

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas  DH  EOR

OG  GSW

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 EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

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  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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 Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top _____ Bottom _____
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Murfin Drilling Co., Inc.
Well Name	BBS UNIT 1-29
Doc ID	1657926

All Electric Logs Run

DIL
DUCP
MEL
BHCS





## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 NWater Ste 300  
Witchita, KS 67202

ATTN: Clayton Erickson

### **BBS Unit #1-29**

### **29-1S-31W Rawlins,KS**

Start Date: 2022.06.13 @ 03:18:00

End Date: 2022.06.13 @ 12:02:30

Job Ticket #: 68773                      DST #: 1

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

Printed: 2022.06.16 @ 08:48:08

Murfin Drilling Company Inc  
29-1S-31W Rawlins,KS  
BBS Unit #1-29  
DST # 1  
LKC A-C  
2022.06.13



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Witchita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68773

**DST#: 1**

ATTN: Clayton Erickson

Test Start: 2022.06.13 @ 03:18:00

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:49:30

Time Test Ended: 12:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Nathan Aneas

Unit No: 71

**Interval: 3825.00 ft (KB) To 3886.00 ft (KB) (TVD)**

Reference Elevations: 2846.00 ft (KB)

Total Depth: 3886.00 ft (KB) (TVD)

2841.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8353**

**Inside**

Press@RunDepth: 174.99 psig @ 3826.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.06.13

End Date: 2022.06.13

Last Calib.: 2022.06.13

Start Time: 03:18:01

End Time: 12:02:30

Time On Btm: 2022.06.13 @ 05:48:45

Time Off Btm: 2022.06.13 @ 09:55:15

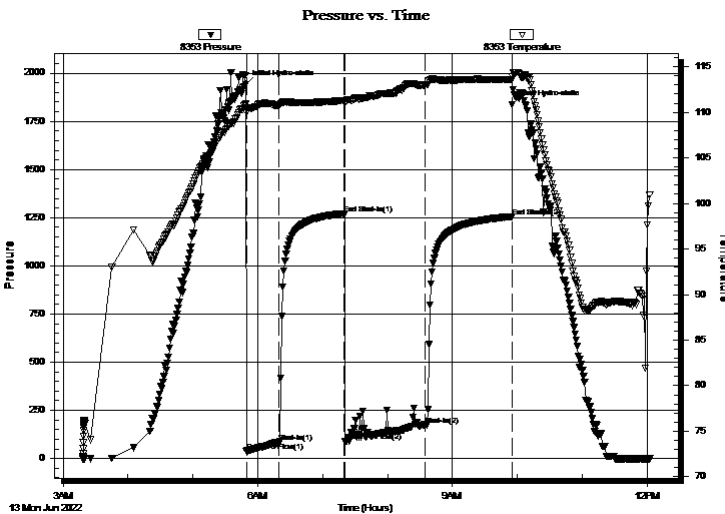
**TEST COMMENT:** 30:IF- Weak surface blow , built to 2 inches in 15 min, final blow is 2 3/4 inch

60:IS- No blow back

60:FF- Weak surface blow in 15 min, final blow is 2 inches

90:FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1940.47	110.92	Initial Hydro-static
1	37.30	110.50	Open To Flow (1)
31	84.12	110.75	Shut-In(1)
91	1271.23	111.29	End Shut-In(1)
92	89.66	111.12	Open To Flow (2)
167	174.99	113.02	Shut-In(2)
246	1255.67	113.58	End Shut-In(2)
247	1836.07	113.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
235.00	Mud 100%M	1.16
31.00	SWM 98%M 2%W	0.43

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Murfine Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Wichita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68773

**DST#: 1**

ATTN: Clayton Erickson

Test Start: 2022.06.13 @ 03:18:00

## GENERAL INFORMATION:

Formation: **LKC A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:49:30

Time Test Ended: 12:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Nathan Aneas

Unit No: 71

**Interval: 3825.00 ft (KB) To 3886.00 ft (KB) (TVD)**

Reference Elevations: 2846.00 ft (KB)

Total Depth: 3886.00 ft (KB) (TVD)

2841.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8676 Outside**

Press@RunDepth: psig @ 3826.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.06.13

