



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1197761
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: _____

1197761

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	HMZ 1-29
Doc ID	1197761

All Electric Logs Run

Dual Induction
Dual Compensated
Microresistivity
Borehole Compensated

MDCI
 HMZ #1-29
 2135' FNL 2415' FWL
 Sec. 29-1S-36W
 3292' KB

MDCI
 Hatch #1-30X
 2000' FSL 2100' FEL
 Sec. 30-1S-36W
 3329' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3186	+106	+12	3184	+108	+14	3235	+94
B/Anhydrite	3220	+72	+12	3220	+72	+12	3269	+60
Neva	3664	-372	+10	3666	-374	+8	3711	-382
Red Eagle	3728	-436	+9	3730	-438	+7	3774	-445
Foraker	3777	-485	+11	3779	-487	+9	3825	-496
Stotler	3926	-634	+10	3927	-635	+9	3973	-644
Topeka	4003	-711	+10	3999	-707	+14	4050	-721
Oread	4127	-835	+10	4130	-838	+7	4174	-845
Lansing	4213	-921	+8	4212	-920	+9	4258	-929
Stark	4431	-1139	+7	4428	-1136	+10	4475	-1146
BKC	4481	-1189	+9	4480	-1188	+10	4527	-1198
Pawnee	4609	-1317	----	4604	-1312	-----	-----	-----
Cherokee	4685	-1393	----	4680	-1388	-----	-----	-----
RTD	4775	-1483					4600	
LTD				4776			4600	

Robert L. Milford

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR: **Murfin Drilling Company, Inc.**
LEASE: **HWZ #4-29**
LOC SPOT: **155 S & 105 E of E3 SE NW**

LOC FOOTAGE: **2,135' FNL 2,415' FWL**
SEC: **29** TNSP: **15** RING: **36W**
COUNTY: **Rawlins** STATE: **Kansas**

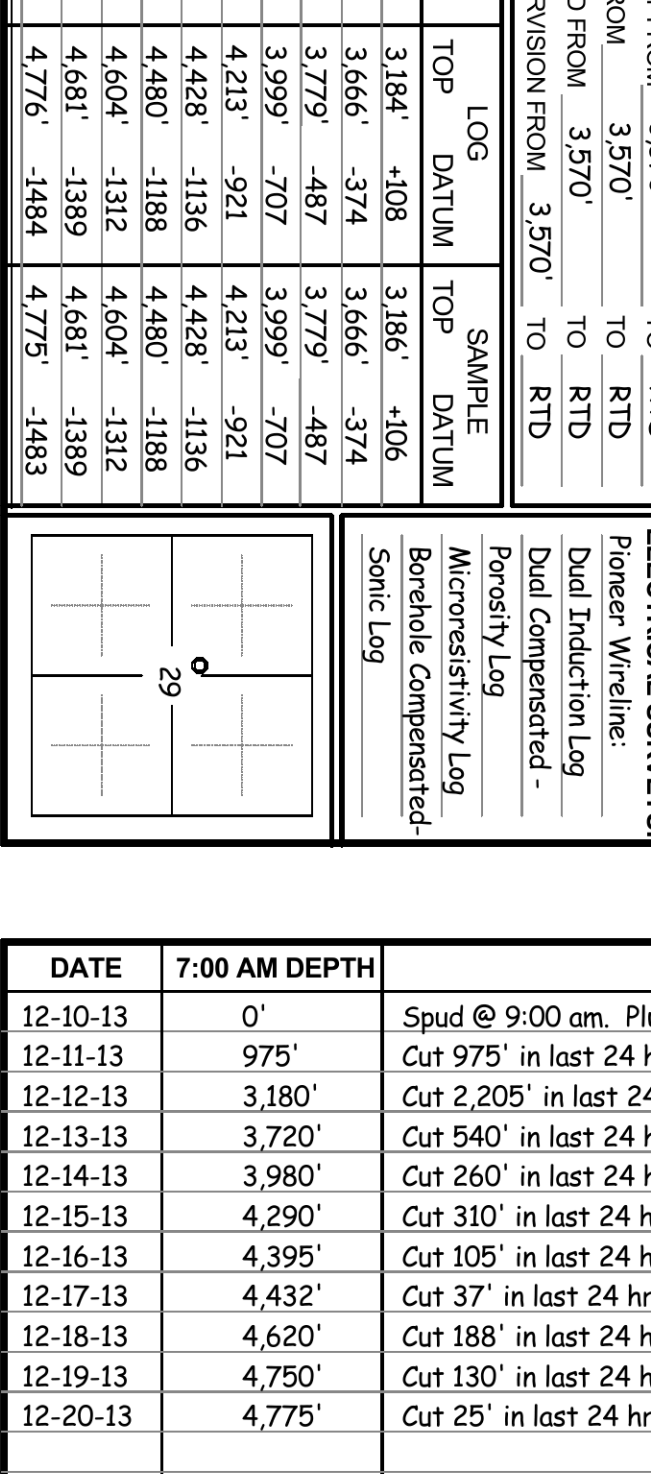
API: **15-153-20948-00-00**
CONTRACTOR: **Murfin Drilling Co., Inc.** RIG NO: **8**
DRILLING STARTED: **12-10-2013** COMPLETED: **12-19-2013**
MUD DISPLACED: **3,387'** MUD TYPE: **Chemical**

DRILLING TIME KEPT FROM: **3,570'** TO: **RTD**
SAMPLES SAVED FROM: **3,570'** TO: **RTD**
SAMPLES EXAMINED FROM: **3,570'** TO: **RTD**
GEOLOGICAL SUPERVISION FROM: **3,570'** TO: **RTD**

PRODUCTION: **5.1/2" @ 4773'**
W/ 230 sacks cement
SURFACE: **8.5/8" @ 254'**
W/ 230 sacks cement
CANDIDATE:
CASING RECORD

ELEVATIONS
KB: **3,292'**
MSL: **3,287'**

FORMATION NAME: **Stone Corral** TOP: **3,184'** LOG: **+108** SAMPLE DATUM: **3,186'** TOP DATUM: **+106**
FORMATION NAME: **Neva** TOP: **3,666'** LOG: **-374** SAMPLE DATUM: **3,666'** TOP DATUM: **-374**
FORMATION NAME: **Forker** TOP: **3,999'** LOG: **-707** SAMPLE DATUM: **3,779'** TOP DATUM: **-487**
FORMATION NAME: **Topeka** TOP: **4,213'** LOG: **-921** SAMPLE DATUM: **4,213'** TOP DATUM: **-921**
FORMATION NAME: **Stark** TOP: **4,428'** LOG: **-1136** SAMPLE DATUM: **4,428'** TOP DATUM: **-1136**
FORMATION NAME: **B/KC** TOP: **4,480'** LOG: **-1188** SAMPLE DATUM: **4,480'** TOP DATUM: **-1188**
FORMATION NAME: **Pawnee** TOP: **4,604'** LOG: **-1312** SAMPLE DATUM: **4,604'** TOP DATUM: **-1312**
FORMATION NAME: **Cherokee** TOP: **4,681'** LOG: **-1389** SAMPLE DATUM: **4,681'** TOP DATUM: **-1389**
FORMATION NAME: **Stark** TOP: **4,775'** LOG: **-1484** SAMPLE DATUM: **4,775'** TOP DATUM: **-1483**



DATE	7:00 AM DEPTH	REMARKS
12-10-13	0'	Spud @ 9:00 am. Plug down @ 4:00 pm. Drilled out plug @ 12:00 am on 12-11 w/ PDC bit
12-11-13	975'	Cut 975' in last 24 hrs. Lost 60 bbl @ 1853' & 40 bbl @ 2580'. Slow returns @ 2605'
12-12-13	3,180'	Cut 2,205' in last 24 hrs; 22 hrs drlg. Bit trip @ 3402' (ran button bit)
12-13-13	3,720'	Cut 540' in last 24 hrs; 16 hrs drlg. DST #1 @ 3980'
12-14-13	3,980'	Cut 260' in last 24 hrs; 8.75 hrs drlg. DST #2 @ 4290'
12-15-13	4,290'	Cut 310' in last 24 hrs; 11.5 hrs drlg. DST #3 @ 4395'
12-16-13	4,395'	Cut 105' in last 24 hrs; 5.25 hrs drlg. DST #4 @ 4432'
12-17-13	4,432'	Cut 37' in last 24 hrs; 1.75 hrs drlg.
12-18-13	4,620'	Cut 188' in last 24 hrs; 10.25 hrs drlg. DST #5 @ 4714'
12-19-13	4,750'	Cut 130' in last 24 hrs; 6.5 hrs drlg. RTD 4775' @ 8:00 am
12-20-13	4,775'	Cut 25' in last 24 hrs; 1 hr drlg. Ran production casing.

Remarks

The electric log measurements correlate from 2' higher to 1' lower to the drilling measurements.

Formation tops and lithology on this report have been connected to the electric log.

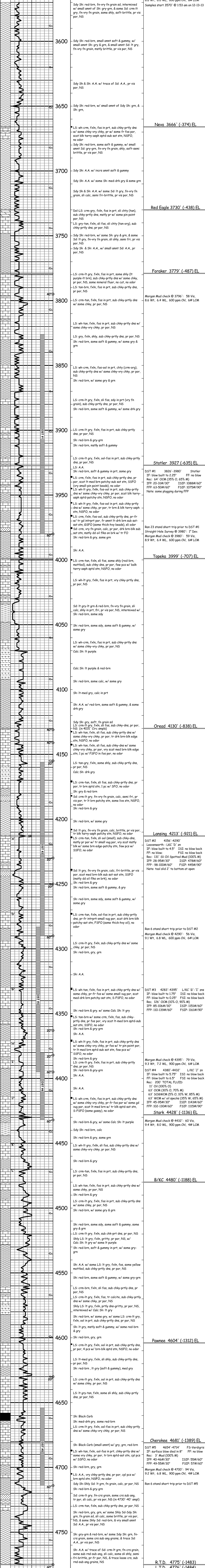
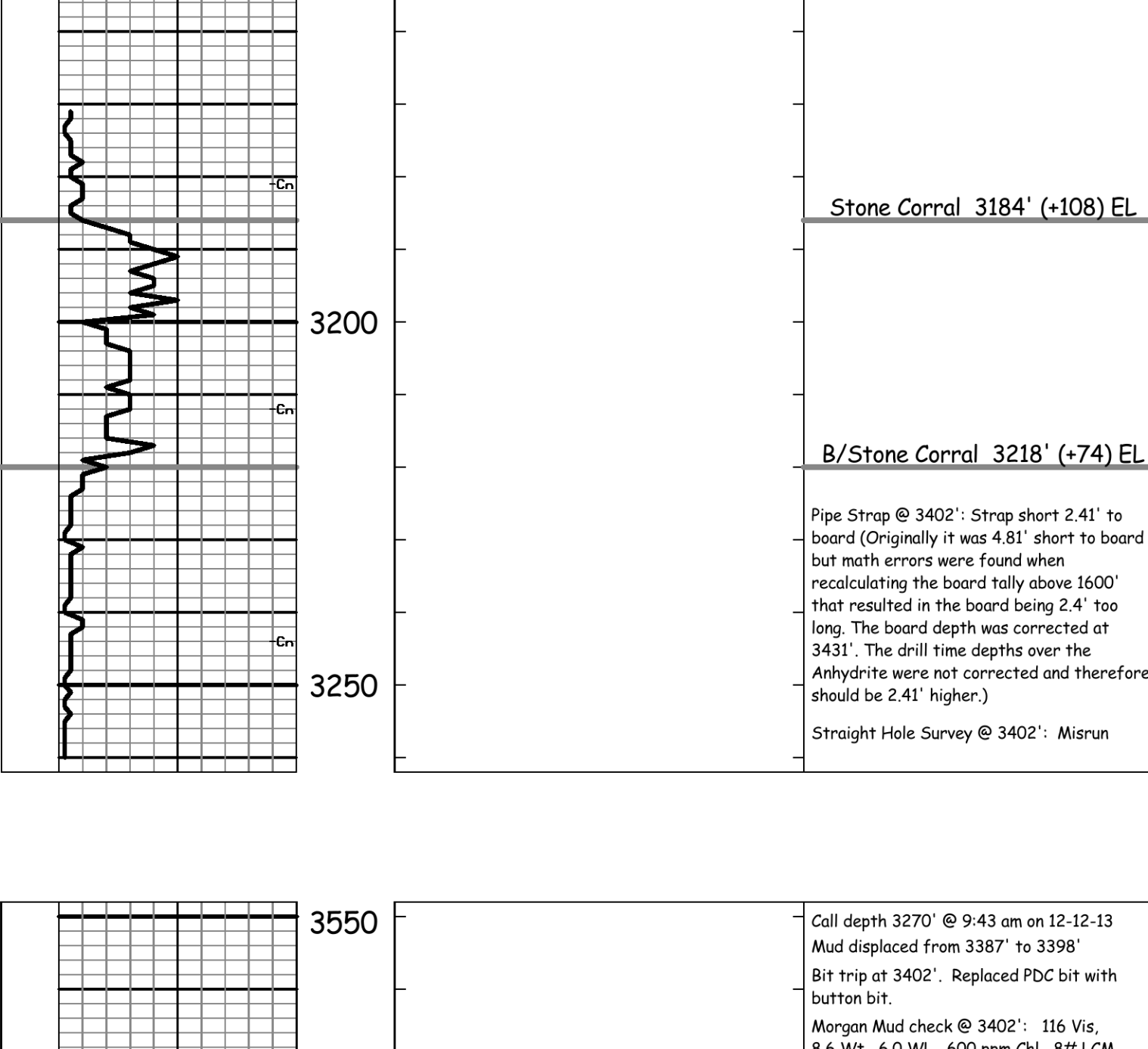
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford

