



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1089080
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: _____

1089080

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	HOSS ET AL 1-22
Doc ID	1089080

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
Thomas E. Wright, Commissioner

Sam Brownback, Governor

July 31, 2012

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

Re: ACO1
API 15-165-21965-00-00
HOSS ET AL 1-22
SW/4 Sec.22-16S-16W
Rush County, Kansas

Dear Production Department:

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

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

Respectfully,
CLAYTON CAMOZZI



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

Date: 4/12/2012
 Invoice # 278
 P.O.#:
 Due Date: 5/12/2012
 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:
 HOSS ET AL 1-22

Description of Work:
 LONG SURFACE JOB

<input checked="" type="checkbox"/> DRLG	<input type="checkbox"/> COMP	<input type="checkbox"/> W/O	<input type="checkbox"/> LOE	<input type="checkbox"/> GG
Account	8200.138			
Well/Prospect				
Deck				
AFE				
Approval	[Signature]			
Description				

Services / Items Included:

	Quantity	Price	Taxable
Labor		\$ 991.39	No
Common-Class A	325	\$ 4,304.86	Yes
Bulk Truck Mat-Material Service Charge	344	\$ 746.97	No
8 5/8" Basket	2	\$ 686.17	Yes
Calcium Chloride	12	\$ 490.66	Yes
Pump Truck Mileage-Job to Nearest Camp	30	\$ 325.06	No
Bulk Truck Mileage-Job to Nearest Bulk Plant	30	\$ 190.22	No
Flo Seal	81	\$ 175.89	Yes
8 5/8" Centralizer	2	\$ 138.97	Yes
Premium Gel (Bentonite)	7	\$ 123.73	Yes
8 5/8" Top Rubber Plug	1	\$ 115.09	Yes

Item	Quantity	Price	Taxable
Baffle Plate Aluminum, 8 5/8"	1	\$97.71	Yes

Invoice Terms:

Net 30

SubTotal: \$ 8,386.71
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,258.01)

SubTotal for Taxable Items: \$ 5,213.11
 SubTotal for Non-Taxable Items: \$ 1,915.59

Total: \$ 7,128.70

Tax: \$ 328.43

Amount Due: \$ 7,457.13

Applied Payments:

Balance Due: \$ 7,457.13

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.

RECEIVED

APR 17 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. 278

Date	4/8/12	Sec.	22	Twp.	16	Range	16	County	Rush	State	KS	On Location		Finish	9:00 AM
------	--------	------	----	------	----	-------	----	--------	------	-------	----	-------------	--	--------	---------

Lease	HOSS ET AL	Well No.	1-22	Location	Galatia, TW, 1/2N, E into										
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Contractor	UAL Rig #6							Owner								
------------	------------	--	--	--	--	--	--	-------	--	--	--	--	--	--	--	--

Type Job	Surface							Owner	To Quality Oilwell Cementing, Inc.							
----------	---------	--	--	--	--	--	--	-------	------------------------------------	--	--	--	--	--	--	--

Hole Size	12 1/4"			T.D.	821'			You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
-----------	---------	--	--	------	------	--	--	--	--	--	--	--	--	--	--

Csg.	8 5/8"		23#		Depth	821'		Charge To	Sam Gary Jr. + Associates						
------	--------	--	-----	--	-------	------	--	-----------	---------------------------	--	--	--	--	--	--

Tbg. Size								Street								
-----------	--	--	--	--	--	--	--	--------	--	--	--	--	--	--	--	--

Tool								City	State							
------	--	--	--	--	--	--	--	------	-------	--	--	--	--	--	--	--

Cement Left in Csg.	42'			Shoe Joint	42'			The above was done to satisfaction and supervision of owner agent or contractor.							
---------------------	-----	--	--	------------	-----	--	--	--	--	--	--	--	--	--	--

Meas Line								Displace	49 3/4 Bbls.		Cement Amount Ordered	325sx Com Plug 2 1/2 gal 1/4#				
-----------	--	--	--	--	--	--	--	----------	--------------	--	-----------------------	-------------------------------	--	--	--	--

EQUIPMENT

Pumptrk	15	No.	Cementer	Paul		Common	325				
			Helper								
Bulktrk	12	No.	Driver	Cody		Poz. Mix					
			Driver								
Bulktrk	PU	No.	Driver	Levy		Gel.	7				
			Driver								

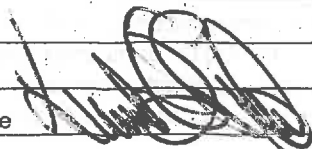
JOB SERVICES & REMARKS

Remarks:	Hulls										
Rat Hole	Salt										
Mouse Hole	Flowseal 8/4										
Centralizers	Kol-Seal										
Baskets	Mud CLR 48										
D/V or Port Collar	CFL-117 or CD110 CAF 38										
Est. Circ.	Sand										
Mix 325 sx	Handling 344										
Displace	Mileage										

8 5/8" FLOAT EQUIPMENT

Land Plug @ 500#	Guide Shoe										
Cement Circulated 48	Centralizer 2										
1 1/4 psi 500#	Baskets 2										
	AFU Inserts										
	Float Shoe										
	Latch Down										
	Rubber Plug + Baffle Plate										
	Head + Manifold										
	Pumptrk Charge Long Surface										
	Mileage 30										

Thank You!!



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: 4/18/2012
 Invoice # 491

P.O.#:
 Due Date: 5/18/2012
 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:
 HOSS ET AL 1-22

Description of Work:
 PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 991.39	Yes				
Common-Class A	156	\$ 2,066.33	Yes				
Bulk Truck Mat-Material Service Charge	269	\$ 584.11	Yes				
POZ Mix-Standard	104	\$ 519.41	Yes				
Pump Truck Mileage-Job to Nearest Camp	30	\$ 325.06	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	30	\$ 190.22	Yes				
Premium Gel (Bentonite)	9	\$ 159.08	Yes				
Flo Seal	65	\$ 141.14	Yes				

Invoice Terms:

Net 30

	SubTotal:	\$ 4,976.74
	Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:	\$ (746.51)
<hr/>		
	SubTotal for Taxable Items:	\$ 4,230.23
	SubTotal for Non-Taxable Items:	\$ -
<hr/>		
	Total:	\$ 4,230.23
	Tax:	\$ 266.50
<hr/>		
	Amount Due:	\$ 4,496.73

6.30% Rooks County Sales Tax

Thank You For Your Business!

Applied Payments:
Balance Due: \$ 4,496.73

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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DRLG COMP W/O LOE GG

RECEIVED

APR 27 2012

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

Account	8200-145
Well/Prospect	
Deck	
AFE	
Approval	
Description	

QUALITY OILWELL CEMENTING, INC.

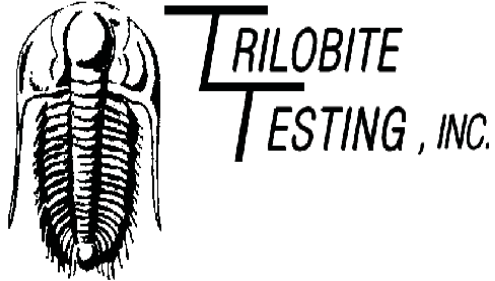
Federal Tax I.D.# 20-2886107

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

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

No. 491

Date	4-13-12	Sec.	22	Twp.	16	Range	16	County	Rush	State	Kansas	On Location		Finish	1:45 PM
Lease	Hess Fetal	Well No.	1-22	Location <i>Capella low 3N Fintz</i>											
Contractor	VAL Rig 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	Plug			Charge To <i>Samuel Gray Sr. & Associates</i>											
Hole Size	7 7/8			T.D.	3640										
Csg.				Depth											
Tbg. Size				Depth											
Tool				Depth											
Cement Left in Csg.				Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line				Displace	Cement Amount Ordered <i>260 6040 4600</i>										
EQUIPMENT													<i>1/2 lb Fla Seal per sk</i>		
Pumptrk	5	No.	Cementers												
			Helper	<i>Steve</i>											
Bulktrk	10	No.	Driver	<i>Bob</i>											
			Driver	<i>Nick</i>											
Bulktrk		No.	Driver												
			Driver												
JOB SERVICES & REMARKS													Common <i>156</i>		
Remarks:													Poz. Mix <i>104</i>		
Rat Hole													Gel. <i>9</i>		
Mouse Hole													Calcium		
Centralizers													Hulls		
Baskets													Salt		
DN or Port Collar													Flowseal <i>65H</i>		
<i>1st Plug @ 3534 50sk</i>													Kol-Seal		
<i>2nd " " 1110 50sk</i>													Mud CLR 48		
<i>3rd " " 840 40sk</i>													CFL-117 or CD110 CAF 38		
<i>4th " " 420 50sk</i>													Sand		
<i>5th " " 60 20sk</i>													Handling <i>269</i>		
<i>Rat Hole 30sk</i>													Mileage		
<i>Mouse Hole 20sk</i>													FLOAT EQUIPMENT		
													Guide Shoe		
													Centralizer		
													Baskets		
													AFU Inserts		
													Float Shoe		
													Latch Down		
<i>Frank</i>													Pumptrk Charge <i>plug</i>		
													Tax		
													Discount		
X Signature <i>Randy O'Neil</i>													Total Charge		



DRILL STEM TEST REPORT

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

1515 Wynkoop, STE 700
Denver CO 80202

ATTN: Clayton Camozzi

Hoss et al #1-22

22-16s-16w Rush, KS

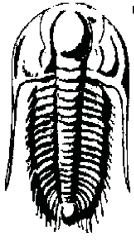
Start Date: 2012.04.11 @ 13:00:36

End Date: 2012.04.11 @ 19:04:36

Job Ticket #: 47710 DST #: 1

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

Printed: 2012.04.13 @ 09:47:36



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47710

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.04.11 @ 13:00:36

GENERAL INFORMATION:

Formation: **KC "F,G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:02:06

Time Test Ended: 19:04:36

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3294.00 ft (KB) To 3337.00 ft (KB) (TVD)

Reference Elevations: 1944.00 ft (KB)

Total Depth: 3337.00 ft (KB) (TVD)

1934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8369

Inside

Press@RunDepth: 22.10 psig @ 3295.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.11

End Date:

2012.04.11

Last Calib.:

2012.04.11

Start Time: 13:00:41

End Time:

19:04:35

Time On Btm:

