



**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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_- Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

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

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1047365

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
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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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	YARMER ET AL 1-3
Doc ID	1047365

All Electric Logs Run

MICRO-RESISTIVITY LOG
COMPENSATED SONIC W/ INTEGRATED TRANSIT TIMES
ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG
COMPACT PHOTO DENSITY COMPENSATED NEUTRON LOG



*Mark Parkinson, Governor  
Thomas E. Wright, Chairman  
Joseph F. Harkins, Commissioner  
Ward Loyd, Commissioner*

November 23, 2010

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

Re: ACO1  
API 15-165-21891-00-00  
YARMER ET AL 1-3  
NE/4 Sec.03-17S-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.**

740 West Wichita Ave, Russell KS 67665  
 Phone: 785 324 1041 Fax: 785 483 1087  
 Email: [Cementing@ruraltel.net](mailto:Cementing@ruraltel.net)  
 Pratt Location 620 388 5422

Date: 8/4/2010  
 Invoice # 4099

P.O.#:  
 Due Date: 9/3/2010  
 Division:

# Invoice

**Contact:**

Samuel Gary Jr & Associates Inc  
 Address/Job Location:  
 Samuel Gary Jr & Associates Inc  
 P.O. BOX 448  
 RUSSELL KS 67665

**Reference:**

YARMER ET AL 1-3

**Description of Work:**

DRLG  COMP  W/O  LOE  
 AFE # \_\_\_\_\_  
 ACCT. # 8200-138  
 APPROVED BY KIS

Services / Items Included:	Quantity	Price	Item	Quantity	Price
Surface Job	1	\$0.00			
Distance from Job location to Nearest Camp	32	\$251.59	8 5/8" Top Rubber Plug	1	\$91.66
Premium Gel (Bentonite)	8	\$112.62	8 5/8" Centralizer	3	\$166.03
Flo Seal	100	\$172.95	8 5/8" Basket	3	\$819.77
Common-Class A	400	\$4,046.96			
Calcium Chloride	14	\$0.00			
Distance from Job location to Nearest Bulk Plant	32	\$147.22			
Truck Material-Material Service Charge	422	\$664.91			
Baffle Plate Aluminum, 8 5/8"	1	\$77.83			

**Invoice Terms:**

Net 30

Labor: \$548.34

Quoted by: Dave Funk

SubTotal: \$ 8,228.85

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,234.33)

Total: \$ 6,994.53

Tax: \$ 560.74

**\$ 7,555.27**

Applied Payments:

**Balance Due: \$ 7,555.27**

**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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**RECEIVED**

AUG 23 2010

SAMUEL GARY JR.  
 & ASSOCIATES, INC.

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

No. 4099

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

Date	7-28-2010	Sec.	3	Twp.	17	Range	16	County	Rush	State	Ks	On Location		Finish	10:15
Lease	Yacmer ET AL		Well No.	#1-3		Location		Galatia Ks 5W to CR 390, 2S							
Contractor	Oil Energy Rig #16		Owner	LW, 3/4 S, W/S											
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.	1086'											
Csg.	8 5/8"		Depth	1086'											
Tbg. Size			Depth												
Tool			Depth												
Cement Left in Csg.	17-27'		Shoe Joint	17-27'											
Meas Line			Displace	<del>1022</del> 67											
			The above was done to satisfaction and supervision of owner agent or contractor.												
			Cement Amount Ordered 400 3/4 Common 3/4 CL 2 1/2												

**EQUIPMENT**

Pumptrk	9	No.	Cementer	3
			Helper	3
Bulktrk	12	No.	Driver	3
			Driver	3
Bulktrk pick up	1	No.	Driver	3
			Driver	3

**JOB SERVICES & REMARKS**

Remarks: Cement Did Circulate

Rat Hole

Mouse Hole

Centralizers 3 - 8 5/8"

Baskets 3 - 8 5/8"

D/V or Port Collar

1/4 Flowseal

Common 400

Poz. Mix

Gel. 3

Calcium 1/4

Hulls

Salt

Flowseal 100#

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 4/22

Mileage

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer 3 - 8 5/8"

Baskets 3 - 8 5/8"

AFU Inserts

Float Shoe

Latch Down

1 - 8 5/8" Baffle plate

1 - 8 5/8" Rubber plug

Pumptrk Charge Long Surface

Mileage 32

Tax

Discount

Total Charge

Signature *E. J. D. M. S.*



# COPY

## BASIC ENERGY SERVICES

PAGE 1 of 1	CUST NO 1003682	INVOICE DATE 08/09/2010
INVOICE NUMBER 1718 - 90379374		

Pratt (620) 672-1201  
 B SAMUEL GARY JR. & ASSOCIATES  
 I PO Box: 448  
 L RUSSELL  
 L KS US 67665  
 T  
 O ATTN:

J LEASE NAME Yarmer 1-3  
 O LOCATION  
 B COUNTY Rush  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE	
40215671	19905		Net - 30 days	09/08/2010	
<i>For Service Dates: 08/05/2010 to 08/05/2010</i>					
0040215671					
171802226A Cement-New Well Casing/Pi 08/05/2010 CNW-5 1/2" Longstring					
60/40 POZ		75.00	EA	7.56	566.98 T
50/50 POZ		150.00	EA	6.93	1,039.47 T
Cello-flake		37.00	EA	2.33	86.24 T
Calcium Chloride		252.00	EA	0.66	166.69 T
Cal-Set		750.00	EA	0.47	354.36 T
FLA-322		121.00	EA	4.72	571.71 T
Cement Gel		252.00	EA	0.16	39.69 T
Gilsonite		1,125.00	EA	0.42	474.85 T
CS-1L, KCl Substitute		4.00	EA	22.05	88.20 T
Super Flush II		500.00	EA	0.96	481.94 T
Latch Down Plug & Baffle		1.00	EA	251.99	251.99
Auto Fill Float Shoe		1.00	EA	226.79	226.79
Turbolizer		8.00	EA	69.30	554.38
Heavy Equipment Mileage		170.00	MI	4.41	749.68
Proppant & Bulk Delivery Charges		812.00	MI	1.01	818.47
Blending & Mixing Service Charge		225.00	MI	0.88	198.44
Unit Mileage Charge-Pickups, Vans & Cars		85.00	HR	2.68	227.58
Depth Charge: 3001'-4000'		1.00	HR	1,360.77	1,360.77
Casing Swivel Rental		1.00	EA	126.00	126.00
Plug Container Utilization Charge		1.00	EA	157.50	157.50
Service Supervisor		1.00	HR	110.25	110.25

DRLG  COMP  W/O  LOE  
 AFE # \_\_\_\_\_  
 ACCT. # 8200-138  
 APPROVED BY [Signature]

### RECEIVED

AUG 23 2010

SAMUEL GARY JR.  
& ASSOCIATES, INC.

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	8,651.98
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	243.82
PO BOX 841903	PO BOX 10460	INVOICE TOTAL	8,895.80
DALLAS, TX 75284-1903	MIDLAND, TX 79702		



Customer James Gary Turner & Associates	Lease No. 1-3	Date 8-5-10			
Lease Farmer	Well # L-3				
Field Order # 2200	Station Pratt, Kansas	Casing 15.875	Depth 3717	County Pratt	State Kansas
Type Job C.M.W. - Long Run	Formation	Legal Description S. 1/4 Sec. 16, T. 13N, R. 11W			

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad		Max		5 Min.
Volume	Volume	From	To	Acid		Min		10 Min.
Max Press	Max Press	From	To	Brac		Avg		15 Min.
Well Connection	Annulus Vol.	From	To	Flush		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To			Gas Volume		Total Load

Customer Representative D. Brown	Station Manager David Scott	Treater R. Albrecht
-------------------------------------	--------------------------------	------------------------

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
10:00					Start of treatment
10:05	150		1	6	Flow 2700 gpm
10:10	150		2	6	Flow 2700 gpm
10:15	150		3	6	Flow 2700 gpm
10:20	150		4	6	Flow 2700 gpm
10:25	150		5	6	Flow 2700 gpm
10:30	150		6	6	Flow 2700 gpm
10:35	150		7	6	Flow 2700 gpm
10:40	150		8	6	Flow 2700 gpm
10:45	150		9	6	Flow 2700 gpm
10:50	150		10	6	Flow 2700 gpm
10:55	150		11	6	Flow 2700 gpm
11:00	150		12	6	Flow 2700 gpm
11:05	150		13	6	Flow 2700 gpm
11:10	150		14	6	Flow 2700 gpm
11:15	150		15	6	Flow 2700 gpm
11:20	150		16	6	Flow 2700 gpm
11:25	150		17	6	Flow 2700 gpm
11:30	150		18	6	Flow 2700 gpm
11:35	150		19	6	Flow 2700 gpm
11:40	150		20	6	Flow 2700 gpm
11:45	150		21	6	Flow 2700 gpm
11:50	150		22	6	Flow 2700 gpm
11:55	150		23	6	Flow 2700 gpm
12:00	150		24	6	Flow 2700 gpm
12:05	150		25	6	Flow 2700 gpm
12:10	150		26	6	Flow 2700 gpm
12:15	150		27	6	Flow 2700 gpm
12:20	150		28	6	Flow 2700 gpm
12:25	150		29	6	Flow 2700 gpm
12:30	150		30	6	Flow 2700 gpm
12:35	150		31	6	Flow 2700 gpm
12:40	150		32	6	Flow 2700 gpm
12:45	150		33	6	Flow 2700 gpm
12:50	150		34	6	Flow 2700 gpm
12:55	150		35	6	Flow 2700 gpm
13:00	150		36	6	Flow 2700 gpm
13:05	150		37	6	Flow 2700 gpm
13:10	150		38	6	Flow 2700 gpm
13:15	150		39	6	Flow 2700 gpm
13:20	150		40	6	Flow 2700 gpm
13:25	150		41	6	Flow 2700 gpm
13:30	150		42	6	Flow 2700 gpm
13:35	150		43	6	Flow 2700 gpm
13:40	150		44	6	Flow 2700 gpm
13:45	150		45	6	Flow 2700 gpm
13:50	150		46	6	Flow 2700 gpm
13:55	150		47	6	Flow 2700 gpm
14:00	150		48	6	Flow 2700 gpm
14:05	150		49	6	Flow 2700 gpm
14:10	150		50	6	Flow 2700 gpm
14:15	150		51	6	Flow 2700 gpm
14:20	150		52	6	Flow 2700 gpm
14:25	150		53	6	Flow 2700 gpm
14:30	150		54	6	Flow 2700 gpm
14:35	150		55	6	Flow 2700 gpm
14:40	150		56	6	Flow 2700 gpm
14:45	150		57	6	Flow 2700 gpm
14:50	150		58	6	Flow 2700 gpm
14:55	150		59	6	Flow 2700 gpm
15:00	150		60	6	Flow 2700 gpm





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

Well Name: YARMER ET AI 1-3  
Location: SEC 3 17S 16W  
License Number: API 15-165-21891-00-00  
Spud Date: 07/28/2010  
Surface Coordinates: 1830' FNL 2500' FEL

Region: WILDCAT  
Drilling Completed: 08/04/2010

**Bottom Hole Coordinates:**

Ground Elevation (ft): 1974                      K.B. Elevation (ft): 1984  
Logged Interval (ft): 1700              To: 3720'              Total Depth (ft): 3720'  
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 Wynkoop, Ste.# 700  
Denver, Colo. 80202  
Geo: Clayton Camozzi

**GEOLOGIST**

Name: RODNEY NAPIER/ TYLER SARYERWINNIE  
Company: Earth Tech OGL, Inc.  
Address: PO Box 683  
Hooker, Okla . 73945  
Off. 888-543-8378 Cell: 620-655-2050


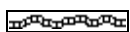
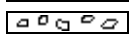
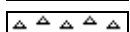
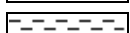



## Circulation Report



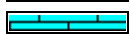

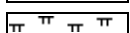

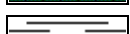

**START UN MANNED UNIT 07/30/2010**  
**START MANNED UNIT 07/31/2010**  
**CTCH 3265' 1.5 HRS**  
**SHORT TRIP 3265'**  
**CFS 3299' 20,40,60**  
**CFS 3324' 20,40,60**  
**CTCH 3324' DST#1**  
**CTCH 1 HR AFTER DST#1**  
**CFS 3349' 20,40,60**  
**CFS 3380' 20,40,60 TOTAL 2 HRS**  
**CTCH 1 HR**  
**CFS 3434' 20,40,60**  
**CTCH 45 MIN**  
**CFS 3487' 20,40,60**  
**CFS 3574' 20,40,60**  
**CFS 3586' 20,40,60 TOTAL 1.5 HRS**  
**CFS/CTCH 20,40,60 TOTAL 1.5 HRS**  
**TD 3720'**  
**TOH FOR LOGS**

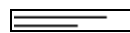





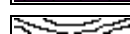
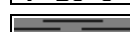
### DST information







**DST #1 3275'-3324', ANCHOR 49', IB WEAK BLOW BUILT 3 IN INTO WATER IN 15 MIN, FB WEAK BLOW BUILT 7 IN INTO WATER IN 45 MIN,FSI NO BLOW BACK, RECOVERY 25' SPOT OIL CUT MUDDY WATER, RECOVERY 60 FT SPOT OIL CUT MUDDY WATER, CHLORIDES 41000, IH 3184 OTF-1 757 SI-1 1472 ESI-1 1640, OTF-2 1498 SI-2 1641 ESI-2 1646 FH 3211,**

### 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
  - Breclfrag
  - Calc
  - Carb
  - Chtdk
  - Chtlit
  - Dol
  - Feldspar
  - Ferrpel
  - Ferr
  - Glau
  - Gyp
  - Hvymin
  - Kaol
  - Marl
  - Minxl
  - Nodule
  - Phos
  - Pyr

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

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

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

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

**STRINGER**

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

**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**

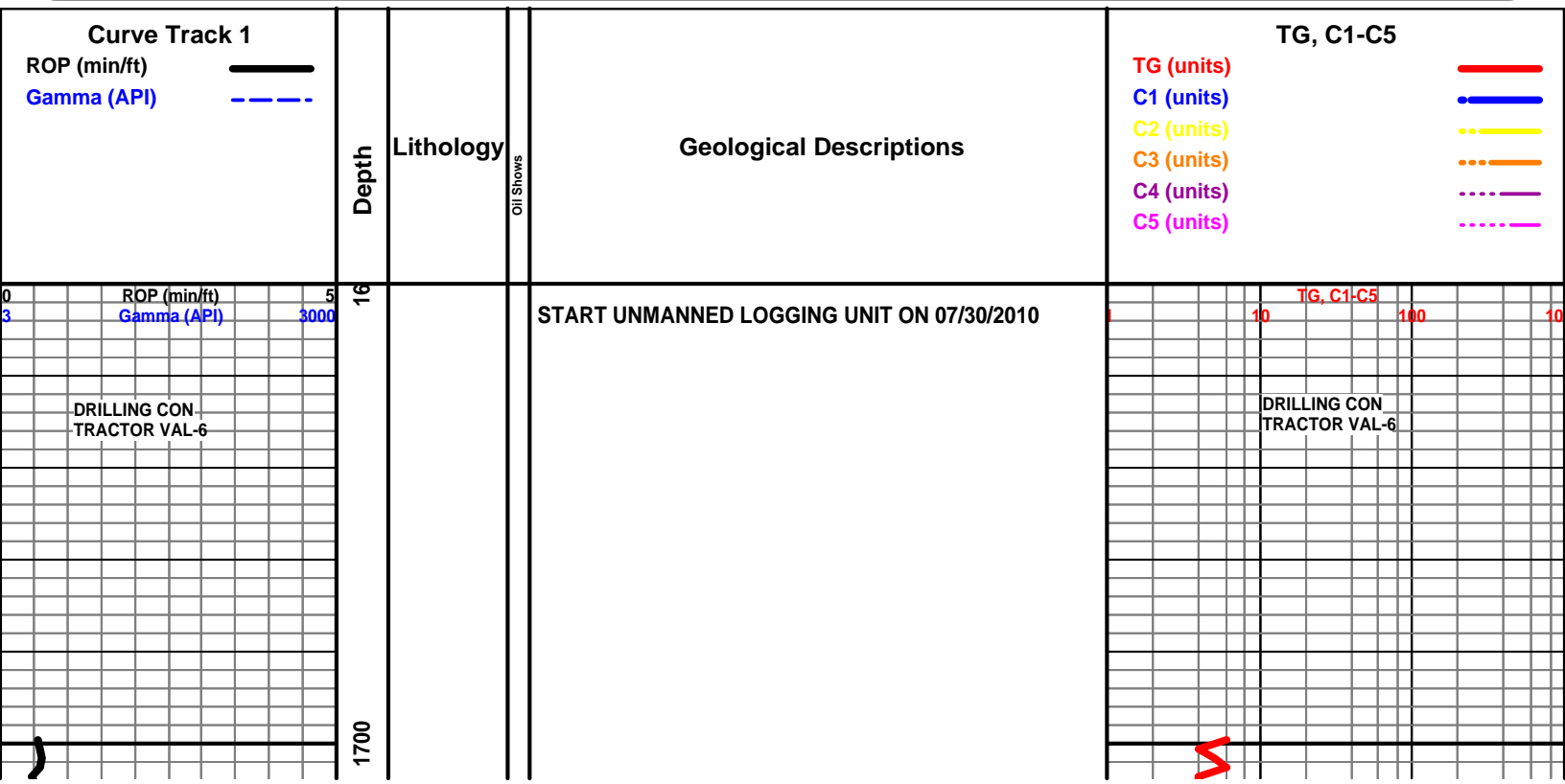
- Even
- Spotted
- Ques
- Dead
- Gas show

