



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1082332
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: _____

1082332

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 <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 List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<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: <input type="checkbox"/> Yes <input type="checkbox"/> No
----------------	-------	---------	------------	---

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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

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

Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	PATRICK 1-12
Doc ID	1082332

All Electric Logs Run

ARRAY IND
DEN-NEUT
MICRO
SONIC
SPECTRAL GR

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

May 23, 2012

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

Re: ACO1
API 15-165-21960-00-00
PATRICK 1-12
SE/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,
THOMAS G. FERTAL



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

Date: 2/5/2012
 Invoice # 577

P.O.#:
 Due Date: 3/6/2012
 Division: Russell

Invoice

2/23

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

V1202 AP-483

Reference:
 PATRICK 1-12

Description of Work:
 LONG SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 937.80	No	Baffle Plate Aluminum, 8 5/8"	1	\$92.43	Yes
Common-Class A	390	\$ 4,886.59	Yes				
8 5/8" Basket	3	\$ 973.62	Yes				
Bulk Truck Matl-Material Service Charge	411	\$ 844.22	No				
Calcium Chloride	14	\$ 541.49	Yes				
Pump Truck Mileage-Job to Nearest Camp	25	\$ 256.24	No				
Flo Seal	97	\$ 199.24	Yes				
8 5/8" Centralizer	3	\$ 197.19	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	25	\$ 149.95	No				
Premium Gel (Bentonite)	7	\$ 117.04	Yes				
8 5/8" Top Rubber Plug	1	\$ 108.86	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 9,304.68
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,395.70)

SubTotal for Taxable Items:	\$ 6,049.00
SubTotal for Non-Taxable Items:	\$ 1,859.97
Total:	\$ 7,908.98
Tax:	\$ 381.09

6.30% Rush County Sales Tax

Thank You For Your Business!

Amount Due: \$ 8,290.07
Applied Payments:
Balance Due: \$ 8,290.07

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
FEB 10 2012
SAMUEL GARY JR. & ASSOCIATES, INC.

DRUG LICENSE NO. 210818

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

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. 577

Date	2-2-12	Sec.	12	Twp.	16	Range	17	County	Rush	State	Ks	On Location		Finish	9:15pm
Lease	Patrick			Well No.	1-12			Location	Loretta, Ks - 1E, 1N, 2E, 1/4						
Contractor	Wal Energy #6							Owner	To Quality Oilwell Cementing, Inc.						
Type Job	Surface							You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	12 1/4"			T.D.	1131'			Charge To	Sam Gary Jr. & Associates						
Csg.	8 5/8"			Depth	1131'			Street							
Tbg. Size								City	State						
Tool								The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.	37.63'			Shoe Joint	37.63'			Cement Amount Ordered	390 5/8 Common 3% CC						
Meas Line								Displace	69 1/2 BLS						

EQUIPMENT

Pumptrk	15	No.	Cementer	Craig
			Helper	
Bulktrk	12	No.	Driver	Cory
			Driver	
Bulktrk	14	No.	Driver	Rick
			Driver	

2 1/2 Gel 1/4 flowseal
Common 390
Poz. Mix
Gel. 7
Calcium 14

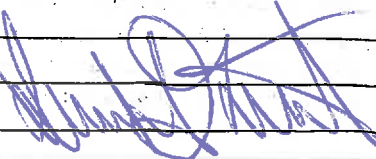
JOB SERVICES & REMARKS

Remarks:
Rat Hole
Mouse Hole
Centralizers 1 17 26
Baskets 2 18 26
D/V or Port Collar
Cement did (Circulate)
Randed Plug @ 800 #

Hulls
Salt
Flowseal 97#
Kol-Seal
Mud CLR 48
CFL-117 or CD110 CAF 38
Sand
Handling 411
Mileage

FLOAT EQUIPMENT

Guide Shoe
Centralizer 3
Baskets 3
AFU inserts
Float Shoe
Latch Down
1 - Baffle plate
1 - Rubber plug
Pumptrk Charge
Mileage 25

X Signature 

Tax
Discount
Total Charge



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

Date: 2/14/2012
 Invoice # 232

P.O.#:
 Due Date: 3/15/2012
 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:
 PATRICK 1-12

Description of Work:
 PROD LONG STRING

DRLG COMP W/O LOE GG

Account	8300-238
Well/Prospect	
Deck	
AFE	
Approval	
Description	

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 950.65	No	Salt (Fine)	19	\$276.14	Yes
Common-Class A	225	\$ 2,857.81	Yes	Pump Truck Mileage-Job to Nearest Camp	25	\$259.75	No
Gilsonite	1057	\$ 1,650.66	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$233.21	Yes
CFL 117	176	\$ 1,128.71	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	25	\$152.00	No
5 1/2" Basket	3	\$ 718.36	Yes	Flo Seal	56	\$116.60	Yes
Bulk Truck Matl-Material Service Charge	254	\$ 528.88	No	KCL	2	\$62.17	Yes
CD-110	117	\$ 487.23	Yes				
5 1/2" Turbolizer	8	\$ 483.07	Yes				
Mud Clear	500	\$ 385.21	Yes				
Defoamer A or CAF-38	50	\$ 364.38	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$ 318.58	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 10,973.40

Discount Available ONLY if Invoice is Paid & Received
 within listed terms of invoice: \$ (1,646.01)

SubTotal for Taxable Items:	\$ 7,719.81
SubTotal for Non-Taxable Items:	\$ 1,607.58

6.30% Rush County Sales Tax

Total: \$ 9,327.39
 Tax: \$ 486.35
Amount Due: \$ 9,813.74
Applied Payments:
Balance Due: \$ 9,813.74

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

FEB 23 2012

SAMUEL GARY JR.
 & ASSOCIATES, INC.

QUALITY OILWELL CEMENTING, INC.

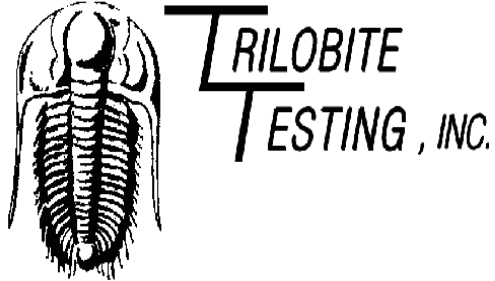
Federal Tax I.D.# 20-2886107

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

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

No. 232

Date	2/11/12	Sec.	12	Twp.	16	Range	17	County	Rush	State	KS	On Location		Finish	11:15 PM
Lease	PATRICK		Well No.	1-12		Location									
Contractor										Owner					
Type Job										To Quality Oilwell Cementing, Inc.					
Hole Size										You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Csg.										Charge To					
Tbg. Size										Street					
Tool										City					
Cement Left in Csg.										State					
Meas Line										The above was done to satisfaction and supervision of owner agent or contractor.					
EQUIPMENT										Cement Amount Ordered					
Pumptrk										5% Gilsonite 4# Flox RP, 3% CD-110, 8% CFL-117					
Bulktrk										Common					
Bulktrk										Poz. Mix					
JOB SERVICES & REMARKS										Gel.					
Remarks:										Calcium					
Rat Hole										Hulls					
Mouse Hole										Salt					
Centralizers										Flowseal					
Baskets										Kol-Seal					
D/V or Port Collar										Mud CLR 48					
Est. Circ - 1 hour										CFL-117 or CD110 CAF 38					
Pump 500gal Mud Clear - 48										Sand					
Plug Rat / Mouse										Handling					
Mix 175 six down 5 1/2"										Mileage					
Displace - First 200 bbls. KCL 700#										5 1/2" FLOAT EQUIPMENT					
Land Plug - 1300 #										Guide Shoe					
Float Held										Centralizer					
Thank										Baskets					
You!!										AFU Inserts					
										Float Shoe					
										Latch Down					
										Rotating Head					
										Pumptrk Charge					
										Mileage					
										Tax					
										Discount					
										Total Charge					
Signature: <i>Karl D. [Signature]</i>															



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Tom Fertal

Patrick #1-12

12-16s-17w Rush,KS

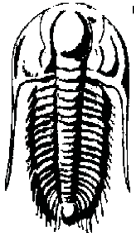
Start Date: 2012.02.08 @ 07:34:47

End Date: 2012.02.08 @ 15:55:47

Job Ticket #: 46420 DST #: 1

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

Printed: 2012.02.15 @ 09:10:53



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

ATTN: Tom Fertal

Job Ticket: 46420

DST#: 1

Test Start: 2012.02.08 @ 07:34:47

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:47

Time Test Ended: 15:55:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: 3256.00 ft (KB) To 3290.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press@RunDepth: 111.32 psig @ 3262.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.08 End Date: 2012.02.08

Last Calib.: 2012.02.08

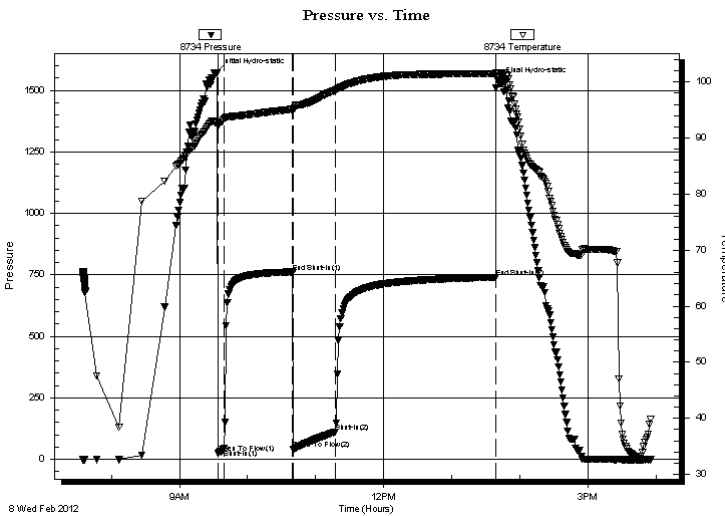
Start Time: 07:34:48 End Time: 15:55:47

Time On Btm: 2012.02.08 @ 09:32:17

Time Off Btm: 2012.02.08 @ 13:41:17

TEST COMMENT: 5 - IFP - weak to good blow 1"- 7"
60 - ISI - no blow back
40 - FFP - BOB 8 min
140 - FSI - 1/4" blow back - died 14 min

PRESSURE SUMMARY



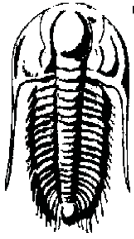
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1571.56	92.75	Initial Hydro-static
2	22.75	92.29	Open To Flow (1)
7	42.90	93.48	Shut-In(1)
68	760.69	95.14	End Shut-In(1)
68	40.75	95.06	Open To Flow (2)
106	111.32	98.59	Shut-In(2)
247	740.24	101.48	End Shut-In(2)
249	1537.50	101.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
184.00	VSO CMV 3%O, 87%W, 10%M	2.58
1.00	FREE OIL TSTM	0.01
0.00	155' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46420

DST#: 1

ATTN: Tom Fertal

Test Start: 2012.02.08 @ 07:34:47

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:47

Time Test Ended: 15:55:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: 3256.00 ft (KB) To 3290.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 6669 Inside

Press@RunDepth: psig @ 3262.00 ft (KB)

Start Date: 2012.02.08 End Date: 2012.02.08

Start Time: 07:34:18 End Time: 15:55:47

Capacity: 8000.00 psig

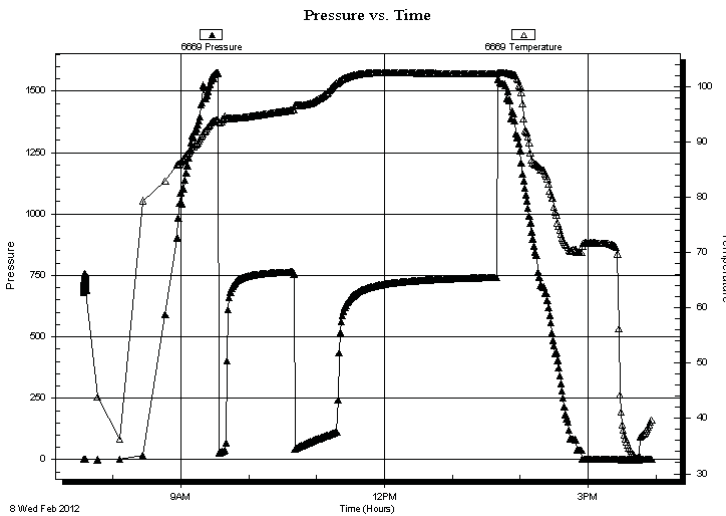
Last Calib.: 2012.02.08

Time On Btm

Time Off Btm

TEST COMMENT: 5 - IFP - weak to good blow 1"- 7"
60 - ISI - no blow back
40 - FFP - BOB 8 min
140 - FSI - 1/4" blow back - died 14 min

PRESSURE SUMMARY



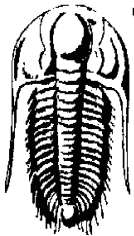
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
184.00	VSO CMV 3%O, 87%W, 10%M	2.58
1.00	FREE OIL TSTM	0.01
0.00	155' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46420

DST#: 1

ATTN: Tom Fertal

Test Start: 2012.02.08 @ 07:34:47

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:47

Time Test Ended: 15:55:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Brian Fairbank

Unit No: 41

Interval: 3256.00 ft (KB) To 3290.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3290.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid

Press@RunDepth: psig @ 3222.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.08

End Date:

2012.02.08

Last Calib.:

2012.02.08

Start Time: 07:34:03

End Time:

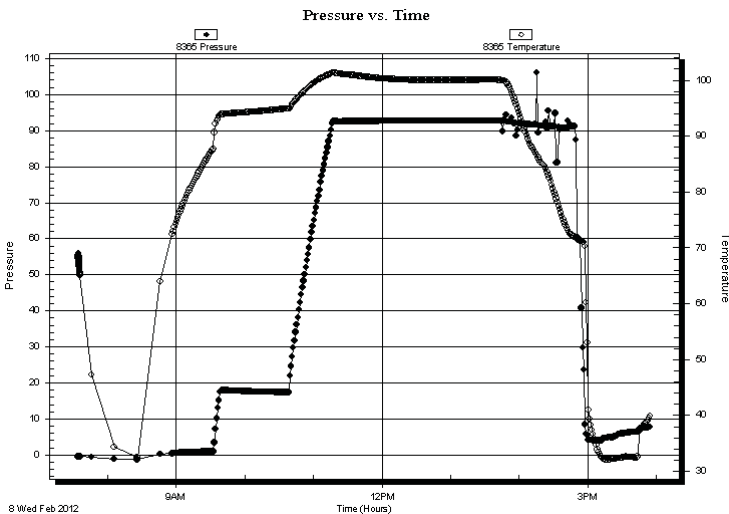
15:55:02

Time On Btm:

Time Off Btm:

TEST COMMENT: 5 - IFFP - weak to good blow 1"- 7"
60 - ISI - no blow back
40 - FFP - BOB 8 min
140 - FSI - 1/4" blow back - died 14 min

PRESSURE SUMMARY



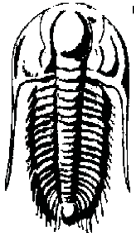
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
184.00	VSOCLMV 3%O, 87%W, 10%M	2.58
1.00	FREE OIL TSTM	0.01
0.00	155' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46420

DST#: 1

ATTN: Tom Fertal

Test Start: 2012.02.08 @ 07:34:47

Tool Information

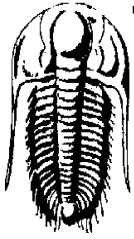
Drill Pipe:	Length: 3230.00 ft	Diameter: 3.80 inches	Volume: 45.31 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 45.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3256.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 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
------------------	-------------	------------	----------	------------	----------------

Recorder	0.00	8365	Fluid	3222.00	
Blank Spacing	5.00			3227.00	
Shut In Tool	5.00			3232.00	
Sampler	2.00			3234.00	
Hydraulic tool	5.00			3239.00	
Jars	5.00			3244.00	
Safety Joint	2.00			3246.00	
Packer	5.00			3251.00	34.00 Bottom Of Top Packer
Packer	5.00			3256.00	
Stubb	1.00			3257.00	
Perforations	5.00			3262.00	
Recorder	0.00	6669	Inside	3262.00	
Recorder	0.00	8734	Outside	3262.00	
Perforations	25.00			3287.00	
Bullnose	3.00			3290.00	34.00 Bottom Packers & Anchor

Total Tool Length: 68.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush,KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46420

DST#: 1

ATTN: Tom Fertal

Test Start: 2012.02.08 @ 07:34:47

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:

60000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	MUD 100%	0.070
184.00	VSOCMMW 3%O, 87%W, 10%M	2.581
1.00	FREE OIL TSTM	0.014
0.00	155' GIP	0.000

Total Length: 190.00 ft Total Volume: 2.665 bbl

Num Fluid Samples: 0

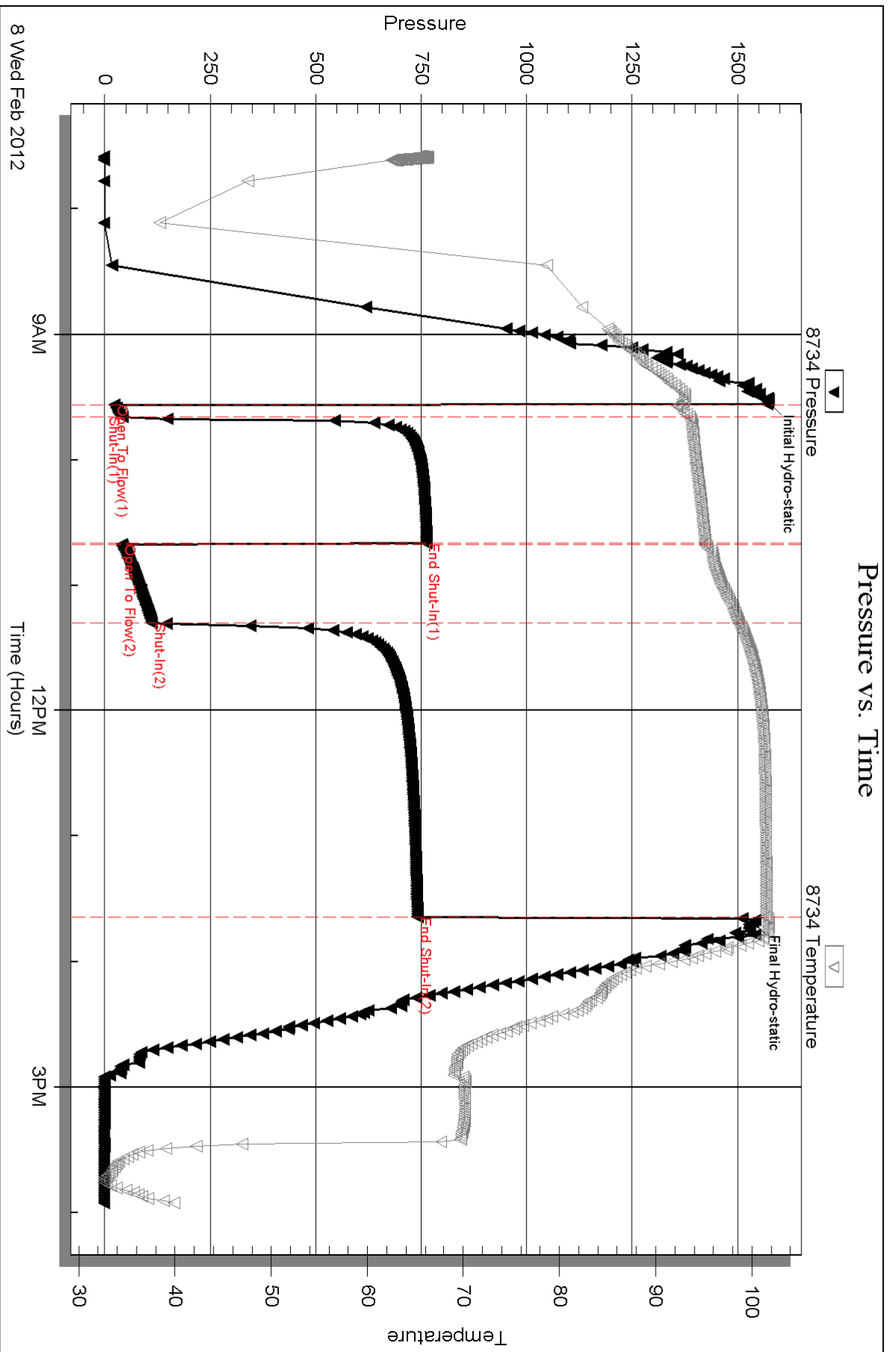
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 200 ML G, 150 ML O, 150 ML M, 3500 ML W, 360 LBS, 60,000 CHLORIDES



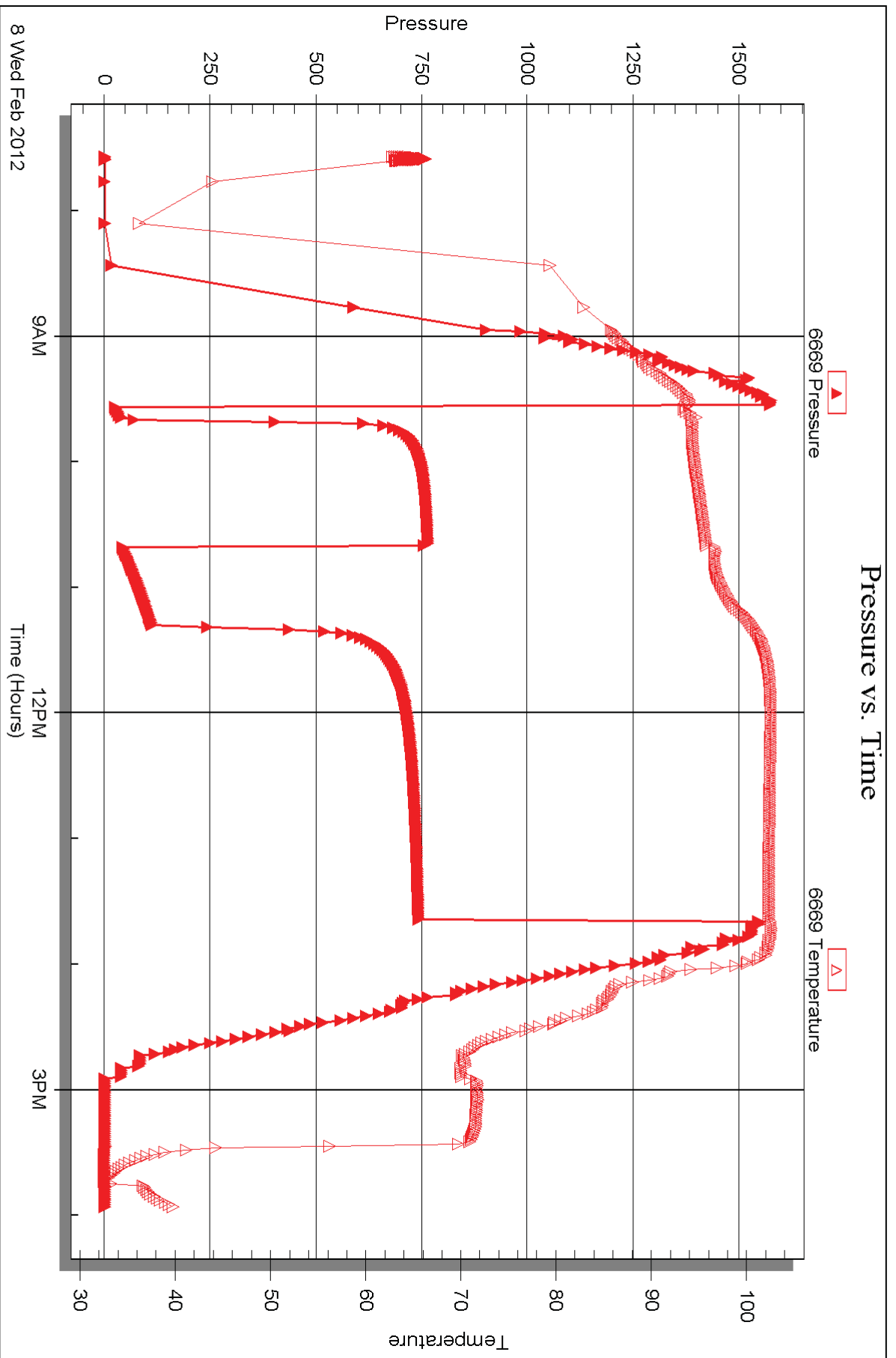
Serial #: 6669

Inside

Samuel Gary Jr. and Associates, Inc.

Patrick#1-12

DST Test Number: 1



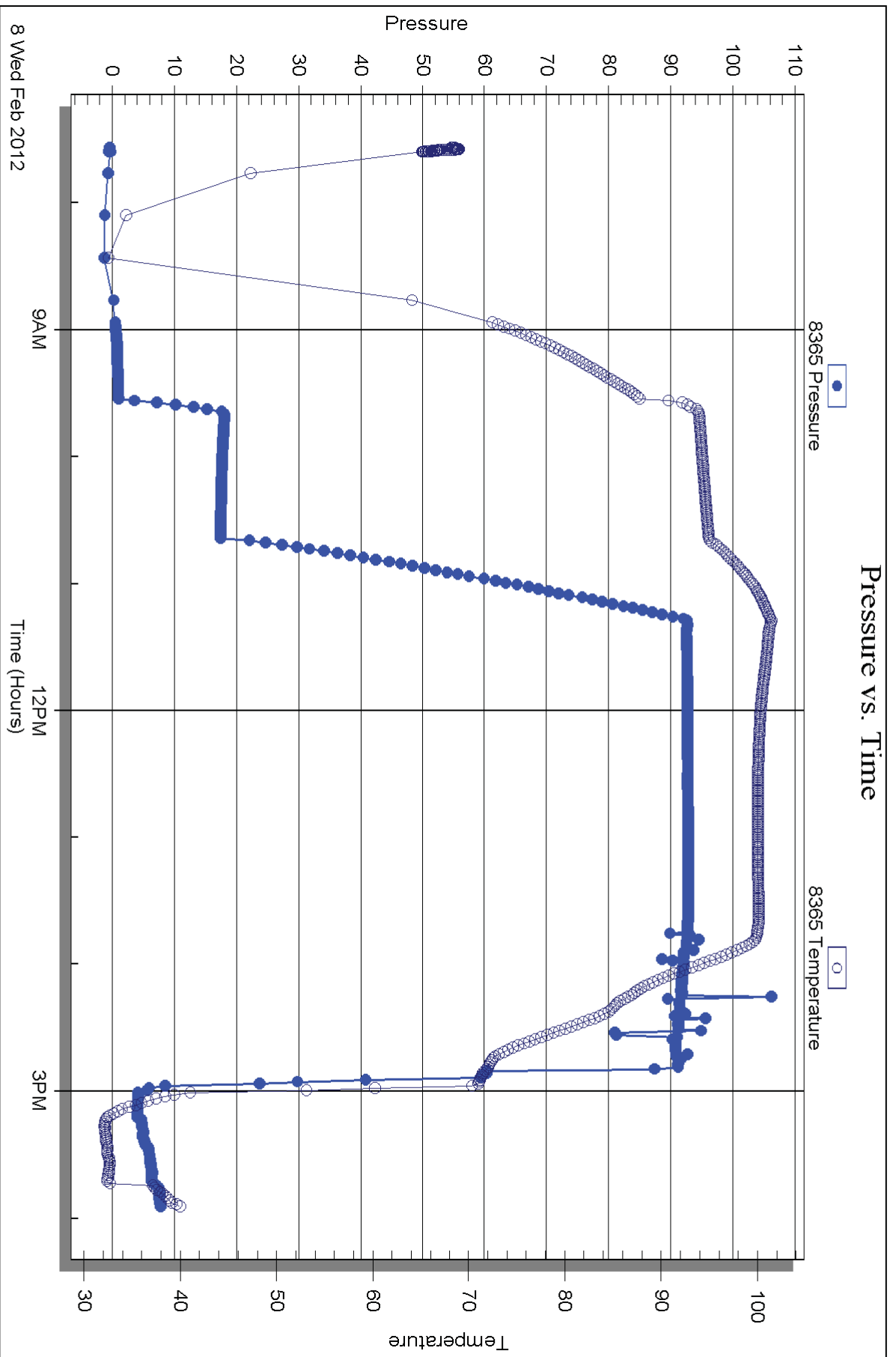
Serial #: 8365

Fluid

Samuel Gary Jr. and Associates, Inc.

