

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1242591
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: _____

1242591

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
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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: _____ _____
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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. 673

Date	Sec.	Twp.	Range	County	State	On Location	Finish
10-24-14	1	5	24	Norton	KS		12:15 AM

Location *Lenora E to W 4 Rd. 1/4 N to tank battery*

Lease	Well No.	Owner
<i>Marian ET AL</i>	<i>1-1</i>	<i>W02</i>

Contractor	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	<i>Surface</i>	

Hole Size	T.D.	Charge To
<i>12 1/4</i>	<i>515</i>	<i>Sam Gary Tr & Associate</i>

Csg.	Depth	Street
<i>8 5/8</i>	<i>505</i>	

Tbg. Size	Depth	City	State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg.	Shoe Joint	Cement Amount Ordered
	<i>42.18</i>	<i>300 sx com 3% CC, 2% gel</i>

Meas Line	Displace	
	<i>30661</i>	<i>1/2 # fs</i>

EQUIPMENT

Pumptrk	No.	Cementer	Common
<i>5</i>		<i>Lonnie W.</i>	<i>300</i>
Bulktrk	No.	Driver	Poz. Mix
<i>4</i>		<i>Lonnie M</i>	<i>6</i>
Bulktrk	No.	Driver	Gel.
<i>PH</i>		<i>Travis</i>	<i>11</i>
			Calcium

JOB SERVICES & REMARKS

Remarks:	Hulls
<i>cement did circulate</i>	Salt
Rat Hole	Flowseal <i>150#</i>
Mouse Hole	Kol-Seal
Centralizers	Mud CLR 48
Baskets	CFL-117 or CD110 CAF 38
D/V or Port Collar	Sand
	Handling <i>316</i>
	Mileage

FLOAT EQUIPMENT

Guide Shoe
Centralizer <i>1</i>
Baskets
AFU Inserts
Float Shoe
Latch Down
<i>1 baffal plate</i>
<i>1 Rubber plug</i>
Pumptrk Charge <i>Long Surface</i>
Mileage <i>56</i>

X Signature *[Signature]*

Tax
Discount
Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

No. 988

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

Date	Sec.	Twp.	Range	County	State	On Location	Finish
10-31-14	1	5	24	Norton	KS		6:45 AM
Location				Lease 1E 1/2 W 170			

Lease	Well No.	Owner	
Manzanita ETAL	1-1	To Quality Oilwell Cementing, Inc.	
Contractor		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		Charge To	
Production string		Sam Co. /	
Hole Size	T.D.	Street	
7 7/8	3945		
Csg.	Depth	City	
5 1/2 15.50'	3816	State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered	
		180 10/5.14 1/4 #510	
Cement Left in Csg.	Shoe Joint	Cement	
44	44	450 QMDC 1/4 #510	
Meas Line	Displace	500 gal mid clear	
	89 3/4 BL		

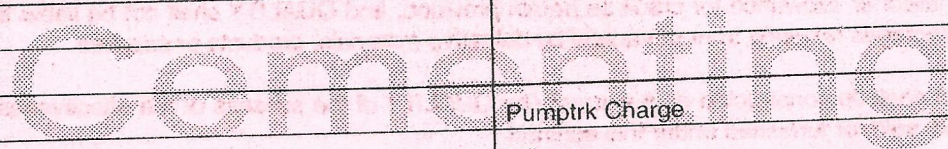
EQUIPMENT			Common
Pumptrk	No.	Cement Helper	Poz. Mix
5		10/9	
Bulktrk	No.	Driver	Gel.
14		10/11	
Bulktrk	No.	Driver	Calcium
21		Tyson	
		10/11	

JOB SERVICES & REMARKS		
Remarks:		Salt
Rat Hole	30SK	Flowseal
Mouse Hole	15SK	Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
5 1/2 sp @ 3816	Bullhead 3772	Handling
ESL	Drop Bullhead	Mileage
Triple shoe pump	500 gal mid clear	
Pump 10 BL water	from cement	
Mouse hole cement	5 1/2 with	
58SK		
	Cement circulated	
	Plug level 2 feet	

FLOAT EQUIPMENT		
Guide Shoe		
Centralizer	10 Turbo's	
Baskets	3 Blue	
AELI Inserts	Triple shoe	
Float Shoe	10 mid clamps	
Latch Down	1	

Pumptrk Charge		
Mileage		
		Tax
		Discount
		Total Charge

X Signature *[Signature]*





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60098

DST#: 1

ATTN: Dan Pritchard

Test Start: 2014.10.27 @ 06:20:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:13:00

Time Test Ended: 14:43:15

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3438.00 ft (KB) To 3480.00 ft (KB) (TVD)

Reference Elevations: 2348.00 ft (KB)

Total Depth: 3480.00 ft (KB) (TVD)

2340.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8791 Inside

Press@RunDepth: 61.49 psig @ 3439.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.27 End Date: 2014.10.27

Last Calib.: 2014.10.27

Start Time: 06:20:05 End Time: 14:43:14

Time On Btm: 2014.10.27 @ 08:12:45

Time Off Btm: 2014.10.27 @ 12:51:30

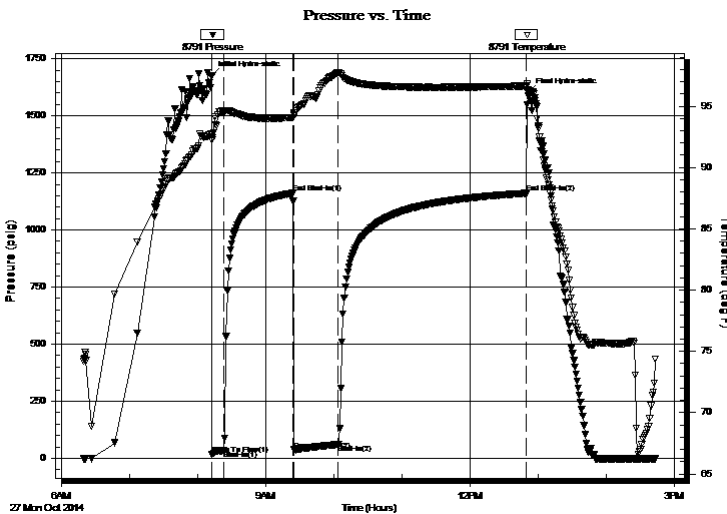
TEST COMMENT: 10 - IF: 1/4" Blow at open, built to 2 1/2"

60 - IS: No blow back

40 - FF: Blow built to 4 1/4"

160 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.33	92.73	Initial Hydro-static
1	17.55	92.29	Open To Flow (1)
11	35.86	94.52	Shut-In(1)
71	1161.20	94.07	End Shut-In(1)
73	36.76	94.29	Open To Flow (2)
112	61.49	97.74	Shut-In(2)
277	1161.05	96.63	End Shut-In(2)
279	1602.19	96.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCW w/trace oil 72%w , 28%m	1.12

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60098

DST#: 1

ATTN: Dan Pritchard

Test Start: 2014.10.27 @ 06:20:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 08:13:00 Tester: James Winder
 Time Test Ended: 14:43:15 Unit No: 57
Interval: 3438.00 ft (KB) To 3480.00 ft (KB) (TVD)
 Reference Elevations: 2348.00 ft (KB)
 Total Depth: 3480.00 ft (KB) (TVD) 2340.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

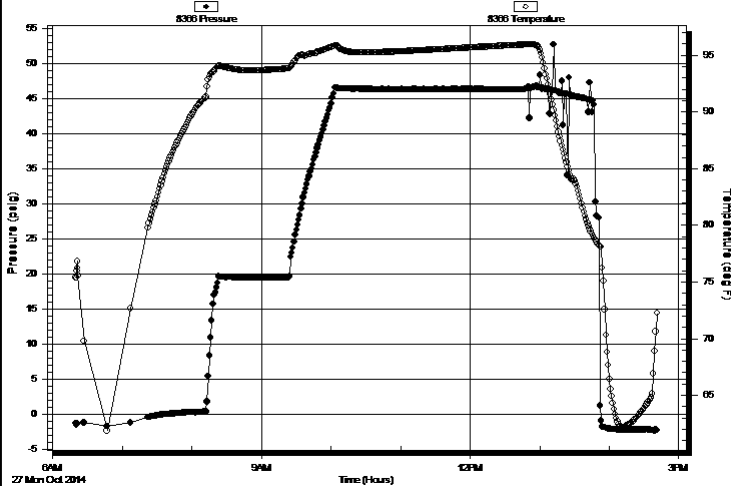
Serial #: 8366

Fluid

Press@RunDepth: psig @ 3403.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.27 Last Calib.: 2014.10.27
 Start Time: 06:20:05 End Time: 14:41:59 Time On Btm:
 Time Off Btm:

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to 2 1/2"
 60 - IS: No blow back
 40 - FF: Blow built to 4 1/4"
 160 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCW w/trace oil 72%w , 28%m	1.12

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60098

DST#: 1

ATTN: Dan Pritchard

Test Start: 2014.10.27 @ 06:20:00

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:

42000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	MCW w/trace oil 72%w , 28%m	1.120

Total Length: 100.00 ft Total Volume: 1.120 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

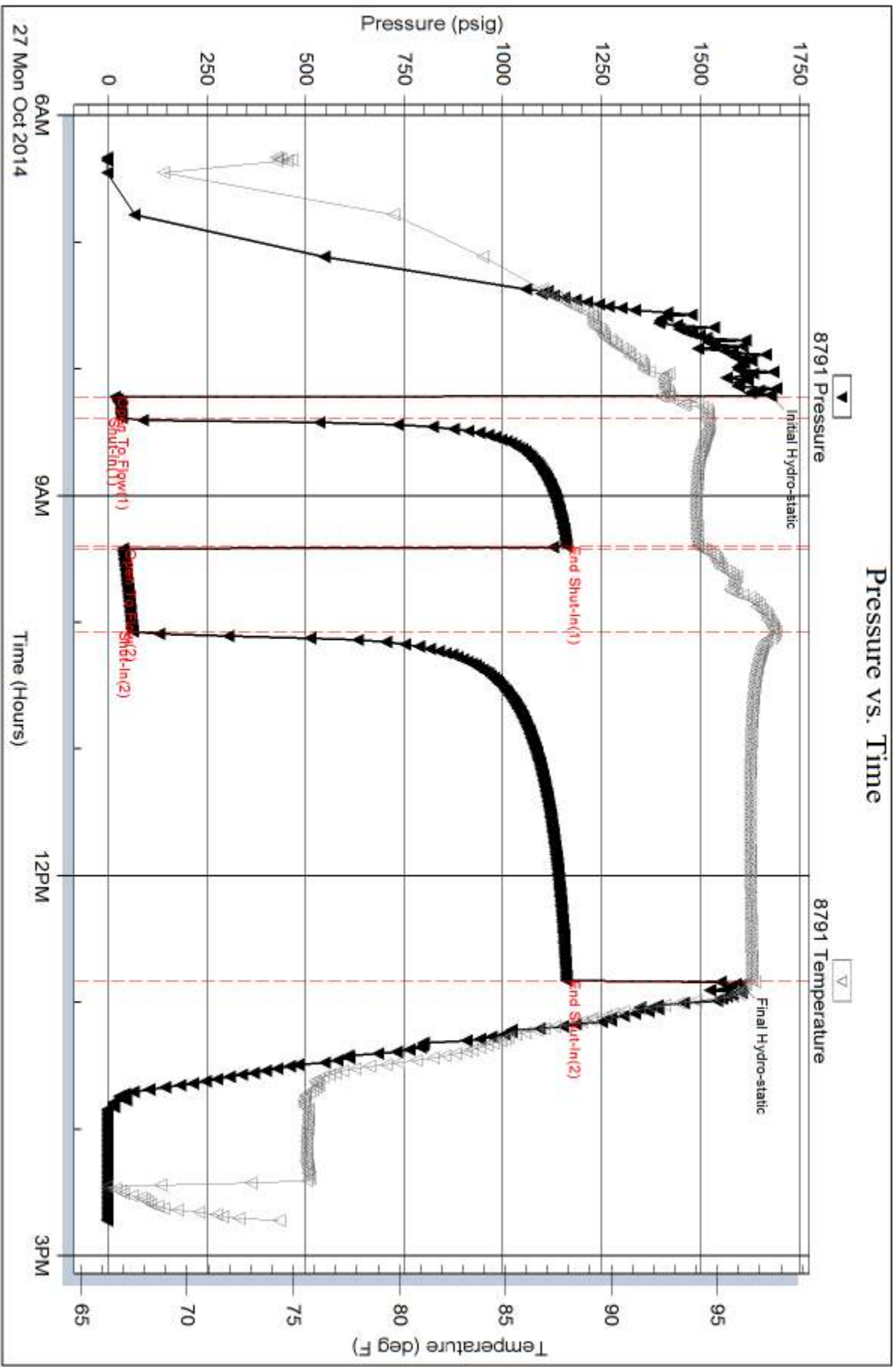
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .170 ohms @ 74.6 deg F Chlorides = 42,000 ppm

