



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1171859
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: _____



1171859

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
--	---

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

December 06, 2013

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

Re: ACO1
API 15-153-20934-00-00
CWA 'C' 1-32
SE/4 Sec.32-02S-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 CWA 'C' #1-32 930' FSL 2170'FEL Sec. 32-2S-36W 3363' KB					MDCI AFT #1-5 330' FNL 2190'FEL Sec. 5-3S-36W 3369' KB		
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref	Log tops	Datum	
Anhydrite	3225	+138	-8	3227	+136	-10	3223	+146	
B/Anhydrite	3261	+102	-7	3260	+103	-6	3260	+109	
Neva	3720	-357	-1	3729	-366	-10	3725	-356	
Foraker	3838	-475	-1	3848	-485	-11	3843	-474	
Topeka	4081	-718	-1	4086	-723	-6	4086	-717	
Oread	4204	-841	-2	4208	-845	-6	4208	-839	
Lansing	4291	-928	-3	4292	-929	-4	4294	-925	
Stark	4508	-1145	+4	4520	-1157	-8	4518	-1149	
BKC	4558	-1195	+5	4570	-1207	-7	4569	-1200	
Pawnee	4685	-1322	+2	4698	-1335	-11	4693	-1324	
Cherokee				4769	-1406	-8	4767	-1398	
Mississippi	NR			NR			DNR		
RTD	4850						4850		
LTD				4853			4853		

Saman Sharfaie

Petroleum Geologist

GEOLOGISTS'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Co., Inc.**
 LEASE: **CWA-C-1 #1-32**

FIELD: **Apache**
 LOCATION: **93° 07' 21" W & 21° 00' 00" N**
 SEC: **32 TWP 2S RGE 36W**
 COUNTY: **Rawlins STATE Kansas**

CONTRACTOR: **Murfin Drilling #3**
 SPUD: **08/10/13 COMP 08/19/13**
 RTD: **4850' LTD 4853'**
 WUD UP: **3500' TYP WUD Chemical**

SAMPLES SAVED FROM: **3620' TO RTD**
 DRILLING TIME KEPT FROM: **3620' TO RTD**
 SAMPLING EXAMINED FROM: **3620' TO RTD**

GEOLOGICAL SUPERVISION FROM: **3.20'**
 REFERENCE WELL: **Murfin Drilling, APT #1-5**

CONDUCTOR: **8-5/8" at 387'**
 SURFACE: **5-1/2" at 4853'**
 PRODUCTION: **3-1/2" at 4853'**

Measurements Are All From Kelly Bushing

GL: **3358'**

DF: _____

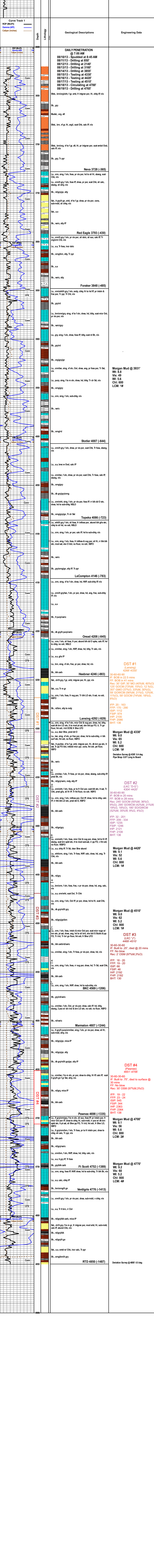
ELEVATIONS
 KB 3363'

Formation	Sample Tops	EOB Tops	Start
Amblydite	3225 (+138)	3227 (+130)	-10
Basal Amblydite	3261 (+102)	3260 (+103)	-6
Neva	3720 (-537)	3728 (-565)	-9
Topeka	4081 (-718)	4086 (-723)	-6
Heebner	4242 (-879)	4246 (-883)	-7
Lansing	4291 (-928)	4292 (-929)	-3
BKC	4568 (-1205)	4569 (-1206)	-7
Pawnee	4695 (-1332)	4698 (-1335)	-11
Verdigris	4776 (-1413)	4776 (-1413)	-8

REMARKS: Due to fair shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.

Respectfully Submitted,
 API #15-153-20934
 Saman Sharfaie
 Petroleum Geologist

*Tops have been adjusted to electric logs



Morgan Mud @ 3931'
 Wt: 8.8
 Vis: 49
 WI: 5.6
 Chl: 600
 LCM: 1#

DST #1
 (Lansing)
 4268-4330'
 30-60-60-90
 IF: BOB in 22.5 mins
 FF: BOB in 41 mins
 Rec: 30' OSM (40%M, 60%O)
 125' GOCM (73%M, 15%O, 12%G)
 357' GMO (37%O, 33%M, 30%G)
 59' GOWCM (56%M, 21%G, 12%W, 8%O)
 59' GOCM (74%M, 18%G, 8%O)

Morgan Mud @ 4330'
 Wt: 9.0
 Vis: 65
 WI: 5.2
 Chl: 600
 LCM: 1#
 Deviation Survey @ 4330': 0.4 deg
 Pipe Strap: 0.01' Long to Board

DST #2
 (LKC "D-G")
 4304'-4420'
 30-60-60-90
 IF: BOB in 20 mins
 FF: BOB in 28 mins
 Rec: 245' GOCM (55%M, 36%O, 9%G), 295' GOWCM (42%M, 21%W, 19%O, 18%O), 180' SO/GWCM (52%M, 35%W, 9%G, 4%O)

Morgan Mud @ 4420'
 Wt: 9.1
 Vis: 52
 WI: 5.6
 Chl: 800
 LCM: 1#

Morgan Mud @ 4510'
 Wt: 9.0
 Vis: 62
 WI: 5.2
 Chl: 800
 LCM: 1#

DST #3
 (LKC "J")
 4469'-4510'
 30-60-30-60
 IF: Built to .75", died @ 20 mins
 FF: No blow
 Rec: 2' OSM (97%M, 3%O)

Morgan Mud @ 4700'
 Wt: 9.6
 Vis: 56
 WI: 5.0
 Chl: 800
 LCM: 2#

Morgan Mud @ 4770'
 Wt: 9.2
 Vis: 60
 WI: 5.0
 Chl: 800
 LCM: 4#

DST #4
 (Pawnee)
 4651'-4706'
 30-60-30-60
 IF: Built to .75", died to surface @ 30 mins
 FF: No blow
 Rec: 30' OSM (97%M, 3%O)

Morgan Mud @ 4850'
 Wt: 9.6
 Vis: 56
 WI: 5.0
 Chl: 800
 LCM: 2#
 Deviation Survey @ 4850': 0.5 deg



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 672020

ATTN: Saman Sharifaie

CWA 'C' #1-32

32-2s-36w Rawlins KS

Start Date: 2013.08.15 @ 12:21:00

End Date: 2013.08.15 @ 20:38:00

Job Ticket #: 52660 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.20 @ 15:33:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52660

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.08.15 @ 12:21:00

GENERAL INFORMATION:

Formation: **LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:11:00
 Time Test Ended: 20:38:00
 Interval: **4268.00 ft (KB) To 4330.00 ft (KB) (TVD)**
 Total Depth: 4330.00 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: 3363.00 ft (KB)
 3358.00 ft (CF)
 KB to GR/CF: 5.00 ft

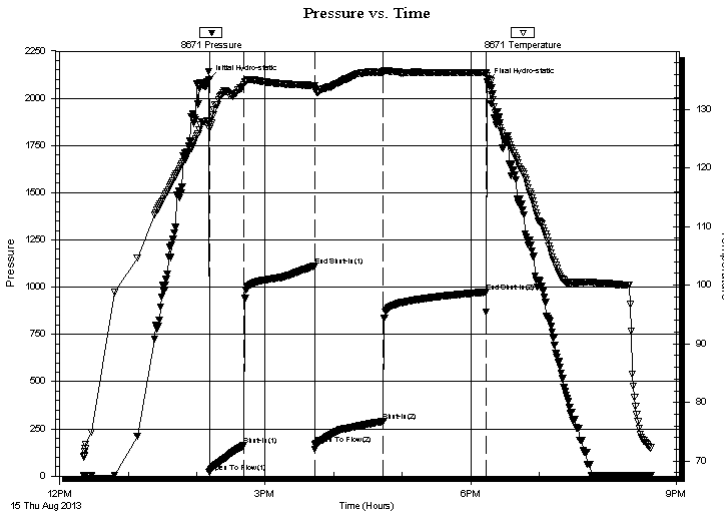
Serial #: 8671

Inside

Press @ Run Depth: 290.20 psig @ 4269.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.15 End Date: 2013.08.15 Last Calib.: 2013.08.15
 Start Time: 12:21:05 End Time: 20:37:59 Time On Btm: 2013.08.15 @ 14:10:45
 Time Off Btm: 2013.08.15 @ 18:14:15

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 22 1/2 min.
 60 - IS: No blow back
 60 - FF: Blow started around 2 min., built to BOB at 41 min.
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.97	128.07	Initial Hydro-static
1	20.10	126.65	Open To Flow (1)
31	163.45	134.20	Shut-In(1)
93	1112.35	134.01	End Shut-In(1)
93	169.95	133.54	Open To Flow (2)
153	290.20	136.33	Shut-In(2)
243	974.45	136.21	End Shut-In(2)
244	2085.57	135.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	GOCM 74% _m , 18% _g , 8% _o	0.29
59.00	GOWCM 56% _m , 21% _g , 12% _w , 11% _o	0.29
357.00	GMO 37% _o , 33% _m , 30% _g	1.76
125.00	GOCM 73% _m , 15% _o , 12% _g	1.48
30.00	MO 60% _o , 40% _m	0.42
0.00	GIP = 30'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52660

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.08.15 @ 12:21:00

Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.80 inches	Volume: 52.48 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 54.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4268.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	90.00 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			4245.00	
Hydraulic tool	5.00			4250.00	
Jars	5.00			4255.00	
Safety Joint	3.00			4258.00	
Packer	5.00			4263.00	28.00 Bottom Of Top Packer
Packer	5.00			4268.00	
Stubb	1.00			4269.00	
Recorder	0.00	8671	Inside	4269.00	
Recorder	0.00	8320	Outside	4269.00	
Perforations	22.00			4291.00	
Blank Spacing	33.00			4324.00	
Perforations	3.00			4327.00	
Bullnose	3.00			4330.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52660

DST#: 1

ATTN: Saman Sharifaie

Test Start: 2013.08.15 @ 12:21:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 21.2 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.16 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
59.00	GOCM 74%m, 18%g, 8%o	0.290
59.00	GOWCM 56%m, 21%g, 12%w, 11%o	0.290
357.00	GMO 37%o, 33%m, 30%g	1.756
125.00	GOCM 73%m, 15%o, 12%g	1.480
30.00	MO 60%o, 40%m	0.421
0.00	GIP = 30'	0.000