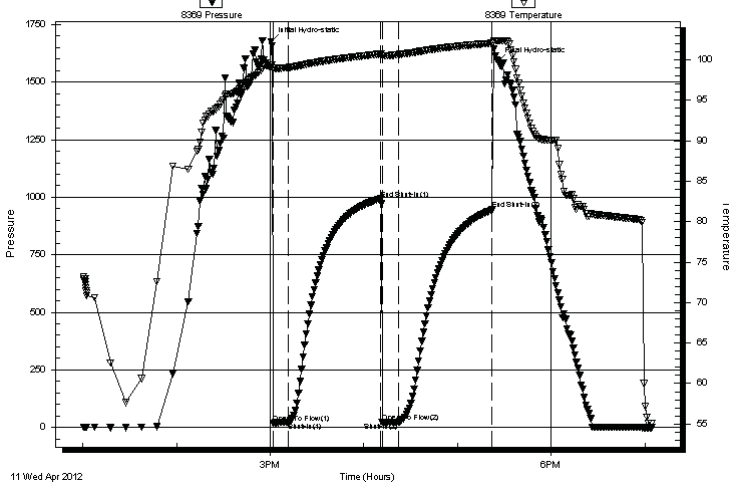
2012.04.11 @ 15:00:36

Time Off Btm:

2012.04.11 @ 17:25:36

TEST COMMENT: 10minIF-No blow
60minFF-No blow
10minFSI-No blow
60minFSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

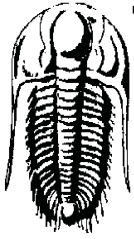
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1676.84	99.35	Initial Hydro-static
2	19.79	98.96	Open To Flow (1)
11	21.27	99.05	Shut-In(1)
70	993.00	100.74	End Shut-In(1)
71	22.88	100.47	Open To Flow (2)
82	22.10	100.66	Shut-In(2)
142	945.43	102.06	End Shut-In(2)
145	1590.21	102.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47710

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.04.11 @ 13:00:36

GENERAL INFORMATION:

Formation: **KC "F,G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:02:06

Time Test Ended: 19:04:36

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3294.00 ft (KB) To 3337.00 ft (KB) (TVD)

Reference Elevations: 1944.00 ft (KB)

Total Depth: 3337.00 ft (KB) (TVD)

1934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8319 Outside

Press@RunDepth: psig @ 3295.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.11 End Date: 2012.04.11

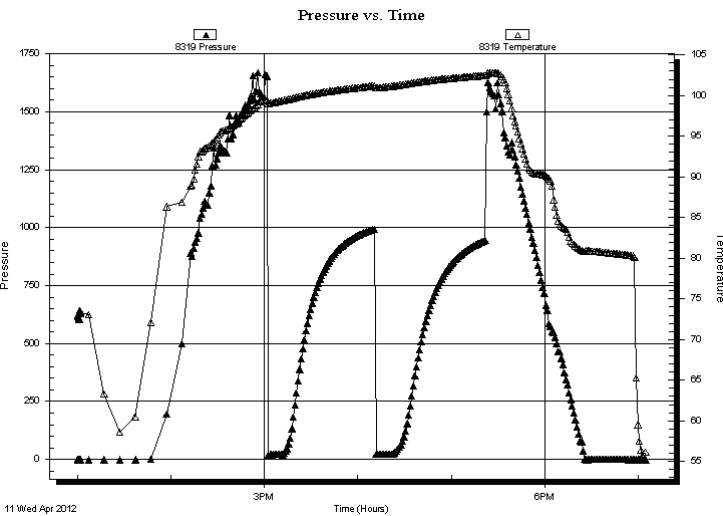
Last Calib.: 2012.04.11

Start Time: 13:00:15 End Time: 19:04:39

Time On Btm:

Time Off Btm:

TEST COMMENT: 10minIF-No blow
60minFF-No blow
10minFSI-No blow
60minFSI-No blow



PRESSURE SUMMARY

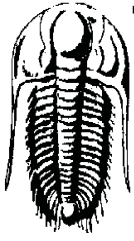
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
3.00	mud	0.04

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates
 1515 Wynkoop, STE 700
 Denver CO 80202
 ATTN: Clayton Camozzi

22-16s-16w Rush, KS

Hoss et al #1-22

Job Ticket: 47710 **DST#: 1**
 Test Start: 2012.04.11 @ 13:00:36

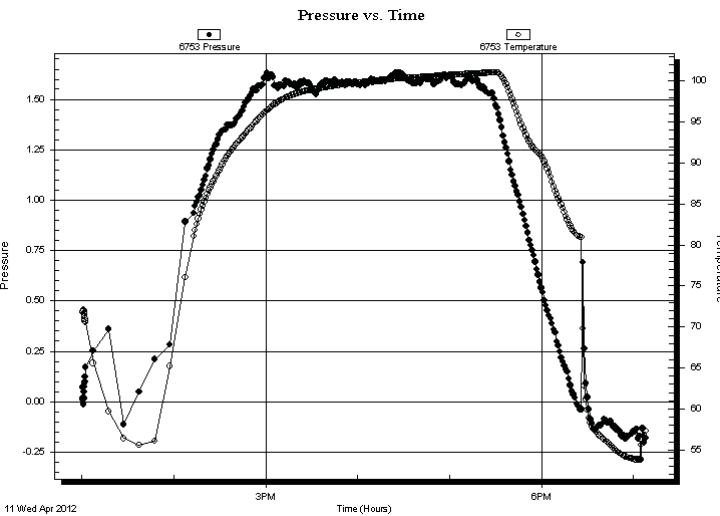
GENERAL INFORMATION:

Formation:	KC "F,G"				
Deviated:	No Whipstock:	ft (KB)	Test Type:	Conventional Bottom Hole (Initial)	
Time Tool Opened:	15:02:06		Tester:	Brett Dickinson	
Time Test Ended:	19:04:36		Unit No:	59	
Interval:	3294.00 ft (KB) To 3337.00 ft (KB) (TVD)		Reference Elevations:	1944.00 ft (KB)	
Total Depth:	3337.00 ft (KB) (TVD)			1934.00 ft (CF)	
Hole Diameter:	7.88 inches	Hole Condition: Fair	KB to GR/CF:	10.00 ft	

Serial #: 6753 Fluid

Press@RunDepth:	psig @	3265.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2012.04.11	End Date:	2012.04.11	Last Calib.:	1899.12.30
Start Time:	13:00:29	End Time:	19:08:23	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 10minIF-No blow
 60minFF-No blow
 10minFSI-No blow
 60minFSI-No blow



PRESSURE SUMMARY

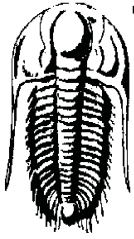
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47710

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.04.11 @ 13:00:36

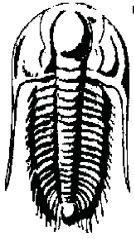
Tool Information

Drill Pipe:	Length: 3290.00 ft	Diameter: 3.80 inches	Volume: 46.15 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 42000.00 lb
			<u>Total Volume: 46.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3294.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	5.00			3265.00	
Recorder	0.00	6753	Fluid	3265.00	
Shut In Tool	5.00			3270.00	
Sampler	2.00			3272.00	
Hydraulic tool	5.00			3277.00	
Jars	5.00			3282.00	
Safety Joint	2.00			3284.00	
Packer	5.00			3289.00	34.00 Bottom Of Top Packer
Packer	5.00			3294.00	
Stubb	1.00			3295.00	
Recorder	0.00	8369	Inside	3295.00	
Recorder	0.00	8319	Outside	3295.00	
Perforations	5.00			3300.00	
Change Over Sub	1.00			3301.00	
Drill Pipe	32.00			3333.00	
Change Over Sub	1.00			3334.00	
Bullnose	3.00			3337.00	43.00 Bottom Packers & Anchor
Total Tool Length:	77.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

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1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47710

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2012.04.11 @ 13:00:36

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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

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 bbl
3.00	mud	0.042

Total Length: 3.00 ft Total Volume: 0.042 bbl

Num Fluid Samples: 0

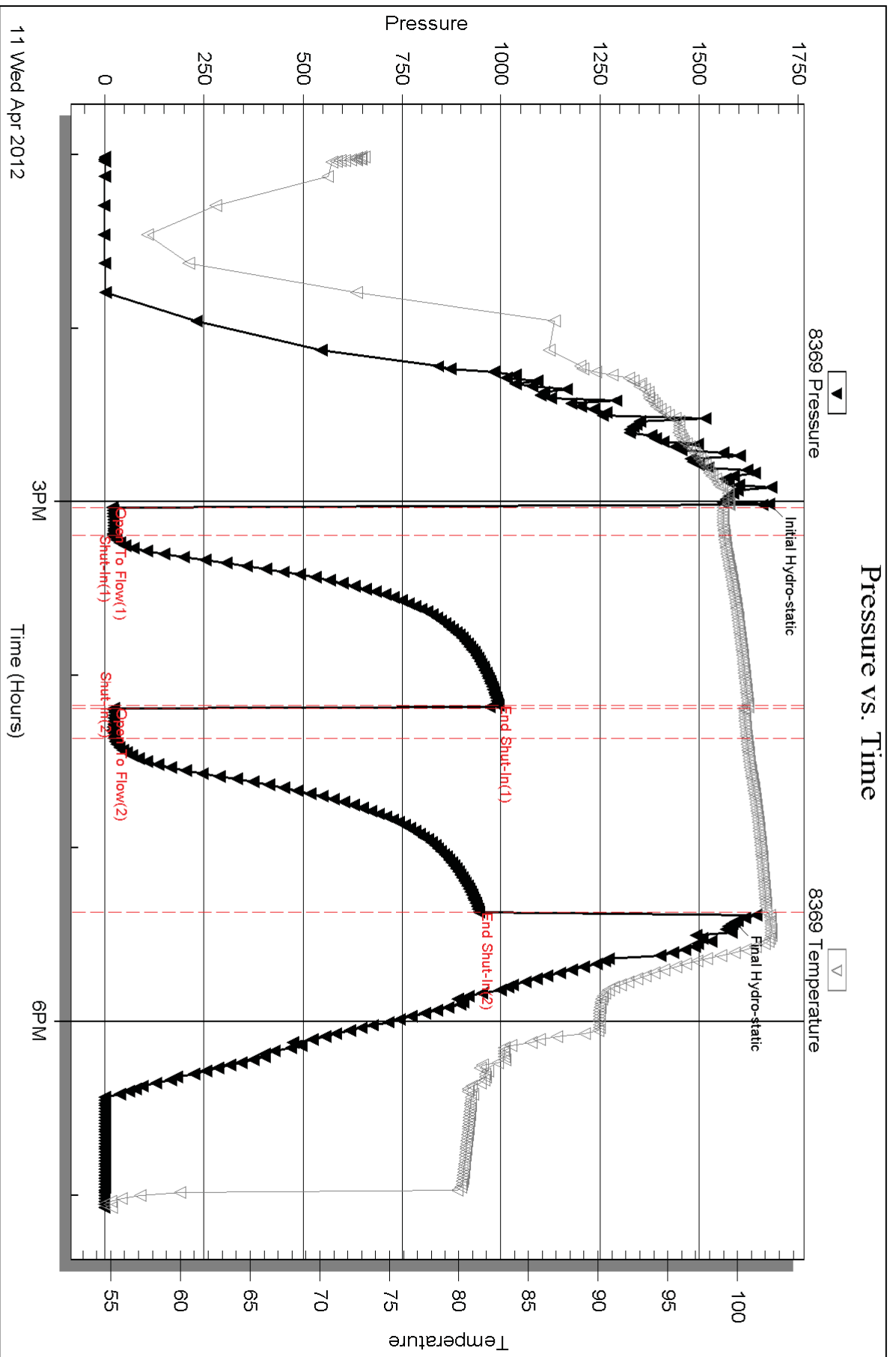
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Samplerdata 3000ml mud

