



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1087215
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

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

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1087215

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	HERRMAN ET AL 1-12
Doc ID	1087215

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

July 12, 2012

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

Re: ACO1
API 15-165-21964-00-00
HERRMAN ET AL 1-12
NW/4 Sec.12-16S-17W
Rush County, Kansas

Dear Production Department:

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

Should you have any questions or need additional information regarding subject well, please contact our office at 303-831-4673.

Respectfully,
TOM FERTAL



QUALITY OILWELL CEMENTING, INC.

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

Date: 3/27/2012
 Invoice # 304

P.O.#:

Due Date: 4/26/2012

Division: Russell

Invoice

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

Reference:
 HERMAN ET AL 1-12

Description of Work:
 LONG SURFACE JOB

RECEIVED

APR 03 2012

**SAMUEL GARY JR.
 & ASSOCIATES, INC.**

DRLG COMP W/O LOE GG

Account	8200.138
Well/Prospect	
Deck	
AFE	
Approval	<i>[Signature]</i>
Description	

Services / Items Included:

	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 963.85	No	Baffle Plate Aluminum, 8 5/8"	1	\$95.00	Yes
Common-Class A	325	\$ 4,185.28	Yes				
8 5/8" Basket	3	\$ 1,000.67	Yes				
Bulk Truck Mat-Material Service Charge	344	\$ 726.22	No				
Calcium Chloride	12	\$ 477.03	Yes				
Pump Truck Mileage-Job to Nearest Camp	24	\$ 252.83	No				
8 5/8" Centralizer	3	\$ 202.67	Yes				
Flo Seal	81	\$ 171.00	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	24	\$ 147.95	No				
Premium Gel (Bentonite)	7	\$ 120.29	Yes				
8 5/8" Top Rubber Plug	1	\$ 111.89	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 8,454.66
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,268.20)

SubTotal for Taxable Items: \$ 5,409.25
 SubTotal for Non-Taxable Items: \$ 1,777.22

6.30% Rush County Sales Tax

Total: \$ 7,186.46
 Tax: \$ 340.78

Thank You For Your Business!

Amount Due: \$ 7,527.25
 Applied Payments:
 Balance Due: \$ 7,527.25

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
 ©2008-2013 Straker Investments, LLC. All rights reserved.

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. 304

Date	3-25-12	Sec.	12	Twp.	16	Range	17	County	Rush	State	KS	On Location		Finish	9:30 AM
Lease	HERMAN ETAL			Well No.	1-12			Location	Loretta 1E 1/2U Finto						
Contractor	Val #6							Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.						
Type Job	Surface							Charge To	Sam Gant Jr + Assoc.						
Hole Size	12 1/4			T.D.	820			Street							
Csg.	8 5/8			Depth	820			City	State						
Tbg. Size								Depth							
Tool								Depth							
Cement Left in Csg.	42.49			Shoe Joint	42.49			The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line				Displace	49 1/2 BCL			Cement Amount Ordered	325 lbm 3 1/2 1/2 1/2 1/2						
EQUIPMENT								1/4 #90							
Pumptrk	5	No.	Cement Helper	Craig				Common							
Bulktrk		No.	Driver	Cody				Poz. Mix							
Bulktrk	13	No.	Driver	Doug				Gel.	7						
JOB SERVICES & REMARKS								Calcium	12						
Remarks:								Hulls							
Rat Hole								Salt							
Mouse Hole								Flowseal	81 #						
Centralizers								Kol-Seal							
Baskets								Mud CLR 48							
D/V or Port Collar								CFL-117 or CD110 CAF 38							
8 5/8 on bottom. Est. Circulation.								Sand							
Pump 108L water + Mix 325-4K cement								Handling	344						
Displace Plug Plug landed @ 200 ft.								Mileage							
Cement Circulated!								FLOAT EQUIPMENT							
								Guide Shoe	8-5/8						
								Centralizer	3						
								Baskets	3						
								AFU Inserts	Rubber Plug						
								Float Shoe	Baffle Plate						
								Latch Down							
								Pumptrk Charge	Long Surface						
								Mileage	24						
								Tax							
								Discount							
								Total Charge							
X Signature	Randy O. [Signature]														



QUALITY OILWELL CEMENTING, INC.

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

Date: 4/4/2012
 Invoice # 273

P.O.#:
 Due Date: 5/4/2012
 Division: Russell

Invoice

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

RECEIVED

APR 09 2012

**SAMUEL GARY JR.
 & ASSOCIATES, INC.**

DRLG COMP W/O LOE GG

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

Reference:
 HERRMAN ET AL 1-12

Description of Work:
 PROD LONG STRING

Services / Items Included:

Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor	\$ 937.80	No		Salt (Fine)	19	\$272.41 Yes
Common-Class A	225 \$ 2,819.19	Yes	Pump Truck Mileage-Job to Nearest Camp	24	\$245.99	No
Gilsonite	1057 \$ 1,628.35	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$230.05	Yes
CFL 117	176 \$ 1,113.46	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	24	\$143.95	No
8 5/8" Basket	3 \$ 973.62	Yes	Flo Seal	56	\$115.03	Yes
Bulk Truck Matl-Material Service Charge	254 \$ 521.73	No	KCL	2	\$61.33	Yes
CD-110	117 \$ 480.65	Yes				
5 1/2" Turbolizer	8 \$ 476.54	Yes				
Mud Clear	500 \$ 380.00	Yes				
Defoamer A or CAF-38	50 \$ 359.46	Yes				
Auto Fill Float Shoe, 5 1/2"	1 \$ 314.27	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 11,073.84

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,661.08)

SubTotal for Taxable Items: \$ 7,840.71

SubTotal for Non-Taxable Items: \$ 1,572.05

Total: \$ 9,412.76

Tax: \$ 493.96

Amount Due: \$ 9,906.73

Applied Payments:

Balance Due: \$ 9,906.73

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.
 ©2008-2013 Straker Investments, LLC. All rights reserved.

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. 273

Date	3/30/12	Sec.	12	Twp.	16	Range	17	County	Rush	State	KS	On Location		Finish	5:45 PM
------	---------	------	----	------	----	-------	----	--------	------	-------	----	-------------	--	--------	---------

Lease	Herrman Et Al	Well No.	1-12	Location	Loretta, 1 E, 1/2 N, E into
-------	---------------	----------	------	----------	-----------------------------

Contractor	VAL Rig #6	Owner	To Quality Oilwell Cementing, Inc.
------------	------------	-------	------------------------------------

Type Job	Production string	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
----------	-------------------	--	--

Hole Size	7 1/2"	T.D.	3700'	Charge To	Sam Gary Jr. + Associates, Inc
-----------	--------	------	-------	-----------	--------------------------------

Csg.	5 1/2" 15.50#	Depth	3696'	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.	42'	Shoe Joint	42'	Cement Amount Ordered	22 5/8 x 2-PRO-C 10% Salt
---------------------	-----	------------	-----	-----------------------	---------------------------

Meas Line		Displace	87 Bbls.	Common	5% Gilsontite, 1/4# Floer, 3% CD-110,
-----------	--	----------	----------	--------	---------------------------------------

EQUIPMENT

Pumptrk	9	No.		Cementor	Paul
Bulktrk	10	No.		Helper	
Bulktrk	PV	No.		Driver	Matt
				Driver	Doug

JOB SERVICES & REMARKS

Remarks:		Calcium	CD-110 117#
Rat Hole	30 5/8	Hulls	KCL 2 gal
Mouse Hole	20 5/8	Salt	19
Centralizers	1, 3, 5, 7, 9, 11, 13, 15	Flowseal	56 #
Baskets	3, 9, 15	Kol-Seal	1057 #
D/V or Port Collar		Mud CLR 48	500 gal / 20 Bbls. KCL
Est. Circ.		CFL-117 or CD110	CAF 38 - 50 #
Pump 500 gal Mud Clear - 48		Sand	176 #
Plug Rat / Mouse		Handling	
Mix 17 5/8 down 5 1/2"		Mileage	5 1/2
Displace - First 20 Bbls. KCL			
Land Plug @ 1500'			
Float Weld			
2 1/2 PSI 800'			

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	8 - Turbos
Baskets	3
AFU Inserts	
Float Shoe	1
Latch Down	1
	Rotating Head

Pumptrk Charge	Prod Long String
Mileage	24

Tax	
Discount	
Total Charge	

X Signature 

Thank You!!



