



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1102048
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: _____



1102048

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> <input type="checkbox"/> Other <i>(Specify)</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

November 20, 2012

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

Re: ACO1
API 15-153-20904-00-00
Hatch 1-30X
SE/4 Sec.30-01S-36W
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

MDCI Hatch #1-30X 2000' FSL 2100' FEL Sec. 30-1S-36W 3329' KB							MDCI Johnsen 'D' #1-25 2276' FSL 660' FWL Sec. 25-T1S-R37W 3317' KB	
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3236	+93	+18	3235	+94	+19	3242	+75
B/Anhydrite	3271	+58	+17	3269	+60	+19	3276	+41
Neva	3720	-391	+9	3711	-382	+18	3717	-400
Red Eagle	3782	-453	+11	3774	-448	+19	3781	-464
Foraker	3834	-505	+11	3825	-496	+20	3833	-516
Stotler	3983	-654	+13	3973	-644	+23	3984	-667
Topeka	4051	-722	+14	4050	-721	+15	4053	-736
Oread	4181	-852	+15	4174	-845	+22	4184	-867
Lansing	4265	-936	+18	4258	-929	+25	4271	-954
Stark	----	---	---	4475	-1146	+24	4487	-1170
BKC	4532	-1203	+22	4527	-1198	+27	4542	-1225
RTD	4600						5070	
LTD				4600			5070	

Robert L. Milford

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR - **Murfin Drilling Company, Inc.**
LEASE - **Hatch #1-30X**
LOC. SPOT - **20' N & 120' W of C NW SE**

LOC. FOOTAGE - **2,000' FSL 2,100' FEL**

SEC. - **30** TWPSP - **15** RING - **36W**

COUNTY - **Rawlins** STATE - **Kansas**

API - **15-153-20904-00-00**

CONTRACTOR - **Murfin Drilling Co., Inc.** RIG NO. - **3**
DRILLING STARTED - **7-28-2012** COMPLETED - **8-6-2012**
MUD DISPLACED - **3,500** MUD TYPE - **Chemical**
DRILLING TIME KEPT FROM - **3,630'** TO - **RTD**
SAMPLES SAVED FROM - **3,630'** TO - **RTD**
SAMPLES EXAMINED FROM - **3,630'** TO - **RTD**
GEOLOGICAL SUPERVISION FROM - **3,401'** TO - **RTD**

CEMENT - **13-3/8" @ 281'**
Production - **5-1/2" @ 4899'**
w/ 175 sacks cement

PIioneer Wireline:
Dial Induction Log
Dial Compensated -

MSR/FBI/NSI/FROM/RS
CASINO RECORD
Conductor

ELEVATIONS
KB - **3,329'**
GL - **3,324'**

FORMATION NAME

FORMATION NAME	LOG TOP	LOG DATUM	SAMPLE TOP	SAMPLE DATUM
Stone Corral	3,235'	+94	3,236'	+93
Base Stone Corral	3,269'	+82	3,271'	+82
Neva	3,711'	-382	3,711'	-382
Foraker	3,825'	-496	3,825'	-496
Topoka	4,050'	-721	4,051'	-722
Oread	4,174'	-845	4,175'	-846
Lansing	4,258'	-929	4,258'	-929
Stark	4,475'	-1146	4,476'	-1147
B/KC	4,527'	-1198	4,528'	-1199
Total Depth	4,600'	-1271	4,600'	-1271



DATE	7:00 AM DEPTH	REMARKS
7-25-12	0'	Spud @ 1:45 pm. 17.5" bit to 251'. Plug down @ 1:45 am on 7-26-12.
7-26-12	251'	Cut 251' in last 24 hrs. DO @ 9:45 am w/ 8.75" bit. Dev: 0.8" @ 1147'. Lost circ @ 1584'
7-27-12	1,584'	Cut 1,333' in last 24 hrs; 13.5 hrs drlg. Bit trip @ 2045'; changed to 7-7/8" bit.
7-28-12	2,365'	Cut 781' in last 24 hrs; 16 hrs drlg. Dev. 0.2" @ 2394'
7-29-12	3,010'	Cut 645' in last 24 hrs; 22 hrs drlg.
7-30-12	3,580'	Cut 570' in last 24 hrs; 21 hrs drlg. DST #1 @ 3850'
7-31-12	3,850'	Cut 270' in last 24 hrs; 8.75 hrs drlg. DST #2 @ 4044'
8-1-12	4,044'	Cut 194' in last 24 hrs; 9 hrs drlg. DST #3 @ 4188'
8-2-12	4,188'	Cut 144' in last 24 hrs; 8.75 hrs drlg.
8-3-12	4,290'	Cut 102' in last 24 hrs; 7 hrs drlg. DST #4 @ 4400'
8-4-12	4,400'	Cut 110' in last 24 hrs; 6.75 hrs drlg. DST #5 @ 4481'
8-5-12	4,481'	Cut 81' in last 24 hrs; 5.75 hrs drlg. RTD 4600' @ 11:55 pm
8-6-12	4,600'	Cut 119' in last 24 hrs; 8.5 hrs drlg. Ran production casing

Remarks

This well replaced the Hatch #1-30, which was P&A @ 1862' due to severe lost circ. in the Niobrara. The rig was moved 150' west for the location of the Hatch #1-30X.

Samples were poor throughout the well. See Remarks with the Sample Description for explanation.

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

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

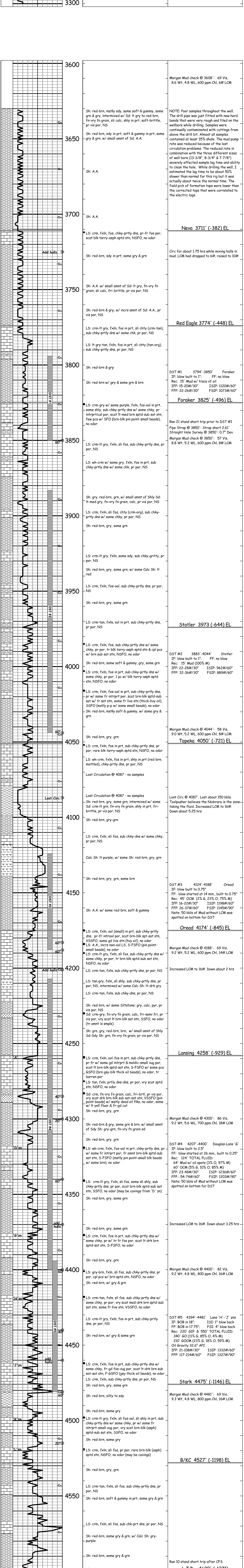
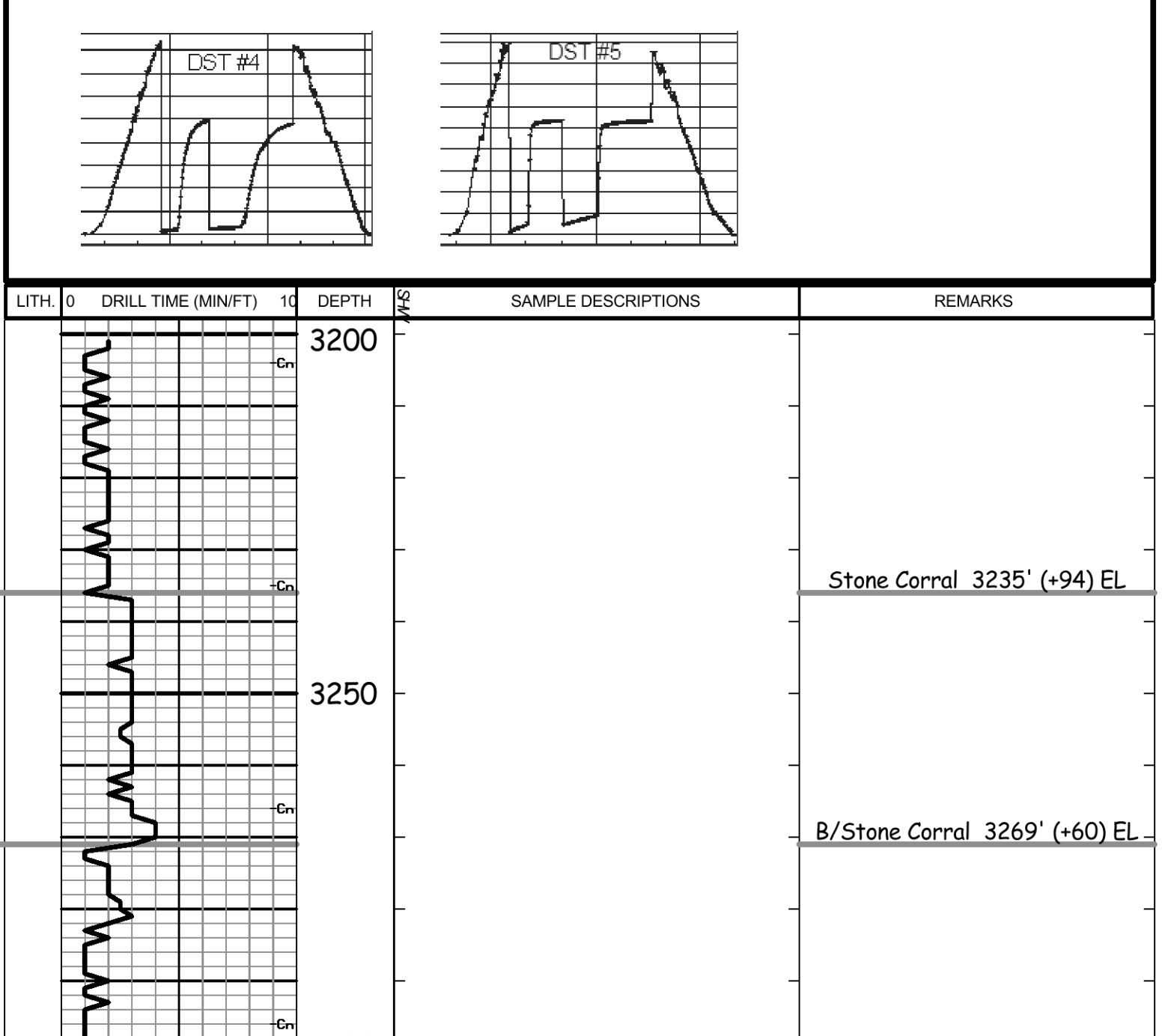
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford

Drill Stem Test Charts

Drill Stem Test by Trilobite Testing, Inc.



Ran 10 stand short trip after CFS
L.T.D. 4600' (-1271)
R.T.D. 4600' (-1271)
Straight Hole Survey @ 4600': 0.6" Dev.



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Hatch #1-30X

30-1s-36w Rawlins KS

Start Date: 2012.07.31 @ 03:20:00

End Date: 2012.07.31 @ 11:44:00

Job Ticket #: 46138 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.10 @ 14:01:01



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46138

DST#: 1

Test Start: 2012.07.31 @ 03:20:00

GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:47:30

Time Test Ended: 11:44:00

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3794.00 ft (KB) To 3850.00 ft (KB) (TVD)

Reference Elevations: 3329.00 ft (KB)

Total Depth: 3850.00 ft (KB) (TVD)

3324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 25.69 psig @ 3795.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.31

End Date:

2012.07.31

Last Calib.:

2012.07.31

Start Time:

03:20:05

End Time:

11:43:59

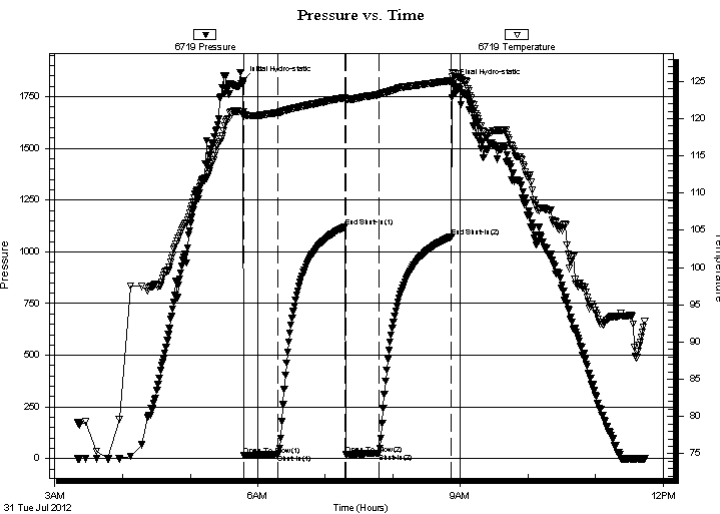
Time On Btm:

2012.07.31 @ 05:47:00

Time Off Btm:

2012.07.31 @ 08:53:00

TEST COMMENT: 30 - IF: 1/4" blow at open, built slowly to 1"
 60 - IS: Bled off, No blow back
 30 - FF: No blow
 60 - FS: No blow back



