



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1159740
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: _____



1159740

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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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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

September 25, 2013

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

Re: ACO1
API 15-065-23937-00-00
Ruder Unit 2-36
SE/4 Sec.36-10S-24W
Graham 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

Ruder Unit #2-36 335' FSL 2600' FEL Sec. 36-T10S-R24W 2331' KB							Ruder Unit #1-36 1430' FSL 2600' FEL Sec. 36-T10S-R24W 2360' KB	
Formation	Sample tops	Datum	Ref	Log Tops	Datum	Ref	Log Tops	Datum
Anhydrite	1933	+398	-7	1931	+400	-5	1955	+405
B/Anhydrite	1975	+356	-6	1972	+359	-3	1998	+362
Topeka	3440	-1109	-15	3437	-1106	-12	3454	-1094
Heebner	3661	-1330	-18	3656	-1325	-13	3672	-1312
Toronto	3683	-1352	-19	3678	-1347	-14	3693	-1333
Lansing	3697	-1366	-16	3691	-1360	-10	3710	-1350
BKC	3931	-1600	-18	3927	-1596	-14	3942	-1582
Cherokee	NR			NR			4140	-1780
Mississippi	NR			NR			4232	-1872
RTD	3985	-1654					4325	
LTD				3982	-1651		4327	-1967

Robert L. Milford

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS' REPORT
DRILLING TIME AND SAMPLE LOGS

OPERATOR **Murfin Drilling Company, Inc.**
LEASE **Ruder Unit #2-36**
LOC. SPOT **5'N & 40'E of C S2 S2 S2**

LOC. FOOTAGE **335' FSL 2 600' FEL**
SEC. **36** TWP **10S** RANG **24W**
COUNTY **Graham** STATE **Kansas**

API **15-065-23937-00-00**
CONTRACTOR **Murfin Drilling Co., Inc.** RIG NO. **16**
DRILLING STARTED **6-3-2013** COMPLETED **6-9-2013**
MUD DISPLACED **2,955'** MUD TYPE **Chemical**

DRILLING TIME KEPT FROM **3,330'** TO **RTD**
SAMPLES SAVED FROM **3,330'** TO **RTD**
SAMPLES EXAMINED FROM **3,330'** TO **RTD**
GEOLOGICAL SUPERVISION FROM **3,263'** TO **RTD**

FORMATION NAME TOP LOG DATUM TOP SAMPLE DATUM

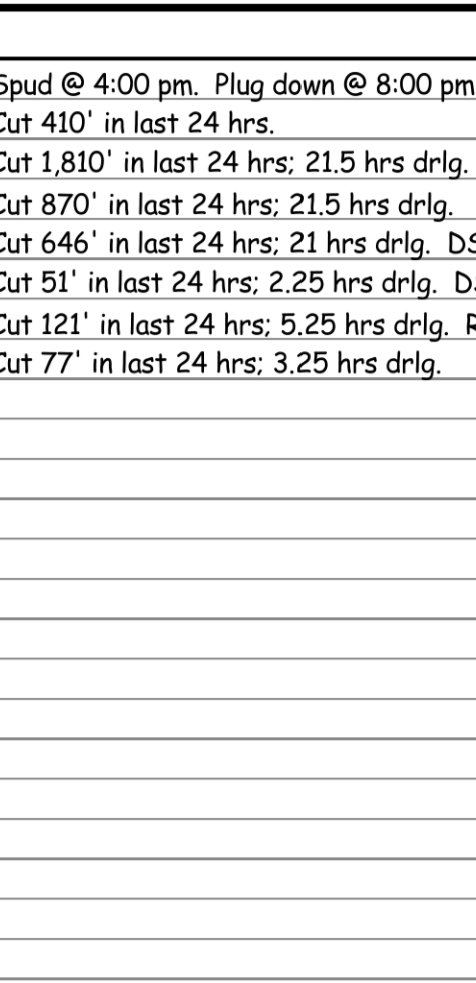
Stone Corral 1,931' +400 1,934' +397
Base Stone Corral 1,972' +359 1,975' +356
Topeka 3,437' -1106 3,440' -1109
Heebner 3,656' -1325 3,661' -1330
Toronto 3,678' -1347 3,683' -1352
Lansing 3,691' -1360 3,696' -1365
Stark 3,882' -1551 3,886' -1555
B/KC 3,927' -1596 3,931' -1600

Total Depth 3,982' -1651 3,985' -1654

ELEVATIONS
KB **2,331'**
GL **2,326'**

MEASUREMENTS FROM KB
CASING RECORD
Conductor
Surface **8.5/8" @ 218'**
w/ 150 sticks cement
Production none

ELECTRICAL SURVEYS
Pioneer Wireline:
Dual Induction Log
Dual Compensated -
Porosity Log
Microresistivity Log
Borehole Compensated -
Sonic Log



DATE	7:00 AM DEPTH	REMARKS
6-3-13	0'	Spud @ 4:00 pm. Plug down @ 8:00 pm. Drilled out plug @ 4:00 am on 6-4-13
6-4-13	410'	Cut 410' in last 24 hrs.
6-5-13	2,220'	Cut 1,810' in last 24 hrs; 21.5 hrs drlg. Dev.: 0.5° @ 2258'
6-6-13	3,090'	Cut 870' in last 24 hrs; 21.5 hrs drlg.
6-7-13	3,736'	Cut 646' in last 24 hrs; 21 hrs drlg. DST #1 @ 3763', DST #2 @ 3787'
6-8-13	3,787'	Cut 51' in last 24 hrs; 2.25 hrs drlg. DST #3 @ 3888'
6-9-13	3,908'	Cut 121' in last 24 hrs; 5.25 hrs drlg. RTD 3985' @ 11:10 am. P&A
6-10-13	3,985'	Cut 77' in last 24 hrs; 3.25 hrs drlg.