Drill Stem Test Charts

Drill Stem Test by **Trilobite Testing, Inc.**





DRILL STEM TEST REPORT

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

250 N Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford / Scot

HMZ #1-29

29 1s 36w Rawlins,KS

Start Date: 2013.12.13 @ 23:50:00

End Date: 2013.12.14 @ 10:01:00

Job Ticket #: 55933 DST #: 1

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

Printed: 2013.12.23 @ 13:33:28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55933

DST#: 1

ATTN: Rocky Milford / Scot

Test Start: 2013.12.13 @ 23:50:00

GENERAL INFORMATION:

Formation: **Stotler**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:36:30

Time Test Ended: 10:01:00

Test Type: Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3826.00 ft (KB) To 3980.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 49.99 psig @ 3827.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.13

End Date:

2013.12.14

Last Calib.: 2013.12.14

Start Time: 23:50:01

End Time:

10:01:00

Time On Btm: 2013.12.14 @ 03:28:00

Time Off Btm: 2013.12.14 @ 07:35:00

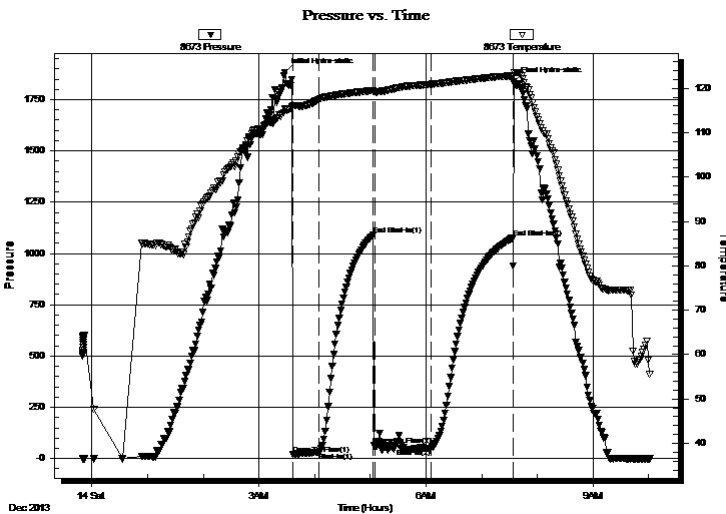
TEST COMMENT: IF: Weak blow , Built to 2 1/4" over 30 mins.

IS: No blow back over 60 mins.

FF: No blow over 60 mins.

FS: No blow back over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1882.46	115.38	Initial Hydro-static
9	20.39	115.89	Open To Flow (1)
37	31.30	117.49	Shut-In(1)
95	1088.36	119.49	End Shut-In(1)
97	63.31	119.21	Open To Flow (2)
157	49.99	120.91	Shut-In(2)
246	1074.95	122.78	End Shut-In(2)
247	1836.42	123.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
64.00	ocm-35%o65%m	0.31

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55933

DST#: 1

ATTN: Rocky Milford / Scot

Test Start: 2013.12.13 @ 23:50:00

Tool Information

Drill Pipe:	Length: 3626.00 ft	Diameter: 3.80 inches	Volume: 50.86 bbl	Tool Weight: 2600.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 51.77 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3826.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	154.00 ft			
Tool Length:	182.00 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			3803.00	
Hydraulic tool	5.00			3808.00	
Jars	5.00			3813.00	
Safety Joint	3.00			3816.00	
Packer	5.00			3821.00	28.00 Bottom Of Top Packer
Packer	5.00			3826.00	
Packer - Shale	0.00			3826.00	
Stubb	1.00			3827.00	
Recorder	0.00	8673	Inside	3827.00	
Recorder	0.00	8651	Outside	3827.00	
Perforations	20.00			3847.00	
change Over Sub	1.00			3848.00	
Drill Pipe	128.00			3976.00	
Change Over Sub	1.00			3977.00	
Bullnose	3.00			3980.00	154.00 Bottom Packers & Anchor

Total Tool Length: 182.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55933

DST#: 1

ATTN: Rocky Milford / Scot

Test Start: 2013.12.13 @ 23:50:00

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: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
64.00	ocm-35%o65%m	0.315

Total Length: 64.00 ft Total Volume: 0.315 bbf

Num Fluid Samples: 0

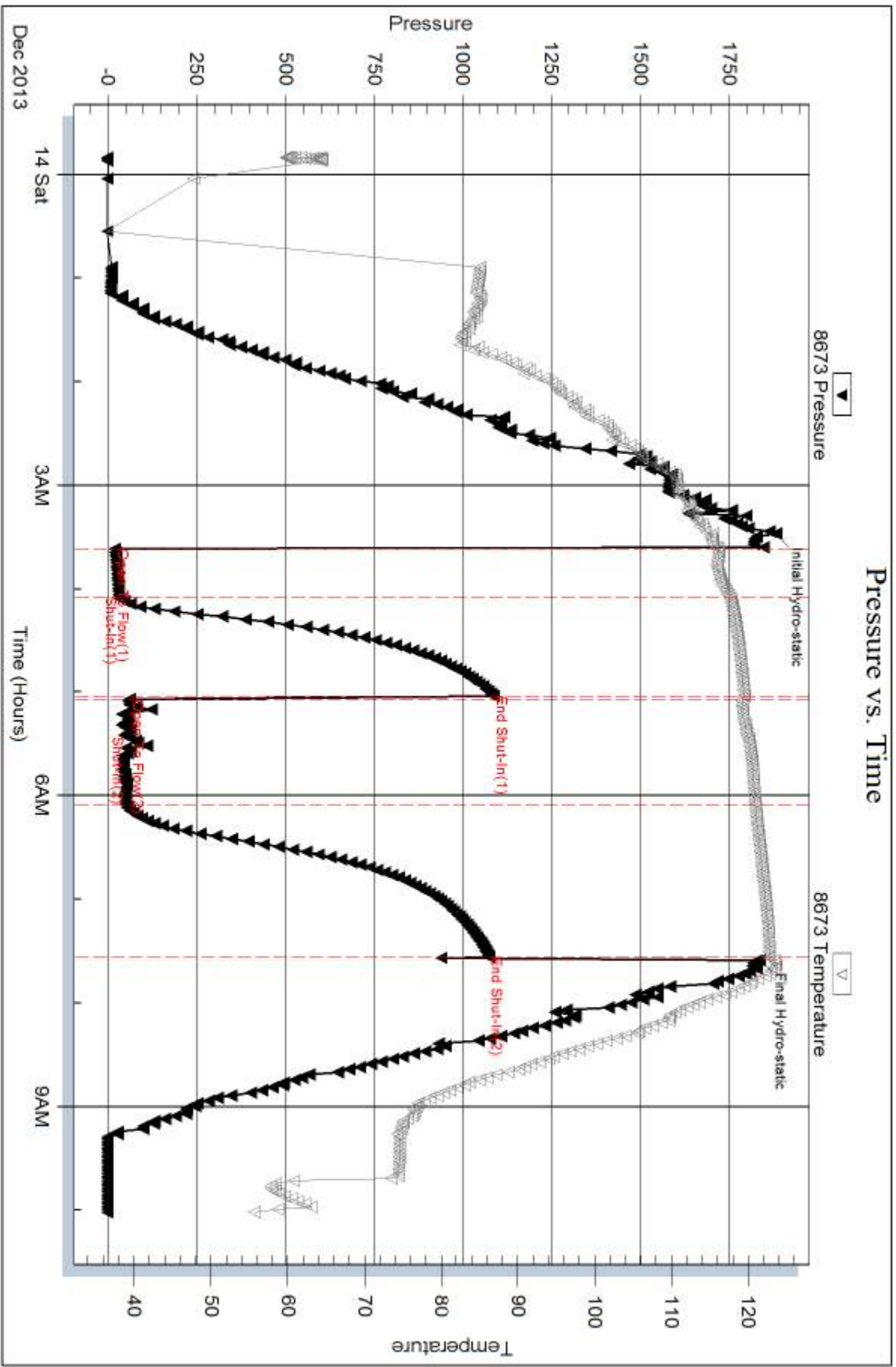
Num Gas Bombs: 0

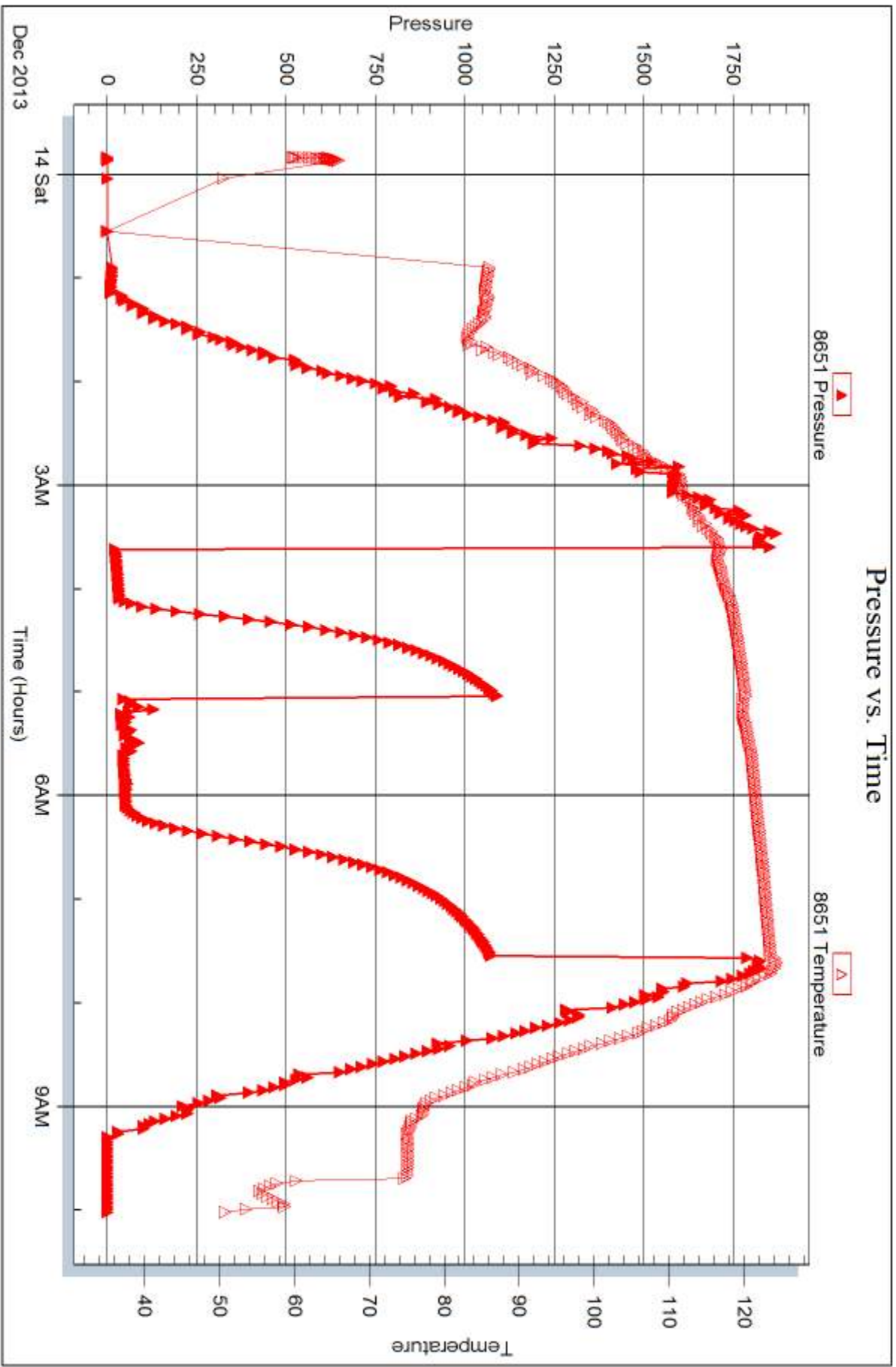
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford / Scot