End Date: 2022.06.13

Last Calib.: 2022.06.13

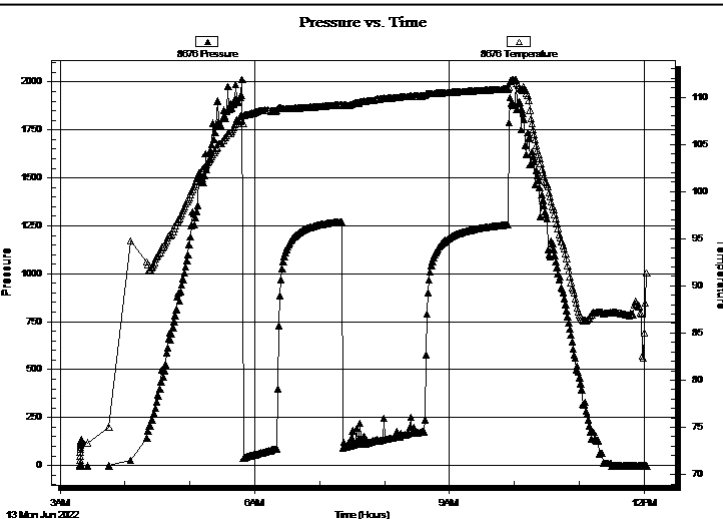
Start Time: 03:18:01

End Time: 12:02:45

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30:IF- Weak surface blow , built to 2 inches in 15 min, final blow is 2 3/4 inch  
60:IS- No blow back  
60:FF- Weak surface blow in 15 min, final blow is 2 inches  
90:FS- No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
235.00	Mud 100%M	1.16
31.00	SWM 98%M 2%W	0.43

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Wichita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68773

**DST#: 1**

ATTN: Clayton Erickson

Test Start: 2022.06.13 @ 03:18:00

## Tool Information

Drill Pipe:	Length: 3578.00 ft	Diameter: 3.80 inches	Volume: 50.19 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3825.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	93.00 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			3798.00	
Hydraulic tool	5.00			3803.00	
Jars	5.00			3808.00	
EM Tool	4.00			3812.00	
Safety Joint	3.00			3815.00	
Packer	5.00			3820.00	32.00 Bottom Of Top Packer
Packer	5.00			3825.00	
Stubb	1.00			3826.00	
Recorder	0.00	8353	Inside	3826.00	
Recorder	0.00	8676	Outside	3826.00	
Perforations	24.00			3850.00	
Change Over Sub	1.00			3851.00	
Blank Spacing	31.00			3882.00	
Change Over Sub	1.00			3883.00	
Bullnose	3.00			3886.00	61.00 Bottom Packers & Anchor

**Total Tool Length: 93.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Witchita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68773

**DST#: 1**

ATTN: Clayton Erickson

Test Start: 2022.06.13 @ 03:18:00

## 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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
235.00	Mud 100%M	1.156
31.00	SWM 98%M 2%W	0.435

Total Length: 266.00 ft      Total Volume: 1.591 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

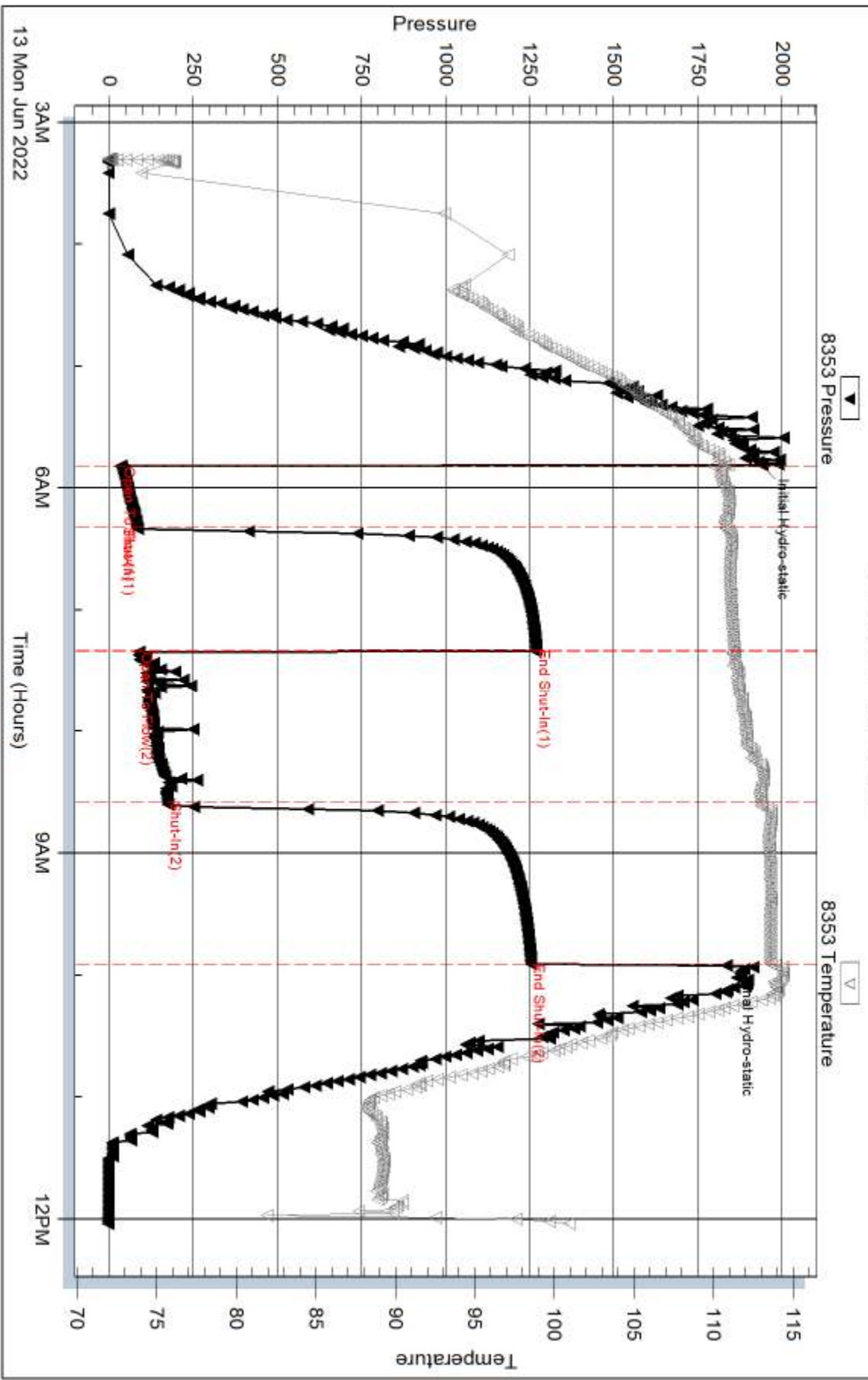
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