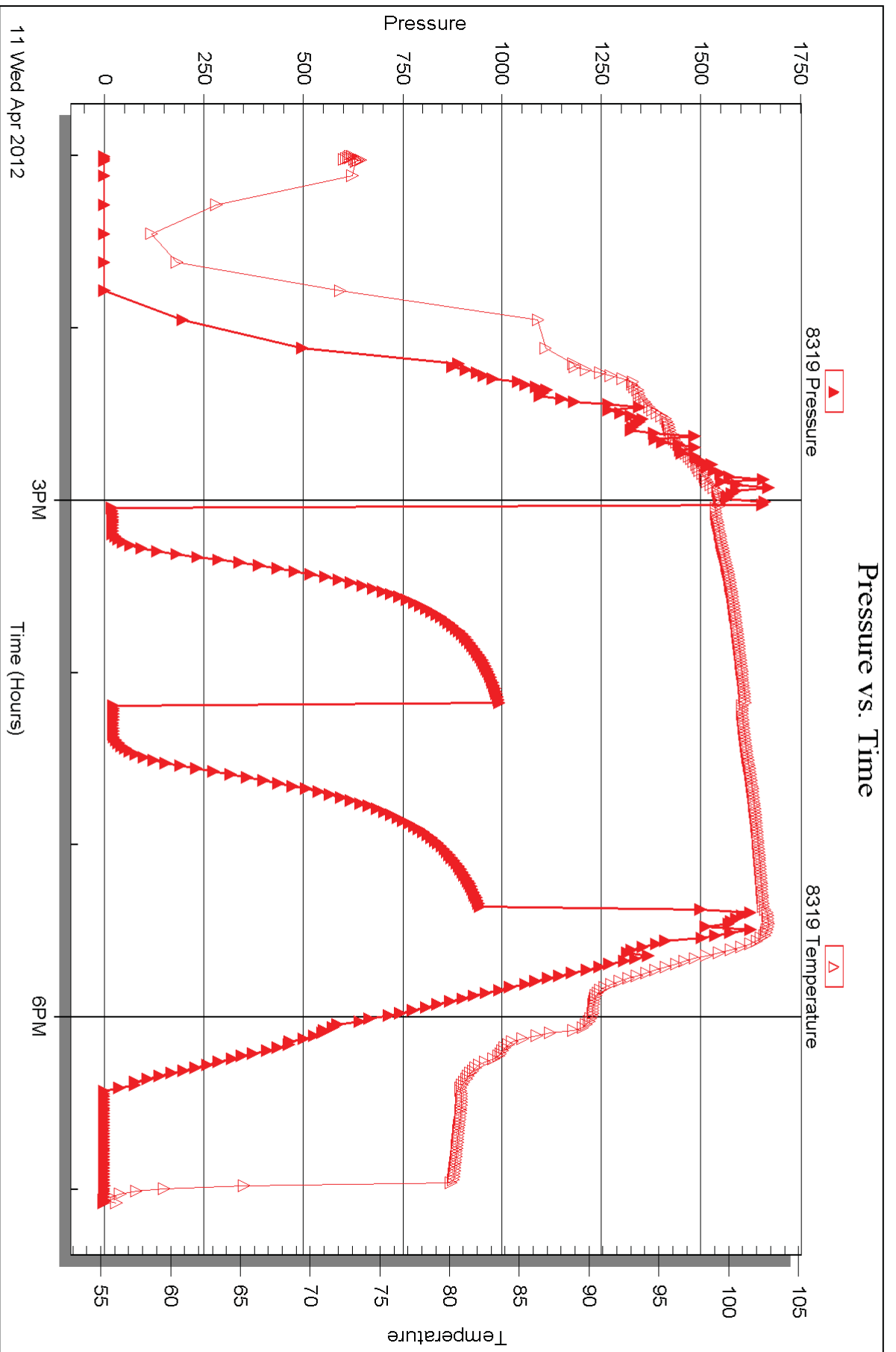


Serial #: 8319

Outside Samuel Gary Jr. & Associates

Hoss et al #1-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 47710

Printed: 2012.04.13 @ 09:47:42

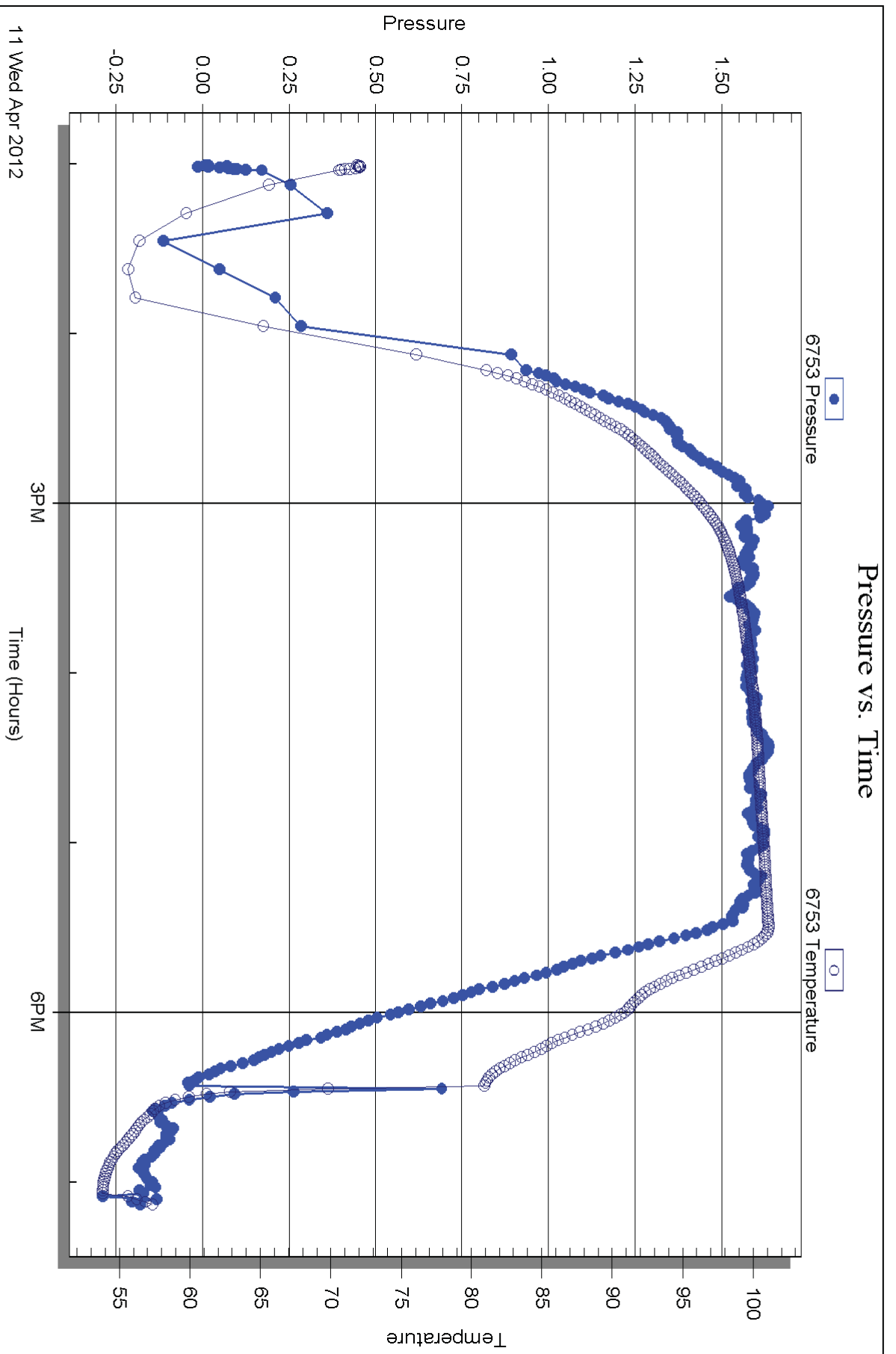
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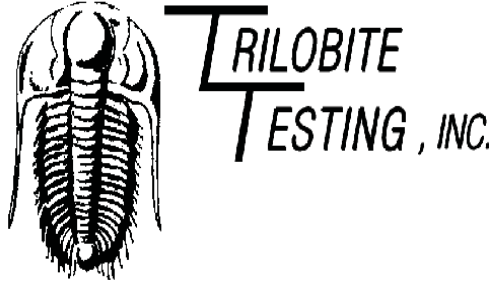
Fluid

Samuel Gary Jr. & Associates

Hoss et al #1-22

DST Test Number: 1





DRILL STEM TEST REPORT

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

1515 Wynkoop, STE 700
Denver CO 80202

ATTN: Clayton Camozzi

Hoss et al #1-22

22-16s-16w Rush,KS

Start Date: 2012.04.12 @ 21:48:15

End Date: 2012.04.13 @ 05:43:15

Job Ticket #: 47711 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.13 @ 09:46:16

Samuel Gary Jr. & Associates

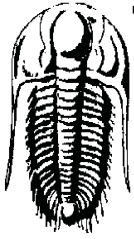
22-16s-16w Rush,KS

Hoss et al #1-22

DST # 2

KC "H-J"

2012.04.12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

GENERAL INFORMATION:

Formation: **KC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:10:45

Time Test Ended: 05:43:15

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3362.00 ft (KB) To 3418.00 ft (KB) (TVD)

Reference Elevations: 1944.00 ft (KB)

Total Depth: 3640.00 ft (KB) (TVD)

1934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8369 Outside

Press@RunDepth: 33.88 psig @ 3414.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.12