HMZ #1-29

29 1s 36w Rawlins,KS

Start Date: 2013.12.15 @ 09:40:04

End Date: 2013.12.15 @ 18:56:04

Job Ticket #: 55871 DST #: 2

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

Printed: 2013.12.23 @ 13:34:10

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

HMZ #1-29

DST # 2

Leavenworth - LKC "D"

2013.12.15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55871

DST#: 2

ATTN: Rocky Milford / Scot

Test Start: 2013.12.15 @ 09:40:04

GENERAL INFORMATION:

Formation: **Leavenworth - LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:20:04

Time Test Ended: 18:56:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 61

Interval: 4156.00 ft (KB) To 4290.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 99.71 psig @ 4160.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.15

End Date:

2013.12.15

Last Calib.: 2013.12.15

Start Time: 09:40:05

End Time:

18:56:04

Time On Btm: 2013.12.15 @ 12:16:04

Time Off Btm: 2013.12.15 @ 16:24:04

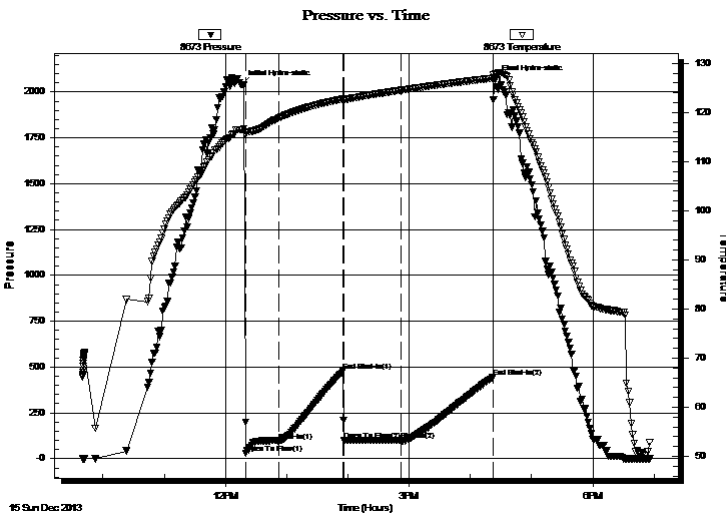
TEST COMMENT: I.F. - 30 - Weak ssurface blow built to 4 1/2"

I.S.I. - 60 - No blow back

F.F. - 60 - No blow

F.S.I. - 90 - No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.74	116.54	Initial Hydro-static
4	27.94	116.12	Open To Flow (1)
37	94.52	118.88	Shut-In(1)
99	477.97	122.76	End Shut-In(1)
100	98.49	122.62	Open To Flow (2)
156	99.71	124.52	Shut-In(2)
246	445.33	126.97	End Shut-In(2)
248	2065.95	127.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
131.00	MUD 100% (WITH FEW OIL SPECS)	0.64

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55871

DST#: 2

ATTN: Rocky Milford / Scot

Test Start: 2013.12.15 @ 09:40:04

GENERAL INFORMATION:

Formation: **Leavenworth - LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:20:04

Time Test Ended: 18:56:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 61

Interval: 4156.00 ft (KB) To 4290.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8651

Outside

Press@RunDepth: psig @ 4160.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.15

End Date:

2013.12.15

Last Calib.:

2013.12.15

Start Time: 09:40:01

End Time:

18:55:30

Time On Btm:

Time Off Btm:

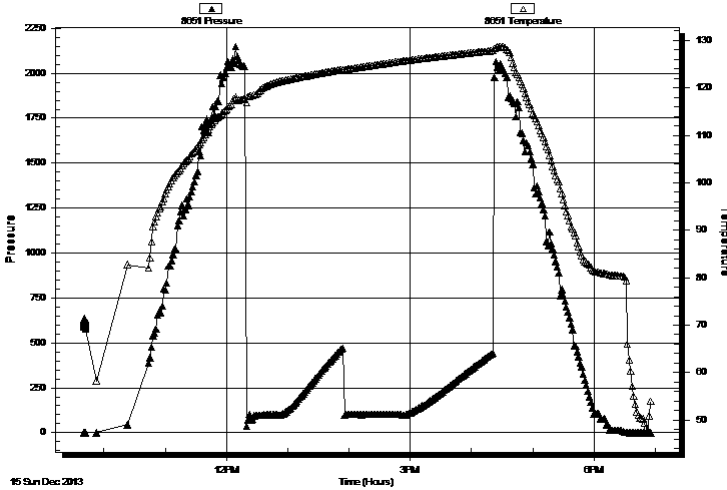
TEST COMMENT: I.F. - 30 - Weak ssurface blow built to 4 1/2"

I.S.I. - 60 - No blow back

F.F. - 60 - No blow

F.S.I. - 90 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
131.00	MUD 100% (WITH FEW OIL SPECS)	0.64

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.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55871

DST#: 2

ATTN: Rocky Milford / Scot

Test Start: 2013.12.15 @ 09:40:04

Tool Information

Drill Pipe:	Length: 3971.00 ft	Diameter: 3.80 inches	Volume: 55.70 bbl	Tool Weight: 2600.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 56.61 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4156.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	134.00 ft			
Tool Length:	162.00 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			4133.00	
Hydraulic tool	5.00			4138.00	
Jars	5.00			4143.00	
Safety Joint	3.00			4146.00	
Packer	5.00			4151.00	28.00 Bottom Of Top Packer
Packer	5.00			4156.00	
Packer - Shale	0.00			4156.00	
Stubb	1.00			4157.00	
Perforations	2.00			4159.00	
Change Over Sub	1.00			4160.00	
Recorder	0.00	8673	Inside	4160.00	
Recorder	0.00	8651	Outside	4160.00	
Drill Pipe	126.00			4286.00	
Change Over Sub	1.00			4287.00	
Bullnose	3.00			4290.00	134.00 Bottom Packers & Anchor

Total Tool Length: 162.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55871

DST#: 2

ATTN: Rocky Milford / Scot

Test Start: 2013.12.15 @ 09:40:04

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
131.00	MUD 100% (WITH FEW OIL SPECS)	0.644

