

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) (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	MB A 3-35
Doc ID	1587743

All Electric Logs Run

DIL
DUCP
MEL
BHCS

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: **Murfin Drilling Company Inc.**

LEASE: **MB 'A' #3-35**

FIELD: **W/Idcat**

LOCATION: **9851nl & 2200'fe1**

SEC: **35** TWP: **4s** RGE: **31w**

COUNTY: **Rawlins** STATE: **Kansas**

CONTRACTOR: **Murfin Drilling Company Inc. Rig #7**

SPUD: **7/5/2021** COMP: **7/14/2021**

RTD: **4520'** LTD: **4520'**

MUD UP: **3200'** TYPE MUD: **Chemical**

SAMPLES SAVED FROM: **3570'** TO **4520'**

DRILLING TIME KEPT FROM: **3570'** TO **4520'**

SAMPLES EXAMINED FROM: **3570'** TO **4520'**

GEOLOGICAL SUPERVISION FROM: **3520'**

GEOLOGIST ON WELL: **Robert D. Hendrix**

FORMATION TOPS: **ELECTRIC LOG**

ANHYDRITE: **2600 (+259)**

TOPEKA: **3671 (-812)**

LANISNA: **3888 (-1029)**

STARK SHALE: **4054 (-1193)**

BKC: **4107 (-1248)**

PAWNEE: **4218 (-1353)**

CHEROKEE SHALE: **4300 (-1441)**

MISSISSIPPI: **4421 (-1562)**

ELEVATIONS: **KB 2859'**

DF: **GL 2854'**

Measurements Are All From **Kelly Bushing**

CASING: **CONDUCTOR 5 1/2" @ 4514'**

CONDUCTOR: **SURFACE 8-5/8" at 3111'**

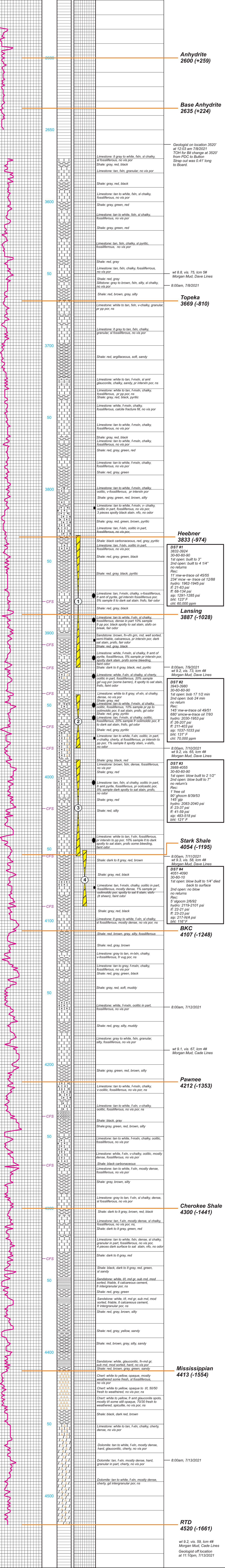
PRODUCTION: **5 1/2" @ 4514'**

ELECTRICAL SURVEYS: **Dual Comp per Microlog Series, Dual Induction Midwest Wireline**

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	2600 (+259)	3669 (-810)
Topeka	3671 (-812)	3887 (-1028)
Lanisna	3888 (-1029)	4054 (-1193)
Stark Shale	4054 (-1193)	4107 (-1248)
BKC	4107 (-1248)	4218 (-1353)
Pawnee	4218 (-1353)	4300 (-1441)
Cherokee Shale	4300 (-1441)	4421 (-1562)
Mississippi	4421 (-1562)	4413 (-1554)

AP# 15-153-21265

REMARKS: Ran 109jts of 15.5# 5 1/2" prod csg set @ 4514'. HSI cmt w/555sxs (325sxs Hcon, 230sxs A-LD), PD @ 11:00AM 7/14. 30sxs RH, 20sxs MH. Circ 20sxs to pit. RR @ 3:00PM 7/14/2021



Murfin Drilling Co Inc
MB 'A' #3-35
6851nl & 2200'fe1
35-4s-31w, Rawlins County, Kansas
KB=2859', GL=2854'
API: 15-153-21265



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

MB "A" 3-35

35-4S-31W Rawlins,KS

Start Date: 2021.07.09 @ 05:38:00

End Date: 2021.07.09 @ 14:05:21

Job Ticket #: 67530 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.07.14 @ 10:22:58

Murfin Drilling

35-4S-31W Rawlins,KS

MB "A" 3-35

DST # 1

Toronto - LKC "B"

2021.07.09



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67530

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.07.09 @ 05:38:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:52:51
 Time Test Ended: 14:05:21
 Interval: **3832.00 ft (KB) To 3924.00 ft (KB) (TVD)**
 Total Depth: 3924.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder/ Justin
 Unit No: 73
 Reference Elevations: 2859.00 ft (KB)
 2854.00 ft (CF)
 KB to GR/CF: 5.00 ft

