



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1151330
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: _____



1151330

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. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

July 11, 2013

Leon Rodak
Murfin Drilling Co., Inc.
250 N WATER STE 300
WICHITA, KS 67202-1216

Re: ACO1
API 15-153-20919-00-00
Erickson 'RM' 1-11
NE/4 Sec.11-05S-31W
Rawlins County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Leon Rodak

Jeff Christian

PETROLEUM GEOLOGIST

Wichita, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **MURFIN DRILLING COMPANY**
 LEASE **ERICKSON "B" # 4-11**
 LOCATION **330' FNL & 400' FEL**

SECT **11** TWP **S 5** R **31 W**
 COUNTY **RAWLINS** STATE **KANSAS**
 FIELD **ELNA**

API **15-153-20919** RIN NO. **14**
 CONTRACTOR **COMPANY TOOLS**
 DRILLING STARTED **03/16/2013** COMPLETED **03/25/2013**
 MUD DISGAGED **2964'** MUD TYPE **CHEMICAL**
 DRILLING TIME LEFT FROM **3495'** TO **RTD**
 DRILLING TIME LEFT FROM **3495'** TO **RTD**
 SAMPLES OBTAINED FROM **3495'** TO **RTD**
 SAMPLES EXAMINED FROM **3495'** TO **RTD**
 GEOLOGICAL SUPERVISION FROM **3550'** TO **RTD**

MEASUREMENTS FROM K&B
 CASING RECORD
 CONDUCTOR NONE
 SURFACE **8.6/66 @ 227'**
 W/ 1/30 SX
 W/ 1/75 SX
 PRODUCTION **1 1/2" @ 1364'**

FORMATION NAME LOG DATE TIME TOP DATUM TOP SAMPLE
 ANHYDRITE 2545' (-275) 2545' (-275)
 TOPEKA 3628' (-808) 3628' (-808)
 HEEBNER 3795' (-976) 3797' (-977)
 LANSING 3844' (-1024) 3844' (-1024)
 STARK 4012' (-1192) 4013' (-1193)
 BKC 4065' (-1245) 4066' (-1246)
 PAWNEE 4173' (-1353) 4173' (-1353)
 FT. SCOTT 4246' (-1426) 4247' (-1427)
 CHEROKEE 4257' (-1437) 4257' (-1437)
 TOTAL DEPTH 4380' (-1560) 4380' (-1560)

DATE	7:00 AM DEPTH	REMARKS
3/16/13	MIRT	SPUD 8:00 pm
3/17/13	230'	WOC Drill Plug 10:00 am dev. 1/2 deg.
3/18/13	1685'	Drlg.
3/19/13	2835'	Drlg.
3/20/13	3480'	Drlg.
3/21/13	3880'	Short Trip Prior to DST # 1 dev. 1 deg.
3/22/13	3925'	TOH w/ DST # 2
3/23/13	4050'	DRLG
3/24/13	4268'	DRLG RTD 4380' @ 2:00 pm dev. 2 deg.
3/25/13	4830'	Finish Logging 1:00 am

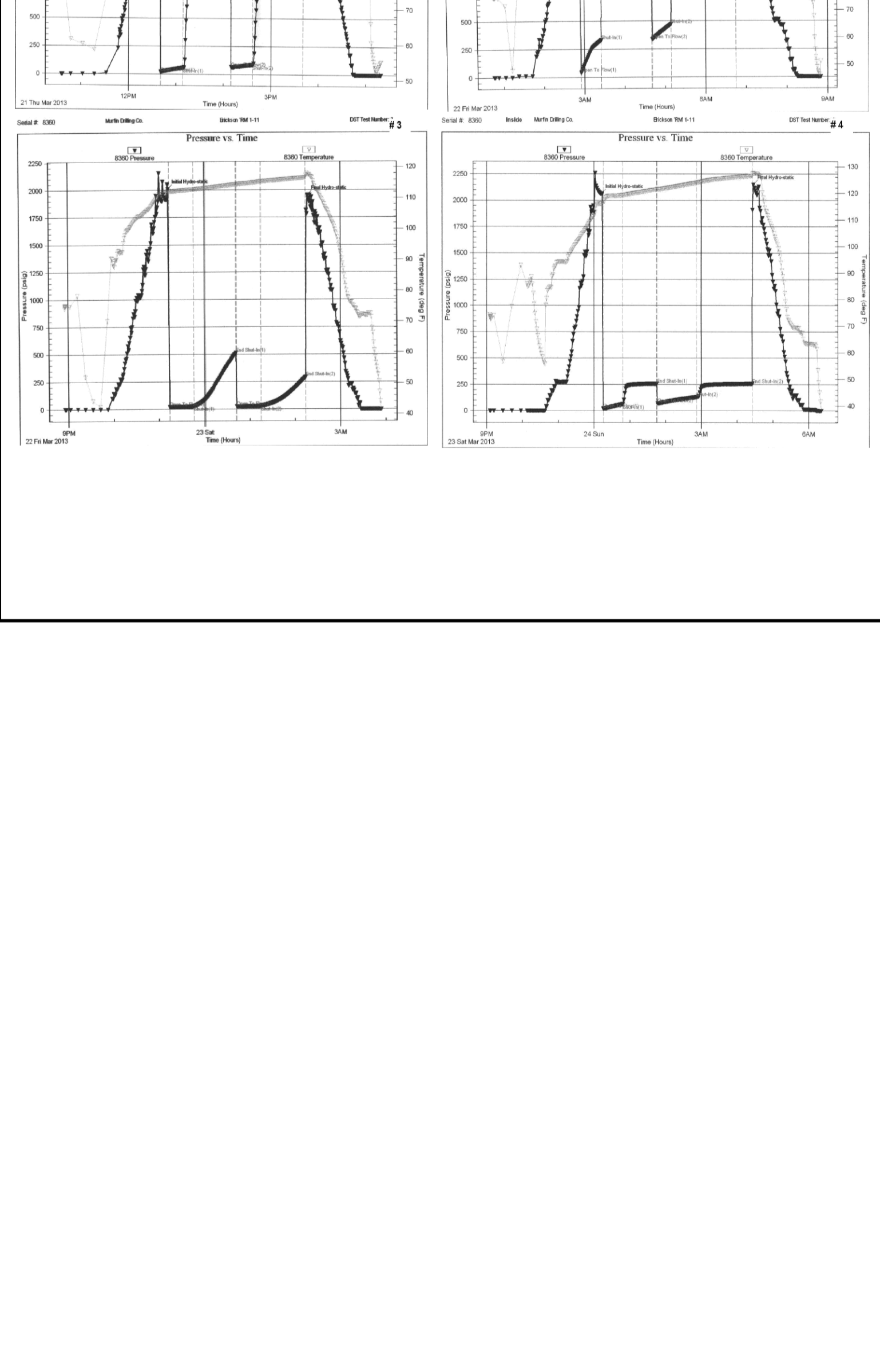
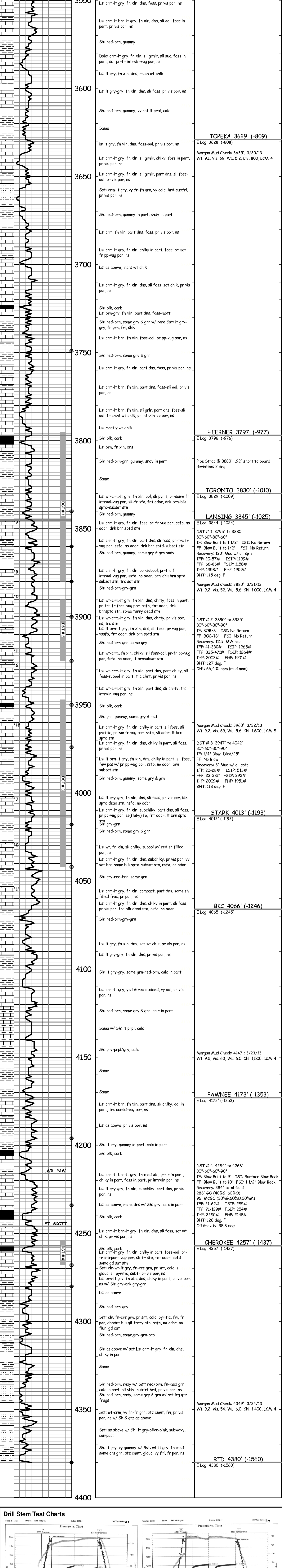
Remarks

5 1/2" production casing set to further test the Cherokee formation.

Electric log measurements correlate about even to 1' high compared to rotary measurements.

Samples deposited at the Kansas Geological Survey.

