

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1256159  
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: \_\_\_\_\_

1256159

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 1219

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3-7-15	25	10	30	Shenandoah	KS		10:45pm.
Location				Carnell 3N Binto			

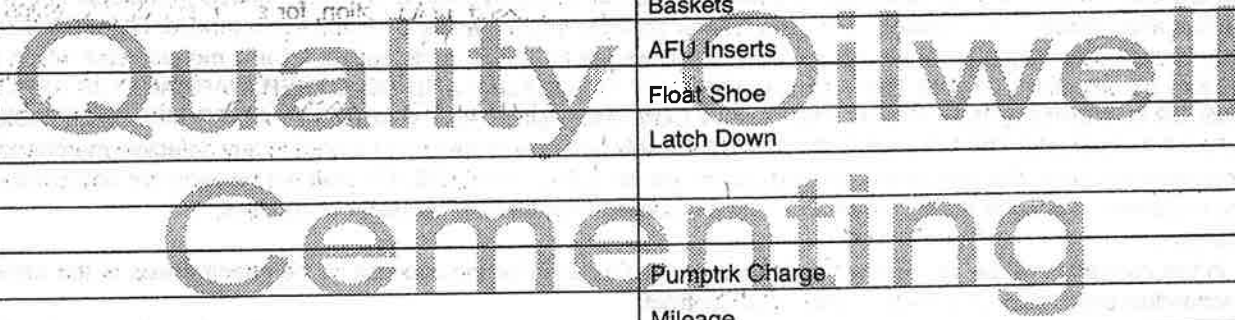
Lease	Well No.	Owner	
Kevin Zear	1-25	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Contractor	Type Job	Charge To	
Discovery #4	Surface	Sam Law	
Hole Size	T.D.	Street	
12 1/4	344		
Csg.	Depth	City	
8 5/8	344		
Tbg. Size	Depth	State	
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered	
20		250 LBM 3/11 2/12 1/2 #40	
Meas Line	Displace		
	20 1/2 BCL		

EQUIPMENT			Common
Pumptrk	No.	Cementer Helper	Poz. Mix
5		Eng	
Bulktrk	No.	Driver	Gel.
		Law	
Bulktrk	No.	Driver	Calcium
9		Law	

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

8 5/8 on bottom Est Circulation  
 Mix 250 LBM Displace  
 Cement Circulated:

FLOAT EQUIPMENT	
Guide Shoe	8 5/8
Centralizer	1
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	



Pumptrk Charge		
Mileage		
		Tax
		Discount
		Total Charge
Signature	W. Law	

# 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. 1222

Date	3-18-15	Sec.	25	Twp.	10	Range	30	County	Shenandoah	State	KS	On Location		Finish	3:00pm
								Location	Corinell 30 E into						

Lease	Kevin Zerr	Well No.	1-25	Owner		
Contractor	D. Sealey #4			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	Production String			Charge To Sam Cary Jr & Associates		
Hole Size	7 7/8	T.D.	4907			
Csg.	5 1/2 15.50	Depth	4575	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.	41.04	Shoe Joint	41.04	Cement Amount Ordered 480 #20 QMDC 1/2 #10		
Meas Line		Displace	108.8L	180 Q-Pro-C 10/ Salt 5/- Gelsite 50 gal mud clear		

**EQUIPMENT**

Pumptrk #5	No.	Cement Helperraig		Common	180 Q-Pro-C	208L KCL
Bulktrk #21	No.	Driver David		Poz. Mix	480 #20 Qmdc	
Bulktrk #9	No.	Driver Doug		Gel.		
Bulktrk #9	No.	Driver Brett		Calcium		

**JOB SERVICES & REMARKS**

Remarks:		Hulls	KCL 2 gal
Rat Hole	30SK	Salt	17
Mouse Hole	15SK	Flowseal	285#
Centralizers		Kol-Seal	900#
Baskets		Mud CLR 48	500 gal
D/V or Port Collar		CFL-117 or CD110 CAF	38

5 1/2 set @ 4575 - Est. Circulation  
Drop bail & set Triplex shoe  
Pump 50 gal mud clear + 108L water  
Spacer Cement Rutholes Mousehole  
Cement 5 1/2 - Clear lines + Displace  
Phases

**FLOAT EQUIPMENT**

Guide Shoe	Triplex shoe
Centralizer	13 Turbo's
Baskets	4
AFB inserts	2 Limit Clamps
Float Shoe	
Latch Down	1

Cement Circulated  
Lift Pressure - 1600#  
Low Pressure - 2000#

Pumptrk Charge	prod string
Mileage	22

X  
Signature *James R. Pannell*

Tax	
Discount	
Total Charge	

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

No. 1252

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

Date	3-27-15	Sec.	12	Twp.	20	Range	24	County	Gove	State	Kansas	On Location		Finish	11:00 AM
Location								ZAINNEH KS. 3N 1/2 E INTO							

Lease	KEVIN ZERR	Well No.	1-25	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	Alliance Well Serv. "HECTOR"	Type Job	Cement Backside 8 5/8 X 5 1/2	Charge To	Samuel Gray Jr. + Assoc.
Hole Size	8 5/8	T.D.	340'	Street	
Csg.	5 1/2	Depth		City	State
Tbg. Size	1"	Depth	368'	The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	250 sx 60/40 4% Gel
Cement Left in Csg.		Shoe Joint		(USED 50 SX)	
Meas Line		Displace		Common	30

**EQUIPMENT**

Pumptrk	20	No.	Cementer	GILIANA G.
			Helper	CODY B.
Bulktrk	19	No.	Driver	CHAD M.
			Driver	
Bulktrk		No.	Driver	
			Driver	

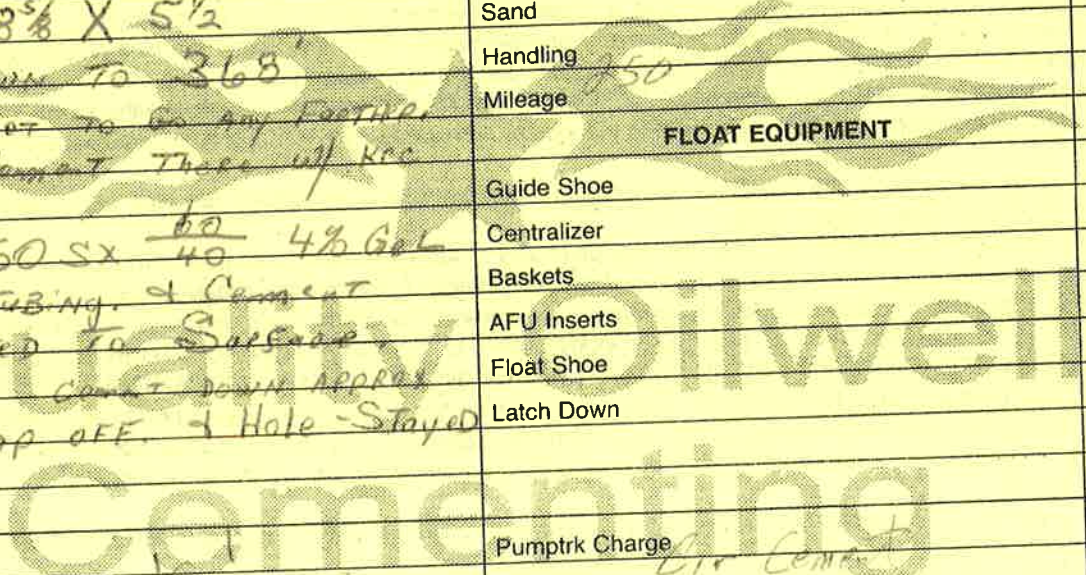
Poz. Mix	20
Gel.	2
Calcium	
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	150
Mileage	

**JOB SERVICES & REMARKS**

Remarks: ~~AS~~ State Rep Darrell <sup>KCC</sup> on loc  
Rat Hole  
Mouse Hole  
Centralizers  
Baskets  
D/V or Port Collar 8 5/8 X 5 1/2  
Ran 1" down to 368'  
COULD NOT GET TO GO ANY FURTHER  
Decide to cement there w/ KCC  
Permissions:  
Mixed 50 SX 60/40 4% Gel  
Down 1" tubing. & cement  
Circulated to surface  
Pulled 1" cement down approx  
3-5 FT/cap off. & hole stayed  
Full.

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	



Pumptrk Charge	20	Tax	
Mileage	22	Discount	
Total Charge			

X Signature *[Handwritten Signature]*

THANKS!



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

ATTN: Clayton Camozzi

Job Ticket: 62419

**DST#: 1**

Test Start: 2015.03.12 @ 06:29:00

## GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:05:45

Time Test Ended: 16:33:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 3926.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 3999.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press @ Run Depth: 472.56 psig @ 3994.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.12

End Date:

2015.03.12

Last Calib.:

2015.03.12

Start Time: 06:29:05

End Time:

16:33:00

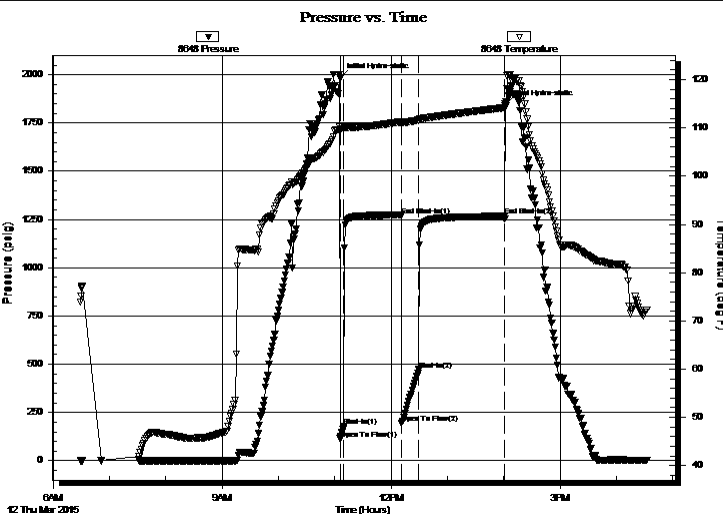
Time On Btm:

2015.03.12 @ 11:05:30

Time Off Btm:

2015.03.12 @ 14:01:30

**TEST COMMENT:** 05 - IF- B.O.B. in 2.5 minutes  
60 - IS- Surface return, died in 10 minutes.  
20 - FF- B.O.B. in 2 minutes  
90 - FS- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1983.55	110.13	Initial Hydro-static
1	113.19	109.40	Open To Flow (1)
5	178.30	109.87	Shut-In(1)
66	1271.33	111.25	End Shut-In(1)
66	194.09	110.92	Open To Flow (2)
85	472.56	111.62	Shut-In(2)
176	1267.13	114.17	End Shut-In(2)
176	1847.33	114.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	WM - Oil spots, 20%W, 80%M	0.60
372.00	WM - Oil spots, 50%W, 50%M	5.22
340.00	MW, Oil spots, 10%M, 90%W	4.77

## Gas Rates

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



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62419

**DST#: 1**

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 06:29:00

### GENERAL INFORMATION:

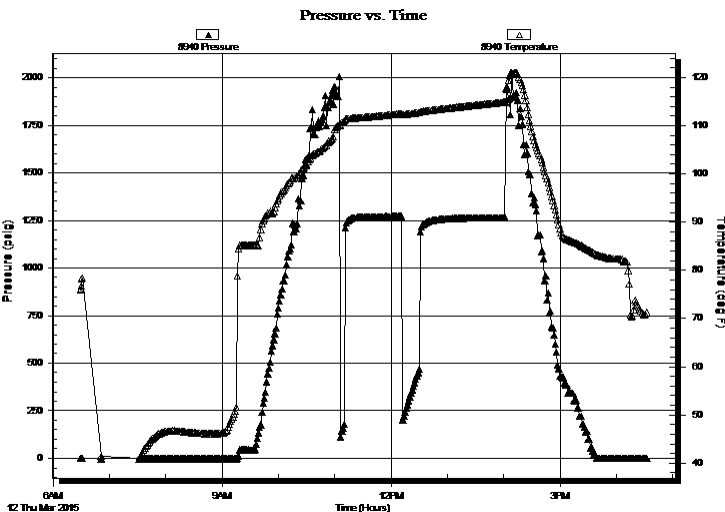
Formation: **LKC "A-C"**  
 Deviated: **No Whipstock:** ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 11:05:45  
 Tester: Cody Bloedorn  
 Time Test Ended: 16:33:00  
 Unit No: 73  
 Interval: **3926.00 ft (KB) To 3999.00 ft (KB) (TVD)**  
 Reference Elevations: 2868.00 ft (KB)  
 Total Depth: 3999.00 ft (KB) (TVD)  
 2860.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

### Serial #: 8940

### Outside

Press @ Run Depth: psig @ 3994.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.12 End Date: 2015.03.12 Last Calib.: 2015.03.12  
 Start Time: 06:29:05 End Time: 16:33:15 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 05 - IF- B.O.B. in 2.5 minutes  
 60 - IS- Surface return, died in 10 minutes.  
 20 - FF- B.O.B. in 2 minutes  
 90 - FS- No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
62.00	WM - Oil spots, 20%W, 80%M	0.60
372.00	WM - Oil spots, 50%W, 50%M	5.22
340.00	MW, Oil spots, 10%M, 90%W	4.77

### Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**25-10s-30w Sheridan KS**  
**Kevin Zerr 1-25**  
 Job Ticket: 62419 **DST#: 1**  
 Test Start: 2015.03.12 @ 06:29:00

## GENERAL INFORMATION:

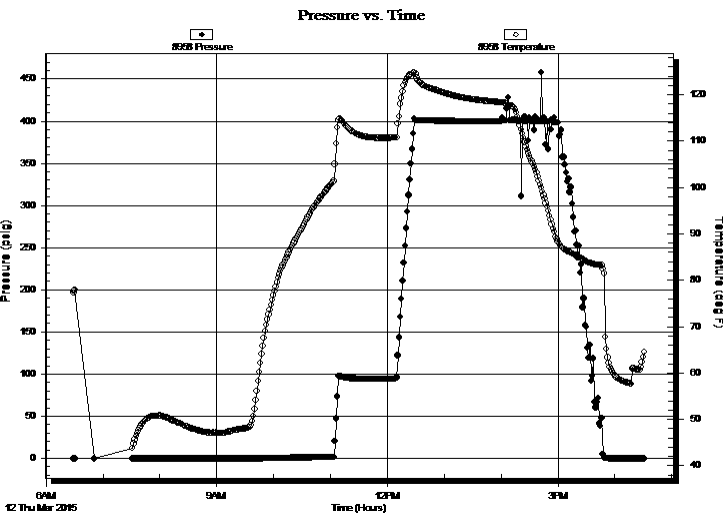
Formation: **LKC "A-C"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:05:45  
 Time Test Ended: 16:33:00  
**Interval: 3926.00 ft (KB) To 3999.00 ft (KB) (TVD)**  
 Total Depth: 3999.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Cody Bloedorn  
 Unit No: 73  
 Reference Elevations: 2868.00 ft (KB)  
 2860.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8958

## Fluid

Press @ RunDepth: psig @ 3893.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.12 End Date: 2015.03.12 Last Calib.: 2015.03.12  
 Start Time: 06:29:05 End Time: 16:32:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 05 - IF- B.O.B. in 2.5 minutes  
 60 - IS- Surface return, died in 10 minutes.  
 20 - FF- B.O.B. in 2 minutes  
 90 - FS- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	WM - Oil spots, 20%W, 80%M	0.60
372.00	WM - Oil spots, 50%W, 50%M	5.22
340.00	MW, Oil spots, 10%M, 90%W	4.77

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62419

**DST#: 1**

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 06:29:00

## 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: 127000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 4.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	WM - Oil spots, 20%W, 80%M	0.596
372.00	WM - Oil spots, 50%W, 50%M	5.218
340.00	MW, Oil spots, 10%M, 90%W	4.769

Total Length: 774.00 ft      Total Volume: 10.583 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

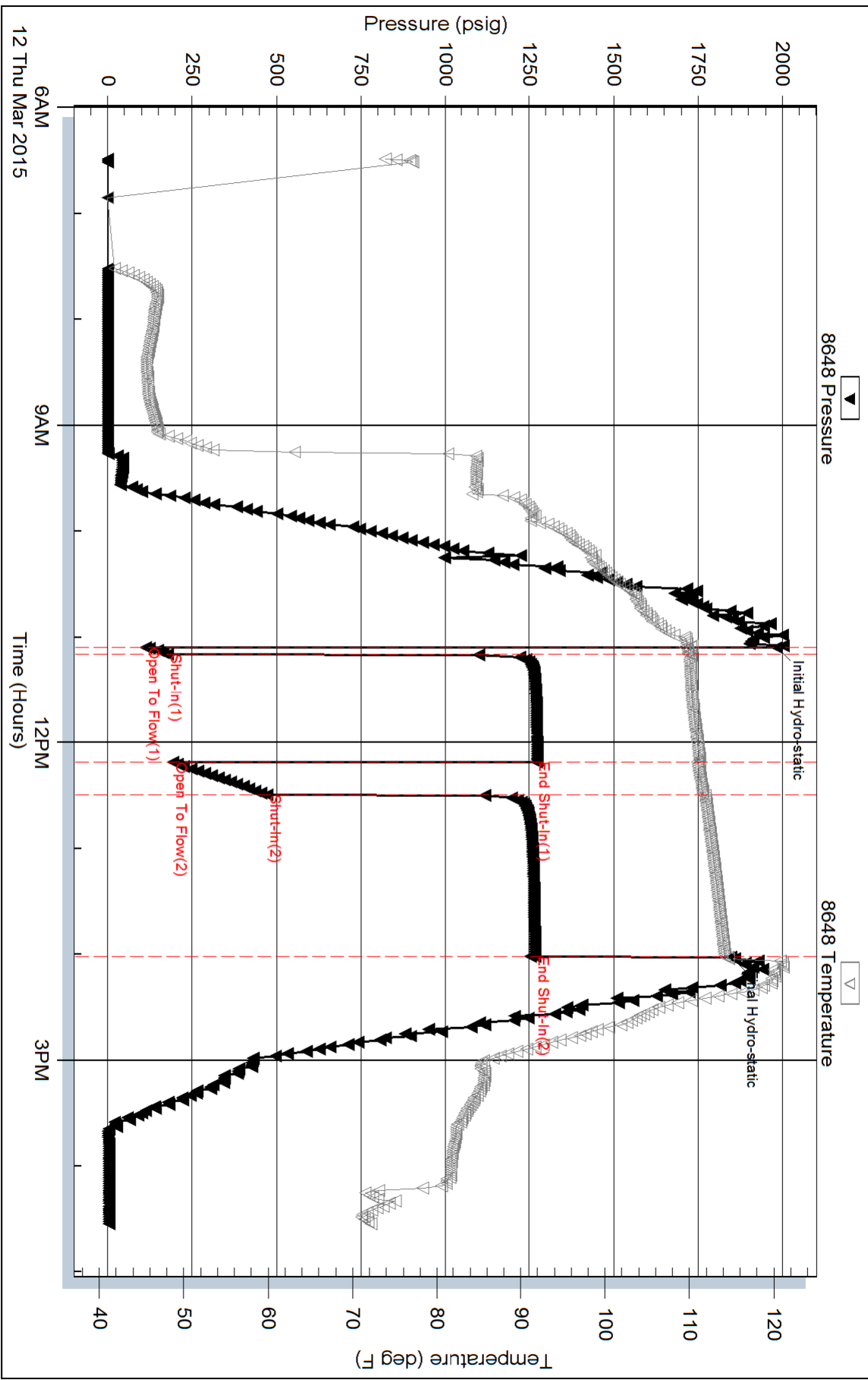
Serial #:

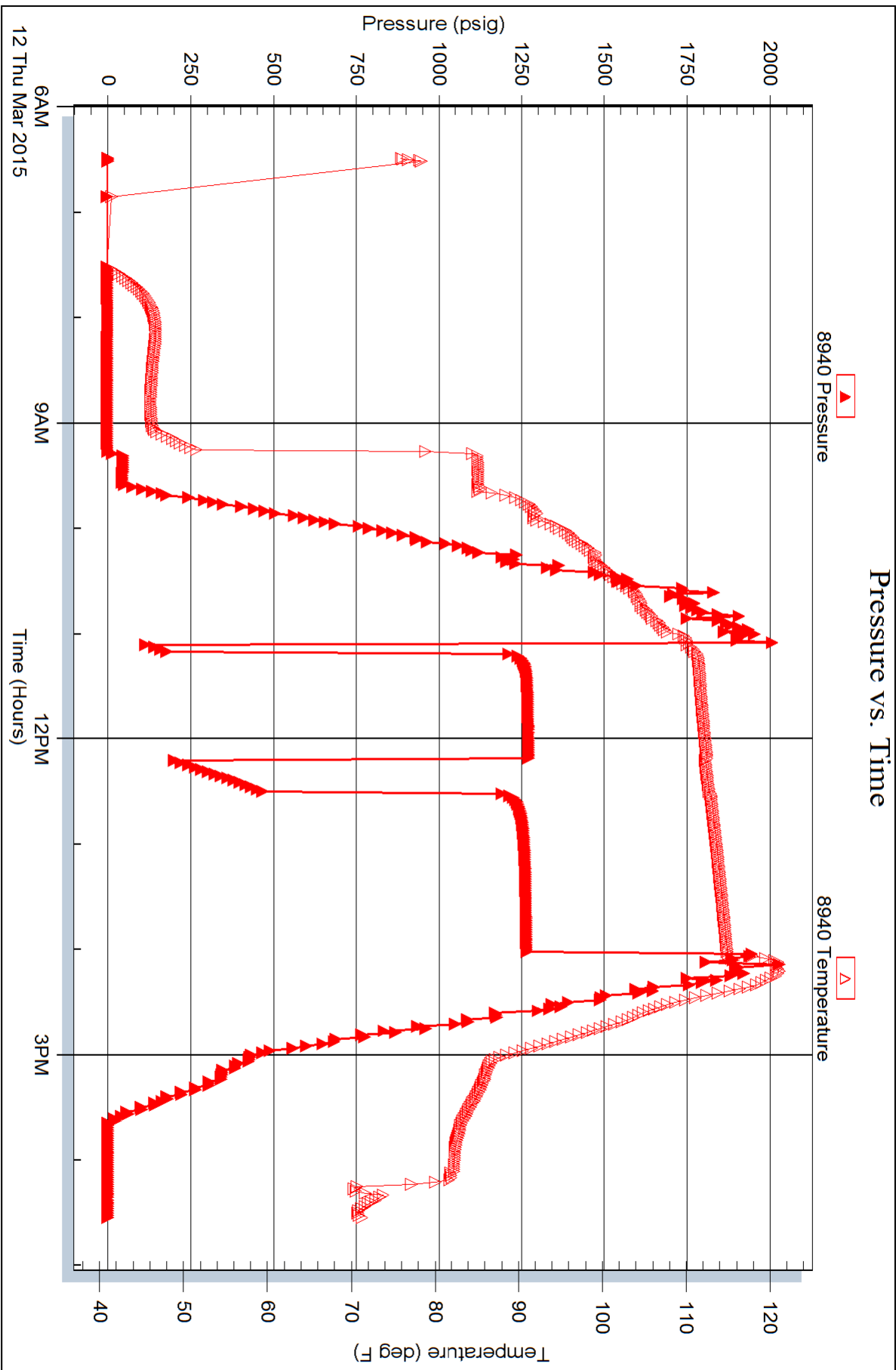
Laboratory Name:

Laboratory Location:

Recovery Comments: .06 @ 75 Degrees = 127000 = Salinity.

### Pressure vs. Time





Serial #: 8958

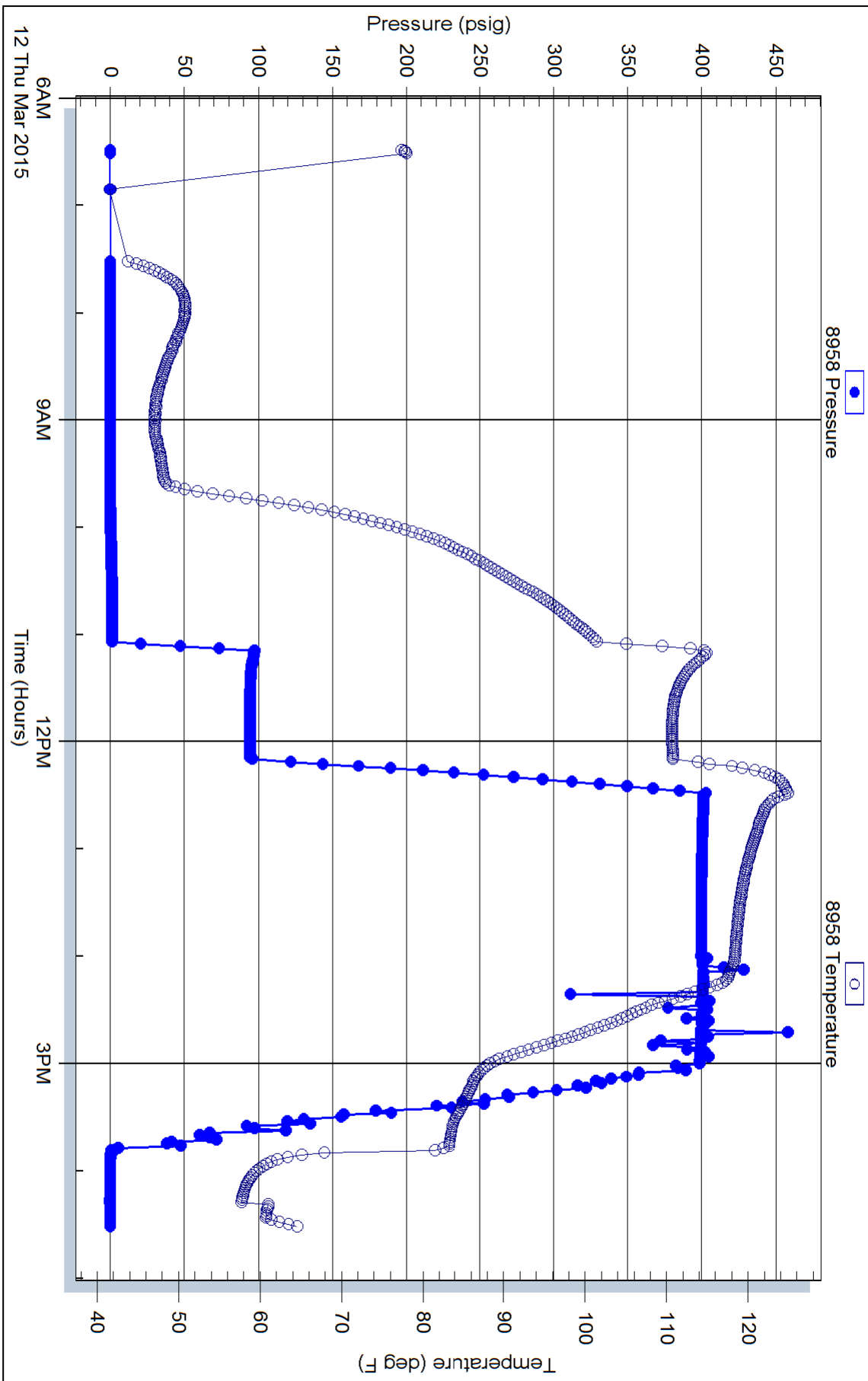
Fluid

Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 1

### Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

ATTN: Clayton Camozzi

Job Ticket: 62400

**DST#: 2**

Test Start: 2015.03.12 @ 17:53:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:22:45

Time Test Ended: 23:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 3981.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 3999.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press @ Run Depth: 479.50 psig @ 3985.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.12

End Date:

2015.03.12

Last Calib.:

2015.03.12

Start Time: 17:53:05

End Time:

23:12:44

Time On Btm:

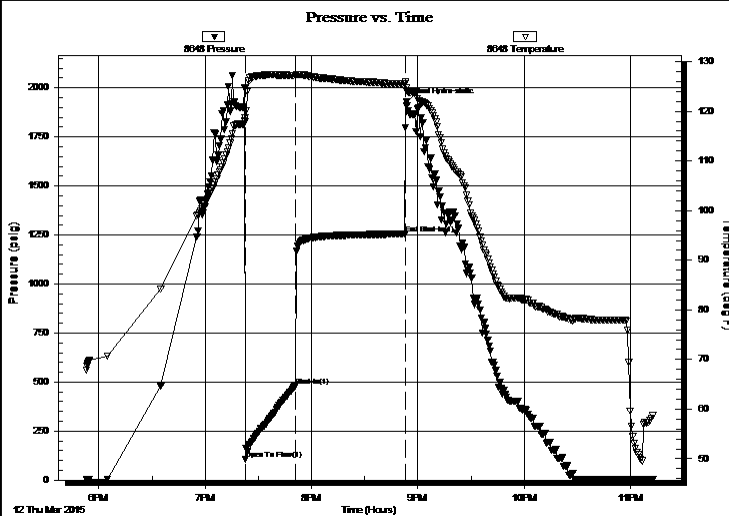
2015.03.12 @ 19:22:30

Time Off Btm:

2015.03.12 @ 20:53:30

TEST COMMENT: 30 - IF- B.O.B. in 3 minutes

60 - IS- No return \*\*\*\*Pulled Tool\*\*\*



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.66	118.69	Initial Hydro-static
1	106.93	117.97	Open To Flow (1)
29	479.50	127.23	Shut-In(1)
91	1254.63	125.54	End Shut-In(1)
91	1926.73	124.66	Final Hydro-static

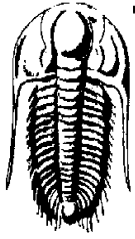
## Recovery

Length (ft)	Description	Volume (bbl)
868.00	MW, 5%M, 95%W	11.90

## 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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62400

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 17:53:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 19:22:45

Time Test Ended: 23:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 3981.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Total Depth: 3999.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8940**

**Outside**

Press @ Run Depth: psig @ 3985.00 ft (KB)

Start Date: 2015.03.12

End Date:

2015.03.12

Capacity: 8000.00 psig

Last Calib.:

2015.03.12

Start Time: 17:53:05

End Time:

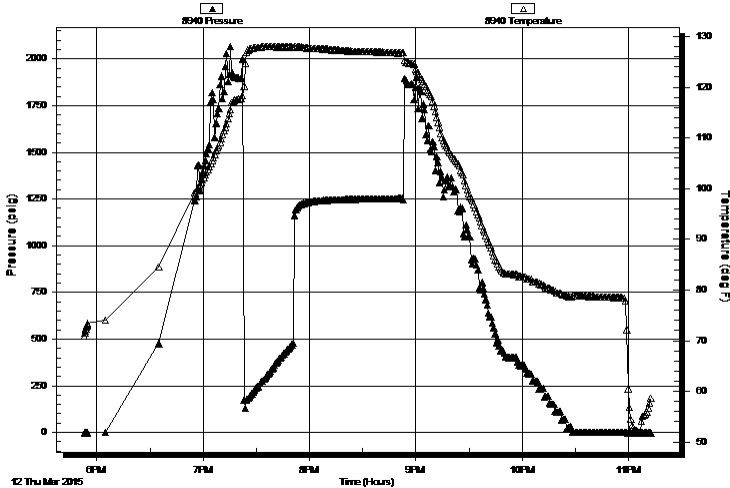
23:12:44

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30 - IF- B.O.B. in 3 minutes  
60 - IS- No return \*\*\*\*Pulled Tool\*\*\*

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
868.00	MW, 5%M, 95%W	11.90

## 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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62400

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 17:53:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:22:45

Time Test Ended: 23:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 3981.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 3999.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8958**

**Fluid**

Press@RunDepth: psig @ 3948.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.12

End Date:

2015.03.12

Last Calib.:

2015.03.12

Start Time: 17:53:05

End Time:

23:12:44

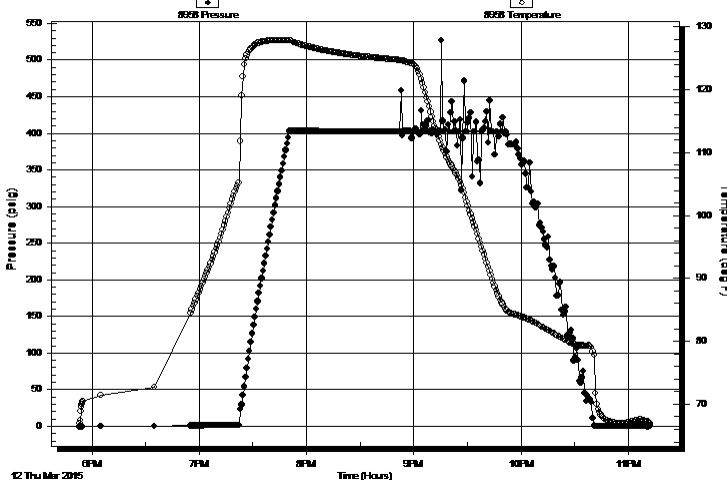
Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- B.O.B. in 3 minutes

60 - IS- No return \*\*\*\*Pulled Tool\*\*\*

**Pressure vs. Time**



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
868.00	MW, 5%M, 95%W	11.90

**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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62400

**DST#: 2**

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 17:53:00

## 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: 127000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 4.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
868.00	MW, 5%M, 95%W	11.902

Total Length: 868.00 ft      Total Volume: 11.902 bbl

Num Fluid Samples: 0

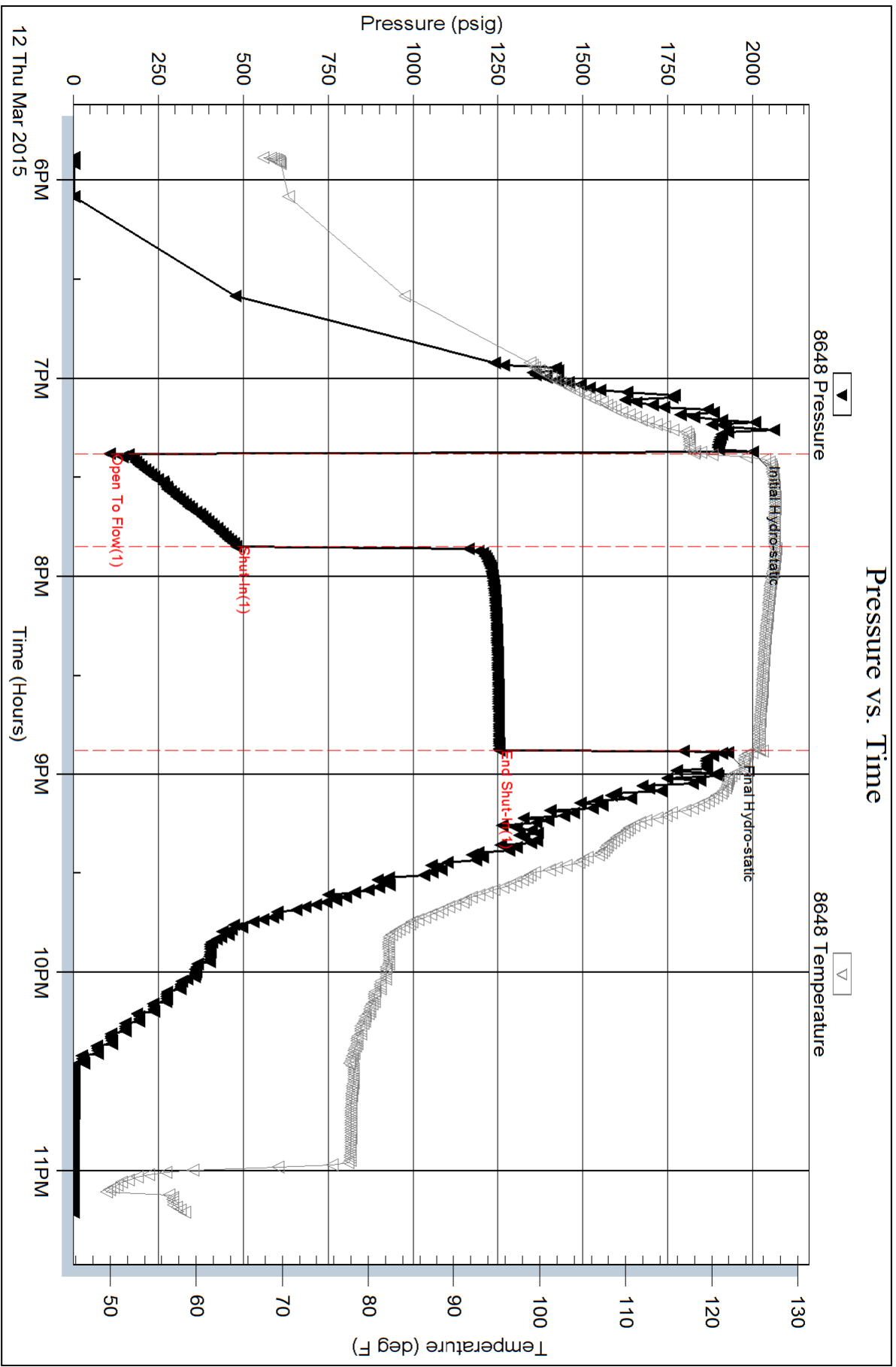
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .08 @ 55 Degrees = 127000