PRESSURE SUMMARY

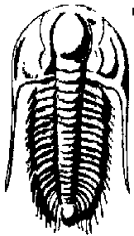
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1826.96	120.94	Initial Hydro-static
1	15.01	120.28	Open To Flow (1)
31	19.96	120.82	Shut-In(1)
91	1119.82	122.83	End Shut-In(1)
92	21.57	122.62	Open To Flow (2)
121	25.69	123.21	Shut-In(2)
185	1072.93	125.09	End Shut-In(2)
186	1811.63	126.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /trace of Oil 100% m	0.07

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46138

DST#: 1

Test Start: 2012.07.31 @ 03:20:00

GENERAL INFORMATION:

Formation: **Foraker**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:47:30

Time Test Ended: 11:44:00

Interval: 3794.00 ft (KB) To 3850.00 ft (KB) (TVD)

Total Depth: 3850.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Reference Elevations: 3329.00 ft (KB)

3324.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 3795.00 ft (KB)

Start Date: 2012.07.31

End Date: 2012.07.31

Capacity: 8000.00 psig

Last Calib.: 2012.07.31

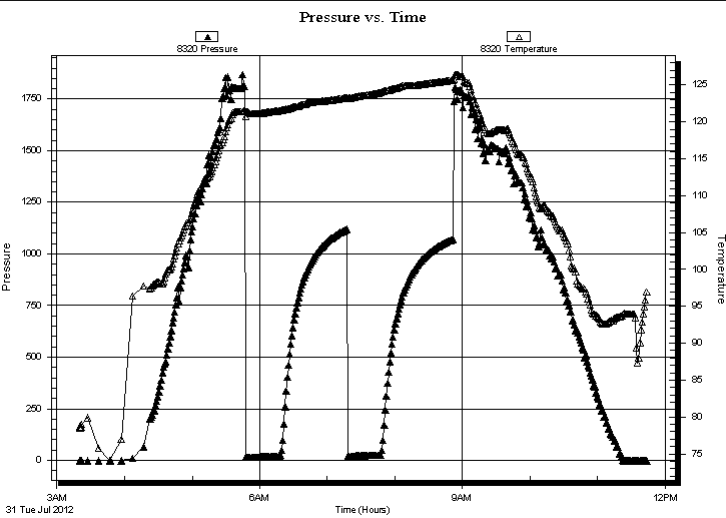
Start Time: 03:20:05

End Time: 11:43:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 1/4" blow at open, built slowly to 1"
60 - IS: Bled off, No blow back
30 - FF: No blow
60 - FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w /trace of Oil 100% m	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46138 **DST#: 1**
Test Start: 2012.07.31 @ 03:20:00

Tool Information

Drill Pipe:	Length: 3271.00 ft	Diameter: 3.80 inches	Volume: 45.88 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: 515.00 ft	Diameter: 2.25 inches	Volume: 2.53 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3794.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Rig tripped slowly due to loss circulation up hole and drill pipe is newly hardbanded so the elevators get stuck on pipe

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3771.00	
Hydraulic tool	5.00			3776.00	
Jars	5.00			3781.00	
Safety Joint	3.00			3784.00	
Packer	5.00			3789.00	28.00 Bottom Of Top Packer
Packer	5.00			3794.00	
Stubb	1.00			3795.00	
Recorder	0.00	6719	Inside	3795.00	
Recorder	0.00	8320	Outside	3795.00	
Perforations	15.00			3810.00	
Blank Spacing	33.00			3843.00	
Perforations	4.00			3847.00	
Bullnose	3.00			3850.00	56.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46138 **DST#: 1**
Test Start: 2012.07.31 @ 03:20:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 600.00 ppm			
Filter Cake: 2.00 inches			

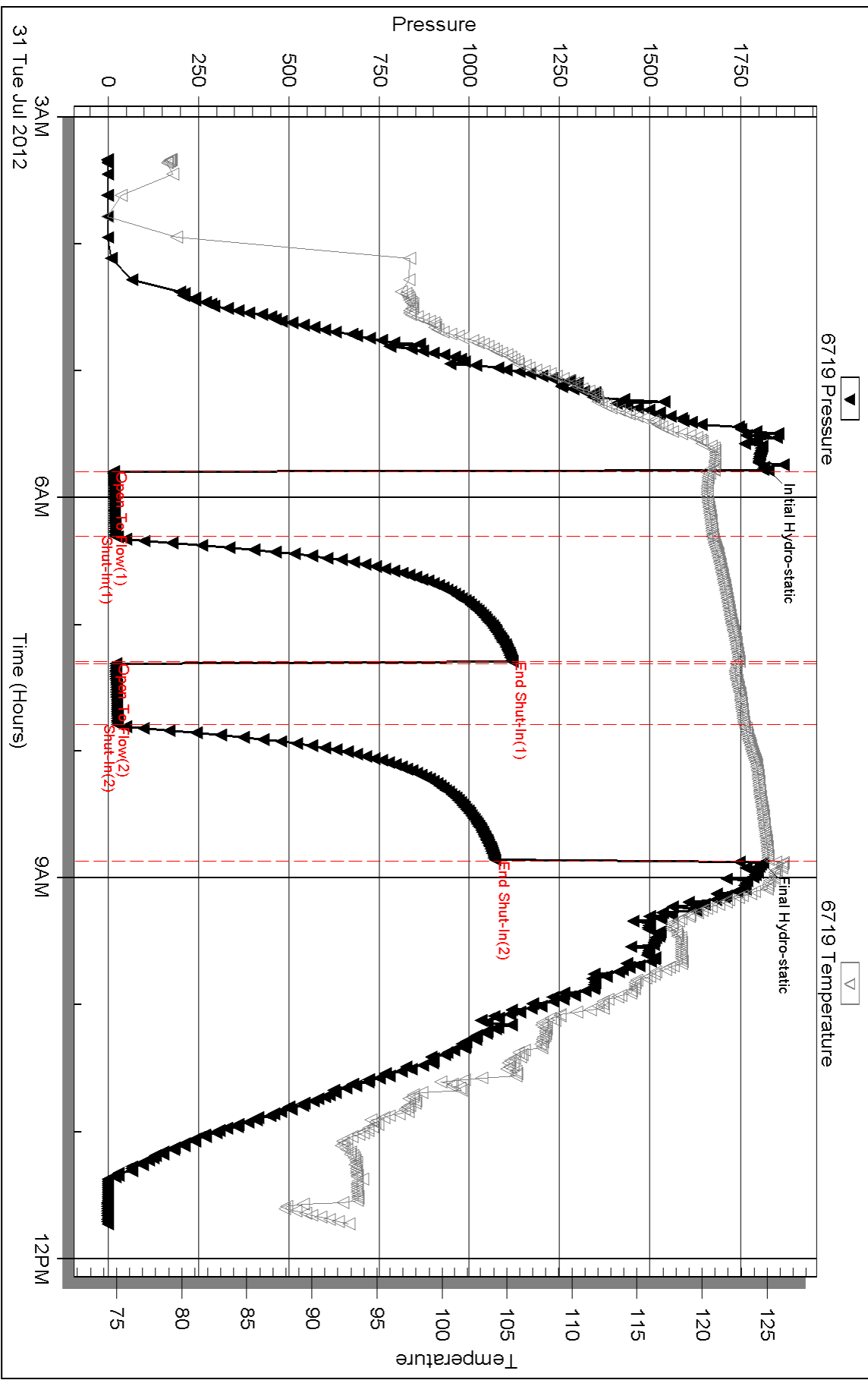
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w /trace of Oil 100%m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: LCM = 8#

Pressure vs. Time

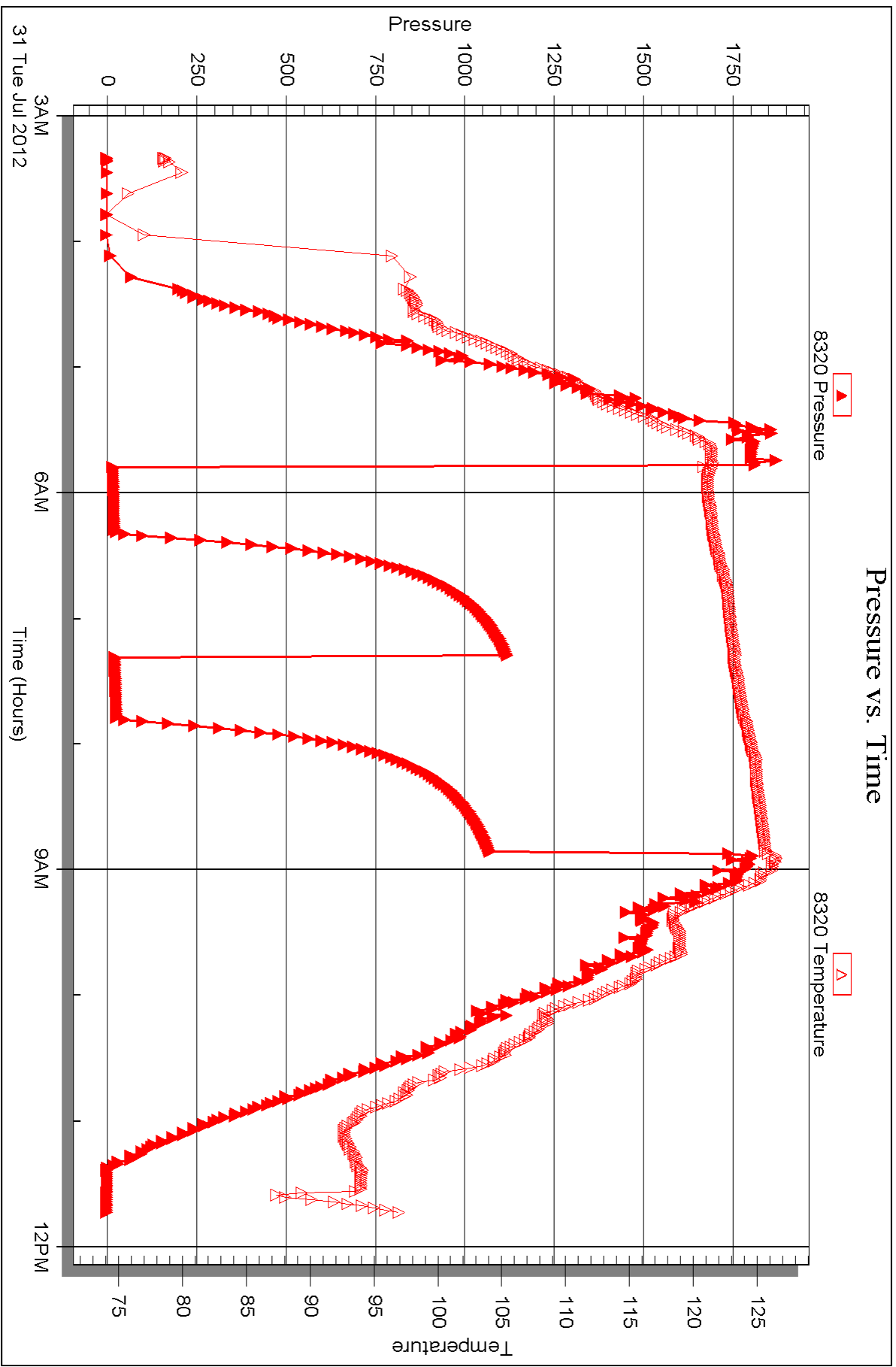


Serial #: 8320

Outside Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Hatch #1-30X

30-1s-36w Rawlins KS

Start Date: 2012.08.01 @ 03:42:00

End Date: 2012.08.01 @ 11:37:00

Job Ticket #: 46139 DST #: 2

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

Printed: 2012.08.10 @ 14:00:16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46139

DST#: 2

Test Start: 2012.08.01 @ 03:42:00

GENERAL INFORMATION:

Formation: **Stotler**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:52:30
 Time Test Ended: 11:37:00
 Interval: **3883.00 ft (KB) To 4044.00 ft (KB) (TVD)**
 Total Depth: 4044.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 3329.00 ft (KB)
 3324.00 ft (CF)
 KB to GR/CF: 5.00 ft

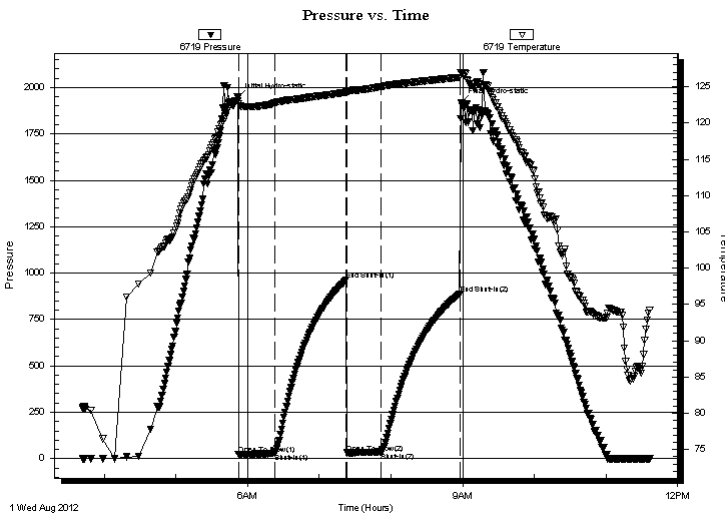
Serial #: 6719

Inside

Press @ Run Depth: 36.47 psig @ 3884.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.01 End Date: 2012.08.01 Last Calib.: 2012.08.01
 Start Time: 03:42:05 End Time: 11:36:59 Time On Btm: 2012.08.01 @ 05:52:00
 Time Off Btm: 2012.08.01 @ 08:59:00

