



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1199839  
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: \_\_\_\_\_

1199839

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:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<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> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Jean 1-8
Doc ID	1199839

All Electric Logs Run

Dual Induction
Dual Compensated
Microresistivity
Borehole Compensated



# M. Bradford Rine

## Consulting Geologist, Licensed and Certified

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

Well Name: Jean #1-8 - Murfin Drilling Company, Inc.  
 Location: C-SE-SE, Section 08-01S-37W  
 License Number: API: 15-023-21376-00-00  
 Spud Date: January 04, 2014  
 Surface Coordinates: 660' FSL & 660' FEL, of Section  
 Bottom Hole Coordinates: Vertical Wellbore  
 Region: Cheyenne County, Kansas  
 Drilling Completed: January 14, 2014  
 Field: Wildcat  
 Production Casing Set

Ground Elevation (ft): 3206 Ft. K.B. Elevation (ft): 3219 Ft.  
 Logged Interval (ft): 3505 Ft. To: 4770 Ft. Total Depth (ft): RTD 4770 Ft. LTD 4767 Ft.  
 Formation: Cherokee at Total Depth  
 Type of Drilling Fluid: Chemical

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

### Operator

Company: Murfin Drilling Company, Inc.  
 Address: 250 North Water, Suite #300  
 Wichita, Kansas 67202

### Geologist

Name: M. Bradford Rine  
 Company: Consulting Geologist, Kansas Lic. #204, Wyo #189, AAPG Cert. #2647  
 Address: 100 South Main, Suite #415  
 Wichita, Kansas 67202

### Remarks

Based on sample observations, drill stem test results, and electric log evaluation, it was the decision of the Operator, to set production casing on the "Jean #1-8", on January 14, 2014.

Respectfully submitted,  
 M. Bradford Rine, Geologist

Formations	Murfin Drilling Co., Inc.			Murfin (Well A)		Well A
	Sample	E-Log	Datum	E-Log	Datum	
	Jean #1-8			Jones "A" #1-17		
	660' FSL & 660' FEL			1050' FNL & 2310' FEL		
	Sec. 08-01S-37W			Sec. 17-01S-37W		
	3219 Ft. KB			3149 Ft. KB		
Anhydrite	3172	3168	51	3110	39	12
B/Anhydrite	3203	3201	18	3142	7	11
Neva	3627	3623	-404	3560	-411	7
Red Eagle	3692	3686	-467	3624	-475	8
Foraker	3739	3732	-513	3671	-522	9
Topeka	3960	3956	-737	3894	-745	8
Oread	4099	4092	-873	4031	-882	9
Lansing	4176	4171	-952	4108	-959	7
Stark Sh	4398	4392	-1173	4329	-1180	7
B/Kansas City	4456	4449	-1230	4385	-1236	6
Marmaton	4493	4488	-1269	4426	-1277	8
Pawnee	4576	4570	-1351	4503	-1354	3
Lwr Pawnee	4609	4605	-1386	4536	-1387	1
Ft. Scott	4643	4638	-1419	4573	-1424	5
Cherokee Sh	4665	4657	-1438	4592	-1443	5
Mississippi	NR			NR		
Total Depth	4770	4767	-1548	4680	-1531	-17

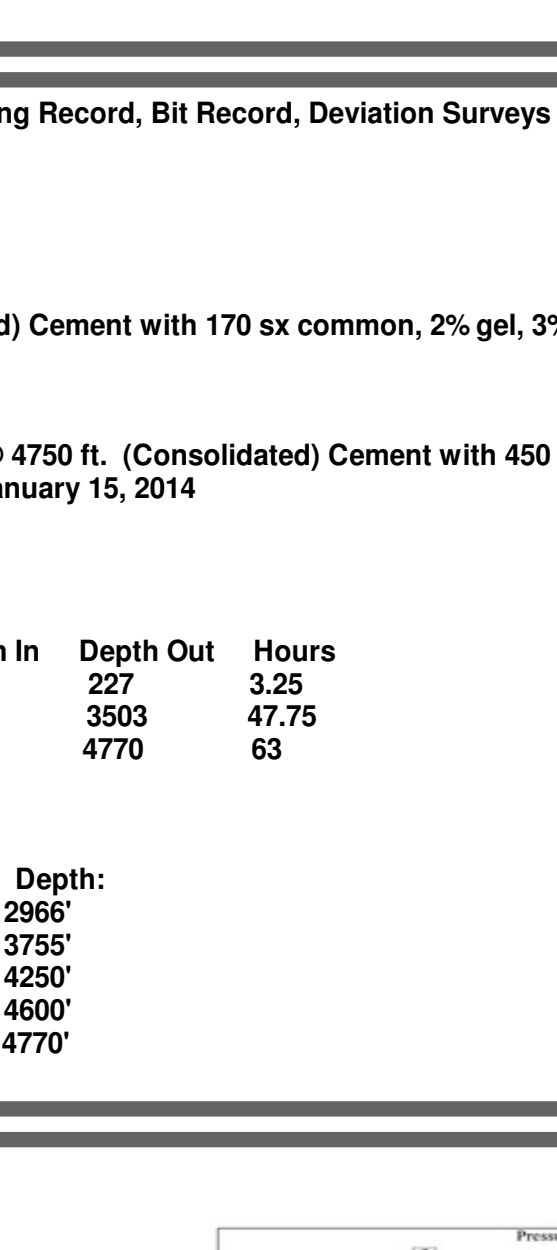
### Drilling Information

Rig: Murfin #25  
 Pump: National K-500 6 x 15  
 Drawworks: National T-370  
 Collars: 544' 2-1/4 x 6-1/4  
 Drillpipe: 4-1/2" 16.6# XH  
 Toolpusher: Raymond Bland

Mud: Morgan (Troy Van Felt, Cade Lines, David Lines)  
 Gas Detector: None  
 Drill Stem Tests: Trilobite (James Winder, Chuck Kreutzer)  
 Logs: Pioneer (D. Kerr)  
 Water: Trucked in (Excel)  
 Company Representatives:  
 Office: Scott Robinson  
 Field: Buck Salas

### Daily Drilling Status

Date: Operations/Depth/Comments  
 01-04-14 MIRT, RU, Spud at 10 PM  
 01-05-14 WOC @ 227'  
 01-06-14 Drilling @ 1514'  
 01-07-14 Drilling @ 3040'  
 01-08-14 CFS @ 3755'  
 01-09-14 Drilling @ 3875'  
 01-10-14 Trip for DST 2 @ 4250'  
 01-11-14 On Bottom with DST 3 @ 4350'  
 01-12-14 Trip for DST 5 @ 4400'  
 01-13-14 Trip for DST 6 @ 4600'  
 01-14-14 Drilling @ 4760'



"Jean #1-8"  
 Murfin Drilling Company, Inc.  
 Section 08-01S-37W, Cheyenne County, Kansas

### Casing Record, Bit Record, Deviation Surveys

**CASING:**  
 Conductor: None  
 Surface: Ran 5 jts 8-5/8" 23#, set @ 227'. (Allied) Cement with 170 sx common, 2% gel, 3% CC. Cement did circulate. Plug down at 4:15 AM, January 05, 2014.

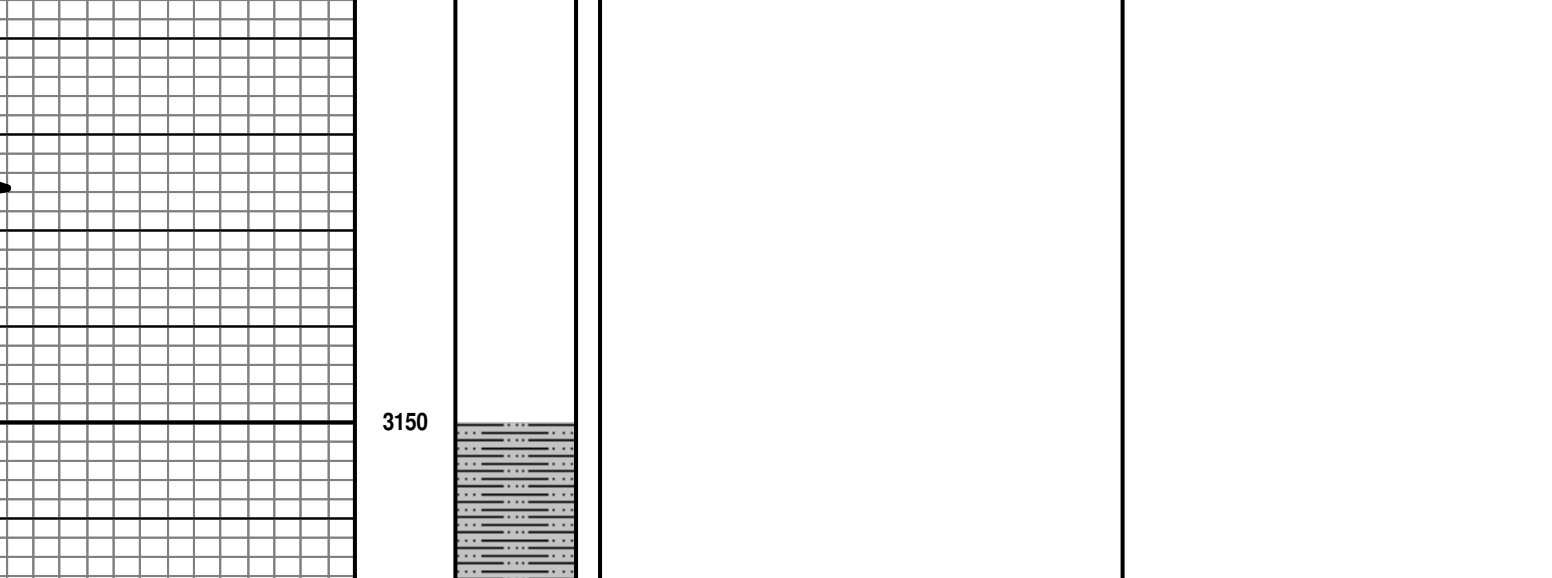
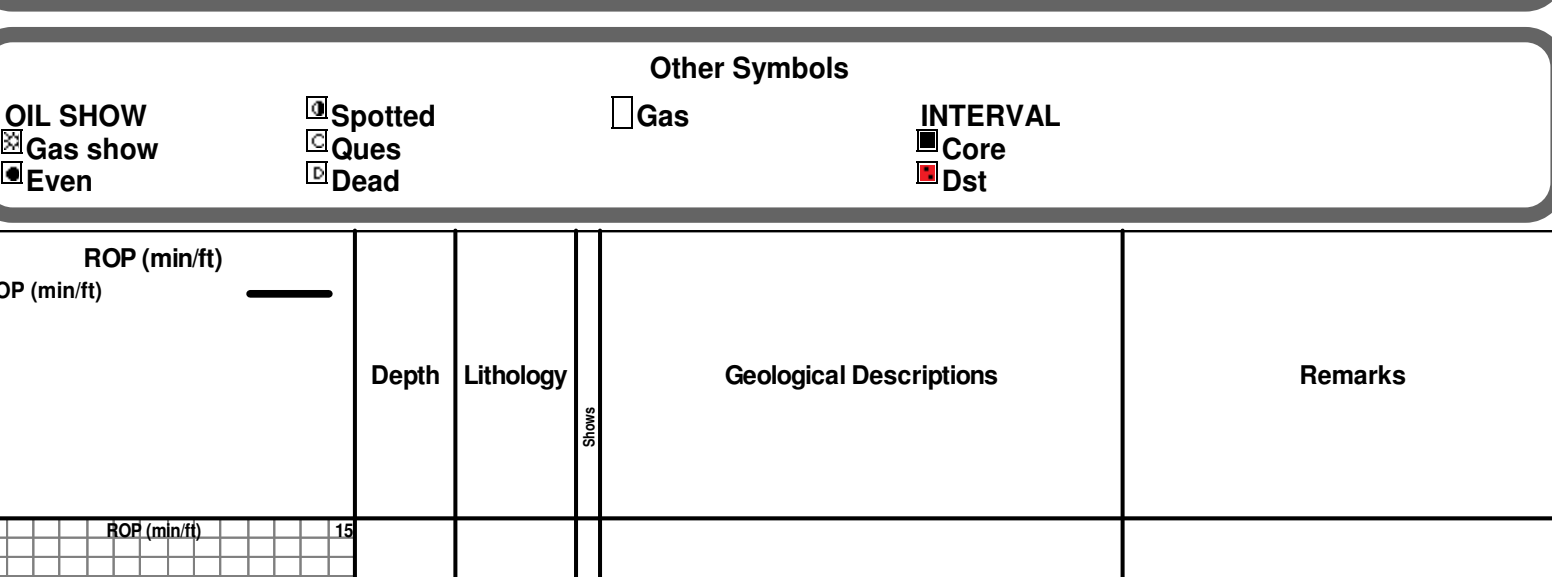
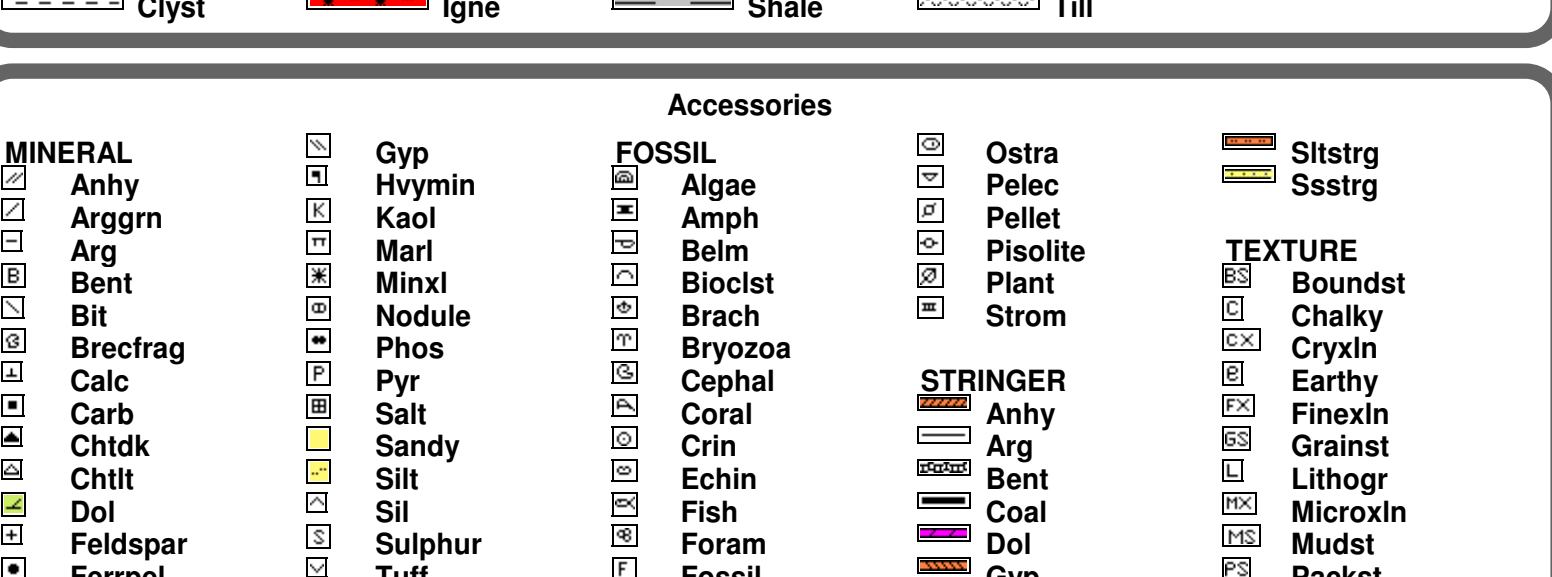
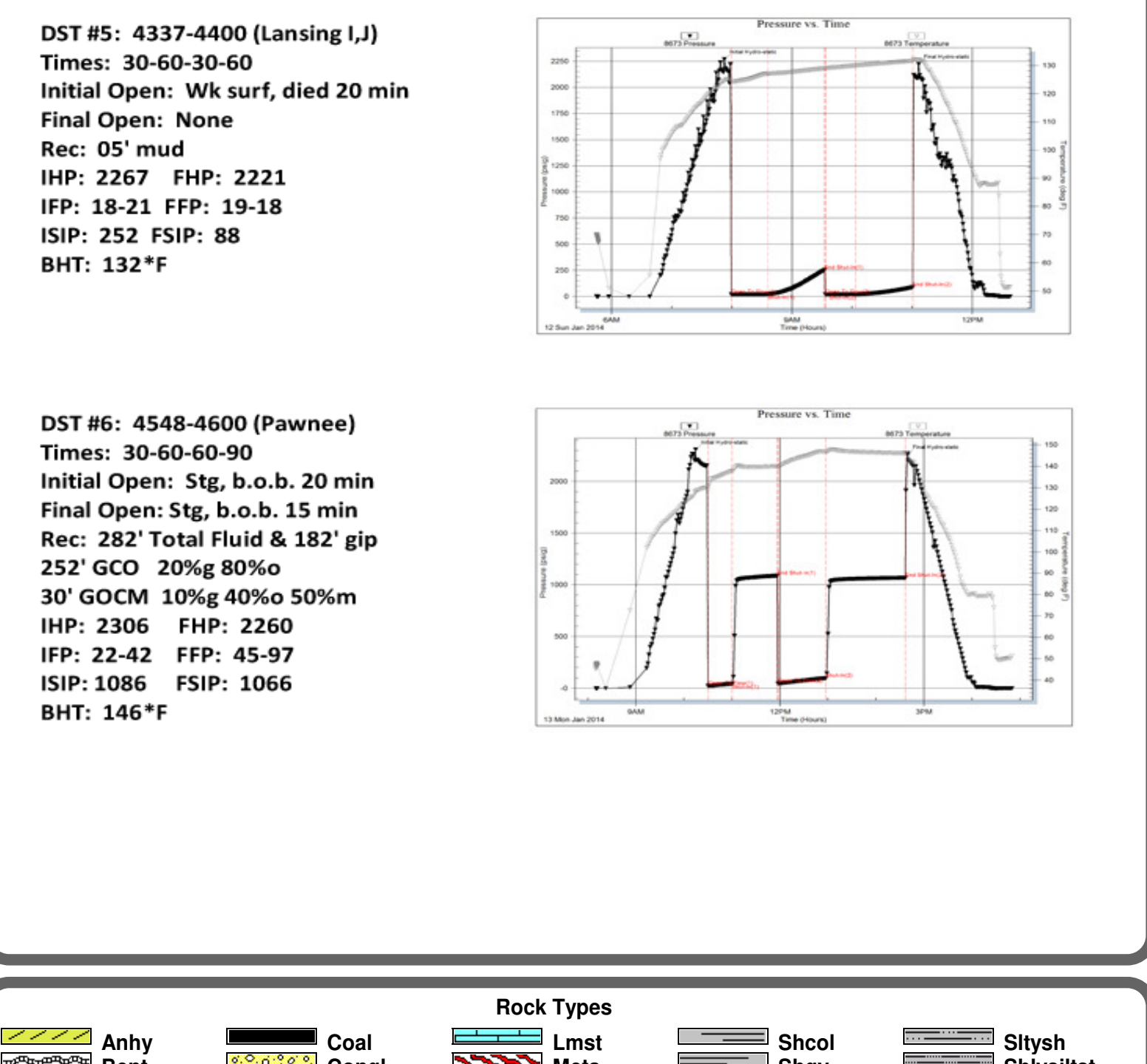
**Production:**  
 Ran 113 jts 5-1/2" 15.5# casing. Set @ 4750 ft. (Consolidated) Cement with 450 sx: 250 sx CMD, 200 sx OWC. 30 sx in RH, 20 sx in MH. PD 9:30 AM, January 15, 2014