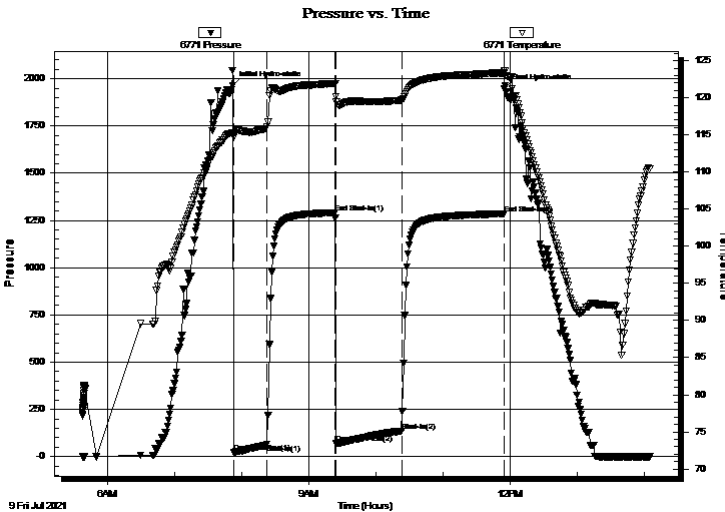
Serial #: 6771

Inside

Press@RunDepth: 134.28 psig @ 3833.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2021.07.09 End Date: 2021.07.09 Last Calib.: 2021.07.09
 Start Time: 05:38:01 End Time: 14:05:21 Time On Btm: 2021.07.09 @ 07:52:06
 Time Off Btm: 2021.07.09 @ 11:54:51

TEST COMMENT: 30 - IF: 1/2" Blow at open, built to 3"
 60 - IS: No blow back
 60 - FF: Blow built to 4 1/4"
 90 - FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1962.83	115.29	Initial Hydro-static
1	20.66	115.29	Open To Flow (1)
31	63.28	116.08	Shut-In(1)
92	1290.74	121.93	End Shut-In(1)
93	67.96	120.14	Open To Flow (2)
151	134.28	119.67	Shut-In(2)
243	1284.85	123.34	End Shut-In(2)
243	1945.46	123.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
234.00	MCW w/ trace oil 88%w, 12%m	1.15
11.00	nw 55%w, 45%m	0.15

Gas Rates

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



TRILLOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

35-4S-31W Rawlins,KS

MB "A" 3-35

Job Ticket: 67530

DST#: 1

Test Start: 2021.07.09 @ 05:38:00

GENERAL INFORMATION:

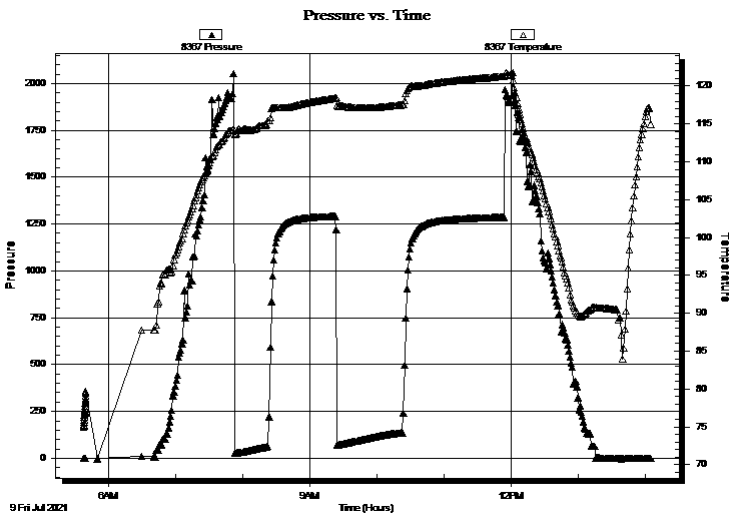
Formation:	Toronto - LKC "B"		
Deviated:	No Whipstock:	ft (KB)	
Time Tool Opened:	07:52:51		Test Type: Conventional Bottom Hole (Initial)
Time Test Ended:	14:05:21		Tester: James Winder/ Justin
Interval:	3832.00 ft (KB) To 3924.00 ft (KB) (TVD)		Unit No: 73
Total Depth:	3924.00 ft (KB) (TVD)		Reference Elevations:
Hole Diameter:	7.80 inches	Hole Condition: Fair	2859.00 ft (KB)
			2854.00 ft (CF)
			KB to GR/CF: 5.00 ft

Serial #: 8367

Outside

Press@RunDepth:	psig @ 3833.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2021.07.09	End Date:	2021.07.09
Start Time:	05:38:01	End Time:	14:04:51
		Last Calib.:	2021.07.09
		Time On Btm:	
		Time Off Btm:	