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Clayton Camozzi

Herrman et al 1-12

12-16-17 Rush, Ks

Start Date: 2012.03.29 @ 04:57:20

End Date: 2012.03.29 @ 13:34:50

Job Ticket #: 36075 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.03 @ 14:24:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16-17 Rush, Ks

1515 Wynkoop St. Ste 700
Denver, CO 80202

Herrman et al 1-12

ATTN: Clayton Camozzi

Job Ticket: 36075

DST#: 1

Test Start: 2012.03.29 @ 04:57:20

GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:50:50

Time Test Ended: 13:34:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: 3509.00 ft (KB) To 3579.00 ft (KB) (TVD)

Reference Elevations: 2004.00 ft (KB)

Total Depth: 3579.00 ft (KB) (TVD)

1994.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 50.07 psig @ 3511.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.03.29 End Date: 2012.03.29

Last Calib.: 1899.12.30

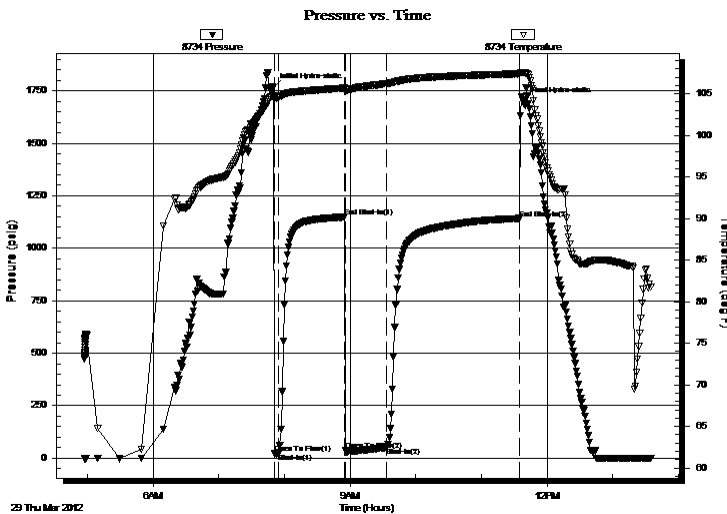
Start Time: 04:57:21 End Time: 13:34:50

Time On Btm: 2012.03.29 @ 07:49:50

Time Off Btm: 2012.03.29 @ 11:38:20

TEST COMMENT: 5 - IFP - weak blow throughout 1/2" - 1 1/2"
60 - ISI - no blow back
40 - FFP - BOB 22 min
120 - FSI - no blow back

PRESSURE SUMMARY



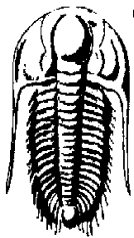
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1766.61	104.78	Initial Hydro-static
1	21.25	104.46	Open To Flow (1)
5	23.75	104.55	Shut-In(1)
65	1148.17	105.69	End Shut-In(1)
66	38.15	105.44	Open To Flow (2)
104	50.07	106.24	Shut-In(2)
225	1141.43	107.40	End Shut-In(2)
229	1697.94	107.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCO 50%O, 50%M	0.84
15.00	HOCM 35%O, 65%M	0.21

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16-17 Rush, Ks

1515 Wynkoop St. Ste 700
Denver, CO 80202

Herrman et al 1-12

ATTN: Clayton Camozzi

Job Ticket: 36075

DST#: 1

Test Start: 2012.03.29 @ 04:57:20

GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:50:50

Time Test Ended: 13:34:50

Interval: 3509.00 ft (KB) To 3579.00 ft (KB) (TVD)

Total Depth: 3579.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Reference Elevations: 2004.00 ft (KB)

1994.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6669 Inside

Press @ Run Depth: psig @ 3511.00 ft (KB)

Start Date: 2012.03.29 End Date: 2012.03.29

Start Time: 04:57:45 End Time: 13:35:44

Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

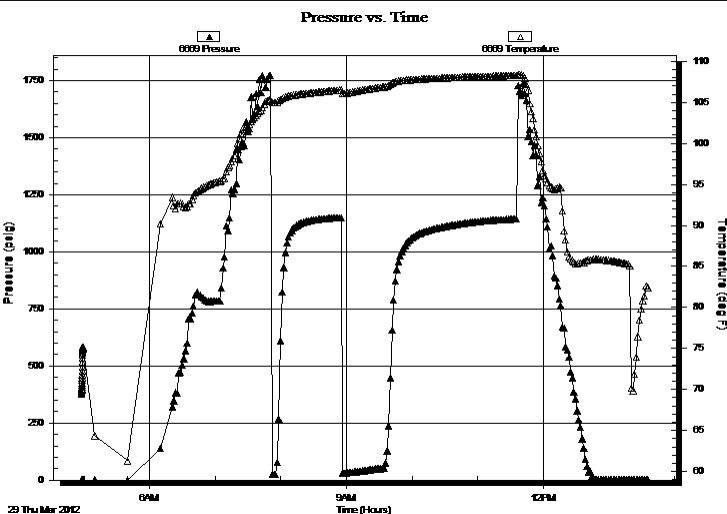
Time Off Btm:

TEST COMMENT: 5 - IFP - weak blow throughout 1/2" - 1 1/2"

60 - ISI - no blow back

40 - FFP - BOB 22 min

120 - FSI - no blow back



PRESSURE SUMMARY

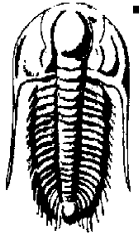
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCO 50%O, 50%M	0.84
15.00	HOCM 35%O, 65%M	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16-17 Rush, Ks

1515 Wynkoop St. Ste 700
Denver, CO 80202

Herrman et al 1-12

ATTN: Clayton Camozzi

Job Ticket: 36075

DST#: 1

Test Start: 2012.03.29 @ 04:57:20

GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:50:50

Time Test Ended: 13:34:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: 3509.00 ft (KB) To 3579.00 ft (KB) (TVD)

Reference Elevations: 2004.00 ft (KB)

Total Depth: 3579.00 ft (KB) (TVD)

1994.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid

Press @RunDepth: psig @ 3475.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.03.29

End Date:

2012.03.29

Last Calib.:

1899.12.30

Start Time: 04:57:54

End Time:

13:35:53

Time On Btm:

Time Off Btm:

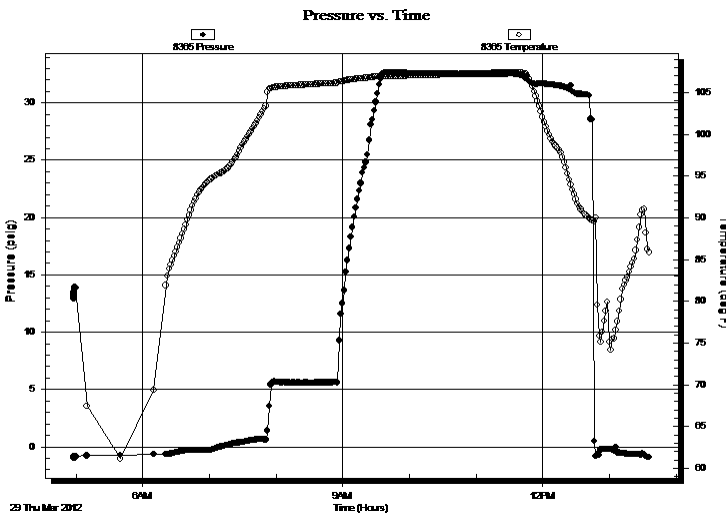
TEST COMMENT: 5 - IFP - weak blow throughout 1/2" - 1 1/2"

60 - ISI - no blow back

40 - FFP - BOB 22 min

120 - FSI - no blow back

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
60.00	MCO 50%O, 50%M	0.84
15.00	HOCM 35%O, 65%M	0.21

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

12-16-17 Rush, Ks

1515 Wynkoop St. Ste 700
Denver, CO 80202

Herrman et al 1-12

Job Ticket: 36075

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.03.29 @ 04:57:20

Tool Information

Drill Pipe:	Length: 3509.00 ft	Diameter: 3.80 inches	Volume: 49.22 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3509.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	104.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Recorder	0.00	8365	Fluid	3475.00	
Blank Spacing	5.00			3480.00	
Shut In Tool	5.00			3485.00	
Sampler	2.00			3487.00	
Hydraulic tool	5.00			3492.00	
Jars	5.00			3497.00	
Safety Joint	2.00			3499.00	
Packer	5.00			3504.00	34.00 Bottom Of Top Packer
Packer	5.00			3509.00	
Stubb	1.00			3510.00	
Perforations	1.00			3511.00	
Recorder	0.00	6669	Inside	3511.00	
Recorder	0.00	8734	Outside	3511.00	
Change Over Sub	1.00			3512.00	
Blank Spacing	62.00			3574.00	
Change Over Sub	1.00			3575.00	
Perforations	1.00			3576.00	
Bullnose	3.00			3579.00	70.00 Bottom Packers & Anchor

Total Tool Length: 104.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. and Associates, Inc.