Sampler = 430 PSI, 1500 mL SMCW 93%w , 7%m, RW = .163 ohms @ 72.9 deg F Chlorides = 44,000 ppm



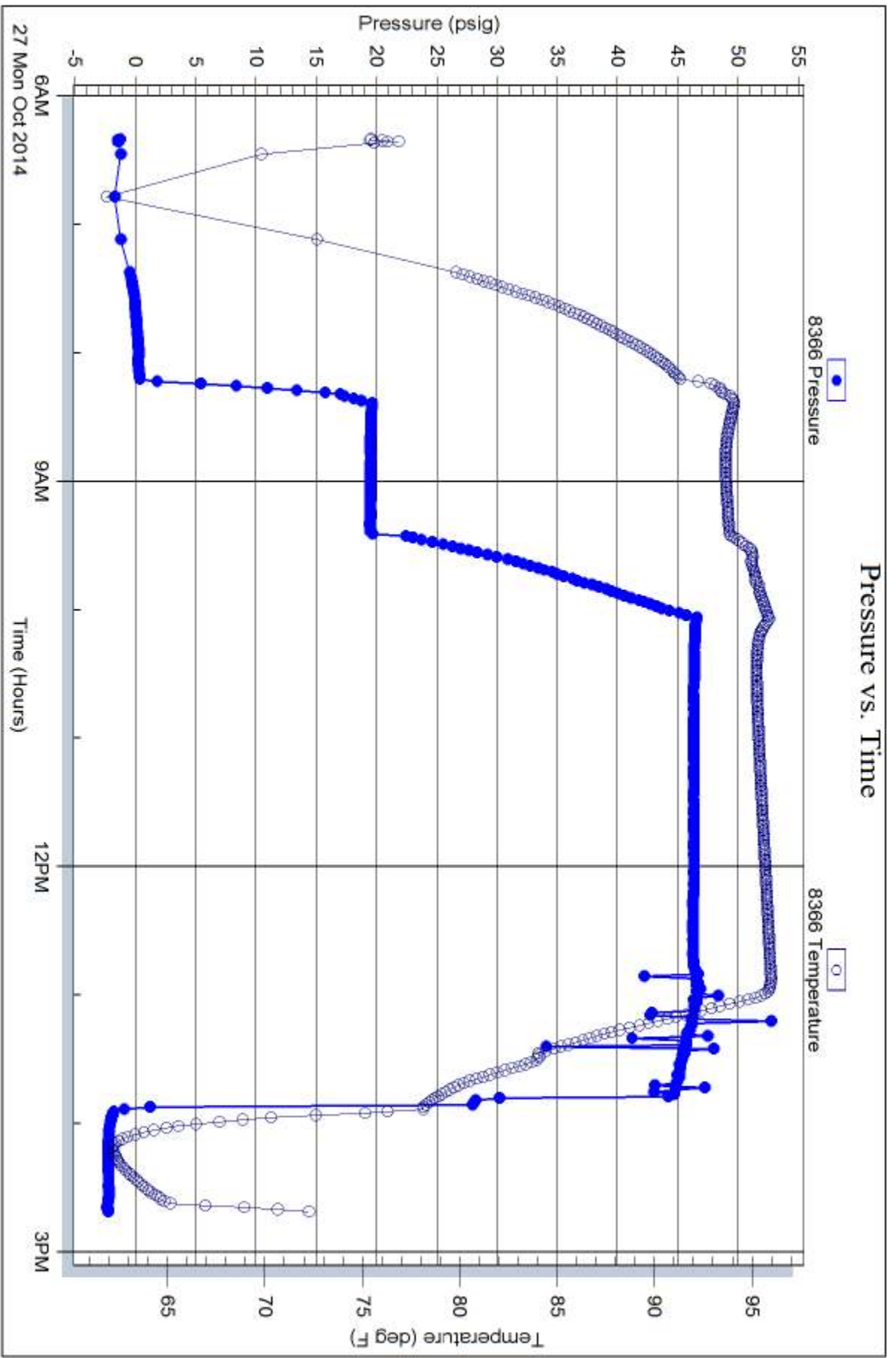
Serial #: 8366

Fluid

Samuel Gary Jr. & Associates

Merian et al #1-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60098

Printed: 2014, 10, 27 @ 16:15:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

ATTN: Dan Pritchard

Job Ticket: 60099

DST#: 2

Test Start: 2014.10.27 @ 21:45:00

GENERAL INFORMATION:

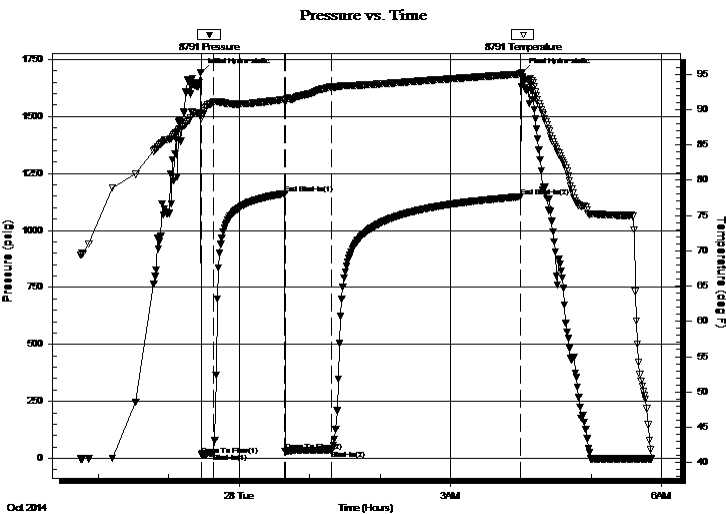
Formation: **LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:27:45
 Time Test Ended: 05:52:00
 Interval: **3478.00 ft (KB) To 3504.00 ft (KB) (TVD)**
 Total Depth: 3504.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8791

Inside

Press @ Run Depth: 35.46 psig @ 3479.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.27 End Date: 2014.10.28 Last Calib.: 2014.10.28
 Start Time: 21:45:05 End Time: 05:51:59 Time On Btm: 2014.10.27 @ 23:27:30
 Time Off Btm: 2014.10.28 @ 04:01:00

TEST COMMENT: 10 - IF: Blow built to 1"
 60 - IS: No blow back
 40 - FF: Blow started at 2 min., built to 1 1/2"
 160 - FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1693.20	89.50	Initial Hydro-static
1	15.74	88.72	Open To Flow (1)
11	24.01	91.08	Shut-In(1)
72	1161.93	91.42	End Shut-In(1)
72	29.68	90.96	Open To Flow (2)
111	35.46	93.21	Shut-In(2)
273	1147.71	95.00	End Shut-In(2)
274	1693.15	94.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OWCM 64%w, 26%w, 10%o	0.28

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60099

DST#: 2

ATTN: Dan Pritchard

Test Start: 2014.10.27 @ 21:45:00

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: 71.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	OWCM 64%m, 26%w, 10%o	0.279

Total Length: 40.00 ft Total Volume: 0.279 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

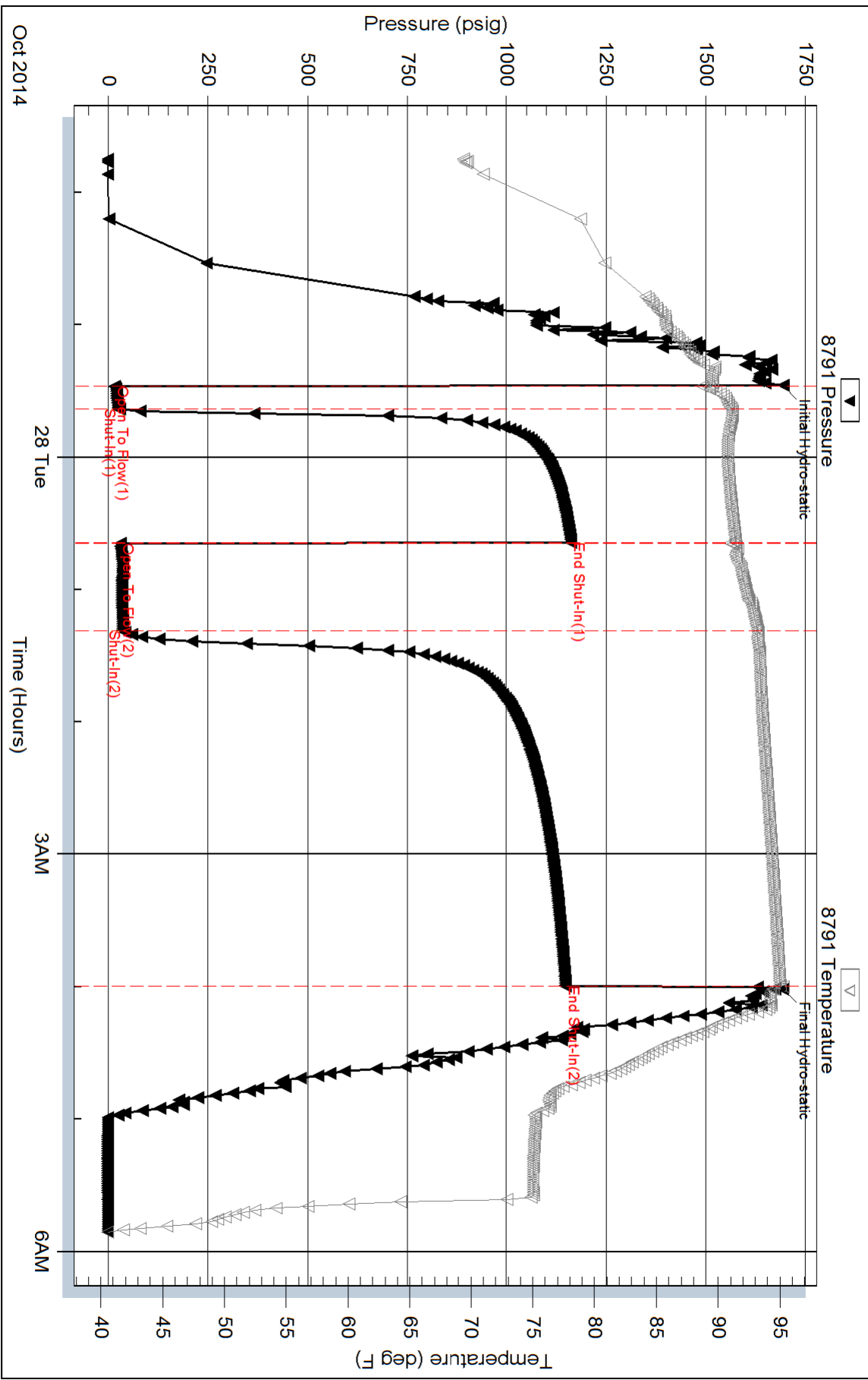
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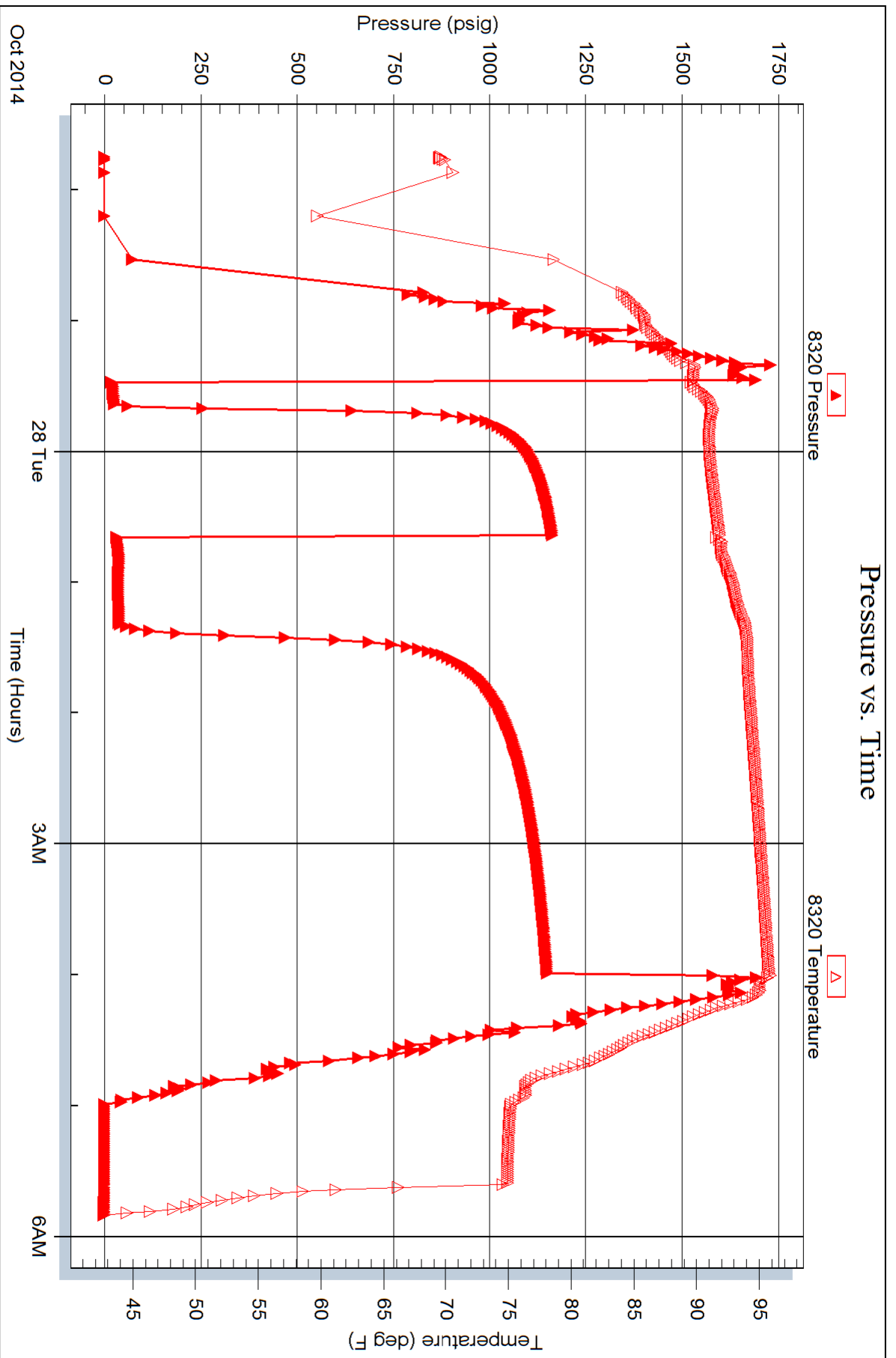
Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler = 445 PSI, 2500 OWCM 64%m, 26%w, 5%o, 5%g

