



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1171985
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: _____



1171985

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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MDCI
 Mary Ann #3-1
 330' FNL 2190' FWL
 Sec. 1-T1S-R36W
 3133' KB

Berexco
 Cheryl #15-31
 565' FSL 1800' FEL
 Sec. 31-T1N-R31W
 3136' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3059	+74	+4	3066	+67	-3	3066	+70
B/Anhydrite	3100	+33	+1	3100	+33	+1	3104	+32
Neva	3542	-409	+1	3549	-416	-6	3546	-410
Red Eagle	3606	-473	+1	3612	-479	-5	3610	-474
Foraker	3653	-520	-1	3657	-524	-5	3655	-519
Topeka	3862	-729	-2	3865	-732	-5	3863	-727
Oread	3975	-842	-2	3979	-846	-6	3976	-840
Lansing	4082	-949	-3	4082	-949	-3	4082	-946
Stark	4301	-1168	-10	4298	-1165	-7	4294	-1158
BKC	4358	-1225	-15	4350	-1217	-7	4346	-1210
Pawnee							4466	-1330
Cherokee							4544	-1408
Mississippi							DNR	
RTD	4458						4650	-1514
LTD				4458				

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co. Inc.**

LEASE **Mary Ann #3-1**

FIELD **3307fml & 21907fml**

LOCATION **1 TWSP 1S RGE 36W**

COUNTY **Rawlins STATE Kansas**

CONTRACTOR **Murfin Drilling Co. Inc. rig #14**

SPUD **8/13/2013 COMP 8/20/2013**

RTD **4458' LPE 4458'**

MUD UP **3300' TYPE MUD Chemical**

SAMPLES SAVED FROM **3440' TO 4458'**

DRILLING TIME KEPT FROM **3400' TO 4458'**

SAMPLES EXAMINED FROM **3440' TO 4458'**

GEOLOGICAL SUPERVISION FROM **3461'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ELECTRIC LOG

ANHYDRITE

NEVA

FORAKER

TOPEKA

OREAD

LANSING

STARK SHALE

BKC

KB 3133'

DF

GL 3123'

Measurements Are All From Kelly Busting

CASING

CONDUCTOR

SURFACE 8-7/8" @ 265'

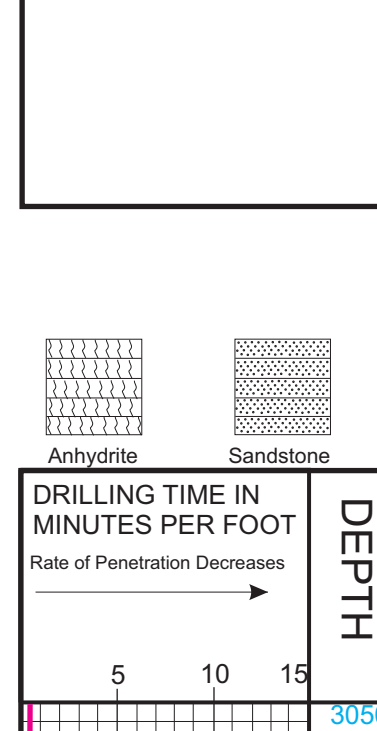
PRODUCTION 5-1/2"

ELECTRICAL SURVEYS

Possible/Indication/MicroSeismic

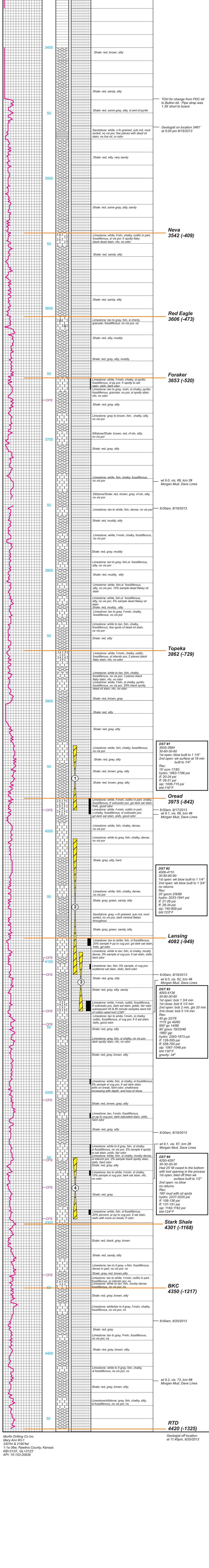
Promer Energy Services

AP7# 15-153-20839



REMARKS: *It is recommended that casing be set to further evaluate the Lansing D zone after positive DST #3.*

LEGEND





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Mary Ann # 3-1

1-1s-36w Rawlins,KS

Start Date: 2013.08.17 @ 01:02:00

End Date: 2013.08.17 @ 08:16:09

Job Ticket #: 49100 DST #: 1

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

Printed: 2013.08.21 @ 14:52:57



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

ATTN: Robert Hendrix

Job Ticket: 49100

DST#: 1

Test Start: 2013.08.17 @ 01:02:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:28:40

Time Test Ended: 08:16:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: 3935.00 ft (KB) To 3984.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 3984.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 31.21 psig @ 3936.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.17

End Date:

2013.08.17

Last Calib.: 2013.08.17

Start Time: 01:02:00

End Time:

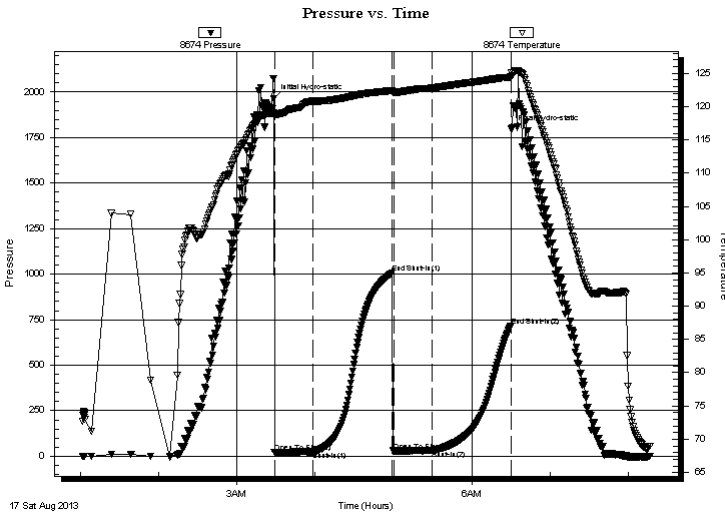
08:16:09

Time On Btm: 2013.08.17 @ 03:28:10

Time Off Btm: 2013.08.17 @ 06:30:09

TEST COMMENT: IF- Weak Surface Blow Built to 1 1/4"
IS- No Blow
FF- Weak Surface Blow in 18min Built to 1/4"
FS- No Blow

PRESSURE SUMMARY



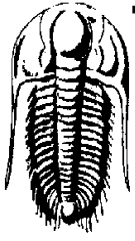
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1963.98	119.05	Initial Hydro-static
1	20.27	118.56	Open To Flow (1)
30	24.81	120.82	Shut-In(1)
91	1006.73	122.41	End Shut-In(1)
92	28.49	122.08	Open To Flow (2)
122	31.21	122.78	Shut-In(2)
182	715.91	124.42	End Shut-In(2)
182	1796.07	125.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OCM 17%oil 83%m	0.07

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: Robert Hendrix

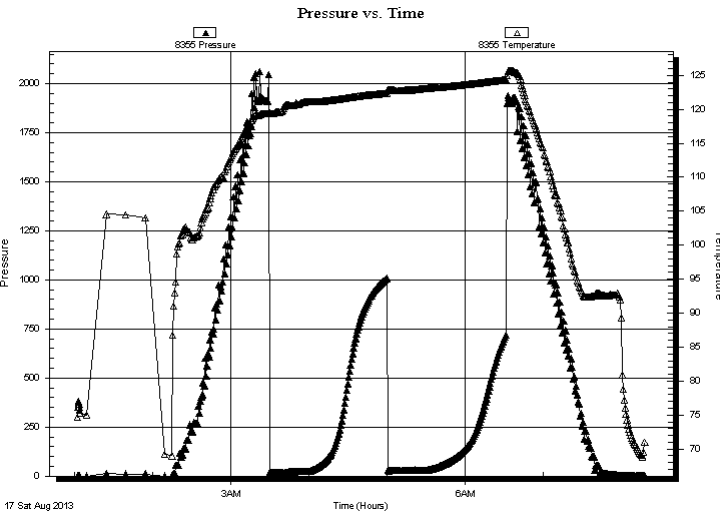
1-1s-36w Rawlins,KS
Mary Ann # 3-1
 Job Ticket: 49100 **DST#: 1**
 Test Start: 2013.08.17 @ 01:02:00

GENERAL INFORMATION:

Formation: **Oread**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**
 Time Tool Opened: **03:28:40** Tester: **Will MacLean**
 Time Test Ended: **08:16:09** Unit No: **58**
Interval: 3935.00 ft (KB) To 3984.00 ft (KB) (TVD) Reference Elevations: **3133.00 ft (KB)**
 Total Depth: **3984.00 ft (KB) (TVD)** **3121.00 ft (CF)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good** KB to GR/CF: **12.00 ft**

Serial #: 8355 **Outside**
 Press @ Run Depth: **psig @ 3936.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2013.08.17** End Date: **2013.08.17** Last Calib.: **2013.08.17**
 Start Time: **01:02:05** End Time: **08:17:29** Time On Btm:
 Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 1 1/4"
 IS- No Blow
 FF- Weak Surface Blow in 18min Built to 1/4"
 FS- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OCM 17%oil 83%m	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 49100