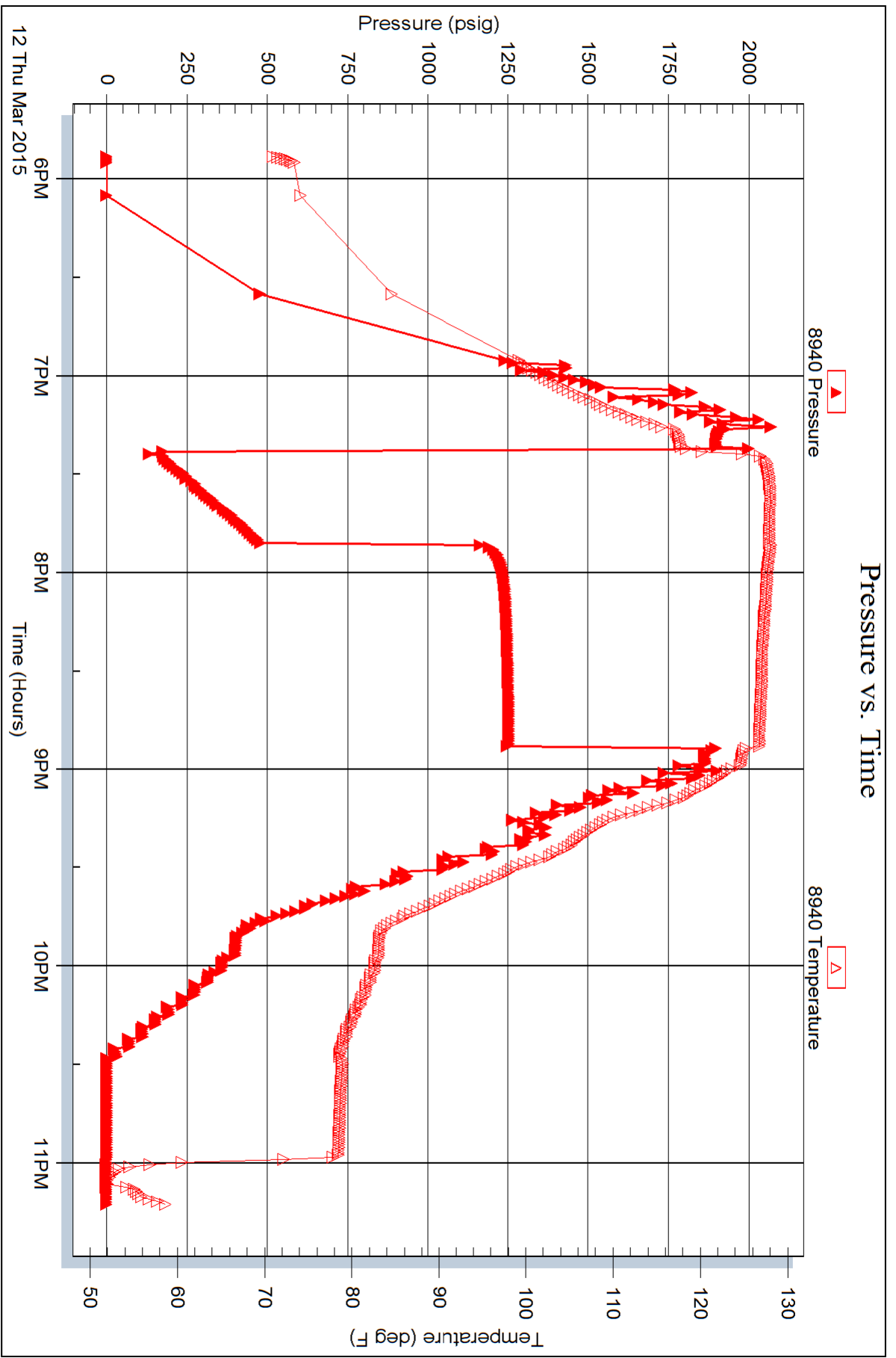


Serial #: 8940

Outside Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 2



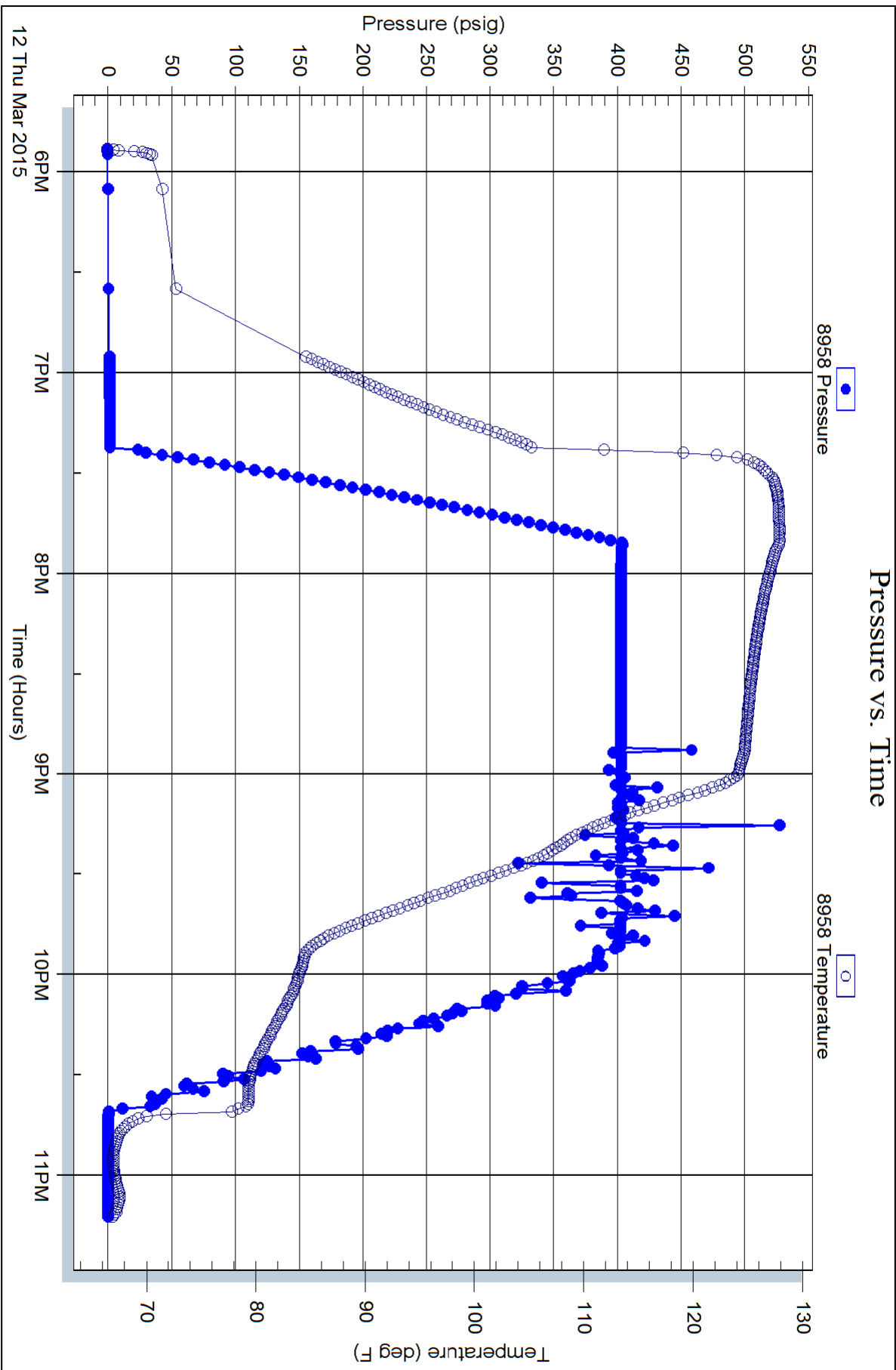
Serial #: 8958

Fluid

Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 2





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62421

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2015.03.13 @ 08:33:00

## GENERAL INFORMATION:

Formation: **LKC "D-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:00

Time Test Ended: 16:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 4001.00 ft (KB) To 4034.00 ft (KB) (TVD)**

Total Depth: 4034.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press @ Run Depth: 112.46 psig @ 4006.00 ft (KB)

Start Date: 2015.03.13

End Date:

2015.03.13

Start Time: 08:33:05

End Time:

16:37:59

Capacity: 8000.00 psig

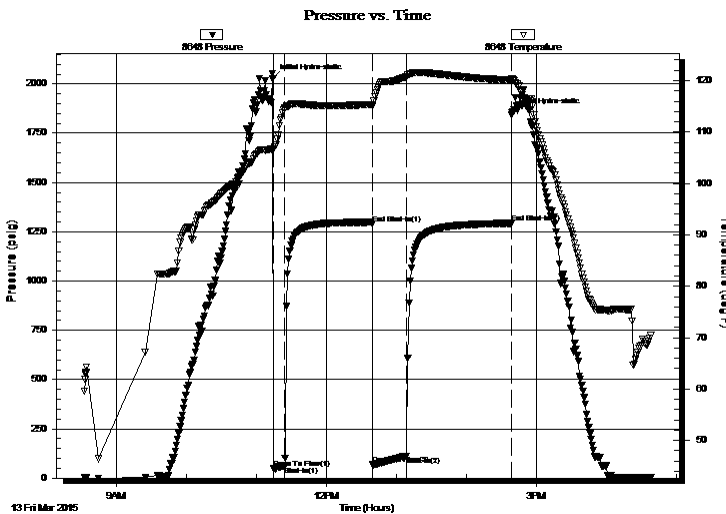
Last Calib.: 2015.03.13

Time On Btm: 2015.03.13 @ 11:14:15

Time Off Btm: 2015.03.13 @ 14:39:00

**TEST COMMENT:** 10 - IF- 3.75" blow  
75 - IS- No return  
30 - FF- 6" blow  
90 - FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2028.12	106.68	Initial Hydro-static
1	48.81	106.69	Open To Flow (1)
11	62.38	114.56	Shut-In(1)
86	1290.86	115.37	End Shut-In(1)
86	70.47	115.02	Open To Flow (2)
115	112.46	120.81	Shut-In(2)
204	1292.91	120.10	End Shut-In(2)
205	1854.99	120.22	Final Hydro-static

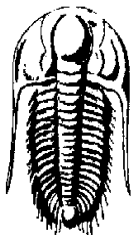
## Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW - Oil spots, 10%M, 90%W	1.47
68.00	VSOCM, 5%O, 95%M	0.95

## 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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

ATTN: Clayton Camozzi

Job Ticket: 62421

**DST#: 3**

Test Start: 2015.03.13 @ 08:33:00

## GENERAL INFORMATION:

Formation: **LKC "D-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:00

Time Test Ended: 16:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 4001.00 ft (KB) To 4034.00 ft (KB) (TVD)**

Total Depth: 4034.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8940** Outside

Press @ Run Depth: psig @ 4006.00 ft (KB)

Start Date: 2015.03.13

End Date:

2015.03.13

Start Time: 08:33:05

End Time:

16:38:14

Capacity: 8000.00 psig

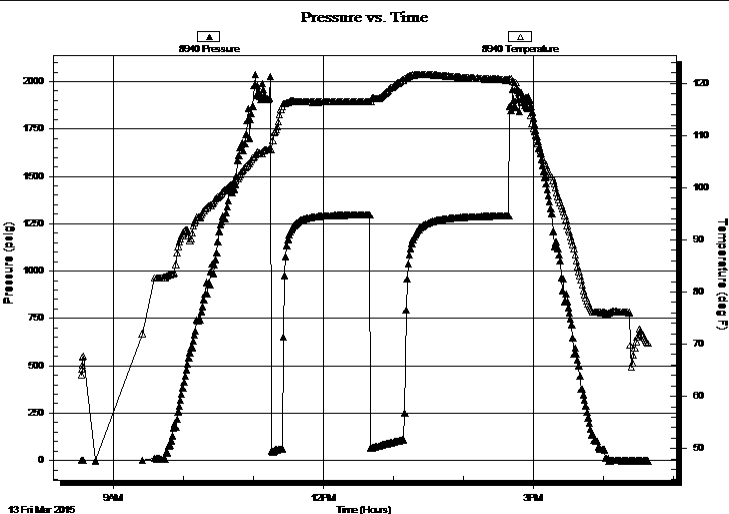
Last Calib.:

2015.03.13

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 10 - IF- 3.75" blow  
75 - IS- No return  
30 - FF- 6" blow  
90 - FS- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW - Oil spots, 10%M, 90%W	1.47
68.00	VSOCM, 5%O, 95%M	0.95

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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\* Recovery from multiple tests



**TRILOBITE**  
**TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62421

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2015.03.13 @ 08:33:00

## GENERAL INFORMATION:

Formation: **LKC "D-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:00

Time Test Ended: 16:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 4001.00 ft (KB) To 4034.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 4034.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8958 Fluid**

Press @RunDepth: psig @ 3968.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.13

End Date:

2015.03.13

Last Calib.:

2015.03.13

Start Time: 08:33:05

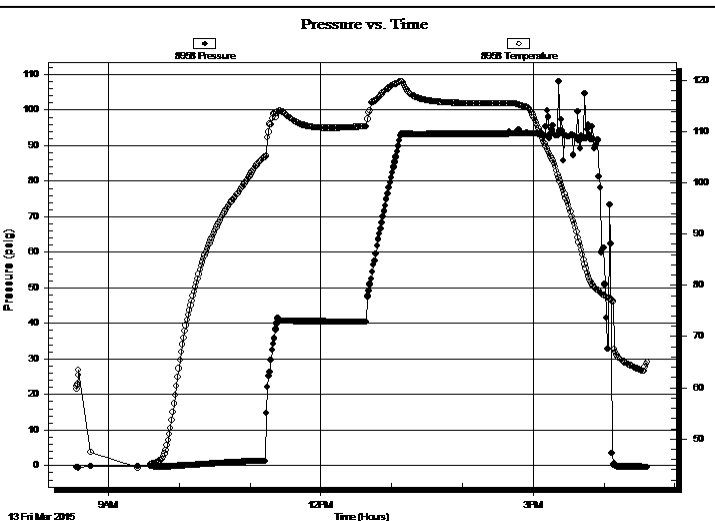
End Time:

16:37:14

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 10 - IF- 3.75" blow  
75 - IS- No return  
30 - FF- 6" blow  
90 - FS- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW - Oil spots, 10%M, 90%W	1.47
68.00	VSOCM, 5%O, 95%M	0.95

## 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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62421

**DST#: 3**

ATTN: Clayton Camozzi

Test Start: 2015.03.13 @ 08:33:00

## 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:

95000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 3.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	MW - Oil spots, 10%M, 90%W	1.466
68.00	VSOCM, 5%O, 95%M	0.954

Total Length: 192.00 ft      Total Volume: 2.420 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

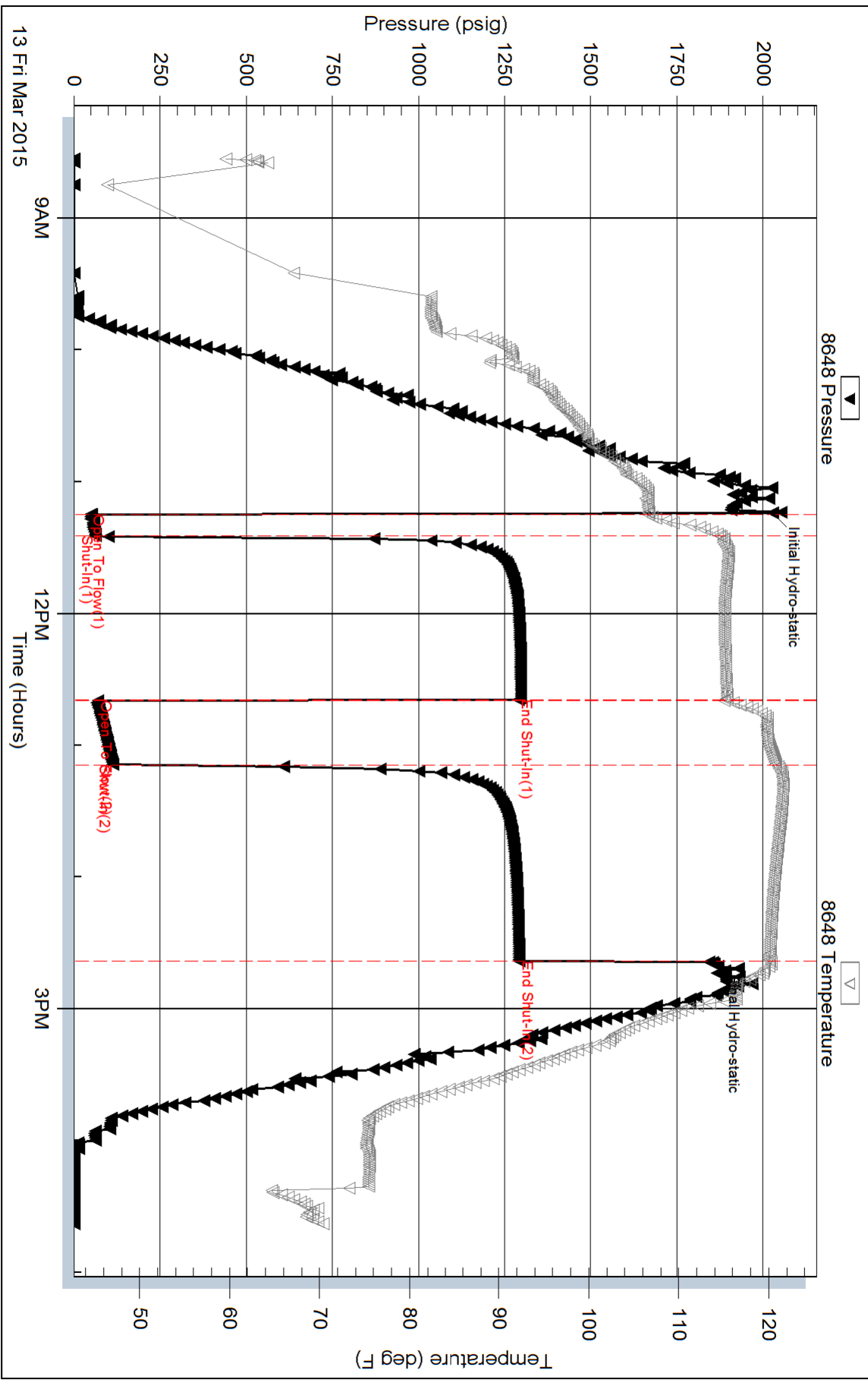
Laboratory Name:

Laboratory Location:

Recovery Comments: .08 @ 72 Degrees = 95,000 Salinity



### Pressure vs. Time

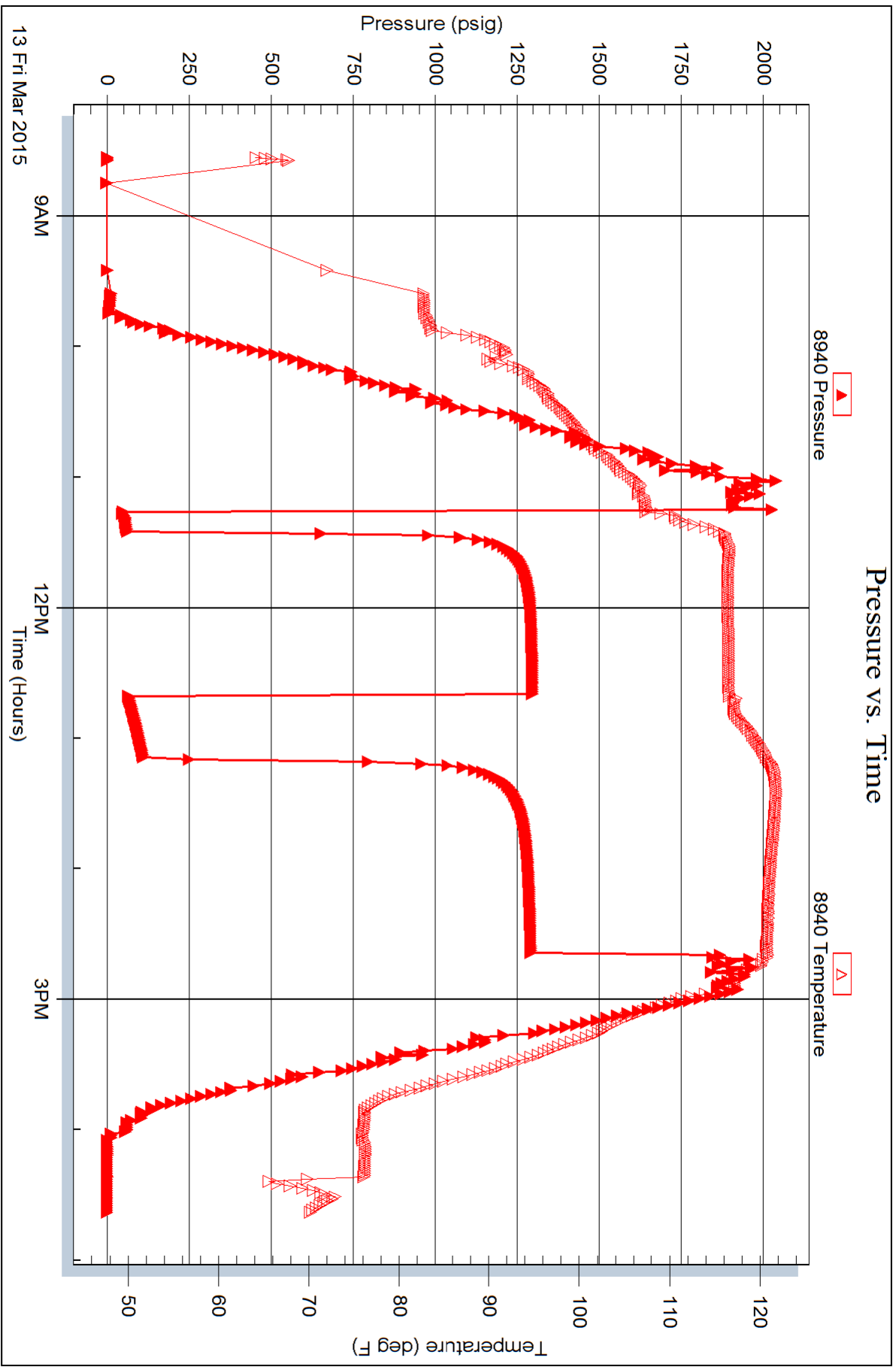


Serial #: 8940

Outside Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 3



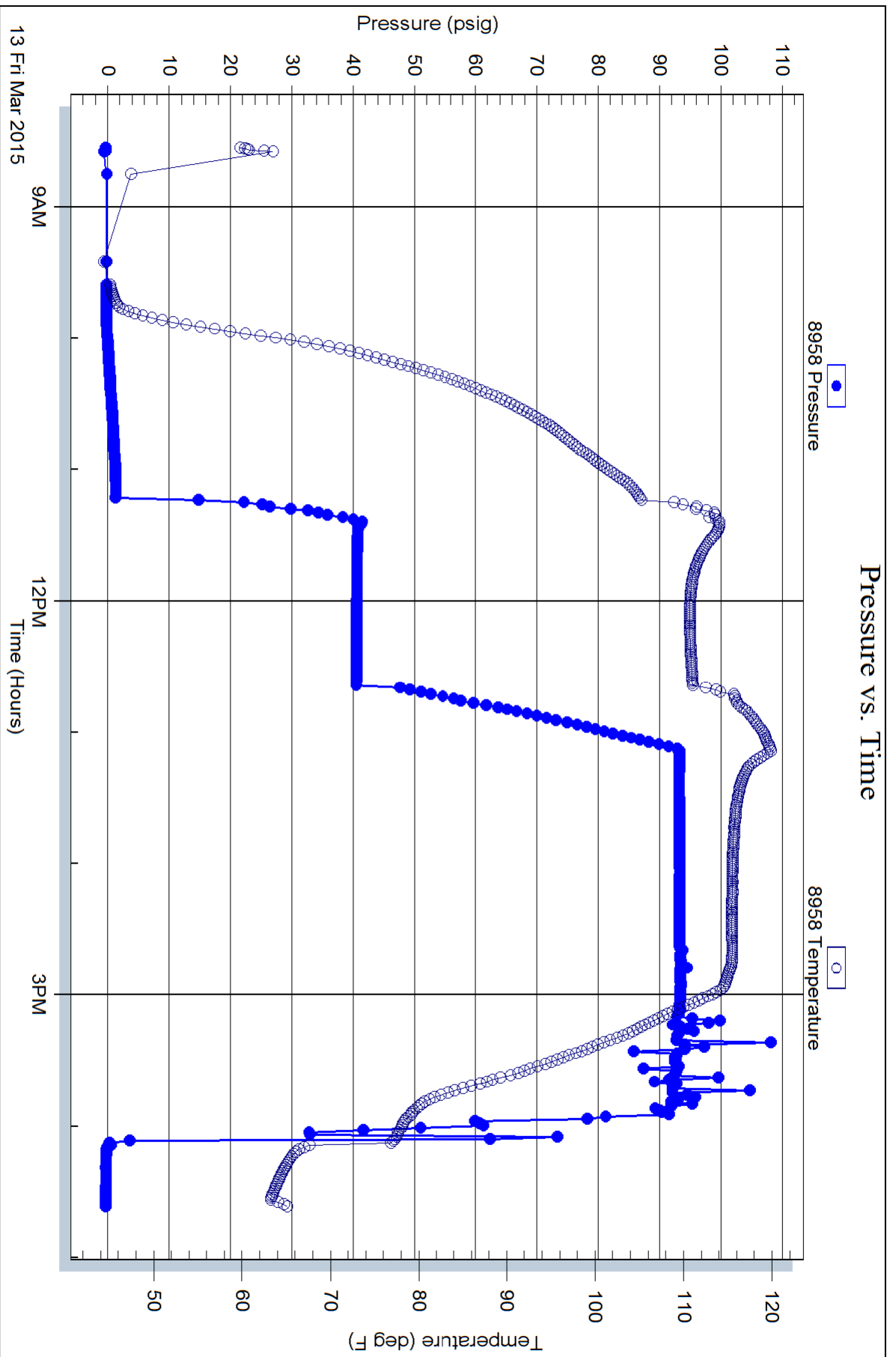
Serial #: 8958

Fluid

Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62421

Printed: 2015.03.13 @ 22:56:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

ATTN: Clayton Camozzi

Job Ticket: 62422

**DST#: 4**

Test Start: 2015.03.15 @ 04:10:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 06:04:15  
 Tester: Cody Bloedorn  
 Time Test Ended: 10:39:45  
 Unit No: 73  
 Interval: **4320.00 ft (KB) To 4366.00 ft (KB) (TVD)**  
 Reference Elevations: 2868.00 ft (KB)  
 Total Depth: 4366.00 ft (KB) (TVD)  
 2860.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

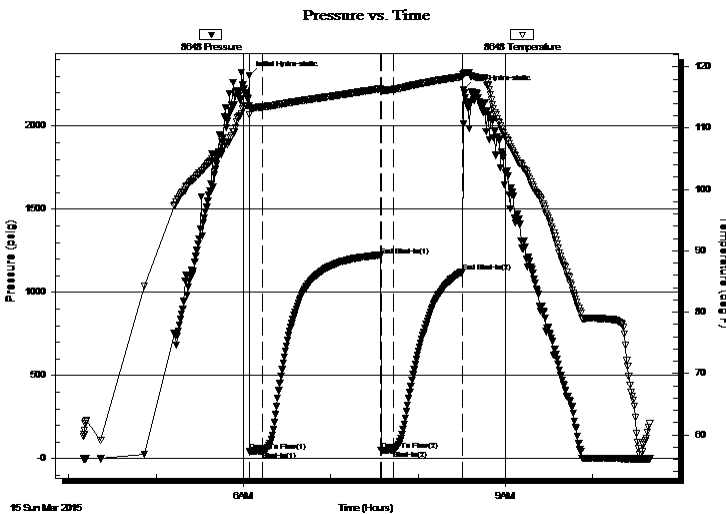
## Serial #: 8648

Inside

Press@RunDepth: 51.27 psig @ 4358.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.15 End Date: 2015.03.15 Last Calib.: 2015.03.15  
 Start Time: 04:10:05 End Time: 10:39:44 Time On Btm: 2015.03.15 @ 06:04:00  
 Time Off Btm: 2015.03.15 @ 08:31:15

TEST COMMENT: 10 - IF- 1/2" blow  
 75 - IS- No return  
 10 - FF- No blow  
 FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2304.81	113.66	Initial Hydro-static
1	43.45	112.26	Open To Flow (1)
10	46.18	113.46	Shut-In(1)
91	1218.82	116.43	End Shut-In(1)
91	50.55	115.93	Open To Flow (2)
99	51.27	116.32	Shut-In(2)
147	1124.06	118.39	End Shut-In(2)
148	2216.26	118.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.07

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

25-10s-30w Sheridan KS

1515 Wynkoop STE 700  
Denver CO, 80202

Kevin Zerr 1-25

Job Ticket: 62422

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2015.03.15 @ 04:10:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:04:15

Time Test Ended: 10:39:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: **4320.00 ft (KB) To 4366.00 ft (KB) (TVD)**

Total Depth: 4366.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches

Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

## Serial #: 8958

Outside

Press @ RunDepth: psig @ 4358.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.15

End Date: 2015.03.15

Last Calib.: 2015.03.15

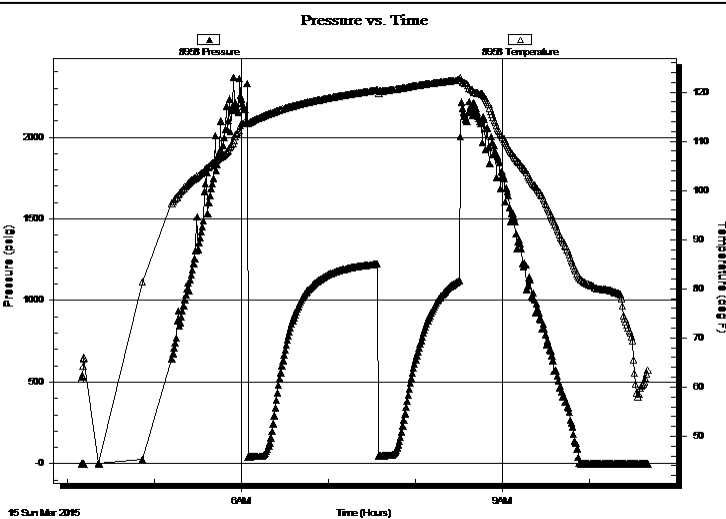
Start Time: 04:10:05

End Time: 10:40:14

Time On Btm:

Time Off Btm:

TEST COMMENT: 10 - IF- 1/2" blow  
 75 - IS- No return  
 10 - FF- No blow  
 FS- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.07

## 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 Inc  
1515 Wynkoop STE 700  
Denver CO, 80202  
ATTN: Clayton Camozzi

**25-10s-30w Sheridan KS**  
**Kevin Zerr 1-25**  
Job Ticket: 62422      **DST#: 4**  
Test Start: 2015.03.15 @ 04:10:00

### GENERAL INFORMATION:

Formation: **Pawnee**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:04:15  
Time Test Ended: 10:39:45  
Interval: **4320.00 ft (KB) To 4366.00 ft (KB) (TVD)**  
Total Depth: 4366.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

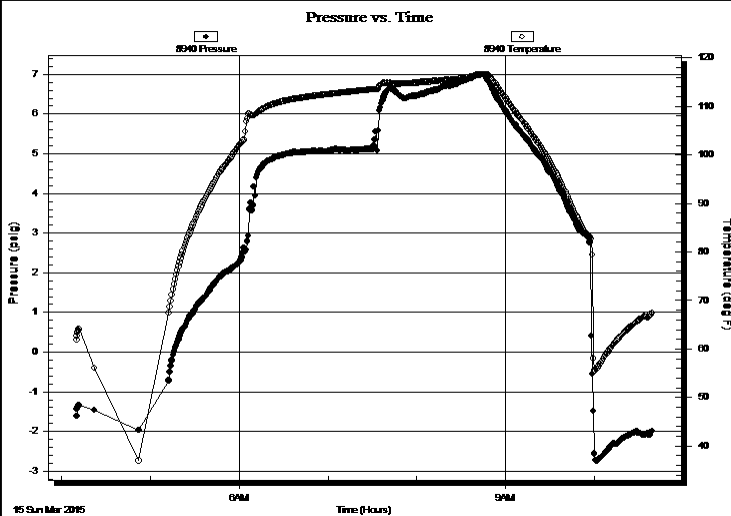
Test Type: Conventional Bottom Hole (Reset)  
Tester: Cody Bloedorn  
Unit No: 73  
Reference Elevations: 2868.00 ft (KB)  
2860.00 ft (CF)  
KB to GR/CF: 8.00 ft

### Serial #: 8940

### Fluid

Press @ Run Depth:                  psig @ 4287.00 ft (KB)                  Capacity: 8000.00 psig  
Start Date: 2015.03.15                  End Date: 2015.03.15                  Last Calib.: 2015.03.15  
Start Time: 04:10:05                  End Time: 10:39:29                  Time On Btm:  
Time Off Btm:

TEST COMMENT: 10 - IF- 1/2" blow  
75 - IS- No return  
10 - FF- No blow  
FS- No return



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.07

### 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 Inc

**25-10s-30w Sheridan KS**

1515 Wynkoop STE 700  
Denver CO, 80202

**Kevin Zerr 1-25**

Job Ticket: 62422

**DST#: 4**

ATTN: Clayton Camozzi

Test Start: 2015.03.15 @ 04:10:00

## 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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud - Oil spots, 100%M	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

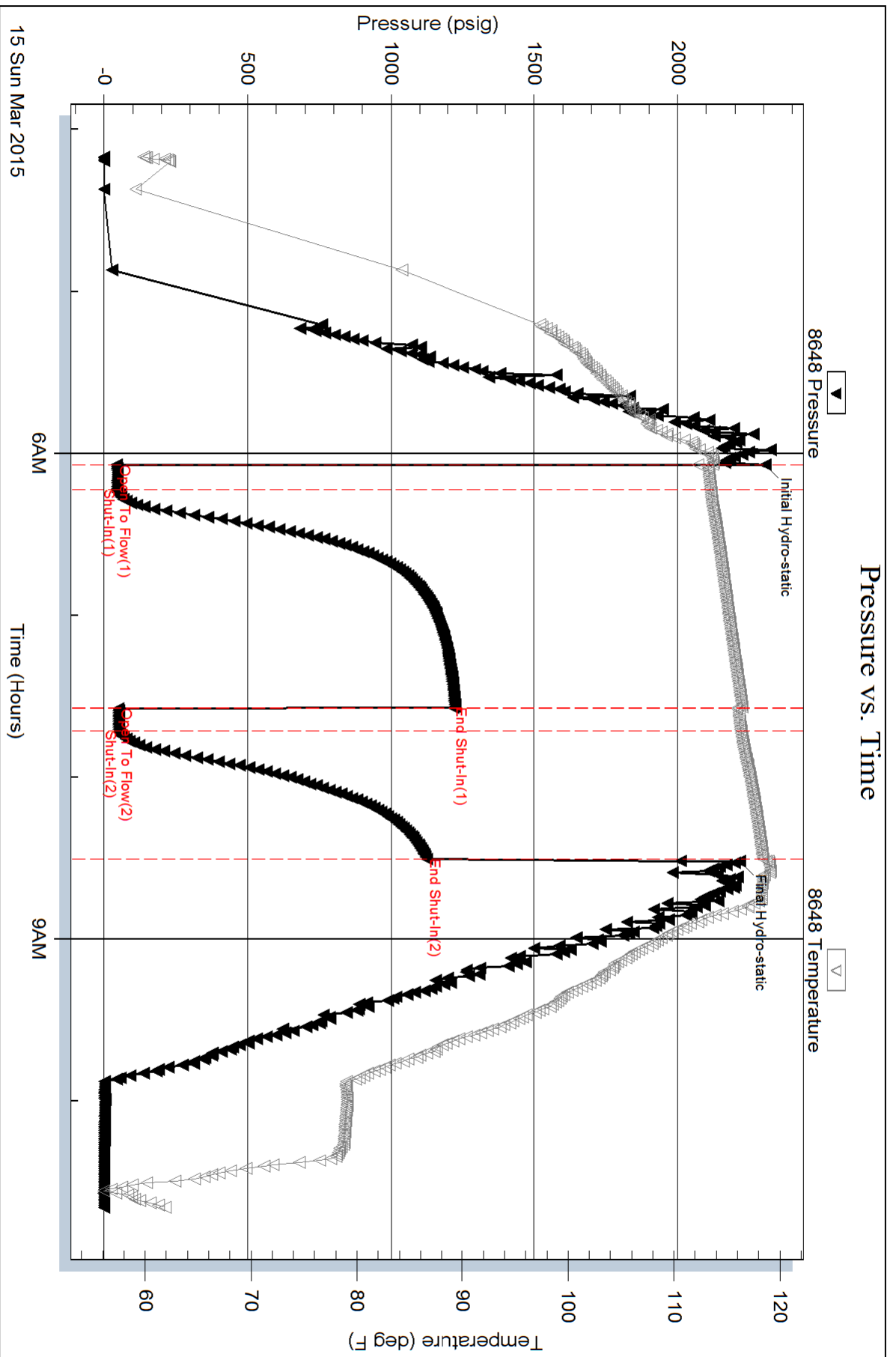
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