12-16-17 Rush, Ks

1515 Wynkoop St. Ste 700
Denver, CO 80202

Herrman et al 1-12

Job Ticket: 36075

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.03.29 @ 04:57:20

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.80 cm³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	MCO 50%O, 50%M	0.842
15.00	HOCM 35%O, 65%M	0.210

Total Length: 75.00 ft Total Volume: 1.052 bbl

Num Fluid Samples: 0

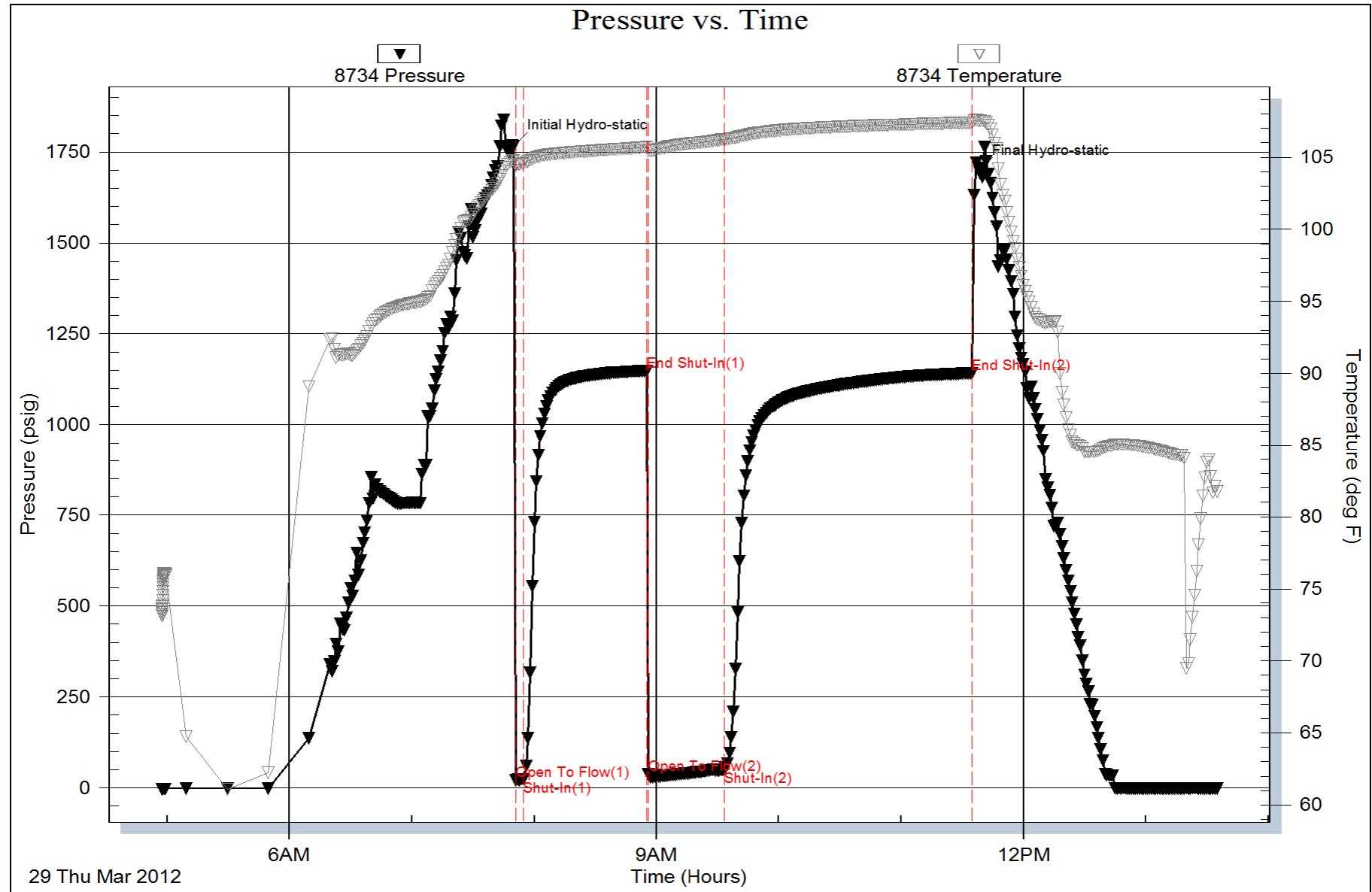
Num Gas Bombs: 0

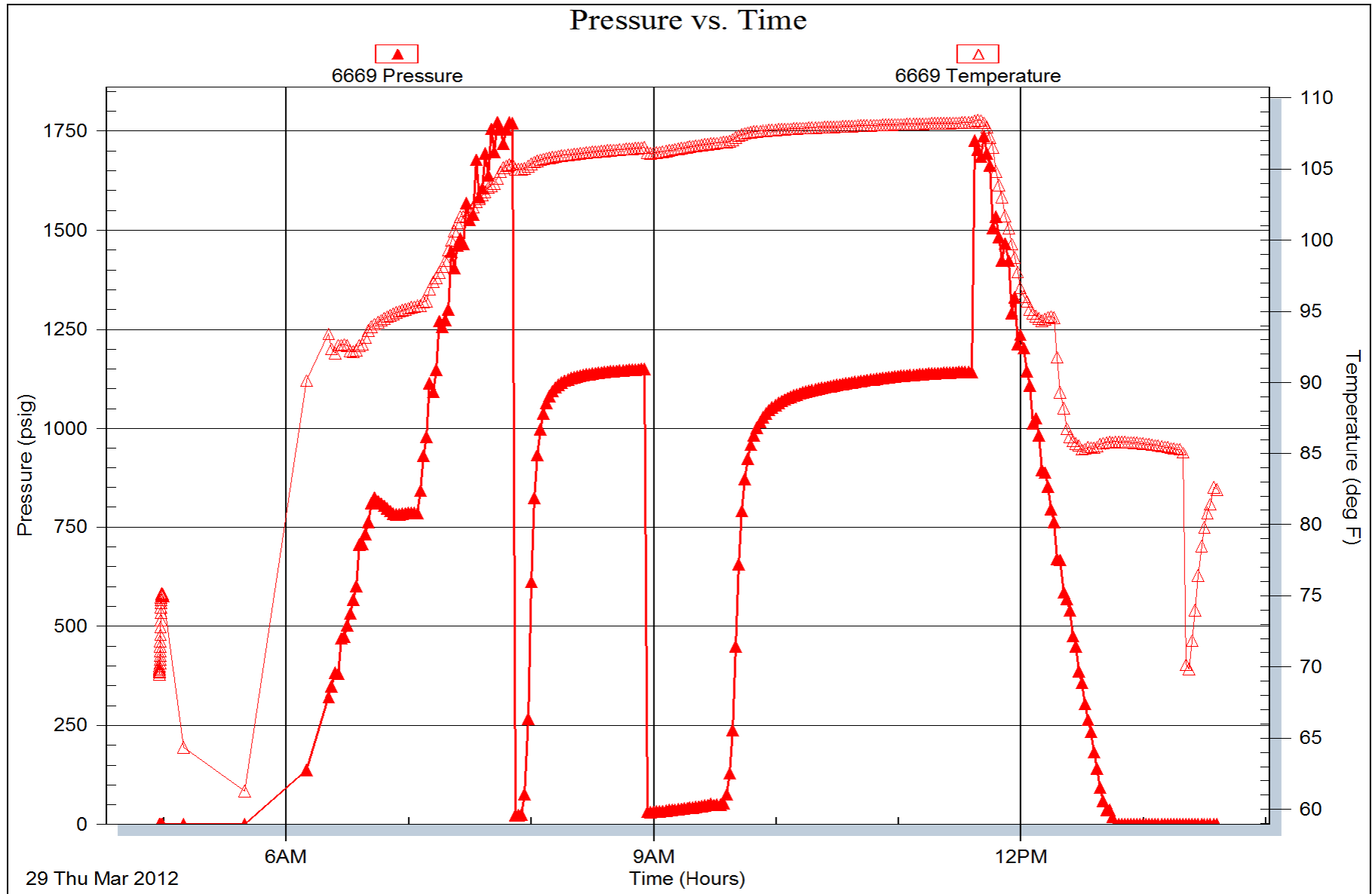
Serial #:

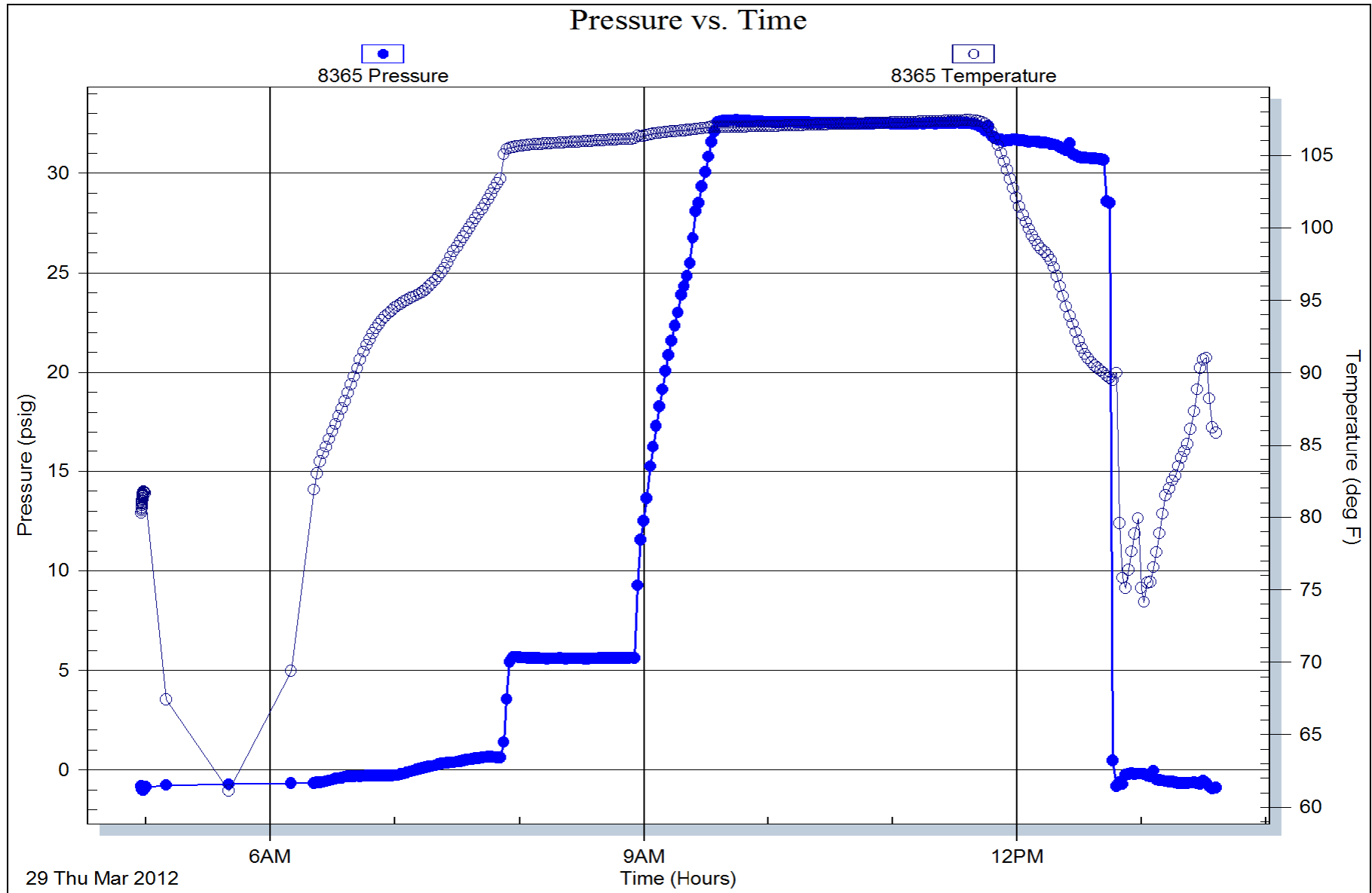
Laboratory Name:

Laboratory Location:

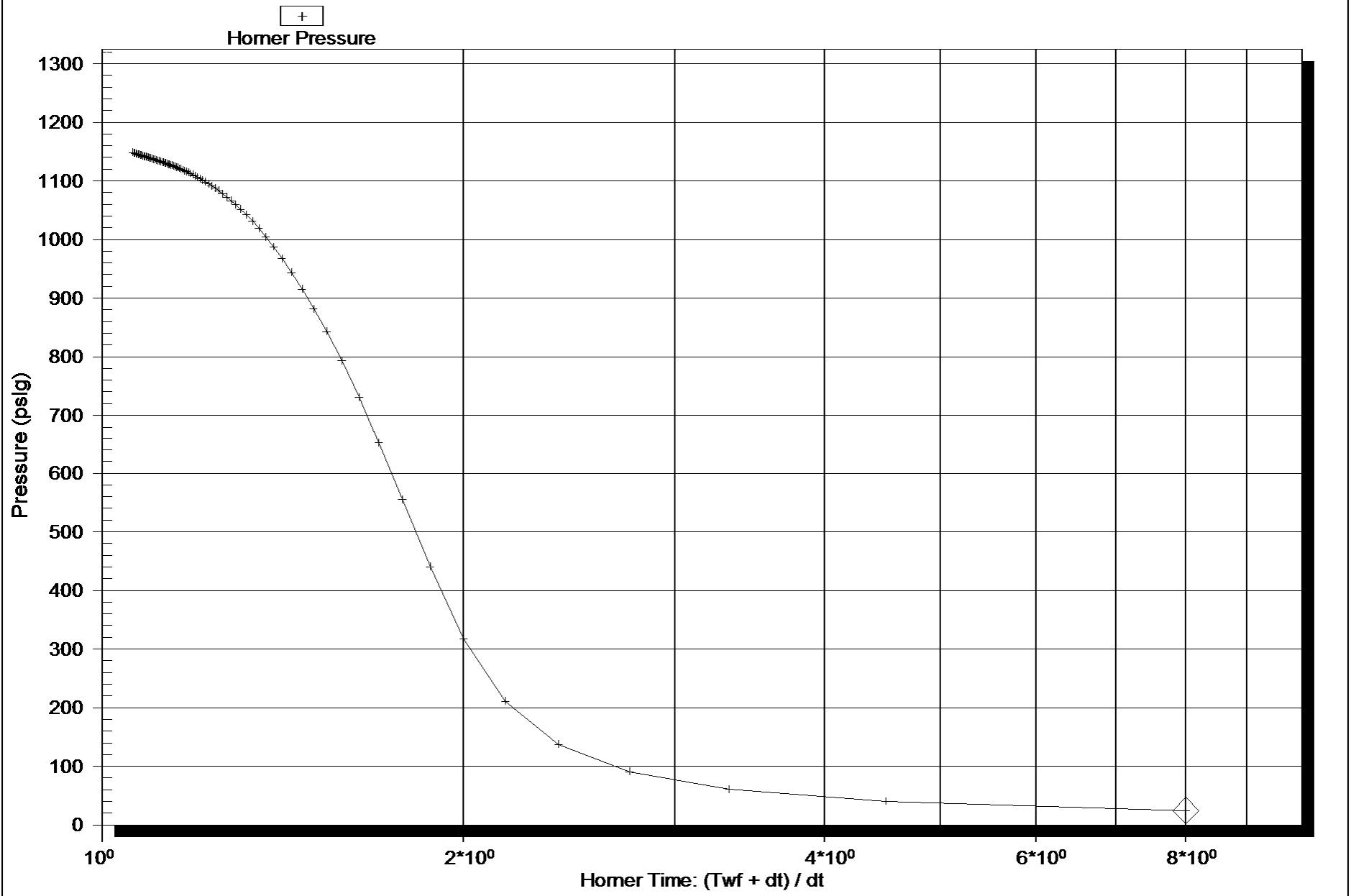
Recovery Comments: 400 ml G, 3200 ml O, 400 ml M, 275 lbs 40 gravity