Respectfully Submitted,
Jeff Christian
 Jeff Christian





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Erickson 'RM' #1-11

11-5s-31w Rawlins,KS

Start Date: 2013.03.21 @ 10:35:00

End Date: 2013.03.21 @ 17:18:30

Job Ticket #: 50634 DST #: 1

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

Printed: 2013.03.26 @ 09:16:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50634

DST#: 1

Test Start: 2013.03.21 @ 10:35:00

GENERAL INFORMATION:

Formation: **Toronto-LKC A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:40:15

Time Test Ended: 17:18:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 3795.00 ft (KB) To 3880.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 3880.00 ft (KB) (TVD)

2810.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: 85.85 psig @ 3796.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.21

End Date:

2013.03.21

Last Calib.:

2013.03.21

Start Time: 10:35:15

End Time:

17:18:30

Time On Btm:

2013.03.21 @ 12:39:45

Time Off Btm:

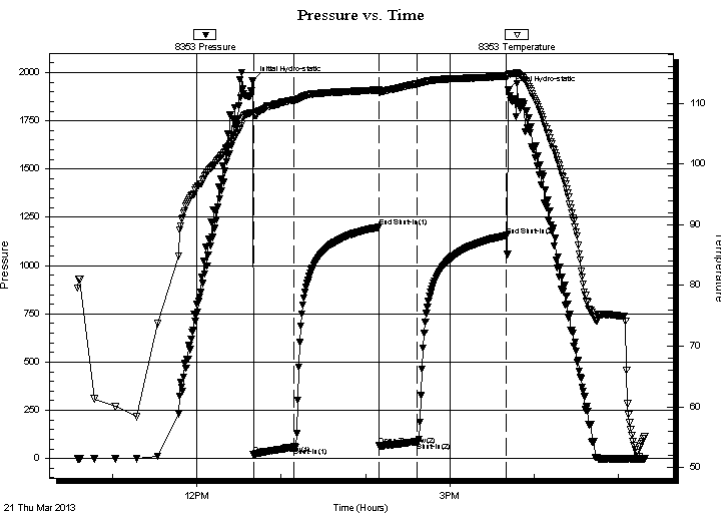
2013.03.21 @ 15:41:45

TEST COMMENT: 30 IF; Built to 1 1/2"

60 IS; No Blow

30 FF; Built to 1/2"

60 FS; No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1957.74	108.50	Initial Hydro-static
1	19.91	108.13	Open To Flow (1)
29	57.44	110.50	Shut-In(1)
90	1198.70	112.19	End Shut-In(1)
90	66.48	111.90	Open To Flow (2)
117	85.85	113.21	Shut-In(2)
181	1155.97	114.48	End Shut-In(2)
182	1908.93	114.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSM	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50634

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.03.21 @ 10:35:00

Tool Information

Drill Pipe:	Length: 3265.00 ft	Diameter: 3.80 inches	Volume: 45.80 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 48.43 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	3795.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	112.00 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			3769.00	
Shut In Tool	5.00			3774.00	
Hydraulic tool	5.00			3779.00	
Jars	5.00			3784.00	
Safety Joint	2.00			3786.00	
Packer	5.00			3791.00	27.00 Bottom Of Top Packer
Packer	4.00			3795.00	
Stubb	1.00			3796.00	
Recorder	0.00	8652	Inside	3796.00	
Recorder	0.00	8353	Outside	3796.00	
Perforations	15.00			3811.00	
Change Over Sub	1.00			3812.00	
Drill Pipe	64.00			3876.00	
Change Over Sub	1.00			3877.00	
Bullnose	3.00			3880.00	85.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50634

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.03.21 @ 10:35:00

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: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	OSM	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

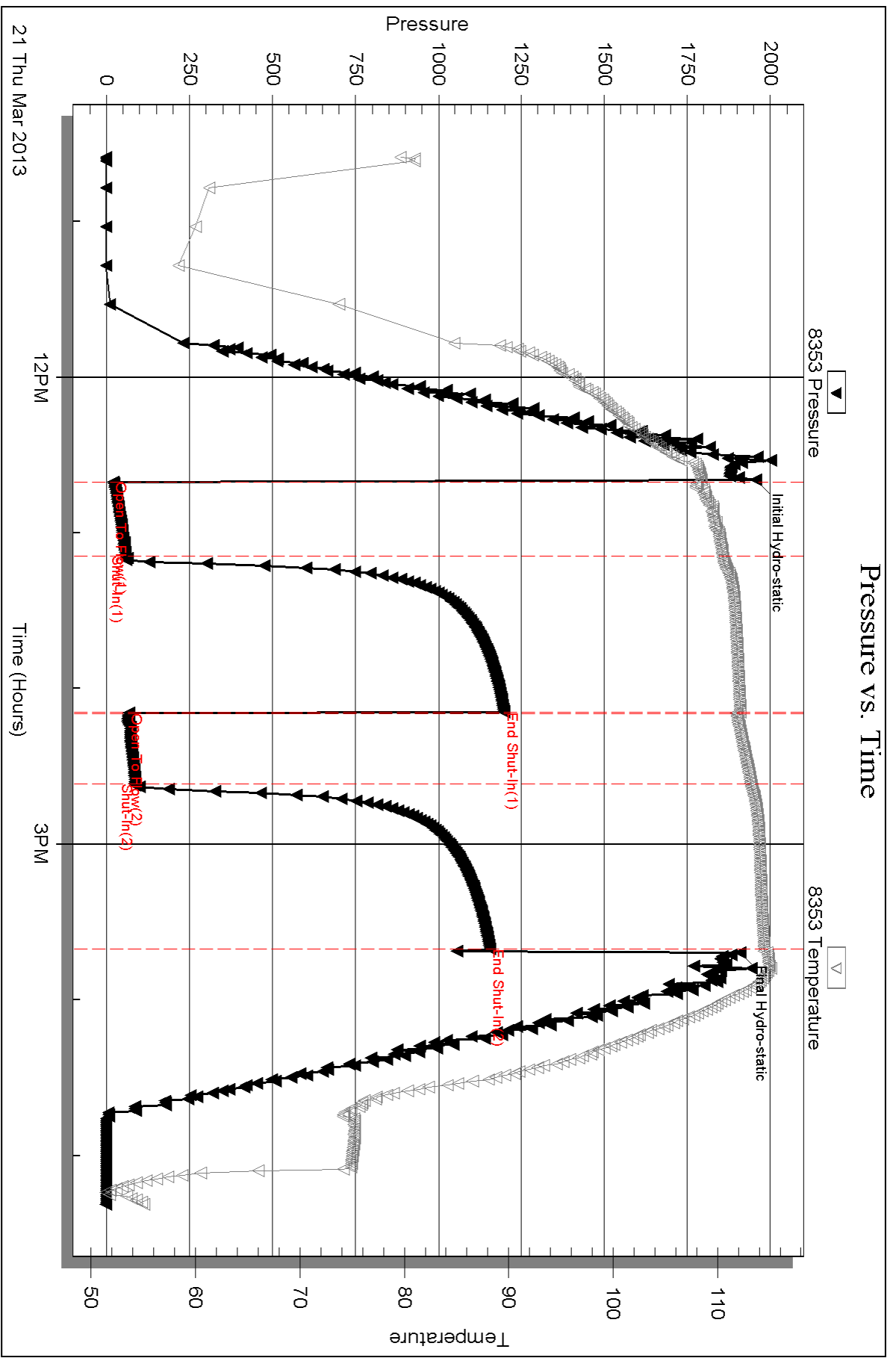
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Erickson 'RM' #1-11

11-5s-31w Rawlins,KS

Start Date: 2013.03.22 @ 00:45:00

End Date: 2013.03.22 @ 08:49:30

Job Ticket #: 50635 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.26 @ 09:15:21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50635

DST#: 2

Test Start: 2013.03.22 @ 00:45:00

GENERAL INFORMATION:

Formation: **LKC D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:54:30

Time Test Ended: 08:49:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 3890.00 ft (KB) To 3925.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 3880.00 ft (KB) (TVD)

2810.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: 471.07 psig @ 3891.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.22

End Date:

2013.03.22

Last Calib.:

2013.03.22

Start Time: 00:45:05

End Time:

08:49:29

Time On Btm:

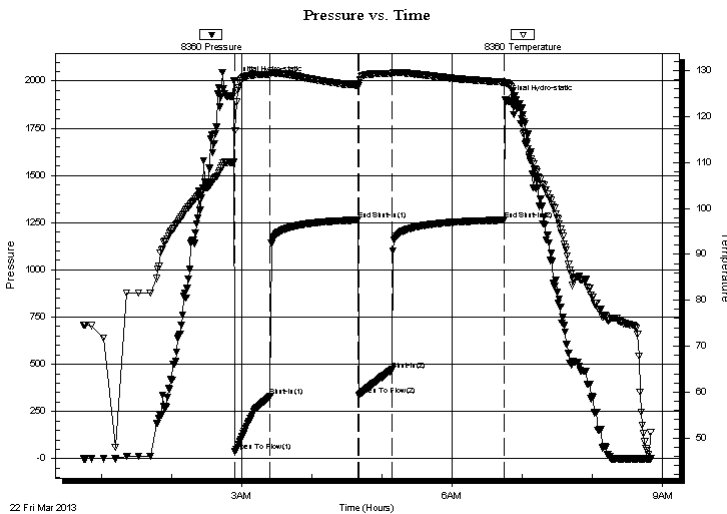
2013.03.22 @ 02:53:30

Time Off Btm:

2013.03.22 @ 06:45:30

TEST COMMENT: 30 IF; BOB in 8 min
60 IS; No Blow
30 FF; BOB in 18 min
90 FS; No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.07	110.04	Initial Hydro-static
1	40.65	116.84	Open To Flow (1)
31	330.15	129.20	Shut-In(1)
106	1264.62	126.72	End Shut-In(1)
107	335.44	126.70	Open To Flow (2)
135	471.07	129.31	Shut-In(2)
231	1264.16	127.43	End Shut-In(2)
232	1900.52	127.45	Final Hydro-static

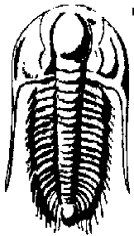
Recovery

Length (ft)	Description	Volume (bbl)
1115.00	MCW	10.78

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50635

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.03.22 @ 00:45:00

GENERAL INFORMATION:

Formation: **LKC D-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:54:30

Time Test Ended: 08:49:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: **3890.00 ft (KB) To 3925.00 ft (KB) (TVD)**