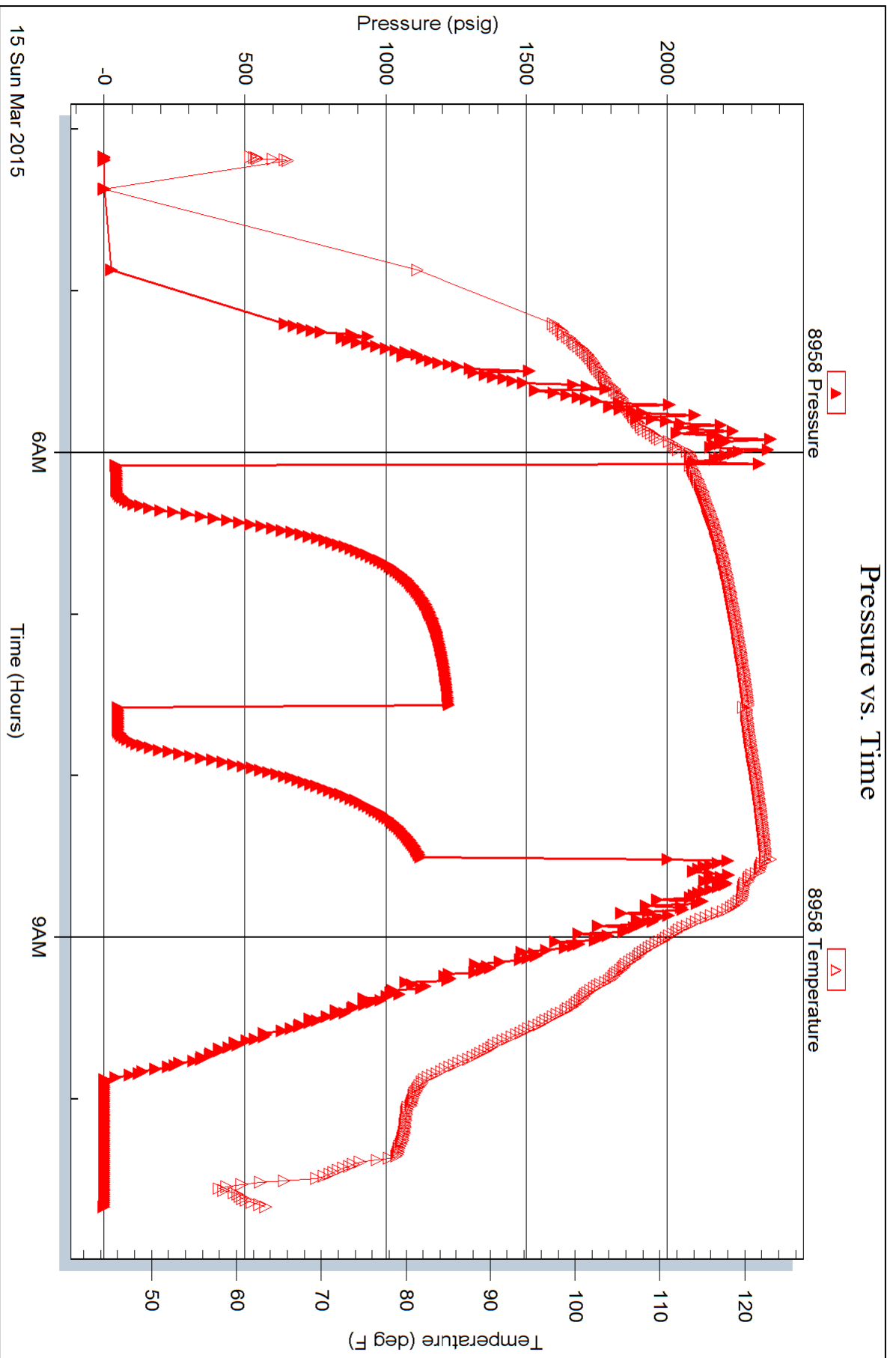


Serial #: 8958

Outside Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 4



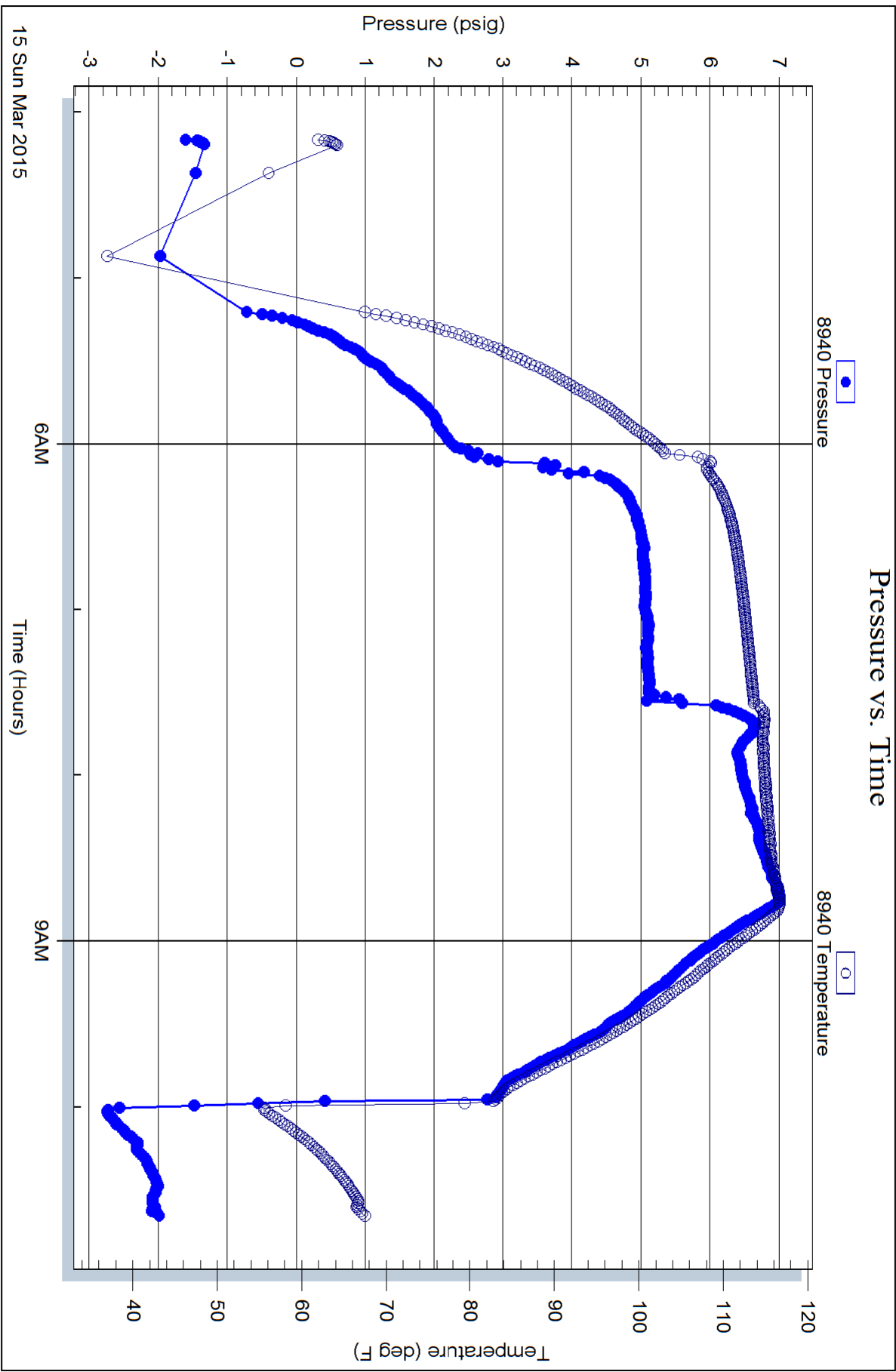
Serial #: 8940

Fluid

Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 4





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan,KS**

1515 Wynkoop STE 700  
Denver CO 80202

**Kevin Zerr 1-25**

Job Ticket: 42423

**DST#: 5**

ATTN: Clayton Camozzi

Test Start: 2015.03.17 @ 03:21:00

## GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:42:00

Time Test Ended: 11:39:45

Test Type: Conventional Straddle (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 4157.00 ft (KB) To 4214.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 4667.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press@RunDepth: 420.28 psig @ 4195.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.17

End Date:

2015.03.17

Last Calib.:

2015.03.17

Start Time:

03:21:05

End Time:

11:39:44

Time On Btm:

2015.03.17 @ 05:41:45

Time Off Btm:

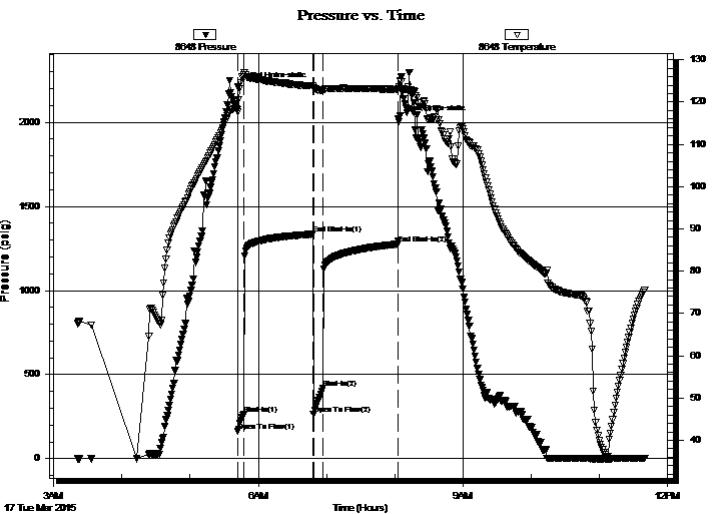
2015.03.17 @ 08:03:15

TEST COMMENT: 05 - IF- B.O.B. in 2 minutes

60 - IS- No return

10 - FF- B.O.B. in 2 minutes

60 - FS- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2209.55	118.22	Initial Hydro-static
1	162.80	117.58	Open To Flow (1)
6	265.92	126.53	Shut-In(1)
67	1335.27	123.80	End Shut-In(1)
67	265.50	123.30	Open To Flow (2)
75	420.28	122.75	Shut-In(2)
141	1275.92	122.99	End Shut-In(2)
142	2018.52	123.18	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
434.00	MW, 5%M, 95%W	5.81
372.00	MW, 50%M, 50%W	5.22
67.00	Mud - Oil spots, 100%M	0.94

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
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# DRILL STEM TEST REPORT

Samuel Gary Jr Associates Inc

**25-10s-30w Sheridan,KS**

1515 Wynkoop STE 700  
Denver CO 80202

**Kevin Zerr 1-25**

Job Ticket: 42423

**DST#: 5**

ATTN: Clayton Camozzi

Test Start: 2015.03.17 @ 03:21:00

## GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:42:00

Time Test Ended: 11:39:45

Test Type: Conventional Straddle (Reset)

Tester: Cody Bloedorn

Unit No: 73

**Interval: 4157.00 ft (KB) To 4214.00 ft (KB) (TVD)**

Reference Elevations: 2868.00 ft (KB)

Total Depth: 4667.00 ft (KB) (TVD)

2860.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8958**

**Fluid**

Press@RunDepth: psig @ 4124.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.17

End Date: 2015.03.17

Last Calib.: 2015.03.17

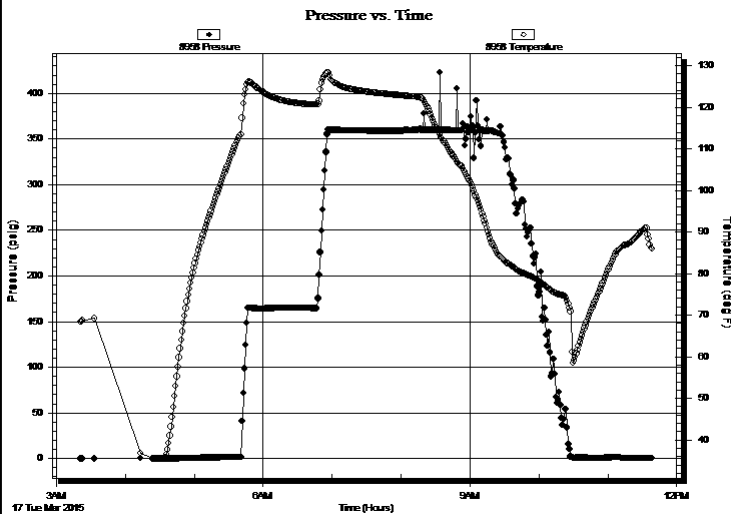
Start Time: 03:21:05

End Time: 11:39:14

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 05 - IF- B.O.B. in 2 minutes  
60 - ISI- No return  
10 - FF- B.O.B. in 2 minutes  
60 - FSI- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
434.00	MW, 5%M, 95%W	5.81
372.00	MW, 50%M, 50%W	5.22
67.00	Mud - Oil spots, 100%M	0.94

## 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 Inc

**25-10s-30w Sheridan,KS**

1515 Wynkoop STE 700  
Denver CO 80202

**Kevin Zerr 1-25**

Job Ticket: 42423

**DST#: 5**

ATTN: Clayton Camozzi

Test Start: 2015.03.17 @ 03:21:00

### 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:

95000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
434.00	MW, 5%M, 95%W	5.815
372.00	MW, 50%M, 50%W	5.218
67.00	Mud - Oil spots, 100%M	0.940

Total Length: 873.00 ft      Total Volume: 11.973 bbl

Num Fluid Samples: 0

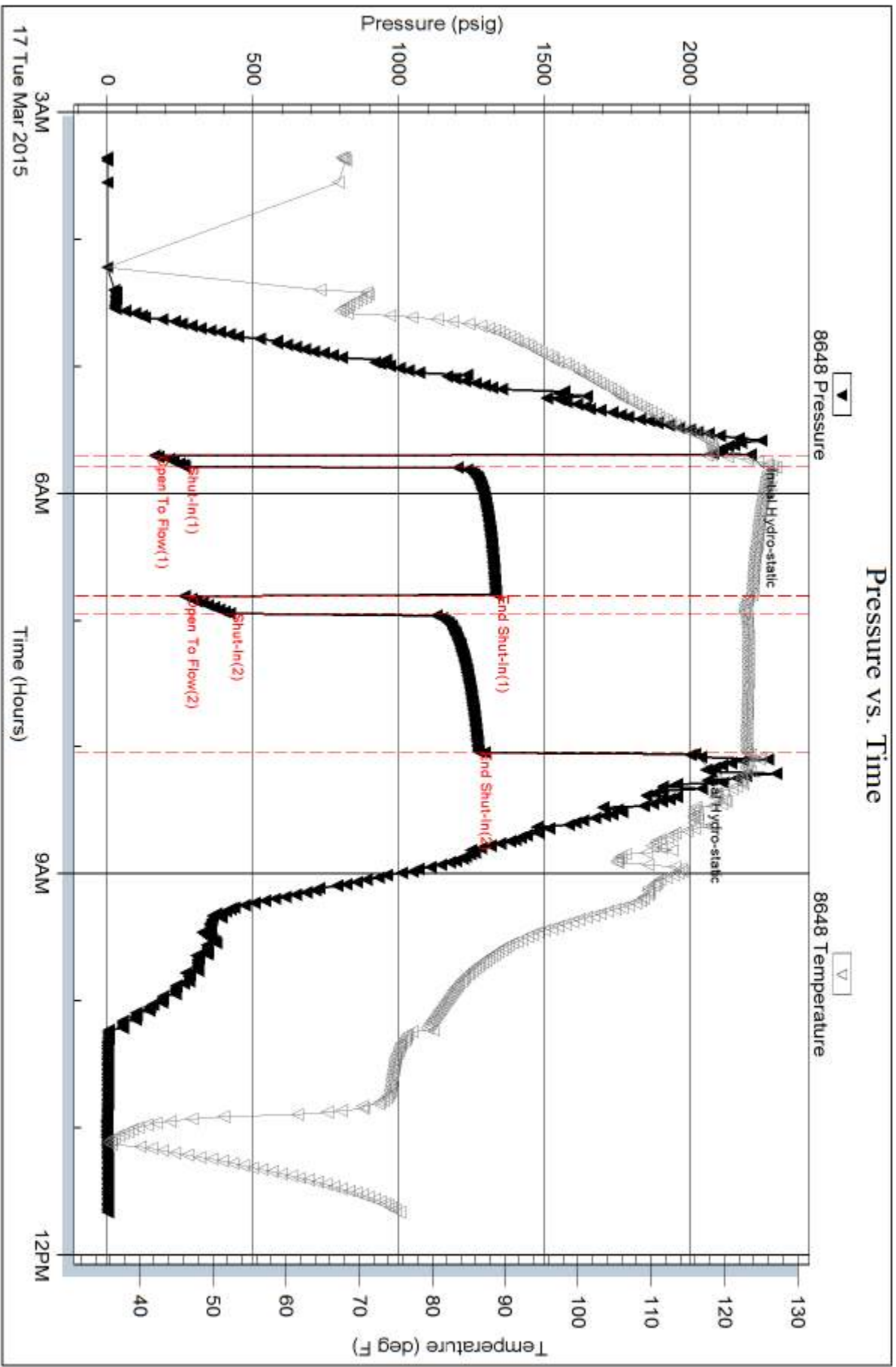
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .14 @ 39 Degrees = 95000



