





1061633

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

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

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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

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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	WAGNER TRUST 4-1
Doc ID	1061633

All Electric Logs Run

DIL
MICRO
POR
SONIC
SPECTRAL

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

August 17, 2011

CLAYTON CAMOZZI  
Samuel Gary Jr. & Associates, Inc.  
1515 WYNKOOP, STE 700  
DENVER, CO 80202

Re: ACO1  
API 15-165-21919-00-00  
WAGNER TRUST 4-1  
NE/4 Sec.01-16S-16W  
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,  
CLAYTON CAMOZZI



**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: 4/28/2011  
 Invoice # 5047

P.O.#:

Due Date: 5/28/2011

Division: Russell

# Invoice

**Contact:**

Samuel Gary Jr & Associates Inc  
 Address/Job Location:  
 Samuel Gary Jr & Associates Inc  
 3111 W. 10th Street  
 Great Bend, KS 67503

DRLG  COMP  W/O  LOE  GG

Account	8200-138
Well/Prospect	WAGNER TRUST 4-1
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

**Reference:**

WAGNER TRUST 4

**Description of Work:**

LONG SURFACE JOB

**Services / Items Included:**

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 733.07	No	Baffle Plate Aluminum, 8 5/8"	1	\$96.34	Yes
Common-Class A	370	\$ 4,831.89	Yes				
Bulk Truck Mat-Material Service Charge	390	\$ 834.93	No				
5 1/2" Basket	3	\$ 738.59	Yes				
Calcium Chloride	13	\$ 524.06	Yes				
Pump Truck Mileage-Job to Nearest Camp	22	\$ 235.02	No				
Flo Seal	90	\$ 192.68	Yes				
5 1/2" Turbolizer	3	\$ 186.25	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$ 137.53	No				
Premium Gel (Bentonite)	7	\$ 121.99	Yes				
8 5/8" Top Rubber Plug	1	\$ 113.46	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 8,745.80  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,311.87)

SubTotal for Taxable Items:	\$ 5,784.47
SubTotal for Non-Taxable Items:	\$ 1,026.36
<b>Total:</b>	<b>\$ 7,433.93</b>
<b>Tax:</b>	<b>\$ 364.42</b>
<b>Amount Due:</b>	<b>\$ 7,798.35</b>
<b>Applied Payments:</b>	
<b>Balance Due:</b>	<b>\$ 7,798.35</b>

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

5-483-2025

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

No. 5047

785-324-1041

Date	4-23-11	Sec.	1	Twp.	16	Range	16	County	Rush	State	KS	On Location		Finish	4:15PM			
Lease	Wagner Trust			Well No.	4		Location									Corham 5 Coline 3/4 W into		
Contractor	Discover #2							Owner									To Quality Oilwell Cementing, Inc.	
Type Job	Surface							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.	996		Charge To									Sam Gary Jr + Associates		
Csg.	8 5/8			Depth	995		Street											
Tbg. Size				Depth			City									State		
Tool				Depth			The above was done to satisfaction and supervision of owner agent or contractor.											
Cement Left in Csg.	31.46			Shoe Joint	31.46		Cement Amount Ordered									370 com. 346cc 296cc		
Meas Line				Displace	61 1/4 BCL		1/4 # F10											
<b>EQUIPMENT</b>																		
Pumptrk	1	No.	Cement Helper	Craig		Common									370			
Bulktrk		No.	Driver	Wale		Poz. Mix												
Bulktrk	12	No.	Driver	Con		Gel.									7			
<b>JOB SERVICES &amp; REMARKS</b>													Calcium				13	
Remarks:	Hulls																	
Rat Hole	Salt																	
Mouse Hole	Flowseal 90#																	
Centralizers	Kol-Seal																	
Baskets	Mud CLR 48																	
D/V or Port Collar	CFL-117 or CD110 CAF 38																	
8 5/8 set @ 995 Battle @ 963.54													Sand					
Est. Circulation Mix 370 sec. Displace													Handling			390		
Plug													Mileage					
Cement Circulation?													<b>FLOAT EQUIPMENT</b>					
Plug landed @ 800# Release													Guide Shoe			8 5/8		
Back to 500# Shut in													Centralizer			3		
													Baskets			3		
													AFU Inserts			Rubber plug		
													Float Shoe			Battle Plate		
													Latch Down					
													Pumptrk Charge			Long Surface		
													Mileage			22		
Thanks													Tax					
Signature													Discount					
Signature													Total Charge					



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

Date: 5/12/2011  
 Invoice # 4633

P.O.#:  
 Due Date: 6/11/2011  
 Division: Russell

# Invoice

**Contact:**  
 Samuel Gary Jr & Associates Inc  
**Address/Job Location:**  
 Samuel Gary Jr & Associates Inc  
 3111 W. 10th Street  
 Great Bend, KS 67503

**Reference:**  
 WAGNER TRUST 4-1

**Description of Work:**  
 PROD LONG STRING

DRLG  COMP  W/O  LOE  GG

Account	8300-238
Well/Prospect	WAGNER 4-1
Deck	
AFE	
Approval	CA
Description	

**Services / Items Included:**

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 950.65	No		Salt (Fine)	19	Yes
Common-Class A	\$ 2,857.81	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$233.21	Yes
Gilsonite	\$ 1,650.66	Yes	Pump Truck Mileage-Job to Nearest Camp	22	\$228.58	No
5 1/2" Triplex Shoe	\$ 1,207.67	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$133.76	No
CFL 117	\$ 1,128.71	Yes	Flo Seal	56	\$116.60	Yes
5 1/2" Basket	\$ 718.36	Yes	KCL	2	\$62.17	Yes
CD-110	\$ 487.23	Yes				
5 1/2" Turbolizer	\$ 483.07	Yes				
Bulk Truck Matl-Material Service Charge	\$ 468.49	No				
Mud Clear	\$ 385.21	Yes				
Defoamer A or CAF-38	\$ 364.38	Yes				

**Invoice Terms:**

Net 30

SubTotal: \$ 11,752.70  
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,762.91)

SubTotal for Taxable Items: \$ 8,475.54  
 SubTotal for Non-Taxable Items: \$ 706.21

6.30% Rush County Sales Tax

Total: \$ 9,989.80  
 Tax: \$ 533.96

**Thank You For Your Business!**

**Amount Due: \$ 10,523.76**  
**Applied Payments:**  
**Balance Due: \$ 10,523.76**

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. 4633

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-9-11	1	16	16	Rush	Kansas		1:30 PM
Lease <i>Wagon Trust</i>	Well No. <i>4-1</i>		Location <i>Barham S. to Cadline 160 S. to</i>				
Contractor <i>Discanny Drilling Rig 2</i>				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 <i>Langstring</i>				Charge To <i>Samuel Gary &amp; Associates</i>			
Hole Size <i>5 7/8</i>	T.D. <i>3741</i>		Street				
Csg. <i>5 1/2 15.50 lb</i>	Depth <i>3703</i>		City				
Tbg. Size	Depth		State				
Tool	Depth		The above was done to satisfaction and supervision of owner agent or contractor.				
Cement Left in Csg. <i>2368</i>	Shoe Joint <i>2368</i>		Cement Amount Ordered <i>225 Q-Flu C 100 Salt</i>				
Meas Line	Displace <i>87 3/4 Bl</i>		38 bitsuite 38 CD-110 89 CFL-117 25 CAF-88				
<b>EQUIPMENT</b>				Common <i>500 Gal Mud Clear-48</i>			
Pumptrk <i>9</i>	No.	Cementor <i>Steve</i>	Poz. Mix <i>20 Bl RCL</i>				
Bulktrk <i>8</i>	No.	Driver <i>Had</i>	Gel.				
Bulktrk	No.	Driver <i>Dave</i>	Calcium <i>CD-110 117 #</i>				
<b>JOB SERVICES &amp; REMARKS</b>				Hulls <i>2 gal RCL</i>			
Remarks:	Salt <i>19</i>						
Rat Hole	Flowseal <i>56 #</i>						
Mouse Hole	Kol-Seal <i>1057 #</i>						
Centralizers	Mud CLR 48 <i>500 gal</i>						
Baskets	CFL-117 or CD110 CAF 38 <i>50 #</i>						
D/V or Port Collar	Sand <i>CFL-117 176 #</i>						
<i>30x Rat Hole</i>	Handling						
<i>15x Mouse Hole</i>	Mileage						
<i>Land plug @ 10000 psi</i>	<b>FLOAT EQUIPMENT</b>						
	Guide Shoe						
	Centralizer <i>8 Turbas</i>						
	Baskets <i>4</i>						
	AFU Inserts						
	Float Shoe						
	Latch Down <i>1</i>						
	<i>Tripbar Shoe</i>						
	Pumptrk Charge <i>Prod Langstring</i>						
	Mileage <i>22</i>						
							Tax
							Discount
							Total Charge
X Signature <i>[Signature]</i>							





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

Well Name: WAGNER TRUST 4-1  
Location: SEC 1, 16S, 16W, Rush Co. Kansas  
License Number: 15-165-21919  
Spud Date:  
Surface Coordinates: 1820' FNL & 2180' FEL  
Region: Wildcat  
Drilling Completed: 4/28/2011

Bottom Hole Coordinates:

Ground Elevation (ft): 1909'      K.B. Elevation (ft): 1917'  
Logged Interval (ft): 1700'      To: 3600'      Total Depth (ft): 3600'  
Formation: Lansing, Arbuckle  
Type of Drilling Fluid:

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

OPERATOR

Company: Samuel Gary Jr, & Assoc.  
Address: 1515 Wykoop, Ste. # 700  
Denver, Colo. 80202  
Geo: Clayton Camozzi

GEOLOGIST

Name: JASON MARSHALL  
Company: Earth Tech OGL, Inc.  
Address: PO Box 683  
Hooker, Okla . 73945  
Off. 888-543-8378 Cell: 620-655-1298

Circulating Report

### DST's Report

**DST #1, 3151'-3213', 10,60,40,120**

**IFP-BOB IN 6 MIN, ISI-NO BLOW BACK, FF-BOB IN 5MIN, FSI-1" BLOW BACK, IH-1524, FH-1501, FIF-41, FFF-52, SIF-55, SFF-75, ISI-334, FSI-324, TOTAL REC- 110', 25% GAS, 10% OIL, 20% WATER, AN 45% MUD, GRAV-94, CHLORIDES- 40,000**

**DST #2, 3242'-3290', 5,60,40,120**


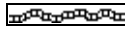
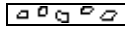
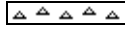
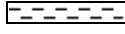



**IFP-BOB IN 45 SEC, ISI-NO BLOW BACK, FF-BOB IN 1 MIN, FSI-BOB IN 15 MIN, IH-1567, FH-1494, FIF-180, FFF-160, SIF-199, SFF-404, ISI-610, FSI-582, TOTAL REC- 885', 20% GAS, 50% OIL, 25% WATER, AN 5% MUD, GRAV-99, CHLORIDES- 105,000**





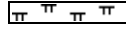

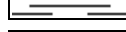
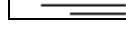
**DST #3, 3334'-3401', 5,60,25,90**


**IFP-BOB IN 1 1/2 MIN, ISI-1" BLOW BACK, FF-BOB IN 1 MIN, FSI-BOB 6 MIN, IH-1640, FH-1553, FIF-73, FFF-91, SIF-85, SFF-146, ISI-465, FSI-460, TOTAL REC- 325', 95% OIL, AN 5% MUD, GRAV-95**







### DST's Report

### ROCK TYPES

	<b>Anhy</b>
	<b>Bent</b>
	<b>Brec</b>
	<b>Cht</b>
	<b>Clyst</b>
	<b>Coal</b>
	<b>Congl</b>
	<b>Dol</b>

	<b>Gyp</b>
	<b>Igne</b>
	<b>Lmst</b>
	<b>Meta</b>
	<b>Mrlst</b>
	<b>Salt</b>
	<b>Shale</b>
	<b>Shcol</b>

	<b>Shgy</b>
	<b>Sltst</b>
	<b>Ss</b>
	<b>Till</b>
	<b>Carb sh</b>
	<b>Dol</b>
	<b>Dtd</b>
	<b>Gry sh</b>

	<b>Sandylms</b>
	<b>Shale</b>
	<b>Sltstn</b>
	<b>Shlyslts</b>
	<b>Sltyslts</b>
	<b>Lms</b>

### ACCESSORIES

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- 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

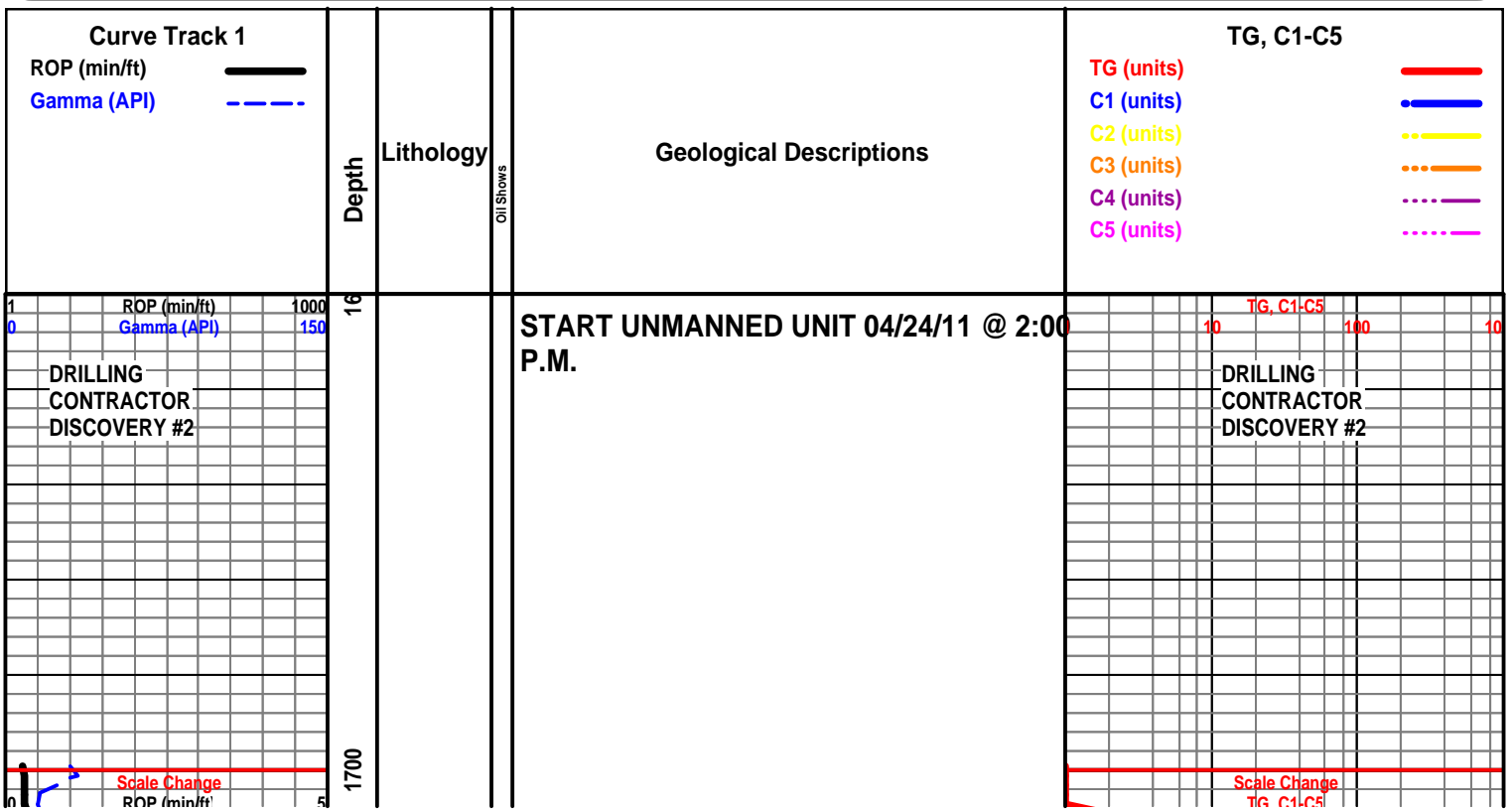
- Even
- Spotted
- Ques
- Dead
- Gas show

