



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1231137
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: _____

1231137

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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. <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	Theron 3-10
Doc ID	1231137

All Electric Logs Run

DIL
DUCP
MEL
BHCS



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Rocky Milford

Theron #3-10

10-1S-37W Cheyenne, KS

Start Date: 2014.07.20 @ 03:43:00

End Date: 2014.07.20 @ 11:26:30

Job Ticket #: 58242 DST #: 1

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

Printed: 2014.07.24 @ 15:11:04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N Water STE #300
Wichita, KS 67202
ATTN: Rocky Milford

10-1S-37W Cheyenne, KS

Theron #3-10

Job Ticket: 58242

DST#: 1

Test Start: 2014.07.20 @ 03:43:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:02:00

Time Test Ended: 11:26:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4011.00 ft (KB) To 4075.00 ft (KB) (TVD)

Reference Elevations: 3197.00 ft (KB)

Total Depth: 4075.00 ft (KB) (TVD)

3192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press@RunDepth: 93.66 psig @ 4012.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.20

End Date:

2014.07.20

Last Calib.:

2014.07.20

Start Time: 03:44:00

End Time:

11:26:30

Time On Btm:

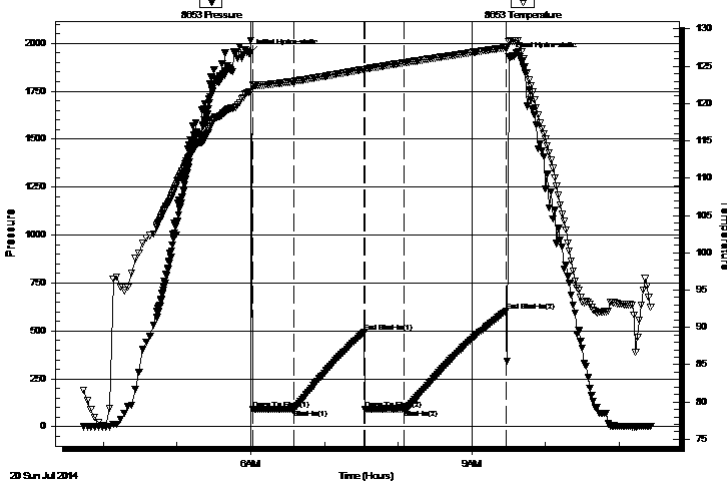
2014.07.20 @ 05:59:30

Time Off Btm:

2014.07.20 @ 09:30:00

TEST COMMENT: 30 - IF- 1/4" Blow died back to 1/8"
60 - IS- No Return
30 - FF- No Blow
60 - FS- No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1948.07	121.58	Initial Hydro-static
3	89.91	122.46	Open To Flow (1)
36	91.21	122.98	Shut-In(1)
93	491.83	124.59	End Shut-In(1)
94	91.44	124.56	Open To Flow (2)
126	93.66	125.46	Shut-In(2)
209	603.85	127.50	End Shut-In(2)
211	1929.23	128.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
135.00	Mud 100M	0.66

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58242

DST#: 1

ATTN: Rocky Milford

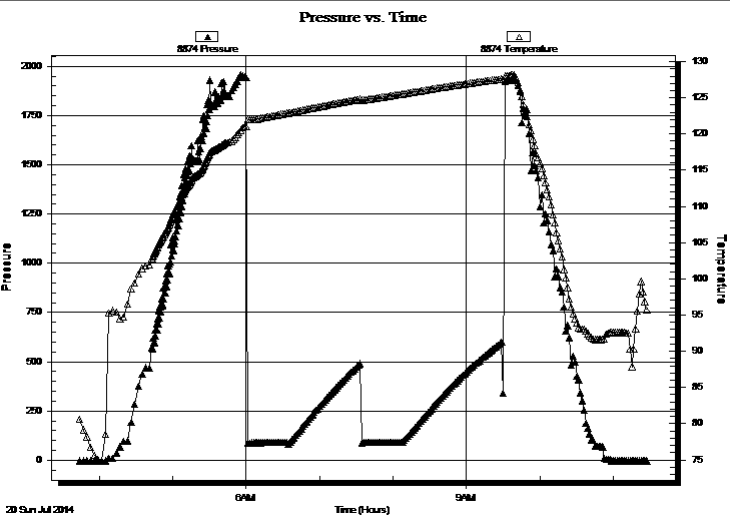
Test Start: 2014.07.20 @ 03:43:00

GENERAL INFORMATION:

Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:02:00
 Time Test Ended: 11:26:30
 Interval: **4011.00 ft (KB) To 4075.00 ft (KB) (TVD)**
 Total Depth: 4075.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 66
 Reference Elevations: 3197.00 ft (KB)
 3192.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8874 Inside
 Press@RunDepth: psig @ 4012.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.20 End Date: 2014.07.20 Last Calib.: 2014.07.20
 Start Time: 03:44:00 End Time: 11:28:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" Blow died back to 1/8"
 60 - ISI- No Return
 30 - FF- No Blow
 60 - FSI- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
135.00	Mud 100M	0.66

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58242

DST#: 1

ATTN: Rocky Milford

Test Start: 2014.07.20 @ 03:43:00

Tool Information

Drill Pipe:	Length: 3815.00 ft	Diameter: 3.80 inches	Volume: 53.51 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 54.41 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4011.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Chased tool approx 20'to bottom. Reset tool and bled off initial mud surge

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3984.00	
Shut In Tool	5.00			3989.00	
Hydraulic tool	5.00			3994.00	
Jars	5.00			3999.00	
Safety Joint	3.00			4002.00	
Packer	5.00			4007.00	28.00 Bottom Of Top Packer
Packer	4.00			4011.00	
Stubb	1.00			4012.00	
Recorder	0.00	8653	Outside	4012.00	
Recorder	0.00	8874	Inside	4012.00	
Perforations	25.00			4037.00	
Change Over Sub	1.00			4038.00	
Drill Pipe	31.00			4069.00	
Change Over Sub	1.00			4070.00	
Bullnose	5.00			4075.00	64.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58242

DST#: 1

ATTN: Rocky Milford

Test Start: 2014.07.20 @ 03:43:00

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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
135.00	Mud 100M	0.664