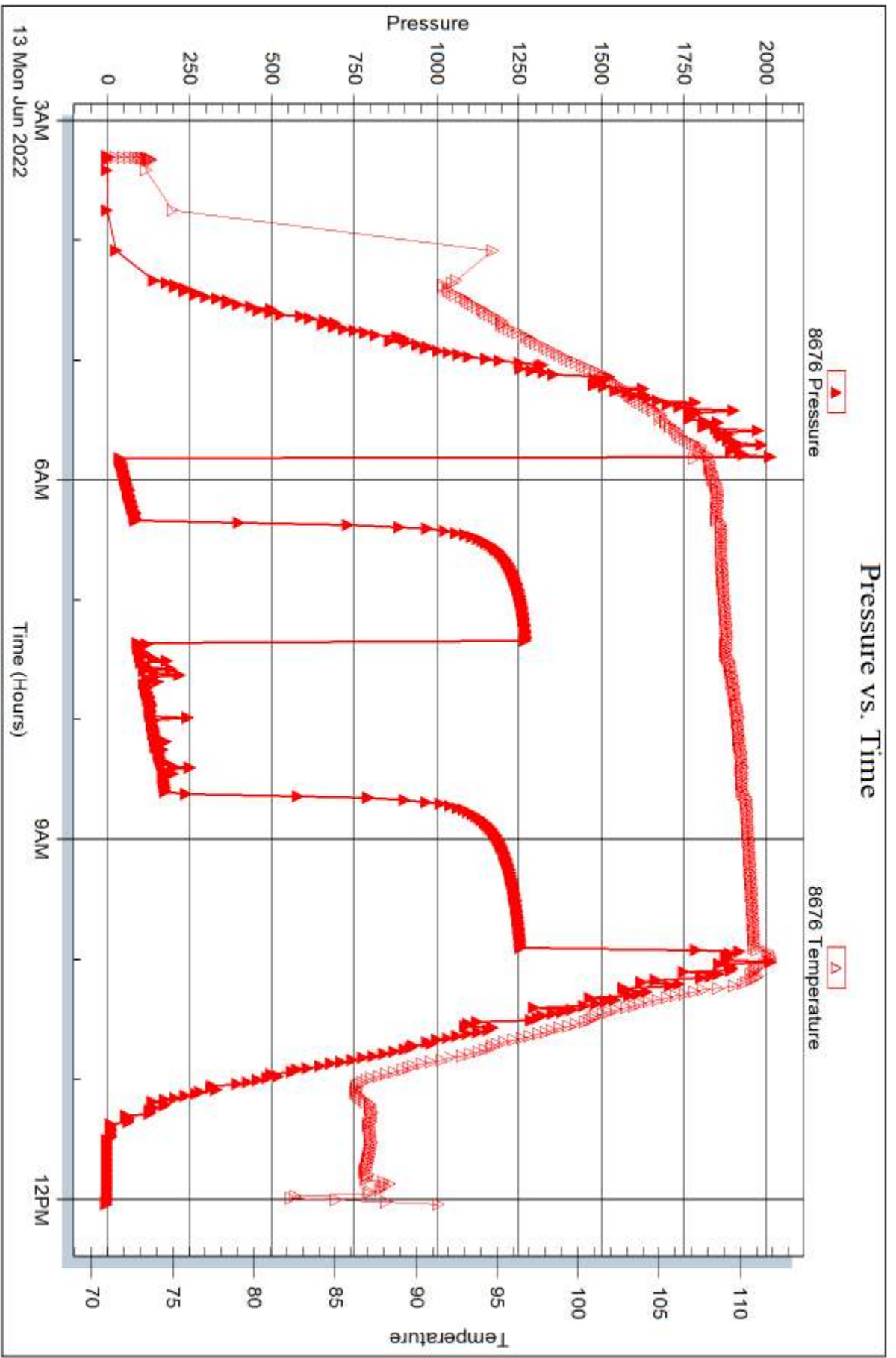


Serial #: 8676

Outside Marfin Drilling Company Inc

BBS Unit #1-29

DST Test Number: 1



Trilobe Testing, Inc

Ref. No: 68773

Printed: 2022.06.16 @ 08:48:09



## DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 NWater Ste 300  
Wichita, KS 67202

ATTN: Clayton Erickson

### **BBS Unit #1-29**

#### **29-1S-31W Rawlins,KS**

Start Date: 2022.06.14 @ 06:50:00

End Date: 2022.06.14 @ 13:40:45

Job Ticket #: 68774                      DST #: 2

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

Printed: 2022.06.16 @ 08:41:38



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Wichita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68774