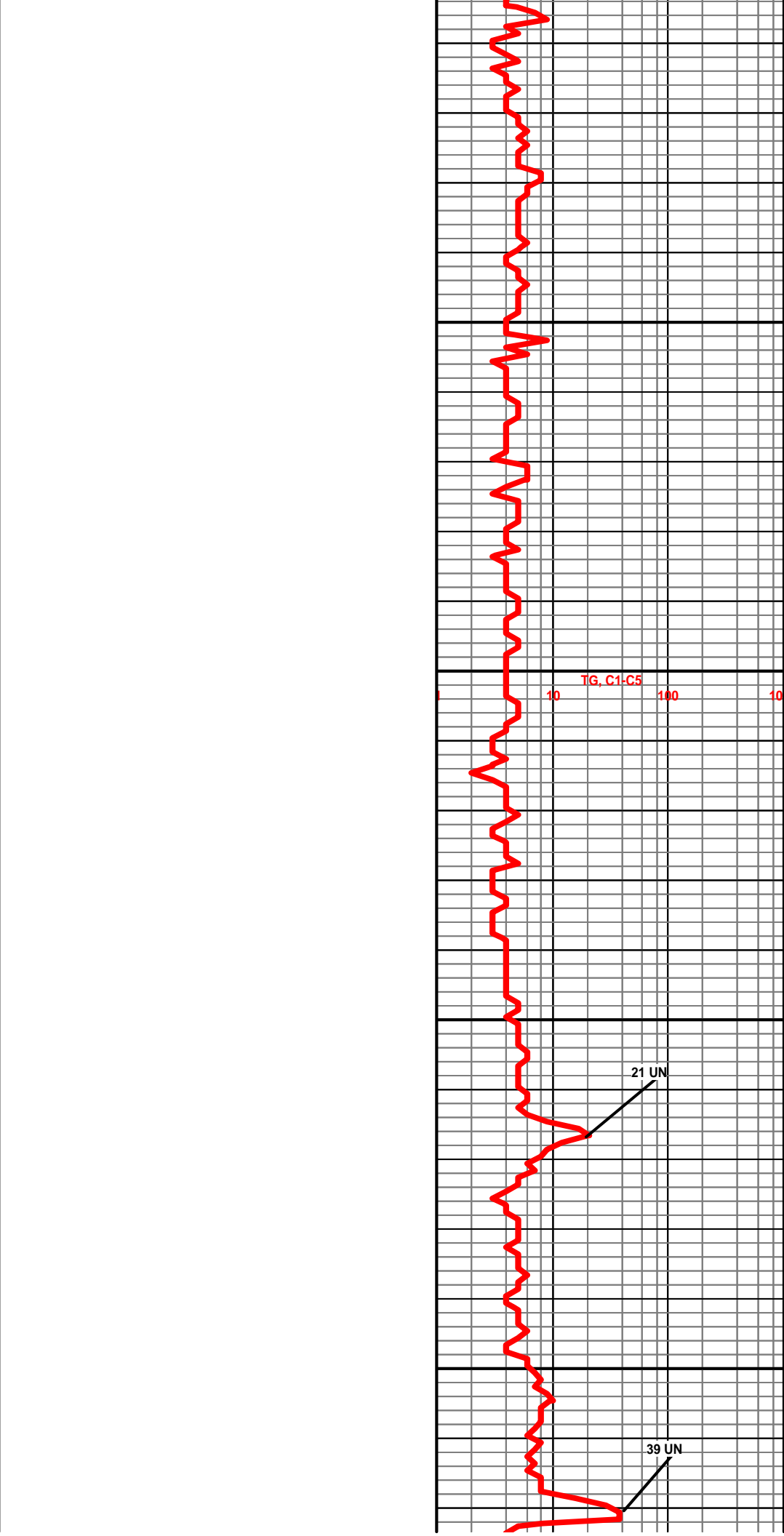
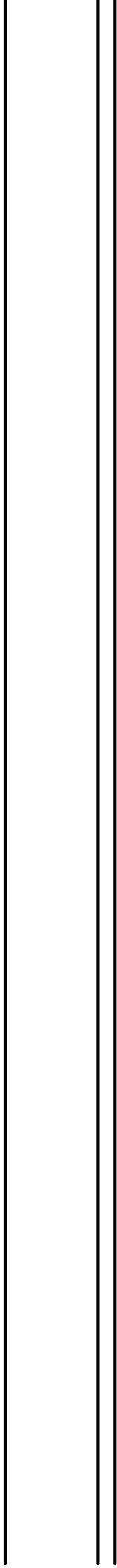
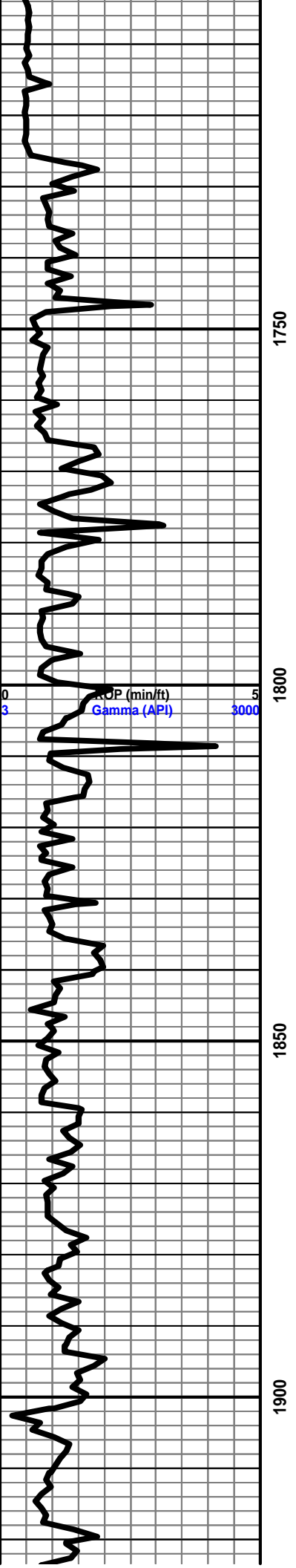
**INTERVALS**

- Core
- Dst
- Dst

**EVENTS**

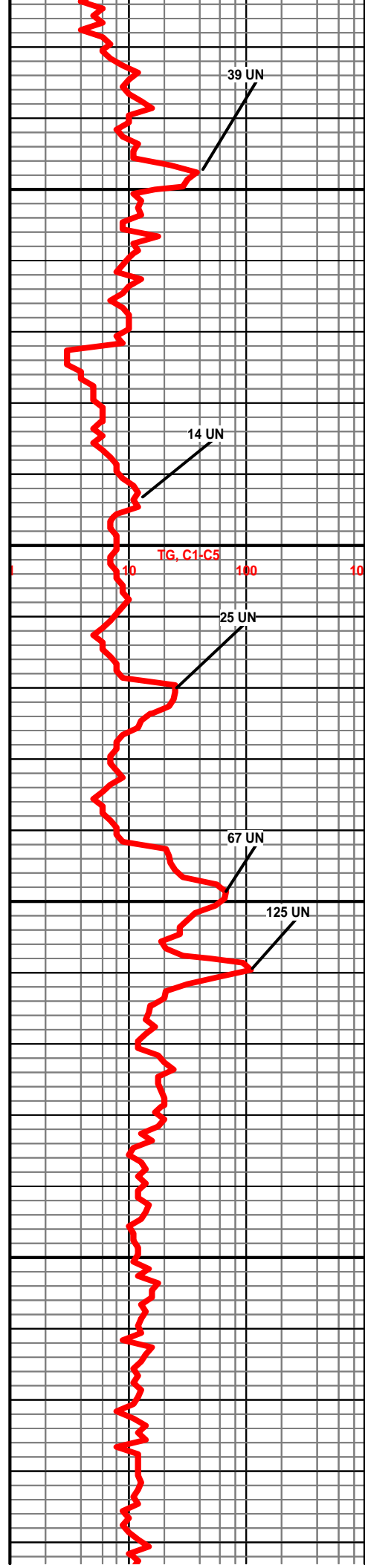
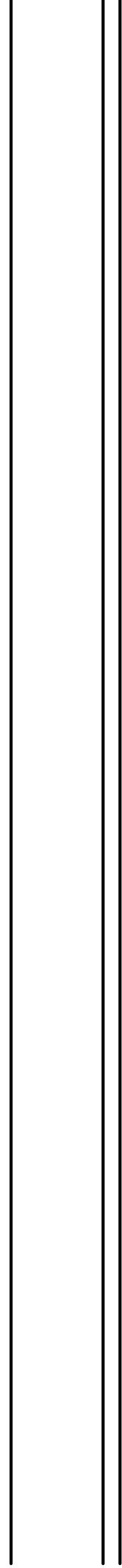
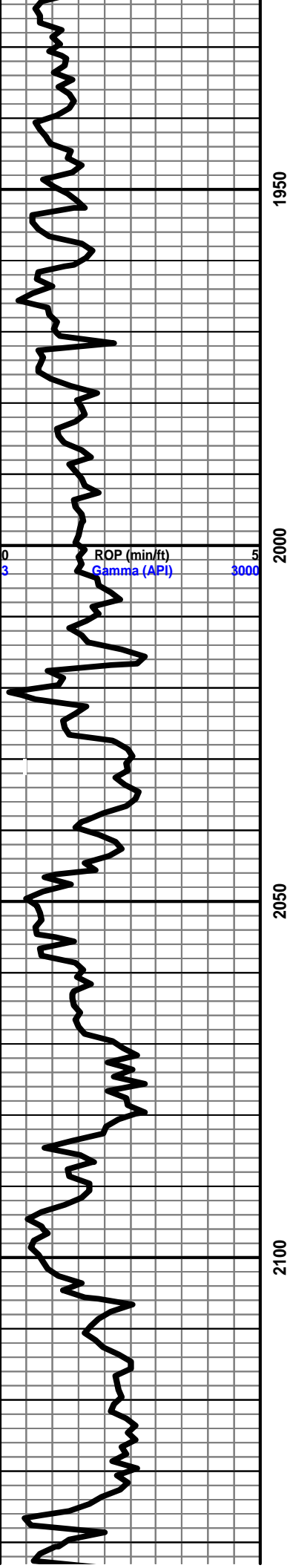
- Rft
- Sidewall

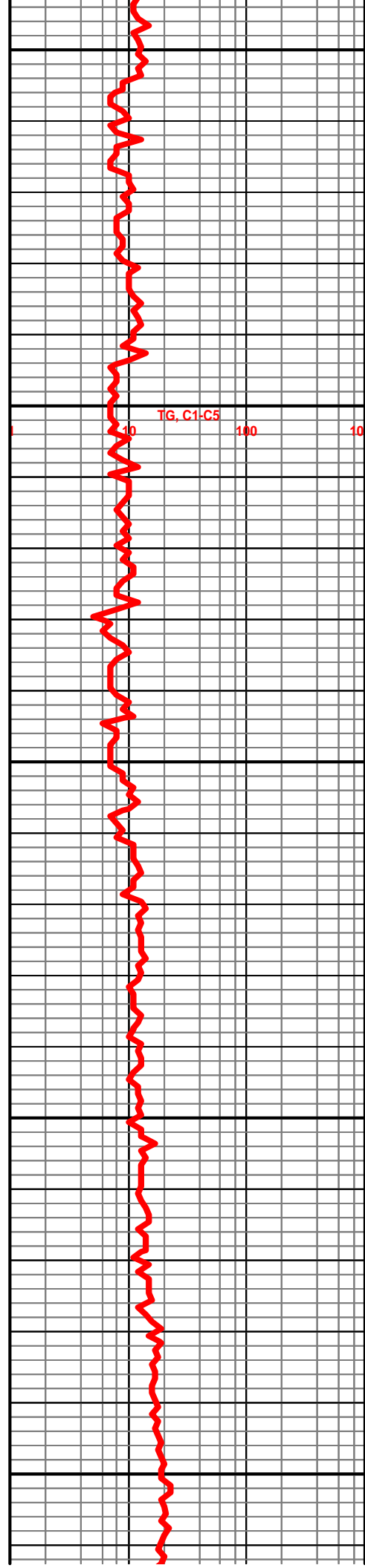
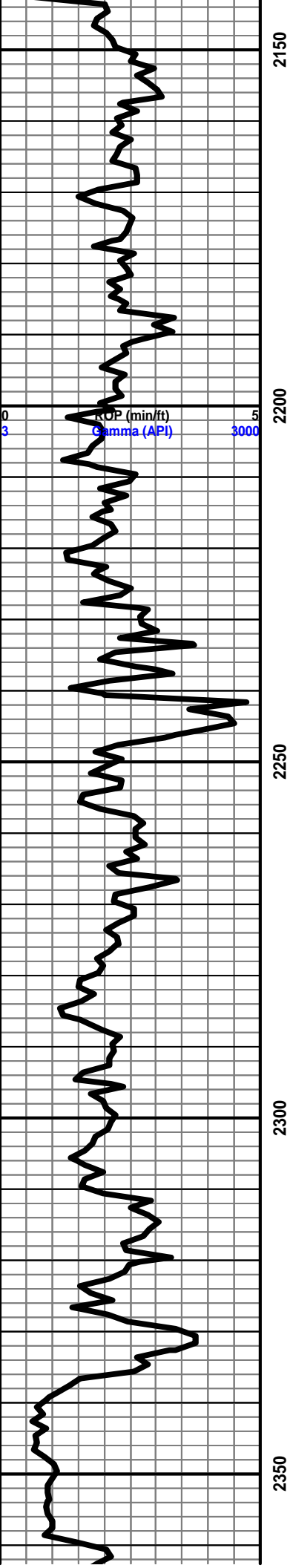