Total Length: 135.00 ft Total Volume: 0.664 bbl

Num Fluid Samples: 0

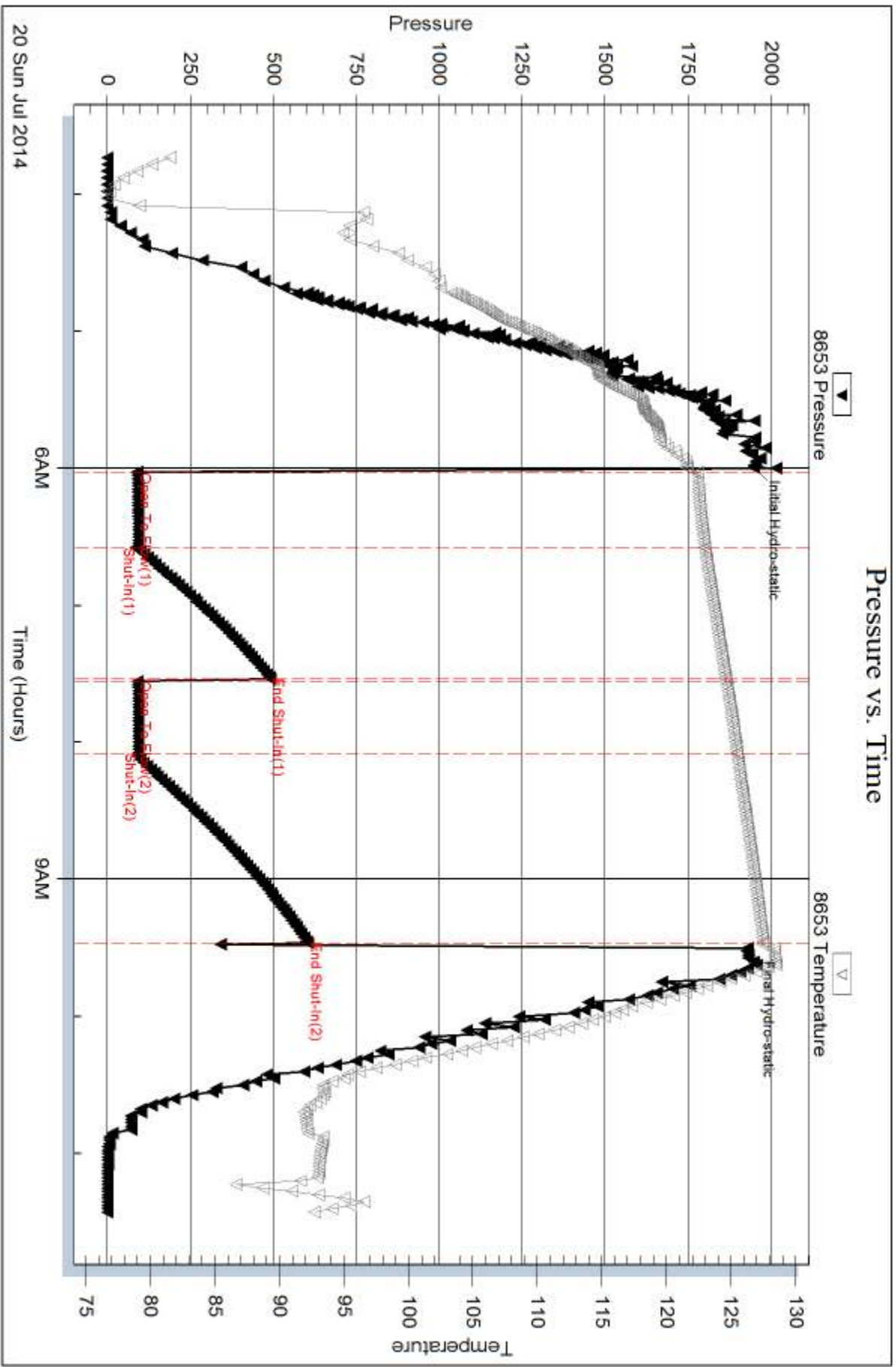
Num Gas Bombs: 0

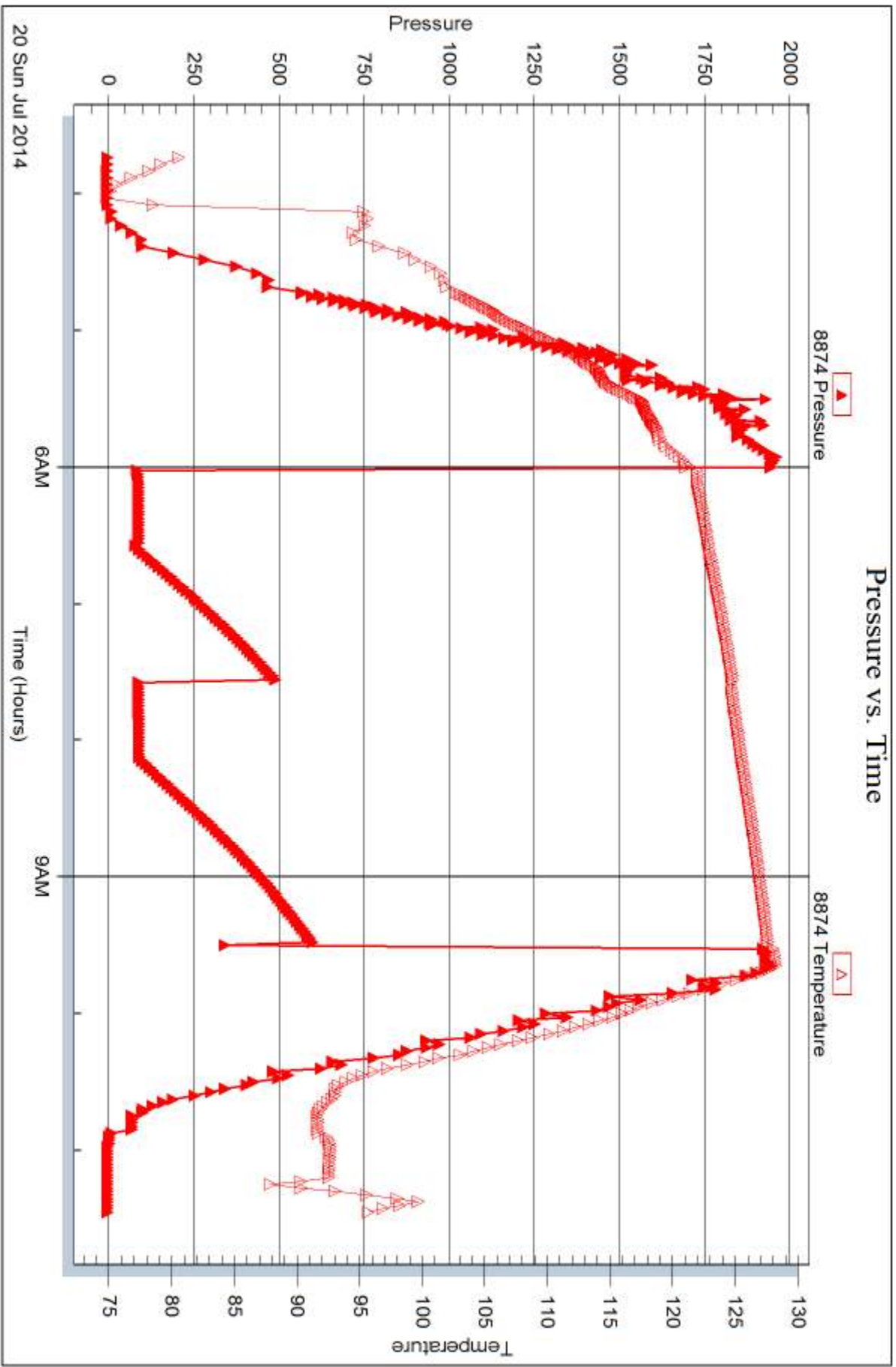
Serial #:

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

Theron #3-10

10-1S-37W Cheyenne, KS

Start Date: 2014.07.21 @ 08:20:00

End Date: 2014.07.21 @ 17:20:00

Job Ticket #: 58243 DST #: 2

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

Printed: 2014.07.24 @ 15:10:32

Murfin Drilling Co., Inc.
10-1S-37W Cheyenne, KS
Theron #3-10
DST # 2
LKC "D"
2014.07.21



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

10-1S-37W Cheyenne, KS

Theron #3-10

Job Ticket: 58243

DST#: 2

Test Start: 2014.07.21 @ 08:20:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:08:30
 Time Test Ended: 17:20:00
 Interval: **4163.00 ft (KB) To 4218.00 ft (KB) (TVD)**
 Total Depth: 4218.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 66
 Reference Elevations: 3197.00 ft (KB)
 3192.00 ft (CF)
 KB to GR/CF: 5.00 ft

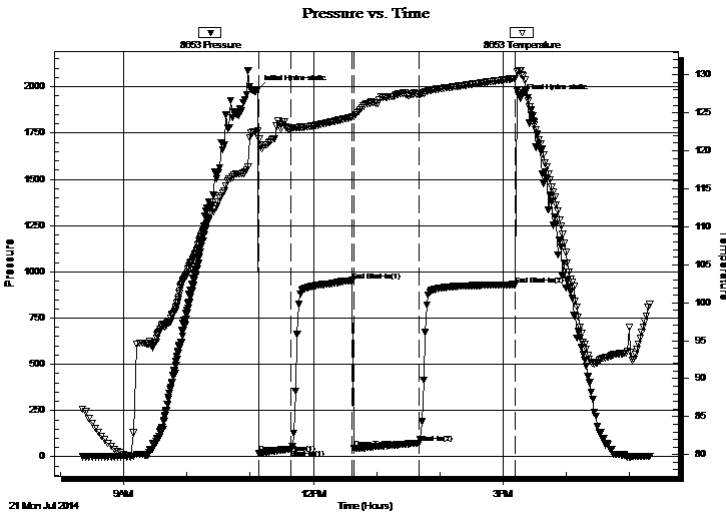
Serial #: 8653

Outside

Press@RunDepth: 74.98 psig @ 4164.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.21 End Date: 2014.07.21 Last Calib.: 2014.07.21
 Start Time: 08:21:00 End Time: 17:20:00 Time On Btm: 2014.07.21 @ 11:07:00
 Time Off Btm: 2014.07.21 @ 15:16:30

TEST COMMENT: 30 - IF- Surface Blow built to 3/4"
 60 - IS- No Return
 60 - FF- Surface Blow started at 7 min. Built to 1"
 90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1984.76	122.57	Initial Hydro-static
2	18.72	121.51	Open To Flow (1)
32	42.17	122.78	Shut-In(1)
90	952.94	124.46	End Shut-In(1)
92	45.08	124.53	Open To Flow (2)
153	74.98	127.41	Shut-In(2)
245	930.96	129.53	End Shut-In(2)
250	1938.10	130.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSM 100M (oil spots)	0.59

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

10-1S-37W Cheyenne, KS
Theron #3-10
 Job Ticket: 58243 **DST#: 2**
 Test Start: 2014.07.21 @ 08:20:00

GENERAL INFORMATION:

Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:08:30
 Time Test Ended: 17:20:00
Interval: 4163.00 ft (KB) To 4218.00 ft (KB) (TVD)
 Total Depth: 4218.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 66
 Reference Elevations: 3197.00 ft (KB)
 3192.00 ft (CF)
 KB to GR/CF: 5.00 ft

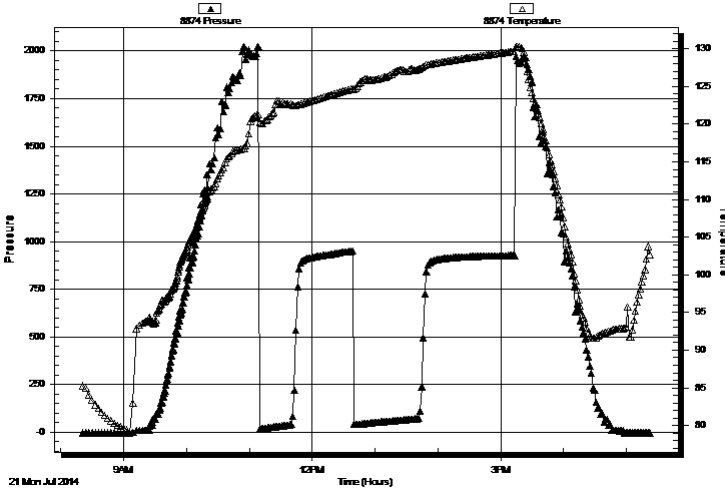
Serial #: 8874 Inside

Press@RunDepth: psig @ 4164.00 ft (KB)
 Start Date: 2014.07.21 End Date: 2014.07.21
 Start Time: 08:21:00 End Time: 17:22:00

Capacity: 8000.00 psig
 Last Calib.: 2014.07.21
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- Surface Blow built to 3/4"
 60 - IS- No Return
 60 - FF- Surface Blow started at 7 min. Built to 1"
 90 - FS- No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSM 100M (oil spots)	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58243

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.07.21 @ 08:20:00

Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 56.66 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4163.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4136.00	
Shut In Tool	5.00			4141.00	
Hydraulic tool	5.00			4146.00	
Jars	5.00			4151.00	
Safety Joint	3.00			4154.00	
Packer	5.00			4159.00	28.00 Bottom Of Top Packer
Packer	4.00			4163.00	
Stubb	1.00			4164.00	
Recorder	0.00	8653	Outside	4164.00	
Recorder	0.00	8874	Inside	4164.00	
Perforations	15.00			4179.00	
Change Over Sub	1.00			4180.00	
Drill Pipe	32.00			4212.00	
Change Over Sub	1.00			4213.00	
Bullnose	5.00			4218.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58243

DST#: 2

ATTN: Rocky Milford

Test Start: 2014.07.21 @ 08:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 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
120.00	OSM 100M (oil spots)	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