**BITS:**

No.	Size	Make	Model	Depth In	Depth Out	Hours
1	12-1/4	HTC	RR GMS	0	227	3.25
2	7-7/8	HTC	DP506F	227	3503	47.75
3	7-7/8	HTC	GX20C	3503	4770	63

**DEVIATION SURVEYS:**

Deviation:	Depth:	Deviation:	Depth:
1.00"	227'	0.40"	2966'
8.00"	499'	0.60"	3755'
8.00"	1032'	1.70"	4250'
1.20"	1729'	2.50"	4600'
		0.50"	4770'



**Rock Types**

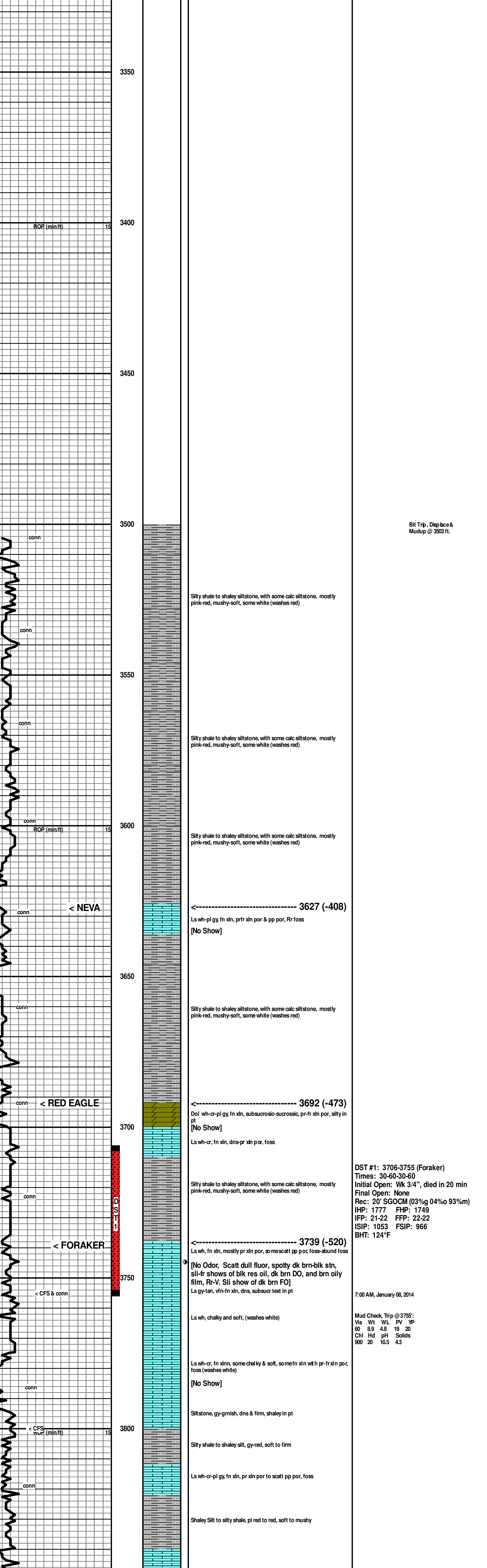
Anhy	Bent	Brec	Cht	Clyst	Coal	Congl	Dol	Gyp	Ignre	Lmst	Meta	Mrlst	Mslt	Shale	Shcol	Shgy	Siltst	Ss	Till	Sltysl	Shlysl	Siltst	Sandlys
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**Accessories**

MINERAL	Gyp	FOSSIL	Ostra	Siltstrg	Arggrm	Hvymn	Algae	Pelec	Ssstrg	Arg	Kaol	Amph	Pellet	Boundst	Bent	Marl	Biocst	Pisilite	Chalky	Bit	Module	Brach	Plant	Strom	Breclrag	Phos	Bryozoa	Ceph	Cephal	CRIN	Arg	Echin	Bent	Eryth	Calc	Pyr	Salt	Sandy	Firm	Carb	Chtdk	Silt	Silt	Fine	Chtlk	Silt	Silt	Grainst	Dol	Feldspar	Sil	Sil	Lithogr	Ferrp	Sulphur	Tuff	Micst	Glau			Micro	Packet	Wackest
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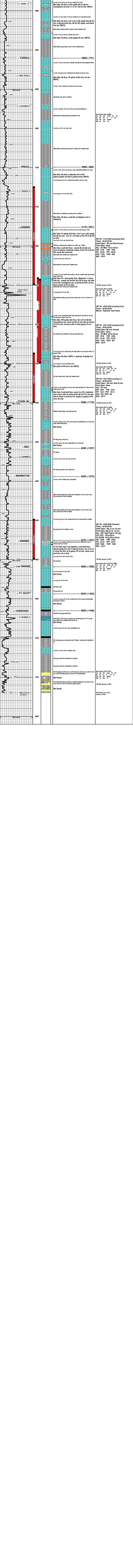
**Other Symbols**

OIL SHOW	Spotted	Gas	INTERVAL
Gas show	Ques		Core
Even	Dead		Dst



**DST #1: 3706-3755 (Foraker)**  
 Times: 30-60-30-60  
 Initial Open: Wk 34", died in 20 min  
 Final Open: None  
 Rec: 20' SGOCM (03%g 04%o 93%w)  
 IHP: 1777 FHP: 1749  
 ISIP: 21-22 FFP: 22-22  
 ISIP: 1053 FSIP: 966  
 BHT: 124°F  
 7:00 AM, January 08, 2014

Mud Check, Trip @ 3755'  
 Vis Wt WL PV  
 60 8.8 19 20  
 Chl Hd pH Solids  
 900 20 10.5 43





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

#### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.08 @ 11:00:00

End Date: 2014.01.08 @ 18:18:30

Job Ticket #: 55888                      DST #: 1

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

Printed: 2014.01.17 @ 10:45:09



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

Test Start: 2014.01.08 @ 11:00:00

## GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:21:00

Time Test Ended: 18:18:30

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 61

**Interval: 3706.00 ft (KB) To 3755.00 ft (KB) (TVD)**

Reference Elevations: 3219.00 ft (KB)

Total Depth: 3755.00 ft (KB) (TVD)

3206.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8673**

**Inside**

Press@RunDepth: 22.11 psig @ 3707.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.08

End Date:

2014.01.08

Last Calib.:

2014.01.08

Start Time: 11:00:01

End Time:

18:18:30

Time On Btm:

2014.01.08 @ 13:20:30

Time Off Btm:

2014.01.08 @ 16:23:30

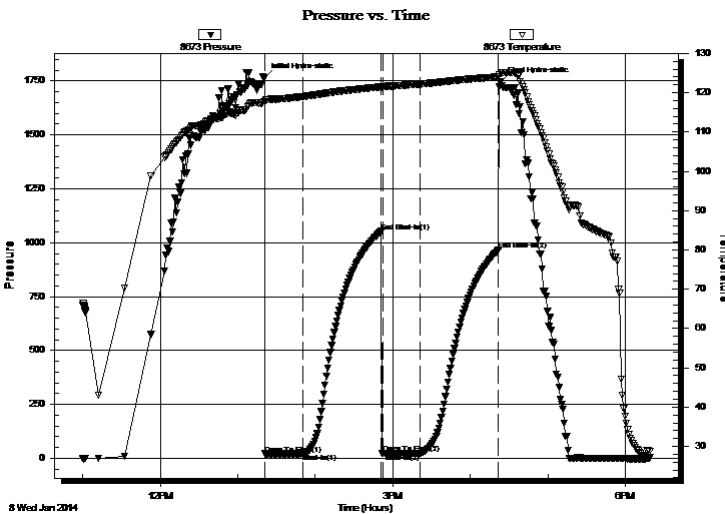
TEST COMMENT: 30 - IF: 3/4" Blow at open, died back, dead at 20 min.