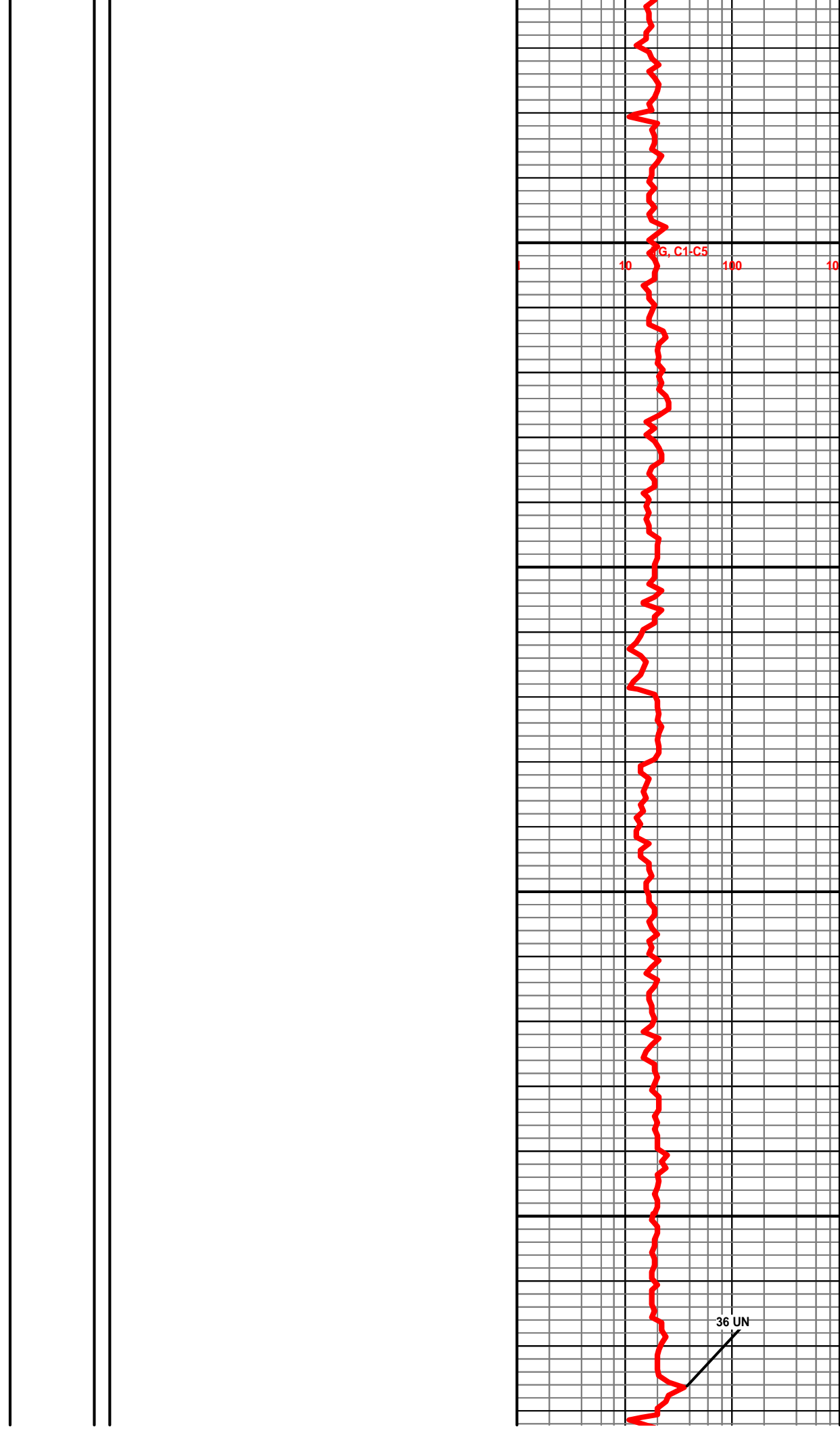
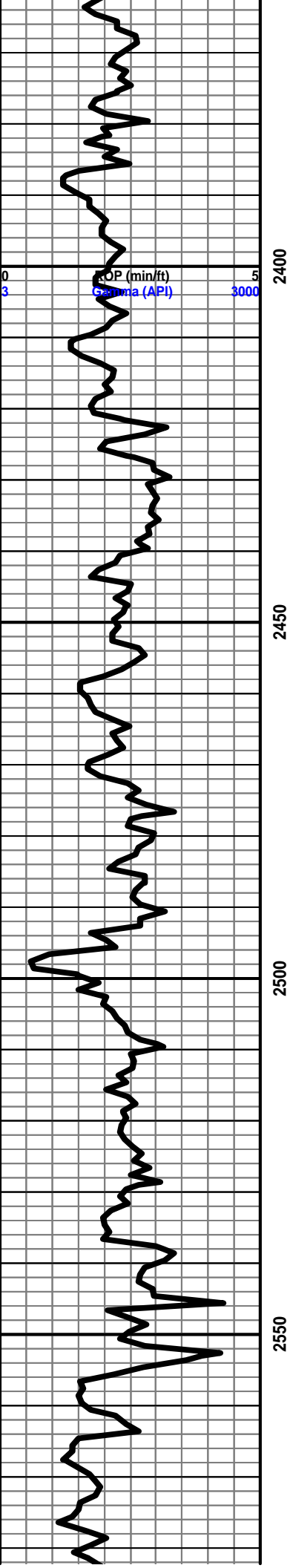


21 UN

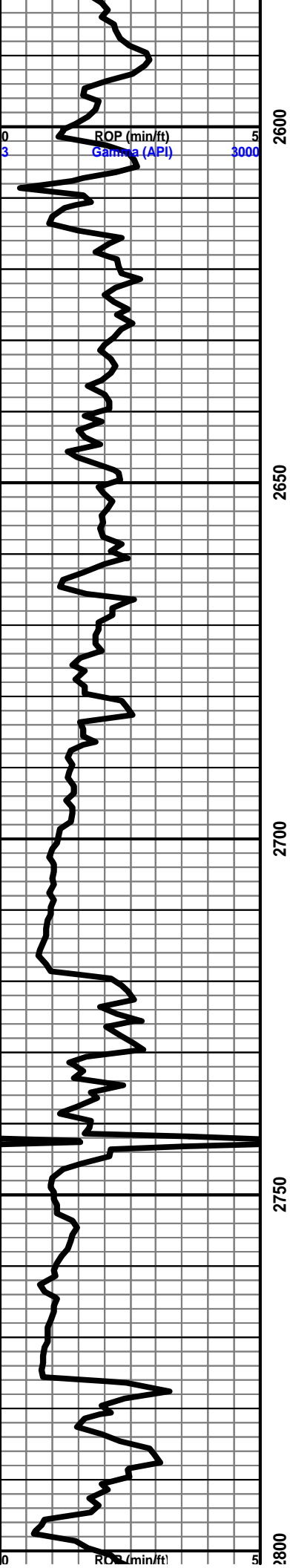
39 UN



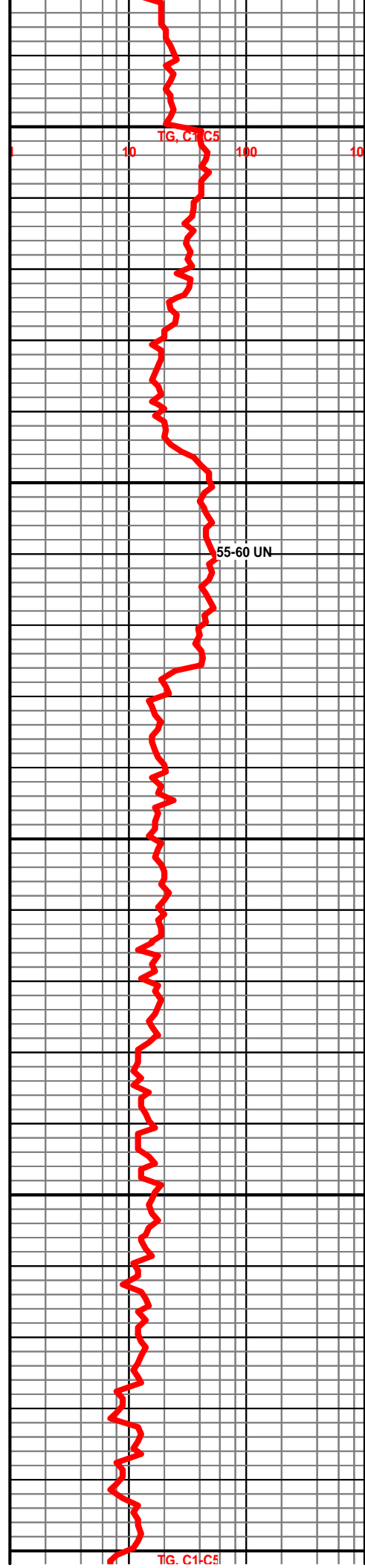


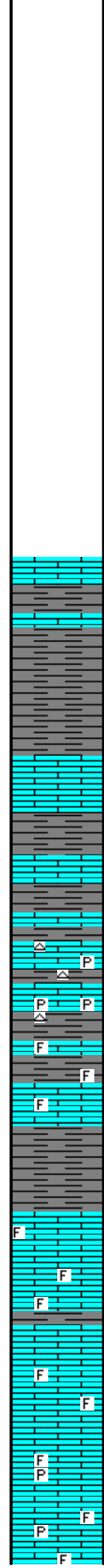
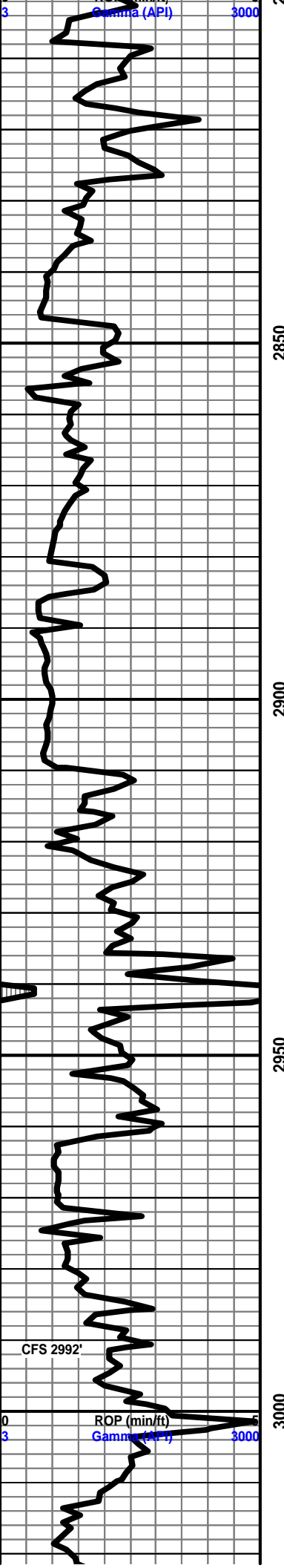






BASE ROOT SHALE 2720' -736'





START 24 HR MANNED UNIT 07/31/2010

**HOWARD 2910' -926'**

LS DK GRY TO GRY HD DN CRYPTO TO VVFN XLN MTX  
NO FLO NO VIS POR NO VIS SHOW

SH GRY LT GRY FRM SFT TO SILTY

LS GRY DK TN TO TN HD DN TT CRYPTO XLN MTX TR  
IMBD CHERT TR PYR NODULES IN TRAY NO FLO NO VIS  
POR NO VIS SHOW

LS GRY LT GRY TAN MOTT VVFN TO FN TO TR MED XLN  
MTX IMBD FOSS IMBD GRY SH SUCRO TXT IP SC TR LT  
YLW FLO FAIR INTRXLN POR NO STAIN NO CUT NO VI  
SHOW

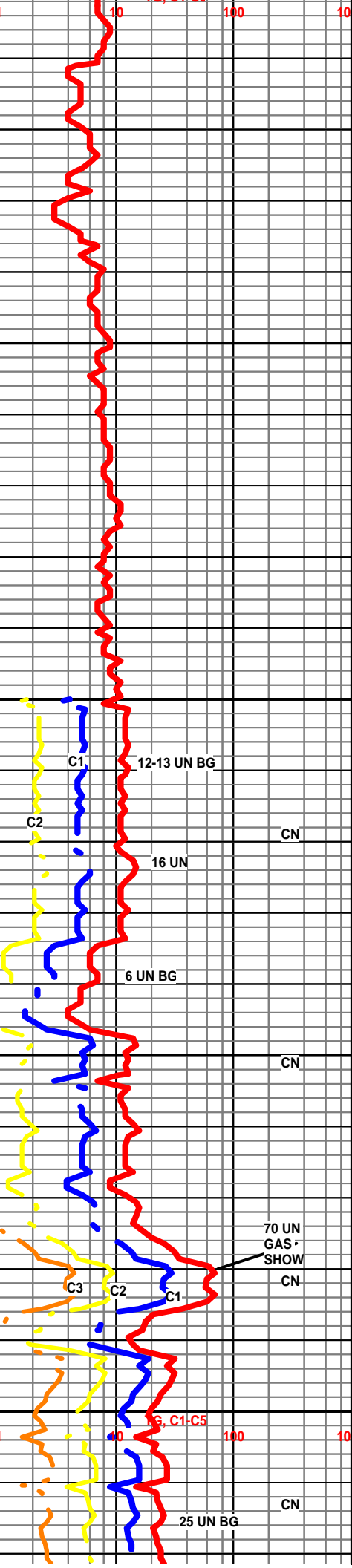
SH GRY LT GRY SMOOTH SLTLY FRM SOFT SILTY

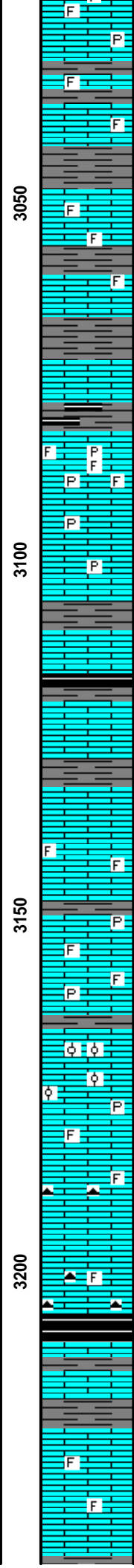
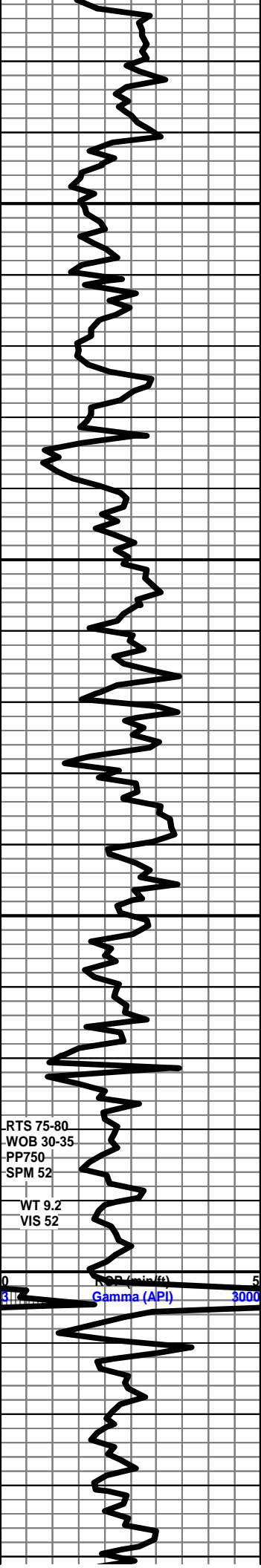
**TOPEKA 2976' -992'**

LS LT GRY TAN TO LT TAN VVFN XLN MTX SUCRO TXT  
THRU TR SM TO MED QRTZ XLS IP TR IMBD FOSS LT  
BRIGHT YLW FLO 60% TT INTRXLN POR TO FAIR MICRO  
PP POR NO STAIN NO CUT NO VIS SHOW POS GAS  
SHOW