End Date: 2012.04.13

Last Calib.: 2012.04.13

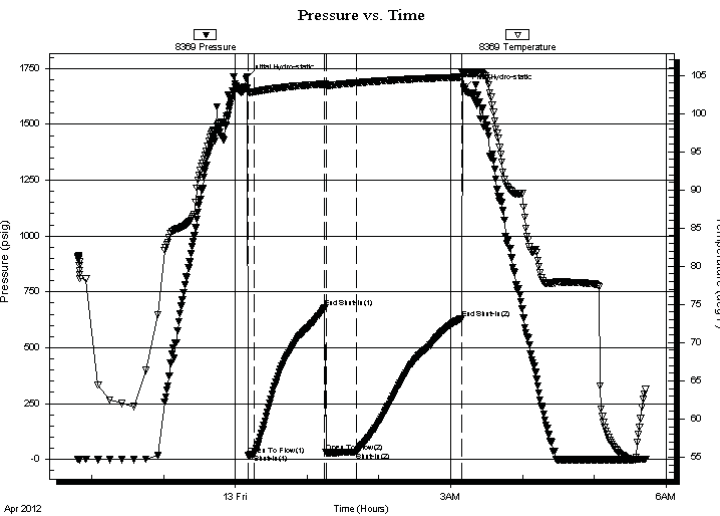
Start Time: 21:48:20

End Time: 05:43:14

Time On Btm: 2012.04.13 @ 00:08:45

Time Off Btm: 2012.04.13 @ 03:11:15

TEST COMMENT: IF-9" blow
ISI-No blow
FF-BOB in 5 min
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.26	103.30	Initial Hydro-static
2	19.12	102.84	Open To Flow (1)
7	22.57	102.84	Shut-In(1)
66	679.48	103.86	End Shut-In(1)
67	31.72	103.70	Open To Flow (2)
92	33.88	104.02	Shut-In(2)
180	629.14	104.78	End Shut-In(2)
183	1660.34	105.29	Final Hydro-static

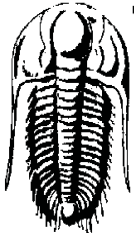
Recovery

Length (ft)	Description	Volume (bbl)
45.00	VSGOCM 5%G 10%O 85%M	0.63
0.00	75ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

GENERAL INFORMATION:

Formation: **KC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:10:45

Time Test Ended: 05:43:15

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3362.00 ft (KB) To 3418.00 ft (KB) (TVD)

Reference Elevations: 1944.00 ft (KB)

Total Depth: 3640.00 ft (KB) (TVD)

1934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8319 Inside

Press@RunDepth: psig @ 3414.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.12

End Date: 2012.04.13

Last Calib.: 2012.04.13

Start Time: 21:48:20

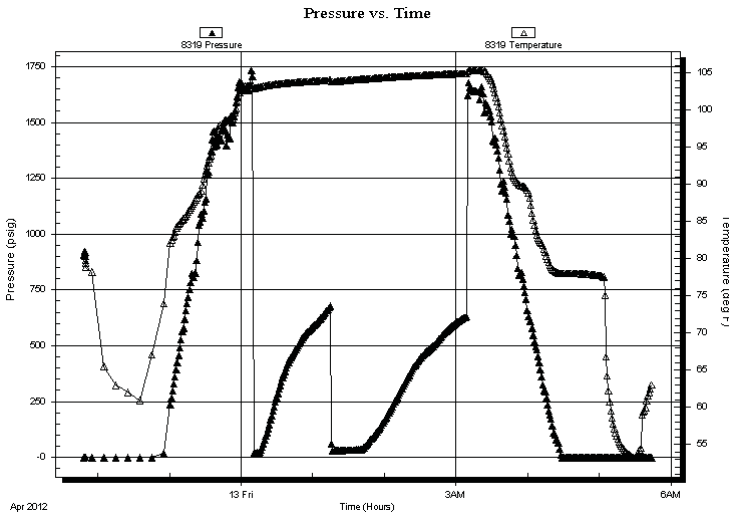
End Time: 05:43:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-9" blow
ISI-No blow
FF-BOB in 5 min
FSI-No blow

PRESSURE SUMMARY



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

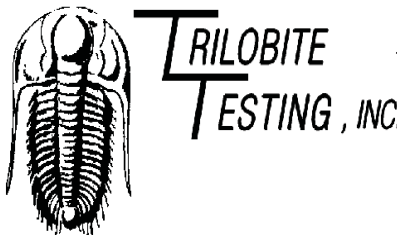
Recovery

Length (ft)	Description	Volume (bbl)
45.00	VSGOCM 5%G 10%O 85%M	0.63
0.00	75ft GIP	0.00

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

GENERAL INFORMATION:

Formation: **KC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:10:45

Time Test Ended: 05:43:15

Interval: 3362.00 ft (KB) To 3418.00 ft (KB) (TVD)

Total Depth: 3640.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Reference Elevations: 1944.00 ft (KB)

1934.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6753

Fluid

Press@RunDepth: psig @ 3334.00 ft (KB)

Start Date: 2012.04.12

End Date: 2012.04.13

Capacity: 8000.00 psig

Last Calib.: 2012.04.13

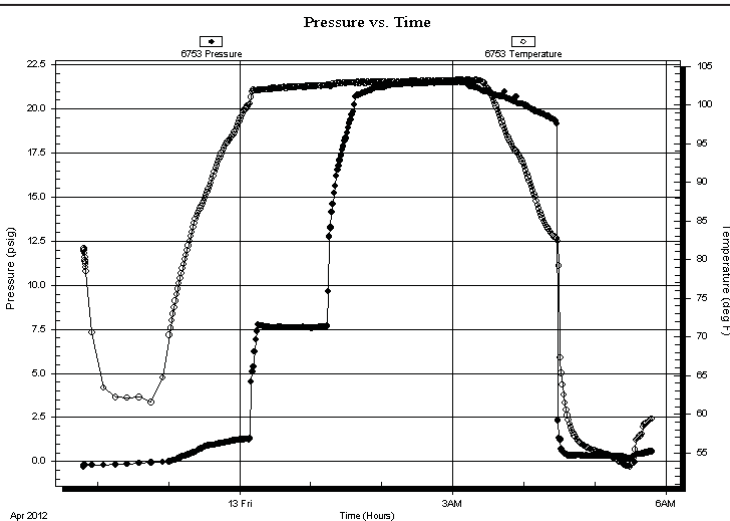
Start Time: 21:48:20

End Time: 05:47:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-9" blow
ISI-No blow
FF-BOB in 5 min
FSI-No blow



PRESSURE SUMMARY

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

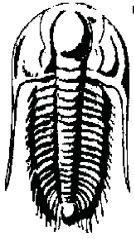
Recovery

Length (ft)	Description	Volume (bbl)
45.00	VSGOCM 5%G 10%O 85%M	0.63
0.00	75ft GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

GENERAL INFORMATION:

Formation: **KC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:10:45

Time Test Ended: 05:43:15

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3362.00 ft (KB) To 3418.00 ft (KB) (TVD)

Reference Elevations: 1944.00 ft (KB)

Total Depth: 3640.00 ft (KB) (TVD)

1934.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8788 Below (Straddle)

Press@RunDepth: psig @ 3425.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.04.12

End Date: 2012.04.13

Last Calib.: 2012.04.13

Start Time: 21:48:20

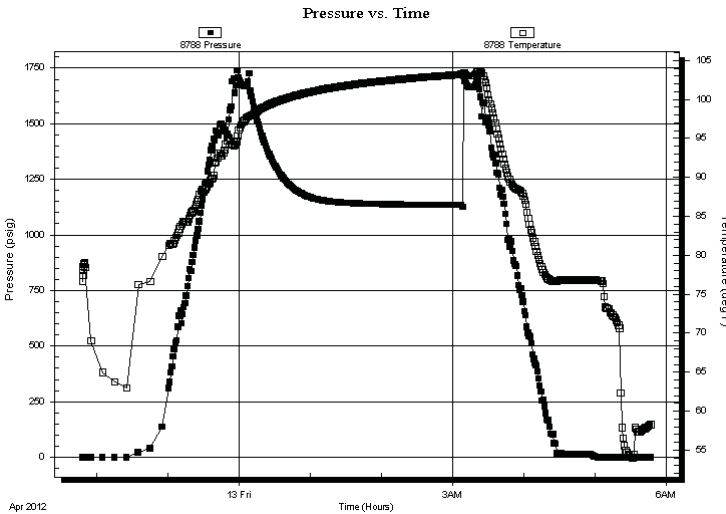
End Time: 05:46:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-9" blow
ISI-No blow
FF-BOB in 5 min
FSI-No blow

PRESSURE SUMMARY



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

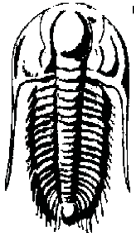
Recovery

Length (ft)	Description	Volume (bbl)
45.00	VSGOCM 5%G 10%O 85%M	0.63
0.00	75ft GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

Tool Information

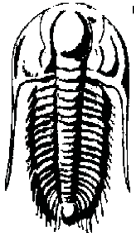
Drill Pipe:	Length: 3356.00 ft	Diameter: 3.80 inches	Volume: 47.08 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 47.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3362.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	3418.00 ft			
Interval between Packers:	56.00 ft			
Tool Length:	313.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	5.00			3334.00		
Recorder	0.00	6753	Fluid	3334.00		
Shut In Tool	5.00			3339.00		
Sampler	2.00			3341.00		
Hydraulic tool	5.00			3346.00		
Jars	5.00			3351.00		
Safety Joint	2.00			3353.00		
Packer	4.00			3357.00	33.00	Bottom Of Top Packer
Packer	5.00			3362.00		
Stubb	1.00			3363.00		
Perforations	5.00			3368.00		
change Over Sub	1.00			3369.00		
Blank Spacing	31.00			3400.00		
change Over Sub	1.00			3401.00		
Perforations	13.00			3414.00		
Recorder	0.00	8319	Inside	3414.00		
Recorder	0.00	8369	Outside	3414.00		
Blank Off Sub	4.00			3418.00	56.00	Tool Interval
Packer	4.00			3422.00		
Stubb	1.00			3423.00		
perforations	1.00			3424.00		
Change Over Sub	1.00			3425.00		
Recorder	0.00	8788	Below	3425.00		
Blank Spacing	217.00			3642.00	224.00	Bottom Packers & Anchor
Total Tool Length:	313.00					



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DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

22-16s-16w Rush, KS

1515 Wynkoop, STE 700
Denver CO 80202

Hoss et al #1-22

Job Ticket: 47711

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2012.04.12 @ 21:48:15

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:

ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	VSGOCM 5%G 10%O 85%M	0.631
0.00	75ft GIP	0.000