Total Length: 131.00 ft Total Volume: 0.644 bbl

Num Fluid Samples: 0

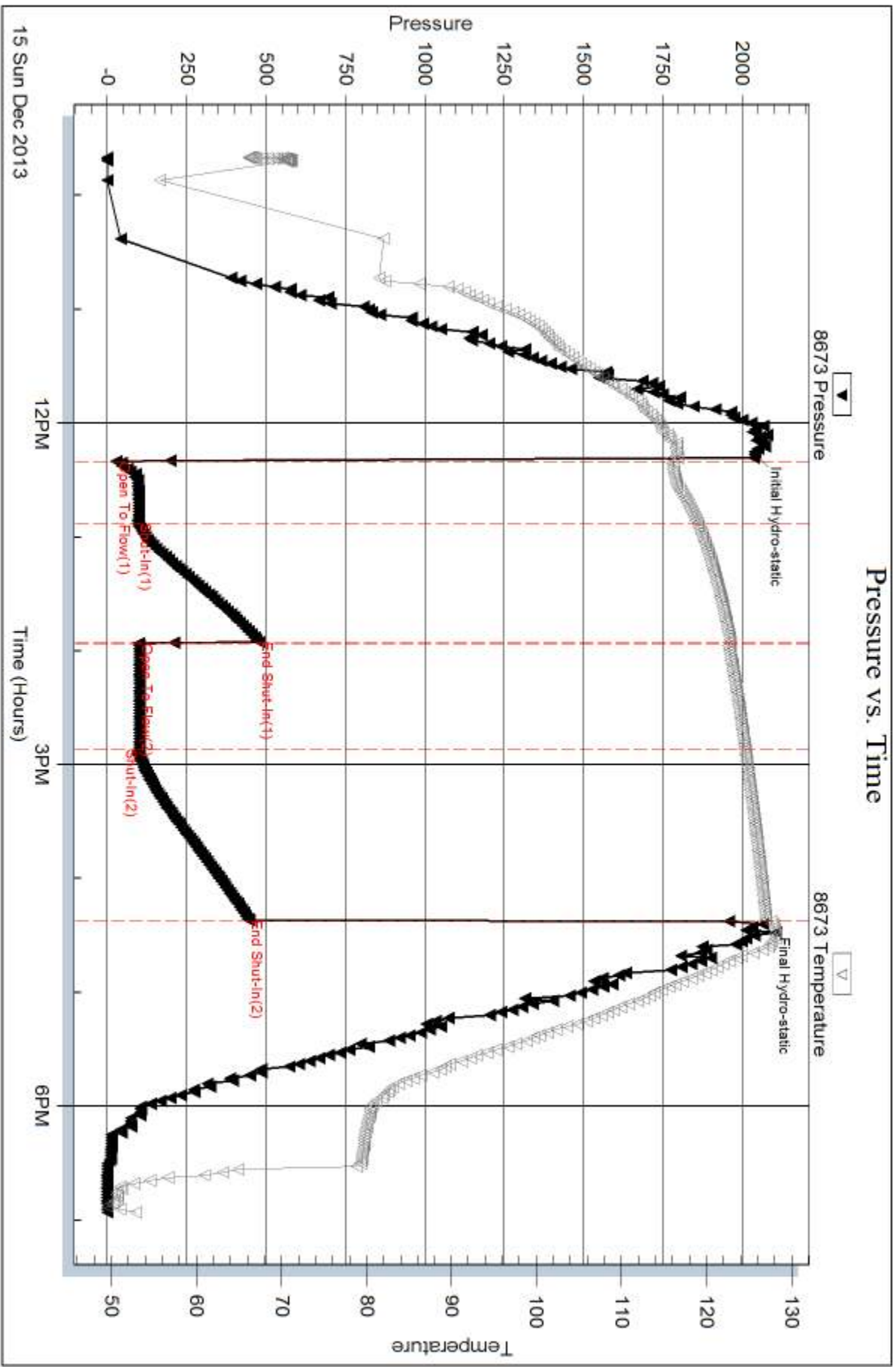
Num Gas Bombs: 0

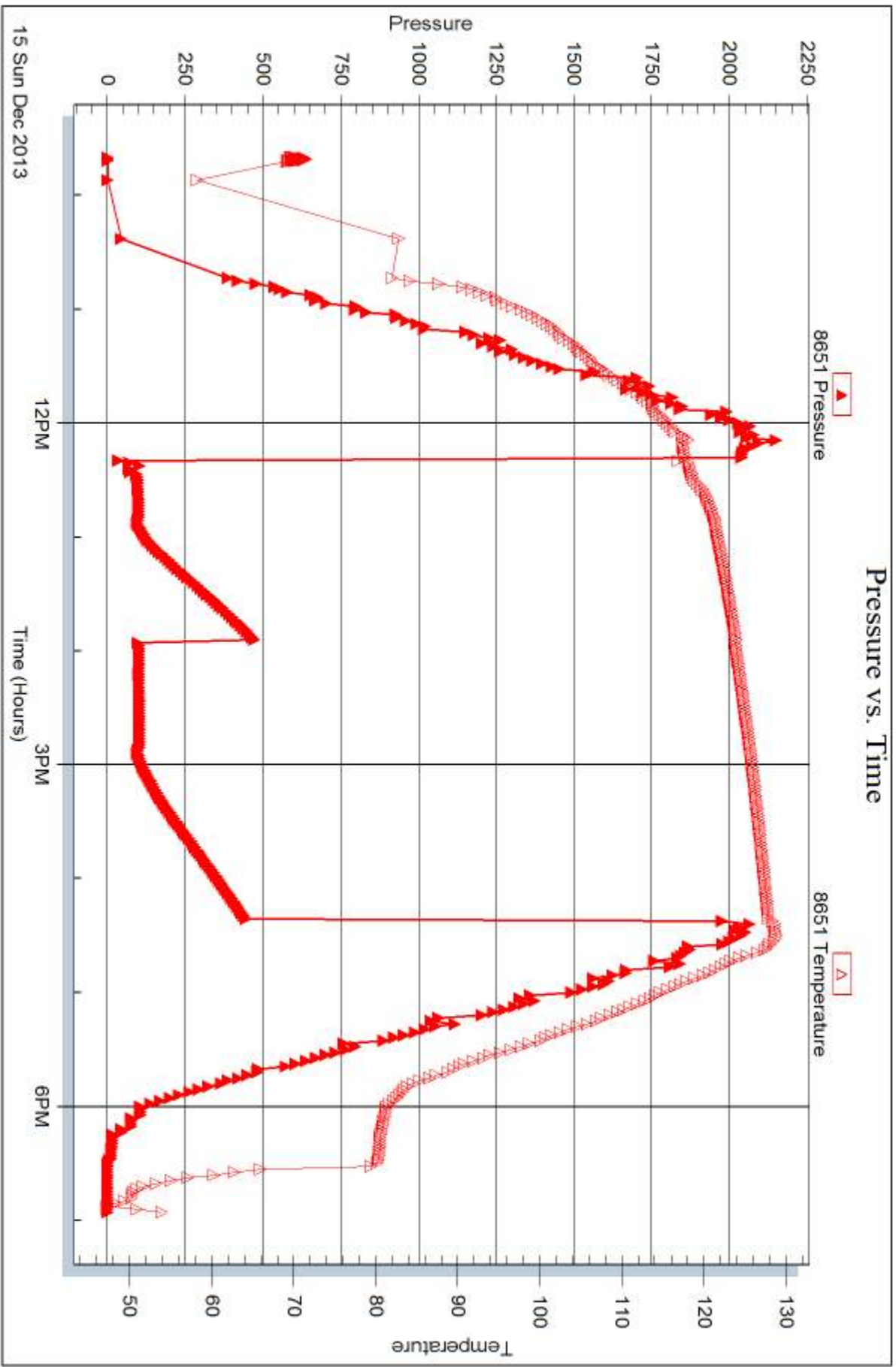
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford / Scot

HMZ #1-29

29 1s 36w Rawlins,KS

Start Date: 2013.12.16 @ 08:07:00

End Date: 2013.12.16 @ 17:02:30

Job Ticket #: 55872 DST #: 3

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

Printed: 2013.12.23 @ 13:26:57



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55872

DST#: 3

ATTN: Rocky Milford / Scot

Test Start: 2013.12.16 @ 08:07:00

GENERAL INFORMATION:

Formation: **LKC "G - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:21:30

Time Test Ended: 17:02:30

Test Type: Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 61

Interval: 4283.00 ft (KB) To 4395.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 4395.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 139.01 psig @ 4381.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.16

End Date:

2013.12.16

Last Calib.:

2013.12.16

Start Time: 08:07:01

End Time:

17:02:30

Time On Btm:

2013.12.16 @ 10:19:00

Time Off Btm:

2013.12.16 @ 14:25:30

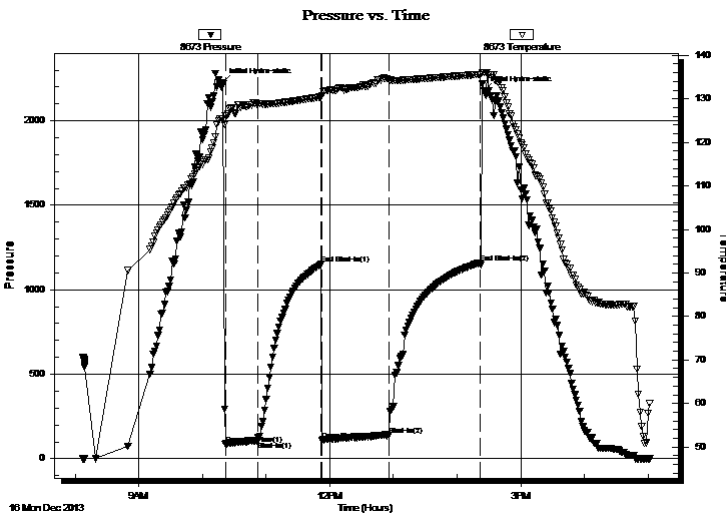
TEST COMMENT: I.F. - 30 - weak surface blow built to 1 3/4"

I.S.I - 60 - No blow back

F.F. - 60 - Weak surface blow throughout

F.S. - 90 - No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2226.15	125.42	Initial Hydro-static
3	84.61	126.09	Open To Flow (1)
33	105.78	128.82	Shut-In(1)
93	1150.51	130.43	End Shut-In(1)
94	110.32	130.79	Open To Flow (2)
157	139.01	134.50	Shut-In(2)
243	1160.74	135.64	End Shut-In(2)
247	2178.14	136.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
131.00	O,C,M, 10% OIL 90% MUD	0.64

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55872

DST#: 3

ATTN: Rocky Milford / Scot

Test Start: 2013.12.16 @ 08:07:00

GENERAL INFORMATION:

Formation: **LKC "G - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:21:30

Time Test Ended: 17:02:30

Test Type: Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 61

Interval: 4283.00 ft (KB) To 4395.00 ft (KB) (TVD)

Total Depth: 4395.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3292.00 ft (KB)

3287.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8651 Outside

Press@RunDepth: psig @ 4381.00 ft (KB)

Start Date: 2013.12.16

End Date:

2013.12.16

Start Time: 08:07:01

End Time:

17:02:00

Capacity: 8000.00 psig

Last Calib.:

2013.12.16

Time On Btm:

Time Off Btm:

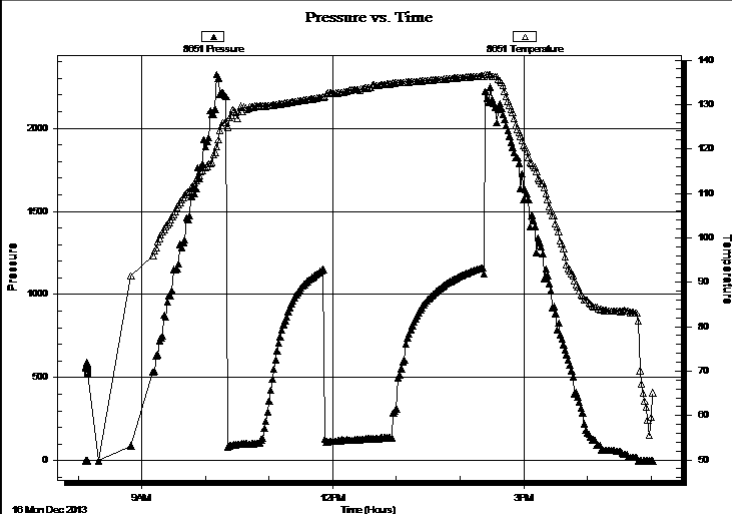
TEST COMMENT: I.F. - 30 - weak surface blow built to 1 3/4"

I.S.I - 60 - No blow back

F.F. - 60 - Weak surface blow throughout

F.S. - 90 - No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
131.00	O,C,M, 10% OIL 90% MUD	0.64

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.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55872

DST#: 3

ATTN: Rocky Milford / Scot

Test Start: 2013.12.16 @ 08:07:00

Tool Information

Drill Pipe:	Length: 4090.00 ft	Diameter: 3.80 inches	Volume: 57.37 bbl	Tool Weight: 2600.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.28 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4283.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	112.00 ft			
Tool Length:	140.00 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			4260.00	
Hydraulic tool	5.00			4265.00	
Jars	5.00			4270.00	
Safety Joint	3.00			4273.00	
Packer	5.00			4278.00	28.00 Bottom Of Top Packer
Packer	5.00			4283.00	
Packer - Shale	0.00			4283.00	
Stubb	1.00			4284.00	
Perforations	2.00			4286.00	
Change Over Sub	1.00			4287.00	
Drill Pipe	94.00			4381.00	
Recorder	0.00	8673	Inside	4381.00	
Recorder	0.00	8651	Outside	4381.00	
Change Over Sub	1.00			4382.00	
Perforations	10.00			4392.00	
Bullnose	3.00			4395.00	112.00 Bottom Packers & Anchor
Total Tool Length:	140.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55872

DST#: 3

ATTN: Rocky Milford / Scot

Test Start: 2013.12.16 @ 08:07:00

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: 79.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
131.00	O,C,M, 10% OIL 90% MUD	0.644

Total Length: 131.00 ft Total Volume: 0.644 bbl

Num Fluid Samples: 0

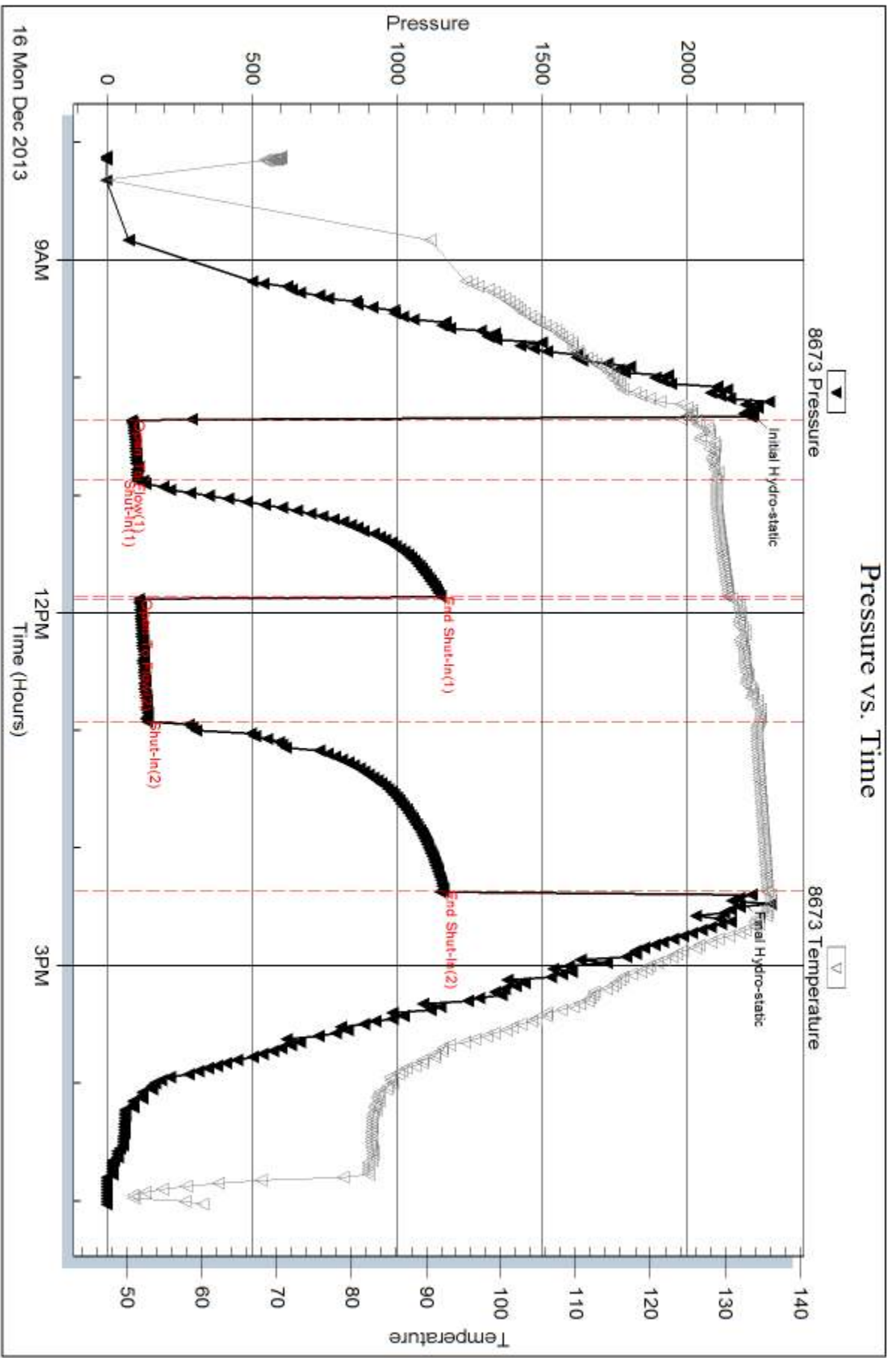
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

