



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1195926
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: _____

1195926

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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MDCI
 Downing 'A' #1-19
 330' FNL 2060' FWL
 Sec. 15-T1S-R35W
 3211' KB

MDCI
 Cahoj #1
 SW NE NE SE
 Sec. 19-T1S-R35W
 3231' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref	Log Top	Datum
Anhydrite	3103	+108	-22	3100	+111	-19	3101	+130
B/Anhydrite	3140	+71	-15	3140	+71	-15	3145	+86
Neva	3601	-390	-13	3599	-388	-11	3608	-377
Red Eagle	3667	-456	-17	3662	-451	-12	3670	-439
Foraker	3717	-506	-15	3711	-500	-9	3722	-491
Topeka	3930	-719	-16	3925	-714	-11	3934	-703
Oread	4045	-834	-23	4041	-830	-19	4042	-811
Lansing	4146	-935	-5	4146	-935	-5	4161	-930
Stark	4360	-1149	-6	4357	-1146	-3	4374	-1143
BKC	4411	-1200	-5	4407	-1196	-1	4426	-1195
Pawnee	4532	-1321		4528	-1317		DNR	
Cherokee	4616	-1405		4610	-1399		DNR	
Mississippi							DNR	
RTD	4700	-1489					4490	
LTD				4698	-1487		4484	



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.11.30 @ 04:15:00

End Date: 2013.11.30 @ 12:54:30

Job Ticket #: 53600 DST #: 1

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

Printed: 2013.12.06 @ 10:03:30

Murfin Drilling Co. 19 1s 35w Rawlins,KS Downing A #1-19 DST # 1 Foraker 2013.11.30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 53600

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.11.30 @ 04:15:00

Tool Information

Drill Pipe:	Length: 3475.00 ft	Diameter: 3.80 inches	Volume: 48.75 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 49.66 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3678.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	79.00 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			3655.00	
Hydraulic tool	5.00			3660.00	
Jars	5.00			3665.00	
Safety Joint	3.00			3668.00	
Packer	5.00			3673.00	28.00 Bottom Of Top Packer
Packer	5.00			3678.00	
Stubb	1.00			3679.00	
Recorder	0.00	8673	Inside	3679.00	
Recorder	0.00	8651	Outside	3679.00	
Perforations	14.00			3693.00	
change Over Sub	1.00			3694.00	
Blank Spacing	31.00			3725.00	
Change Over Sub	1.00			3726.00	
Bullnose	3.00			3729.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 53600

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.11.30 @ 04:15:00

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: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	mud w ith oil spots-1%o99%m	0.123

Total Length: 25.00 ft Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

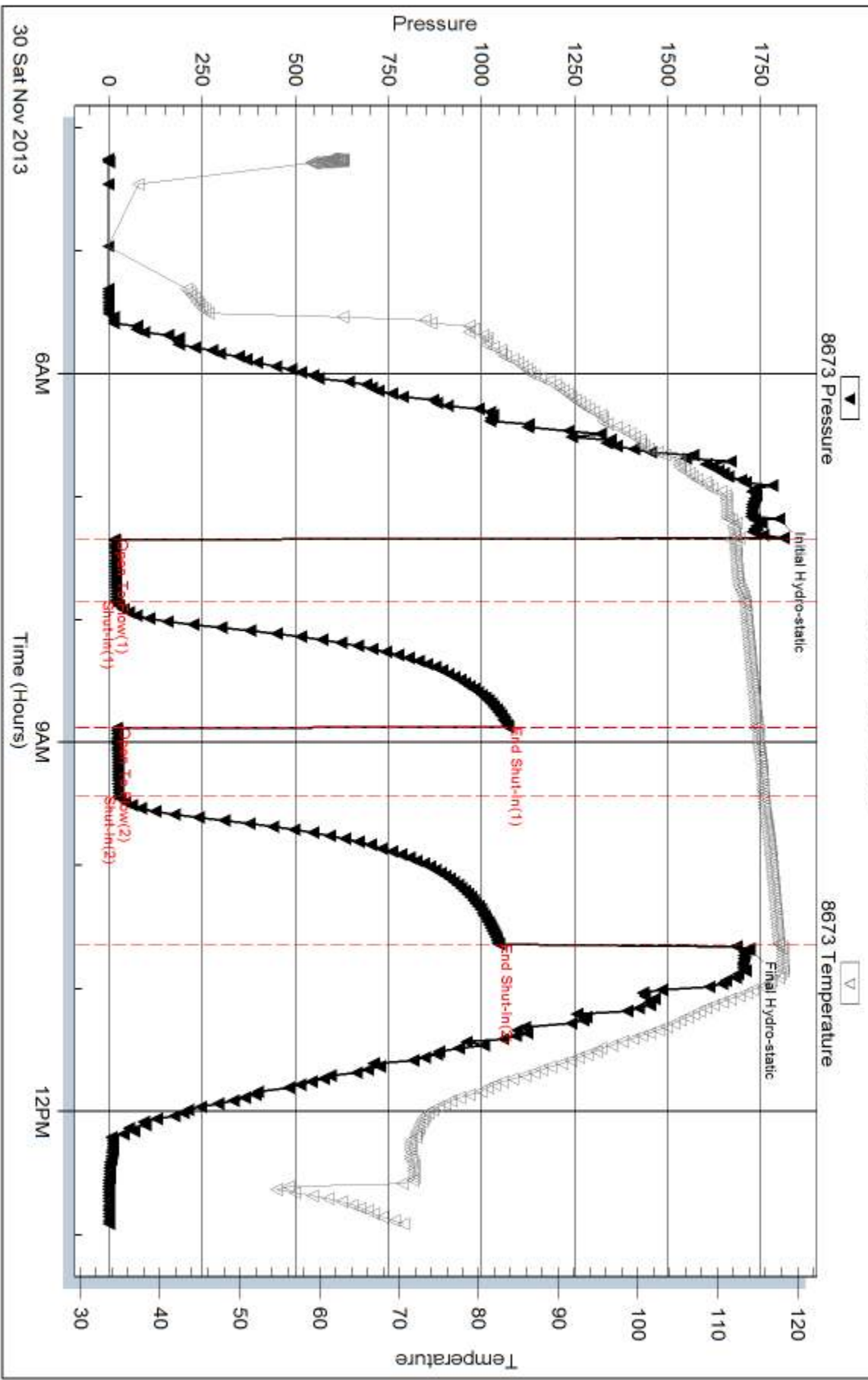
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: On loc. at 4:10 Tool made up on w alk at 4:45. Tool made up in table, w ait on jars. and trip in to circ. sub 5:35. (truck batterys w ere dead jumped it and then had to jump it again before i left tow n 10 mins. late to rig. didn't rec. call untill 2am and i took job for james.

Pressure vs. Time

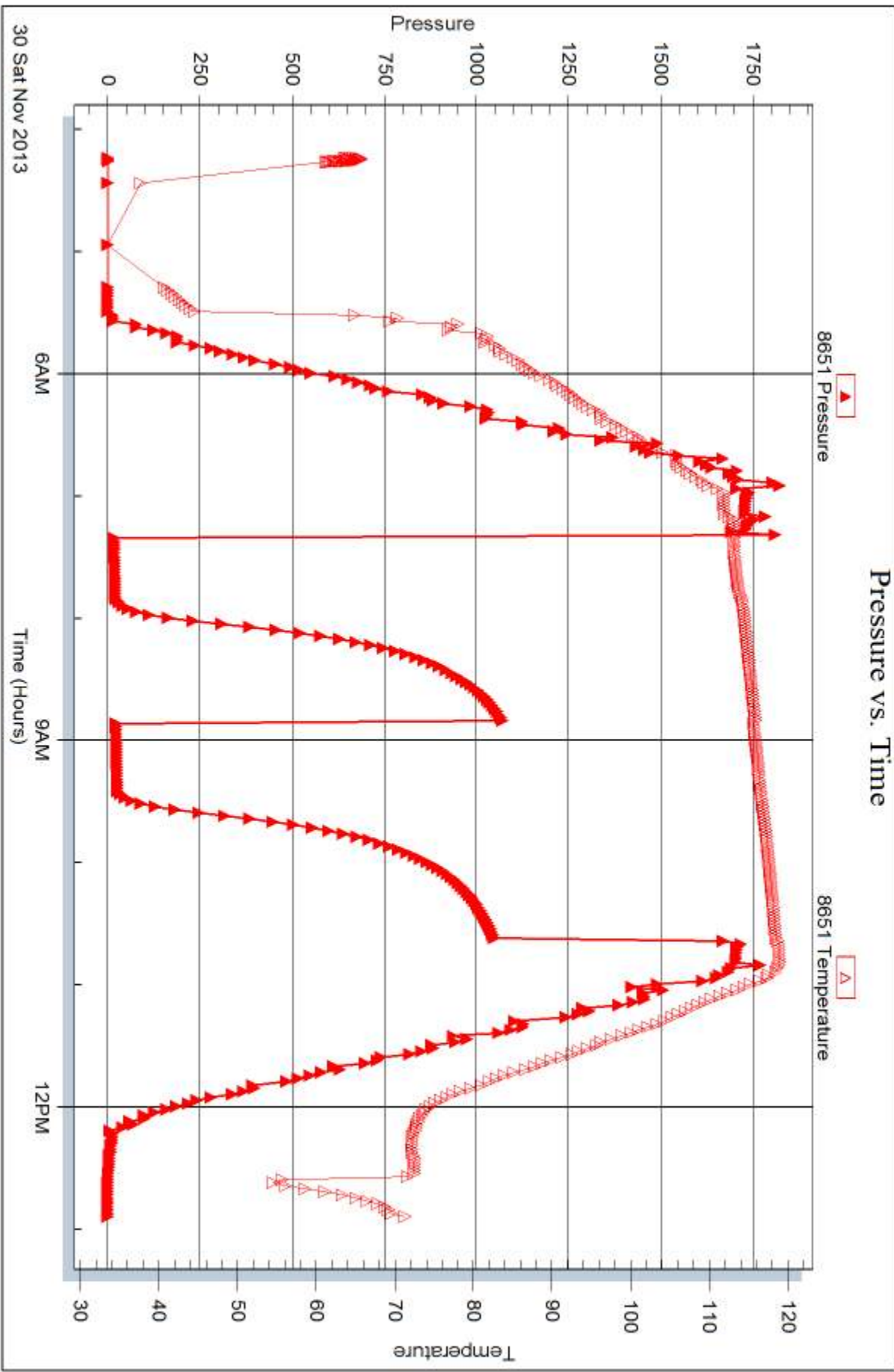


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.01 @ 16:10:00

End Date: 2013.12.02 @ 02:08:30

Job Ticket #: 55926 DST #: 2

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

Printed: 2013.12.06 @ 10:02:52



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

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

19 1s 35w Rawlins,KS
Downing A #1-19
Job Ticket: 55926 **DST#: 2**
Test Start: 2013.12.01 @ 16:10:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:28:30
Time Test Ended: 02:08:30
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61
Interval: **4084.00 ft (KB) To 4175.00 ft (KB) (TVD)**
Reference Elevations: 3211.00 ft (KB)
Total Depth: 4175.00 ft (KB) (TVD) 3206.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

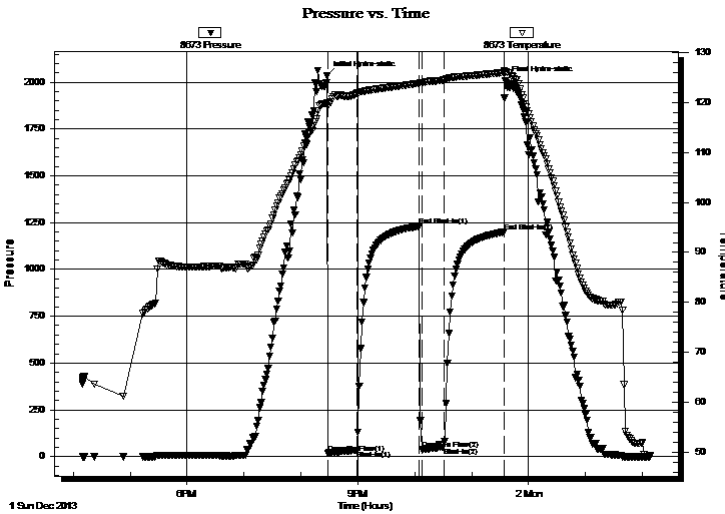
Serial #: 8673

Inside

Press@RunDepth: 49.76 psig @ 4085.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.12.01 End Date: 2013.12.02 Last Calib.: 2013.12.02
Start Time: 16:10:01 End Time: 02:08:30 Time On Btm: 2013.12.01 @ 20:27:30
Time Off Btm: 2013.12.01 @ 23:35:30

TEST COMMENT: IF: Weak surface blow , over 30 mins.
IS: No blow back over 60 mins.
FF: Weak blow , After 10 mins. off and on over next 20 mins.
FS: No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.10	119.97	Initial Hydro-static
1	18.20	119.15	Open To Flow (1)
32	34.44	121.86	Shut-In(1)
97	1229.96	123.83	End Shut-In(1)
100	38.84	123.90	Open To Flow (2)
123	49.76	124.55	Shut-In(2)
187	1199.49	126.00	End Shut-In(2)
188	2006.85	126.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	mud-100%m	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.

