



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1238303
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
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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: _____

1238303

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: 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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Samuel Gary Jr. & Associates, Inc.
Well Name	F&R REALTY 1-12
Doc ID	1238303

All Electric Logs Run

DEN-NEUT
INDUCTION
MICRO
SONIC
SPECTRAL



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: 9/19/2014
 Invoice # 801

P.O.#:

Due Date: 10/19/2014

Division: Russell

Invoice

Contact:
 Samuel Gary Jr & Associates Inc
Address/Job Location:
 Samuel Gary Jr & Associates Inc
 1935 LOUIE ROAD
 HAYS KANSAS 67601

RECEIVED

SEP 24 2014

SAMUEL GARY JR.
 & ASSOCIATES, INC.

Reference:
 F R REALITY 1-12

Description of Work:
 LONG SURFACE JOB

DRLG COMP W/O LOE GG

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

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	No				
Common-Class A	350	\$ 6,454.41	Yes				
Calcium Chloride	13	\$ 808.71	Yes				
Bulk Truck Matl-Material Service Charge	370	\$ 827.06	No				
Pump Truck Mileage-Job to Nearest Camp	56	\$ 624.63	No				
Flo Seal	175	\$ 391.18	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	56	\$ 365.52	No				
Premium Gel (Bentonite)	7	\$ 127.37	Yes				
8 5/8" Top Rubber Plug	1	\$ 118.47	Yes				
8 5/8" Centralizer	1	\$ 71.53	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 10,809.41
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (1,621.41)

SubTotal for Taxable Items:	\$ 6,775.91
SubTotal for Non-Taxable Items:	\$ 2,412.09
Total:	\$ 9,188.00
Tax:	\$ 467.54
Amount Due:	\$ 9,655.54
Applied Payments:	
Balance Due:	\$ 9,655.54

6.90% Norton County Sales Tax

Thank You For Your Business!

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

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 801

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-19-2014	12	5	24	NORTON	KANSAS		3:30 AM

Location LENOXA KS. 1/4 E 1 N 1/4 E & S INTO

Lease	Well No.	Owner
F-R Reality	1-12	To Quality Oilwell Cementing, Inc.

Contractor	Type Job	Charge To
DISCOVERY DRILL RIG #4	LONG SURFACE	SAM GARY JR. & ASSOC. INC.

Hole Size	T.D.	Street
12 1/4	594	

Csg.	Depth	City
8 5/8 NEW	594	

Tbg. Size	Depth	State
23 # Csg.		

Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered	350 SX COM 1/2 # FB-Seq L

Cement Left in Csg.	Shoe Joint	3 9/16 CC	2 9/16 GEL
35'	35'		

EQUIPMENT		Common
Pumptrk	No. Cementer	350
18	Helper	
	Driver	Poz. Mix
Bulktrk	Driver	Gel. 7
19	Driver	Calcium 13
	Driver	
Bulktrk	Driver	

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole		Flowseal 125
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
		Handling 370
		Mileage

Ran 8 5/8 Set @ 594	FLOAT EQUIPMENT
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Cement 4/350 SX COM. 3+2 w/ 1/2 # FLOSEAL	Guide Shoe	Baffle Plate
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Release TRP. & Displaced 35 1/2 BBL	Centralizer	X 1
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H ₂ O, 700 # H ₂ O	Baskets	
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SHUT IN @ 800 #	AFU Inserts	
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Cement Did Circulate TO SURFACE	Float Shoe	
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	Latch Down	
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	1 - Solid Rubber Plug	
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	Pumptrk Charge	Long Surface
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	Mileage	56
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X Signature Mike [Signature]	Tax	
	Discount	
	Total Charge	

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. 391

Date	9-25-14	Sec.	12	Twp.	5	Range	24	County	Norton	State	KS	On Location		Finish	8:00pm
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Location Lenaera 1E 1/2 W Kinto

Lease	F&R Realty	Well No.	1-12	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.
Contractor	D. Scovery #4				
Type Job	Production string				
Hole Size	7 7/8	T.D.	3915	Charge To	Sam Garl Jr & Associates
Csg.	5 1/2 15.50"	Depth	3905	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	43.43	Shoe Joint	43.43	Cement Amount Ordered	200 @ Proc 10/3/14 5/6.15.14 1/4"
Meas Line		Displace	92 RCL	.31/CD-110 .8/CFI-117 .25/CAF-38 20BL KCL	

EQUIPMENT

Pumptrk	16	No.	Cementer Craig	Common	500gal mod clear 435 QMDC/H*F10
			Helper Billy	Pos Mix	CD-110 100 100#
Bulktrk	14	No.	Driver Tylor	Gr.	200 class A pro-c
			Driver Chad	Calcium	435 QMDC
Bulktrk	21	No.	Driver Chad	Hulls	KCL 2 gal

JOB SERVICES & REMARKS

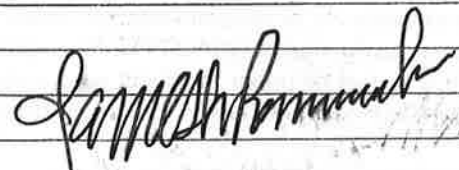
Remarks:		Salt	17
Rat Hole	30SK	Flowseal	158#
Mouse Hole	15SK	Kol-Seal	1000#
Centralizers		Mud CLR 48	500 gal
Baskets		CFL-117 or CD110 CAF 38	50#
D/V or Port Collar		Sand	168 168#
	5 1/2 3140 3905 - Est. Circulation.	Handling	662 662
	Pumps 500gal mod clear 10BL spacer	Mileage	
	Cement patch hole & mouse hole - Cement		
	5 1/2 with 6.15SK. Displace		
	Dwg. 1st 20BL KCL		

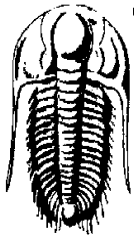
FLOAT EQUIPMENT

		Guide Shoe	
		Centralizer	8 Turbo's
		Baskets	2 Red 1 Blue
		AFU Inserts	
		Float Shoe	1
		Latch Down	1

Pumptrk Charge	prod string Cir Cement
Mileage	56

		Tax	
		Discount	
		Total Charge	

X Signature 



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Assoc. Inc.

12-5s-24w

1515 Wynkoop, STE 700
Denver, CO, 80202

F&R Realty # 1-12

ATTN: Dan Pritchard

Job Ticket: 60145

DST#: 1

Test Start: 2014.09.22 @ 20:08:00

GENERAL INFORMATION:

Formation: **LKC - "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:46:45

Time Test Ended: 04:13:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Donovan Baumann

Unit No: 57

Interval: 3402.00 ft (KB) To 3498.00 ft (KB) (TVD)

Reference Elevations: 2340.00 ft (KB)

Total Depth: 3498.00 ft (KB) (TVD)

2335.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 244.33 psig @ 3403.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.09.22

End Date:

2014.09.23

Last Calib.:

2014.09.23

Start Time:

20:08:05

End Time:

04:13:14

Time On Btm:

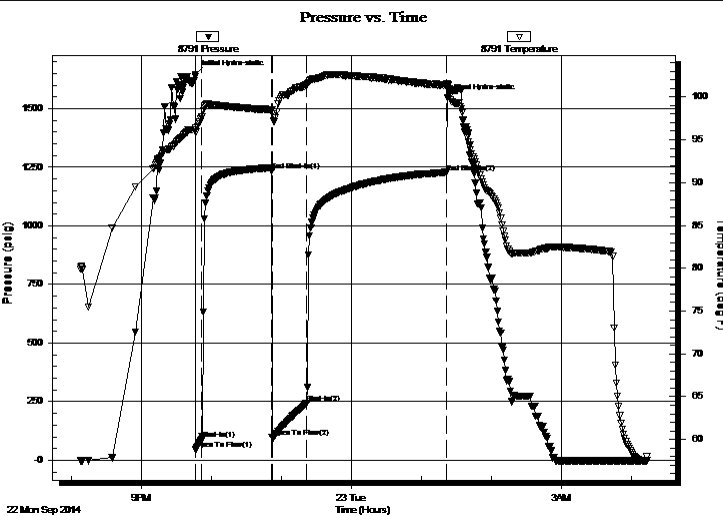
2014.09.22 @ 21:46:30

Time Off Btm:

2014.09.23 @ 01:22:30

TEST COMMENT:

- 5 - IF - Strong surface blow built to BOB in 3 min.
- 60 - ISI - Weak return built to 1/2 inch in 3 min died back to 1/4 after 25 min dead in 57 min
- 30 - FF - Strong surface blow built to BOB in 3 min.
- 120 - FSI - Weak surface blow built to BOB in 13 min. & stayed for the w hole duration



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1646.07	96.38	Initial Hydro-static
1	45.18	95.88	Open To Flow (1)
6	88.15	97.66	Shut-In(1)
66	1236.05	98.52	End Shut-In(1)
66	97.56	98.06	Open To Flow (2)
96	244.33	101.35	Shut-In(2)
216	1228.67	101.41	End Shut-In(2)
216	1544.66	101.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	GMOC - 40M - 40o - 20G	1.49
126.00	MCGO - 15M - 55o - 30G	1.77
63.00	MCGO - 20M - 50o - 30G	0.88
315.00	Oil - 100o	4.42

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Assoc. Inc.

12-5s-24w

1515 Wynkoop, STE 700
Denver, CO, 80202

F&R Realty # 1-12

Job Ticket: 60145

DST#: 1

ATTN: Dan Pritchard

Test Start: 2014.09.22 @ 20:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	GMOC - 40M - 40o - 20G	1.494
126.00	MCGO - 15M - 55o - 30G	1.767
63.00	MCGO - 20M - 50o - 30G	0.884
315.00	Oil - 100o	4.419

Total Length: 630.00 ft

Total Volume: 8.564 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

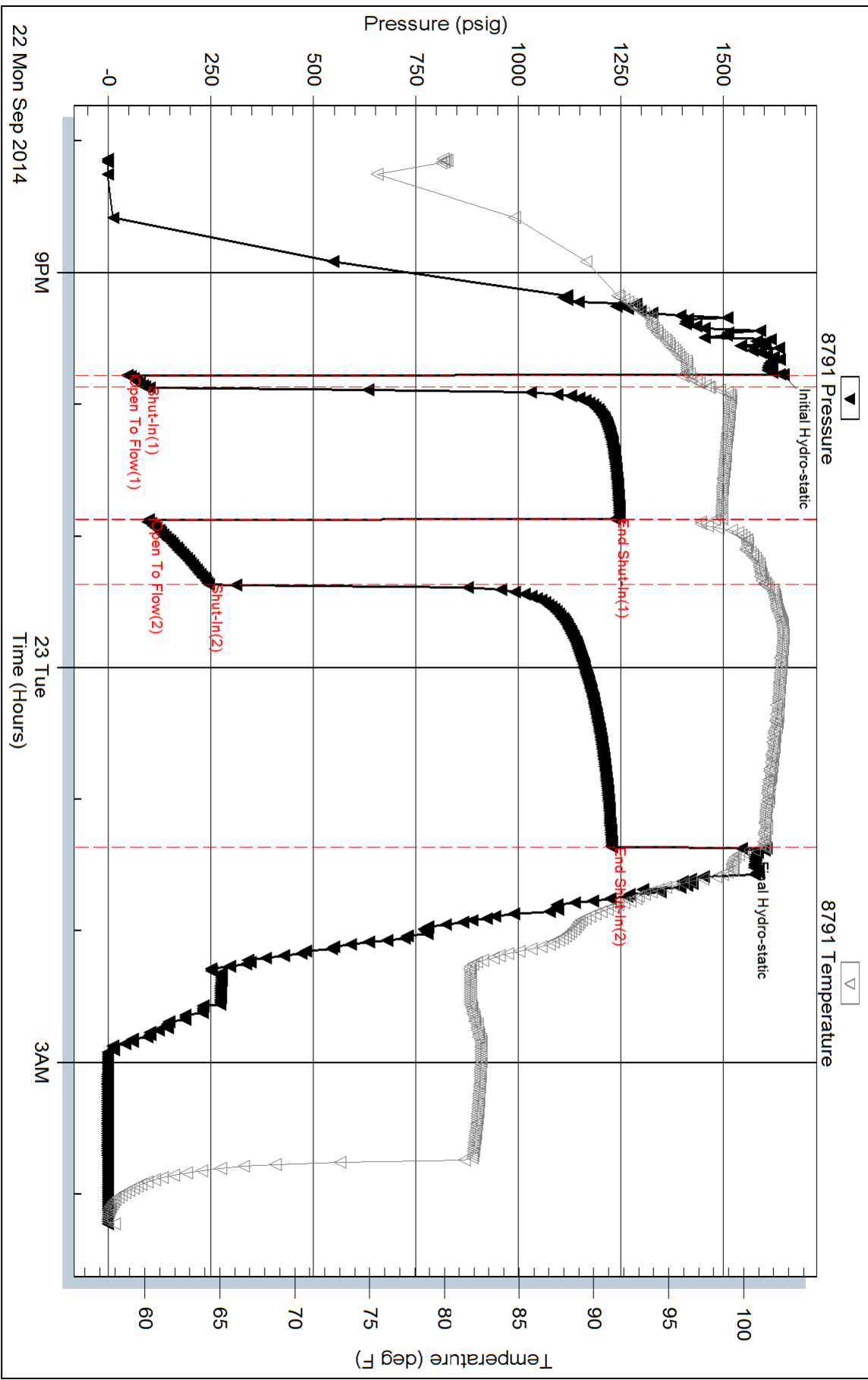
Inside

Samuel Gary Jr. & Assoc. Inc.