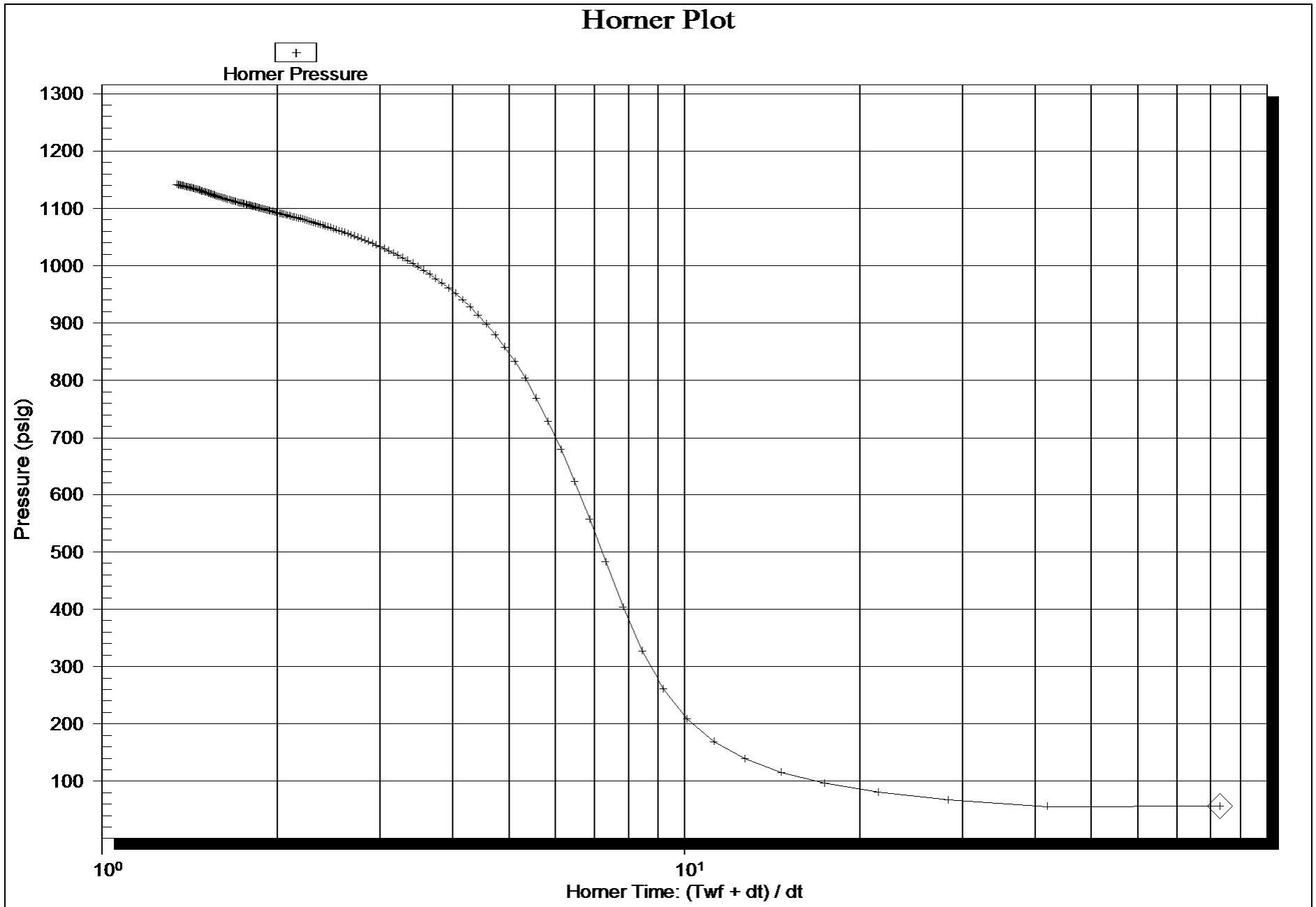


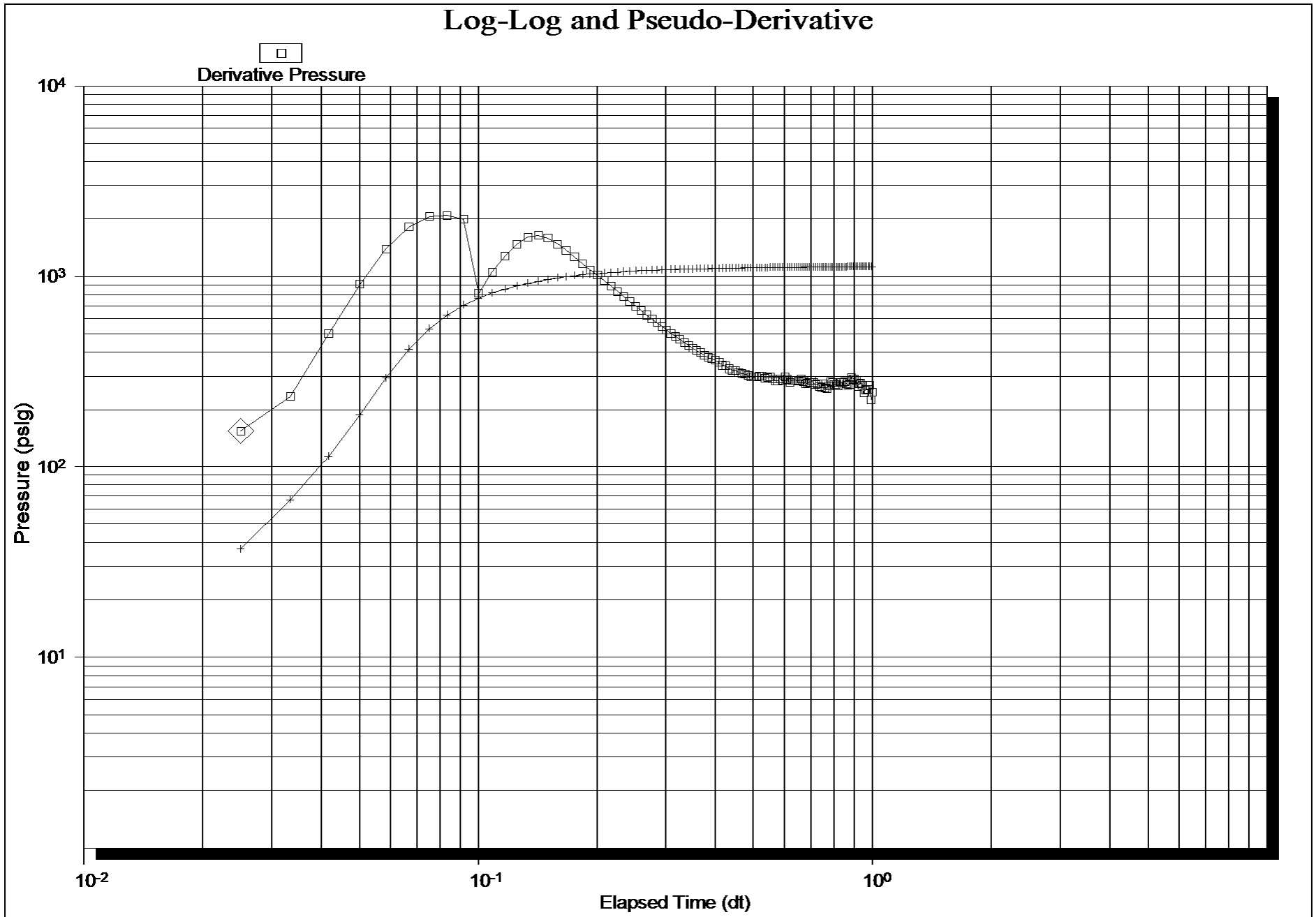


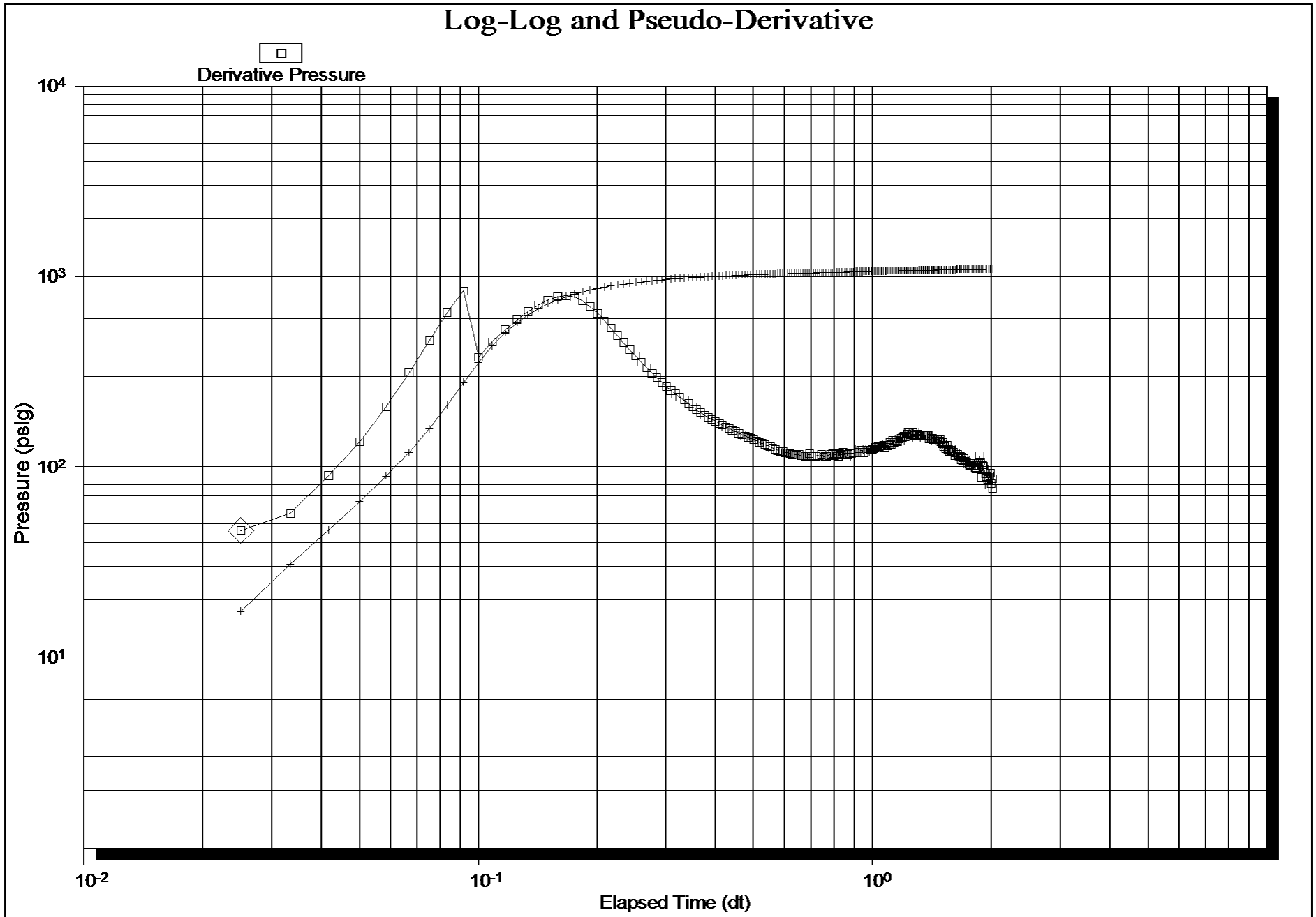


Horner Plot











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

Well Name: SGA Herrman et al 1-12
 Location: SEC. 12-16S-17W, RUSH COUNTY, KANSAS
 License Number: 15-165-21964-0000
 Spud Date: 3/19/12
 Surface Coordinates: 2610' FNL/ 405' FWL
 Region: WILDCAT
 Drilling Completed: 3/29/12

Bottom Hole Coordinates:
 Ground Elevation (ft): 1994' K.B. Elevation (ft): 2004'
 Logged Interval (ft): 1800' To: 3700' Total Depth (ft): 3700'
 Formation: Lansing, Arbuckle
 Type of Drilling Fluid:

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

OPERATOR

Company: Samuel Gary Jr. & Assoc.
 Address: 1515 Wynkoop, Ste. # 700
 Denver, Colo. 80202
 Geo: CLAYTON CAMOZZI

GEOLOGIST

Name: SCHUYLER HEDRICK
 Company: Earth Tech OGL, Inc.
 Address: PO Box 683
 Hooker, Okla . 73945
 Off. 888-543-8378