19 1s 35w Rawlins, KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55926

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.01 @ 16:10:00

GENERAL INFORMATION:

Formation: **LKC-A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:28:30

Time Test Ended: 02:08:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 4084.00 ft (KB) To 4175.00 ft (KB) (TVD)

Reference Elevations: 3211.00 ft (KB)

Total Depth: 4175.00 ft (KB) (TVD)

3206.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8651 Outside

Press@RunDepth: psig @ 4085.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.01

End Date: 2013.12.02

Last Calib.: 2013.12.02

Start Time: 16:10:01

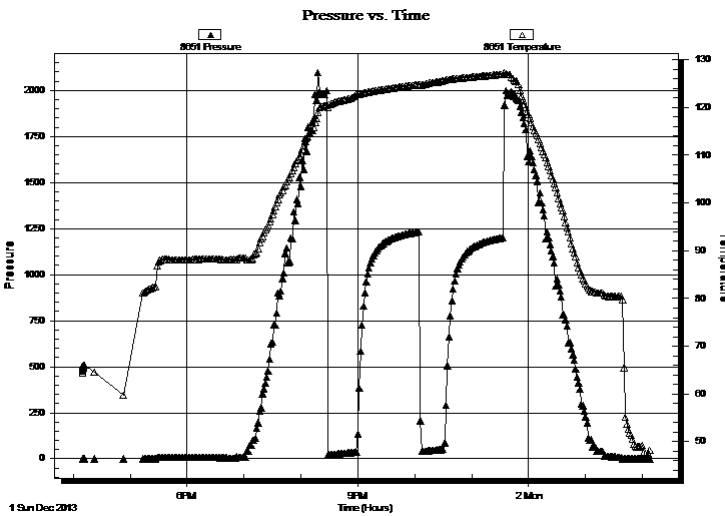
End Time: 02:08:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Weak surface blow , over 30 mins.
IS: No blow back over 60 mins.
FF: Weak blow , After 10 mins. off and on over next 20 mins.
FS: No blow back.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	mud-100%m	0.31

* 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.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55926

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.01 @ 16:10:00

Tool Information

Drill Pipe:	Length: 3882.00 ft	Diameter: 3.80 inches	Volume: 54.45 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 55.36 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4084.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4061.00	
Hydraulic tool	5.00			4066.00	
Jars	5.00			4071.00	
Safety Joint	3.00			4074.00	
Packer	5.00			4079.00	28.00 Bottom Of Top Packer
Packer	5.00			4084.00	
Stubb	1.00			4085.00	
Recorder	0.00	8673	Inside	4085.00	
Recorder	0.00	8651	Outside	4085.00	
Perforations	22.00			4107.00	
change Over Sub	1.00			4108.00	
Drill Pipe	63.00			4171.00	
Change Over Sub	1.00			4172.00	
Bullnose	3.00			4175.00	91.00 Bottom Packers & Anchor

Total Tool Length: 119.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55926

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.01 @ 16:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 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
63.00	mud-100%m	0.310

Total Length: 63.00 ft Total Volume: 0.310 bbl

Num Fluid Samples: 0

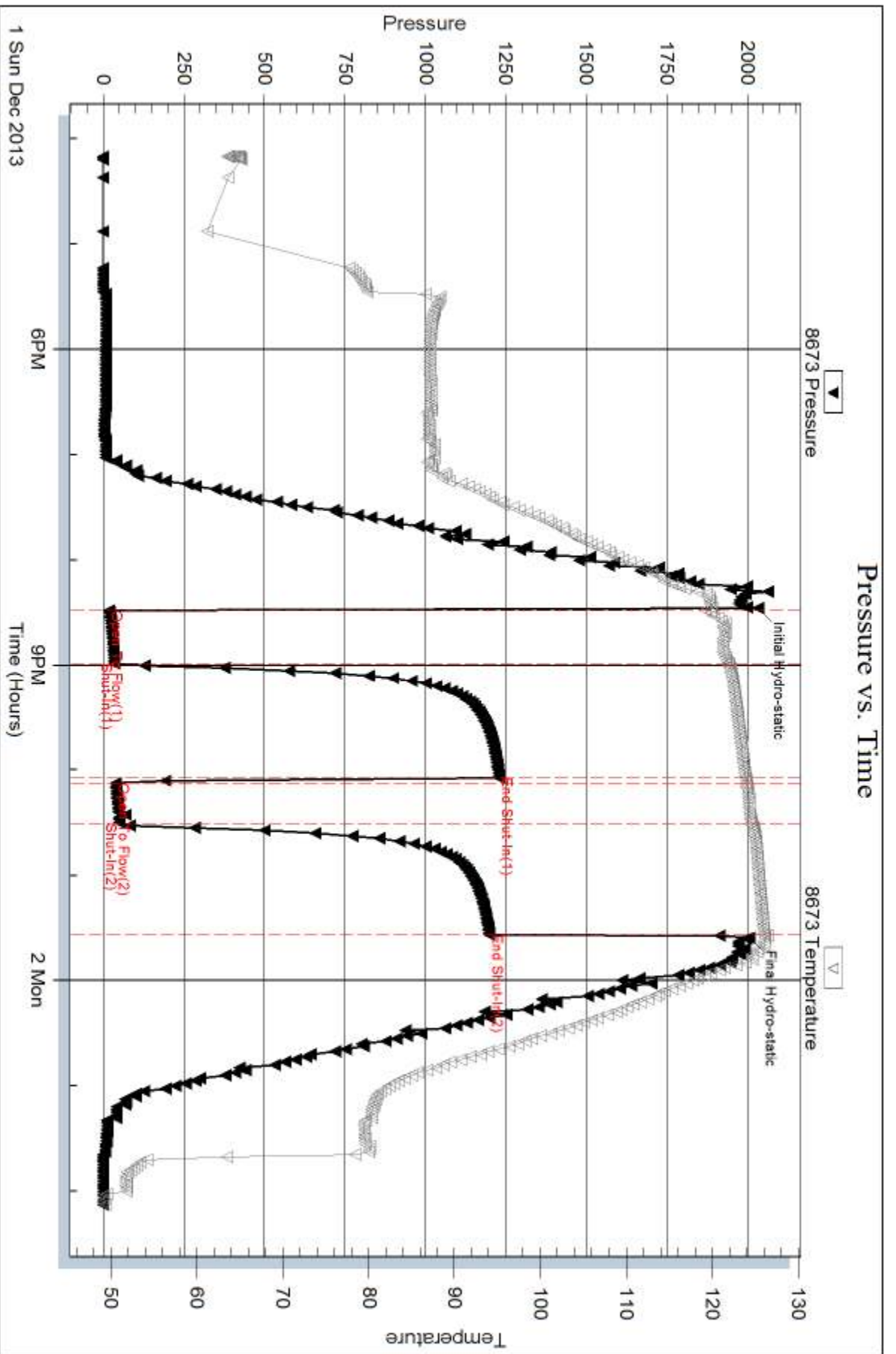
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Noticed hyd. fluid on catw alk by the by pass sub on my hdy. tool. had a new on brought out (5 to 6:45). 1hr. 45 mins. of rig time.

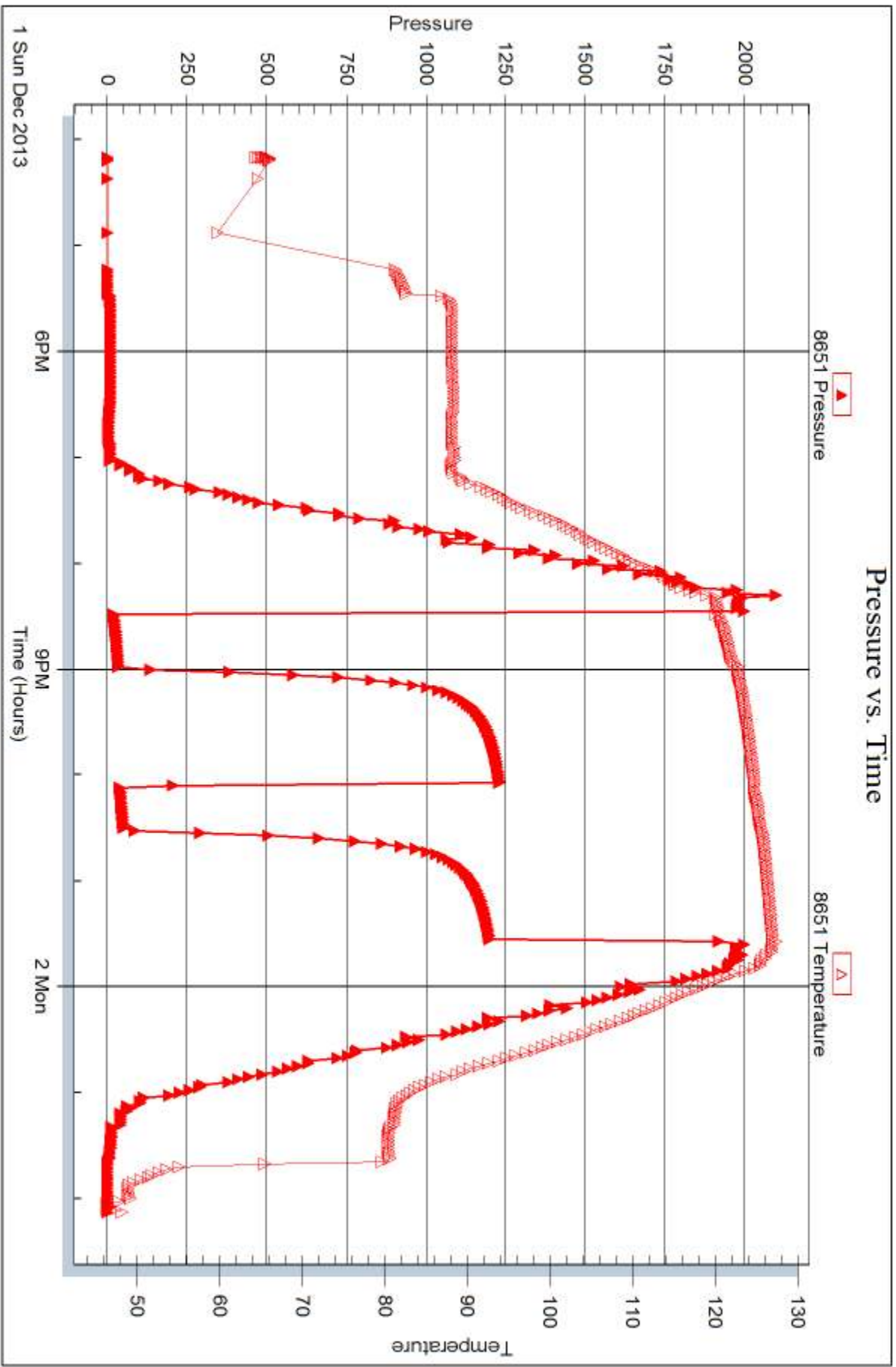


Serial #: 8651

Outside Murfin Drilling Co.

Dowling A #1-19

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55926

Printed: 2013.12.06 @ 10:02:54



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.02 @ 10:35:00

End Date: 2013.12.02 @ 19:45:30

Job Ticket #: 55927 DST #: 3

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

Printed: 2013.12.06 @ 10:02:04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55927

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.12.02 @ 10:35:00

Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 56.67 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4156.00 ft			Final 47000.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4133.00	
Hydraulic tool	5.00			4138.00	
Jars	5.00			4143.00	
Safety Joint	3.00			4146.00	
Packer	5.00			4151.00	28.00 Bottom Of Top Packer
Packer	5.00			4156.00	
Stubb	1.00			4157.00	
Recorder	0.00	8673	Inside	4157.00	
Recorder	0.00	8651	Outside	4157.00	
Perforations	25.00			4182.00	
change Over Sub	1.00			4183.00	
Blank Spacing	31.00			4214.00	
Change Over Sub	1.00			4215.00	
Bullnose	3.00			4218.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55927

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.12.02 @ 10:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: 0.20 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
185.00	gocmw -5%g5%o10%m70%w	0.910
126.00	gvsocmw -10%g1%o30%m59%w	1.767
126.00	gw ocm-10%g10%w 10%o70%m	1.767
63.00	gmco-5%g10%m85%o	0.884
126.00	go-20%g80%o	1.767
0.00	252 ft. of gas in pipe	0.000