Serial #: 8958

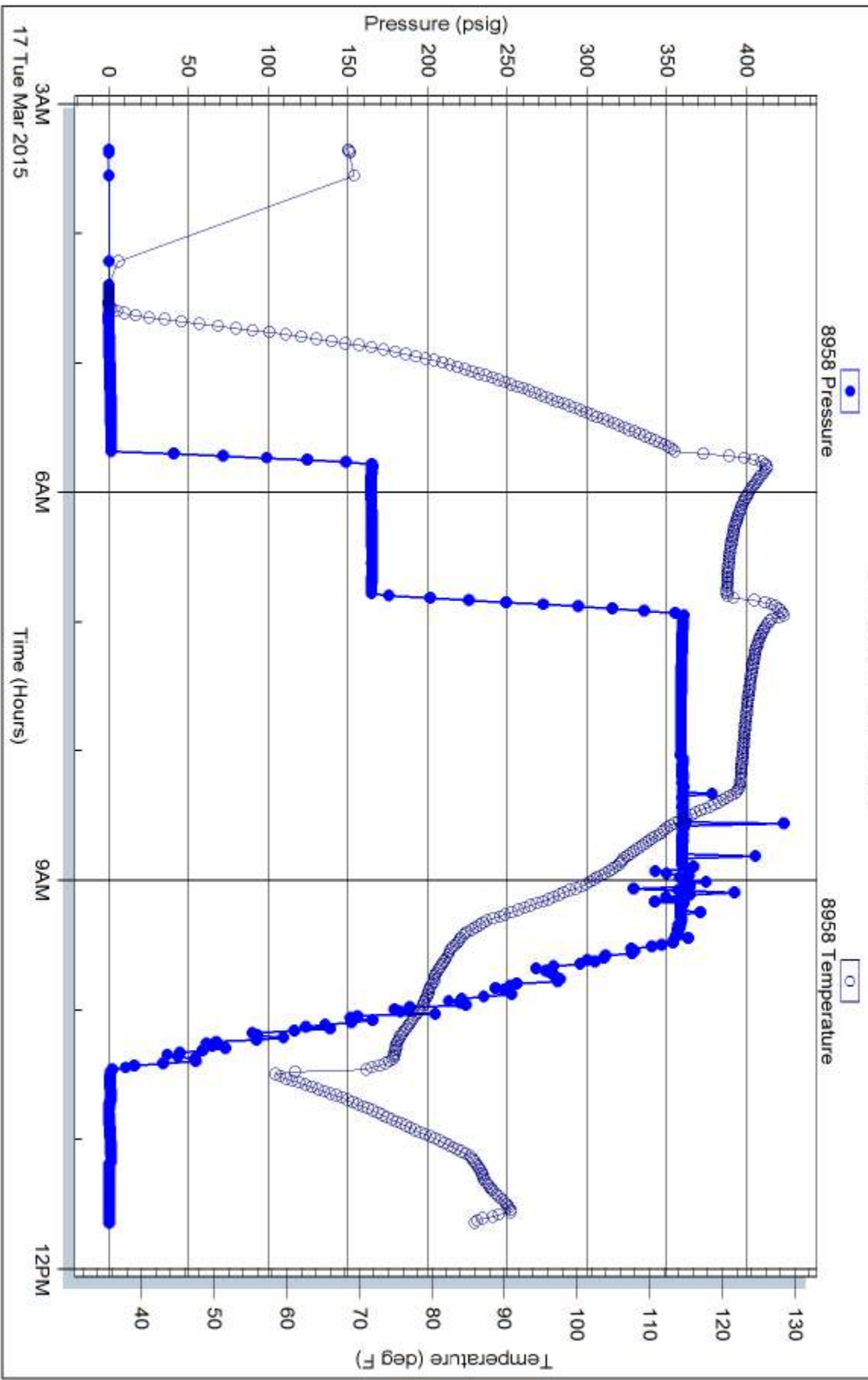
Fluid

Samuel Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 5

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 42423

Printed: 2015.03.17 @ 11:57:48

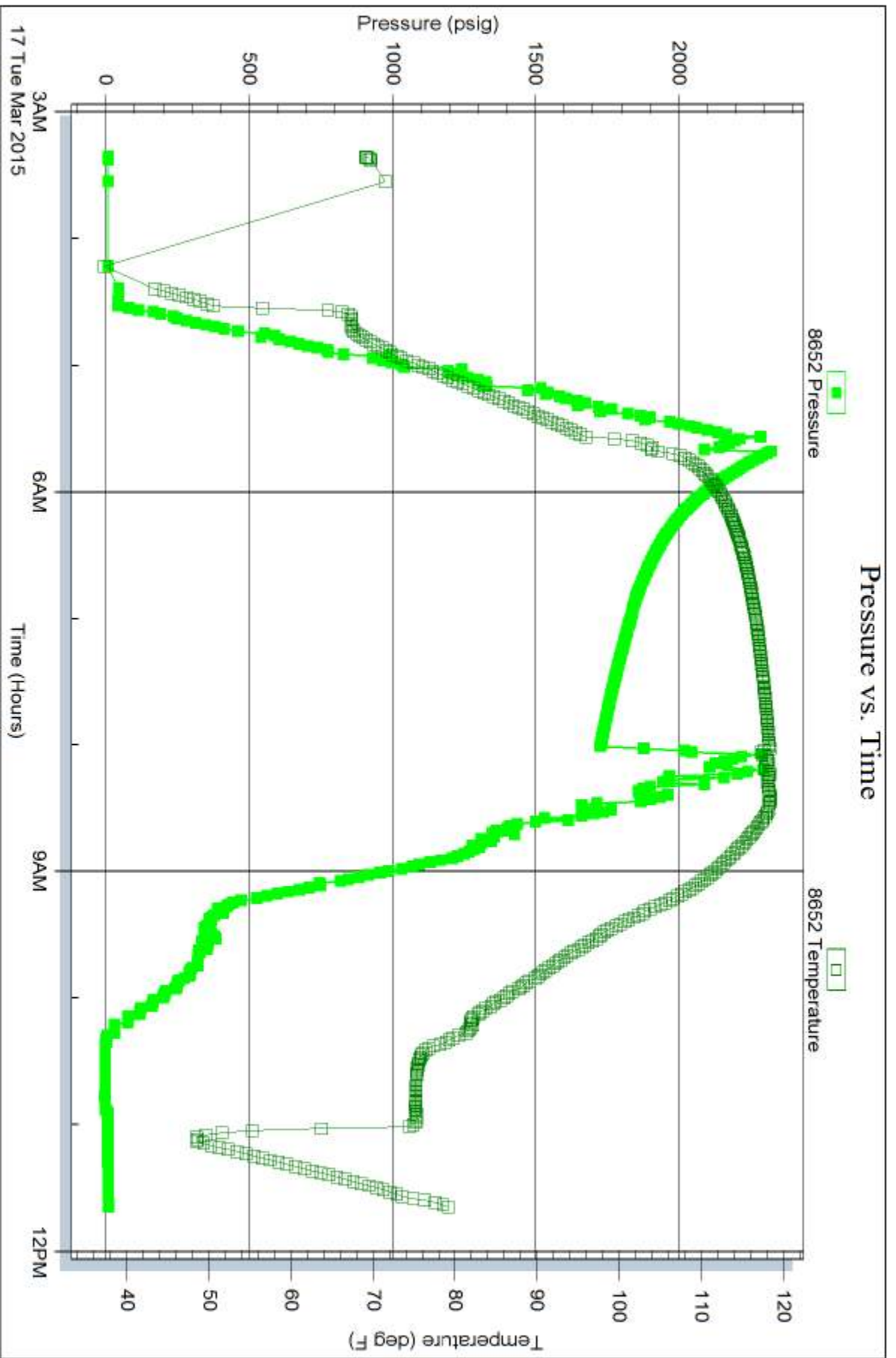


Serial #: 8652

Below (Stratton) Gary Jr Associates Inc

Kevin Zerr 1-25

DST Test Number: 5





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

Well Name: SGA Kevin Zerr 1-25  
Well Id:  
Location: Sec. 25 T10S R30W  
License Number: 15-179-21398  
Spud Date: 3/7/2015  
Surface Coordinates: 700' FNL 760' FWL  
Region: Wildcat  
Drilling Completed: 3/16/2015

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 2860' K.B. Elevation (ft): 2868'  
Logged Interval (ft): 3870' To: 4670' Total Depth (ft): 4670'  
Formation: Lansing / Kansas City  
Type of Drilling Fluid: Natural Chemical

Printed by WellSight Log Manager from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**OPERATOR**

Company: Samuel Gary Jr. & Assoc.  
Address: 1515 Winkoop Street, Suite 700  
Denver CO, 80202  
Geo: Clayton Camozzi

**GEOLOGIST**

Name: Ian Bosmeijer  
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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Samuel Gary Jr Associates Inc

25-10s-30w Sheridan KS

1515 Wyrkoop STE 700  
Denver CO, 80202

Kevin Zerr 1-25

Job Ticket: 62419

DST#: 1

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 06:29:00

**GENERAL INFORMATION:**

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:05:45

Time Test Ended: 16:33:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: **3926.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Total Depth: 3999.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8648**

Inside

Press@RunDepth: 472.56 psig @ 3994.00 ft (KB)

Start Date: 2015.03.12

End Date: 2015.03.12

Start Time: 06:29:05

End Time: 16:33:00

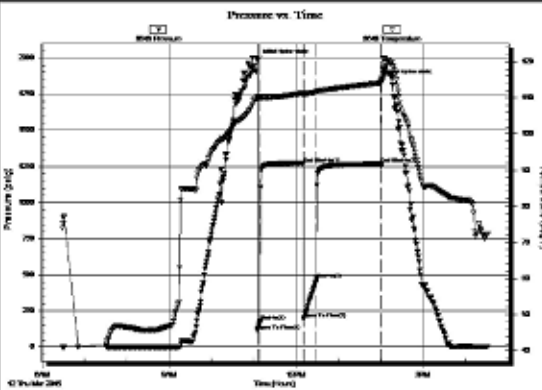
Capacity: 8000.00 psig

Last Calb.: 2015.03.12

Time On Btm: 2015.03.12 @ 11:05:30

Time Off Btm: 2015.03.12 @ 14:01:30

**TEST COMMENT:** 05 - F- B.O.B. in 2.5 minutes  
60 - IS- Surface return, died in 10 minutes.  
20 - FF- B.O.B. in 2 minutes  
90 - FS- No return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1983.55	110.13	Initial Hydro-static
1	113.19	109.40	Open To Flow (1)
5	178.30	109.67	Shut-In(1)
66	1271.33	111.25	End Shut-In(1)
66	194.09	110.92	Open To Flow (2)
85	472.56	111.62	Shut-In(2)
176	1267.13	114.17	End Shut-In(2)
176	1847.33	114.56	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
62.00	WM - Oil spots, 20%W, 80%M	0.60
372.00	WM - Oil spots, 50%W, 50%M	5.22
340.00	MW, Oil spots, 10%M, 90%W	4.77

**Gas Rates**

	Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Samuel Gary Jr Associates Inc

25-10s-30w Sheridan KS

1515 Wyrkoop STE 700  
Denver CO, 80202

Kevin Zerr 1-25

Job Ticket: 62400

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2015.03.12 @ 17:53:00

**GENERAL INFORMATION:**

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:22:45

Time Test Ended: 23:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: **3981.00 ft (KB) To 3999.00 ft (KB) (TVD)**

Total Depth: 3999.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8648**

Inside

Press@RunDepth: 479.50 psig @ 3985.00 ft (KB)

Start Date: 2015.03.12

End Date:

2015.03.12

Start Time: 17:53:05

End Time:

23:12:44

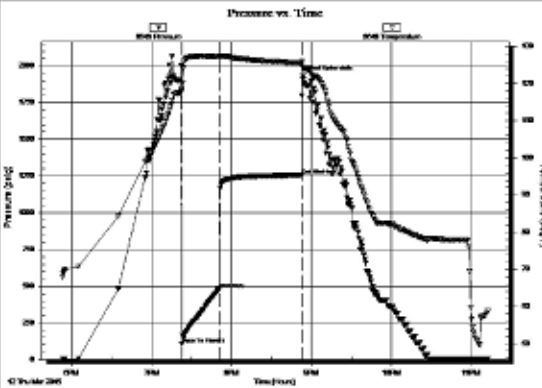
Capacity: 8000.00 psig

Last Calb.: 2015.03.12

Time On Btm: 2015.03.12 @ 19:22:30

Time Off Btm: 2015.03.12 @ 20:53:30

TEST COMMENT: 30 - F- B.O.B. in 3 minutes  
60 - IS- No return \*\*\*\*Pulled Tool\*\*



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.66	118.69	Initial Hydro-static
1	106.93	117.97	Open To Flow (1)
29	479.50	127.23	Shut-in(1)
91	1254.63	125.54	End Shut-in(1)
91	1926.73	124.66	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
868.00	MW, 5%M, 95%W	11.90

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Samuel Gary Jr Associates Inc

25-10s-30w Sheridan KS

1515 Wyrkoop STE 700  
Denver CO, 80202

Kevin Zerr 1-25

Job Ticket: 62421

DST#: 3

ATTN: Clayton Camozzi

Test Start: 2015.03.13 @ 08:33:00

**GENERAL INFORMATION:**

Formation: **LKC "D-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:00

Time Test Ended: 16:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: **4001.00 ft (KB) To 4034.00 ft (KB) (TVD)**

Total Depth: 4034.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2868.00 ft (KB)

2860.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press@RunDepth: 112.46 psig @ 4006.00 ft (KB)

Start Date: 2015.03.13

Start Time: 08:33:05

End Date: 2015.03.13

End Time: 16:37:59

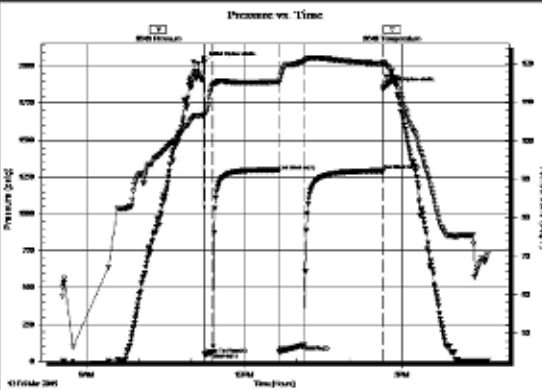
Capacity: 8000.00 psig

Last Calb.: 2015.03.13

Time On Btm: 2015.03.13 @ 11:14:15

Time Off Btm: 2015.03.13 @ 14:39:00

**TEST COMMENT:** 10 - F- 3.75" blow  
75 - IS- No return  
30 - FF- 6" blow  
90 - FS- No return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2028.12	106.68	Initial Hydro-static
1	48.81	106.69	Open To Flow (1)
11	62.38	114.56	Shut-In(1)
86	1290.86	115.37	End Shut-In(1)
86	70.47	115.02	Open To Flow (2)
115	112.46	120.81	Shut-In(2)
204	1292.91	120.10	End Shut-In(2)
205	1854.99	120.22	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
124.00	MW - Oil spots, 10%M, 90%W	1.47
66.00	VSOCM, 5%O, 95%M	0.95

**Gas Rates**

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Samuel Gary Jr Associates Inc

25-10s-30w Sheridan KS

1515 Wyrkoop STE 700  
Denver CO, 80202

Kevin Zerr 1-25

Job Ticket: 62422

DST#: 4

ATTN: Clayton Camozzi

Test Start: 2015.03.15 @ 04:10:00

**GENERAL INFORMATION:**

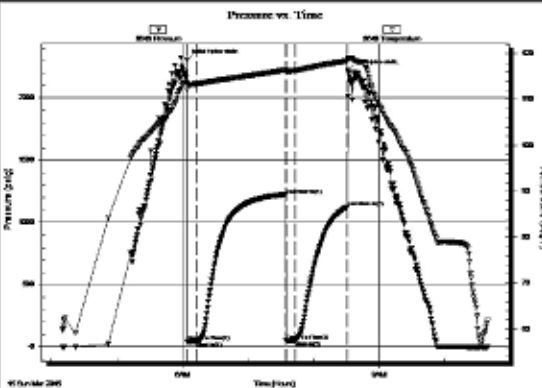
Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 06:04:15 Tester: Cody Bloedorn  
 Time Test Ended: 10:39:45 Unit No: 73  
 Interval: 4320.00 ft (KB) To 4366.00 ft (KB) (TVD) Reference Elevations: 2868.00 ft (KB)  
 Total Depth: 4366.00 ft (KB) (TVD) 2860.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

**Serial #: 8648**

**Inside**

Press@RunDepth: 51.27 psig @ 4358.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.15 End Date: 2015.03.15 Last Calb.: 2015.03.15  
 Start Time: 04:10:05 End Time: 10:39:44 Time On Btm: 2015.03.15 @ 06:04:00  
 Time Off Btm: 2015.03.15 @ 08:31:15

TEST COMMENT: 10 - F- 1/2" blow  
 75 - IS- No return  
 10 - FF- No blow  
 FSI- No return



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2304.81	113.66	Initial Hydro-static
1	43.45	112.26	Open To Flow (1)
10	46.18	113.46	Shut-in(1)
91	1218.82	116.43	End Shut-in(1)
91	50.55	115.93	Open To Flow (2)
99	51.27	116.32	Shut-in(2)
147	1124.06	118.39	End Shut-in(2)
148	2216.26	118.69	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.07

**Gas Rates**

Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)