Total Length: 630.00 ft Total Volume: 4.237 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 22.4 api @ 72 deg F
Corrected Gravity = 21.2 api

Serial #: 8671

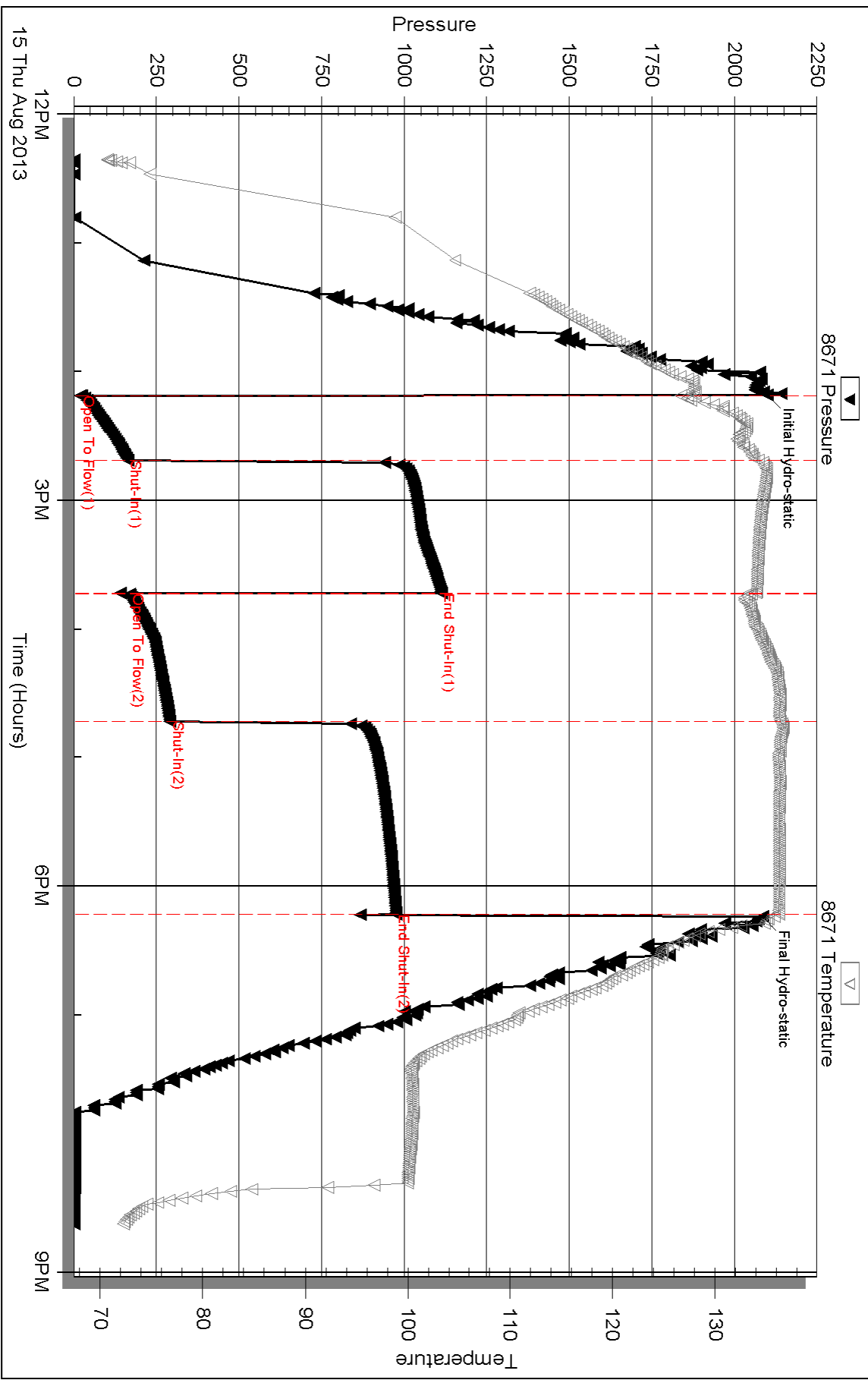
Inside

Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 52660

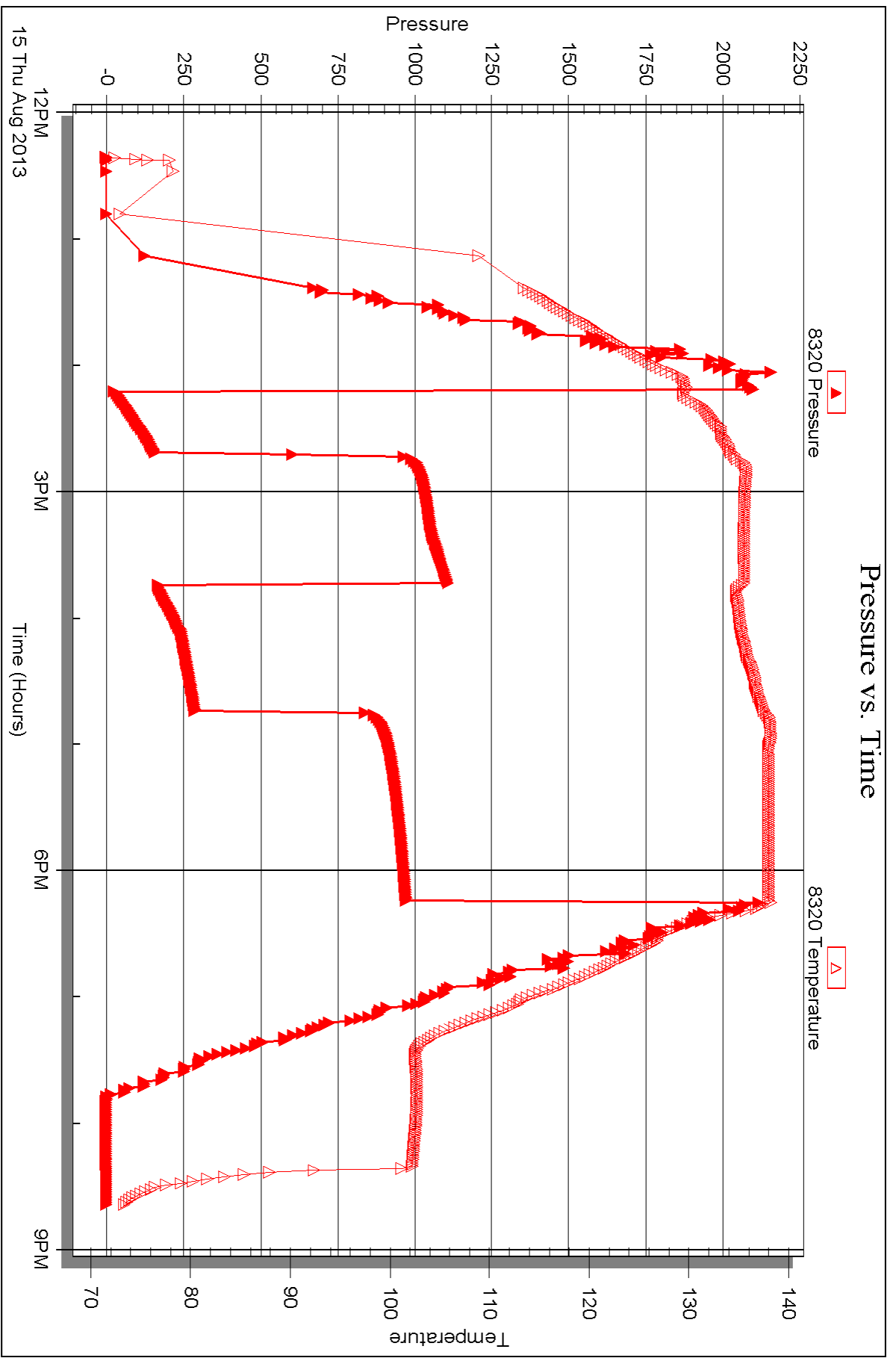
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Serial #: 8320

Outside Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52660

Printed: 2013.08.20 @ 15:33:10



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 672020

ATTN: Saman Sharifaie

CWA 'C' #1-32

32-2s-36w Rawlins KS

Start Date: 2013.08.16 @ 09:40:00

End Date: 2013.08.16 @ 18:05:30

Job Ticket #: 52661 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.20 @ 15:32:28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52661

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.08.16 @ 09:40:00

GENERAL INFORMATION:

Formation: **LKC "B - G"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:35:45
 Tester: James Winder
 Time Test Ended: 18:05:30
 Unit No: 57
 Interval: **4304.00 ft (KB) To 4420.00 ft (KB) (TVD)**
 Reference Elevations: 3363.00 ft (KB)
 Total Depth: 4430.00 ft (KB) (TVD) 3358.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

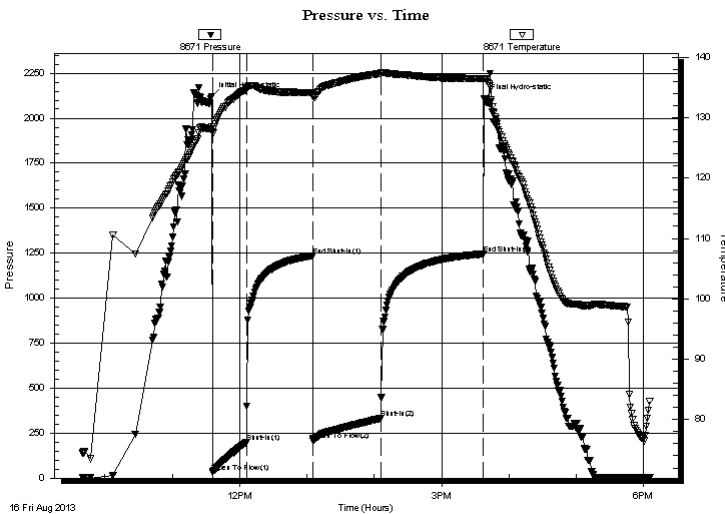
Serial #: 8671

Inside

Press @ Run Depth: 333.67 psig @ 4305.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.16 End Date: 2013.08.16 Last Calib.: 2013.08.16
 Start Time: 09:40:05 End Time: 18:05:29 Time On Btm: 2013.08.16 @ 11:35:15
 Time Off Btm: 2013.08.16 @ 15:38:00