Total Length: 45.00 ft Total Volume: 0.631 bbl

Num Fluid Samples: 0

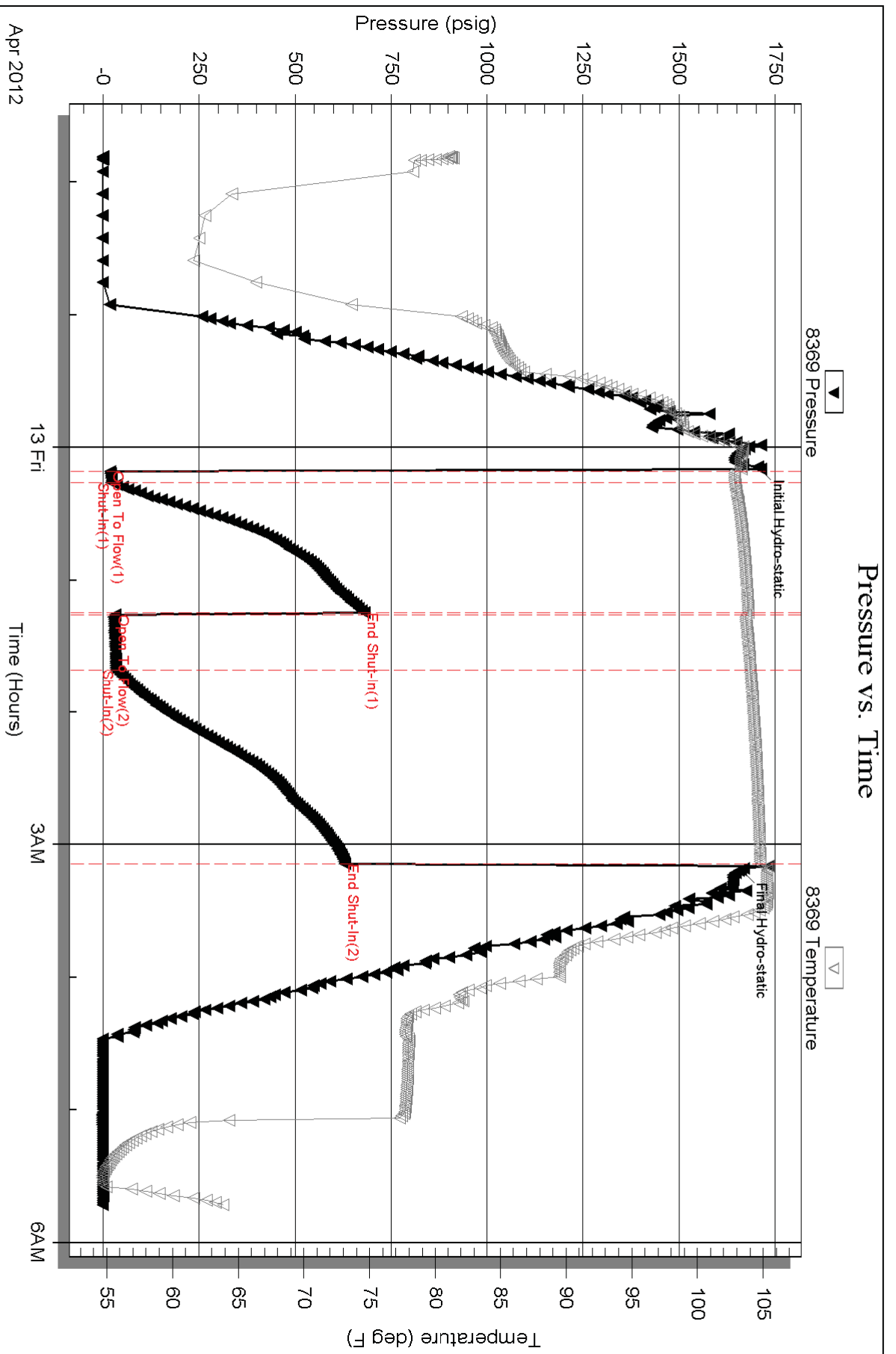
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: SamplerData 1500mlGas 250mlOil 1250mlMud 475 PSI