Patrick#1-12

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 46420

Printed: 2012.02.15 @ 09:10:56



DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Tom Fertal

Patrick #1-12

12-16s-17w Rush,KS

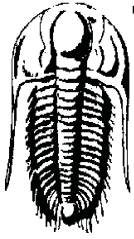
Start Date: 2012.02.09 @ 07:33:37

End Date: 2012.02.09 @ 14:52:37

Job Ticket #: 46421 DST #: 2

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

Printed: 2012.02.15 @ 09:09:56



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46421

DST#: 2

ATTN: Tom Fertal

Test Start: 2012.02.09 @ 07:33:37

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:14:37

Time Test Ended: 14:52:37

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3338.00 ft (KB) To 3388.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3388.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8734 Outside

Press@RunDepth: 283.35 psig @ 3375.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.09

End Date:

2012.02.09

Last Calib.:

2012.02.09

Start Time: 07:33:38

End Time:

14:52:37

Time On Btm:

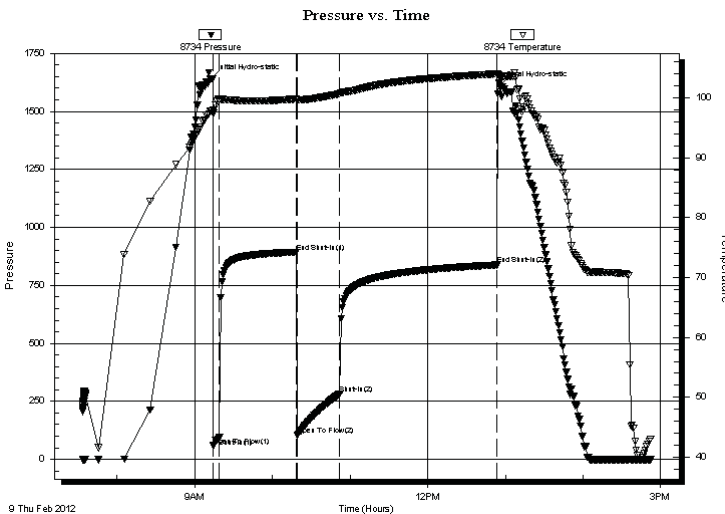
2012.02.09 @ 09:12:37

Time Off Btm:

2012.02.09 @ 12:55:37

TEST COMMENT: 5 - IFP - BOB 3 min
60 - ISI - sur blow back - died 16 min
35 - FFP - BOB 4 min
120 - ISI - sur blow back - died 7 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.90	97.82	Initial Hydro-static
2	58.73	97.48	Open To Flow (1)
7	93.46	99.65	Shut-In(1)
66	893.29	99.80	End Shut-In(1)
67	104.73	99.58	Open To Flow (2)
100	283.35	100.68	Shut-In(2)
221	838.30	103.98	End Shut-In(2)
223	1611.19	103.67	Final Hydro-static

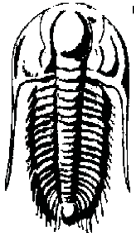
Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
504.00	MW 95%W, 5%M	7.07
1.00	FREE OIL TSTM	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.
 1515 Wynkoop St. Ste 700
 Denver, CO 80202
 ATTN: Tom Fertal

12-16s-17w Rush, KS
Patrick #1-12
 Job Ticket: 46421 **DST#: 2**
 Test Start: 2012.02.09 @ 07:33:37

GENERAL INFORMATION:

Formation: **LKC "F-G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:14:37
 Time Test Ended: 14:52:37

Test Type: Conventional Bottom Hole (Reset)
 Tester: Brian Fairbank
 Unit No: 41

Interval: 3338.00 ft (KB) To 3388.00 ft (KB) (TVD)
 Total Depth: 3388.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

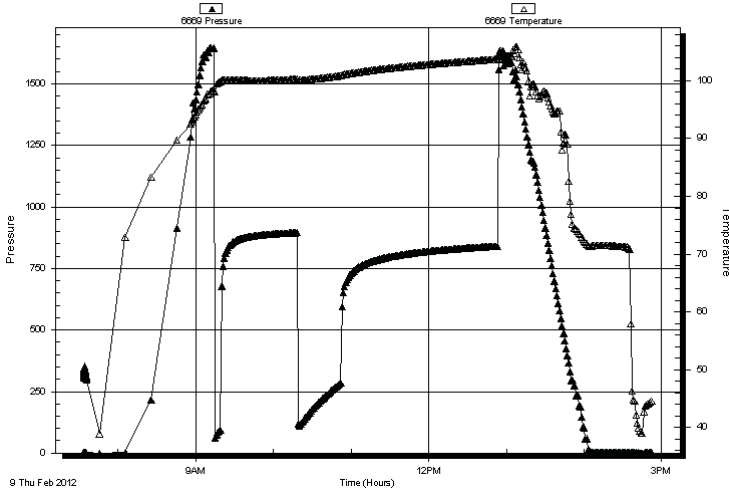
Reference Elevations: 1984.00 ft (KB)
 1974.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6669 Inside

Press@RunDepth: psig @ 3375.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.09 End Date: 2012.02.09 Last Calib.: 2012.02.09
 Start Time: 07:33:38 End Time: 14:52:37 Time On Btm:
 Time Off Btm:

TEST COMMENT: 5 - IFF - BOB 3 min
 60 - ISI - sur blow back - died 16 min
 35 - FFP - BOB 4 min
 120 - ISI - sur blow back - died 7 min

Pressure vs. Time



PRESSURE SUMMARY

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

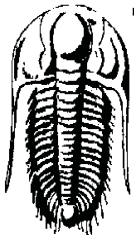
Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
504.00	MW 95%W, 5%M	7.07
1.00	FREE OIL TSTM	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46421

DST#: 2

ATTN: Tom Fertal

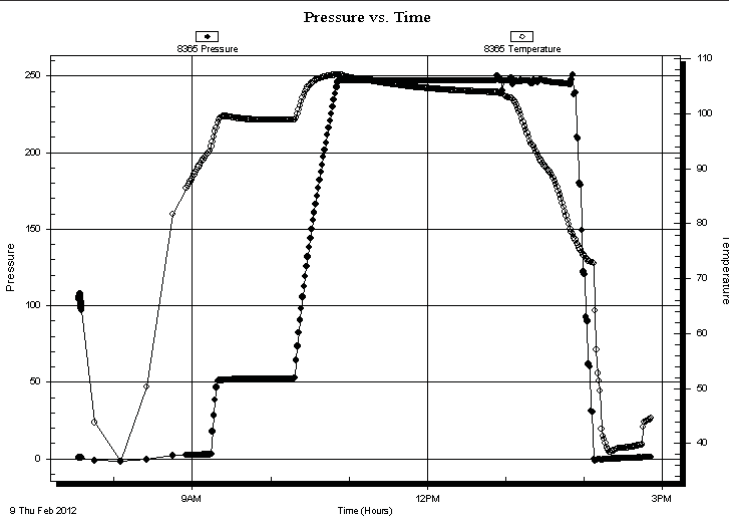
Test Start: 2012.02.09 @ 07:33:37

GENERAL INFORMATION:

Formation: **LKC "F-G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:14:37
 Time Test Ended: 14:52:37
 Interval: **3338.00 ft (KB) To 3388.00 ft (KB) (TVD)**
 Total Depth: 3388.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brian Fairbank
 Unit No: 41
 Reference Elevations: 1984.00 ft (KB)
 1974.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid
 Press@RunDepth: psig @ 3304.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.09 End Date: 2012.02.09 Last Calib.: 2012.02.09
 Start Time: 07:33:01 End Time: 14:52:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: 5 - IFP - BOB 3 min
 60 - ISI - sur blow back - died 16 min
 35 - FFP - BOB 4 min
 120 - ISI - sur blow back - died 7 min



PRESSURE SUMMARY

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

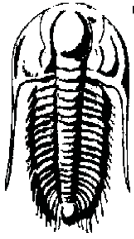
Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD 100%	0.07
504.00	MW 95%W, 5%M	7.07
1.00	FREE OIL TSTM	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush,KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46421

DST#: 2

ATTN: Tom Fertal

Test Start: 2012.02.09 @ 07:33:37

Tool Information

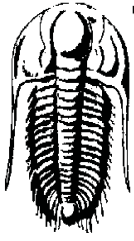
Drill Pipe:	Length: 3323.00 ft	Diameter: 3.80 inches	Volume: 46.61 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3338.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Recorder	0.00	8365	Fluid	3304.00	
Blank Spacing	5.00			3309.00	
Shut In Tool	5.00			3314.00	
Sampler	2.00			3316.00	
Hydraulic tool	5.00			3321.00	
Jars	5.00			3326.00	
Safety Joint	2.00			3328.00	
Packer	5.00			3333.00	34.00 Bottom Of Top Packer
Packer	5.00			3338.00	
Stubb	1.00			3339.00	
Perforations	3.00			3342.00	
Change Over Sub	1.00			3343.00	
Blank Spacing	31.00			3374.00	
Change Over Sub	1.00			3375.00	
Recorder	0.00	6669	Inside	3375.00	
Recorder	0.00	8734	Outside	3375.00	
Perforations	10.00			3385.00	
Bullnose	3.00			3388.00	50.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush,KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46421

DST#: 2

ATTN: Tom Fertal

Test Start: 2012.02.09 @ 07:33:37

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:

57000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	MUD 100%	0.070
504.00	MW 95%W, 5%M	7.070
1.00	FREE OIL TSTM	0.014

Total Length: 510.00 ft Total Volume: 7.154 bbl

Num Fluid Samples: 0

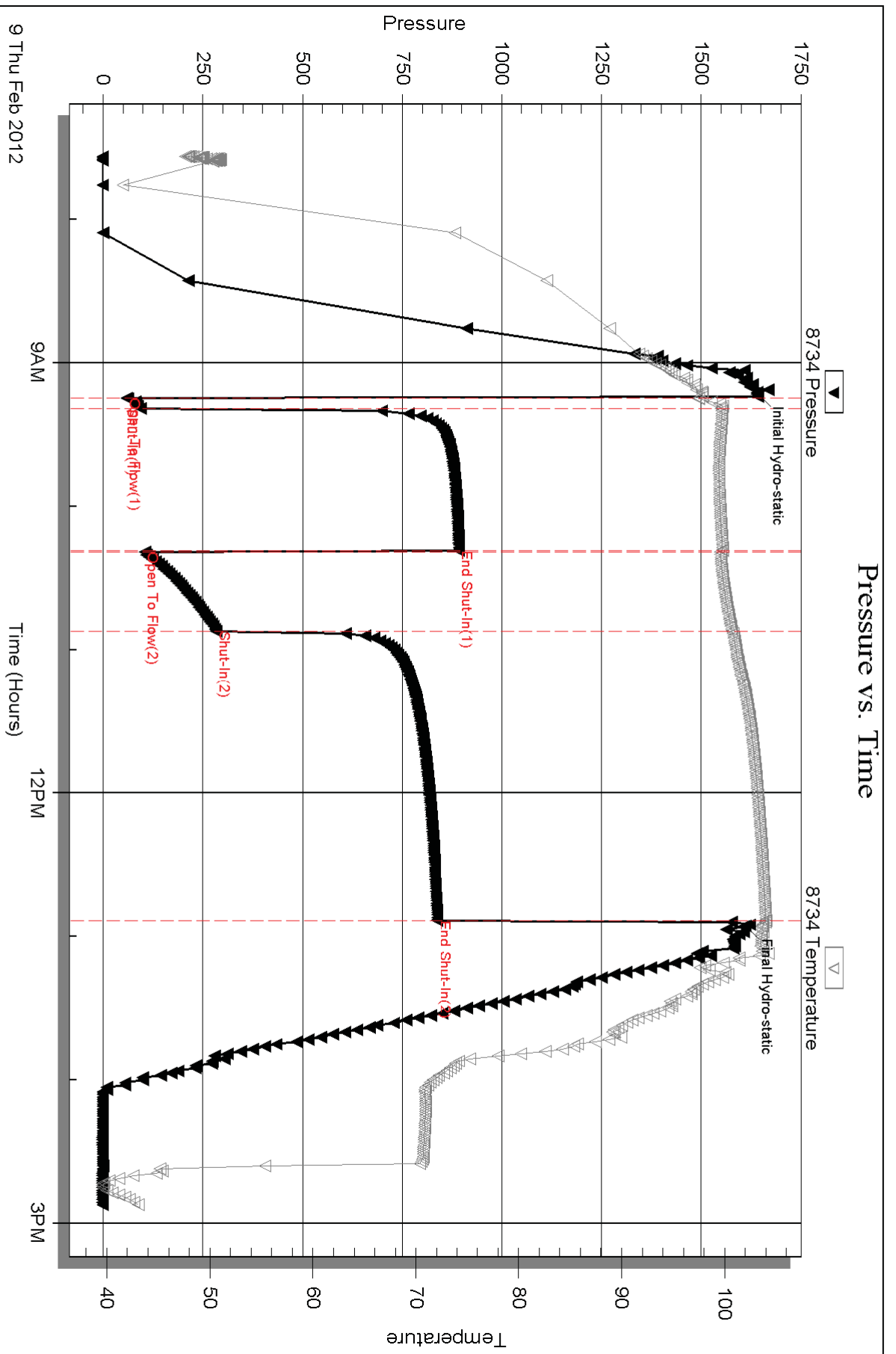
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 200 ML O, 400 ML M, 3400 ML W, 350 LBS, 57,000 CHLORIDES