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1767.71	117.75	Initial Hydro-static
1	20.62	117.79	Open To Flow (1)
30	21.73	119.05	Shut-In(1)
91	1052.77	121.51	End Shut-In(1)
92	22.30	121.62	Open To Flow (2)
121	22.11	122.22	Shut-In(2)
181	966.22	124.05	End Shut-In(2)
183	1749.16	125.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 93% m, 4% o, 3% g	0.28

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

ATTN: Brad Rine

Test Start: 2014.01.08 @ 11:00:00

## Tool Information

Drill Pipe:	Length: 3704.00 ft	Diameter: 3.80 inches	Volume: 51.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 51.96 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3706.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool chased 2' to bottom at open, lost a couple ft. of mud - 3/4" blow at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3683.00	
Hydraulic tool	5.00			3688.00	
Jars	5.00			3693.00	
Safety Joint	3.00			3696.00	
Packer	5.00			3701.00	28.00 Bottom Of Top Packer
Packer	5.00			3706.00	
Packer - Shale	0.00			3706.00	
Stubb	1.00			3707.00	
Recorder	0.00	8673	Inside	3707.00	
Recorder	0.00	8651	Outside	3707.00	
Perforations	11.00			3718.00	
Change Over Sub	1.00			3719.00	
Drill Pipe	32.00			3751.00	
Change Over Sub	1.00			3752.00	
Bullnose	3.00			3755.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55888

**DST#: 1**

ATTN: Brad Rine

Test Start: 2014.01.08 @ 11:00:00

### 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	SOCM 93% <i>m</i> , 4% <i>o</i> , 3% <i>g</i>	0.281

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

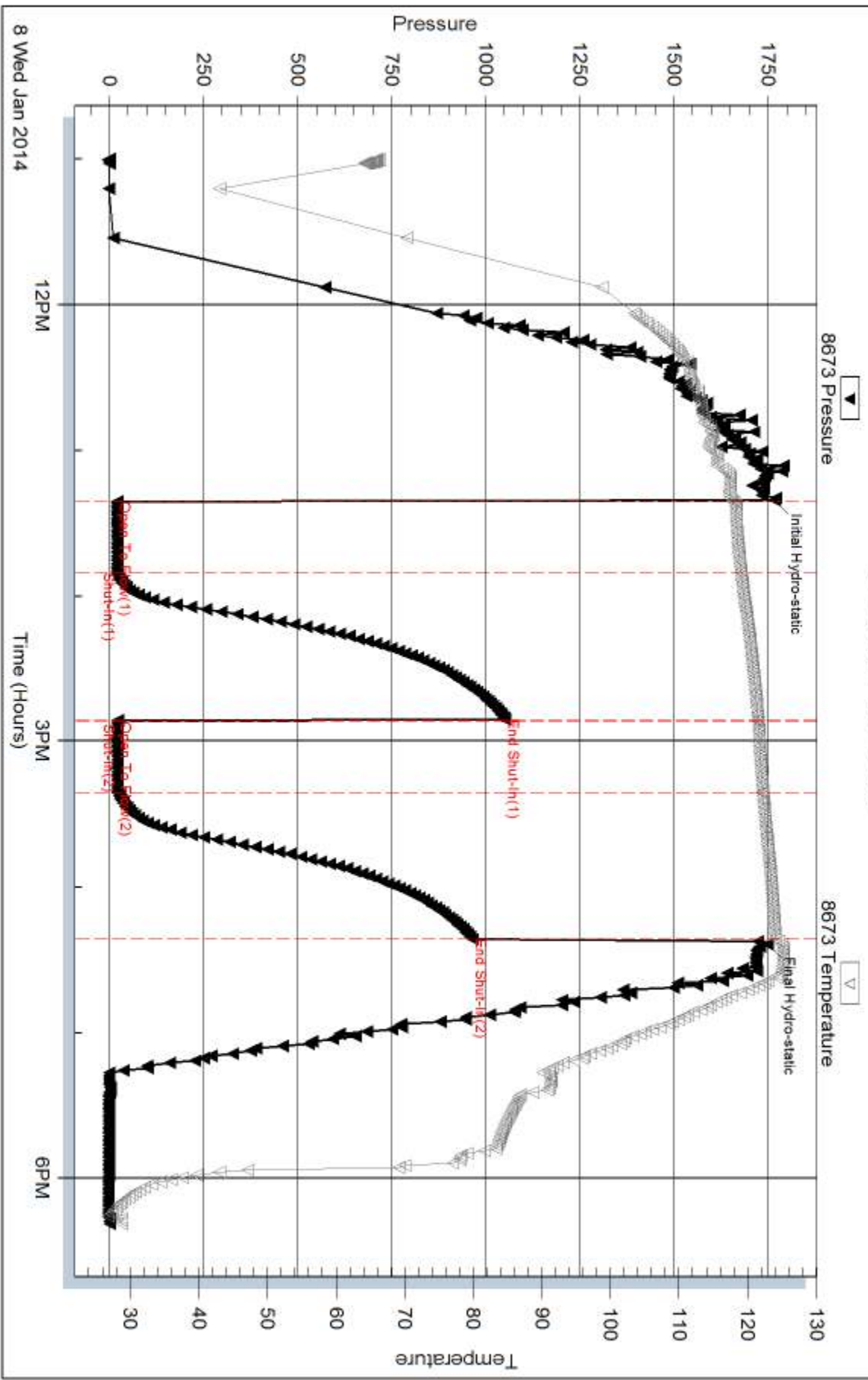
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

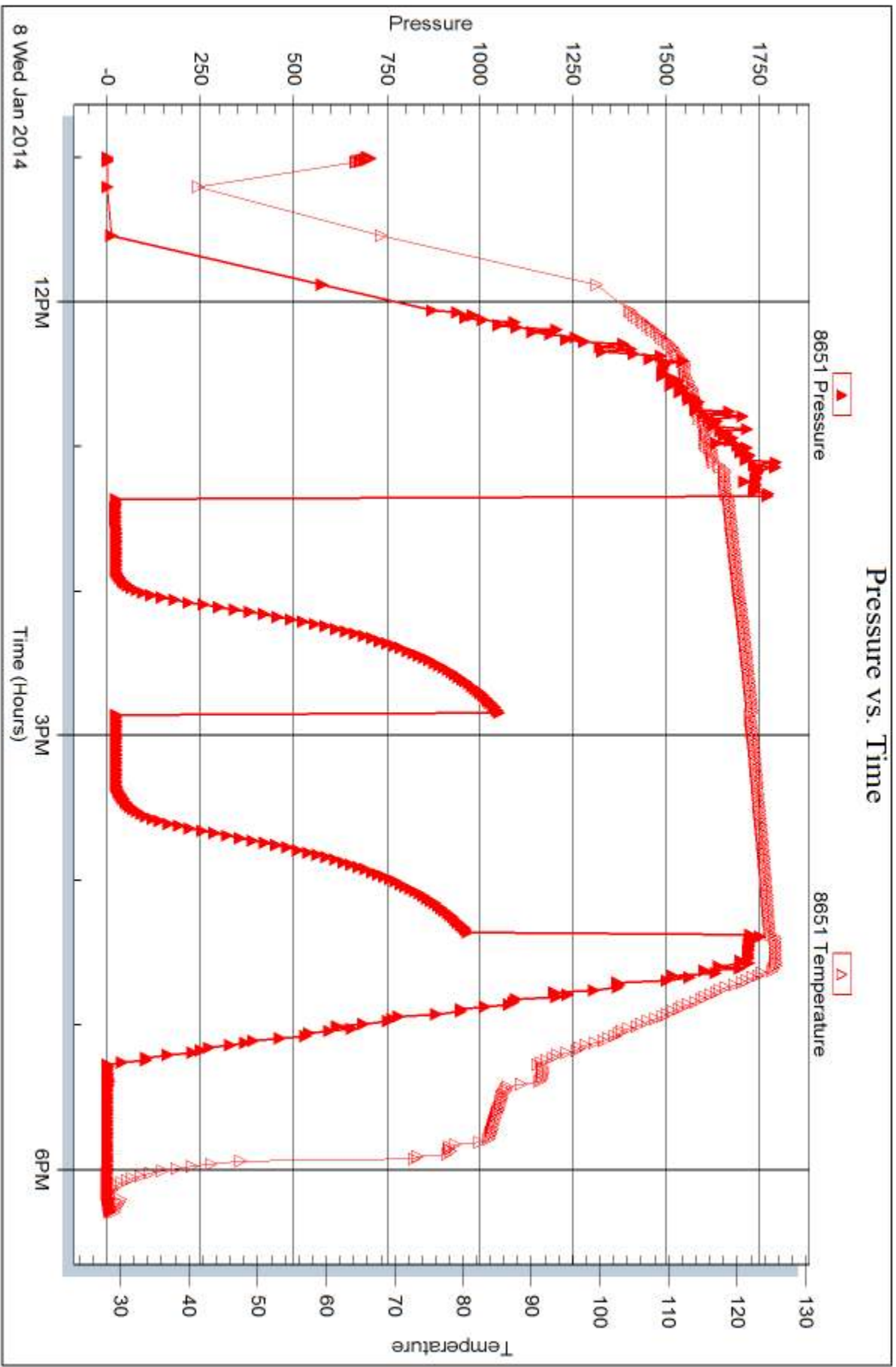


Serial #: 8651

Outside Murfin Drilling Co., Inc.

Jean #1-8

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 55888

Printed: 2014.01.17 @ 10:45:11



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.10 @ 08:45:00

End Date: 2014.01.10 @ 15:54:00

Job Ticket #: 55942                      DST #: 2

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

Printed: 2014.01.17 @ 10:44:39

Murfin Drilling Co., Inc. 8-1s-37w Cheyenne KS Jean #1-8 DST # 2 LKC A-D 2014.01.10



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

Test Start: 2014.01.10 @ 08:45:00

## GENERAL INFORMATION:

Formation: **LKC A-D**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:53:00  
 Time Test Ended: 15:54:00  
 Interval: **4124.00 ft (KB) To 5250.00 ft (KB) (TVD)**  
 Total Depth: 4250.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

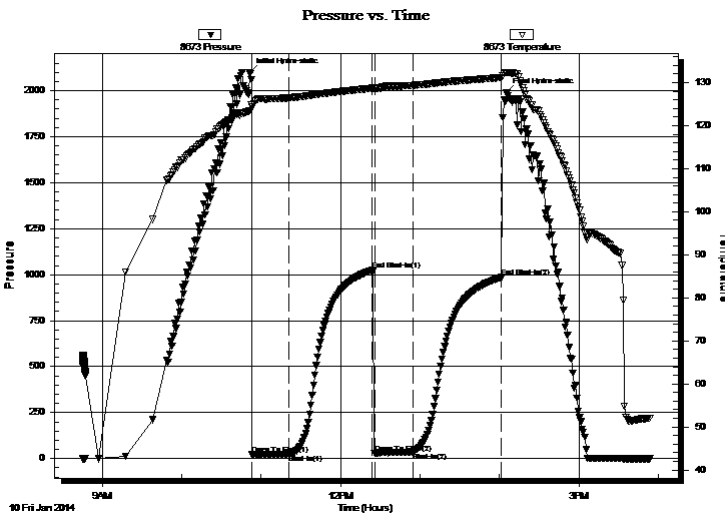
**Serial #: 8673**

**Inside**

Press@RunDepth: 36.12 psig @ 4125.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.10 End Date: 2014.01.10 Last Calib.: 2014.01.10  
 Start Time: 08:45:01 End Time: 15:54:00 Time On Btm: 2014.01.10 @ 10:51:00  
 Time Off Btm: 2014.01.10 @ 14:05:00

TEST COMMENT: IF: Weak blow , surface over 30 mins.  
 IS: No blow back  
 FF: No blow .  
 FS: No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.83	123.49	Initial Hydro-static
2	21.93	124.28	Open To Flow (1)
30	24.75	126.46	Shut-In(1)
93	1024.86	128.69	End Shut-In(1)
95	27.59	128.65	Open To Flow (2)
124	36.12	129.35	Shut-In(2)
191	985.30	131.16	End Shut-In(2)
194	1991.99	132.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	MCO 30%M 70%O	0.56

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

ATTN: Brad Rine

Test Start: 2014.01.10 @ 08:45:00

## Tool Information

Drill Pipe:	Length: 4113.00 ft	Diameter: 3.80 inches	Volume: 57.69 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 57.69 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4124.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	126.00 ft			
Tool Length:	154.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4101.00	
Hydraulic tool	5.00			4106.00	
Jars	5.00			4111.00	
Safety Joint	3.00			4114.00	
Packer	5.00			4119.00	28.00 Bottom Of Top Packer
Packer	5.00			4124.00	
Packer - Shale	0.00			4124.00	
Stubb	1.00			4125.00	
Recorder	0.00	8673	Inside	4125.00	
Recorder	0.00	8651	Outside	4125.00	
Perforations	26.00			4151.00	
Change Over Sub	1.00			4152.00	
Drill Pipe	94.00			4246.00	
Change Over Sub	1.00			4247.00	
Bullnose	3.00			4250.00	126.00 Bottom Packers & Anchor

