T.O.H.F.L.



DISCOVERY #2