DST#: 1

ATTN: Robert Hendrix

Test Start: 2013.08.17 @ 01:02:00

Tool Information

Drill Pipe:	Length: 3354.00 ft	Diameter: 3.80 inches	Volume: 47.05 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 575.00 ft	Diameter: 2.25 inches	Volume: 2.83 bbl	Weight to Pull Loose:	12000.00 lb
			<u>Total Volume: 49.88 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	3935.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	77.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3908.00	
Shut In Tool	5.00			3913.00	
Hydraulic tool	5.00			3918.00	
Jars	5.00			3923.00	
Safety Joint	3.00			3926.00	
Packer	5.00			3931.00	28.00 Bottom Of Top Packer
Packer	4.00			3935.00	
Stubb	1.00			3936.00	
Recorder	0.00	8355	Outside	3936.00	
Recorder	0.00	8674	Inside	3936.00	
Perforations	10.00			3946.00	
Change Over Sub	1.00			3947.00	
Drill Pipe	31.00			3978.00	
Change Over Sub	1.00			3979.00	
Bullnose	5.00			3984.00	49.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 49100

DST#: 1

ATTN: Robert Hendrix

Test Start: 2013.08.17 @ 01:02:00

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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OCM 17%oil 83%m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

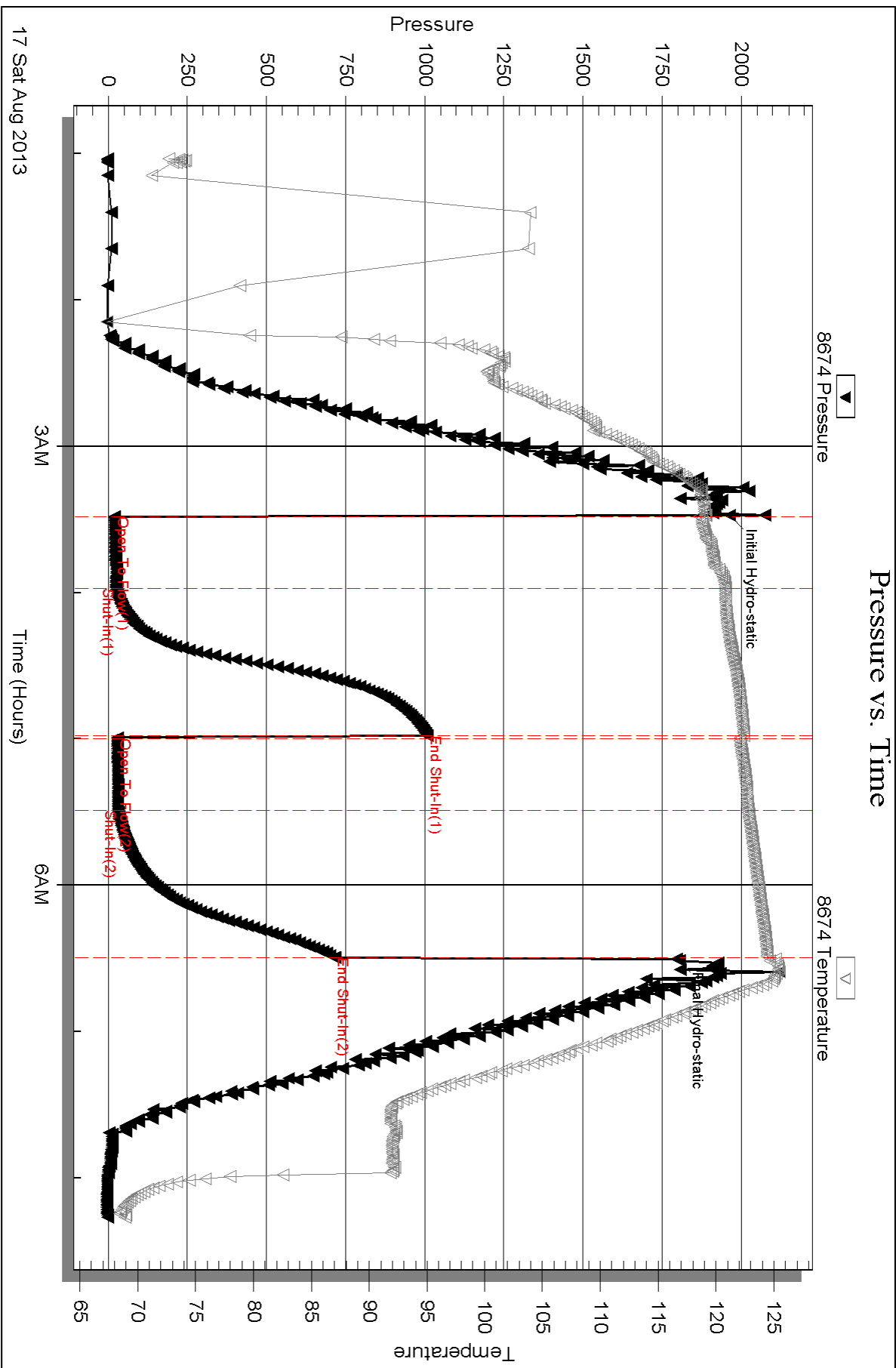
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

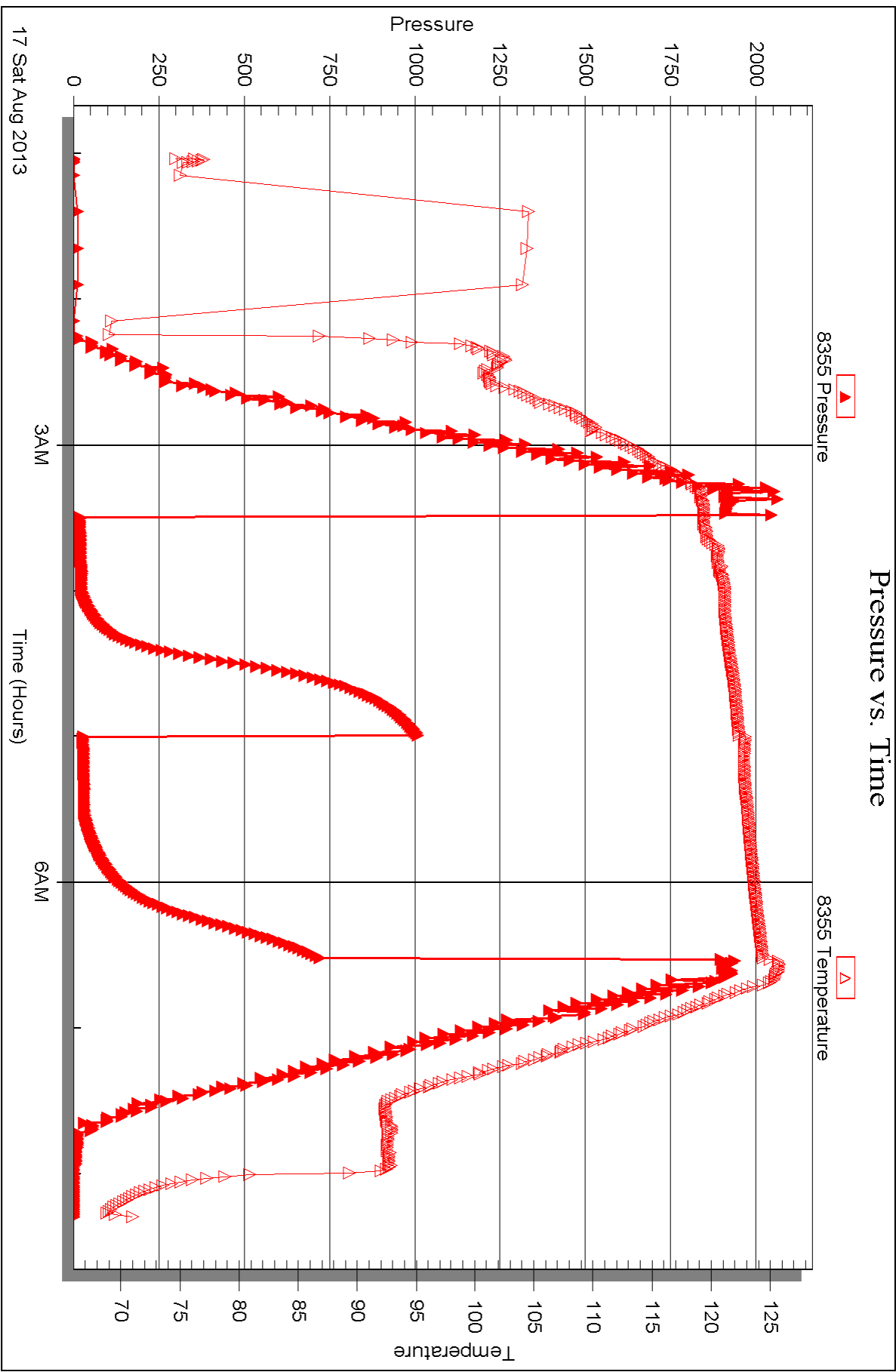


Serial #: 8355

Outside Murfin Drilling Co. Inc

Mary Ann # 3-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Mary Ann # 3-1

1-1s-36w Rawlins,KS

Start Date: 2013.08.17 @ 21:40:00

End Date: 2013.08.18 @ 05:13:39

Job Ticket #: 53002 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.21 @ 14:51:29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