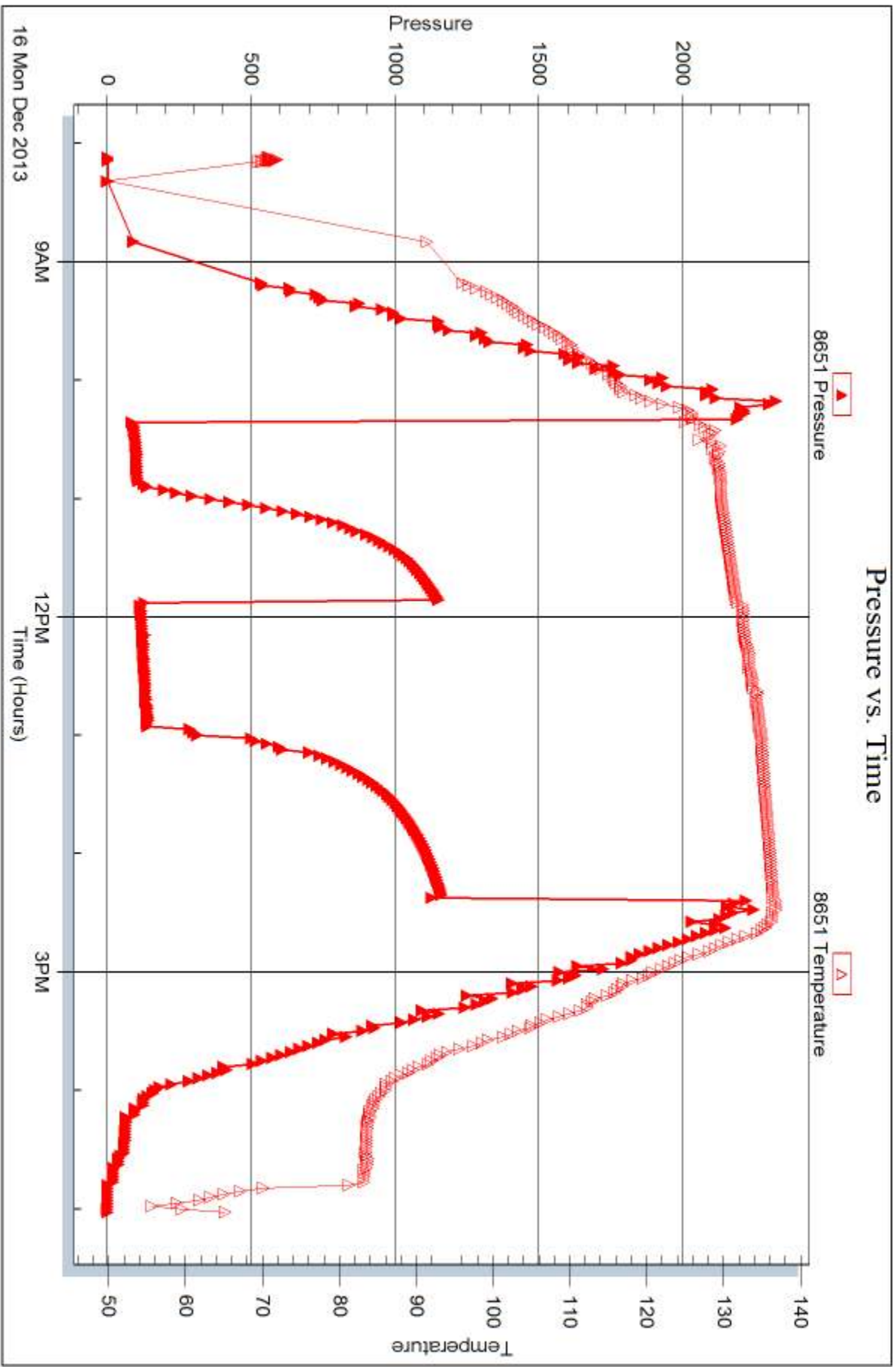


Serial #: 8651

Outside Murfin Drilling Co Inc.

HMZ #1-29

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford / Scot

HMZ #1-29

29 1s 36w Rawlins,KS

Start Date: 2013.12.17 @ 04:23:00

End Date: 2013.12.17 @ 14:13:30

Job Ticket #: 55873 DST #: 4

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

Printed: 2013.12.23 @ 13:25:26

Murfin Drilling Co Inc.
29 1s 36w Rawlins,KS
HMZ #1-29
DST # 4
LKC "J"
2013.12.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55873

DST#: 4

ATTN: Rocky Milford / Scot

Test Start: 2013.12.17 @ 04:23:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:09:00

Time Test Ended: 14:13:30

Test Type: Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 4380.00 ft (KB) To 4432.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 4432.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 130.28 psig @ 4382.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.17

End Date:

2013.12.17

Last Calib.:

2013.12.17

Start Time: 04:23:01

End Time:

14:13:30

Time On Btm:

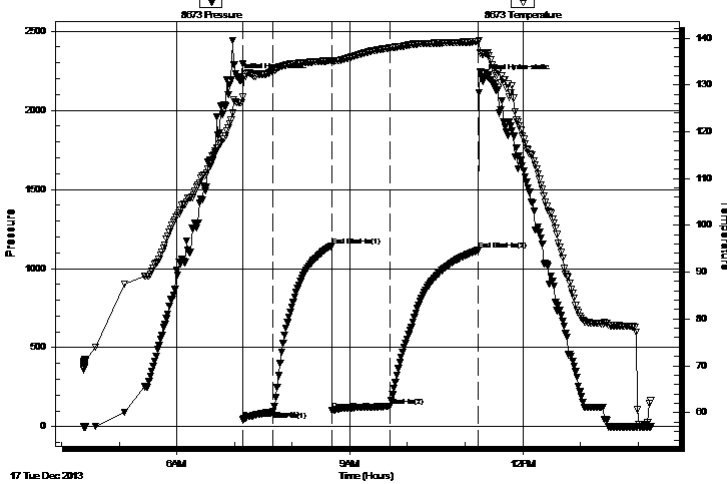
2013.12.17 @ 07:03:00

Time Off Btm:

2013.12.17 @ 11:18:00

TEST COMMENT: I.F. - 30 - Weak surface blow built to 5 3/4"
I.S.I. - 60 - No blow back
F.F. - 60 - Weak surface blow built to 6 1/2"
F.F. - 90 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2206.95	126.26	Initial Hydro-static
6	44.54	127.47	Open To Flow (1)
37	94.75	133.01	Shut-In(1)
98	1142.92	135.24	End Shut-In(1)
99	101.87	134.88	Open To Flow (2)
159	130.28	137.89	Shut-In(2)
251	1115.08	139.25	End Shut-In(2)
255	2197.68	136.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,O,S,H,W,C,M, (OIL SPECS) 35%WTR	6.0.31UD
63.00	S,O,C,W,C,M, 5%OIL 10%WTR. 85%MU	0.31
63.00	H,O,C,M, 30%OIL 70%MUJ	0.35
11.00	C/OIL 100%	0.15

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55873

DST#: 4

ATTN: Rocky Milford / Scot

Test Start: 2013.12.17 @ 04:23:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:09:00

Time Test Ended: 14:13:30

Test Type: Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

Interval: 4380.00 ft (KB) To 4432.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 4432.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8651 Outside

Press@RunDepth: psig @ 4382.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.17

End Date:

2013.12.17

Last Calib.:

2013.12.17

Start Time: 04:23:01

End Time:

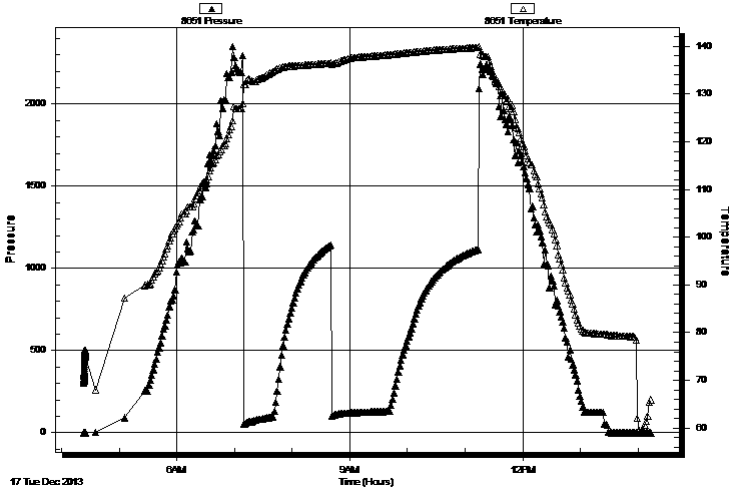
14:13:30

Time On Btm:

Time Off Btm:

TEST COMMENT: I.F. - 30 - Weak surface blow built to 5 3/4"
I.S.I. - 60 - No blow back
F.F. - 60 - Weak surface blow built to 6 1/2"
F.F. - 90 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,O,S,H,W,C,M, (OIL SPECS) 35%WTR	6.31UD
63.00	S,O,C,W,C,M, 5%OIL 10%WTR. 85%MUD	0.31
63.00	H,O,C,M, 30%OIL 70%MUD	0.35
11.00	C/OIL 100%	0.15

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.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55873

DST#: 4

ATTN: Rocky Milford / Scot

Test Start: 2013.12.17 @ 04:23:00

Tool Information

Drill Pipe:	Length: 4173.00 ft	Diameter: 3.80 inches	Volume: 58.54 bbl	Tool Weight:	2600.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4380.00 ft			Final	52000.00 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			4357.00	
Hydraulic tool	5.00			4362.00	
Jars	5.00			4367.00	
Safety Joint	3.00			4370.00	
Packer	5.00			4375.00	28.00 Bottom Of Top Packer
Packer	5.00			4380.00	
Packer - Shale	0.00			4380.00	
Stubb	1.00			4381.00	
Change Over Sub	1.00			4382.00	
Recorder	0.00	8673	Inside	4382.00	
Recorder	0.00	8651	Outside	4382.00	
Drill Pipe	31.00			4413.00	
Change Over Sub	1.00			4414.00	
Perforations	15.00			4429.00	
Perforations	3.00			4432.00	52.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55873

DST#: 4

ATTN: Rocky Milford / Scot

Test Start: 2013.12.17 @ 04:23:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

36000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
63.00	S,O,S,H,W,C,M, (OIL SPECS) 35%WTR 65%M	0.310
63.00	S,O,C,W,C,M, 5%OIL 10%WTR. 85%MUD	0.310
63.00	H,O,C,M, 30%OIL 70%MUD	0.346
11.00	C/OIL 100%	0.154

Total Length: 200.00 ft Total Volume: 1.120 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API = 33.8 API @ 60 F