LS DK GRY TO GRY DK TAN TO TAN HD DN TT CRYPTO  
TO VVFN TO FN XLN MTX TR IMBD FOSS TR DULL YLW  
FLO POOR INTRXLN POR TO TR PP AND MICRO PP POR  
IP NO CUT NO VIS SHOW

LS LT GRY TAN TO LT TAN FN TO MED XLN MTX RE XLN  
MTX IMBD FOSS TR IMBD PYR TR IMBD LS GRAINS  
SUCRO TXT IP CHLKY DULL YLW FLO PR TO FR INTR  
XLN TR VUGS IP TO MICRO PP POR IP NO CUT NO VIS  
SHOW





LS TAN LT TAN CRM BUFF HD TO FRM BRITT FN TO MED XLN MTX IMBD FOSS TR IMBD GRY SH NO FLO POSS TT INTR XLN POR NO CUT NO VIS SHOW

LS TAN LT TAN BUFF FRM BRITT FN XLN MTX REXLN MTX SUB CHLKY W TR FRM PIECES OF CHLK TR IMBD LS GRNS IMBD FOSS TR LMNTD GR SH TR PP TO MICRO PP POR SCATT TR LT YLW FLO TR DULL YLW FLO NO CUT NO VIS SHOW

**3068' @ 00:01 AM 08/01/2010**  
**LE COMPTON 3082' -1098'**

3082'-3088' LS LT TAN BUFF FRM BRITT FN TO MED XLN MTX IMBD FOSS THRU IMBD VSM LS GRNS TR IMBD SM QRTZ XLS SUB CHLKY IP TR LMNTD PYR FR TO GD INTRXLN POR FR VUG POR TR MICRO PP POR DULL YLW FLO 50% NO STAIN NO CUT NO VIS SHO

LS TAN GRY LT GRY HD DN BRITT CRYPTO TO VVFN XLN MTX TR OFF WHT CHRT IP NO FLO NO VIS POR NO VIS SHOW

SH BLK CARB

LS LT TAN CRM BUFF HD DN TT CRYPTO TO VVFN DISS GRY SH IP NO VIS POR NO VIS SHOW

LS DK TAN TO TAN LT TAN CRM BUFF HD TO FRM BRIT FN TO MED XLN MTX REXLN MTX IMBD FOSS IMBD SM MED QRTZ XLS IP SUB CHLKY IP LT YLW FLO PR TO FR INTR XLN POR TR V/SM VUGS POSS TT INTR FOSS POR TR STAIN 2 ROCKS NO CUT NO VIS SHO

LS LT TAN CRM TO BUFF FN TO MED XLN MTX IMBD SM LS GRNS IMBD FOSS TR PYR NOD IN TRAY SUB CHLKY IP TR SM CLUSTRS QRTZ XLS IP NO FLO PR TO FR INTRXLN POR NO CUT NO VIS SHOW

LS VFN TO FN XLN MTX IMBD LS GRNS TR IMBD FOSS CHLKY IP SUC TXT IP LMNTD PYR TR IMBD OOLITES TT INTR XLN TO FR VUGGY POR TR MICRO PP POR DULL YLW FLO 40% STAIN 10% POOR FLUSH CUT VPR MLK' BLUE STREAM CUT WEAK SHOW

LS FN XLN MTX IMBD VSM LS GRNS SUCRO TXT IMBD FOSS TR LOOSE FRAG IN TRAY SUB CHLKY TR DRK TAN TO DRK GREEN CHRT NO FLO NO VIS POR NO CUT NO VIS SHOW

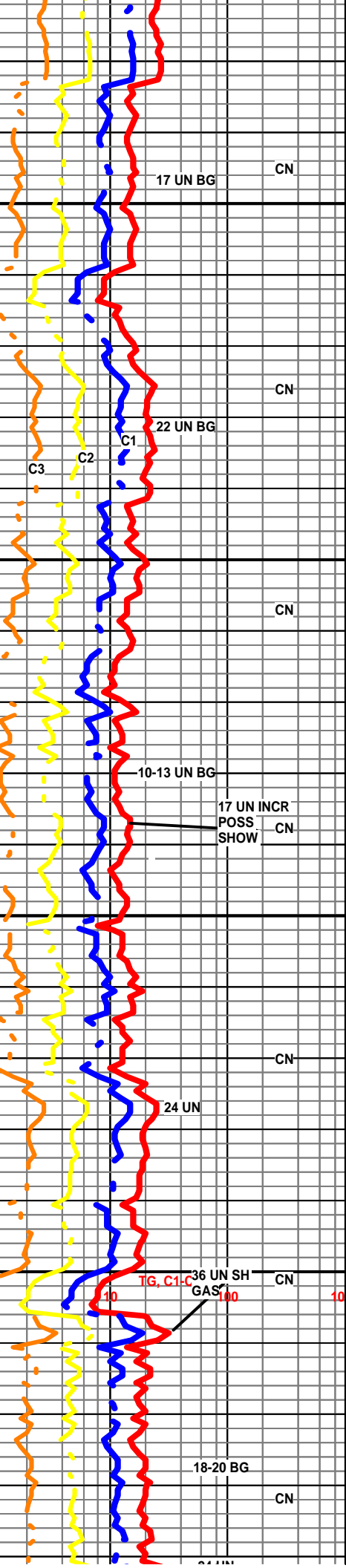
**HEEBNER 3206' -1222'**

SH BLK CARB

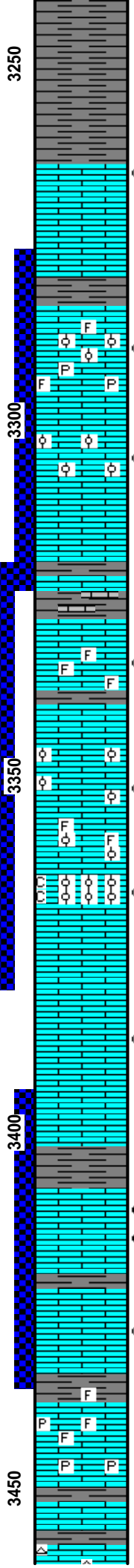
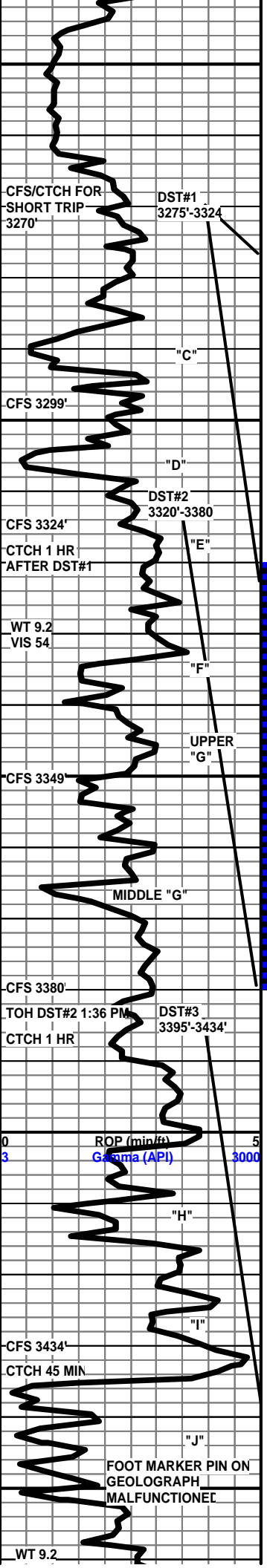
LS DRK TAN GRY HD DN TT CRYPTO XLN MTX TR DISS BLK CARB SH IP NO VIS POR NO CUT NO VIS SHO

SH GRY TO LT GRY FRM BRITT SMOOTH LMY IP

LS LT TAN CRM TO BUFF MOTT FN XLN MTX SUB-CHLKY TR IMBD FOSS TR IMBD DRK GRY SH NO FLO TI MICRO PP POR NO CUT NO VIS SHOW



RTS 75-80  
 WOB 30-35  
 PP750  
 SPM 52  
 WT 9.2  
 VIS 52  
 0 5  
 3000  
 Gamma (API)



SH LT GRY BWN FRM TO SFT SMOOTH SPLINTY SFT TO SILTY

**LANSING 3263' -1279'**

LS LT TAN BUFF TO OFF WHT HD TO FRM BRITT CRYPTO TO VVFN XI MTX TR IMBD CALC XLS TR DISS GRY SH TR IMBD SM LS GRNS DULL YLW FLO THRU TR POOR INTRXLN POR TR OIL STAIN 2 ROCKS F FLUSH CUT SPURTY SLOW MLKY BLUE STREAMING CUT 1 ROCK PR SHOW

**LANSING "C" 3284' -1300'**

LS LT TAN CRM TO BUFF FRM BRITT FN TO MD XLN MTX IMBD FOSS THRU IMBD OOLITES TR IMBD QRTZ CHLKY TR PYR NOD PR TO FR INTRXLN POR TR SM TO MD MICRO VUGS POSS TT INTRFOSS POR DULL YLW FLO 20% STAIN 10% VERY FAINT ODOR IN 60 MIN SAMPLE PR FAINT FLUSH CUT VERY PR SPURTY MILKY BLUE STREAM CUT 2 ROCKS

3302'-3308' LS LT TN CRM BUFF FRM BRITT VFN TO FN XLN MTX RE-XLN MTX IMBD OOLITES IMBD SM CALC XLS IN VUGS FAIR ODOR IN 40 AND 60 MIN SAMPLE OOMOLDIC POOR TO FAIR TO TR GOOD INTERXLN POR VUGGY POR TR PP POR POSS TT INTER FOSS POR GLDN YLW FLO 70% STAIN 40% SOME 5% ROCKS SATURATED WITH STAIN FAIR TO GOOD INSTANT FLUSH CUT TO SLOW MILKY BLUE STREAM CUT

**LANSING "F" 3330' -1346'**

3333-3337' LS TAN CRM BUFF FN XLN MTX IMBD SM TR MED OOLITES THRU SUC TXT CHLKY GLDN YLW FLO 40% TR OIL STAIN 10% POOR TO FAIR INTRXLN POR PP POR IP OOLMOLDIC 75% FAINT ODOR 60 M SAMPLE POOR INSTANT FLUSH CUT TO SLOW SPURTY MILKY BLUE STREAM CUT

LS CRM BUFF OFF WHT HD DN FRM CRYPTO TO VVFN XLN MTX NO FLO NO VIS POR NO VIS SHOW

LS TN LT TN HD DN CRYPTO TO VVFN XLN MT RE-XLN MTX TR IMBD OOLITES IN TT CRYPTO XLN ROCK TO VRY FN SUCRO TXT SUB-CHLKY TR POOR MICRO PP TO PP POR IP NO FLO TR OIL STAIN 25% FAINT TO POOR INSTANT FLUSH CUT

LS OFF WHT TO WHT LT TAN FN TO MD XLN MTX IMBD VSM TO SM OOLITES OOLITE CLUSTERS WITH CALC XLS TR OOLITIC POR IP TR FIRM PIECES CHLK W TR OIL STAIN LT GRY TO WHT SOFT CHLK TR IMBD PYR TR IMBD CALC XLS DULL GLDN YLW FLO 70% STAIN 35% TR POOR TO FAIR INTRXLN POR SLIGHT TR PP POR FAIR FLUSH CUT TO GOOD MLKY BLUE STREAM CUT FAINT ODOR 40 AND 60 MIN

LS CRM OFF WHT TO WHT HD TO FRM CRYPTO TO VVFN TO FN XLN MTX RE-XLN MTX IP TR IMBD FOSS IP TR IMBD PYR IP SUB-CHLKY IP TR IMBD CHLK IP TR DEAD OIL STAIN ON THREE ROCKS NO ODOR POSS TR INTRXLN POR TO TR MICRO PP TO PP POR IP ONLY LT YLW FLO 40% FAINT FLUSH CUT TO TR LT YWL RING CUT

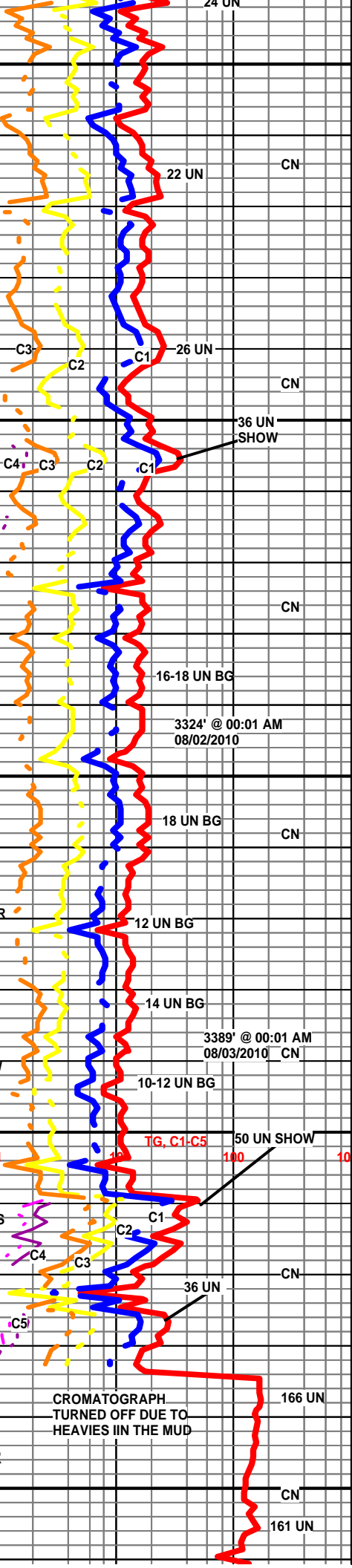
**LANSING "H" 3309' -1325'**

LS LT GRY TN BUFF OFF WHT HD TO FRM BRITT VFN TO FN TO MD XLN MTX RE-XLN MTX IMBD FOSS IMBD SM TO MD QRTZ XLS TO TR IMBD SM CALC XLS FAIR TO GOOD ODOR STAIN 60% TR LIVE OIL BRITE GLDN YLW FLO 80% POOR FAIR TO GOOD INTERXLN POR POSS FRACTURES POOR TO POSS FAIR INTER FOSS POR IP TR MICRO PP TO VUGS IP GOOD INSTANT FLUSH CUT TO FAIR TO GOOD MILKY BLUE STREAM CUT WITH BRN LEACH ON DISH

LS GRY DK TN TO TN BUFF TO CRM HD DN CRYPTO TO VVFN XLN MTX TR IMBD FOSS IP TR QRTZ XLS ON EDGE OF ROCKS POSS TT FRACTURES TR VUGS IP LT DULL YLW FLO 30% DEAD OIL STAIN 25% FAINT FAIR ODOR FAIR FLUSH CUT TO SPOTY SLOW MILKY BLUE STREAM CUT LT YLW RING CU

LS GRY TO LT GRY LT TAN TO BUFF HD DN BRITT CRYPTO VVFN TO FN XLN MTX RE-XLN MTX IP TR PYR NOD IMBD FOSS IP POSS TT INTR-XLN POR TO NO POR NO FLO NO ODOR NO STAIN NO CUT NO VIS SHOW

LS DRK TAN TAN BUFF CRYPTO XLN MTX VFN TO FN



"K"

CFS 3487'

3500

3550

3600

3650

WT 9.2  
VIS 54

CFS 3574'

CFS 3586'