Remarks

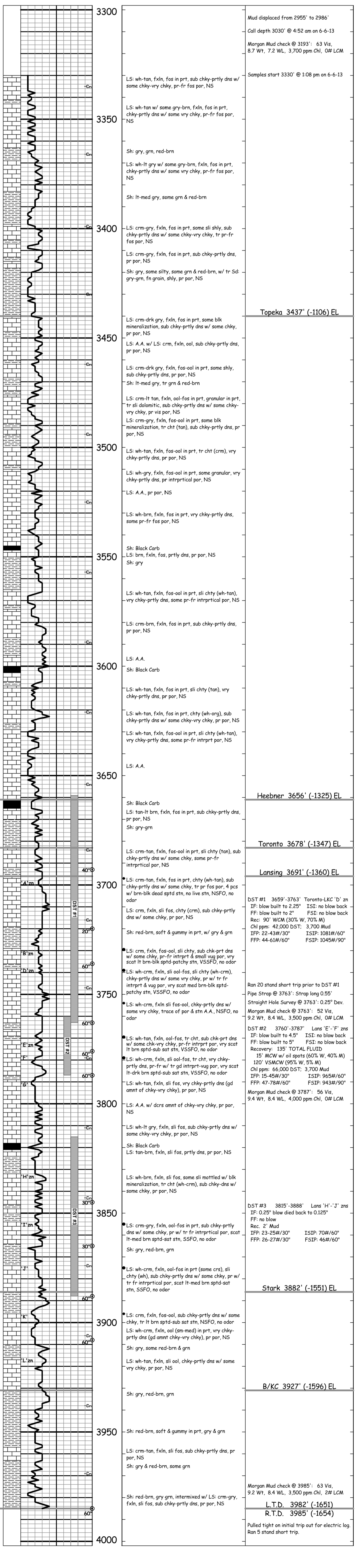
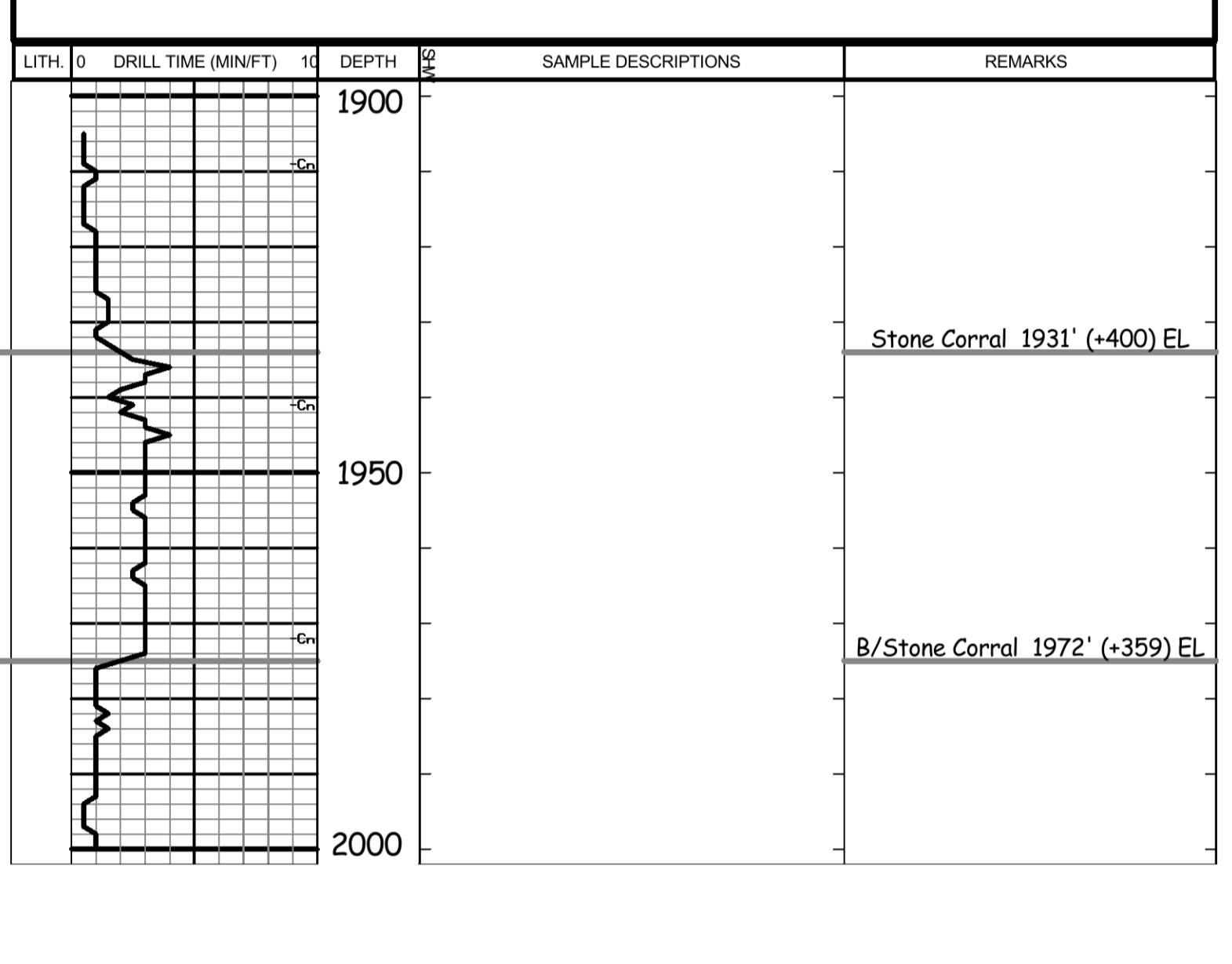
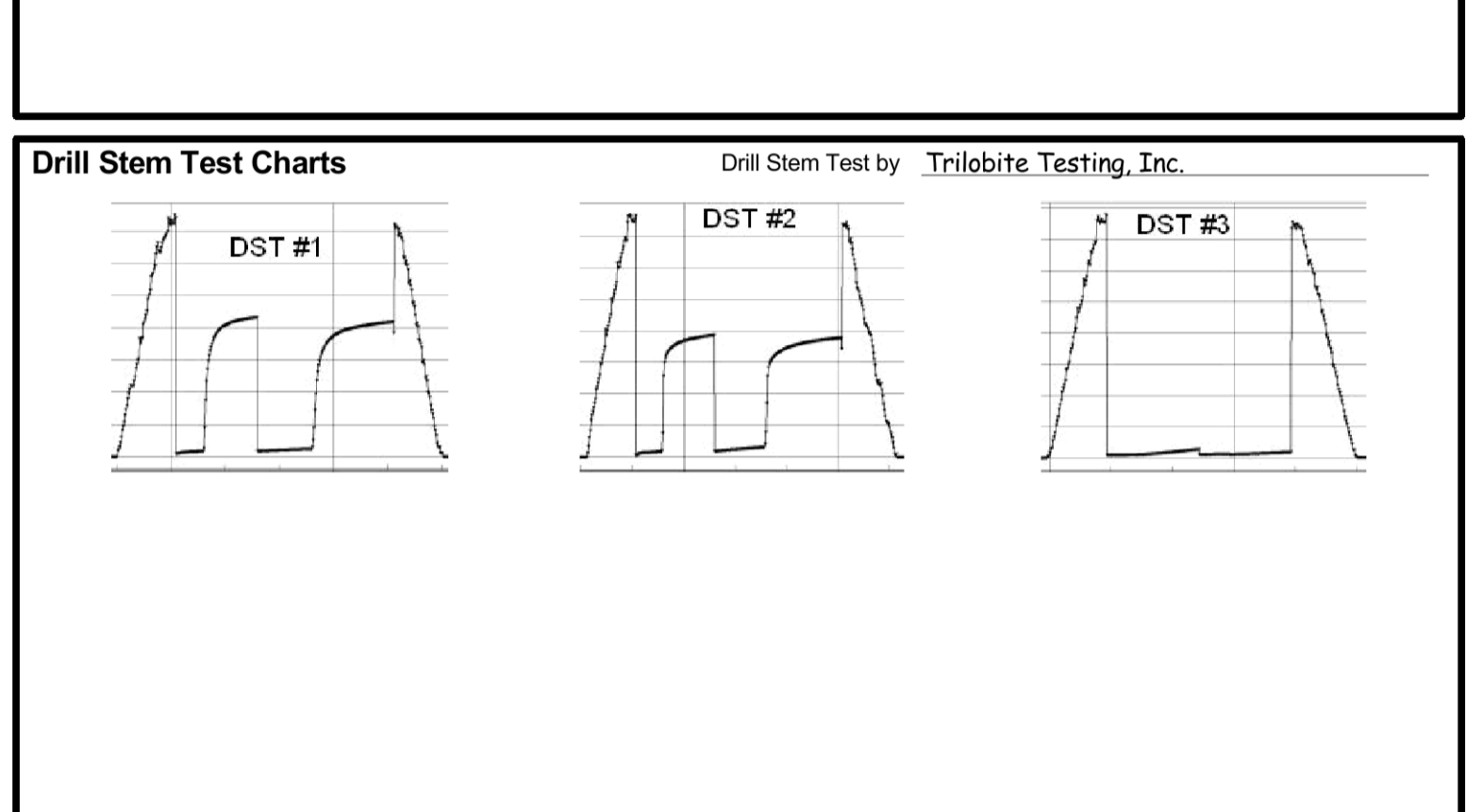
The electric log measurements correlate from 3' to 5' higher to the drilling measurements.

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

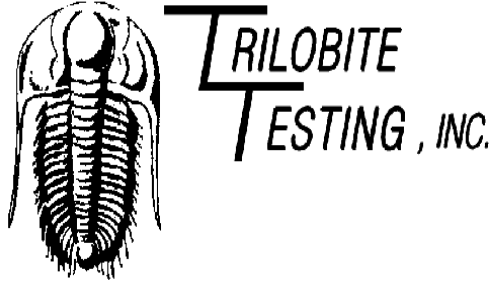
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford



Morgan Mud check @ 3985': 63 Vis, 9.2 Wt, 8.4 WL, 3,500 ppm Chl, 2# LCM
L.T.D. 3982' (-1651)
R.T.D. 3985' (-1654)
Pulled tight on initial trip out for electric log. Ran 5 stand short trip.



DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Ruder Unit #2-36

36-10s-24w Graham,KS

Start Date: 2013.06.07 @ 13:10:00

End Date: 2013.06.07 @ 20:19:30

Job Ticket #: 53892 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.12 @ 10:31:45



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

36-10s-24w Graham,KS

250 N Water STE 300
Wichita KS 67202

Ruder Unit #2-36

Job Ticket: 53892

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.06.07 @ 13:10:00

Tool Information

Drill Pipe:	Length: 3612.00 ft	Diameter: 3.80 inches	Volume: 50.67 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3659.00 ft			Final	55000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3632.00	
Shut In Tool	5.00			3637.00	
Hydraulic tool	5.00			3642.00	
Jars	5.00			3647.00	
Safety Joint	2.00			3649.00	
Packer	5.00			3654.00	28.00 Bottom Of Top Packer
Packer	5.00			3659.00	
Stubb	1.00			3660.00	
Recorder	0.00	8166	Inside	3660.00	
Recorder	0.00	8319	Outside	3660.00	
Perforations	4.00			3664.00	
Change Over Sub	1.00			3665.00	
Drill Pipe	94.00			3759.00	
Change Over Sub	1.00			3760.00	
Bullnose	3.00			3763.00	104.00 Bottom Packers & Anchor

Total Tool Length: 132.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

36-10s-24w Graham,KS
Ruder Unit #2-36
Job Ticket: 53892 **DST#: 1**
Test Start: 2013.06.07 @ 13:10:00

Mud and Cushion Information

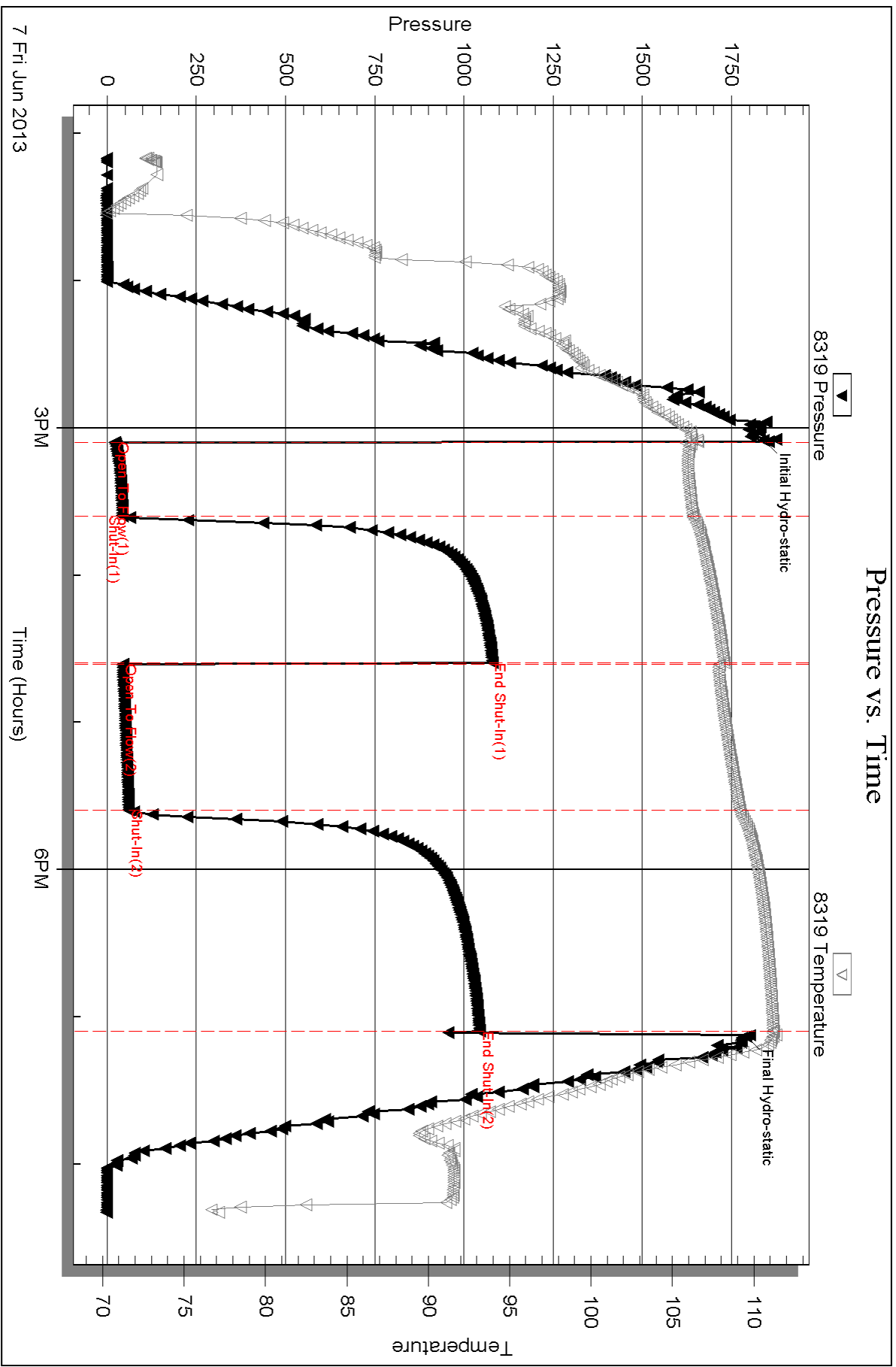
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	42000 ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3700.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	WCM 30%W 70%M	0.980

Total Length: 90.00 ft Total Volume: 0.980 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



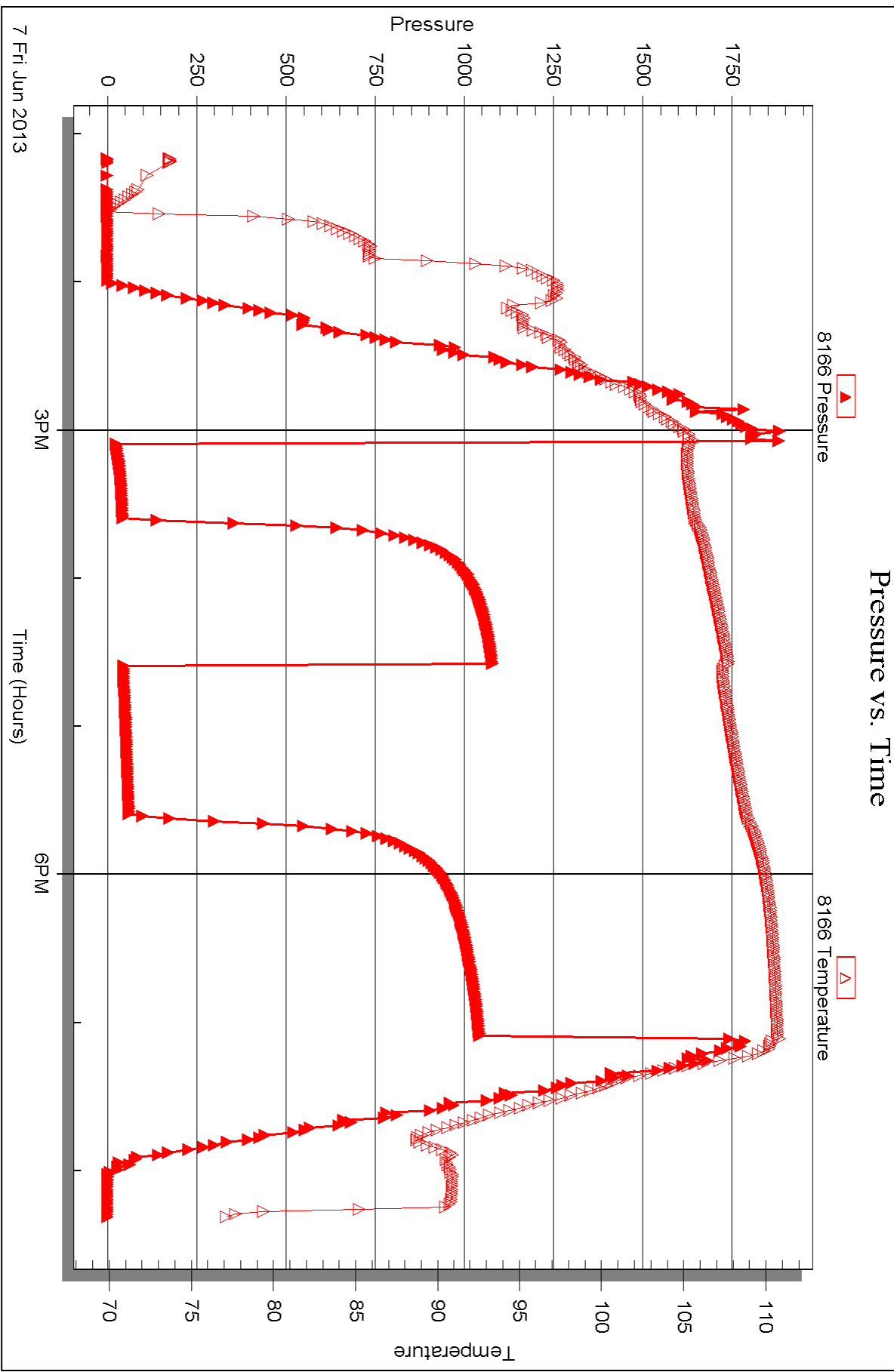
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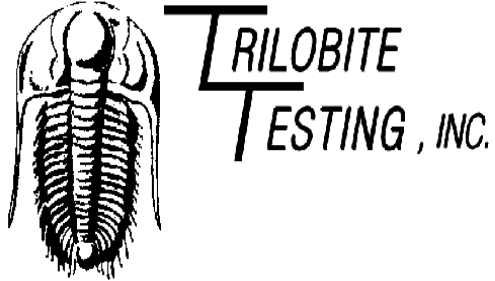
Inside