R.W. = .219 @ 63.7 F

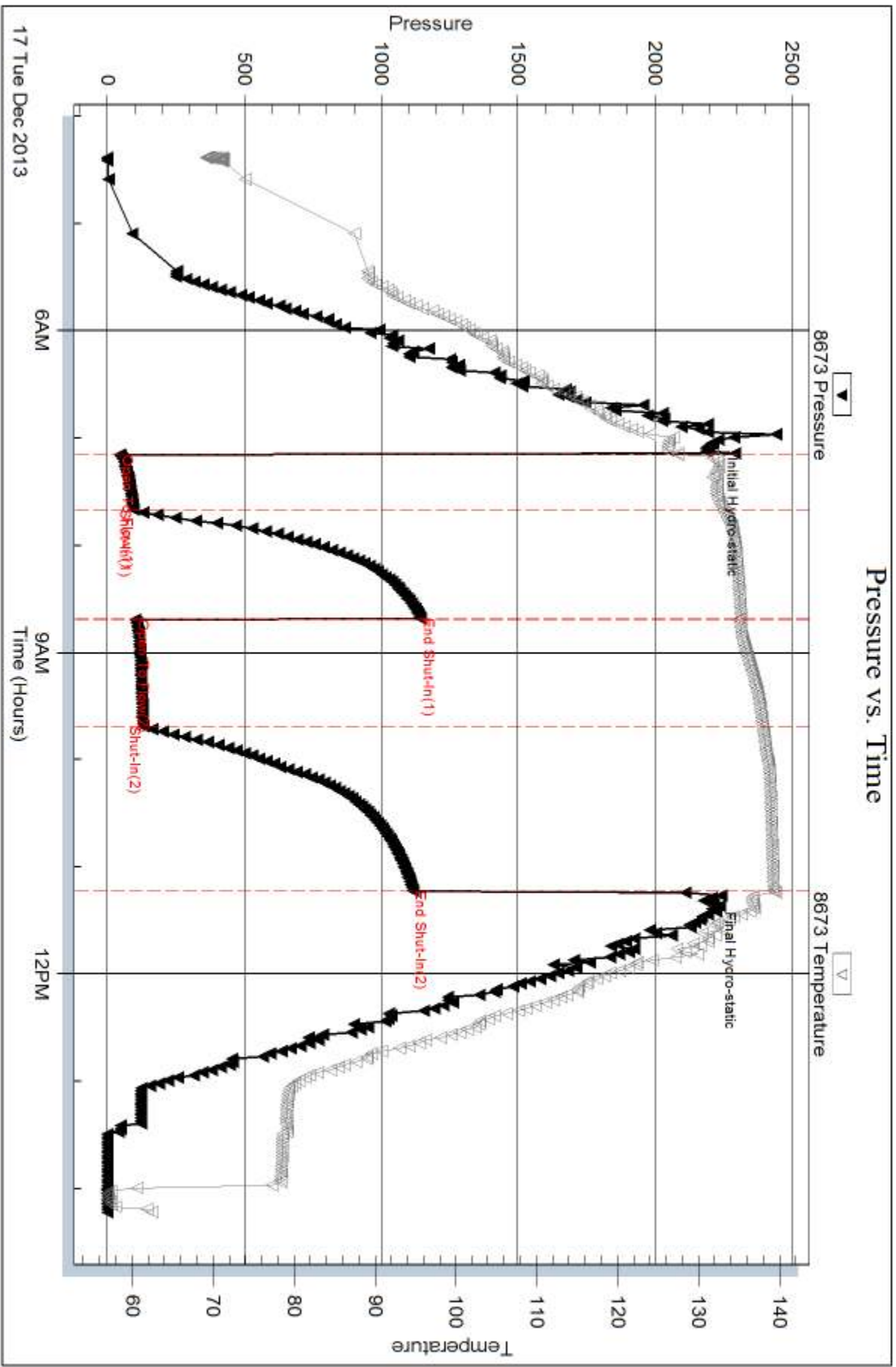
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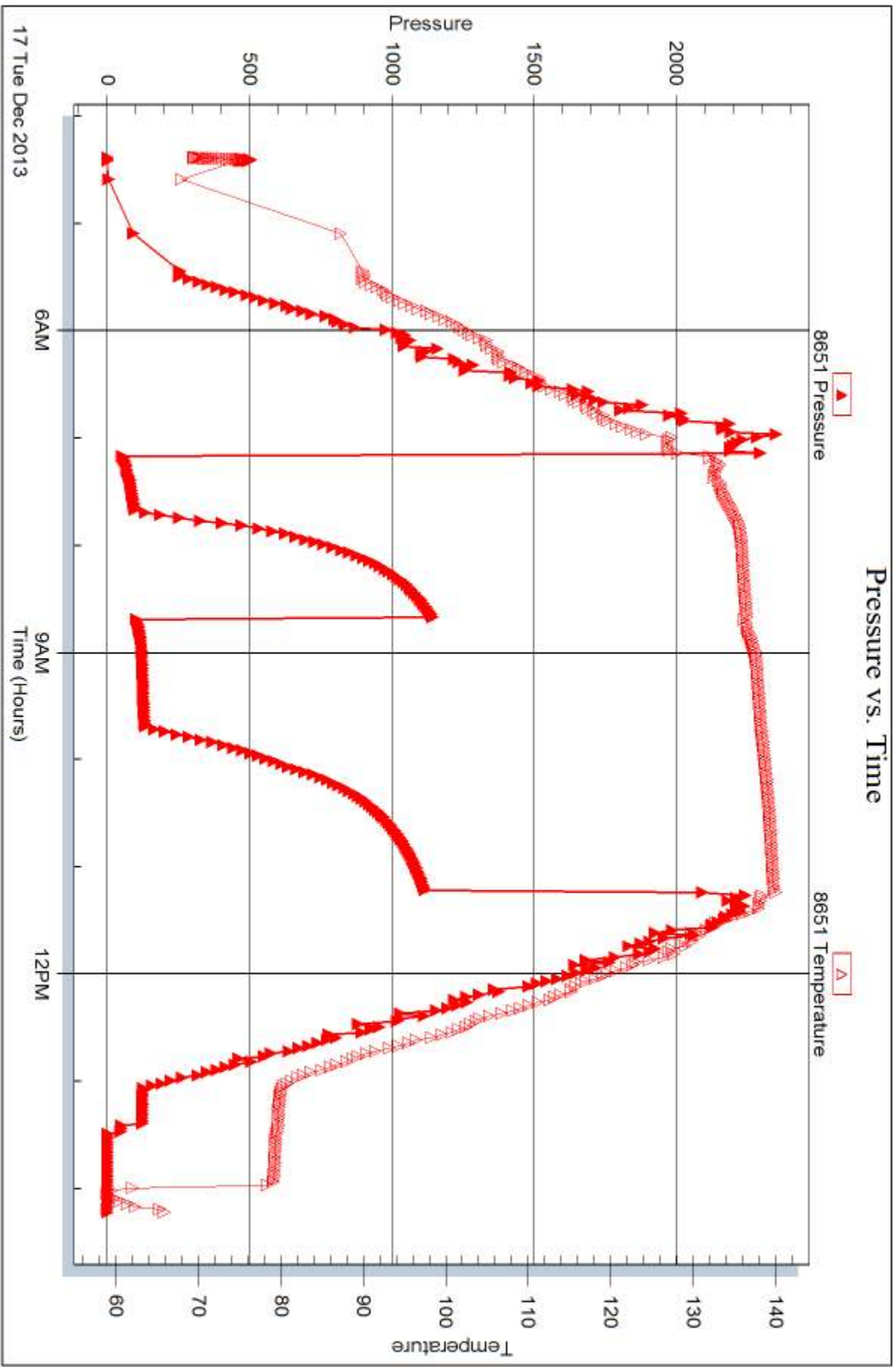
Inside

Murfin Drilling Co Inc.

HMZ #1-29

DST Test Number: 4







DRILL STEM TEST REPORT

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

250 N Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford / Scot

HMZ #1-29

29 1s 36w Rawlins,KS

Start Date: 2013.12.18 @ 17:05:00

End Date: 2013.12.19 @ 01:32:30

Job Ticket #: 55874 DST #: 5

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

Printed: 2013.12.23 @ 13:22:32



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55874

DST#: 5

ATTN: Rocky Milford / Scot

Test Start: 2013.12.18 @ 17:05:00

GENERAL INFORMATION:

Formation: **Ft Scott - Verdigris**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:57:00

Time Test Ended: 01:32:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 61

Interval: 4654.00 ft (KB) To 4714.00 ft (KB) (TVD)

Reference Elevations: 3292.00 ft (KB)

Total Depth: 4714.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 54.61 psig @ 4691.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.18

End Date:

2013.12.19

Last Calib.: 2013.12.19

Start Time: 17:05:01

End Time:

01:32:30

Time On Btm: 2013.12.18 @ 19:52:00

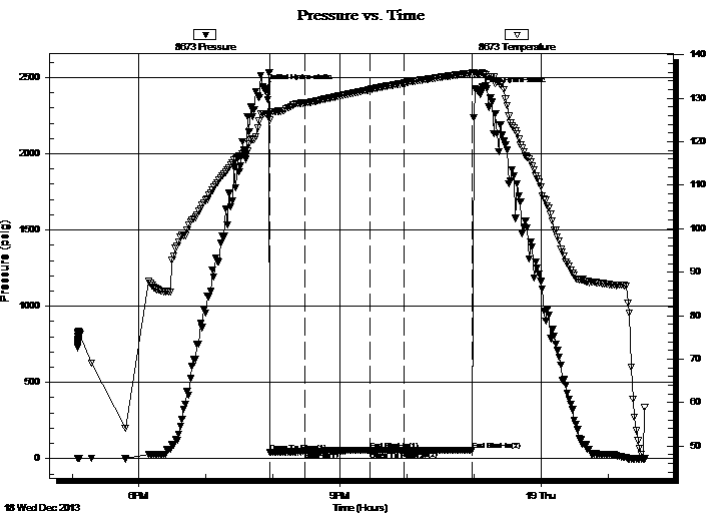
Time Off Btm: 2013.12.18 @ 23:03:30

TEST COMMENT: I.F. - 30 - Weak surface blow died in 8 min

I.S.I. - 60 - No blow back

F.F. - 30 - No blow

F.S.I. - 60 No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2427.93	126.51	Initial Hydro-static
5	40.14	124.97	Open To Flow (1)
36	45.78	128.93	Shut-In(1)
95	54.51	132.01	End Shut-In(1)
95	49.03	132.04	Open To Flow (2)
126	54.61	133.50	Shut-In(2)
187	56.61	135.87	End Shut-In(2)
192	2410.72	135.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	MUD 100%	0.01

* 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.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55874

DST#: 5

ATTN: Rocky Milford / Scot

Test Start: 2013.12.18 @ 17:05:00

Tool Information

Drill Pipe:	Length: 4449.00 ft	Diameter: 3.80 inches	Volume: 62.41 bbl	Tool Weight: 2600.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 63.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4654.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	88.00 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			4631.00	
Hydraulic tool	5.00			4636.00	
Jars	5.00			4641.00	
Safety Joint	3.00			4644.00	
Packer	5.00			4649.00	28.00 Bottom Of Top Packer
Packer	5.00			4654.00	
Packer - Shale	0.00			4654.00	
Stubb	1.00			4655.00	
Perforations	2.00			4657.00	
Change Over Sub	1.00			4658.00	
Drill Pipe	32.00			4690.00	
Change Over Sub	1.00			4691.00	
Recorder	0.00	8673	Inside	4691.00	
Recorder	0.00	8651	Outside	4691.00	
Perforations	20.00			4711.00	
Bullnose	3.00			4714.00	60.00 Bottom Packers & Anchor
Total Tool Length:	88.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc.

29 1s 36w Rawlins,KS

250 N Water Ste. 300
Wichita KS 67202

HMZ #1-29

Job Ticket: 55874

DST#: 5

ATTN: Rocky Milford / Scot

Test Start: 2013.12.18 @ 17:05:00

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: 94.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	MUD 100%	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

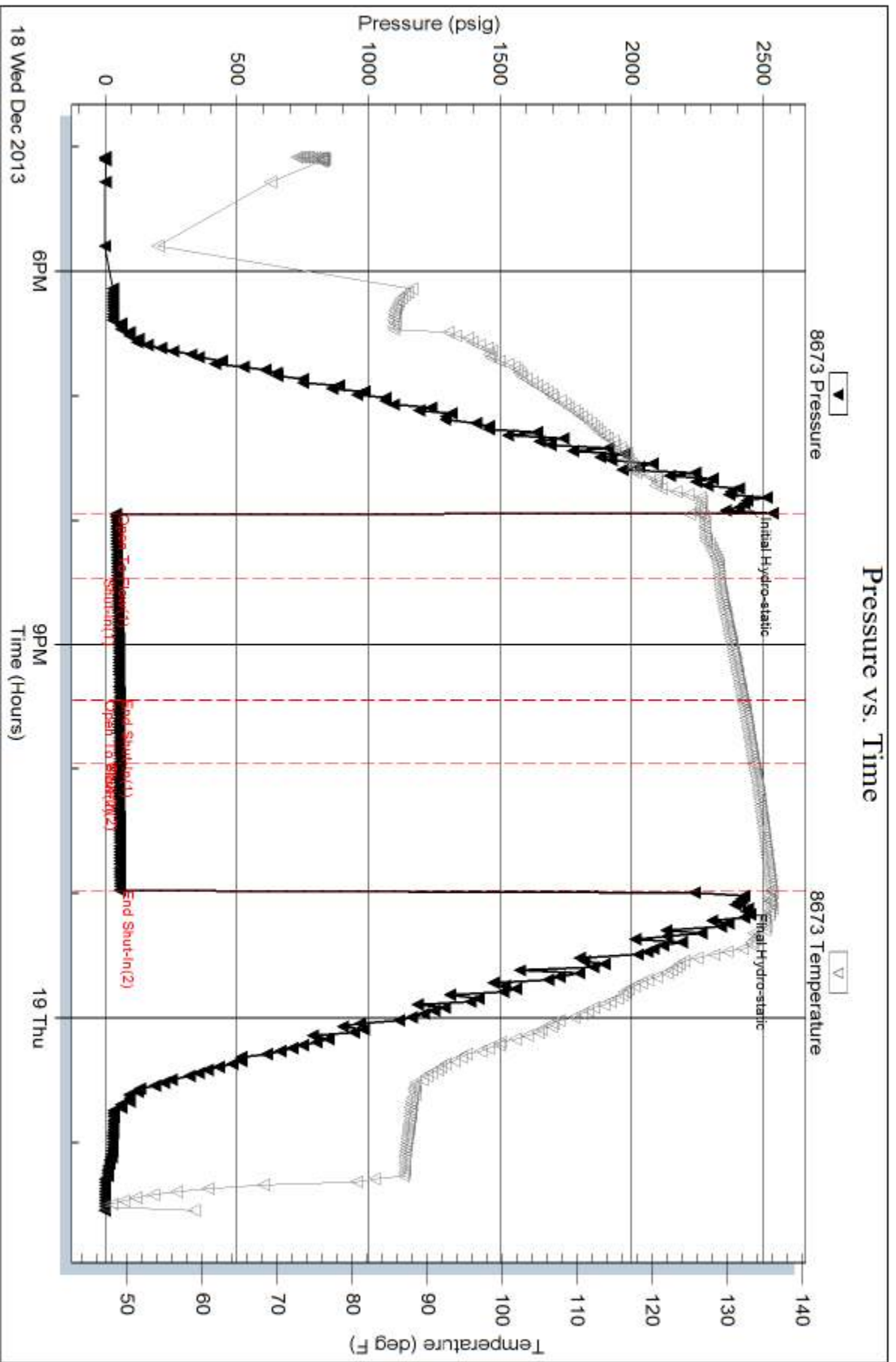
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