TEST COMMENT: 30 - IF: Blow built to BOB (11") in 20 min.
 60 - IS: No blow back
 60 - FF: Blow built to BOB in 28 min.
 90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2120.52	128.43	Initial Hydro-static
1	31.74	127.67	Open To Flow (1)
31	200.99	134.63	Shut-In(1)
90	1235.37	134.17	End Shut-In(1)
91	208.67	133.59	Open To Flow (2)
151	333.67	137.32	Shut-In(2)
242	1245.77	136.45	End Shut-In(2)
243	2107.75	136.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	SO/GWCM 52% _m , 35% _w , 9% _g , 4% _o	0.89
295.00	GOWCM 42% _m , 21% _w , 19% _g , 18% _o	1.45
245.00	GOCM 55% _m , 36% _o , 9% _g	3.16

* 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.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52661

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.08.16 @ 09:40:00

Tool Information

Drill Pipe:	Length: 3804.00 ft	Diameter: 3.80 inches	Volume: 53.36 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 55.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4304.00 ft			Final 73000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	116.00 ft			
Tool Length:	144.00 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			4281.00	
Hydraulic tool	5.00			4286.00	
Jars	5.00			4291.00	
Safety Joint	3.00			4294.00	
Packer	5.00			4299.00	28.00 Bottom Of Top Packer
Packer	5.00			4304.00	
Stubb	1.00			4305.00	
Recorder	0.00	8671	Inside	4305.00	
Recorder	0.00	8320	Outside	4305.00	
Perforations	15.00			4320.00	
Blank Spacing	95.00			4415.00	
Perforations	2.00			4417.00	
Bullnose	3.00			4420.00	116.00 Bottom Packers & Anchor

Total Tool Length: 144.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52661

DST#: 2

ATTN: Saman Sharifaie

Test Start: 2013.08.16 @ 09:40:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 21 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 12000 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.58 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 800.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	SO/GWCM 52%m, 35%w, 9%g, 4%o	0.885
295.00	GOWCM 42%m, 21%w, 19%g, 18%o	1.451
245.00	GOCM 55%m, 36%o, 9%g	3.163

Total Length: 720.00 ft Total Volume: 5.499 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 24 api @ 90 deg F
Corrected Gravity = 21 api
RW = .452 ohms @ 82.4 deg F
Chlorides = 12,000 ppm

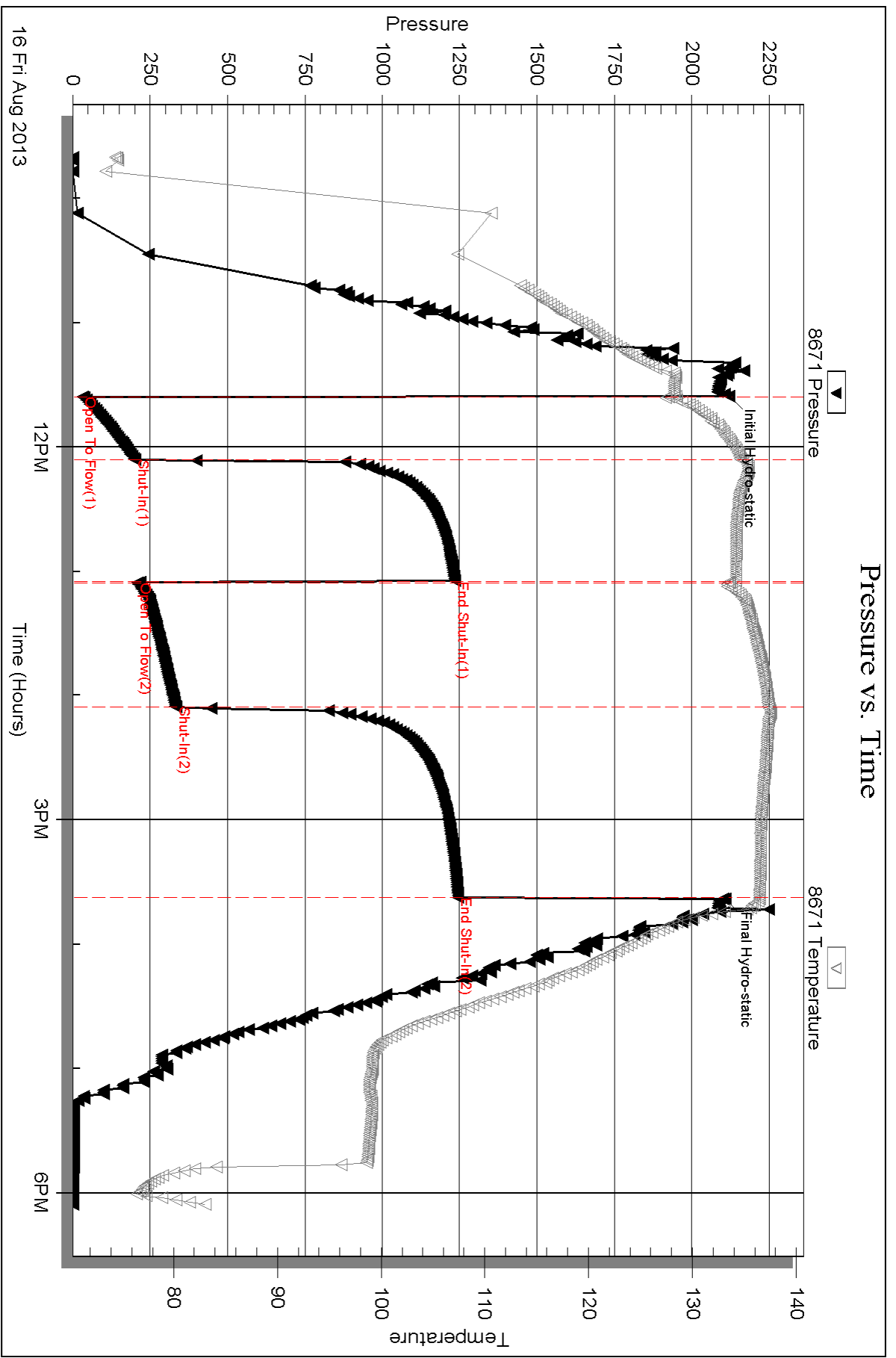
Serial #: 8671

Inside

Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 52661

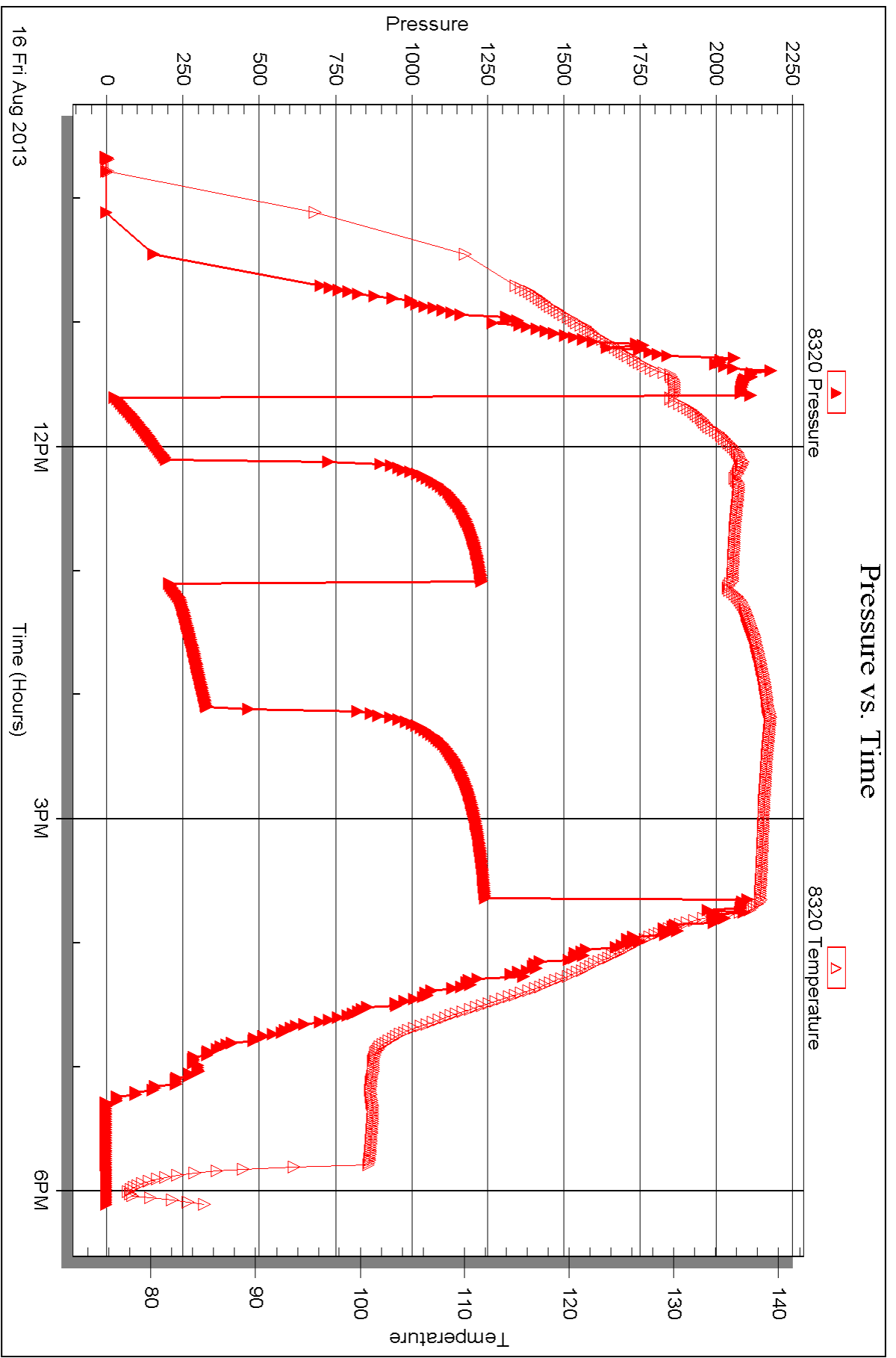
Printed: 2013.08.20 @ 15:32:31

Serial #: 8320

Outside Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 52661

Printed: 2013.08.20 @ 15:32:31



DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 672020

ATTN: Saman Sharifaie

CWA 'C' #1-32

32-2s-36w Rawlins KS

Start Date: 2013.08.17 @ 05:44:00

End Date: 2013.08.17 @ 13:10:45

Job Ticket #: 52662 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.20 @ 15:31:56



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52662

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.08.17 @ 05:44:00

GENERAL INFORMATION:

Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 07:56:30
 Tester: James Winder
 Time Test Ended: 13:10:45
 Unit No: 57
 Interval: **4469.00 ft (KB) To 4510.00 ft (KB) (TVD)**
 Reference Elevations: 3363.00 ft (KB)
 Total Depth: 4510.00 ft (KB) (TVD)
 3358.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