TEST COMMENT: 30 - IF: Blow built to 1" in 10 min., died back slightly by close
 60 - IS: Bled off, No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.86	123.04	Initial Hydro-static
1	22.25	122.65	Open To Flow (1)
31	28.05	122.72	Shut-In(1)
91	962.08	124.23	End Shut-In(1)
91	31.54	124.16	Open To Flow (2)
120	36.47	125.01	Shut-In(2)
186	889.03	126.29	End Shut-In(2)
187	1920.24	126.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.07

* 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
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Rocky Milford

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46139 **DST#: 2**
Test Start: 2012.08.01 @ 03:42:00

Tool Information

Drill Pipe:	Length: 3364.00 ft	Diameter: 3.80 inches	Volume: 47.19 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: 515.00 ft	Diameter: 2.25 inches	Volume: 2.53 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 49.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3883.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	161.00 ft			
Tool Length:	189.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			3860.00	
Hydraulic tool	5.00			3865.00	
Jars	5.00			3870.00	
Safety Joint	3.00			3873.00	
Packer	5.00			3878.00	28.00 Bottom Of Top Packer
Packer	5.00			3883.00	
Packer - Shale	0.00			3883.00	
Stubb	1.00			3884.00	
Recorder	0.00	6719	Inside	3884.00	
Recorder	0.00	8320	Outside	3884.00	
Perforations	20.00			3904.00	
Blank Spacing	126.00			4030.00	
Perforations	11.00			4041.00	
Bullnose	3.00			4044.00	161.00 Bottom Packers & Anchor

Total Tool Length: 189.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

30-1s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Hatch #1-30X

Job Ticket: 46139

DST#: 2

ATTN: Rocky Milford

Test Start: 2012.08.01 @ 03:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
15.00	Mud 100%	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM = 8#

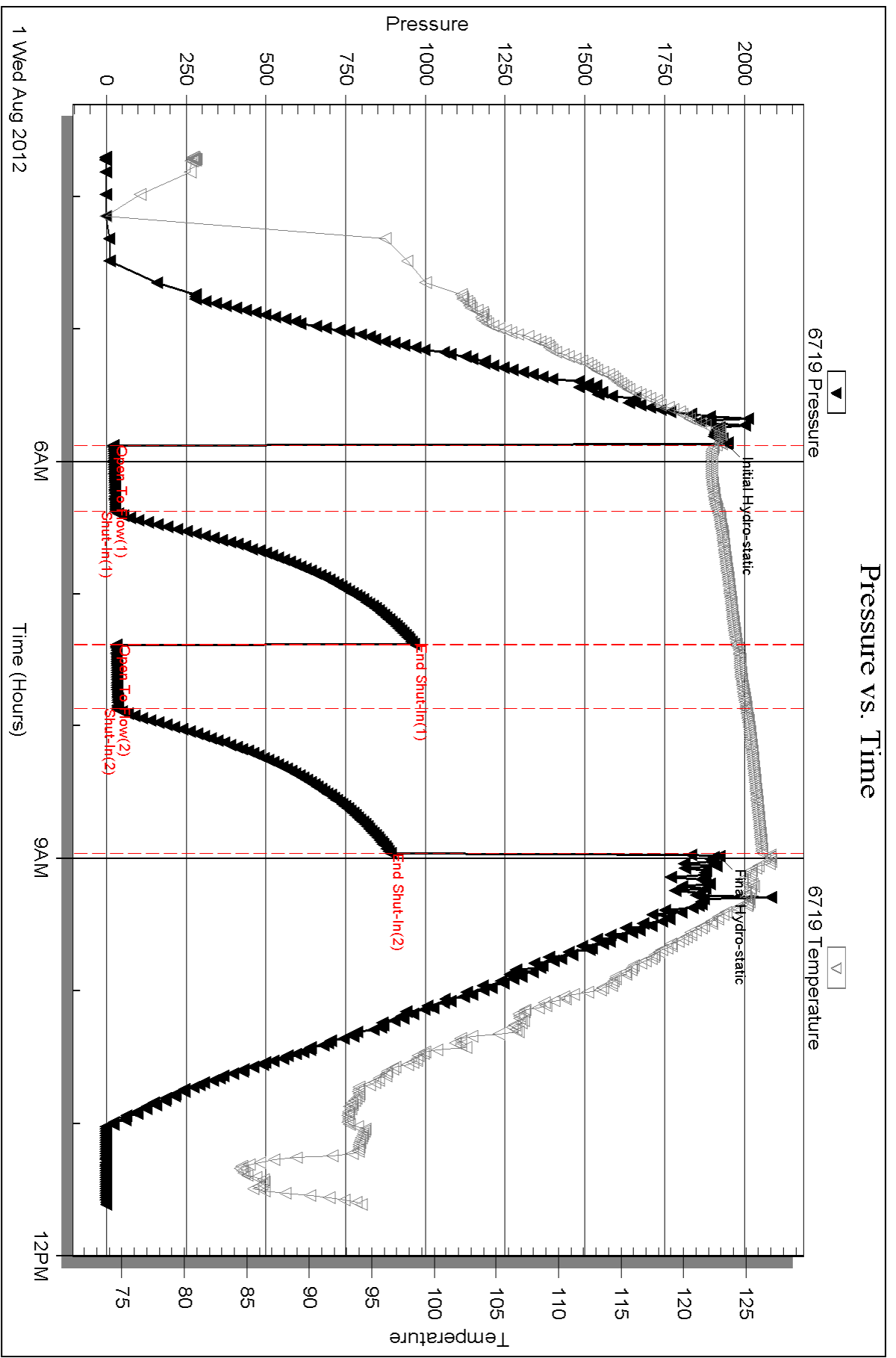
Serial #: 6719

Inside

Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 46139

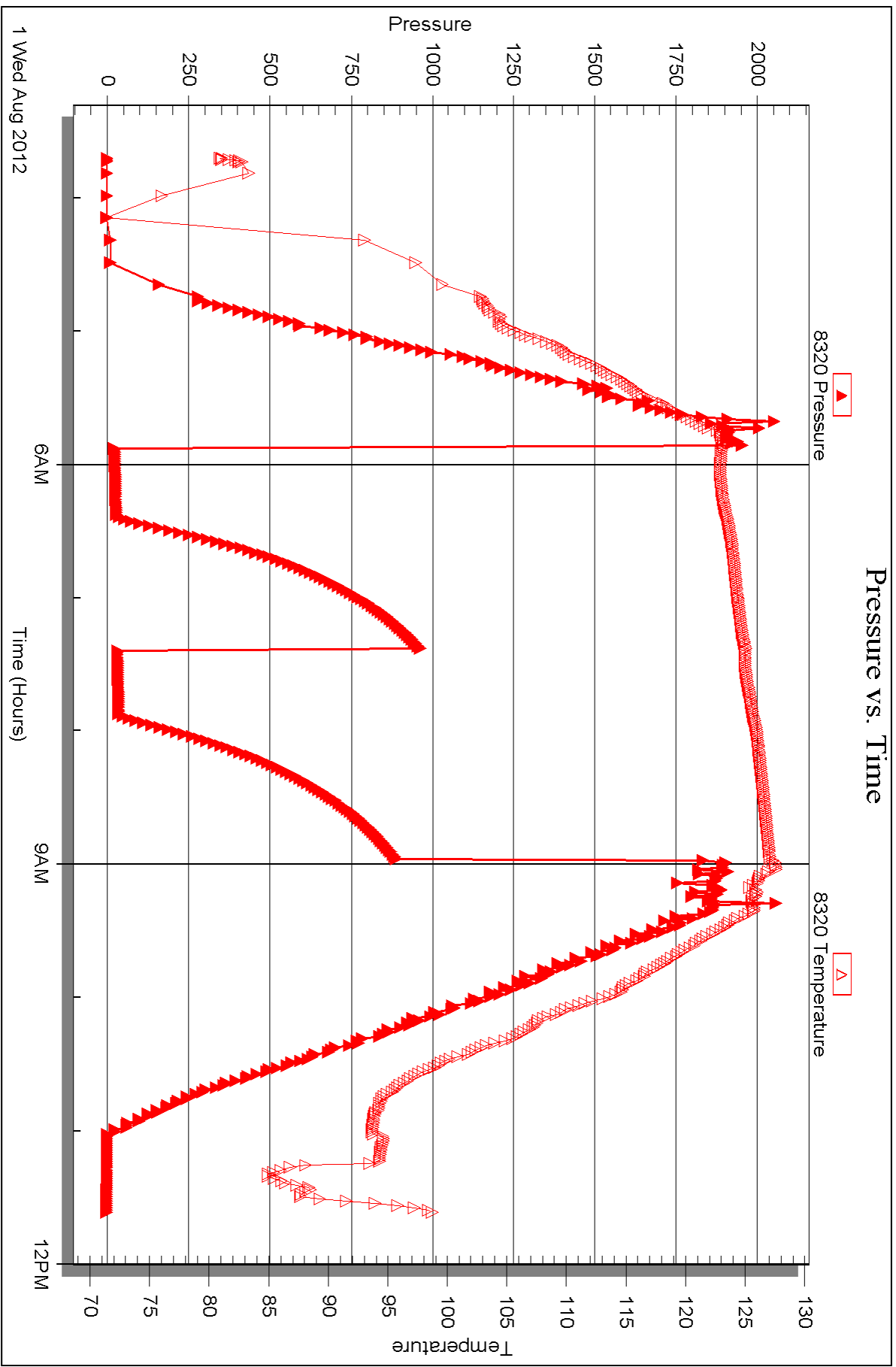
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Serial #: 8320

Outside Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Hatch #1-30X

30-1s-36w Rawlins KS

Start Date: 2012.08.02 @ 10:00:00

End Date: 2012.08.02 @ 18:29:30

Job Ticket #: 46140 DST #: 3

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

Printed: 2012.08.10 @ 13:59:09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46140

DST#: 3

Test Start: 2012.08.02 @ 10:00:00

GENERAL INFORMATION:

Formation: **Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:58:30

Time Test Ended: 18:29:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4124.00 ft (KB) To 4188.00 ft (KB) (TVD)

Reference Elevations: 3329.00 ft (KB)

Total Depth: 4188.00 ft (KB) (TVD)

3324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 36.94 psig @ 4125.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.02

End Date:

2012.08.02

Last Calib.:

2012.08.02

Start Time: 10:00:05

End Time:

18:29:29

Time On Btm:

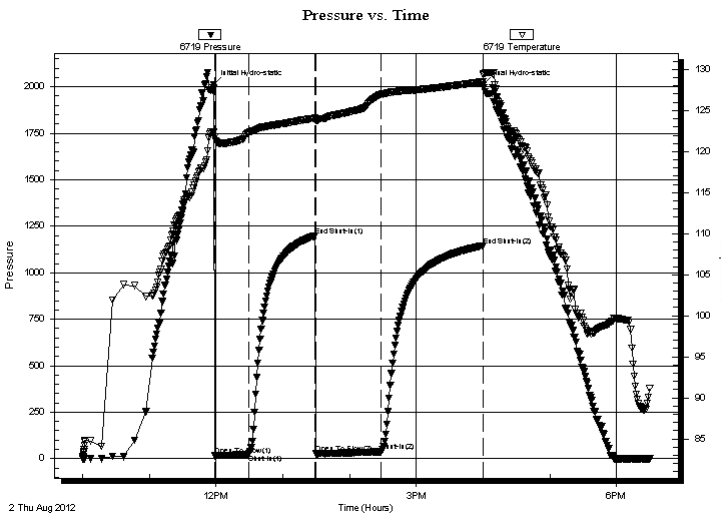
2012.08.02 @ 11:58:00

Time Off Btm:

2012.08.02 @ 16:00:00

TEST COMMENT: 30 - IF: Blow built to 3/4"
 60 - IS: Bled off, No blow back
 60 - FF: Blow started at 14 min., built to 3/4"
 90 - FS: Bled off, No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2012.67	122.31	Initial Hydro-static
1	15.97	121.75	Open To Flow (1)
31	22.17	122.26	Shut-In(1)
91	1198.10	124.08	End Shut-In(1)
92	26.07	123.78	Open To Flow (2)
150	36.94	126.95	Shut-In(2)
242	1144.54	128.53	End Shut-In(2)
242	2010.15	129.35	Final Hydro-static