**Total Tool Length: 154.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55942

**DST#: 2**

ATTN: Brad Rine

Test Start: 2014.01.10 @ 08:45:00

## 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	MCO 30%M 70%O	0.561

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

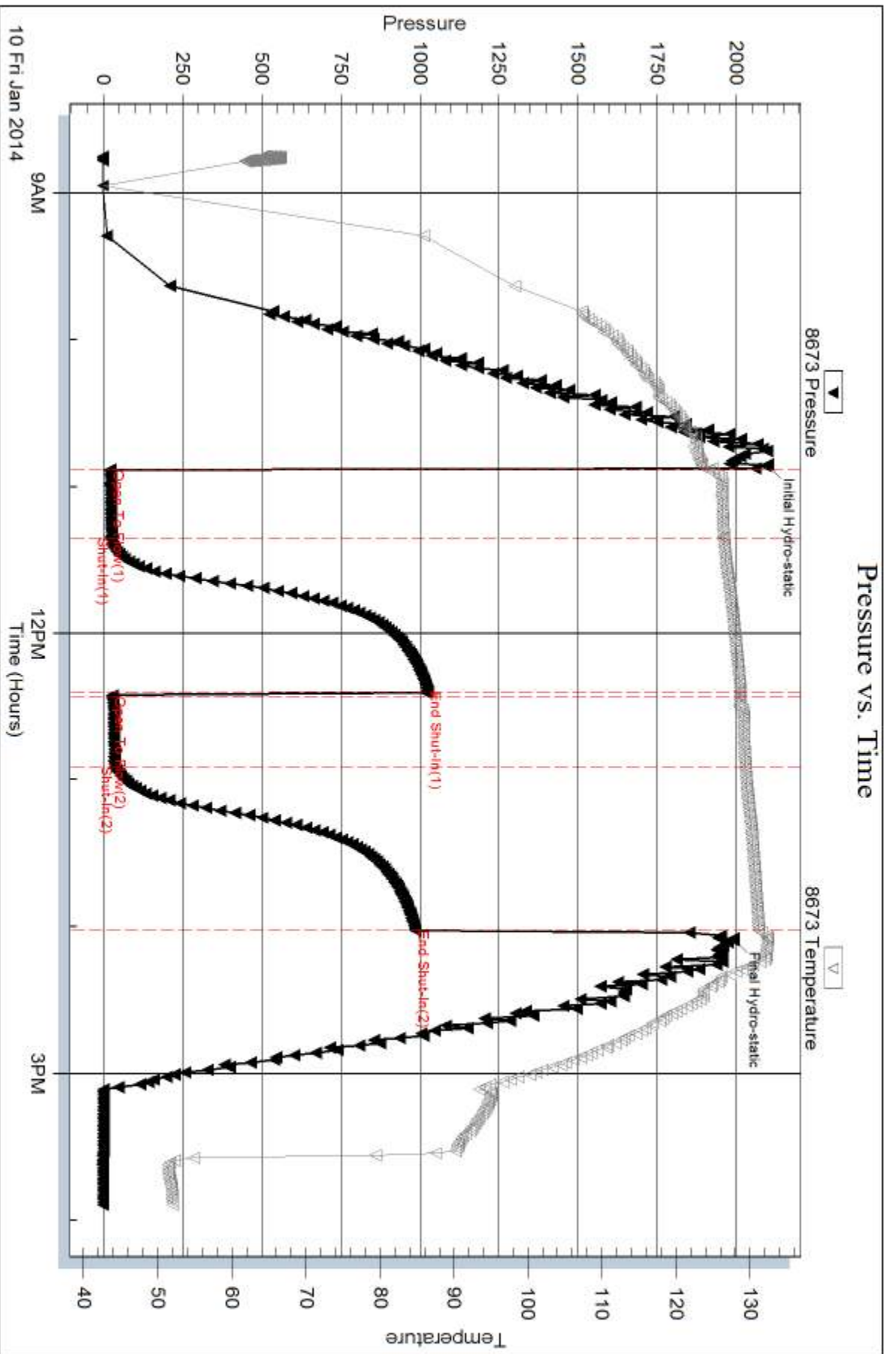
Num Gas Bombs: 0

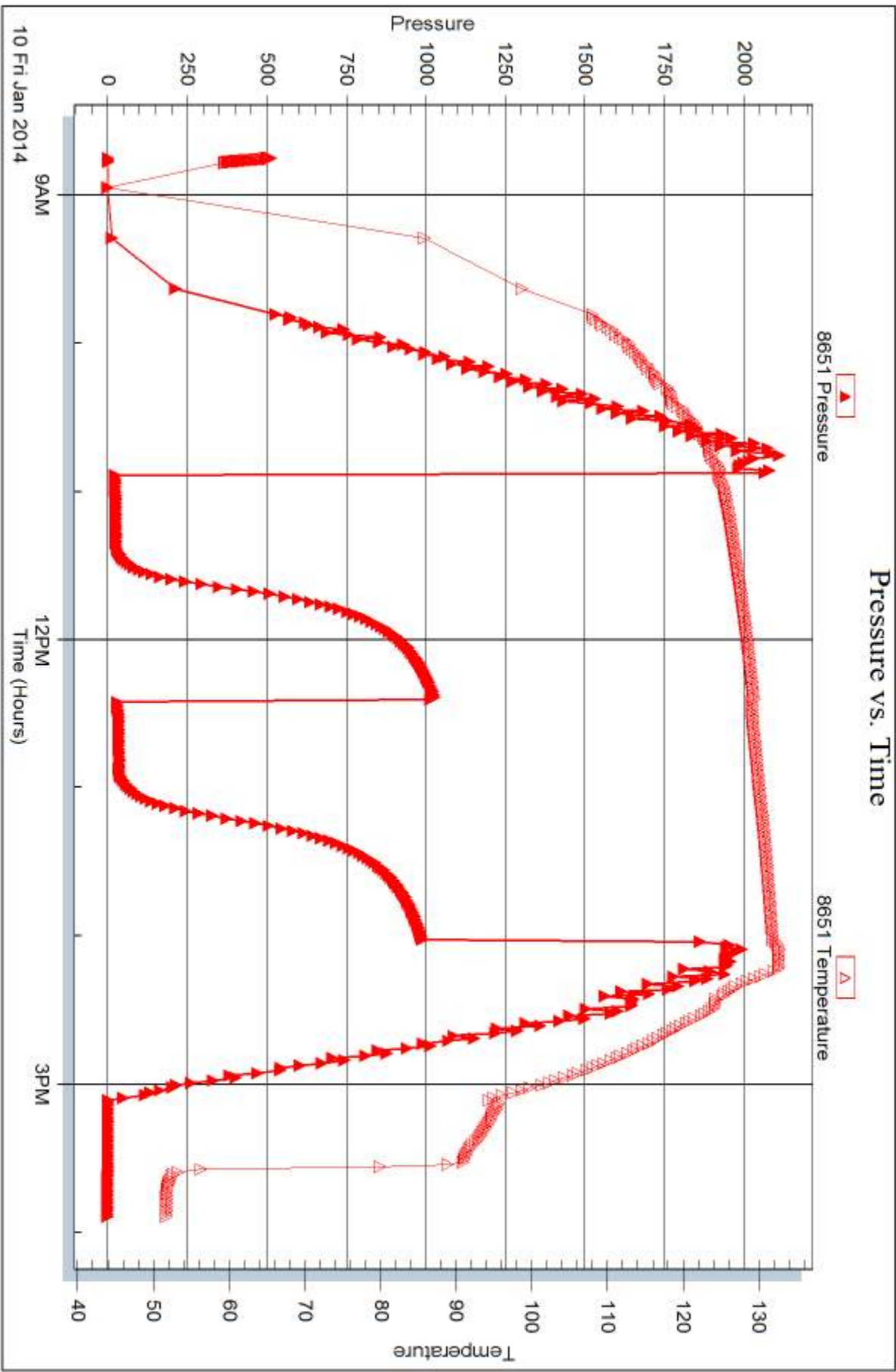
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.11 @ 05:00:00

End Date: 2014.01.11 @ 12:10:30

Job Ticket #: 55943                      DST #: 3

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

Printed: 2014.01.17 @ 10:41:55



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

Test Start: 2014.01.11 @ 05:00:00

## GENERAL INFORMATION:

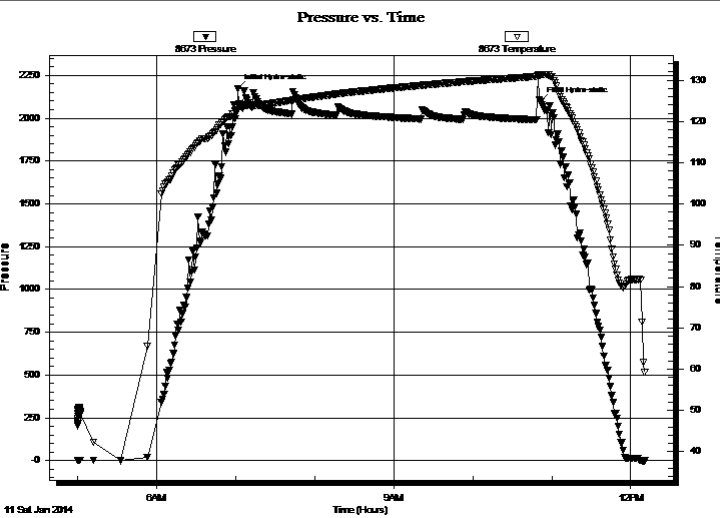
Formation: **LKC G-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:01:30  
 Time Test Ended: 12:10:30  
 Interval: **4242.00 ft (KB) To 4350.00 ft (KB) (TVD)**  
 Total Depth: 4350.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 8673**

**Inside**

Press@RunDepth: psig @ 4243.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.11 End Date: 2014.01.11 Last Calib.: 2014.01.11  
 Start Time: 05:00:01 End Time: 12:10:30 Time On Btm: 2014.01.11 @ 07:01:30  
 Time Off Btm: 2014.01.11 @ 10:51:30

TEST COMMENT: IF: No Blow (30)  
 IS: No blow back(60)  
 FF: No blow (30)  
 FS: No blow back(60)-----Hdy. Tool w ent out.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.40	122.79	Initial Hydro-static
230	2094.71	131.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 05:00:00

## Tool Information

Drill Pipe:	Length: 4239.00 ft	Diameter: 3.80 inches	Volume: 59.46 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 59.46 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4242.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	108.00 ft			
Tool Length:	136.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4219.00	
Hydraulic tool	5.00			4224.00	
Jars	5.00			4229.00	
Safety Joint	3.00			4232.00	
Packer	5.00			4237.00	28.00 Bottom Of Top Packer
Packer	5.00			4242.00	
Packer - Shale	0.00			4242.00	
Stubb	1.00			4243.00	
Recorder	0.00	8673	Inside	4243.00	
Recorder	0.00	8651	Outside	4243.00	
Perforations	3.00			4246.00	
Change Over Sub	1.00			4247.00	
Drill Pipe	94.00			4341.00	
Change Over Sub	1.00			4342.00	
Perforations	5.00			4347.00	
Bullnose	3.00			4350.00	108.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>136.00</b>				





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55943

**DST#: 3**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 05:00:00

### 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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.19 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