Total Length: 626.00 ft

Total Volume: 7.095 bbl

Num Fluid Samples: 0

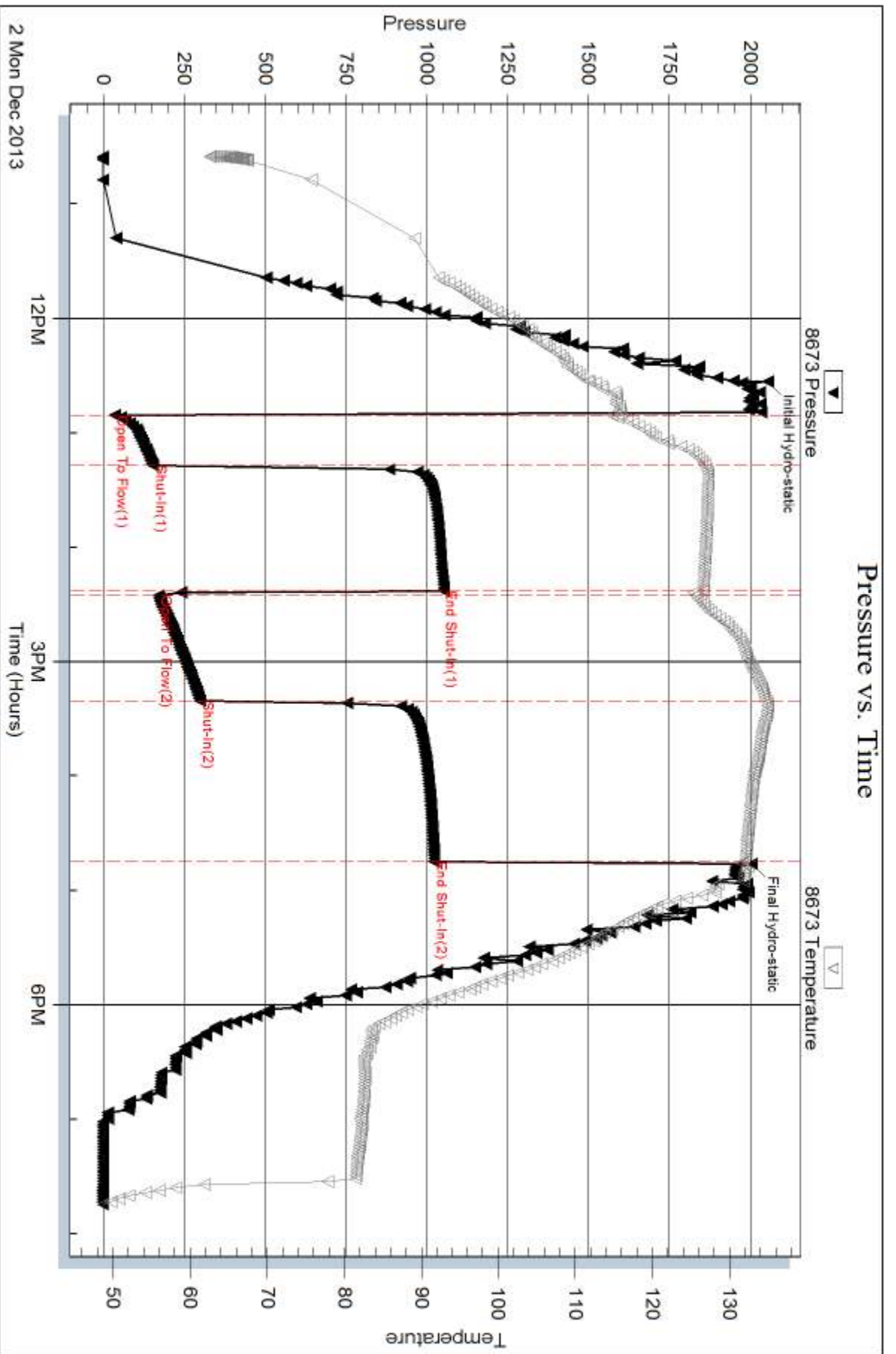
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

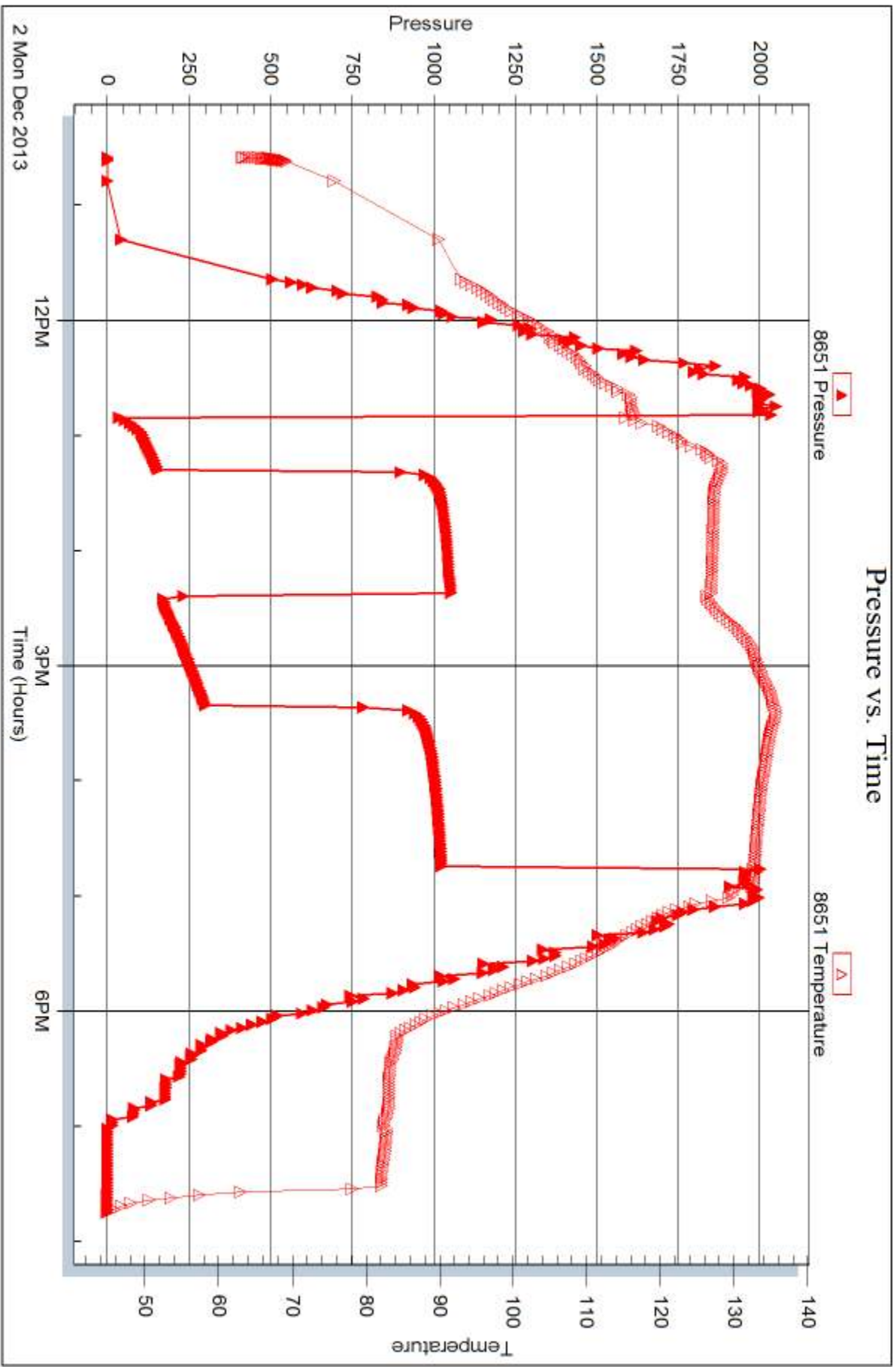


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.03 @ 05:32:00

End Date: 2013.12.03 @ 13:26:30

Job Ticket #: 55928 DST #: 4

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

Printed: 2013.12.06 @ 10:01:18



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

19 1s 35w Rawlins,KS
Downing A #1-19
 Job Ticket: 55928 **DST#: 4**
 Test Start: 2013.12.03 @ 05:32:00

GENERAL INFORMATION:

Formation: **LKC-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:15:30
 Time Test Ended: 13:26:30
 Interval: **4212.00 ft (KB) To 4275.00 ft (KB) (TVD)**
 Total Depth: 4275.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Reference Elevations: 3211.00 ft (KB)
 3206.00 ft (CF)
 KB to GR/CF: 5.00 ft

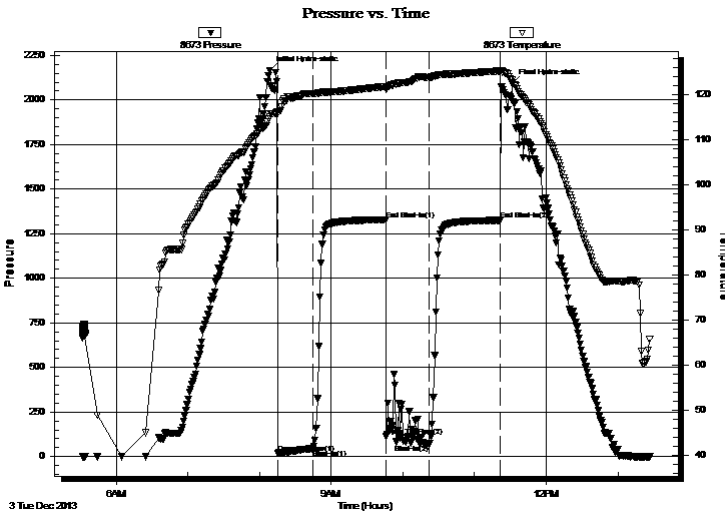
Serial #: 8673

Inside

Press@RunDepth: 68.51 psig @ 4215.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.03 End Date: 2013.12.03 Last Calib.: 2013.12.03
 Start Time: 05:32:01 End Time: 13:26:30 Time On Btm: 2013.12.03 @ 08:08:30
 Time Off Btm: 2013.12.03 @ 11:31:30

TEST COMMENT: IF: Weak blow , Surface over over 30 mins.
 IS: No blow back over 60 mins.
 FF: No blow over 30 mins.
 FS: No blow back over 60 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2166.12	115.11	Initial Hydro-static
7	19.30	116.09	Open To Flow (1)
36	43.29	120.09	Shut-In(1)
97	1328.36	121.75	End Shut-In(1)
98	111.27	121.24	Open To Flow (2)
134	68.51	123.74	Shut-In(2)
193	1325.35	125.19	End Shut-In(2)
203	2092.73	123.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	ocm-15%o85%m	0.44

* Recovery from multiple tests

Gas Rates

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



DRILL STEM TEST REPORT

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

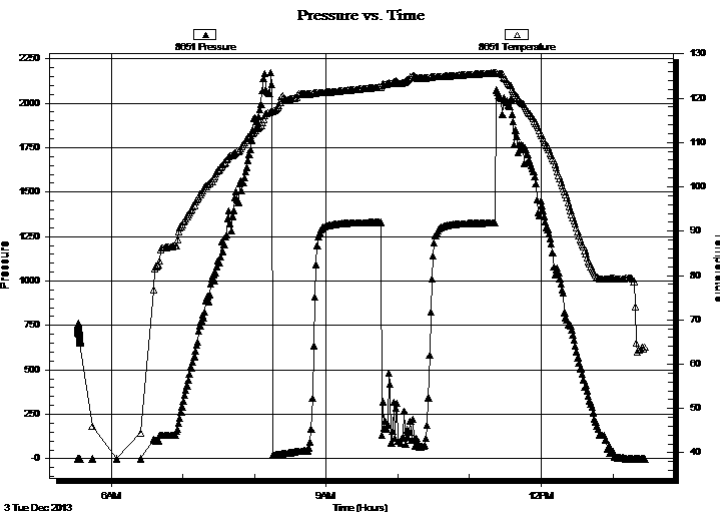
19 1s 35w Rawlins, KS
Downing A #1-19
Job Ticket: 55928 **DST#: 4**
Test Start: 2013.12.03 @ 05:32:00

GENERAL INFORMATION:

Formation: LKC-G	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Chuck Kreutzer Jr.
Time Tool Opened: 08:15:30	Unit No: 61
Time Test Ended: 13:26:30	Reference Elevations: 3211.00 ft (KB)
Interval: 4212.00 ft (KB) To 4275.00 ft (KB) (TVD)	3206.00 ft (CF)
Total Depth: 4275.00 ft (KB) (TVD)	KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Fair

Serial #: 8651 Outside	Press@RunDepth: psig @ 4215.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.12.03	End Date: 2013.12.03	Last Calib.: 2013.12.03
Start Time: 05:32:01	End Time: 13:26:30	Time On Btm:
		Time Off Btm:

TEST COMMENT: IF: Weak blow , Surface over over 30 mins.
IS: No blow back over 60 mins.
FF: No blow over 30 mins.
FS: No blow back over 60 mins.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	ocm-15%o85%m	0.44

* 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.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55928

DST#: 4

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 05:32:00

Tool Information

Drill Pipe:	Length: 4014.00 ft	Diameter: 3.80 inches	Volume: 56.31 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 57.22 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4214.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 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			4191.00	
Hydraulic tool	5.00			4196.00	
Jars	5.00			4201.00	
Safety Joint	3.00			4204.00	
Packer	5.00			4209.00	28.00 Bottom Of Top Packer
Packer	5.00			4214.00	
Stubb	1.00			4215.00	
Recorder	0.00	8673	Inside	4215.00	
Recorder	0.00	8651	Outside	4215.00	
Perforations	24.00			4239.00	
change Over Sub	1.00			4240.00	
Blank Spacing	31.00			4271.00	
Change Over Sub	1.00			4272.00	
Bullnose	3.00			4275.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55928

DST#: 4

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 05:32:00

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: 5.19 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
90.00	ocm-15%o85%m	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