DST's Report

DST #1 3509'-3579' 5-60-40-120
 IF- WK BLW THRU 1/2"-1 1/2", ISI- NO BLW BACK, FF- BOB 22 MIN, FSI- NO BLW BACK
 IH-1767, FH-1698/ IF- 21 TO 24, FF- 38 TO 50/ ISI- 1148, FSI-1141
 REC. 75' OF TF/ 15' OF HOCM 35% OIL, 65% MUD/ 60' OF MCO 50% OIL, 50% MUD/ BHT- 107, GRAVITY-40,
 CHLOR.-6700

ROCK TYPES

Anhy	Gyp	Shgy	Sandylms
Bent	Igne	Sltst	Shale
Brec	Lmst	Ss	Sltstn
Cht	Meta	Till	Shlysits
Clyst	Mrlst	Carb sh	Sitysh
Coal	Salt	Dol	Lms
Congl	Shale	Dtd	
Dol	Shcol	Gry sh	

ACCESSORIES

MINERAL	Salt	Fossil	Clystn
Anhy	Sandy	Gastro	Dol
Arggrn	Silt	Oolite	Grysh
Arg	Sil	Ostra	Gryslt
Bent	Sulphur	Pelec	Lms
Bit	Tuff	Pellet	Sandylms
Brecfrag	Chlorite	Pisolite	Sh
Calc	Dol	Plant	Sltstn
Carb	Sand	Strom	
Chtdk	Sity	Fuss	
Chtlt		Oomold	
Dol	FOSSIL	STRINGER	TEXTURE
Feldspar	Algae	Anhy	Boundst
Ferrpel	Amph	Arg	Chalky
Ferr	Belm	Bent	Cryxln
Glau	Bioclst	Coal	Earthy
Gyp	Brach	Dol	Finexln
Hvymn	Bryozoa	Gyp	Grainst
Kaol	Cephal	Ls	Lithogr
Marl	Coral	Mrst	Microxln
Minxl	Crin	Sltstrg	Mudst
Nodule	Echin	Ssstrg	Packst
Phos	Fish	Carbsh	Wackest
Pyr	Foram		

OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- B Fenest
- F Fracture
- X Inter
- A Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- S Subrnd
- a Subang

- A Angular

OIL SHOWS

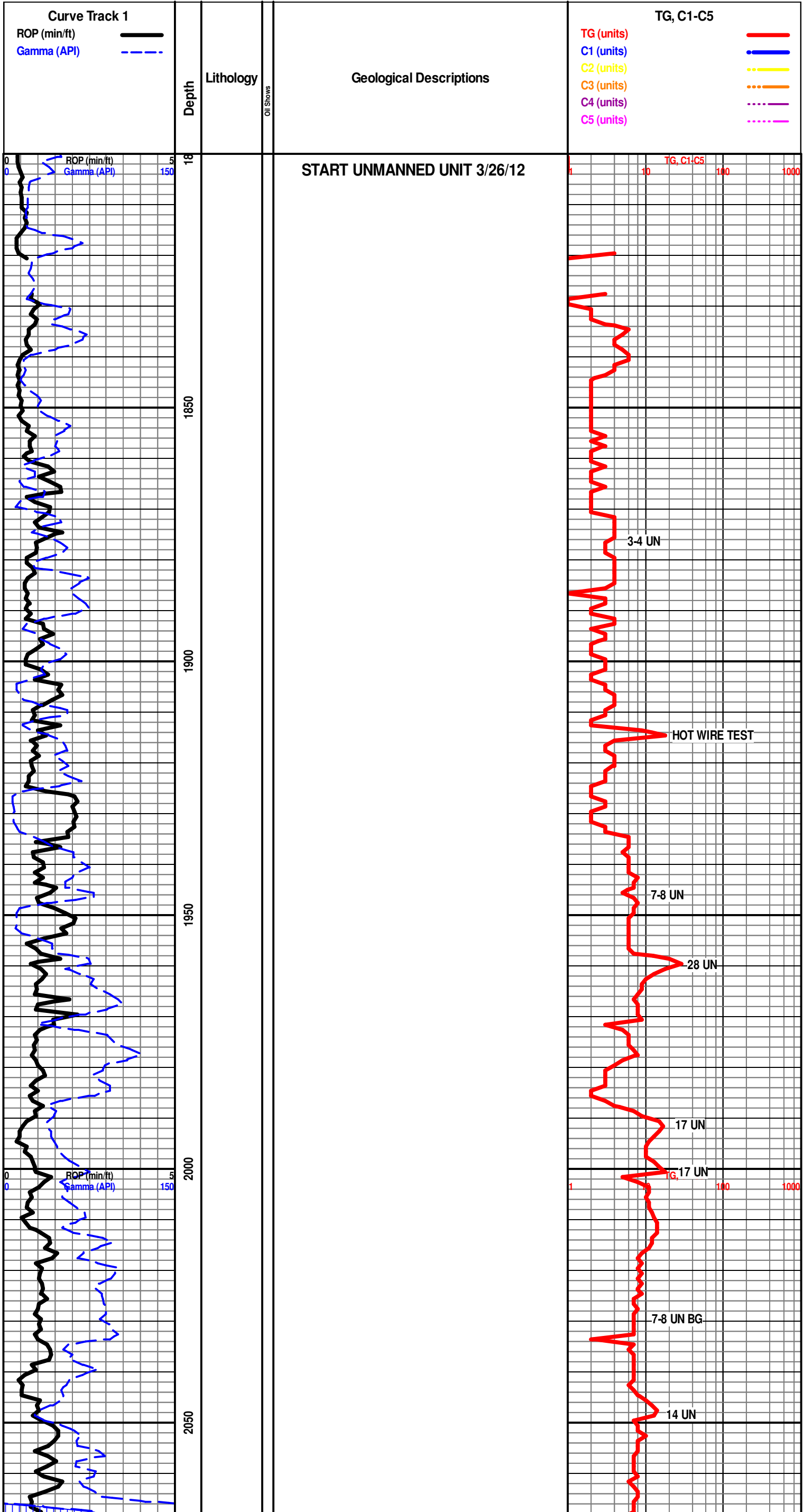
- E Even
- S Spotted
- Q Ques
- D Dead
- G Gas show

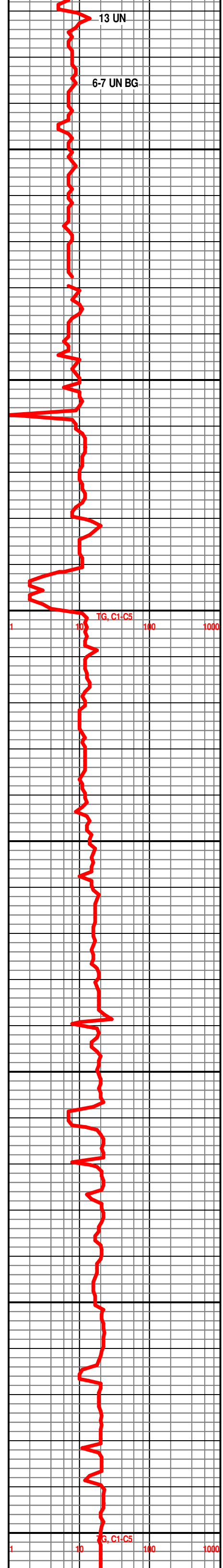
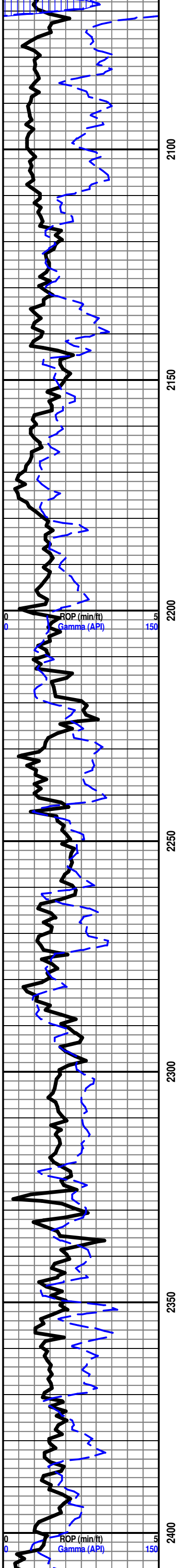
INTERVALS