Pressure vs. Time





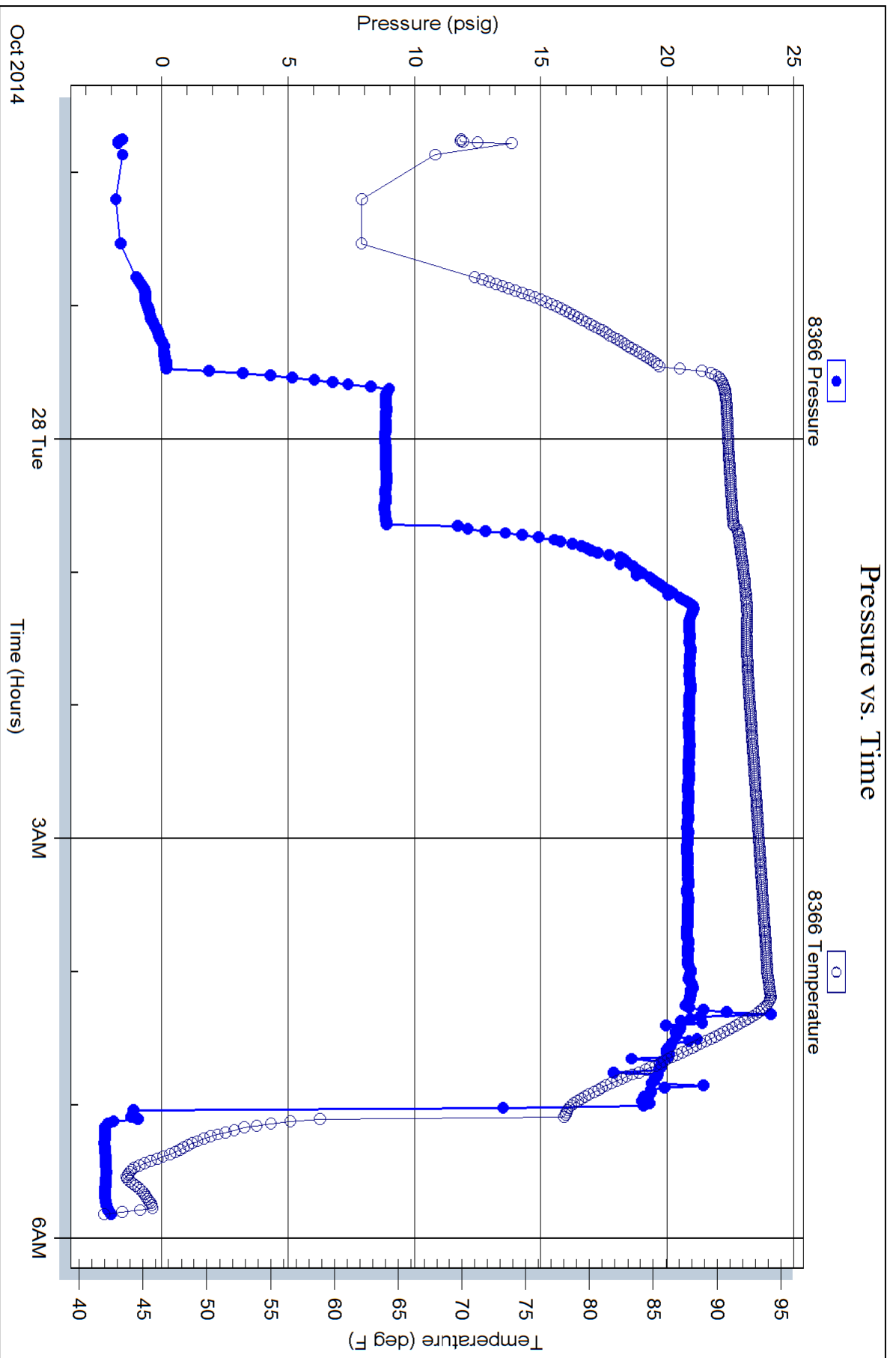
Serial #: 8366

Fluid

Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 2





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60100

DST#: 3

ATTN: Dan Pritchard

Test Start: 2014.10.28 @ 15:30:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl

Total Length: ft Total Volume: bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

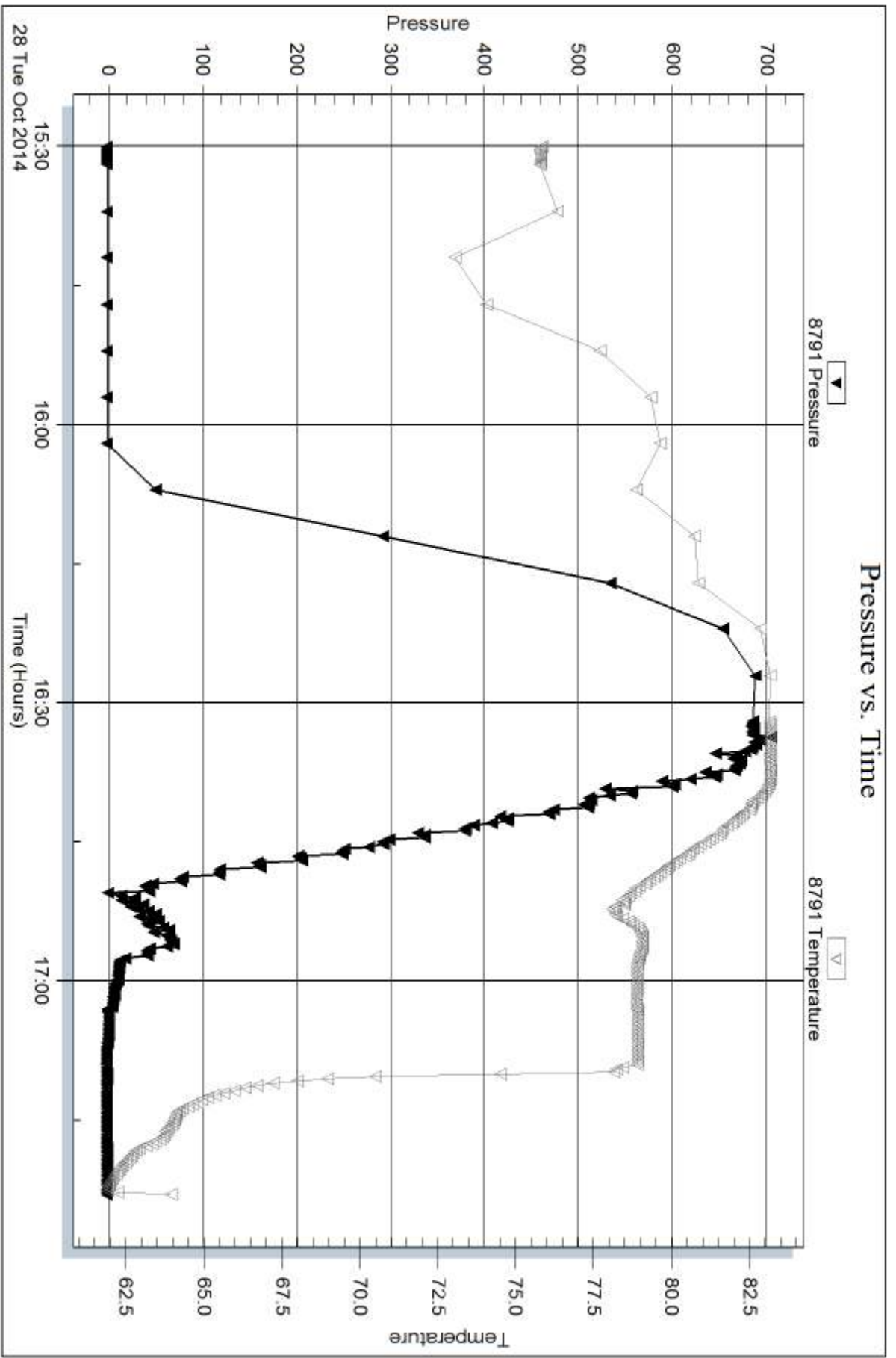
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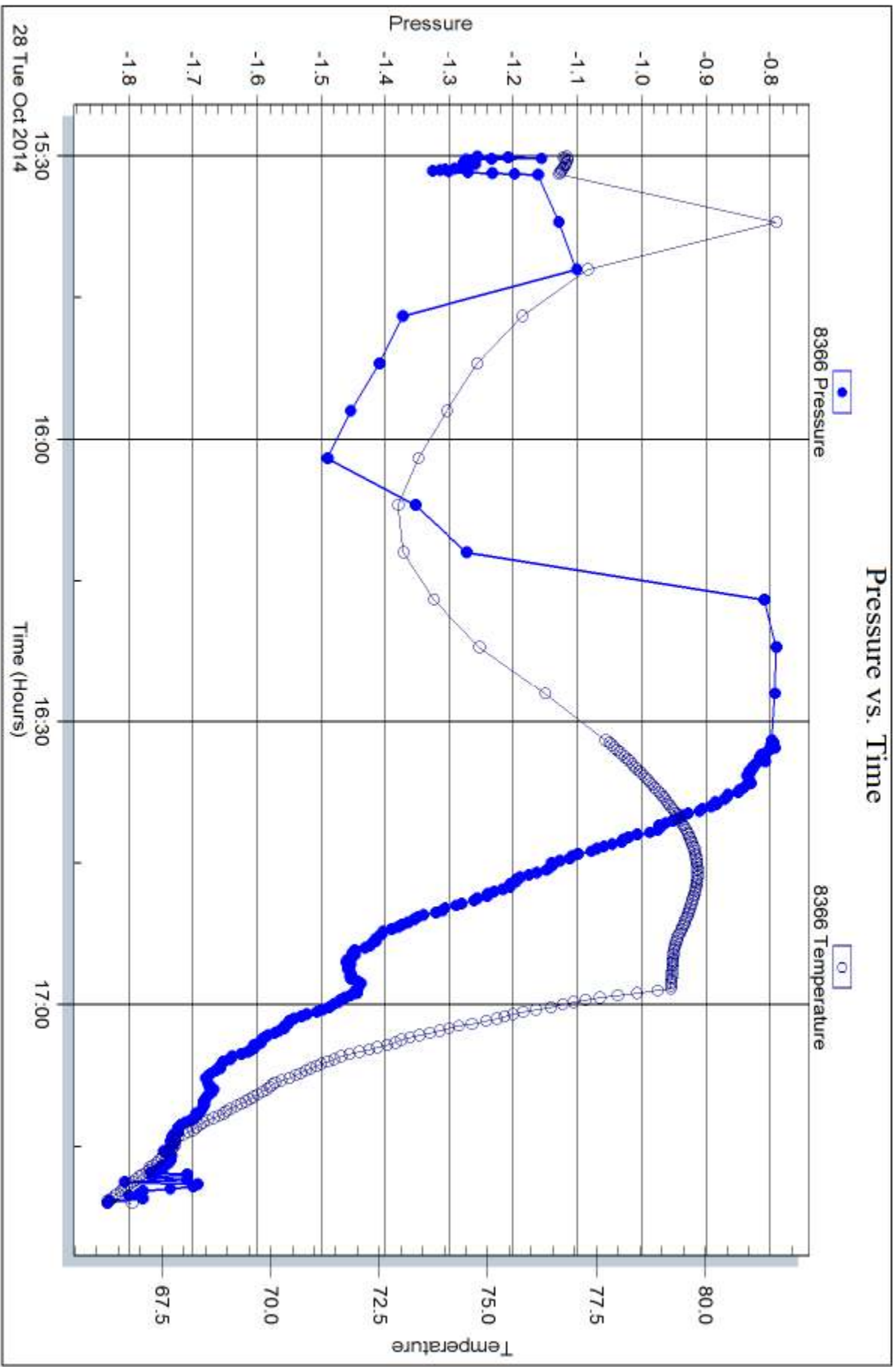
Inside

Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 3







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60776

DST#: 4

ATTN: Dan Pritchard

Test Start: 2014.10.28 @ 21:24:00

GENERAL INFORMATION:

Formation: **LKC "C - E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:54:15

Time Test Ended: 05:43:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3506.00 ft (KB) To 3558.00 ft (KB) (TVD)

Reference Elevations: 2348.00 ft (KB)

Total Depth: 3558.00 ft (KB) (TVD)

2340.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8791 Inside

Press@RunDepth: 34.32 psig @ 3507.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28

End Date:

2014.10.29

Last Calib.:

2014.10.29

Start Time: 21:24:05

End Time:

05:43:29

Time On Btm:

2014.10.28 @ 22:54:00

Time Off Btm:

2014.10.29 @ 03:27:45

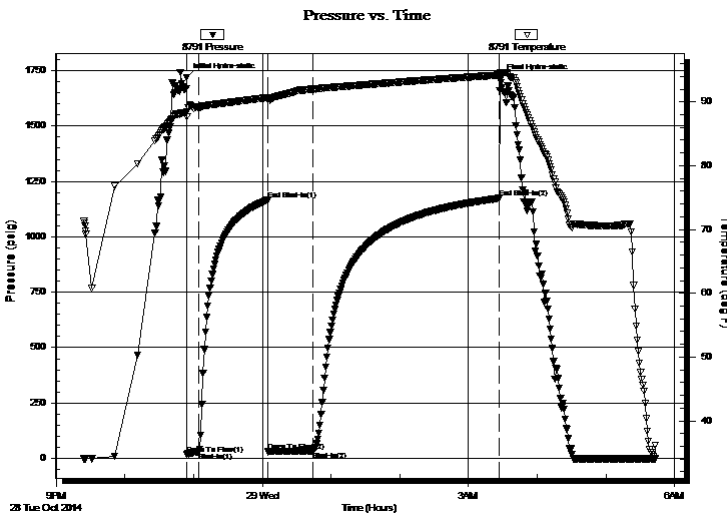
TEST COMMENT: 10 - IF: 1/2" Blow at open, built to 1 1/4"

60 - IS: No blow back

40 - FF: Blow built to 1"

160 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1720.21	88.40	Initial Hydro-static
1	19.36	87.74	Open To Flow (1)
11	27.82	89.17	Shut-In(1)
71	1165.52	90.67	End Shut-In(1)
71	31.77	90.30	Open To Flow (2)
111	34.32	92.01	Shut-In(2)
273	1174.42	94.21	End Shut-In(2)
274	1714.83	94.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	WCM w/oil spots 68% _m , 31% _m , 1% _o	0.28

* 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. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60776

DST#: 4

ATTN: Dan Pritchard

Test Start: 2014.10.28 @ 21:24:00

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:

34000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	WCM w/oil spots 68%w, 31%w, 1%o	0.279

Total Length: 40.00 ft Total Volume: 0.279 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

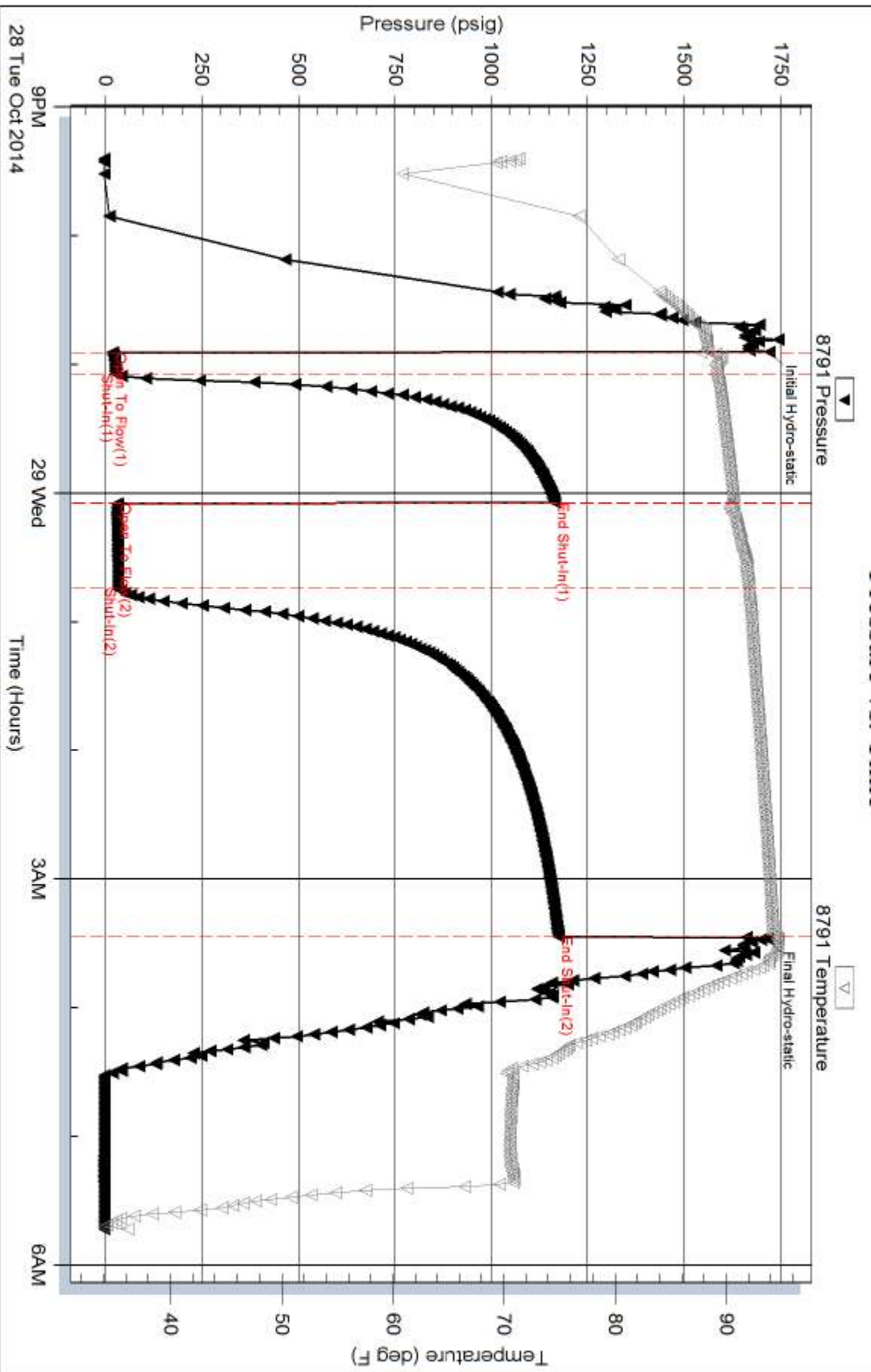
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .576 ohms @ 49 deg F Chlorides = 21,000 ppm

Sampler = 420 PSI, 1000 mL Water 98%w, 2%w, 1500 mL OMCW 68%w, 22%w, 5%o, 5%g RW = .302 ohms @ 49 deg F Chlorides = 34,000 ppm

Pressure vs. Time



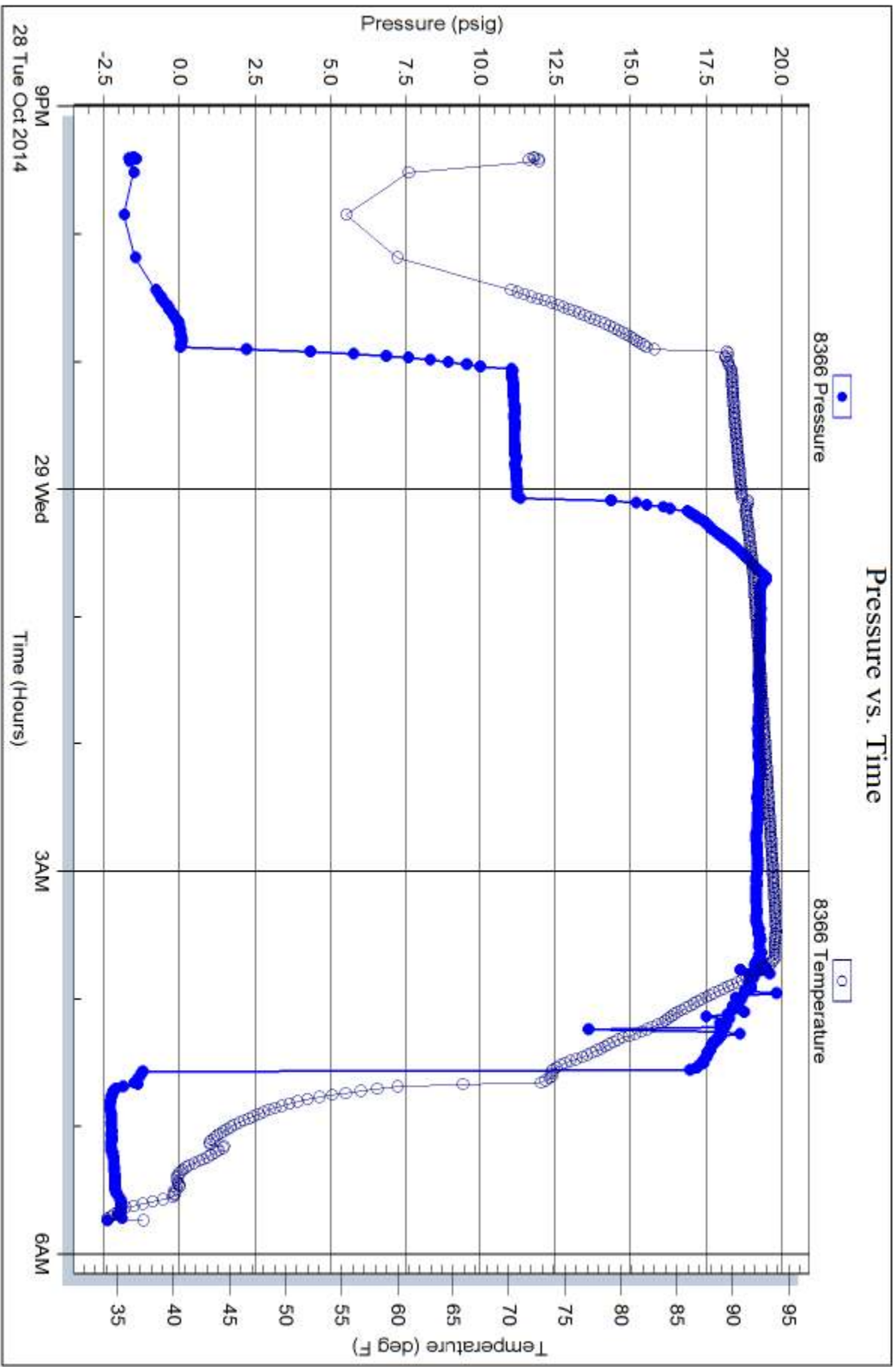
Serial #: 8366

Fluid

Samuel Gary Jr. & Associates

Merian et al #1-1

DST Test Number: 4





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

Formation: **LKC "F - H"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:20:00 Tester: James Winder
 Time Test Ended: 22:43:30 Unit No: 57
 Interval: **3569.00 ft (KB) To 3630.00 ft (KB) (TVD)** Reference Elevations: 2348.00 ft (KB)
 Total Depth: 3630.00 ft (KB) (TVD) 2340.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