ATTN: Robert Hendrix

Job Ticket: 53002

DST#: 2

Test Start: 2013.08.17 @ 21:40:00

GENERAL INFORMATION:

Formation: **Lansing " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:30:10

Time Test Ended: 05:13:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4006.00 ft (KB) To 4110.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 4110.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 34.86 psig @ 4008.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.17

End Date:

2013.08.18

Last Calib.: 2013.08.18

Start Time: 21:40:00

End Time:

05:13:39

Time On Btm: 2013.08.17 @ 23:29:55

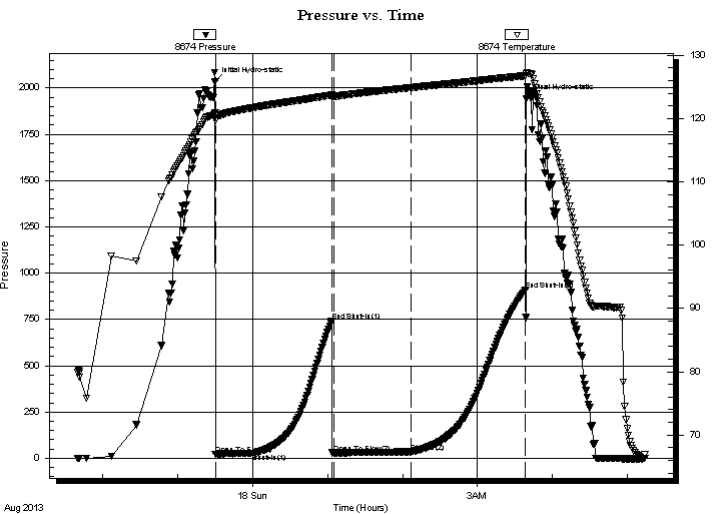
Time Off Btm: 2013.08.18 @ 03:39:09

TEST COMMENT: IF- Weak Surface Blow Built to 1"

IS- No Blow

FF- Weak Surface Blow Built to 1 3/4"

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.68	120.93	Initial Hydro-static
1	21.81	119.74	Open To Flow (1)
31	26.82	121.73	Shut-In(1)
94	740.34	123.69	End Shut-In(1)
96	28.16	123.44	Open To Flow (2)
157	34.86	124.88	Shut-In(2)
249	909.05	126.76	End Shut-In(2)
250	1941.07	127.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	GOCM 2%g 9%oil 89%m	0.10

* 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

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

ATTN: Robert Hendrix

Job Ticket: 53002

DST#: 2

Test Start: 2013.08.17 @ 21:40:00

GENERAL INFORMATION:

Formation: **Lansing " A "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:30:10

Time Test Ended: 05:13:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4006.00 ft (KB) To 4110.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 4110.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8355 Outside

Press @ Run Depth: psig @ 4008.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.17

End Date:

2013.08.18

Last Calib.:

2013.08.18

Start Time: 21:40:05

End Time:

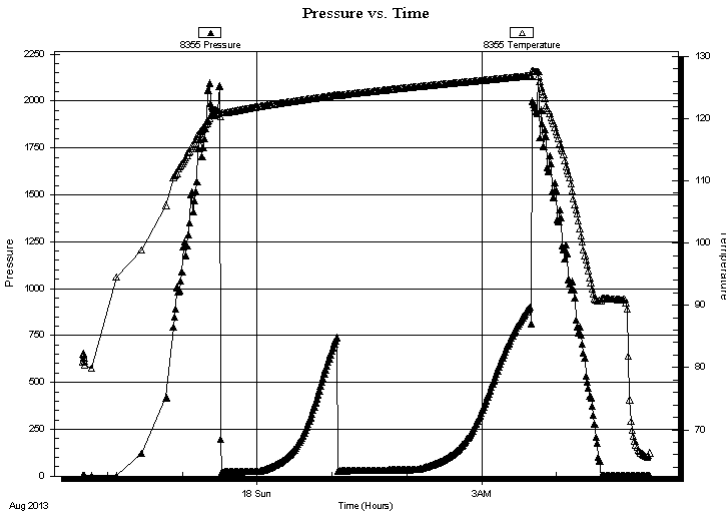
05:14:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 1"
IS- No Blow
FF- Weak Surface Blow Built to 1 3/4"
FS- No Blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	GOCM 2%g 9%oil 89%m	0.10

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

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53002

DST#: 2

ATTN: Robert Hendrix

Test Start: 2013.08.17 @ 21:40:00

Tool Information

Drill Pipe:	Length: 3415.00 ft	Diameter: 3.80 inches	Volume: 47.90 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	26000.00 lb
Drill Collar:	Length: 575.00 ft	Diameter: 2.25 inches	Volume: 2.83 bbl	Weight to Pull Loose:	16000.00 lb
			<u>Total Volume: 50.73 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	74000.00 lb
Depth to Top Packer:	4006.00 ft			Final	74000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	104.00 ft				
Tool Length:	132.00 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			3979.00	
Shut In Tool	5.00			3984.00	
Hydraulic tool	5.00			3989.00	
Jars	5.00			3994.00	
Safety Joint	3.00			3997.00	
Packer	5.00			4002.00	28.00 Bottom Of Top Packer
Packer	4.00			4006.00	
Stubb	1.00			4007.00	
Perforations	1.00			4008.00	
Recorder	0.00	8355	Outside	4008.00	
Recorder	0.00	8674	Inside	4008.00	
Perforations	32.00			4040.00	
Change Over Sub	1.00			4041.00	
Drill Pipe	63.00			4104.00	
Change Over Sub	1.00			4105.00	
Bullnose	5.00			4110.00	104.00 Bottom Packers & Anchor
Total Tool Length:	132.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53002

DST#: 2

ATTN: Robert Hendrix

Test Start: 2013.08.17 @ 21:40:00

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: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	GOCM 2%g 9%oil 89%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