TEST COMMENT: 30 - IF: 1/2" Blow at open, built to 3"
 60 - IS: No blow back
 60 - FF: Blow built to 4 1/4"
 90 - FS: No Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
234.00	MCW w/ trace oil 88%w, 12%m	1.15
11.00	nw 55%w, 45%m	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67530

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.07.09 @ 05:38:00

Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 51.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3832.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	92.00 ft			
Tool Length:	125.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3800.00	
Shut In Tool	5.00			3805.00	
Hydraulic tool	5.00			3810.00	
Jars	5.00			3815.00	
EM Tool	4.00			3819.00	
Safety Joint	3.00			3822.00	
Packer	5.00			3827.00	33.00 Bottom Of Top Packer
Packer	5.00			3832.00	
Stubb	1.00			3833.00	
Recorder	0.00	6771	Inside	3833.00	
Recorder	0.00	8367	Outside	3833.00	
Perforations	22.00			3855.00	
Change Over Sub	1.00			3856.00	
Drill Pipe	63.00			3919.00	
Change Over Sub	1.00			3920.00	
Perforations	1.00			3921.00	
Bullnose	3.00			3924.00	92.00 Bottom Packers & Anchor
Total Tool Length:	125.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67530

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.07.09 @ 05:38:00

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:

60000 ppm

Viscosity: 73.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 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
234.00	MCW w / trace oil 88%w , 12%m	1.151
11.00	mw 55%w , 45%m	0.154