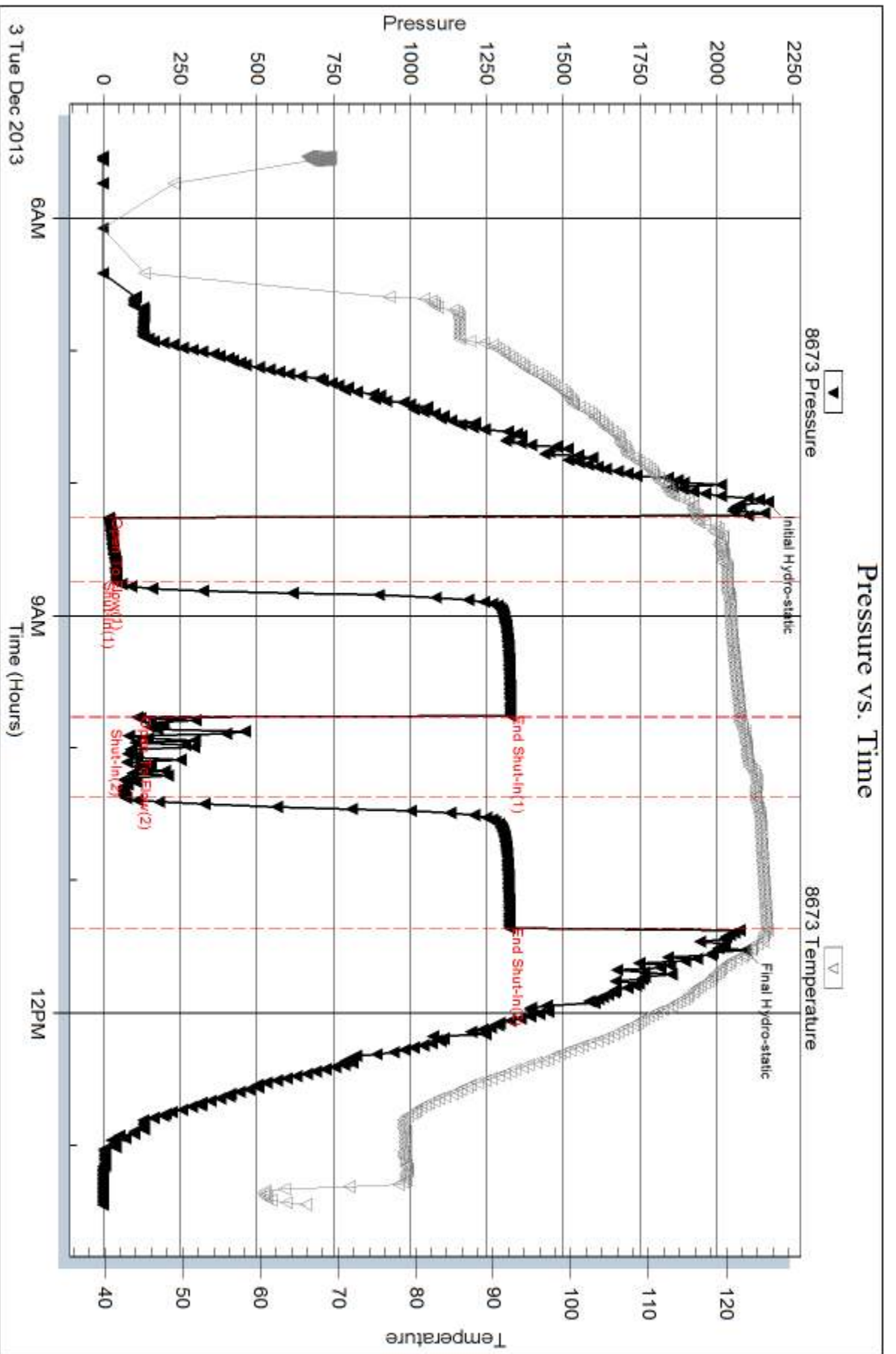
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

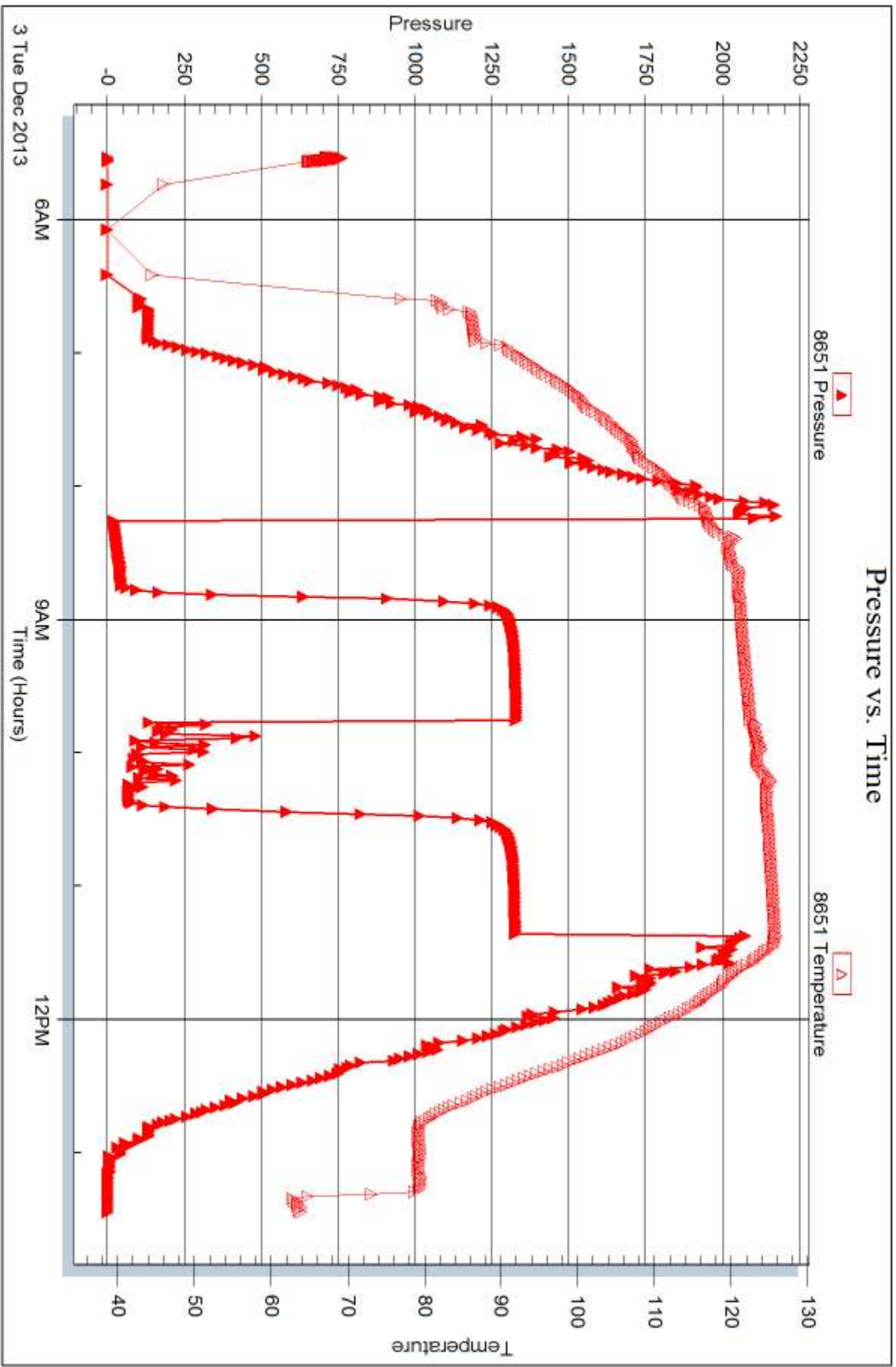


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.03 @ 23:28:00

End Date: 2013.12.04 @ 09:33:00

Job Ticket #: 55929 DST #: 5

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

Printed: 2013.12.06 @ 10:00:11



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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

19 1s 35w Rawlins,KS
Downing A #1-19
 Job Ticket: 55929 **DST#: 5**
 Test Start: 2013.12.03 @ 23:28:00

GENERAL INFORMATION:

Formation: **LKC G-I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:31:30
 Time Test Ended: 09:33:00
 Interval: **4266.00 ft (KB) To 4333.00 ft (KB) (TVD)**
 Total Depth: 4333.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Reference Elevations: 3211.00 ft (KB)
 3206.00 ft (CF)
 KB to GR/CF: 5.00 ft

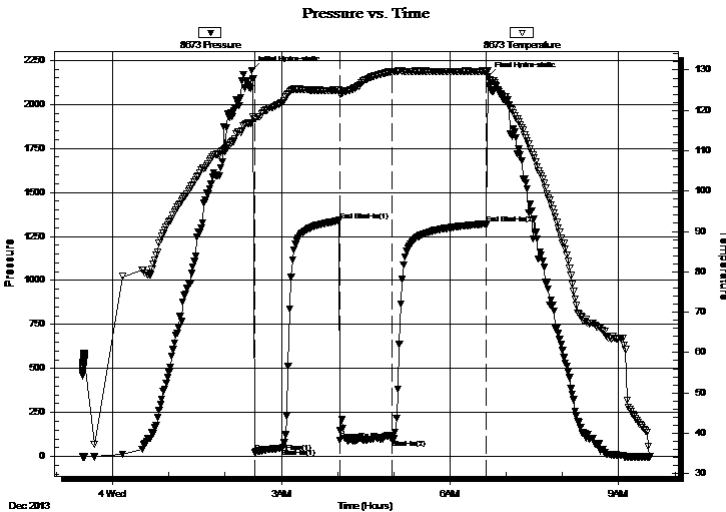
Serial #: 8673

Inside

Press@RunDepth: 99.28 psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.03 End Date: 2013.12.04 Last Calib.: 2013.12.04
 Start Time: 23:28:01 End Time: 09:33:00 Time On Btm: 2013.12.04 @ 02:28:30
 Time Off Btm: 2013.12.04 @ 06:40:30

TEST COMMENT: IF: Weak blow , Built to 2 in. over 30 mins.
 IS: No blow back over 60 mins.
 FF: weak blow , Built to 1 in. over 60 mins.
 FS: No blow back over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.17	116.94	Initial Hydro-static
3	24.41	117.90	Open To Flow (1)
33	48.81	121.87	Shut-In(1)
94	1341.11	124.99	End Shut-In(1)
94	90.62	124.22	Open To Flow (2)
150	99.28	129.59	Shut-In(2)
250	1321.75	129.76	End Shut-In(2)
252	2156.08	129.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm-25%o75%m	0.30
62.00	go-10%g90%o	0.30
76.00	go-20%g80%o	0.51

* 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.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55929

DST#: 5

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 23:28:00

Tool Information

Drill Pipe:	Length: 4069.00 ft	Diameter: 3.80 inches	Volume: 57.08 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 57.99 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4266.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4243.00	
Hydraulic tool	5.00			4248.00	
Jars	5.00			4253.00	
Safety Joint	3.00			4256.00	
Packer	5.00			4261.00	28.00 Bottom Of Top Packer
Packer	5.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	8673	Inside	4267.00	
Recorder	0.00	8651	Outside	4267.00	
Perforations	29.00			4296.00	
change Over Sub	1.00			4297.00	
Blank Spacing	32.00			4329.00	
Change Over Sub	1.00			4330.00	
Bullnose	3.00			4333.00	67.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55929

DST#: 5

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 23:28:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	ocm-25%o75%m	0.305
62.00	go-10%g90%o	0.305
76.00	go-20%g80%o	0.510