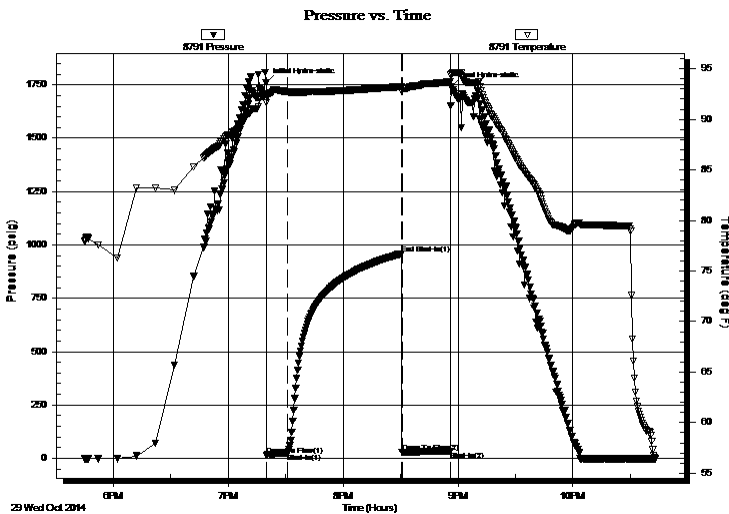
Serial #: 8791

Inside

Press @ Run Depth: 24.07 psig @ 3570.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 17:45:05 End Time: 22:43:29 Time On Btm: 2014.10.29 @ 19:19:45
 Time Off Btm: 2014.10.29 @ 20:56:30

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
 60 - IS: No blow back
 15 - FF: Blow started at 3 min., built to almost 1/4"
 Pulled tool

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1759.64	92.49	Initial Hydro-static
1	15.32	91.65	Open To Flow (1)
12	24.07	92.71	Shut-In(1)
71	959.63	93.25	End Shut-In(1)
71	28.77	92.80	Open To Flow (2)
97	32.35	93.72	Shut-In(2)
97	1743.10	94.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	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. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

Formation: **LKC "F - H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:20:00

Time Test Ended: 22:43:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3569.00 ft (KB) To 3630.00 ft (KB) (TVD)

Reference Elevations: 2348.00 ft (KB)

Total Depth: 3630.00 ft (KB) (TVD)

2340.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8366 Fluid

Press @ Run Depth: psig @ 3534.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.29 End Date: 2014.10.29

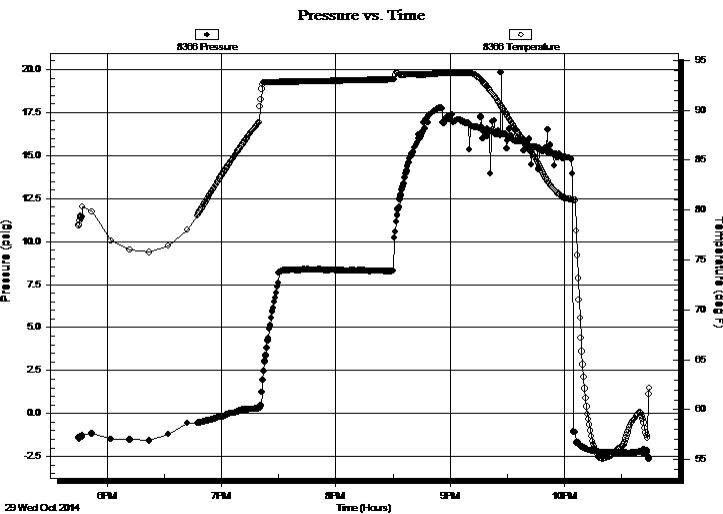
Last Calib.: 2014.10.29

Start Time: 17:45:05 End Time: 22:44:44

Time On Btm:

Time Off Btm:

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
60 - IS: No blow back
15 - FF: Blow started at 3 min., built to almost 1/4"
Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

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: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	Mud 100%	0.209

Total Length: 35.00 ft Total Volume: 0.209 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

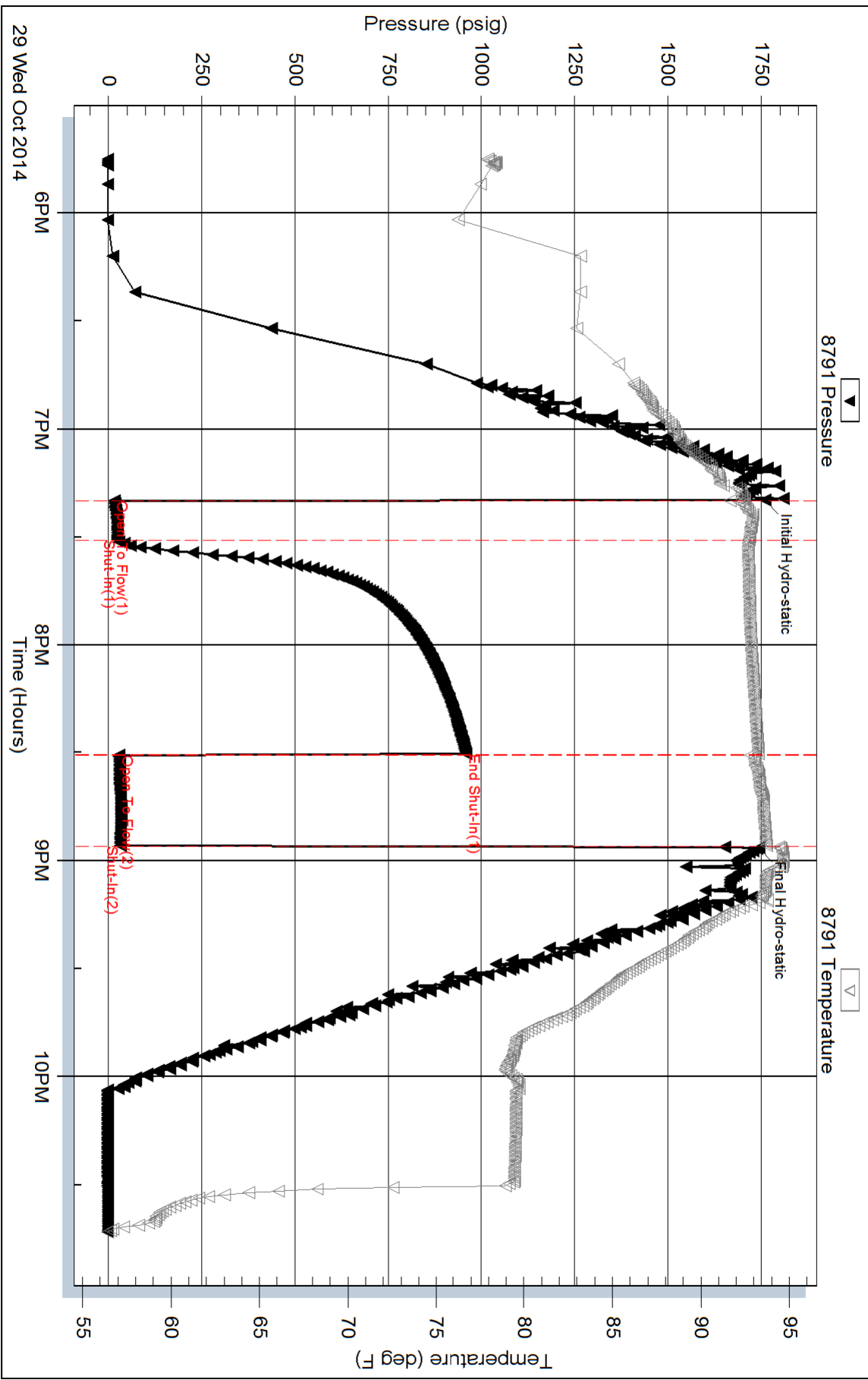
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Forgot to close tool so No sampler pressure - Caught a fluid sample as breaking tool down, got WCM 87%_m, 13%_w