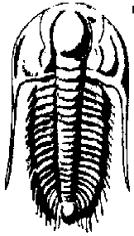
Recovery

Length (ft)	Description	Volume (bbl)
45.00	OCM 75% m, 23% o, 2% g	0.22

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46140

DST#: 3

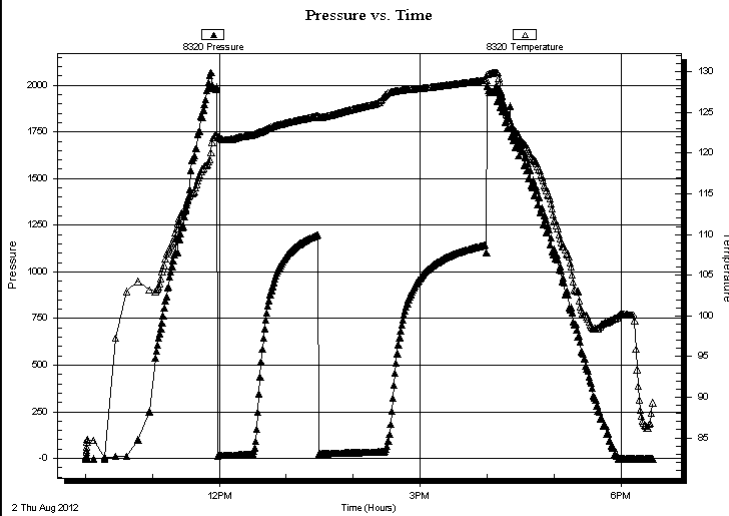
Test Start: 2012.08.02 @ 10:00:00

GENERAL INFORMATION:

Formation: Oread			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 11:58:30		Tester: James Winder	
Time Test Ended: 18:29:30		Unit No: 57	
Interval: 4124.00 ft (KB) To 4188.00 ft (KB) (TVD)		Reference Elevations: 3329.00 ft (KB)	
Total Depth: 4188.00 ft (KB) (TVD)		3324.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft	

Serial #: 8320	Outside				
Press @ Run Depth:	psig @	4125.00 ft (KB)	Capacity:	8000.00	psig
Start Date:	2012.08.02	End Date:	2012.08.02	Last Calib.:	2012.08.02
Start Time:	10:00:05	End Time:	18:28:59	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 30 - IF: Blow built to 3/4"
60 - IS: Bled off, No blow back
60 - FF: Blow started at 14 min., built to 3/4"
90 - FS: Bled off, No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
45.00	OCM 75% m, 23% o, 2% g	0.22

* 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
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Rocky Milford

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46140 **DST#: 3**
Test Start: 2012.08.02 @ 10:00:00

Tool Information

Drill Pipe:	Length: 3615.00 ft	Diameter: 3.80 inches	Volume: 50.71 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: 515.00 ft	Diameter: 2.25 inches	Volume: 2.53 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 53.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4124.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4101.00	
Hydraulic tool	5.00			4106.00	
Jars	5.00			4111.00	
Safety Joint	3.00			4114.00	
Packer	5.00			4119.00	28.00 Bottom Of Top Packer
Packer	5.00			4124.00	
Stubb	1.00			4125.00	
Recorder	0.00	6719	Inside	4125.00	
Recorder	0.00	8320	Outside	4125.00	
Perforations	22.00			4147.00	
Blank Spacing	33.00			4180.00	
Perforations	5.00			4185.00	
Bullnose	3.00			4188.00	64.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

30-1s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Hatch #1-30X

Job Ticket: 46140

DST#: 3

ATTN: Rocky Milford

Test Start: 2012.08.02 @ 10:00:00

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: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	OCM 75% _m , 23% _o , 2% _g	0.221

Total Length: 45.00 ft Total Volume: 0.221 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM = 14# at flow line

Rig spotted 50 bbl of fresh chemical mud on bottom before the DST

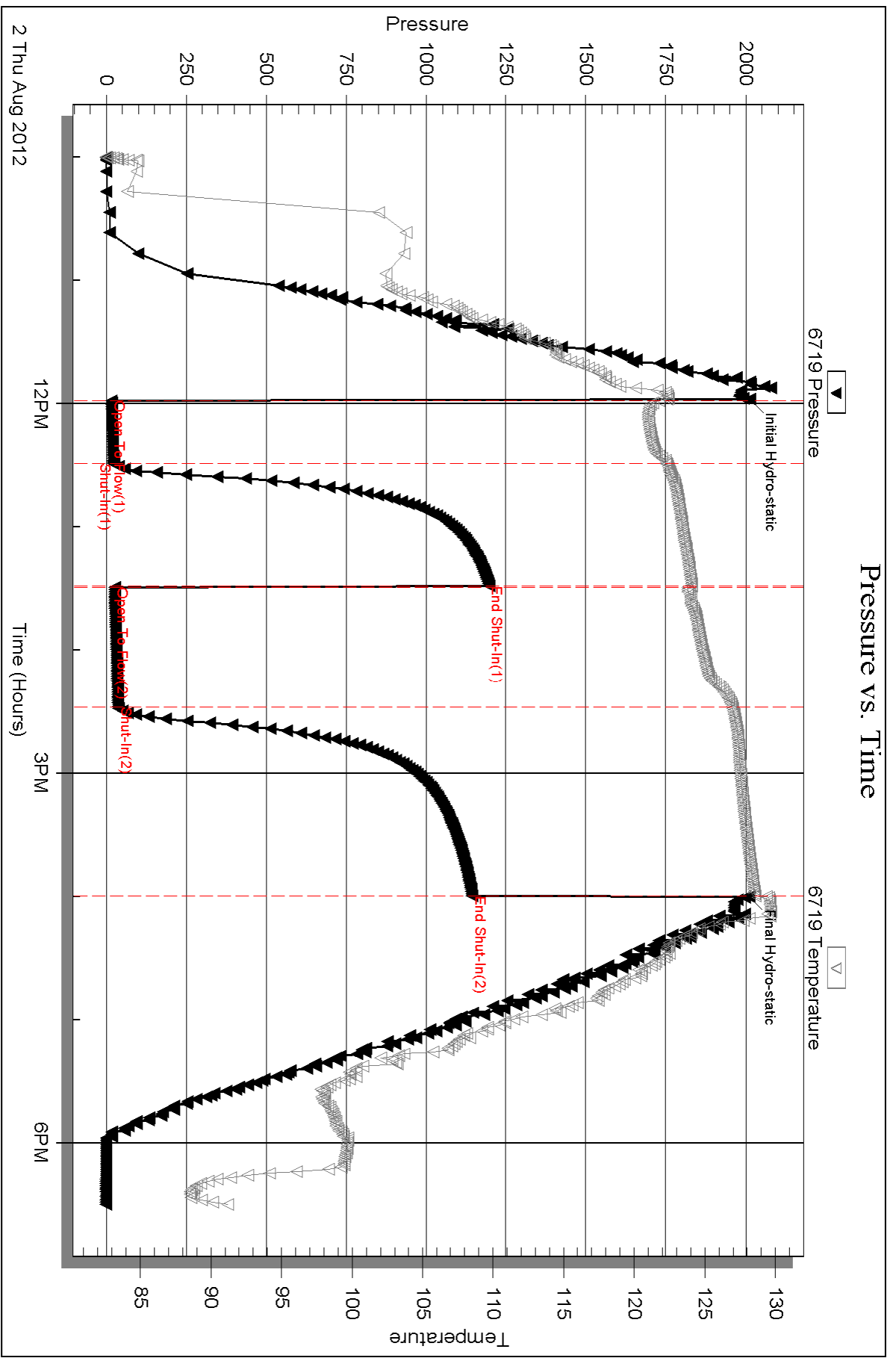
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Inside

Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 3

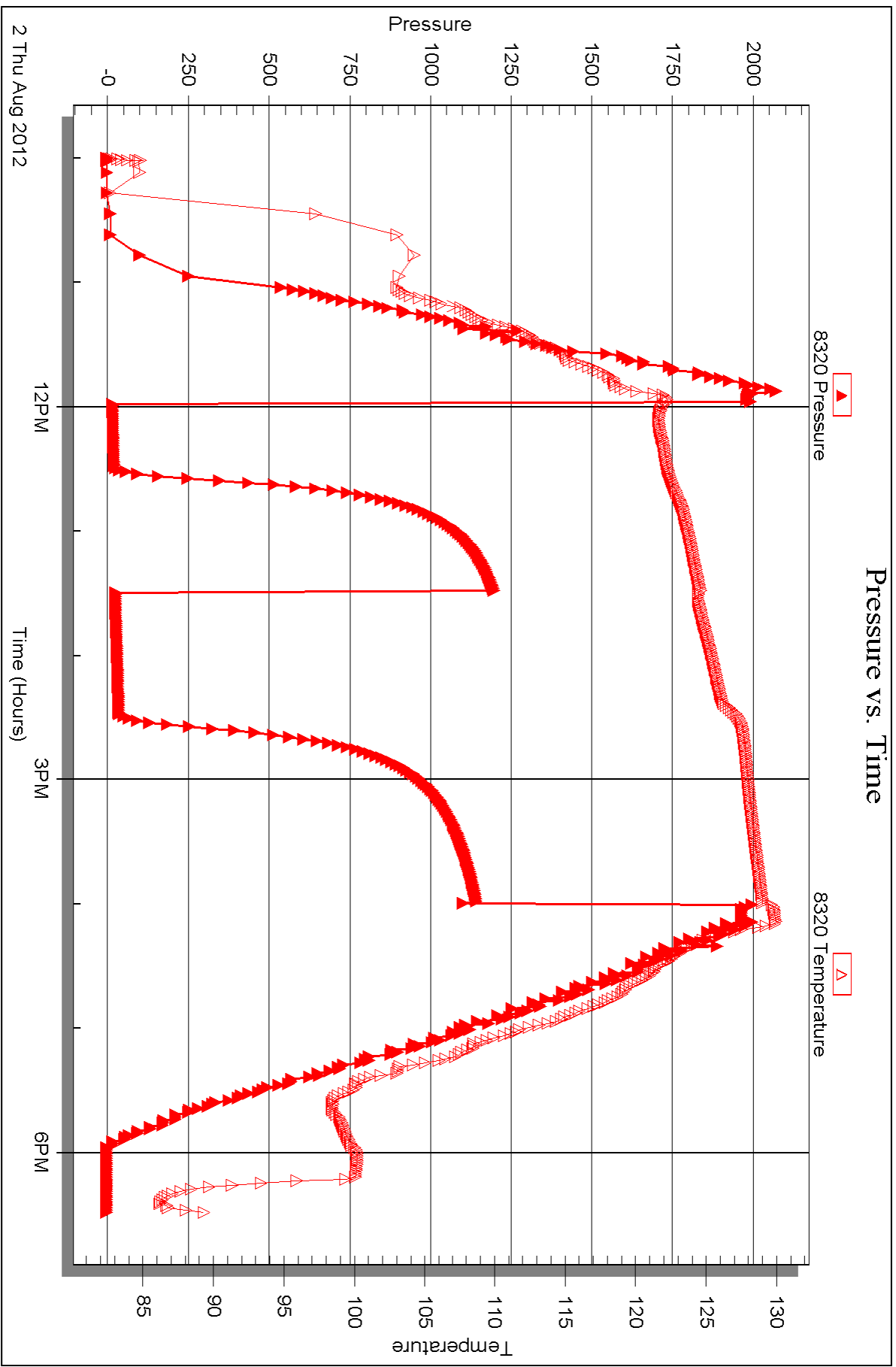


Serial #: 8320

Outside Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Hatch #1-30X

30-1s-36w Rawlins KS

Start Date: 2012.08.04 @ 00:01:00

End Date: 2012.08.04 @ 09:39:30

Job Ticket #: 46141 DST #: 4

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

Printed: 2012.08.10 @ 13:58:21



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46141

DST#: 4

Test Start: 2012.08.04 @ 00:01:00

GENERAL INFORMATION:

Formation: **Douglas Sand - Lans.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:43:00

Time Test Ended: 09:39:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4207.00 ft (KB) To 4400.00 ft (KB) (TVD)

Reference Elevations: 3329.00 ft (KB)

Total Depth: 4400.00 ft (KB) (TVD)

3324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 74.13 psig @ 4208.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.04

End Date:

2012.08.04

Last Calib.: 2012.08.04

Start Time: 00:01:05

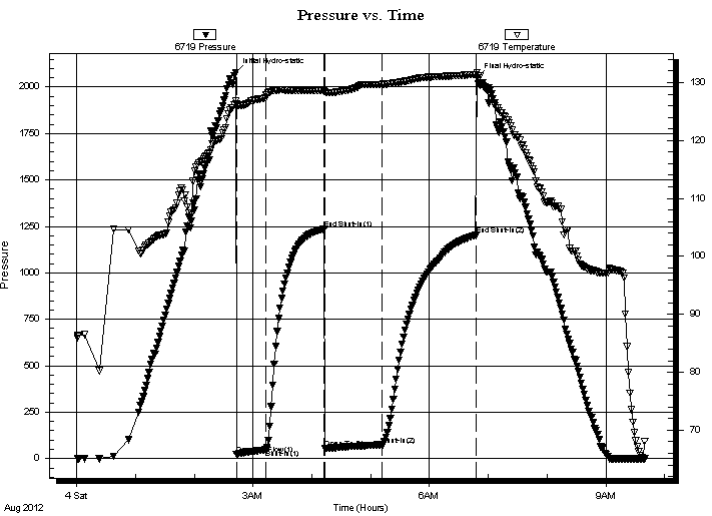
End Time:

09:39:30

Time On Btm: 2012.08.04 @ 02:42:30

Time Off Btm: 2012.08.04 @ 06:48:30

TEST COMMENT: 30 - IF: 1" Blow at open, built to 2 1/2"
 60 - IS: Bled off, No blow back
 60 - FF: Blow started at 26 min., built to 1/4"
 90 - FS: Bled off, No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2079.14	126.78	Initial Hydro-static
1	23.29	126.28	Open To Flow (1)
31	47.87	127.81	Shut-In(1)
90	1235.77	128.70	End Shut-In(1)
91	53.92	128.44	Open To Flow (2)
150	74.13	129.71	Shut-In(2)
245	1202.61	131.39	End Shut-In(2)
246	2049.21	131.76	Final Hydro-static

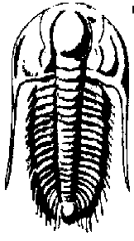
Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 85% m, 10% o, 5% g	0.30
64.00	Mud w/oil spots 97% m, 3% o	0.31

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46141 **DST#: 4**
 Test Start: 2012.08.04 @ 00:01:00

GENERAL INFORMATION:

Formation: **Douglas Sand - Lans.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:43:00

Time Test Ended: 09:39:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4207.00 ft (KB) To 4400.00 ft (KB) (TVD)

Reference Elevations: 3329.00 ft (KB)

Total Depth: 4400.00 ft (KB) (TVD)

3324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press @ RunDepth: psig @ 4208.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.04

End Date: 2012.08.04

Last Calib.: 2012.08.04

Start Time: 00:01:05

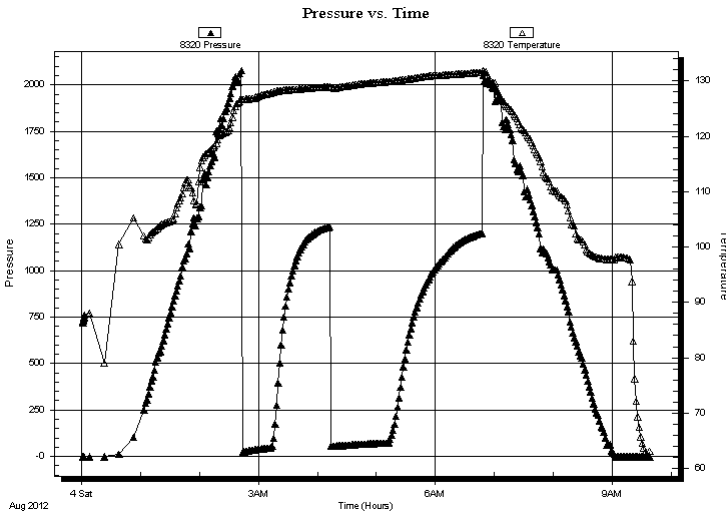
End Time: 09:38:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: 1" Blow at open, built to 2 1/2"
 60 - IS: Bled off, No blow back
 60 - FF: Blow started at 26 min., built to 1/4"
 90 - FS: Bled off, No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 85%m, 10%o, 5%g	0.30
64.00	Mud w/oil spots 97%m, 3%o	0.31

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46141 **DST#: 4**
Test Start: 2012.08.04 @ 00:01:00

Tool Information

Drill Pipe:	Length: 3675.00 ft	Diameter: 3.80 inches	Volume: 51.55 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: 515.00 ft	Diameter: 2.25 inches	Volume: 2.53 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 54.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4207.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	193.00 ft			
Tool Length:	221.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4184.00	
Hydraulic tool	5.00			4189.00	
Jars	5.00			4194.00	
Safety Joint	3.00			4197.00	
Packer	5.00			4202.00	28.00 Bottom Of Top Packer
Packer	5.00			4207.00	
Stubb	1.00			4208.00	
Recorder	0.00	6719	Inside	4208.00	
Recorder	0.00	8320	Outside	4208.00	
Perforations	22.00			4230.00	
Blank Spacing	158.00			4388.00	
Perforations	9.00			4397.00	
Bullnose	3.00			4400.00	193.00 Bottom Packers & Anchor

Total Tool Length: 221.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

30-1s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Hatch #1-30X

Job Ticket: 46141

DST#: 4

ATTN: Rocky Milford

Test Start: 2012.08.04 @ 00:01:00

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: 77.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCM 85% <i>m</i> , 10% <i>o</i> , 5% <i>g</i>	0.295
64.00	Mud w /oil spots 97% <i>m</i> , 3% <i>o</i>	0.315

Total Length: 124.00 ft Total Volume: 0.610 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Rig spotted 50 bbl of clean chemical mud on bottom for the DST

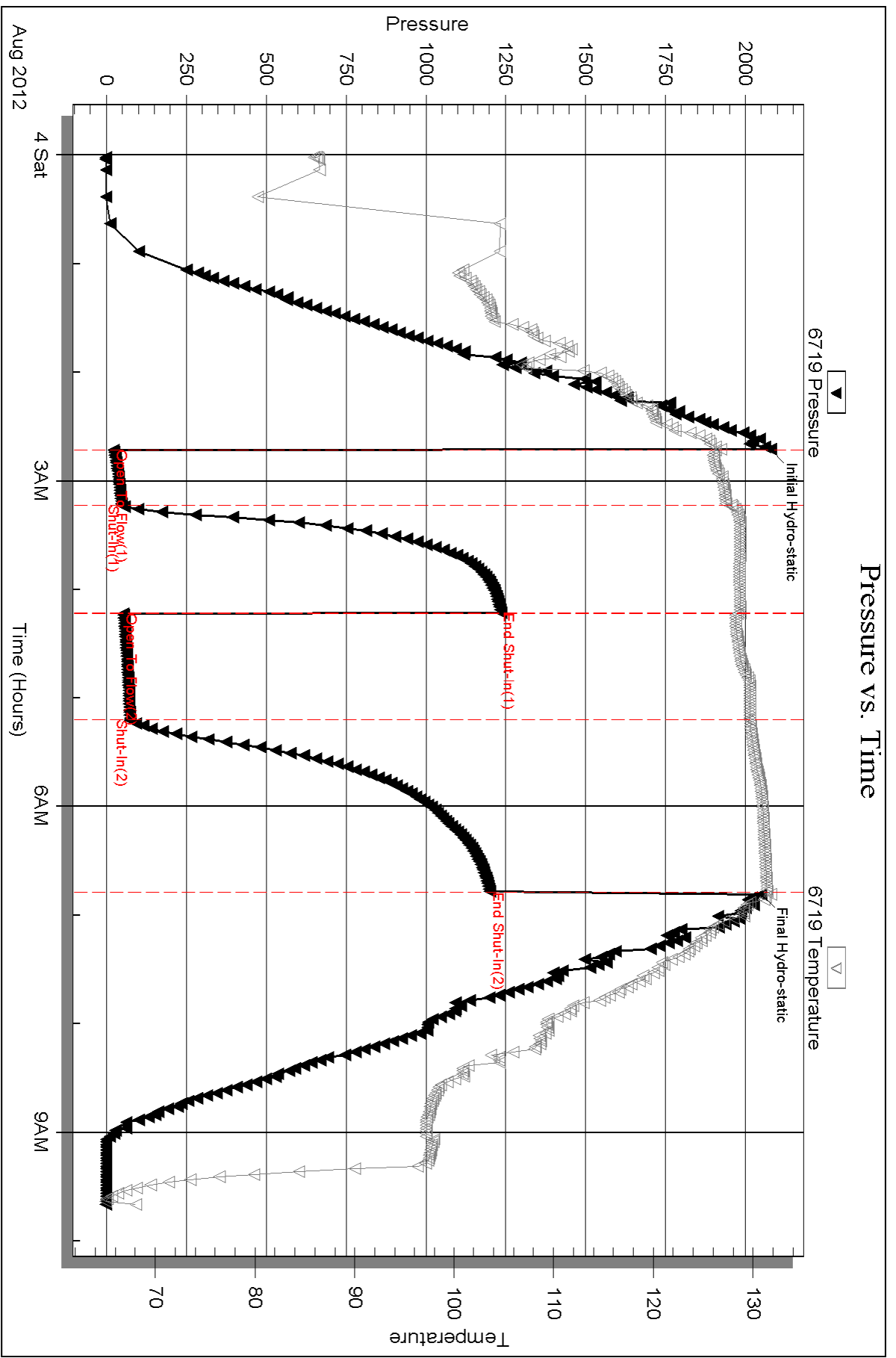
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Inside

Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 4

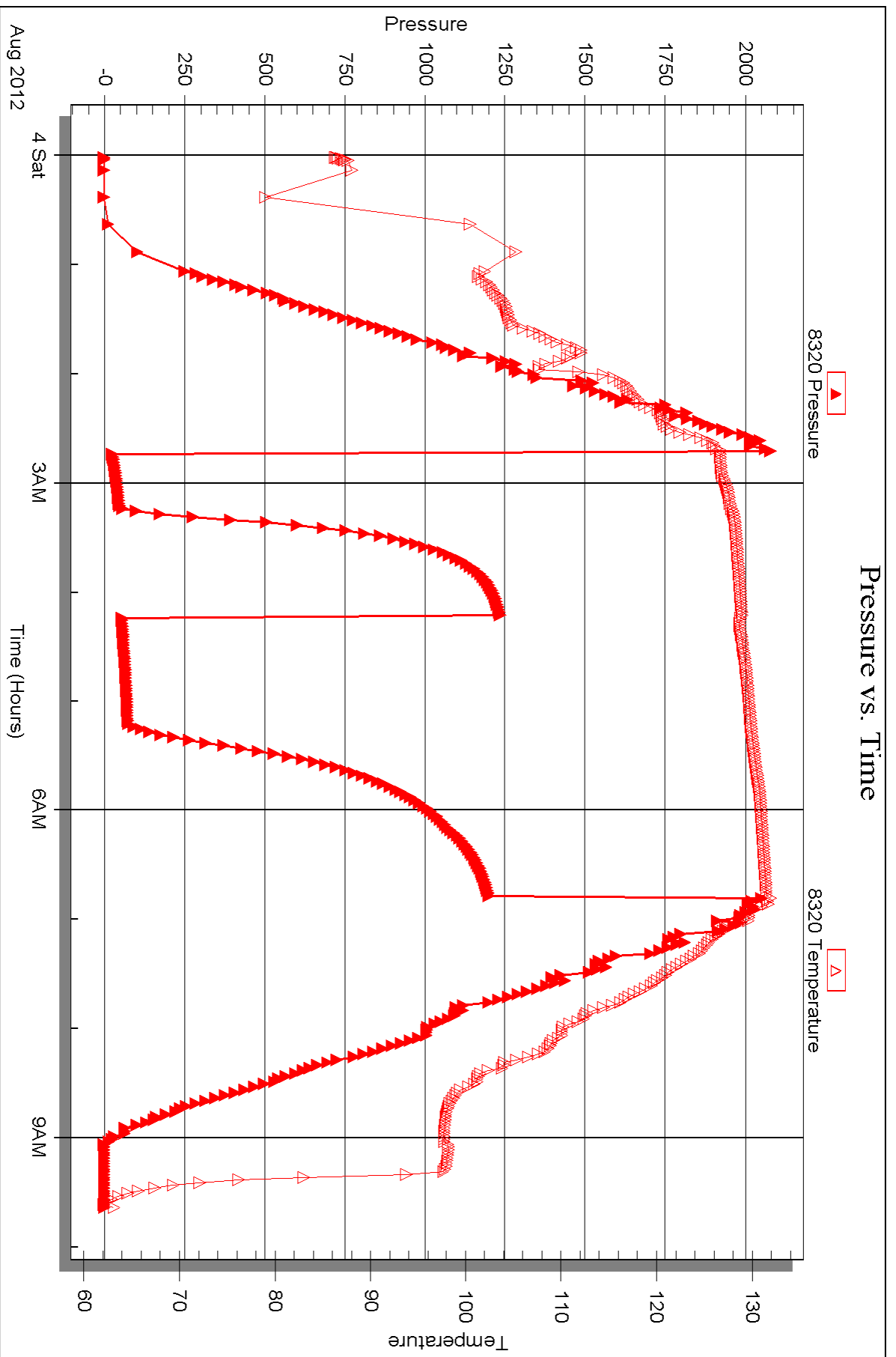


Serial #: 8320

Outside Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co Inc**

250 N. Water Suite 300
Wichita, KS 67202

ATTN: Rocky Milford

Hatch #1-30X

30-1s-36w Rawlins KS

Start Date: 2012.08.05 @ 01:26:00

End Date: 2012.08.05 @ 10:31:30

Job Ticket #: 46142 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.10 @ 13:57:37