F&R Realty # 1-12

DST Test Number: 1

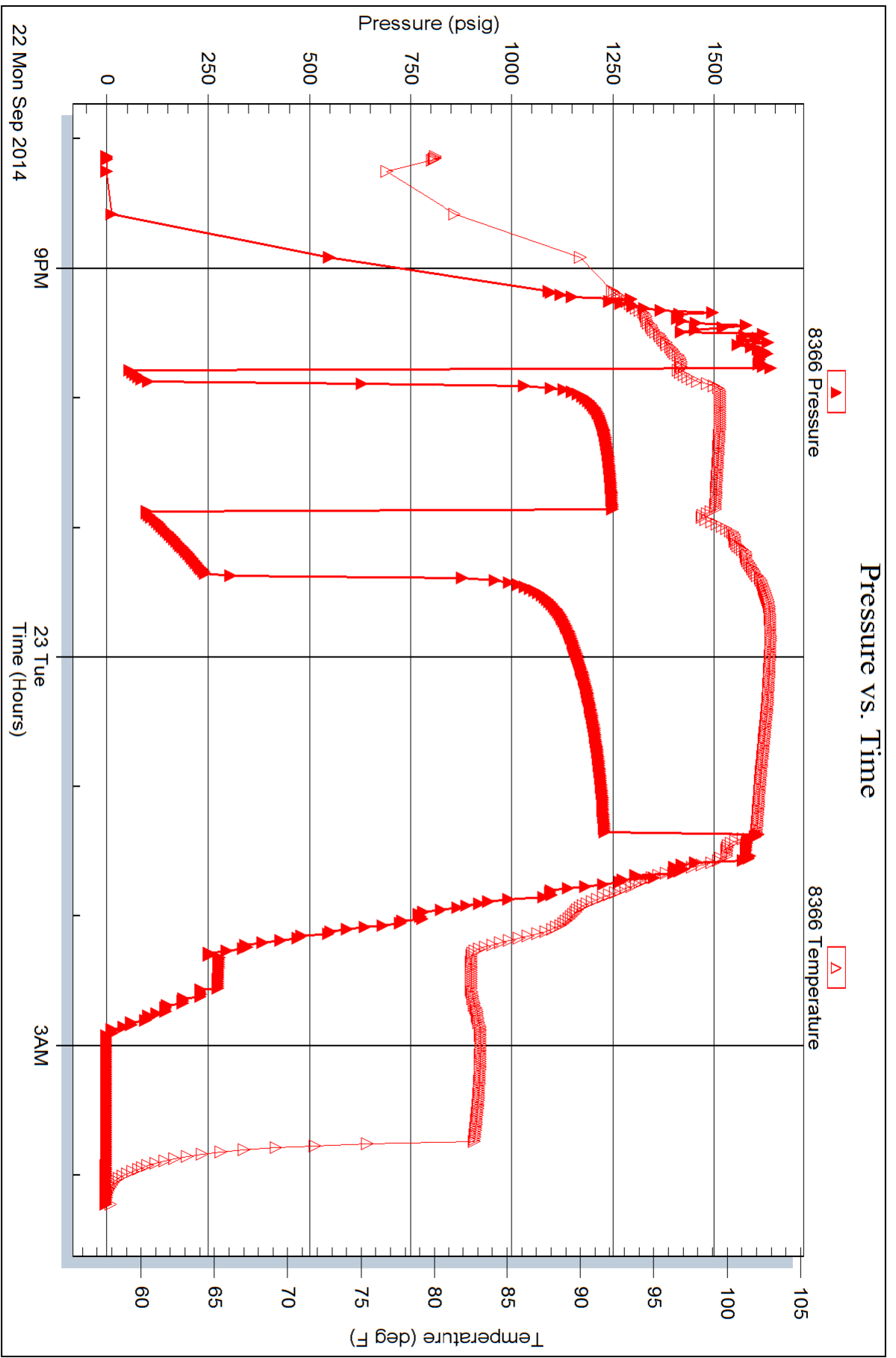
Pressure vs. Time



Triobite Testing, Inc

Ref. No: 60145

Printed: 2014.09.23 @ 06:51:39



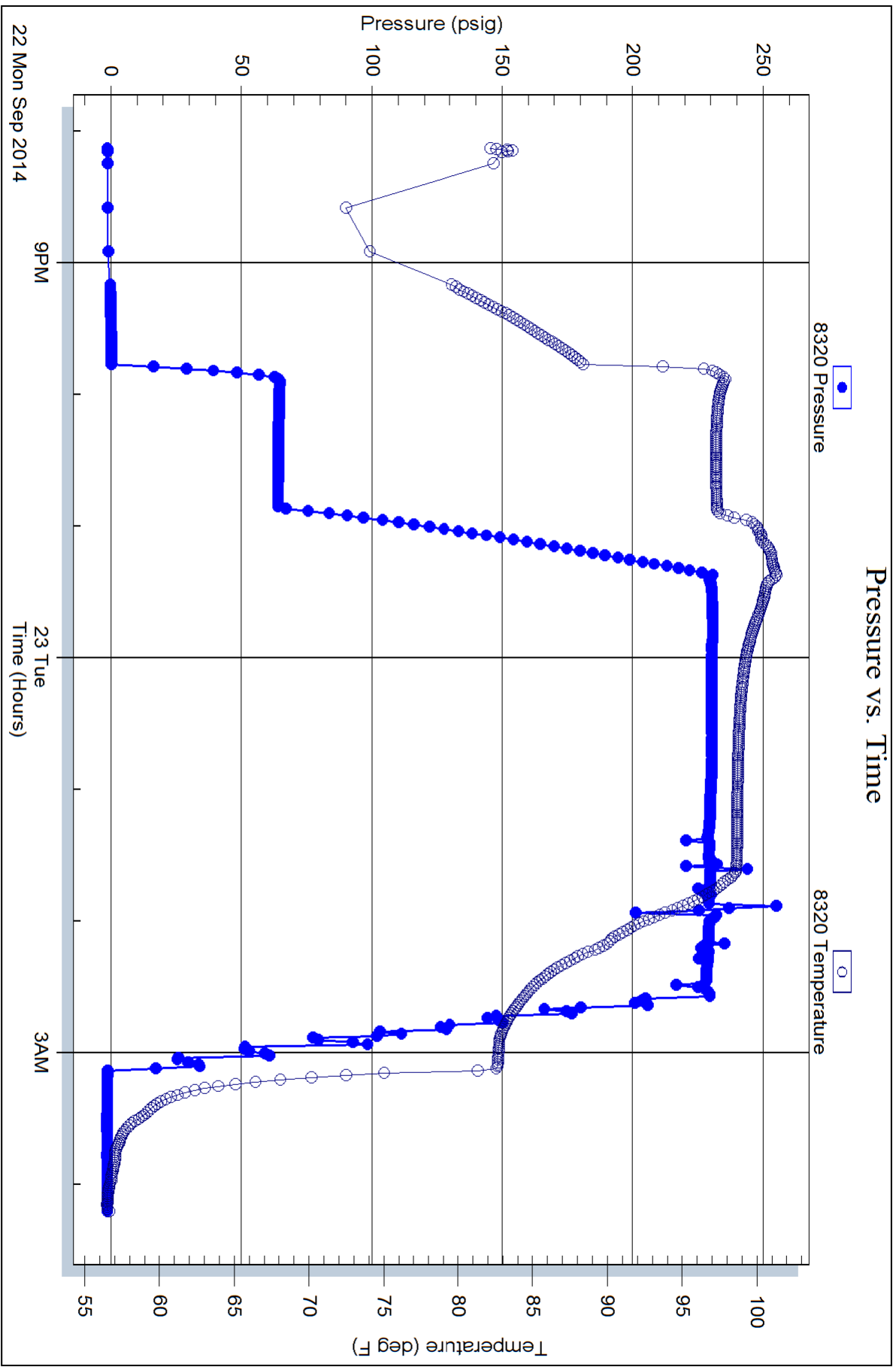
Serial #: 8320

Fluid

Samuel Gary Jr. & Assoc. Inc.

F&R Realty # 1-12

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Assoc. Inc.