Total Length: 245.00 ft Total Volume: 1.305 bbl

Num Fluid Samples: 0

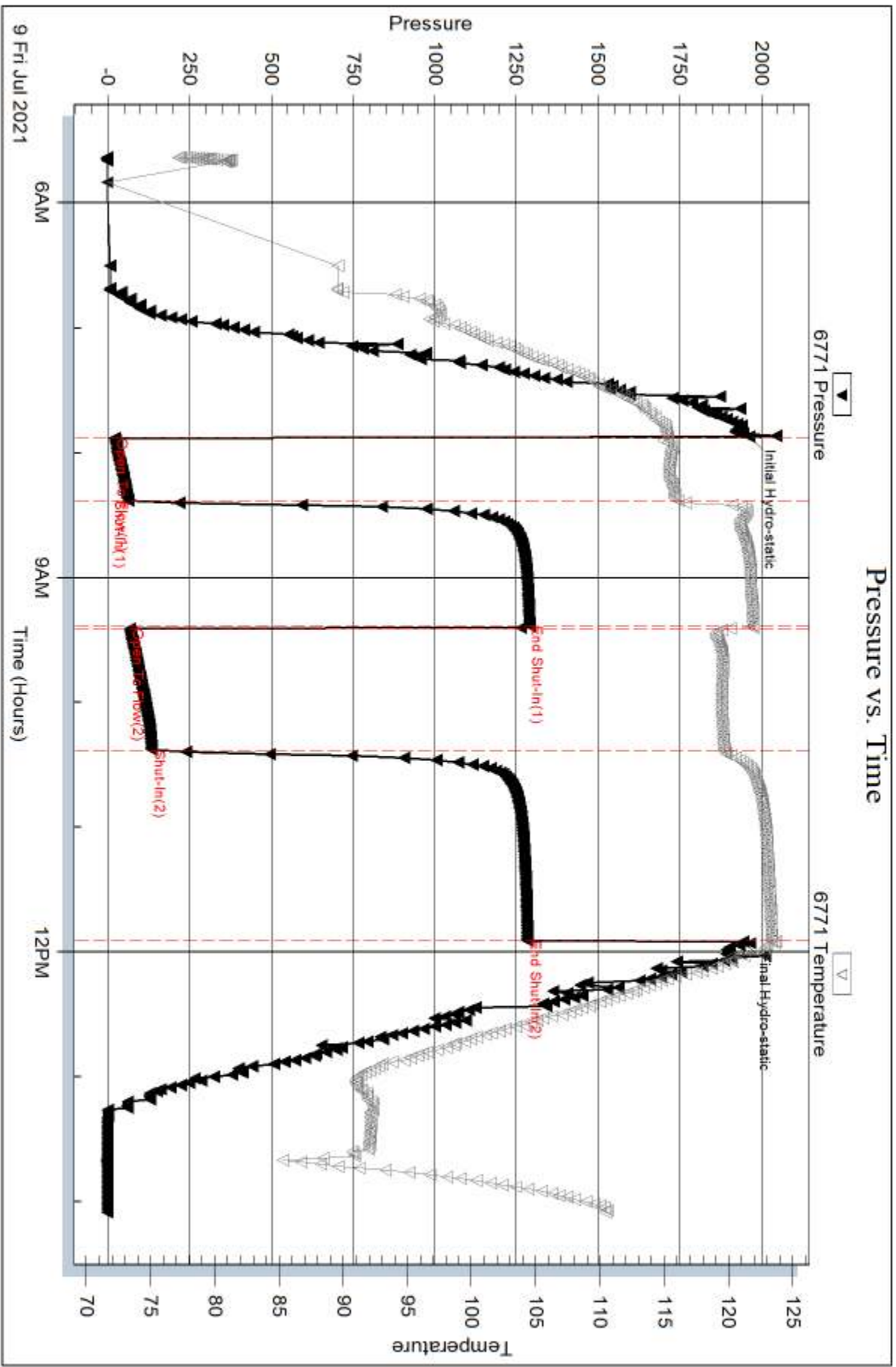
Num Gas Bombs: 0

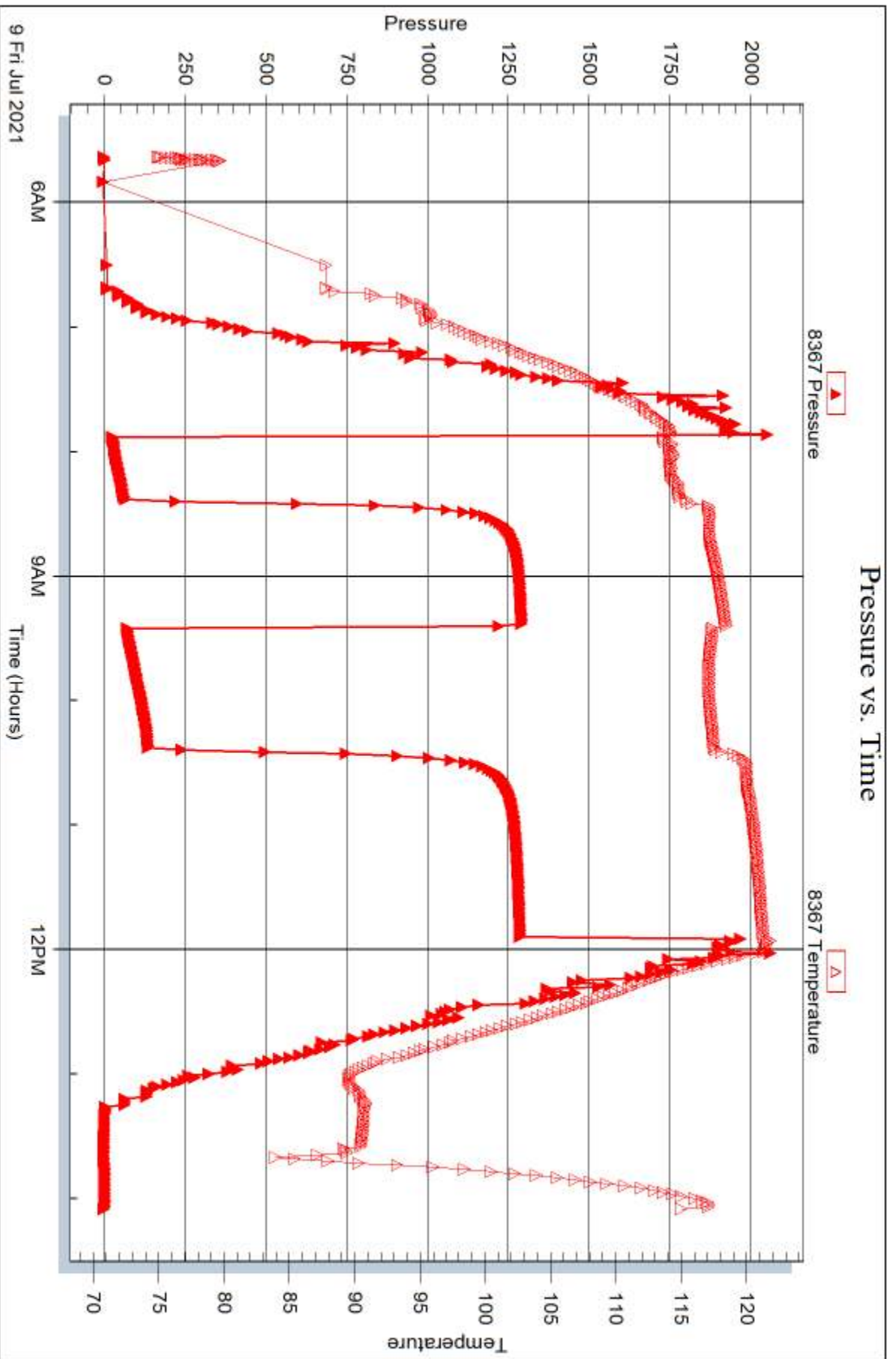
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw =.098 ohms @ 89.8deg.f chlorides=60,000ppm







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

MB "A" 3-35

35-4S-31W Rawlins,KS

Start Date: 2021.07.10 @ 02:04:00

End Date: 2021.07.10 @ 10:36:50

Job Ticket #: 67531 DST #: 2

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

Printed: 2021.07.14 @ 10:22:13

Murfin Drilling
35-4S-31W Rawlins,KS
MB "A" 3-35
DST # 2
LKC F - G
2021.07.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67531