Total Length: 200.00 ft Total Volume: 1.120 bbl

Num Fluid Samples: 0

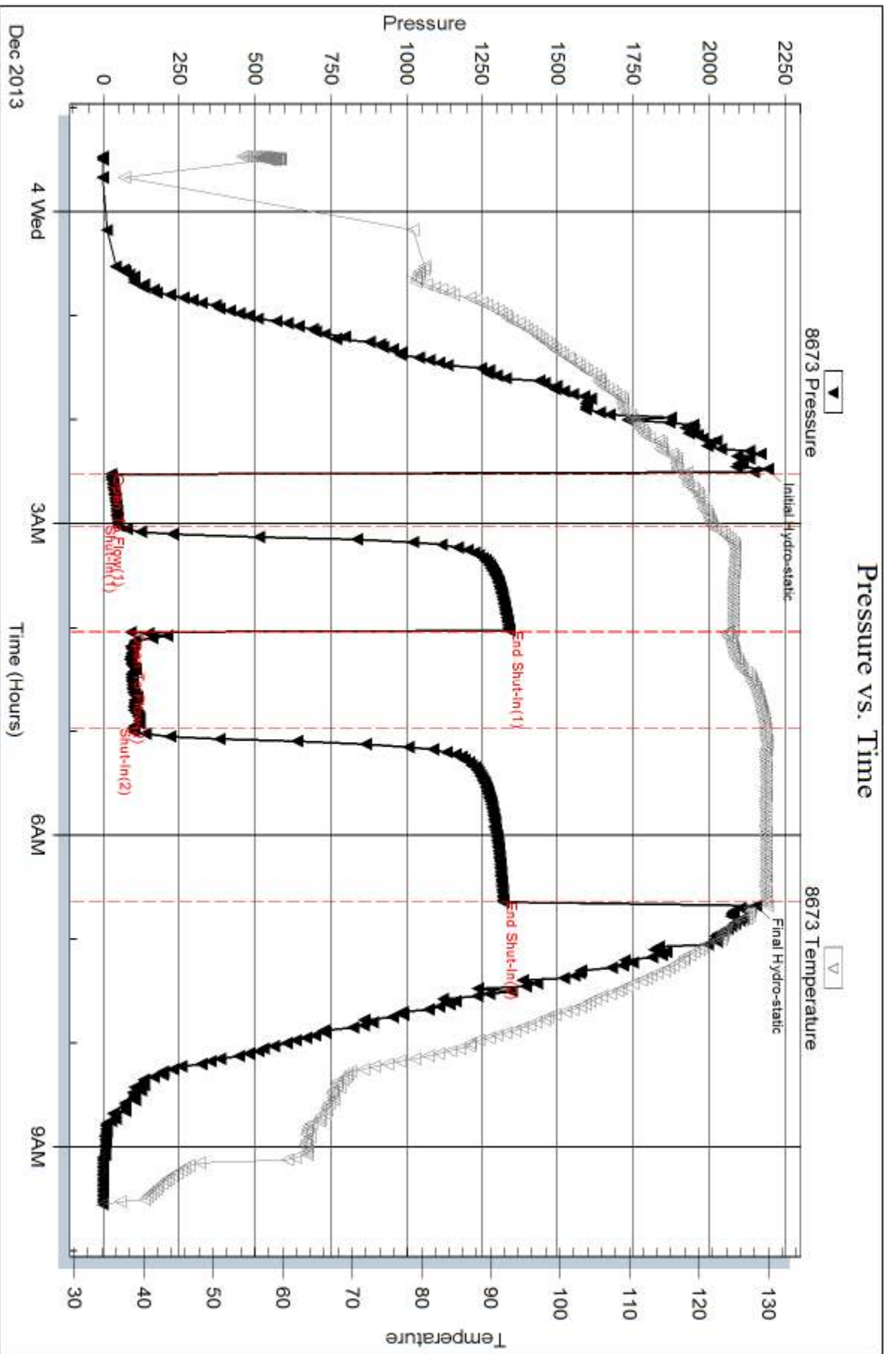
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

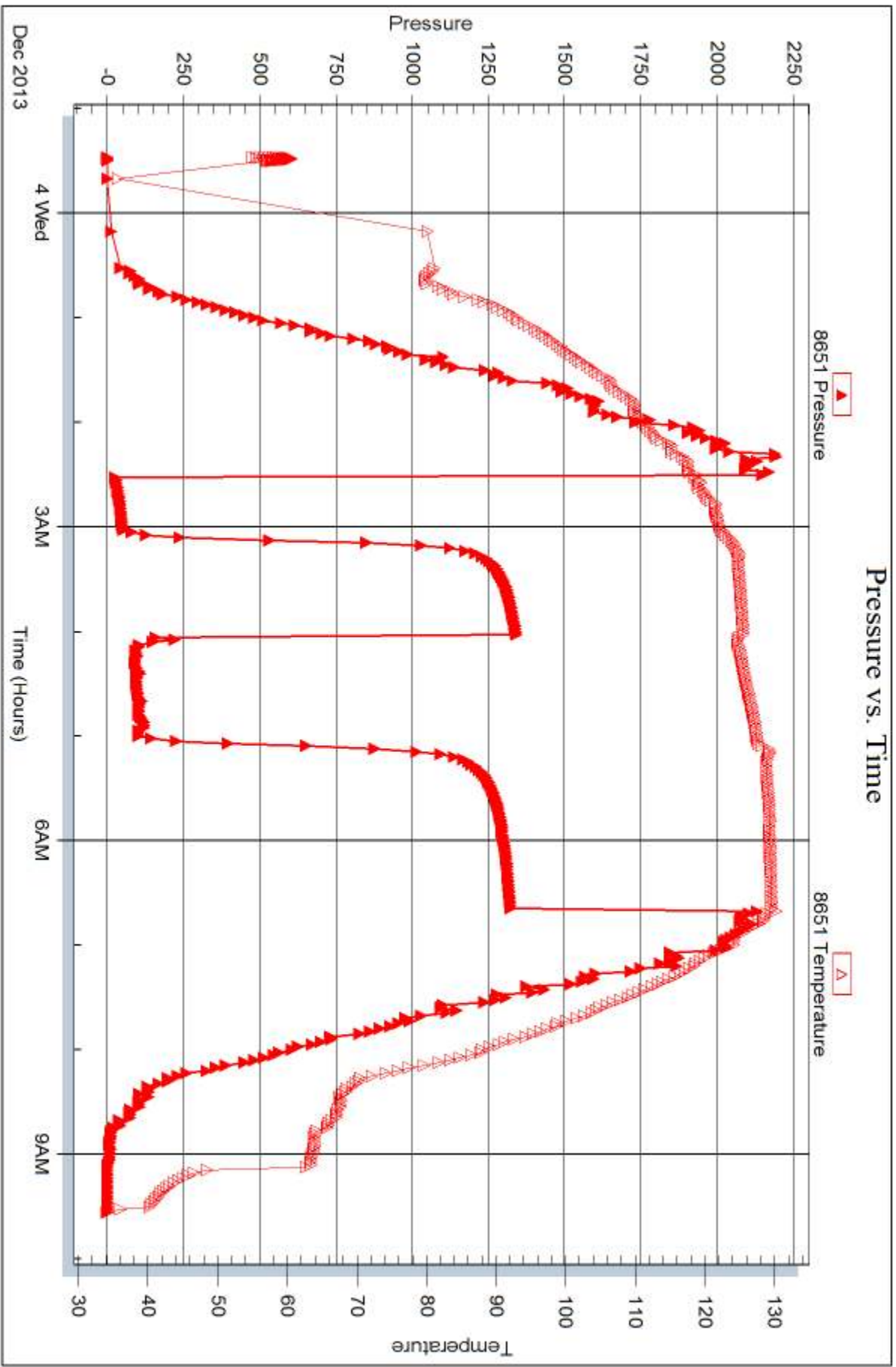


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.04 @ 18:55:00

End Date: 2013.12.05 @ 06:01:00

Job Ticket #: 55930 DST #: 6

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

Printed: 2013.12.06 @ 09:58:19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

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

19 1s 35w Rawlins,KS
Downing A #1-19
Job Ticket: 55930 **DST#: 6**
Test Start: 2013.12.04 @ 18:55:00

GENERAL INFORMATION:

Formation: **LKC-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:01:00
Time Test Ended: 06:01:00
Interval: **4312.00 ft (KB) To 4364.00 ft (KB) (TVD)**
Total Depth: 4364.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61
Reference Elevations: 3211.00 ft (KB)
3206.00 ft (CF)
KB to GR/CF: 5.00 ft

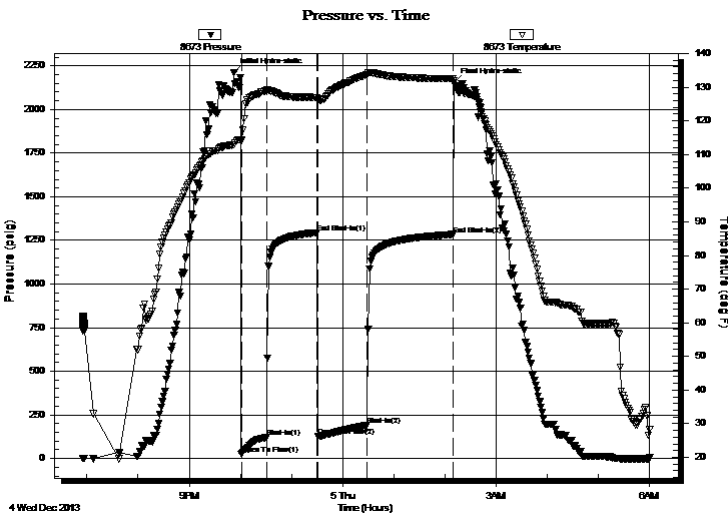
Serial #: 8673

Inside

Press@RunDepth: 191.16 psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.12.04 End Date: 2013.12.05 Last Calib.: 2013.12.05
Start Time: 18:55:01 End Time: 06:01:00 Time On Btm: 2013.12.04 @ 21:52:30
Time Off Btm: 2013.12.05 @ 02:10:30

TEST COMMENT: IF: Strong blow , Built to B.O.B in 19 mins.
IS: No blow back over 60 mins.
FF: Weak blow , Built to 1 ln. over 90 mins.
FS: No blow back over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2212.82	112.98	Initial Hydro-static
9	23.09	113.96	Open To Flow (1)
39	121.59	128.94	Shut-In(1)
98	1294.81	126.93	End Shut-In(1)
99	125.57	126.41	Open To Flow (2)
157	191.16	133.86	Shut-In(2)
257	1284.11	132.53	End Shut-In(2)
258	2156.29	132.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw -80%w 20%m	1.79
126.00	ocmw -20%o40%w 40%m	1.77
1.00	oil-100%	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.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

19 1s 35w Rawlins, KS

Downing A #1-19

Job Ticket: 55930 **DST#: 6**

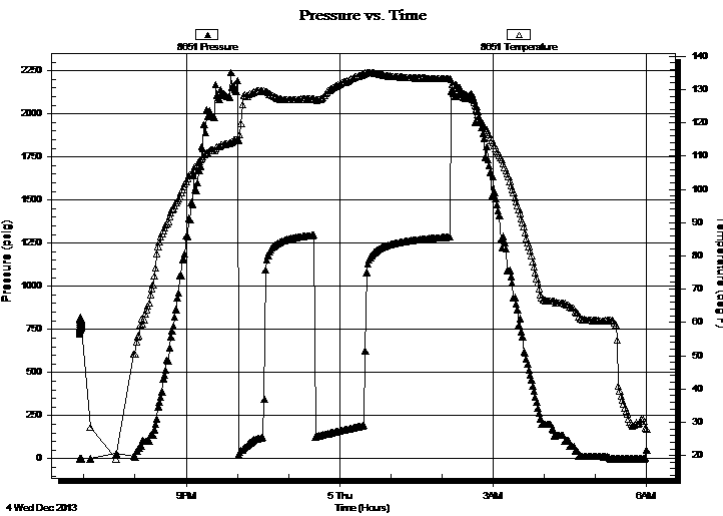
Test Start: 2013.12.04 @ 18:55:00

GENERAL INFORMATION:

Formation: LKC-J	Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 22:01:00			Tester: Chuck Kreutzer Jr.
Time Test Ended: 06:01:00			Unit No: 61
Interval: 4312.00 ft (KB) To 4364.00 ft (KB) (TVD)			Reference Elevations: 3211.00 ft (KB)
Total Depth: 4364.00 ft (KB) (TVD)			3206.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 5.00 ft

Serial #: 8651	Outside				
Press@RunDepth: psig @	4313.00 ft (KB)	Capacity:	8000.00 psig		
Start Date: 2013.12.04	End Date: 2013.12.05	Last Calib.:	2013.12.05		
Start Time: 18:55:01	End Time: 06:00:30	Time On Btm:			
		Time Off Btm:			

TEST COMMENT: IF: Strong blow , Built to B.O.B in 19 mins.
IS: No blow back over 60 mins.
FF: Weak blow , Built to 1 In. over 90 mins.
FS: No blow back over 90 mins.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw -80%w 20%m	1.79
126.00	ocmw -20%o40%w 40%m	1.77
1.00	oil-100%	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55930

DST#: 6

ATTN: Rocky Milford

Test Start: 2013.12.04 @ 18:55:00

Tool Information

Drill Pipe:	Length: 4108.00 ft	Diameter: 3.80 inches	Volume: 57.62 bbl	Tool Weight: 2400.00 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: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 58.53 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4312.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4289.00	
Hydraulic tool	5.00			4294.00	
Jars	5.00			4299.00	
Safety Joint	3.00			4302.00	
Packer	5.00			4307.00	28.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Recorder	0.00	8673	Inside	4313.00	
Recorder	0.00	8651	Outside	4313.00	
Perforations	15.00			4328.00	
change Over Sub	1.00			4329.00	
Blank Spacing	31.00			4360.00	
Change Over Sub	1.00			4361.00	
Bullnose	3.00			4364.00	52.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55930

DST#: 6

ATTN: Rocky Milford

Test Start: 2013.12.04 @ 18:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	mcw -80%w 20%m	1.794
126.00	ocmw -20%o40%w 40%m	1.767
1.00	oil-100%	0.014