12-5s-24w Norton KS

1515 Wynkoop, STE 700
Denver, CO, 80202

F&R Realty # 1-12

ATTN: Dan Pritchard

Job Ticket: 60077

DST#: 2

Test Start: 2014.09.23 @ 16:35:00

GENERAL INFORMATION:

Formation: **LKC "C - E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:14:30
 Time Test Ended: 23:54:30
 Interval: **3500.00 ft (KB) To 3558.00 ft (KB) (TVD)**
 Total Depth: 3558.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2344.00 ft (KB)
 2336.00 ft (CF)
 KB to GR/CF: 8.00 ft

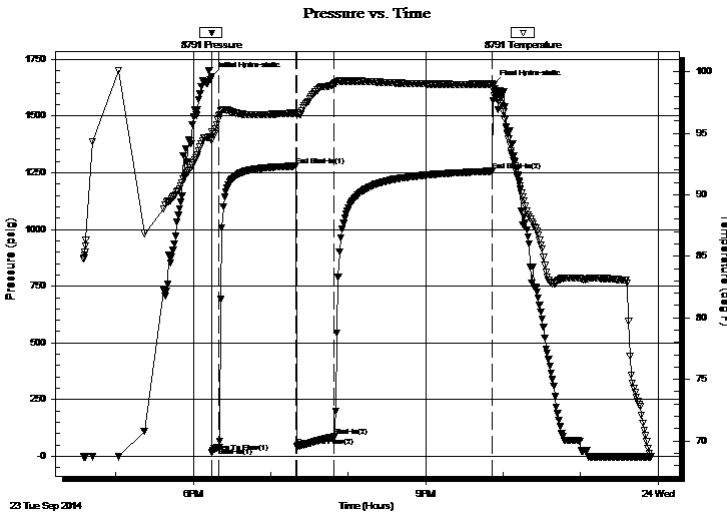
Serial #: 8791

Inside

Press@RunDepth: 86.91 psig @ 3501.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.23 End Date: 2014.09.23 Last Calib.: 2014.09.24
 Start Time: 16:35:05 End Time: 23:54:29 Time On Btm: 2014.09.23 @ 18:14:15
 Time Off Btm: 2014.09.23 @ 21:52:30

TEST COMMENT: 5 - IF: Blow built to 4"
 60 - ISI: No blow back
 30 - FF: Blow built to BOB (11") at 16 1/4 min.
 120 - FSI: Blow back built to 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1675.60	95.12	Initial Hydro-static
1	19.58	94.37	Open To Flow (1)
6	41.28	96.43	Shut-In(1)
66	1280.05	96.65	End Shut-In(1)
66	44.68	96.46	Open To Flow (2)
95	86.91	98.99	Shut-In(2)
218	1257.55	98.98	End Shut-In(2)
219	1639.42	98.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
67.00	OMCW 51%w, 38%m, 7%o, 4%g	0.62
68.00	OWCM 57%m, 30%w, 11%o, 2%g	0.95
30.00	SMCO 92%o, 6%g, 2%m	0.42
0.00	GIP = 90'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Assoc. Inc.

12-5s-24w Norton KS

1515 Wynkoop, STE 700
Denver, CO, 80202

F&R Realty # 1-12

Job Ticket: 60077

DST#: 2

ATTN: Dan Pritchard

Test Start: 2014.09.23 @ 16:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

37000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
67.00	OMCW 51%w , 38%m, 7%o, 4%g	0.621
68.00	OWCM 57%m, 30%w , 11%o, 2%g	0.954
30.00	SMCO 92%o, 6%g, 2%m	0.421
0.00	GIP = 90'	0.000

Total Length: 165.00 ft Total Volume: 1.996 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: gravity = 30 api @ 68 deg F corrected gravity = 29.2 api
RW = .211 ohms @ 66.5 deg F Chlorides = 37,000 ppm
Sampler = 550 psi, 2000 mL SMCWO 57%o, 33%w , 5%m, 5%g
(converts to - 1140 mL O, 660 mL w , 100 mL m, 100 mL g)

Serial #: 8791

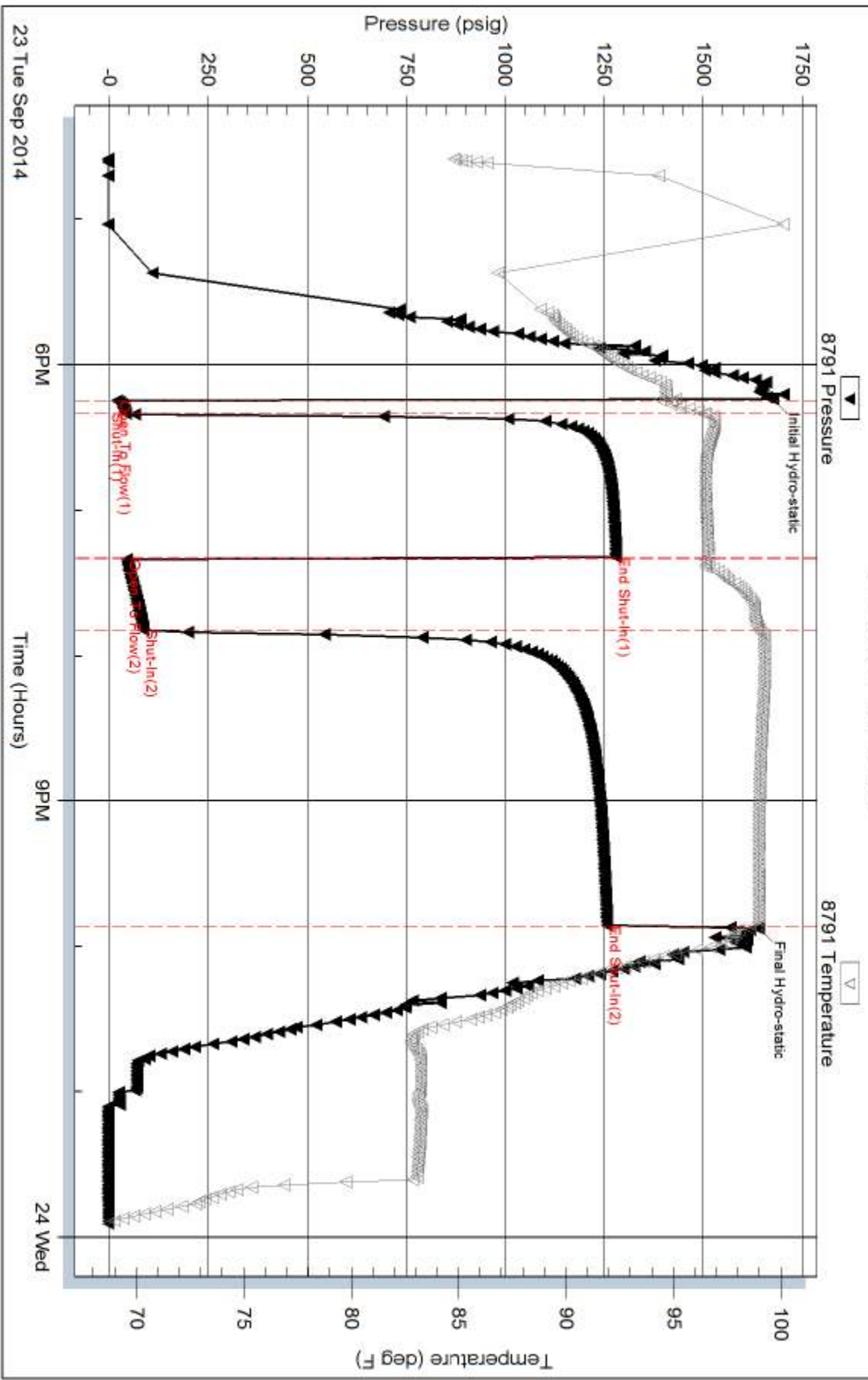
Inside

Samuel Gary Jr. & Assoc. Inc.