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 02:04:00

GENERAL INFORMATION:

Formation: **LKC F - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:51

Time Test Ended: 10:36:50

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/Justin

Unit No: 73

Interval: 3943.00 ft (KB) To 3980.00 ft (KB) (TVD)

Reference Elevations: 2859.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

2854.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 402.98 psig @ 3944.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.07.10

End Date:

2021.07.10

Last Calib.:

2021.07.10

Start Time: 02:04:01

End Time:

10:36:50

Time On Btm:

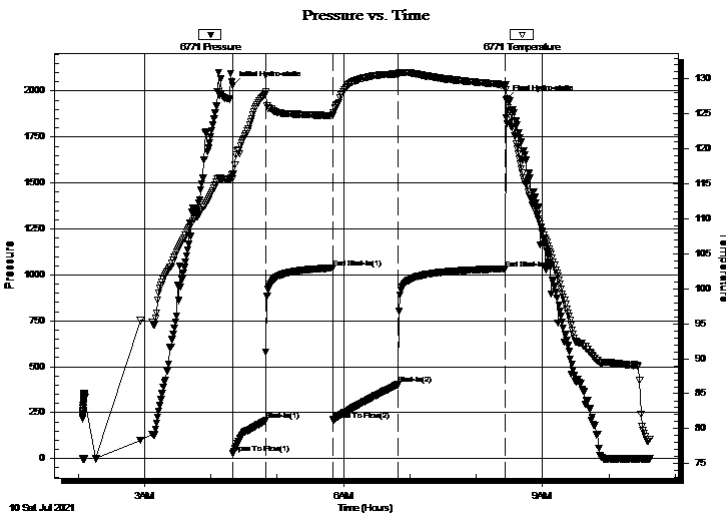
2021.07.10 @ 04:19:36

Time Off Btm:

2021.07.10 @ 08:27:06

TEST COMMENT: 30 IF: Blow built to BOB (11") in 17.5 min, built to 15"
60 IS: No blow back
60 FF: Blow built to BOB in 24 min, built to 15"
90 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2029.69	116.50	Initial Hydro-static
1	25.94	115.71	Open To Flow (1)
30	207.34	127.94	Shut-In(1)
91	1036.81	124.73	End Shut-In(1)
91	210.92	124.81	Open To Flow (2)
150	402.98	130.72	Shut-In(2)
247	1033.46	129.02	End Shut-In(2)
248	1953.69	128.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
680.00	SMCW W/ TR oil 93%W, 7%M	7.41
145.00	MW W/ TR oil 51%M, 49%W	2.03

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67531

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 02:04:00

GENERAL INFORMATION:

Formation: **LKC F - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:51

Time Test Ended: 10:36:50

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/Justin

Unit No: 73

Interval: 3943.00 ft (KB) To 3980.00 ft (KB) (TVD)

Reference Elevations: 2859.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

2854.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 3944.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.07.10 End Date: 2021.07.10

Last Calib.: 2021.07.10

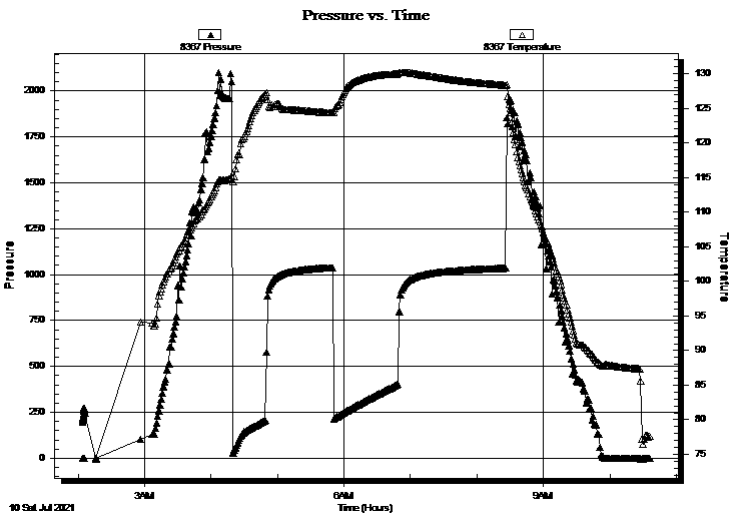
Start Time: 02:04:01 End Time: 10:36:20

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF: Blow built to BOB (11") in 17.5 min, built to 15"
60 IS: No blow back
60 FF: Blow built to BOB in 24 min, built to 15"
90 FS: No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
680.00	SMCW W/ TR oil 93%W, 7%M	7.41
145.00	MW W/ TR oil 51%M, 49%W	2.03