ROP (min/ft) 5  
Gamma (API) 3000



XLN MTX TR IMBD LS GRAINS IP SUC TXT TR LT TAN TR  
ORANGE OPAQUE CHERT NO FLO NO VIS POR NO VIS  
SHOW

LS LT TAN LT GRY CRM TO BUFF MOTT HD TO FIRM  
BRITT TR IMBD GRY SH TR LAMNTD DRK GRY SH TR  
IMBD FOSS IP SUB CHLKY TR MICRO PP POR POOR  
INTR XLN POR SCAT LT YLW FLO IP NO STAIN NO ODOR  
NO CUT NO VIS SHOW

**BKC 3496' -1512'**

SH GRY SMOOTH SPLNTY SLTLY FRM SFT TO SILTY  
LS DK TN TO TN HD DN TT CRYPTO XLN MTX TR DK TN  
TO GRN CHERT IP NO FLO NO VIS POR NO VIS SHOW

SS CLR FRSTY WHT LT TN HD FRI SM TO MD ANG TO  
SUB-ANG SS GRNS WITH TR IMBD SH LMY TR GLAC  
POOR SORT WITH IMBD SM QRTZ XLS TR VRY SM  
SUB-RND SS GRNS UNCON IN TRAY TT TO POOR INTEI  
GRAN POR TR STAIN 10% LT YLW FLO 50% FAINT TO  
POOR INSTANT FLUSH CUT TO LT YLW RING CUT

SH DK GRY TO GRY FRM BLKY WITH TN LT TN TO OFF  
WHT CHERT IP

CONG CHERT LT TN TO ORNG TR FELD TR LOOSE QRTZ  
FRAGS TO TR IMBD OOLITES IN CHERT TR DK BRN SH  
HD WITH IMBD VRY FN SS GRNS IMBD FOSS LOOSE  
FOSS IN TRAY PYR NODULES IN TRAYNO VIS POR NO  
VIS SHOW

SH GRY DK BRN TO RED SH SLTLY FRM SMOOTH SFT  
WITH CHERT WHT TO OFF WHT ORNG TO GRN

**ARBUCKLE 3577' -1593'**

3577'-3579'DOL OFF WHT TO WHT HD DN CRYPTO TO VVFN XLN MTX  
THRU TR IMBD OOLITES IP NO STAIN NO ODOR NO VIS POR NO CUT  
NO VIS SHOW

3579'-3584' DOL OFF WHT TO WHT HD FRM VFN TO FN XLN MTX TR MD  
XLN MTX SM ANG TO SUB-ANG DOL XLS TR POOR TO FAIR INTER-XLN  
POR NO STAIN LT DULL YLW FLO 70% NO CUT NO VIS SHOW

DOL OF WHT TO WHT FRM BRITT VFN TO FN XLN MTX  
TR SM ANG DOL XLS TO IMBD SUB-RND TO RND DOL  
GRNS FAIR INTER XLN POR TO POSS INTER GRAN POR  
NO FLO NO STAIN NO CUT NO VIS SHOW

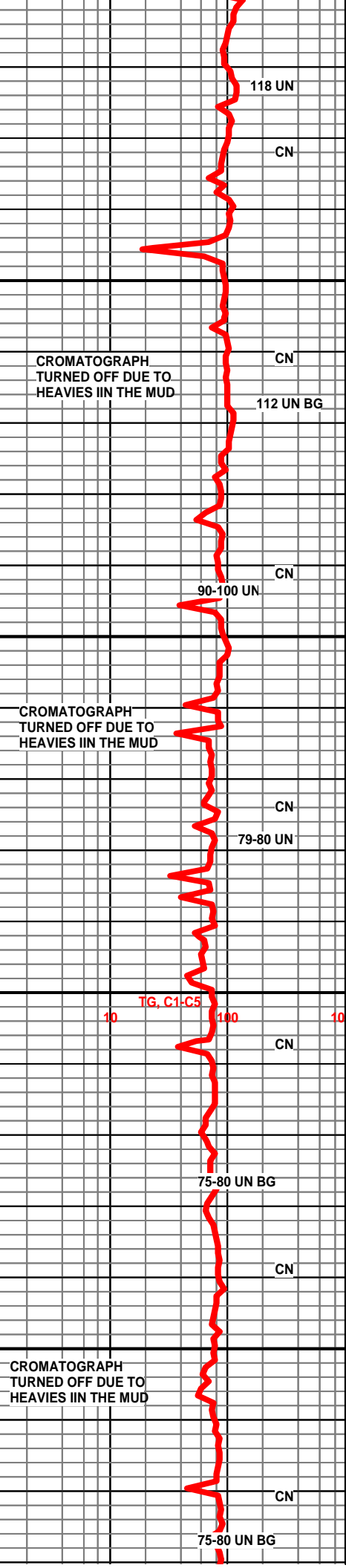
DOL OFF WHT TO WHT LT GRY FRM BRITT VFN TO FN  
XLN MTX SUCRO TXT CHLKY IP TR IMBD TO LMNTD PYR  
TR PYR NODULES IN TRAY NO FLO POSS POOR  
INTERXLN POR NO FLO NO STAIN NO CUT NO VIS SHOW

DOL OFF WHT TO WHT LT GRY FN XLN MTX WITH  
CLUSTERS OF CLR TO FRSTY WHT DOL GRNS SUB-RND  
TO RND FRI FAIR TO GOOD INTER GRAN POR NO STAIN  
NO FLO NO CUT NO VIS SHOW

DOL OFF WHT TO BUFF FRM VVFN TO FN XLN MTX VRY  
SUCRO TXT THRU TR SM IMBD QRTZ XLS IP POSS TT  
INTER GRAN TO NO POR NO STAIN NO FLO NO CUT NO  
VIS SHOW

DOL LT TN CRM BUFF HD DN BRITT CRYPTO TO VVFN  
TO FN XLN MTX SUCRO TXT WITH IMBD DOL XLS IP TR  
IMBD LT GRY CLAY NO FLO NO VIS POR NO VIS SHOW

SS CLR FSTY WHT LT GRY VRY SM TO SM SUB-ANG TO  
SUB-RND TO RND SS GRNS FRI IP WITH IMBD LT GRY

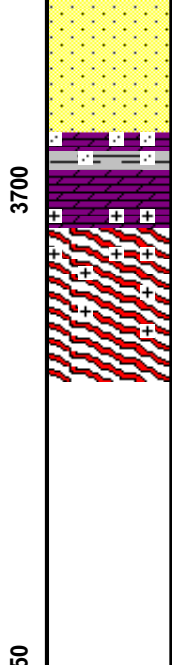
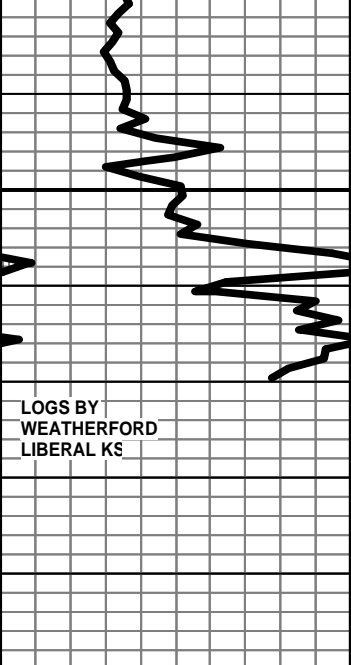


CROMATOGRAPH  
TURNED OFF DUE TO  
HEAVIES IIN THE MUD

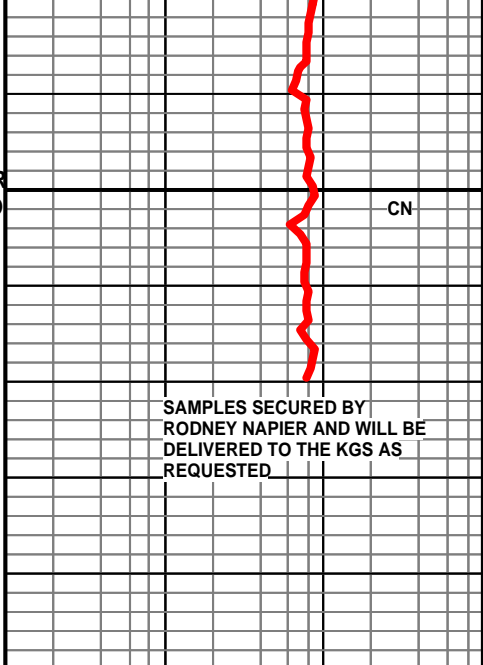
CROMATOGRAPH  
TURNED OFF DUE TO  
HEAVIES IIN THE MUD

TG. C1-C5

CROMATOGRAPH  
TURNED OFF DUE TO  
HEAVIES IIN THE MUD

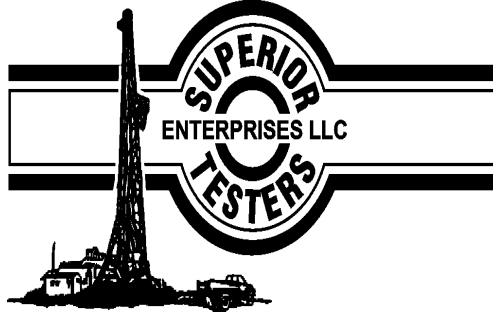


SUB-RND TO RND SS GRNS TRIP WITH IMBD LT GR  
 TO GRN CLAY IMBD GLAC IP POOR SORT TR SM AND  
 MD SUB-RND TO RND SS GRNS LOOSE IN TRAY POOR  
 TO POSS FAIR INTER GRAN POR NO STAN NO FLO NO  
 CUT NO VIS SHOW  
  
 DOL LT TN BUFF HD DN VVFN TO FN XLN MTX IMBD  
 FRSTY WHT QRTZ XLS TR IMBD GRY TO LT GRY CLY TR  
 IMBD VRY SM SS GRNS IP TR FELD SPAR IP NO FLO NO  
 VIS POR NO VIS SHOW  
  
 META QRTZITE CLR FRSTY LT GRN TO GRN WITH  
 FELDSPAR LT ORNG WITH IMBD MICA AND MAGNITITE  
 THRU NO FLO NO VIS POR NO CUT NO VIS SHOW  
  
**TD 3720' 08/04/2010 7:12 AM**  
**CTCH 1.5 HRS**  
**TOH FOR LOGS**  
  
**THANK YOU FOR CHOOSING**  
**EARTHTECH OGL INC.**



LOGS BY  
 WEATHERFORD  
 LIBERAL KS

SAMPLES SECURED BY  
 RODNEY NAPIER AND WILL BE  
 DELIVERED TO THE KGS AS  
 REQUESTED



## DRILL STEM TEST REPORT

Prepared For: **SAMUEL GARY JR & ASSOCIATES INC**

SAMUEL GARY JR & ASSOCIATES INC  
1515 WYNKOOP ST SUITE 700  
DENVER CO 80202

ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

**YARMER ET AL 1-3**

Start Date: 2010.08.01 @ 20:56:00

End Date: 2010.08.02 @ 04:20:30

Job Ticket #: 16338                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2010.08.04 @ 08:11:15

SAMUEL GARY JR & ASSOCIATES INC  
YARMER ET AL 1-3  
3-17S-16W RUSH  
DST # 1  
LANSING C-D  
2010.08.01





# DRILL STEM TEST REPORT

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16338

**DST#: 1**

Test Start: 2010.08.01 @ 20:56:00

## GENERAL INFORMATION:

Formation: **LANSING C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:32:30

Time Test Ended: 04:20:30

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-56

**Interval: 3275.00 ft (KB) To 3324.00 ft (KB) (TVD)**

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3324.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8405**

**Inside**

Press @ RunDepth: 91.08 psia @ 3320.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.01

End Date:

2010.08.02

Last Calib.:

2010.08.02

Start Time: 20:58:00

End Time:

04:20:30

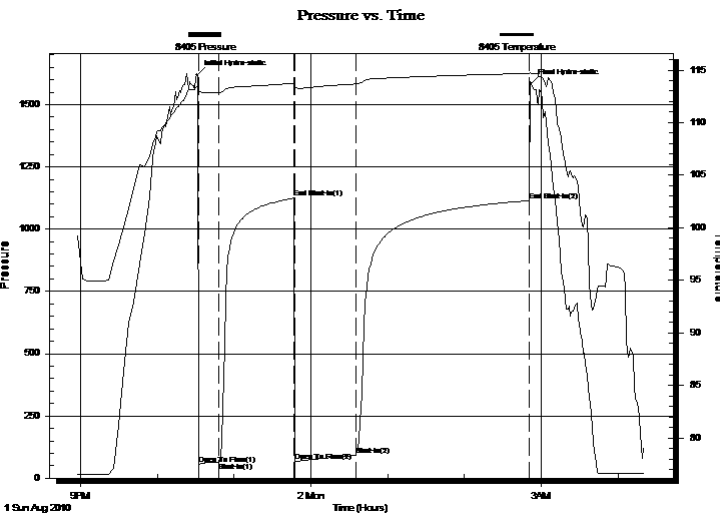
Time On Btm:

2010.08.01 @ 22:31:30

Time Off Btm:

2010.08.02 @ 02:52:00

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 3 INCHES INTO WATER IN 15 MINUTES  
 60/INITIAL SHUT IN:NO BLOW BACK  
 45/FINAL OPEN:WEAK BLOW BUILT 7 INCHES INTO WATER IN 45 MINUTES  
 135/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1619.07	113.47	Initial Hydro-static
1	56.38	112.98	Open To Flow (1)
17	63.42	112.85	Shut-In(1)
75	1123.72	113.74	End Shut-In(1)
76	68.77	113.34	Open To Flow (2)
124	91.08	113.68	Shut-In(2)
259	1114.26	114.69	End Shut-In(2)
261	1586.16	114.72	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	SLIGHTLY OIL CUT MUDDY WATER	0.35
	5%OIL 30%MUD 65%WATER	0.00
60.00	Very slightly oil cut muddy w ater	0.84
	1%OIL 40%MUD 59%WATER	0.00
	CHLORIDES 41,000	0.00
	Resistivity .11 @ 71 Degrees	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16338

**DST#: 1**

Test Start: 2010.08.01 @ 20:56:00

## Tool Information

Drill Pipe:	Length: 3252.00 ft	Diameter: 3.80 inches	Volume: 45.62 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: 45.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 54.00 lb
Depth to Top Packer:	3275.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3247.00	
Shut-In Tool	5.00			3252.00	
Hydraulic Tool	5.00			3257.00	
Jars	6.00			3263.00	
Safety Joint	2.00			3265.00	
Packer	5.00			3270.00	29.00 Bottom Of Top Packer
Packer	5.00			3275.00	
Change Over Sub	0.75			3275.75	
Drill Pipe	31.50			3307.25	
Change Over Sub	0.75			3308.00	
Perforations	11.00			3319.00	
Recorder	1.00	8405	Inside	3320.00	
Recorder	1.00	8524	Outside	3321.00	
Bullnose	3.00			3324.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



# DRILL STEM TEST REPORT

**FLUID SUMMARY**

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16338

**DST#: 1**

Test Start: 2010.08.01 @ 20:56:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 41000 ppm	
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.11 ohm.m	Gas Cushion Pressure: psia		
Salinity: 3900.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	SLIGHTLY OIL CUT MUDDY WATER	0.351
	5%OIL 30%MUD 65%WATER	0.000
60.00	Very slightly oil cut muddy water	0.842
	1%OIL 40%MUD 59%WATER	0.000
	CHLORIDES 41,000	0.000
	Resistivity .11 @ 71 Degrees	0.000

Total Length: 85.00 ft      Total Volume: 1.193 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: Chlorides 41,000 Resistivity .11 @ 71 Degrees