**ROCK TYPES**

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol

- Gyp
- Igne
- Lmst
- Meta
- Mrlst
- Salt
- Shale
- Shcol

- Shgy
- Slstst
- Ss
- Till
- Carb sh
- Dol
- Dtd
- Gry sh

- Sandylms
- Shale
- Slststn
- Shlyslts
- Sltysh
- Lms

## ACCESSORIES

### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

### MINERAL

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

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

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

### STRINGER

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

### TEXTURE

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

## OTHER SYMBOLS

### INTERVALS

- Core
- Dst
- Dst

### EVENTS

- Rft
- Sidewall

### POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

### SORTING

- Well
- Moderate
- Poor

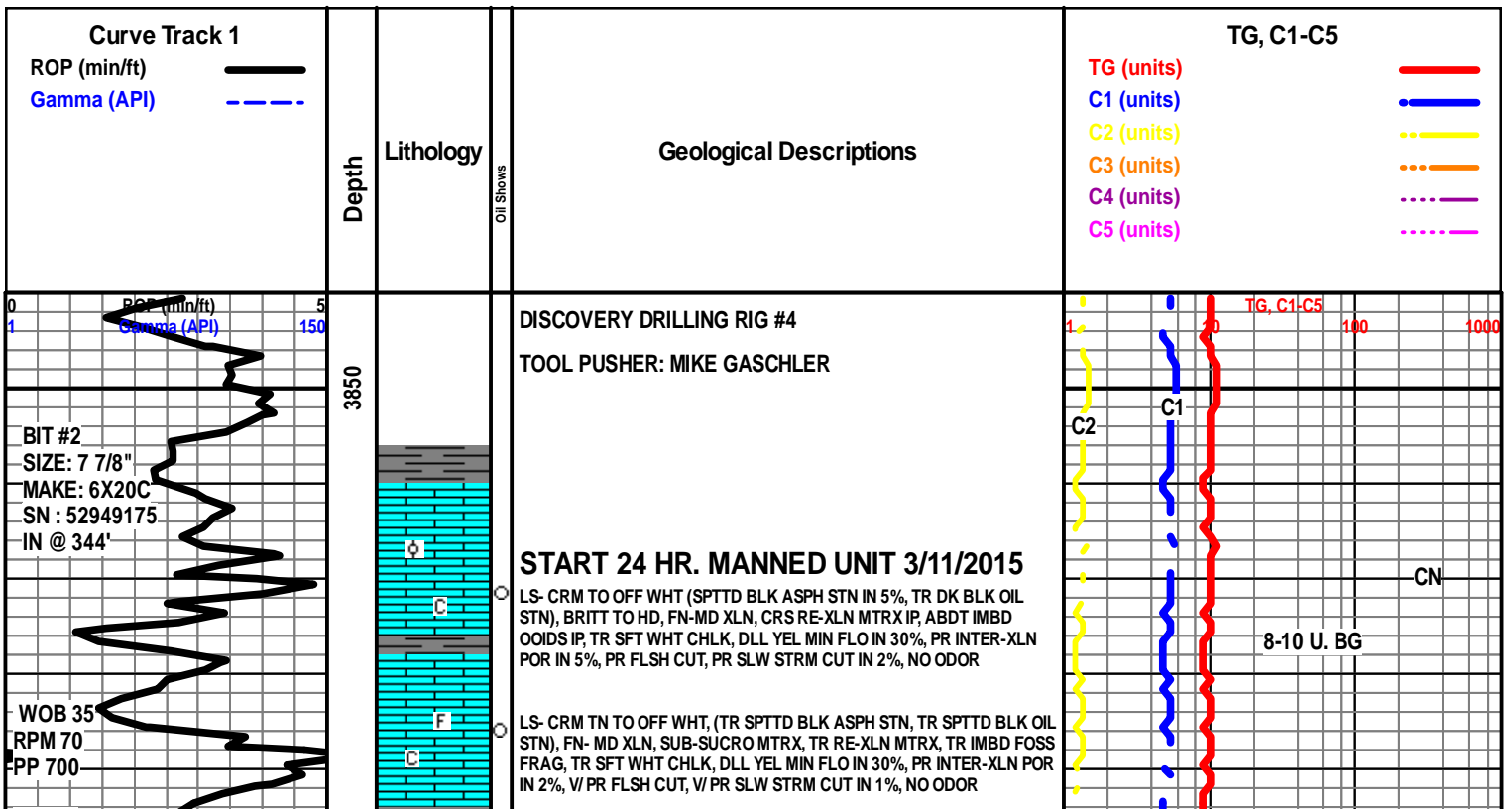
### ROUNDING

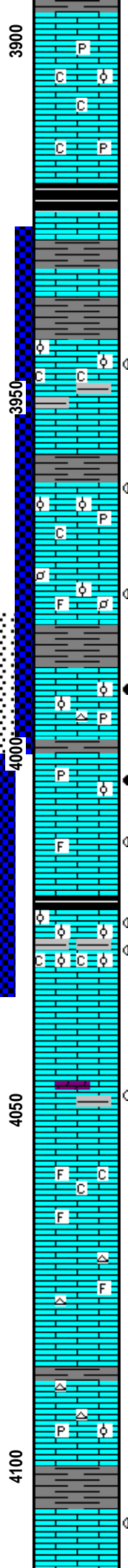
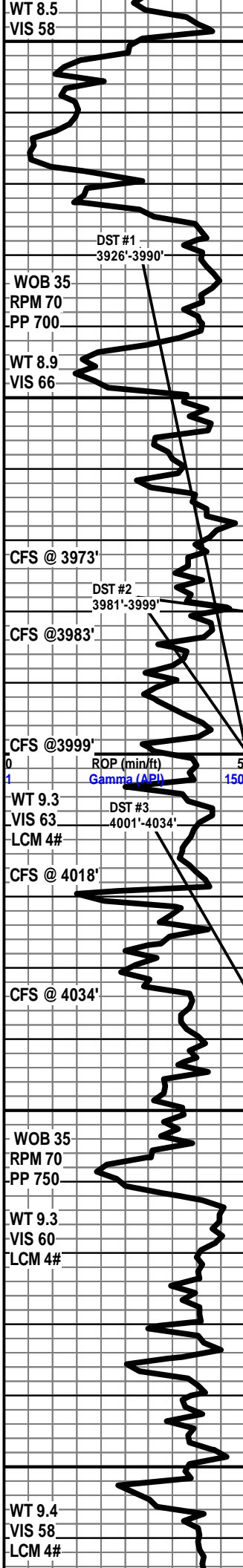
- Rounded
- Subrnd
- Subang

- Angular

### OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show





LS- CRM TO OFF WHT, BRITT TO SFT, FN-XLN, SUB-CHLKY MTRX IP, ABDT SFT WHT CHLK, PYR CLSTR IP, IMBD OOIDS IP, DLL YEL MIN FLO IN 20%, BRIT YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

**HEEBNER 3920' (-1052')**  
SH- BLK, FRM TO SFT, CARB IP, TR PYR

SH- LT TO MD GY, FRM TO SFT, GMMY IP, MARL IP, SLI SLTY IP, TR PR INTER-GRN POR, NO VIS CUT OR SHOW

3940'-3944' LS- CRM OFF WHT (LT TN OIL STN IN 20%), BRITT TO HD IP, FN-MD XLN, RE-XLN TO SUB-SUCRO MTRX, SCAT IMBD OOL IP, ABDT IMBD PYR IP, SFT WHT CHLK IP, ARG TO SHLY IP, BRIT YEL GLD FLO IN 30%, FR INTER-XLN POR IN 5%, GD INTER-OOL POR IN 2%, GD MICRO VUG POR IN 1%, GD FLSH CUT, GD SLW STRM CUT IN 10%, LT TN LCH ON DISH, V/LT ODOR

**LANSING 3961' (-1093')**  
3962' LS- OFF WHT TO CRM (LT TN OIL STN IN 15%), HD DNS TO BRITT, FN-MD XLN, SUB-SUCRO MTRX, RE-XLN MTRX IP, ABDT IMBD OOIDS, TR FRM CHLK, TR IMBD PYR, BRIT YEL GLD FLO IN 30%, PR-FR INTER-XLN POR IN 5%, FR FLSH CUT, GD SLW STRM CUT IN 10%, LT TN LCH ON DISH, V/LT ODOR

3976'-3978' LS- OFF WHT TO CRM (SPTTD LT TN OIL STN IN 5%), HD DNS, SLI BRITT IP, FN-MD XLN, SLI RE-XLN MTRX IP, ABDT IMBD OOIDS/PELLETS, TR IMBD FOSS FRAG, SPTTD YEL GLD FLO IN 25%, PR-FR INTER-XLN POR IN 2%, PR-FR MICRO VUG POR IN 1%, FR-GD FLSH CUT, FR SLW STRM IN 10%, V/LT TN LCH ON DISH, V/LT ODOR

**LANSING "C" 3988'(-1120')**  
3990'-3993' LS- CRM TO OFF WHT (TN OIL STN IN 60%), HD TO BRITT, FN-MD XLN, SLI TO V/RE-XLN MTRX IP, SUB-SUCRO IP, IMBD OOL IP, TR WHT CHRT, TR IMBD PYR CLSTR, BRIT YEL GLD FLO IN 80%, GD INTER-XLN POR IN 5%, GD MICRO- VUG POR IN 5%, GD FLSH CUT, GD SLW STRM CUT IN 40%, TN LCH ON DISH, GD ODOR, LIVE OIL ON SAMPLE

4004'-4008' LS- OFF WHT TO CRM (TN OIL STN IN 40%), HD TO BRITT, FN-MD XLN, SLI RE-XLN MTRX IP, TR IMBD PYR, TR IMBD OOL, BRIT YEL GLD FLO IN 50%, FR-GD INTER-XLN POR IN 4%, GD PP POR IN 4%, GD MICRO VUG POR IN 2%, GD FLSH CUT, GD SLW STRM CUT IN 40%, TN LCH,FR ODOR

4010'-4012' LS- OFF WHT TO CRM (SPTTD TN OIL STN IN 10%), HD DNS TO BRITT IP, V/FN-FN XLN, V/RE-XLN MTRX IP, TR IMBD FOSS, SPTTD YEL MIN FLO IN 30%, TR SPTTD DLL GLD FLO, FR-GD INTER-XLN POR IN 2%, FR FLSH CUT, FR-GD SLW STRM CUT IN 2%, LT TN LCH ON DISH, LT ODOR

**LANSING F SHALE 4019' (-1151')**  
4022'-4028' LS- OFF WHT TO WHT, (SPTTD TN TO BLK OIL STN IN 25%), HD TO BRITT, FN-MD XLN, RE-XLN IP, ABDT IMBD OOL IP, TR SFT WHT CHLK IP, YEL GLD FLO IN 30%, FR INTER-XLN POR IN 4%, FR MICRO VUG POR IN 2%, TR PR INTER-OOL POR, FR FLSH CUT, GD SLW STRM CUT IN 20%, LT OIL ODOR

4028'-4040'- LS OFF WHT TO CRM (TR SPTTD LT TN OIL STN), BRITT TO HD, FN-MD XLN, SUB-CHLKY MTRX IP, ABDT SFT WHT CHLK IP, ABDT IMBD OOL IP, SPTTD BRIT YEL MIN FLO IN 20%, PR INTER-OOL POR IP, NO VIS CUT OR SHOW

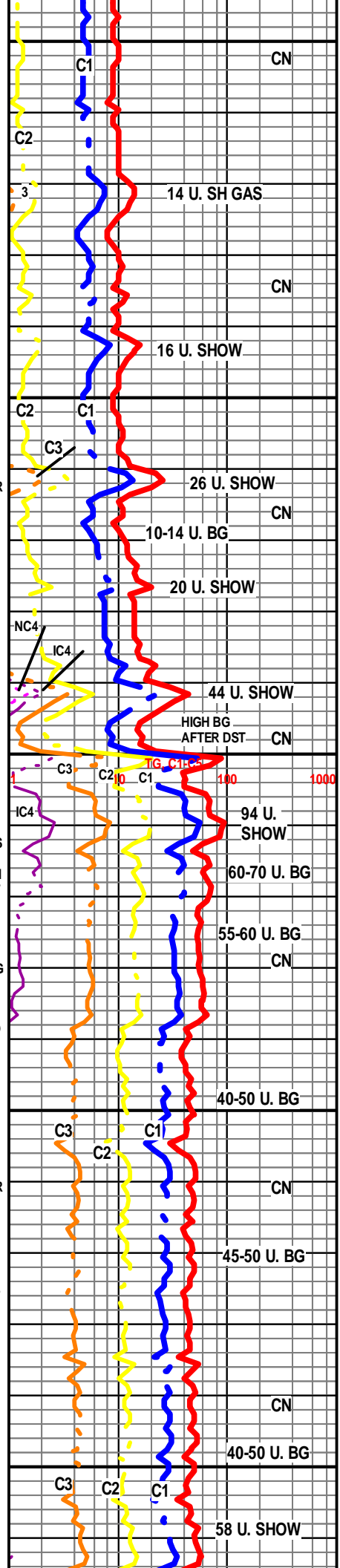
LS- CRM TO OFF WHT, HD DNS, V/FN- FN XLN, TR PYR CLSTR, TR DISS BRN SH, TR DOLO GRNS, DLL YEL MIN FLO IN 30%, GD INTER-XLN POR IN 1%, NO SHOW

LS- WHT TO OFF WHT, HD DNS, V/FN XLN, SLI SUB-CHLKY MTRX IP, TR RE-XLN MTRX, SFT WHT CHLK IP, TR IMBD FOSS FRAG, DLL YEL MIN FLO IN 30%, NO VIS POR, NO SHOW

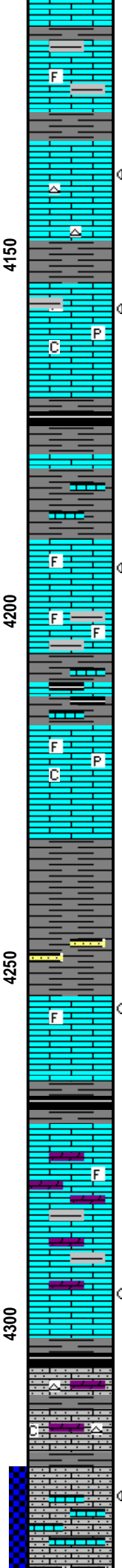
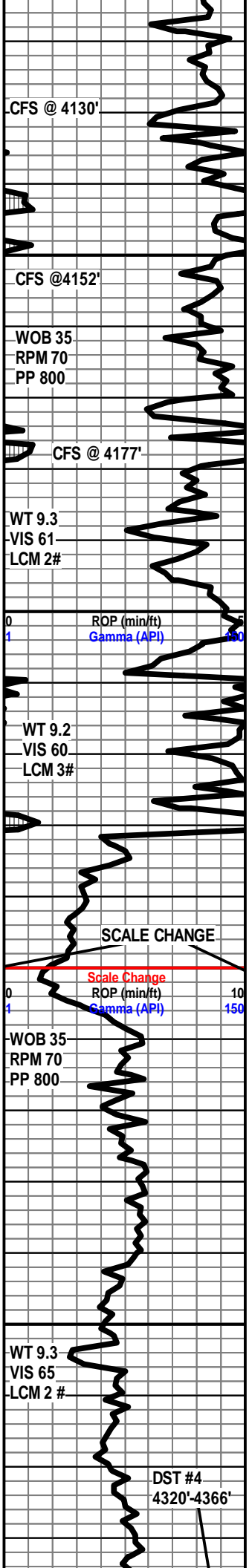
LS- OFF WHT TO TN, V/ HD DNS, V/FN-FN XLN, SLI RE-XLN IP, ABDT CRM TO OPQ CHRT, TR IMBD FOSS FRAG, DLL YEL MIN FLO IN 30%, BRIT YEL MIN FLO IN 10%, VIS POR, NO SHOW

LS- CRM TO TN, HD DNS, V/FN- MD XLN IP, SUB-SUCRO MTRX, ABDT ANG CRM TO OPQ CHRT, TR IMBD FOSS, TR IMBD OOL, TR PYR CLSTR, DLL YEL MIN FLO IN 20 %, NO VIS POR, NO SHOW

4106-4108'LS- OFF WHT TO WHT (SPTTD TN OIL STN IN 5%), HD DNS, TR BRITT, FN-MD XLN, DLL YEL GLD FLO IN 15%, FR MICRO VUG POR IN 5%, FR FLSH CUT, FR SLW STRM CUT IN 5%, NO ODOR







LS- CRM TO TN, HD DNS, V/FN- FN XLN, TR TT SUCRO MTRX, GMMY GY SH IP, TR IMBD FOSS FRAG, TR ANG OPQ CHRT, DLL YEL MIN FLO IN 10%, PR PP POR IN 5%, NO VIS CUT OR SHOW

SH- GY TO GRN, SFT, TO FRM BLKYIP, GMMY IP, SLI SLTY TXT

LS- OFF WHT TO TN (DUE TO TN-BLK OIL STN IN 30%, DOS IN 10%), HD DNS, V/FN-FN XLN, SUB-SUCRO MTRX, TR TT SUCRO MTRX, TR ANG WHT TO CRM CHRT, SPTTD YEL GLD FLO IN 50%, FR PPPOR IN 3%, PR INTER-XLN POR IN 2%, FR-GD FL SH CUT, GD SLW STRM CUT IN 20%, LT TN LCH ON DISH, LT OIL ODOR

**LANSING J 4153' (-1285')**

LS- OFF WHT TO WHT, CRM, (SPTTD TN OIL STN IN 2%, DOS IN 2%), HD DNS, TR BRITT, V/FN-FN XLN, TR TT SUCRO MTRX, TR RE-XLN MTRX, IMBD FOSS FRAG IP, IMBD PYR CLSTR IP, TR SFT WHT CHLK, DLL SPTTD DLL GLD FLO IN 4%, FR PP POR IN 3%, GD MICRO VUG POR IN 1%, PR FL SH CUT, FR-GD SLW STRM CUT IN 2%, NO ODOR

SH- BLK, GRY TO BRN IP, SFT GMMY, BLKY IP, SLI CALC IP, CARB IP, SMTH TXT

SH- LT TO MD GY, GRN IP, FRM TO SFT, HD DNS MARL IP, SLI SLTY TO GMMY TXT IP

4192'-4195' LS- CRM (SPTTD TN OIL STN IN 5%), HD DNS, BRITT IP, FN-MD XLN, TT SUCRO MTRX IP, TR IMBD FOSS FRAG, SPTTD BRIT YEL GLD FLO IN 30%, FR PP POR IN 3%, FR INTER-XLN POR IN 1%, TR FR MICRO VUG POR, PR FL SH CUT, FR SLW STRM CUT IN 2%, NO ODOR

4196'-4204' LS- LT GY TO CRM, HD DNS, F-XLN, SUB-SUCRO MTRX, ARG, ABDT IMBD FOSS FRAG IP, SCAT IMBD & FREE GY CHRT, DLL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

LS- OFF WHT TO LT GY, HD DNS, FN-MD XLN, MARL IP, PYR CLSTR IP, TR SFT GMMY CHLK, IMBD BLK SH IP, DLL YEL MIN FLO IN 20%, NO VIS POR, NO SHOW

LS- WHT TO OFF WHT, CRM IP, HD DNS, V/F-FN XLN, TR RE-XLN MTRX, TR IMBD FOSS FRAG, TR IMBD PYR, TR SFT WHT CHLK, V/ DLL YEL MIN FLO IN 10%, TR V/ PR MICRO VUG POR, NO VIS CUT OR SHOW

**BKC 4231' (-1363')**

SH- LT TO MD GY, RD IP, BLK IP, SFT GMMY TO FRM IP, BLKY IP, SFT GMMY CHLK IP, TR FREE PYR CLSTR

SH- LT GY TO LT RD, BRN IP, FRM BLKY, SFT GMMY IP, V/ SNDY IP

LS- OFF WHT TO WHT (DK TN OIL STN IN 1%), V/ HD DNS, FN XLN, MD XLN IP, IMBD RE-XLN FOSS FRAG IP, DLL YEL GLD FLO IN 5%, PR PPPOR IN 1%, TR FR MICRO VUG POR, V/ PR FL SH CUT, PR FL SH CUT IN 1%, SMALL VOLUME OF SHOW