**DST#: 2**

ATTN: Clayton Erickson

Test Start: 2022.06.14 @ 06:50:00

## GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:36:30

Time Test Ended: 13:40:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Nathan Aneas

Unit No: 71

**Interval: 3920.00 ft (KB) To 4014.00 ft (KB) (TVD)**

Reference Elevations: 2846.00 ft (KB)

Total Depth: 4014.00 ft (KB) (TVD)

2841.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8353**

**Inside**

Press@RunDepth: 108.13 psig @ 3921.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.06.14

End Date:

2022.06.14

Last Calib.:

2022.06.14

Start Time: 06:50:01

End Time:

13:40:45

Time On Btm:

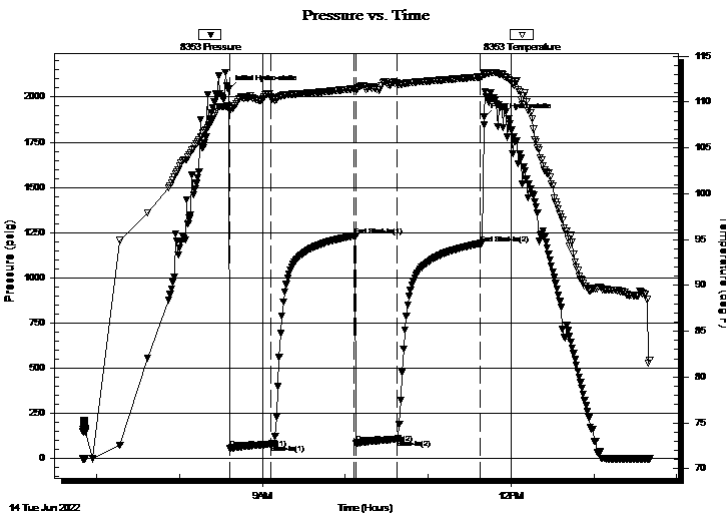
2022.06.14 @ 08:35:45

Time Off Btm:

2022.06.14 @ 11:40:30

**TEST COMMENT:** 30:IF- Weak surface blow , built to 1 inch in 15 min, final blow is 1 3/4 inch  
60:IS- No blow back  
30:FF- Weak surface blow in 20 min, final blow is weak surface  
60:FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2042.74	109.59	Initial Hydro-static
1	55.98	109.23	Open To Flow (1)
31	80.03	110.42	Shut-In(1)
91	1232.07	111.46	End Shut-In(1)
92	84.65	111.30	Open To Flow (2)
122	108.13	112.00	Shut-In(2)
182	1189.69	112.74	End Shut-In(2)
185	1888.35	112.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
176.00	Mud 100%M (Trace Oil)	0.87

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Murfin Drilling Company Inc

**29-1S-31W Rawlins, KS**

250 NWater Ste 300  
Witchita, KS 67202

**BBS Unit #1-29**

ATTN: Clayton Erickson

Job Ticket: 68774

**DST#: 2**

Test Start: 2022.06.14 @ 06:50:00

### GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:36:30

Time Test Ended: 13:40:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Nathan Aneas

Unit No: 71

**Interval: 3920.00 ft (KB) To 4014.00 ft (KB) (TVD)**

Reference Elevations: 2846.00 ft (KB)

Total Depth: 4014.00 ft (KB) (TVD)

2841.00 ft (CF)

Hole Diameter: 7.87 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8676 Outside**

Press@RunDepth: psig @ 3921.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2022.06.14

End Date: 2022.06.14

Last Calib.: 2022.06.14

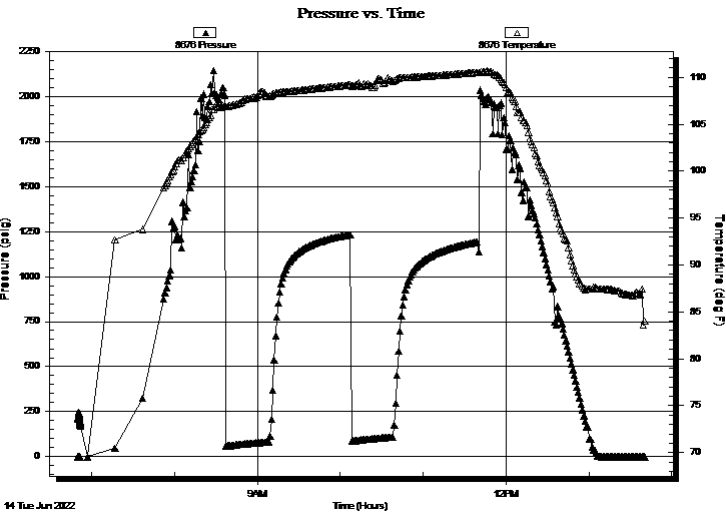
Start Time: 06:50:01

End Time: 13:41:00

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 30:IF- Weak surface blow , built to 1 inch in 15 min, final blow is 1 3/4 inch  
60:IS- No blow back  
30:FF- Weak surface blow in 20 min, final blow is weak surface  
60:FS- No blow back