Total Depth: 3880.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2820.00 ft (KB)

2810.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8353

Outside

Press @ RunDepth: psig @ 3891.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.22

End Date:

2013.03.22

Last Calib.:

2013.03.22

Start Time: 00:45:15

End Time:

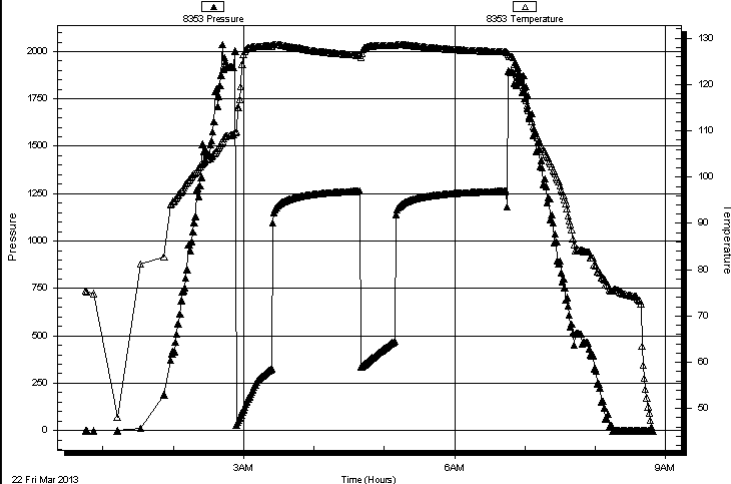
08:49:15

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF; BOB in 8 min
60 ISl; No Blow
30 FF; BOB in 18 min
90 FS!; No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1115.00	MCW	10.78

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.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50635

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.03.22 @ 00:45:00

Tool Information

Drill Pipe:	Length: 3360.00 ft	Diameter: 3.80 inches	Volume: 47.13 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 49.76 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3890.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	62.00 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			3864.00	
Shut In Tool	5.00			3869.00	
Hydraulic tool	5.00			3874.00	
Jars	5.00			3879.00	
Safety Joint	2.00			3881.00	
Packer	5.00			3886.00	27.00 Bottom Of Top Packer
Packer	4.00			3890.00	
Stubb	1.00			3891.00	
Recorder	0.00	8360	Inside	3891.00	
Recorder	0.00	8353	Outside	3891.00	
Perforations	31.00			3922.00	
Bullnose	3.00			3925.00	35.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50635

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.03.22 @ 00:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1115.00	MCW	10.776

Total Length: 1115.00 ft Total Volume: 10.776 bbl

Num Fluid Samples: 0

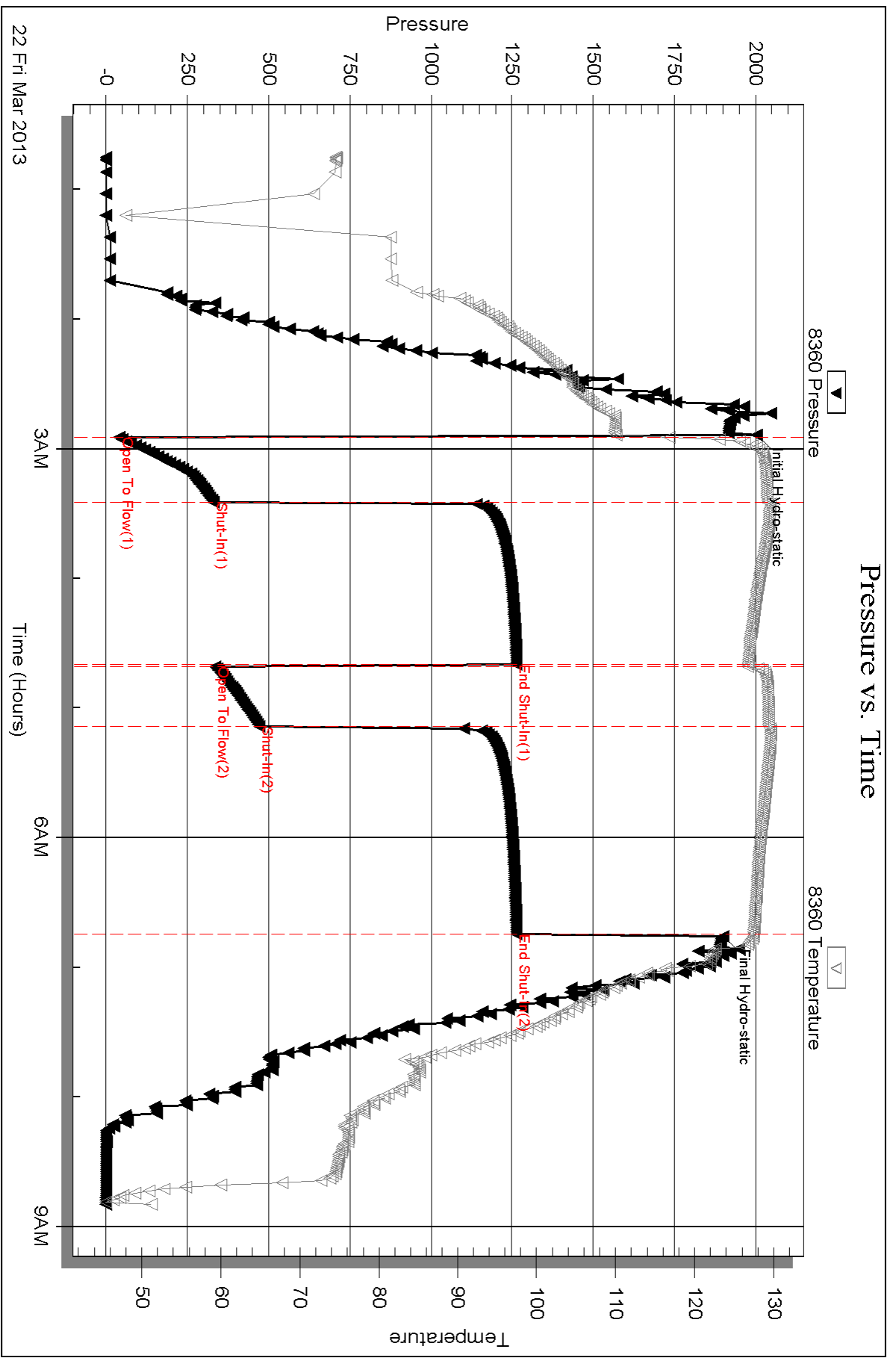
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

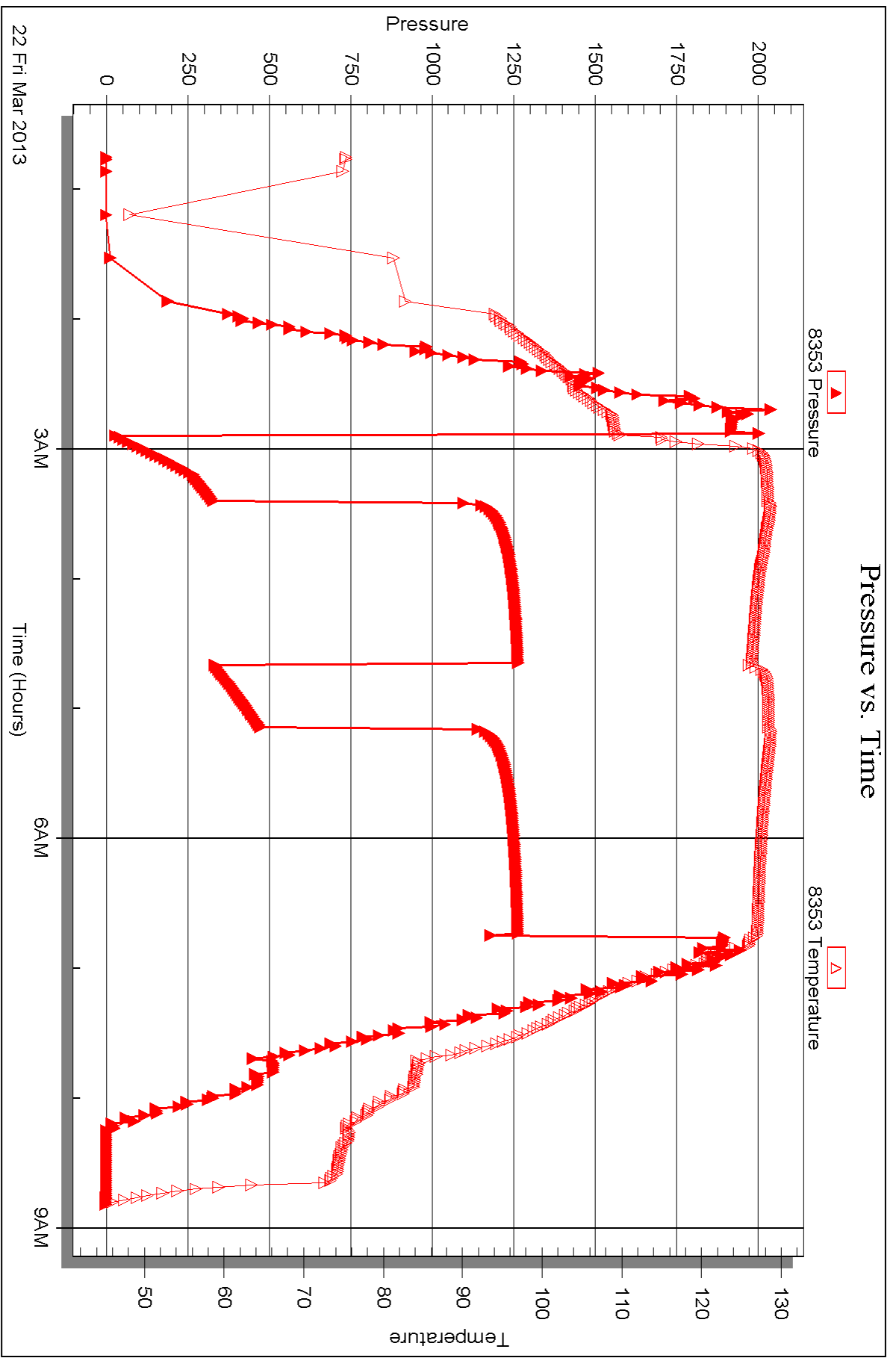


Serial #: 8353

Outside Murfin Drilling Co.