Murfin Drilling Co. Inc.

Ruder Unit #2-36

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Ruder Unit #2-36

36-10s-24w Graham,KS

Start Date: 2013.06.08 @ 02:55:00

End Date: 2013.06.08 @ 10:34:00

Job Ticket #: 53893 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.12 @ 10:31:12

Murfin Drilling Co. Inc. 36-10s-24w Graham,KS Ruder Unit #2-36 DST # 2 KC "E-F" 2013.06.08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

36-10s-24w Graham,KS

Ruder Unit #2-36

Job Ticket: 53893

DST#: 2

Test Start: 2013.06.08 @ 02:55:00

GENERAL INFORMATION:

Formation: **KC "E-F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:04:00
 Time Test Ended: 10:34:00
 Interval: **3760.00 ft (KB) To 3787.00 ft (KB) (TVD)**
 Total Depth: 3787.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2331.00 ft (KB)
 2326.00 ft (CF)
 KB to GR/CF: 5.00 ft

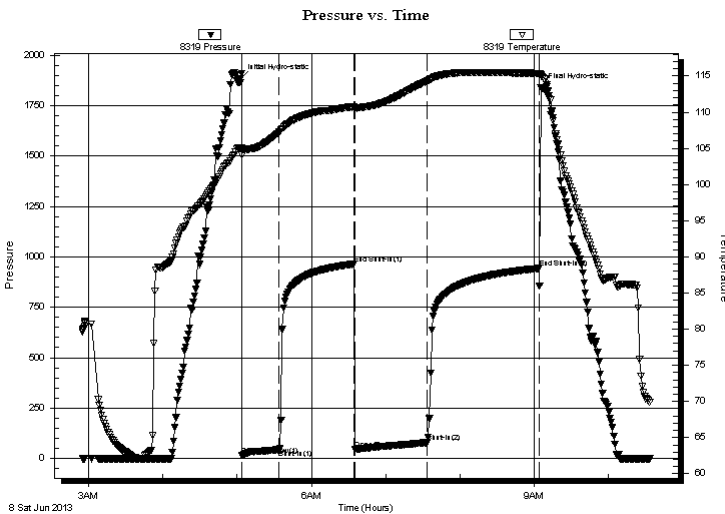
Serial #: 8319

Outside

Press @ Run Depth: 78.38 psig @ 3761.00 ft (KB)
 Start Date: 2013.06.08 End Date: 2013.06.08
 Start Time: 02:55:05 End Time: 10:33:59
 Capacity: 8000.00 psig
 Last Calib.: 2013.06.08
 Time On Btm: 2013.06.08 @ 05:03:00
 Time Off Btm: 2013.06.08 @ 09:06:00

TEST COMMENT: IF-4 1/2" blow
 IS- No blow
 FF-5" blow
 FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.99	105.05	Initial Hydro-static
1	15.07	104.11	Open To Flow (1)
31	44.66	107.27	Shut-In(1)
92	964.53	110.75	End Shut-In(1)
93	46.78	110.50	Open To Flow (2)
151	78.38	114.28	Shut-In(2)
241	943.28	115.37	End Shut-In(2)
243	1838.29	115.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	VSMCW 5%M 95%W	1.40
15.00	Oil spotted MCW 40%M 60%W	0.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

36-10s-24w Graham,KS

250 N Water STE 300
Wichita KS 67202

Ruder Unit #2-36

Job Ticket: 53893

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.06.08 @ 02:55:00

Tool Information

Drill Pipe:	Length: 3738.00 ft	Diameter: 3.80 inches	Volume: 52.43 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3760.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	48.00 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			3740.00	
Shut In Tool	5.00			3745.00	
Hydraulic tool	5.00			3750.00	
Packer	5.00			3755.00	21.00 Bottom Of Top Packer
Packer	5.00			3760.00	
Stubb	1.00			3761.00	
Recorder	0.00	8166	Inside	3761.00	
Recorder	0.00	8319	Outside	3761.00	
Perforations	23.00			3784.00	
Bullnose	3.00			3787.00	27.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

36-10s-24w Graham,KS
Ruder Unit #2-36
Job Ticket: 53893 **DST#: 2**
Test Start: 2013.06.08 @ 02:55:00