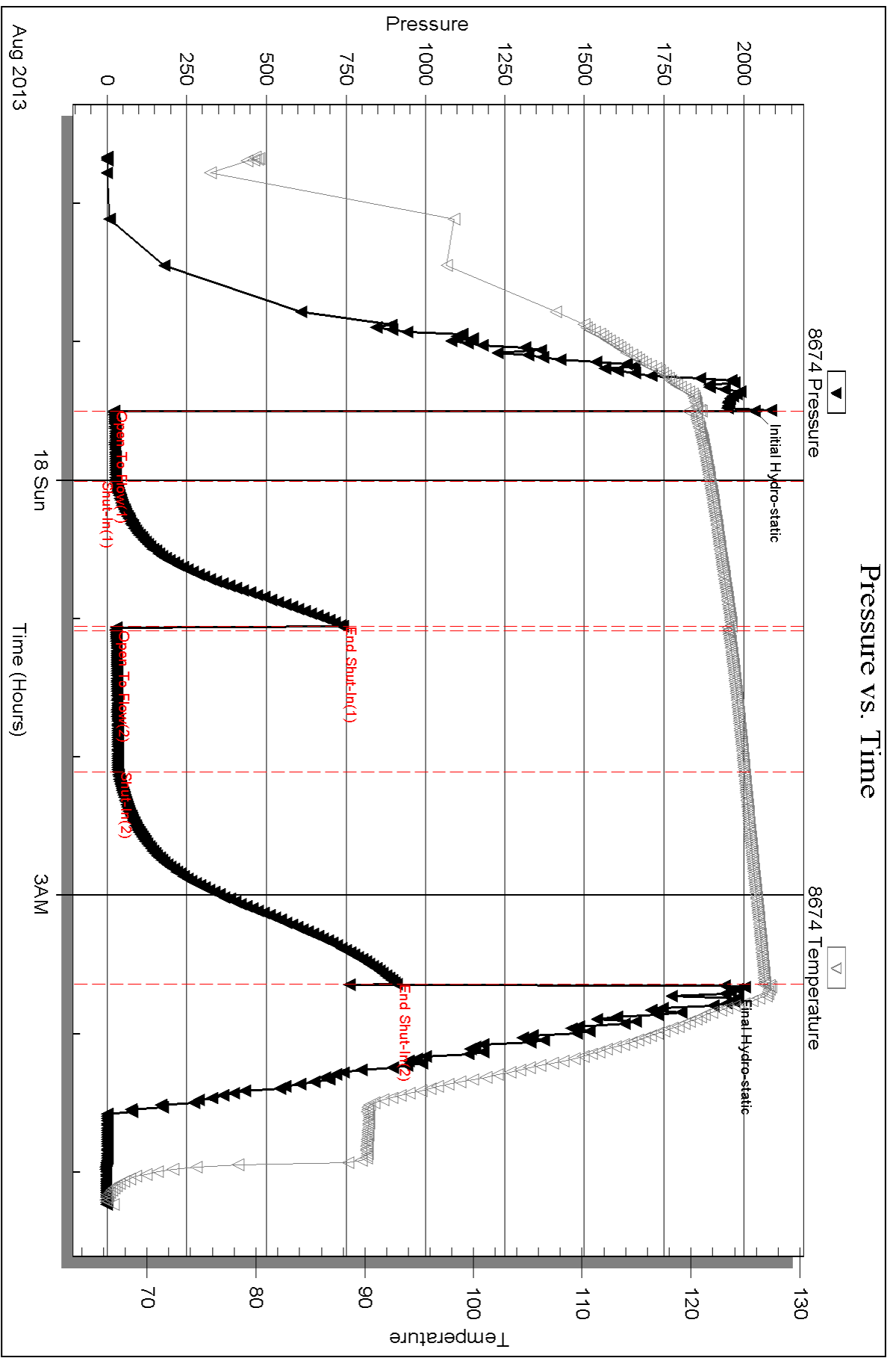
Serial #: 8674

Inside

Murfin Drilling Co. Inc

Mary Ann # 3-1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 53002

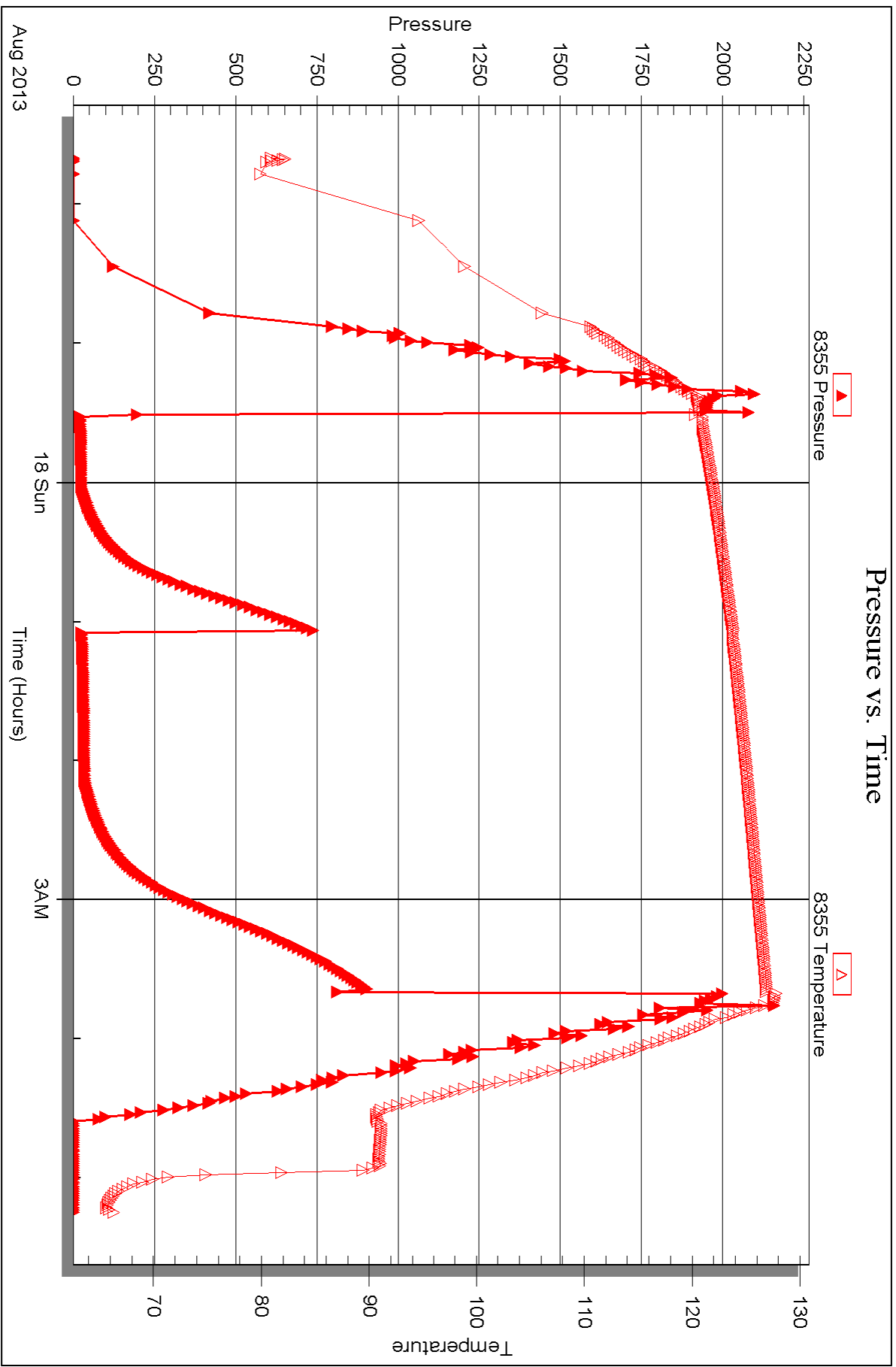
Printed: 2013.08.21 @ 14:51:32

Serial #: 8355

Outside Murfin Drilling Co. Inc

Mary Ann # 3-1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 53002

Printed: 2013.08.21 @ 14:51:33



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Mary Ann # 3-1

1-1s-36w Rawlins,KS

Start Date: 2013.08.18 @ 13:04:00

End Date: 2013.08.18 @ 21:16:54

Job Ticket #: 53003 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.21 @ 14:44:07

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

Mary Ann # 3-1

DST # 3

Lansing " D "

2013.08.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

ATTN: Robert Hendrix

Job Ticket: 53003

DST#: 3

Test Start: 2013.08.18 @ 13:04:00

GENERAL INFORMATION:

Formation: **Lansing " D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:47:40

Time Test Ended: 21:16:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4093.00 ft (KB) To 4138.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 4138.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 765.02 psig @ 4095.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.18

End Date: 2013.08.18

Last Calib.: 2013.08.18

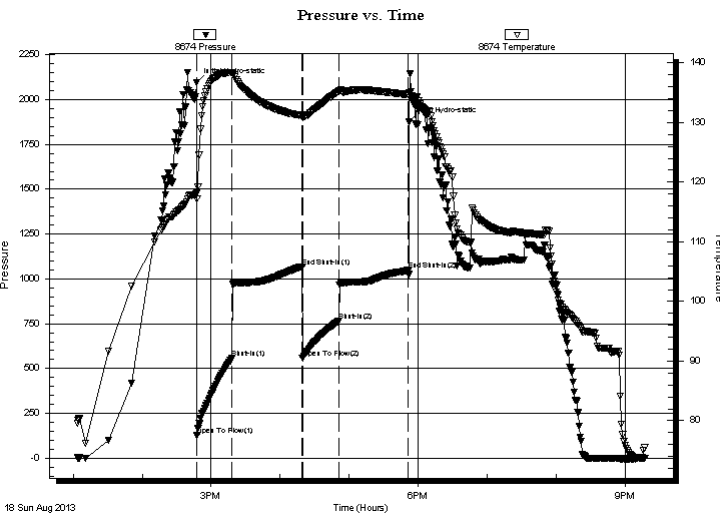
Start Time: 13:04:00

End Time: 21:16:54

Time On Btm: 2013.08.18 @ 14:47:25

Time Off Btm: 2013.08.18 @ 17:51:54

TEST COMMENT: IF- Surface Blow Built to BOB in 1 3/4 min
 IS- Weak Surface Blow in 1 1/2 min Built to BOB in 9 1/2 min
 FF- Surface Blow Built to BOB in 2 min (Gas to Surface in 20 min)
 FS- Weak Surface Blow Built to BOB in 5 1/4 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2093.20	118.13	Initial Hydro-static
1	128.72	117.18	Open To Flow (1)
31	555.73	138.38	Shut-In(1)
92	1067.46	131.10	End Shut-In(1)
92	558.43	130.89	Open To Flow (2)
124	765.02	135.21	Shut-In(2)
184	1048.63	134.62	End Shut-In(2)
185	1873.89	134.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	GO 22%g 78%oil	0.20
1115.00	GO 40%g 60%oil	10.77
950.00	GO 14%g 86%oil	13.33
90.00	GMCO 19%g 33%m 48%oil	1.26
0.00	1860' of GIP	0.00

* 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

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53003

DST#: 3

ATTN: Robert Hendrix

Test Start: 2013.08.18 @ 13:04:00

GENERAL INFORMATION:

Formation: **Lansing " D "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:47:40

Time Test Ended: 21:16:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4093.00 ft (KB) To 4138.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 4138.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8355 Outside

Press @RunDepth: psig @ 4095.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.18 End Date: 2013.08.18

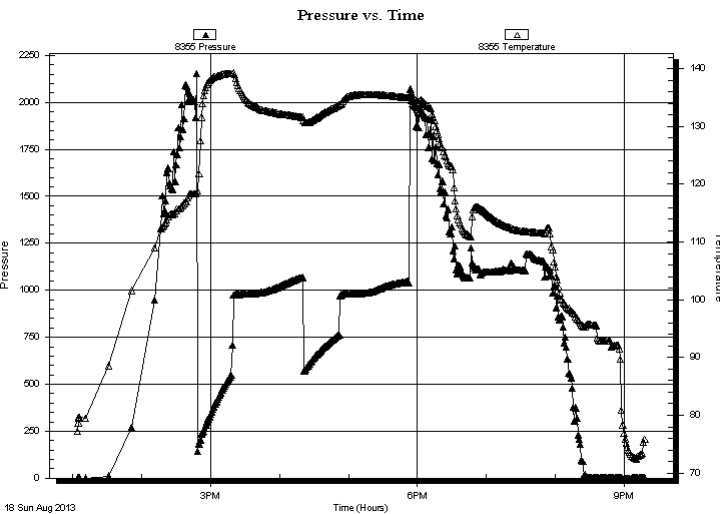
Last Calib.: 2013.08.18

Start Time: 13:04:05 End Time: 21:18:29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Surface Blow Built to BOB in 1 3/4 min
 IS- Weak Surface Blow in 1 1/2 min Built to BOB in 9 1/2 min
 FF- Surface Blow Built to BOB in 2 min (Gas to Surface in 20 min)
 FS- Weak Surface Blow Built to BOB in 5 1/4 min