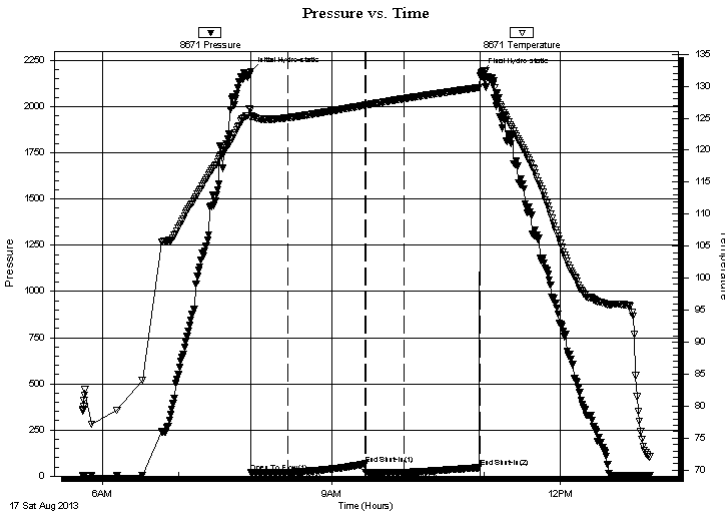
Serial #: 8671

Inside

Press @ Run Depth: 20.19 psig @ 4470.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.17 End Date: 2013.08.17 Last Calib.: 2013.08.17
 Start Time: 05:44:05 End Time: 13:10:44 Time On Btm: 2013.08.17 @ 07:56:15
 Time Off Btm: 2013.08.17 @ 10:57:30

TEST COMMENT: 30 - IF: Blow built to 1/4" then died back, dead at 20 min.
 60 - IS: No blow back
 30 - FF: No blow
 60 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2191.58	126.28	Initial Hydro-static
1	18.43	125.00	Open To Flow (1)
30	19.58	125.06	Shut-In(1)
90	65.94	127.01	End Shut-In(1)
91	19.24	127.00	Open To Flow (2)
121	20.19	128.04	Shut-In(2)
181	46.31	129.78	End Shut-In(2)
182	2182.23	132.00	Final Hydro-static

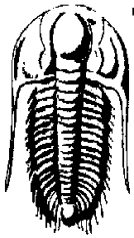
Recovery

Length (ft)	Description	Volume (bbl)
2.00	OSM 97% m, 3% o	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52662

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.08.17 @ 05:44:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:56:30

Time Test Ended: 13:10:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: **4469.00 ft (KB) To 4510.00 ft (KB) (TVD)**

Reference Elevations: 3363.00 ft (KB)

Total Depth: 4510.00 ft (KB) (TVD)

3358.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 4470.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.17

End Date:

2013.08.17

Last Calib.:

2013.08.17

Start Time: 05:44:05

End Time:

13:11:29

Time On Btm:

Time Off Btm:

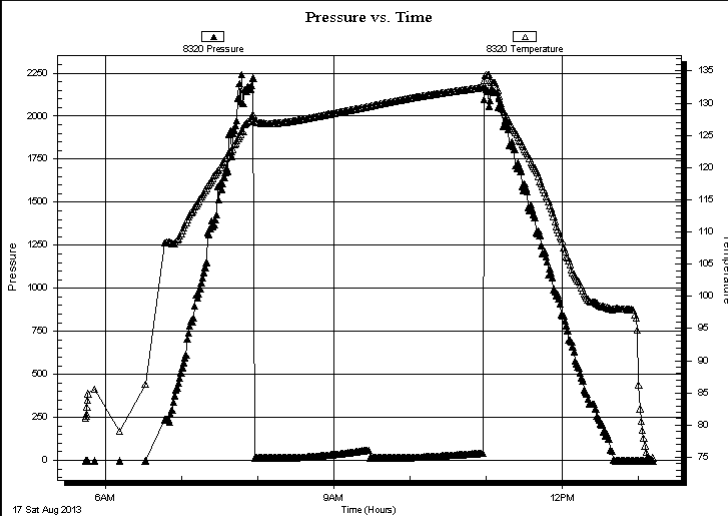
TEST COMMENT: 30 - IF: Blow built to 1/4" then died back, dead at 20 min.

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
2.00	OSM 97% _m , 3% _o	0.01

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.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52662

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.08.17 @ 05:44:00

Tool Information

Drill Pipe:	Length: 3958.00 ft	Diameter: 3.80 inches	Volume: 55.52 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4469.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	69.00 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			4446.00	
Hydraulic tool	5.00			4451.00	
Jars	5.00			4456.00	
Safety Joint	3.00			4459.00	
Packer	5.00			4464.00	28.00 Bottom Of Top Packer
Packer	5.00			4469.00	
Stubb	1.00			4470.00	
Recorder	0.00	8671	Inside	4470.00	
Recorder	0.00	8320	Outside	4470.00	
Perforations	4.00			4474.00	
Blank Spacing	33.00			4507.00	
Bullnose	3.00			4510.00	41.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52662

DST#: 3

ATTN: Saman Sharifaie

Test Start: 2013.08.17 @ 05:44:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OSM 97% _m , 3% _o	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:

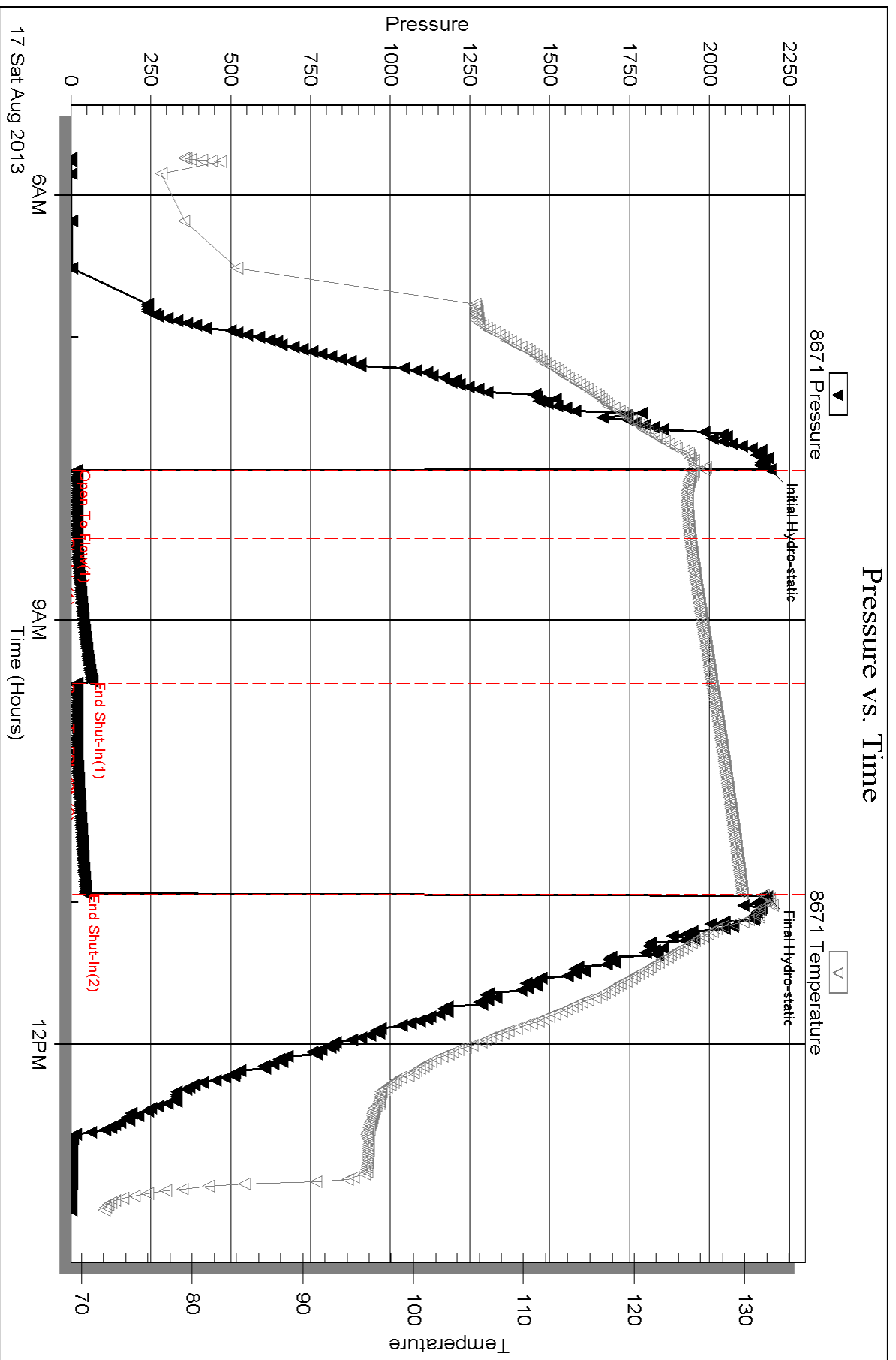
Serial #: 8671

Inside

Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 3

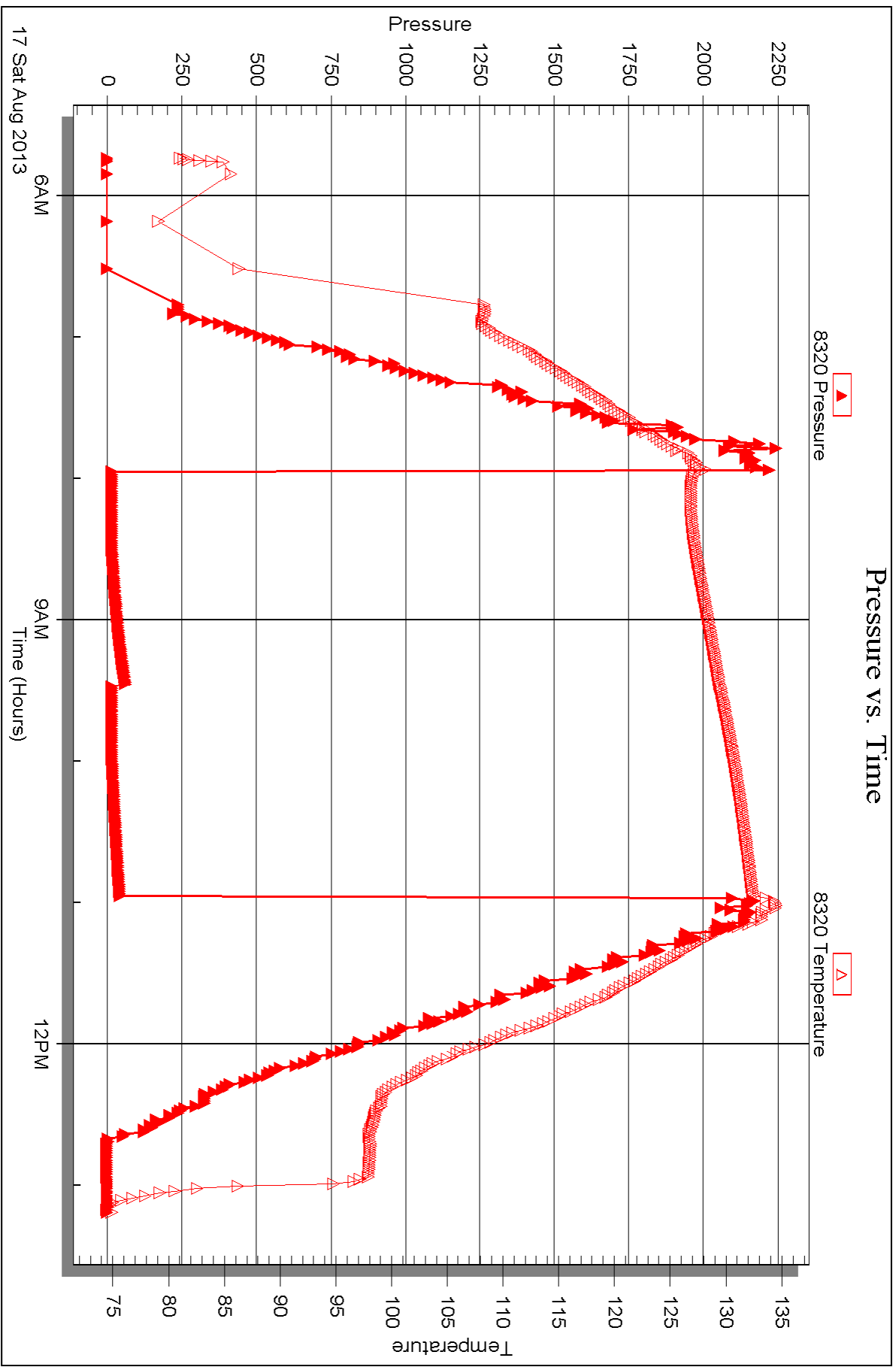


Serial #: 8320

Outside Murfin Drilling Co., Inc.

CWA 'C' #1-32

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 672020

ATTN: Saman Sharifaie

CWA 'C' #1-32

32-2s-36w Rawlins KS

Start Date: 2013.08.18 @ 11:58:00

End Date: 2013.08.18 @ 16:01:45

Job Ticket #: 52663 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.20 @ 15:31:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52663

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 11:58:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:51:45

Time Test Ended: 16:01:45

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4658.00 ft (KB) To 4706.00 ft (KB) (TVD)

Reference Elevations: 3363.00 ft (KB)

Total Depth: 4706.00 ft (KB) (TVD)

3358.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671 Inside

Press @ Run Depth: psig @ 4659.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.18

End Date: 2013.08.18

Last Calib.: 2013.08.18

Start Time: 11:58:05

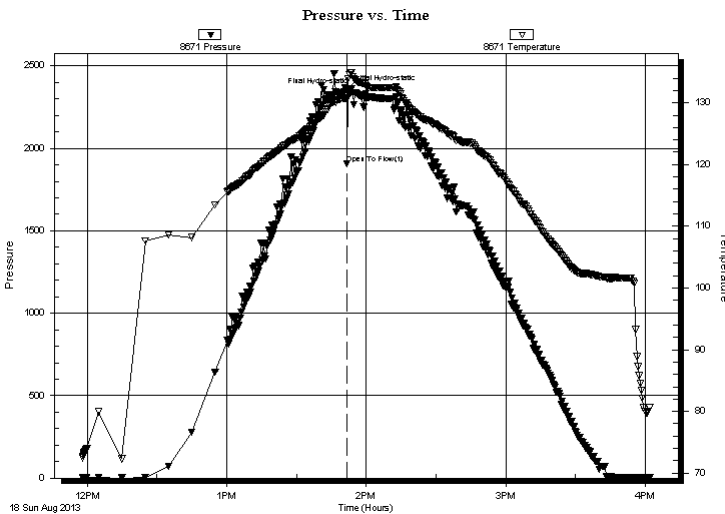
End Time: 16:01:45

Time On Btm: 2013.08.18 @ 13:51:30

Time Off Btm: 2013.08.18 @ 13:55:15

TEST COMMENT: Mis-Run
Packer Failure - Reset tool - Failed again
Pulled tool

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2357.15	130.73	Initial Hydro-static
1	1904.50	130.46	Open To Flow (1)
4	2334.95	133.71	Final Hydro-static

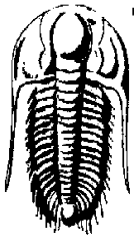
Recovery

Length (ft)	Description	Volume (bbl)
165.00	Mud 100%	0.81

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52663

DST#: 4

ATTN: Saman Sharifaie

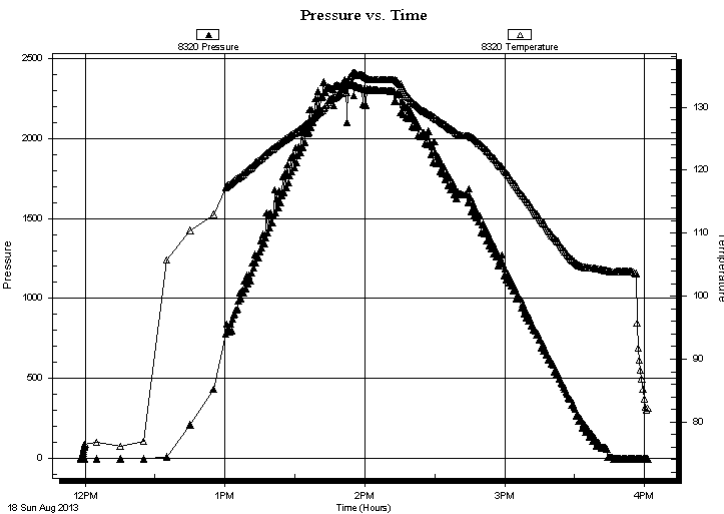
Test Start: 2013.08.18 @ 11:58:00

GENERAL INFORMATION:

Formation: Pawnee			
Deviated: No Whipstock:		ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 13:51:45			Tester: James Winder
Time Test Ended: 16:01:45			Unit No: 57
Interval: 4658.00 ft (KB) To 4706.00 ft (KB) (TVD)			Reference Elevations: 3363.00 ft (KB)
Total Depth: 4706.00 ft (KB) (TVD)			3358.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 5.00 ft

Serial #: 8320	Outside				
Press @ Run Depth:	psig @	4659.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2013.08.18	End Date:	2013.08.18	Last Calib.:	2013.08.18
Start Time:	11:58:05	End Time:	16:01:30	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: Mis-Run
Packer Failure - Reset tool - Failed again
Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
165.00	Mud 100%	0.81

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.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52663

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 11:58:00

Tool Information

Drill Pipe:	Length: 4145.00 ft	Diameter: 3.80 inches	Volume: 58.14 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 60.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4658.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	76.00 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			4635.00	
Hydraulic tool	5.00			4640.00	
Jars	5.00			4645.00	
Safety Joint	3.00			4648.00	
Packer	5.00			4653.00	28.00 Bottom Of Top Packer
Packer	5.00			4658.00	
Stubb	1.00			4659.00	
Recorder	0.00	8671	Inside	4659.00	
Recorder	0.00	8320	Outside	4659.00	
Perforations	11.00			4670.00	
Blank Spacing	33.00			4703.00	
Bullnose	3.00			4706.00	48.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52663

DST#: 4

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 11:58:00

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: 5.59 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
165.00	Mud 100%	0.811

Total Length: 165.00 ft Total Volume: 0.811 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

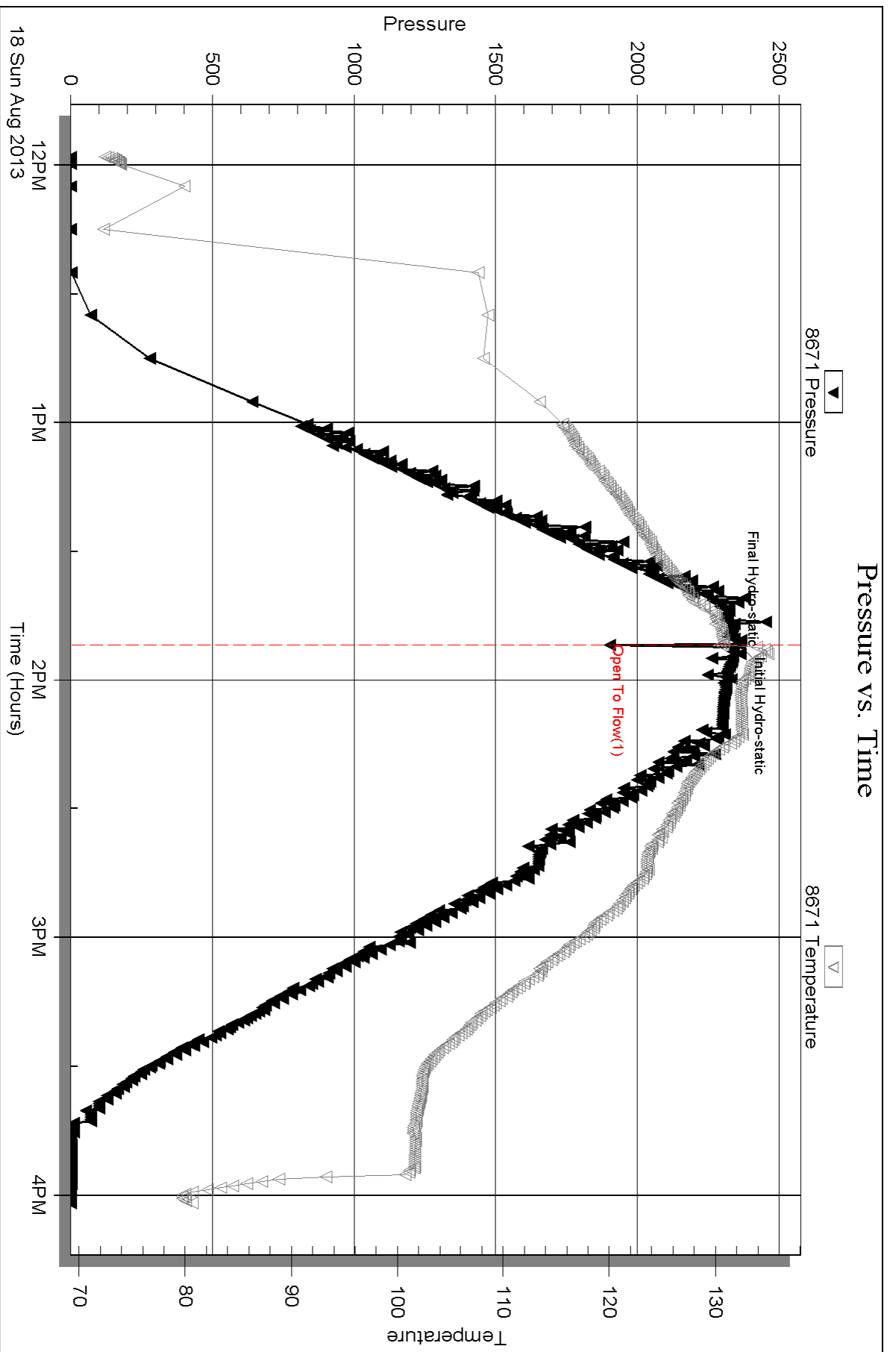
Serial #: 8671

Inside

Murfin Drilling Co., Inc.