Mud and Cushion Information

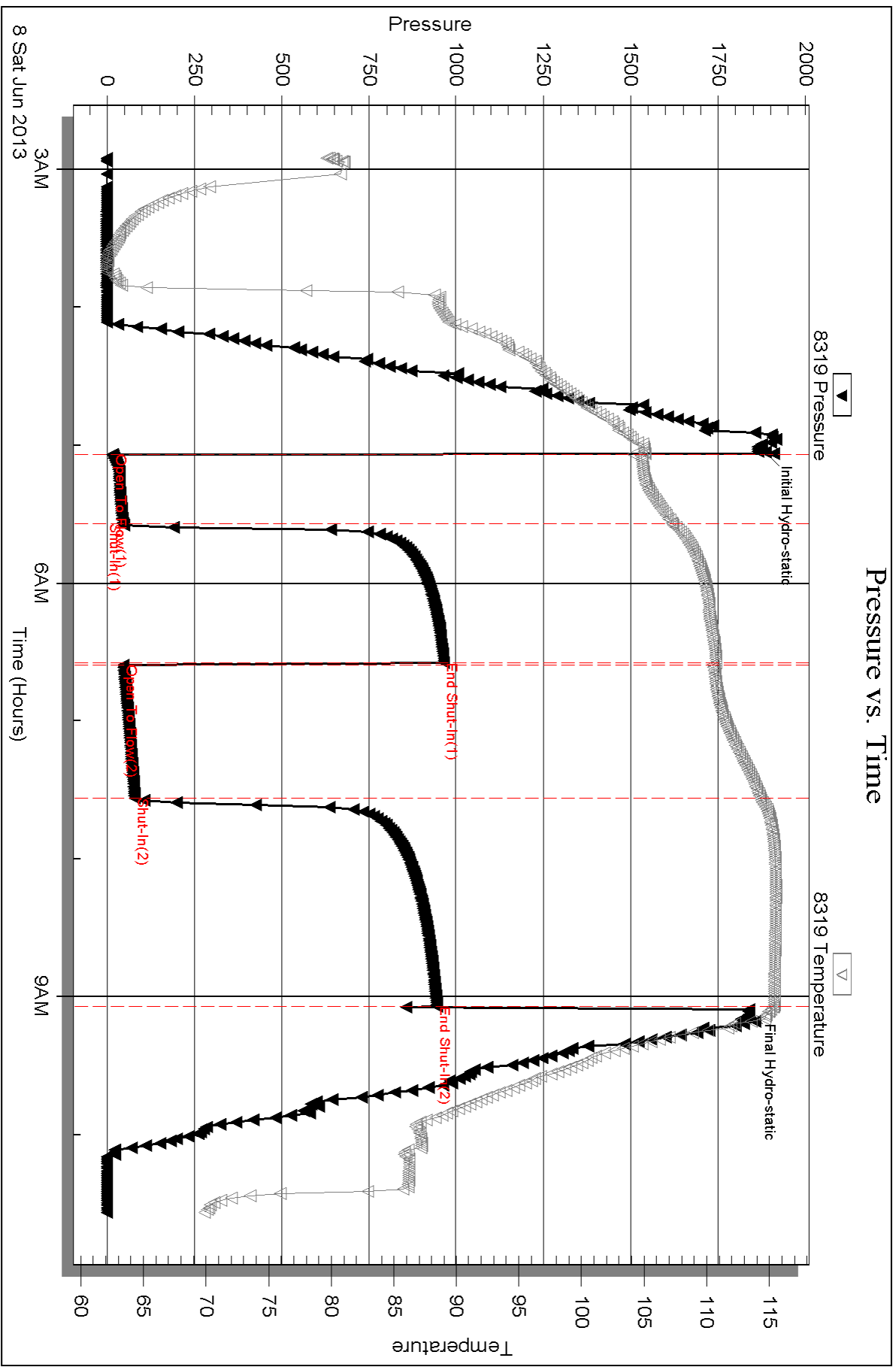
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 66000 ppm	
Viscosity: 63.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3700.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	VSMCW 5%M 95%W	1.401
15.00	Oil spotted MCW 40%M 60%W	0.210

Total Length: 135.00 ft Total Volume: 1.611 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



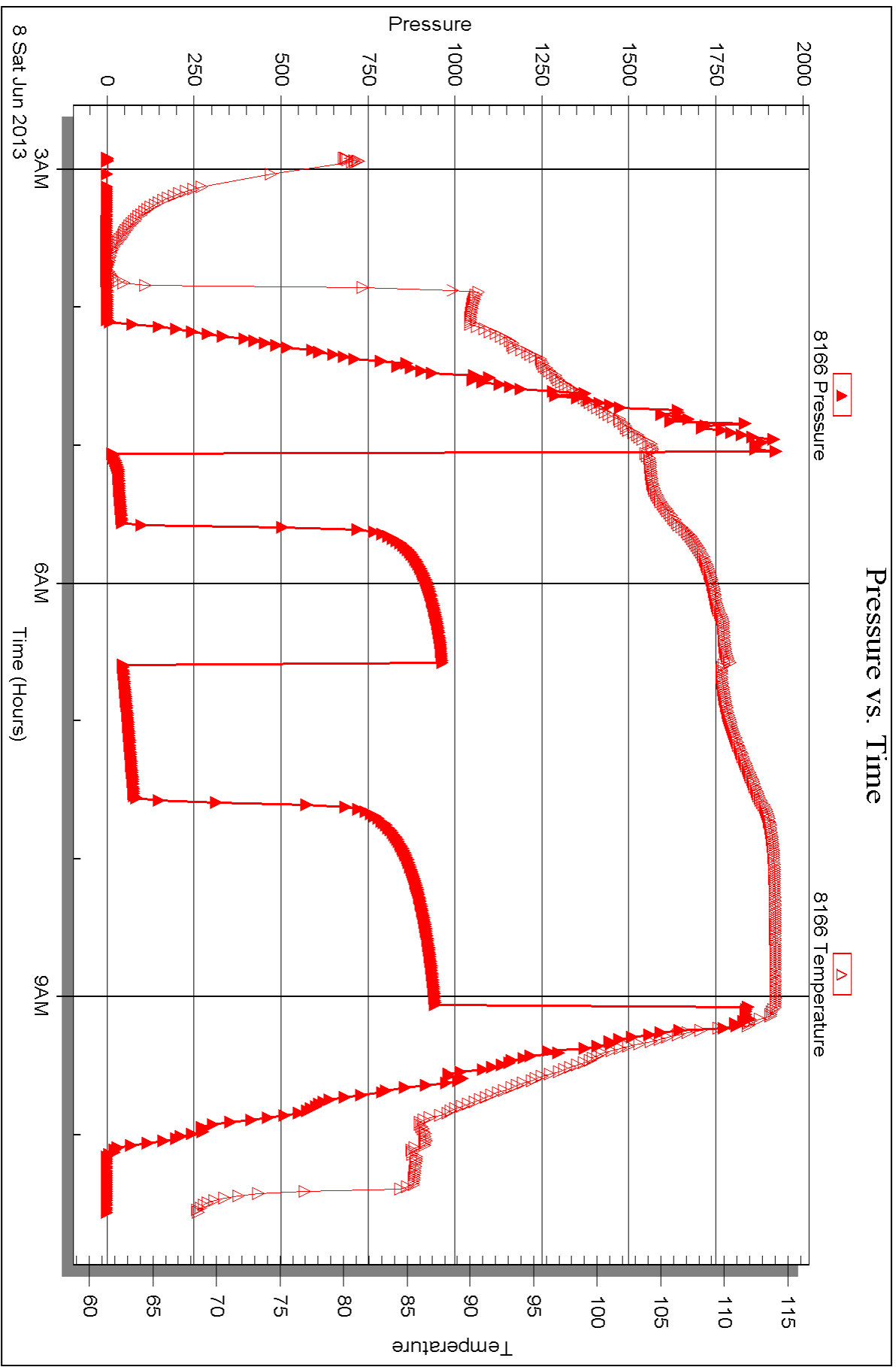
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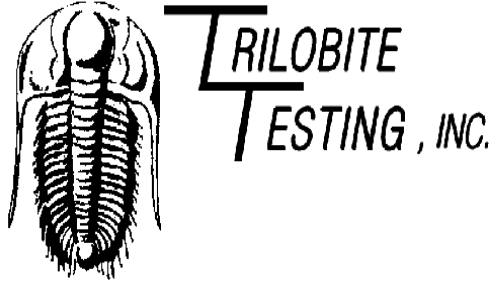
Inside

Murfin Drilling Co. Inc.