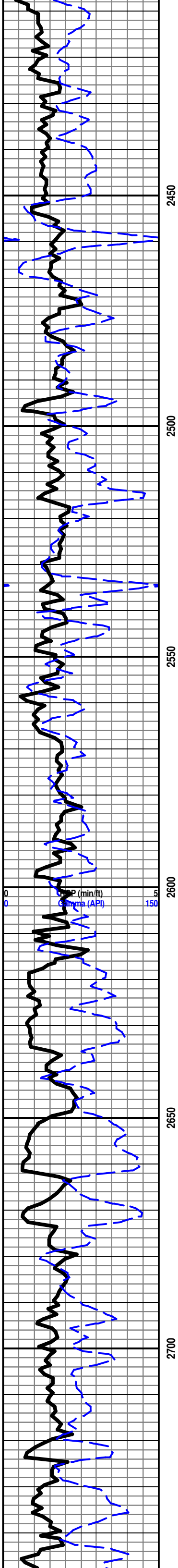
- C Core
- + Dst
- Dst

EVENTS

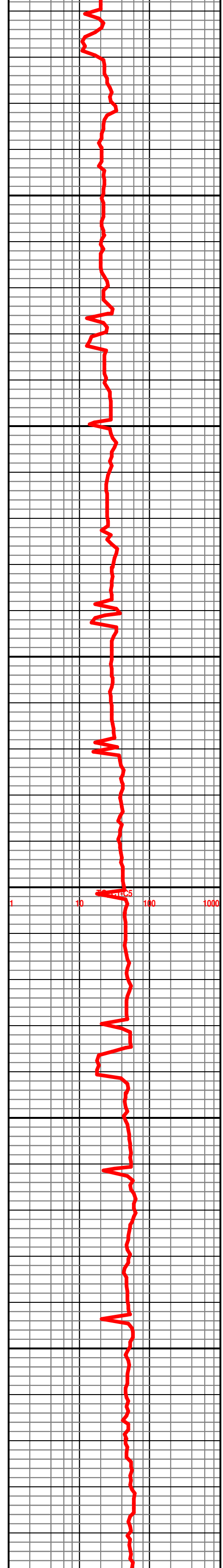
- ▽ Rft
- ▾ Sidewall



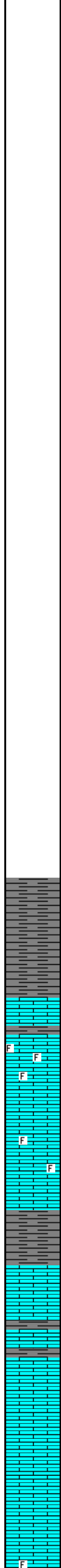
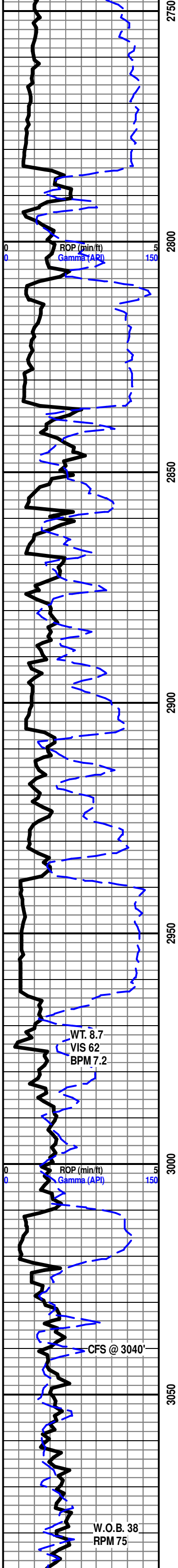




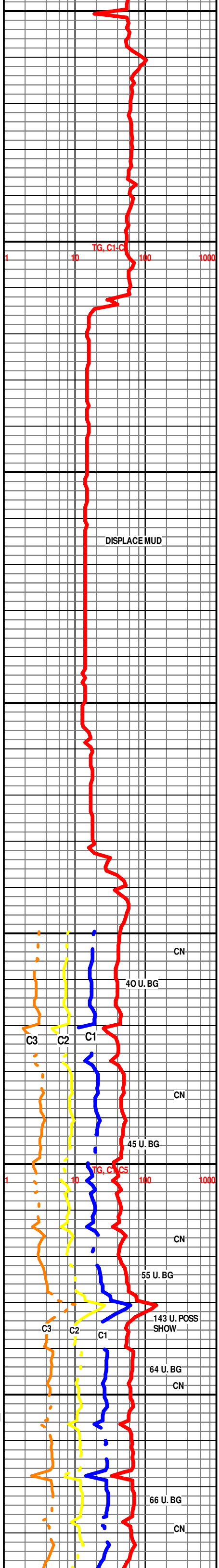
2700 2650 2600 2550 2500 2450



2700 2650 2600 2550 2500 2450



BRS 2784'-780'



START 24 HR. MANNED UNIT 3/27/12

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

HOWARD 2963'-959'

LS- CRM TO LT TN TN, HD DNS TO BRTT IP, MD-XLN MTRX, TR RE-XLN IP, S-CHLKY IP, SCAT IMB FOSS FRAGS THRU, TR DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN LT GY, HD DNS TO TR BRTT IP, MD/F-XLN MTRX, S-SUCRO IP, S-CHLKY IP, SCAT IMB FOSS FRAGS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SEVERY 3010'-1006'

SH- LT GY TO GY, SFT TO V GMMY IP, V SLTY BLCKY TXT THRU

TOPEKA 3023'-1019'

LS- CRM TO LT TN, HD DNS TO V-BRTT, MD/F-XLN MTRX, S-CHLKY THRU, TR S-SUCRO IP, ABDT SFT GMMY WHT CHLK THRU, SCAT IMB CAL-XLS THRU, SCAT FREE CALC-XLS IP, TR SCAT PYR IP, V DUL YEL FLO IP, NO VIS POR, NO VIS CUT OR SHOW

LS- LT TN TN TO LT GY MOTT, HD DNS TO BRTT IP, MD-XLN MTRX, S-SUCRO IP, TR S-CHLKY IP, SCAT IMB SM CAL-XLS TRHU, V DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

LS- CRM TO LT GY, HD DNS TO V-BRTT IP, MD/F-XLN MTRX, S-SUCRO IP, SCAT IMB SM CALC-XLS IP, TR IMB FOSS FRAGS IP, TR V DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

CN

40 U. BG

CN

45 U. BG

CN

55 U. BG

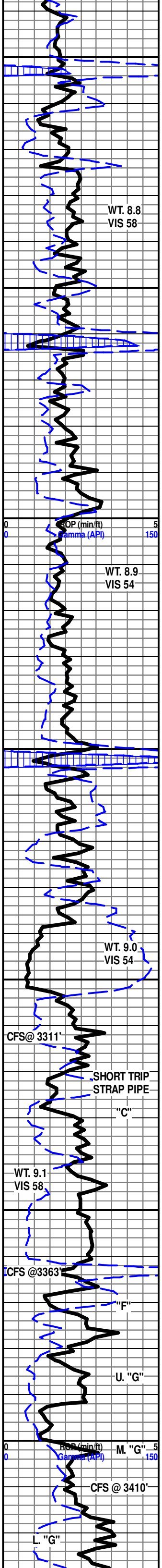
143 U. POSS SHOW

64 U. BG

CN

66 U. BG

CN



SH- LT GRN TO LT GY MOTT, FRM TO V-SFT, SLTY BLCKY TXT THRU W/ SMTH SPLNTY TXT IP

LE COMPTON 3124'-1120'

LS- OFF WHT TO CRM BFF, V HD DNS TO TR BRTT IP, F/VF-XLN MTRX, SLI TR S-SUCRO IP, DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRTT IP, MD/F-XLN MTRX, SLI TR RE-XLN IP, TR IMB FOSS FRAGS IP, V DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

SH- BLCK SFT CARB

LS- CRM BFF TO LT TN, HD DNS TO BRTT, F/VF-XLN MTRX, S-SURCO IP, SCAT IMB SM CALC-XLS THRU, TR SCAT FREE FOSS IP, V DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN TN, HD DNS TO V/BRTT IP, MD/F-XLN MTRX, V SUCRO IP, SCAT IMB FOSS FRAGS IP, V DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM BFF, HD TO V/BRTT IP, MD-XLN MTRX, S-CHLKY THRU, TR SFT WHT CHLK IP, TR SCAT IMB FOSS FRAGS IP, DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

HEEBNER 3250'-1246'

SH- BLCK SFT CARB

LS- OFF WHT TO CRM, HD DNS TO BRTT IP, MD/F-XLN MTRX, TR RE-XLN IP, S-CHLKY IP, ABDT WHT CHRT THRU, SCAT SFT WHT CHLK IP, DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

DOUGLAS 3283'-1279'

SH- LT GRN TO LT GY GY, FRM TO V/SFT GMMY IP, SILTY SPLNTY TXT THRU

LANSING 3303'-1299'

3303'-3305' LS- CRM TO LT TN W/ TN OIL STN IN 10%, V HD DNS TO BRTT IP, MD/F-XLN MTRX, S-CHLKY THRU, TR S-SUCRO IP, SCAT IMB SM CALC-XLS THRU, TR PYR IP, DUL YEL GLD FLO IN 30%, BRT YEL GLD FLO IN 10%, V PR TO PR SCAT INTER-XLN POR IN 20%, SLI TR V PR VUG POR IP, V PR FLSH CUT IN 10%, PR TO TR FR SLW STRM CUT IN 20%, NO VIS LCH ON DSH, NO OIL ODOR

LANSING "C" 3323'-1319'

3331'-3332' LS- CRM TO LT TN LT GYMOTT W/ LT TN OIL STN SCAT IN 20%, HD TO V-BRTT, MD-XLN RE-XLN MTRX, S-SUCRO THRU, S-CHLKY IP, ABDT SCAT IMB SM CALC-XLS THRU, IMB LAMNTD SH IP, IMB FOSS FRAGS IP, DUL YEL GLD FLO IP, TR BRT YEL GLD FLO IP, V PR SCAT INTER-XLN POR IN 10%, TR V PR MICRO VUG POR IP, NO FLSH CUT, V PR TO PR SLW STRM CUT IN 10%, NO LCH ON DSH, FNT OIL ODOR