Total Length: 375.00 ft

Total Volume: 3.575 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8673

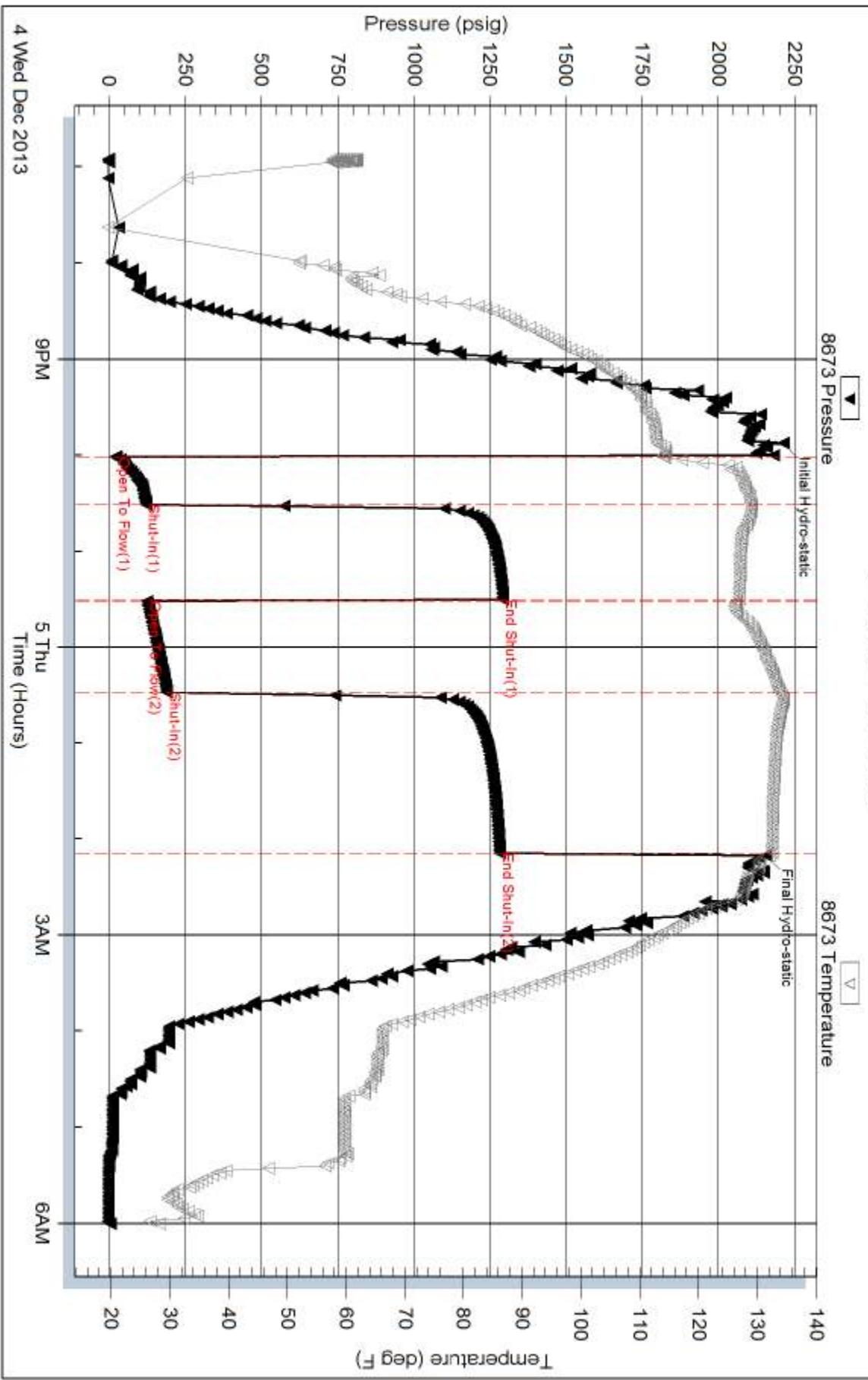
Inside

Murfin Drilling Co.

Downing A #1-19

DST Test Number: 6

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 55930

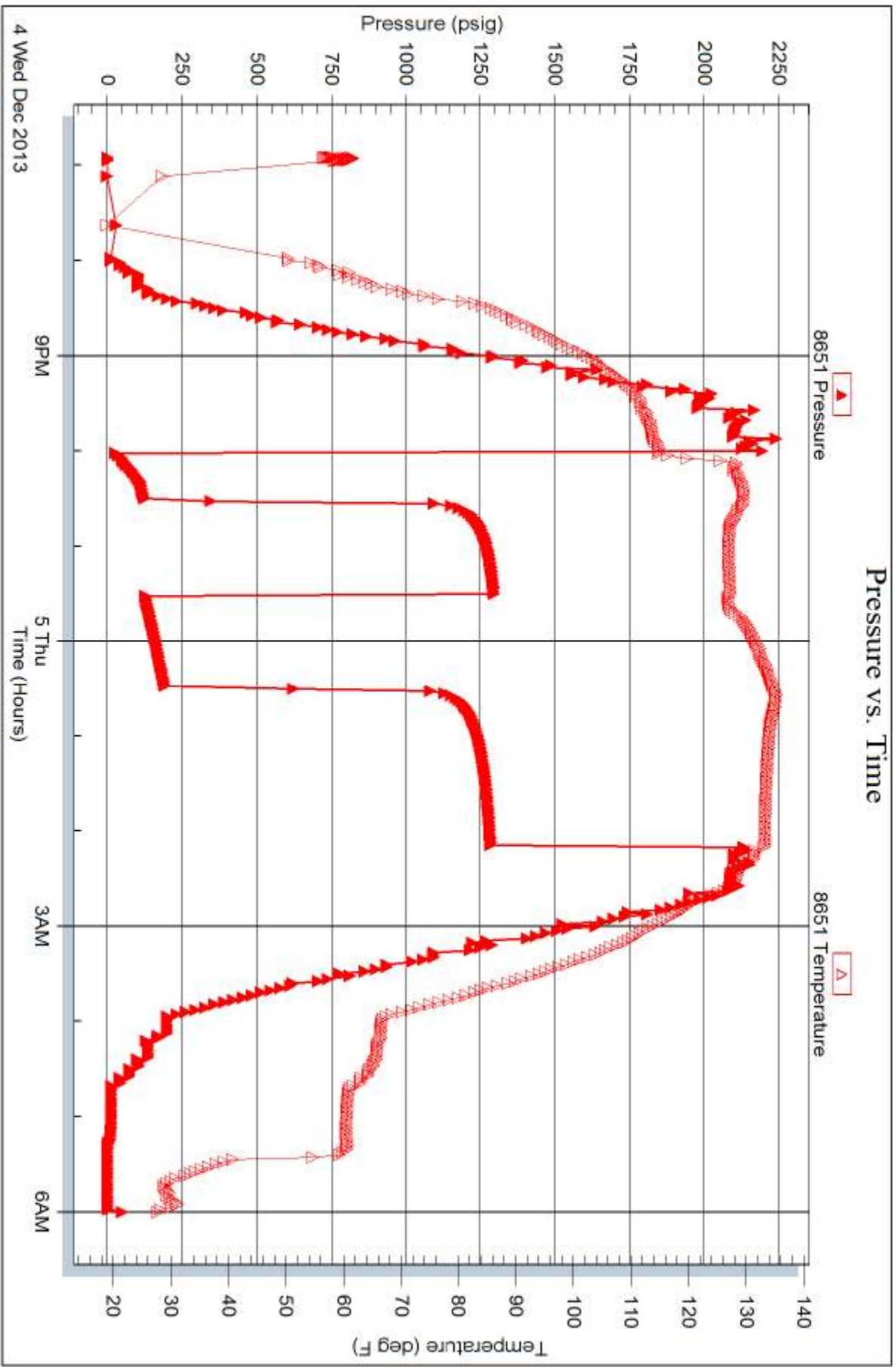
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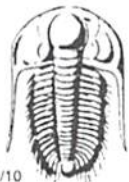
Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53600

Well Name & No. Downing 'A' #1-19 Test No. 1 Date 11-30-2014
 Company Murfin Drilling Co. Inc. Elevation 3211 KB 3206 GL
 Address 250 N. Water ste. 300 Wichita Ks
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rawlins State Ks

Interval Tested 3678 3729 Zone Tested Foraker
 Anchor Length 51 Drill Pipe Run 3475 Mud Wt. 8.6
 Top Packer Depth 3675 Drill Collars Run 185 Vis 75
 Bottom Packer Depth 3678 Wt. Pipe Run -0- WL 5.2
 Total Depth 3729 Chlorides 500 ppm System LCM 6#

Blow Description IF: Work surface blow over 30mins
ISF: No blow back
FF: No blow over 30mins
FSF: No blow back over 60mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>mud with oil spots</u>				<u>99</u>

Rec Total 25 BHT 116 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

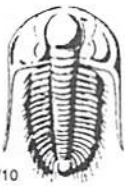
(A) Initial Hydrostatic 1798 Test 1150 T-On Location 4:15
 (B) First Initial Flow 16 Jars 250 T-Started 4:15
 (C) First Final Flow 20 Safety Joint 75 T-Open 7:20
 (D) Initial Shut-In 1073 Circ Sub _____ T-Pulled 10:30
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 12:54
 (F) Second Final Flow 25 Mileage 55x2 = 110x1.55 = 170.50 Comments See Fluid Rec. sheet.
 (G) Final Shut-In 1047 Sampler _____
 (H) Final Hydrostatic 1719 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

Sub Total 0
 Total 1645.50
 MP/DST Disc't _____
 Sub Total 1645.50

Approved By _____ Our Representative Chuck King

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55926

Well Name & No. Downing 'A' #1-19 Test No. 2 Date 12-01-13
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. water ste. 300 Wichita Ks
 Co. Rep / Geo. Rocky Milford Rig Murfin 8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rawlins State Ks.

Interval Tested 4084 4175 Zone Tested LKC-A
 Anchor Length 91 Drill Pipe Run 3882 Mud Wt. 9.2
 Top Packer Depth 4079 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4084 Wt. Pipe Run -0- WL 6.0
 Total Depth 4175 Chlorides 600 ppm System LCM 5#

Blow Description IF: Weak surface blow over 30 mins
IST: No blow back
FF: Weak blow After 10 mins. ON and OFF over Next 20 mins.
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>mud</u>			<u>100</u>	

Rec Total 63 BHT 1250 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2033</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>15:40</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:10</u>
(C) First Final Flow <u>34</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:28</u>
(D) Initial Shut-In <u>1230</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>23:30</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2:08</u>
(F) Second Final Flow <u>50</u>	<input checked="" type="checkbox"/> Mileage <u>55x2=110x.55= 170.50</u>	Comments <u>Start backline AT</u>
(G) Final Shut-In <u>1199</u>	<input type="checkbox"/> Sampler _____	Rig time? _____
(H) Final Hydrostatic <u>2007</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>91.67</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 2.75h</u>	Total <u>1837.17</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1745.50</u>	

Approved By _____ Our Representative chick

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55927**

Well Name & No. Downing A' #1-19 Test No. 3 Date 12-2-2013
 Company MurFin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. Water Ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig MurFin #8
 Location: Sec. 19 Twp. 1S Rge. 35W Co. Rawlins State Ks.

Interval Tested 4156 4218 Zone Tested LRC-0
 Anchor Length 62 Drill Pipe Run 3975 Mud Wt. 9.0
 Top Packer Depth 4151 Drill Collars Run 185 Vis 62
 Bottom Packer Depth 4156 Wt. Pipe Run -0- WL 5.2
 Total Depth 4218 Chlorides 700 ppm System LCM 4#

Blow Description IF: Strong blow, Built to B.O.B in 15 mins.

ISI: Blow back after 5 mins. Built to 3in. over 60 mins.

FF: Strong blow, Built to ~~Back~~ B.O.B in 20 mins.

FST: ~~See~~ blow back after 5 mins. Weak surface died in 60 mins.

see sheet for full results

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>252 ft gas in pipe</u>				
<u>126</u>	<u>go</u>	<u>20</u>	<u>80</u>		
<u>63</u>	<u>gmco</u>	<u>5</u>	<u>85</u>		<u>10</u>
<u>126</u>	<u>gwocm</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>70</u>
<u>126</u>	<u>gvsocmw</u>	<u>10</u>	<u>1</u>	<u>59</u>	<u>30</u>
<u>185</u>	<u>gocmw</u>	<u>5</u>	<u>5</u>	<u>70</u>	<u>10</u>

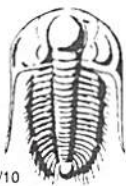
Rec Total 626 BHT 135 Gravity 30 API RW .2 @ 60 °F Chlorides 40,000 ppm

(A) Initial Hydrostatic 2054 Test 1250 T-On Location 10:10
 (B) First Initial Flow 35 Jars 250 T-Started 10:35
 (C) First Final Flow 153 Safety Joint 75 T-Open 12:50
 (D) Initial Shut-In 1052 Circ Sub _____ T-Pulled 16:50
 (E) Second Initial Flow 170 Hourly Standby _____ T-Out 19:45
 (F) Second Final Flow 299 Mileage 55x2=110x1.55= 170.50 Comments stayed out Benkelman APT
 (G) Final Shut-In 1621 Sampler _____
 (H) Final Hydrostatic 2005 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 1745.50
 Day Standby _____ Total _____
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1745.50

Approved By _____

Our Representative Chuck Wagner

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55928**

4/10

Well Name & No. Downing 'A' #1-19 Test No. 4 Date 12-3-2013
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250N. Water St 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 1A Twp. 15 Rge. 3SW Co. Rawlrs State Ks.

Interval Tested 4214 4275 Zone Tested LKC-6
 Anchor Length 61 Drill Pipe Run 4014 Mud Wt. 9.0
 Top Packer Depth 4209 Drill Collars Run 185 Vis 62
 Bottom Packer Depth 4214 Wt. Pipe Run -0- WL 5.2
 Total Depth 4275 Chlorides 700 ppm System LCM 4#

Blow Description IF: Weak blow, weak surface over 30 mins.