Ruder Unit #2-36

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Ruder Unit #2-36

36-10s-24w Graham,KS

Start Date: 2013.06.08 @ 20:03:00

End Date: 2013.06.09 @ 02:26:00

Job Ticket #: 53894 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.12 @ 10:27:57

Murfin Drilling Co. Inc. 36-10s-24w Graham,KS Ruder Unit #2-36 DST # 3 KC "H-J" 2013.06.08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

36-10s-24w Graham,KS

Ruder Unit #2-36

Job Ticket: 53894

DST#: 3

Test Start: 2013.06.08 @ 20:03:00

GENERAL INFORMATION:

Formation: **KC "H-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:56:30
 Time Test Ended: 02:26:00
 Interval: **3815.00 ft (KB) To 3888.00 ft (KB) (TVD)**
 Total Depth: 3888.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2331.00 ft (KB)
 2326.00 ft (CF)
 KB to GR/CF: 5.00 ft

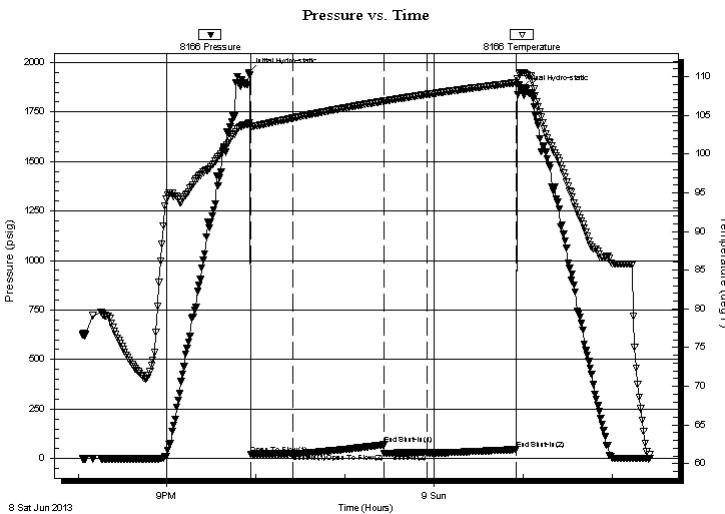
Serial #: 8166

Inside

Press @ Run Depth: 26.95 psig @ 3816.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.06.08 End Date: 2013.06.09 Last Calib.: 2013.06.09
 Start Time: 20:03:05 End Time: 02:25:59 Time On Btm: 2013.06.08 @ 21:55:00
 Time Off Btm: 2013.06.09 @ 00:59:00

TEST COMMENT: IF-1/4" blow died back to 1/8"
 IS- No blow
 FF- No blow
 FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1949.84	103.93	Initial Hydro-static
2	22.84	103.67	Open To Flow (1)
30	24.88	104.66	Shut-In(1)
91	70.33	106.85	End Shut-In(1)
92	26.14	106.85	Open To Flow (2)
121	26.95	107.71	Shut-In(2)
181	45.93	109.22	End Shut-In(2)
184	1865.72	110.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

36-10s-24w Graham,KS

250 N Water STE 300
Wichita KS 67202

Ruder Unit #2-36

Job Ticket: 53894

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.06.08 @ 20:03:00

Tool Information

Drill Pipe:	Length: 3770.00 ft	Diameter: 3.80 inches	Volume: 52.88 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3815.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	73.00 ft				
Tool Length:	101.00 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			3788.00	
Shut In Tool	5.00			3793.00	
Hydraulic tool	5.00			3798.00	
Jars	5.00			3803.00	
Safety Joint	2.00			3805.00	
Packer	5.00			3810.00	28.00 Bottom Of Top Packer
Packer	5.00			3815.00	
Stubb	1.00			3816.00	
Recorder	0.00	8166	Inside	3816.00	
Recorder	0.00	8319	Outside	3816.00	
Perforations	4.00			3820.00	
Change Over Sub	1.00			3821.00	
Drill Pipe	63.00			3884.00	
Change Over Sub	1.00			3885.00	
Bullnose	3.00			3888.00	73.00 Bottom Packers & Anchor

Total Tool Length: 101.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

36-10s-24w Graham,KS

250 N Water STE 300
Wichita KS 67202

Ruder Unit #2-36

Job Ticket: 53894

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.06.08 @ 20:03:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8166

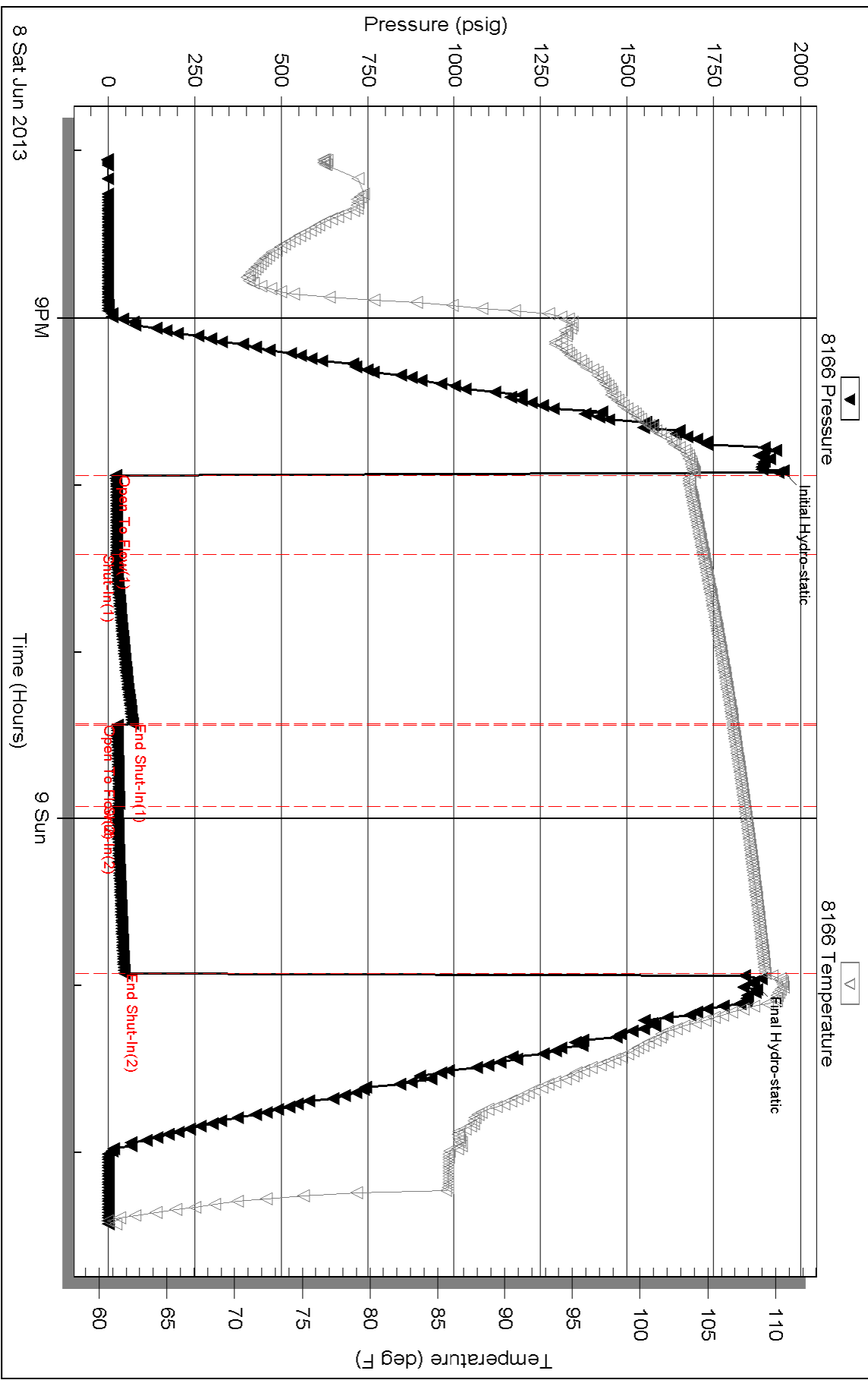
Inside

Murfin Drilling Co. Inc.