Pressure vs. Time

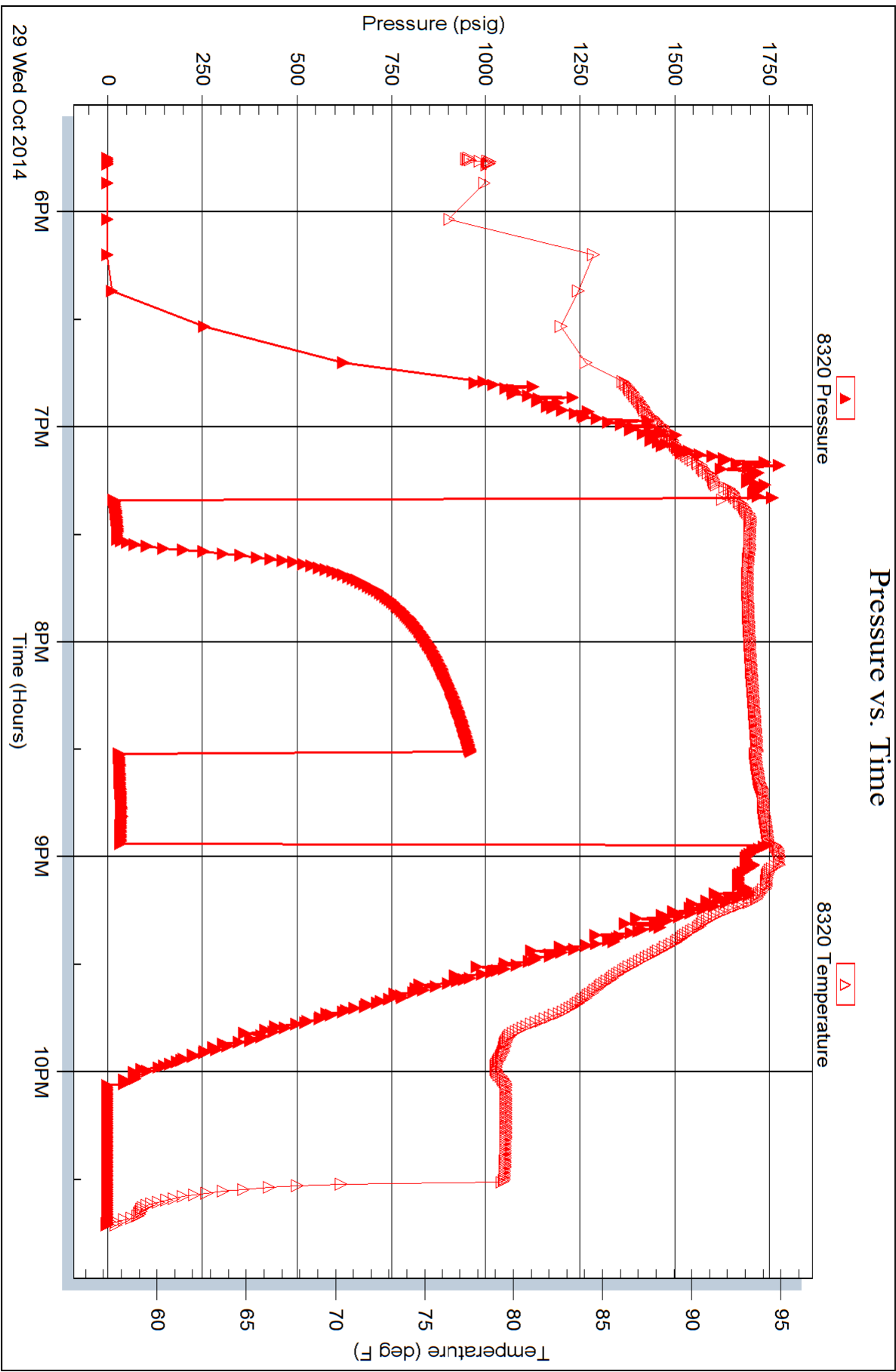


Serial #: 8320

Outside Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 5



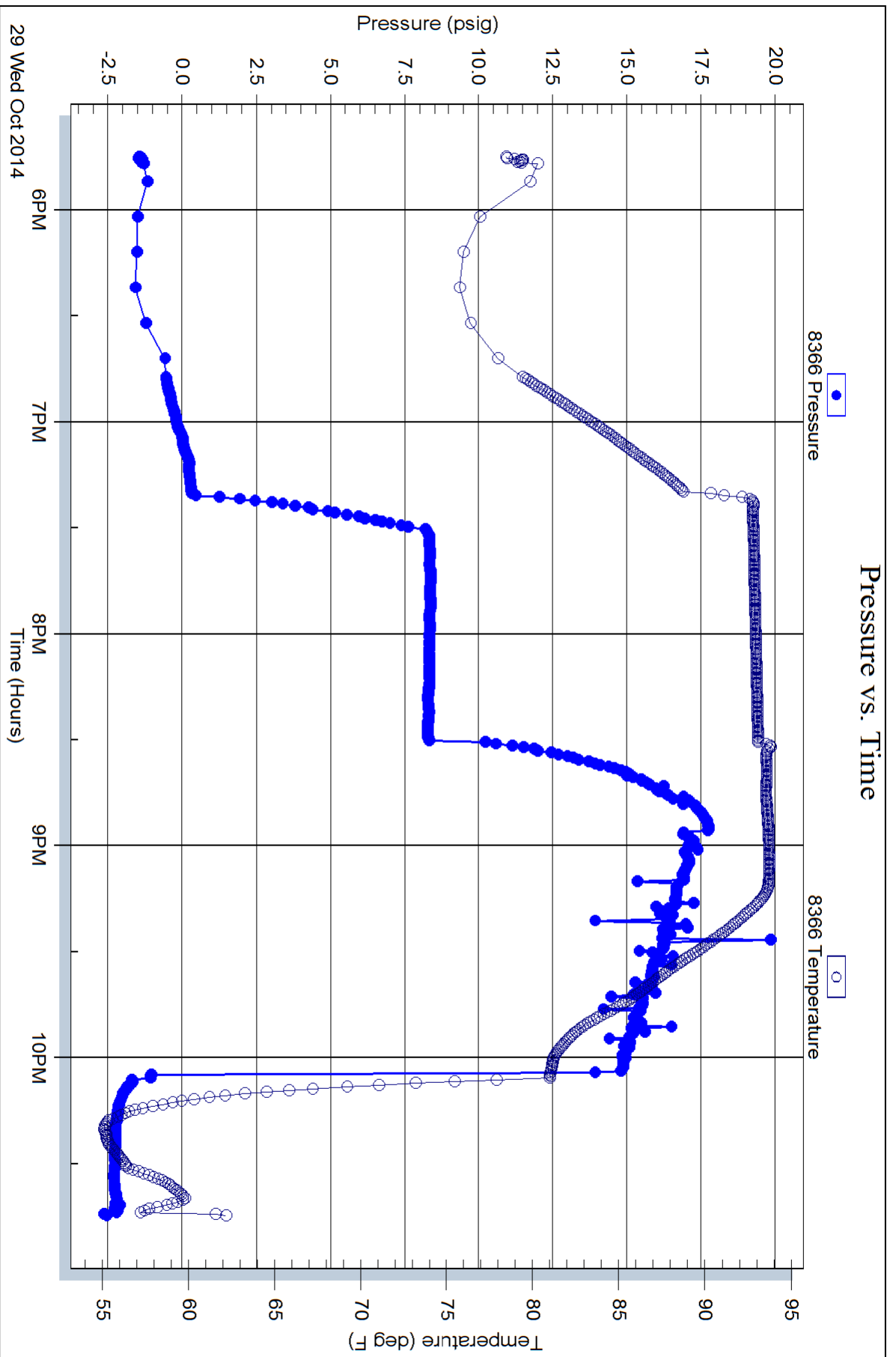
Serial #: 8366

Fluid

Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 5





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

Well Name: Marian et al 1-1
Well Id:
Location: Sec. 1 5S 24W Norton County, Kansas
License Number: 15-137-20720-0000
Spud Date: Oct. 23, 2014
Surface Coordinates: 2668' FNL & 1760' FWL
Region: Wildcat
Drilling Completed: Oct. 30, 2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2340' K.B. Elevation (ft): 2348'
Logged Interval (ft): 3175' To: 3945' Total Depth (ft): 3945'
Formation:
Type of Drilling Fluid: Natural Chemical


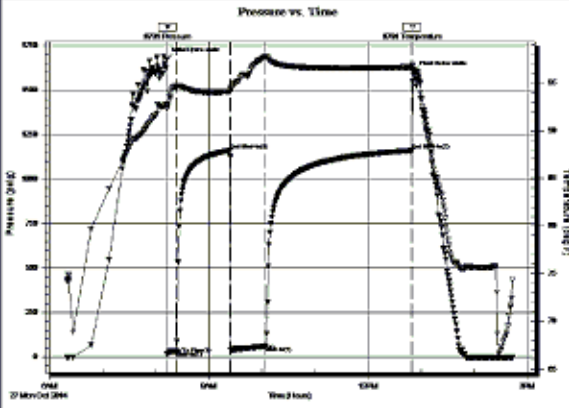
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

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
8918 5Th St
Great Bend, Ks. 67530
1-580-652-3924
1-888-543-8378

TRILOBITE TESTING, INC.		DRILL STEM TEST REPORT																																									
		Samuel Gary Jr. & Associates 1515 Wynkoop STE 700 Denver, CO 80202 ATTN: Dan Pritchard	1/5s/24w Norton KS Marian et al #1-1 Job Ticket: 60098 DST#: 1 Test Start: 2014.10.27 @ 06:20:00																																								
GENERAL INFORMATION:																																											
Formation:	Toronto - LKC "A"																																										
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)																																								
Time Tool Opened:	08:13:00		Tester: James Winder																																								
Time Test Ended:	14:43:15		Unit No: 57																																								
Interval:	3438.00 ft (KB) To 3480.00 ft (KB) (TVD)		Reference Elevations: 2348.00 ft (KB)																																								
Total Depth:	3480.00 ft (KB) (TVD)		2340.00 ft (CF)																																								
Hole Diameter:	7.88 inches	Hole Condition: Fair	KB to GRVCF: 8.00 ft																																								
Serial #: 8791	Inside																																										
Press@RunDepth:	61.49 psig @ 3439.00 ft (KB)	Capacity:	8000.00 psig																																								
Start Date:	2014.10.27	End Date:	2014.10.27																																								
Start Time:	06:20:05	End Time:	14:43:14																																								
		Time On Btm:	2014.10.27 @ 08:12:45																																								
		Time Off Btm:	2014.10.27 @ 12:51:30																																								
TEST COMMENT: 10 - IF: 1/4" Blow at open, built to 2 1/2" 60 - IS: No blow back 40 - FF: Blow built to 4 1/4" 160 - FS: No blow back																																											
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TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

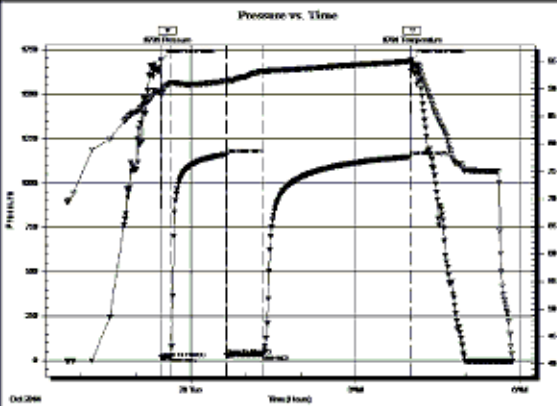
1/5s/24w Norton KS
Marian et al #1-1
 Job Ticket: 60099 **DST#: 2**
 Test Start: 2014.10.27 @ 21:45:00

GENERAL INFORMATION:

Formation: **LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:27:45
 Time Test Ended: 05:52:00
 Interval: **3478.00 ft (KB) To 3504.00 ft (KB) (TVD)**
 Total Depth: 3504.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GRVCF: 8.00 ft

Serial #: 8791 Inside
 Press@RunDepth: 35.46 psig @ 3479.00 ft (KB)
 Start Date: 2014.10.27 End Date: 2014.10.28
 Start Time: 21:45:05 End Time: 05:51:59
 Capacity: 8000.00 psig
 Last Calib.: 2014.10.28
 Time On Btm: 2014.10.27 @ 23:27:30
 Time Off Btm: 2014.10.28 @ 04:01:00

TEST COMMENT: 10 - IF: Blow built to 1"
 60 - IS: No blow back
 40 - FF: Blow started at 2 min., built to 1 1/2"
 160 - FS: No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1693.20	89.50	Initial Hydro-static
1	15.74	88.72	Open To Flow (1)
11	24.01	91.08	Shut-in(1)
72	1161.93	91.42	End Shut-in(1)
72	29.68	90.96	Open To Flow (2)
111	35.46	93.21	Shut-in(2)
273	1147.71	95.00	End Shut-in(2)
274	1693.15	94.47	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
40.00	OWCM 64%w, 26%w, 10%o	0.28

Gas Rates		
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: Dan Pritchard

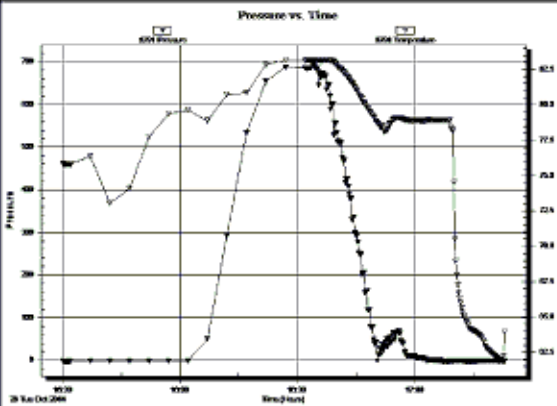
1/5s/24w Norton KS
Marian et al #1-1
 Job Ticket: 60100 **DST#: 3**
 Test Start: 2014.10.28 @ 15:30:00

GENERAL INFORMATION:

Formation: **LKC "C - E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 17:23:00
 Interval: **3506.00 ft (KB) To 3558.00 ft (KB) (TVD)**
 Total Depth: 3558.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GRVCF: 8.00 ft

Serial #: 8791 Inside
 Press@RunDepth: psig @ 3507.00 ft (KB)
 Start Date: 2014.10.28 End Date: 2014.10.28
 Start Time: 15:30:05 End Time: 17:23:00
 Capacity: 8000.00 psig
 Last Calib.: 2014.10.28
 Time On Btm:
 Time Off Btm:

TEST COMMENT: Hit bridge 25 stands going in hole
 Couldn't get tool by
 Pulled tool
 Ms-run



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

Recovery		
Length (ft)	Description	Volume (bbl)

Gas Rates		
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: Dan Pritchard

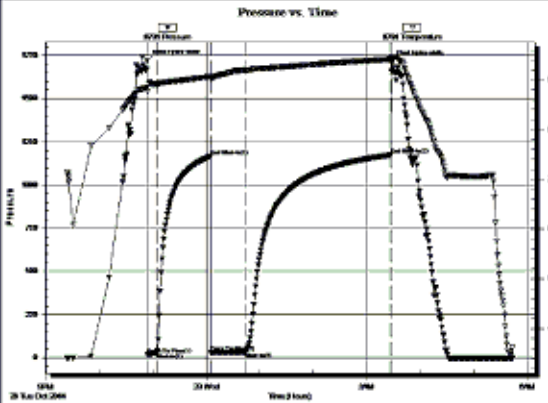
1/5s/24w Norton KS
Marian et al #1-1
 Job Ticket: 60776 **DST#: 4**
 Test Start: 2014.10.28 @ 21:24:00

GENERAL INFORMATION:

Formation: **LKC "C - E"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:54:15
 Time Test Ended: 05:43:30
 Interval: **3506.00 ft (KB) To 3558.00 ft (KB) (TVD)**
 Total Depth: 3558.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GRVCF: 8.00 ft

Serial #: 8791 Inside
 Press@RunDepth: 34.32 psig @ 3507.00 ft (KB)
 Start Date: 2014.10.28 End Date: 2014.10.29
 Start Time: 21:24:05 End Time: 05:43:29
 Capacity: 8000.00 psig
 Last Calib.: 2014.10.29
 Time On Btm: 2014.10.28 @ 22:54:00
 Time Off Btm: 2014.10.29 @ 03:27:45

TEST COMMENT: 10 - IF: 1/2" Blow at open, built to 1 1/4"
 60 - IS: No blow back
 40 - FF: Blow built to 1"
 160 - FS: No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1720.21	88.40	Initial Hydro-static
1	19.36	87.74	Open To Flow (1)
11	27.82	89.17	Shut-in(1)
71	1165.52	90.67	End Shut-in(1)
71	31.77	90.30	Open To Flow (2)
111	34.32	92.01	Shut-in(2)
273	1174.42	94.21	End Shut-in(2)
274	1714.83	94.64	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
40.00	WCM w/oil spots 68%w, 31%w, 1%o	0.28