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46142

DST#: 5

Test Start: 2012.08.05 @ 01:26:00

GENERAL INFORMATION:

Formation: **Lans. "H - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:32:30

Time Test Ended: 10:31:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4394.00 ft (KB) To 4481.00 ft (KB) (TVD)

Reference Elevations: 3329.00 ft (KB)

Total Depth: 4481.00 ft (KB) (TVD)

3324.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6719

Inside

Press @ Run Depth: 213.75 psig @ 4395.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.05

End Date:

2012.08.05

Last Calib.: 2012.08.05

Start Time:

01:26:05

End Time:

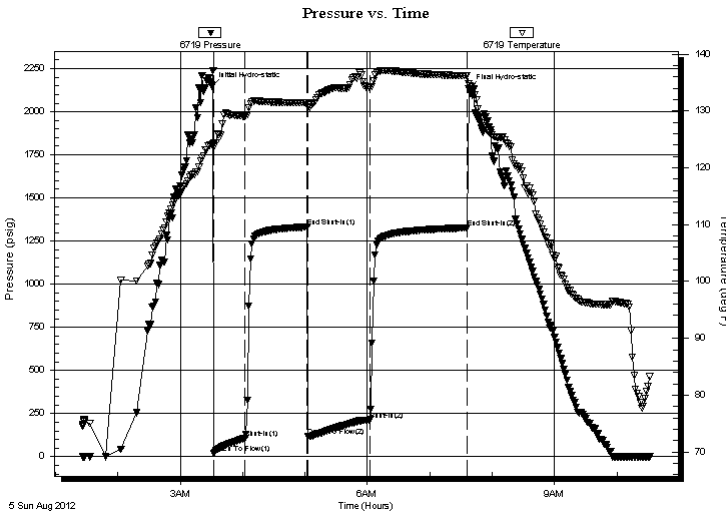
10:31:30

Time On Btm: 2012.08.05 @ 03:30:30

Time Off Btm: 2012.08.05 @ 07:37:30

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 18 min.
60 - IS: Bled off, Blow back built to 1"
60 - FF: Blow built to BOB at 17 3/4 min.
90 - FS: Bled off, Blow back built to 4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2148.30	124.03	Initial Hydro-static
2	21.15	124.37	Open To Flow (1)
32	108.42	129.07	Shut-In(1)
92	1331.86	131.47	End Shut-In(1)
93	116.60	130.77	Open To Flow (2)
152	213.75	134.11	Shut-In(2)
246	1326.99	136.17	End Shut-In(2)
247	2134.27	134.85	Final Hydro-static

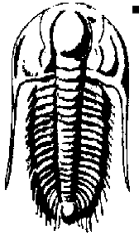
Recovery

Length (ft)	Description	Volume (bbl)
210.00	GOCM 59% <i>m</i> , 23% <i>g</i> , 18% <i>o</i>	1.03
340.00	GO 85% <i>o</i> , 11% <i>g</i> , 4% <i>m</i>	1.99
0.00	GIP = 220'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

30-1s-36w Rawlins KS

Hatch #1-30X

Job Ticket: 46142

DST#: 5

Test Start: 2012.08.05 @ 01:26:00

GENERAL INFORMATION:

Formation: **Lans. "H - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:32:30

Time Test Ended: 10:31:30

Interval: 4394.00 ft (KB) To 4481.00 ft (KB) (TVD)

Total Depth: 4481.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Reference Elevations: 3329.00 ft (KB)

3324.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press @ RunDepth: psig @ 4395.00 ft (KB)

Start Date: 2012.08.05

End Date:

2012.08.05

Start Time: 01:26:05

End Time:

10:31:00

Capacity: 8000.00 psig

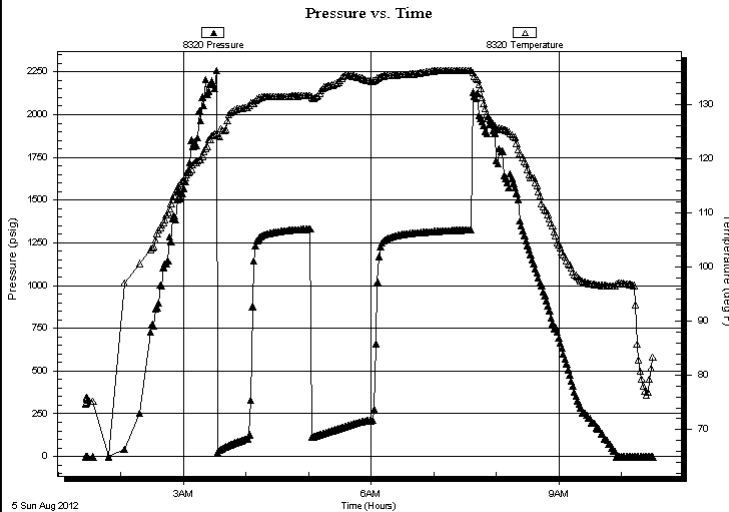
Last Calib.: 2012.08.05

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to BOB (11") at 18 min.
60 - IS: Bled off, Blow back built to 1"
60 - FF: Blow built to BOB at 17 3/4 min.
90 - FS: Bled off, Blow back built to 4"

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
210.00	GOCM 59% <i>m</i> , 23% <i>g</i> , 18% <i>o</i>	1.03
340.00	GO 85% <i>o</i> , 11% <i>g</i> , 4% <i>m</i>	1.99
0.00	GIP = 220'	0.00

* 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
250 N. Water Suite 300
Wichita, KS 67202
ATTN: Rocky Milford

30-1s-36w Rawlins KS
Hatch #1-30X
Job Ticket: 46142 **DST#: 5**
Test Start: 2012.08.05 @ 01:26:00

Tool Information

Drill Pipe:	Length: 3863.00 ft	Diameter: 3.80 inches	Volume: 54.19 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: 515.00 ft	Diameter: 2.25 inches	Volume: 2.53 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 56.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4394.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	115.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			4371.00	
Hydraulic tool	5.00			4376.00	
Jars	5.00			4381.00	
Safety Joint	3.00			4384.00	
Packer	5.00			4389.00	28.00 Bottom Of Top Packer
Packer	5.00			4394.00	
Packer - Shale	0.00			4394.00	
Stubb	1.00			4395.00	
Recorder	0.00	6719	Inside	4395.00	
Recorder	0.00	8320	Outside	4395.00	
Perforations	16.00			4411.00	
Blank Spacing	64.00			4475.00	
Perforations	3.00			4478.00	
Bullnose	3.00			4481.00	87.00 Bottom Packers & Anchor

Total Tool Length: 115.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co Inc

30-1s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 67202

Hatch #1-30X

Job Ticket: 46142

DST#: 5

ATTN: Rocky Milford

Test Start: 2012.08.05 @ 01:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32.6 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 74.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
210.00	GOCM 59%m, 23%g, 18%o	1.033
340.00	GO 85%o, 11%g, 4%m	1.991
0.00	GIP = 220'	0.000

Total Length: 550.00 ft Total Volume: 3.024 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rig spotted 50 bbl of clean chemical mud on bottom for dst