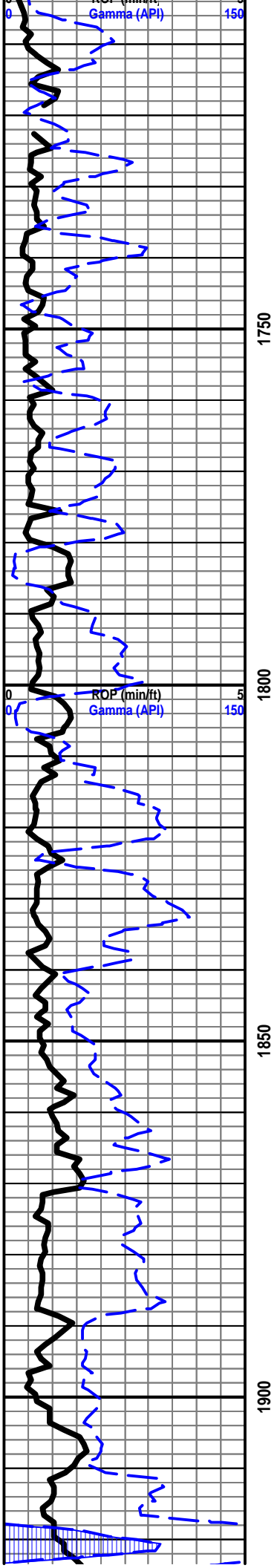
#### INTERVALS

- Core
- Dst
- Dst

#### EVENTS

- Rft
- Sidewall



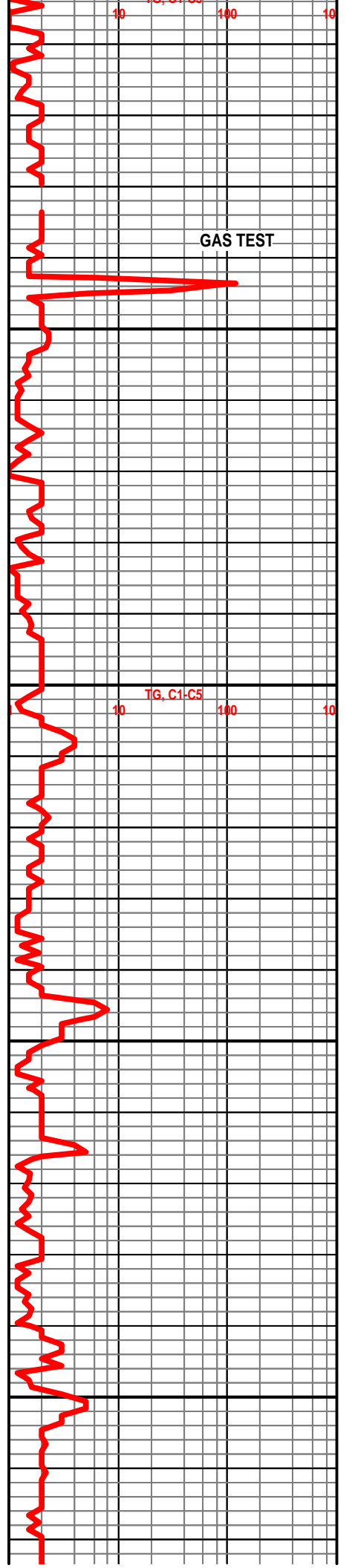


1750

1800

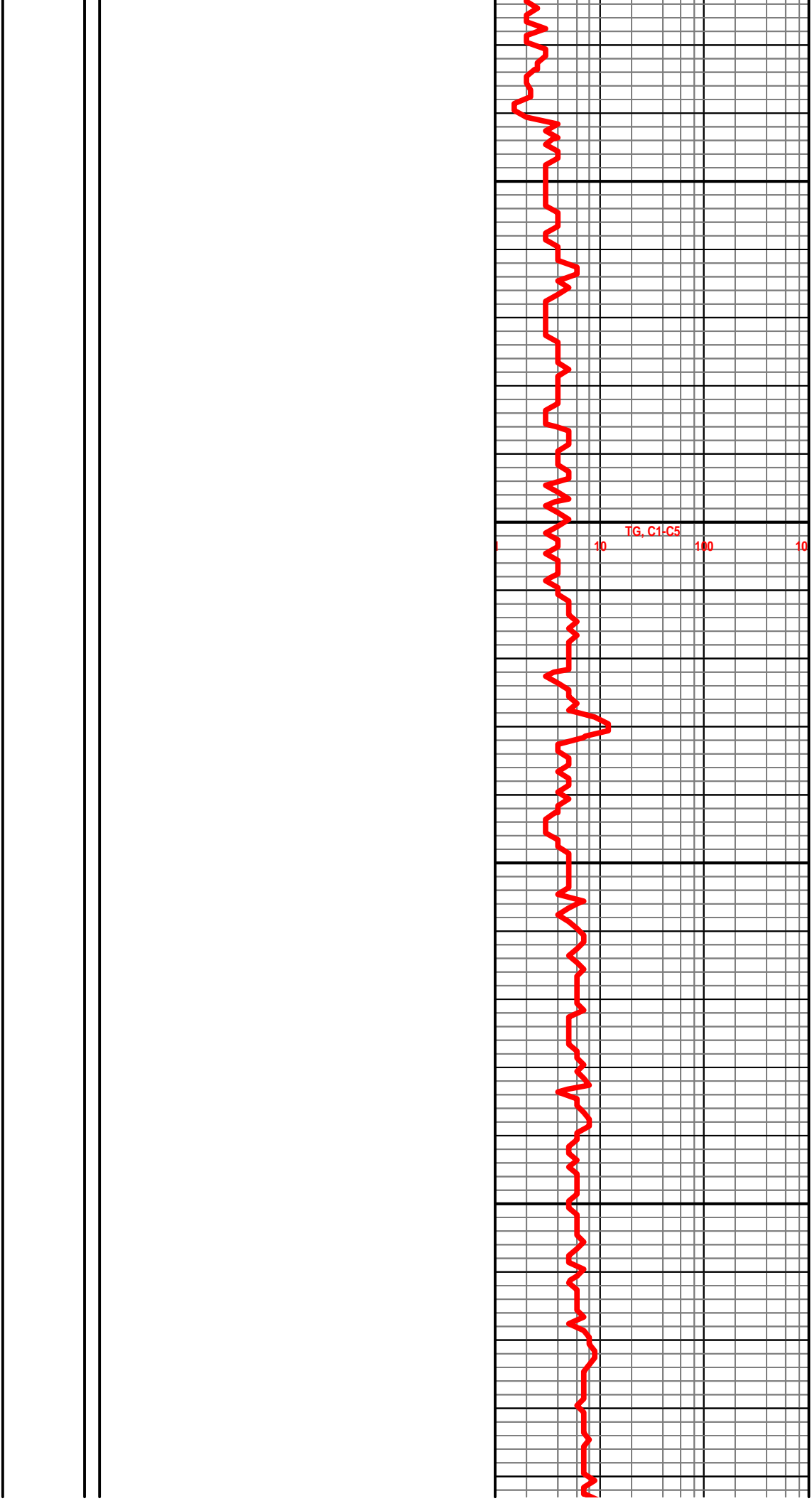
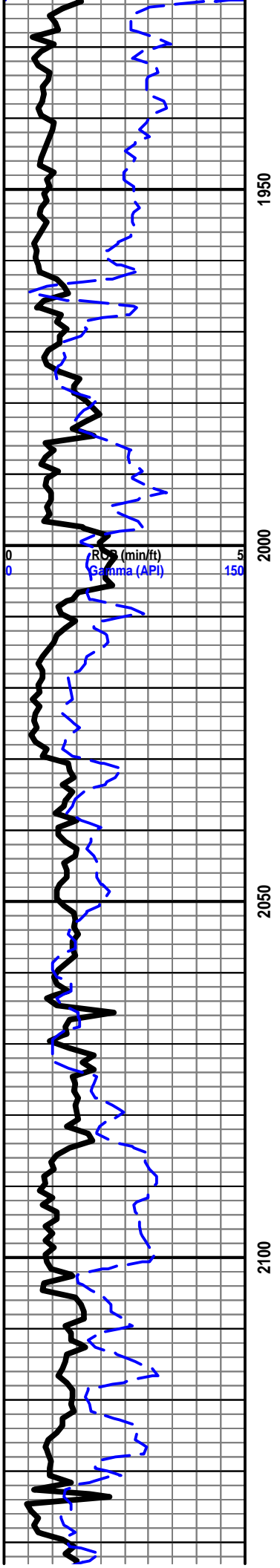
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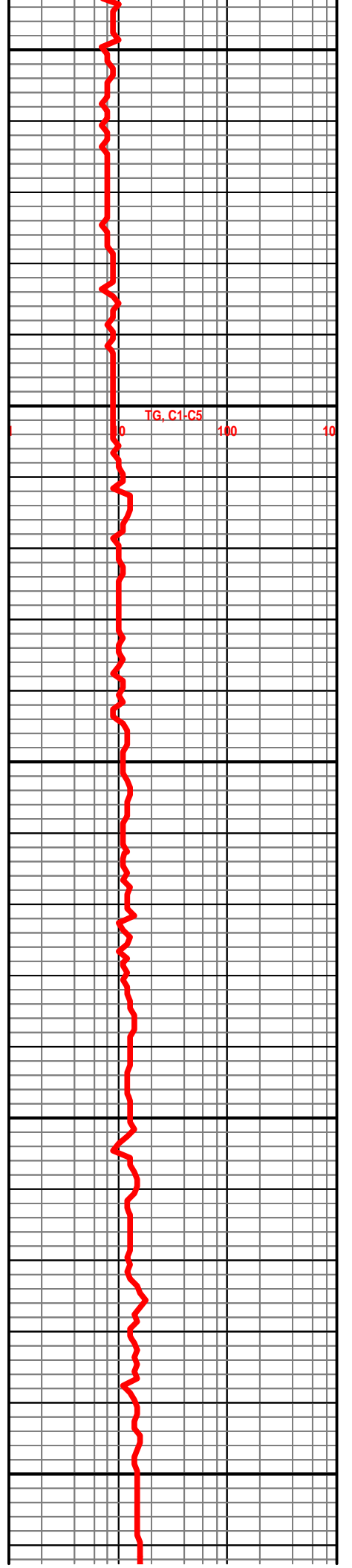
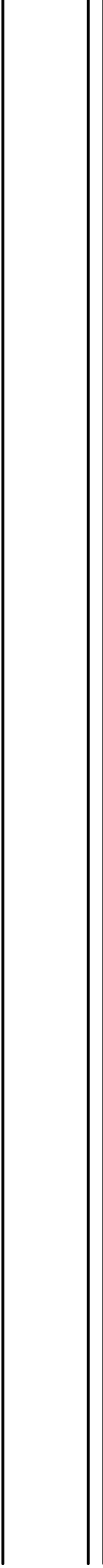
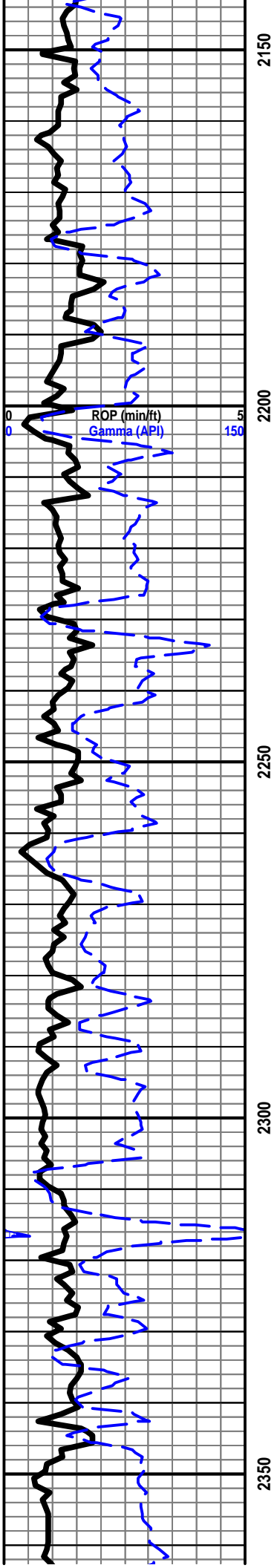
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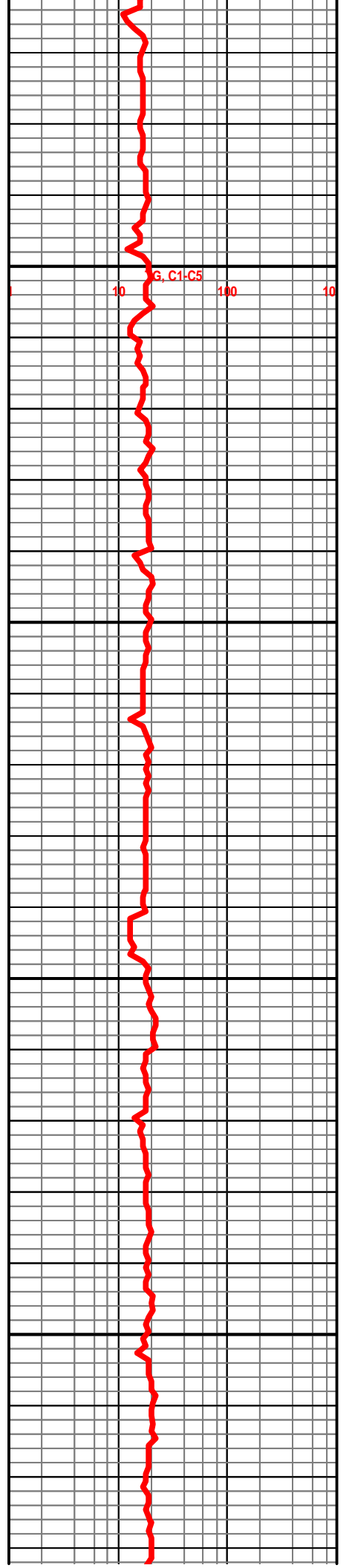
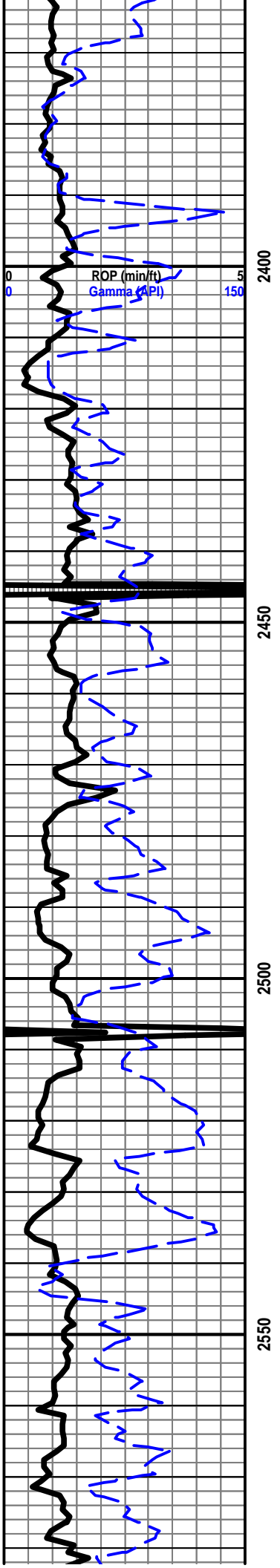


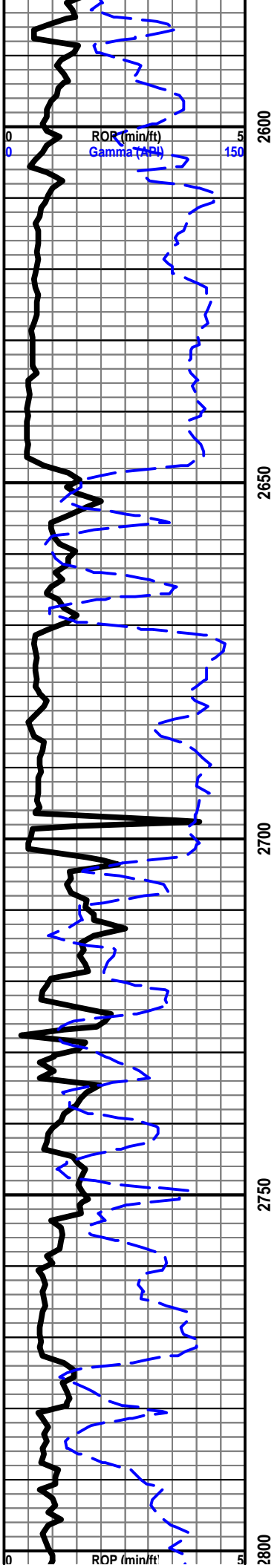
GAS TEST

TG, C1-C5



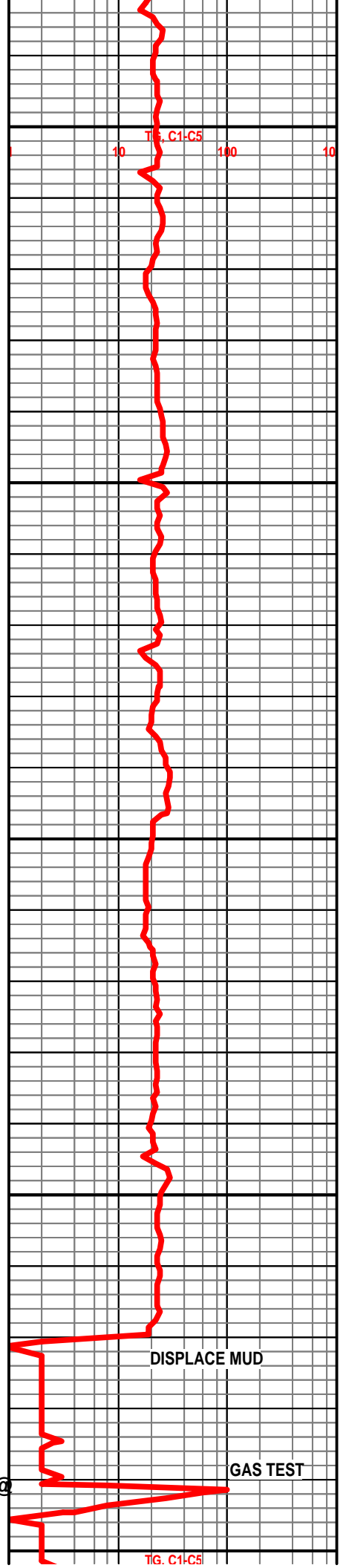




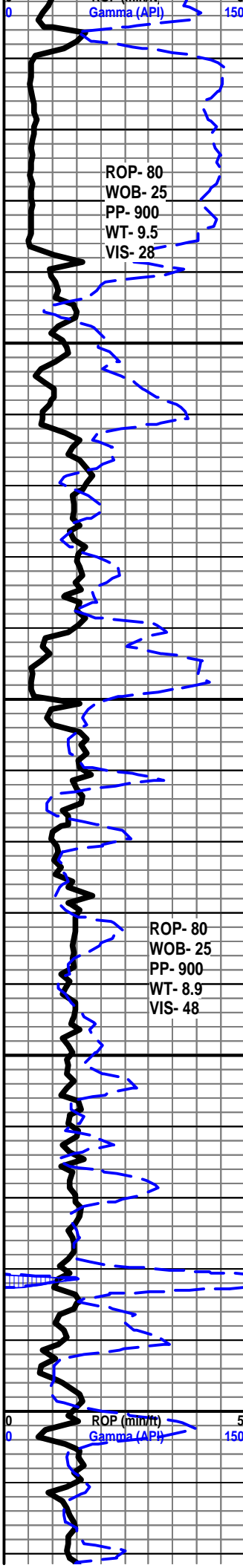


BASE ROOT SHALE @ 2647' -730

STARTED MANNED UNIT ON 4/25/2011 @ 2:30 P.M.





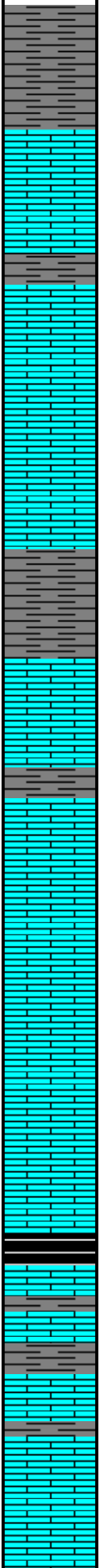


ROP- 80  
WOB- 25  
PP- 900  
WT- 9.5  
VIS- 28

ROP- 80  
WOB- 25  
PP- 900  
WT- 8.9  
VIS- 48

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

2850  
2900  
2950  
3000



SH- GRY TO DK GRY, FRM, SMTH BLKY

**HOWARD @ 2836' -919'**

LS- LT GRY, CRM, TN, HD DNS TO BRITT, MD XLN, REXLN MTRX IP, TR CHLK SCAT THRU, IMBD CALC XLS SCAT THRU, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

SH- GRY TO DK GRY, SFT GUMMY, BLKY

LS- GRY, CRM, TN, HD DNS TO BRITT, MD XLN, REXLN MTRX IP, CHLK SCAT THRU, TR IMBD FOSS FRAGS IP, IMBD CALC XLS SCAT THRU, DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW

**SEVERY @ 2891' -974'**

SH- GRY TO DK GRY, SFT GUMMY TO TR FRM, BLKY

**TOPEKA @ 2904' -987'**

LS- GRY, CRM OFF WHT, TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, TR CHLK SCAT THRU, IMBD FOSS FRAGS IP, IMBD CALC XLS IP, SLI TR IMBD SHAL IP, DLL YEL FLO, V/PR TR PP POR IN 5%, NO VIS CUT, N VIS SHOW

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

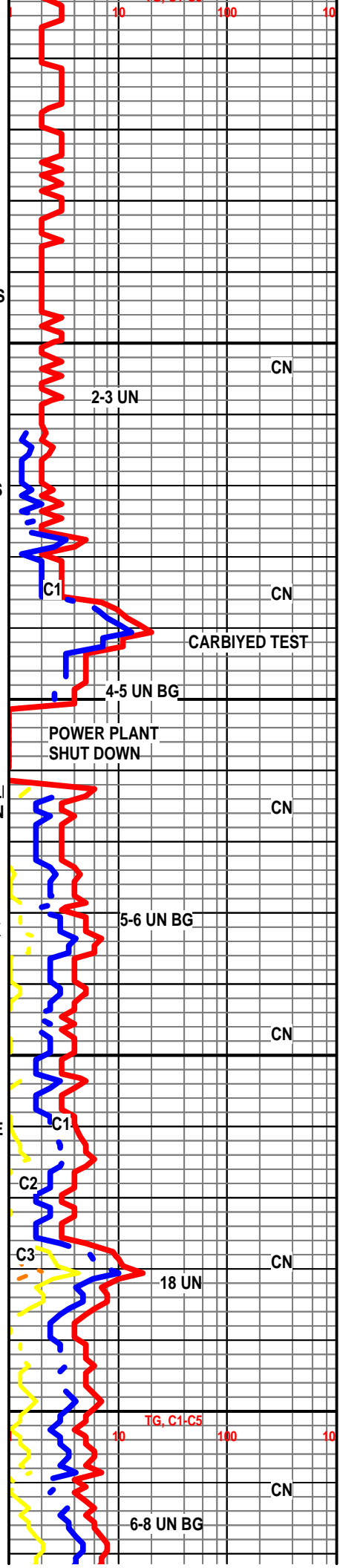
LS- GRY, CRM OFF WHT, TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, TR SUCRO TXT, IMBD FOSS FRAGS IP, IMBD CALC XLS IP, SLI TR IMBD GRY SHALE IP, DLL YEL FLO, NO VIS POR, NO VIS CUT, NO VIS SHOW

SH- SOFT BLACK CARB SHALE, TR DISS PYR THRU

SH- GRY TO DK GRY, FRM TO TR SFT, BLKY, TR PYR

**LE COMPTON 3004' -1087'**

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 40%, FN TO MD XLN, REXLN MTRX THRU, SLI TR SUCRO TXT, TR FRM GRYISH WHT CHLK SCAT THRU, IMBD CALC XLS THRU, DLL YEL FLO, PP POR IN 30%, NO VIS CUT, NO VIS SHOW