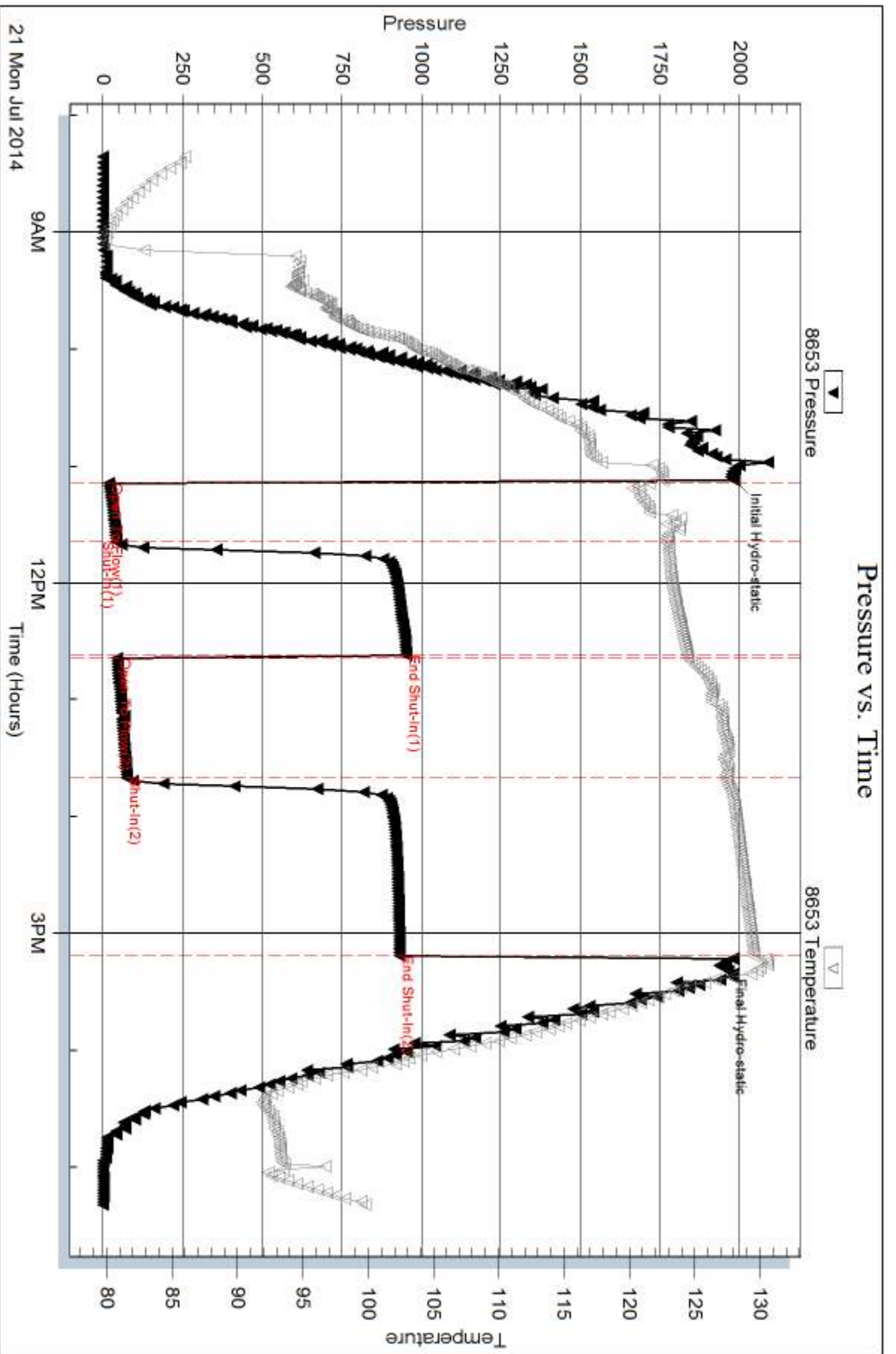
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



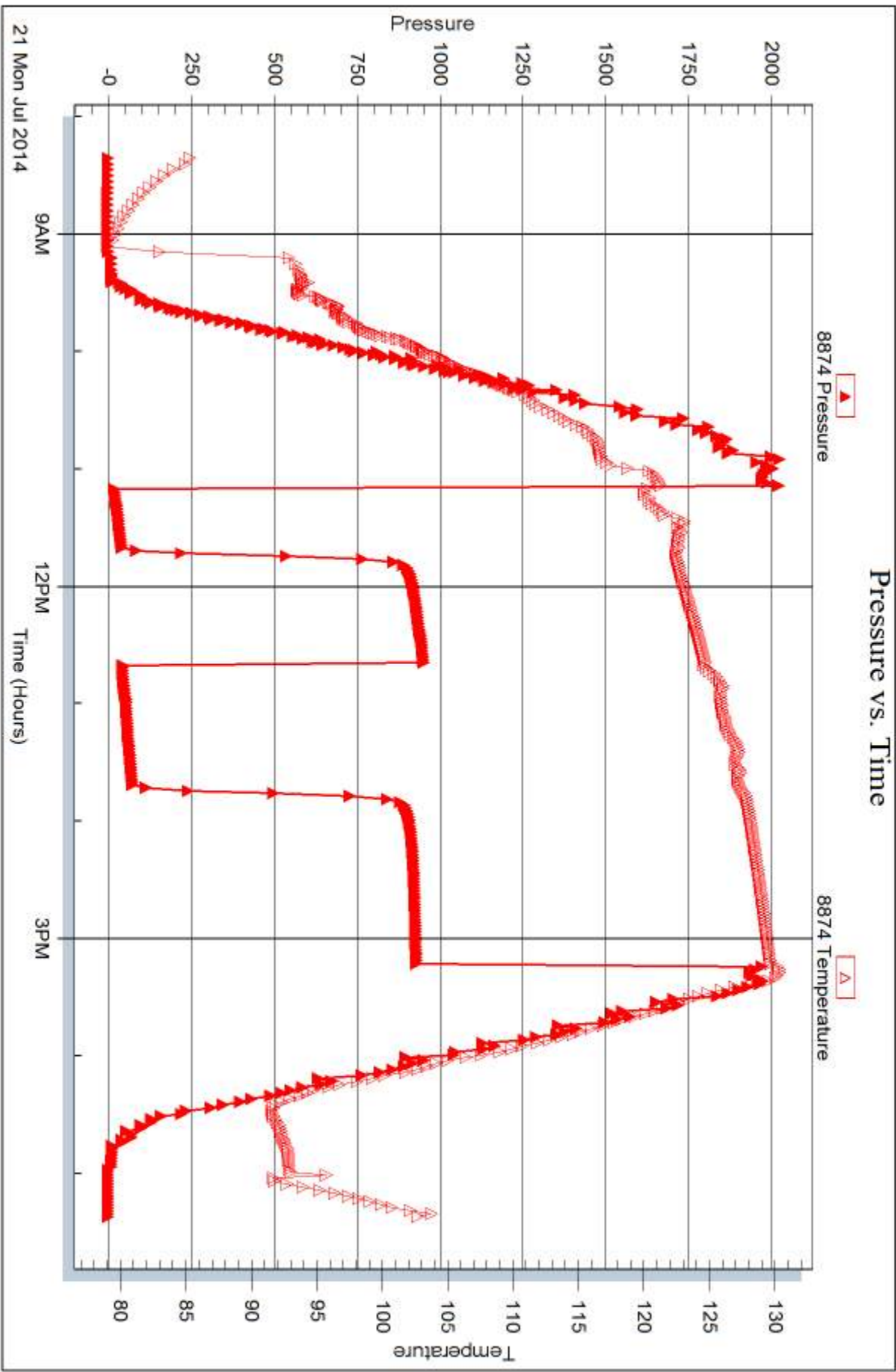
Serial #: 8874

Inside

Murfin Drilling Co., Inc.

Theron #3-10

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Rocky Milford

Theron #3-10

10-1S-37W Cheyenne, KS

Start Date: 2014.07.22 @ 09:15:00

End Date: 2014.07.22 @ 16:55:30

Job Ticket #: 58244 DST #: 3

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

Printed: 2014.07.24 @ 15:10:08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N Water STE #300
Wichita, KS 67202
ATTN: Rocky Milford

10-1S-37W Cheyenne, KS

Theron #3-10

Job Ticket: 58244

DST#: 3

Test Start: 2014.07.22 @ 09:15:00

GENERAL INFORMATION:

Formation: **LKC "G-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:23:30
 Time Test Ended: 16:55:30
 Interval: **4215.00 ft (KB) To 4365.00 ft (KB) (TVD)**
 Total Depth: 4365.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 66
 Reference Elevations: 3197.00 ft (KB)
 3192.00 ft (CF)
 KB to GR/CF: 5.00 ft

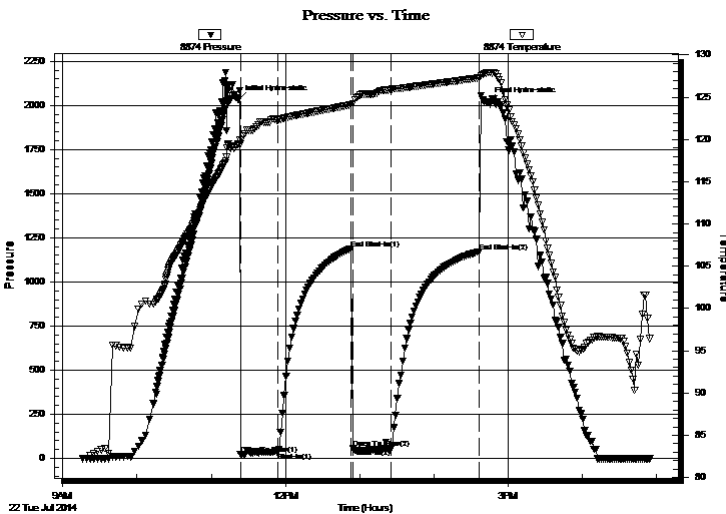
Serial #: 8874

Inside

Press@RunDepth: 54.70 psig @ 4216.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.22 End Date: 2014.07.22 Last Calib.: 2014.07.24
 Start Time: 09:16:00 End Time: 16:55:30 Time On Btm: 2014.07.22 @ 11:22:00
 Time Off Btm: 2014.07.22 @ 14:43:30