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
176.00	Mud 100%M (Trace Oil)	0.87

\* 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 Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Witchita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68774

**DST#: 2**

ATTN: Clayton Erickson

Test Start: 2022.06.14 @ 06:50:00

## Tool Information

Drill Pipe:	Length: 3673.00 ft	Diameter: 3.80 inches	Volume: 51.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 235.00 ft	Diameter: 2.25 inches	Volume: 1.16 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3920.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 ft			
Tool Length:	126.00 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			3893.00	
Hydraulic tool	5.00			3898.00	
Jars	5.00			3903.00	
EM Tool	4.00			3907.00	
Safety Joint	3.00			3910.00	
Packer	5.00			3915.00	32.00 Bottom Of Top Packer
Packer	5.00			3920.00	
Stubb	1.00			3921.00	
Recorder	0.00	8353	Inside	3921.00	
Recorder	0.00	8676	Outside	3921.00	
Change Over Sub	1.00			3922.00	
Blank Spacing	63.00			3985.00	
Change Over Sub	1.00			3986.00	
Perforations	25.00			4011.00	
Bullnose	3.00			4014.00	94.00 Bottom Packers & Anchor

**Total Tool Length: 126.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Company Inc

**29-1S-31W Rawlins,KS**

250 NWater Ste 300  
Witchita, KS 67202

**BBS Unit #1-29**

Job Ticket: 68774

**DST#: 2**

ATTN: Clayton Erickson

Test Start: 2022.06.14 @ 06:50:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
176.00	Mud 100%M (Trace Oil)	0.866

Total Length: 176.00 ft      Total Volume: 0.866 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

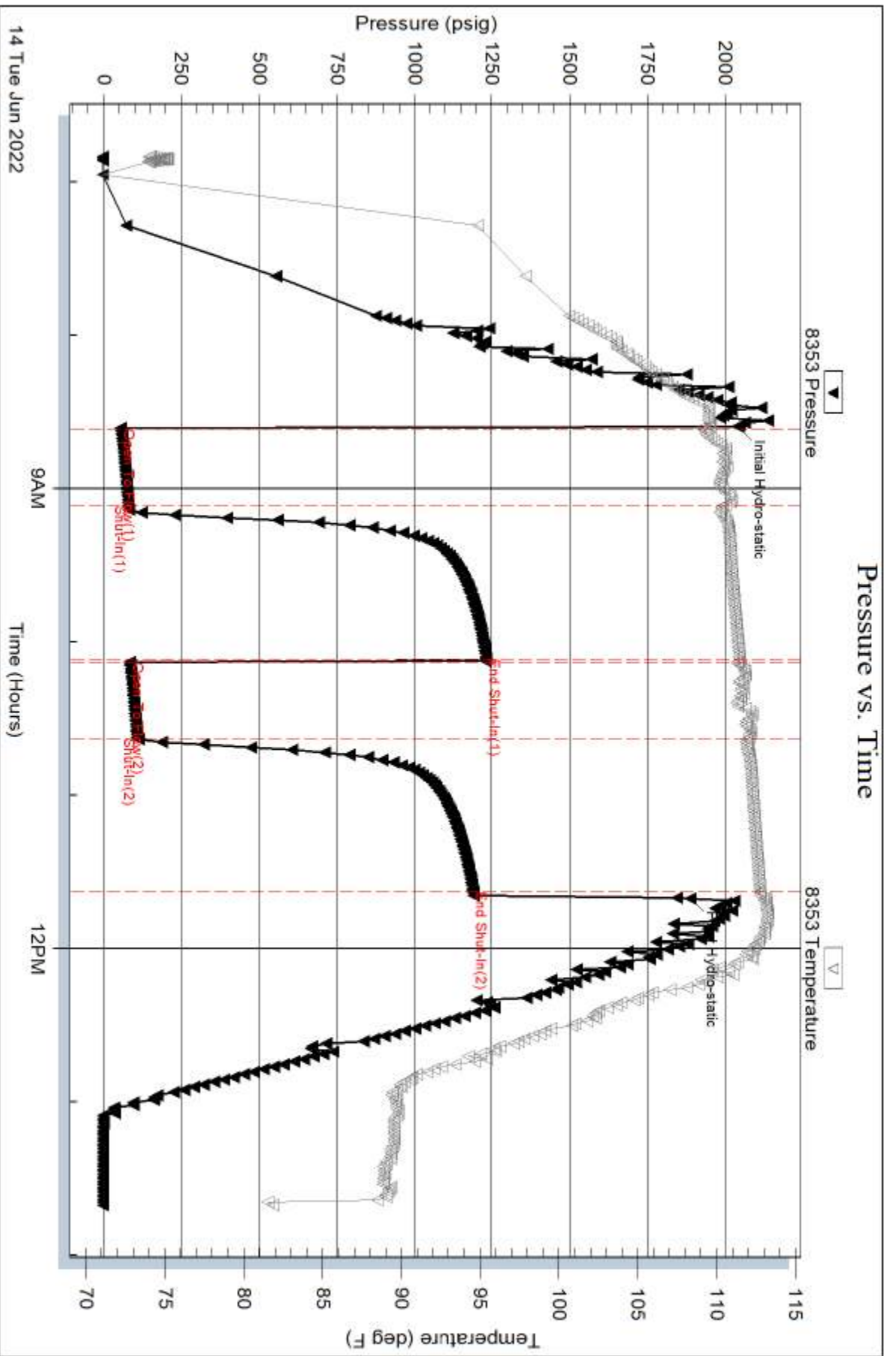
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