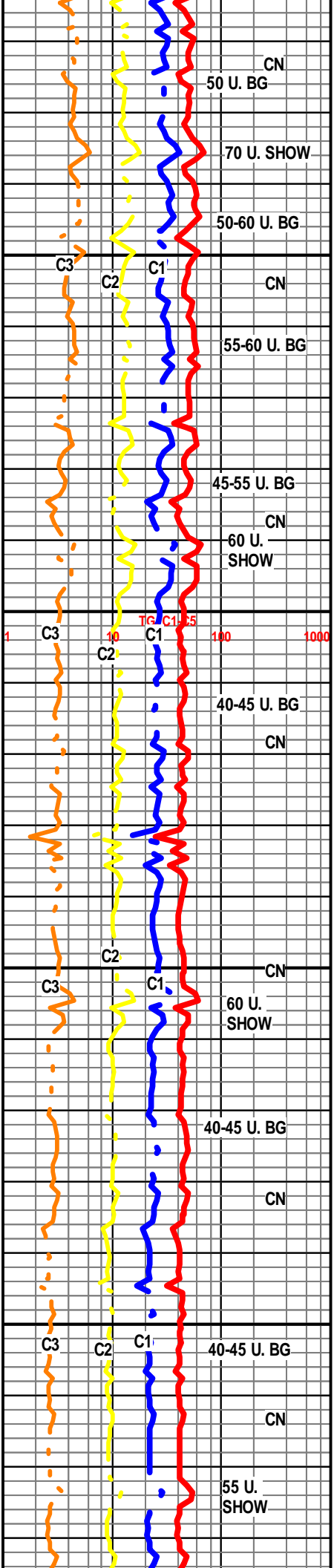
LS- OFF WHT TO CRM, TN IP, V/ HD DNS, TR BRITT, V/FN-FN XLN, SCAT FREE WHT TO TN CHRT, TR FOSS FRAG, TN SUCRO DOLO IP, IMBD BRN SH IP, DLL YEL MIN FLO IN 10%, PR INTER-XLN POR IP, NO SHOW

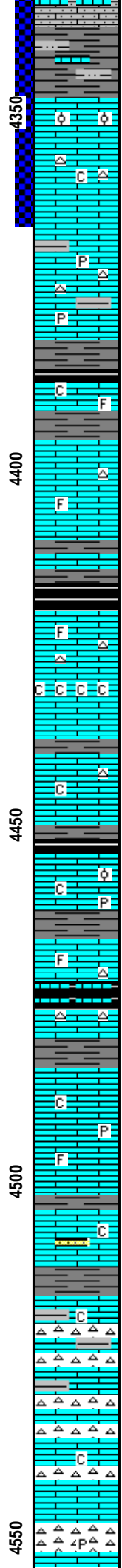
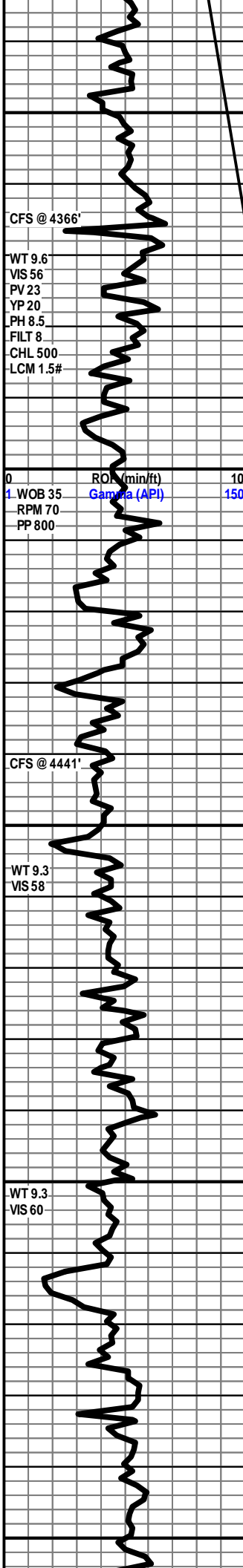
LS- OFF WHT GY TO TN, HD DNS, BRITT TO SFT IP, FN-MD XLN, SLI SUB-CHLKY IP, SLI DOLO IP, IMBD WHT TO TN CHRT, IMBD BRN SH IP, DLL YEL MIN FLO IN 10%, PR INTER-XLN POR IP, NO VIS CUT OR SHOW

SH- GY TO BLK, FRM BLKY, SPLNTY IP, SMTH TXT

SNDY LS- CRM TO TN, HD DNS, BRITT/FRI IP, F-XLN, SUB-SUCRO MTRX, ABDT IMBD F-GRN S-RND QRTZ, DOLO CMNT IP, WHT CHRT IP, TR FRM TO SFT CHLK, DLL YEL MIN FLO IN 10%, V/ PR INTER-GRN POR IP, NO VIS CUT OR SHOW

4322'-4324' SNDY LS- CRM (SPTTD TN OIL STN IN 4%), BRITT TO FRI, ABDT IMBD F-GRN S-RND QRTZ, WLL SRT, CALC CMNT, TR IMBD BRN SH, SPTTD GLD FLO IN 5%, PR INTER-GRN POR IN 4%, PR FL SH CUT, FR SLW STRM CUT IN 2%, NO ODOR, V/ SMALL VOLUME OF SHOW





SH- LT TO MD GY, FRM BLKY, SLI SFT IP, CALC TO MARL IP, SLI SLTYTXT

4348'-4352' LS- CRM TO TN (TN OIL STN IN 20%), HD DNS, BRITT IP, FN-MD XLN, SLI RE-XLN TO SLI SUCRO MTRX IP, SUB-SUCRO MTRX IP, IMBD OIDS IP, BRIT YEL GLD FLO IN 20%, FR INTER-XLN POR IN 5%, GD MICRO VUG POR IN 3%, FR-GD FL SH CUT, FR SLW STRM CUT IN 10%, V/ LT ODOR

4352'-4366' LS- LT TN TO CRM, V/HD DNS, CRYPTO-V/FN XLN, TR WHT TO CRM CHRT, TR FRM CHLK, TR DLL YEL MIN FLO, NO VIS POR, NO SHOW

LS- LT TO MD GY, GN, HD DNS, TR BRITT, V/FN-FN XLN, SCAT TO ABDT S-RND ORNG CHRT, SLI TO V/ ARG IP, DISS PYR IP, NO FLO, NO VIS POR, NO SHOW

**LABETTE SHALE 4385' (-1517')**

4388'-4402' LS- CRM TO TN, HD DNS, FN-MD XLN, SLI RE-XLN TO SUB-CHLKY MTRX, IMBD FOSS FRAG IP, DLL YEL MIN FLO IN 10%, PR PP POR IP, NO VIS CUT OR SHOW

LS- CRM OFF WHT, GY IP, HD DNS, F-XLN, TR SUB-CHLKY MTRX, TR IMBD FOSS FRAG, TR IMBD WHT CHRT, DLL YEL MIN FLO IN 20%, NO VIS POR, NO SHOW

LS- CRM TN TO OFF WHT, HD DNS, V/FN- FN XLN, TR RE-XLN MTRX, IMBD CLR ANG QRTZ/CHRT, TR IMBD FOSS FRAG, TR IMBD PYR CLSTR, BRIT YEL MIN FLO IN 15%, NO VIS POR, NO SHOW

**FT SCOTT 4420' (-1552')**

4426'-4428' LS- CRM TO TN (BLEEDING LT TN OIL IN 2%), HD DNS TO BRITT IP, FN XLN, MD XLN IP, SLI SUB-CHLKY IP, IMBD MICRO-FOSS IP, IMBD & FREE CHRT, DLL GLD FLO IN 20%, FR PP POR IN 5%, FR FL SH CUT, GD SLW STRM CUT IN 10%, V/ LT ODOR

4428-4432 LS- CRM TO OFF WHT, BRITT TO HD IP, F-XLN, SUB-CHLKY TO CHLKY, ABDT WHT TO CRM ANG CHRT, IMBD MICRO FOSS IP, SPTTD YEL MIN FLO IN 20%, FR PP POR IN 4%, NO VIS CUT OR SHOW

LS- CRM TO TN, OFF WHT IP, HD DNS, V/FN-FN XLN, MD XLN IP, TR RE-XLN MTRX, CRM TO TN CHRT IP, TR SFT WHT CHLK, DLL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

SH- GY TO BLK, FRM, SLI SPLNTY TO BLKY, CARB  
**CHEROKEE 4454' (-1586')**

LS- OFF WHT TO CRM, LT GY IP, HD DNS, V/FN-FN XLN, TR MD XLN, TR PYR CLSTR, TR ABDT IMBD OOL, TR SFT WHT CHLK, DLL YEL MIN FLO IN 20%, NO VIS POR, NO SHOW

LS- CRM TO TN, V/ HD DNS, V-FN - FN XLN, TR SUB-CHLKY, TR IMBD FOSS FRAG, SCAT FREE TN S-ANG CHRT, TR LMNTD BLK SH, NO FLO, NO VIS POR, NO SHOW

**BASE OF CHEROKEE 4480' (-1612')**

LS- CRM TO TN, OFF WHT IP, HD DNS, FN-MD XLN, SLI RE-XLN IP, TR SFT WHT CHLK, TR TR IMBD FOSS FRAG, TR PYR CLSTR, DLL YEL MIN FLO IN 20%, TR PR PP POR, NO VIS CUT OR SHOW

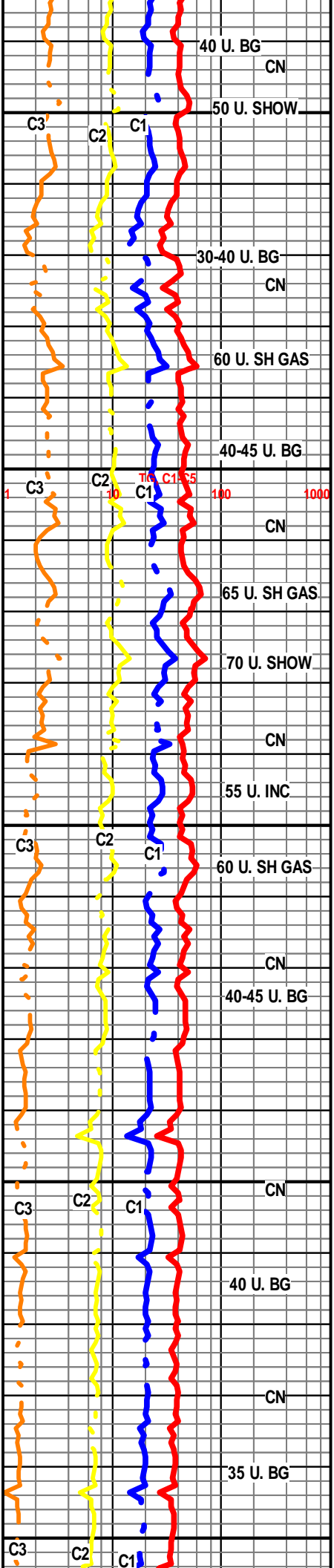
LS- OFF WHT TO WHT, HD DNS, FN-XLN, SLI SUB-CHLKY MTRX IP, AREN TO SNDY IP, TR ORNG CHRT, DLL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

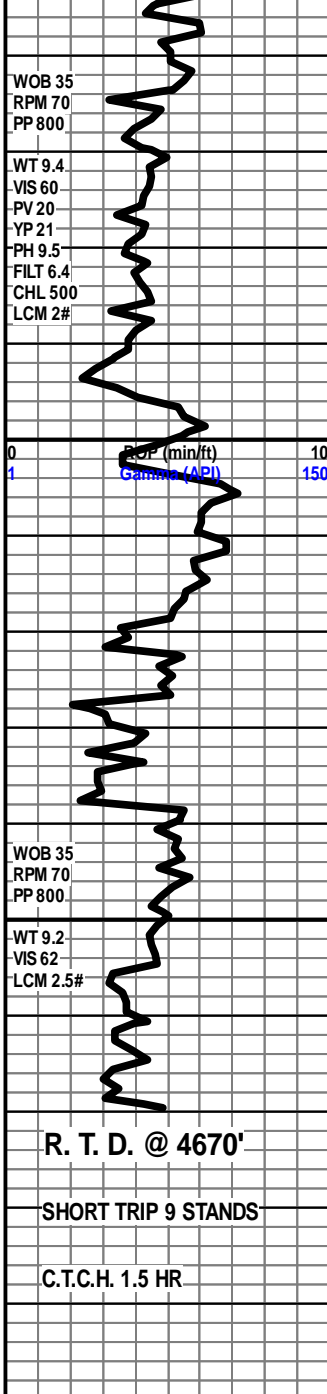
**MISSISSIPPIAN 4518' (-1650')**

LS- OFF WHT, LT GY, TO BRN, HD DNS, FN-XLN, TR MD-XLN, SUB-SUCRO MTRX, ABDT FREE WHT, ORNG, TO PNK CHRT, IMBD RD SH IP, DLL YEL MIN FLO IN 30%, NO VIS POR, NO SHOW

LS- WHT OFF WHT TO CRM, HD DNS, FN-XLN, SUB-SUCRO MTRX, TR SUB-CHLKY MTRX, ABDT WHT TO GY CHRT, ORNG IP, V/ DLL YEL MIN FLO IN 70%, NO VIS POR, NO SHOW

LS- OFF WHT TO WHT, HD DNS TO BRITT, FN-XLN, SUB SUCRO MTRX TO TR SUB-CHLKY MTRX, ABDT WHT TO GY CHRT TR DISS PYR V/ DLL YEL MIN FLO IN 70% NO





LS & CHRT - OFF WHT TO WHT, CRM, LT GY, HD DNS, CRYPTO-FN XLN, TR SUB-CHLKY, ABDT LRG S-ANG CHRT, IMBD CHL IP, DISS PYR IP, SFT WHT CHLK IP, DLL YEL MIN FLO IN 50%, FR PP POR IP, FR MICRO VUG POR IP, NO SHOW

CHRT - WHT TO LT GY, HD DNS, TR BRITT, CRYPO-XLN, S-ANG TO ANG, CHLKY WHT LS IP, DISS PYR TO PYR CLSTR, IMBD CHL IP, DLL YEL MIN FLO IN 10%, PR PP POR IP, NO SHOW

CHRT - OFF WHT TO WHT, CLR, HD DNS, CRYPTO -XLN, ANG- TO SUB-ANG, ABDT CHLKY TO MD-XLN WHT LS IP, TR IMBD FOSS FRAG, DLL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

CHRT- OFF WHT, WHT, LT GY TO TN, HD DNS, TR BRITT, CRYPTO-XLN, FN-MD XLN CRM LS, DISS PYR IP, DLL YEL MIN FLO IN 10%, NO VIS POR, NO SHOW

LS- OFF WHT TO WHT, TN IP, V/FN-MD XLN, SUB-CHLKY TO CHLKY IP, ABDT ANG WHT, ORNG TN CHRT, TR SLI DOLO, DLL YEL MIN FLO IN 20%, NO SHOW

LS- OFF WHT, HD DNS, V/FN-FN XLN, SUB-CHLKY IP, TR MD XLN, ABDT CLR TN TO GY ANG CHRT, SFT WHT CHLK IP, TR SLI DOLO, DLL YEL MIN FLO IN 5% PR INTER-XLN POR IP, NO SHOW

LS- CRM TO OFF WHT, HD DNS, SLI BRITT IP, V/FN-MD XLN, SLI RE-XLN IP, IMBD FOSS, SCAT FREE ANG OFF WHT TO CRM CHRT, FRM TO SFT CHLK IP, TR V/DLL YEL MIN FLO, FR INTER-XLN POR IN 5%, NO SHOW

LS- CRM TO OFF WHT, TN IP, HD DNS, BRITT TO SFT IP, FN-MD XLN, TT SUCRO IP, IMBD FOSS, SCAT FREE CRM TO TN CHRT, TR TN DOLO IP, ABDT FRM TO SFT CHLK IP, DLL YEL MIN FLO IN 10%, FR INTER-XLN POR IP, NO SHOW

**R.T.D. @ 4670'**

SHORT TRIP 9 STANDS

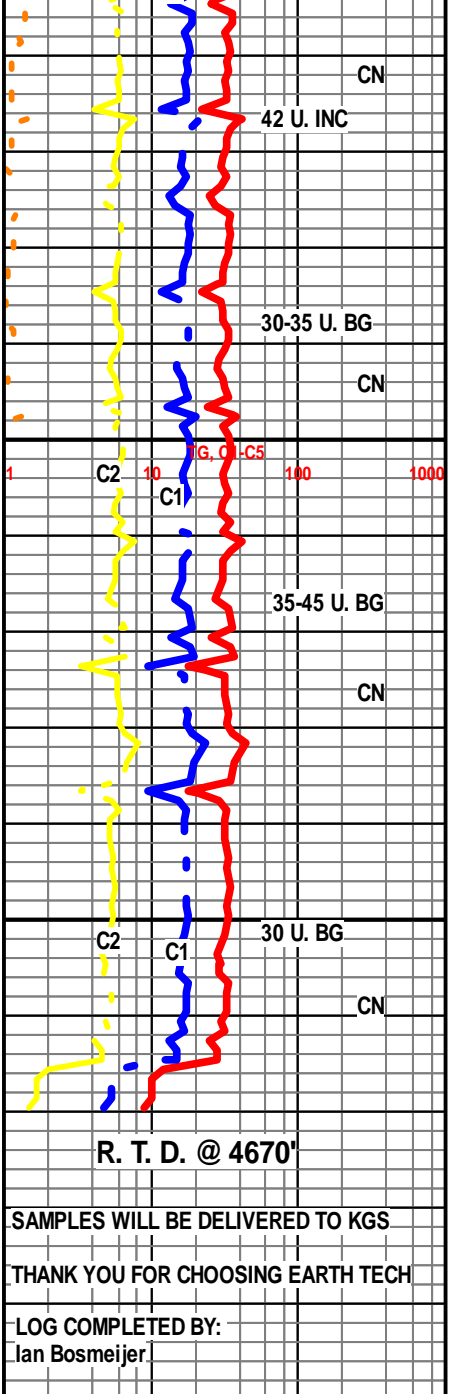
C.T.C.H. 1.5 HR

**R.T.D. @ 3:15 PM 3/16/2015**

DROP SURVEY

T.O.F.L. @ 5:30 P.M.

WEATHERFORD LIBERAL,KS



42 U. INC

30-35 U. BG

35-45 U. BG

30 U. BG

**R. T. D. @ 4670'**

SAMPLES WILL BE DELIVERED TO KGS

THANK YOU FOR CHOOSING EARTH TECH

LOG COMPLETED BY:  
Ian Bosmeijer