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
40.00	GO 22%g 78%oil	0.20
1115.00	GO 40%g 60%oil	10.77
950.00	GO 14%g 86%oil	13.33
90.00	GMCO 19%g 33%m 48%oil	1.26
0.00	1860' of GIP	0.00

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

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53003

DST#: 3

ATTN: Robert Hendrix

Test Start: 2013.08.18 @ 13:04:00

Tool Information

Drill Pipe:	Length: 3512.00 ft	Diameter: 3.80 inches	Volume: 49.26 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 575.00 ft	Diameter: 2.25 inches	Volume: 2.83 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 52.09 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	4093.00 ft			Final	72000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	73.00 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			4066.00	
Shut In Tool	5.00			4071.00	
Hydraulic tool	5.00			4076.00	
Jars	5.00			4081.00	
Safety Joint	3.00			4084.00	
Packer	5.00			4089.00	28.00 Bottom Of Top Packer
Packer	4.00			4093.00	
Stubb	1.00			4094.00	
Perforations	1.00			4095.00	
Recorder	0.00	8355	Outside	4095.00	
Recorder	0.00	8674	Inside	4095.00	
Perforations	5.00			4100.00	
Change Over Sub	1.00			4101.00	
Drill Pipe	31.00			4132.00	
Change Over Sub	1.00			4133.00	
Bullnose	5.00			4138.00	45.00 Bottom Packers & Anchor
Total Tool Length:	73.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53003

DST#: 3

ATTN: Robert Hendrix

Test Start: 2013.08.18 @ 13:04:00

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: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	GO 22%g 78%oil	0.197
1115.00	GO 40%g 60%oil	10.767
950.00	GO 14%g 86%oil	13.326
90.00	GMCO 19%g 33%m 48%oil	1.262
0.00	1860' of GIP	0.000

Total Length: 2195.00 ft Total Volume: 25.552 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

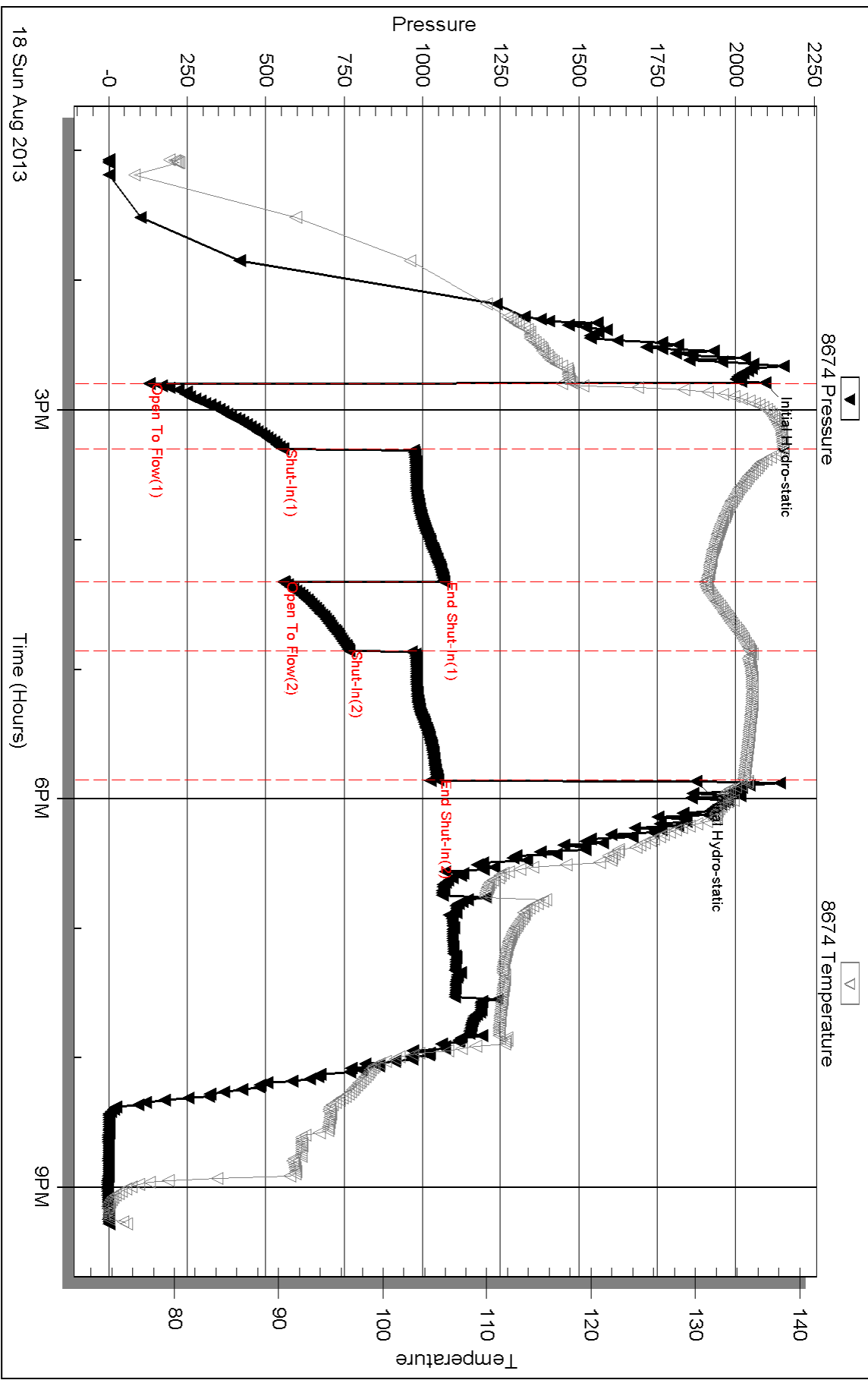
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 35 @ 70f = 34

Pressure vs. Time

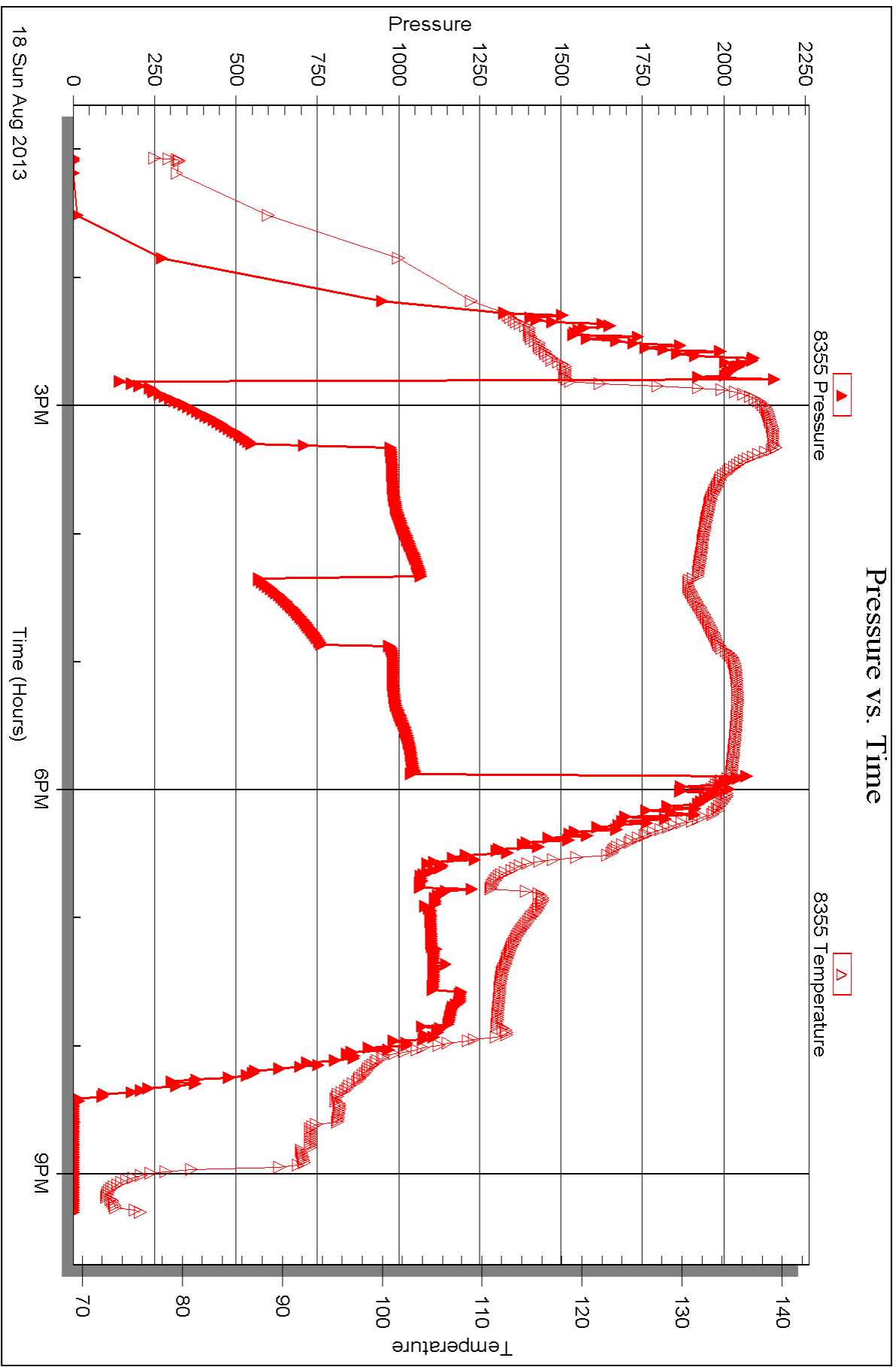


Serial #: 8355

Outside Murfin Drilling Co. Inc

Mary Ann # 3-1

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

Mary Ann # 3-1

1-1s-36w Rawlins,KS

Start Date: 2013.08.19 @ 16:22:00

End Date: 2013.08.19 @ 23:21:24

Job Ticket #: 53004 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.21 @ 14:41:44