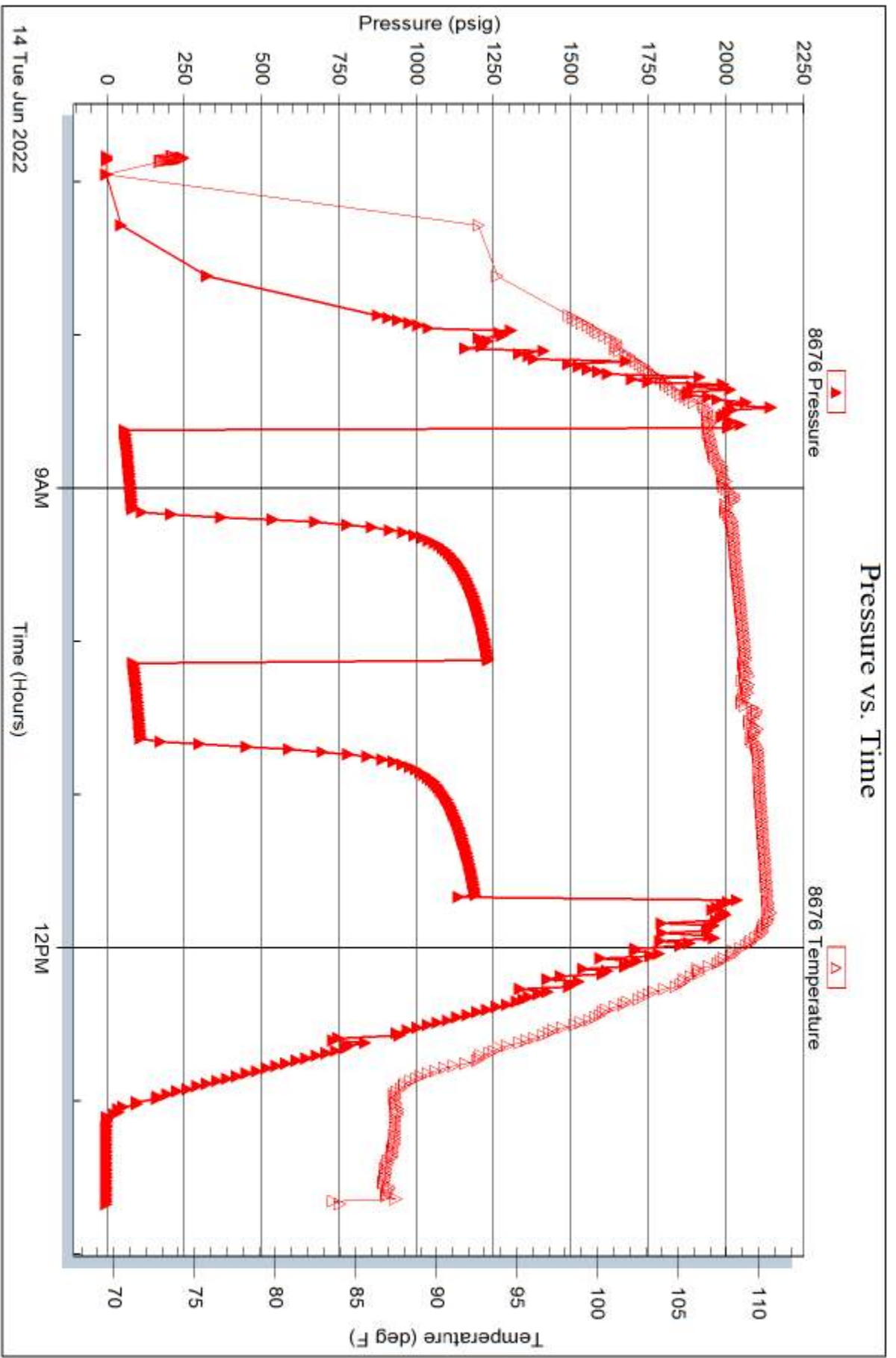


Serial #: 8676

Outside Marfin Drilling Company Inc

BBS Unit #1-29

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 68774

Printed: 2022.06.16 @ 08:41:40



# TRILOBITE TESTING INC.

1515 Commerce Parkway - Hays, Kansas 67601

## Test Ticket

NO. **68773**

Well Name & No. BBS Unit #1-29 Test No. 1 Date 6/12/22  
 Company Murfin Drilling Company Inc Elevation 2846 KB 2841 GL  
 Address 250 N Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #7  
 Location: Sec. 29 Twp 1S Rge. 31W Co. Rawlins State Ks

Interval Tested 3825-3886 Zone Tested LKC A-C  
 Anchor Length 61' Drill Pipe Run 3578 Mud Wt. 8.7  
 Top Packer Depth 3820 Drill Collars Run 235 Vls 64  
 Bottom Packer Depth 3825 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 3886 Chlorides 1700 ppm System LCM 5#

Blow Description IF-Weak surface blow, built to 2 inches in 15 min, Final blow is 2 3/4

ISI- No blow back

FF- Weak surface blow in 15 min, Final blow is 2 inches

FST- No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>31</u>	<u>SWM</u>			<u>2</u>	<u>98</u>
<u>235</u>	<u>Mud</u>				<u>100</u>
____	____				
____	____				
____	____				

Rec Total 266 BHT 113 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1940  Test 1800 T-On Location 23:30  
 (B) First Initial Flow 37  Jars 300 T-Started 03:18  
 (C) First Final Flow 84  Safety Joint \_\_\_\_\_ T-Open 05:49  
 (D) Initial Shut-In 1271  Circ Sub \_\_\_\_\_ T-Pulled 09:50  
 (E) Second Initial Flow 90  Hourly Standby \_\_\_\_\_ T-Out 11:55  
 (F) Second Final Flow 175  Mileage 56 RT 84 Comments \_\_\_\_\_  
 (G) Final Shut-In 1256  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1836  Straddle \_\_\_\_\_  
 Shale Packer 250  EM Tool \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Day Standby \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Accessibility \_\_\_\_\_ Sub Total 0  
 Sub Total 2434 Total 2434

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 68774

Well Name & No. BBS Unit #1-29 Test No. 2 Date 6/14/22  
 Company Murfin Drilling Company Inc Elevation 2846 KB 2841 GL  