F&R Realty # 1-12

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 60077

Printed: 2014.09.24 @ 07:59:18

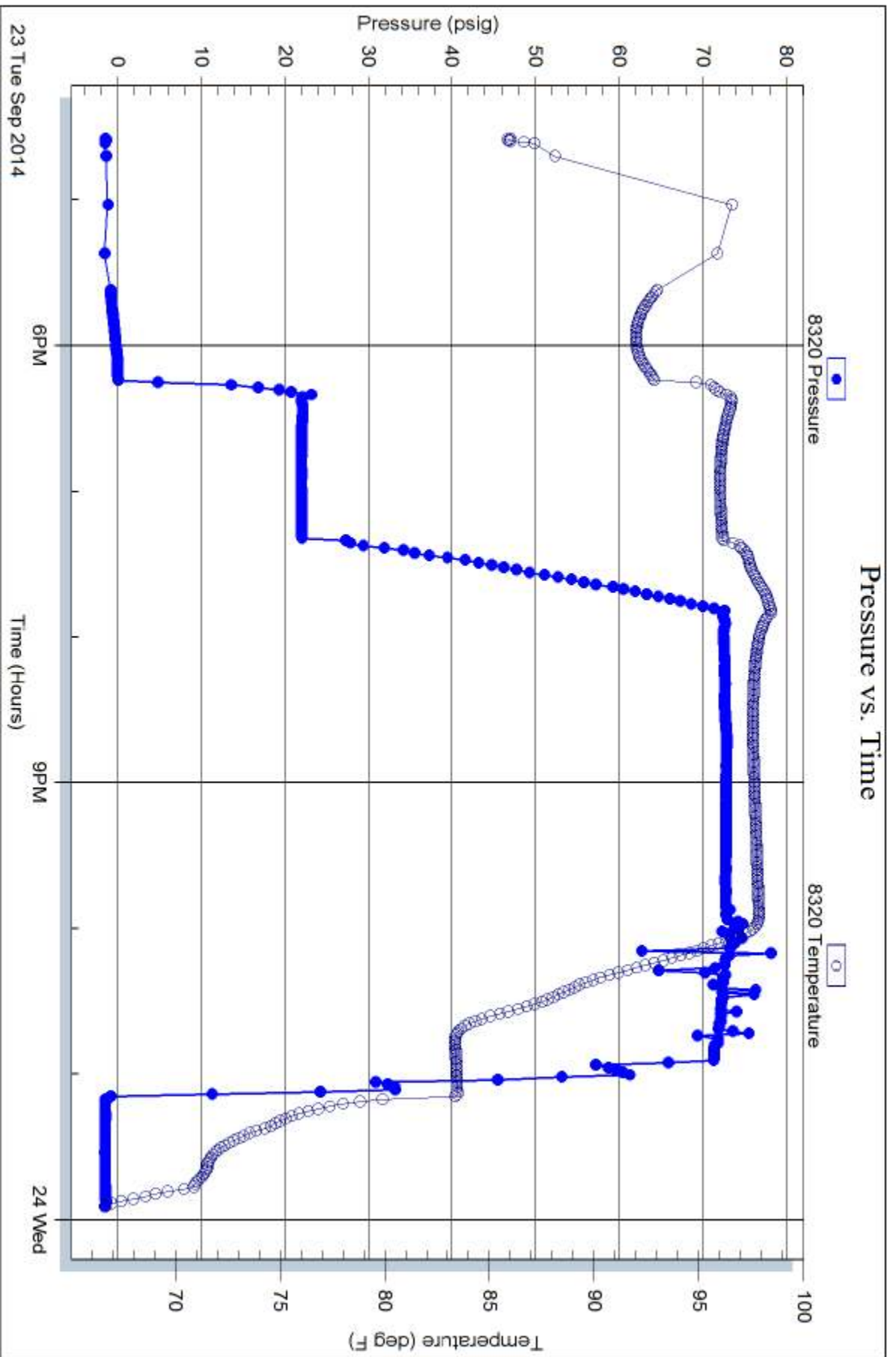
Serial #: 8320

Fluid

Samuel Gary Jr. & Assoc. Inc.

F&R Realty # 1-12

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60077

Printed: 2014.09.24 @ 07:59:18



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

Well Name: F&R Realty 1-12
 Location: Sec. 12 5S 24W Norton County, Kansas
 License Number: 15-137-20712-0000
 Spud Date: Sept 18, 2014
 Surface Coordinates: 1100' FNL & 935' FWL
 Region: Wildcat
 Drilling Completed: Sept 25, 2014

Bottom Hole Coordinates:
 Ground Elevation (ft): 2336' K.B. Elevation (ft): 2344'
 Logged Interval (ft): 3200' To: 3915' Total Depth (ft): 3915'
 Formation:
 Type of Drilling Fluid: Natural Chemical

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

OPERATOR

Company: Samuel Gary Jr & Associates, inc
 Address: 1515 Wynkoop Street, Suite 700
 Denver, Colorado 80202
 Geo: Dan Pritchard

GEOLOGIST

Name: Aaron Suelter
 Company: EARTH TECH OGL, Inc.
 Address: PO Box 683
 Hooker, Okla 73945
 1-580-652-3924
 8918 5Th St
 Great Bend, Ks. 67530
 1-888-543-8378

	DRILL STEM TEST REPORT				
	Samuel Gary Jr. & Assoc. Inc. 1515 Wynkoop, STE 700 Denver, CO, 80202 ATTN: Dan Pritchard	12-5s-24w F&R Realty # 1-12 Job Ticket: 60145 DST#: 1 Test Start: 2014.09.22 @ 20:08:00			
GENERAL INFORMATION:					
Formation: LKC - "B" Deviated: No Whipstock: ft (KB) Time Tool Opened: 21:46:45 Time Test Ended: 04:13:15		Test Type: Conventional Bottom Hole (Initial) Tester: Donovan Baumann Unit No: 57			
Interval: 3402.00 ft (KB) To 3498.00 ft (KB) (TVD) Total Depth: 3498.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good		Reference Elevations: 2340.00 ft (KB) 2335.00 ft (CF) KB to GR/CF: 5.00 ft			
Serial #: 8791 Inside					
Press@RunDepth: 244.33 psig @ 3403.00 ft (KB)		Capacity: 8000.00 psig			
Start Date: 2014.09.22 End Date: 2014.09.23		Last Calib.: 2014.09.23			
Start Time: 20:08:05 End Time: 04:13:14		Time On Btm: 2014.09.22 @ 21:46:30 Time Off Btm: 2014.09.23 @ 01:22:30			
TEST COMMENT: 5 - F - Strong surface blow built to BOB in 3 min. 60 - FS - Weak return built to 1/2 inch in 3 min died back to 1/4 after 25 min dead in 57 min 30 - FF - Strong surface blow built to BOB in 3 min. 120 - FSI - Weak surface blow built to BOB in 13 min. & stayed for the whole duration					
		PRESSURE SUMMARY			
		Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
		0	1646.07	96.38	Initial Hydro-static
		1	45.18	95.88	Open To Flow (1)
		6	88.15	97.66	Shut-in(1)
		66	1236.05	98.52	End Shut-in(1)
		66	97.56	98.06	Open To Flow (2)
		96	244.33	101.35	Shut-in(2)
		216	1228.67	101.41	End Shut-in(2)
		216	1544.66	101.52	Final Hydro-static
Recovery		Gas Rates			
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
126.00	GMCC - 40M - 40o - 20G	1.49			
126.00	MCGO - 15M - 55o - 30G	1.77			
63.00	MCGO - 20M - 50o - 30G	0.88			
315.00	Oil - 100o	4.42			



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. & Assoc. Inc.
1515 Wynkoop, STE 700
Denver, CO, 80202
ATTN: Dan Pritchard