2-3 UN

C1

CARBIYED TEST

4-5 UN BG

POWER PLANT SHUT DOWN

5-6 UN BG

C1

C2

C3

18 UN

TG, C1-C5

6-8 UN BG

CN

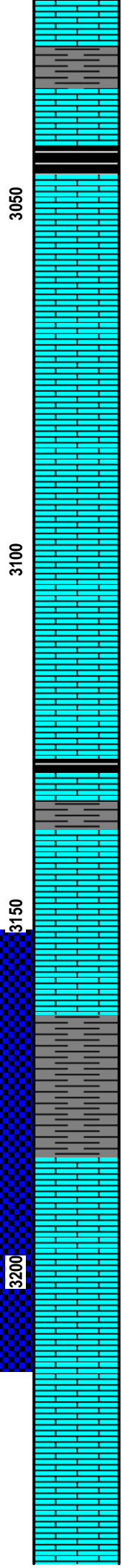
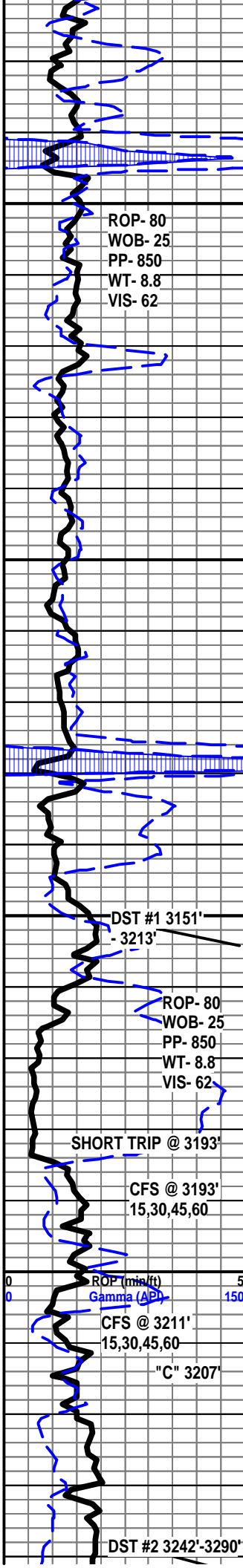
CN

CN

CN

CN

CN



SH- GRY TO DK GRY, FRM, BLK'

SH- SOFT BLACK CARB SHALE

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 50%, FN TO MD XLN, REXLN MTRX THRU, SLI TR SUCRO TXT, TR FRM GRYISH WHT CHLK SCAT THRU, IMBD CALC XLS THRU, TR DISS PYR SCAT THRU, DLL YEL FLO, PP POR IN 20% SLI TR VUG POR IN 10%, NO VIS CUT, NO VIS SHOW

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 80%, FN TO MD XLN, REXLN MTRX THRU, SLI TR SUCRO TXT, SLI TR FRM WHT CHLK IP, IMBD CALC XLS THRU, LIVE OIL THRU 60%, GLD TO BRIT YEL FLO, VUG POR IN 60%, EX INST FLUSH CUT, TO EXT STRONG MLKY BLUE STREAM CUT, GD OIL ODOR, DRK BRN STAIN ON DISH

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 30%, FN XLN, REXLN MTRX THRU, IMBD CALC XLS THRU, TR IMBD FOSS FRAGS IP, DLL YEL FLO, PP POR IN 10%, NO VIS CUT, NO VIS SHOW

**HEEBNER @ 3131' -1214'**

SH- SOFT BLACK CARB SHALE

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 40%, FN XLN, REXLN MTRX THRU, IMBD CALC XLS THRU, IMBD FOSS FRAGS IP, PYR SCAT THRU, DLL YEL FLO, PP POR IN 10% SLI TR VUG POR 5%, V/PR FLUSH CUT TO NO STREAM CUT, NO OIL ODOR

**DOUGLAS @ 3165' -1248'**

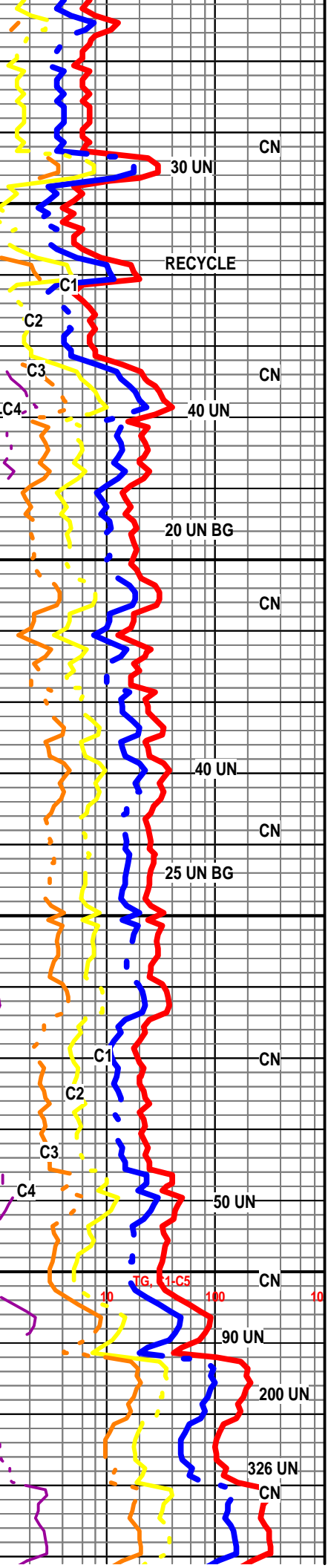
SH - GRY TO DK GRY, FRM TO SFT, BLKY TO TR SPLINTY

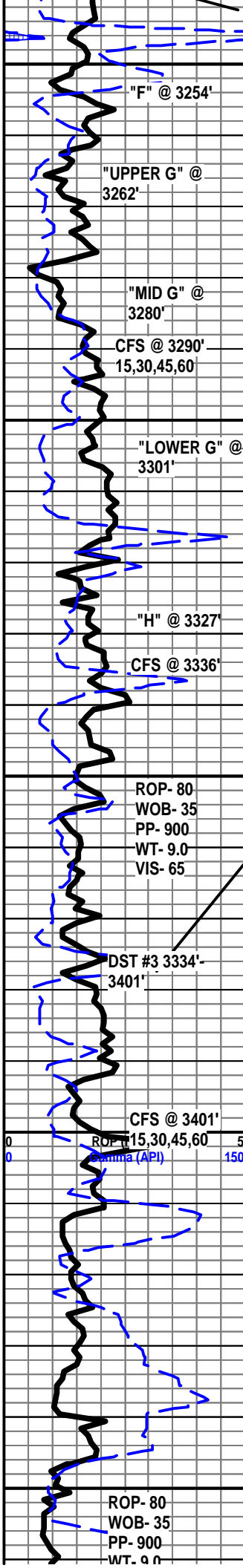
**LANSING @ 3184' -1267'**

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 30%, FN XLN, REXLN MTRX THRU, IMBD CALC XLS THRU, IMBD FOSS FRAGS IP, DLL YEL FLO, PP POR IN 20% SLI TR VUG POR 5%, PR FLUSH CUT TO PR MLKY BLUE STREAM CUT IN 10%, NO OIL ODOR

LS- CRM OFF WHT, LT TN TO TN, STAIN IN 45%, FN XLN, REXLN MTRX THRU, IMBD CALC XLS THRU, IMBD FOSS FRAGS IP, DLL TO TR BRIT YEL FLO, FR PP POR IN 30% FR TO TR GD VUG POR 25%, FR FLUSH CUT THRU, FR STRONG MLKY BLUE STREAM CUT IN 30%, FR OIL ODOR

LS- CRM, LT TN TO TN, STAIN IN 60%, FN XLN, REXLN MTRX THRU, IMBD CALC XLS IP, IMBD FOSS FRAGS IP, LIVE OIL ON 30%, GLD TO TR BRIT YEL FLO, FR PP POR IN 30% GD VUG POR 15%, GD INST FLUSH CUT THRU, GD STRONG MLKY BLUE STREAM CUT IN 60%, GD OIL ODOR, BRN STAIN ON DISH





LS- CRM, LT TN TO TN, STAIN IN 40%, FN XLN, REXLN MTRX THRU, IMBD OOL SCAT THRU, IMBD FOSS FRAGS IP, LIVE OIL ON 10%, TR OF FRM WHT CHLK IP, GLD TO TR BRIT YEL FLO, FR PP POR IN 20% FR VUG POR 10%, FR INST FLUSH CUT THRU, TO FR STRONG MLKY BLUE STREAM CUT IN 40%, FR OIL ODOR, LT BRN STAIN ON DISH

LS- CRM, LT TN TO TN, STAIN IN 55%, FN XLN, REXLN MTRX THRU, IMBD FOSS FRAGS IP, LIVE OIL ON 15%, TR OF FRM WHT CHLK SCAT IP, GLD TO TR BRIT YEL FLO, FR PP POR IN 30% FR VUG POR 20%, GD INST FLUSH CUT THRU, TO GD STRONG MLKY BLUE STREAM CUT IN 60%, GD OIL ODOR, BRN STAIN ON DISH

LS- CRM, LT TN TO TN, STAIN IN 45%, FN XLN, REXLN MTRX THRU, IMBD FOSS FRAGS IP, LIVE OIL ON 5%, IMBD CALC XLS SCAT IP, GLD TO TR BRIT YEL FLO, FR PP POR IN 20% TR FR VUG POR 10%, GD INST FLUSH CUT THRU, TO GD STRONG MLKY BLUE STREAM CUT IN 50%, PR TO FR OIL ODOR, LT BRN STAIN ON DISH

LS- CRM, LT TN TO TN, STAIN IN 30%, FN XLN, REXLN MTRX THRU, IMBD FOSS FRAGS IP, IMBD CALC XLS SCAT IP, GLD TO BRIT YEL FLO, FR PP POR IN 40% TR FR VUG POR 3%, GD FLUSH CUT THRU, TO GD STRONG MLKY BLUE STREAM CUT IN 40%, FR OIL ODOR, LT BRN STAIN ON DISH

SH- GRY TO DK GRY, FRM TO TR SFT, BLKY TO SPLINTY IP

LS- CRM, LT TN TO TN, STAIN IN 25%, V/FN TO FN XLN, REXLN MTRX THRU, TR IMBD OOL IP, IMBD CALC XLS SCAT IP, V/SLI TR CHLKY SCAT IP, GLD TO BRIT YEL FLO, PR PP POR IN 30%, GD FLUSH CUT THRU, TO FR STRONG MLKY BLUE STREAM CUT IN 20%, PR OIL ODOR

LS- CRM, OFF WHT, LT TN TO TN, STAIN IN 15%, V/FN TO FN XLN, REXLN MTRX THRU, TR IMBD FOSS FRAGS IP, IMBD CALC XLS SCAT IP, SLI TR CHLKY SCAT IP, GLD TO BRIT YEL FLO, PR PP POR IN 30%, PR FLUSH CUT THRU TO NO STEAM CUT, NO ODOR

LS- CRM, LT TN TO TN, STAIN IN 60%, V/FN TO FN XLN, REXLN MTRX THRU, FOSS FRAGS IP, IMBD CALC XLS SCAT IP, V/SLI TR CHLKY SCAT IP, LIVE OIL IN 30% DEAD OIL STAIN IN 10%, GLD TO BRIT YEL FLO, GD PP POR IN 40% TO GD VUG POR IN 30%, GD INST FLUSH CUT THRU, TO GD STRONG STREAM CUT IN 60%, GD OIL ODOR, BRN STAIN ON DISH

SH- GRY TO DK GRY, FRM, SPLINTY

LS- CRM, LT TN TO TN, STAIN IN 60%, V/FN TO FN XLN, REXLN MTRX THRU, FOSS FRAGS IP, IMBD CALC XLS SCAT IP, V/SLI TR CHLKY SCAT IP, LIVE OIL IN 20% GLD TO BRIT YEL FLO, FR PP POR IN 20% TO FR VUG POR IN 20%, GD FLUSH CUT THRU, TO FR STRONG MLKY BLUE STREAM CUT IN 40%, FR OIL ODOR

LS- CRM, OFF WHT, LT TN TO TN, STAIN IN 20%, V/FN TO FN XLN, REXLN MTRX THRU, TR IMBD FOSS FRAGS IP, IMBD CALC XLS SCAT IP, SLI TR CHLKY SCAT IP, LIVE OIL IN 10%, GLD TO BRIT YEL FLO, OOLCAST POR 10%, GD FLUSH CUT 50%, TO FR STRONG MLKY BLUE STREAM CUT IN 20%, PR OIL ODOR

**BASE KANSAS CITY @ 3411' -1494'**

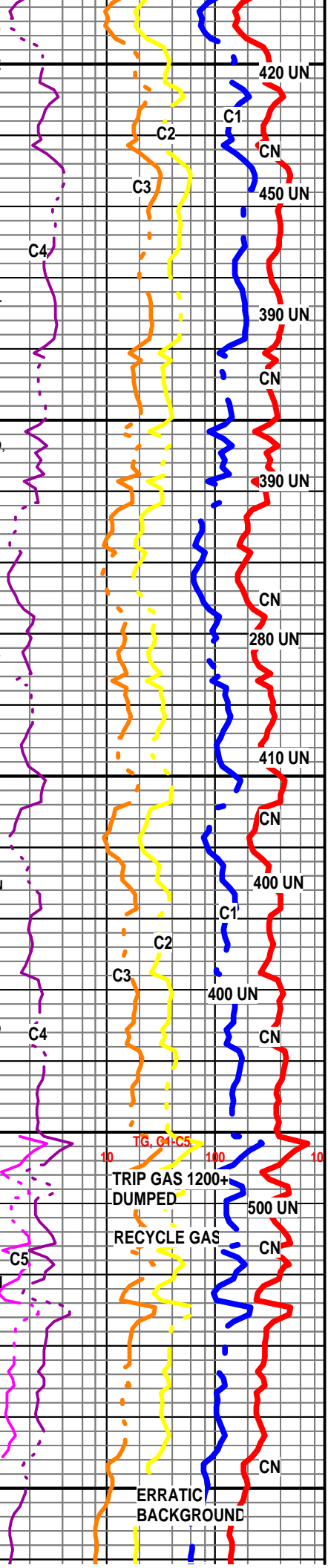
SH- GRY TO DK GRY, FRM, BLKY TO TR SPLINT

LS- CRM OFF WHT TO WHT, LT TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, IMBD FOSS FRAGS IP, IMBD CALC XLS IP, IMBD OOL SCAT THRU, DLL YEL FLO, FR PP POR IN 30%, V/PR FLUSH CUT TO NO STREAM CUT, NO OIL ODOF

SH- GRY TO DK GRY, FRM, BLKY

LS- CRM OFF WHT TO WHT LT TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX, IMBD RED GUMMY SHALE THRU, DLL YEL FLO THRU, VIS POR, NO VIS SHOW

SS- CLR FRSTY, PRED UNCONLTD GRNS FN TO V/FN RND TO S/RND, FR SRT, TR WHT CHLK, IND GRNS IN TRAY. NO FLO. NO VIS POR. NO VIS CU'



WT- 9.0  
VIS- 65

CFS @ 3482'  
15,30,45

CFS @ 3491'  
15,30,45,60

ROP- 80  
WOB- 35  
PP- 850  
WT- 9.0  
VIS- 50

CFS @ 3600'  
15,30,45,60

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

CTCH 1.5 HOUR  
T.O.H FOR LOGS

3500  
3550  
3600  
50

SH- REDISH BRN DK GRY, FRM TO SFT, BLKY

SS- LT GRY TO FRSTY CLR, TN, DK OIL STAIN IN 10%, HD TT TO TR FR IP, FRSTY GRNS TO TN GRNS, MD TO FN GRN, S/RND TO S/ANG TO TR RND, PR SRT, V/CALC TO LMY CMNT, TR IMBD RED SHALE, SLI TR CHLK, V/DLL YEL GLD FLO IN 50%, NO VIS POR, GD FLUSH CUT TO GD SLOW STREAM MLKY BLUE CUT IN 50%, NO OIL ODOR

**ARBUCKLE @ 3482' - 1565'**

DOL- LT TN TO TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, IMBD ABDT SM TO MD ANG DOL GRNS, SLI TR CHLK, V/SLI TR DISS PYR IN 10%, DLL GLD FLO THRU TO SCAT BRIT GLD FLO IN 40%, FR TO GD INTR-XLN POR IN 50% TO V/PR INTR-XLN POR IN 50%, EXCL INST FLUSH CUT THRU, TO EXCL STRONG MLKY BLUE CUT THRU, FR OIL ODOR, LT BRN STAIN ON DISH

DOL- LT TN TO TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, IMBD ABDT SM TO MD ANG DOL GRNS, SLI TR CHLK, DLL GLD FLO THRU, FR INTR-XLN POR IN 50%, GD FLUSH CUT THRU, TO GD STRONG MLKY BLUE CUT IN 30%, PR OIL ODOR, LT BRN STAIN ON DISH

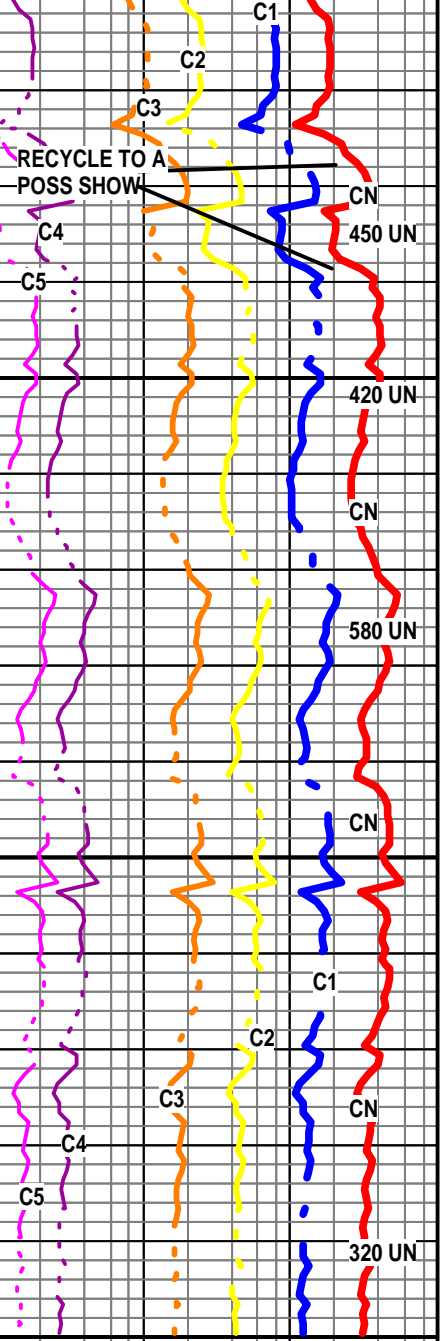
DOL- LT GRY OFF WHT TN, HD DNS TO BRITT, FN TO MD XLN, REXLN MTRX THRU, IMBD DOL XLS THRU, SLI TR CHLK, DLL GLD FLO THRU, PR INTR-XLN POR IN 30%, P FLUSH CUT, NO STREAM CUT, NO ODOR

DOL- OFF WHT TO WHT LT TN, HD TT TO FRI, FN TO MD XLN, REXLN MTRX THRU, IMBD DOL XLS SCAT THRU, DLL GLD FLO THRU, PR INTR-XLN POR IN 20%, NO VIS CUT, NO VIS SHOW

**RTD 3600' @ 5:30 PM 04/28/2011**

**LOGS BY WEATHERFORD  
LIBERAL KANSAS**

THANK YOU FOR CHOOSING EARTHTECH



SAMPLES WILL BE  
DELIVERED TO THE KGS

LOG COMPLETED BY JASON  
MARSHALL



## DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202

ATTN: Claton Camozzi

**1-16-16/Rush**

**Wagner Trust 4-1**

Start Date: 2011.04.26 @ 08:34:38

End Date: 2011.04.26 @ 16:08:38

Job Ticket #: 42555                      DST #: 1

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Sam Gary  
1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**Wagner Trust 4-1**  
**1-16-16/Rush**  
Job Ticket: 42555 **DST#: 1**  
Test Start: 2011.04.26 @ 08:34:38