CMA 'C' #1-32

DST Test Number: 4

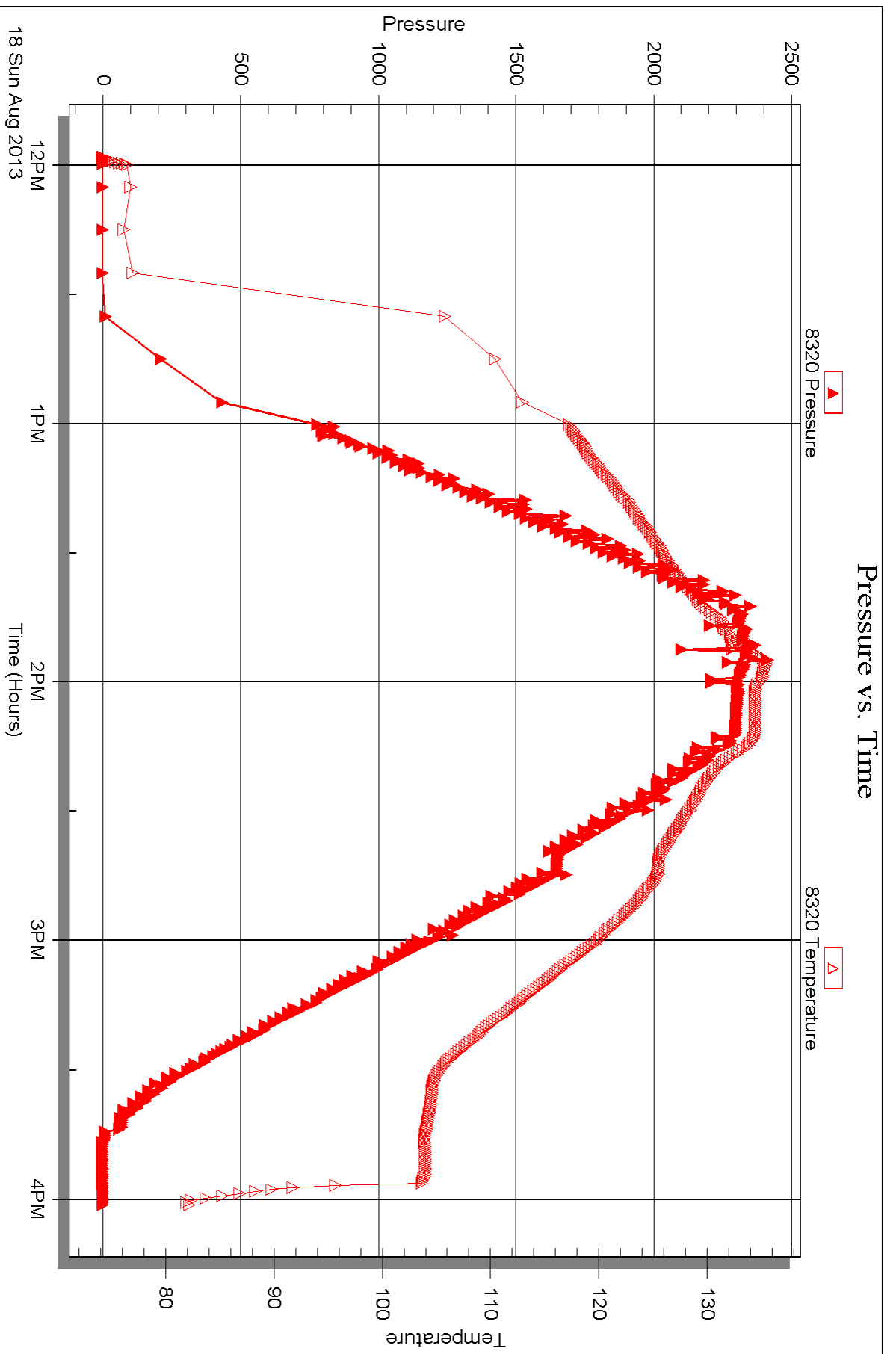


Serial #: 8320

Outside Murfin Drilling Co., Inc.

CMA 'C' #1-32

DST Test Number: 4





DRILL STEM TEST REPORT

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

250 N. Water Suite 300
Wichita, KS 672020

ATTN: Saman Sharifaie

CWA 'C' #1-32

32-2s-36w Rawlins KS

Start Date: 2013.08.18 @ 16:27:00

End Date: 2013.08.18 @ 23:11:00

Job Ticket #: 52664 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.20 @ 15:30:09



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52664

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 16:27:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:59:30

Time Test Ended: 23:11:00

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 4651.00 ft (KB) To 4706.00 ft (KB) (TVD)

Reference Elevations: 3363.00 ft (KB)

Total Depth: 4706.00 ft (KB) (TVD)

3358.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 24.02 psig @ 4652.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.18

End Date:

2013.08.18

Last Calib.:

2013.08.18

Start Time:

16:27:05

End Time:

23:10:59

Time On Btm:

2013.08.18 @ 17:59:15

Time Off Btm:

2013.08.18 @ 20:59:45

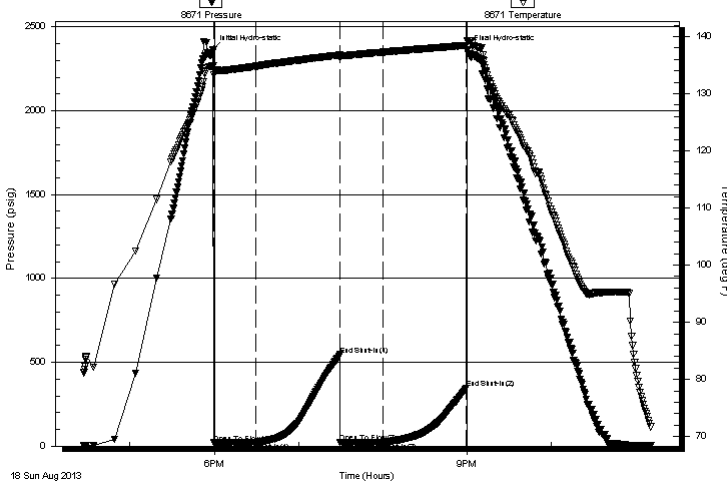
TEST COMMENT: 30 - IF: Blow built to 3/4" then died back to surface blow at close

60 - IS: No blow back

30 - FF: No blow

60 - FS: No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2362.91	134.87	Initial Hydro-static
1	19.13	133.24	Open To Flow (1)
30	22.34	134.78	Shut-In(1)
91	545.29	136.76	End Shut-In(1)
91	22.61	136.36	Open To Flow (2)
121	24.02	137.25	Shut-In(2)
180	343.59	138.46	End Shut-In(2)
181	2363.90	139.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OSM 97% m, 3% o	0.15

* 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.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52664

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 16:27:00

Tool Information

Drill Pipe:	Length: 4145.00 ft	Diameter: 3.80 inches	Volume: 58.14 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: 505.00 ft	Diameter: 2.25 inches	Volume: 2.48 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4651.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			4628.00	
Hydraulic tool	5.00			4633.00	
Jars	5.00			4638.00	
Safety Joint	3.00			4641.00	
Packer	5.00			4646.00	28.00 Bottom Of Top Packer
Packer	5.00			4651.00	
Packer - Shale	0.00			4651.00	
Stubb	1.00			4652.00	
Recorder	0.00	8671	Inside	4652.00	
Recorder	0.00	8320	Outside	4652.00	
Perforations	18.00			4670.00	
Blank Spacing	33.00			4703.00	
Bullnose	3.00			4706.00	55.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

32-2s-36w Rawlins KS

250 N. Water Suite 300
Wichita, KS 672020

CWA 'C' #1-32

Job Ticket: 52664

DST#: 5

ATTN: Saman Sharifaie

Test Start: 2013.08.18 @ 16:27:00

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: 5.58 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
30.00	OSM 97% _m , 3% _o	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