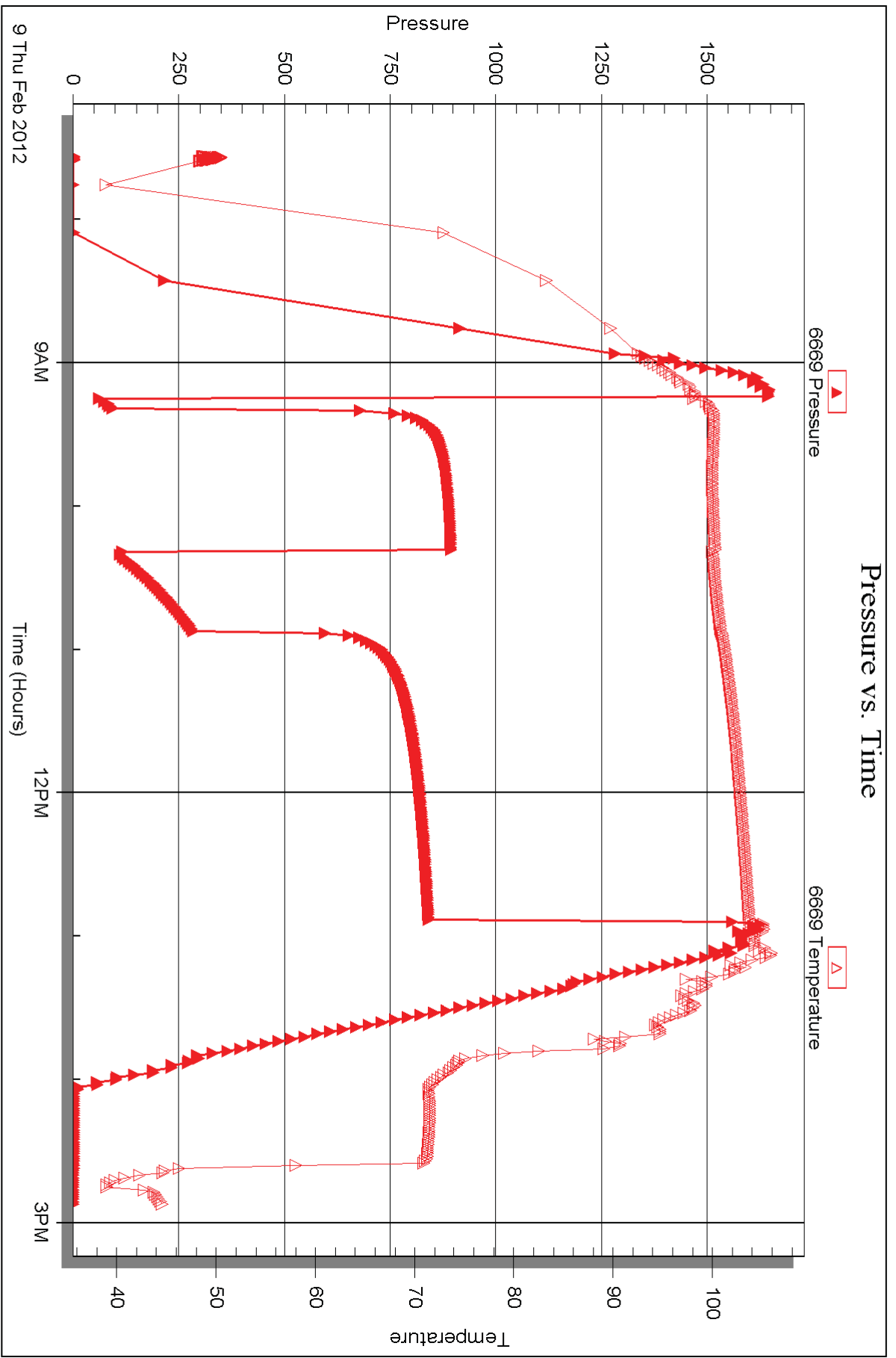
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Inside

Samuel Gary Jr. and Associates, Inc.

Patrick#1-12

DST Test Number: 2



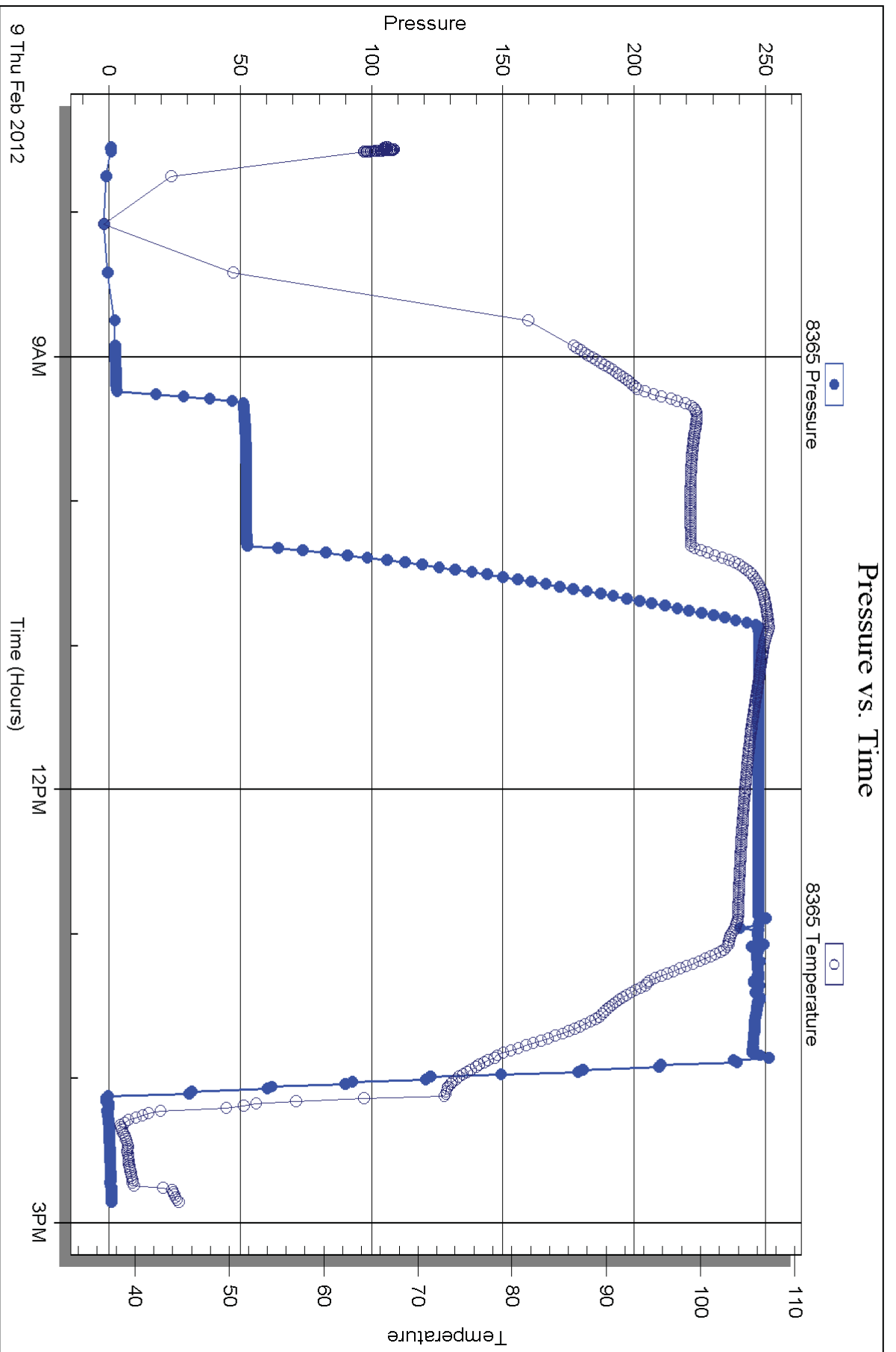
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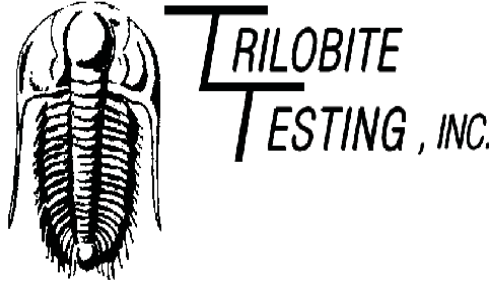
Fluid

Samuel Gary Jr. and Associates, Inc.

Patrick #1-12

DST Test Number: 2





DRILL STEM TEST REPORT

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

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Tom Fertal

Patrick #1-12

12-16s-17w Rush,KS

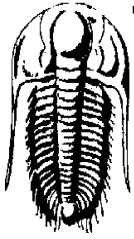
Start Date: 2012.02.10 @ 10:21:17

End Date: 2012.02.10 @ 18:36:17

Job Ticket #: 46422 DST #: 3

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

Printed: 2012.02.15 @ 09:06:22



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

ATTN: Tom Fertal

Job Ticket: 46422

DST#: 3

Test Start: 2012.02.10 @ 10:21:17

GENERAL INFORMATION:

Formation: **Penn Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:01:47
 Time Test Ended: 18:36:17
 Interval: **3503.00 ft (KB) To 3542.00 ft (KB) (TVD)**
 Total Depth: 3542.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brian Fairbank
 Unit No: 41
 Reference Elevations: 1984.00 ft (KB)
 1974.00 ft (CF)
 KB to GR/CF: 10.00 ft

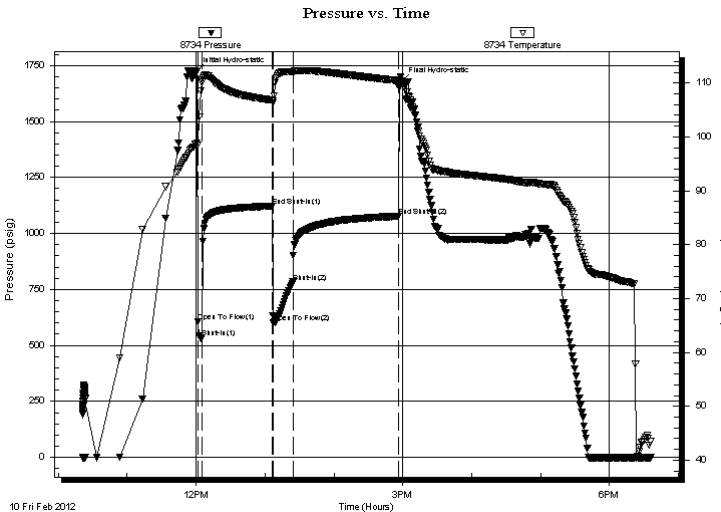
Serial #: 8734

Outside

Press@RunDepth: 782.25 psig @ 3506.00 ft (KB)
 Start Date: 2012.02.10 End Date: 2012.02.10
 Start Time: 10:21:18 End Time: 18:36:17
 Capacity: 8000.00 psig
 Last Calib.: 2012.02.10
 Time On Btm: 2012.02.10 @ 11:59:47
 Time Off Btm: 2012.02.10 @ 14:59:17

TEST COMMENT: 5 - IFP - BOB 30 sec
 60 - ISI - BOB 4 min
 20 - FFP - BOB 20 sec
 90 - FSI - BOB 3 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1723.06	98.71	Initial Hydro-static
2	606.68	98.55	Open To Flow (1)
6	535.60	110.63	Shut-In(1)
67	1121.97	106.83	End Shut-In(1)
68	602.50	106.28	Open To Flow (2)
85	782.25	112.10	Shut-In(2)
177	1076.30	110.43	End Shut-In(2)
180	1677.73	110.11	Final Hydro-static

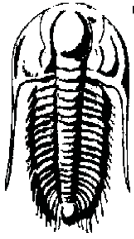
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 10%G, 30%O, 60%M	1.68
1865.00	REVERSED OUT OIL	26.16
15.00	FREE OIL	0.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46422

DST#: 3

ATTN: Tom Fertal

Test Start: 2012.02.10 @ 10:21:17

GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:01:47

Time Test Ended: 18:36:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3503.00 ft (KB) To 3542.00 ft (KB) (TVD)

Reference Elevations: 1984.00 ft (KB)

Total Depth: 3542.00 ft (KB) (TVD)

1974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 6669 Inside

Press@RunDepth: psig @ 3506.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.10 End Date: 2012.02.10