Erickson RM #1-11

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 50635

Printed: 2013.03.26 @ 09:15:25



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Erickson 'RM' #1-11

11-5s-31w Rawlins,KS

Start Date: 2013.03.22 @ 20:55:00

End Date: 2013.03.23 @ 03:54:00

Job Ticket #: 50636 DST #: 3

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

Printed: 2013.03.26 @ 09:09:25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50636

DST#: 3

Test Start: 2013.03.22 @ 20:55:00

GENERAL INFORMATION:

Formation: **LKC H-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:13:30

Time Test Ended: 03:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 3947.00 ft (KB) To 4042.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4042.00 ft (KB) (TVD)

2810.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: 27.84 psig @ 3948.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.22

End Date:

2013.03.23

Last Calib.: 2013.03.23

Start Time: 20:55:05

End Time:

03:53:59

Time On Btm: 2013.03.22 @ 23:12:30

Time Off Btm: 2013.03.23 @ 02:16:30

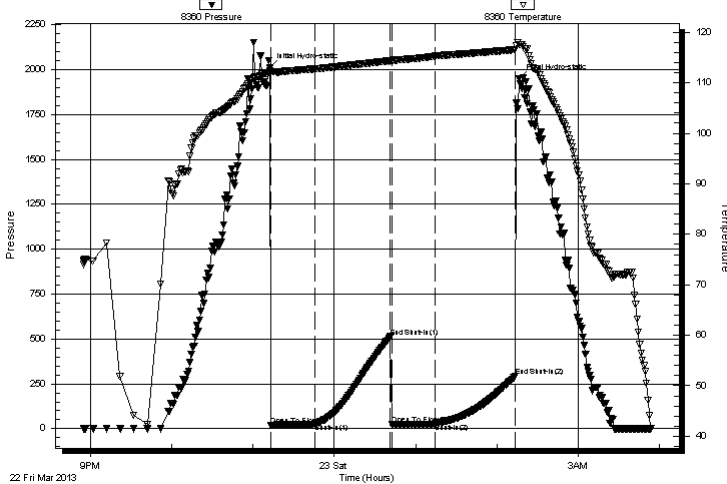
TEST COMMENT: 30 IF; Built to 1/4" died in 25

60 IS; No Blow

30 FF; No Blow

60 FS; No Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2008.54	112.33	Initial Hydro-static
1	19.86	112.24	Open To Flow (1)
33	27.94	112.76	Shut-In(1)
89	512.61	114.38	End Shut-In(1)
90	23.38	114.07	Open To Flow (2)
122	27.84	115.31	Shut-In(2)
181	291.85	116.56	End Shut-In(2)
184	1951.07	117.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	OSM	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50636

DST#: 3

Test Start: 2013.03.22 @ 20:55:00

GENERAL INFORMATION:

Formation: **LKC H-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:13:30

Time Test Ended: 03:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 3947.00 ft (KB) To 4042.00 ft (KB) (TVD)

Total Depth: 4042.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2820.00 ft (KB)

2810.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth: psig @ 3948.00 ft (KB)

Start Date: 2013.03.22

End Date:

2013.03.23

Start Time: 20:55:15

End Time:

03:54:00

Capacity: 8000.00 psig

Last Calib.:

2013.03.23

Time On Btm:

Time Off Btm:

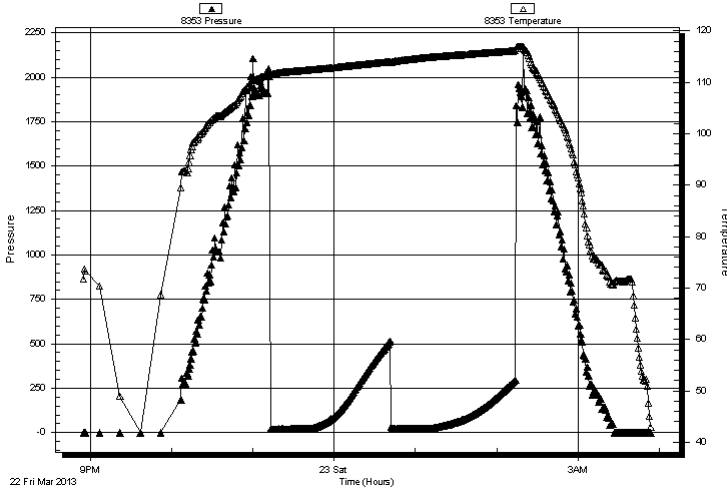
TEST COMMENT: 30 IF; Built to 1/4" died in 25

60 IS; No Blow

30 FF; No Blow

60 FS; No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	OSM	0.01

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.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50636

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.03.22 @ 20:55:00

Tool Information

Drill Pipe:	Length: 3393.00 ft	Diameter: 3.80 inches	Volume: 47.59 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 50.22 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3947.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	122.00 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			3921.00	
Shut In Tool	5.00			3926.00	
Hydraulic tool	5.00			3931.00	
Jars	5.00			3936.00	
Safety Joint	2.00			3938.00	
Packer	5.00			3943.00	27.00 Bottom Of Top Packer
Packer	4.00			3947.00	
Stubb	1.00			3948.00	
Recorder	0.00	8360	Inside	3948.00	
Recorder	0.00	8353	Outside	3948.00	
Perforations	25.00			3973.00	
Change Over Sub	1.00			3974.00	
Drill Pipe	64.00			4038.00	
Change Over Sub	1.00			4039.00	
Bullnose	3.00			4042.00	95.00 Bottom Packers & Anchor

Total Tool Length: 122.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50636

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.03.22 @ 20:55:00

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: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	OSM	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

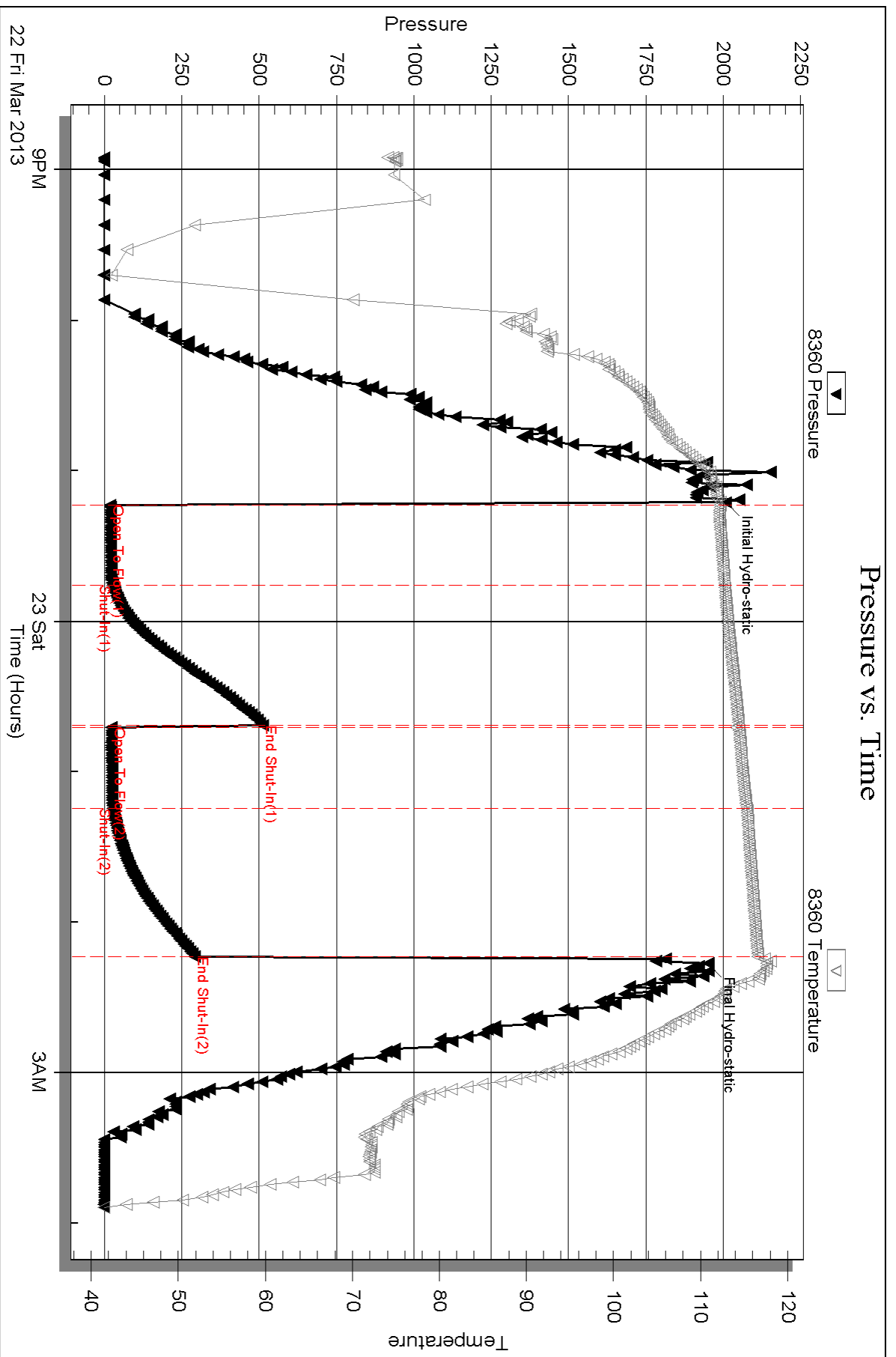
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