Gravity = 34.6 api @ 80 deg F

Corrected Gravity = 32.6 api

Serial #: 6719

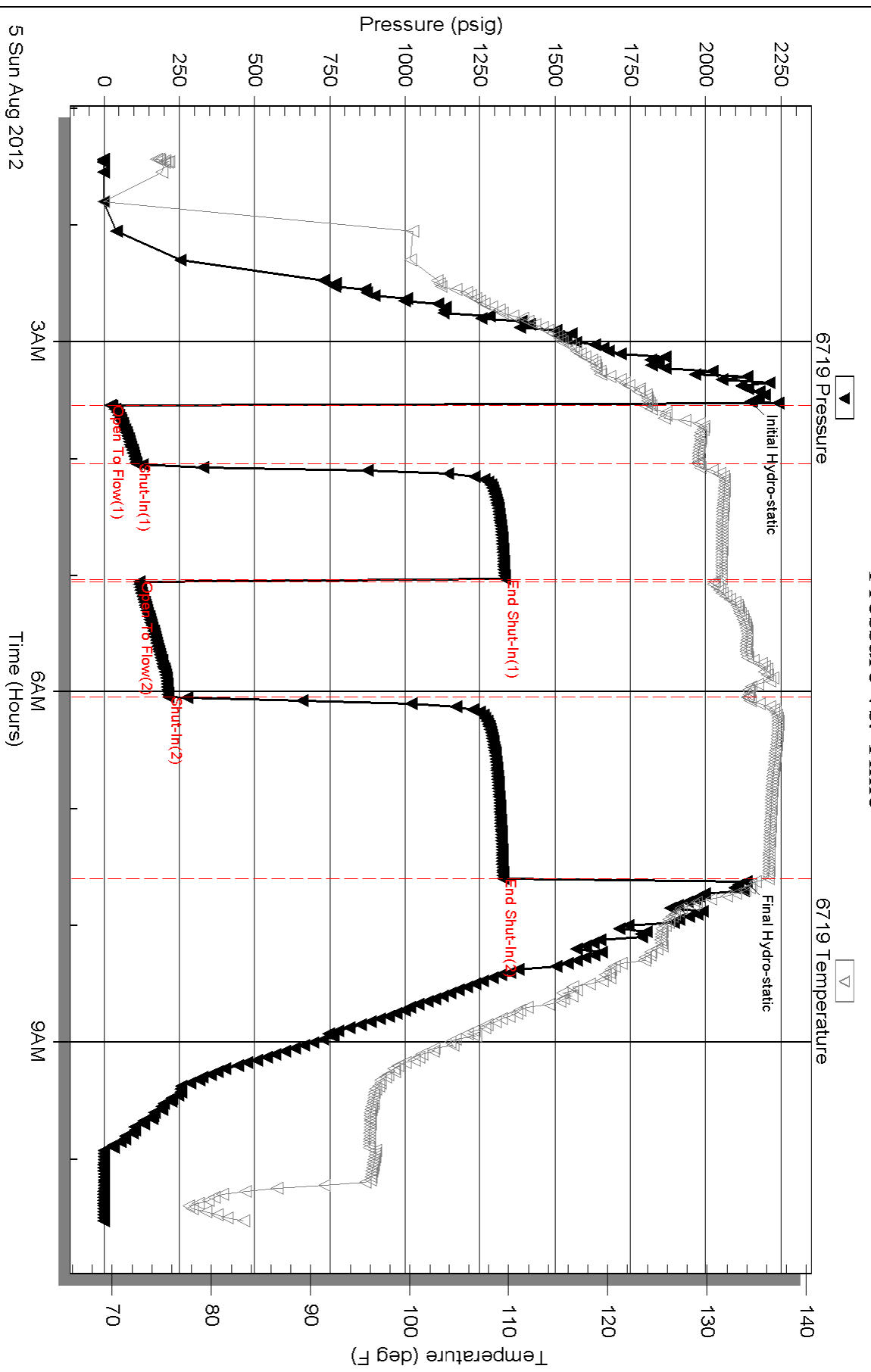
Inside

Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 5

Pressure vs. Time

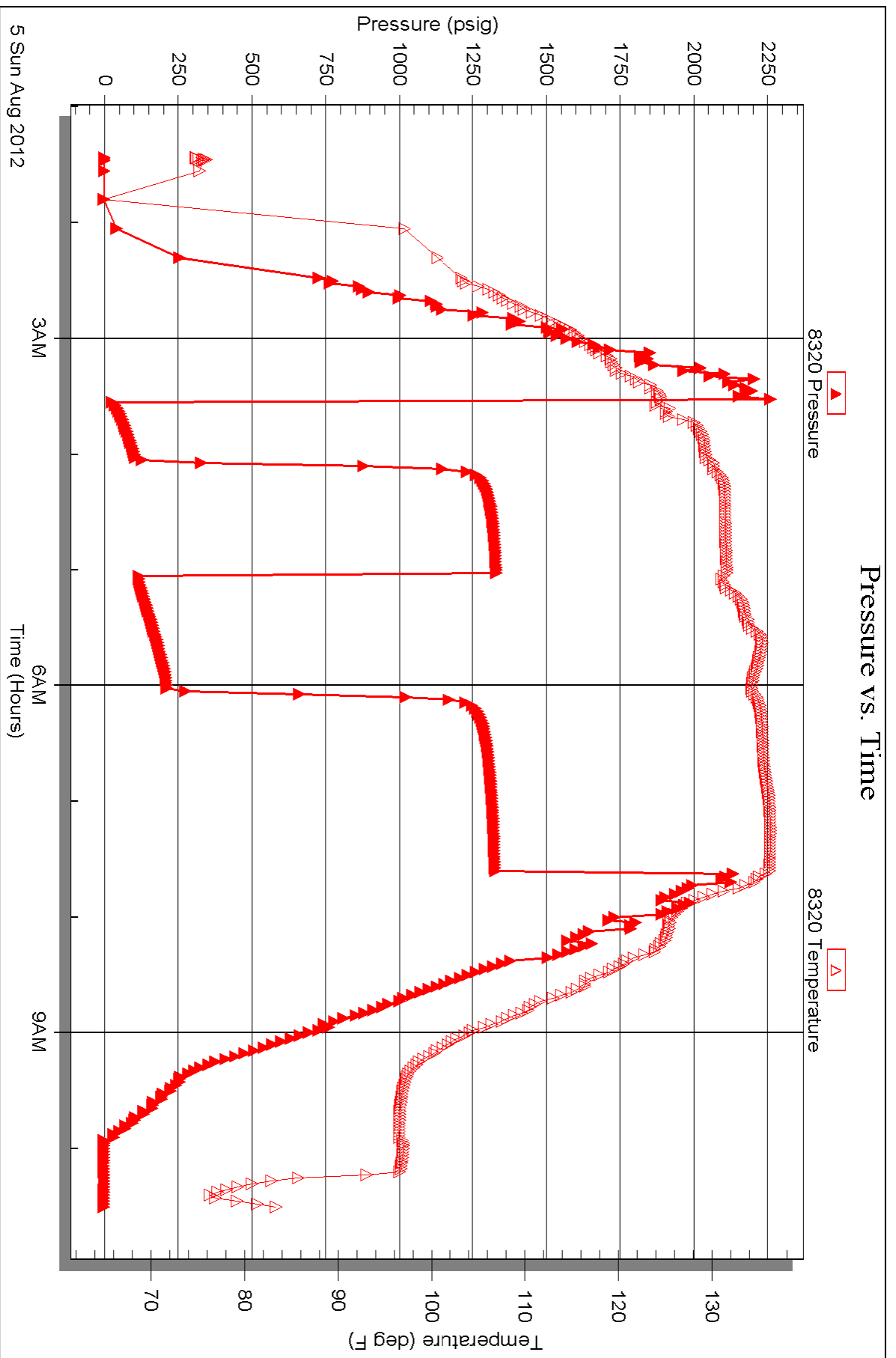


Serial #: 8320

Outside Murfin Drilling Co Inc

Hatch #1-30X

DST Test Number: 5





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. **46138**

4/10

Well Name & No. Hatch #1-30X Test No. 1 Date 7-31-12
 Company Murfin Drilling Co. Inc Elevation 3329 KB 3324 GL
 Address 250 N. Water Suite 300 Wichita, KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 30 Twp. 1s Rge. 36w Co. Rawlins State KS

Interval Tested 3794-3850 Zone Tested Foraker
 Anchor Length 56 Drill Pipe Run 3271 Mud Wt. 8.8
 Top Packer Depth 3789 Drill Collars Run 515 Vis 57
 Bottom Packer Depth 3794 Wt. Pipe Run - WL 5.2
 Total Depth 3850 Chlorides 600 ppm System LCM 8#
 Blow Description IF: 1/4" Blow at open, Built slowly to 1"
ISI: Bled off, No blowback
FF: No Blow
FSI: No Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud w/trace of Oil</u>	<u>trace</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 15 BHT 125 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1827</u>	<input type="checkbox"/> Test <u>*</u> 1150	T-On Location <u>1:45</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>3:20</u>
(C) First Final Flow <u>20</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>5:47</u>
(D) Initial Shut-In <u>1120</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>8:52</u>
(E) Second Initial Flow <u>22</u>	<input type="checkbox"/> Hourly Standby <u>1hr</u> 100	T-Out <u>11:40</u>
(F) Second Final Flow <u>26</u>	<input type="checkbox"/> Mileage <u>118RT</u> 182.90	Comments _____
(G) Final Shut-In <u>1073</u>	<input checked="" type="checkbox"/> Sampler _____	<input checked="" type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1812</u>	<input checked="" type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer _____	<input checked="" type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Extra Recorder _____	Total <u>1757.90</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input checked="" type="checkbox"/> Accessibility _____	
	Sub Total <u>1757.90</u>	

Approved By Rocky Milford

Our Representative James Winder

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46139

4/10

Well Name & No. Hatch #1-30X Test No. 2 Date 8-1-12
 Company Murfin Drilling Co. Inc. Elevation 3329 KB 3324 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 30 Twp. 15 Rge. 36W Co. Rawlins State KS

Interval Tested 3883 - 4044 Zone Tested Stotler
 Anchor Length 161 Drill Pipe Run 3364 Mud Wt. 9.0
 Top Packer Depth 3878 Drill Collars Run 515 Vis 58
 Bottom Packer Depth 3883 (shale) Wt. Pipe Run - WL 5.2
 Total Depth 4044 Chlorides 600 ppm System LCM 8
 Blow Description IF: Blow built to 1" in 10 min., died back slightly by close
ISI: Bled off, No Blowback
FF: No ~~blow~~ Blow
FSI: No Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 126 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>1944</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>3:00</u>
(B) First Initial Flow <u>22</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>3:42</u>
(C) First Final Flow <u>28</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>5:52</u>
(D) Initial Shut-In <u>962</u>	<input checked="" type="checkbox"/> Circ Sub <u>*NA</u>	T-Pulled <u>8:57</u>
(E) Second Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Hourly Standby	T-Out <u>11:30</u>
(F) Second Final Flow <u>36</u>	<input type="checkbox"/> Mileage <u>118 RT</u> 182.90	Comments <u>Hotel</u>
(G) Final Shut-In <u>889</u>	<input checked="" type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1920</u>	<input checked="" type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer <u>*</u> 250	<input checked="" type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>2007.90</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2007.90</u>	

Approved By Rocky Milford

Our Representative James Windes

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46140

Well Name & No. Hatch #1-30X Test No. 3 Date 8-2-12
 Company Murfin Drilling Co. Inc Elevation 3329 KB 3324 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 30 Twp. 15 Rge. 36w Co. Rawlins State KS

Interval Tested 4124 - 4188 Zone Tested Oread
 Anchor Length 64 Drill Pipe Run 3615 Mud Wt. 9.2
 Top Packer Depth 4119 Drill Collars Run 515 Vis 69
 Bottom Packer Depth 4124 Wt. Pipe Run - WL 5.2
 Total Depth 4188 Chlorides 600 ppm System LCM 14

Blow Description IF: Blow built to 3/4"
ISI: Bled off, No blowback
FF: Blow started at 14 min., built to 3/4"
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>OCM</u>	<u>2</u>	<u>23</u>	<u>-</u>	<u>75</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 45 BHT 129 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2013</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>9:30 9:30</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>10:00</u>
(C) First Final Flow <u>22</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>11:58</u>
(D) Initial Shut-In <u>1198</u>	<input checked="" type="checkbox"/> Circ Sub <u>ANA</u>	T-Pulled <u>15:59</u>
(E) Second Initial Flow <u>26</u>	<input checked="" type="checkbox"/> Hourly Standby <u>3/4 hr</u>	T-Out <u>18:20</u>
(F) Second Final Flow <u>37</u>	<input type="checkbox"/> Mileage <u>118RT</u> 182.90	Comments <u>(Hot!) Rig spotted</u>
(G) Final Shut-In <u>1145</u>	<input checked="" type="checkbox"/> Sampler	<u>50BBL of Fresh Chem. Mud</u>
(H) Final Hydrostatic <u>2010</u>	<input checked="" type="checkbox"/> Straddle	<u>on Bottom for DST</u>

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby	Total <u>1757.90</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1757.90</u>	

Approved By Rocky Milford

Our Representative James Winder

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46141

4/10

Well Name & No. Hatch #1-30X Test No. 4 Date 8-3-12
 Company Murfin Drilling Co. Inc. Elevation 3329 KB 3324 GL
 Address 250 N. Water Suite 300 Wichita KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 30 Twp. 1S Rge. 36W Co. Rawlins State KS

Interval Tested 4207 - 4400 Zone Tested Douglas - Lans. "6"
 Anchor Length 193 Drill Pipe Run 3675 Mud Wt. 9.1
 Top Packer Depth 4205 Drill Collars Run 515 Vis 77
 Bottom Packer Depth 4207 Wt. Pipe Run - WL 5.6
 Total Depth 4400 Chlorides 700 ppm System LCM 16

Blow Description IF: 1" Blow at open, built to 2 1/2"
ISI: Bled off, No blowback
FF: Blow started at 26 min., built to 1/4"
FSI: Bled off, No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>64</u>	<u>mud w/oil spots</u>	<u>3</u>	<u>-</u>	<u>97</u>	
<u>60</u>	<u>OCM</u>	<u>5</u>	<u>10</u>	<u>85</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 124 BHT 131 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2079</u>	<input type="checkbox"/> Test <u>*</u> 1250	T-On Location <u>23:20</u>
(B) First Initial Flow <u>23</u>	<input type="checkbox"/> Jars <u>*</u> 250	T-Started <u>00:01 8-4-12</u>
(C) First Final Flow <u>48</u>	<input type="checkbox"/> Safety Joint <u>*</u> 75	T-Open <u>2:43</u>
(D) Initial Shut-In <u>1236</u>	<input checked="" type="checkbox"/> Circ Sub <u>XNA</u>	T-Pulled <u>6:47</u>
(E) Second Initial Flow <u>54</u>	<input type="checkbox"/> Hourly Standby <u>1/4 hr</u>	T-Out <u>9:35</u>
(F) Second Final Flow <u>74</u>	<input type="checkbox"/> Mileage <u>118 RT</u> 182.90	Comments <u>Rig Spotted 50 bbl</u>
(G) Final Shut-In <u>1203</u>	<input checked="" type="checkbox"/> Sampler	<u>of Clean Chem. Mud</u>
(H) Final Hydrostatic <u>2049</u>	<input checked="" type="checkbox"/> Straddle	<u>on Bottom for DST</u>

Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input checked="" type="checkbox"/> Extra Recorder <u>DST #3 Finished @ 18:20</u>	Sub Total <u>166.67</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u>5 hrs.</u>	Total <u>1924.57</u>
	<input checked="" type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1757.90</u>	

Approved By Rocky Milford

Our Representative James Winda

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 46142

4/10

Well Name & No. Hatch #1-30 X Test No. 5 Date 8-5-12
 Company Murfin Drilling Co. Inc Elevation 3329 KB 3324 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 30 Twp. 1s Rge. 36w Co. Rawlins State KS

Interval Tested 4394 - 4481 Zone Tested Lans "H-J"
 Anchor Length 87 Drill Pipe Run 3863 Mud Wt. 9.3
 Top Packer Depth 4389 Drill Collars Run 515 Vis 74
 Bottom Packer Depth 4394 (shale) Wt. Pipe Run - WL 6.4
 Total Depth 4481 Chlorides 800 ppm System LCM 16

Blow Description IF: Blow built to BOB (11") at 18 min.
ISI: Bled off, Blowback built to 1"
FF: Blow built to BOB at 17 3/4 min.
FSI: Bled off, Blowback built to 4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>340</u>	<u>Feet of 260 60</u>	<u>11</u>	<u>85</u>	<u>-</u>	<u>4</u>
<u>210</u>	<u>Feet of 60cm</u>	<u>23</u>	<u>18</u>	<u>-</u>	<u>59</u>
<u>Rec</u>	<u>Feet of GIP = 220'</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 550 Fluid 220 GAS BHT 136 Gravity 32.6 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2148 Test * 1250 T-On Location 00:45
 (B) First Initial Flow 21 Jars * 250 T-Started 1:26
 (C) First Final Flow 108 Safety Joint * 75 T-Open 3:32
 (D) Initial Shut-In 1332 Circ Sub XNA T-Pulled 7:36
 (E) Second Initial Flow 117 Hourly Standby T-Out 10:20
 (F) Second Final Flow 214 Mileage 118 RT 182.90 Comments Rig spotted 50 bbl of clean chem mud on bottom for DST
 (G) Final Shut-In 1327 Sampler Ruined Shale Packer * 350
 (H) Final Hydrostatic 2134 Straddle Ruined Packer
 Shale Packer * 250 Extra Copies
 Initial Open 30 Extra Packer Sub Total 350
 Initial Shut-In 60 Extra Recorder Total 2357.90
 Final Flow 60 Day Standby MP/DST Disc't
 Final Shut-In 90 Accessibility Sub Total 2007.90

Approved By Rocky Milford
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Our Representative James Winder



acct.
Prod-Lit.