Ruder Unit #2-36

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53894

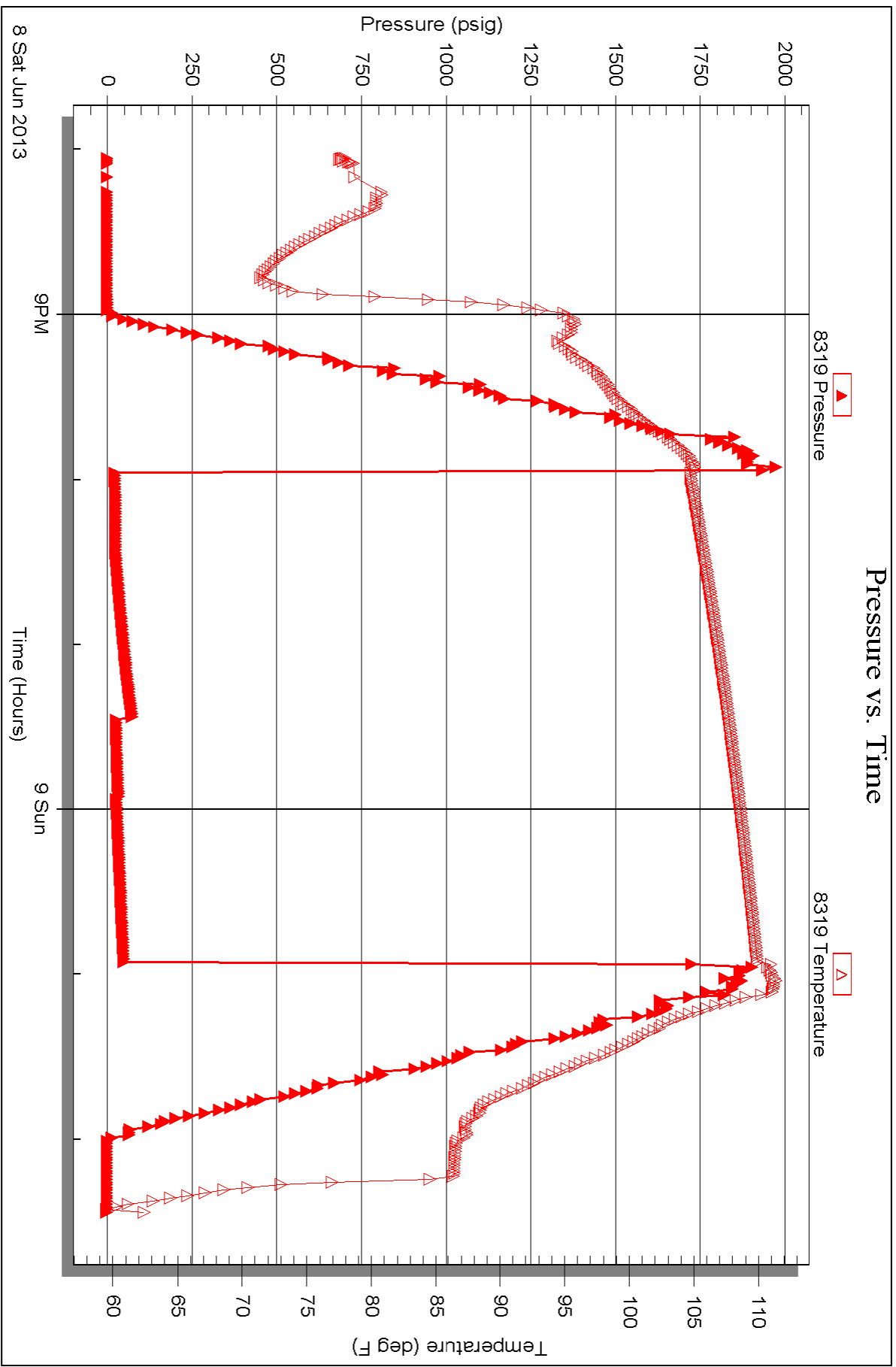
Printed: 2013.06.12 @ 10:27:59

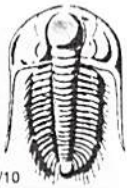
Serial #: 8319

Outside Murfin Drilling Co. Inc.

Ruder Unit #2-36

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53892

Well Name & No. Rader Unit #2-36 Test No. 1 Date 6/7/13
 Company Murfin Drilling Co. Inc. Elevation 2331 KB 2326 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 36 Twp. 10s Rge. 24w Co. Graham State KS

Interval Tested 3659 - 3763 Zone Tested Toronto - KC^D
 Anchor Length 104 Drill Pipe Run 3612 Mud Wt. 8.7
 Top Packer Depth 3654 Drill Collars Run 30 Vis 63
 Bottom Packer Depth 3659 Wt. Pipe Run — WL 7.2
 Total Depth 3763 Chlorides 3,700 ppm System LCM
 Blow Description IF - 2 1/4 in blow
ISI - No blow
FF - 2 in blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>wcm</u>			<u>30</u>	<u>70</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90 BHT 111 Gravity _____ API RW .18 @ 20 ° F Chlorides 42,000 ppm

(A) Initial Hydrostatic <u>1,840</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>11:50</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:10</u>
(C) First Final Flow <u>43</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:03</u>
(D) Initial Shut-In <u>1,081</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>19:03</u>
(E) Second Initial Flow <u>44</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>20:15</u>
(F) Second Final Flow <u>61</u>	<input checked="" type="checkbox"/> Mileage <u>94 ft</u> 145.70	Comments _____
(G) Final Shut-In <u>1,045</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1,291</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>60</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1620.70</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1620.70</u>	

Approved By _____ Our Representative Beth Duda

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. 53893

Well Name & No. Ruder Unit #2-36 Test No. 2 Date 6/8/13
 Company Murfin Drilling Co. Inc. Elevation 2331 KB 2326 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 36 Twp. 10s Rge. 24w Co. Graham State KS

Interval Tested 3260 - 3787 Zone Tested KC "E, F"
 Anchor Length 27 Drill Pipe Run _____ Mud Wt. 8.7
 Top Packer Depth 3755 Drill Collars Run 31 Vis 63
 Bottom Packer Depth 3260 Wt. Pipe Run - WL 7.2
 Total Depth 3787 Chlorides 3,700 ppm System LCM _____

Blow Description IF - 4 1/2 in blow
ISI - No blow
EF - 5 in blow
FSI - No blow

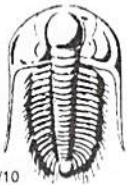
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>oil spotted mcn</u>			<u>60</u>	<u>40</u>
<u>120</u>	<u>vsmcn</u>			<u>95</u>	<u>5</u>
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 135 BHT _____ Gravity _____ API RW .12 @ 70 °F Chlorides 66,000 ppm

(A) Initial Hydrostatic <u>1,986</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2:35</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars _____	T-Started <u>2:55</u>
(C) First Final Flow <u>45</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>5:02</u>
(D) Initial Shut-In <u>965</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>9:02</u>
(E) Second Initial Flow <u>47</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>10:02</u>
(F) Second Final Flow <u>78</u>	<input checked="" type="checkbox"/> Mileage <u>94rt</u> 145.70	Comments _____
(G) Final Shut-In <u>943</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1,838</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>1295.70</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1295.70</u>	

Approved By _____ Our Representative Beth Dickman

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. 53894

Well Name & No. Ruder Unit #2-36 Test No. 3 Date 6/8/13
 Company Murfin Drilling Co Inc Elevation 2331 KB 2326 GL
 Address 250 N Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #16
 Location: Sec. 36 Twp. 10s Rge. 24 Co. Graham State KS

Interval Tested 3815-3888 Zone Tested KC" 14-0"
 Anchor Length 73 Drill Pipe Run 3770 Mud Wt. 9.4
 Top Packer Depth 3810 Drill Collars Run 31 Vis 56
 Bottom Packer Depth 3815 Wt. Pipe Run — WL 8.4
 Total Depth 3888 Chlorides 4,000 ppm System LCM

Blow Description IF - 1/4 in blow died back to 1/8 in blow
ISI - No blow
FF - No blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud</u>				

Rec Total 2 BHT 109 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 4,950 Test 1150 T-On Location 19:45
 (B) First Initial Flow 23 Jars 250 T-Started 20:03
 (C) First Final Flow 25 Safety Joint 75 T-Open 21:55
 (D) Initial Shut-In 70 Circ Sub T-Pulled 00:55
 (E) Second Initial Flow 26 Hourly Standby T-Out 2:25
 (F) Second Final Flow 27 Mileage 94RT 291.40 Comments _____
 (G) Final Shut-In 46 Sampler loaded tools 6/9 12:00
 (H) Final Hydrostatic 4,866 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30 Extra Recorder Sub Total 0
 Initial Shut-In 60 Day Standby Total 1766.40
 Final Flow 30 Accessibility MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1766.40

Approved By _____ Our Representative Bob Dickinson

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.