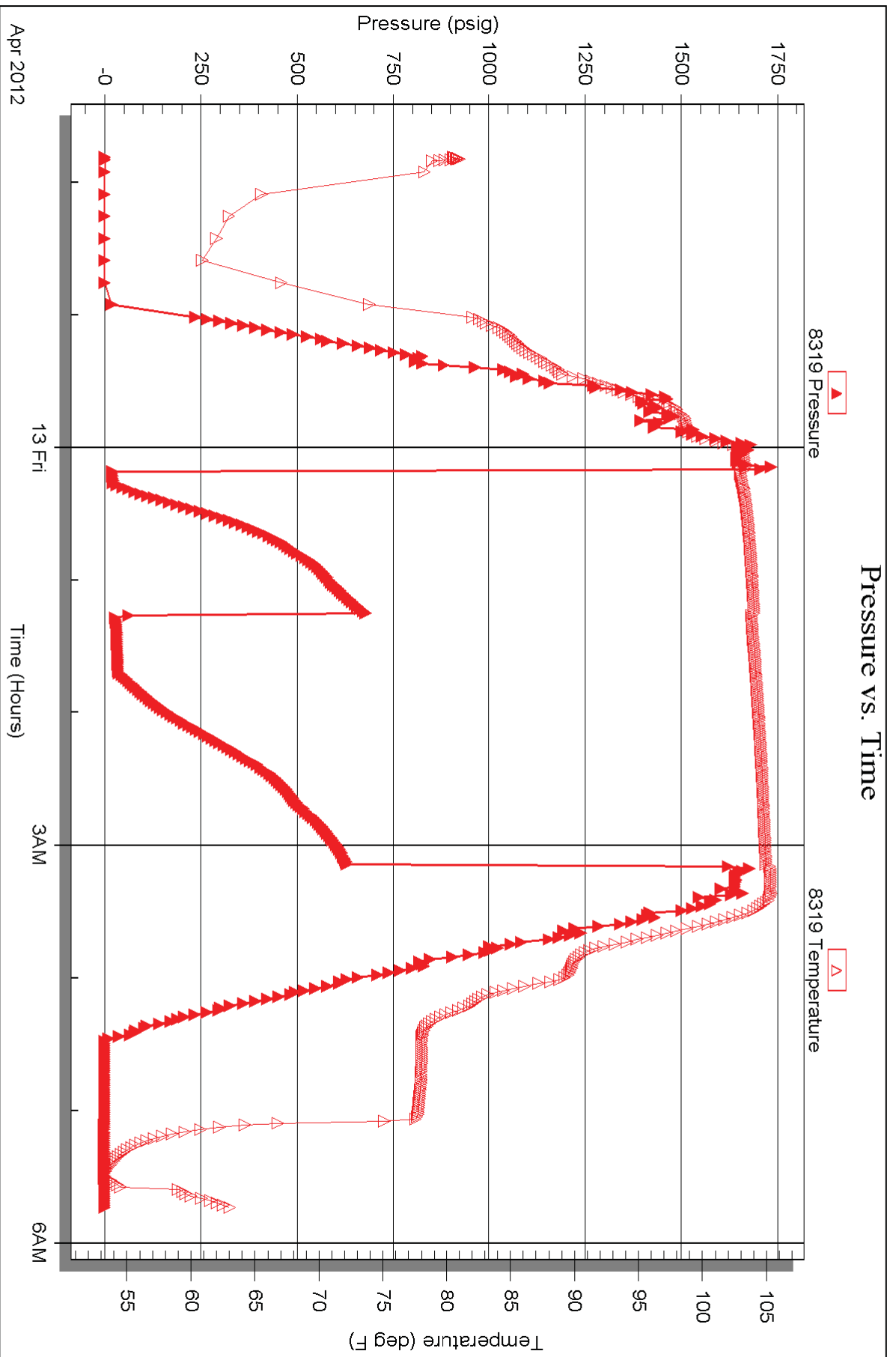
Serial #: 8319

Inside

Samuel Gary Jr. & Associates

Hoss et al #1-22

DST Test Number: 2



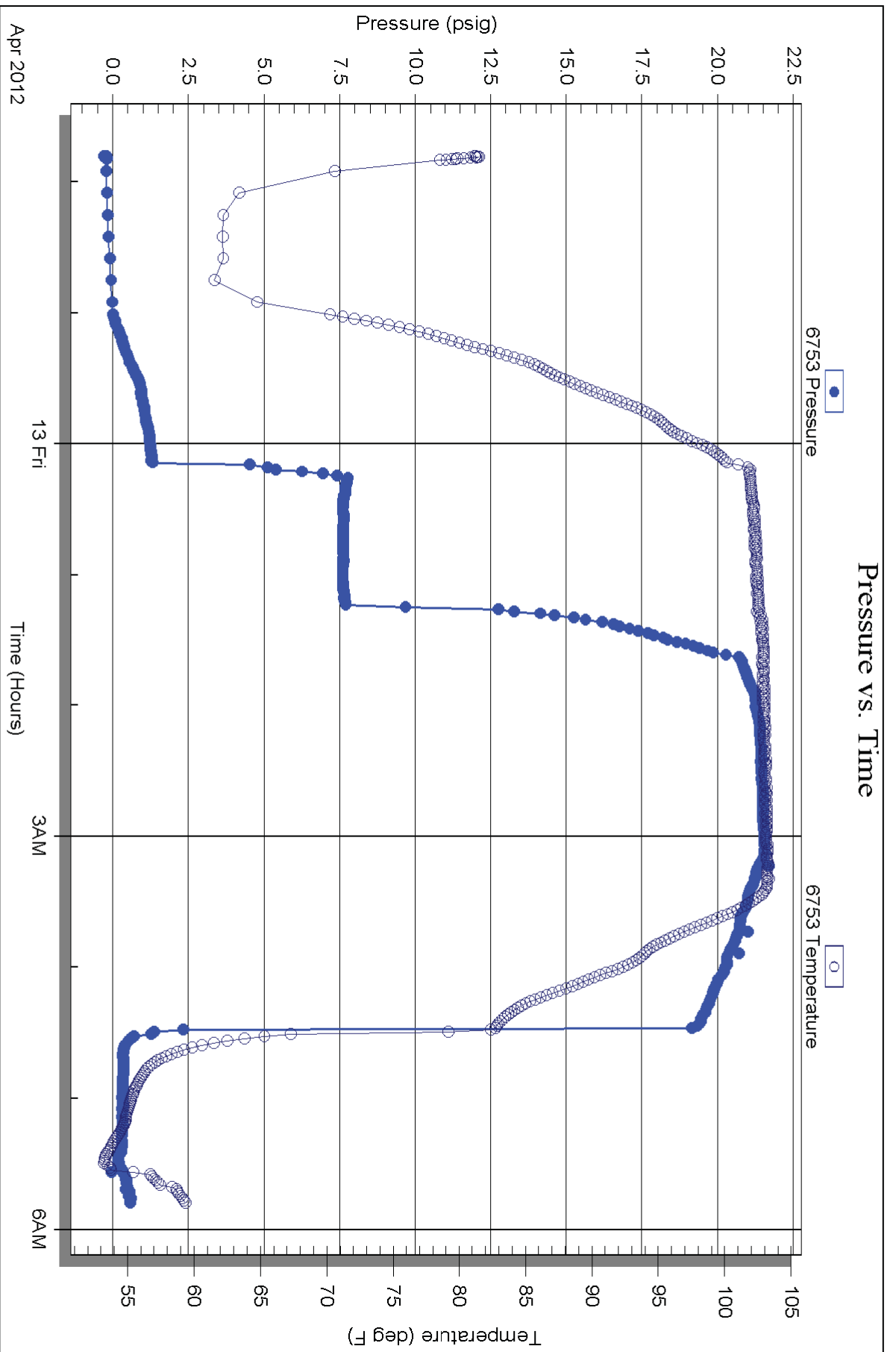
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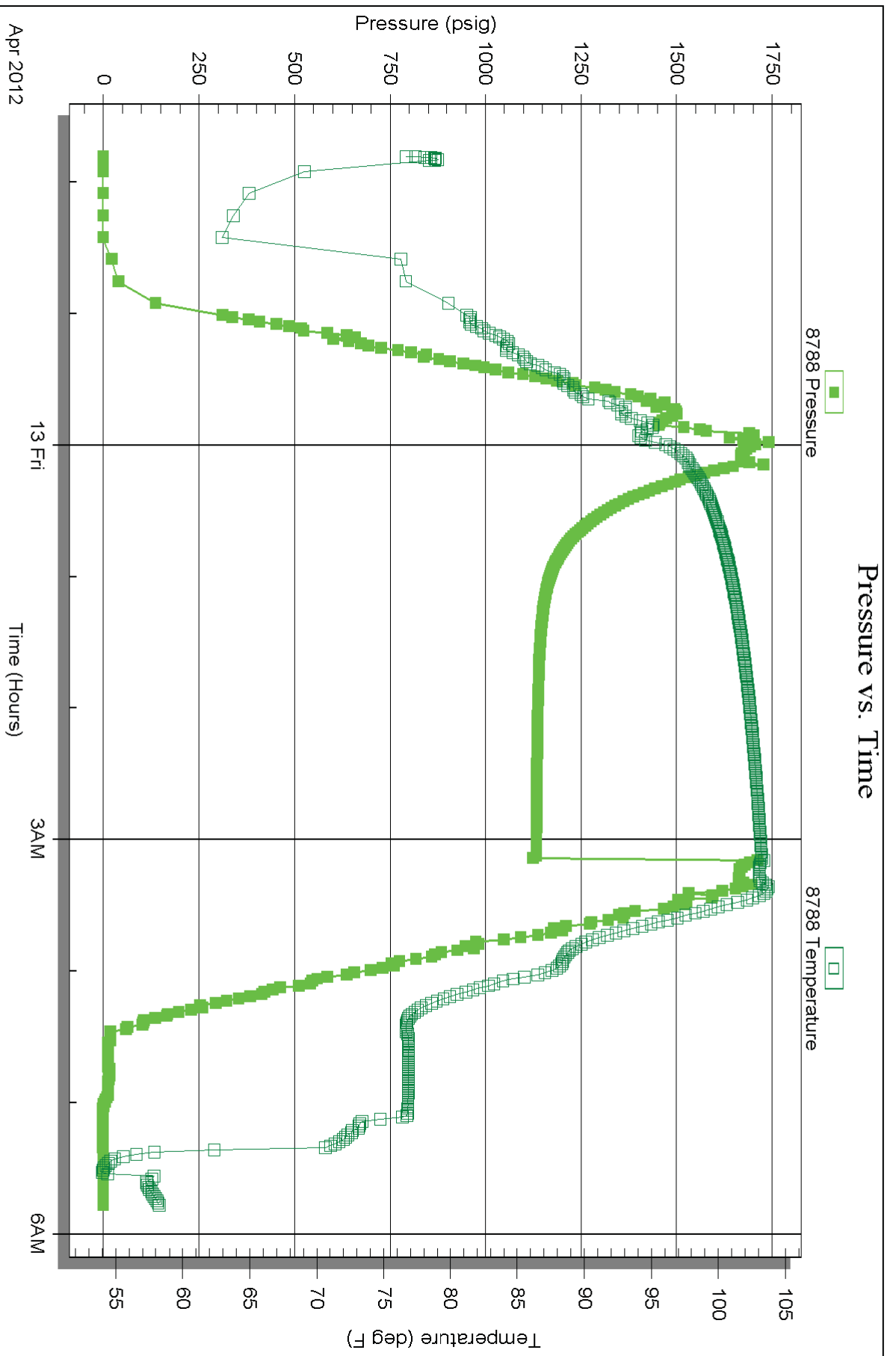
Fluid

Samuel Gary Jr. & Associates

Hoss et al #1-22

DST Test Number: 2







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

Well Name: SGA HOSS ET AL 1-22
 Location: SEC. 22 16S 16W RUSH, KANSAS
 License Number: 15-165-21965-0000
 Spud Date: 4/07/12
 Surface Coordinates: 2020' FSL/ 1380' FWL
 Region: WILDCAT
 Drilling Completed: 4/12/12

Bottom Hole Coordinates:
 Ground Elevation (ft): 1934' K.B. Elevation (ft): 1944'
 Logged Interval (ft): 1700 To: 2640' Total Depth (ft): 2640'
 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 3294'-3337' 10-60-10-60
 IF- NO BLW, ISI- NO BLOW, FF- NO BLOW, FSI- NO BLOW
 IH- 1677, FH- 1590/ IF- 20 TO 21, FF- 23-22/ ISI- 993, FSI- 945
 REC. 3' OF TF/ 3' OF MUD/ BHT-102, CHLOR.- 6700

DST's Report

DST# 2 3362'-3418'
 IF- 9" BLW, ISI- NO BLW, FF- B.O.B. IN 5 MIN, FSI- NO BLW
 IH-1704,FH- 1660/ IF- 19 TO 22, FF- 31 TO 33/ ISI- 679, FSI- 629
 REC. 45' OF TF/ 45' OF VSGOCM 5% GAS, 10% OIL, 85% MUD/ 75' GIP

ROCK TYPES

Anhy	Gyp	Shgy	Sandylms
Bent	Igne	Sltst	Shale
Brec	Lmst	Ss	Sltstn
Cht	Meta	Till	Shlyslts
Clyst	Mrlst	Carb sh	Sltsh
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	Silty	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
Hvymin	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
- r Subrnd
- a Subang

- A Angular

OIL SHOWS

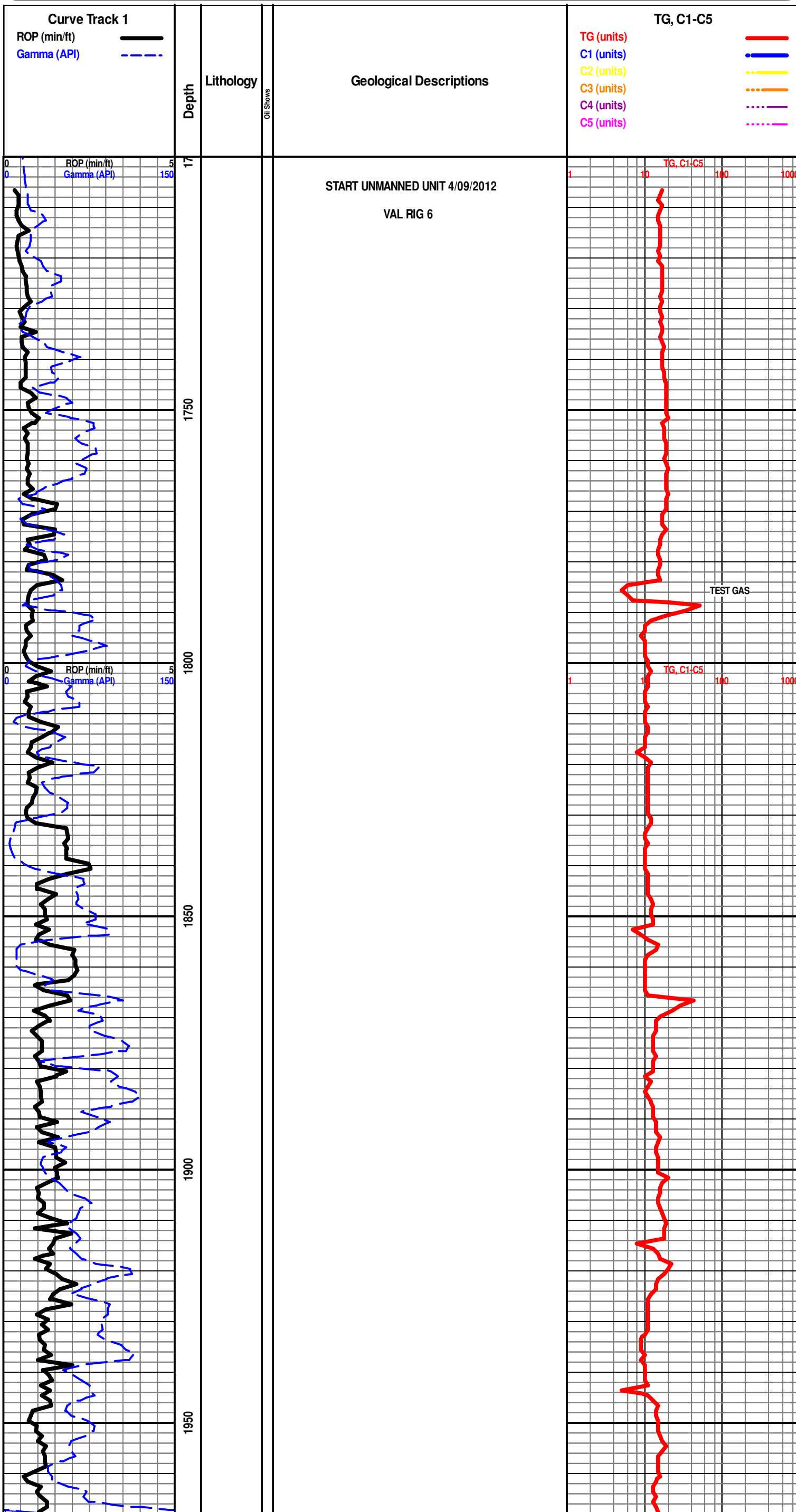
- Even
- ◐ Spotted
- ◑ Ques
- ◒ Dead
- ⊠ Gas show