TEST COMMENT: 30 - IF- 1/2" Blow built to 1" in 20 min. then died back to 3/4"
 60 - IS- No Return
 30 - FF- No Blow
 60 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.81	119.48	Initial Hydro-static
2	21.73	119.51	Open To Flow (1)
32	35.96	122.29	Shut-In(1)
91	1188.29	124.09	End Shut-In(1)
93	55.12	124.20	Open To Flow (2)
123	54.70	125.91	Shut-In(2)
195	1170.73	127.27	End Shut-In(2)
202	2018.61	127.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud 100M	0.34

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58244

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.07.22 @ 09:15:00

Tool Information

Drill Pipe:	Length: 4007.00 ft	Diameter: 3.80 inches	Volume: 56.21 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.11 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	4215.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	150.00 ft			
Tool Length:	178.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4188.00	
Shut In Tool	5.00			4193.00	
Hydraulic tool	5.00			4198.00	
Jars	5.00			4203.00	
Safety Joint	3.00			4206.00	
Packer	5.00			4211.00	28.00 Bottom Of Top Packer
Packer	4.00			4215.00	
Stubb	1.00			4216.00	
Recorder	0.00	8653	Outside	4216.00	
Recorder	0.00	8874	Inside	4216.00	
Perforations	15.00			4231.00	
Change Over Sub	1.00			4232.00	
Drill Pipe	127.00			4359.00	
Change Over Sub	1.00			4360.00	
Bullnose	5.00			4365.00	150.00 Bottom Packers & Anchor

Total Tool Length: 178.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58244

DST#: 3

ATTN: Rocky Milford

Test Start: 2014.07.22 @ 09:15:00

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 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
70.00	Mud 100M	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

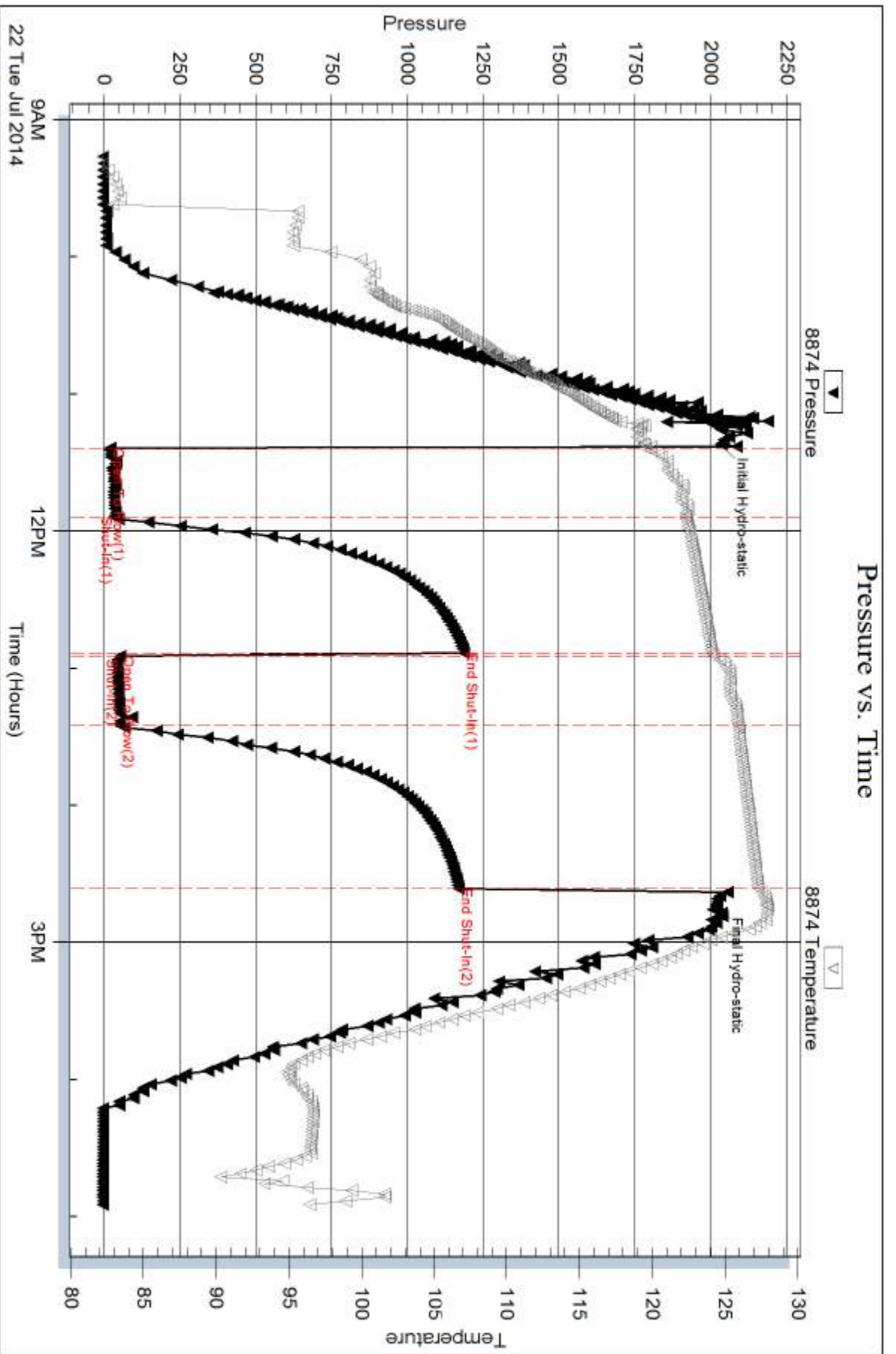
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Show of oil spots in tool

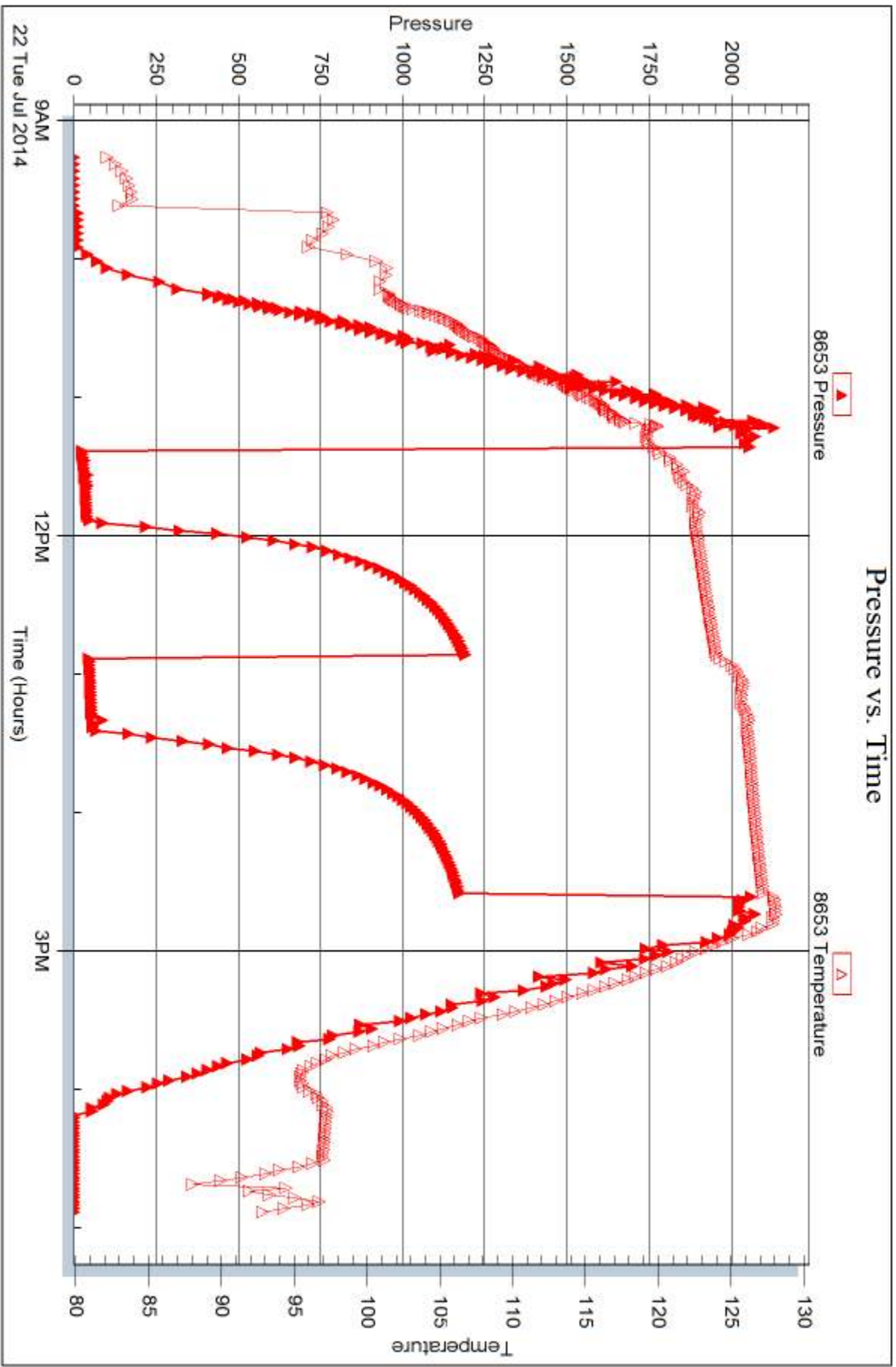


Serial #: 8653

Outside Murfin Drilling Co., Inc.