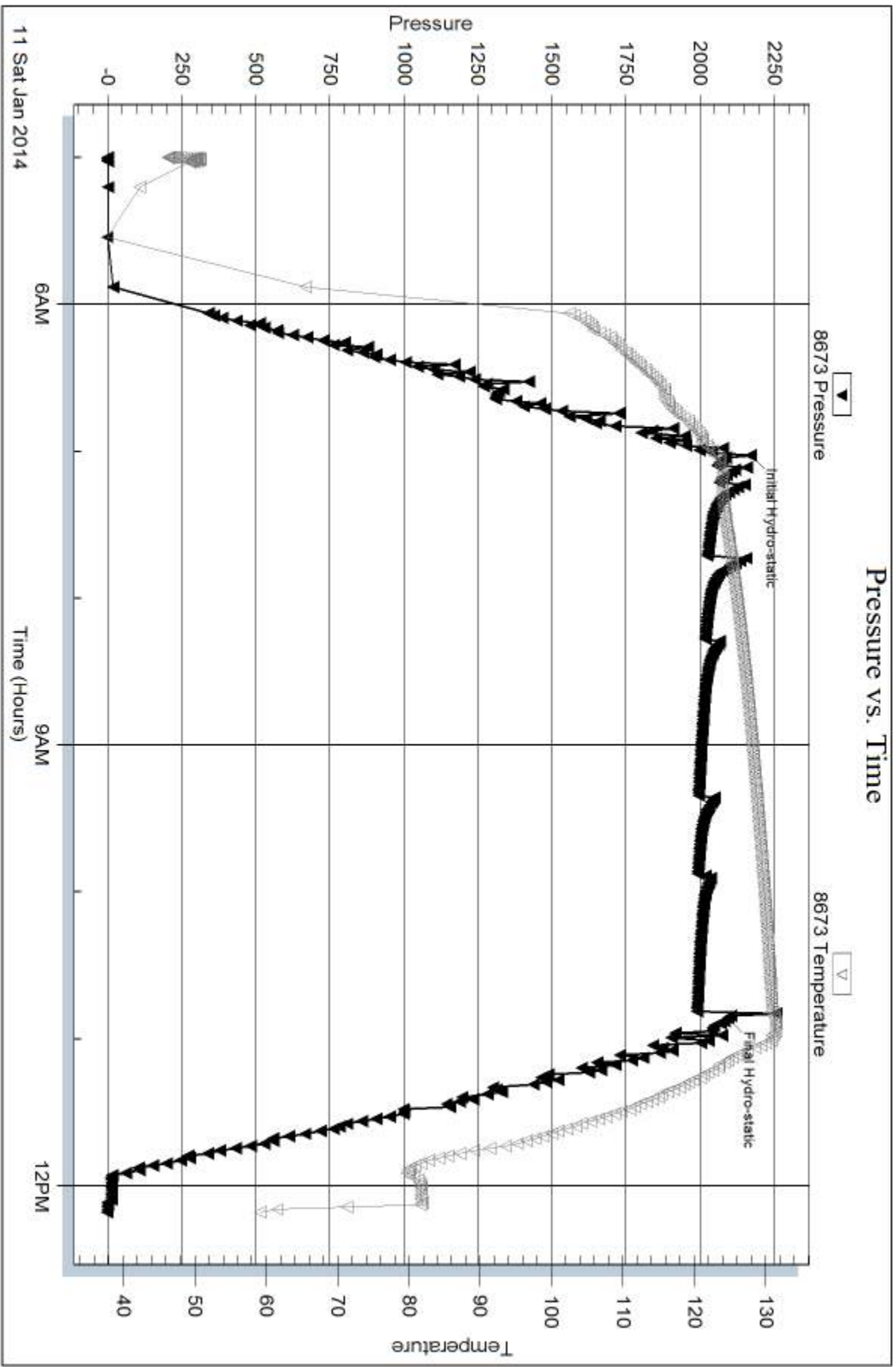
Length ft	Description	Volume bbbl

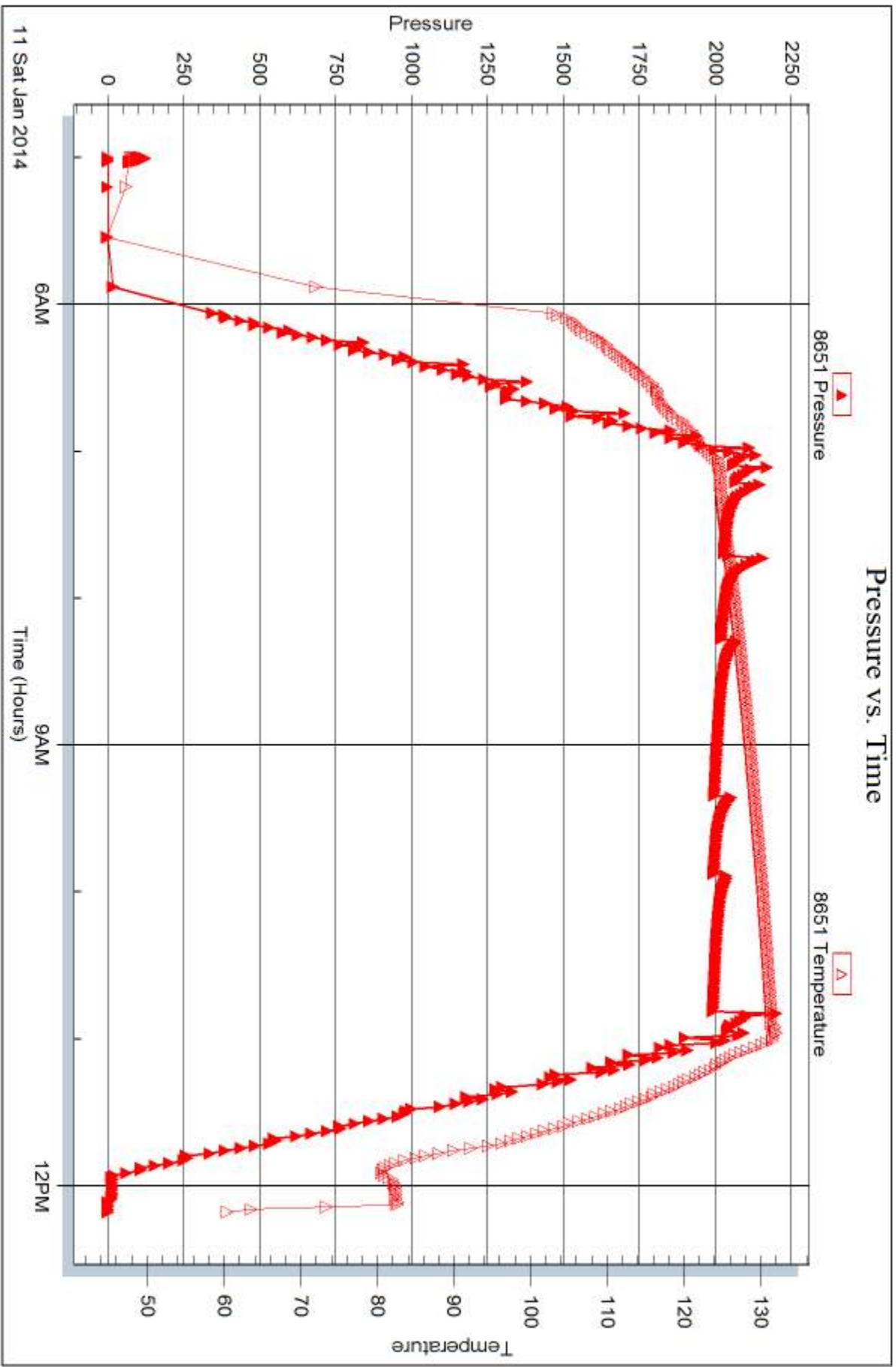
Total Length:                      ft      Total Volume:                      bbl

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

Laboratory Name:                      Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.11 @ 13:45:00

End Date: 2014.01.11 @ 20:34:30

Job Ticket #: 55944                      DST #: 4

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

Printed: 2014.01.17 @ 10:41:28



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

Test Start: 2014.01.11 @ 13:45:00

## GENERAL INFORMATION:

Formation: **LKC G-I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:30:30  
 Time Test Ended: 20:34:30  
 Interval: **4241.00 ft (KB) To 4350.00 ft (KB) (TVD)**  
 Total Depth: 4350.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

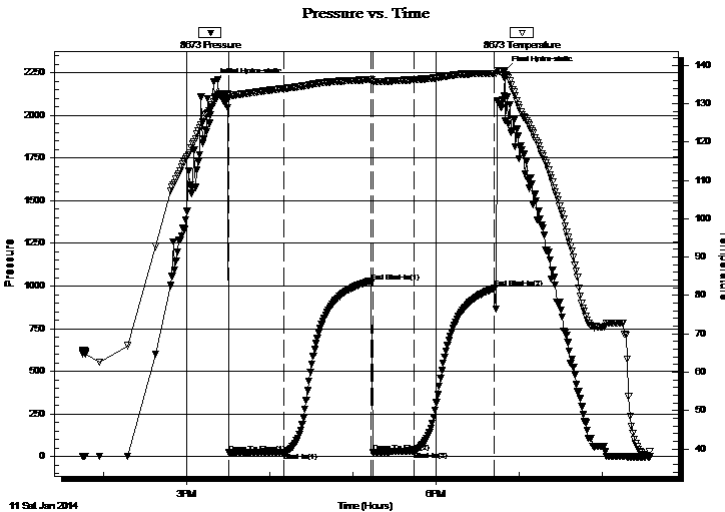
## Serial #: 8673

Inside

Press@RunDepth: 32.93 psig @ 4242.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.11 End Date: 2014.01.11 Last Calib.: 2014.01.11  
 Start Time: 13:45:01 End Time: 20:34:30 Time On Btm: 2014.01.11 @ 15:19:30  
 Time Off Btm: 2014.01.11 @ 18:50:00

TEST COMMENT: IF: Weak blow over 30 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2195.21	130.33	Initial Hydro-static
11	21.57	131.24	Open To Flow (1)
51	25.34	133.91	Shut-In(1)
114	1021.73	136.23	End Shut-In(1)
115	25.13	135.77	Open To Flow (2)
145	32.93	136.20	Shut-In(2)
203	986.76	137.85	End Shut-In(2)
211	2264.53	136.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mco-20% m80% o	0.42

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 13:45:00

## Tool Information

Drill Pipe:	Length: 4238.00 ft	Diameter: 3.80 inches	Volume: 59.45 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4241.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	109.00 ft			
Tool Length:	137.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4218.00	
Hydraulic tool	5.00			4223.00	
Jars	5.00			4228.00	
Safety Joint	3.00			4231.00	
Packer	5.00			4236.00	28.00 Bottom Of Top Packer
Packer	5.00			4241.00	
Packer - Shale	0.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	8673	Inside	4242.00	
Recorder	0.00	8651	Outside	4242.00	
Perforations	4.00			4246.00	
Change Over Sub	1.00			4247.00	
Drill Pipe	94.00			4341.00	
Change Over Sub	1.00			4342.00	
Perforations	5.00			4347.00	
Bullnose	3.00			4350.00	109.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>137.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55944

**DST#: 4**

ATTN: Brad Rine

Test Start: 2014.01.11 @ 13:45:00

## 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: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.19 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
30.00	mco-20% m80%o	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

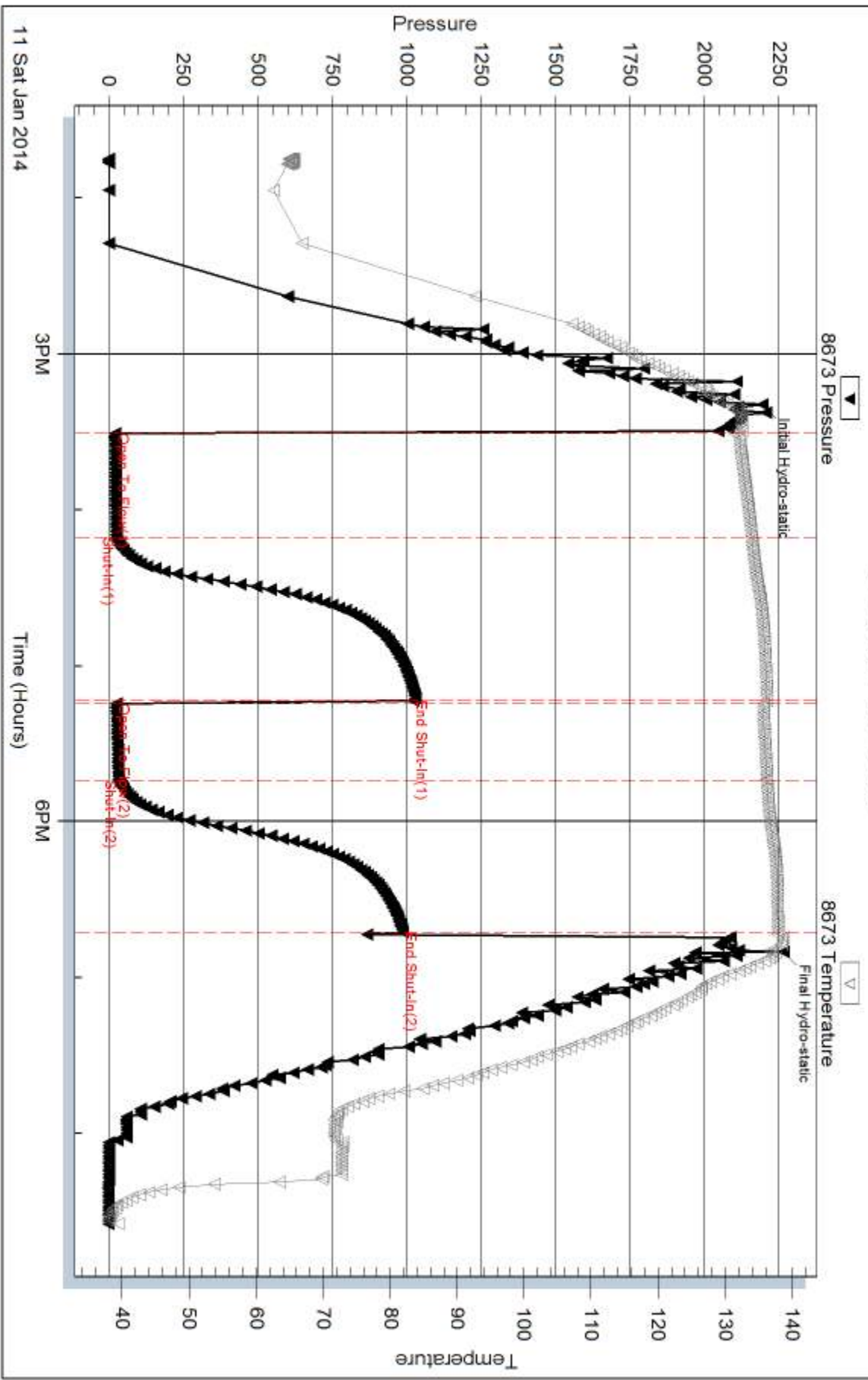
Laboratory Name:

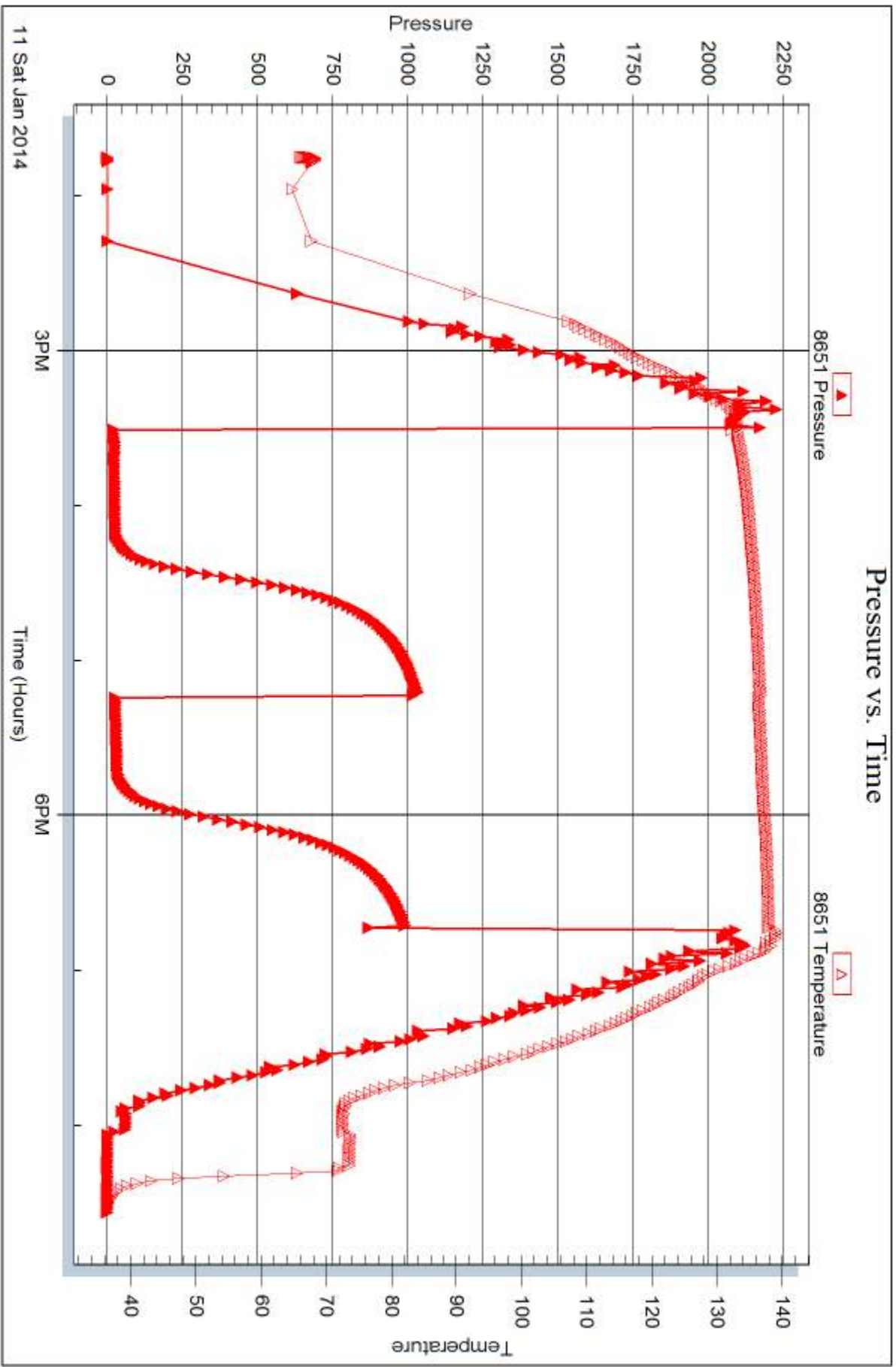
Laboratory Location:

Recovery Comments:



### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.12 @ 05:45:00

End Date: 2014.01.12 @ 12:38:00

Job Ticket #: 55945                      DST #: 5

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

Printed: 2014.01.17 @ 10:40:51

Murfin Drilling Co., Inc.  
8-1s-37w Cheyenne KS  
Jean #1-8  
DST # 5  
LKC J  
2014.01.12



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

ATTN: Brad Rine

Test Start: 2014.01.12 @ 05:45:00

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:59:30

Time Test Ended: 12:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 4337.00 ft (KB) To 4400.00 ft (KB) (TVD)**

Total Depth: 4400.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3219.00 ft (KB)

3206.00 ft (CF)

KB to GR/CF: 13.00 ft

**Serial #: 8673**

**Inside**

Press@RunDepth: 18.47 psig @ 4338.00 ft (KB)

Start Date: 2014.01.12

End Date:

2014.01.12

Start Time: 05:45:01

End Time:

12:38:00

Capacity: 8000.00 psig

Last Calib.: 2014.01.12

Time On Btm: 2014.01.12 @ 07:52:30

Time Off Btm: 2014.01.12 @ 11:06:30

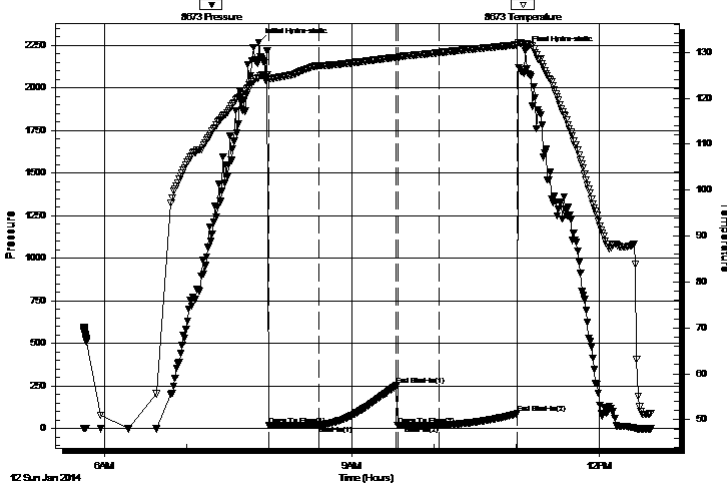
TEST COMMENT: IF: Weak blow, Dead in 20 mins.

IS: No blow back

FF: No blow

FS: No blow back,

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2267.89	124.41	Initial Hydro-static
7	18.19	124.33	Open To Flow (1)
44	20.90	127.06	Shut-In(1)
100	252.45	128.89	End Shut-In(1)
101	19.03	128.85	Open To Flow (2)
131	18.47	129.92	Shut-In(2)
188	88.06	131.61	End Shut-In(2)
194	2221.20	131.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.07

Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

ATTN: Brad Rine

Test Start: 2014.01.12 @ 05:45:00

## Tool Information

Drill Pipe:	Length: 4334.00 ft	Diameter: 3.80 inches	Volume: 60.79 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 60.79 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4337.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4314.00	
Hydraulic tool	5.00			4319.00	
Jars	5.00			4324.00	
Safety Joint	3.00			4327.00	
Packer	5.00			4332.00	28.00 Bottom Of Top Packer
Packer	5.00			4337.00	
Packer - Shale	0.00			4337.00	
Stubb	1.00			4338.00	
Recorder	0.00	8673	Inside	4338.00	
Recorder	0.00	8651	Outside	4338.00	
Perforations	25.00			4363.00	
Change Over Sub	1.00			4364.00	
Drill Pipe	32.00			4396.00	
Change Over Sub	1.00			4397.00	
Bullnose	3.00			4400.00	63.00 Bottom Packers & Anchor

**Total Tool Length: 91.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55945

**DST#: 5**

ATTN: Brad Rine

Test Start: 2014.01.12 @ 05:45:00

### 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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

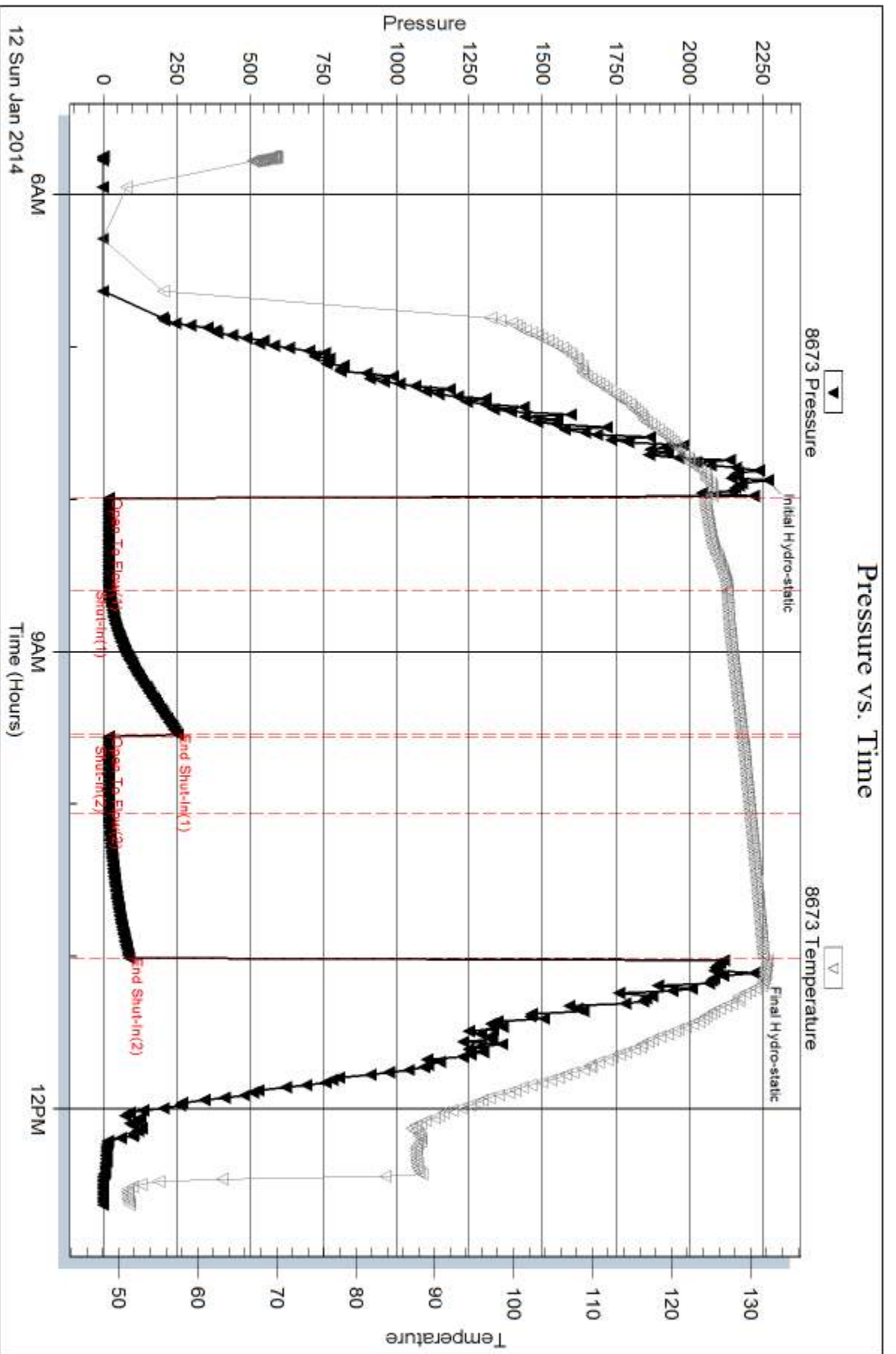
Num Gas Bombs: 0

Serial #:

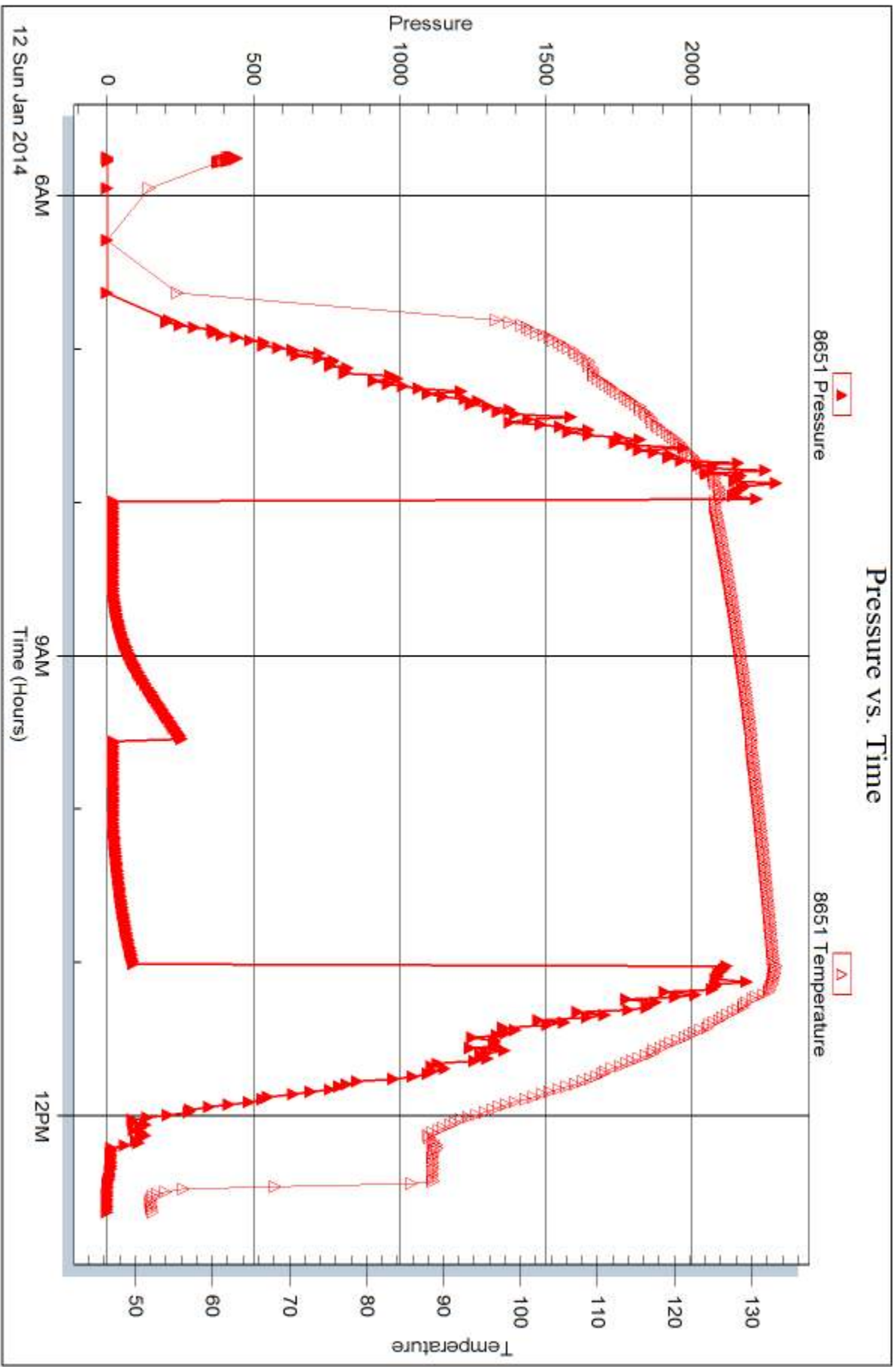
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co., Inc.**

250 N. Water Suite 300  
Wichita, KS 67202

ATTN: Brad Rine

### **Jean #1-8**

#### **8-1s-37w Cheyenne KS**

Start Date: 2014.01.13 @ 08:10:00

End Date: 2014.01.13 @ 16:50:00

Job Ticket #: 55946                      DST #: 6

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

Printed: 2014.01.17 @ 10:24:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.  
250 N. Water Suite 300  
Wichita, KS 67202  
ATTN: Brad Rine

**8-1s-37w Cheyenne KS**

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

Test Start: 2014.01.13 @ 08:10:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:30:30  
 Time Test Ended: 16:50:00  
 Interval: **4548.00 ft (KB) To 4600.00 ft (KB) (TVD)**  
 Total Depth: 4600.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: James Winder  
 Unit No: 61  
 Reference Elevations: 3219.00 ft (KB)  
 3206.00 ft (CF)  
 KB to GR/CF: 13.00 ft

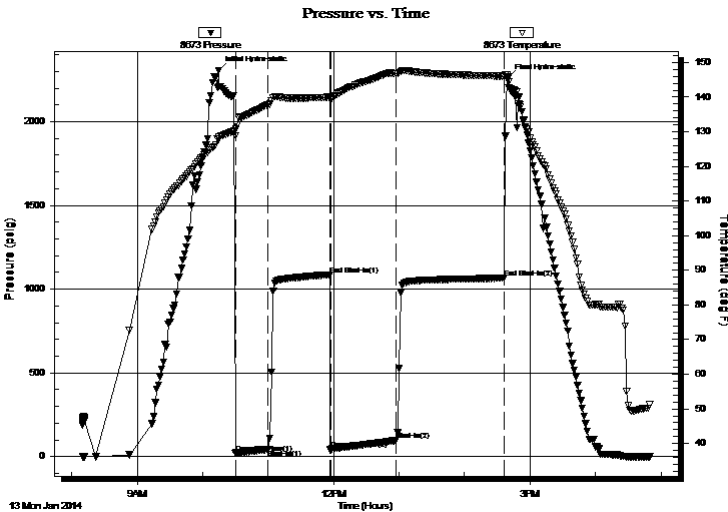
## Serial #: 8673

Inside

Press@RunDepth: 96.64 psig @ 4549.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.13 End Date: 2014.01.13 Last Calib.: 2014.01.13  
 Start Time: 08:10:01 End Time: 16:50:00 Time On Btm: 2014.01.13 @ 10:14:30  
 Time Off Btm: 2014.01.13 @ 14:39:30