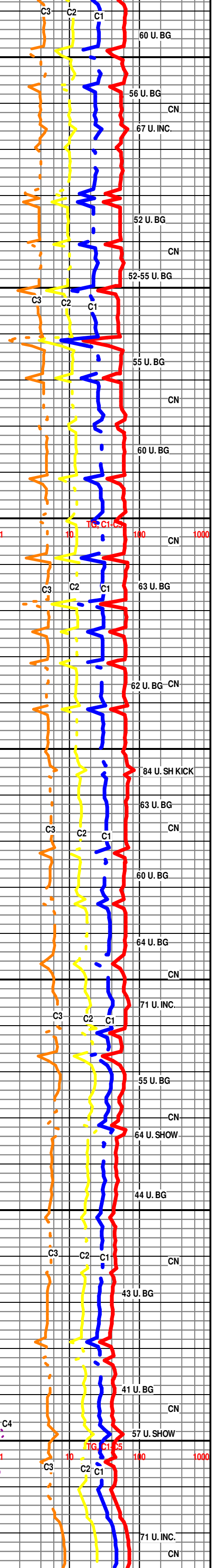
LS- CRM BFF TO LT TN, HD DNS TO BRTT IP, MD-XLN MTRX, SLI TR RE-XLN, SUCRO THRU, S-CHLKY IP, ABDT IMB OOLLITES THRU, SCAT IMB SM CALC-XLS THRU, TR GLAUCONITE IP, DUL YEL FLO IP, TR V PR INTER-XLN POR IP, NO VIS CUT OR SHOW

LANSING "F" 3372'-1368'

3372'-3374' LS- WHT TO OFF WHT CRM, W/ LT TN OIL STN IN 40%, DNS TO V-BRTT, MD-XLN SUCRO MTRX, S-CHLKY IP, SCAT IMB SM CALC-XLS IP, BRT YEL GLD FLO IN 30%, DUL YEL GLD FLO IN 10%, PR TO TR FR INTER-XLN POR SCAT IN 20%, TR PR MICRO-VUG POR IN 20%, PR FLSH CUT IN 10%, FR TO TR GD SLW STRM CUT IN 30%, NO LCH ON DSH, NO OIL ODOR

3397'-3399' LS- CRM BFF TO LT TN, W/ LT TN OIL STN SCAT IN 30%, HD DNS TO V/BRTT, RE-XLN MTRX, S-CHLKY THRU, V OOLITIC THRU, ABDT IMB OOLLITES THRU, SCAT SFT WHT CHLK THRU, SCAT IMB SM CALC-XLS IP, SPTTD BRT YEL GLD FLO IP, TR V PR INTER-OOLITIC POR SCAT IN 20%, V PR FLSH CUT IP, FR SLW STRM CUT IP, NO LCH ON DSH, NO OIL ODOR

LS- CRM TO LT TN, HD DNS TO BRTT, MD/F-XLN MTRX, S-SUCRO THRU, V OOLMOLDIC THRU, DUL YEL FLO IP, FR TO GD OOLMOLDIC POR THRU, NO VIS CUT OR SHOW



LANSING "H" 3438'-1434'

LS- OFF WHT TO CRM LT TN, HD DNS TO V BRIT, MD/F-XLN MTRX, TR RE-XLN IP, S-CHLKY THRU, SCAT IMB SFT WHT CHLK THRU, DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

3465'-3467' LS- OFF WHT TO WHT, W/ D.O.S. SCAT IN 30% & LT TN OIL STN IN 10%, HD TO BRIT IP, MD-XLN RE-XLN MTRX, S-SUCRO THRU, SCAT IMB SM CALC-XLS THRU, DUL YEL FLO IP, FR SCAT INTER-XLN POR IN 30%, TR PR VUG POR IN 10%, V PR WK FLSH CUT IP, V PR SLW STRM CUT IP, NO LCH ON DSH, NO OIL ODOR

LS- OFF WHT TO CRM BFF, DNS TO V-SFT THRU GMMY IP, CHLKY MTRX, ABDT SFT WHT CHLK THRU, DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

LS- CRM BFF LT TN, HD DNS TO BRIT IP, MD/F-XLN MTRX, TR RE-XLN IP, S-CHLKY THRU, S-SUCRO IP, SCAT SFT WHT CHLK THRU, DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

3518'-3519' LS- OFF WHT CRM TO LT TN, W/ TN OIL STN SCAT IN 40%, V HD TO BRIT, MD-XLN RE-XLN MTRX, S-SUCRO THRU, SCAT IMB CAC-XLS THRU, BRT YEL GLD FLO IN 60%, DUL YEL GLD FLO IN 10%, FR TO TR GD MICRO-VUG POR IN 30%, FR INTER-XLN POR IN 20%, POSS FRACT POR, FR FLSH CUT IN 20%, PR TO TR FR SLW STRM CUT IN 20%, V LT TN LCH ON DSH, FNT OIL ODOR

BKC 3538'-1534'

3553'-3555' SS- OFF WHT TO CRM, CLR QTRZ GRNS, TT TO V/FRI, VFMD ANG TO S-ANG CLR QTRZ GRNS THRU, WLL SRT, SIL CMNT IN 100%, DUL YEL GLD FLO IN 50%, NO FLO IN 50%, FR TO TR GD INTER-GRN POR IN 60%, PR FLSH CUT IN 10%, FR TO TR GD FLSH CUT IN 40%, V LT TN LCH ON DSH, NO OIL ODOR

LS- OFF WHT TO CRM LT TN, V HD DNS, VF/CRYPTO-XLN MTRX, ABDT WHT CHRT THRU, TR SFT WHT CHLKY THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- RD TO DK RD MAROON, V GMMY TXT THRU, ABDT GMMY CHLK THRU

ARBUCKLE 3607'-1603'

DOLO- OFF WHT TO CRM, HD DNS TO TR BRIT IP, MD-XLN RE-XLN MTRX, S-SUCRO IP, SCAT IMB SM TO TR MD S-ANG DOLO GRNS THRU, TR IMB SM S-ANG CLR QTRZ GRNS IP, TR WHT CHRT IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

DOLO- OFF WHT TO CRM, V HD TO BRIT IP, V RE-XLN MTRX, S-SUCRO IP, ABDT SM TO MD S-ANG TO S-RND CLR QTRZ GRNS THRU, SCAT SM S-RND DOLO GRNS IP, TR V DUL YEL FLO IP, V PR TO TR PR INTER-GRN POR IN 20%, NO VIS CUT OR SHOW

DOLO- WHT TO OFF WHT, V HD DNS, MD-XLN RE-XLN MTRX, S-SUCRO IP, ABDT IMB SM S-ANG DOLO GRNS THRU, TR IMB SM ANG TO S-ANG CLR QTRZ GRNS IP, DISS PYR THRU, V DUL YEL FLO THRU, NO VIS POR, NO VIS SHOW

DOLO- WHT TO OFF WHT, HD DNS, MD/F-XLN MTRX, RE-XLN IP, ABDT IMB SM S-ANG TO S-RND DOLO GRNS THRU, TR IMB MD S-RND DOLO GRNS THRU, TR DISS PYR IP, TR V DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

R.T.D. @ 9:30 P.M. 3/29/12

DROP SURVEY

T.O.F.L @ 12:00 A.M.

WEATHERFORD/ LIBERAL, KS

55 U. BG

56 U. BG

71 U. SHOW

54 U. BG

60 U. BG

94 U. SHOW

75 U. BG

120 U. BG

100 U. BG

102 U. BG

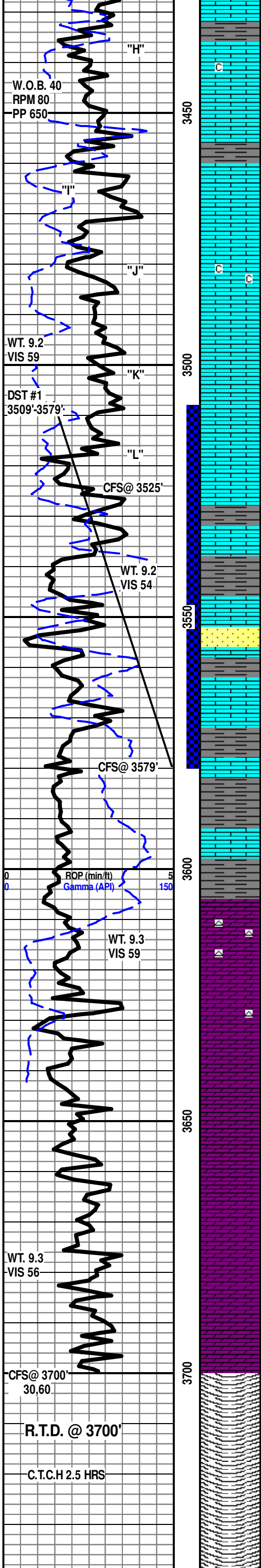
115 U. BG

R.T.D. @ 3700'

SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH

SCHUYLER HEDRICK



Geological descriptions and lithology for Lansing 'H' 3438'-1434', BKC 3538'-1534', and Ar buckle 3607'-1603'.