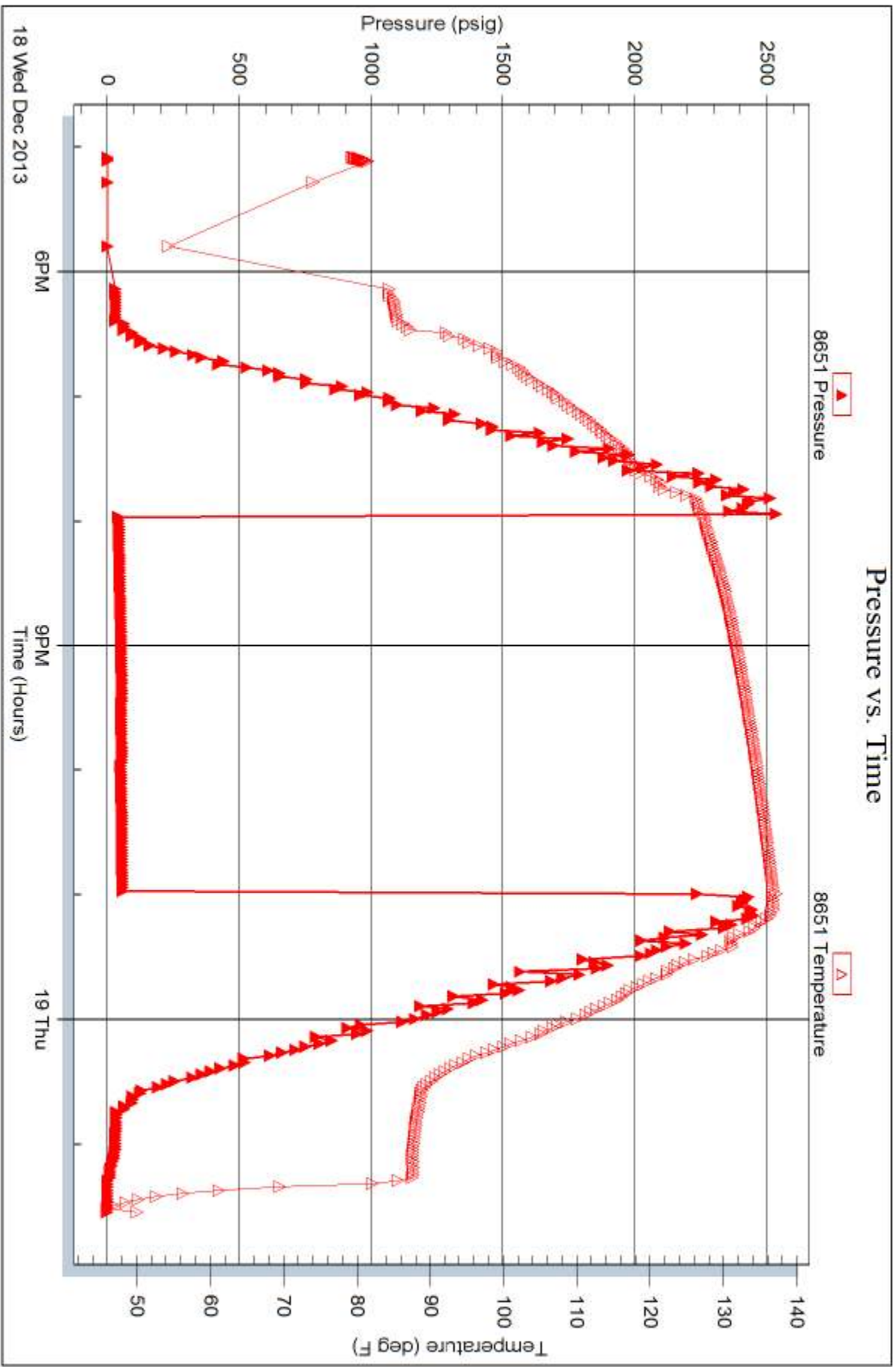


Serial #: 8651

Outside Murfin Drilling Co Inc.

HMZ #1-29

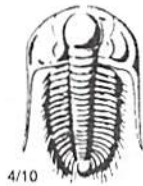
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 55874

Printed: 2013.12.23 @ 13:22:39



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55933**

Well Name & No. HMZ #1-29 Test No. 1 Date 12-13-2013
 Company Mur Fin Drilling Co. Inc. Elevation 3292 KB 3287 GL
 Address 250 N. Water Ste. 300 Wichita Ks. 67202
 Co. Rep / Geo. Rocky Milford Rig MurFin #8
 Location: Sec. 29 Twp. 1s Rge. 36w Co. Rawlins State Ks

Interval Tested 3826 3980 Zone Tested stotler
 Anchor Length 154 Drill Pipe Run 3626 Mud Wt. 8.6
 Top Packer Depth 3821 Drill Collars Run 185 Vis 58
 Bottom Packer Depth 3826 Wt. Pipe Run -0- WL 6.4
 Total Depth 3980 Chlorides 600 ppm System LCM 6#

Blow Description IF: Weak blow built to 2 1/4 in. over 30 mins.
ISF: No blow back
FF: No blow
FSS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>64</u>	<u>00CM</u>		<u>35</u>		<u>65</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 64 BHT 121 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1882</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>12-13</u> <u>22:00</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12-14</u> <u>23:50</u>
(C) First Final Flow <u>31</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open _____ <u>3:36</u>
(D) Initial Shut-In <u>1088</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled _____ <u>7:35</u>
(E) Second Initial Flow <u>63</u>	<input type="checkbox"/> Hourly Standby _____	T-Out _____ <u>10:01</u>
(F) Second Final Flow <u>50</u>	<input checked="" type="checkbox"/> Mileage <u>60x2 = 120x1.55</u> <u>186</u>	Comments _____
(G) Final Shut-In <u>1075</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1836</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1911</u>
Final Shut-In <u>40</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1911</u>	

Approved By _____ Our Representative Chuck Nye

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55871**

Well Name & No. HMZ# 1-29 Test No. 2 Date 12-15-13
 Company Murfin Drilling Com. Inc. Elevation 3,292 KB 3,287 GL
 Address 250 N. Water Suite 300 Wichita KS. 67202
 Co. Rep / Geo. Scott Robinson / Rocky Millford Rig Murfin Rig #8
 Location: Sec. 29 Twp. 1-S Rge. 36-W Co. Rawlins State Ks.

Interval Tested 4156-4290 Zone Tested Leavenworth - h.k.c. "D"
 Anchor Length 134 Drill Pipe Run 3971 Mud Wt. 9.1
 Top Packer Depth 4151 Drill Collars Run 186' Vis 56
 Bottom Packer Depth 4156 Wt. Pipe Run _____ WL 6.8
 Total Depth 4290 Chlorides 600 ppm System LCM 6.0

Blow Description I.F. - 30 - 1/4 INT. Blow Built to (4 1/2" in 30 Min.)
E.S.I. - 60 - No B.B.
E.F. - 60 - No INT. Blow (No Build)
E.S.I. - 90 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>131</u>	<u>505 M (few oil specs)</u>			<u>100</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 131 BHT 128' Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2,040
- (B) First Initial Flow 28
- (C) First Final Flow 95
- (D) Initial Shut-In 478
- (E) Second Initial Flow 98
- (F) Second Final Flow 100
- (G) Final Shut-In 445
- (H) Final Hydrostatic 2066

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub _____
- Hourly Standby _____
- Mileage 120 R.T. 186
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____
- Sub Total 1761

T-On Location 09:15:00
 T-Started 09:40:00
 T-Open 12:20:00
 T-Pulled 16:20:00
 T-Out 18:50:00

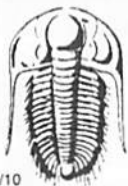
Comments "Thank-you"

- Ruined Shale Packer _____
- Ruined Packer _____
- Extra Copies _____
- Sub Total 0
- Total 1761
- MP/DST Disc't _____

Initial Open 31
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55872

Well Name & No. HMZ #1-27 Test No. 3 Date 12-16-13
 Company Murfin Drilling Co., INC. Elevation 3,292 KB 3,287 GL
 Address 250 N Water Suite 300 Wichita KS. 67202
 Co. Rep / Geo. Scott Robinson / Rocky M. Ford Rig Murfin Rig #8
 Location: Sec. 29 Twp. 1-5 Rge. 36-W Co. Rawlins State KS.

Interval Tested 4283-4395 Zone Tested Lansing "G-I" zns
 Anchor Length 112' Drill Pipe Run 4090 Mud Wt. 9.3
 Top Packer Depth 4278 Drill Collars Run 186 Vis 79
 Bottom Packer Depth 4283 Wt. Pipe Run --- WL 7.2
 Total Depth 4395 Chlorides 000 ppm System LCM 6.0

Blow Description I.F. - 30 - 1/4 INT. Blow Built to (1 3/4" in 30 Min)
I.S.I - 60 - No B.B.
F.F. - 60 - 1/4 INT. Blow No Build
E.S.I - 90 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>OCM</u>		<u>10</u>		<u>90</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 126 BHT 136 Gravity --- API RW --- @ --- ° F Chlorides --- ppm

(A) Initial Hydrostatic 2,226 Test 1250 T-On Location 06:50:00
 (B) First Initial Flow 85 Jars 250 T-Started 08:07:00
 (C) First Final Flow 106 Safety Joint 75 T-Open 10:22:00
 (D) Initial Shut-In 1151 Circ Sub _____ T-Pulled 14:22:00
 (E) Second Initial Flow 110 Hourly Standby _____ T-Out 17:00:00
 (F) Second Final Flow 139 Mileage 120 R.T. 186
 (G) Final Shut-In 1,161 Sampler _____
 (H) Final Hydrostatic 2,178 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Extra Packer _____
 Final Flow 60 Extra Recorder _____
 Final Shut-In 90 Day Standby _____
 Accessibility _____
 Sub Total 1761

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55873**

Well Name & No. H.M.Z. # 1-29 Test No. 4 Date 12-17-13
 Company Murkin Drilling Co. INC. Elevation 3,292 KB 3,287 GL
 Address 250 N. Water Suite 300 Wichita KS. 67202
 Co. Rep / Geo. Scott Robinson / Rocky Milford Rig Murkin Rig #8
 Location: Sec. 29 Twp. 1-S. Rge. 36-W Co. Rawlins. State KS.