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 132090

Invoice Date: Jul 25, 2012

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361



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

Customer ID	Well Name/# or Customer P.O.	Payment Terms	
Murfin	Hatch #1-30X	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jul 25, 2012	8/24/12

Quantity	Item	Description	Unit Price	Amount
325.00	MAT	Class A Common	16.25	5,281.25
12.00	MAT	Chloride	58.20	698.40
341.25	SER	Cubic Feet	2.10	716.63
1,258.63	SER	Ton Mileage	2.35	2,957.80
1.00	SER	Surface	1,125.00	1,125.00
80.00	SER	Pump Truck Mileage	7.00	560.00
80.00	SER	Light Vehicle Mileage	4.00	320.00
1.00	CEMENTER	Alan Ryan		
1.00	EQUIP OPER	Wayne McGhghy		
1.00	OPER ASSIST	Adam Holcomb		

PKB

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

\$ 4080.67

ONLY IF PAID ON OR BEFORE

Aug 19, 2012

Subtotal	11,659.08
Sales Tax	496.31
Total Invoice Amount	12,155.39
Payment/Credit Applied	
TOTAL	12,155.39

ALLIED OIL & GAS SERVICES, LLC 056773

Federal Tax I.D.# 20-5976804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Ogalla

DATE <u>7/25/12</u>	SEC. <u>30</u>	TWP. <u>1</u>	RANGE <u>36</u>	CALLED OUT	ON LOCATION	JOB START <u>11:00a</u>	JOB FINISH <u>11:30p</u>
LEASE <u>Hatch</u>	WELL # <u>1-30X</u>	LOCATION <u>McDonald 2 1/2 10N 1/2 E</u>		COUNTY <u>Cheyenne</u>	STATE <u>Kansas</u>		
OLD OR <u>NEW</u> (Circle one)	<u>12120</u>						

CONTRACTOR Murfin 3
 TYPE OF JOB Surface
 HOLE SIZE 17 1/4 T.D. 251
 CASING SIZE 13 7/8 DEPTH 251
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHO JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT

OWNER Same
 CEMENT AMOUNT ORDERED 325 SKs Com 370 CC
 COMMON 325 SK @ 16.25 5281.25
 POZMIX @
 GEL @
 CHLORIDE 12 @ 58.20 698.40
 ASC @

EQUIPMENT
 PUMP TRUCK CBMENTER Alan Ryan 1
 1 482 HELPER Wayne Murphy 2
 BULK TRUCK DRIVER Adam Holcomb 3
 1 540
 BULK TRUCK DRIVER

HANDLING 341.25 CF @ 2.10 716.63
 MILEAGE 2.25 mile / 70W - 15.733 TONS 2957.80
 TOTAL 9654.08
1258.63

REMARKS:
Run csg, circulate, mix cement, Displacement
w/ BBL H₂O
Cement Dick Circulate
Frank
Alan, Wayne, Adam

SERVICE
 DEPTH OF JOB 251'
 PUMP TRUCK CHARGE 1125.00
 EXTRA FOOTAGE @
 MILEAGE 80 @ 7.00 560.00
 MANIFOLD @
 Life Vehicle 80 @ 4.00 320.00
 TOTAL 2005.00

CHARGE TO: Murfin Drilling Co
 STREET
 CITY STATE ZIP

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

PRINTED NAME Charley Van Belt
 SIGNATURE

PLUG & FLOAT EQUIPMENT
 TOTAL
 SALES TAX (If Any) 496.31
 TOTAL CHARGES 11659.08
 DISCOUNT 35 4080.67 IF PAID IN 30 DAYS

Act g -

cc WF
cc Lir
cc Leavel



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



Invoice

DATE	INVOICE #
8/15/2012	21858

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	#1-30X	Hatch	Rawlins	Company Rig	Oil	Development	Cement Port Collar	Don

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	120	Miles	6.00	720.00
576D-D	Pump Charge - Port Collar - 3201 Feet	1	Job	1,250.00	1,250.00
290	D-Air	5	Gallon(s)	35.00	175.00T
330	Swift Multi-Density Standard (MIDCON II)	450	Sacks	16.50	7,425.00T
276	Flocele	225	Lb(s)	2.00	450.00T
581D	Service Charge Cement	450	Sacks	2.00	900.00
583D	Drayage	2,693.52	Ton Miles	1.00	2,693.52
	Subtotal				13,613.52
	Sales Tax Rawlins County			8.05%	648.03

USED FOR IC 103
 APPROVED JTL

We Appreciate Your Business!	Total	\$14,261.55
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CHARGE TO: Marlin Dry Co.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET
 No 21858

PAGE 1 OF 1

SERVICE LOCATIONS

1. Hays, KS WELL/PROJECT NO. 1-30 X LEASE Hatch COUNTY/PARISH Rawlins STATE KS DATE 8-15-12 OWNER _____
 2. Ness City, KS TICKET TYPE SERVICE CONTRACTOR Co RIG NAME/NO. _____ ORDER NO. _____
 3. WELL TYPE D-1 WELL CATEGORY Miscellaneous JOB PURPOSE Revent Part 2000 DELIVERED TO W Mc Donald, KS WELL PERMIT NO. _____
 4. REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____ WELL LOCATION _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE #113	120	Mi			600	72000
576 D		1			Revent Charge - Cost Part 2000	1	ea	3801	ft.	185000	185000
290		1			D-Air	5	gal			3500	17500
380		2			SUD Revent	450	Sts	41667	lbs	1650	742500
276		2			Flocele 1/2 hr	225	lbs			200	45000
581		2			Revent - Service Charge	75	hrs			200	20000
583		2			Drayage 120 mi	269352	TW	4892	lbs	100	269352

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 8-15-12 TIME SIGNED 0930 P.A.M. P.M.

SWIFT OPERATOR Ben Lawrence APPROVAL _____

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

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? YES NO

PAGE TOTAL 13613 52

TOTAL 14,261.55

TAX 648.03

18.05%

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 8-15-12 PAGE NO. 1

CUSTOMER Martin Drilling Co. WELL NO. 1-30x LEASE Hatch JOB TYPE Cont. Port Collar TICKET NO. 21858

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0850							DN location w/ 750 SKS SMD cut
								Set up P.T. - Port Collar @ 3201'
	0915					1200	1200	Tst. Start P.C. Closed - 1200# - OK
		3					600 700	Open P.C. - Inj rate 3 @ 600/700
								Hook to Hg
		3				700	600	Start 80 BBI Drilling
		3	50					@ 50 BBI - Have need returns
			80			500		Fin Drilling - Start (6 BBI) H ₂ O Spacer
						500		start 125 SKS SMD cut @ 11.2#/gal
			70			700		start 125 SKS SMD cut @ 13.7#/gal
			118			400		start 100 SKS SMD cut @ 11.2#/gal
			173			450		start 100 SKS SMD cut @ 13#/gal
			200			400		cut air to pit
			207			400		Fin cut - Displ 11 BBI H ₂ O
			10			600	C	Fin Displ - Close P.C.
						C	1200	Tst Closed - OK
								Ris Run 6 ITS Tbg.
							250	Rev-out - 2 Plugs - clean
							200	Fin Rev-out
								Circulate 25 SKS cut to Pit
								Used 450 SKS SMD cut.
	1215							Job Complete
								Washup & Ruckup Tools
	1245							

[Signature]
 Han, Brien & Doug



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



Acctg — cc: WFP
cc: Liz
cc: hca

Invoice

DATE	INVOICE #
8/6/2012	21853

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

USED FOR 1C 103
APPROVED ST

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-30	Hatch X	Rawlins	Company Rig	Oil	Development	Cement 5-1/2" L...	Don
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				120	Miles	6.00	720.00
578D-L	Pump Charge - Long String - 4599 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
290	D-Air				3	Gallon(s)	35.00	105.00T
403-5	5 1/2" Cement Basket				3	Each	250.00	750.00T
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				12	Each	40.00	480.00T
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				57	Lb(s)	2.00	114.00T
283	Salt				1,125	Lb(s)	0.20	225.00T
284	Calseal				11	Sack(s)	35.00	385.00T
285	CFR-1				159	Lb(s)	4.00	636.00T
581D	Service Charge Cement				225	Sacks	2.00	450.00
583D	Drayage				1,412.94	Ton Miles	1.00	1,412.94
	Subtotal							15,715.44
	Sales Tax Rawlins County						8.05%	936.42
We Appreciate Your Business!							Total	\$16,651.86



Services, Inc.

CHARGE TO: Murphy Dry Co.
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET NO 21853

PAGE 1 OF 2

SERVICE LOCATIONS: 1. Hays, KS WELL PROJECT NO: 1-30 X LEASE: Hatch COUNTY/PARISH: Railiens STATE: KS CITY: _____ DATE: 8-6-12 OWNER: _____
2. Ness City, KS TICKET TYPE: RESERVE CONTRACTOR: Co-RS RIG NAME/NO.: #3 SHIPPED VIA: CT DELIVERED TO: N/We Donald, KS ORDER NO.: _____
3. WELL TYPE: D-11 WELL CATEGORY: Wildcat JOB PURPOSE: Cement 5 1/2" Longstring WELL PERMIT NO.: _____
4. REFERRAL LOCATION: _____ INVOICE INSTRUCTIONS: _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 113	120	mi			1.20	72.00
578					Ramp Charge - cement Longstring	1	ea			1500.00	1500.00
221					Liquid KCL	4	gal			25.00	100.00
280					Flscheck - 21	5	gal			35.00	175.00
290					D-Air	3	gal			35.00	105.00
403					Cement Baskets	3	ea			85.00	255.00
404					Part Collar	1	ea			2400.00	2400.00
406					Laba Devinc Plug + Baffle	1	ea			850.00	850.00
407					Insert Filter Stone w/ No. 40 Mesh	1	ea			350.00	350.00
409					Turbolizers	15	ea			90.00	1350.00
413					Rota Valve Swabbers	12	ea			40.00	480.00
419					Rotating Head Round	1	ea			2000.00	2000.00

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: 8-6-12 TIME SIGNED: 8:00 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? YES NO
 WE UNDERSTOOD AND MET YOUR NEEDS? YES NO
 OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO
 ARE YOU SATISFIED WITH OUR SERVICE? YES NO
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL	P.1	9455.00
P.2	6260.44	
sub total	15715.44	
Railiens TAX	936.42	
TOTAL	16,651.86	

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



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

TICKET CONTINUATION

TICKET No. 21853

CUSTOMER
Mun. Fin. Dpt. Co.

WELL
Hatch 1-30 X

DATE
8-6-12

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY.	UM	QTY.	UM		
325		2				Standard Cement EA-1	225	SKS	2152	lbs	1352	3037.50
276		2				Eccole 1/4	57	lbs			2100	117100
283		2				Salt 10%	1125	lbs			30	22500
284		2				Barrel 5%	1058	lbs		11	3400	38500
285		2				CFR-1 3 1/2%	159	lbs			4100	63600
581		2				Service Charge Cement	225	SKS			300	45000
583		2				Mileage Charge	1412.94				100	141294

CONTINUATION TOTAL 6260.94

CUSTOMER *Martin Drilling Co.* WELL NO. *1-30 X* LEASE *Hatch* JOB TYPE *Cement Longstring* TICKET NO. *21853*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		TD 4600'	DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING		
	<i>1945</i>	<i>2150</i>	<i>Fin LD</i>	<i>D.P</i>					<i>In loc w/FE - Res LD wet D.P</i>
									<i>Start 5 1/2" 15.5" casing to 4579'</i>
									<i>55-20' @ 4579 = 109 881</i>
									<i>Insert Float Valve w/Auto-Bell</i>
									<i>LD, Baffle @ 4579</i>
									<i>Coat - 1 to 14 & 32</i>
									<i>Coat Baskets 32-33-57 Pin ends</i>
									<i>Port Collar #33 @ 3232'</i>
	<i>2315</i>								<i>air 1/2 way in with casing</i>
	<i>0015</i>								<i>Fin Run casing - Top 10' up</i>
	<i>0130</i>								<i>Try to air down - on bottom</i>
	<i>0200</i>								<i>Start air / Rotate</i>
	<i>0245</i>								<i>Fin air</i>
		<i>5</i>	<i>15</i>						<i>Pump 15-BBI KCL Flush</i>
		<i>5</i>	<i>12</i>			<i>400</i>			<i>Pump 500 gal Hockert-21</i>
		<i>5</i>	<i>5</i>			<i>400</i>			<i>Pump 5 BBI KCL Spacer</i>
		<i>4</i>				<i>400</i>			<i>Start 175 175 STS EA-2</i>
		<i>4</i>	<i>42</i>			<i>0</i>			<i>Fin coat - Wash pump Lines</i>
									<i>Drop L.D. Plug</i>
		<i>9</i>	<i>15</i>			<i>300</i>			<i>Start Disp 1 - First Tank KCL AIR</i>
		<i>9</i>	<i>75</i>			<i>400</i>			<i>Caught LH press</i>
		<i>6</i>	<i>90</i>			<i>600</i>			<i>Press before Plug Down</i>
	<i>0330</i>	<i>5</i>	<i>109</i>			<i>1500</i>			<i>Plug Down - Hold - Release & Heel</i>
			<i>7</i>			<i>0</i>			<i>Plug RH 30 STS cut</i>
			<i>5</i>						<i>MH 20 STS cut</i>
	<i>0345</i>								<i>Job Complete</i>
									<i>Wash up & Reel up TMs</i>
	<i>0415</i>								<i>Thanks Alan, Brian & Jeremy</i>