ISF: No blow back

FF: NO blow back

FS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>61</u>		<u>15</u>		<u>85</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 40 BHT 124 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

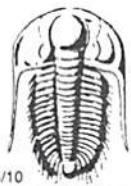
(A) Initial Hydrostatic 2166 Test 1250 T-On Location 3:00
 (B) First Initial Flow 19 Jars 250 T-Started 5:32
 (C) First Final Flow 43 Safety Joint 75 T-Open 8:15
 (D) Initial Shut-In 1328 Circ Sub _____ T-Pulled 11:15
 (E) Second Initial Flow 111 Hourly Standby _____ T-Out 13:26
 (F) Second Final Flow 69 Mileage 55x2 = 110x1.55 = 170.50 Comments Benkelman Apt
 (G) Final Shut-In 1325 Sampler _____
 (H) Final Hydrostatic 2093 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Extra Recorder _____ Total 1745.50
 Final Flow 30 Day Standby _____ MP/DST Disc't _____
 Final Shut-In 60 Accessibility _____ Sub Total 1745.50

Approved By _____

Our Representative Chuck Keyser

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55929

Well Name & No. Downing A* #1-19 Test No. 5 Date 12-4-2013
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. Water Ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rawlins State Ks

Interval Tested 4266 4333 Zone Tested LRC-G-I
 Anchor Length 67 Drill Pipe Run 4069 Mud Wt. 9.1
 Top Packer Depth 4261 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4266 Wt. Pipe Run -0- WL 5.6
 Total Depth 4333 Chlorides 1000 ppm System LCM 5#

Blow Description IF: Weak blow, built to 2 in. over 30 mins.

FSI: No blow back

FF: Weak blow built to 1 in. over 60 mins.

FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>76</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>62</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>62</u>	<u>OCM</u>		<u>25</u>		<u>75</u>

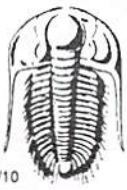
Rec Total 200 BHT 129 Gravity 30 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2193 Test 1250 T-On Location 22:00
 (B) First Initial Flow 24 Jars 250 T-Started 23:28
 (C) First Final Flow 49 Safety Joint 75 T-Open 2:31
 (D) Initial Shut-In 1341 Circ Sub _____ T-Pulled 6:50
 (E) Second Initial Flow 91 Hourly Standby _____ T-Out 9:33
 (F) Second Final Flow 99 Mileage 55x2 = 110 x 1.55 = 170.50 Comments stayed Bentline APL
 (G) Final Shut-In 1322 Sampler _____
 (H) Final Hydrostatic 2156 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1745.50
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1745.50

Approved By _____ Our Representative Chad [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55930

Well Name & No. Downing Test No. 6 Date 12-4-2013
 Company MurFin Drilling Co Elevation 3211 KB 3208 GL
 Address 250 N. Water ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig MurFin #8
 Location: Sec. 19 Twp. 1s Rge. 35w Co. Rawlins State Ks

Interval Tested 4312 4364 Zone Tested LKc-5
 Anchor Length 52 Drill Pipe Run 4108 Mud Wt. 9.1
 Top Packer Depth 4307 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4312 Wt. Pipe Run -0- WL 5.6
 Total Depth 4364 Chlorides 1000 ppm System LCM 5#

Blow Description IF: Strong blow built to B.O.B. in 19 mins
ISJ: No blow back
FF: Weak blow, Built to 1 in. over 60 mins.
RST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>+</u>	<u>oil</u>		<u>100</u>		
<u>126</u>	<u>OCMW</u>		<u>20</u>	<u>40</u>	<u>40</u>
<u>248</u>	<u>MCW</u>			<u>80</u>	<u>20</u>

Rec Total 375 BHT 134 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2213</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>17:50</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>18:55</u>
(C) First Final Flow <u>122</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>20:01</u>
(D) Initial Shut-In <u>1295</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2:00</u>
(E) Second Initial Flow <u>126</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:01</u>
(F) Second Final Flow <u>191</u>	<input checked="" type="checkbox"/> Mileage <u>55x2 = 110x1.55 = \$170.50</u>	Comments <u>stayed in Apt. Fr Bankman</u>
(G) Final Shut-In <u>1284</u>	<input checked="" type="checkbox"/> Sampler <u>170.50x2 = 341</u> mileage twice loaded tools	<u>Loaded tools at 4:30</u>
(H) Final Hydrostatic <u>2156</u>	<input type="checkbox"/> Straddle	<u>ON 12-6-2013</u>

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1916</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1916</u>	

Approved By _____ Our Representative [Signature]

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Robert L. Milford

PEROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS REPORT
DRILLING TIME AND SAMPLE LOG

OPERATOR **Murfin Drilling Company, Inc.**
LEASE **Downing 'A' #1-19**
LOC SPOT **20 N & 80 E of S2 NE NW**
LOC FOOTAGE **970' FNL 2,060' FWL**
SEC. **19** TWP **15** RNG **35W**
COUNTY **Rush** STATE **KANSAS**

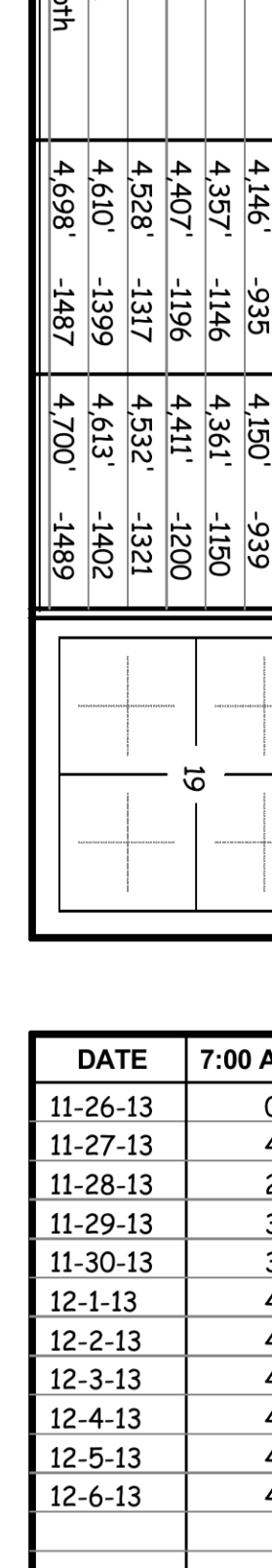
CONTRACTOR **Murfin Drilling Co., Inc.** REG. NO. **8**
DRILLING STARTED **11-26-2013** COMPLETED **12-6-2013**
MUD DISCHARGED **3:38** MUD TYPE **Chemical**
DRILLING TIME KEPT FROM **3:480'** TO RTD
SAMPLES SAVED FROM **3:480'** TO RTD
SAMPLES EXAMINED FROM **3:480'** TO RTD
GEOLOGICAL SUPERVISION FROM **3:480'** TO RTD

DATE **15-15-2012** TIME **00:00**
SURFACE **8.5' @ 25'**
W/ **230 sacks cement**
PRODUCTION **1.1/2" @ 462'**
W/ **450 sacks cement**
ELECTRICAL SURVEYS
PIPEWIRE LOG
DUAL INDUCTION LOG
DUAL COMPENSATED

MEASUREMENTS FROM K&B
CASING RECORD
CONDUIT

ELEVATIONS
BK **3,211'**
GL **3,206'**

FORMATION NAME	LOG TOP	LOG BOTTOM	SAMPLE DTLUM	DATUM
Stone Corral	3,011'	+10'	3,103'	+108'
Neva	3,600'	-89'	3,694'	-93'
Fordker	3,711'	-500'	3,715'	-504'
Topeka	3,925'	-714'	3,928'	-717'
Lansing	4,146'	-935'	4,150'	-939'
Stark	4,357'	-1146'	4,361'	-1150'
B/KC	4,407'	-1196'	4,411'	-1200'
Pawnee	4,528'	-1317'	4,532'	-1321'
Cherokee	4,610'	-1399'	4,613'	-1402'
Total Depth	4,698'	-1487'	4,700'	-1489'



DATE	7:00 AM DEPTH	REMARKS
11-26-13	0'	Spud @ 10:30 am. Plug down @ 7:30 pm. Drilled out plug @ 3:30 am on 11-27 w/ PDC bit
11-27-13	440'	Cut 440' in last 24 hrs. Dev. 0.25' @ 1217'
11-28-13	2,250'	Cut 1,810' in last 24 hrs; 21 hrs drlg.
11-29-13	3,405'	Cut 1,155' in last 24 hrs; 21 hrs drlg. Bit trip @ 3495' (ran button bit). DST #1 @ 3729'
11-30-13	3,729'	Cut 324' in last 24 hrs; 9.5 hrs drlg.
12-1-13	4,090'	Cut 361' in last 24 hrs; 14.5 hrs drlg. DST #2 @ 4175'
12-2-13	4,218'	Cut 128' in last 24 hrs; 5 hrs drlg. DST #3 @ 4218', DST #4 @ 4275'
12-3-13	4,275'	Cut 57' in last 24 hrs; 2.75 hrs drlg. DST #5 @ 4333'
12-4-13	4,333'	Cut 58' in last 24 hrs; 2.5 hrs drlg. DST #6 @ 4364'
12-5-13	4,364'	Cut 31' in last 24 hrs; 1.5 hrs drlg. RTD 4700' @ 2:37 am on 12-6-13
12-6-13	4,700'	Cut 336' in last 24 hrs; 16.5 hrs drlg. Ran production casing

Remarks

The electric log measurements correlate from 2' to 4' higher to the drilling measurements.

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

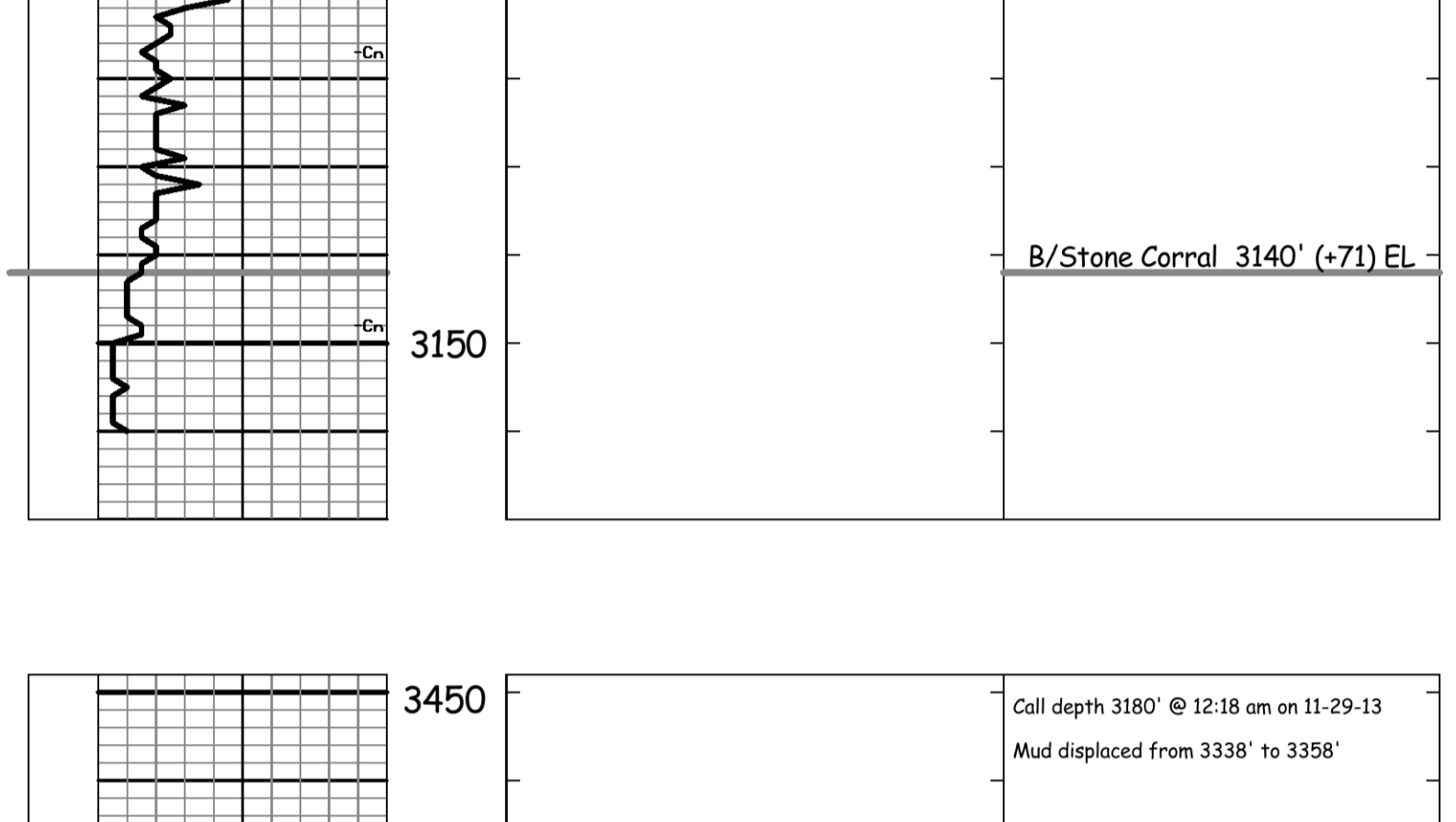
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.