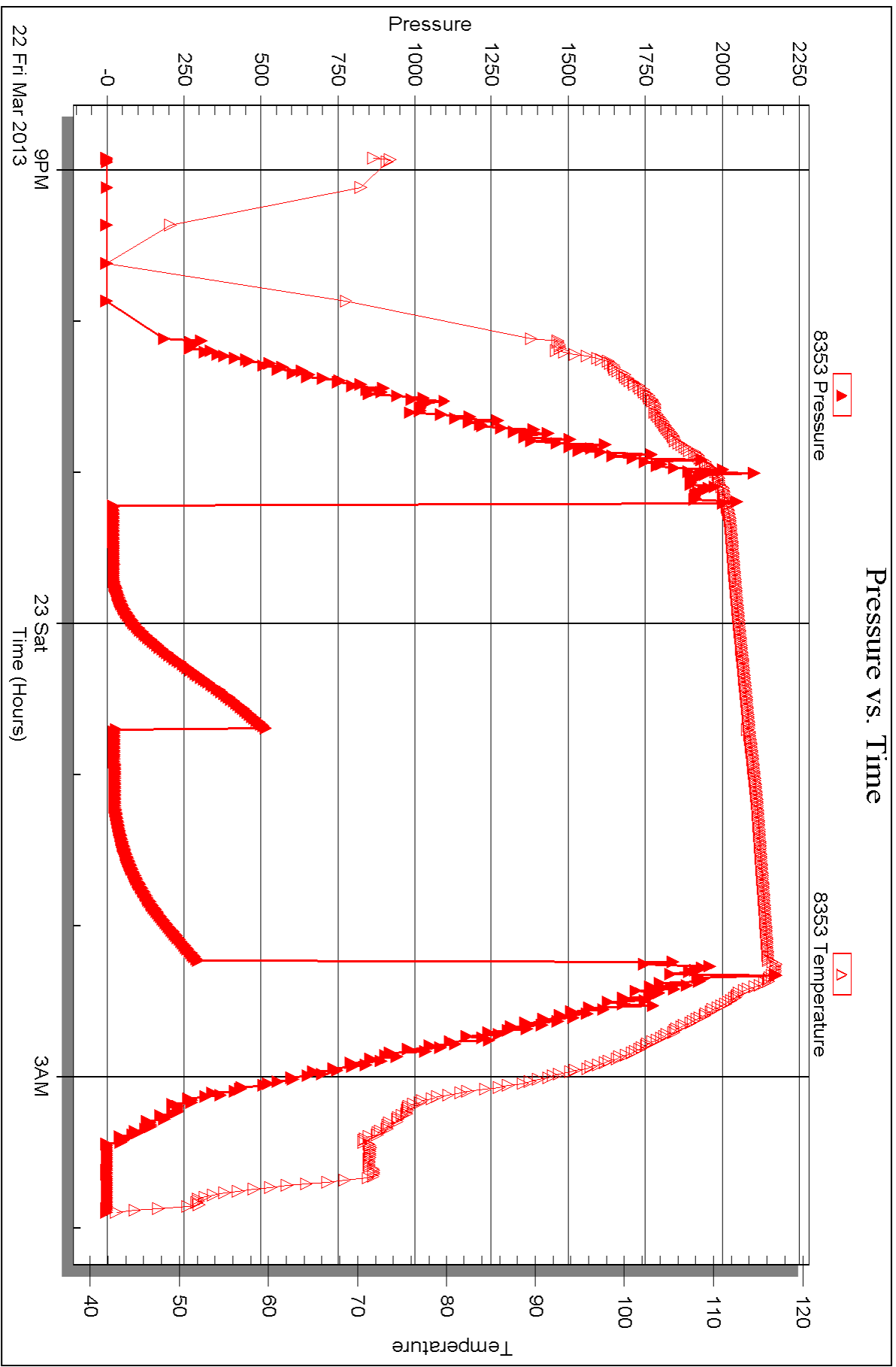


Serial #: 8353

Outside Murfin Drilling Co.

Erickson RM #1-11

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Erickson 'RM' #1-11

11-5s-31w Rawlins,KS

Start Date: 2013.03.23 @ 21:05:00

End Date: 2013.03.24 @ 06:22:00

Job Ticket #: 50637 DST #: 4

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

Printed: 2013.03.26 @ 09:08:12

Murfin Drilling Co. 11-5s-31w Rawlins,KS Erickson 'RM' #1-11 DST # 4 Cherokee 2013.03.23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50637

DST#: 4

Test Start: 2013.03.23 @ 21:05:00

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:15:00

Time Test Ended: 06:22:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Wilbur Steinbeck

Unit No: 39

Interval: 4254.00 ft (KB) To 4268.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4268.00 ft (KB) (TVD)

2810.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8360

Inside

Press @ Run Depth: 128.78 psig @ 4255.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.23

End Date:

2013.03.24

Last Calib.: 2013.03.24

Start Time: 21:05:05

End Time:

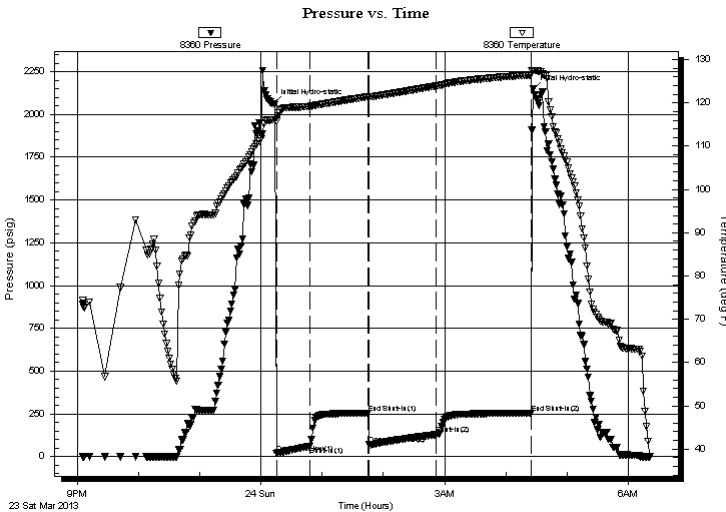
06:22:00

Time On Btm: 2013.03.24 @ 00:12:00

Time Off Btm: 2013.03.24 @ 04:27:00

TEST COMMENT: 30 IF; Built to 9"
60 IS; Surface Blow
60 FF; Built to 10"
90 FS; Built to 1 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2062.30	116.11	Initial Hydro-static
3	20.67	115.81	Open To Flow (1)
36	61.89	119.23	Shut-In(1)
93	255.24	121.44	End Shut-In(1)
94	70.62	121.51	Open To Flow (2)
160	128.78	123.94	Shut-In(2)
253	253.95	126.50	End Shut-In(2)
255	2148.16	127.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
96.00	MGCO 20%M 20%G 60%O	0.47
288.00	GO 40%G 60%O	1.42

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

11-5s-31w Rawlins, KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

ATTN: Jeff Christian

Job Ticket: 50637

DST#: 4

Test Start: 2013.03.23 @ 21:05:00

GENERAL INFORMATION:

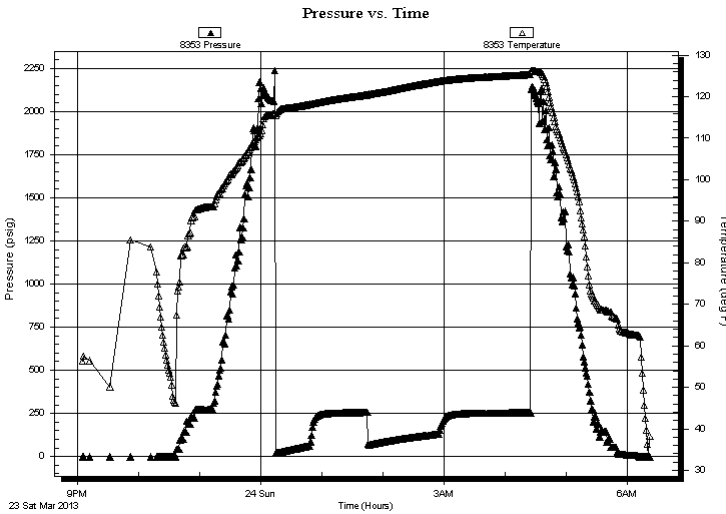
Formation: Cherokee		Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:	ft (KB)	Tester: Wilbur Steinbeck
Time Tool Opened: 00:15:00		Unit No: 39
Time Test Ended: 06:22:00		
Interval: 4254.00 ft (KB) To 4268.00 ft (KB) (TVD)		Reference Elevations: 2820.00 ft (KB)
Total Depth: 4268.00 ft (KB) (TVD)		2810.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 10.00 ft