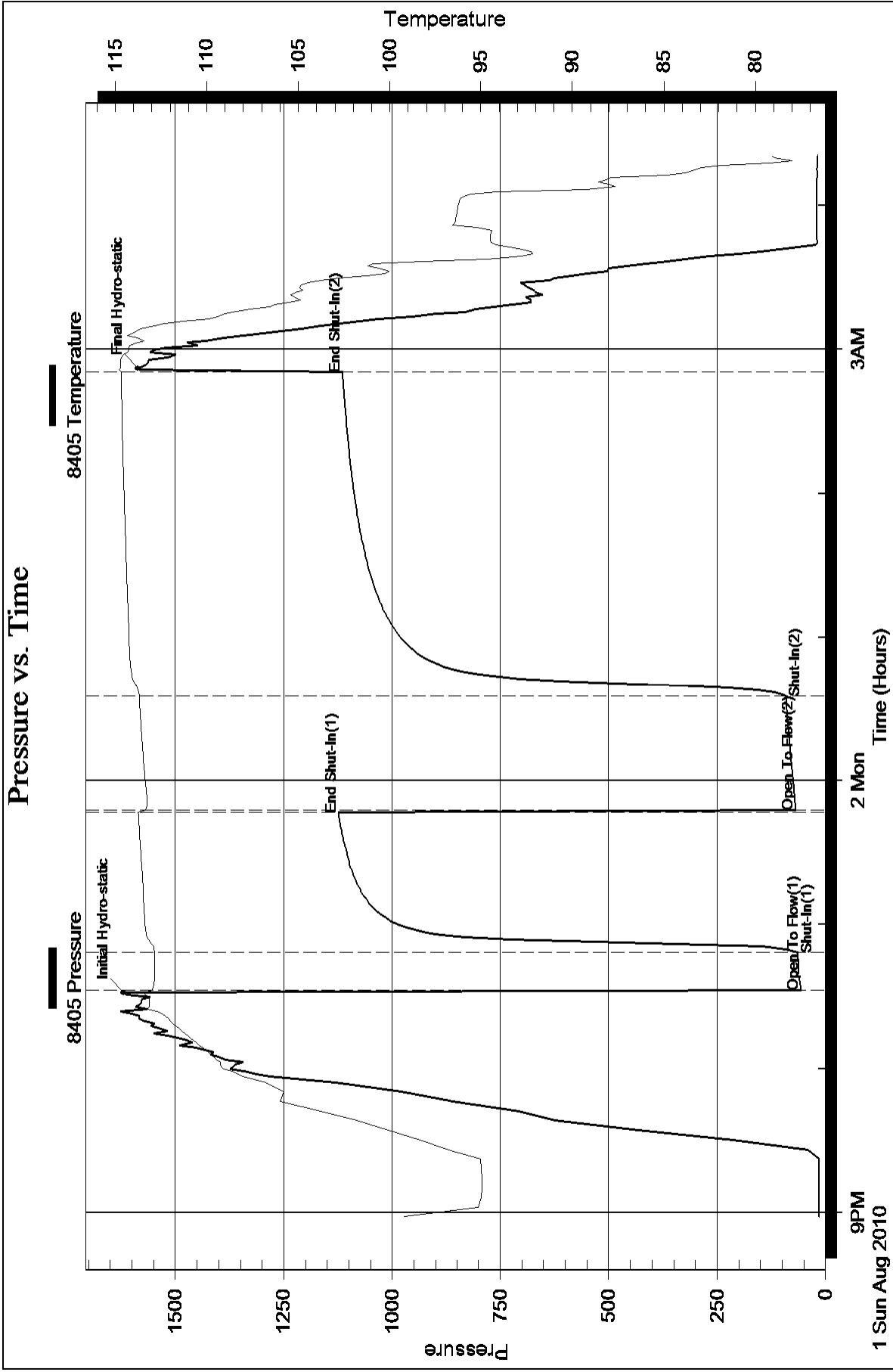
Serial #: 8405

Inside

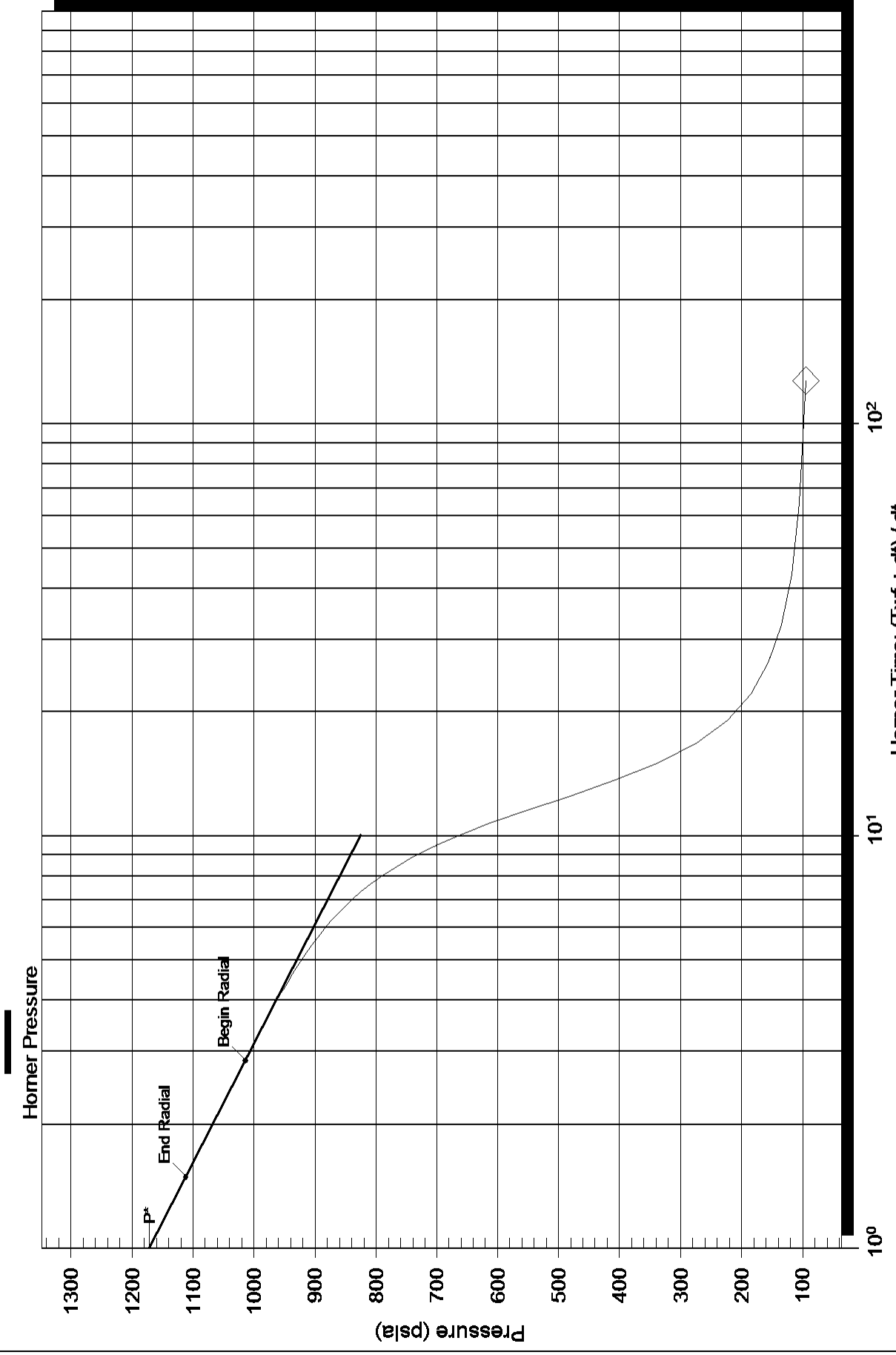
SAMUEL GARY JR & ASSOCIATES INC

3-17S-16W RUSH

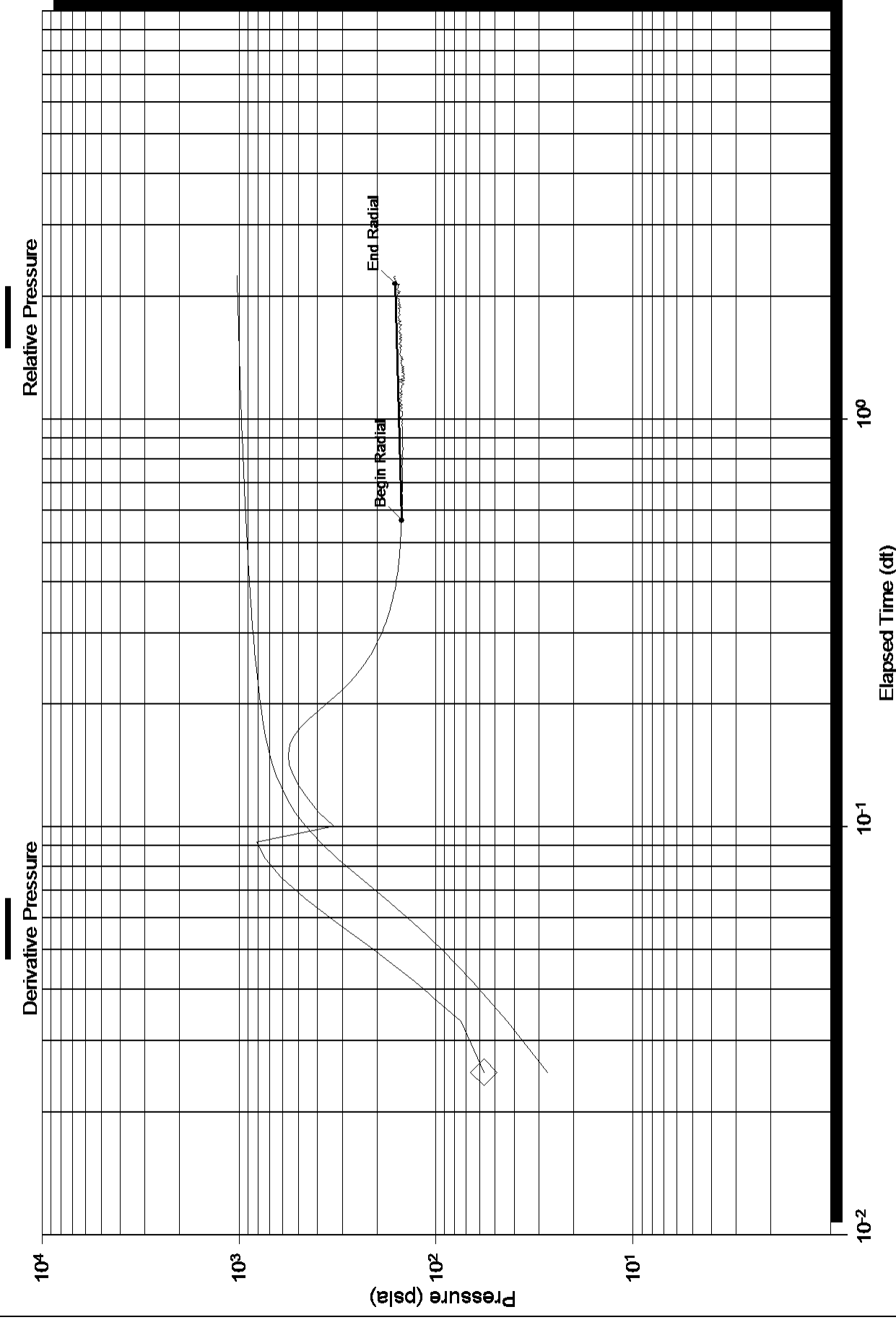
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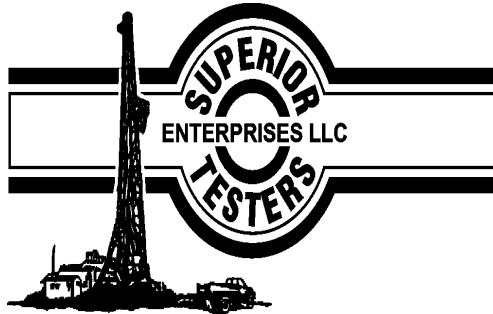


### Horner Plot



# Log-Log and Pseudo-Derivative





## DRILL STEM TEST REPORT

Prepared For: **SAMUEL GARY JR & ASSOCIATES INC**

SAMUEL GARY JR & ASSOCIATES INC  
1515 WYNKOOP ST SUITE 700  
DENVER CO 80202

ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

**YARMER ET AL 1-3**

Start Date: 2010.08.02 @ 15:17:00

End Date: 2010.08.02 @ 22:30:30

Job Ticket #: 16339                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2010.08.04 @ 08:19:51





# DRILL STEM TEST REPORT

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16339

**DST#: 2**

Test Start: 2010.08.02 @ 15:17:00

## GENERAL INFORMATION:

Formation: **Lansing "F & G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:36:30

Time Test Ended: 22:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-gb-56

**Interval: 3320.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8405 Inside**

Press @ Run Depth: 93.95 psia @ 3375.98 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.02

End Date: 2010.08.02

Last Calib.: 2010.08.03

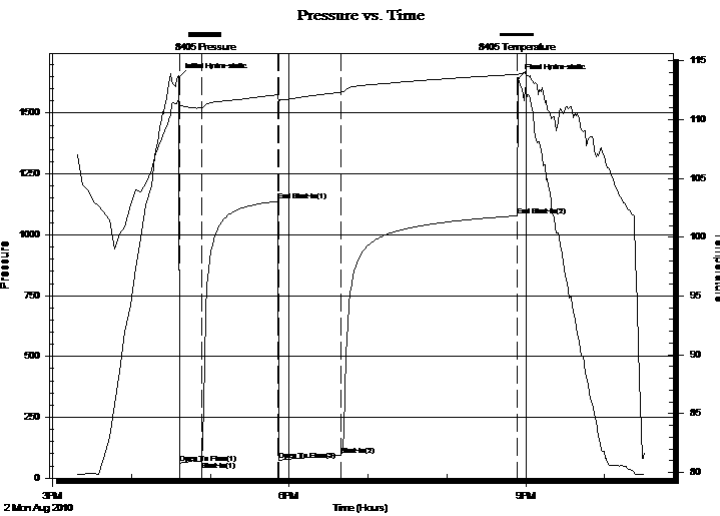
Start Time: 15:19:00

End Time: 22:30:30

Time On Btm: 2010.08.02 @ 16:36:00

Time Off Btm: 2010.08.02 @ 20:54:30

**TEST COMMENT:** 15/Initial Opening Weak building blow built to 2 3/4 inches into the water  
 60/Initial Shut-In-No blow back  
 45/Final Open-Weak building blow built to 3 3/4 inches into the water  
 135/Final Shut-In-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1647.04	111.72	Initial Hydro-static
1	61.99	111.10	Open To Flow (1)
18	70.19	110.99	Shut-In(1)
76	1137.78	112.13	End Shut-In(1)
76	73.68	111.47	Open To Flow (2)
124	93.95	112.33	Shut-In(2)
258	1078.13	113.85	End Shut-In(2)
259	1641.01	113.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	Muddy Water 30% Mud 70% Water	0.91
	Chlorides 43,000	0.00
	Resistivity .14 @ .82 Degrees	