Theron #3-10

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 58244

Printed: 2014.07.24 @ 15:10:09



DRILL STEM TEST REPORT

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

250 N Water STE #300
Wichita, KS 67202

ATTN: Rocky Milford

Theron #3-10

10-1S-37W Cheyenne, KS

Start Date: 2014.07.23 @ 12:25:00

End Date: 2014.07.23 @ 23:11:30

Job Ticket #: 58245 DST #: 4

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

Printed: 2014.07.24 @ 15:07:01



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N Water STE #300
 Wichita, KS 67202
 ATTN: Rocky Milford

10-1S-37W Cheyenne, KS

Theron #3-10

Job Ticket: 58245

DST#: 4

Test Start: 2014.07.23 @ 12:25:00

GENERAL INFORMATION:

Formation: **Pawnee**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:34:30
 Time Test Ended: 23:11:30
 Interval: **4521.00 ft (KB) To 4570.00 ft (KB) (TVD)**
 Total Depth: 4570.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 66
 Reference Elevations: 3197.00 ft (KB)
 3192.00 ft (CF)
 KB to GR/CF: 5.00 ft

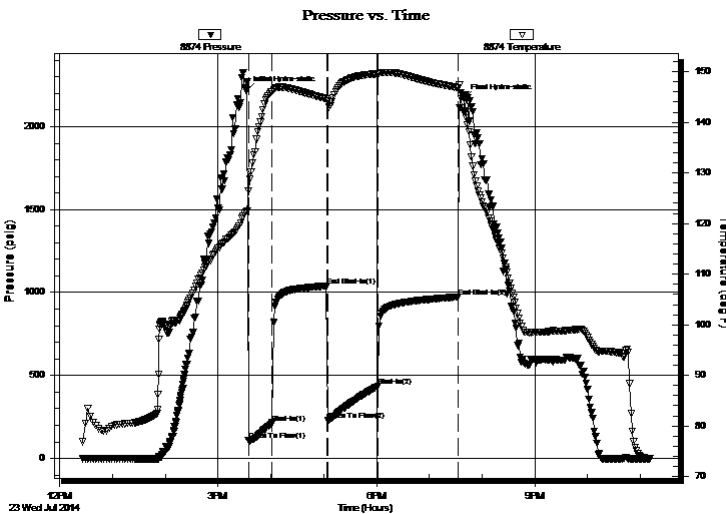
Serial #: 8874

Inside

Press@RunDepth: 435.33 psig @ 4522.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.23 End Date: 2014.07.23 Last Calib.: 2014.07.23
 Start Time: 12:26:00 End Time: 23:11:30 Time On Btm: 2014.07.23 @ 15:32:00
 Time Off Btm: 2014.07.23 @ 19:40:00

TEST COMMENT: 30 - IF- BoB in 4 min.
 60 - IS- BoB in 17
 60 - FF - BoB in 7 min
 90 - FSI - Blow built to 9"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.72	122.37	Initial Hydro-static
3	106.96	126.44	Open To Flow (1)
30	213.97	146.11	Shut-In(1)
91	1039.33	144.66	End Shut-In(1)
93	231.14	144.29	Open To Flow (2)
150	435.33	149.56	Shut-In(2)
241	973.43	146.85	End Shut-In(2)
248	2168.76	142.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCO 50M 50o	0.89
60.00	OCM 70M 30o	0.81
860.00	Clean Gassy Oil 40G 60o	12.06
0.00	1450 GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58245

DST#: 4

ATTN: Rocky Milford

Test Start: 2014.07.23 @ 12:25:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:34:30

Time Test Ended: 23:11:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 4521.00 ft (KB) To 4570.00 ft (KB) (TVD)

Reference Elevations: 3197.00 ft (KB)

Total Depth: 4570.00 ft (KB) (TVD)

3192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press@RunDepth: psig @ 4522.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.23

End Date:

2014.07.23

Last Calib.:

2014.07.23

Start Time: 12:26:00

End Time:

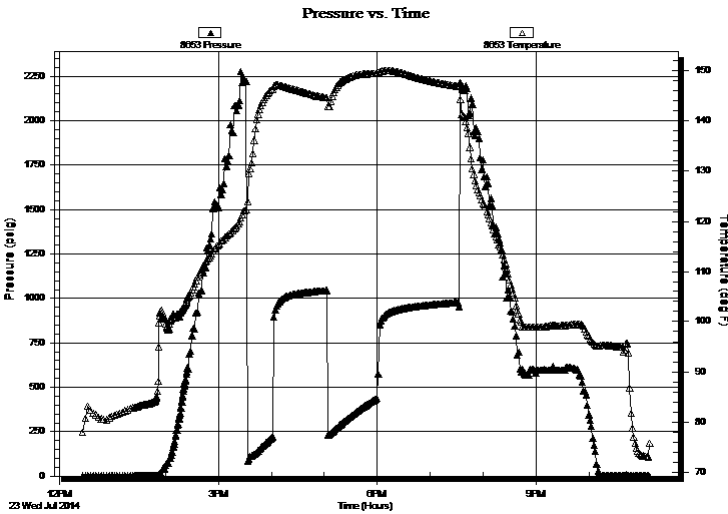
23:09:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- BoB in 4 min.
60 - IS- BoB in 17
60 - FF - BoB in 7 min
90 - FSI - Blow built to 9"

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCO 50M 50o	0.89
60.00	OCM 70M 30o	0.81
860.00	Clean Gassy Oil 40G 60o	12.06
0.00	1450 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58245

DST#: 4

ATTN: Rocky Milford

Test Start: 2014.07.23 @ 12:25:00

Tool Information

Drill Pipe:	Length: 4320.00 ft	Diameter: 3.80 inches	Volume: 60.60 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 61.50 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4521.00 ft			Final 72000.00 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: Dropped bar to reverse out fluid

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4494.00	
Shut In Tool	5.00			4499.00	
Hydraulic tool	5.00			4504.00	
Jars	5.00			4509.00	
Safety Joint	3.00			4512.00	
Packer	5.00			4517.00	28.00 Bottom Of Top Packer
Packer	4.00			4521.00	
Packer - Shale	0.00			4521.00	
Stubb	1.00			4522.00	
Recorder	0.00	8653	Outside	4522.00	
Recorder	0.00	8874	Inside	4522.00	
Perforations	10.00			4532.00	
Change Over Sub	1.00			4533.00	
Drill Pipe	31.00			4564.00	
Change Over Sub	1.00			4565.00	
Bullnose	5.00			4570.00	49.00 Bottom Packers & Anchor
Total Tool Length:	77.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

10-1S-37W Cheyenne, KS

250 N Water STE #300
Wichita, KS 67202

Theron #3-10

Job Ticket: 58245

DST#: 4

ATTN: Rocky Milford

Test Start: 2014.07.23 @ 12:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	MCO 50M 50o	0.885
60.00	OCM 70M 30o	0.814
860.00	Clean Gassy Oil 40G 60o	12.064
0.00	1450 GIP	0.000

Total Length: 1100.00 ft Total Volume: 13.763 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

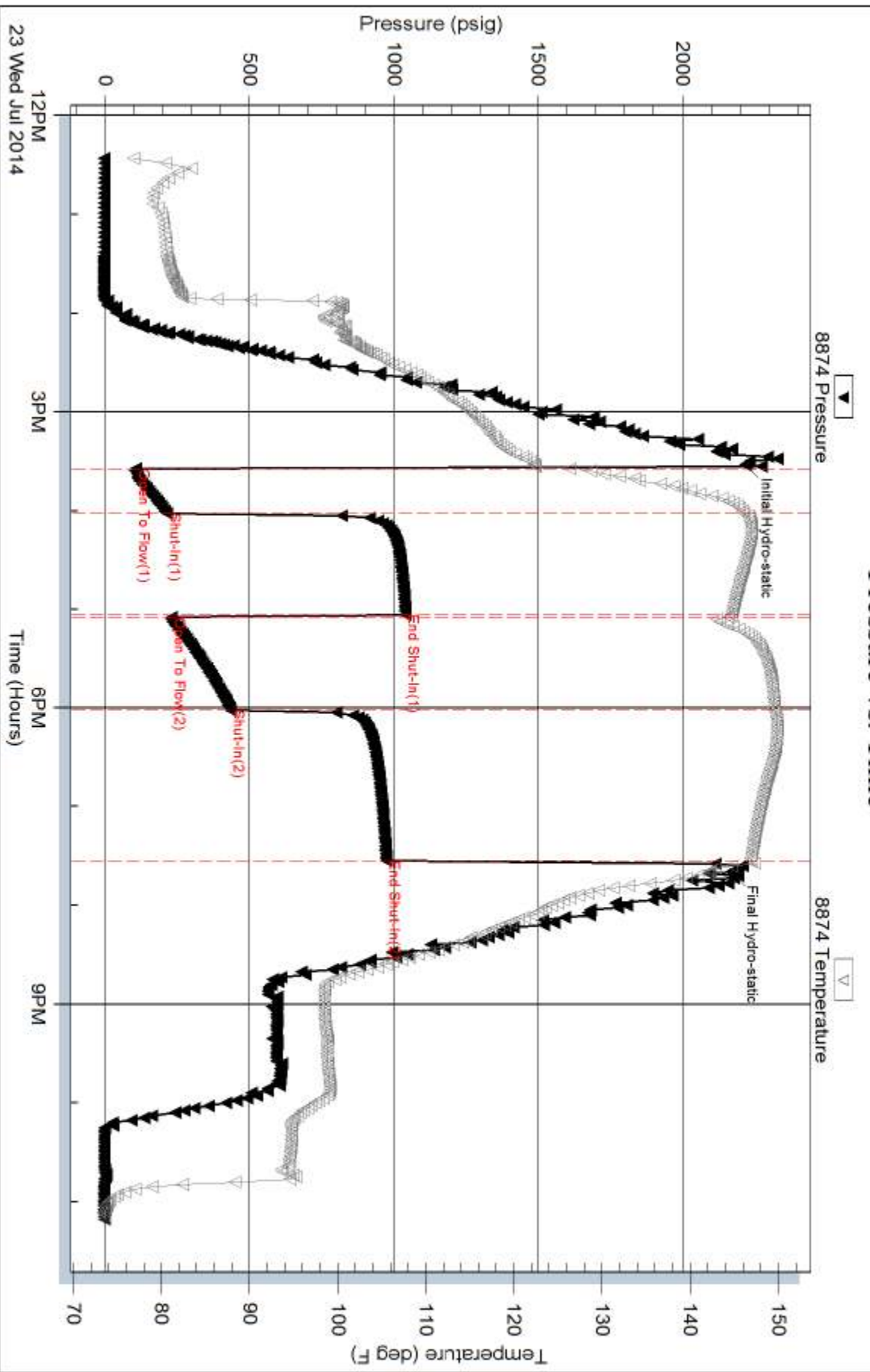
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 36 @ 80 deg = 34