Serial #: 8353 Outside

Press @ Run Depth:	psig @	4255.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2013.03.23	End Date:	2013.03.24	Last Calib.:	2013.03.24
Start Time:	21:05:15	End Time:	06:22:00	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 30 IF; Built to 9"
60 IS; Surface Blow
60 FF; Built to 10"
90 FS; Built to 1 1/2"

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
96.00	MGCO 20%M 20%G 60%O	0.47
288.00	GO 40%G 60%O	1.42

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50637

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.03.23 @ 21:05:00

Tool Information

Drill Pipe:	Length: 3712.00 ft	Diameter: 3.80 inches	Volume: 52.07 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: 534.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 54.70 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	4254.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	14.00 ft				
Tool Length:	41.00 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			4228.00	
Shut In Tool	5.00			4233.00	
Hydraulic tool	5.00			4238.00	
Jars	5.00			4243.00	
Safety Joint	2.00			4245.00	
Packer	5.00			4250.00	27.00 Bottom Of Top Packer
Packer	4.00			4254.00	
Stubb	1.00			4255.00	
Recorder	0.00	8360	Inside	4255.00	
Recorder	0.00	8353	Outside	4255.00	
perforations	10.00			4265.00	
bullnose	3.00			4268.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

11-5s-31w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Erickson 'RM' #1-11

Job Ticket: 50637

DST#: 4

ATTN: Jeff Christian

Test Start: 2013.03.23 @ 21:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
96.00	MGCO 20%M 20%G 60%O	0.472
288.00	GO 40%G 60%O	1.416

Total Length: 384.00 ft

Total Volume: 1.888 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

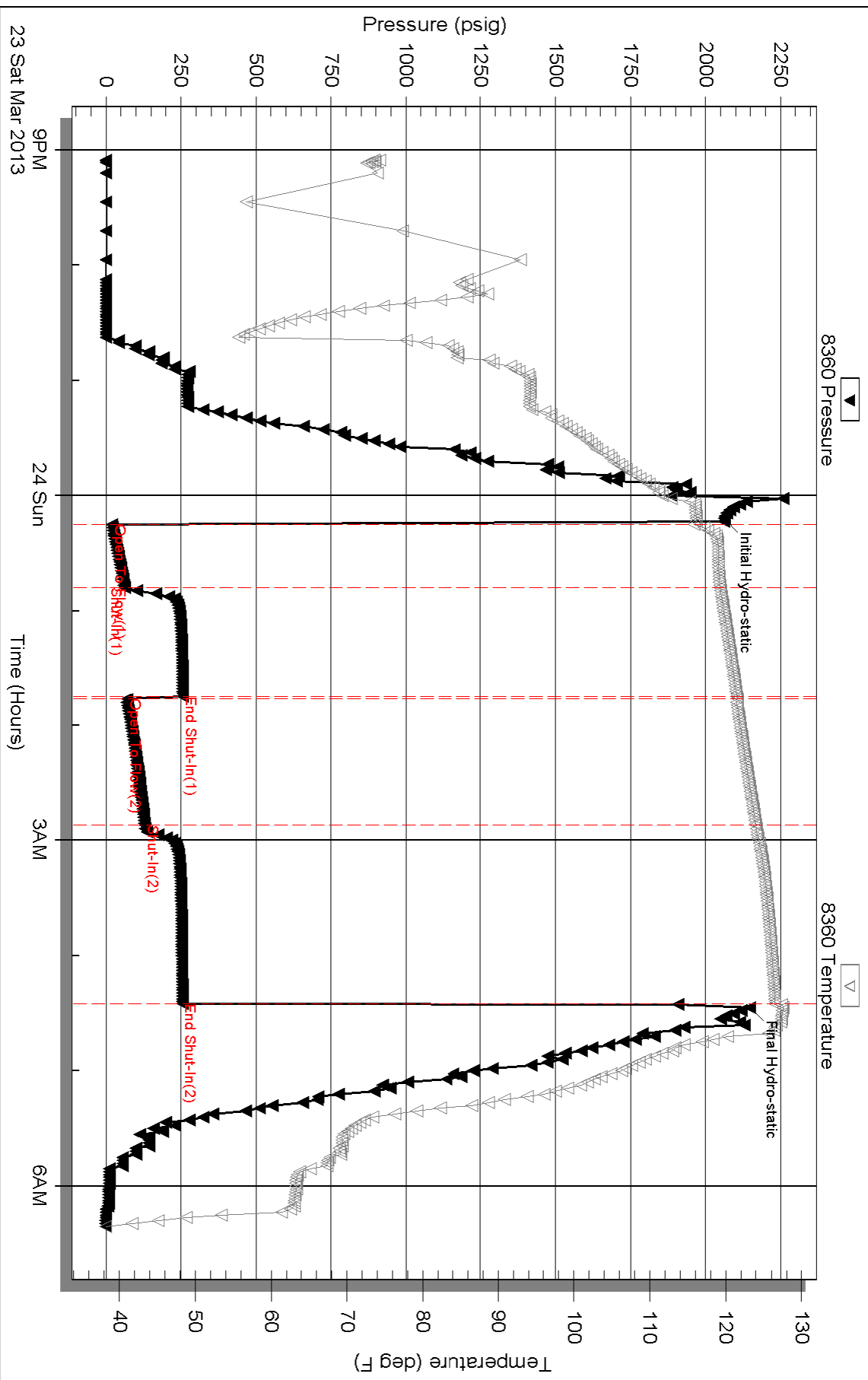
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

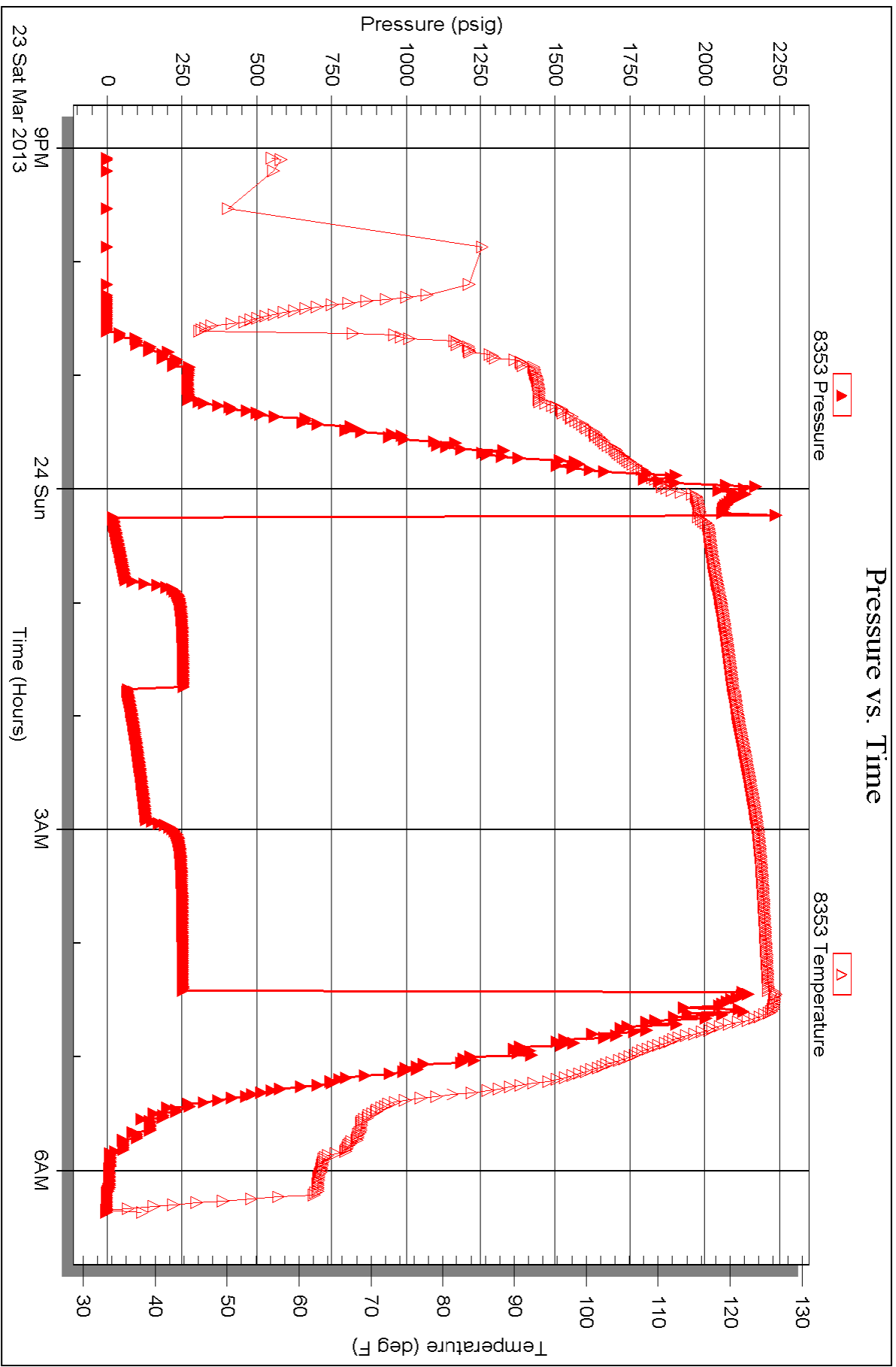


Serial #: 8353

Outside Murfin Drilling Co.