## Gas Rates

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



# DRILL STEM TEST REPORT

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16339

**DST#: 2**

Test Start: 2010.08.02 @ 15:17:00

## GENERAL INFORMATION:

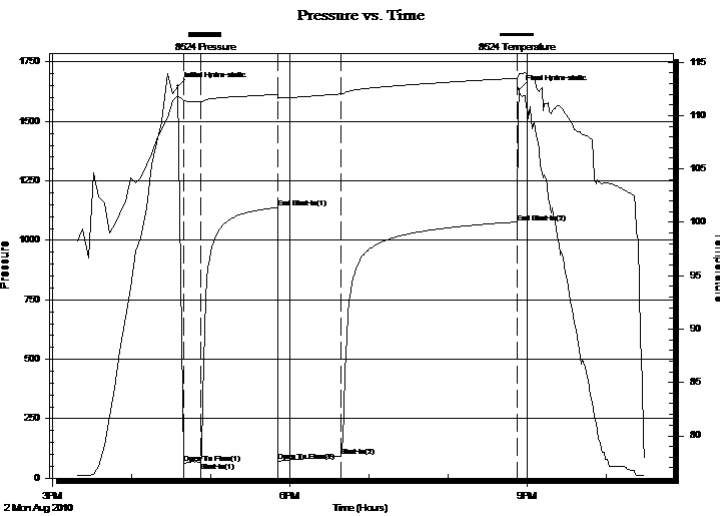
Formation: **Lansing "F & G"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:36:30  
 Time Test Ended: 22:30:30  
 Interval: **3320.00 ft (KB) To 3380.00 ft (KB) (TVD)**  
 Total Depth: 3380.00 ft (KB) (TVD)  
 Hole Diameter: 6.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jared Scheck  
 Unit No: 3320-gb-56  
 Reference Elevations: 1984.00 ft (KB)  
 1974.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8524

**Outside**

Press @ RunDepth: 1074.67 psia @ 3376.98 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.08.02 End Date: 2010.08.02 Last Calib.: 2010.08.03  
 Start Time: 15:19:00 End Time: 22:29:30 Time On Btm: 2010.08.02 @ 16:35:00  
 Time Off Btm: 2010.08.02 @ 20:53:30

**TEST COMMENT:** 15/Initial Opening Weak building blow built to 2 3/4 inches into the water  
 60/Initial Shut-In-No blow back  
 45/Final Open-Weak building blow built to 3 3/4 inches into the water  
 135/Final Shut-In-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1647.07	111.88	Initial Hydro-static
4	62.54	111.38	Open To Flow (1)
18	67.56	111.27	Shut-In(1)
76	1137.28	112.00	End Shut-In(1)
76	70.79	111.56	Open To Flow (2)
124	93.74	112.03	Shut-In(2)
258	1074.67	113.50	End Shut-In(2)
259	1635.71	113.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	Muddy Water 30% Mud 70% Water	0.91
	Chlorides 43,000	0.00
	Resistivity .14 @ .82 Degrees	

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16339

**DST#: 2**

Test Start: 2010.08.02 @ 15:17:00

## Tool Information

Drill Pipe:	Length: 3314.00 ft	Diameter: 3.80 inches	Volume: 46.49 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.76 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: 46.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3320.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.98 ft			
Tool Length:	88.98 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3292.00	
Shut-In Tool	5.00			3297.00	
Hydraulic Tool	5.00			3302.00	
Jars	6.00			3308.00	
Safety Joint	2.00			3310.00	
Packer	5.00			3315.00	29.00 Bottom Of Top Packer
Packer	5.00			3320.00	
Perforations	5.00			3325.00	
Change Over Sub	0.75			3325.75	
Drill Pipe	31.48			3357.23	
Change Over Sub	0.75			3357.98	
Perforations	17.00			3374.98	
Recorder	1.00	8405	Inside	3375.98	
Recorder	1.00	8524	Outside	3376.98	
Bullnose	3.00			3379.98	59.98 Bottom Packers & Anchor

**Total Tool Length: 88.98**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16339

**DST#: 2**

Test Start: 2010.08.02 @ 15:17:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 49.00 sec/qt  
 Water Loss: 10.17 in<sup>3</sup>  
 Resistivity: 0.14 ohm.m  
 Salinity: 5800.00 ppm  
 Filter Cake: 1.00 inches

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

Oil API: deg API  
 Water Salinity: 43000 ppm

### Recovery Information

Recovery Table

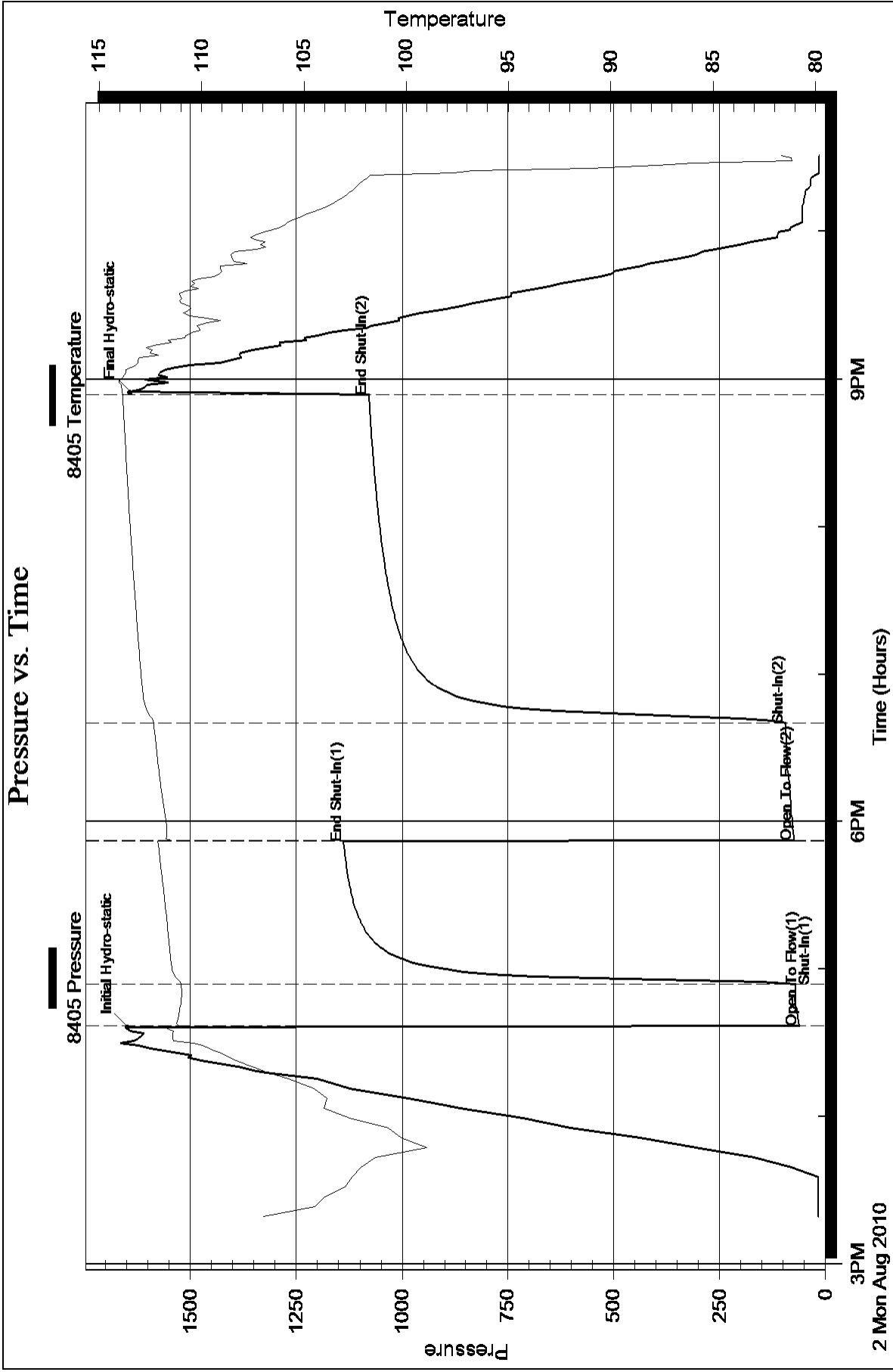
Length ft	Description	Volume bbl
65.00	Muddy Water 30% Mud 70% Water	0.912
	Chlorides 43,000	0.000
	Resistivity .14 @ .82 Degrees	

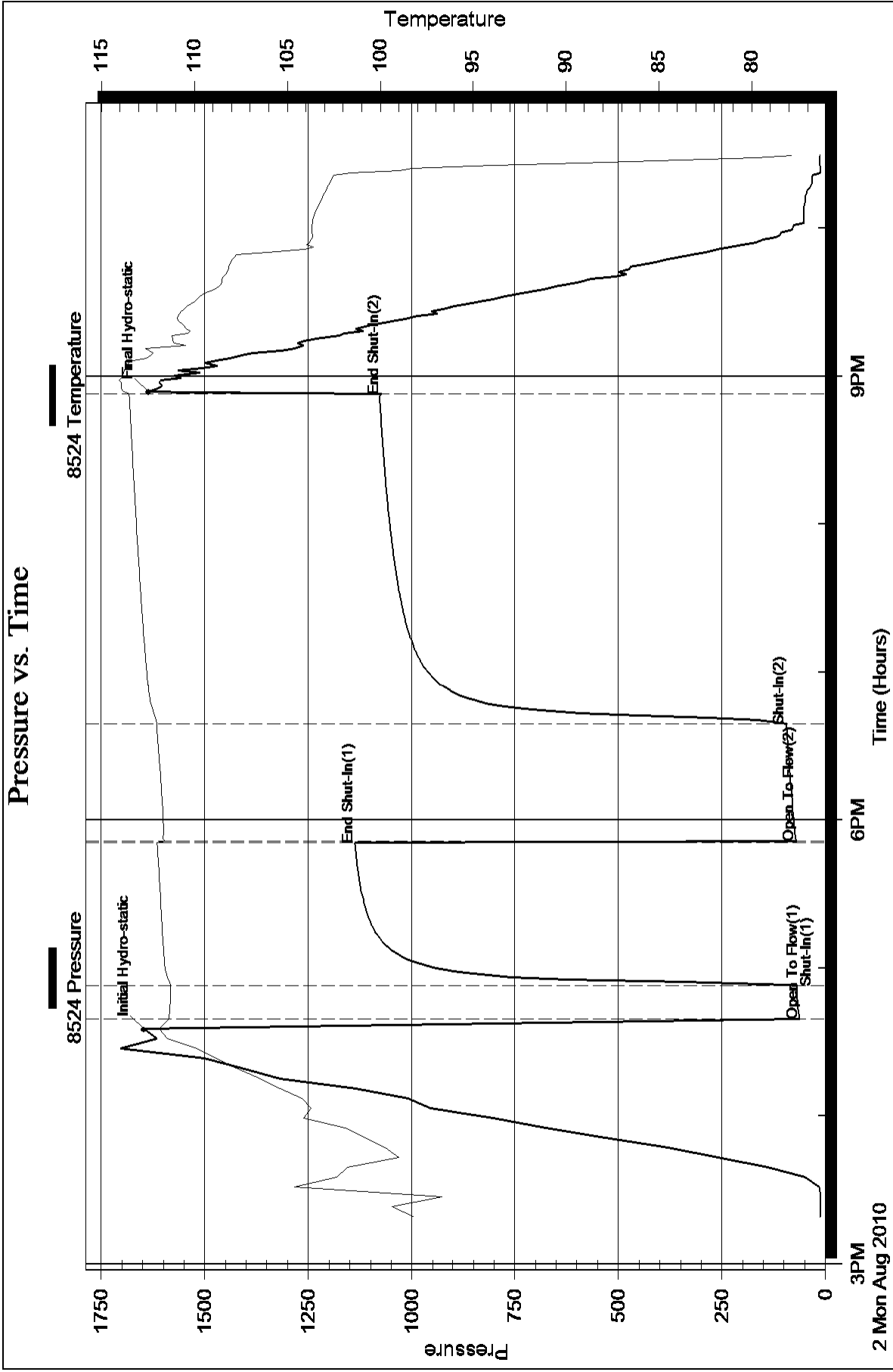
Total Length: 65.00 ft      Total Volume: 0.912 bbl

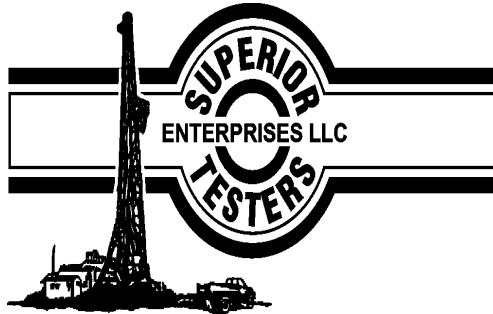
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Chlorides 43,000 Resistivity .14 @ 82 Degrees







## DRILL STEM TEST REPORT

Prepared For: **SAMUEL GARY JR & ASSOCIATES INC**

SAMUEL GARY JR & ASSOCIATES INC  
1515 WYNKOOP ST SUITE 700  
DENVER CO 80202

ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

**YARMER ET AL 1-3**

Start Date: 2010.08.03 @ 07:45:00

End Date: 2010.08.03 @ 14:40:00

Job Ticket #: 16340                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2010.08.04 @ 08:32:34

SAMUEL GARY JR & ASSOCIATES INC

YARMER ET AL 1-3

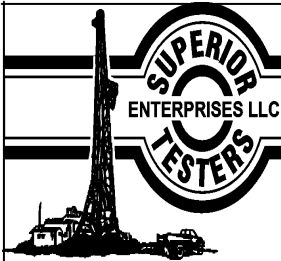
3-17S-16W RUSH

DST # 3

Lansing H - I

2010.08.03





# DRILL STEM TEST REPORT

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16340

**DST#: 3**

Test Start: 2010.08.03 @ 07:45:00

## GENERAL INFORMATION:

Formation: **Lansing H - I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:12:30

Time Test Ended: 14:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-56

**Interval: 3395.00 ft (KB) To 3434.00 ft (KB) (TVD)**

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3434.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8405 Inside**

Press @ RunDepth: 67.99 psia @ 3430.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.03

End Date: 2010.08.03

Last Calib.: 2010.08.03

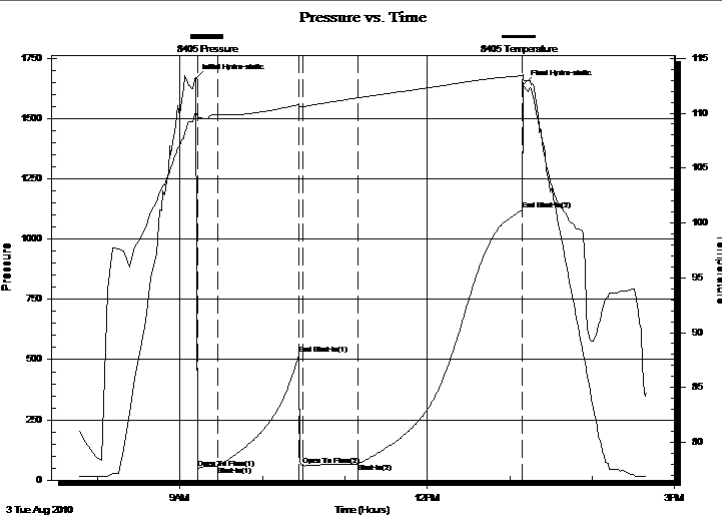
Start Time: 07:47:00

End Time: 14:40:00

Time On Btm: 2010.08.03 @ 09:11:30

Time Off Btm: 2010.08.03 @ 13:10:00

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 5 1/2 INCHES INTO WATER IN 15 MINUTES  
 60/INITIAL SHUT IN:NO BLOW BACK  
 40/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 120/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1663.94	110.13	Initial Hydro-static
1	49.46	109.66	Open To Flow (1)
16	57.56	109.87	Shut-In(1)
75	521.76	110.80	End Shut-In(1)
78	59.55	110.61	Open To Flow (2)
118	67.99	111.40	Shut-In(2)
238	1119.74	113.42	End Shut-In(2)
239	1642.22	113.15	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	GASSY Oil Cut Mud	0.88
	5%Gas 20% Oil 75%Mud	0.00
	300 Feet of Gas in the pipe	

## Gas Rates

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



# DRILL STEM TEST REPORT

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
WYNKOOP ST SUITE 700  
DENVER CO 80202  
ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16340

**DST#: 3**

Test Start: 2010.08.03 @ 07:45:00

## GENERAL INFORMATION:

Formation: **Lansing H - I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:12:30