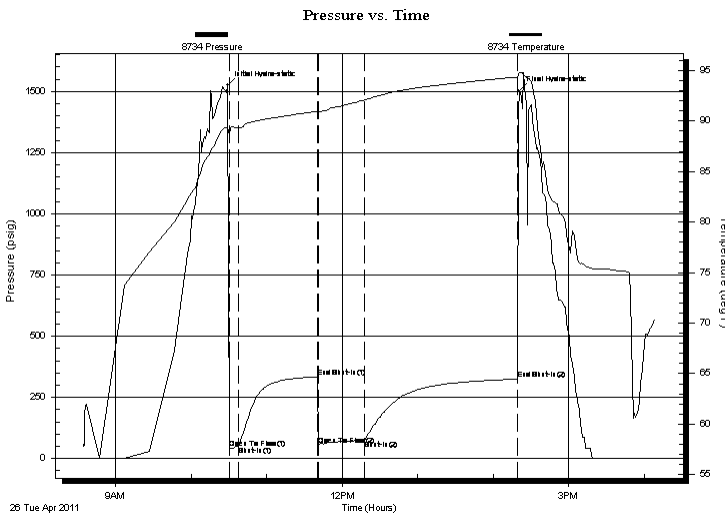
## GENERAL INFORMATION:

Formation: **LKC "A-C"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:30:08  
Time Test Ended: 16:08:38  
Interval: **3151.00 ft (KB) To 3213.00 ft (KB) (TVD)**  
Total Depth: 3213.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition:  
Test Type: Conventional Bottom Hole  
Tester: Brian Fairbank  
Unit No: 41  
Reference Elevations: 1917.00 ft (KB)  
1909.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8734 Outside**  
Press @ Run Depth: 74.87 psig @ 3157.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.04.26 End Date: 2011.04.26 Last Calib.: 2011.04.26  
Start Time: 08:34:39 End Time: 16:08:38 Time On Btm: 2011.04.26 @ 10:29:08  
Time Off Btm: 2011.04.26 @ 14:20:38

**TEST COMMENT:** 10 - IFP - BOB 6 min  
60 - ISI - no blow back  
40 - FFP - BOB 5 min  
120 - FSI - 1" blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1523.80	89.44	Initial Hydro-static
1	41.03	88.64	Open To Flow (1)
9	51.89	89.32	Shut-In(1)
71	334.19	90.96	End Shut-In(1)
72	54.97	90.88	Open To Flow (2)
109	74.87	92.09	Shut-In(2)
230	324.49	94.35	End Shut-In(2)
232	1501.21	94.76	Final Hydro-static

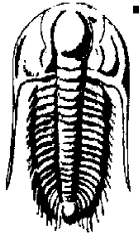
## Recovery

Length (ft)	Description	Volume (bbl)
65.00	GO & WCM 25%G, 10%O, 20%W, 45%M	0.64
45.00	GM 5%G, 95%M	0.63
0.00	150' GIP	0.00

## Gas Rates

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





**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Sam Gary  
 1515 Wynkoop St. Ste 700  
 Denver, CO  
 80202  
 ATTN: Claton Camozzi

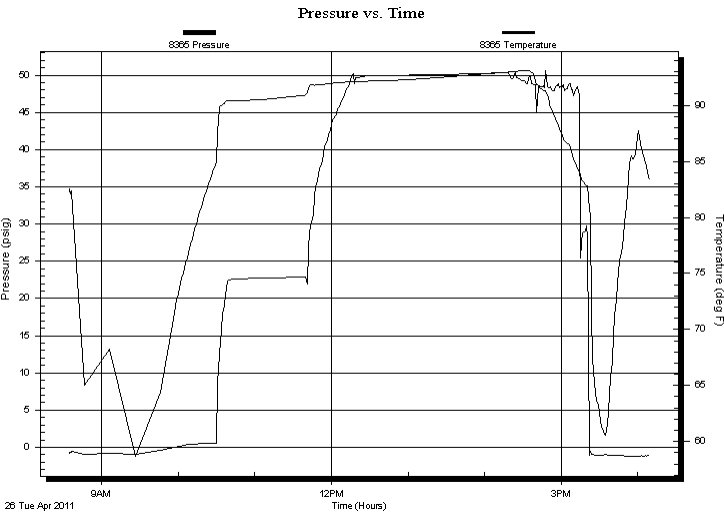
**Wagner Trust 4-1**  
**1-16-16/Rush**  
 Job Ticket: 42555 **DST#: 1**  
 Test Start: 2011.04.26 @ 08:34:38

**GENERAL INFORMATION:**

Formation: **LKC "A-C"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:30:08  
 Time Test Ended: 16:08:38  
 Interval: **3151.00 ft (KB) To 3213.00 ft (KB) (TVD)**  
 Total Depth: 3213.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches  
 Hole Condition:  
 Test Type: Conventional Bottom Hole  
 Tester: Brian Fairbank  
 Unit No: 41  
 Reference Elevations: 1917.00 ft (KB)  
 1909.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8365 Fluid**  
 Press @ Run Depth: psig @ 3116.00 ft (KB)  
 Start Date: 2011.04.26 End Date: 2011.04.26  
 Start Time: 08:34:28 End Time: 16:08:57  
 Capacity: 8000.00 psig  
 Last Calib.: 2011.04.26  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 10 - IFP - BOB 6 min  
 60 - ISI - no blow back  
 40 - FFP - BOB 5 min  
 120 - FSI - 1" blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
65.00	GO & WCM 25%G, 10%O, 20%W, 45%M	0.64
45.00	GM 5%G, 95%M	0.63
0.00	150' GIP	0.00

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Sam Gary  
1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**Wagner Trust 4-1**  
**1-16-16/Rush**  
Job Ticket: 42555      **DST#: 1**  
Test Start: 2011.04.26 @ 08:34:38

**Tool Information**

Drill Pipe:	Length: 3105.00 ft	Diameter: 3.80 inches	Volume: 43.55 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			Total Volume: 43.70 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3151.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	97.00 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	8365	Fluid	3116.00	
Blank Spacing	5.00			3121.00	
Shut In Tool	5.00			3126.00	
Sampler	3.00			3129.00	
Hydraulic tool	5.00			3134.00	
Jars	5.00			3139.00	
Safety Joint	2.00			3141.00	
Packer	5.00			3146.00	35.00      Bottom Of Top Packer
Packer	5.00			3151.00	
Stubb	1.00			3152.00	
Perforations	4.00			3156.00	
Change Over Sub	1.00			3157.00	
Recorder	0.00	8372	Inside	3157.00	
Recorder	0.00	8734	Outside	3157.00	
Blank Spacing	32.00			3189.00	
Change Over Sub	1.00			3190.00	
Perforations	20.00			3210.00	
Bullnose	3.00			3213.00	62.00      Bottom Packers & Anchor

**Total Tool Length:    97.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Sam Gary  
1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**Wagner Trust 4-1**  
**1-16-16/Rush**  
Job Ticket: 42555      **DST#: 1**  
Test Start: 2011.04.26 @ 08:34:38

### 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:	40000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6100.00 ppm			
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	GO & WCM 25%G, 10%O, 20%W, 45%M	0.638
45.00	GM 5%G, 95%M	0.631
0.00	150' GIP	0.000

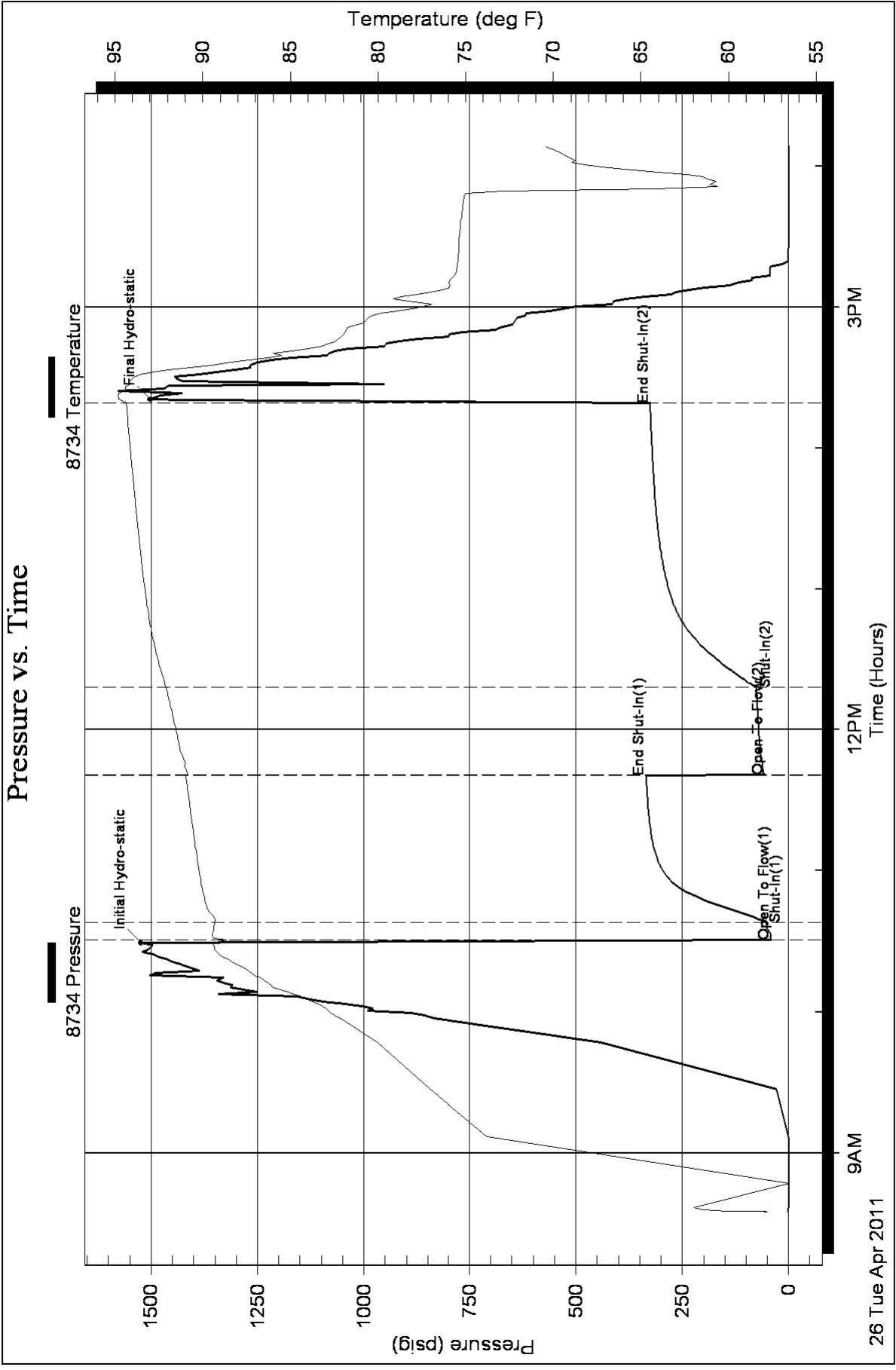
Total Length: 110.00 ft      Total Volume: 1.269 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: SAMPLER: 1200ml G, 1400ml O, 600ml M, 800ml W, 260#