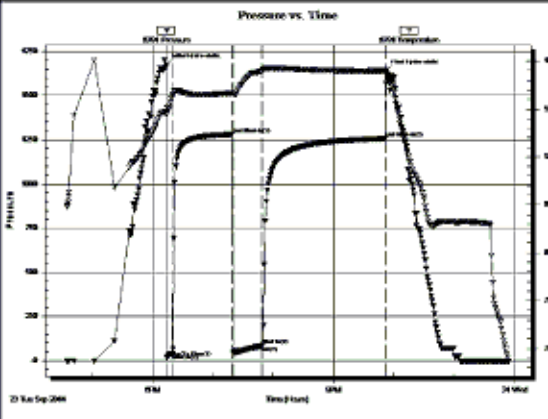
12-5s-24w Norton KS
F&R Realty # 1-12
Job Ticket: 60077 DST#: 2
Test Start: 2014.09.23 @ 16:35:00

GENERAL INFORMATION:

Formation: LKC "C - E"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:14:30
Time Test Ended: 23:54:30
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 57
Interval: 3500.00 ft (KB) To 3558.00 ft (KB) (TVD)
Total Depth: 3558.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Reference Elevations: 2344.00 ft (KB)
2336.00 ft (CF)
KB to GRVCF: 8.00 ft

Serial #: 8791 Inside
Press@RunDepth: 86.91 psig @ 3501.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.09.23 End Date: 2014.09.23 Last Calib.: 2014.09.24
Start Time: 16:35:05 End Time: 23:54:29 Time On Btm: 2014.09.23 @ 18:14:15
Time Off Btm: 2014.09.23 @ 21:52:30

TEST COMMENT: 5 - IF: Blow built to 4"
60 - IS: No blow back
30 - FF: Blow built to BOB (11") at 16 1/4 min.
120 - FS: Blow back built to 1/2"



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1675.60	95.12	Initial Hydro-static
1	19.58	94.37	Open To Flow (1)
6	41.28	96.43	Shut-in(1)
66	1280.05	96.65	End Shut-in(1)
66	44.68	96.46	Open To Flow (2)
95	86.91	98.99	Shut-in(2)
218	1257.55	98.98	End Shut-in(2)
219	1639.42	98.52	Final Hydro-static

Length (ft)	Description	Volume (bbl)
67.00	CMCW 51%w, 38%lm, 7%o, 4%g	0.62
68.00	CWCM 57%lm, 30%w, 11%o, 2%g	0.95
30.00	SMCO 92%o, 6%g, 2%lm	0.42
0.00	GIP = 90'	0.00

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

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

- Sandylms
- Shale
- Sltstn
- Shlyslts
- Sitysh
- Lms

ACCESSORIES

- MINERAL**
- Anhy
 - Arggrn
 - Arg
 - Bent
 - Bit
 - Brecfrag
 - Calc
 - Carb
 - Chtdk
 - Chtlt
 - Dol
 - Feldspar
 - Ferrpel
 - Ferr
 - Glau
 - Gyp
 - Hvymn
 - Kaol
 - Marl
 - Minxl
 - Nodule
 - Phos
 - Pyr

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

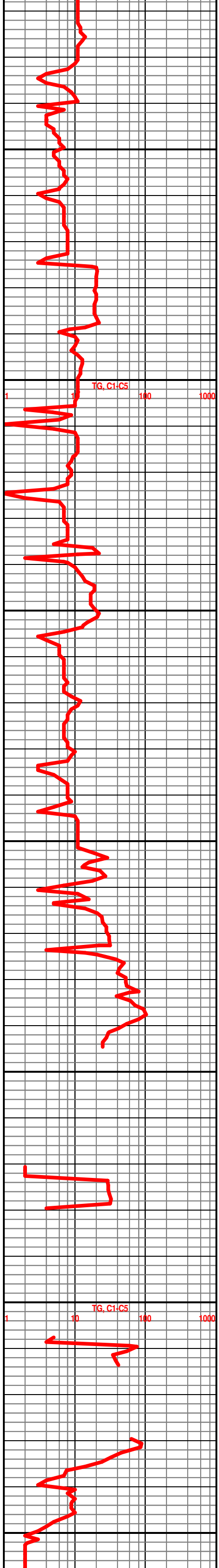
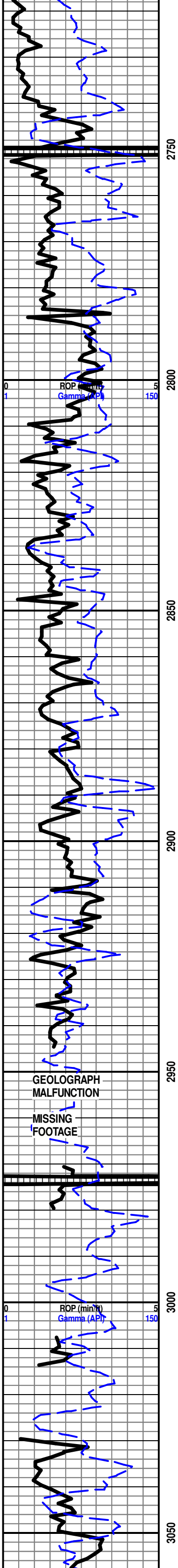
- FOSSIL**
- Algae
 - Amph
 - Belm
 - Bioclst
 - Brach
 - Bryozoa
 - Cephal
 - Coral
 - Crin
 - Echin
 - Fish
 - Foram

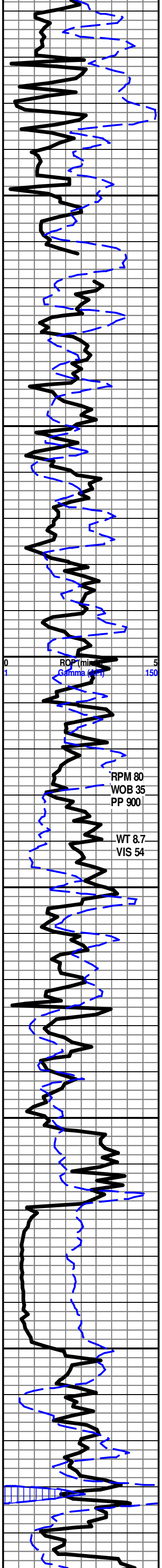
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

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

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

- TEXTURE**
- Boundst
 - Chalky
 - Cryxln
 - Earthy
 - Finexln
 - Grainst
 - Lithogr
 - Microxln
 - Mudst
 - Packst
 - Wackest





3100

3150

3200

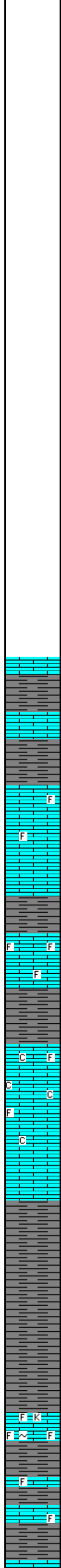
3250

3300

3350

ROP (min)
Gamma (cpm)

RPM 80
WOB 35
PP 900
WT 8.7
VIS 54



START 24 HOUR MANNED UNIT 9/20/14

SH- GRN TO BRWN, FRM BLKY, SMTH TO SLTY TXT

LS- LT GY TO TN, HD DNS TO BRIT IP, F TO MD XLN RE-XLN MTRX, S-SUCRO IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

TOPEKA 3228' -884'