Pressure vs. Time

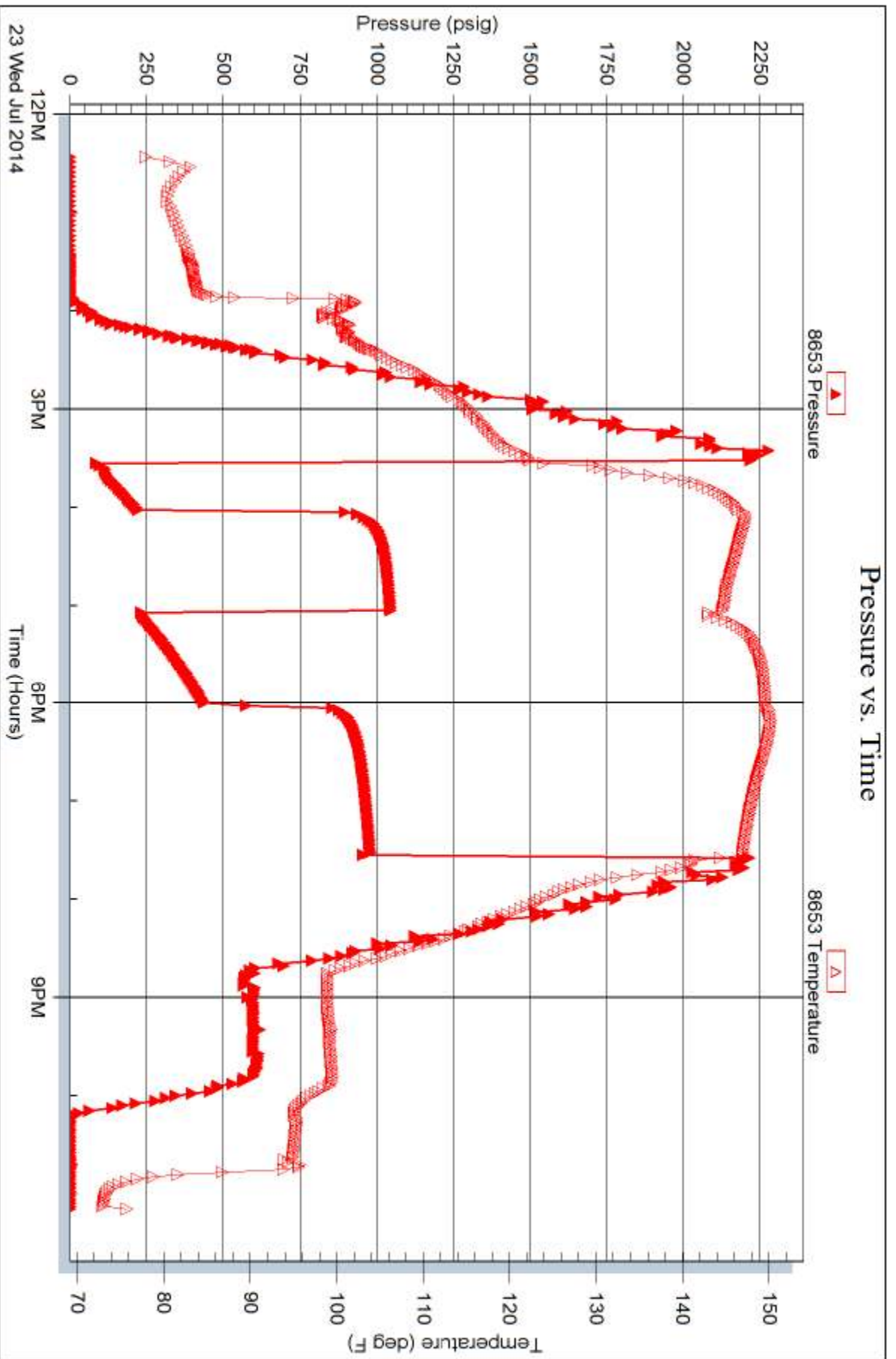


Serial #: 8653

Outside Murfin Drilling Co., Inc.

Theron #3-10

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 58245

Printed: 2014.07.24 @ 15:07:02



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58242

Well Name & No. Theron #3-10 Test No. 1 Date 7-20-14
 Company Murfin Drilling Co., Inc. Elevation 3197 KB 3192 GL
 Address 250 N Water St #300 Wichita, KS 67202
 Co. Rep / Geo. Rockx Milford Rig Murfin #8
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4011-4075 Zone Tested Oreud
 Anchor Length 64 Drill Pipe Run 3815' Mud Wt. 8.9
 Top Packer Depth 4007 Drill Collars Run 183' Vis 63
 Bottom Packer Depth 4011 Wt. Pipe Run 0 WL 7.6
 Total Depth 4075 Chlorides 500 ppm System LCM 2#
 Blow Description IF- 1/4" Blow died back to 1/8"
ISI- No Return
FF- No Blow
FSE- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>135</u>	<u>mud</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 135' BHT 128° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1948</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:00 AM</u>
(B) First Initial Flow <u>89</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:43 AM</u>
(C) First Final Flow <u>91</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:05 AM</u>
(D) Initial Shut-In <u>491</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>9:35 AM</u>
(E) Second Initial Flow <u>91</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:30 AM</u>
(F) Second Final Flow <u>93</u>	<input checked="" type="checkbox"/> Mileage <u>136 RT</u> 210.80	Comments <u>Chased tool approx</u>
(G) Final Shut-In <u>603</u>	<input type="checkbox"/> Sampler	<u>20' to bottom. Reset</u>
(H) Final Hydrostatic <u>1929</u>	<input type="checkbox"/> Straddle	<u>tool and bleed off initial surge</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<u>waited for rig to make repairs</u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>0</u>
	Sub Total <u>1785.80</u>	Total <u>1785.80</u>

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58243

Well Name & No. Theron #3-10 Test No. 2 Date 7-21-14
 Company Murfin Drilling Co., Inc Elevation 3197 KB 3192 GL
 Address 250 N Water St #3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 10 Twp. 1S Rge. 37W Co. Cheyenne State KS

Interval Tested 4163-4218 Zone Tested LKC "D"
 Anchor Length 55' Drill Pipe Run 3975' Mud Wt. 9.2
 Top Packer Depth 4159 Drill Collars Run 183' Vis 52
 Bottom Packer Depth 4163 Wt. Pipe Run Ø WL 8.4
 Total Depth 4218 Chlorides 6000 ppm System LCM RT

Blow Description IF - Surface Blow built to 3/4"
ISI - NO Return
FF - Surface Blow started out 7 min. Built to 1"
FSI - NO Return

Rec	Feet of	%gas	SPOTS	%oil	%water	%mud
<u>120</u>	<u>0.5M</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 120 BHT 1300 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1984</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>7:30 Am</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:20 Am</u>
(C) First Final Flow <u>42</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:10 Am</u>
(D) Initial Shut-In <u>952</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>3:10 Pm</u>
(E) Second Initial Flow <u>45</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:23 Pm</u>
(F) Second Final Flow <u>74</u>	<input checked="" type="checkbox"/> Mileage <u>136 RT</u> 210.80	Comments
(G) Final Shut-In <u>930</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1938</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

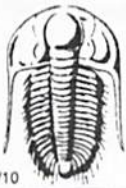
Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 1785.80

Total 1785.80
 MP/DST Disc't

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58244

Well Name & No. Theron #3-10 Test No. 3 Date 7-22-14
 Company Murfin Drilling Co., Inc. Elevation 3197 KB 3192 GL
 Address 2508 N Water STE # 3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 10 Twp. 15 Rge. 37W Co. Cherokee State KS

Interval Tested 4215 - 4365 Zone Tested LKC "G°-J"
 Anchor Length 158' Drill Pipe Run _____ Mud Wt. 9.0
 Top Packer Depth 4211 Drill Collars Run 183' Vis 64
 Bottom Packer Depth 4215 Wt. Pipe Run 9000 WL 8.0
 Total Depth 4365 Chlorides 600 ppm System LCM 7#
 Blow Description IF - 1/2" Blow built to 1" in 20 min. Then died back to 3/4"
ISI - NO Return
FF - NO Blow
FSI - NO Return

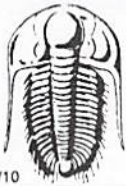
Rec	Feet of	%gas	%oil	%water	%mud
<u>708</u>	<u>mud</u>			<u>1000</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 708 BHT 127 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2033</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>9:00 AM</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>9:15 AM</u>
(C) First Final Flow <u>35</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:24 AM</u>
(D) Initial Shut-In <u>1188</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>2:24 PM</u>
(E) Second Initial Flow <u>55</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>5:00 PM</u>
(F) Second Final Flow <u>55</u>	<input checked="" type="checkbox"/> Mileage <u>136 RT</u> 210.80	Comments <u>Show of oil spots in tool</u>
(G) Final Shut-In <u>1170</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2018</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<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>00</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1785.80</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1785.80</u>	

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58245

Well Name & No. Theron #3-10 Test No. 4 Date 7-27-14
 Company Murfin Drilling Co., Inc. Elevation 3197 KB 3192 GL
 Address 250 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 10 Twp. 15 Rge. 37W Co. Cheyenne State KS

Interval Tested 4521-4570 Zone Tested Pawnee
 Anchor Length 49' Drill Pipe Run 4320 Mud Wt. 9.1
 Top Packer Depth 4517 Drill Collars Run 183 Vis 60
 Bottom Packer Depth 4521 Wt. Pipe Run 0 WL 8.2
 Total Depth 4570 Chlorides 7000 ppm System LCM 6#
 Blow Description IF-BoB in 4 min
ISI-BoB in 17 min.
FF-BoB in 7 min
FSI-Blow built to 9"

Rec	Feet of	%gas	%oil	%water	%mud
<u>860</u>	<u>Feet of Clean Gassy oil</u>	<u>40</u>	<u>60</u>		
<u>60</u>	<u>Feet of OCM</u>		<u>30</u>	<u>70</u>	
<u>180</u>	<u>Feet of MCO</u>		<u>50</u>	<u>50</u>	
	<u>Feet of</u>				
<u>1450</u>	<u>Feet of GIP</u>	<u>100</u>			

Rec Total 11000' BHT 147 Gravity 34 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2216</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>12:00 PM</u>
(B) First Initial Flow <u>1086</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:25 PM</u>
(C) First Final Flow <u>213</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>3:34 PM</u>
(D) Initial Shut-In <u>1039</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>7:34 PM</u>
(E) Second Initial Flow <u>231</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:12 PM</u>
(F) Second Final Flow <u>435</u>	<input checked="" type="checkbox"/> Mileage <u>136RT</u> 210.80	Comments <u>Dropped Bar</u>
(G) Final Shut-In <u>973</u>	<input type="checkbox"/> Sampler	<u>to reverse out fluid</u>
(H) Final Hydrostatic <u>2108</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>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>2085.80</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2085.80</u>	

Approved By _____ Our Representative [Signature]

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.