### Pressure vs. Time



Serial #: 8372

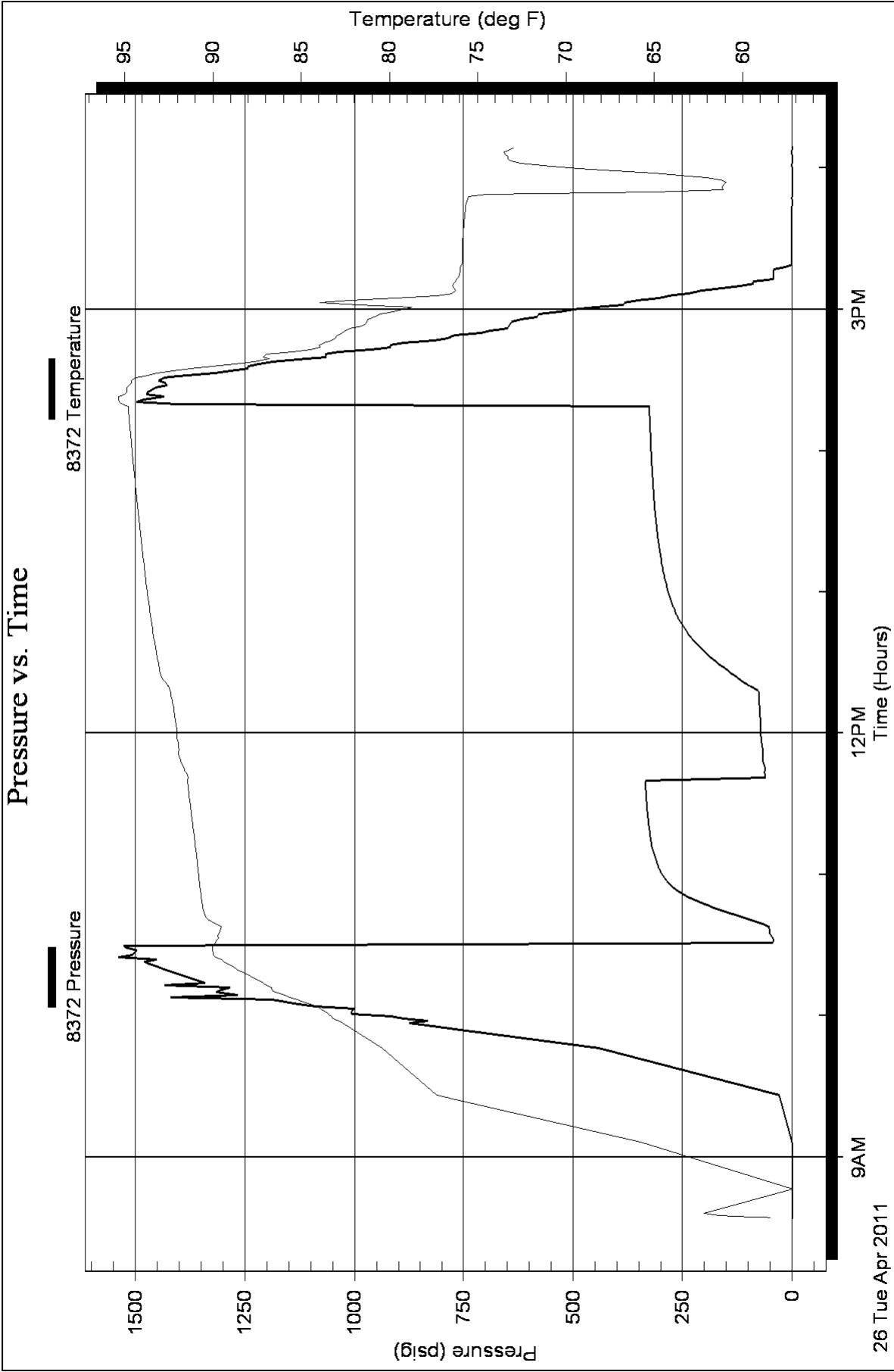
Inside

Sam Gary

1-16-16/Rush

DST Test Number: 1

### Pressure vs. Time



Serial #: 8365

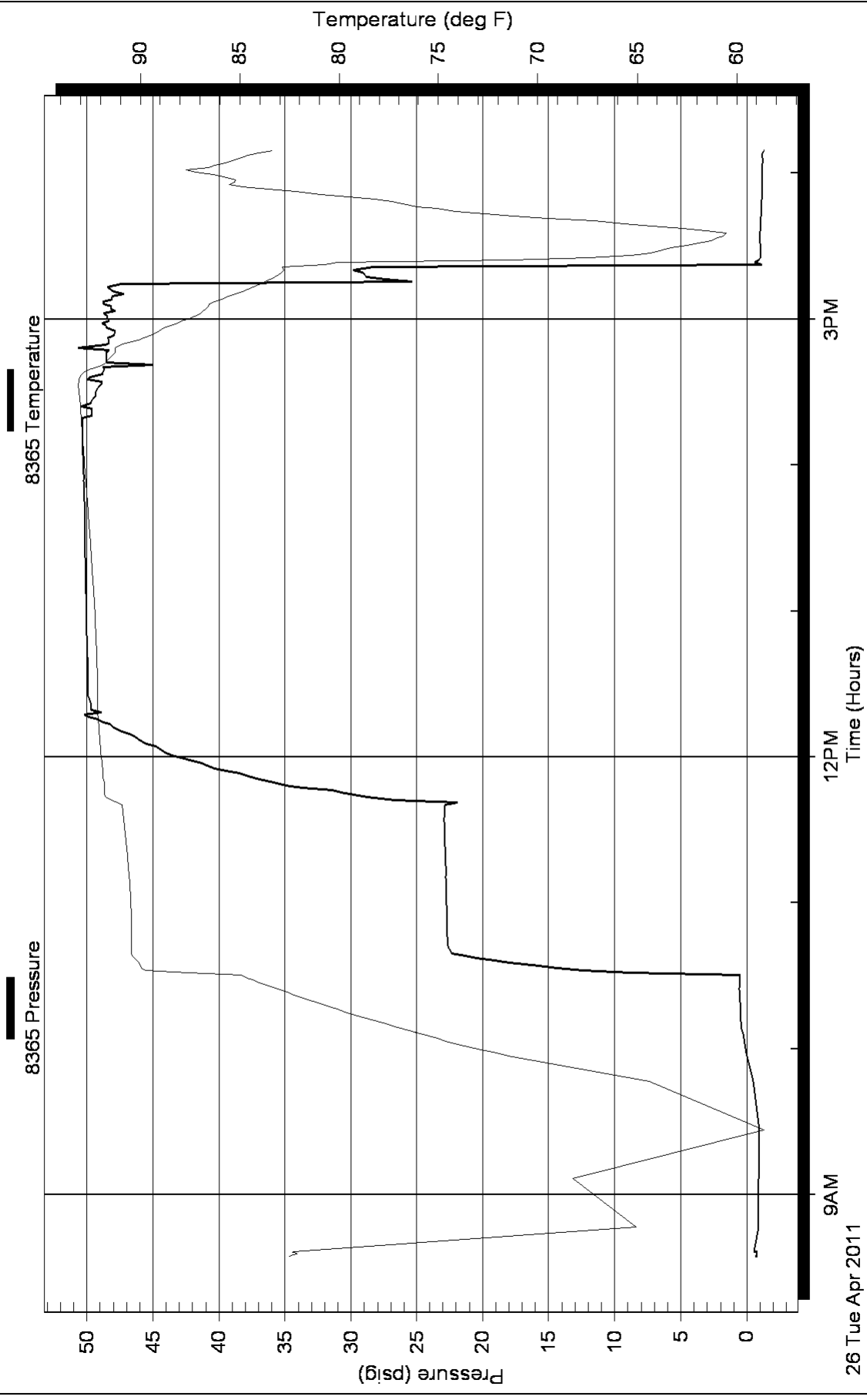
Fluid

Sam Gary

1-16-16/Rush

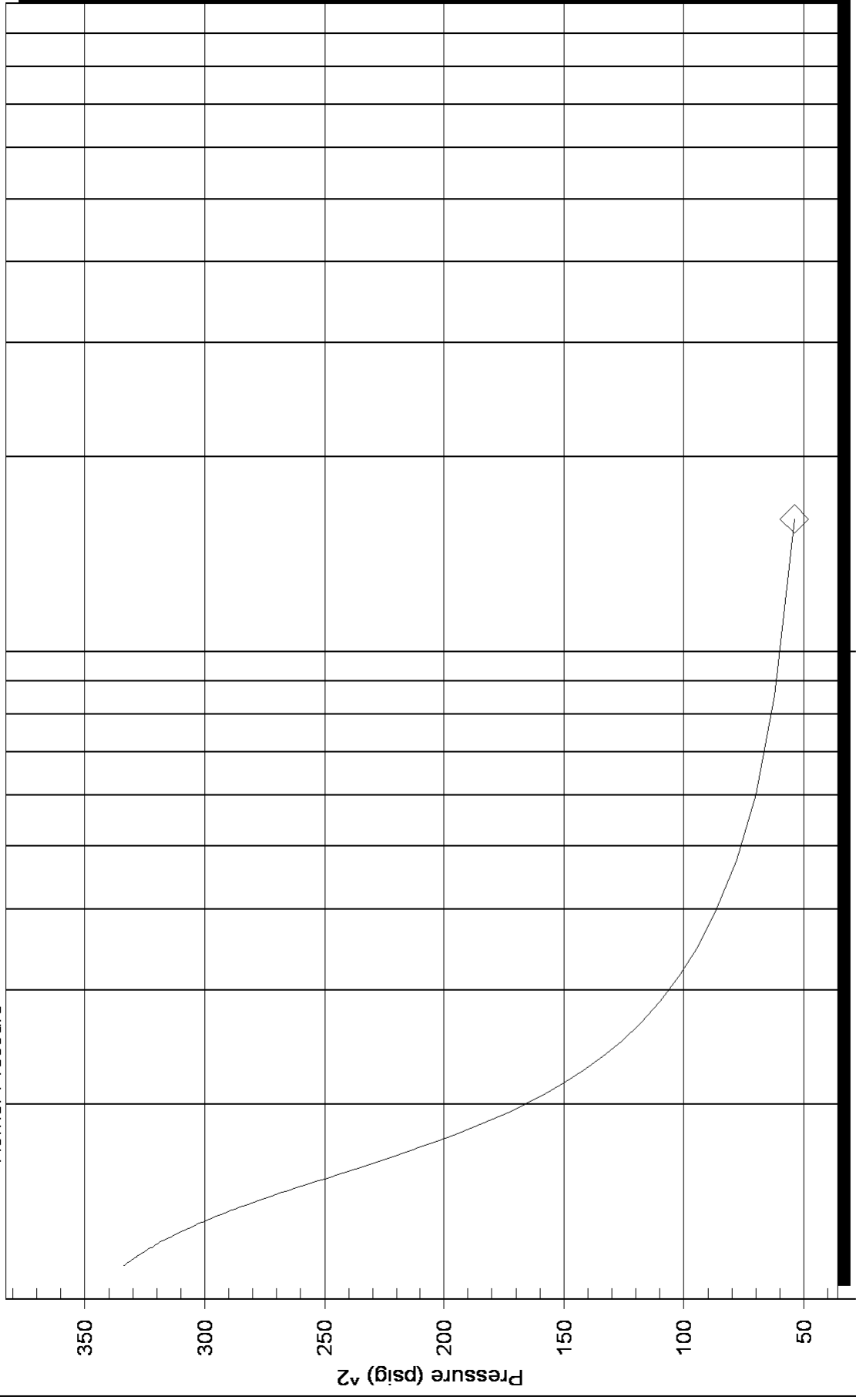
DST Test Number: 1

### Pressure vs. Time



### Homer Plot

Horner Pressure



Horner Time: (Twf + dt) / dt

Slope (m) : kpa/log cycle

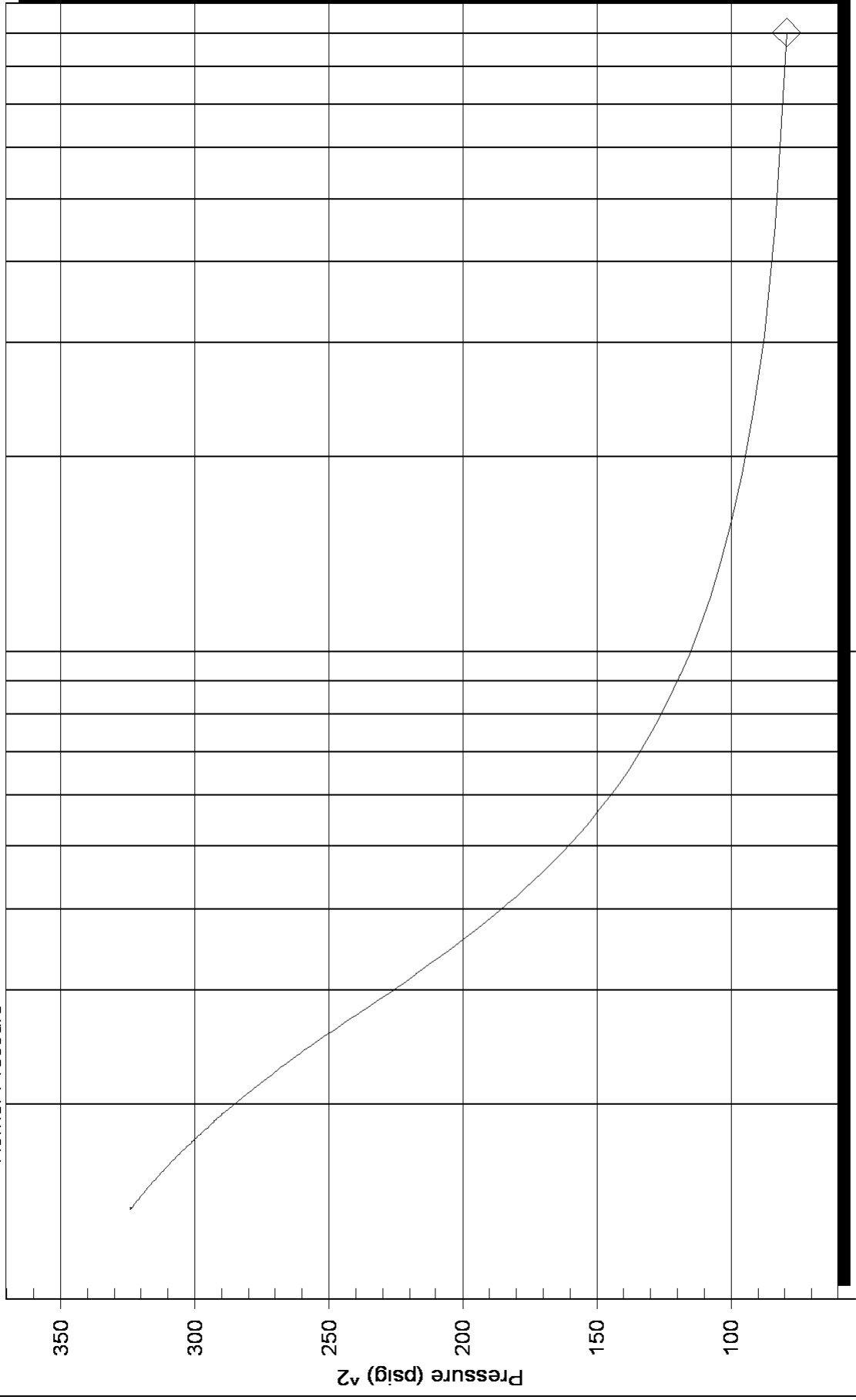
P\* :

Serial Number: 8734 (Outside)

Flow Cycle: 1

### Homer Plot

Horner Pressure



Horner Time: (Twf + dt) / dt

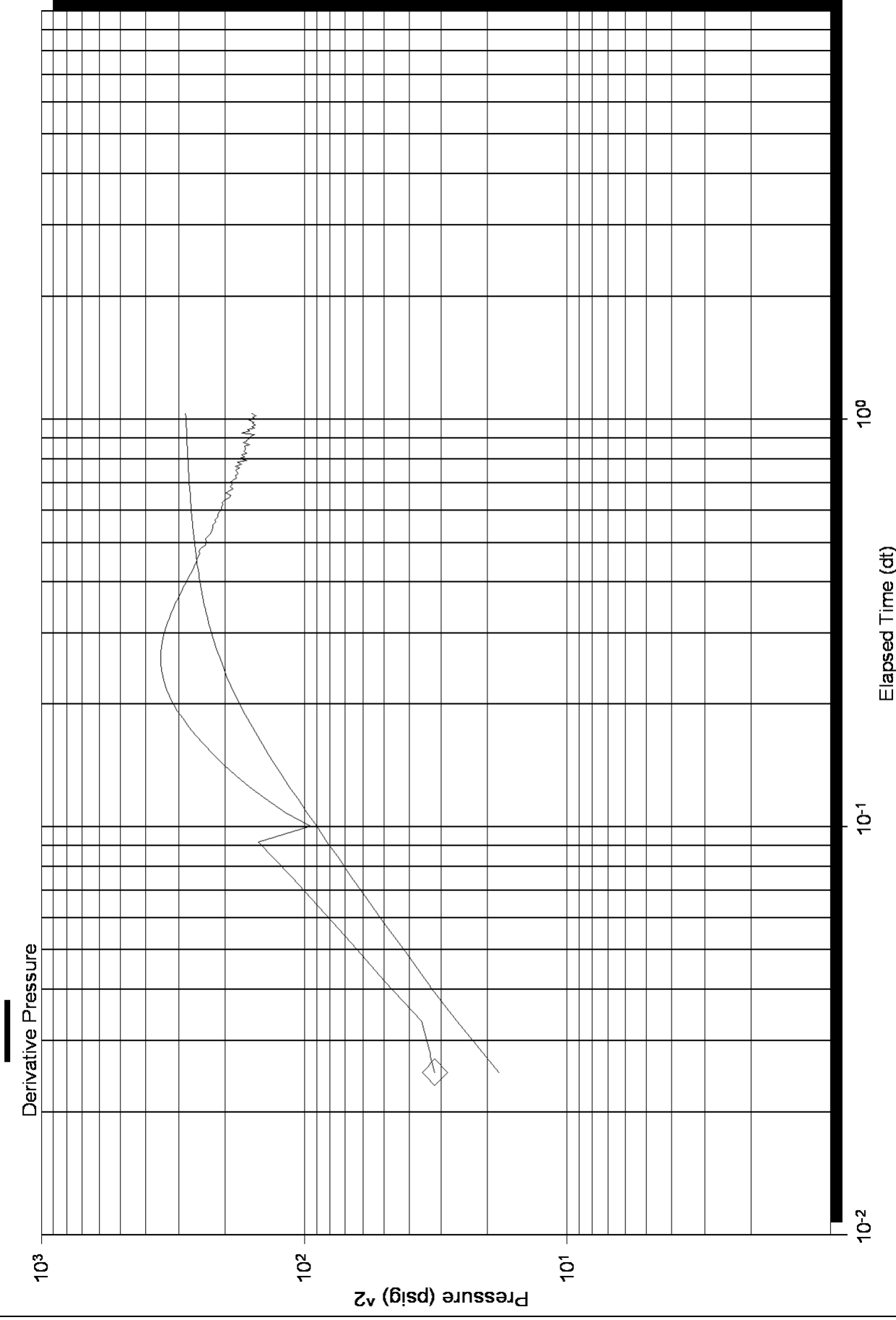
Slope (m) : kpa/log cycle

P\* :

Serial Number: 8734 (Outside)

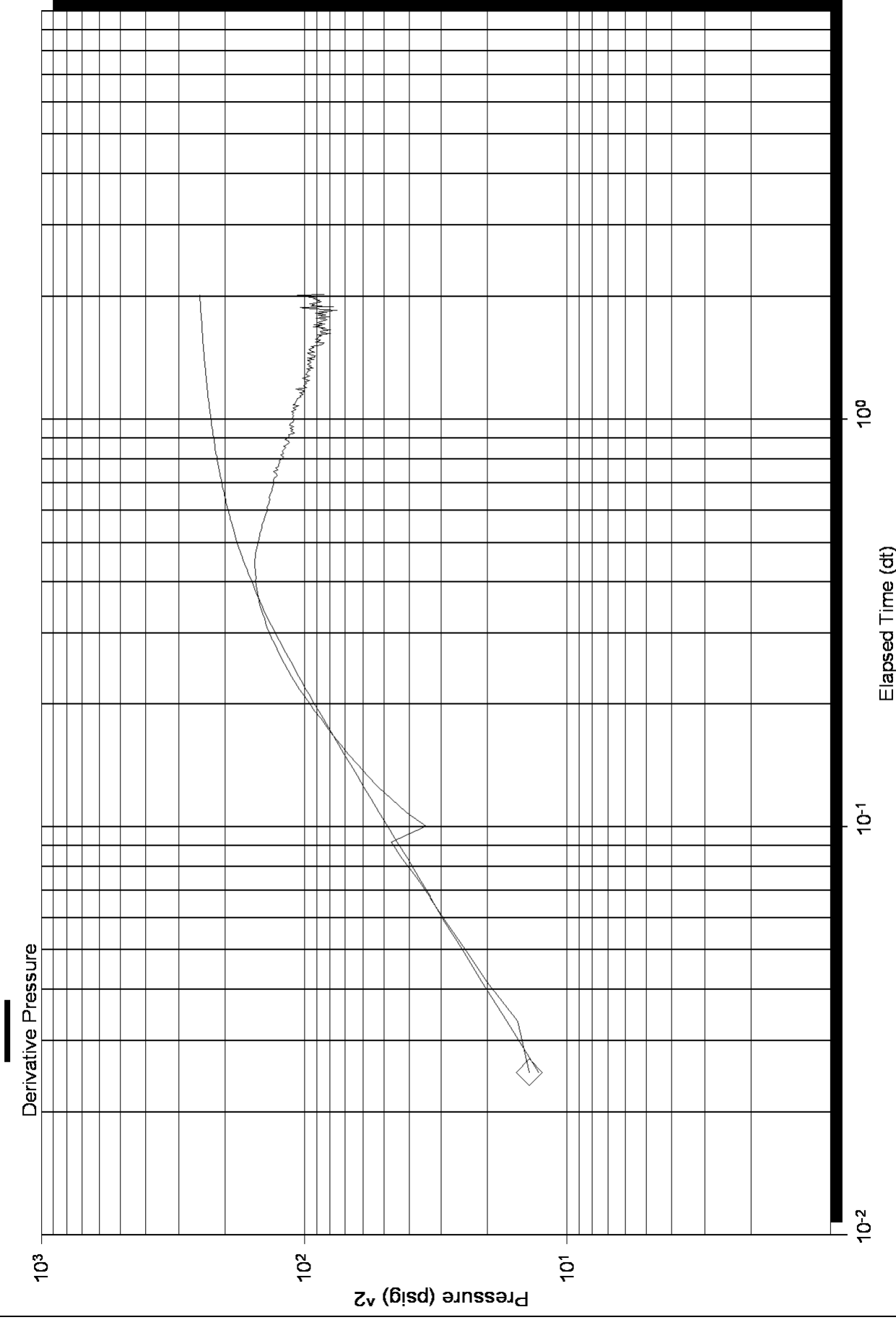
Flow Cycle: 2

# Log-Log and Pseudo-Derivative





# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. and Associates, Inc**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202

ATTN: Claton Camozzi

**1-16-16/Rush**

**Wagner Trust 4-1**

Start Date: 2011.04.27 @ 00:11:57

End Date: 2011.04.27 @ 08:01:57

Job Ticket #: 42557                      DST #: 2

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42557

**DST#: 2**

Test Start: 2011.04.27 @ 00:11:57

## GENERAL INFORMATION:

Formation: **LKC "F-G"**

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

Time Tool Opened: 01:50:27

Time Test Ended: 08:01:57

Test Type: **Conventional Bottom Hole**

Tester: **Brian Fairbank**

Unit No: **41**

**Interval: 3242.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Reference Elevations: **1917.00 ft (KB)**

Total Depth: **3290.00 ft (KB) (TVD)**

**1909.00 ft (CF)**

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

**KB to GR/CF: 8.00 ft**

**Serial #: 8734 Outside**

Press @ Run Depth: **404.38 psig @ 3250.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2011.04.27**

End Date:

**2011.04.27**

Last Calib.:

**2011.04.27**

Start Time: **00:11:58**

End Time:

**08:01:57**

Time On Btm:

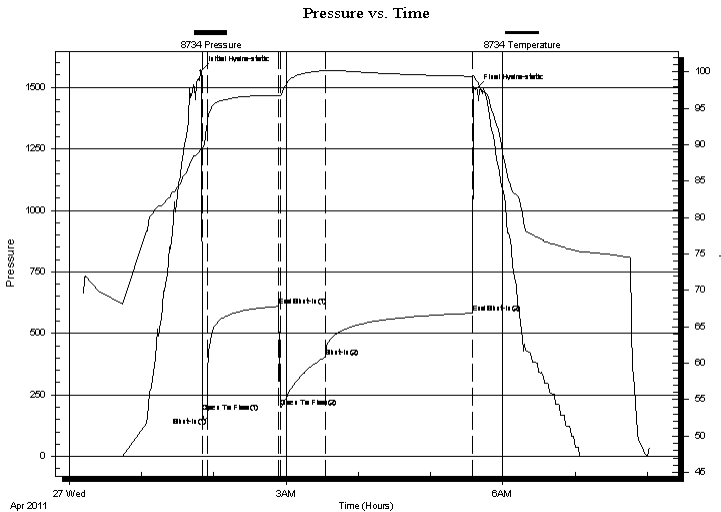
**2011.04.27 @ 01:49:27**

Time Off Btm:

**2011.04.27 @ 05:37:57**

**TEST COMMENT:** 5 - IFP - BOB 45 sec  
60 - ISI - no blow back  
40 - FFP - BOB 1 min  
120 - FSI - BOB 15 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1567.34	89.56	Initial Hydro-static
1	179.56	89.37	Open To Flow (1)
5	160.34	92.92	Shut-In(1)
65	610.30	96.80	End Shut-In(1)
66	198.61	96.71	Open To Flow (2)
104	404.38	100.17	Shut-In(2)
226	582.37	99.39	End Shut-In(2)
229	1494.20	98.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02
465.00	MW 95%W, 5%M	6.29
340.00	GM & WCO 20%G, 50%O, 25%W, 5%M	4.77
75.00	GM & OCW 40%G, 15%O, 35%W, 10%M	1.05
0.00	480' GIP	0.00
0.00	2000 G, 1000 O, 200 M, 800 W, 360 LBS	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42557

**DST#: 2**

Test Start: 2011.04.27 @ 00:11:57

**GENERAL INFORMATION:**

Formation: **LKC "F-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:50:27

Time Test Ended: 08:01:57

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

**Interval: 3242.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

**Serial #: 8365 Fluid**

Press @ Run Depth: psig @ 3207.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.27 End Date: 2011.04.27

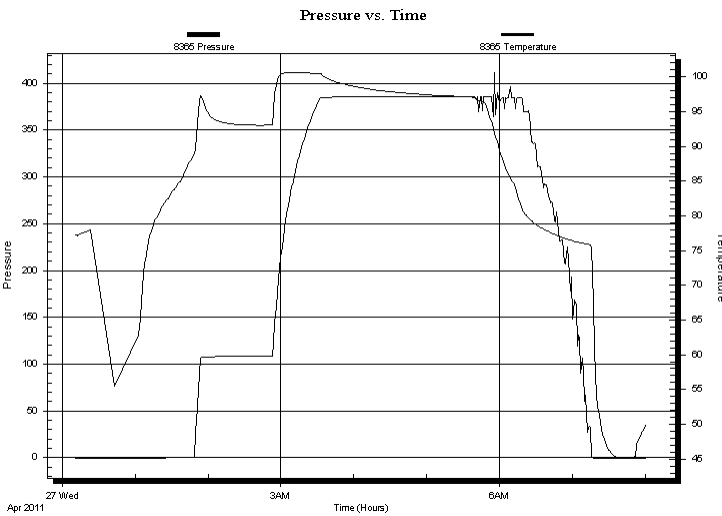
Last Calib.: 2011.04.27

Start Time: 00:11:04 End Time: 08:01:03

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 5 - IFP - BOB 45 sec  
60 - ISI - no blow back  
40 - FFP - BOB 1 min  
120 - FSI - BOB 15 min



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02
465.00	MW 95%W, 5%M	6.29
340.00	GM & WCO 20%G, 50%O, 25%W, 5%M	4.77
75.00	GM & OCW 40%G, 15%O, 35%W, 10%M	1.05
0.00	480' GIP	0.00
0.00	2000 G, 1000 O, 200 M, 800 W, 360 LBS	0.00

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42557

**DST#: 2**

Test Start: 2011.04.27 @ 00:11:57

### GENERAL INFORMATION:

Formation: **LKC "F-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:50:27

Time Test Ended: 08:01:57

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

**Interval: 3242.00 ft (KB) To 3290.00 ft (KB) (TVD)**

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

**Serial #: 8372 Inside**

Press @ Run Depth: psig @ 3250.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.27