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

ATTN: Robert Hendrix

Job Ticket: 53004

DST#: 4

Test Start: 2013.08.19 @ 16:22:00

GENERAL INFORMATION:

Formation: **Lansing " J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:10:40

Time Test Ended: 23:21:24

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4250.00 ft (KB) To 4297.00 ft (KB) (TVD)

Reference Elevations: 3133.00 ft (KB)

Total Depth: 4297.00 ft (KB) (TVD)

3121.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

Serial #: 8674 Inside

Press @ Run Depth: 151.50 psig @ 4251.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.19

End Date: 2013.08.19

Last Calib.: 2013.08.19

Start Time: 16:22:00

End Time: 23:21:24

Time On Btm: 2013.08.19 @ 19:10:10

Time Off Btm: 2013.08.19 @ 21:16:54

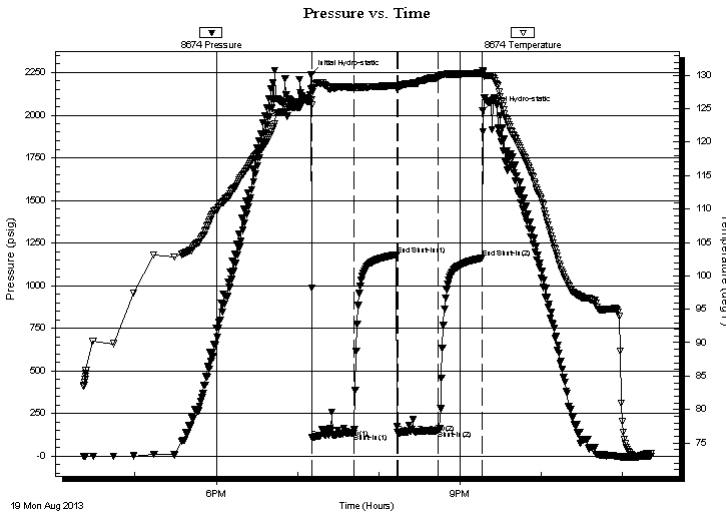
TEST COMMENT: IF- Chased Tool 25' to Bottom Had 2" blow Bled it off Weak Surface Blow Built to 1/2"

IS- No Blow

FF- No Blow

FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2237.39	126.28	Initial Hydro-static
1	108.06	126.37	Open To Flow (1)
32	136.04	128.13	Shut-In(1)
63	1182.61	128.52	End Shut-In(1)
64	137.58	128.25	Open To Flow (2)
94	151.50	129.77	Shut-In(2)
127	1162.83	130.37	End Shut-In(2)
127	2025.03	130.75	Final Hydro-static

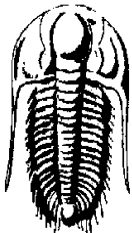
Recovery

Length (ft)	Description	Volume (bbl)
190.00	100% m w ith Oil Spots	0.93

* 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

250 N. Water Ste 300
Wichita KS 67202

ATTN: Robert Hendrix

1-1s-36w Rawlins,KS

Mary Ann # 3-1

Job Ticket: 53004

DST#: 4

Test Start: 2013.08.19 @ 16:22:00

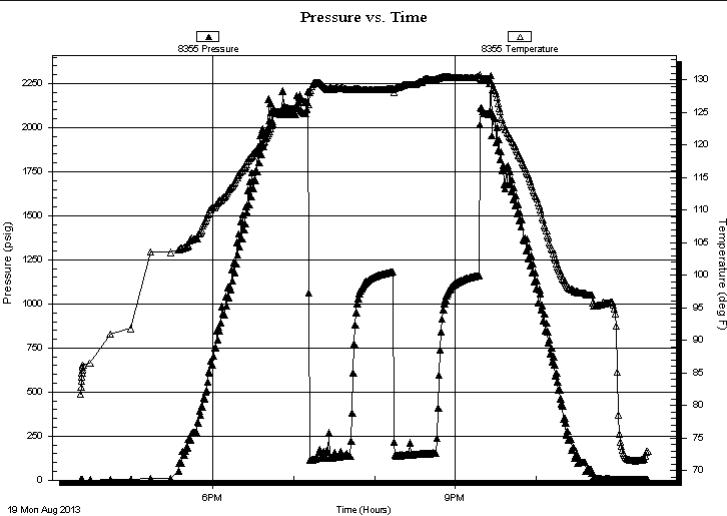
GENERAL INFORMATION:

Formation: Lansing " J "	
Deviated: No Whipstock:	ft (KB)
Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 19:10:40	Tester: Will MacLean
Time Test Ended: 23:21:24	Unit No: 58
Interval: 4250.00 ft (KB) To 4297.00 ft (KB) (TVD)	Reference Elevations: 3133.00 ft (KB)
Total Depth: 4297.00 ft (KB) (TVD)	3121.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good
	KB to GR/CF: 12.00 ft

Serial #: 8355 Outside

Press @RunDepth: psig @	4251.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.08.19	End Date: 2013.08.19	Last Calib.: 2013.08.19
Start Time: 16:22:05	End Time: 23:22:59	Time On Btm:
		Time Off Btm:

TEST COMMENT: IF- Chased Tool 25' to Bottom Had 2" blow Bled it off Weak Surface Blow Built to 1/2"
IS- No Blow
FF- No Blow
FS- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
190.00	100% m w ith Oil Spots	0.93

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

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53004

DST#: 4

ATTN: Robert Hendrix

Test Start: 2013.08.19 @ 16:22:00

Tool Information

Drill Pipe:	Length: 3669.00 ft	Diameter: 3.80 inches	Volume: 51.47 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 575.00 ft	Diameter: 2.25 inches	Volume: 2.83 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 54.30 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	4250.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	47.00 ft				
Tool Length:	75.00 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
Change Over Sub	1.00			4223.00	
Shut In Tool	5.00			4228.00	
Hydraulic tool	5.00			4233.00	
Jars	5.00			4238.00	
Safety Joint	3.00			4241.00	
Packer	5.00			4246.00	28.00 Bottom Of Top Packer
Packer	4.00			4250.00	
Stubb	1.00			4251.00	
Recorder	0.00	8355	Outside	4251.00	
Recorder	0.00	8674	Inside	4251.00	
Perforations	8.00			4259.00	
Change Over Sub	1.00			4260.00	
Drill Pipe	31.00			4291.00	
Change Over Sub	1.00			4292.00	
Bullnose	5.00			4297.00	47.00 Bottom Packers & Anchor

Total Tool Length: 75.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

1-1s-36w Rawlins,KS

250 N. Water Ste 300
Wichita KS 67202

Mary Ann # 3-1

Job Ticket: 53004

DST#: 4

ATTN: Robert Hendrix

Test Start: 2013.08.19 @ 16:22:00

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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	100% m with Oil Spots	0.934