* 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

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67531

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 02:04:00

Tool Information

Drill Pipe:	Length: 3707.00 ft	Diameter: 3.80 inches	Volume: 52.00 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3943.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3911.00	
Shut In Tool	5.00			3916.00	
Hydraulic tool	5.00			3921.00	
Jars	5.00			3926.00	
EM Tool	4.00			3930.00	
Safety Joint	3.00			3933.00	
Packer	5.00			3938.00	33.00 Bottom Of Top Packer
Packer	5.00			3943.00	
Stubb	1.00			3944.00	
Recorder	0.00	6771	Inside	3944.00	
Recorder	0.00	8367	Outside	3944.00	
Perforations	33.00			3977.00	
Bullnose	3.00			3980.00	37.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67531

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 02:04:00

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:

70000 ppm

Viscosity: 73.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 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
680.00	SMCW W/ TR oil 93%W, 7%M	7.407
145.00	MW W/ TR oil 51%M, 49%W	2.034

Total Length: 825.00 ft Total Volume: 9.441 bbl

Num Fluid Samples: 0

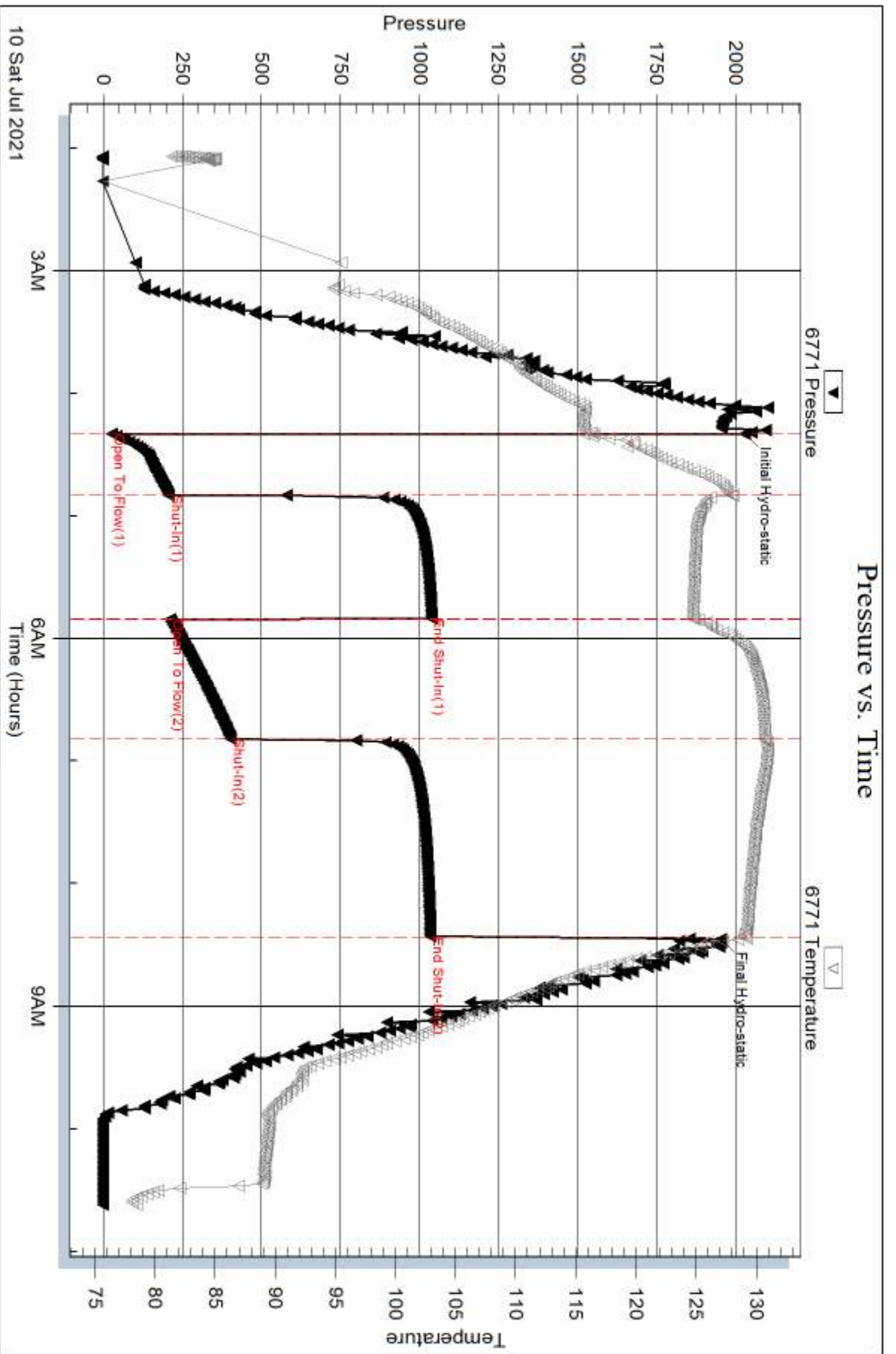