End Date: 2011.04.27

Last Calib.: 2011.04.27

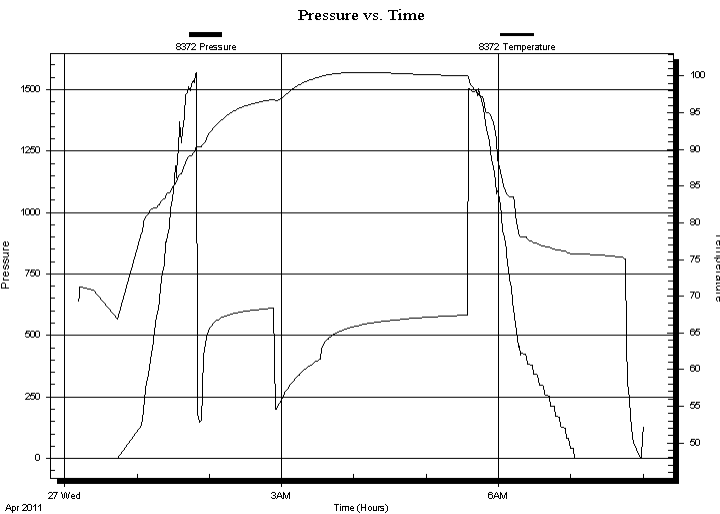
Start Time: 00:11:30

End Time: 08:01:29

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 5 - IFP - BOB 45 sec  
60 - ISI - no blow back  
40 - FFP - BOB 1 min  
120 - FSI - BOB 15 min



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.02
465.00	MW 95%W, 5%M	6.29
340.00	GM & WCO 20%G, 50%O, 25%W, 5%M	4.77
75.00	GM & OCW 40%G, 15%O, 35%W, 10%M	1.05
0.00	480' GIP	0.00
0.00	2000 G, 1000 O, 200 M, 800 W, 360 LBS	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42557

**DST#: 2**

Test Start: 2011.04.27 @ 00:11:57

## Tool Information

Drill Pipe:	Length: 3197.00 ft	Diameter: 3.80 inches	Volume: 44.85 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 45.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3242.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	83.00 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	8365	Fluid	3207.00		
Blank Spacing	5.00			3212.00		
Shut In Tool	5.00			3217.00		
Sampler	3.00			3220.00		
Hydraulic tool	5.00			3225.00		
Jars	5.00			3230.00		
Safety Joint	2.00			3232.00		
Packer	5.00			3237.00	35.00	Bottom Of Top Packer
Packer	5.00			3242.00		
Stubb	1.00			3243.00		
Perforations	6.00			3249.00		
Change Over Sub	1.00			3250.00		
Recorder	0.00	8372	Inside	3250.00		
Recorder	0.00	8734	Outside	3250.00		
Blank Spacing	31.00			3281.00		
Change Over Sub	1.00			3282.00		
Perforations	5.00			3287.00		
Bullnose	3.00			3290.00	48.00	Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42557

**DST#: 2**

Test Start: 2011.04.27 @ 00:11:57

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 53.00 sec/qt  
Water Loss: 7.98 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6100.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 105000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%	0.025
465.00	MW 95%W, 5%M	6.295
340.00	GM & WCO 20%G, 50%O, 25%W, 5%M	4.769
75.00	GM & OCW 40%G, 15%O, 35%W, 10%M	1.052
0.00	480' GIP	0.000
0.00	2000 G, 1000 O, 200 M, 800 W, 360 LBS	0.000

Total Length: 885.00 ft      Total Volume: 12.141 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

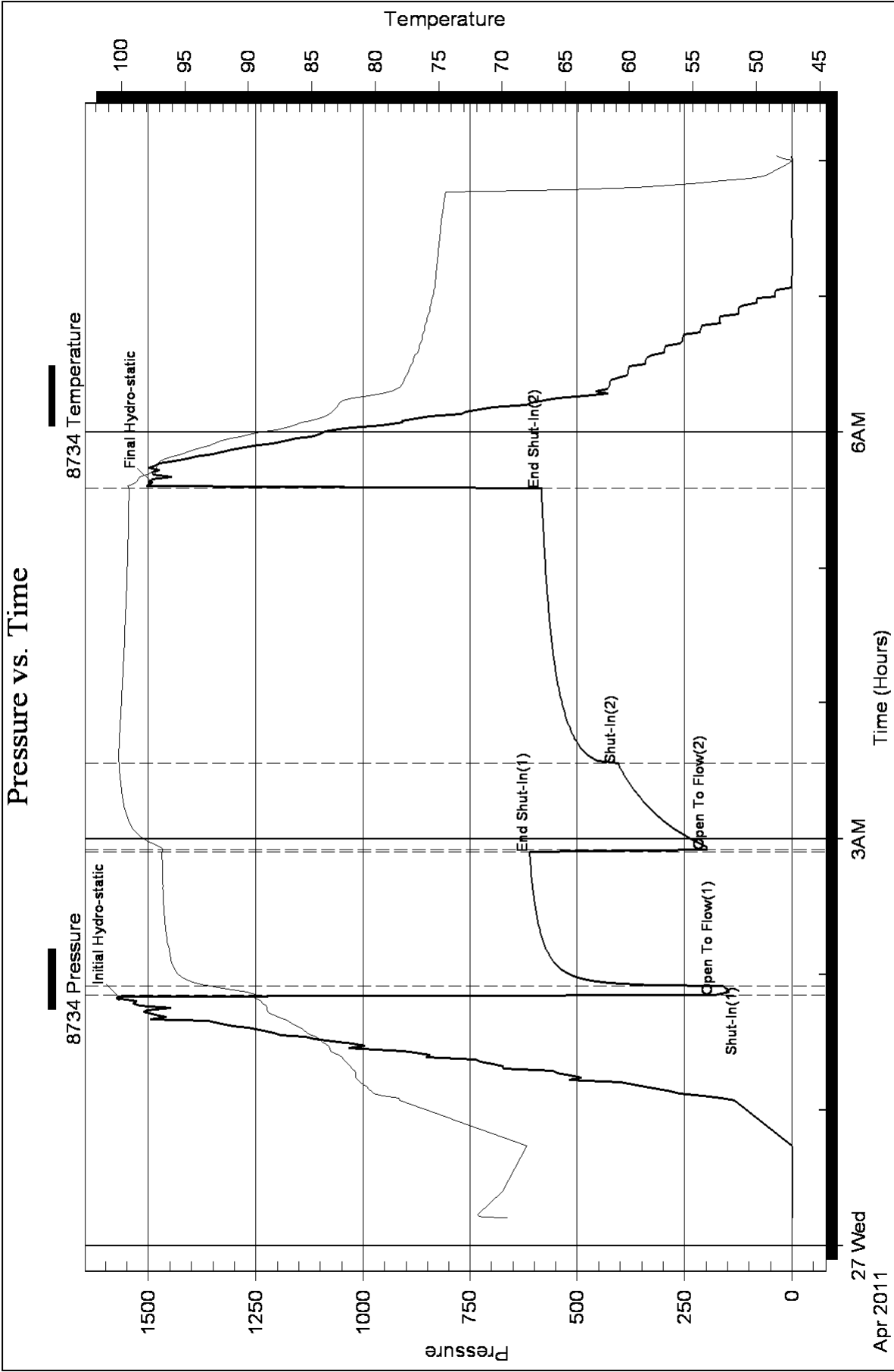
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





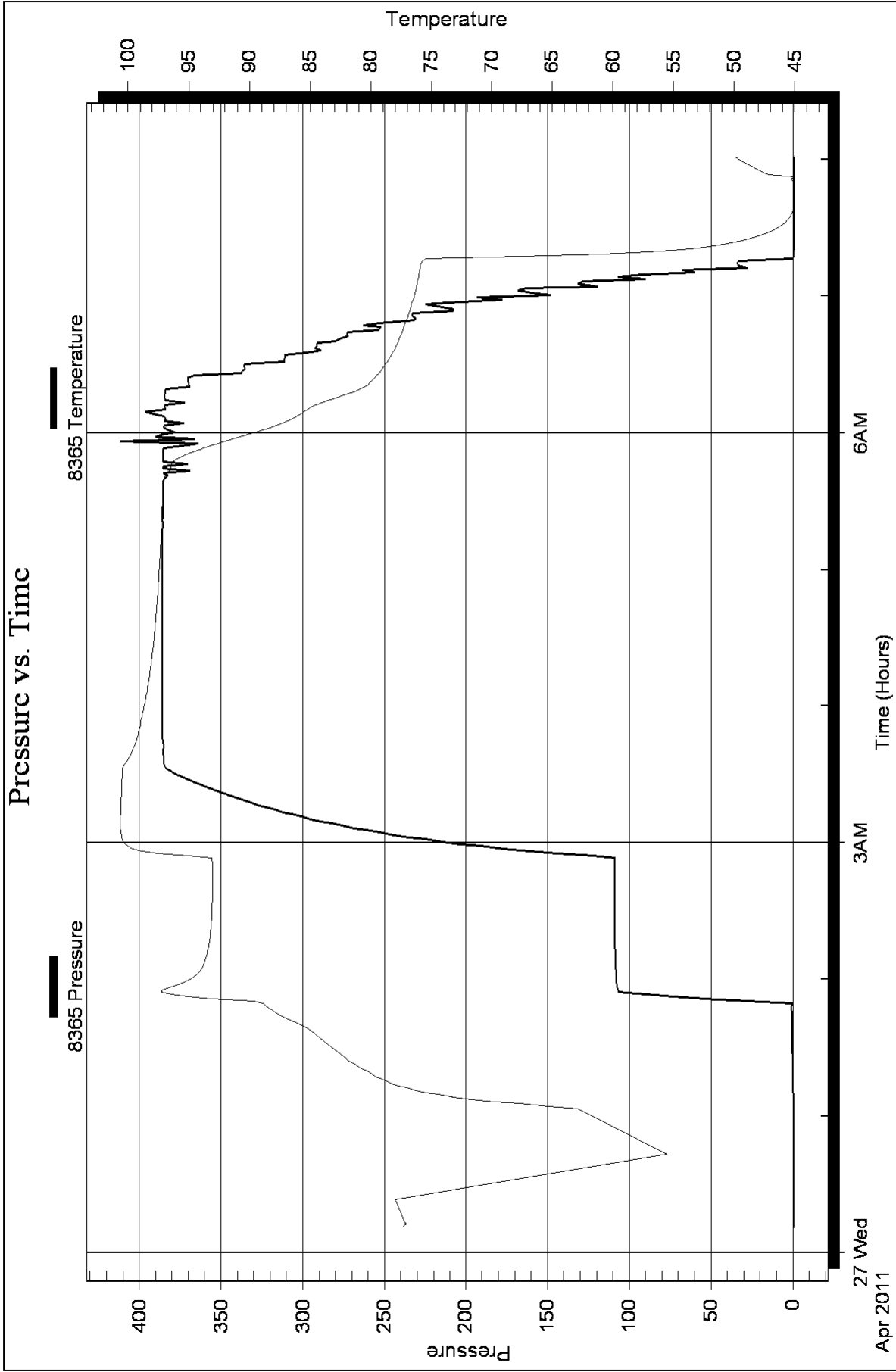
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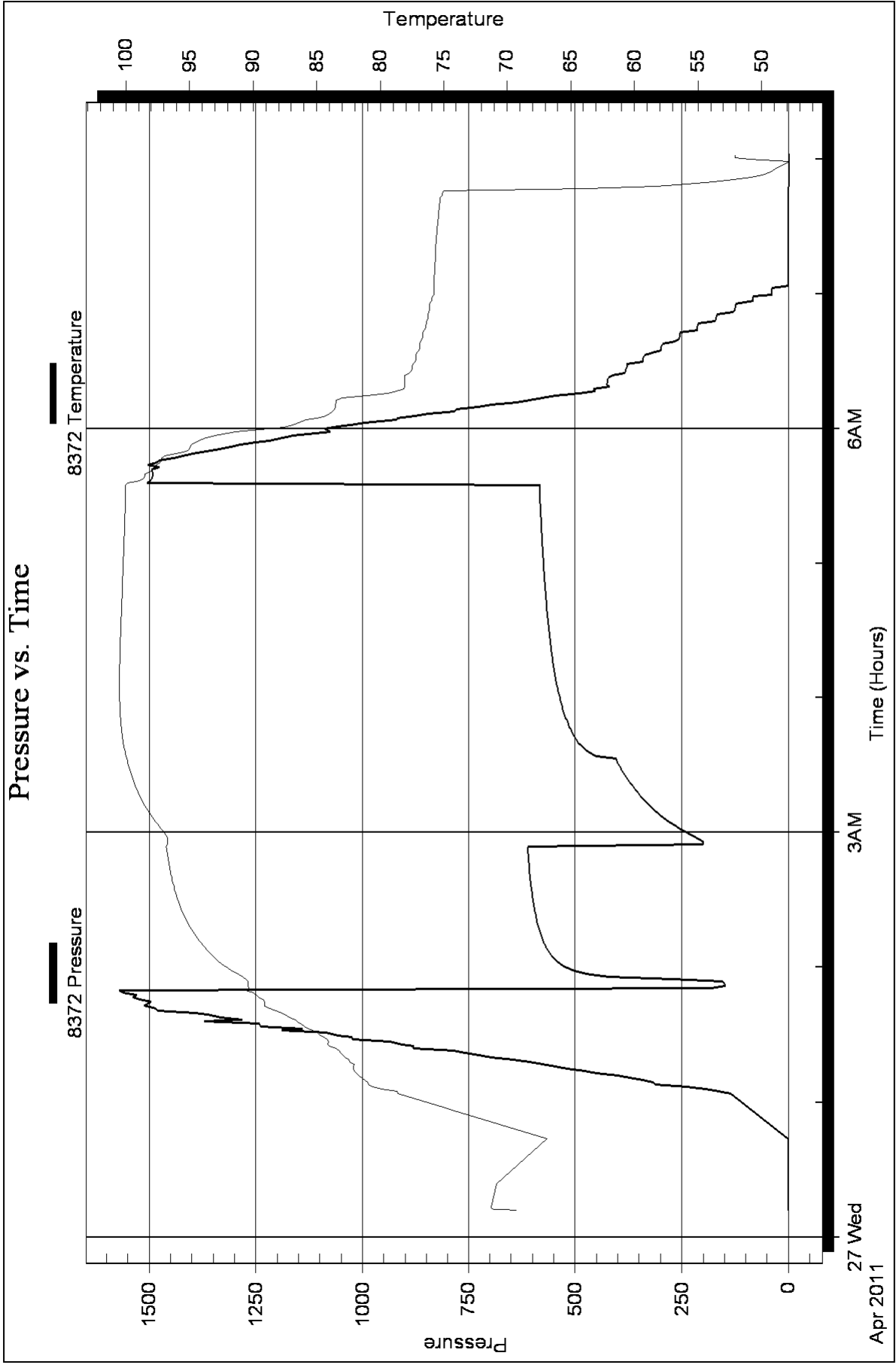
Fluid

Samuel Gary Jr. and Associates, Inc

1-16-16/Rush

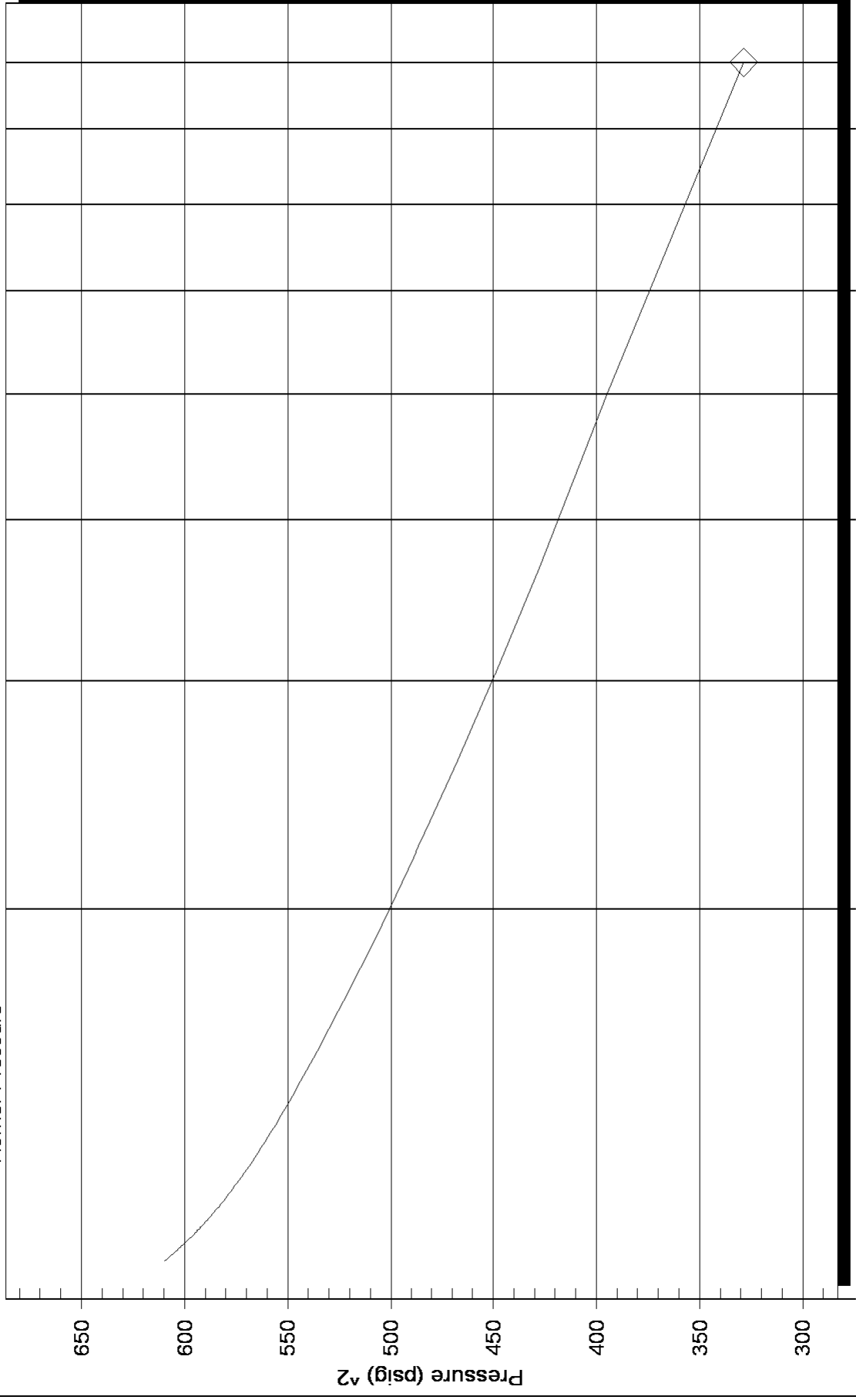
DST Test Number: 2





### Homer Plot

Horner Pressure



Horner Time: (T<sub>wf</sub> + dt) / dt

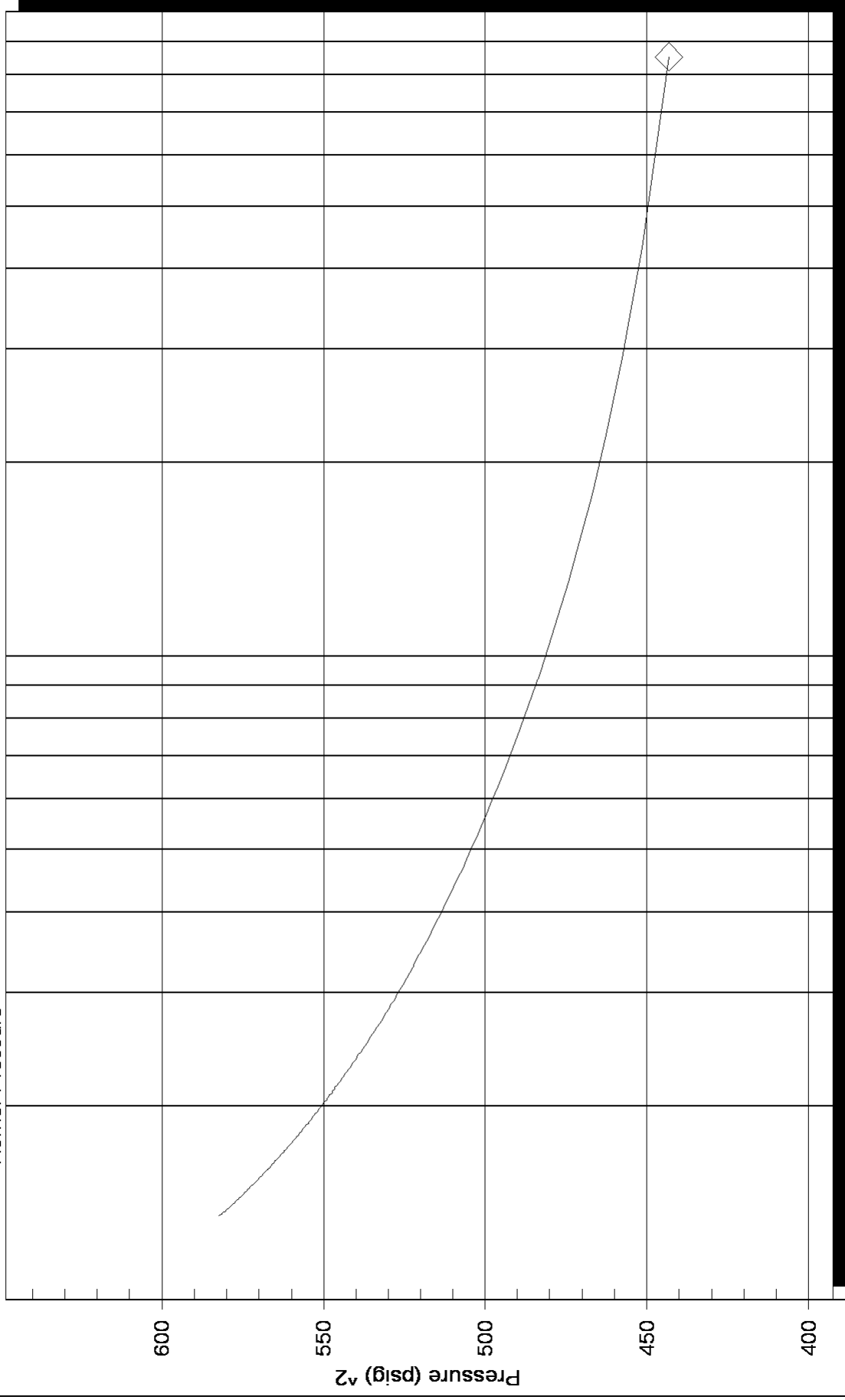
P\* : Slope (m) : kpa/log cycle

Flow Cycle: 1

Serial Number: 8734 (Outside)