 Address 280 N Water Ste 300 Wichita, KS 67202  
 Co. Rep / Geo. Clayton Erickson Rig Murfin #17  
 Location: Sec. 29 Twp 18 Rge. 31W Co. Rawlins State KS

Interval Tested 3920-4014 Zone Tested LKC H-I-J  
 Anchor Length 94' Drill Pipe Run 3673 Mud Wt. 8.9  
 Top Packer Depth 3915 Drill Collars Run 235 Vls 69  
 Bottom Packer Depth 3920 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 4014 Chlorides 1900 ppm System LCM 5#

Blow Description IF - Weak surface blow, built to 1 inch in 15min, Final blow is 1 3/4  
ISI - No blow back  
FF - Weak surface blow in 20min, Final blow is weak surface  
FSI - No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>176.25</u>	<u>Mud (Trace oil)</u>				<u>100</u>
____	____				
____	____				
____	____				
____	____				

Rec Total 176.25 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2043</u>	<input checked="" type="checkbox"/> Test <u>1950</u>	T-On Location <u>04:30</u>
(B) First Initial Flow <u>56</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>06:50</u>
(C) First Final Flow <u>80</u>	<input checked="" type="checkbox"/> Safety Joint _____	T-Open <u>08:36</u>
(D) Initial Shut-In <u>1232</u>	<input checked="" type="checkbox"/> Circ Sub _____	T-Pulled <u>11:36</u>
(E) Second Initial Flow <u>85</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>13:40</u>
(F) Second Final Flow <u>108</u>	<input checked="" type="checkbox"/> Mileage <u>56 RT</u> 84	Comments _____
(G) Final Shut-In <u>1890</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1888</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<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>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>2584</u>
	Sub Total <u>2584</u>	MP/DST Disc't _____

Approved By \_\_\_\_\_ Our Representative [Signature]

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



**CEMENT TREATMENT REPORT**

<b>Customer:</b> Murfin Drilling	<b>Well:</b> BBS Unit # 1-29	<b>Ticket:</b> WP 2919
<b>City, State:</b> Oakley KS	<b>County:</b> Rawlins KS	<b>Date:</b> 6/9/2022
<b>Field Rep:</b> Auturo	<b>S-T-R:</b> 29-1S-31W	<b>Service:</b> Surface