Robert L. Milford

PETROLEUM GEOLOGIST
WICHITA, KANSAS

GEOLOGISTS REPORT

DRILLING TIME AND SAMPLE LOG
OPERATOR **Murfin Drilling Company, Inc.**
LEASE **Theron #3-10**
LOC SPOT **C SEC SE**

ELEVATIONS
KB **3198'**
GL **3193'**

MEASUREMENTS
LOC FOOTAGE **660' FSL 660' FEL**
SEC. **10** TYPSE **15** RING **37W**
COUNTY **Cheyenne** STATE **KANSAS**

CONTRACTOR **Murfin Drilling Co., Inc.** RIG NO. **8**
DRILLING STARTED **7-6-2014** COMPLETED **7-24-2014**
DRILLING TIME (MIN/FT) **3:596** MUD TYPE **Chemical**
MUD LOSS (GAL) **0** TO **RTD**
DRILLING TIME KEPT FROM **3:490** TO **RTD**
SAMPLER SAVED FROM **3:490** TO **RTD**
SAMPLER EXAMINED FROM **3:490** TO **RTD**
GEOLOGICAL SUPERVISION FROM **3:490** TO **RTD**

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GEOLOGICAL SUPERVISION FROM **3:490** TO **RTD**

FORMATION NAME	LOG TOP	LOG DATUM	SAMPLE TOP	SAMPLE DATUM
Stone Corral	3143'	+85'	3143'	+85'
Neva	3197'	-99'	3198'	-800'
Topeka	3929'	-731'	3930'	-732'
Oread	4066'	-868'	4066'	-868'
Lansing	4148'	-950'	4148'	-950'
Stark	4364'	-1166'	4365'	-1167'
B/KC	4419'	-1221'	4420'	-1222'
Pawnee	4543'	-1345'	4543'	-1345'
Cherokee	4634'	-1436'	4634'	-1436'
Total Depth	4734'	-1537'	4735'	-1537'

DATE	7:00 AM DEPTH	REMARKS
7-16-14	0'	Spud @ 9:00 am. Plug down @ 12:30 pm. Drilled out plug @ 8:30 pm w/ PDC bit
7-17-14	1,395'	Cut 1,395' in last 24 hrs; 9:25 hrs drlg w/ PDC bit. Trip to clean balled bit @ 2868'
7-18-14	3,170'	Cut 1,775' in last 24 hrs; 19:25 hrs drlg. Bit trip @ 3454' (ran button bit)
7-19-14	3,730'	Cut 560' in last 24 hrs; 14:55 hrs drlg. DST #1 @ 4075'
7-20-14	4,075'	Cut 345' in last 24 hrs; 14:55 hrs drlg. Lost circ @ 4093' (down 3.25 hrs). DST #2 @ 4218'
7-21-14	4,218'	Cut 143' in last 24 hrs; 7:75 hrs drlg.
7-22-14	4,365'	Cut 147' in last 24 hrs; 8:25 hrs drlg. DST #3 @ 4365'
7-23-14	4,560'	Cut 195' in last 24 hrs; 10:25 hrs drlg. DST #4 @ 4570'
7-24-14	4,655'	Cut 95' in last 24 hrs; 6 hrs drlg. RTD 4735' @ 10:49 am
7-25-14	4,735'	Cut 80' in last 24 hrs; 3.25 hrs drlg. Ran production casing.

Remarks

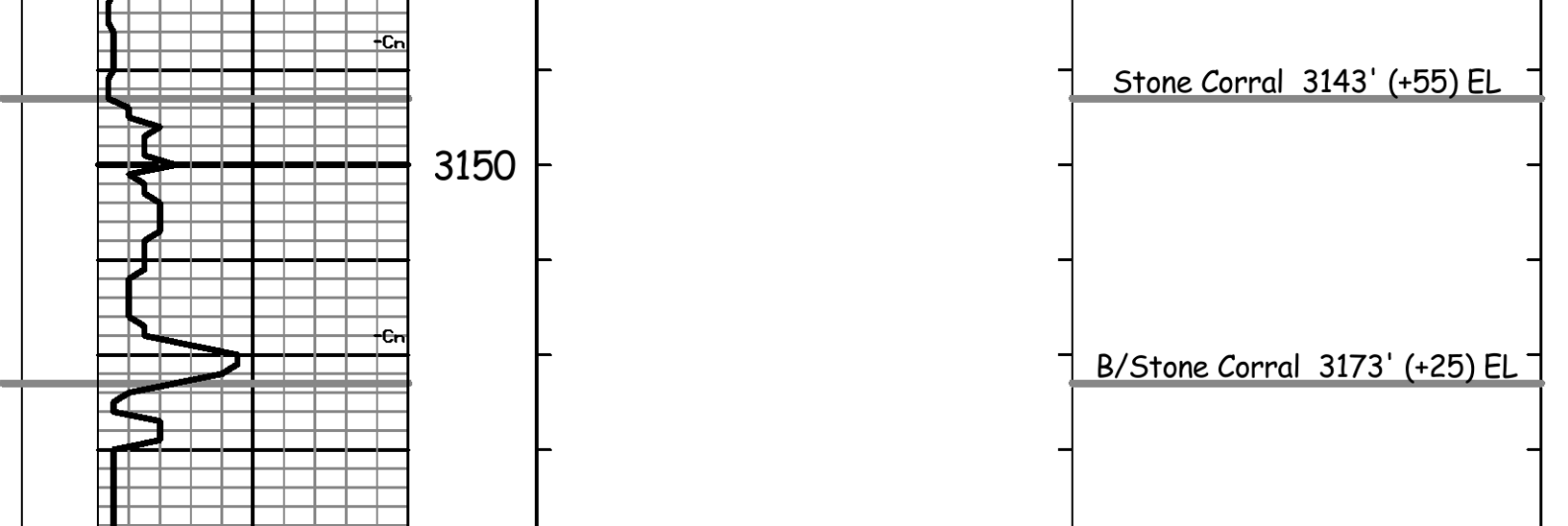
The electric log measurements correlate from even to 1' higher to the drilling measurements.

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

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

Respectfully submitted,

Robert L. Milford



LITH.	DRILL TIME (MIN/FT)	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
		3150		Stone Corral 3143' (+85) EL
		3200		B/Stone Corral 3173' (+25) EL

DEPTH	SAMPLE DESCRIPTIONS	REMARKS
3450	Sdy Sh: red-brn, w/ small amt of Sd: lt gry, fn-vry fn grain, calc, semi fri-brittle, pr vis por, NS	Call depth 3190' @ 7:36 am on 7-18-14 Mud displaced @ 3296' Morgan Mud check @ 3322': 66 Vis, 8.6 Wt, 6.4 WL, 700 ppm Chl, 1# LCM Bit trip at 3454'. Replaced PDC bit with button bit. Pipe Strap @ 3454': Strap short 0.75' Straight Hole Survey @ 3454': 1.25" Dev.
3500	Sdy Sh: red-brn (small amt soft & gummy), w/ small amt Sh: gry, & some Sd: lt gry, fn-vry fn grain, calc, semi fri-brittle, pr vis por, NS	Samples start 3490' @ 10:24 pm on 7-18-14
3550	Sdy Sh: red-brn (some soft & gummy), w/ small amt Sh: gry, & small amt Sd: A.A.	
3600	Sdy Sh: A.A. w/ incrs amt soft & gummy, & small amt of Sh & Sd: A.A.	
3650	Sdy Sh: red-brn (gd amt soft & gummy), w/ small amt of Sh: gry, w/ tr grn	
3700	Sdy Sh: red-brn (soft & gummy in prt), w/ small amt Sh: gry, w/ some grn, & some Shly Sd: grn, fn-vry fn grain, calc, soft-semi brittle, pr vis por, NS	
3750	Sdy Sh: red-brn (mstly soft & gummy)	
3800	LS: wh-crm, fxln, granular, some sli sdy, vry chky-sub chky, pr por, NS	
3850	Sd: lt gry, fn-vry fn grain, fri-brittle, pr por, NS	
3900	Sdy Sh: red-brn (gd amt soft & gummy)	
3950	Sdy Sh: red-brn (some soft & gummy), w/ small amt Sh: gry, w/ some grn	
4000	Sdy Sh: red-brn (ncrs soft & gummy), w/ small amt of Sd: lt gry, fn-vry fn grain, sli calc, semi fri-brittle, pr vis por, NS	
4050	LS w/ some Dol: crm, fxln, sli fos, vry chky (crm, org, purple-brn), sub chky-prtly dns w/ some chky, pr por, NS	
4100	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4150	Sdy Sh: red-brn, w/ small amt Sd: lt gry-lt grn, fn-vry fn grain, calc, sli shly in prt, soft-brittle, pr por, NS	
4200	LS: crm, fxln, sli fos, sdy in prt, sli chky, sub chky-prtly dns, pr w/ tr fr fos por, fr amt lt-drk brn patchy-sat stn w/ some blk asph patchy stn, S-FSFO (mstly sin point-small beads), no odor	Call depth 3190' @ 7:36 am on 7-18-14 Mud displaced @ 3296' Morgan Mud check @ 3322': 66 Vis, 8.6 Wt, 6.4 WL, 700 ppm Chl, 1# LCM Bit trip at 3454'. Replaced PDC bit with button bit. Pipe Strap @ 3454': Strap short 0.75' Straight Hole Survey @ 3454': 1.25" Dev.
4250	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4300	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4350	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4400	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4450	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4500	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4550	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4600	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4650	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4700	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	
4750	LS: crm-tan, fxln, sli fos, sub chky-prtly dns, pr por, NS	