Gas Rates		
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: Dan Pritchard

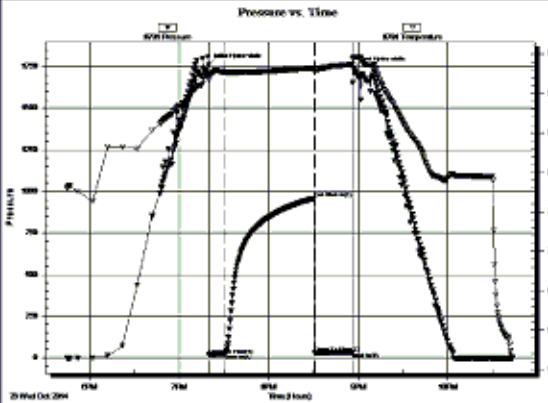
1/5s/24w Norton KS
Marian et al #1-1
 Job Ticket: 60777 **DST#: 5**
 Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

Formation: **LKC "F - H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:20:00
 Time Test Ended: 22:43:30
 Interval: **3569.00 ft (KB) To 3630.00 ft (KB) (TVD)**
 Total Depth: 3630.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GRVCF: 8.00 ft

Serial #: 8791 Inside
 Press@RunDepth: 24.07 psig @ 3570.00 ft (KB)
 Start Date: 2014.10.29 End Date: 2014.10.29
 Start Time: 17:45:05 End Time: 22:43:29
 Capacity: 8000.00 psig
 Last Calib.: 2014.10.29
 Time On Btm: 2014.10.29 @ 19:19:45
 Time Off Btm: 2014.10.29 @ 20:56:30

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
 60 - IS: No blow back
 15 - FF: Blow started at 3 min., built to almost 1/4"
 Pulled tool



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1759.64	92.49	Initial Hydro-static
1	15.32	91.65	Open To Flow (1)
12	24.07	92.71	Shut-in(1)
71	959.63	93.25	End Shut-in(1)
71	28.77	92.80	Open To Flow (2)
97	32.35	93.72	Shut-in(2)
97	1743.10	94.48	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.21

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

ROCK TYPES

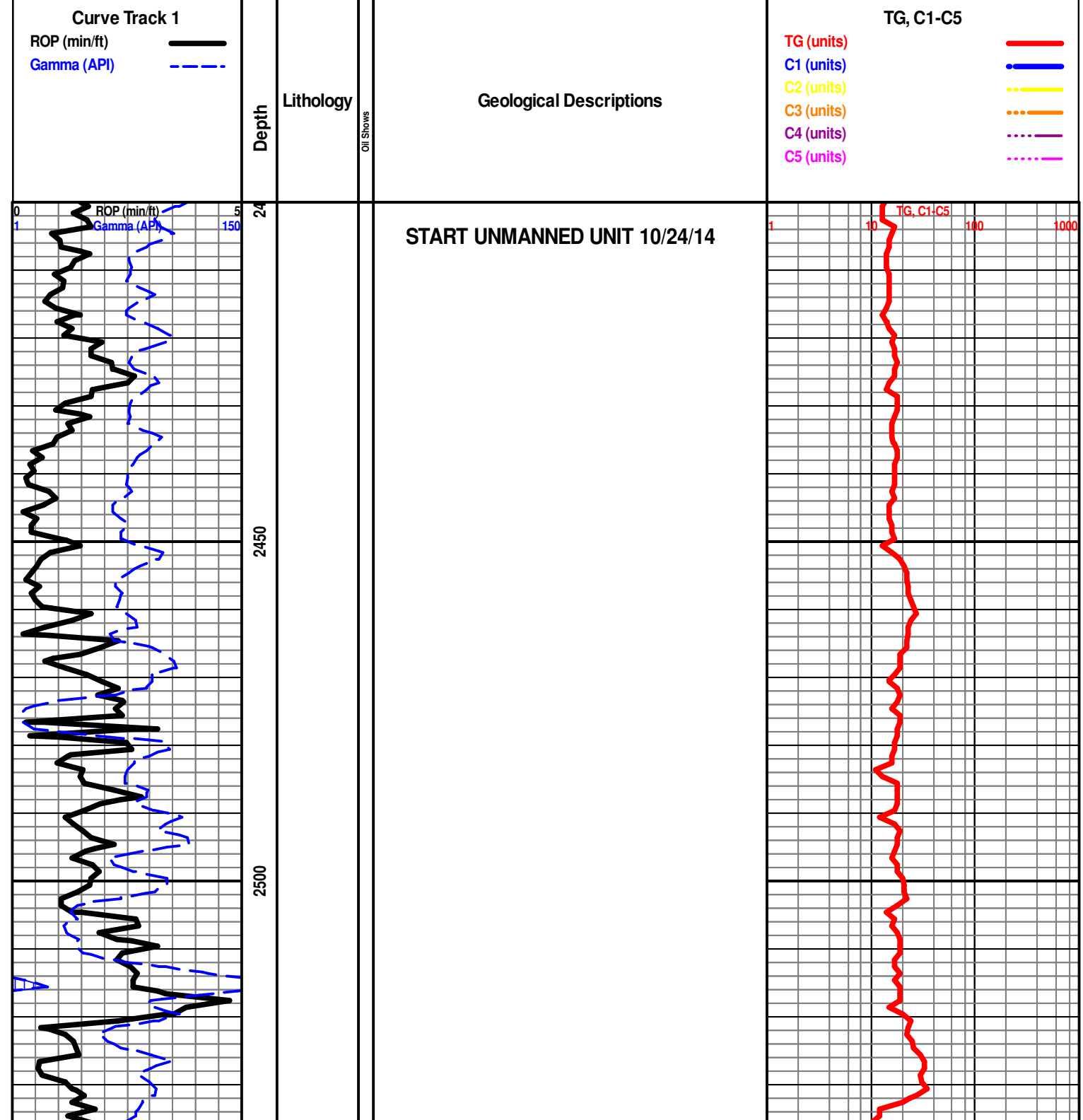
<ul style="list-style-type: none"> Anhy Bent Brec Cht Clyst Coal Congl Dol 	<ul style="list-style-type: none"> Gyp Igne Lmst Meta Mrlst Salt Shale Shcol 	<ul style="list-style-type: none"> Shgy Sltst Ss Till Carb sh Dol Dtd Gry sh 	<ul style="list-style-type: none"> Sandylms Shale Sltstn Shlyslts Sitysh Lms
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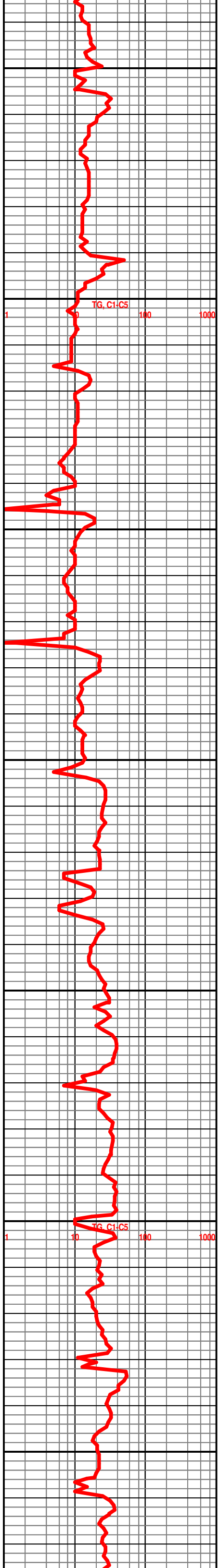
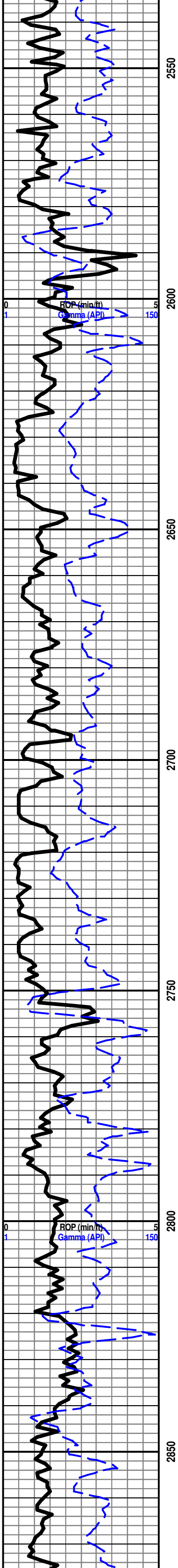
ACCESSORIES

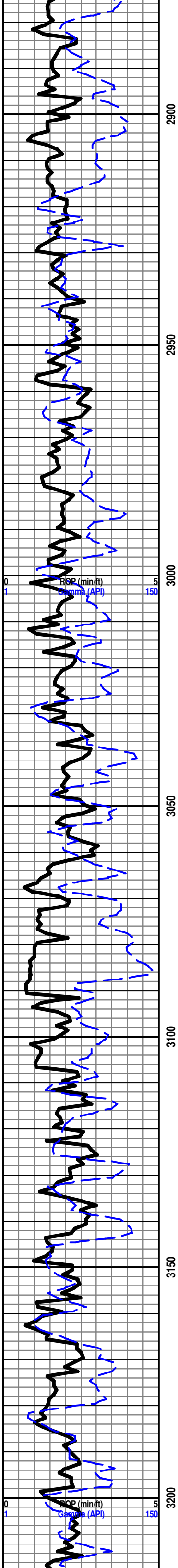
<h4>MINERAL</h4> <ul style="list-style-type: none"> Anhy Arggrn Arg Bent Bit Brecfrag Calc Carb Chtdk Chtlt Dol Feldspar Ferrpel Ferr Glau Gyp Hvymin Kaol Marl Minxl Nodule Phos Pyr 	<h4>FOSSIL</h4> <ul style="list-style-type: none"> Salt Sandy Silt Sil Sulphur Tuff Chlorite Dol Sand Sltly <h4>FOSSIL</h4> <ul style="list-style-type: none"> Algae Amph Belm Bioclst Brach Bryozoa Cephal Coral Crin Echin Fish Foram 	<h4>STRINGER</h4> <ul style="list-style-type: none"> Anhy Arg Bent Coal Dol Gyp Ls Mrst Sltstrg Ssstrg Carbsh 	<h4>Fossil</h4> <ul style="list-style-type: none"> Fossil Gastro Oolite Ostra Pelec Pellet Pisolite Plant Strom Fuss Oomold 	<h4>TEXTURE</h4> <ul style="list-style-type: none"> Boundst Chalky Cryxln Earthy Finexln Grainst Lithogr Microxln Mudst Packst Wackest
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OTHER SYMBOLS

<h4>POROSITY TYPE</h4> <ul style="list-style-type: none"> Earthy Fenest Fracture Inter Moldic Organic Pinpoint Vuggy 	<h4>SORTING</h4> <ul style="list-style-type: none"> Well Moderate Poor <h4>ROUNDING</h4> <ul style="list-style-type: none"> Rounded Subrnd Subang 	<h4>INTERVALS</h4> <ul style="list-style-type: none"> Core Dst Dst <h4>EVENTS</h4> <ul style="list-style-type: none"> Rft Sidewall 	<h4>Angular</h4> <ul style="list-style-type: none"> Angular <h4>OIL SHOWS</h4> <ul style="list-style-type: none"> Even Spotted Ques Dead Gas show
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2900

2950

3000

3050

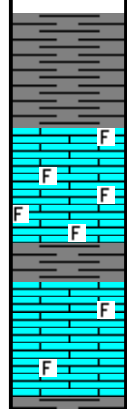
3100

3150

3200

ROP (min/ft)
Gamma (API)

ROP (min/ft)
Gamma (API)

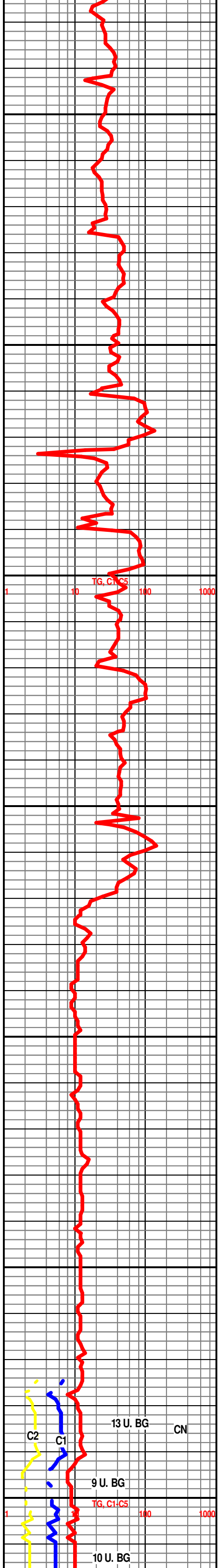


JANESVILLE SHALE 2971' -623'

START 24 HOUR MANNED UNIT
10/25/14
SH- GRN RED BRWN TO GY, FRM BLKY, SMTH TXT

LS- OFF WHT TO CRM, HD DNS, V/F TO F XLN SUCRO
MTRX, IMBD FOSS FRG THRU, TR IMBD CALC XLS IP, NO
VIS FLO, NO VIS POR, NO VIS SHOW