<b>Downhole Information</b> Hole Size: 12.25 in Hole Depth: 310 ft Casing Size: 8 5/8 in Casing Depth: 310 ft Tubing / Liner: in Depth: ft Tool / Packer: Tool Depth: ft Displacement: 8.5 bbbls		<b>Calculated Slurry - Lead</b> Blend: h-325 Weight: 14.9 ppg Water / Sx: 6.9 gal / sx Yield: 1.41 ft³ / sx Annular Bbls / Ft.: 0.0735 bbls / ft. Depth: 310 ft Annular Volume: 22.8 bbls Excess: Total Slurry: 69.0 bbls Total Sacks: 275 sx		<b>Calculated Slurry - Tail</b> Blend: Weight: ppg Water / Sx: gal / sx Yield: ft³ / sx Annular Bbls / Ft.: bbls / ft. Depth: ft Annular Volume: 0 bbls Excess: Total Slurry: 0.0 bbls Total Sacks: 0 sx	
---	--	---	--	--	--

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
645P			-	-	GOT TO LOCATION
650P				-	SAFETY MEETING
655P				-	RIGGED UP TRUCKS
1025P	3.0	40.0	5.0	5.0	PUMPED H2O AHEAD
1027P	3.2	200.0	69.0	74.0	PUMPED 275SKS OF H- 325 @ 310 FT
1048P	2.6	1'00	18.5	92.5	DISPLACED WITH H2O
1055P				92.5	PLUG DOWN / CIRCULATED 5 BBL TO PIT
1100P				92.5	WASHED UP PUMP TRUCK
1115P				92.5	RIGGED DOWN TRUCKS
1130P				92.5	OFF LOCATION
				92.5	

<b>Crew</b> Cementer: Josh Pump Operator: spencer Bulk #1: Bulk #2:	<b>UNIT</b>		<b>SUMMARY</b>		
	530/235	528/520	Average Rate	Average Pressure	Total Fluid
			2.9 bpm	120 psi	93 bbls



**CEMENT TREATMENT REPORT**

Customer:	Murfin Drilling	Well:	BBS Unit #1-29	Ticket:	WP 2944
City, State:	Oakley KS	County:	Rawlins KS	Date:	6/16/2022
Field Rep:	Arturo	S-T-R:	29-1S-31W	Service:	PTA

Downhole Information	
Hole Size:	7.875 in
Hole Depth:	4200 ft
Casing Size:	in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	bbbls

Calculated Slurry - Lead	
Blend:	H-Plug
Weight:	13.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.42 ft <sup>3</sup> / sx
Annular Bbls / Ft.:	0.0406 bbls / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	64.4 bbls
Total Sacks:	255 sx

Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft <sup>3</sup> / sx
Annular Bbls / Ft.:	bbls / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
12:45 AM			-	-	Arrived on location
12:55 AM				-	Safety meeting
1:05 AM				-	Rigged up
				-	
3:20 AM	2.7	200.0	5.0	5.0	Water ahead
3:24 AM	3.1	200.0	12.6	17.6	Mixed 50 sacks H-Plug cement 13.8 ppg @ 2650'
3:31 AM	4.0	100.0	5.0	22.6	Begin displacement
3:35 AM				22.6	Pumped mud using rig pump for 2:00 minutes
				22.6	
4:08 AM	3.2	100.0	5.0	27.6	Water ahead
4:14 AM	3.7	200.0	25.2	52.8	Mixed 100 sacks H-Plug cement 13.8 ppg @ 1700'
4:24 AM	2.8	100.0	12.5		Begin displacement
5:14 AM	3.2	100.0	5.0		Water ahead
5:17 AM	5.0	200.0	12.6		Mixed 50 sacks H-Plug cement 13.8 ppg @ 350'
5:21 AM	2.0	100.0	0.7		Begin displacement
6:40 AM	2.0	100.0	2.5		Mixed 10 sacks H-Plug cement 13.8 ppg with wooden plug for top 40'
6:45 AM	3.0	100.0	3.7		Mixed 15 sacks H-Plug cement 13.8 ppg for mouse hole plug
6:56 AM	3.0	100.0	7.5		Mixed 30 sacks H-Plug cement 13.8 ppg for rat hole plug
7:00 AM					Plug down
7:02 AM					Wash up and rigged down
7:35 AM					Left location

CREW		UNIT	SUMMARY		
Cementer:	John	64	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Spencer	528-520	3.1 bpm	133 psi	97 bbls
Bulk #1:	Charlie	205			
Bulk #2:					

## DRILLING REPORT - LOG TOPS - BBS UNIT 1-29

MDCI  
 BBS Unit #1-29  
 1320'FNL 2640'FEL  
 Sec. 29-T1S-R31W  
 2846' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	2626	+220	+5	2624	+222	+7
B/Anhydrite	2662	+184	+6	2660	+186	+8
Topeka	3618	-772	+4	3616	-770	+6
Oread	3766	-920	+11	3773	-927	+4
Lansing	3815	-969	+1	3814	-968	+2
Mound City	4067	-1221	+1	4066	-1220	+2
RTD	4200					
LTD				4200		