Erickson RM #1-11

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50634

Well Name & No. Erickson 'RM' #1-11 Test No. 1 Date 3-21-13
 Company Murfin Drilling Elevation 2820 KB 2810 GL
 Address 250 N Water St 300 Wichita Ks 67202
 Co. Rep / Geo. Jeff Christman Rig Murfin 14
 Location: Sec. 11 Twp. 5s Rge. 31w Co. Rawlins State Ks

Interval Tested 3795 3880 Zone Tested Toronto - LRC A-B
 Anchor Length 85' Drill Pipe Run 3265 Mud Wt. 9.1
 Top Packer Depth 3790 Drill Collars Run 534 Vis 69
 Bottom Packer Depth 3795 Wt. Pipe Run 0 WL 5.2
 Total Depth 3880 Chlorides 800 ppm System LCM 4

Blow Description IF; Built to 1 1/2"
ISL; No Blow
FF; Built to 1/2"
PSL; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>OSM</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 1150 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1958 Test 1150 T-On Location 8:50
 (B) First Initial Flow 20 Jars 250 T-Started 10:35
 (C) First Final Flow 57 Safety Joint 75 T-Open 12:40
 (D) Initial Shut-In 1199 Circ Sub NA T-Pulled 15:40
 (E) Second Initial Flow 66 Hourly Standby _____ T-Out 17:20
 (F) Second Final Flow 86 Mileage 65 RT 100.75
 (G) Final Shut-In 1156 Sampler _____
 (H) Final Hydrostatic 1909 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 60 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____
 Sub Total 1575.75

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1575.75
 MP/DST Disc't _____

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50635

Well Name & No. Ericksen 'RM' 1-11 Test No. 2 Date 3-22-13
 Company Murfin Drilling Elevation 2820 KB 2810 GL
 Address 250 N Walnut STE 300 Wichita KS 67202
 Co. Rep / Geo. Jett Christian Rig Murfin 14
 Location: Sec. 11 Twp. 5S Rge. 31W Co. Rawlrs State KS

Interval Tested 3890 3925 Zone Tested LKC D-F
 Anchor Length 35 Drill Pipe Run 3360 Mud Wt. 9.1
 Top Packer Depth 3885 Drill Collars Run 534 Vis 69
 Bottom Packer Depth 3890 Wt. Pipe Run 0 WL 5.2
 Total Depth 3925 Chlorides 800 ppm System LCM 4
 Blow Description FF BOB in 8 min
FSI No Blow
FF BOB in 18 min
FSI No Blow

Rec	Feet of	%gas	%oil	%water	%mud
1115	MLW		70	30	

Rec Total 1115 BHT 127° Gravity _____ API RW 400 @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2003</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>12:30</u>
(B) First Initial Flow <u>41</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:45</u>
(C) First Final Flow <u>330</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:53</u>
(D) Initial Shut-In <u>1265</u>	<input checked="" type="checkbox"/> Circ Sub <u>NA</u>	T-Pulled <u>6:38</u>
(E) Second Initial Flow <u>335</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>8:45</u>
(F) Second Final Flow <u>471</u>	<input checked="" type="checkbox"/> Mileage <u>65 RT</u> 100.75	Comments _____
(G) Final Shut-In <u>1264</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1901</u>	<input type="checkbox"/> Straddle _____	

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

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1575.75
 MP/DST Disc't _____

Sub Total 1575.75

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50636

Well Name & No. Ericksen RM 1-11 Test No. 3 Date 3-22-13
 Company Murfin Drilling Elevation 2820 KB 2810 GL
 Address 250 N WATER ST E Wichita Ks 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin 14
 Location: Sec. 11 Twp. Ss Rge. 31w Co. Routins State Ks

Interval Tested 3947 4042 Zone Tested LKC H-K
 Anchor Length 95 Drill Pipe Run 3393 Mud Wt. 9.2
 Top Packer Depth 3942 Drill Collars Run 534 Vis 69
 Bottom Packer Depth 3947 Wt. Pipe Run 0 WL 5.6
 Total Depth 4042 Chlorides 1600 ppm System LCM 5

Blow Description IF; Built to 1/4" died in 25min
ISI; No Blow
FFI; No Blow
BSI; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>OSM</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 3 BHT 118° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2009</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>20:45</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>20:55</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>23:10</u>
(D) Initial Shut-In <u>513</u>	<input checked="" type="checkbox"/> Circ Sub <u>NA</u>	T-Pulled <u>2:10</u>
(E) Second Initial Flow <u>23</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>3:50</u>
(F) Second Final Flow <u>28</u>	<input checked="" type="checkbox"/> Mileage <u>65 RT</u> 100.75	Comments _____
(G) Final Shut-In <u>292</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1,951</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 1675.75

Sub Total 1675.75

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50637

Well Name & No. Ericksen 'RMP' 1-11 Test No. 4 Date 3-23-15
 Company Murphy Drilling Elevation 2820' KB 2810' GL
 Address 250 N Water St 300 Colichite KS 67202
 Co. Rep / Goo. Jeff Christen Rig Murphy 14
 Location: Sec. 11 Twp. 5S Rge. 31W Co. Rawlins State KS

Interval Tested 4254 4268 Zone Tested Cherokee
 Anchor Length 14 Drill Pipe Run 3712 Mud Wt. 9.2
 Top Packer Depth 4249 Drill Collars Run 534 Vis 0.7
 Bottom Packer Depth 4254 Wt. Pipe Run 0 WL 5.6
 Total Depth 4268 Chlorides 4600 ppm System LCM 5
 Blow Description JF Built to 9in
ISI surface Blow
FF Built to 10in
ISI Built to 1 1/2

Rec	Feet of	%gas	%oil	%water	%mud
<u>288</u>	<u>GO</u>	<u>40</u>	<u>60</u>		
<u>96</u>	<u>M40</u>	<u>20</u>	<u>60</u>	<u>20</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 384 BHT 128° Gravity 39.6068° = 388 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2062</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:45 pm</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>9:05 pm</u>
(C) First Final Flow <u>62</u>	<input type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:15</u>
(D) Initial Shut-In <u>255</u>	<input checked="" type="checkbox"/> Circ Sub <u>NA</u>	T-Pulled <u>4:15</u>
(E) Second Initial Flow <u>71</u>	<input checked="" type="checkbox"/> Hourly Standby <u>22:00 on 3-24-13</u>	T-Out <u>6:15</u>
(F) Second Final Flow <u>129</u>	<input checked="" type="checkbox"/> Mileage <u>65 RT</u> 100.75	Comments <u>Relayed @ 22:00</u>
(G) Final Shut-In <u>254</u>	<input type="checkbox"/> Sampler	<u>on 3-24-13</u>
(H) Final Hydrostatic <u>2,148</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>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>1675.75</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1675.75</u>	

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged or 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.

ALLIED

OIL & GAS SERVICES, LLC

PO Box 93999
Southlake, TX 76092

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

PROD COPY

OPERATOR PAY MDC
LEASE: BM

INVOICE

Invoice Number: 135256
Invoice Date: Mar 16, 2013
Page: 1

*Acct.
Prod-LH.*

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

Now Includes:

originals



Customer ID	Field Ticket #	Payment Terms	
Murfin	60070	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Mar 16, 2013	4/15/13

Quantity	Item	Description	Unit Price	Amount
190.00	MAT	Erickson RM #1-11 Class A Common	17.90	3,401.00
7.00	MAT	Chloride	64.00	448.00
199.81	SER	Cubic Feet	2.48	495.53
460.00	SER	Ton Mileage	2.60	1,196.00
1.00	SER	Surface	1,512.25	1,512.25
50.00	SER	Pump Truck Mileage	7.70	385.00
1.00	SER	Manifold Swedge Rental	275.00	275.00
50.00	SER	Light Vehicle Mileage	4.40	220.00
1.00	CEMENTER	LaRene Wentz		
1.00	OPER ASSIST	Paul Beaver		
1.00	OPER ASSIST	David Scariano		

Account	No.	Amount	Description
<i>ID203</i>		<i>5466.15</i>	<i>Cement S Cg. # 1-11</i>
<i>3</i>	<i>2160.0001</i>		

Subtotal	7,932.78
Sales Tax	309.84
Total Invoice Amount	8,242.62
Payment/Credit Applied	
TOTAL	8,242.62

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

\$ 2,776.47 *35%*

ONLY IF PAID ON OR BEFORE

Apr 10, 2013

Product

2776.47

5466.15

ALLIED OIL & GAS SERVICES, LLC 060070

Federal Tax I.D. # 20-8651475

MITTO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT
Dakota, KS
3-17-13

DATE <u>3-16-13</u>	SEC. <u>11</u>	TWP. <u>5</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>10:30pm</u>	JOB START <u>1130am</u>	JOB FINISH <u>2:00am</u>
LEASE <u>RM</u>	WELL # <u>1-11</u>	LOCATION <u>Rexford 2 1/2 W, 5 1/2 N, Sec, Rawlins</u>	COUNTY	STATE <u>KS</u>			
OLD OR NEW (Circle one)		<u>1 1/2, 3/4 E, Sinto</u>					

CONTRACTOR Murfin 14 OWNER Same

TYPE OF JOB Surface
HOLE SIZE 12 1/4" T.D. 2301
CASING SIZE 9 5/8" DEPTH 2301
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH

CEMENT AMOUNT ORDERED 190sk Com 3% CC

PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 13.76 bbl
EQUIPMENT

COMMON 190sk @ 17.90 3401.00
POZMIX @
GEL @
CHLORIDE 7sk @ 64.00 448.00
ASC @
HANDLING 199.81 @ 2.48 495.53
MILEAGE 2.2 hrs @ 50 @ 2.60 1196.00
TOTAL 5540.53

PUMP TRUCK CEMENTER Karlene E. White
431 HELPER Paul Beaver
BULK TRUCK DRIVER David Scarrano
396/306
BULK TRUCK DRIVER

REMARKS:

Mix 190 sks cement
Displace with water
Cement did circulate.