ALLIED OIL & GAS SERVICES, LLC 063172

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:
09kby

DATE <u>7-16-14</u>	SEC. <u>10</u>	TWP. <u>1</u>	RANGE <u>37</u>	CALLED OUT	ON LOCATION <u>8:30 AM</u>	JOB START <u>12:00</u>	JOB FINISH <u>12:30</u>
LEASE <u>Therom</u>	WELL # <u>370</u>		LOCATION <u>Bird city N TO AA</u>		COUNTY <u>Cherokee</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)			<u>W TO 32 IN E N E N S E 1-00</u>				

CONTRACTOR Murfin &
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 215'
 CASING SIZE 8 3/8 DEPTH 215'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 25'
 PERFS.
 DISPLACEMENT 12110 DBL

OWNER same
 CEMENT
 AMOUNT ORDERED 225.565 cu m 3 3/8 cu

EQUIPMENT

COMMON 225.565 @ 12.90 4022.50
 POZMIX @
 GEL @
 CHLORIDE 634# @ 1.10 697.40
 ASC @

PUMP TRUCK CEMENTER Andrew Forstud
 # 431 HELPER Brandon Wilkinson
 BULK TRUCK
 # 891 DRIVER Beto (TWS)
 BULK TRUCK
 # DRIVER Lapene Wentz

Material Total @ 4789.97
 (1653.74 / 3.5%)
 HANDLING 226.24 cu ft @ 2.48 561.87
 MILEAGE 2.25 ton/mile, 1089 ton 26.95.22

REMARKS:

Cement did circulate

TOTAL _____

SERVICE

DEPTH OF JOB 215'
 PUMP TRUCK CHARGE 1572.25
 EXTRA FOOTAGE @
 MILEAGE 90 miles @ 2.20 198.00
 MANIFOLD head @ 325.00
light vehicle @ 4.40 396.00

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

(2155.08 / 3.5%)
 TOTAL 6152.39

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.

PRINTED NAME Andrew Forstud
 SIGNATURE Andrew Forstud

SALES TAX (if Any) _____
 TOTAL CHARGES 102,882.36
 DISCOUNT 3,800.00 (3.5%) IF PAID IN 30 DAYS
7,073.53 Net



Services, Inc.

CHARGE TO: Marlin Dr lg Co. Inc.

ADDRESS

CITY, STATE, ZIP CODE

TICKET 26733

PAGE 1 OF 2

1. Hays, KS	WELL/PROJECT NO. # 3-10	LEASE	Pheron	COUNTY/PARISH	Cherokee	STATE	KS	CITY		DATE	7-25-14	OWNER	59.000
2. Ness City, KS	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	Cs Tools #8	RIG NAME/NO.		SHIPPED VIA	Truck	DELIVERED TO	Location	ORDER NO.		WELL LOCATION	
3.	WELL TYPE	WELL CATEGORY	Oil	JOB PURPOSE	Top To Bottom	WELL PERMIT NO.							
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS											

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT								
575					2111						
579				Pump Charge (Top to Bottom)	1.00	4735'				2000.00	2000.00
221				KCL	4 gal					25.00	100.00
281				Mud Wash	500 gal					1.25	625.00
290				D-Air	5 gal					42.00	210.00
403				Baskets	3 ea	5 1/2"				300.00	900.00
406				L D Plug + Baffle	1 ea					275.00	275.00
407				Insert + Float Sleeve and Bill	1 ea					375.00	375.00
409				Turboliners	15 ea					90.00	1350.00
413				Rotating Scratchers	7 ea					40.00	280.00
419				Rotating Head	1 ea					200.00	200.00

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.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED: 7-25-14 TIME SIGNED: 8:40 A.M. P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL 1 7215.00
 Page 2 14918.00
 Subtotal 22133.00
 Chennick Tax 8.15% 1,178.08
 TOTAL 23,311.08

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: Mark Anderson APPROVAL: Mark Anderson

Thank You!



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

TICKET CONTINUATION

TICKET No. 26733

CUSTOMER: *Martina Dely Car. Inc*

WEL# *3-10 Phoenix*

DATE: *2-25-14* PAGE: *2* OF: *2*

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACQUANTING LOC	ACQUANTING ACOT	DT	TITLE	DESCRIPTION	WEL#			DATE	PAGE	OF	
							QTY	UM	QTY				UM
325		2				Standard Cement	200	SKS				2900	00
330		2				SMD Cement	300	SKS				5550	00
270		2				F/c c/lx	200	SKS				5000	00
283		2				Sq ft	1000	#				200	00
284		2				Calseg	9	SKS				315	00
285		2				CEA-1	150	#				675	00
581		2				SERVICE CHARGE						1000	00
583		2				MILEAGE CHARGE						3778	00
						TOTAL WEIGHT						3778	00
						LOADED MILES						1000	00
						TON MILES						3778	00

CONTINUATION TOTAL 14918 00

JOB LOG

SWIFT Services, Inc.

DATE 7-25-14 PAGE NO.

CUSTOMER *Martin Drilling Co Inc* WELL NO. *#3-16* LEASE *Pheon* JOB TYPE *Top To Bottom* TICKET NO. *26735*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0245							02100 w/FE
								RTD 4735'
								5 1/2" x 15.5" x 4730' x 22'
								Tubes 1-13, 34, 44
								Back. 11, 35, 45
								7 scratches
	0400							Start Float Equip.
	0500							56jts circ 15min
	0615							Bottom Circ
	0710	2	7/4					Plug RH+MH
	0720	5	0			200		start 500gal Mud/Flush
		5	12/0			200		start 20 bbl KCL flush
		5	20/0			200		start 255 sks SMD Cement
		5	141/0			200		start 200 sks EA-2 Cement
	0805		48					End Cement
								Wash P&L
								Drop I.D. Plug
	0810	6	0			200		start Displacement 1/2% KCL 1st 20 bbl
	0817	5	45			350		Circ Cement
	0830		112			1100/1600		hard Plug
								Release Pressure
								Float Held
								Circ 50 sks cement to pit
								Thank you
								Nick, David E, John S, + Craig

Theron #3-10
Daily Drilling Report
Page Two

- 7/22/14 Depth 4365'. Cut 147'. DT: None. CT: 15½ hrs. Dev.: None. **DST #2 4163-4218 (LKC D)**: 30-60-60-90. IF: blow built to ¾". FF: blow built to 1". Rec.: 120' OSM (spots O, 100%M). HP: 1985-1938. FP: 19/42, 45/75. SIP: 953-931. BHT: 130°. Note: some minor plugging during FFP. **LKC G**: pr w/ some fr intrprtcal & tr small vug por, scat lt-drk brn patchy-sub sat w/ tr sat stn, S-FSFO (some bleeding), no odor. **LKC H**: mstly pr w/ tr fr fos-small vug por, tr drk brn-blk sptd-patchy stn, 1 pc w/ SSFO, no odor. **LKC J**: pr-fr intrprtcal por, scat lt-drk brn patchy-sub sat w/ some sat stn, FSFO, no odor. **DST #3 4215-4365 (LKC G-J)**: est on bottom w/ test about 11:15 am
- 7/23/14 Depth 4560'. Cut 195'. DT: None. CT: 13½ hrs. Dev.: None. **DST #3 4215-4365 (LKC G-J)**: 30-60-30-60. IF: ½" blow built to 1" in 20 min., then died back to ¾". FF: no blow. Rec. 70' Mud w/ oil spots in tool (100% M). HP: 2034-2019. FP: 22/36, 55/55. SIP: 1188-1171. BHT: 127°. Note: minor intermittent plugging during ISIP and some minor plugging in FSIP (running 7# LCM). **Pawnee**: pr-fr w/ some gd introol por, scat lt-med brn patchy-sat stn, S-FSFO, no odor. **DST #4 4521-4570 (Pawnee)**: est on bottom with test about 2:30 pm
- 7/24/14 Depth 4655'. Cut 95'. DT: None. CT: 18 ¾ hrs. Dev.: None. **DST #4 4521-4570 (Pawnee)**: 30-60-60-90. IF: BOB in 4". ISI: BOB in 17". FF: BOB in 7". FSI: blow back built to 9". 1,450' GIP. Rec. 1,100' TF: Rec. 860' CGO (40% G, 60% O), 60' OCM (30% O, 70% M), 180' MCO (50% O, 50% M). Grav. 34° API. HP: 2216-2168. FP: 106/213, 231/435. SIP: 1039-973. BHT: 147°. (dumped 50', reversed out 810' into water truck, dumped 240').
- 7/25/14 RTD 4735'. Cut 80'. DT: None. CT: 20 ¾ hrs. Dev.: 1¼° @ 4735'. TD @ 10:45AM 7/24. Pioneer Logged from 3:30PM-8:00PM 7/24. LTD 4734'. 113 jts of 15.5# 5 ½" prod csg, set @ 4730'. Swift cmt w/250sxs CMD, 200sxs EA-2. 30sxs RH, 20sxs MH.
- 7/26/14 RTD: 4735'. CT: 5½ hrs. PD @ 8:30AM. RR @ 12:30PM 7/25. FINAL REPORT

MDCI Theron #3-10 660' FSL 660' FEL Sec. 10-T1S-R37W 3198' KB							MDCI Theron #2-10 660' FSL 2310' FEL Sec. 10-T1S-R37W 3103' KB	
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3144	+54	-1	3143	+55	Flat	3048	+55
B/Anhydrite	3174	+24	Flat	3173	+25	+1	3079	+24
Neva	3596	-398	-1	3597	-399	-2	3500	-397
Red Eagle	3659	-461	-1	3663	-465	-5	3563	-460
Foraker	3704	-506	-1	3708	-510	-5	3608	-505
Topeka	3928	-730	-2	3929	-731	-3	3831	-728
Oread	4063	-865	-3	4066	-868	-6	3965	-862
Lansing	4146	-948	-4	4148	-950	-6	4047	-944
Stark	4365	-1167	-7	4364	-1166	-6	4263	-1160
BKC	4420	-1222	-9	4419	-1221	-8	4316	-1213
Pawnee	4543	-1345	-12	4543	-1345	-12	4436	-1333
Cherokee	4634	-1436	-16	4634	-1436	-16	4523	-1420
RTD	4735	-1537					4620	-1517
LTD				4734	-1536		4620	-1517