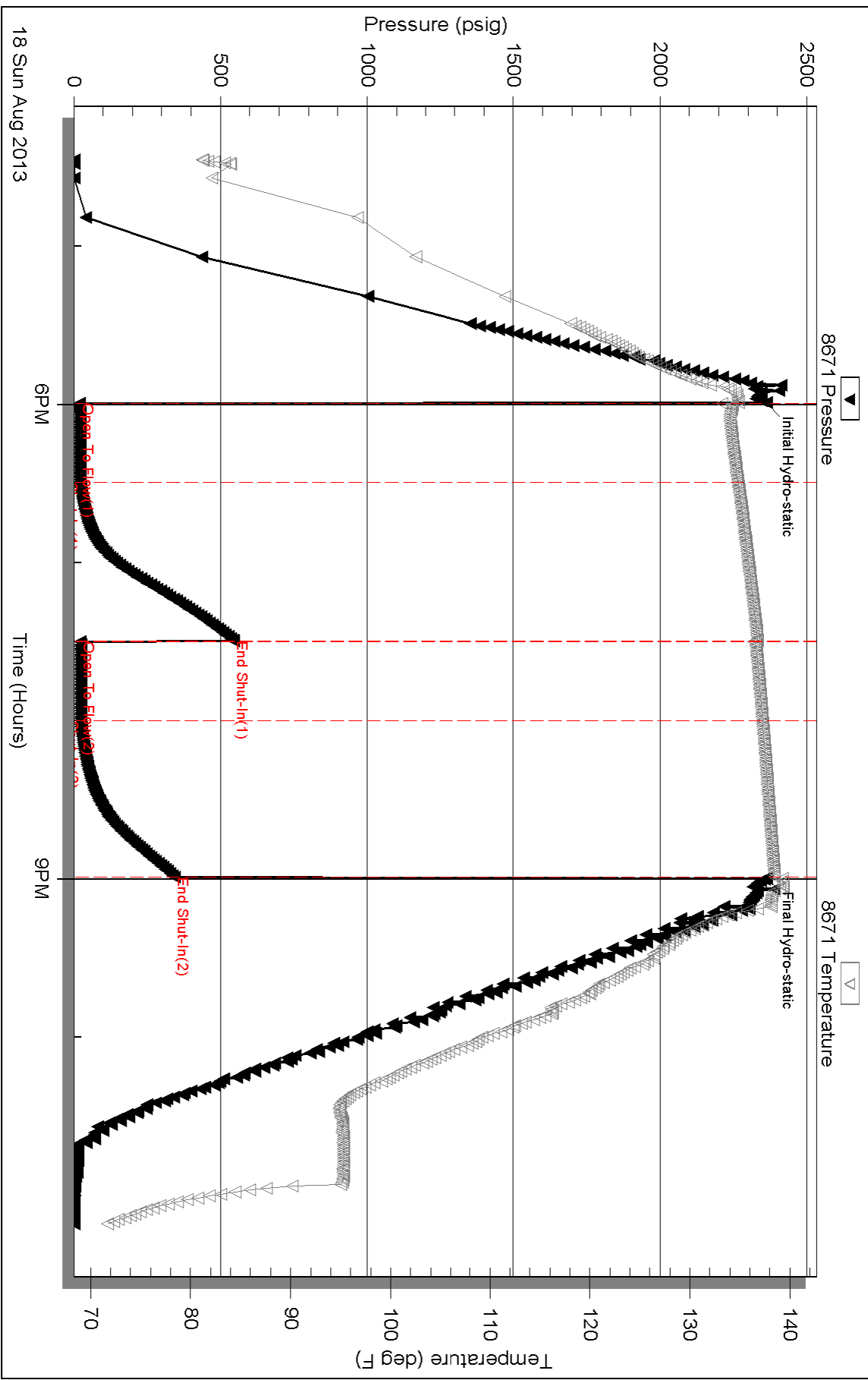
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

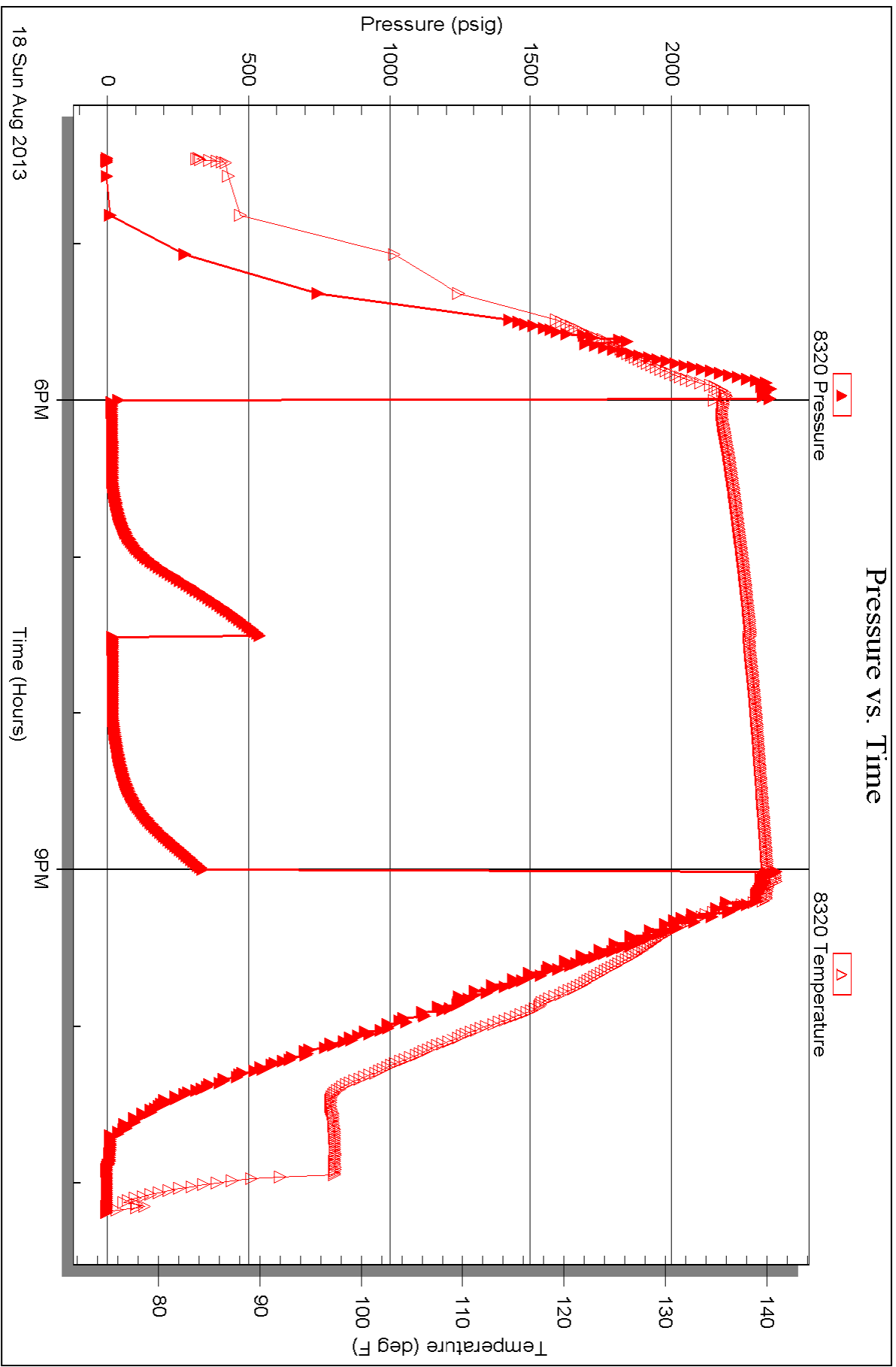


Serial #: 8320

Outside Murfin Drilling Co., Inc.

CMA 'C' #1-32

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52660

Well Name & No. CWA "C" #1-32 Test No. 1 Date 8-15-13
 Company Murfin Drilling Co. Inc Elevation 3363 KB 3358 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 32 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4268-4330 Zone Tested LKC "A"
 Anchor Length 62 Drill Pipe Run 3741 Mud Wt. 9.0
 Top Packer Depth 4263 Drill Collars Run 505 Vis 65
 Bottom Packer Depth 4268 Wt. Pipe Run - WL 5.2
 Total Depth 4330 Chlorides 600 ppm System LCM 1
 Blow Description IF: Blow built to BOB (11") in 22 1/2 min.
ISI: No blowback
FF: Blow started around 2 min, built to BOB ^{at} 41 min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
30	MO	-	60	-	40
125	GOCM	12	15	-	73
357	GMO	30	37	-	33
59	GOWCM	21	11	12	56
59	GOCM	18	8	-	74

Rec Total 630 Fluid 30' 5" IP BHT 136 Gravity 21.2 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2100 Test * 1250 T-On Location 11:15
 (B) First Initial Flow 20 Jars * 250 T-Started 12:21
 (C) First Final Flow 163 Safety Joint * 75 T-Open 14:10
 (D) Initial Shut-In 1112 Circ Sub * T-Pulled ~~18:13~~ 18:13
 (E) Second Initial Flow 170 Hourly Standby T-Out 20:30
 (F) Second Final Flow 290 Mileage 98 RT 151.90 Comments _____
 (G) Final Shut-In 974 Sampler _____
 (H) Final Hydrostatic 2086 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1726.90
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1726.90

Approved By [Signature] Our Representative James Winder

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52661

Well Name & No. CWA 'C' #1-32 Test No. 2 Date 8-16-13
 Company Murfin Drilling Co. Inc Elevation 3363 KB 3358 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 32 Twp. 2s Rge. 36w Co. Rawlins State KS

Interval Tested 4304 - 4420 Zone Tested LKC "B-G"
 Anchor Length 116 Drill Pipe Run 3804 Mud Wt. 9.1
 Top Packer Depth 4309 Drill Collars Run 505 Vis 52
 Bottom Packer Depth 4314 Wt. Pipe Run - WL 5.6
 Total Depth 4430 Chlorides 800 ppm System LCM 1

Blow Description IF: Blow built to BOB (11") in 20 min.
ISI: No blowback
FF: Blow built to BOB in 28 min.
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
245	60cm	9	36	-	55
295	60wcm	19	18	21	42
180	50/6wcm	9	4	35	52

Rec Total 720 BHT 136 Gravity 21 API RW .452 @ 82.4 °F Chlorides 12,000 ppm

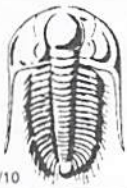
(A) Initial Hydrostatic 2121 Test * 1250 T-On Location 9:10
 (B) First Initial Flow 32 Jars * 250 T-Started 9:40
 (C) First Final Flow 201 Safety Joint * 75 T-Open 11:35
 (D) Initial Shut-In 1235 Circ Sub *NA T-Pulled 15:37
 (E) Second Initial Flow 209 Hourly Standby _____ T-Out 18:00
 (F) Second Final Flow 334 Mileage 98RT 151.90
 (G) Final Shut-In 1246 Sampler _____
 (H) Final Hydrostatic 2108 Straddle _____

Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1726.90
 MP/DST Disc't _____

Approved By [Signature] Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52662

Well Name & No. CWA 'C' #1-32 Test No. 3 Date 8-17-13
 Company Murfin Drilling Co., Inc Elevation 3363 KB 3358 GL
 Address 250 N. Water Suite 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 32 Twp. 25 Rge. 36w Co. Rawlins State KS

Interval Tested 4469-4510 Zone Tested LKC "J"
 Anchor Length 41 Drill Pipe Run 3958 Mud Wt. 9.0
 Top Packer Depth 4464 Drill Collars Run 505 Vis 62
 Bottom Packer Depth 4469 Wt. Pipe Run - WL 5.2
 Total Depth 4510 Chlorides 800 ppm System LCM 1
 Blow Description IF: Blow built to 1/4" then died back, dead at 20 min.
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>OSM</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>97</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 2 BHT 130 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 2192 Test * 1250 T-On Location 5:15
 (B) First Initial Flow 18 Jars * 250 T-Started 5:44
 (C) First Final Flow 20 Safety Joint * 75 T-Open 7:56
 (D) Initial Shut-In 66 Circ Sub *NA T-Pulled 10:56
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 13:05
 (F) Second Final Flow 20 Mileage 98RT 151.90 Comments _____
 (G) Final Shut-In 46 Sampler _____
 (H) Final Hydrostatic 2182 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1726.90

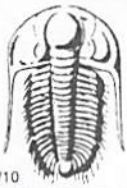
Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1726.90
 MP/DST Disc't _____