SERVICE

DEPTH OF JOB
PUMP TRUCK CHARGE 1512.25
EXTRA FOOTAGE @
MILEAGE MICU 50 @ 7.00 385.00
MANIFOLD Sledge @ 275.00
MICU 50 @ 4.40 220.00

CHARGE TO: Murfin Drilling Co
STREET
CITY STATE ZIP

TOTAL 2392.25

PLUG & FLOAT EQUIPMENT

@
@
@
@
TOTAL

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

SALES TAX (if Any)
TOTAL CHARGES 7,930.78
DISCOUNT 2,776.47 IF PAID IN 30 DAYS
5156.30 Net.

PRINTED NAME Orzy Church
SIGNATURE [Signature]

Acidz -

oc: W P
cc: Lin
cc: 6-1



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



Invoice

DATE	INVOICE #
4/2/2013	24169

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

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-11	Erickson RM	Rawlins	Company Tools	Oil	Development	Cement Port Collar	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
576D-D	Pump Charge - Port Collar				1	Job	1,250.00	1,250.00
330	Swift Multi-Density Standard (MIDCON II)				190	Sacks	16.50	3,135.00T
276	Flocele				50	Lb(s)	2.00	100.00T
290	D-Air				2	Gallon(s)	35.00	70.00T
581D	Service Charge Cement				400	Sacks	2.00	800.00
583D	Drayage				2,388.24	Ton Miles	1.00	2,388.24
	Subtotal							8,463.24
	Sales Tax Rawlins County						8.05%	266.05
USED FOR <u>1C 103</u> APPROVED <u>[Signature]</u>								

We Appreciate Your Business!

Total

\$8,729.29



Services, Inc.

CHARGE TO: WDPEN Drilling
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET No 24169

PAGE 1 OF 1

SERVICE LOCATIONS
 1. North KS WEL/PROJECT NO. 1-11 LEASE Erkson RM COUNTY/PARISH Rawlins STATE KS CITY Boxford DATE 2 APR 13 OWNER
 2. TICKET TYPE SERVICE CONTRACTOR CO TEAS RIG NAME/NO. Development SHIPPED WCT DELIVERED TO location ORDER NO.
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE cement part collar WELL PERMIT NO. 11-5-31
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT								
575		1			TRK 114	120	mi			6.00	720.00
576D		1			Pump Charge	1	ea			1250.00	1250.00
330		1			SWD cement	100	sk			16.50	3135.00
276		1			Fluore	50	lb			2.00	100.00
290		1			D-air	2	gal			35.00	70.00
583		1			Dozage	39804	lb			1.00	238824.00
581		1			service charge	400	sk			2.00	800.00

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 4/11/13 TIME SIGNED 7:00 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?
 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?
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	8463.24
TOTAL	8729.29

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR Byhall APPROVAL
 Thank You!

JOB LOG

SWIFT Services, Inc.

DATE **2 APR 13** PAGE NO. **1**

CUSTOMER **MURPIN Drilling** WELL NO. **1-11** LEASE **Ericksen RM** JOB TYPE **Cement port collar** TICKET NO. **24169**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								400 sk SMD w/ 1/4" floccle
								2 3/4" x 5 1/2" port collar @ 2564'
	0915							on loc TRK114
	0935					1200	1200	test to 1200 psi - hold
								open port collar
	0957	2 1/2	2			450		inj rate 2 1/2 bpm @ 450 psi
	1002	3 3/4				500		mix SMD cement @ 11.2 ppg fluid to surface
		3 3/4	3			500		
		3 3/4	40			600		
		3 3/4	75			750		
		3 3/4	100			800		
								— cement to surface —
								{ 190 sk mixed }
								{ 20 to pit }
	1030	3 3/4	8			850		Displace w/ H ₂ O
	1150					1200	1200	close port collar - test to 1200
								Run 6 joints
	1100		30					Reverse hole clean
								- 2 cement plugs -
	1110							wash truck
								Rack up
	1150							job complete
								Thanks
								Rob TJ & BIANE



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

Invoice

DATE	INVOICE #
3/25/2013	23957

Accty -
cc: WF
cc: L-1
cc: L-1

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

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-11	Erikson RM	Rawlins	Murfin Drilling	Oil	Development	LongString	Nick
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				110	Miles	6.00	660.00
578D-L	Pump Charge - Long String - 4380 Feet				1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
280	Flocheck 21				500	Gallon(s)	2.50	1,250.00T
403-5	5 1/2" Cement Basket				2	Each	250.00	500.00T
404-5	5 1/2" Port Collar				1	Each	2,400.00	2,400.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	250.00	250.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	350.00	350.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher				1	Each	40.00	40.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				225	Sacks	13.50	3,037.50T
276	Flocele				50	Lb(s)	2.00	100.00T
283	Salt				1,150	Lb(s)	0.20	230.00T
284	Calseal				11	Sack(s)	35.00	385.00T
285	CFR-1				150	Lb(s)	4.00	600.00T
581D	Service Charge Cement				225	Sacks	2.00	450.00
583D	Drayage				1,298	Ton Miles	1.00	1,298.00
Subtotal								14,700.50
Sales Tax Rawlins County							8.05%	868.80
USED FOR <u>IC 103</u> APPROVED <u>JR</u>								

We Appreciate Your Business!

Total

\$15,569.30



CHARGE TO: Murfin Drilling Co. Inc.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET
 No. 23957

PAGE 1 OF 2

SERVICE LOCATIONS
 1. Hays, KS WEL/PROJECT NO. #1-11 LEASE Ericksen "A" 11 COUNTY/PARISH Rawlins STATE KS DATE 3-25-13 OWNER Sammie
 2. Ness City, KS TICKET TYPE CONTRACTOR CONTRACTOR Murfin Drilling #14 RIG NAME/NO. _____ SHIPPED VIA KA DELIVERED TO Leebert ORDER NO. _____
 3. _____ WEL TYPE SALES WELL CATEGORY Development JOB PURPOSE long string WELL PERMIT NO. _____ WELL LOCATION _____
 4. _____ INVOICE INSTRUCTIONS _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE 110 #111	110	mi			6.00	660.00
575					Pump Charge (Long string)	1	EA	4350		1500.00	1500.00
221					RCL	4	rod			25.00	100.00
280					Flackback-21	500	gal			2.50	1250.00
403					Baskets	2	ea	54	11	250.00	500.00
404					Part Collar	1	ea			2400.00	2400.00
406					LD Plug Bar	1	ea			250.00	250.00
407					Inscr Float Shoe w/2-11	1	ea			350.00	350.00
409					Tubelizers	15	ea			90.00	1350.00
413					Rotawall scratcher	1	ea			40.00	40.00
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.

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

DATE SIGNED 3-25-13 TIME SIGNED 1:35 A.M. P.M.
 X Miller
 SURVEY
 OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?
 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? YES NO
 CUSTOMER DID NOT WISH TO RESPOND

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR Miller APPROVAL _____
 TOTAL 15,569.30
 TAX 868.90
 TOTAL 16,438.20
 Thank You!



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

TICKET CONTINUATION

TICKET No. 23957

CUSTOMER: *Martin D. Ig Co. Inc*

WELL: *W. B. Johnson R.M.*

DATE: *3-25-13* PAGE: *2* OF: *2*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT	
		LOC	ACCT	DE			QTY	UM	QTY	UM			
325		2				Standard Cement	225	sk			13.50	3037.50	
276		2				Flare/s	50	#	24	1/4"	2.00	100.00	
283		2				Salt	1150	#	10	1/2"	.00	232.00	
284		2				Calc/sal	11	sk	5	1/2"	35.00	385.00	
285		2				CFR-1	150	#	3	1/2"	4.00	600.00	
581		2									2.00	450.00	
585		2									1.00	1298.00	
SERVICE CHARGE							22	56	5				
MILEAGE CHARGE							236	00					
TOTAL WEIGHT							22	56	5				
LOADED MILES							118						
CUBIC FEET							1298						
TON MILES							1298						
CONTINUATION TOTAL											6100	50	

JOB LOG

SWIFT Services, Inc.

DATE 3-25-13 PAGE NO. 1

CUSTOMER Mudfin Pro Co, Inc.	WELL NO. #1-11	LEASE Erikson RM	JOB TYPE Longstring	TICKET NO. 23957
---------------------------------	-------------------	---------------------	------------------------	---------------------

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0850							07 10c w/FE
								RTD 4380'
								5 1/2" x 18.5" x 4364' x 21'
								Turbo 1-13, 42, 41
								Back 42, 43
								PC, 43 @ 2193' 2573'
	1130							start FE
	1230							2193' Break Circ
	1345							
	1440	5	0				200	start KCL flush 15 bbl
	1443	5	15/0				200	start Flocheck-21 500gal
	1445	5	12/0				200	start KCL flush 5 bbl
	1446	5	5/0				200	start 180 sks EA-2 cement
	1455		43					End Cement
								wash P&L
								Drop L.D. Plug
	1600	6	0				150	start Displacement
	1512	5	70				250	catch Cement
	1520		103.5				800 / 1500	Land Plug
								Flat Head
	1525	2.5	7/4					Plug RH & MH 30/15 sks EA-2

Thank you

Nick, David E. & Rob