TEST COMMENT: IF: Fair blow , Built to B.O.B in 20 mins.  
 IS: No blow back  
 FF: Fair blow , Built to B.O.B in 15 mins.  
 FS: Blow back afer 5 mins. Weak surface . Died in 20 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2305.72	127.86	Initial Hydro-static
16	22.12	130.78	Open To Flow (1)
46	42.12	137.80	Shut-In(1)
102	1085.99	140.00	End Shut-In(1)
103	45.31	139.47	Open To Flow (2)
163	96.64	146.78	Shut-In(2)
262	1065.65	146.03	End Shut-In(2)
265	2259.87	145.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	gocm-10%g40%o50%m	0.42
252.00	go-20%g80%o	3.53
0.00	188 ft. gas in pipe	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

ATTN: Brad Rine

Test Start: 2014.01.13 @ 08:10:00

## Tool Information

Drill Pipe:	Length: 4525.00 ft	Diameter: 3.80 inches	Volume: 63.47 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 63.47 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4548.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4525.00	
Hydraulic tool	5.00			4530.00	
Jars	5.00			4535.00	
Safety Joint	3.00			4538.00	
Packer	5.00			4543.00	28.00 Bottom Of Top Packer
Packer	5.00			4548.00	
Packer - Shale	0.00			4548.00	
Stubb	1.00			4549.00	
Recorder	0.00	8673	Inside	4549.00	
Recorder	0.00	8651	Outside	4549.00	
Perforations	15.00			4564.00	
Change Over Sub	1.00			4565.00	
Drill Pipe	31.00			4596.00	
Change Over Sub	1.00			4597.00	
Bullnose	3.00			4600.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 80.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**8-1s-37w Cheyenne KS**

250 N. Water Suite 300  
Wichita, KS 67202

**Jean #1-8**

Job Ticket: 55946

**DST#: 6**

ATTN: Brad Rine

Test Start: 2014.01.13 @ 08:10:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	gocm-10%g40%o50%m	0.421
252.00	go-20%g80%o	3.535
0.00	188 ft. gas in pipe	0.000

Total Length: 282.00 ft      Total Volume: 3.956 bbl

Num Fluid Samples: 0

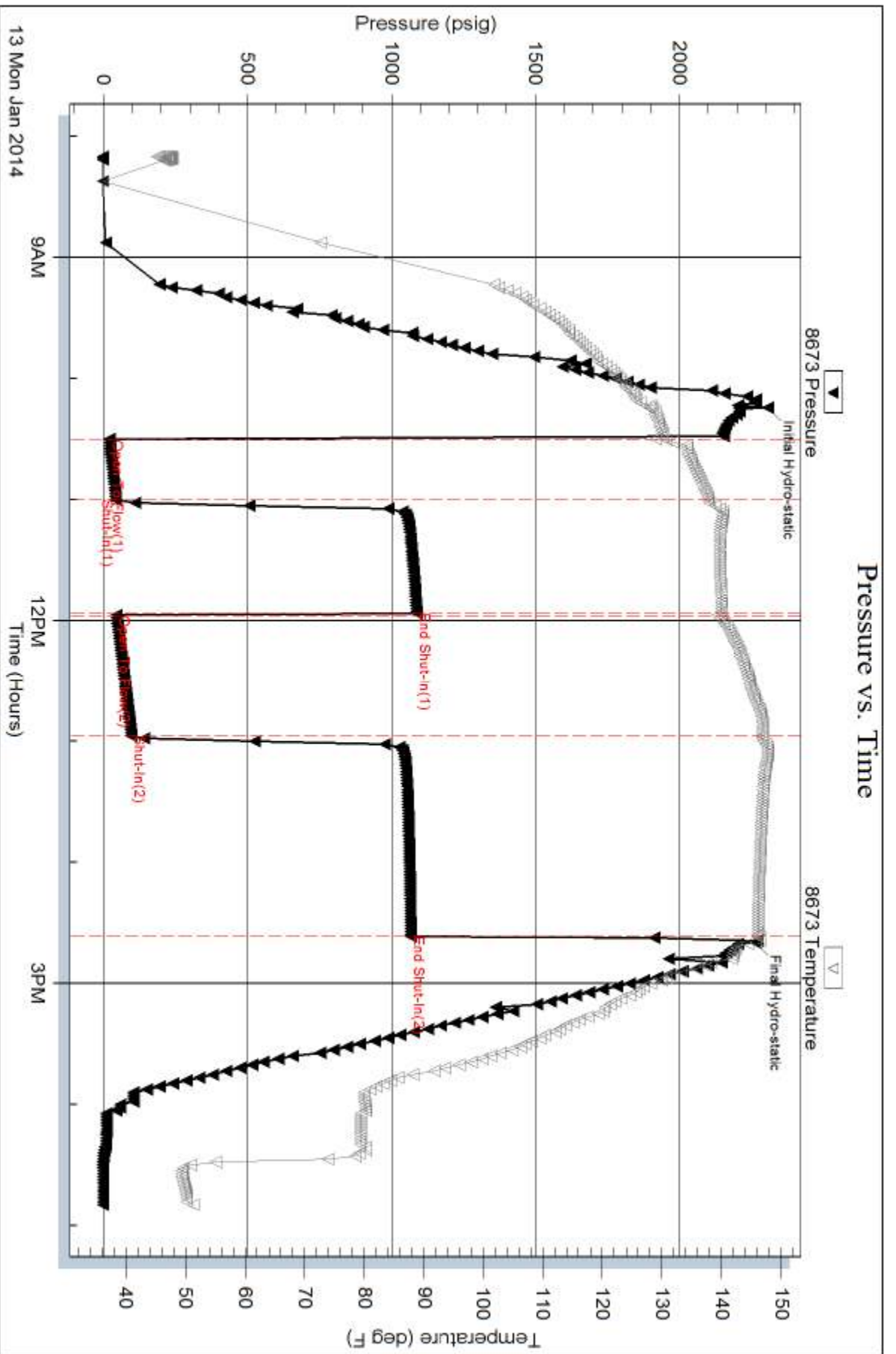
Num Gas Bombs: 0

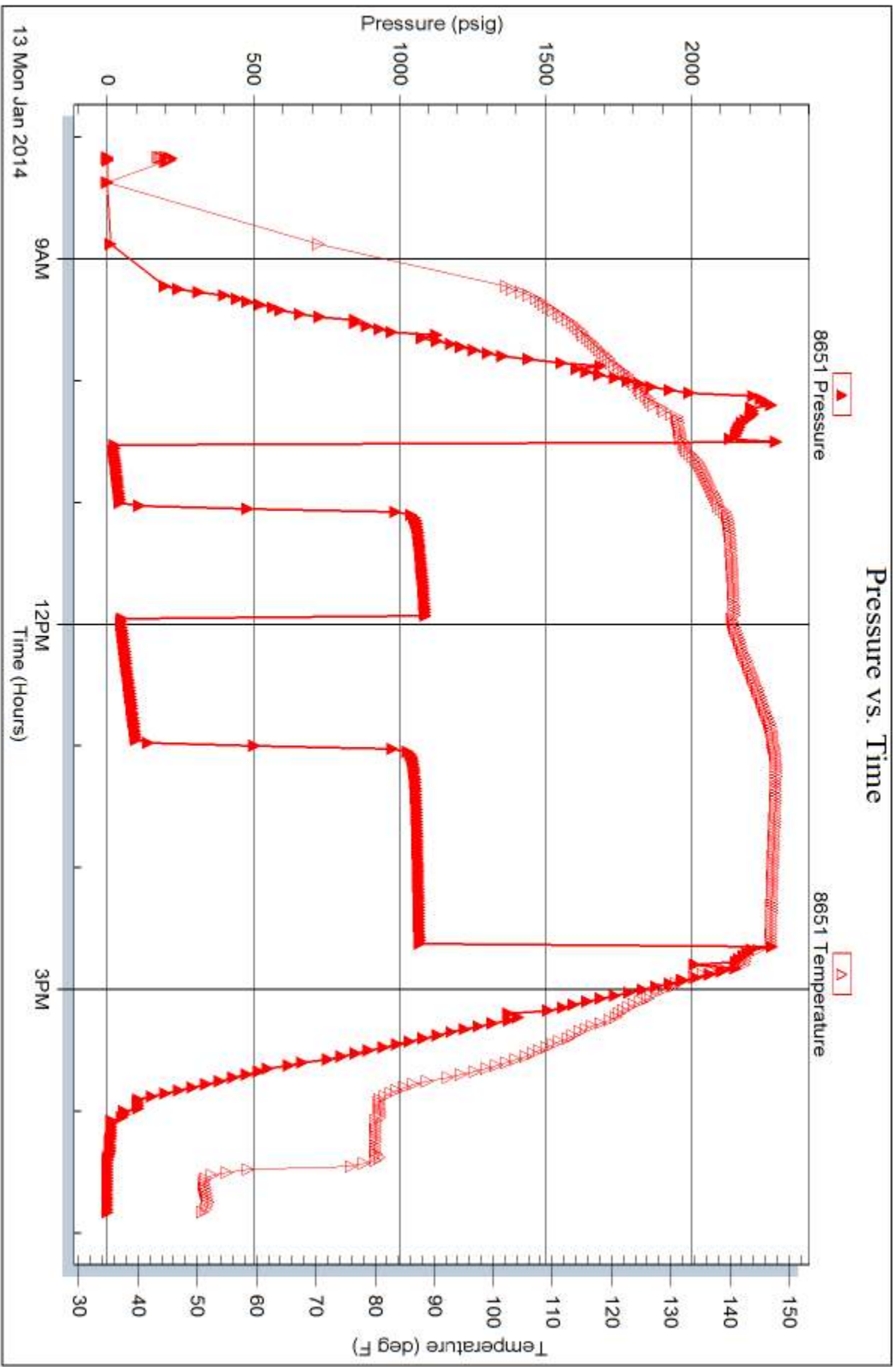
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity-39@70\*=38









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55888**

4/10

Well Name & No. Jean #1-8 Test No. 1 Date 1-8-14  
 Company Murfin Drilling Co. Inc Elevation 3219 KB 3206 GL  
 Address 250 N. Water Suite 300 Wichita, KS 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin #25  
 Location: Sec. 08 Twp. 1s Rge. 37w Co. Cheyenne State KS

Interval Tested 3706 - 3755 Zone Tested Foraker  
 Anchor Length 49 Drill Pipe Run 3704 Mud Wt. 8.9  
 Top Packer Depth 3701 Drill Collars Run - Vis 60  
 Bottom Packer Depth 3706 (shale) Wt. Pipe Run - WL 4.8  
 Total Depth 3755 Chlorides 900 ppm System LCM 7

Blow Description IF: 3/4" Blow at open, died back, dead at 20 min.  
ISI: No blowback  
FF: No blow  
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>50cm</u>	<u>3</u>	<u>4</u>	<u>-</u>	<u>93</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 124 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 1777  Test \* 1150 T-On Location 10:30  
 (B) First Initial Flow 21  Jars \* 250 T-Started 11:00  
 (C) First Final Flow 22  Safety Joint \* 75 T-Open 13:21  
 (D) Initial Shut-In 1053  Circ Sub \* NA T-Pulled 16:21  
 (E) Second Initial Flow 22  Hourly Standby \_\_\_\_\_ T-Out 18:15  
 (F) Second Final Flow 22  Mileage 148 RT 229.40 Comments Tail chased 2' to  
 (G) Final Shut-In 966  Sampler \_\_\_\_\_ bottom - lost a couple ft. of  
 (H) Final Hydrostatic 1749  Straddle \_\_\_\_\_ mud - 3/4" blow at open

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Total 1954.40  
 Final Flow 30  Day Standby \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60  Accessibility \_\_\_\_\_  
 Sub Total 1954.40

Approved By Brad Rine Our Representative James Winder

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55942

Well Name & No. Jean #1-8 Test No. 2 Date 1-10-14  
 Company Murfin Drilling Co. Inc Elevation 3219 KB 3204 GL  
 Address 250 N. Water St 300 Wichita KS. 67202  
 Co. Rep / Geo. Brad Rine Rig Murfin 25  
 Location: Sec. 08 Twp. 15 Rge. 37W Co. Cherokee State Ks

Interval Tested 4124 4250 Zone Tested LKC A, B, D  
 Anchor Length 126 Drill Pipe Run 4113 Mud Wt. 9.3  
 Top Packer Depth 4119 Drill Collars Run -0- Vis 60  
 Bottom Packer Depth 4124 Wt. Pipe Run -0- WL 6.2  
 Total Depth 4250 Chlorides 500 ppm System LCM 6H

Blow Description IF: Weak surface over 20 mins

SSJ: No blow back

FF: No blow

FJS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>HMC0</u>		<u>70</u>		<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

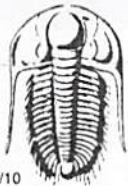
Rec Total 40 BHT 129. Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2100  Test 1250 T-On Location 6:30  
 (B) First Initial Flow 22  Jars 250 T-Started 8:45  
 (C) First Final Flow 25  Safety Joint 75 T-Open 10:53  
 (D) Initial Shut-In 1025  Circ Sub \_\_\_\_\_ T-Pulled 14:00  
 (E) Second Initial Flow 28  Hourly Standby \_\_\_\_\_ T-Out 15:54  
 (F) Second Final Flow 36  Mileage 70x2 = 140x1.55 229.40  
 (G) Final Shut-In 985  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1992  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer TOP PACKER 250  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder 1d 12.25h Sub Total 408.33  
 Final Flow 30  Day Standby give to James Total 2462.73  
 Final Shut-In 60  Accessibility standby 10 JAMES MP/DST Disc't \_\_\_\_\_  
 Sub Total 2054.40