Last Calib.: 2012.02.10

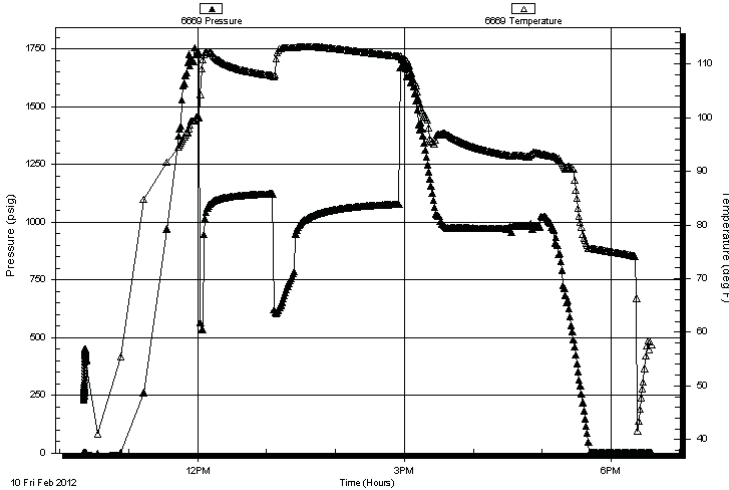
Start Time: 10:20:48 End Time: 18:35:47

Time On Btm

Time Off Btm

TEST COMMENT: 5 - IFP - BOB 30 sec
60 - ISI - BOB 4 min
20 - FFP - BOB 20 sec
90 - FSI - BOB 3 min

Pressure vs. Time



PRESSURE SUMMARY

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

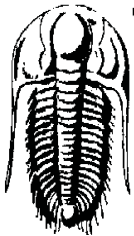
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 10%G, 30%O, 60%M	1.68
1865.00	REVERSED OUT OIL	26.16
15.00	FREE OIL	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush, KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46422

DST#: 3

ATTN: Tom Fertal

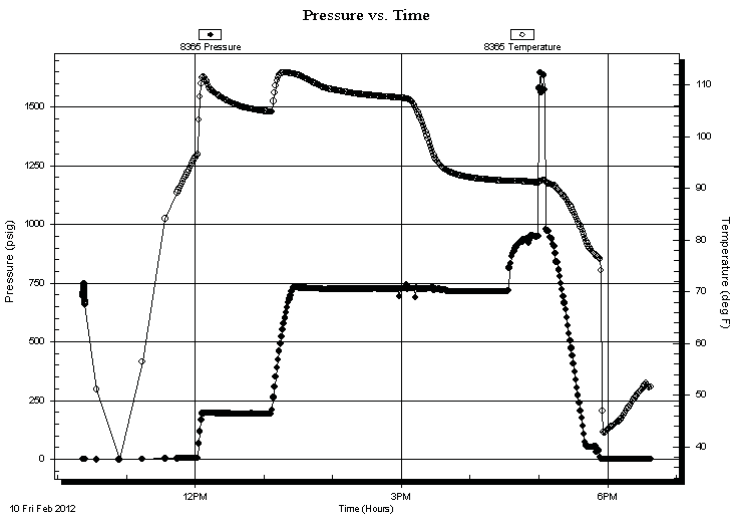
Test Start: 2012.02.10 @ 10:21:17

GENERAL INFORMATION:

Formation: **Penn Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:01:47
Time Test Ended: 18:36:17
Interval: **3503.00 ft (KB) To 3542.00 ft (KB) (TVD)**
Total Depth: 3542.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Brian Fairbank
Unit No: 41
Reference Elevations: 1984.00 ft (KB)
1974.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8365 Fluid
Press@RunDepth: psig @ 3469.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.02.10 End Date: 2012.02.10 Last Calib.: 2012.02.10
Start Time: 10:21:50 End Time: 18:37:19 Time On Btm:
Time Off Btm:

TEST COMMENT: 5 - IFP - BOB 30 sec
60 - ISI - BOB 4 min
20 - FFP - BOB 20 sec
90 - FSI - BOB 3 min



PRESSURE SUMMARY

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

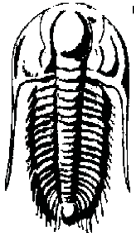
Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 10%G, 30%O, 60%M	1.68
1865.00	REVERSED OUT OIL	26.16
15.00	FREE OIL	0.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush,KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46422

DST#: 3

ATTN: Tom Fertal

Test Start: 2012.02.10 @ 10:21:17

Tool Information

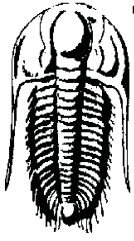
Drill Pipe:	Length: 3479.00 ft	Diameter: 3.80 inches	Volume: 48.80 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 48.80 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3503.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Recorder	0.00	8365	Fluid	3469.00	
Blank Spacing	5.00			3474.00	
Shut In Tool	5.00			3479.00	
Sampler	2.00			3481.00	
Hydraulic tool	5.00			3486.00	
Jars	5.00			3491.00	
Safety Joint	2.00			3493.00	
Packer	5.00			3498.00	34.00 Bottom Of Top Packer
Packer	5.00			3503.00	
Stubb	1.00			3504.00	
Perforations	1.00			3505.00	
Change Over Sub	1.00			3506.00	
Recorder	0.00	6669	Inside	3506.00	
Recorder	0.00	8734	Outside	3506.00	
Blank Spacing	31.00			3537.00	
Change Over Sub	1.00			3538.00	
Perforations	1.00			3539.00	
Bullnose	3.00			3542.00	39.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. and Associates, Inc.

12-16s-17w Rush,KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Patrick #1-12

Job Ticket: 46422

DST#: 3

ATTN: Tom Fertal

Test Start: 2012.02.10 @ 10:21:17

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.89 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GMCO 10%G, 30%O, 60%M	1.683
1865.00	REVERSED OUT OIL	26.161
15.00	FREE OIL	0.210

Total Length: 2000.00 ft Total Volume: 28.054 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

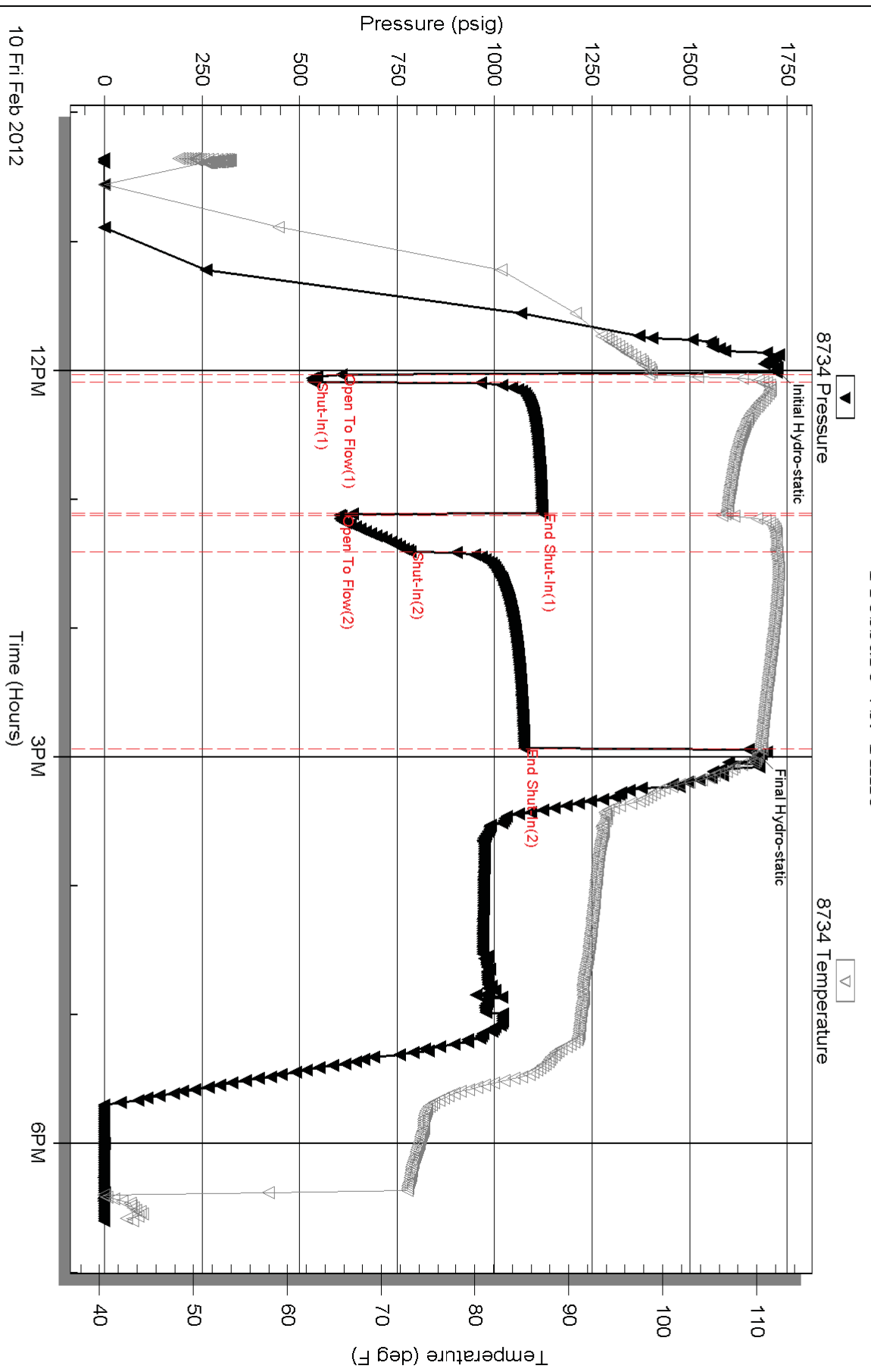
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



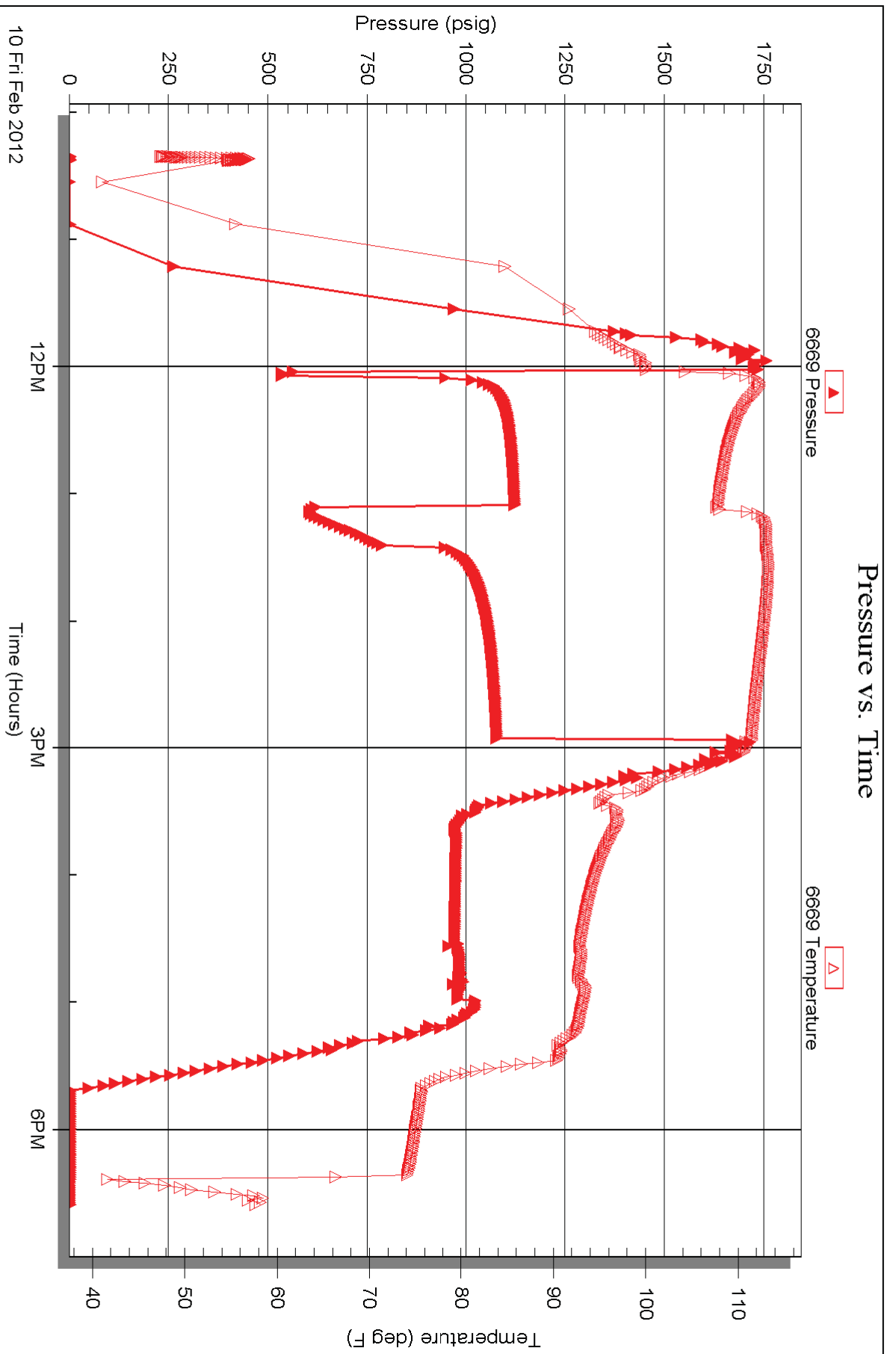
Serial #: 6669

Inside

Samuel Gary Jr. and Associates, Inc.