Total Length: 190.00 ft Total Volume: 0.934 bbl

Num Fluid Samples: 0

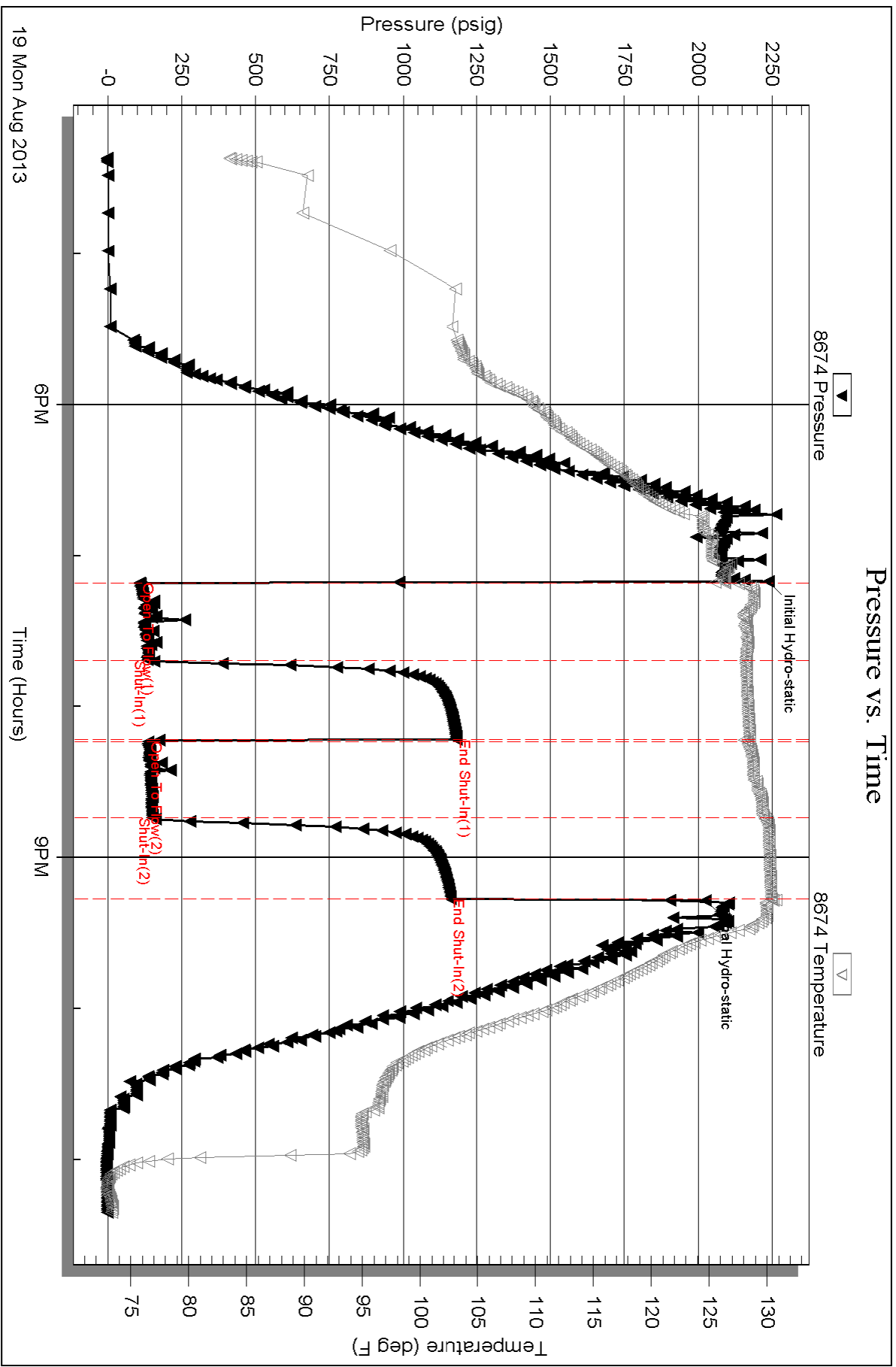
Num Gas Bombs: 0

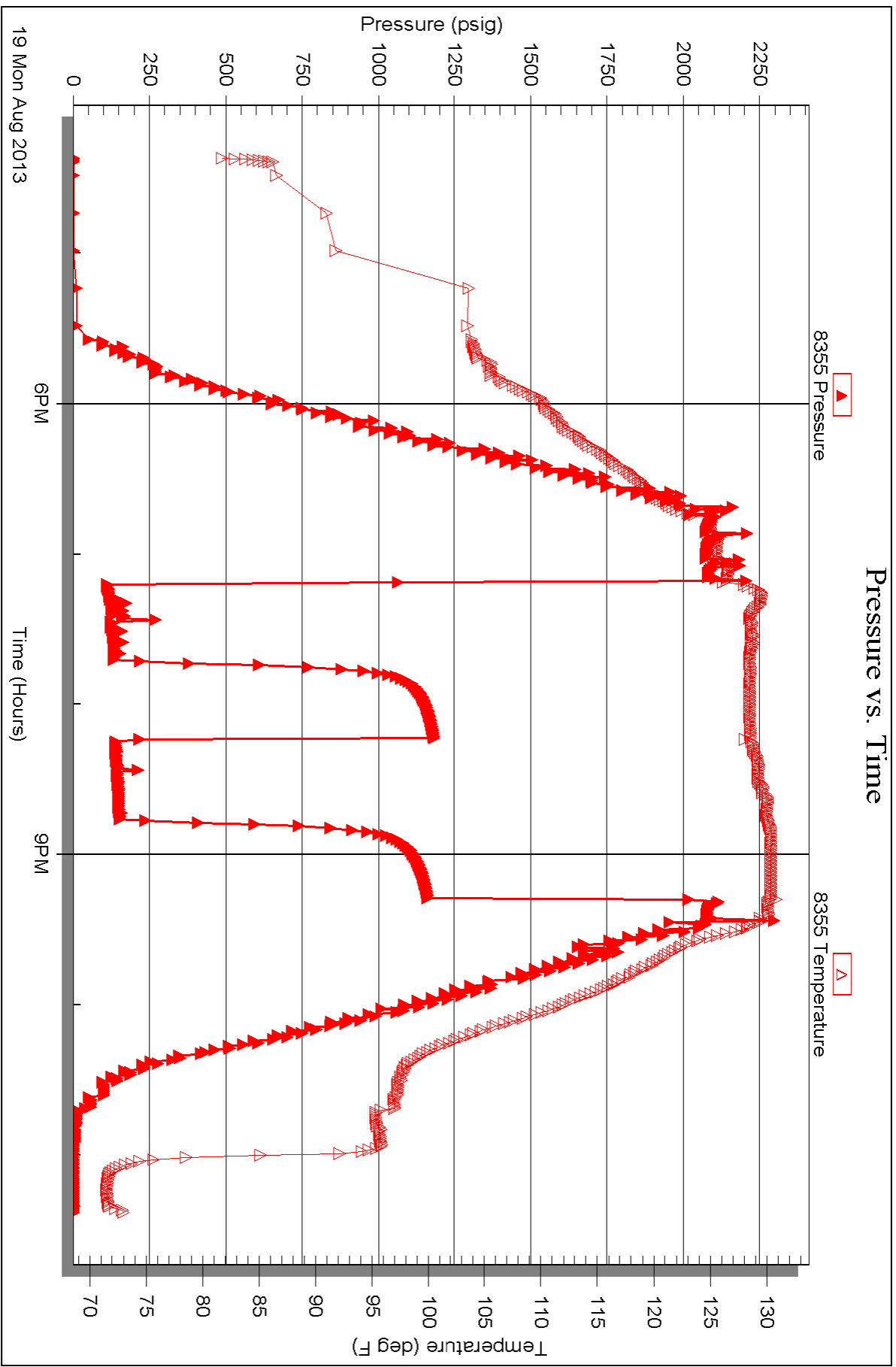
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49100

Well Name & No. Mary Ann #3-1 Test No. DST #1 Date 8-17-13
 Company Martin Drilling Co. Inc Elevation 3133 KB 3121 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Martin Rig 14
 Location: Sec. 1 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 3935-3984 Zone Tested Oread
 Anchor Length 49 Drill Pipe Run 3354 Mud Wt. 9.0
 Top Packer Depth 3931 Drill Collars Run 575 Vis 69
 Bottom Packer Depth 3935 Wt. Pipe Run 0 WL 6.0
 Total Depth 3984 Chlorides 600 ppm System LCM 316

Blow Description IF- Weak Surface Blow Built to 1/4"
ISI- No Blow
FI- Weak Surface Blow in 18min Built to 1/4"
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>OCM</u>	<u>17</u>		<u>83</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 15 BHT 116 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1963</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>00:00</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1:02</u>
(C) First Final Flow <u>24</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>3:28</u>
(D) Initial Shut-In <u>1006</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>6:30</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>8:16</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>256 R/T</u> 108rt 167.40	Comments _____
(G) Final Shut-In <u>715</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1796</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1642.40</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1642.40</u>	

Approved By _____

Our Representative Will Man

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53002

Well Name & No. Mary Ann # 3-1 Test No. DST # 2 Date 8-17-13
 Company Murfin Drilling Co. Inc Elevation 3133 KB 3121 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin Rig #14
 Location: Sec. 1 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4006 - 4110 Zone Tested Lansing "A"
 Anchor Length 104 Drill Pipe Run 3415 Mud Wt. 9.1
 Top Packer Depth 4002 Drill Collars Run 575 Vis 66
 Bottom Packer Depth 4006 Wt. Pipe Run 0 WL 6.4
 Total Depth 4110 Chlorides 800 ppm System LCM 4/6

Blow Description IF - Weak Surface Blow Built to 1"
ISI - No Blow
FF - Weak Surface Blow Built to 134"
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>60CM</u>	<u>2</u>	<u>9</u>	<u>89</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

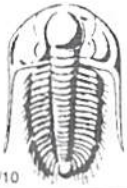
Rec Total 20 BHT 123 Gravity ✓ API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 2033 Test 1250 T-On Location 20:54
 (B) First Initial Flow 21 Jars 250 T-Started 21:40
 (C) First Final Flow 26 Safety Joint 75 T-Open 23:30
 (D) Initial Shut-In 740 Circ Sub NIC T-Pulled 3:39
 (E) Second Initial Flow 28 Hourly Standby T-Out 5:13
 (F) Second Final Flow 34 Mileage 256 R/T 167.40 Comments _____
 (G) Final Shut-In 909 Sampler _____
 (H) Final Hydrostatic 1941 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 60 Ruined Packer _____
 Final Flow 60 Extra Copies _____
 Final Shut-In 90 Sub Total 0
 Total 1642.40
 MP/DST Disc't _____
 Sub Total 1642.40

Approved By _____ Our Representative Nin M...