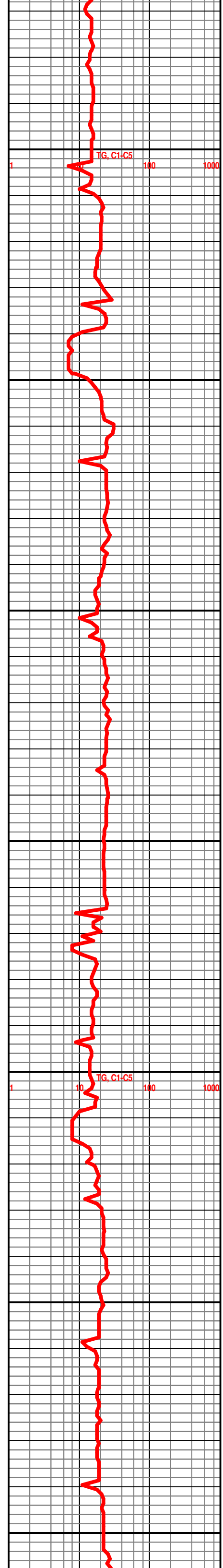
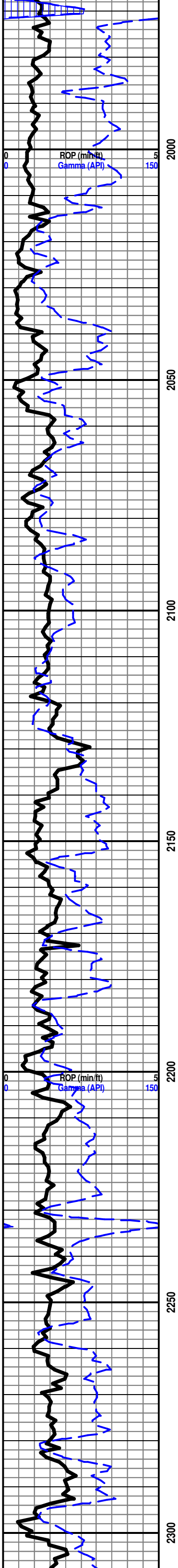
INTERVALS

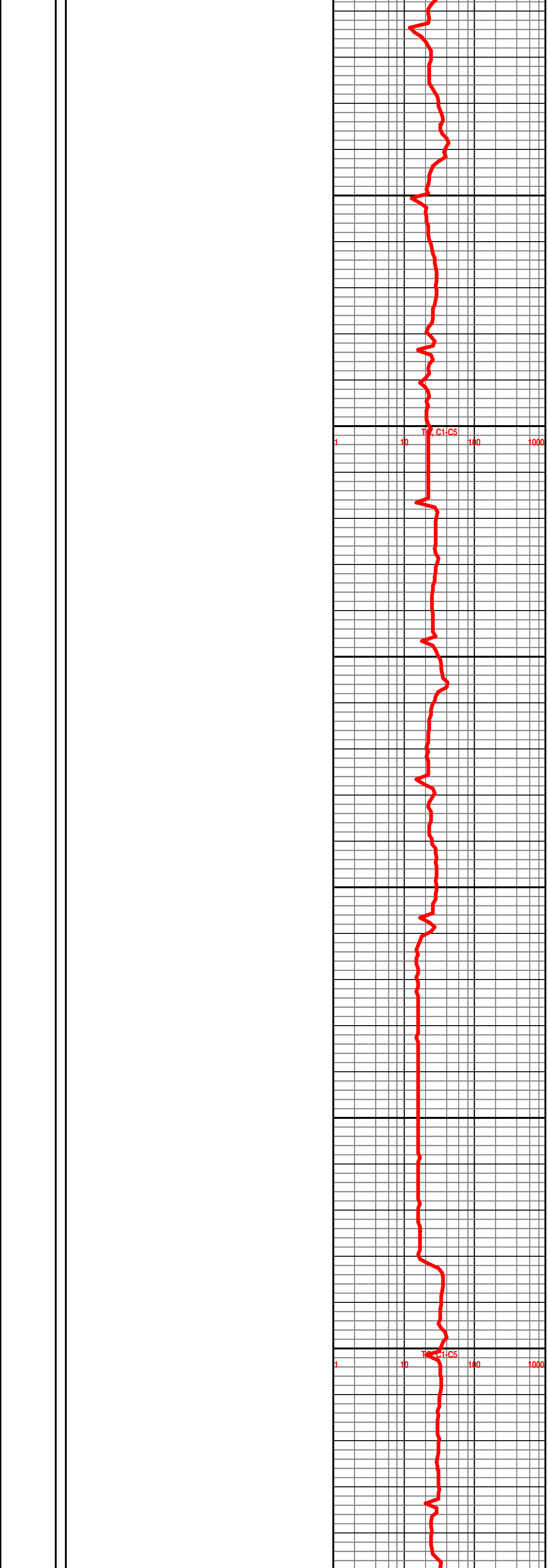
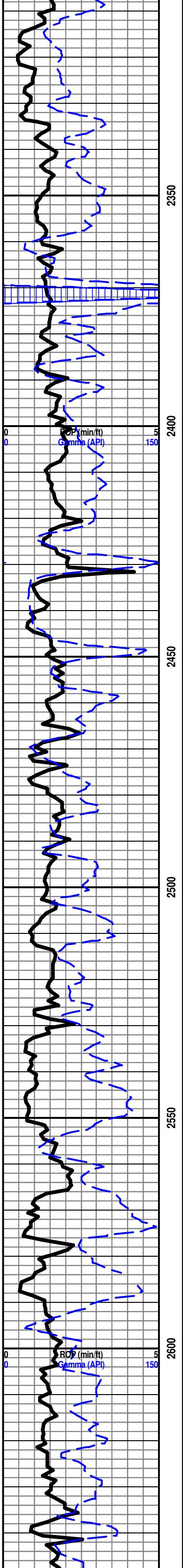
- Core
- ◻ Dst
- ◼ Dst

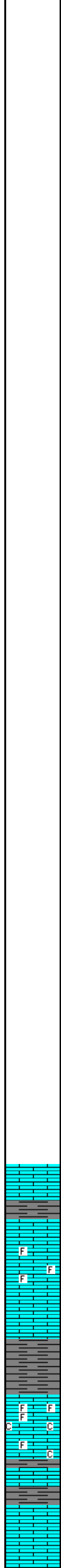
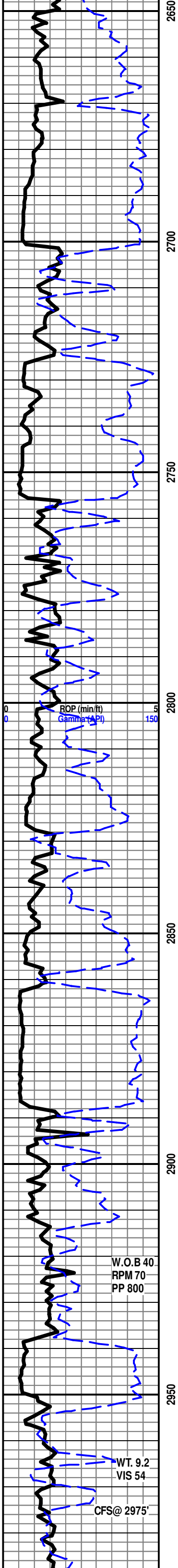
EVENTS

- ◻ Rft
- ◼ Sidewall









BRS 2701'-757'

MUD DISPLACEMENT

HOWARD 2887'-943'

START 24 HR. MANNED UNIT 4/10/12

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

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

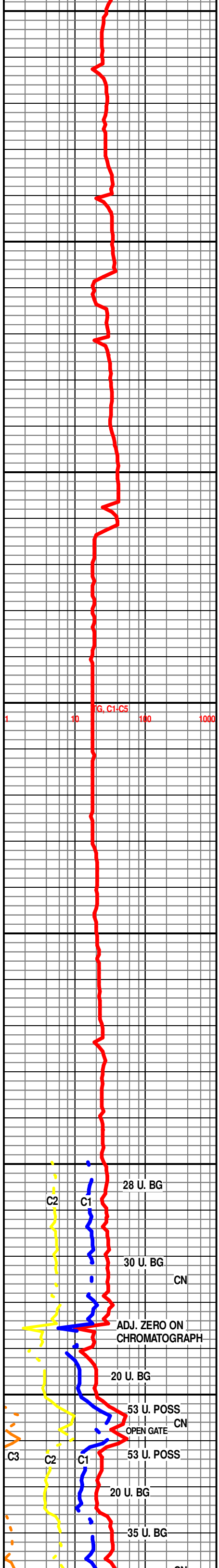
SEVERY 2937'-993'

SH- LT GY TO GY, SFT TO V GMMY THRU, SMTH SPLNTY TXT

TOPEKA 2950'-1006'

LS- CRM TO LT TN, HD DNS TO BRTT, MD/F-XLN MTRX, S-CHLKY THRU, SCAT SFT TO GMMY WHT CHLK THRU, SCAT IMB FOSS FRAGS THRU, FREE FOSSIL IP, V DUL YEL FLO IP, TR V PR VUG POR IP, NO VIS CUT OR SHOW