### Homer Plot

Horner Pressure



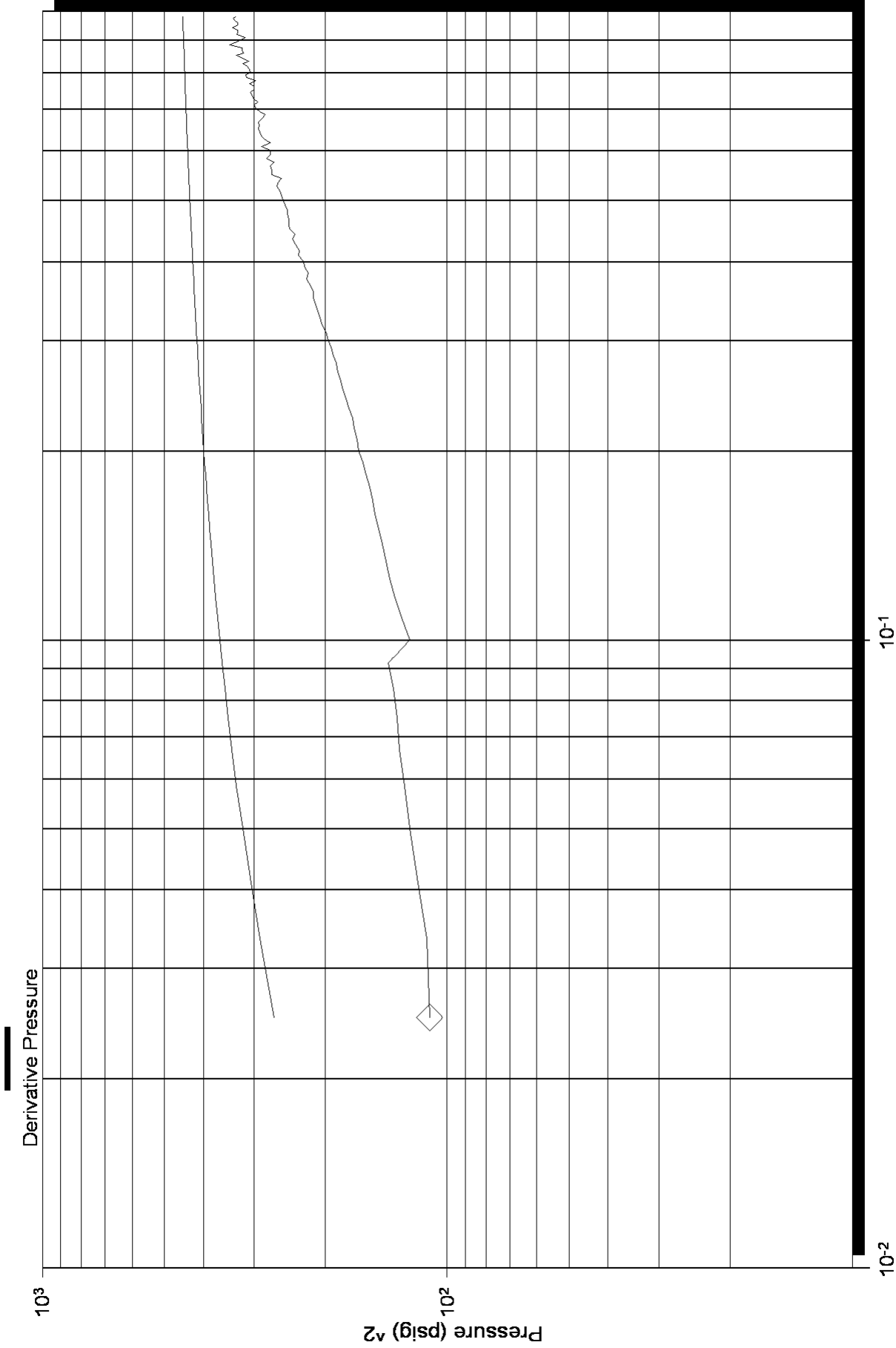
Horner Time:  $(T_{wf} + dt) / dt$

Slope (m) : kpa/log cycle

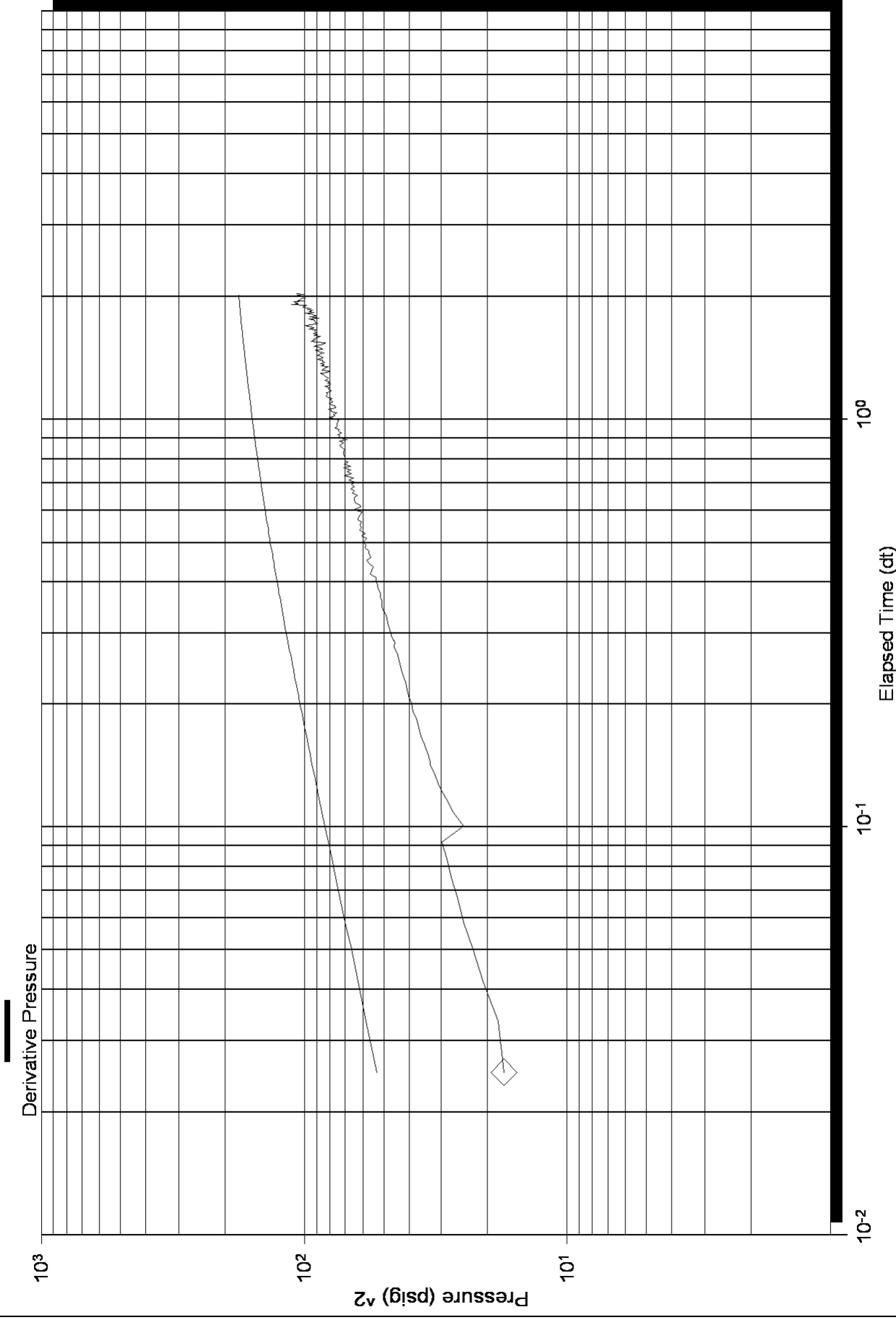
Serial Number: 8734 (Outside)

Flow Cycle: 2

# Log-Log and Pseudo-Log-Derivative



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. and Associates, Inc**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202

ATTN: Claton Camozzi

**1-16-16/Rush**

**Wagner Trust 4-1**

Start Date: 2011.04.27 @ 20:01:52

End Date: 2011.04.28 @ 03:23:52

Job Ticket #: 42558                      DST #: 3

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
 Denver, CO  
 80202  
 ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42558

**DST#: 3**

Test Start: 2011.04.27 @ 20:01:52

## GENERAL INFORMATION:

Formation: **LKC "I-K"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:41:52  
 Time Test Ended: 03:23:52  
 Interval: **3334.00 ft (KB) To 3401.00 ft (KB) (TVD)**  
 Total Depth: 3401.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition:  
 Test Type: Conventional Bottom Hole  
 Tester: Brian Fairbank  
 Unit No: 41  
 Reference Elevations: 1917.00 ft (KB)  
 1909.00 ft (CF)  
 KB to GR/CF: 8.00 ft

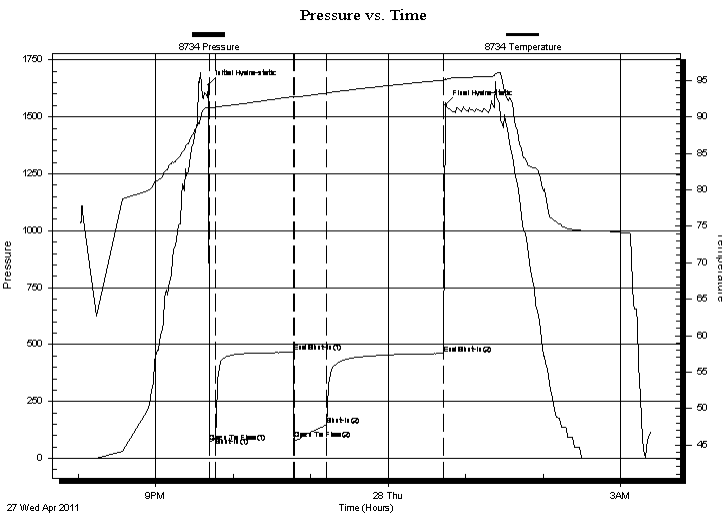
## Serial #: 8734

**Outside**

Press @ Run Depth: 145.86 psig @ 3341.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.04.27 End Date: 2011.04.28 Last Calib.: 2011.04.28  
 Start Time: 20:01:53 End Time: 03:23:52 Time On Btm: 2011.04.27 @ 21:40:52  
 Time Off Btm: 2011.04.28 @ 00:44:22

**TEST COMMENT:** 5 - IFP - BOB 1 1/2 min  
 60 - ISI - 1" blow back - died 10 min  
 25 - FFP - BOB 1 min  
 90 - FSI - BOB 6 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.46	91.38	Initial Hydro-static
1	72.72	91.10	Open To Flow (1)
5	91.16	91.32	Shut-In(1)
66	465.44	92.77	End Shut-In(1)
67	84.54	92.72	Open To Flow (2)
91	145.86	93.24	Shut-In(2)
182	460.36	95.04	End Shut-In(2)
184	1553.00	95.15	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	MO 85%O, 15%M	0.99
190.00	FREE OIL 95%O, 5%M	2.67
45.00	HOCM 40%O, 60%M	0.63
0.00	1720' GIP	0.00
0.00	G 1800, O 2000, M 200 350 LBS	0.00

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42558

**DST#: 3**

Test Start: 2011.04.27 @ 20:01:52

## GENERAL INFORMATION:

Formation: **LKC "I-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:41:52

Time Test Ended: 03:23:52

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

**Interval: 3334.00 ft (KB) To 3401.00 ft (KB) (TVD)**

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3401.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

**Serial #: 8365 Fluid**

Press @ RunDepth: psig @ 3299.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.27

End Date:

2011.04.28

Last Calib.:

2011.04.28

Start Time: 20:01:25

End Time:

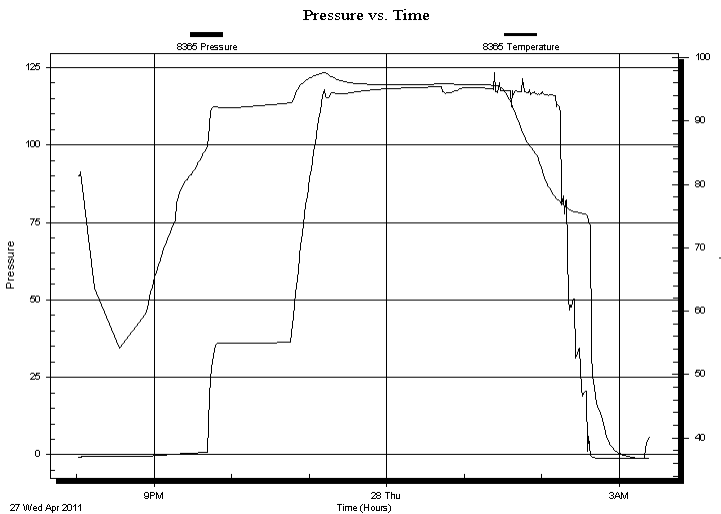
03:23:24

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 5 - IFP - BOB 1 1/2 min  
60 - ISI - 1" blow back - died 10 min  
25 - FFP - BOB 1 min  
90 - FSI - BOB 6 min

## PRESSURE SUMMARY



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

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
90.00	MO 85%O, 15%M	0.99
190.00	FREE OIL 95%O, 5%M	2.67
45.00	HOCM 40%O, 60%M	0.63
0.00	1720' GIP	0.00
0.00	G 1800, O 2000, M 200 350 LBS	0.00

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42558

**DST#: 3**

Test Start: 2011.04.27 @ 20:01:52

## Tool Information

Drill Pipe:	Length: 3292.00 ft	Diameter: 3.80 inches	Volume: 46.18 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 53000.00 lb
			<u>Total Volume: 46.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3334.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	102.00 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	8365	Fluid	3299.00		
Blank Spacing	5.00			3304.00		
Shut In Tool	5.00			3309.00		
Sampler	3.00			3312.00		
Hydraulic tool	5.00			3317.00		
Jars	5.00			3322.00		
Safety Joint	2.00			3324.00		
Packer	5.00			3329.00	35.00	Bottom Of Top Packer
Packer	5.00			3334.00		
Stubb	1.00			3335.00		
Perforations	5.00			3340.00		
Change Over Sub	1.00			3341.00		
Recorder	0.00	8372	Inside	3341.00		
Recorder	0.00	8734	Outside	3341.00		
Blank Spacing	31.00			3372.00		
Change Over Sub	1.00			3373.00		
Perforations	25.00			3398.00		
Bullnose	3.00			3401.00	67.00	Bottom Packers & Anchor

**Total Tool Length: 102.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Samuel Gary Jr. and Associates, Inc

**Wagner Trust 4-1**

1515 Wynkoop St. Ste 700  
Denver, CO  
80202  
ATTN: Claton Camozzi

**1-16-16/Rush**

Job Ticket: 42558

**DST#: 3**

Test Start: 2011.04.27 @ 20:01:52

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 42 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.19 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 7300.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

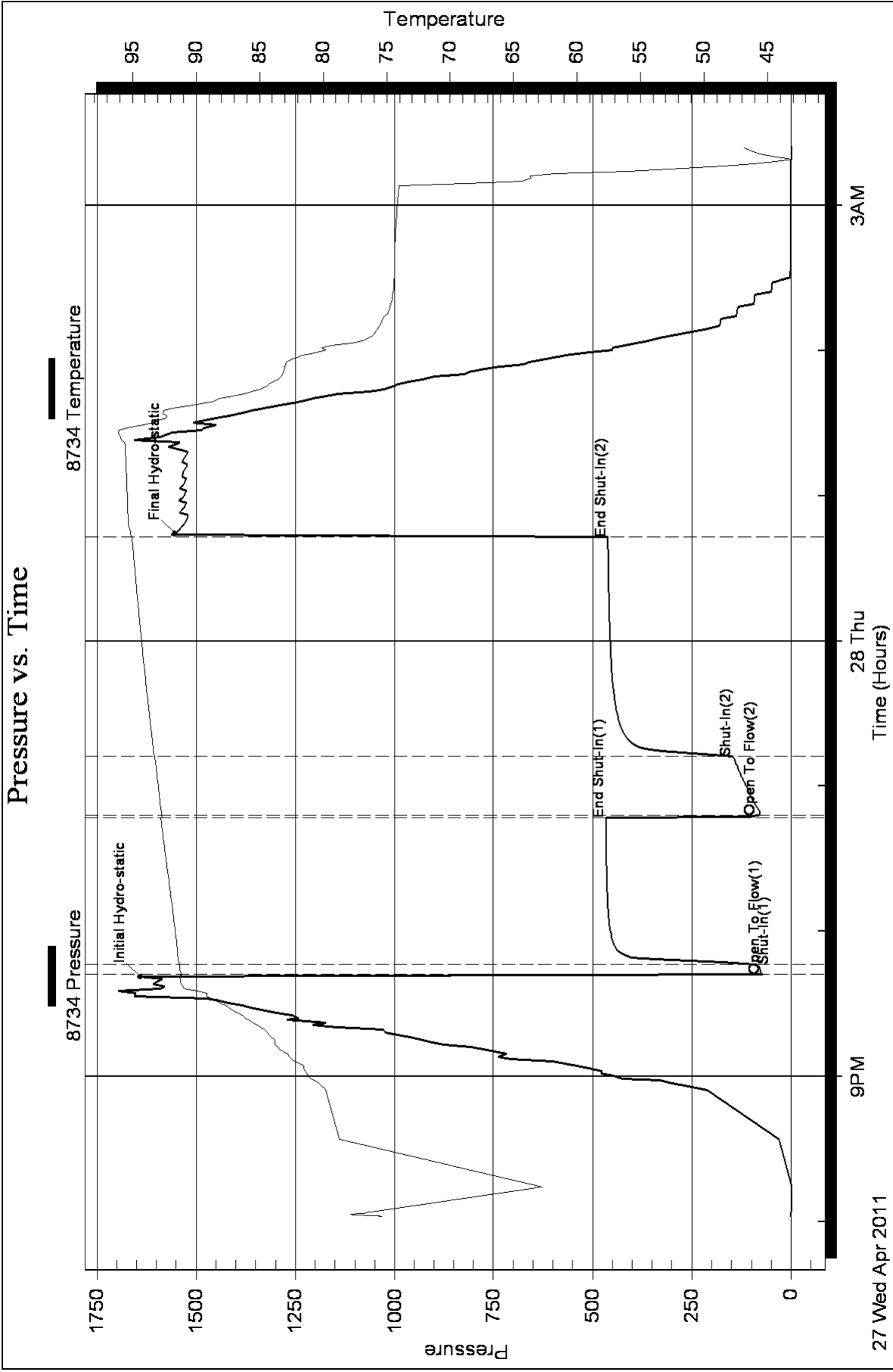
Length ft	Description	Volume bbl
90.00	MO 85%O, 15%M	0.989
190.00	FREE OIL 95%O, 5%M	2.665
45.00	HOCM 40%O, 60%M	0.631
0.00	1720' GIP	0.000
0.00	G 1800, O 2000, M 200 350 LBS	0.000