Approved By

Our Representative

James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52663

Well Name & No. CWA "C" #1-32 Test No. 4 Date 8-18-13
 Company Murfin Drilling Co. Inc Elevation 3363 KB 3358 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4658 - 4706 Zone Tested Pawnee
 Anchor Length 48 Drill Pipe Run 4145 Mud Wt. 9.1
 Top Packer Depth 4653 Drill Collars Run 505 Vis 56
 Bottom Packer Depth 4658 Wt. Pipe Run - WL 5.6
 Total Depth 4706 Chlorides 800 ppm System LCM 2
 Blow Description Mis-Run
Packer Failure - Reset - Failed again
Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>165</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 165 BHT - Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic X Test * 1050 T-On Location 11:00
 (B) First Initial Flow X Jars * 250 T-Started 11:58
 (C) First Final Flow X Safety Joint * 75 T-Open 13:51
 (D) Initial Shut-In X Circ Sub *NA T-Pulled 13:55
 (E) Second Initial Flow X Hourly Standby T-Out 16:00
 (F) Second Final Flow X Mileage 98 + 20 = 118RT 182.90 Comments Started to Rig got
 (G) Final Shut-In X Sampler - called - said they need to
 (H) Final Hydrostatic X Straddle - short trip - 20mi RT
 Shale Packer - Ruined Shale Packer -
 Shale Packer - Ruined Packer * 320
 Extra Packer - Extra Copies -
 Extra Recorder - Sub Total 0
 Day Standby - Total 1877.90
 Accessibility - MP/DST Disc't -
 Sub Total 1557.90

Approved By _____ Our Representative James Winder

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52664

Well Name & No. CWA "C" #1-32 Test No. 5 Date 8-18-13
 Company Murfin Drilling Co. Inc. Elevation 3363 KB 3358 GL
 Address 250 N. Water Suite 300 Wichita, KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin #3
 Location: Sec. 32 Twp. 2S Rge. 36W Co. Rawlins State KS

Interval Tested 4651 - 4706 Zone Tested Pawnee
 Anchor Length 55 Drill Pipe Run 4145 Mud Wt. 9.1
 Top Packer Depth 4646 Drill Collars Run 505 Vis 56
 Bottom Packer Depth 4651 Wt. Pipe Run - WL 5.6
 Total Depth 4706 Chlorides 800 ppm System LCM 2

Blow Description IF: Blow built to 3/4" then died back to surface at close.
ISI: No blowback
FF: No blow
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>05m</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>97</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 30 BHT 138 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2363 Test ★ 1250 T-On Location 16:15
 (B) First Initial Flow 19 Jars ★ 250 T-Started 16:27
 (C) First Final Flow 22 Safety Joint ★ 75 T-Open 17:59
 (D) Initial Shut-In 545 Circ Sub ★ T-Pulled 20:59
 (E) Second Initial Flow 23 Hourly Standby T-Out 23:05
 (F) Second Final Flow 24 Mileage - Comments _____
 (G) Final Shut-In 344 Sampler _____
 (H) Final Hydrostatic 2364 Straddle _____ Ruined Shale Packer ★ 350

Initial Open 30 Ruined Packer _____
 Initial Shut-In 60 Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 2175
 Accessibility _____ MP/DST Disc't _____
 Sub-Total 1825

Approved By [Signature] Our Representative James Winder

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ALLIED

OIL & GAS SERVICES, LLC

PO Box 93999
Southlake, TX 76092

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

INVOICE

Invoice Number: 137861
Invoice Date: Aug 10, 2013
Page: 1

Now Includes:



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

Customer ID	Field Ticket #	Payment Terms	
Murfin	61239	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Aug 10, 2013	9/9/13

Quantity	Item	Description	Unit Price	Amount
350.00	CEMENT MATERIALS	CWA C #1-32		
		Class A Common	17.90	6,265.00
12.00	CEMENT MATERIALS	Chloride	64.00	768.00
367.50	CEMENT SERVICE	Cubic Feet	2.48	911.40
1,440.00	CEMENT SERVICE	Ton Mileage	2.60	3,744.62
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
85.00	CEMENT SERVICE	Pump Truck Mileage	7.70	654.50
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
85.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	374.00
1.00	EQUIPMENT SALES	8.5/8 Wooden Plug	107.64	107.64
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	EQUIPMENT OPERATOR	Wayne McGhghy		
1.00	OPERATOR ASSISTANT	Kevin Ryan		

Subtotal	14,612.41
Sales Tax	564.11
Total Invoice Amount	15,176.52
Payment/Credit Applied	
TOTAL	15,176.52

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

\$ 5,114.34

ONLY IF PAID ON OR BEFORE

Sep 4, 2013

(Handwritten initials)



CONSOLIDATED
Oil Well Services, LLC

Acoby
cc: WF
cc: L-1

Services, LLC
6
)-4346

MAIN OFFICE
P.O. Box 884
Chanute, KS 66720
620/431-9210 • 1-800/467-8676
Fax 620/431-0012

INVOICE Invoice # 261578
=====

MURFIN DRILLING
P.O. BOX 288
RUSSELL KS 67665
() -

CWA 'C' 1-32
38071
32-2-36
08-20-2013
KS

USED FOR 16103
APPROVED JLR

Invoice Date: 08/23/2013 Terms: 10/10/30,n/30 Page 1

Part Number	Description	Qty	Unit Price	Total
1126	OIL WELL CEMENT	200.00	23.7000	4740.00
1110A	KOL SEAL (50# BAG)	1000.00	.5600	560.00
1104S	CLASS "A" CEMENT (SALE)	300.00	18.5500	5565.00
1102	CALCIUM CHLORIDE (50#)	564.00	.9400	530.16
1101	CAL SEAL	564.00	.5200	293.28
1111A	SODIUM METASILICATE	564.00	2.5200	1421.28
1118B	PREMIUM GEL / BENTONITE	564.00	.2700	152.28
1142A	KCL SUB MB6875 CC3107 (1	2.00	41.1000	82.20
1144G	MUD FLUSH (SALE)	500.00	1.0000	500.00
4104	CEMENT BASKET 5 1/2"	3.00	290.0000	870.00
4136	TURBOLIZER 5 1/2"	15.00	75.7500	1136.25
4159	FLOAT SHOE AFU 5 1/2"	1.00	433.7500	433.75
4315	ROTATING SCRATCHERS	5.00	94.5000	472.50
4454	5 1/2" LATCH DOWN PLUG	1.00	567.0000	567.00
4310	5 1/2" ROTATING HEAD	1.00	150.0000	150.00
1107	FLO-SEAL (25#)	150.00	2.9700	445.50

Sublet Performed	Description	Total
9996-130	CEMENT MATERIAL DISCOUNT	-1791.92
9995-130	CEMENT EQUIPMENT DISCOUNT	-678.48

Description	Hours	Unit Price	Total
456 SINGLE PUMP	1.00	3175.00	3175.00
456 EQUIPMENT MILEAGE (ONE WAY)	75.00	5.25	393.75
460 TON MILEAGE DELIVERY	1.00	1608.00	1608.00
528 TON MILEAGE DELIVERY	1.00	1608.00	1608.00

Amount Due 26119.56 if paid after 09/22/2013

Parts:	17919.20	Freight:	.00	Tax:	1274.05	AR	23507.60
Labor:	.00	Misc:	.00	Total:	23507.60		
Sublt:	-2470.40	Supplies:	.00	Change:	.00		

Signed _____ Date _____

BARTLESVILLE, OK 918/338-0808 EL DORADO, KS 316/322-7022 EUREKA, KS 620/583-7664 PONCA CITY, OK 580/762-2303 OAKLEY, KS 785/672-8822 OTTAWA, KS 785/242-4044 THAYER, KS 620/839-5269 GILLETTE, WY 307/686-4914 CUSHING, OK 918/225-2650



CONSOLIDATED
Oil Well Services, LLC

261578

TICKET NUMBER 38071

LOCATION Oakley

FOREMAN Darren + miles

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT

Ks.

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-20-13	5406	CWA "C" 1-32	32	2	36	Rawlins
CUSTOMER			TRUCK # DRIVER TRUCK # DRIVER			
Murf'in			456 Jordan			
MAILING ADDRESS			460 Danial			
CITY			528 Mike			
STATE			ZIP CODE			

JOB TYPE Long string HOLE SIZE 7 7/8 HOLE DEPTH 4850 CASING SIZE & WEIGHT 5 1/2 15.5
 CASING DEPTH 4831 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 11.3 +142 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT IN CASING 21.16
 DISPLACEMENT 114 47 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting Rig up on Murfin #3 Run float Equipment tubularizers on 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 38, 57 Baskets on 15, 39, 58, Circulate on Jt. #60 - Run Chain To Bottom Circulate for hr. mix 300 sks CMD 1/2 * Floseal + 200 SKS OWC 5 * Gilsonite per sack Washup Pump + Lines Displace plug Down with water (114,47 bbl) Final Lift 1100' Land plug @ 1750' * Float Did Hold

Plug Rathole 30 SKS Cement - Plug mousehole 20 SKS Cement
Cement Did Circulate

Approx 20 bbl To Pit

Thanks Darren + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	\$3175.00	\$3175.00
5406	75	MILEAGE	\$5.25	\$393.75
5407A	24.5	ton mileage Delivery	\$1.75	\$321.60
1126	200 SKS	OWC	\$23.70	\$4740.00
1110A	1000 *	Kal Seal	\$.56	\$560.00
1104S	300 SKS	Com Class "A"	\$18.55	\$5565.00
1102	564 *	Calcium Chloride	\$.94	\$530.16
1101	564 *	Cal Seal	\$.52	\$293.28
1111A	564 *	metasilicate	\$2.52	\$1421.28
1118B	564 *	Bentonite	\$.27	\$152.28
1142A	2 gal	KCL	\$41.10	\$82.20
1144G	500 gal	mud Flush	\$1.00	\$500.00
4104	3	5 1/2 Baskets	\$290.00	\$870.00
4136	15	5 1/2 tubularizers	\$75.75	\$1136.25
4159	1	5 1/2 AFU Float Shoe	\$433.75	\$433.75
4315	5	Rotating Scratchers	\$94.50	\$472.50
4454	1	5 1/2 Latch Down w	\$567.00	\$567.00
4310	1	5 1/2 Rotating Head	\$150.00	\$150.00
1107	150 *	1/2 * Floseal	\$2.97	\$445.50

Completed

Subtotal 24708.95 Less 10% 2470.40 Subtotal 22238.55 ESTIMATED TOTAL 23507.60
 Sales Tax 1274.05 DATE _____
 AUTHORIZATION Buck Sales TITLE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.