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53003

Well Name & No. Mary Ann #3-1 Test No. DST #3 Date 8-18-13
 Company Murfin Drilling Co. Inc Elevation 3133 KB 3121 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin Rig #14
 Location: Sec. 1 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4093-4138 Zone Tested Lansing "D"
 Anchor Length 45 Drill Pipe Run 3512 Mud Wt. 9.1
 Top Packer Depth 4089 Drill Collars Run 575 Vis 69
 Bottom Packer Depth 4093 Wt. Pipe Run 0 WL 6.4
 Total Depth 4138 Chlorides 900 ppm System LCM 4/6

Blow Description IF-Surface Blow Built to BOB in 1 3/4
ISI-Weak Surface Blow in 1 1/2 min Built to BOB in 9 1/2 min
FF-Surface Blow Built to BOB in 2 min (Gas to Surface in 20 min)
FSI-Weak Surface Blow Built to BOB in 5 1/4 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>0-0</u>	<u>22</u>	<u>78</u>		
<u>1115</u>	<u>0-0</u>	<u>40</u>	<u>60</u>		
<u>950</u>	<u>0-0</u>	<u>14</u>	<u>86</u>		
<u>90</u>	<u>0-MCO</u>	<u>19</u>	<u>48</u>		<u>33</u>
Rec	Feet of <u>1860 G-IP</u>	%gas	%oil	%water	%mud

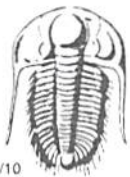
Rec Total 2195 BHT 130 Gravity 34 API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 2093 Test 1250 T-On Location 12:54
 (B) First Initial Flow 128 Jars 250 T-Started 13:04
 (C) First Final Flow 555 Safety Joint 75 T-Open 14:47
 (D) Initial Shut-In 1067 Circ Sub 50 Dropped Bar T-Pulled 17:51
 (E) Second Initial Flow 558 Hourly Standby T-Out 21:16
 (F) Second Final Flow 765 Mileage 256 R/T 167.40 Comments API is 35 @ 70°F = 34
 (G) Final Shut-In 1048 Sampler Dropped Bar
 (H) Final Hydrostatic 1873 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60
 Sub Total 0
 Total 1792.40
 MP/DST Disc't
 Sub Total 1792.40

Approved By _____ Our Representative Will Mad

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53004

Well Name & No. Mary Ann # 3-1 Test No. DST #4 Date 8-19-13
 Company Murfin Drilling Co. Inc Elevation 3133 KB 3121 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin Rig #14
 Location: Sec. 1 Twp. 15 Rge. 36w Co. Rawlins State KS

Interval Tested 4250-4297 Zone Tested Lansings "J"
 Anchor Length 47 Drill Pipe Run 3669 Mud Wt. 9.1
 Top Packer Depth 4246 Drill Collars Run 575 Vis 6.7
 Bottom Packer Depth 4250 Wt. Pipe Run 0 WL 6.4
 Total Depth 4297 Chlorides 100 ppm System LCM 216

Blow Description IF- Tool Opened chased it 25' to Bottom Weak Surface Blow (Bull) to
ISI- No Blow
FF- No Blow
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</u>	<u>Mud with Oil Spots</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 190 BHT 124 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2237
- (B) First Initial Flow 108
- (C) First Final Flow 136
- (D) Initial Shut-In 1182
- (E) Second Initial Flow 137
- (F) Second Final Flow 151
- (G) Final Shut-In 1162
- (H) Final Hydrostatic 2025

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub NIC
- Hourly Standby
- Mileage 256 RIT + 2
334.80
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 16:08
 T-Started 16:22
 T-Open 19:10
 T-Pulled 21:16
 T-Out 23:21

Comments
loaded tools 8/20 15:30
Tool was plugging
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1909.80
 MP/DST Disc't _____

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

Sub Total 1909.80

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.



gust.
Prod-LH

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 137948

Invoice Date: Aug 13, 2013

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361

Bill To:

Murfin Drig. Co., Inc.
250 N. Water
STE #300
Wichita, KS 67202

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Murfin	60215	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Aug 13, 2013	9/12/13

Quantity	Item	Description	Unit Price	Amount
225.00	CEMENT MATERIALS	Mary Ann #3-1		
		Class A Common	17.90	4,027.50
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
236.26	CEMENT SERVICE	Cubic Feet	2.48	585.92
980.10	CEMENT SERVICE	Ton Mileage	2.60	2,548.26
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
90.00	CEMENT SERVICE	Pump Truck Mileage	7.70	693.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
90.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	396.00
1.00	CEMENT SUPERVISOR	LaRene Wentz		
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	OPERATOR ASSISTANT	Brandon Wilkinson		

Subtotal	10,549.93
Sales Tax	358.62
Total Invoice Amount	10,908.55
Payment/Credit Applied	
TOTAL	10,908.55

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

\$ 3,692.47

ONLY IF PAID ON OR BEFORE

Sep 7, 2013

OK

ALLIED OIL & GAS SERVICES, LLC 060215

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, KS
8-19-13

DATE <u>8-13-13</u>	SEC. <u>1</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>10:00pm</u>	JOB START <u>12:00am</u>	JOB FINISH <u>12:30am</u>
LEASE <u>Marlan</u>	WELL# <u>3-1</u>		LOCATION <u>Trenton Rd 706, 9W, 45,</u>		COUNTY <u>Reardon</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)			<u>40, 15, 10, N to</u>				

CONTRACTOR Meerfun 14

TYPE OF JOB Surface

HOLE SIZE 12 1/8 T.D. 2681

CASING SIZE 8 7/8 DEPTH 268-261'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 151

PERFS. _____

DISPLACEMENT 16.21 bbl

OWNER same

CEMENT AMOUNT ORDERED 225 sks Com 3% CC

EQUIPMENT _____

PUMP TRUCK CEMENTER Lakone & Coker

423/281 HELPER Paul Beaver

BULK TRUCK DRIVER Brandon Wilkinson

396/306

BULK TRUCK DRIVER _____

COMMON	<u>225 sks @ 17.90</u>	<u>4022.50</u>
POZMIX	@	
GEL	@	
CHLORIDE	<u>8 sks @ 64.00</u>	<u>512.00</u>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING	<u>236.26 ft³ @ 2.48</u>	<u>585.92</u>
MILEAGE	<u>10.89 hr X 90 X 2.60</u>	<u>2578.26</u>
TOTAL		<u>7673.68</u>

REMARKS:
MTD 225 sks cement
Displace with water
Cement did circulate

SERVICE

DEPTH OF JOB	_____	
PUMP TRUCK CHARGE	_____	<u>1512.25</u>
EXTRA FOOTAGE	@	
MILEAGE	<u>MTD 90 @ 7.70</u>	<u>693.00</u>
MANIFOLD	<u>Head @ 275.00</u>	<u>275.00</u>
MICU	<u>90 @ 4.40</u>	<u>396.00</u>
	@	
TOTAL		<u>2876.25</u>

CHARGE TO: Meerfun Drilling

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.

PRINTED NAME Greg Churek

SIGNATURE Greg Churek

SALES TAX (If Any) _____

TOTAL CHARGES 10,549.93

DISCOUNT 3,692.47 IF PAID IN 30 DAYS

6,857.45 Net.

ALLIED

OIL & GAS SERVICES, LLC

Prod-LH

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 137948
Invoice Date: Aug 13, 2013
Page: 1

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

PROD COPY

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
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Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Aug 13, 2013	9/12/13

Quantity	Item	Description	Unit Price	Amount
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1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
90.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	396.00
1.00	CEMENT SUPERVISOR	LaRene Wentz		
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	OPERATOR ASSISTANT	Brandon Wilkinson		

Account: 10203
 7216.08 Cement S. (Sg) #34
 3.5048.0003

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

\$ 3,692.47

ONLY IF PAID ON OR BEFORE
Sep 7, 2013

Subtotal	10,549.93
Sales Tax	358.62
Total Invoice Amount	10,908.55
Payment/Credit Applied	
TOTAL	10,908.55

(3692.47)
 OK
 7216.08

ALLIED OIL & GAS SERVICES, LLC 060215

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:

Oakley, KS
8-19-13

DATE <u>8-13-13</u>	SEC. <u>1</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION <u>10:00pm</u>	JOB START <u>12:00am</u>	JOB FINISH <u>12:30am</u>
LEASE <u>Mary Ann</u>	WELL# <u>3-1</u>	LOCATION <u>Trenton Rd 706, 9W, 45,</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>40, 15, 10, N 1/4</u>			

CONTRACTOR Murfin 14
 TYPE OF JOB Surface
 HOLE SIZE 12 1/8 T.D. 2681
 CASING SIZE 8 7/8 DEPTH 268.26'
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 151
 PERFS. _____
 DISPLACEMENT 16.21 bbl

OWNER Same
 CEMENT AMOUNT ORDERED 225 sks Com 3% CC
 COMMON 225 sks @ 17.90 4022.50
 POZMIX _____ @ _____
 GEL _____ @ _____
 CHLORIDE 8 sks @ 64.00 512.00
 ASC _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 HANDLING 236.26 ft³ @ 2.98 583.92
 MILEAGE 10.89 mi X 90 X 2.60 2548.26
 TOTAL 7673.68

EQUIPMENT
 PUMP TRUCK CEMENTER Lakone S. Jank
 # 423/281 HELPER Paul Beaver
 BULK TRUCK
 # 396/306 DRIVER Brandon Wilkerson
 BULK TRUCK
 # _____ DRIVER _____

REMARKS:
MO 225 sks cement
Displace with water
Cement did circulate

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

SERVICE
 DEPTH OF JOB _____
 PUMP TRUCK CHARGE _____ 1512.25
 EXTRA FOOTAGE _____ @ _____
 MILEAGE MEAN 90 @ 7.70 693.00
 MANIFOLD Head _____ @ _____ 275.00
 MLCU 90 @ 3.40 306.00
 _____ @ _____
 TOTAL 2876.25

PLUG & FLOAT EQUIPMENT
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 TOTAL _____

To: Allied Oil & Gas Services, LLC.
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PRINTED NAME Greg L. Wren
 SIGNATURE Greg L. Wren

SALES TAX (if Any) _____
 TOTAL CHARGES 10,549.93
 DISCOUNT 3,692.47 IF PAID IN 30 DAYS
6,857.45 Net.