Patrick#1-12

DST Test Number: 3



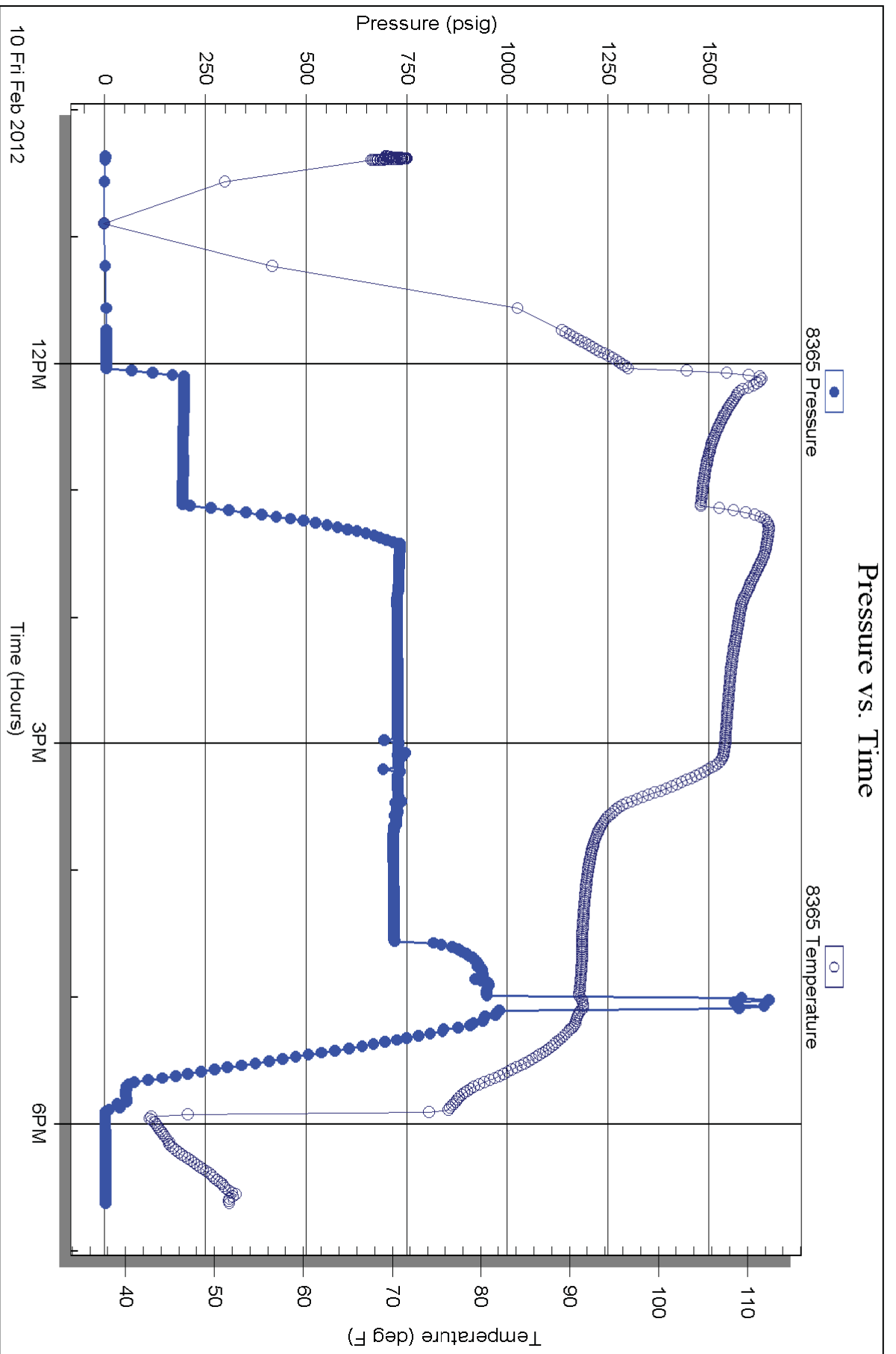
Serial #: 8365

Fluid

Samuel Gary Jr. and Associates, Inc.

Patrick #1-12

DST Test Number: 3





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

Well Name: SGA Patrick # 1-12
 Location: SEC 12 16s 17w, Rush County, Kansas
 License Number: 15-165-21960-0000
 Spud Date: 2-01-2012
 Surface Coordinates: 545' FSL & 2160' FEL
 Region: WILDCAT
 Drilling Completed: 2-08-2012

Bottom Hole
 Coordinates:
 Ground Elevation (ft): 1974' K.B. Elevation (ft): 1984'
 Logged Interval (ft): 1800' To: 3650' Total Depth (ft): 3650'
 Formation: Lansing, Arbuckle
 Type of Drilling Fluid:

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

OPERATOR

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

GEOLOGIST

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

DST's Report

DST#1 3256-3290 5 60 40 140
 IF-BLT TO 7"/ISI- NB/ FF-BOB 8 MIN./FSI-1/4" BLO DIED IN 8M.
 IH-1572, FH-1538/ IF-23 TO 43, FF- 41 TO 111/ISI-761, FSI-740
 RECOVERED- 155' GIP,/ 190' TF, 1' FREE OIL, 184' VSOCMW,3%O., 87%W.,10%M.,/ 5'M. 100% M. /RW.267 @ 36
 DEG. 60,000 CHL. PIT CHL 2000/ BHT 105
 SAMPLER-200 ML GAS/ 150 ML OIL/3500 ML WATER/ 360 PSI/ 1000 ML TOTAL/ OIL GRAVITY-TSTM

DST#2 3338 TO 3388 5 60 35 120
 IF-BOB 3 MIN./ISI-SRFC BLO DIED IN 16 MIN./FF- BOB IN 4 MIN./ SRFC BLO DIED IN 7 MIN.
 IH- 1640, FH-1611/ IF- 59 TO 93, FF-105 TO 283/ ISI- 893', FSI-838
 RECOVERED- 510' TF, 1' FREE OIL, 504 ' MW, 95%W, 5%M, /5' MUD , 100% M. RW .187@51 DEG =57,000 CHL/ PIT
 CHL 4700 BHT- 104 DEG.
 SAMPLER-200 ML OIL/400 ML MUD/3400 ML WATER/ 350 PSI/4000ML TOTAL/ OIL GRAVITY-TSTM

DST's Report

DST#3 3503-3542' 5 60 20 90
 IF-BOB 30SEC/ ISI-BOB 4 MIN./ FF-BOB 20 SEC./FSI-BOB 3 MIN DIED IN 66 MIN.
 IH-1723, FH-1678/ IF-607 TO 536, FF-603 TO 782/ISI-1122, FSI-1076/ RECOVERED- 2000' TF, 15' FREE OIL 95%
 O., 5% M./1865' REV OUT OIL/ 120' GMCO, 10%G., 30%O.,60%M./ 40 GRAVITY, BHT 110 DEG. PIT CHL- 5500
 SAMPLER-800 ML GAS/ 3050 ML OIL/ 150 ML MUD/ 220 PSI, 4000 ML TOTAL

ROCK TYPES

Anhy
 Bent
 Brec
 Cht
 Clyst
 Coal
 Congl
 Dol

Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt
 Shale
 Shcol

Shgy
 Sltst
 Ss
 Till
 Carb sh
 Dol
 Dtd
 Gry sh

Sandy lms
 Shale
 Sltstn
 Shlyslts
 Sltyslts
 Lms

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

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

FOSSIL

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

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

STRINGER

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

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandyms
- Sh
- Slstsn

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

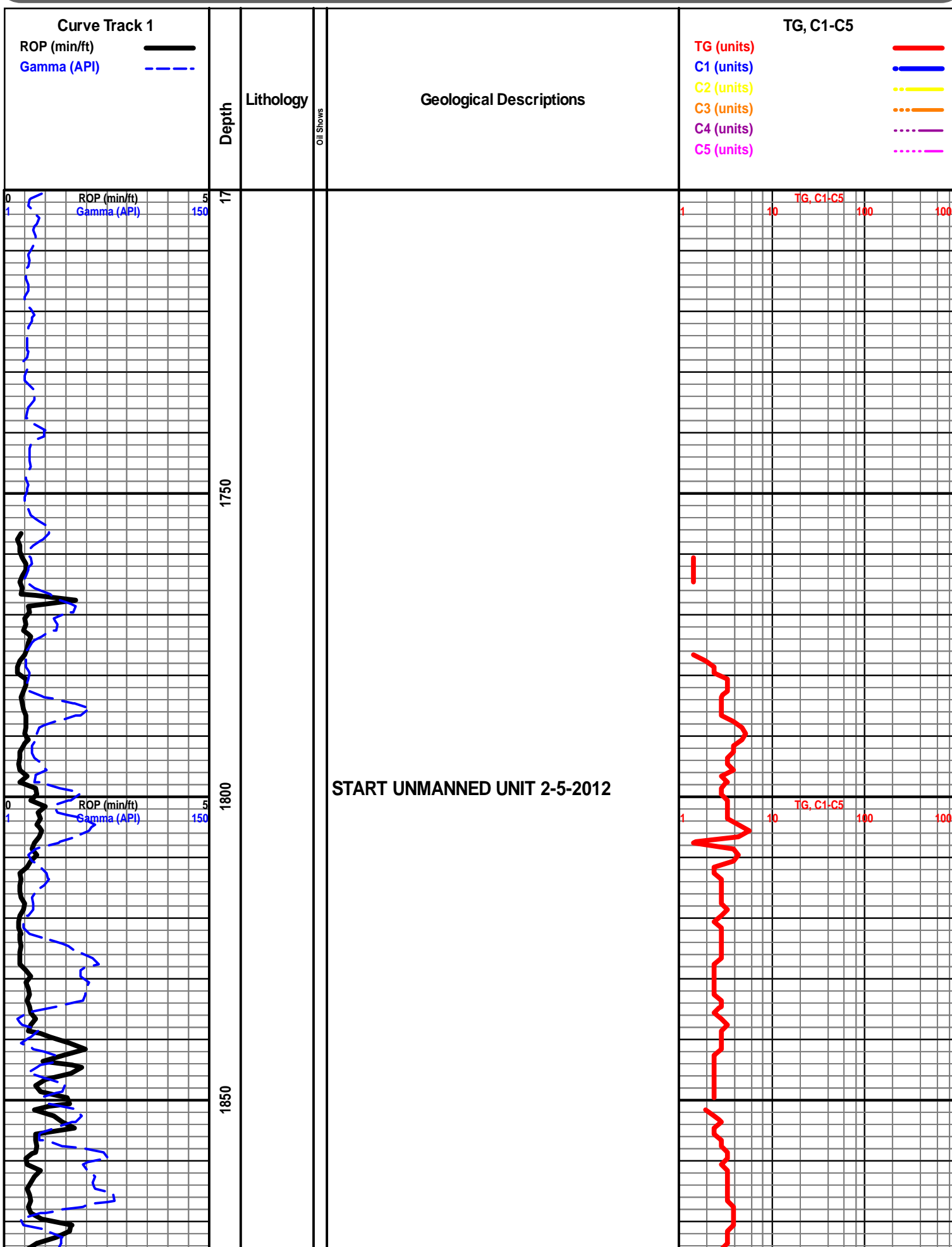
- Even
- Spotted
- Ques
- Dead
- Gas show

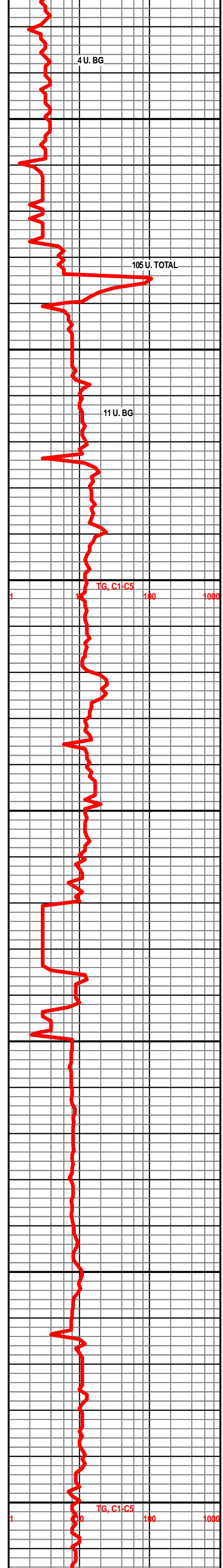
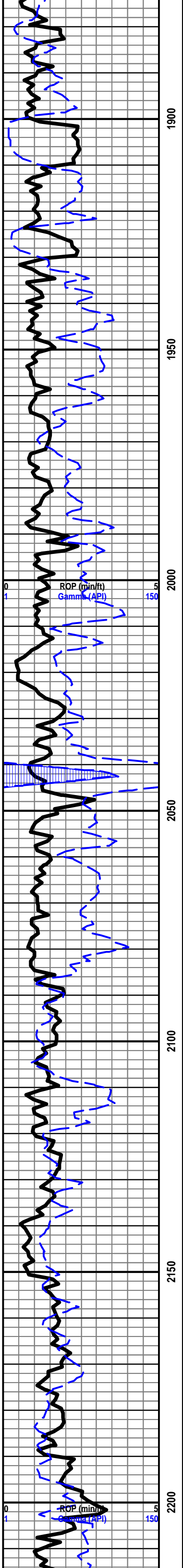
INTERVALS