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 6/5/2013
 Invoice # 6908

P.O.#:
 Due Date: 7/5/2013
 Division: Russell
 Hill City

Invoice

Contact:
 Murfin Drilling Company
 Address/Job Location:
 Murfin Drilling Company
 P.O. Box 288
 Russell Ks 67665

OPERATOR PAY MDC
LEASE: Ruder
 unit 2-36
 /on

USED FOR _____
 APPROVED _____

Reference:
 RIVER UNIT 2-36
 Ruder
 Description of Work:
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	No				
Common-Class A	150	\$ 2,102.29	Yes				
Pump Truck Mileage-Job to Nearest Camp	52	\$ 580.01	No				
Bulk Truck Matl-Material Service Charge	158	\$ 353.18	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	52	\$ 339.41	No				
Calcium Chloride	5	\$ 266.34	Yes				
Premium Gel (Bentonite)	3	\$ 54.59	Yes				

Invoice Terms:

Net 30

Account	Qty	W	No.	Price	Taxable
10203				4,716.36	Yes
Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:				3,645.10	No
SubTotal for Taxable Items:				2,059.73	
SubTotal for Non-Taxable Items:				1,949.17	
Total:				4,008.91	
7.55% Graham County Sales Tax				155.51	
Amount Due:				4,164.42	
Applied Payments:					
Balance Due:				4,164.42	

Thank You For Your Business!

Amount Due: \$ 4,164.42
 Applied Payments:
 Balance Due: \$ 4,164.42

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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QUALITY OILWELL CEMENTING, INC.

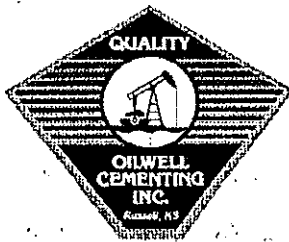
Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6908

Date	6-3-13	Sec.	36	Twp.	10	Range	24	County	Graham	State	KS	On Location		Finish	8:00 P.M.
Lease								Well No.		Owner					
Rider Unit								2-36		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Contractor										Charge To					
Murfen #16										Murfen Drilling					
Type Job								T.D.		Street					
Surface								220							
Hole Size								Depth		City					
12 1/4								218		State					
Csg.								Depth		The above was done to satisfaction and supervision of owner agent or contractor.					
8 5/8										Cement Amount Ordered					
Tbg. Size								Shoe Joint		150 com 30/60 20/60					
Tool															
Cement Left in Csg.															
15															
Meas Line								Displace							
								13 BCL							
EQUIPMENT										Common					
Pumptrk								No.		150					
15								Cementer							
								Helper							
Bulktrk								No.		Poz. Mix					
								Driver		3					
Bulktrk								No.		Gel.					
1								Driver		5					
								Driver		Calcium					
JOB SERVICES & REMARKS										Hulls					
Remarks:										Salt					
Rat Hole										Flowseal					
Mouse Hole										Kol-Seal					
Centralizers										Mud CLR 48					
Baskets										CFL-117 or CD110 CAF 38					
D/V or Port Collar										Sand					
8 5/8 on bottom. Est Circulation.										Handling 158					
Mix 150 skt Displace										Mileage					
Cement Circulated										FLOAT EQUIPMENT					
										Guide Shoe					
										Centralizer					
										Baskets 8 5/8 Surge					
										AFU Inserts					
										Float Shoe					
										Latch Down					
										Pumptrk Charge Surface					
										Mileage 52					
										Tax					
										Discount					
										Total Charge					
Signature															
Ag. [Signature]															



QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 West Wichita Ave, Russell KS 67665
 Phone: 785-324-1041 fax: 785-483-1087
 Email: cementing@ruraltel.net

Date: 6/9/2013
 Invoice # 6963

acct.
Prod-LH

P.O.#:

Due Date: 7/9/2013

Division: *Russell*

Invoice

Contact:
 Murfin Drilling Company
Address/Job Location:
 Murfin Drilling Company
 P.O. Box 288
 Russell Ks 67665

USED FOR _____

APPROVED _____

OPERATOR PAY MDG
LEASE: Ruder Unit 2-36
Am

Reference:
 RUDER UNIT 2-36

Description of Work:
 PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 1,020.55	Yes				
Common-Class A	132	\$ 1,850.02	Yes				
Pump Truck Mileage-Job to Nearest Camp	52	\$ 580.01	Yes				
Bulk Truck Mat-Material Service Charge	228	\$ 509.65	Yes				
POZ Mix-Standard	88	\$ 452.42	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	52	\$ 339.41	Yes				
Premium Gel (Bentonite)	8	\$ 145.56	Yes				
Flo Seal	50	\$ 111.76	Yes				
Dry Hole Plug	1	\$ 62.59	Yes				

Invoice Terms:

Net 30

SubTotal: \$ 5,071.97
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (760.80)

SubTotal for Taxable Items: \$ 4,311.18
 SubTotal for Non-Taxable Items: \$

Total: \$ 4,311.17
 Tax: \$ 325.49

7.55% Graham County Sales Tax

Thank You For Your Business!

Amount Due: \$ 4,636.66
 Applied Payments:
 Balance Due: \$ 4,636.66

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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OK
NR

FD203 3. 6451.0002 4636.66 PTA "2-36"

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6963

Date	6-9-13	Sec.	36	Twp.	10	Range	24	County	GRAHAM	State	KANSAS	On Location		Finish	11:30 am
------	--------	------	----	------	----	-------	----	--------	--------	-------	--------	-------------	--	--------	----------

Location WAKEFELY NTO BRN-5 W-1 N- E/INTO

Lease	<u>RUNER UNIT</u>	Well No.	<u>2-36</u>	Owner	<u>MURETN DRILLING</u>
Contractor	<u>MURETN #16</u>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	<u>P.T.A</u>				
Hole Size	<u>7 7/8"</u>	T.D.	<u>3,985</u>	Charge To	<u>MURETN DRILLING</u>
Csg.	<u>4 1/2"</u>	Depth		Street	<u>250 N. WATER - STE 300</u>
Tbg. Size		Depth		City	<u>WICHITA</u> State: <u>KS</u>
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	<u>220 SKS</u> ^{6%} <u>40.702</u> ^{4%} <u>480</u>

Meas Line	Displace	EQUIPMENT		Common	<u>132</u>
Pumptrk # <u>16</u>	No.	Cementer		Poz. Mix	<u>88</u>
		Helper	<u>LOANIT W.</u>	Gel.	<u>3</u>
Bulktrk	No.	Driver		Calcium	
		Driver	<u>LOANIT M.</u>		
Bulktrk	No.	Driver			
		Driver	<u>CISCO A</u>		

JOB SERVICES & REMARKS		Hulls	
Remarks:		Salt	
Rat Hole	<u>30 SKS</u>	Flowseal	<u>50#</u>
Mouse Hole	<u>15 SKS</u>	Kol-Seal	
Centralizers		Mud CLR 48.	
Baskets		CFL-117 or CD110 CAF 38	
D/V or Port Collar		Sand	
		Handling	<u>228</u>
		Mileage	

1st @	<u>1,940'</u>	<u>25 SKS</u>
2nd @	<u>1,100'</u>	<u>100 SKS</u>
3rd @	<u>270'</u>	<u>40 SKS</u>
4th @	<u>40'</u>	<u>10 SKS</u>
RATHOLE		<u>30 SKS</u>
MOUSEHOLE		<u>15 SKS</u>
TOTAL		<u>220 SKS</u>

FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	<u>1- 8 5/8" WOODEN PLUG</u>

Pumptrk Charge	<u>plug</u>	Tax	
Mileage	<u>52</u>	Discount	
		Total Charge	
X Signature	<u>Ag. Lital</u>		