Respectfully submitted,

Robert L. Milford

Drill Stem Test Charts

Drill Stem Test by Trilobite Testing, Inc.



LITH	DRILL TIME (MIN/FT)	DEPTH	SAMPLE DESCRIPTIONS	REMARKS
		3050		
		3100		Stone Corral 3101' (+110) EL
		3150		B/Stone Corral 3140' (+71) EL
		3450		
		3500	Sdy Sh: red-brn, soft & gummy in prt, intermixed w/ some Sd: crm-lt gry, fn-vry fn grain, soft-brITTLE, pr vis por, NS	Call depth 3180' @ 12:18 am on 11-29-13 Mud displaced from 3338' to 3358'
		3550	Sdy Sh: red-brn, intermixed w/ some Sd: lt gry, fn-vry fn grain, vry sli calc, semi fri-brittle, pr vis por, NS	Samples start 3480' @ 8:31 am on 11-29-13 Pipe Strap @ 3495': Strap short 114' Straight Hole Survey @ 3495': 0.25' Dev. Bit trip at 3495'. Replaced PDC bit with button bit. Morgan Mud check @ 3495': 75 Vis, 8.6 Wt, 5.2 WL, 500 ppm Chl, 6# LCM
		3600	Sdy Sh: red-brn, some soft & gummy, w/ some Sd: lt gry-lt grn, fn-vry fn grain, semi fri-brittle, pr vis por, NS	
		3650	Sdy Sh: red-brn, soft & vry gummy	
		3700	Sdy Sh: A.A.	
		3750	Sdy Sh: red-brn, some soft & gummy, w/ small amt Sd: lt gry, sli calc, fn-vry fn grain, soft-brITTLE, pr vis por, NS	
		3800	LS: wh-lt gry, fxln, fos-ool in prt, vry chky-prtly dns, pr por, NS	
		3850	Sdy Sh: red-brn, some soft & gummy, w/ some Sd: lt gry-lt grn, fn-vry fn grain, some sli shly, sli calc, semi fri-brittle, pr vis por, NS	
		3900	Sdy Sh: A.A., mostly soft & vry gummy, w/ small amt Sd: A.A., pr por, NS	
		3950	Sdy Sh: red-brn, soft & gummy in prt, w/ some Sd: lt gry-lt grn, fn-vry fn grain, sli calc, some sli shly, semi fri-brittle, pr vis por, NS	
		4000	LS: wh-lt gry, fxln, fos in prt, tr ch, sub chky-prtly dns w/ some chky-vry chky, pr por, NS	
		4050	Sdy Sh: red-brn, soft & gummy in prt	
		4100	Sdy Sh: A.A. w/ some Sd: gry-grn & some Shly Sd: lt gry, fn-vry fn grain, calc, soft-brITTLE, pr vis por, NS	DST #1 3678'-3729' Foraker IF: weak surface blow FF: no blow Rec: 25' Mud w/ oil spots (1% O, 99% M) IFP: 16-20#/30' ISIP: 1073#/60' FFP: 22-25#/30' FSIP: 1047#/60'
		4150	LS: wh-tan, fxln, fos, sub chky-prtly dns, pr por, NS	
		4200	LS: crm-tan, fxln, fos, sub chky-prtly dns, pr por, NS	
		4250	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns, pr por, NS	
		4300	LS: crm-tan, fxln, fos, some sli shly, sub chky-prtly dns, pr por, NS	
		4350	LS: crm-lt gry, fxln, fos in prt, some shly (red-brn, mottled), sub chky-prtly dns w/ some chky, pr por, NS	
		4400	LS: crm-lt gry, fxln, fos in prt, some shly (red-brn, mottled), sub chky-prtly dns w/ some chky, pr por, NS	
		4450	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	
		4500	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	
		4550	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	
		4600	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	
		4650	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	
		4700	LS: crm-lt gry, fxln, fos in prt, sub chky-prtly dns w/ some chky, pr por, NS	

Stark 4357' (-1146) EL
B/KC 4407' (-1196) EL
Pawnee 4528' (-1317) EL
Cherokee 4610' (-1399) EL
L.T.D. 4698' (-1487)
R.T.D. 4700' (-1489)
Straight Hole Survey @ 4700': 1.75' Dev.



over.
Prod. - LH

INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 140036
Invoice Date: Nov 26, 2013
Page: 1

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

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

Customer ID	Field Ticket #	Payment Terms	
Murfin	62157	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Nov 26, 2013	12/26/13

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Downing A #1-19		
230.00	CEMENT MATERIALS	Class A Common	17.90	4,117.00
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
241.34	CEMENT SERVICE	Cubic Feet Charge	2.48	598.52
834.75	CEMENT SERVICE	Ton Mileage Charge	2.60	2,170.35
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
75.00	CEMENT SERVICE	Pump Truck Mileage	7.70	577.50
1.00	CEMENT SERVICE	Swedge Manifold Rental	275.00	275.00
75.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	330.00
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Tyler Flipse		

Subtotal	10,092.62
Sales Tax	365.69
Total Invoice Amount	10,458.31
Payment/Credit Applied	
TOTAL	10,458.31

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

\$ 3,532.41

MJ
12/10

ONLY IF PAID ON OR BEFORE

Dec 21, 2013

OK

- 3532.41

ALLIED OIL & GAS SERVICES, LLC 062157

Federal Tax I.D. # 20-8651476

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

SERVICE POINT: Oshtemo KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
11-26-13	19	1	35	12:00 p.m.	2:00 p.m.	7:10 p.m.	7:30 p.m.
LEASE <u>Downing 3A</u>	WELL #	1-19	LOCATION	Beardsley N to AA W to Rd 7		COUNTY	STATE
OLD OR NEW (Circle one)			<u>IN Einto</u>				
			KS				

CONTRACTOR <u>Murfin 8</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D.
CASING SIZE <u>8 5/8</u>	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>15.06 bbl water</u>	

CEMENT		
AMOUNT ORDERED	<u>230 sks Com</u>	
	<u>3% CC</u>	
COMMON	<u>230 sks @ 17.90</u>	<u>4117.00</u>
POZMIX	@	
GEL	@	
CHLORIDE	<u>8 sks @ 64.00</u>	<u>512.00</u>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING <u>241.34 ft³</u>	@ <u>2.46</u>	<u>598.52</u>
MILEAGE <u>11.13 hrs x 75 mi x 2.40</u>		<u>2170.35</u>
TOTAL		<u>7377.87</u>

PUMP TRUCK CEMENTER <u>Paul Beaver</u>
<u>120</u> HELPER <u>Tyler Flipse</u>
BULK TRUCK
<u>600</u> DRIVER <u>Chuck (TWS)</u>
BULK TRUCK
DRIVER

REMARKS:
Mix 230 sks Com 3% CC @ 15'
Displace w/ water (15.06 bbl)
cement did circulate

*Thank you!
Paul & Tyler*

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

SERVICE		
DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>1512.25</u>
EXTRA FOOTAGE	@	
MILEAGE <u>MIH V 75mi</u>	@ <u>7.70</u>	<u>577.50</u>
MANIFOLD <u>Sum edge</u>	@	<u>275.00</u>
<u>MIH V 75mi</u>	@ <u>4.40</u>	<u>330.00</u>
	@	
TOTAL		<u>2694.75</u>

PLUG & FLOAT EQUIPMENT		
	@	
	@	
	@	
	@	
	@	
TOTAL		

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

PRINTED NAME Fred Taylor
SIGNATURE Fred Taylor

SALES TAX (If Any) _____
TOTAL CHARGES 10,092.62
DISCOUNT 3,532.41 IF PAID IN 30 DAYS
6,560.20 Net.



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

Acctg
cc: Liz
cc: L-1



Invoice

DATE	INVOICE #
12/6/2013	25250

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	#1-19	Downing A	Rawlins		Oil	Development	5-1/2" LongStrin...	Josh
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				150	Miles	6.00	900.00
579D	Pump Charge - Top To Bottom LongString				1	Job	2,000.00	-2,000.00
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
281	Mud Flush				500	Gallon(s)	1.25	625.00T
290	D-Air				5	Gallon(s)	42.00	210.00T
403-5	5 1/2" Cement Basket				3	Each	300.00	900.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	375.00	375.00T
409-5	5 1/2" Turbolizer				15	Each	90.00	1,350.00T
413-5	5 1/2" Roto Wall Scratcher				15	Each	40.00	600.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				200	Sacks	14.50	2,900.00T
330	Swift Multi-Density Standard (MIDCON II)				300	Sacks	18.50	5,550.00T
276	Flocele				125	Lb(s)	2.50	312.50T
283	Salt				1,000	Lb(s)	0.20	200.00T
284	Calseal				9	Sack(s)	35.00	315.00T
285	CFR-1				150	Lb(s)	4.50	675.00T
581D	Service Charge Cement				500	Sacks	2.00	1,000.00
583D	Drayage				3,814.5	Ton Miles	1.00	3,814.50
	Subtotal							22,302.00
	Sales Tax Rawlins County						7.90%	1,152.41
USED FOR <u>IC 103</u>								
APPROVED <u>JT</u>								
<u>FH</u>								

**Thank You For Your Business &
Best Wishes For A Wonderful Holiday Season!!**

Total \$23,454.41



CHARGE TO: Murphy
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 25250

PAGE 1 OF 2

1. SERVICE LOCATIONS Hegs KS WELL/PROJECT NO. 1-19 LEASE Downing A COUNTY/PARISH Nowins STATE KS DATE 12-6-13 OWNER
 2. Ness City, KS CONTRACTOR Development RIG NAME NO. 5 1/2 Longstring Top of Bottom SHIPPED VIA CT DELIVERED TO Lecton ORDER NO.
 3. TICKET TYPE SERVICE SALES WELL TYPE 01 WELL CATEGORY Development JOB PURPOSE 5 1/2 Longstring Top of Bottom WELL PERMIT NO. WELL LOCATION Bearslide, KS on H4 3000 7821 W
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575						111	150	mi			6.00	900.00
579					Pump Charge		1	ea			2000.00	2000.00
221					Legline KCL		4	gal			25.00	100.00
281					Mud Push		500	gal			1.25	625.00
290					O-Air		5	gal			42.00	210.00
403					Cement Basket		3	ea		5 1/2"	300.00	900.00
406					Linch Down Plug w/ GPH		1	ea			275.00	275.00
407					Insert Float Shoe w/ Auto Fill		1	ea			375.00	375.00
409					Turbo lifters		15	ea			90.00	1350.00
413					Rotowall Scatterers		15	ea			40.00	600.00
414					Rotators Head Rentals		1	ea			200.00	200.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

REMIT PAYMENT TO:

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

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED 12-6-13 TIME SIGNED 2:00 A.M. P.M.

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 14767.00

Subtotal 22,302.00

Paulina's TAX 7.97

TOTAL 23,454.41

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

SWIFT OPERATOR [Signature] APPROVAL [Signature]

Thank You!



Services, Inc.

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

TICKET CONTINUATION

TICKET No. 252520

CUSTOMER *Murkin*

WELL *Dawdling* 4" 1-19

DATE 12-6-13

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL			DATE	AMOUNT		
		LOG	ACQ	DE			QTY	SUM	QTY			SUM	
325		2				Standard Cement EA-2	200	SKS		14	50	2900	00
330		2				Swift Multi Density	300	SKS		18	50	5550	00
276		2				Fluocole	125	lbs		2	50	312	50
283		2				Salt	1000	lbs			20	200	00
284		2				Calseal	9	SKS		35	00	315	00
285		2				CFR-1	150	lbs		4	50	675	00
581		2				SERVICE CHARGE				2	00	1000	00
583		2				MILEAGE CHARGE				1	00	3804	50
TOTAL WEIGHT							50855						
LOADED MILES							150						
CUBIC FEET							520						
TON MILES							3814.50						
CONTINUATION TOTAL											14767.	00	

JOB LOG

SWIFT Services, Inc.

DATE 12-6-13 PAGE NO.

CUSTOMER *Murkin* WELL NO. *1-19* LEASE *Downing A* JOB TYPE *5 1/2 long string Re-Installation* TICKET NO. *25252*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PS)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2000							on location
								TD 4700 SS 21
								TP 4692 Insert 4671
								5 1/2 x 15, 5#
								Centrivers 1-10, 12, 14, 16, 26, 38
								Baskets 15, 27, 39
	2230							Start Pipe
	2345							Break Circulation
	0015							Finish Pumping Pipe
	0115							Drop Ball Circulate Rotate
	0225	5	12		✓		300	Start Mud Flush
		5	20		✓		300	Start KLL Flush
	0280	5	138		✓		200	Start SMO 250 sks
		5	48		✓		300	Start EA-Z 200 sks
	0350							Drop Plug wash out Pump + Lines
	0355	6	20		✓			Start Displacement w/ KLL 20661
			100		✓			Circulate Cement
	0415		111.1		✓		800/1600	land Plug
	0420							Plug RT 30sks MT 20sks
								wash up
								Back up Circulated 20sks
								to pit
	0500							Job Complete
								Thank You
								Dash, David, Rob, Doug