Time Test Ended: 14:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-56

**Interval: 3395.00 ft (KB) To 3434.00 ft (KB) (TVD)**

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3434.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 6.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8524 Outside**

Press @ RunDepth: 1119.80 psia @ 3431.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.08.03

End Date: 2010.08.03

Last Calib.: 2010.08.03

Start Time: 07:47:00

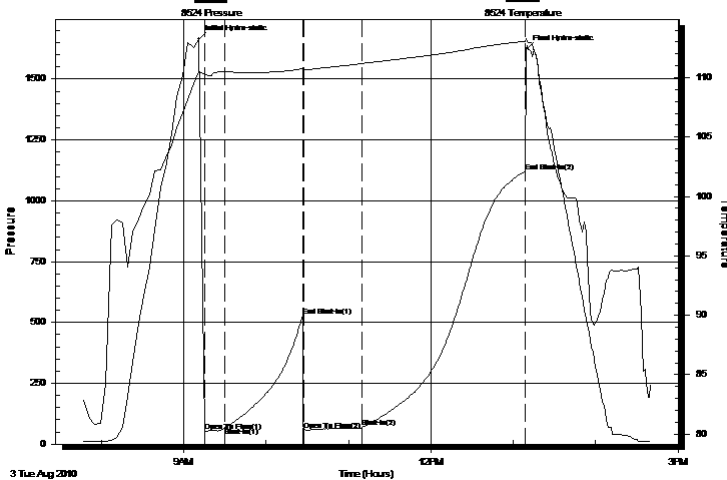
End Time: 14:40:00

Time On Btm: 2010.08.03 @ 09:11:00

Time Off Btm: 2010.08.03 @ 13:09:30

**TEST COMMENT:** 15/INITIAL OPEN:WEAK BLOW BUILT 5 1/2 INCHES INTO WATER IN 15 MINUTES  
60/INITIAL SHUT IN:NO BLOW BACK  
40/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
120/FINAL SHUT IN:NO BLOW BACK

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1664.35	110.53	Initial Hydro-static
4	52.22	110.23	Open To Flow (1)
19	67.92	110.48	Shut-In(1)
76	525.57	110.74	End Shut-In(1)
77	56.55	110.69	Open To Flow (2)
119	67.67	111.19	Shut-In(2)
238	1119.80	113.05	End Shut-In(2)
239	1622.27	113.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	GASSY Oil Cut Mud	0.88
	5%Gas 20% Oil 75%Mud	0.00
	300 Feet of Gas in the pipe	

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16340

**DST#: 3**

Test Start: 2010.08.03 @ 07:45:00

**Tool Information**

Drill Pipe:	Length: 3376.00 ft	Diameter: 3.80 inches	Volume: 47.36 bbl	Tool Weight: 1000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 47.36 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3395.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3367.00	
Shut-In Tool	5.00			3372.00	
Hydraulic Tool	5.00			3377.00	
Jars	6.00			3383.00	
Safety Joint	2.00			3385.00	
Packer	5.00			3390.00	29.00 Bottom Of Top Packer
Packer	5.00			3395.00	
Perforations	34.00			3429.00	
Recorder	1.00	8405	Inside	3430.00	
Recorder	1.00	8524	Outside	3431.00	
Bullnose	3.00			3434.00	39.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**



# DRILL STEM TEST REPORT

**FLUID SUMMARY**

SAMUEL GARY JR & ASSOCIATES INC

**YARMER ET AL 1-3**

SAMUEL GARY JR & ASSOCIATES INC 1515  
 WYNKOOP ST SUITE 700  
 DENVER CO 80202  
 ATTN: CLAYTON CAMOZZI

**3-17S-16W RUSH**

Job Ticket: 16340

**DST#: 3**

Test Start: 2010.08.03 @ 07:45:00

## Mud and Cushion Information

Mud Type: Polymer	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 4600.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

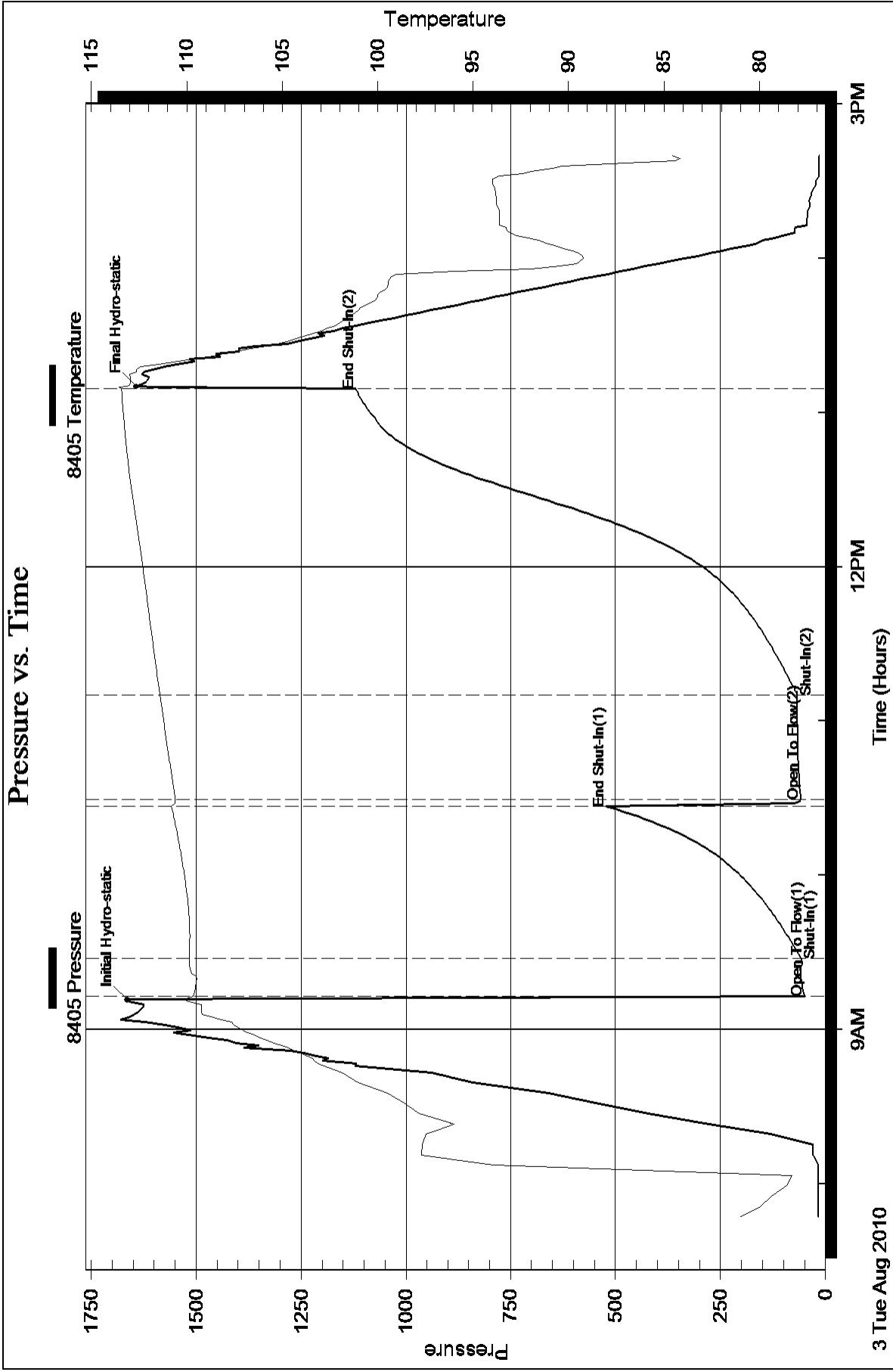
Length ft	Description	Volume bbl
63.00	GASSY Oil Cut Mud	0.884
	5%Gas 20% Oil 75%Mud	0.000
	300 Feet of Gas in the pipe	

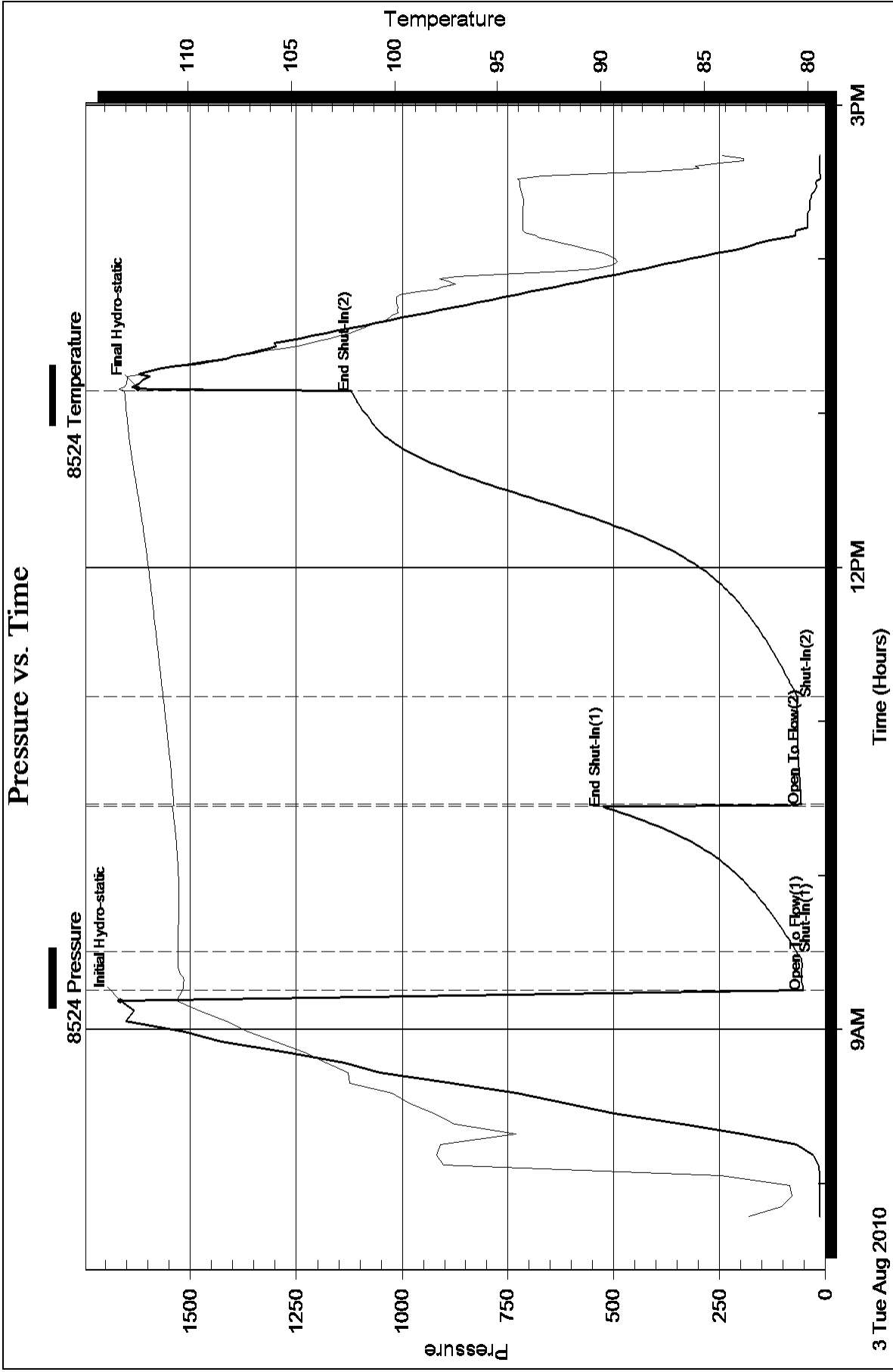
Total Length: 63.00 ft      Total Volume: 0.884 bbl

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

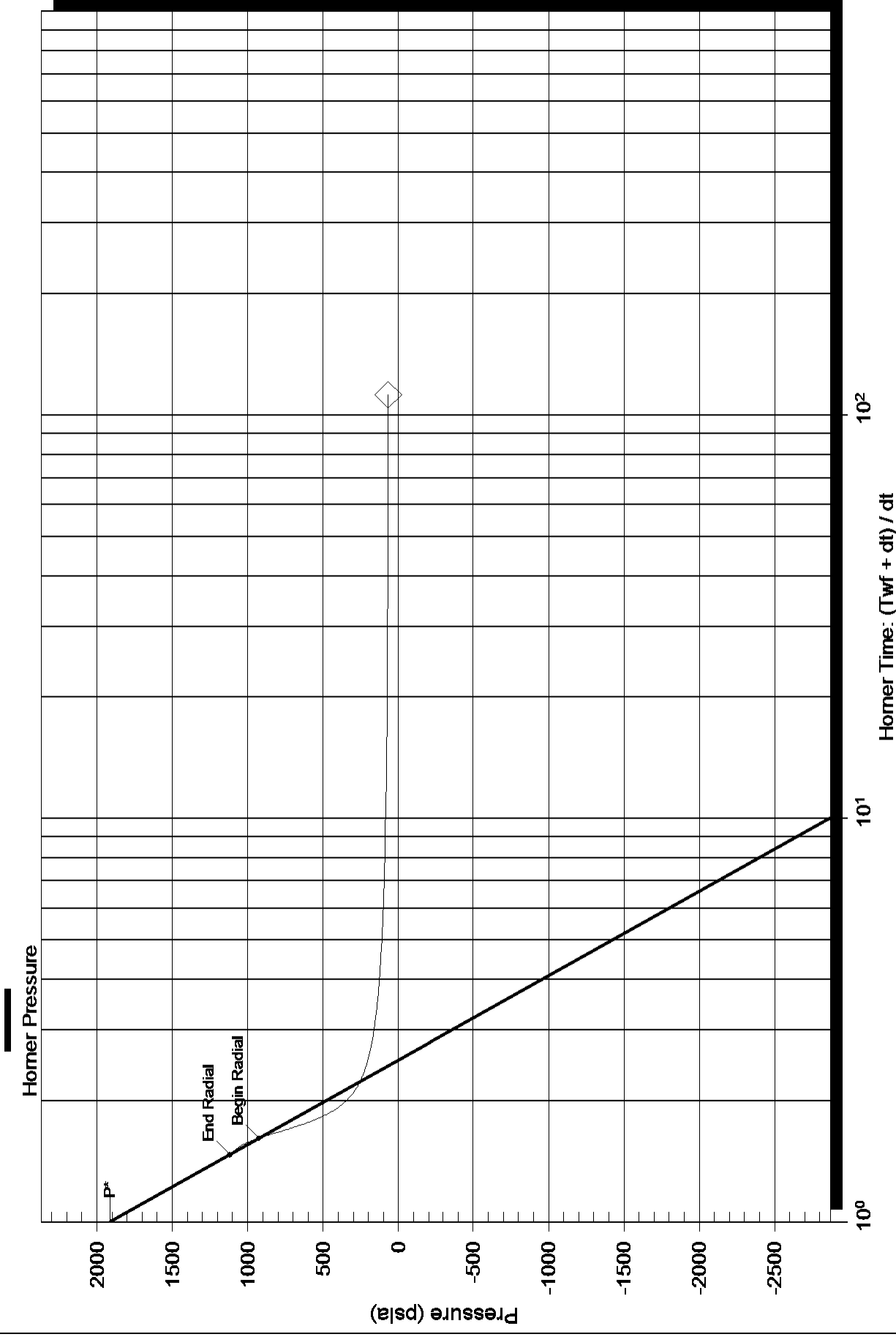
Laboratory Name:      Laboratory Location:

Recovery Comments: There was not enough break over on the final shut-in to get an accurate extrapolation 65% break over is needed





### Horner Plot



# Log-Log and Pseudo-Derivative