LS- CRM TO LT TN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, SLI TR SCAT IMBD FOSS FRG IP, SLI TR IMBD CALC XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT CRM TO LT TN, HD DNS TO BRIT, V/F TO F SUCRO MTRX, RE-XLN IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN BRWN TO LT GY MOTT IP, FRM BLKY, SMTH TXT,

LS- CRM TO LT TN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN BRWN YEL TO GY, FRM BLKY, SMTH TO SLTY TXT

LS- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-SUCRO IP, SCAT IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM TO LT TN, HD DNS TO BRIT, V/F TO F XLN MTRX, S-CHLKY IP, SFT WHT CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

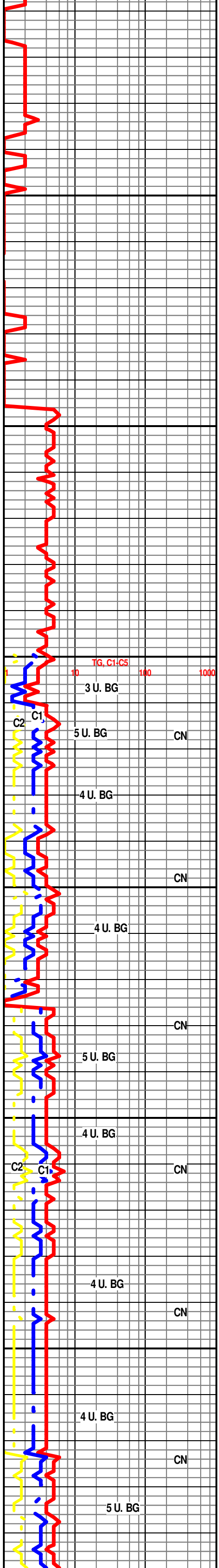
SH- GRN BRWN YEL ORNG TO GY, FRM BLKY, SMTH TXT

SH- GRN BRWN TO GY, FRM BLKY TO SPLNTY, SMTH TXT

LS- CRM TO LT TN, HD DNS, F TO MD XLN RE-XLN MTRX, IMBD FOSS FRG IP, SLI TR IMBD KAOL OR GLAUC, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN RE-XLN MTRX, S-SUCRO IP, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- GRN BRWN TO YEL, FRM BLKY, SMTH TXT



TG, C1-C5
3 U. BG

C2 C1
5 U. BG CN

4 U. BG

CN

4 U. BG

CN

5 U. BG

4 U. BG

C2 C1
CN

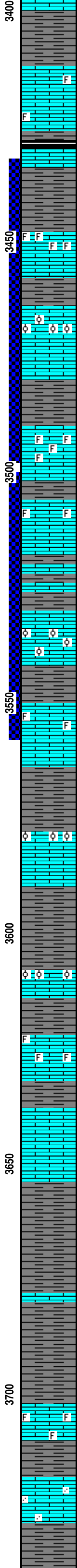
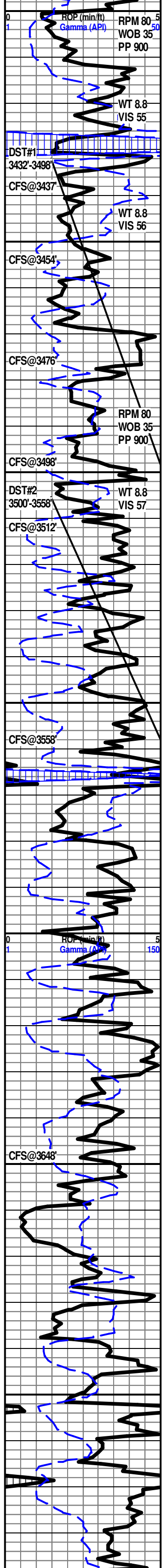
4 U. BG

CN

4 U. BG

CN

5 U. BG



SH- GRN BRWN TO GY, FRM BLKY TO SPLNTY, SMTH TXT

LS- CRM TO LT TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-CHLKY IP, SCAT IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

HEEBNER 3427' -1083'

SH- BLCK, SFT, CARB

SH- GRN BRWN TO LT GY, FRM BLKY TO SFT GMMY, SMTH TXT

3448'-3451' LS- OFF WHT TO CRM W/ TN OIL STN IN 60%, HD DNS TO BRIT, V/F TO F XLN CHLKY MTRX, S-SUCRO IP, ABDT IMBD FOSS FRG THRU, BRT YEL GLD FLO IN 70%, FR TO GD INTR FOSS POR IN 5%, GD FLSH CUT IN 70%, GD SLW STRM IN 70%, TN LCH ON DISH

LANSING 3464' -1120'

3467'-3468' LS- OFF WHT TO LT TN W/ TN OIL STN IN 63% LOS IN 2%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 35%, BRT YEL GLD FLO IN 30%, FR TO GD INTR OOL POR IN 4%, FR VUG POR IN 3%, GD INST FLSH CUT IN 80%, GD MLKY BLU SLW STRM IN 80%, DK TN LCH ON DISH, WK OIL ODOR

LANSING "B" 3489' -1145'

3492'-3494' LS- LT TN TO TN W/ TN OIL STN IN 95%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD FOSS FRG THRU, BRT YEL GLD FLO THRU, FR TO GD INTR FOSS POR IN 6%, GD INSTNT FLSH CUT THRU, GD TO V/GD MLKY BLU SLW STRM THRU, DK TN LCH ON DISH, STRNG OIL ODOR

3508'-3509' LS- OFF WHT CRM TO LT TN W/ TN OIL STN IN 60%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, IMBD FOSS FRG IP, BRT YEL GLD FLO IN 70%, FR INTR FOSS POR IN 2%, FR VUG POR IN 3%, FR FLSH CUT IN 70%, FR TO GD SLW STRM IN 70%, TN LCH ON DISH

SH- BRWN TO GY, FRM BLKY, SMTH TXT

3534'-3536' LS- CRM TO LT TN W/ TN OIL STN IN 75%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, BRT YEL GLD FLO IN 75%, FR TO GD INTR OOL POR IN 5%, FR FLSH CUT IN 80%, FR TO GD SLW STRM IN 80%, DK TN LCH ON DISH, WK OIL ODOR

3551'-3553' LS- CRM TO LT TN W/ TN OIL STN IN 50%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, IMBD FOSS FRG IP, DUL YEL GLD FLO IN 60%, FR INTR FOSS POR IN 2%, PR TO FR VUG POR IN 3%, FR FLSH CUT IN 60%, FR SLW STRM IN 60%, LT TN LCH ON DISH

LANSING "F" SHALE 3564' -1220

SH- BRWN LT GY TO GY, FRM BLKY, SLTY TXT

3568'-3570' LS- CRM TO LT TN W/ TN OIL STN IN 30%, HD DNS, V/F TO F XLN MTRX, IMBD OOL IP, DUL YEL GLD FLO IN 40%, TT TO PR INTR OOL POR IN 3%, FR FLSH CUT IN 40%, FR TO GD SLW STRM IN 40%, LT TN LCH ON DISH

SH- GRN BRWN TO GY, FRM BLKY TO SFT GMMY, SMTH TXT

LANSING "G" 3607' -1263'

3609'-3610' LS- CRM TO LT TN W/ TN OIL STN IN 80% LOS IN 2%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 80%, FR INTR OOL POR IN 6%, GD INSTNT FLSH CUT IN 90%, GD TO V/GD MLKY BLU SLW STRM IN 90%, DK TN LCH ON DISH

3627'-3628' LS- CRM TO LT TN W/ TN OIL STN IN 50%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD FOSS FRG THRU, BRT YEL GLD FLO IN 50%, FR INTR FOSS POR IN 4%, FR FLSH CUT IN 50%, FR TO GD SLW STRM IN 50%, LT TN LCH ON DISH