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



C2

C1

28 U. BG

30 U. BG

CN

ADJ. ZERO ON CHROMATOGRAPH

20 U. BG

53 U. POSS

OPEN GATE

CN

53 U. POSS

C3

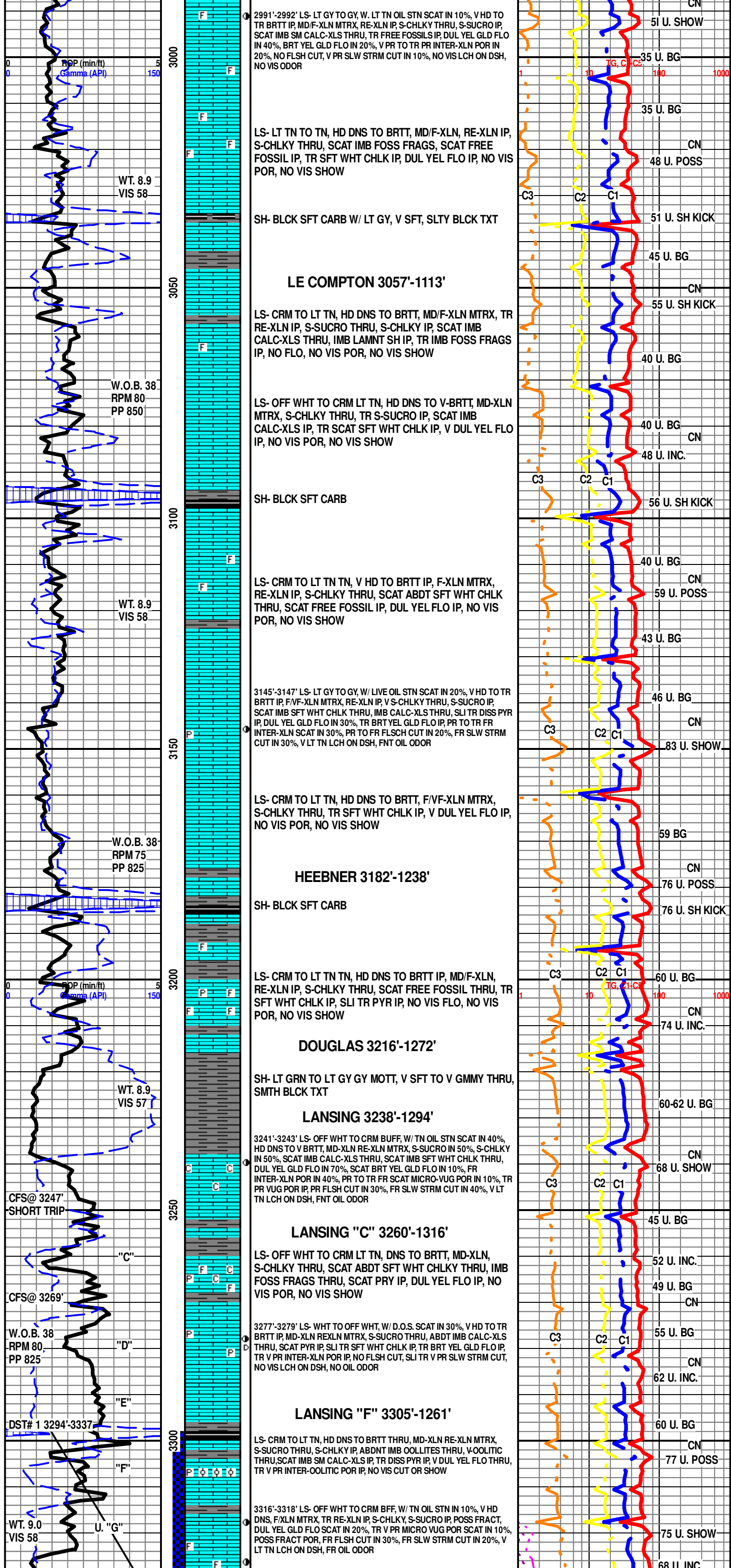
C2

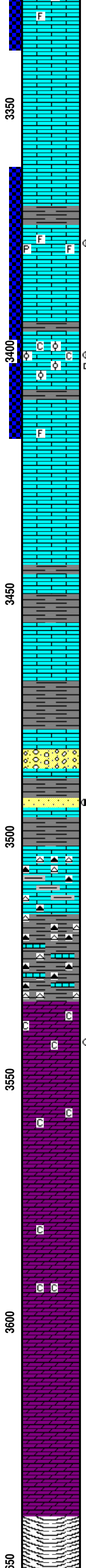
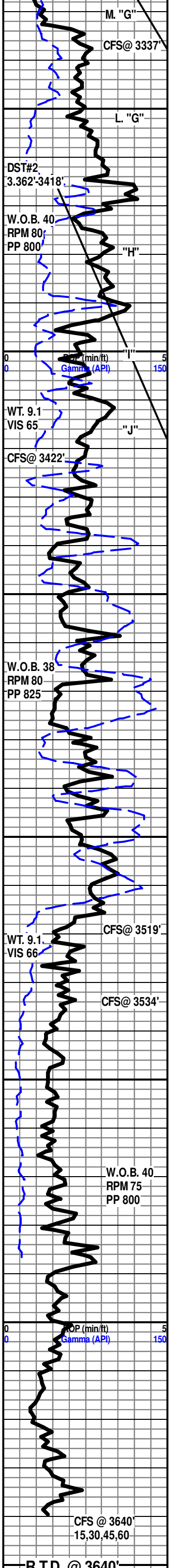
C1

20 U. BG

35 U. BG

CN





3324'-3326' LS- TN TO DK TN, W/ DK TN OIL STN SCAT IN 40%, W/ LIVE OIL STN IN 20%, HD TO BRTT THRU, RE-XLN MTRX, S-SUCRO THRU, S-CHLKY IP, SCAT FREE FOSSIL IP, DUL YEL GLD FLO IN 60%, SCAT BRT YEL GLD FLO IN 20%, FR TO TR GD VUG POR SCAT IN 30%, PR MICRO VUG POR SCAT IN 10%, GD FL SH CUT IN 50%, GD SLW STRM CUT IN 60%, TN LCH ON DSH, GD STRNG OIL ODOR, LIVE OIL SCAT IN TRAY

LS- CRM TO LT TN, HD DNS TO BRTT IP, MD/F-XLN MTRX, S-CHLKY THRU, TR FREE FOSSIL IP, TR V DUL YEL FLO IP, NO VIS POR, NO VIS SHOW

LANSING "H" 3375'-1431'

3377'-3378' LS- OFF WHT TO CRM, W/ LT TN OIL STN SCAT IN 20%, V HD DNS, F/VF-XLN, RE-XLN IP, S-CHLKY THRU, S-SUCRO, SCAT IMB SM CALC-XLS, IMB FOSS FRAGS IP, TR PYR IP, DUL YEL GLD FLO IN 20%, TR BRT YEL GLD FLO IP, V PR INTER-XLN POR IN 10%, V PR FL SH CUT IN 10%, V PR TO TR PR SLW STRM CUT IN 20%, NO VIS LCH ON DSH, NO OIL ODOR

3401'-3402' & 3405'-3407' LS- WHT TO OFF WHT, W/ D.O.S. SCAT IN 30%, TR V LT TN OIL STN SCAT IN 20%, HD DNS TO V-BRTT, GMMY IP, MD/F-XLN MTRX, RE-XLN, S-CHLY THRU, S-SUCRO IP, ABDT SFT TO GMMY WHT CHLK THRU, IMB OOLITES THRU, OOLITIC, TR SPTTD BRT YEL GLD FLO IP, TR V PR INTER-OOLITIC POR IN 10%, POSS FRACT POR, FR FL SH CUT IN 15%, PR TO FR SLW STRM CUT IN 20%, NO VIS LCH ON DSH, NO OIL ODOR

LS- OFF WHT TO CRM BFF, HD DNS TO TR BRTT IP, F/VF-XLN MTRX, S-CHLKY THRU, SCAT SFT WHT CHLK THRU, TR FREE FOSSIL IP, TR IMB FOSS FRAG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

SH- GY TO DK GY, V SFT GMMY, SMTH BLCKY TXT

BKC 3468'-1524'

SH- LT GR TO GY MOTT, FRM TO V SFT THRU, SMTH SPLNTY TXT

CONG- ABDT LS SH MOTT CHRT, W/ SFT GMMY WHT CHLK THRU

3493'-3494' SS- OFF WHT TO CRM, QRTZ GRNS, HD TT TO SLI TR FRI IP, F/VF GRNS, S-ANG TO S-RND QRTZ GRNS, PR SRT, CALC CMNT, IMB WHT CHLK THRU, NO VIS FLO, TR V PR INTER-GRN POR IP, V PR FL SH CUT IN 10%, V PR SLW STRM CUT IN 20%, NO VIS LCH ON DSH, NO OIL ODOR

LS, RD TO GY GMMY MOTT SH'S, MOTT CHRT'S, A LOT OF TRASH IN SAMPLES

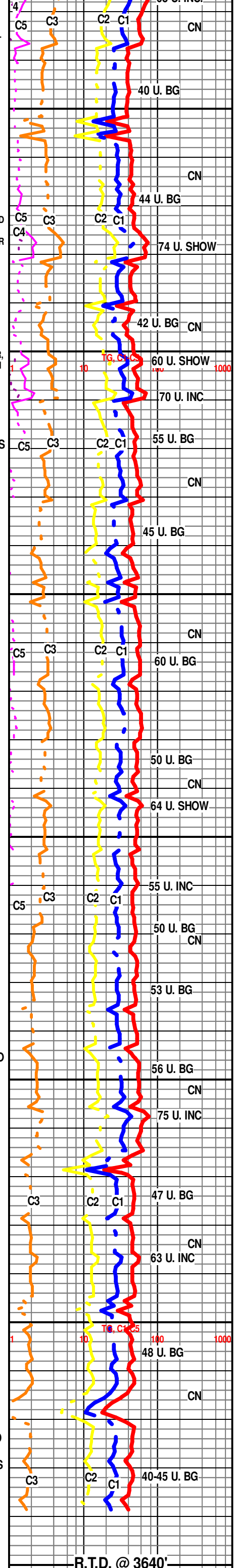
ARBUCKLE 3534'-1590'

3540'-3542' DOLO- OFF WHT TO CRM, W/ LT TN OIL STN SCAT IN 10%, HD DNS TO BRTT, MD-XLN RE-XLN MTRX, S-CHLKY THRU, ABDT IMB SM S-ANG TO RND DOLO GRNS THRU, SCAT SFT WHT CHLK THRU, V DUL YEL FLO THRU, PR TO TR FR INTER-GRN POR SCAT IN 20%, TR V PR FL SH CUT IN PR, TR V PR SLW STRM CUT IN IP, NO VIS LCH ON DSH, NO OIL ODOR

DOLO- WHT TO OFF WHT, V HD DNS TO TR BRTT IP, F-XLN RE-XLN MTRX, S-CHLKY THRU, SCAT IMB SM RND DOLO GRNS THRU, SCAT SFT WHT CHLK, TR V DUL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

DOLO- OFF WHT TO CRM, HD DNS TO BRTT IP, F/VF-XLN MTRX, RE-XLN, S-SUCRO IP, ADT IMB SM RND DOLO GRNS, SCAT IMB SM TO MD RND TO S-RND QRTZ GRNS, DUL YEL MIN FLO THRU, NO VIS POR, NO VIS SHOW

DOLO- OFF WHT TO CRM BFF, V HD DNS TO TR BRTT IP, F/VF-XLN MTRX, RE-XLN, S-SUCRO IP, ABDT IMB SM RND TO S-RND DOLO GRNS THRU, SCAT IMB MD S-ANG TO RND CLR QRTZ GRNS, V DUL YEL MIN FLO THRU, NO VIS POR, NO VIS SHOW



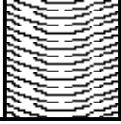
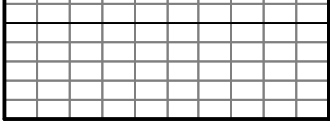
R.T.D. @ 2:00 P.M. 4/12/12

DROP SURVEY
T.O.F. LOGS @ 4:00 P.M.

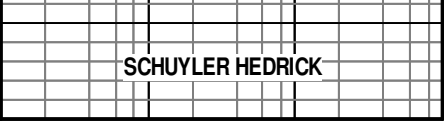
R.T.D. @ 3640'

SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH



WEATHERFORD/ LIBERAL, KS



SCHUYLER HEDRICK