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



TG, C1-C5

TG, C1-C5

C2 C1
13 U. BG CN
9 U. BG
10 U. BG

RPM 70
WOB 35
PP 900

WT 8.5
VIS 56

DST#1
3438'-3480'

RPM 70
WOB 35
PP 900

WT 8.5
VIS 67

DST#2
3478'-3504'

WT 8.7
VIS 71

CFS@3504'

DST#3@4
3506'-3558'

RPM 70
WOB 35
PP 900

WT 8.9
VIS 57

ROP (mm/hr)
Gamma (API)

CFS@3442'

CFS@3504'

CFS@3504'

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

TOPEKA 3234' -886'

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

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

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

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

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

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, S-CHLKY IP, IMBD OOL THRU, TR SFT WTH CHLK IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

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

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

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

3395'-3397' LS- CRM TO LT TN W/ DOS IN 25%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, IMBD OOL IP, SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 25%, PR INTR OOL POR IN 3%, GD FLSH CUT IN 30%, GD SLW STRM IN 30%, TN LCH ON DISH

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

HEEBNER 3432' -1084'

SH- BLCK, SFT, CARB

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

3457'-3458' LS- OFF WHT TO CRM W/ TN OIL STN IN 70%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 80%, FR TO GD INTR OOL POR IN 5%, GD INSN FLSH CUT IN 80%, GD MLKY BLU SLW STRM IN 80%, DK TN LCH ON DISH, FR OIL ODOR

LANSING 3471' -1123'

3472'-3474' LS- OFF WHT TO CRM W/ TN OIL STN IN 65%, LOS IN 3%, HRD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 75%, FR TO GD INTR OOL POR IN 6%, GD FLSH CUT IN 75%, FR TO GD SLW STRM IN 75%, DK TN LCH ON DISH, GD OIL ODOR

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

LANSING "B" 3497' -1149'

3498'-3500' LS- OFF WHT CRM TO LT TN W/ TN OIL STN IN 70%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 80%, PR TO FR INTR OOL POR IN 5%, GD FLSH CUT IN 80%, FR TO GD MLKY BLU SLW STRM IN 80%, DK TN LCH ON DISH, GD OIL ODOR

3515'-3517' LS- OFF WHT TO CRM W/ TN OIL STN IN 80%, LOS IN 1%, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD FOSS FRG THRU, DUL YEL GLD FLO IN 80%, BRT YEL GLD FLO IN 5%, FR TO GD INTR FOSS POR IN 6%, GD FLSH CUT IN 90%, GD SLW STRM IN 90%, DK TN LCH ON DISH, FR OIL ODOR

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

3544'-3545' LS- CRM TO LT TN W/ TN OIL STN IN 60%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, IMBD OOL IP, BRT YEL GLD FLO IN 70%, PR IN TR OOL POR IN 3%, FR VUG POR IN 1%, WK FLSH CUT IN 70%, PR TO FR SLW STRM IN 70%, LT TN LCH ON DISH

3555'-3557' LS- OFF WHT TO CRM W/ TN OIL STN IN 40%, HD DNS, V/F TO

11 U. BG

7 U. BG

8 U. BG

8 U. BG

9 U. BG

18 U. INC

13 U. BG

13 U. BG

18 U. BG

17 U. BG

16 U. BG

15 U. BG

22 U. SH KICK

15 U. BG

12 U. BG

15 U. SHOW

10 U. BG

12 U. BG

17 U. SHOW

7 U. BG

11 U. SHOW

7 U. BG

10 U. INC

6 U. BG

C2 C1

C2 C1

C2 C1

C3 C2 C1

CN

CN

CN

CN

CN

CN

CN

CN

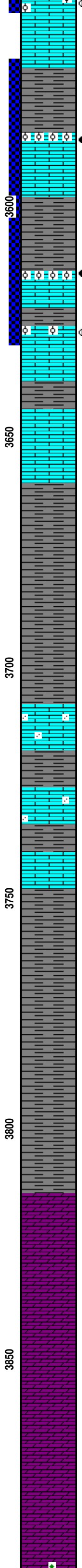
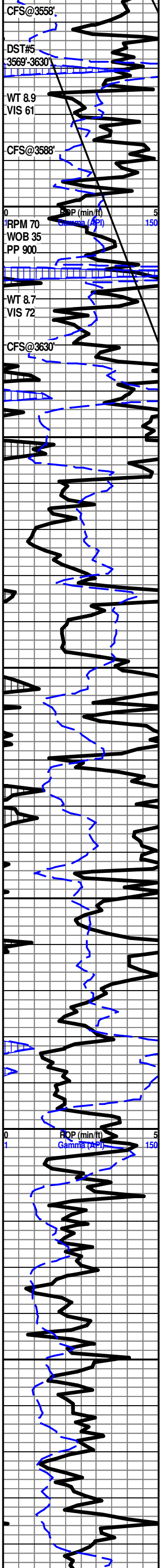
CN

CN

CN

CN

TG, C1, 100, 1000



F XLN SUCRO MTRX, S-CHLKY, IMBD OOL IP, BRT YEL GLD FLO IN 50%, TT INTR OOL POR IN 2%, POS FRCT POR, FR FLSH CUT IN 50%, PR TO FR SLW STRM IN 50%, LT TN LCH ON DISH

LANSING "F" SHALE 3570' -1222'
 SH- RED BRWN TO GY, FRM BLKY, SMTH TXT
 3585'-3586' LS- CRM TO LT TN W/ TN OIL STN IN 65%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 70%, FR TO GD INTR OOL POR IN 5%, GD FLSH CUT IN 70%, FR TO GD SLW STRM IN 70%, DK TN LCH ON DISH, NO OIL ODOR

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

LANSING "G" 3614' -1266'
 3614'-3615' LS- CRM TO LT TN W/ TN OIL STN IN 55%, LOS IN 3%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD OOL THRU, DUL YEL GLD FLO IN 60%, FR TO GD INTR OOL POR IN 5%, FR VUG POR IN 1%, GD INSTNT FLSH CUT IN 70%, V/GD FLSH CUT IN 70%, DK TN LCH ON DISH

3626'-3627' LS- LT TN TO TN W/ TN OIL STN IN 60%, LOS IN 1%, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, IMBD OOL IP, DUL YEL GLD FLO IN 60%, FR INTR OOL POR IN 3%, FR VUG POR IN 2%, GD FLSH CUT IN 60%, GD SLW STRM IN 60%, TN LCH ON DISH

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

BKC 3659' -1311'
 SH- GRN RED BRWN TO GY, FRM BLKY TO SPLNTY, SLTY TXT

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

LS- OFF WHT TO CRM, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, IMBD SM RND QRTZ XLS THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- CRM LT TN TO TN, HD DNS, V/F TO F XLN MTRX, S-SUCRO, SCAT IMBD SM S-RND TO RND QRTZ XLS THRU, NO VIS FLO, NO VIS POR, NO VIS SHOW

LS- OFF WHT TO CRM, HD DNS, V/F TO F XLN MTRX, S-SUCRO, CRM TO ORNG CHRT IN TRAY, NO VIS FLO, NO VIS POR, NO VIS SHOW

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

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

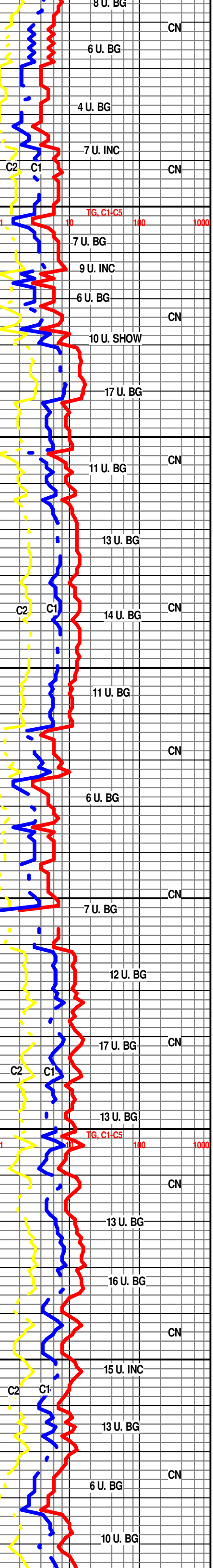
SH- RED BRWN TO GY, FRM BLKY, SLTY TXT

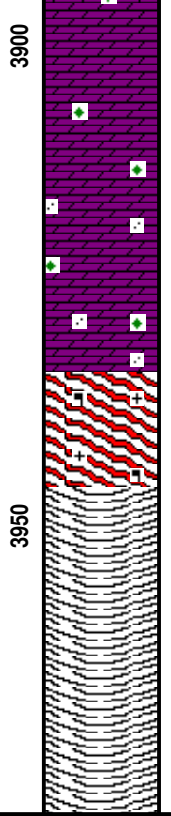
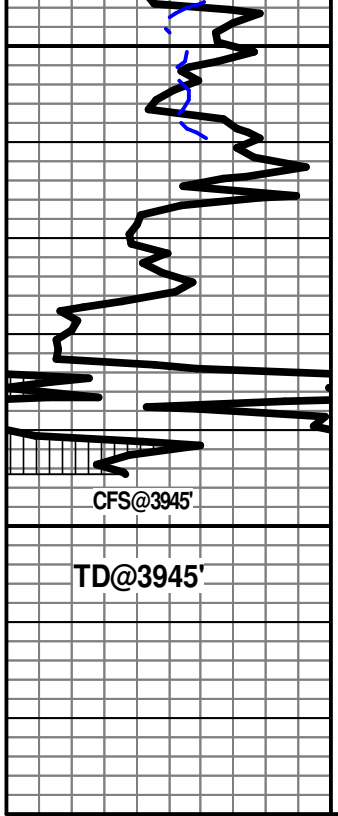
ARBUCKLE 3814' -1466'
 DOLO- WHT TO OFF WHT, HD DNS TO BRIT, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO SM S-RND TO S-ANG DOLO GRNS THRU, NO VIS FLO, TT INTR GRN POR IN 5%, NO VIS SHOW

DOLO- WHT TO OFF WHT, 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 IN TR GRN POR IN 7%, NO VIS SHOW

DOLO- CRM TO BRWN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD F TO SM S-ANG TI S-RND DOLO GNRS THRU, NO VIS FLO, PR INTR GRN POR IN 7%, NO VIS SHOW

DOLO- CRM LT TN TO TN, HD DNS TO BRIT IP, V/F TO F XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S-RND DOLO GRNS THRU, NO VIS FLO, PR INTR GRN POR IN 7%, FR TO GD VUG POR IN 3%, NO VIS SHOW





DOLO- CRM LT TN TO TN, HD DNS TO BRIT IP, V/F TO F
 XLN SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO
 S-RND DOLO GRNS THRU, IMBD CHLRTE IP, NO VIS FLO,
 TT TO PR INTR GRN POR IN 5%, NO VIS SHOW

DOLO- TN TO DK TN, HD DNS TO BRIT IP, V/F TO F XLN
 SUCRO MTRX, ABDT IMBD SM TO MD S-ANG TO S-RND
 DOLO GRNS THRU, IMBD CHLRTE IP, IMBD SM RND QRTZ
 GRNS IP, NO VIS FLO, PR TO FR INTR GRN POR IN 7%,
 NO VIS SHOW

GRANITE WASH 3933' -1585'

GRNTE- CLR FRST TO ORNG, ABDT QRTZ IN TRAY, SCAT
 FLDSPR IN TRAY, ABDT IMBD BIOTITE IN THRU, NO VIS
 FLO, NO VIS POR, NO VIS SHOW

R.T.D. @ 8:00 PM 10/30/14

CFS 1 HOUR

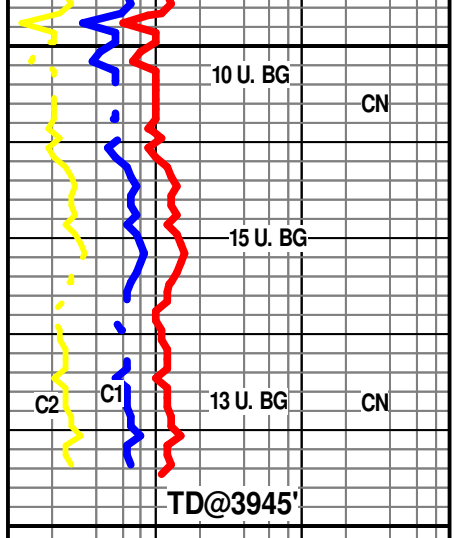
SHORT TRIP

CTCH 1.5 HOUR

DROP SURVEY

TOFL

WEATHERFORD LIBERAL



SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH

AARON SUELTER