LS- LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-CHLKY IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

BKC 3654' -1310'

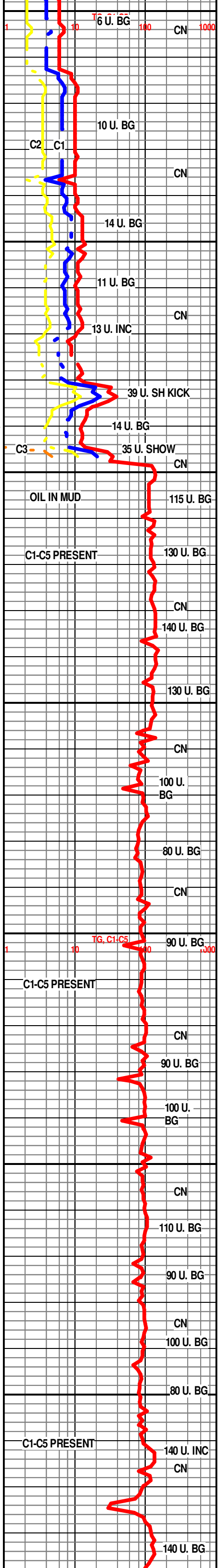
SH- BRWN LT GY TO DK GY, FRM BLKY, SLTY TXT

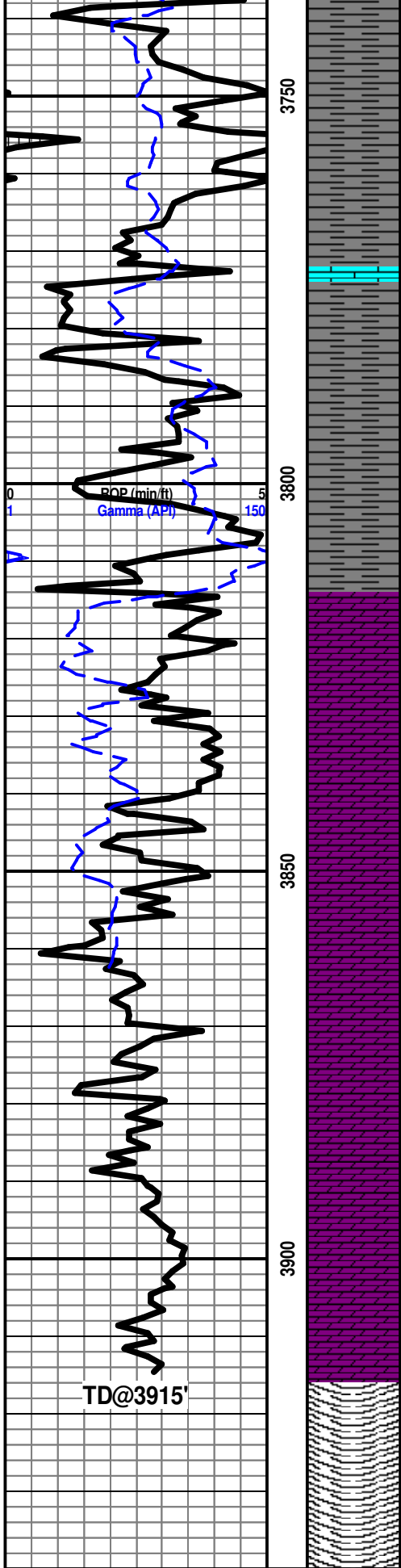
SH- RED BRWN TO GY, FRM BLKY TO SPLNTY, SLTY TXT

LS- WHT TO OFF WHT, HD DNS TO BRIT IP, V/F TO F XLN MTRX, S-CHLKY IP, SLI TR IMBD FOSS FRG IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- BRWN TO TN, HD DNS TO BRIT IP, V/F TO F XLN MTRX, RE-XLN IP, IMBD QRTZ XLS IP, NO VIS FLO, NO VIS POR, NO VIS SHOW

SH- RED BRWN TO GY, FRM BLKY, SLTY TO SMTH TXT





SH- RED BRWN TO GY MOTT IP, FRM BLKY, SLTY TXT

SH- RED TO BRWN, FRM BLKY TO SFT GMMY, SMTH TO SLTY TXT

SH- RED ORNG TO BRWN, SFT GMMY TO FRM BLKY, SMTH TO SLTY TXT

ARBUCKLE 3814' -1470'

DOLO- BRWN WHT TO OFF WHT, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD F TO SM S-ANG TO ANG DOLO GRNS THRU, NO VIS FLO, TT TO PR IN GRN POR IN 10%, NO VIS SHOW

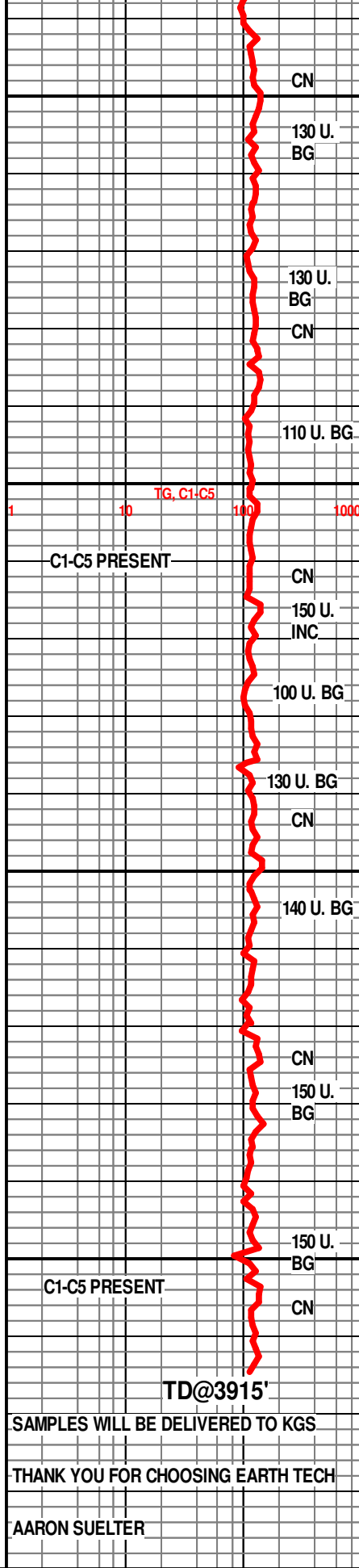
DOLO- OFF WHT CRM TO BRWN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, ABDT IMBD SM S-ANG TO ANG DOLO GRNS THRU, NO VIS FLO, TT TO PR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- OFF WHT TN TO BRWN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO ANG DOLO GRNS THRU, NO VIS FLO, TT TO PR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- OFF WHT TN TO BRWN, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, NO VIS FLO, TT TO PR INTR GRN POR IN 10%, NO VIS SHOW

DOLO- OFF WHT CRM TN TO BRWN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABNT IMBD F TO MD S-ANG TO ANG DOLO GRNS THRU, NO VIS FLO, TT TO PR INTR GRN POR IN 10%, NO VIS SHOW

R.T.D. @ 12:15 AM 9/25/14
CFS 1 HOUR
SHORT TRIP
CTCH 1 HOUR
TOFL
WEATHERFORD/ LIBERAL



CN
130 U. BG
130 U. BG
CN
110 U. BG
CN
150 U. INC.
100 U. BG
130 U. BG
CN
140 U. BG
CN
150 U. BG
150 U. BG
CN