Approved By \_\_\_\_\_ Our Representative Chris Meyer

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55943**

Well Name & No. Jean # 1-8 Test No. 3 Date 1-11-2014  
 Company Murfin Drilling Co. Inc. Elevation 3214 KB 3204 GL  
 Address 250 N. Water Ste 300 Wichita Ks. 67202  
 Co. Rep / Geo. Brad Rize Rig Murfin 25  
 Location: Sec. 08 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4242 4350 Zone Tested LKC- G,H,I  
 Anchor Length 108 Drill Pipe Run 4239 Mud Wt. 9.3  
 Top Packer Depth 4287 Drill Collars Run -0- Vis 60  
 Bottom Packer Depth 4242 Wt. Pipe Run -0- WL 6.2  
 Total Depth 4350 Chlorides 500 ppm System LCM 6#

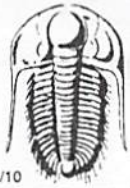
Blow Description IF: No blow, Fluted tool No Blow  
IST: No blow back  
FF: No blow  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud

Rec Total \_\_\_\_\_ BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic \_\_\_\_\_  Test 1050 T-On Location 4:00  
 (B) First Initial Flow \_\_\_\_\_  Jars 250 T-Started 5:00  
 (C) First Final Flow \_\_\_\_\_  Safety Joint 75 T-Open 8:00  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 11:00  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow \_\_\_\_\_  Mileage 70 x 2 = 140 x 1.55 = 229.40 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1854.40  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1854.40

Approved By \_\_\_\_\_ Our Representative Chuck Hays  
 TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55944

Well Name & No. Team #1-8 Test No. 4 Date 1-11-14  
 Company Murfin Drilling Co. Elevation 3214 KB 3204 GL  
 Address 250 N. Water St 300 Wichita KS 67202  
 Co. Rep / Geo. Brad Rize Rig Murfin #25  
 Location: Sec. 08 Twp. 1S Rge. 37W Co. Cherokee State KS

Interval Tested 4241 4350 Zone Tested Llc-6, H, F  
 Anchor Length 109 Drill Pipe Run 4238 Mud Wt. 9.3  
 Top Packer Depth 4236 Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 4241 Wt. Pipe Run 0 WL 6.2  
 Total Depth 4350 Chlorides 500 ppm System LCM 6#

Blow Description IF: Max blow over 30 mins.  
ISI: No blow back  
FF: No blow  
FSE: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mco</u>		<u>80</u>		<u>20</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 135 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2145</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>1145</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1145</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:30</u>
(D) Initial Shut-In <u>1022</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled _____
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>20:34</u>
(F) Second Final Flow <u>33</u>	<input checked="" type="checkbox"/> Mileage <u>700 = 140 x 155</u>	Comments _____
(G) Final Shut-In <u>987</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2265</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1825</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1825</u>	

Approved By \_\_\_\_\_ Our Representative Chris [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55945

Well Name & No. Jean # 1-8 Test No. 5 Date 1-12-14  
 Company Murfin Drilling Co Elevation 3219 KB 3204 GL  
 Address 250 N. water ste. 300 Wichita Ks 67202  
 Co. Rep / Geo. Brad Rice Rig Murfin #25  
 Location: Sec. 08 Twp. 15 Rge. 37w Co. Cherokee State Ks.

Interval Tested 4337 4400 Zone Tested LKC-J  
 Anchor Length 63 Drill Pipe Run 4334 Mud Wt. 9.3  
 Top Packer Depth 4332 Drill Collars Run -0- Vis 59  
 Bottom Packer Depth 4337 Wt. Pipe Run -0- WL 6.0  
 Total Depth 4400 Chlorides 900 ppm System LCM 8#

Blow Description IF: Weak blow, died in 20 mins.  
FF: No blow back  
FF: No blow  
FF: No blow back

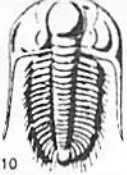
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud</u>				

Rec Total 5 BHT 132 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic \_\_\_\_\_  Test 1250 T-On Location 4:25  
 (B) First Initial Flow \_\_\_\_\_  Jars 250 T-Started 5:45  
 (C) First Final Flow \_\_\_\_\_  Safety Joint 75 T-Open 8:00  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 11:00  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 12:38  
 (F) Second Final Flow \_\_\_\_\_  Mileage 202240 x 1.55 = 229.40 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  
 Shale Packer 250  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2054.40  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2054.40

Approved By \_\_\_\_\_ Our Representative Chad Myers

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55946

Well Name & No. Jean # 1-8 Test No. 6 Date 1-13-14  
 Company Murfin Drilling Co Elevation 3214 KB 3204 GL  
 Address 250 N. Water St. 300 Wichita Ks 67202  
 Co. Rep / Geo. Brad Ane Rig Murfin #25  
 Location: Sec. 08 Twp. 15 Rge. 37w Co. Cheyenne State Ks

Interval Tested 4548 4600 Zone Tested Pawnee  
 Anchor Length 52 Drill Pipe Run 4525 Mud Wt. 9.3  
 Top Packer Depth 4543 Drill Collars Run 0 Vis 62  
 Bottom Packer Depth 4548 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4600 Chlorides 900 ppm System LCM 8#

Blow Description IF: Fair blow, Built to B.O.B in 20 mins

FSF: No blow back

FF: Fair Blow, Built to B.O.B in 15 mins

FSF: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>D</u>	<u>180ft + gas in pipe</u>				
<u>252</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>30</u>	<u>90cm</u>	<u>10</u>	<u>40</u>		<u>50</u>

Rec Total 282 BHT 146 Gravity 38 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>2306</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>7:30</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:10</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:30</u>
(D) Initial Shut-In <u>1086</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>14:25</u>
(E) Second Initial Flow <u>45</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:50</u>
(F) Second Final Flow <u>97</u>	<input checked="" type="checkbox"/> Mileage <u>70x2 = 140 x 1.55</u> 458.80	Comments <u>loaded tools 11/14 11:15</u>
(G) Final Shut-In <u>1666</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2260</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2283.80</u>
Final Shut-In <u>40</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2283.80</u>	

Approved By \_\_\_\_\_

Our Representative Chad Meyer

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Jean #1-8  
 Daily Drilling Reports  
 Page Three

MDCI Jean #1-8 660' FSL 660' FEL Sec. 8-T1S-R37W 3219' KB							MDCI Jones A #1-17 1050' FNL 2310' FEL Sec. 17-T1S-R37W 3149' KB	
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3172	+47	+8	3168	+51	+12	3110	+39
B/Anhydrite	3203	+16	+9	3201	+18	+11	3142	+7
Neva	3627	-408	+3	3623	-404	+7	3560	-411
Red Eagle	3692	-473	+2	3686	-467	+8	3624	-475
Foraker	3739	-520	+2	3732	-513	+9	3671	-522
Topeka	3960	-741	+4	3957	-738	+7	3894	-745
Oread	4097	-878	+4	4092	-873	+9	4031	-882
Lansing	4176	-957	+2	4171	-952	+7	4108	-959
Stark	4392	-1173	+7	4392	-1173	+7	4329	-1180
BKC	4456	-1237	-1	4450	-1231	+5	4385	-1236
Pawnee	4569	-1350	+4	4570	-1351	+3	4503	-1354
Cherokee	4665	-1446	-3	4657	-1438	+5	4592	-1443
RTD	4770							
LTD				4767	-1548		4680	



unc.  
Prod-Ut

# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 140760

Invoice Date: Jan 5, 2014

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361

<b>Bill To:</b>
Murfin Drig. Co., Inc. 250 N. Water STE #300 Wichita, KS 67202

Customer ID	Field Ticket #	Payment Terms	
Murfin	62479	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jan 5, 2014	2/4/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Jean #1-8		
170.00	CEMENT MATERIALS	Class A Common	17.90	3,043.00
6.00	CEMENT MATERIALS	Chloride	64.00	384.00
178.51	CEMENT SERVICE	Cubic Feet Charge	2.48	442.70
823.00	CEMENT SERVICE	Ton Mileage Charge	2.60	2,139.80
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
100.00	CEMENT SERVICE	Pump Truck Mileage	7.70	770.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
100.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	440.00
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	CEMENT SUPERVISOR	Kelly Gabel		
1.00	OPERATOR ASSISTANT	Brandon Wilkinson		

*AD*

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$ 3,152.36 *ok 2/5/14*

ONLY IF PAID ON OR BEFORE  
Jan 30, 2014

Subtotal	9,006.75
Sales Tax	279.30
Total Invoice Amount	9,286.05
Payment/Credit Applied	
<b>TOTAL</b>	<b>9,286.05</b>

- 3152.36  
6133.69







**CONSOLIDATED**  
Oil Well Services, LLC

**REMIT TO**  
Consolidated Oil Well Services, LLC  
Dept. 970  
P.O. Box 4346  
Houston, TX 77210-4346

**MAIN OFFICE**  
P.O. Box 884  
Chanute, KS 66720  
620/431-9210 • 1-800/467-8676  
Fax 620/431-0012

**INVOICE**

Invoice # 265386

Invoice Date: 01/16/2014 Terms: 10/10/30,n/30 Page 1

MURFIN DRILLING  
P.O. BOX 288  
RUSSELL KS 67665  
( ) -

JEAN 1-8  
38185  
8-1S-37W  
01-15-2014  
KS

APPROVED FOR IC 103A  
JLR  
FH

Part Number	Description	Qty	Unit Price	Total
1104D	CLASS "A" CEMENT CMD	300.00	27.9200	8376.00
1107	FLO-SEAL (25#)	150.00	2.9700	445.50
1110A	KOL SEAL (50# BAG)	1000.00	.5600	560.00
1126	OIL WELL CEMENT	200.00	23.7000	4740.00
1142A	KCL SUB MB6875 CC3107 (1	2.00	41.1000	82.20
1144G	MUD FLUSH (SALE)	500.00	1.0000	500.00
4104	CEMENT BASKET 5 1/2"	3.00	290.0000	870.00
4136	TURBOLIZER 5 1/2"	15.00	75.7500	1136.25
4159	FLOAT SHOE AFU 5 1/2"	1.00	433.7500	433.75
4310	ROTATING HEAD	1.00	200.0000	200.00
4315	ROTATING SCRATCHERS	15.00	94.5000	1417.50
4454	5 1/2" LATCH DOWN PLUG	1.00	318.2500	318.25

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-1907.95
9995-130	CEMENT EQUIPMENT DISCOUNT	-711.73

Description	Hours	Unit Price	Total
T-118 SINGLE PUMP	1.00	3175.00	3175.00
T-118 EQUIPMENT MILEAGE (ONE WAY)	85.00	5.25	446.25
T-119 TON MILEAGE DELIVERY	1.00	1748.03	1748.03
566 TON MILEAGE DELIVERY	1.00	1748.02	1748.02

Amount Due 27751.73 if paid after 02/15/2014

Parts:	19079.45	Freight:	.00	Tax:	1399.48	AR	24976.55
Labor:	.00	Misc:	.00	Total:	24976.55		
Sublt:	-2619.68	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_ Date \_\_\_\_\_

BARTLESVILLE, OK 918/338-0808 EL DORADO, KS 316/322-7022 EUREKA, KS 620/583-7664 PONCA CITY, OK 580/762-2303 OAKLEY, KS 785/672-8822 OTTAWA, KS 785/242-4044 THAYER, KS 620/839-5269 GILLETTE, WY 307/686-4914 CUSHING, OK 918/225-2650



**CONSOLIDATED**  
Oil Well Services, LLC

265386

TICKET NUMBER 38185  
LOCATION Oakley, KS  
FOREMAN Miles Shaw

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
HIS-17	5406	Jean #1-8	8	15	37W	Cherokee
CUSTOMER		Murdon Drilling		McDonnell		US
MAILING ADDRESS		1511 W.S.		TRUCK #	DRIVER	TRUCK #
CITY		STATE	ZIP CODE	597118	Scotlan	
				5287119	Michael R	
				526	Scott H	

JOB TYPE long string HOLE SIZE 7 7/8 HOLE DEPTH 4770 CASING SIZE & WEIGHT 5 1/2" 15.5#  
CASING DEPTH 4750' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
SLURRY WEIGHT 11#14# SLURRY VOL 2.9/1.42 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 21.14  
DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety Meeting and rig up on murdon drilling rig #25. float equipment  
turbolizers on sets 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 38, 50 baskets on sets # 16, 38, 50  
Bottoms, Run 113 sets to bottom circulate casing 1hr with rotating heads  
pump mud flush mix 250 sbs CMD with 6" floreal failed in with 200 sbs ovc with  
5" hole seal shut down cleared pump & lines released plug & set and 115 1/2 hrs  
water with 1750 psi lift plug and held @ 2300 psi cement did  
not circulate

Thanks Miles & crew

205 sbs MH 30<sup>sh</sup> RH

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5406	1	PUMP CHARGE	31.75 <sup>00</sup>	31.75 <sup>00</sup>
5106	85	MILEAGE	5.25	446.25
5407A	23.5 tons	Ten Mileage delivery	1.75	3996.05
1104D	300 sbs	CMD	27.92	8376.00
1107	150 #	Floreal	2.97	445.50
1110A	1000 #	hole seal	1.56	560.00
1126	200 sbs	OVG	23.70	4740.00
1142A	2 gal	VCL	41.10	82.20
1144G	500 gal	Mud flush	1.00	500.00
4104	3	5 1/2" Baskets	290.00	870.00
4136	15	5 1/2" Turbulizers	75.75	1136.25
4159	1	5 1/2" AFH float shoe "W"	433.75	433.75
4310	1	Rotating head	200.00	200.00
4315	15	Rotating scrapers	99.50	1492.50
4454	1	Latch down plug 5 1/2"	318.25	318.25
		Subtotal		26196.75
		less 10% discount		23577.07
		Subtotal		23577.07
		SALES TAX 8.15		1399.48
		ESTIMATED TOTAL		24976.55

completed

AUTHORIZATION Buck Salas TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.