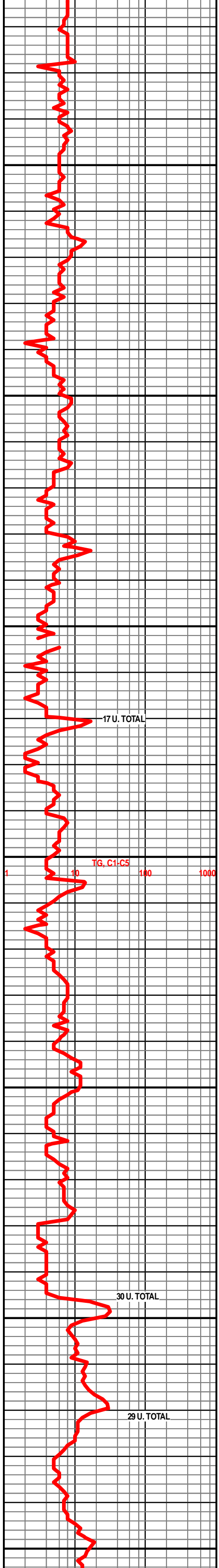
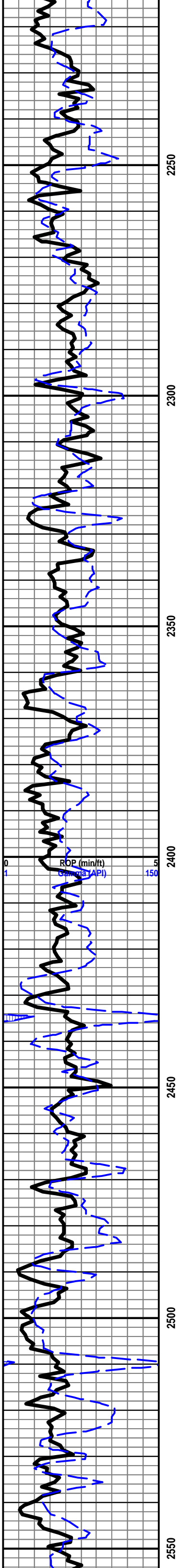
- Core
- Dst
- Dst

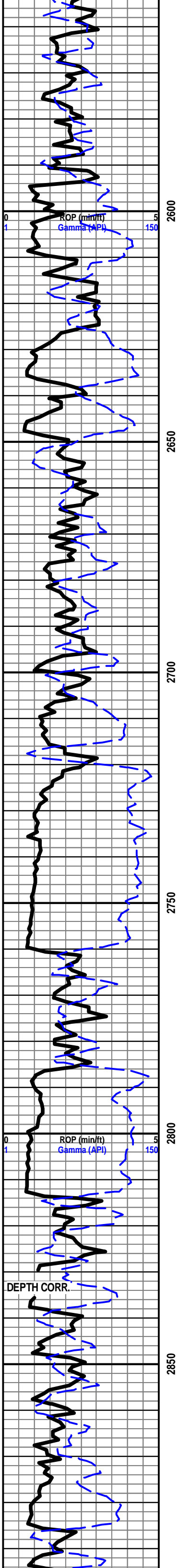
EVENTS

- Rft
- Sidewall









2600

2650

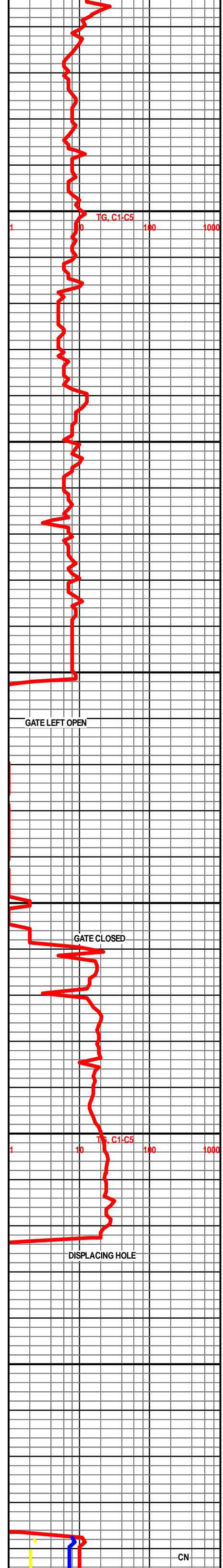
2700

2750

2800

2850

BRS 2760' - 776'

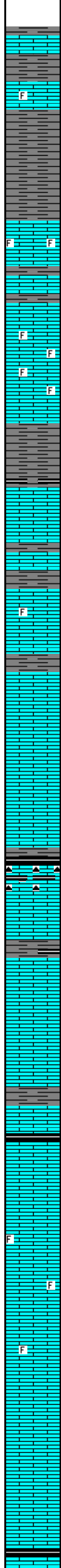
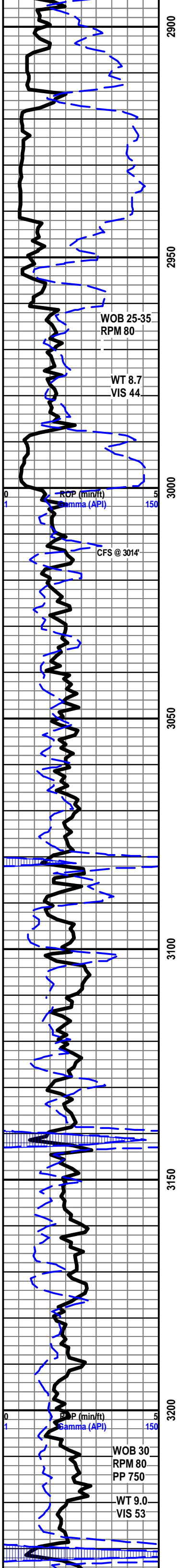


TG, C1-C5

GATE LEFT OPEN

GATE CLOSED

DISPLACING HOLE



LS- CRM LT TN, HD DNS TO V BRTT, MD-XLN, V RE-XLN MTRX, V FOSS, V DUL YEL FLO IP, NO FLO, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY, LT GRN IP MOTT, FRM BLKY SMTH TXT, V SFT TR SLTY

HOWARD 2941' - 957'

LS- LT TN TO TN, HD DNS TR BRTT, MD-XLN, RE-XLN MTRX, ABDT IMB FOSS FRAGS, SLI TR SUCRO IP, V DUL YEL FLO IN 80%, TR BRT YEL FLO IN 10%, NO VIS POR, NO VIS SHOW

LS- CRM BUFF LT TN, HD DNS TO V BRTT, MD-XLN, RE-XLN MTRX, SURCO IP, SCAT IMB FOSS FRAGS THRU, SLI TR S-CHLKY, LT BRT YEL MIN FLO IN 20%, DUL YEL IN 80%, NO VIS POR, NO VIS SHOW

SH- LT TO MD GY, V SFT GMMY TXT IP, GRDNG TO V SFT SLTY W/ LMNTD DISS BLK CARB SH IP

TOPEKA 2999'-1015'

3001'-3004' LS- LT TN TO TN THRU W/ OIL STN IN 100%, HD TO BRTT, V SUCRO MTRX, MD CALC-XLS IMB IN 40%, W/ FNLY DISS PYR IN 40%, PR TO FR TO TR GD MICRO-PP POR IN 60%, PR VIS MICRO-VUG POR & PR VIS MICRO-PP POR IN 40%, V RCH BRT YEL GLD FLO THRU, EXCEL INST FLSH CUT IN 100%, EXCEL RCH BLUE STRM MILKY CUT THRU, BRWN LCH ON DSH, GD OIL ODOR

LS- CRM LT TN - HD DNS TO BRITT, MD-F-XLN TO SUCRO SLI S-CHLKY IP, TR FOSS FRGS IP, NO FLO NO VIS POR, NO VIS POR

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

LS- OFF WHT CRM LT TN IP, HD DNS IP V/ SUCRO MTRX THRU V/ SLI S-CHLKY IP, TR F-XLN W/ TR IMBD FOSS FRGS IP, NO FLO, NO VIS POR, NO VIS SHOW

SH- BLK SFT CARB

LS- OFF WHT TO DK GY BLK- MOTT V/ SFT CHLKY MTRX W/ IMBD BLK SFT CARB SH, ABDT BLK RE-WORKED CHRT, HVY TR MD CALC XLS IMBD IP, NO FLO, NO VIS POR, NO VIS SHOW

LeCOMPTON 3102' - 1118'

LS- FF WHT CRM LT TN- HD DNS IP TO V/ BRITT, MD-F-XLN IP TO SUCRO S-CHLKY TO TR ABDT SFT WHT GMMY CHLK, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

SH- BLK SFT CARB SLI CALC IP

LS- CRM BFF- HD DNS F-XLN TO V/ TT SUCRO MTRX HVY TR ABDT SFT WHT CHLK IP, NO FLO, NO VIS POR, NO VIS SHOW

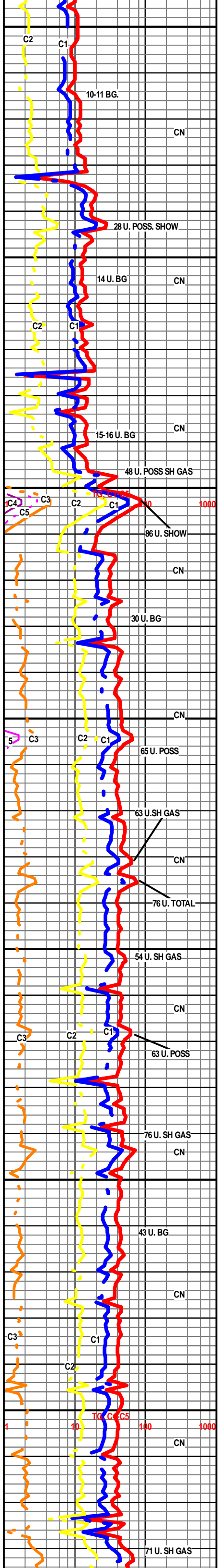
LS- CRM LT TN TO OFF WHT- HD DNS F-XLN IP RE-XLN IP TR FOSS IMBD IP, SUCRO SLI S-CHLKY IP W/ TR IMBD FOSS FRGS, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

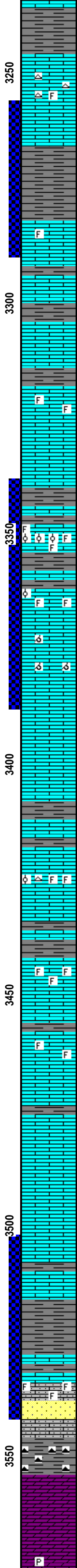
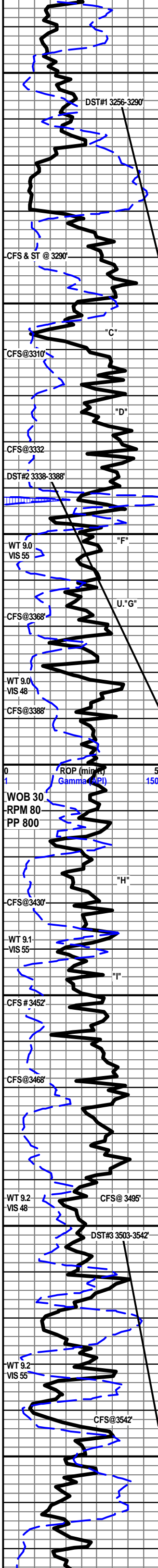
LS- OFF WHT CRM BFF- HD DNS IP TO MD-HD, V/ TT SUCRO MTRX TO SUCRO S-CHLKY, TR IMBD FOSS FRGS IP, NO FLO, NO VIS POR, NO VIS SHW

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

LS- OFF WHT CRM LT TN- HD DNS TO MD HD IP, F-XLN TO SUCRO S-CHLKY TO CHLKY IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

HEEBNER 3229' - 1245'





SH- LT GRN TO LT GY, FRM BLKY SMTH TXT, SLI GRNY IP

LS- OFF WHT TO CRM, HD DNS TO BRIT, MD-F-XLN, S-SUCRO TO SLI CHLKY IP, W/ ABTD WHT CHRT, TR FOSS IP, LT YEL FLO IP, NO VIS POR, NO VIS SHOW

DOUGLAS 3266' - 1282'

SH- GRN LT GY TO RD MOTT, FRM IP, GRNY TXT, SLI TR GRN TXT

LANSING 3280' - 1296'

3280'-3283' LS- CRM LT TN TO TN W/ TN OIL STN IN 70%, HD DNS IP TO V- V BRIT, MD-F-XLN, V RE-XLN MTRX, FOSS FRGS IMB IP, SM CALC-XLS IP, BRIT YEL GLD FLO IN 40%, DUL YEL GLD FLO IN 30%, GD VIS INTER-XLN POR IN 20%, FR VIS MICRO-VUG POR IN 40%, NO VIS POR IN 40%, V GD FLSH IN 60%, V GD SLO STRM CUT IN 60%, GD OIL ODOR, LIVE OIL IN DSH, LT TN LCH ON DSH, ABTD SM CRUSH SHOW ROCK IN BTM OF TRAY

LANSING "C" 3305' - 1321'

3305-3308- LS- OFF WHT TO WHT- MD HD TO SFT ABTD FRM TO V/ SFT GMMY CHLK THU, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

3320-3326- LS CRM LT TN TN (TN STN IN 20%) - HD DNS IP TO V/ BRIT, MD-F-XLN RE-XLN MTRX IP, FOSS FRGS IP, GRDNG TO S-CHLKY TO V/ CHLKY MTRX, BRIT YEL GLD FLO IN 20%, DLL YEL FLO IN 80%, POSS TR FRACT POR, TR PR SCAT MICROVUG POR IN LESS THAN 10%, NO POR IN 85%, WK FLSH CUT IN 10%, FR SLO STRM CUT IN 10%, NO CUT IN 90%, NO STN ON DISH, NO ODOR

LANSING "F" 3348' - 1364'

3349-3352' LS- CRM LT TN TN (DUE TO TN OIL STN IN 80%) HD DNS TO BRIT, MD-XLN V/RE-XLN MTRX, V FOSS V/ MICRO OOL THRU, V SMLL CALC XLS IP, BRIT YEL GLD FLO IN 50%, DLL YEL GLD FLO IN 50%, FR SCAT MICRO VUG POR IN 50%, PR TO TR FR INTER-FOSS POR IN 30%, PR TO FR VIS INT-OOL POR IN 10%, VGD FLSH CUT IN 60%, V/ GD SLO STRM RICH MLKY BLU CUT IN 60%, TN LCH ON DISH, FR OIL ODOR