Interval Tested 4380 - 4432 Zone Tested Zandig "J"
 Anchor Length 52' Drill Pipe Run 4173 Mud Wt. 9.4
 Top Packer Depth 4375 Drill Collars Run 180' Vis 60
 Bottom Packer Depth ~~4375~~ 4380 Wt. Pipe Run — WL 6.3
 Total Depth 4432 Chlorides 900 ppm System LCM 4.0

Blow Description I.F. - 30 - 1/4 INT. Blow Built to (5 3/4" in 30 min.)
I.S.I - 60 - No B.B.
F.F. - 60 - 1/4 INT. Blow Built to (6 1/2" in 60 min.)
F.S.I - 90 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>C/O</u>	<u>100</u>			
<u>63</u>	<u>HOC, M</u>	<u>30</u>		<u>70</u>	
<u>63</u>	<u>SOC, W, C, M</u>	<u>5</u>	<u>10</u>	<u>85</u>	
<u>63</u>	<u>S, S, H, W, C, M (oil specs)</u>	<u>SRCS</u>	<u>35</u>	<u>65</u>	

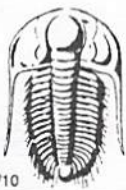
Rec Total 200 BHT 137 Gravity 33.8 API RW .219 @ 63.7° F Chlorides 36,000 ppm

(A) Initial Hydrostatic 2,207 Test 1250 T-On Location 03:50:00
 (B) First Initial Flow 45 Jars 250 T-Started 04:23:00
 (C) First Final Flow 95 Safety Joint 75 T-Open 07:09:00
 (D) Initial Shut-In 1,143 Circ Sub _____ T-Pulled 11:09:00
 (E) Second Initial Flow 102 Hourly Standby _____ T-Out 14:13:00
 (F) Second Final Flow 130 Mileage 120 R.O.F. 186 Comments _____
 (G) Final Shut-In 1,115 Sampler _____ Thank you!
 (H) Final Hydrostatic 2,198 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1761
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1761

Approved By _____ Our Representative B. J. [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55874

Well Name & No. H.M.E # 1-29 Test No. 5 Date 12-18-13
 Company Murfin Drilling Co. INC. Elevation 3,292 KB 3,287 GL
 Address 250 N. Water Suite 300 Wichita KS. 67202
 Co. Rep / Geo. Scott Robinson / Rocky Milford Rig Murfin Rig #8
 Location: Sec. 29 Twp. 1-5 Rge. 36 - W Co. Rawlins State KS.

Interval Tested 4654 - 4714 Zone Tested Ft. Scott - Verdigris
 Anchor Length 60 Drill Pipe Run 4449 Mud Wt. 9.2
 Top Packer Depth 4649 Drill Collars Run 188' Vis 94
 Bottom Packer Depth 4654 Wt. Pipe Run _____ WL 6.8
 Total Depth 4714 Chlorides 900 ppm System LCM 4.0

Blow Description IF-30-W.S.B. (Died in 8 min)
EST-60-NO B.B.
EF-30-NO Blow
F.SI-60-NO B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>				<u>100</u>	

Rec Total 3 BHT 135.7 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2428 Test 1250 T-On Location 16:00:00
 (B) First Initial Flow 40 Jars 250 T-Started 17:05:00
 (C) First Final Flow 46 Safety Joint 75 T-Open 20:00:00
 (D) Initial Shut-In 55 Circ Sub _____ T-Pulled 23:00:00
 (E) Second Initial Flow 49 Hourly Standby _____ T-Out 01:30:00
 (F) Second Final Flow 55 Mileage 120 R.T. 186 Comments Loaded tools
 (G) Final Shut-In 57 Sampler _____ on 12-19-13 @ 2:50:00
 (H) Final Hydrostatic 2,911 Straddle _____ "Thank you"
 Shale Packer _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 91.67
 Final Flow 30 Day Standby 1d 2.75h Total 1852.67
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1761

Approved By _____ Our Representative [Signature]

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*Ucat
Prod-LH*

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 140253

Invoice Date: Dec 10, 2013

Voice: (817) 546-7282
Fax: (817) 246-3361

Page: 1

Bill To:
Murfin Drlg. Co., Inc. 250 N. Water STE #300 Wichita, KS 67202

Customer ID	Field Ticket #	Payment Terms	
Murfin	61423	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Dec 10, 2013	1/9/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	HMZ #1-29		
230.00	CEMENT MATERIALS	Class A Common	17.90	4,117.00
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
241.50	CEMENT SERVICE	Cubic Feet Charge	2.48	598.92
890.40	CEMENT SERVICE	Ton Mileage Charge	2.60	2,315.04
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
80.00	CEMENT SERVICE	Pump Truck Mileage	7.70	616.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
80.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	352.00
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	CEMENT SUPERVISOR	Kelly Gabel		
1.00	OPERATOR ASSISTANT	Chris Helpingstine		

Subtotal	10,298.21
Sales Tax	365.69
Total Invoice Amount	10,663.90
Payment/Credit Applied	
TOTAL	10,663.90

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

\$ 3,604.37

ONLY IF PAID ON OR BEFORE
Jan 4, 2014

-3604.37

OK JL

ALLIED OIL & GAS SERVICES, LLC 061423

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

• SERVICE POINT:

Dallas

DATE <u>12-10-13</u>	SEC. <u>29</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION	JOB START <u>7:30 AM</u>	JOB FINISH <u>9:00 PM</u>
LEASE <u>H12</u>	WELL# <u>1-29</u>	LOCATION <u>McDonald INN WINTO</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)							

CONTRACTOR Murfin R OWNER Same

TYPE OF JOB Surface
 HOLE SIZE 10 1/8" T.D. 254' CEMENT
 CASING SIZE 8 7/8" DEPTH 254' AMOUNT ORDERED 220 SKS com 8% CC

TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 15'
 PERFS. _____
 DISPLACEMENT 15,22 BBL

EQUIPMENT
 PUMP TRUCK CEMENTER Andrew Jorstand
 # 431 HELPER Kelly Gabel
 BULK TRUCK
 # 096 DRIVER Chris Helpingstair
 BULK TRUCK
 # _____ DRIVER _____

COMMON	<u>220 SKS</u>	@ <u>17.92</u>	<u>4117.00</u>
POZMIX		@	
GEL		@	
CHLORIDE	<u>8 SKS</u>	@ <u>64.25</u>	<u>512.00</u>
ASC		@	
HANDLING	<u>2415 cu/ft</u>	@ <u>2.48</u>	<u>5989.2</u>
MILEAGE	<u>2.10 mi/mile</u>	<u>11.83 mi</u>	<u>235.24</u>
			TOTAL <u>2542.96</u>

REMARKS:

Cement did circulate

Thank you

SERVICE

DEPTH OF JOB	<u>254'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>80 miles</u>	@ <u>7.20</u>	<u>616.00</u>
MANIFOLD	<u>head</u>	@	<u>275.00</u>
Light Vehicle		@ <u>440</u>	<u>352.00</u>
			TOTAL <u>2755.25</u>

CHARGE TO: Murfin
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
TOTAL _____		

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) _____
 TOTAL CHARGES 10,298.21
 DISCOUNT 3,604.37 IF PAID IN 30 DAYS
6,693.83 Net.

PRINTED NAME X Andrew Jorstand
 SIGNATURE X Kelly Gabel



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
12/19/2013	25915

BILL TO	
Murfin Drilling Co Inc PO Box 661 Colby, KS 67701-0661	USED FOR APPROVED

IC 103
FH

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-29	HMZ	Rawlins	Company Tools R...	Oil	Development	5-1/2" LongString	Jason
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				145	Miles	6.00	870.00
579D	Pump Charge - Top To Bottom LongString				1	Job	2,000.00	2,000.00
403-5	5 1/2" Cement Basket				3	Each	300.00	900.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	375.00	375.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher				10	Each	40.00	400.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
276	Flocele				125	Lb(s)	2.50	312.50T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				9	Sack(s)	35.00	315.00T
285	CFR-1				150	Lb(s)	4.50	675.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
325	Standard Cement				200	Sacks	14.50	2,900.00T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	18.50	5,550.00T
581D	Service Charge Cement				500	Sacks	2.00	1,000.00
583D	Drayage				3,683.36	Ton Miles	1.00	3,683.36
	Subtotal							21,940.86
	Sales Tax Rawlins County						7.90%	1,136.61

Thank You For Your Business & Best Wishes For A Wonderful Holiday Season!!

Total \$23,077.47



CHARGE TO: MURKIN DRILLING
 ADDRESS:
 CITY, STATE, ZIP CODE

TICKET 25915

WELL/PROJECT NO. HMZ 1-29
 LEASE COUNTY/PARCEL RAWLINS
 RIG NAME/NO. 8

PAGE 1 OF 2

SERVICE LOCATION: 1. NESS CITY, KS.
 2.
 3.
 REFERRAL LOCATION:
 TICKET TYPE: SERVICE SALES
 CONTRACTOR: CO. TOBS RIG # 8
 WELL TYPE: OIL
 WELL CATEGORY: DEVELOPMENT
 JOB PURPOSE: 5 1/2 LONGSTRINGS
 STATE: KS. CITY: Mc Donald, KS. DATE: 19 DEC 13
 SHIPPED VIA: DELIVERED TO: ORDER NO.
 WELL PERMIT NO.:
 WELL LOCATION: 1D3N W ESTD

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE #115	145	MIL			6.00	870
579					PUMP CHANGE	1	JOB			2000	2000
4D3					CEMENT BASKETS	3	EA			300	900
4D6					LATCH DOWN PLUG & BARRLE	1	EA			275	275
4D7					INSERT FLOAT SHOE W/FILL	1	EA			375	375
4D9					TURBOCHIZERS	15	EA			90	1350
413					ROTO WALL SEARCHERS	10	EA			40	400
419					ROTATING HEAD RESISTAL	1	JOB			200	200
281					MUD FLUSH	500	EA			1.25	625
221					LIQUID RCL	4	BAR			25	100

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

DATE SIGNED: 20 DEC 13
 TIME SIGNED: 0900
 A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				2	7095
WE UNDERSTOOD AND MET YOUR NEEDS?				2	14845
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				2	21940
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS?				2	1136
ARE YOU SATISFIED WITH OUR SERVICE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	23,077
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					47

WIFT OPERATOR: [Signature] APPROVAL: [Signature]

Thank You!



Swifton, Inc.

PO Box 466
Ness City, KS 67560
Of: 785-798-2300

TICKET CONTINUATION

TICKET No. 25915

CUSTOMER MUREIN DRILLING WELLS HMZ-1-29 DATE 19 DEC 13 PAGE 21 OF 2

PRICE REFERENCE	SECONDARY REFERENCE PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOG	ACCT	DE								
276												
283					FLUCEL	185	lbs			2.50	312.50	
284					SALT	1000	lbs			3.20	2000.00	
285					CAISEAL	9	5X			35.70	315.00	
29D					CFR-1	150	lbs.			4.15	675.00	
					D-AIR	5	gal			42.00	210.00	
325					STANDARD CEMENT EA-2	200	5X			14.50	2900.00	
330					SMD CEMENT	300	5X			18.50	5550.00	
581					SERVICE CHARGE					2.00	1000.00	
583					MILEAGE TOTAL WESHT	30.83	30.83	30.83		1.00	3683.00	

CONTINUATION TOTAL 14845.00

JOB LOG

SWIFT Services, Inc.

DATE 9 DEC 13 PAGE NO.

CUSTOMER MURKIN DRILLING

WELL NO.

LEASE HMZ 1-29

JOB TYPE/ S² LONGSTRING

TICKET NO. 25915

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2130							ON LOCATION
	0300							START PIPE S ² -15.5" RTD @ 4775 SET @ 4773 SHOEJ. 19.60' CENTRALIZERS 1,2,3,4,5,6,7,8,9,10,11,12,13,34,44 BASKETS 10,35,45
								CIRCULATE @ 2385 FOR 30 min.
	0530							DROP BALL - CIRCULATE.
	0640	6 6			✓ ✓		400	Pump 500 gal MUD FLUSH 400 Pump 20 BBL KCL FLUSH
	0647		7.5					PLUG RH - 30sx - MA - 20sx
	0655	6 6	138 1/2 48 1/2		✓ ✓			MIX 250 SX SMD MIX 200 SX EA-2
	0739							WASH OUT Pump & LINES.
	0741	6			✓			START DISPLACING PLUG.
	0800	✓	114		✓		2000	PLUG DOWN - LATCH PLUG FN CIRCULATE 10sx TO PIT RELEASE PSI - DRY
	0802							
	0804							WASH TRUCK
	0845							JOB COMPLETE
								THANKS BLS
								JASON DAVE JUAN JARED CRAIG