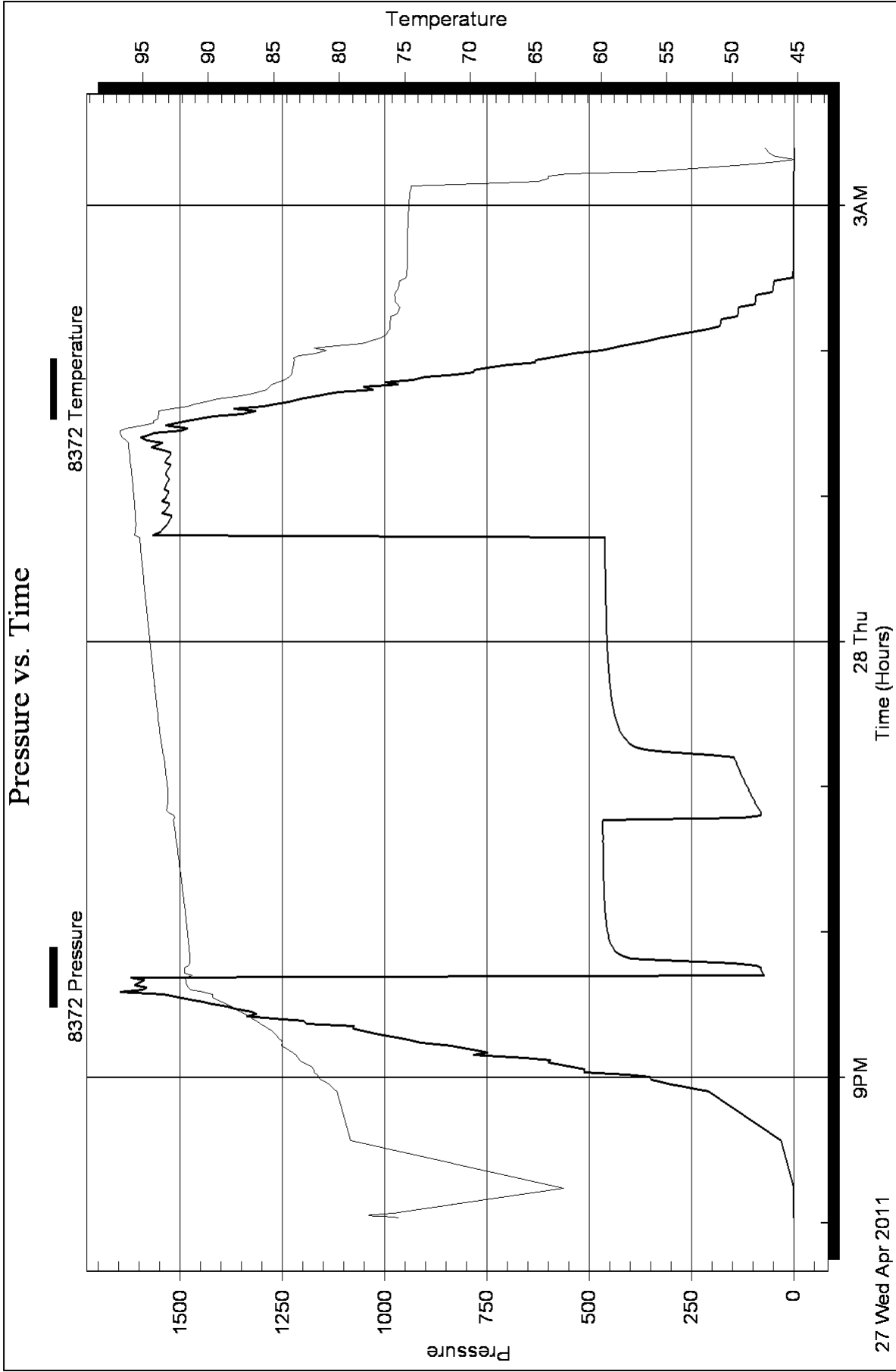
Total Length: 325.00 ft      Total Volume: 4.285 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:





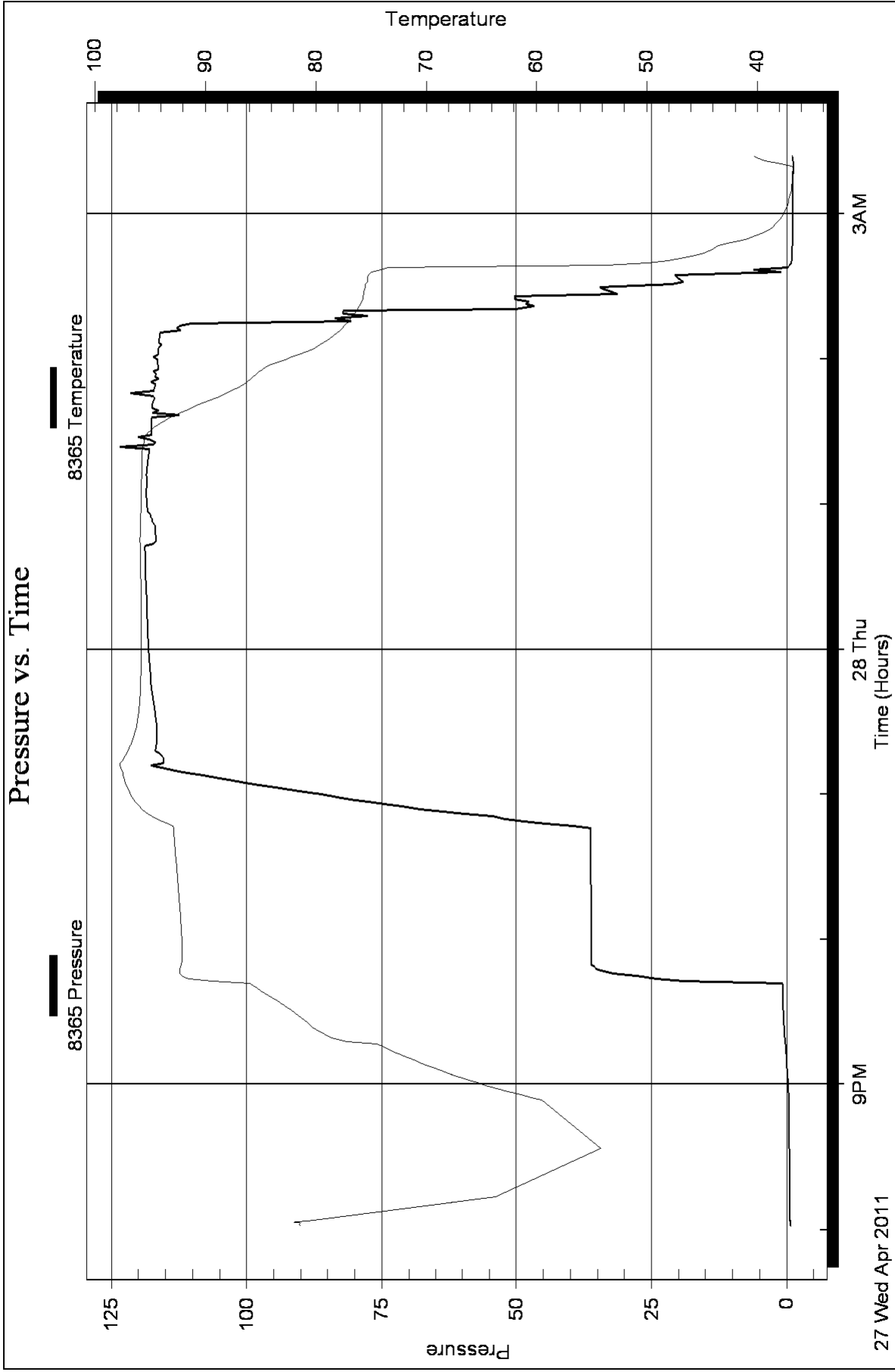
Serial #: 8365

Fluid

Samuel Gary Jr. and Associates, Inc

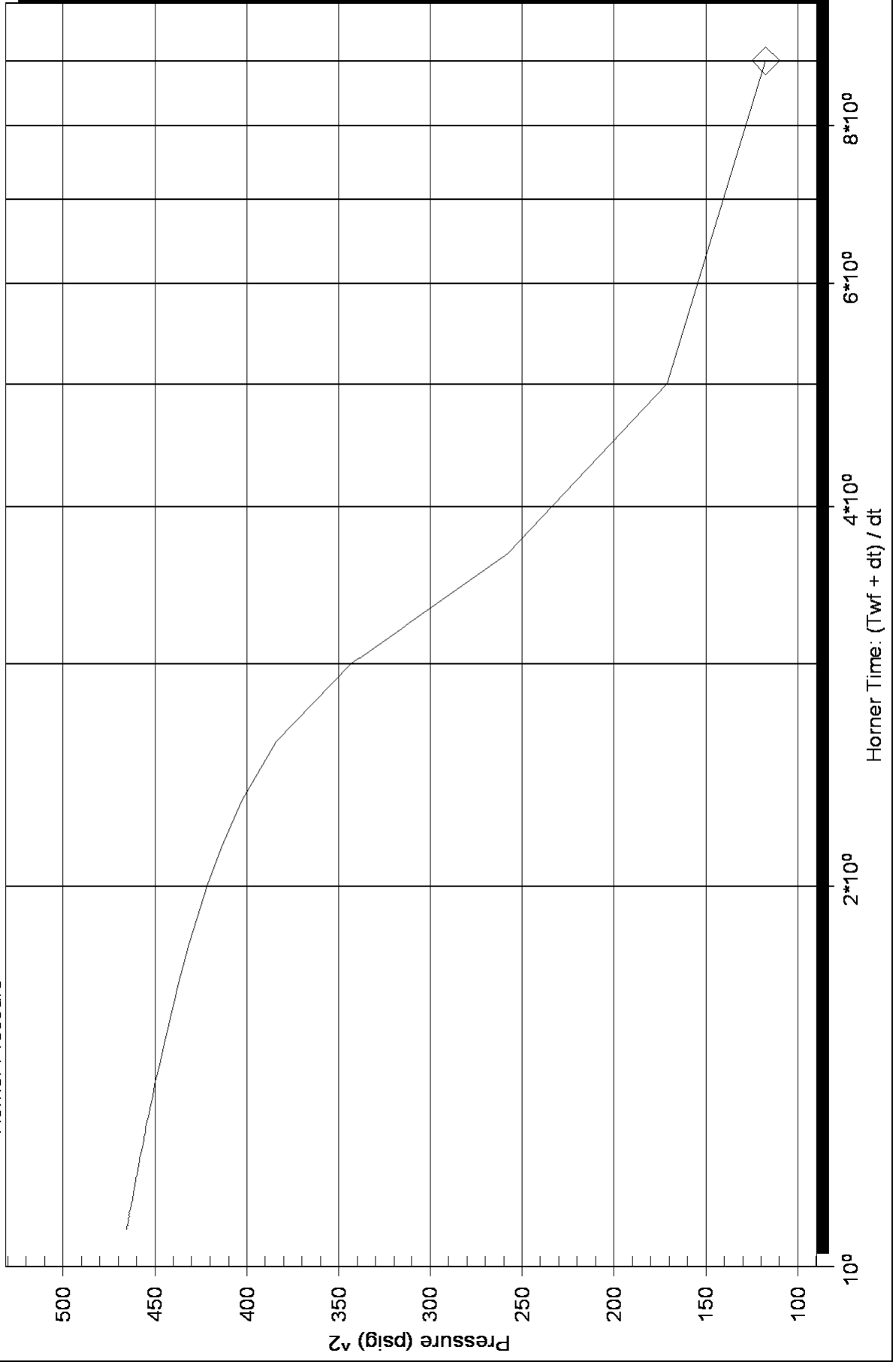
1-16-16/Rush

DST Test Number: 3



### Homer Plot

Horner Pressure



Serial Number: 8734 (Outside)

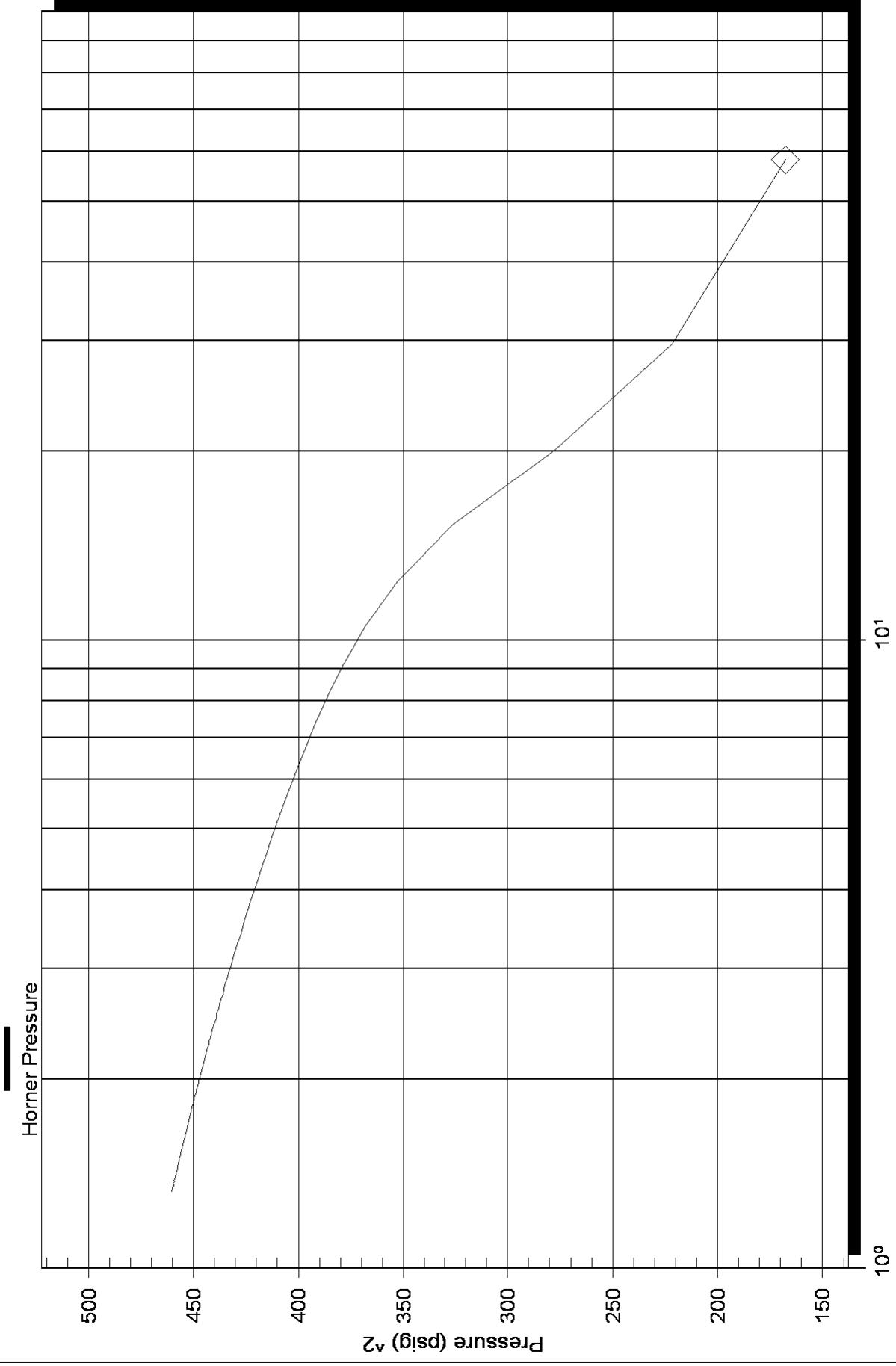
P\* :

Slope (m) : kpa/log cycle

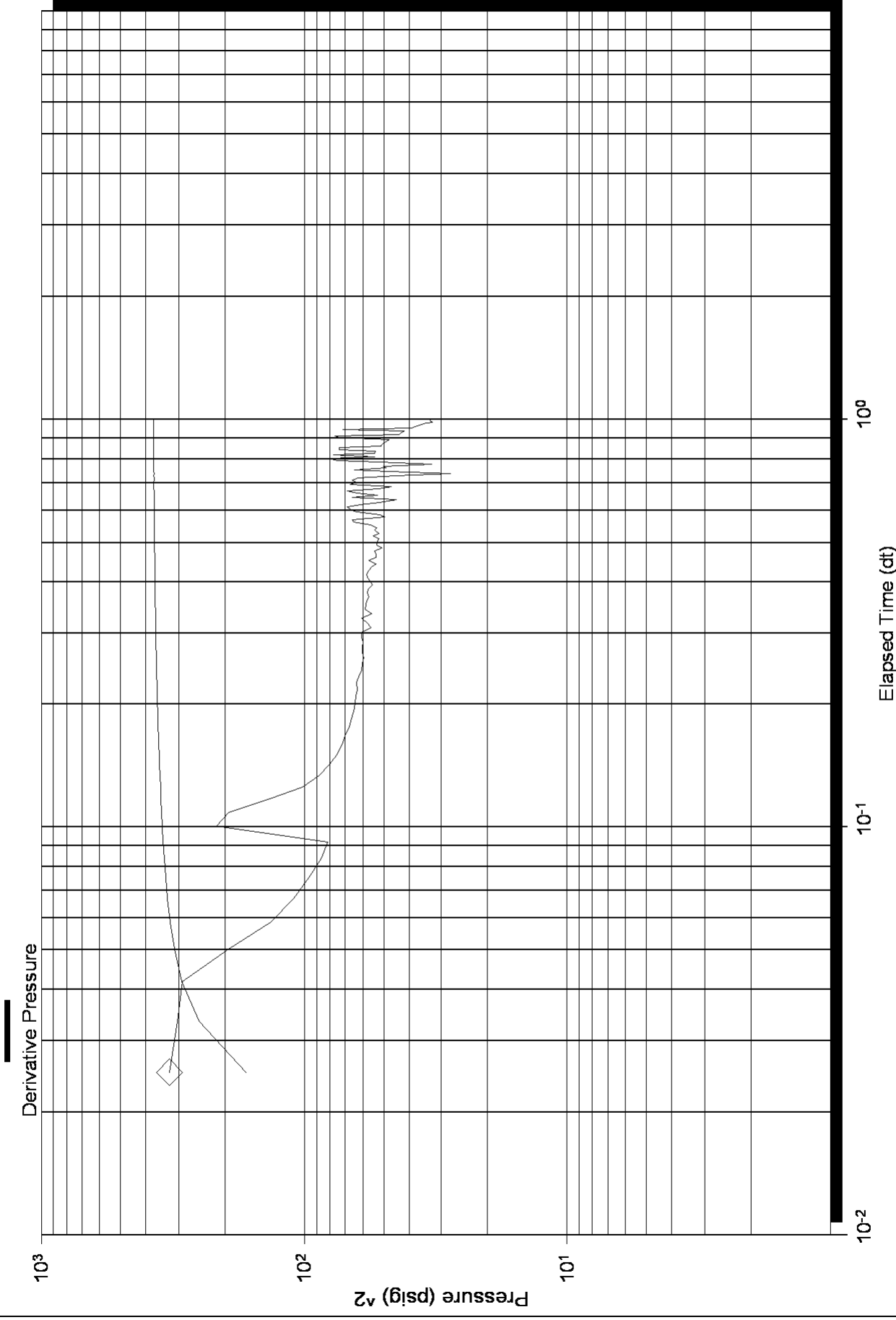
Flow Cycle: 1



### Homer Plot



# Log-Log and Pseudo-Derivative



# Log-Log and Pseudo-Derivative