3362-3366' LS- LT TN TN LT BRN(SPTTD DK BRN OIL STN IN 80%) HD DNS TO BRIT IP, MD-F-XLN RE-XLN IP, V/ FOSS IP, TR SCAT MD OOL IP, TR GLAUC OR KAOL, SMLL CALC XLS IP, SLI TR IMBD CHLK IP, BRIT YEL GLD FLO IN 40%, DLL YEL FLO IN 60%, FR SCAT MICRO VUG POR IN 20%, PR SCAT INTER-FOSS POR SCAT THRU, TR PR INTER-XLN POR SCAT THRU, V/RCH FLSH CUT THRU, RICH SLO STRM MLKY BLU CUT THRU, TN LCH ON DISH, STRNG OIL ODOR,

3372-3381-LS- OFF WHT CRM TN- HD DNS IP TO BRIT, MD-F-XLN RE-XLN MTRX V/ OOLMLD IP, HVY TR ABTD SFT WHT CHLK IP, BRIT YEL MIN FLO THRU, PR SCAT VIS OOLMLD POR IN 40%, SCAT PR MICROVUG POR IN 20%, NO VIS SHOW OR CUT

LS- CRM OFF WHT- HD DNS TR BRIT IP, F-VF-XLN TO MD-XLN RE-XLN IP, TR FOSS FRGS, SLI TR IMBD SFT CHLK, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

LANSING "H" 3418' - 1434'

3423-3427' LS- WHT OFF WHT LT TN IP(DUE TO LT TN SPTTD OIL STN IN 60%) HD V/ BRIT, MD-XLN RE-XLN MTRX ABTD SMLL FOSS FRGS IP, TR MICRO OOL IP, V/ S-CHLKY SCAT THRU, TR WHT LT TN CHRT W/ STN, BRIT YEL GLD FLO IN 30%, DLL YEL GLD FLO IN 30%, DLL YEL FLO 20%, PR MICRO PP POR IN 30%, PR SCAT MICRO VUG POR IN 20%, FR TO GD FLSH CUT IN 60%, FR TO GD SLO STRM CUT IN 80%, LT TN LCH ON DISH GD OIL ODOR

3442-3449' LS- CRM LT TN BRN BLK OIL STN DOS SCATT THRU, HD DNS TO V/ BRIT, MD-F-XLN V/RE-XLN IP, RE-XLN MTRX, IMBD FOSS FRGS THRU, MD CALC XLS SCAT THRU, BRIT YEL GLD FLO SCAT 60%, DLL YEL GLD FLO SCAT IN 40%, PR TO FR VIS MICRO VUG POR IN 30%, SCAT FR TO GD VIS INTER-FOSS POR IN 30%, POSS FRACT POR 20%, FR FLSH CUT IN 50%, FR TO GD SLO STRM CUT IN 70%, TN LCH ON DISH, GD OIL ODOR

3452-3454 LS- CRM LT TN TN W/ SPTTD OIL STN SCAT THRU, HD DNS F-XLN TO TT SUCRO MTRX IP, SLI TR DOS IP, BRIT YEL GLD FLO IN 60%, DLL YEL FLO IN 30%, PR VIS MICRO PPPOR IN 10%, SLI TR MICROVUG POR IP, GD FLSH CUT IN 30%, GD SLO STRM CUT IN 30%, NO LCH ON DISH, FR OIL ODOR

3459-3461' LS- CRM LT TN W/ TN OIL STN SCATT IN 20%, TN STN ON ONE FACE IP, HD DNS SLI TR BRIT, V/ F-CRYPTO-XLN SLI TR RE-XLN IP, TR FOSS FRGS IP, BRIT YEL FLO SPTTD IN 80%, DLL YEL FLO IN 20%, NO VIS POR TO TR SCAT PR MICRO PP POR IP TO SLI TR MICRO VUG POR IN 5%, POSS FRACT POR IP, WK FLSH CUT IN 20%, FR SLO STRM CUT IN 30%, NO STN ON DISH, LT OIL ODOR

3476-3478- LS- TN BRN DUE TO EVEN BRN OIL STN THRU (3 ROCKS) HD DNS SLI TR BRIT, MD-F-XLN RE-XLN MTRX, SMLL TO MD CALC XLS IMBD IP, BRIT YEL GLD FLO THRU, PR TO FR SCAT INTER-XLN POR IN 80%, PR SCAT VUG POR IP, GD FLSH CUT IN 80%, GD SLO STRM CUT IN 80%, TN LCH ON DISH, FR OIL ODOR

3495- 3507 OFF WHT TO WHT- MD HD TO SFT, ABTD CHLKY MTRX TO SUCRO S-CHLKY IP, NO FLO, NO VIS POR, NO VIS SHOW

BKC 3517' - 1533'

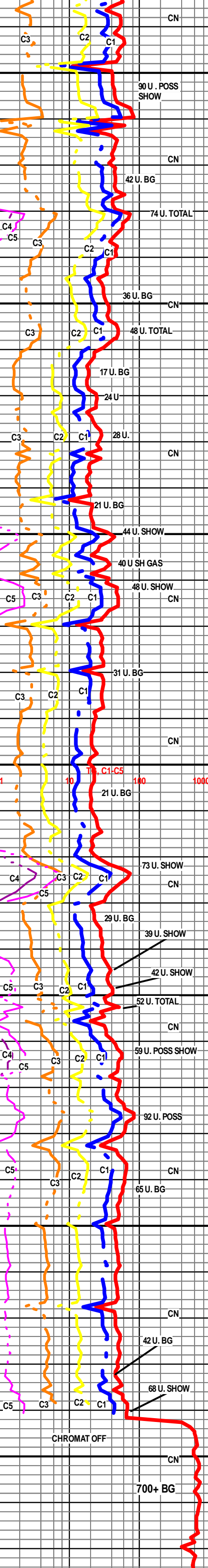
SH- RED - V/ SFT GMMY TXT

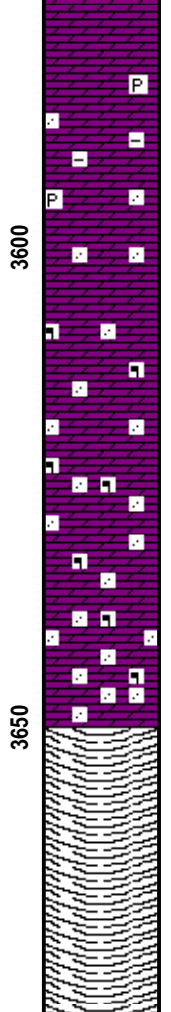
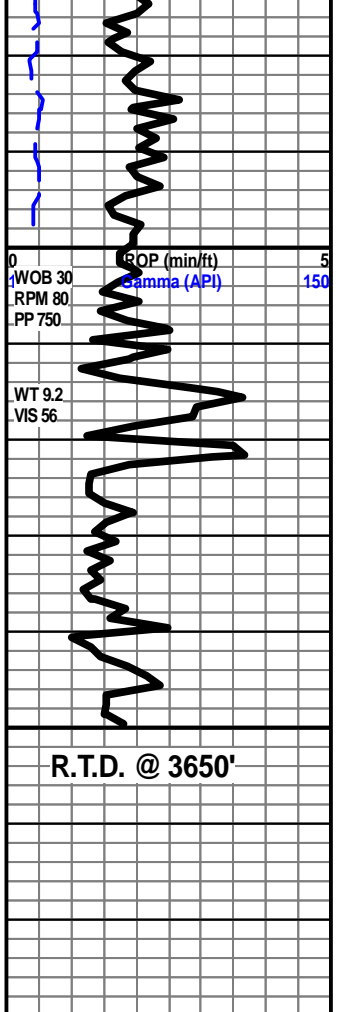
3533-3538-LS- LT TN TN DUE TO OILS STN IN 60%, HD DNS TO V/ BRIT MD-F-XLN RE-XLN MTRX, V/ FOSS IP, HVY TR IMBD F-MD S-ANG TO S-RND QURTZ GRNS IP, BRIT YEL GLD FLO IN 70%, DLL YEL FLO IN 30%, FR TO GD VIS INTER-FOSS POR IN 30%, GD INTER-XLN POR IN 30%, EXCEL INST FLSH CUT IN 80%, EXCEL SLO STRM CUT IN 80%, BRN LCH ON DISH, NO ODOR

3538-3542- SS- CLR TO LT TN RED- HD V/ FRI, F-MD CLR QURTZ GRNS THRU, FR TO TR GD SRT, ANG TO S-ANG GRNS, SIL CMNT THRU TO SLI TR CALC CMNT IP, ABTD FREE GRNS IN TRAY, BRIT YEL GLD FLO IN 80%, DLL YEL FLO IN 20%, PR TO FR TO TR GD VIS INTER-GRN POR THRU, WK FLSH CUT TO FR TO GD SLO STRM CUT THRU, LT TN LCH ON DISH, NO ODOR

ARBUCKLE 3555' - 1571'

3555-3560- DOLO- WHT OFF WHT- HD DNS F-XLN IPTO V/ TT SUCRO MTRX SLI TR WHT CHLK IP, DLL YEL MIN FLO, SLI TR BRIT YEL GLD FLO IN 10%, NO VIS POR, WK FLSH CUT IN 10%, WK SLO STRM CUT IN 20%, NO VIS STN ON DISH, NO ODOR





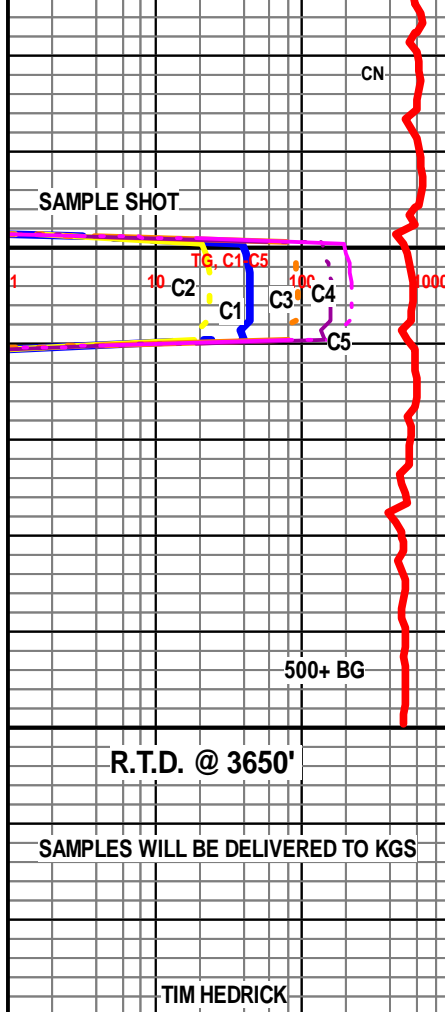
3560-3568- DOLO- OFF WHT LT TN SCAT IN 60%, HD DNS TO BRIT, MD-XLN TO CRS SUCRO MTRX, ABDT IMBD ANG DOLO GRNS THRU , SFT WHT CHLK IMBD THRU,BRIT YEL GLD FLO IN 50%, DLL YEL FLO IN 50%, FR TO TR GD VIS INTER-XLN POR SCAT THRU, GD FLS CUT IN 50%, GD SLO STRM CUT IN 70%, TN STN ON DISH, SLPHR ODOR

3570-3584- DOLO- OFF WHT WHT- HD DNS TO TR BRIT, F-XLN TO CRS SUCRO MTRX, ABDT IMBD MD ANG LM GRNS THRU, ABDT IMBD SFT CHLK, TR LMNTD AND DISS PYR, DLL YEL MIN FLO IN 30%, PR TO FR VIS INTER-XLN POR IN 40%, FR VIS VUG POR IP, NO VIS SHOW

3684- 3610 DOLO- OFF WHT WHT- HD DNS TO TR BRIT, F-XLN TO CRS SUCRO MTRX, ABDT IMBD MD ANG LM GRNS THRU, ABDT IMBD SFT CHLK THRU, SCAT IMBD S-RND CLR QURTZ GRNS , TR LMNTD GRN CLAY, TR LMNTD AND DISS PYR, DLL YEL MIN FLO IN 20%, PR TO FR VIS INTER-XLN POR IN 40%, NO VIS SHOW

3610-3624- DOLO OFF WHT WHT LT ORNG- HD DNS TO TR BRIT, F-XLN TO CRS SUCRO MTRX, ABDT IMBD MD ANG LM GRNS THRU, ABDT IMBD SFT CHLK THRU, ABDT SCAT IMBD SMLL S-RND CLR QURTZ GRNS ,HVY TR FLDSPR THRU, DLL YEL MIN FLO IN 30%, PR TO FR VIS INTER-XLN POR IN 40%, FR VIS VUG POR IP, NO VIS SHOW

3624-3650' DOLO- WHT OFF WHT LT ORNG-HD DNS TO BRIT, V/ SUCRO MTRX, ABD T IMBD SMLL TO MD S-RND TO S-ANG CLR QURTZ GRNS THRU, ABDT IMBD SFT WHT CHLK ,FELDSPAR SCAT THRU, DLL YEL MIN FLO IN 10%, PR SCAT INTER-XLN POR IP,NO VIS SHOW



R.T.D. @ 3650'

R.T.D. 2:09 AM 2/11/2012

CTCH 2 HRS

TOFL/ 4:10 AM

WEATHERFORD/ LIBERAL

R.T.D. @ 3650'

SAMPLES WILL BE DELIVERED TO KGS

TIM HEDRICK