Num Gas Bombs: 0

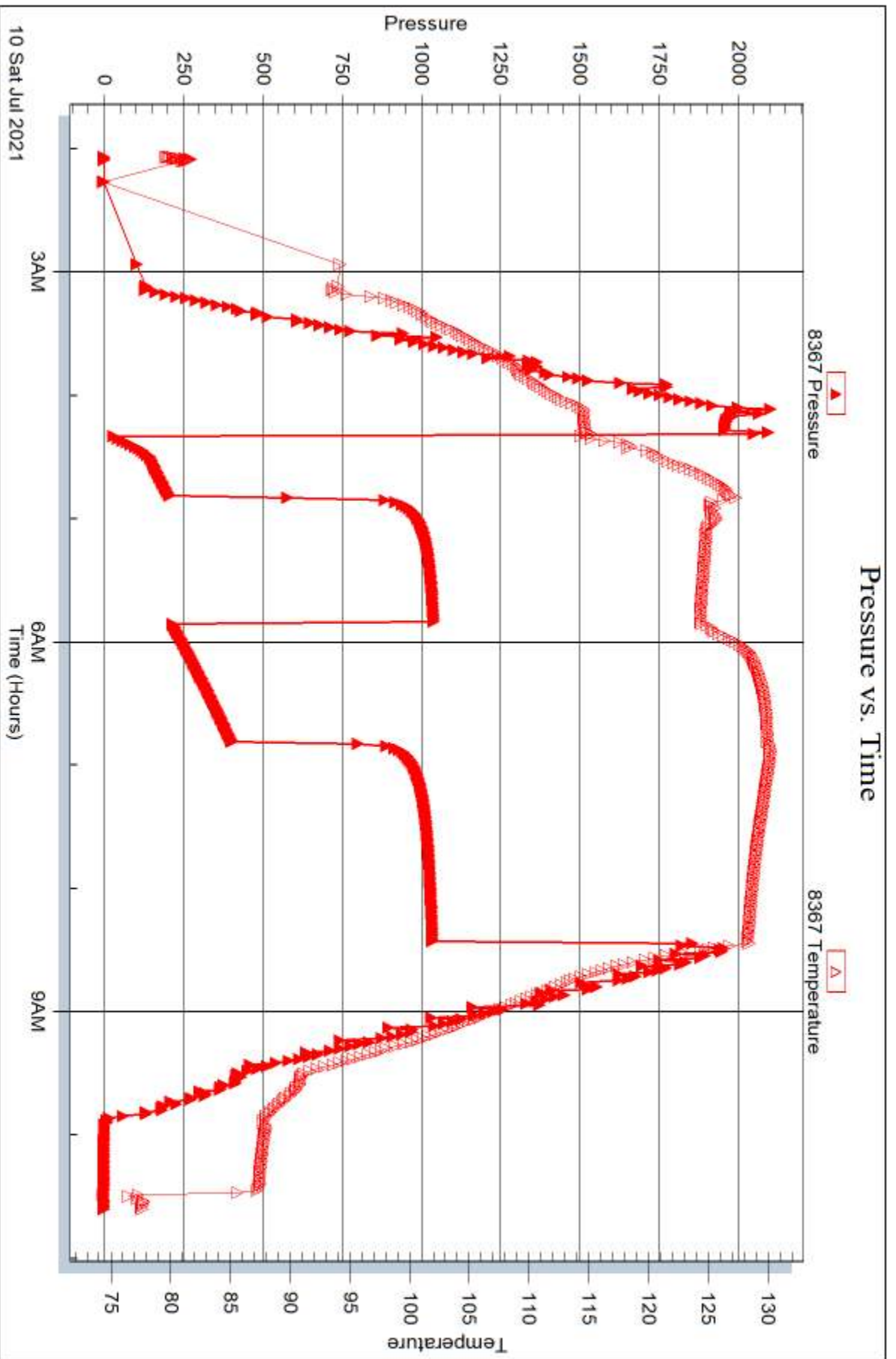
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.111ohms @72.8Deg.F Chlorides 70,000 ppm







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

MB "A" 3-35

35-4S-31W Rawlins,KS

Start Date: 2021.07.10 @ 23:00:00

End Date: 2021.07.11 @ 07:17:51

Job Ticket #: 67532 DST #: 3

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

Printed: 2021.07.14 @ 10:01:39

Murfin Drilling
35-4S-31W Rawlins,KS
MB "A" 3-35
DST # 3
LKC H - J
2021.07.10



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67532

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 23:00:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:03:06

Time Test Ended: 07:17:51

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/Justin

Unit No: 73

Interval: 3988.00 ft (KB) To 4055.00 ft (KB) (TVD)

Reference Elevations: 2859.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2854.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8367 Outside

Press@RunDepth: 58.56 psig @ 3989.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.07.10

End Date:

2021.07.11

Last Calib.:

2021.07.11

Start Time: 23:00:01

End Time:

07:17:51

Time On Btm:

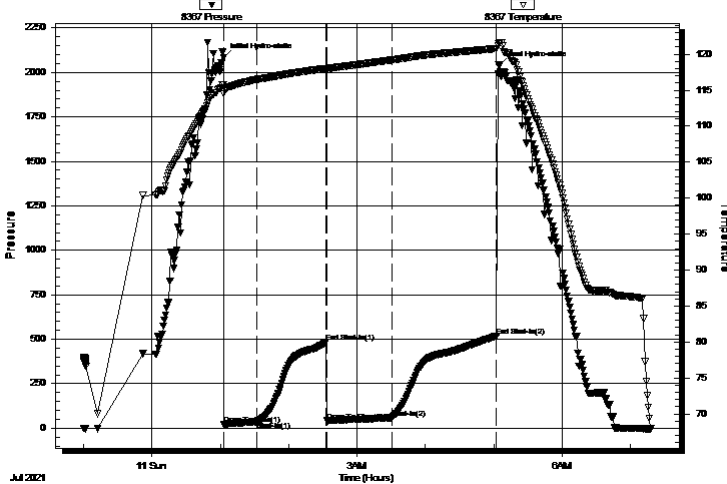
2021.07.11 @ 01:02:51

Time Off Btm:

2021.07.11 @ 05:04:36

TEST COMMENT: 30 IF Blow built to 2.5"
60 ISI No blow back
60 FF Blow built to 7"
90 FSI No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2083.42	115.82	Initial Hydro-static
1	22.98	114.55	Open To Flow (1)
30	36.84	116.50	Shut-In(1)
90	483.09	118.03	End Shut-In(1)
91	41.20	117.89	Open To Flow (2)
148	58.56	119.20	Shut-In(2)
240	517.65	120.79	End Shut-In(2)
242	2040.28	121.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GHOCM 53% M, 39%O, 8%G	0.44
1.00	Free Oil 100%O	0.00
0.00	GIP=145'	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67532

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 23:00:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:03:06

Time Test Ended: 07:17:51

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/Justin

Unit No: 73

Interval: 3988.00 ft (KB) To 4055.00 ft (KB) (TVD)

Reference Elevations: 2859.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2854.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 3989.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.07.10

End Date:

2021.07.11

Last Calib.:

2021.07.11

Start Time: 23:00:01

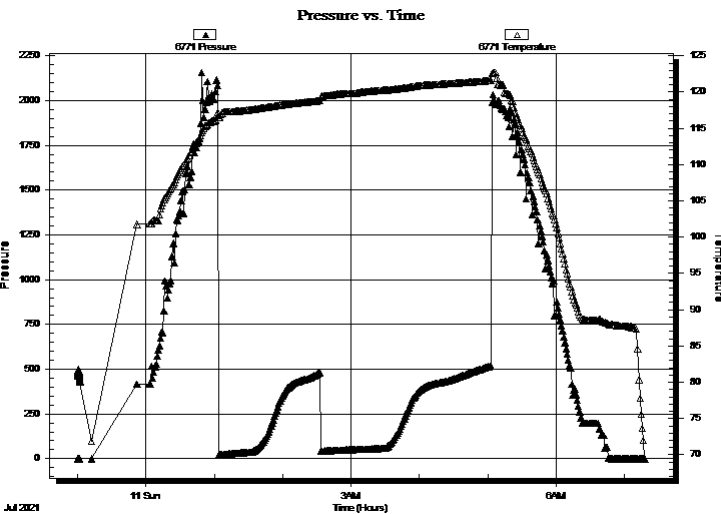
End Time:

07:18:21

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF Blow built to 2.5"
60 ISI No blow back
60 FF Blow built to 7"
90 FSI No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	GHOCM 53% M, 39%O, 8%G	0.44
1.00	Free Oil 100%O	0.00
0.00	GIP=145'	0.00

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

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67532

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 23:00:00

Tool Information

Drill Pipe:	Length: 3738.00 ft	Diameter: 3.80 inches	Volume: 52.43 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 15000.00 lb
			<u>Total Volume: 53.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3988.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	100.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3956.00	
Shut In Tool	5.00			3961.00	
Hydraulic tool	5.00			3966.00	
Jars	5.00			3971.00	
EM Tool	4.00			3975.00	
Safety Joint	3.00			3978.00	
Packer	5.00			3983.00	33.00 Bottom Of Top Packer
Packer	5.00			3988.00	
Stubb	1.00			3989.00	
Recorder	0.00	6771	Inside	3989.00	
Recorder	0.00	8367	Outside	3989.00	
Perforations	25.00			4014.00	
Change Over Sub	1.00			4015.00	
Drill Pipe	32.00			4047.00	
Change Over Sub	1.00			4048.00	
Perforations	4.00			4052.00	
Bullnose	3.00			4055.00	67.00 Bottom Packers & Anchor
Total Tool Length:	100.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67532

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.07.10 @ 23:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	GHOCM 53% M, 39%O, 8%G	0.443
1.00	Free Oil 100%O	0.005
0.00	GIP=145'	0.000

Total Length: 91.00 ft Total Volume: 0.448 bbl

Num Fluid Samples: 0

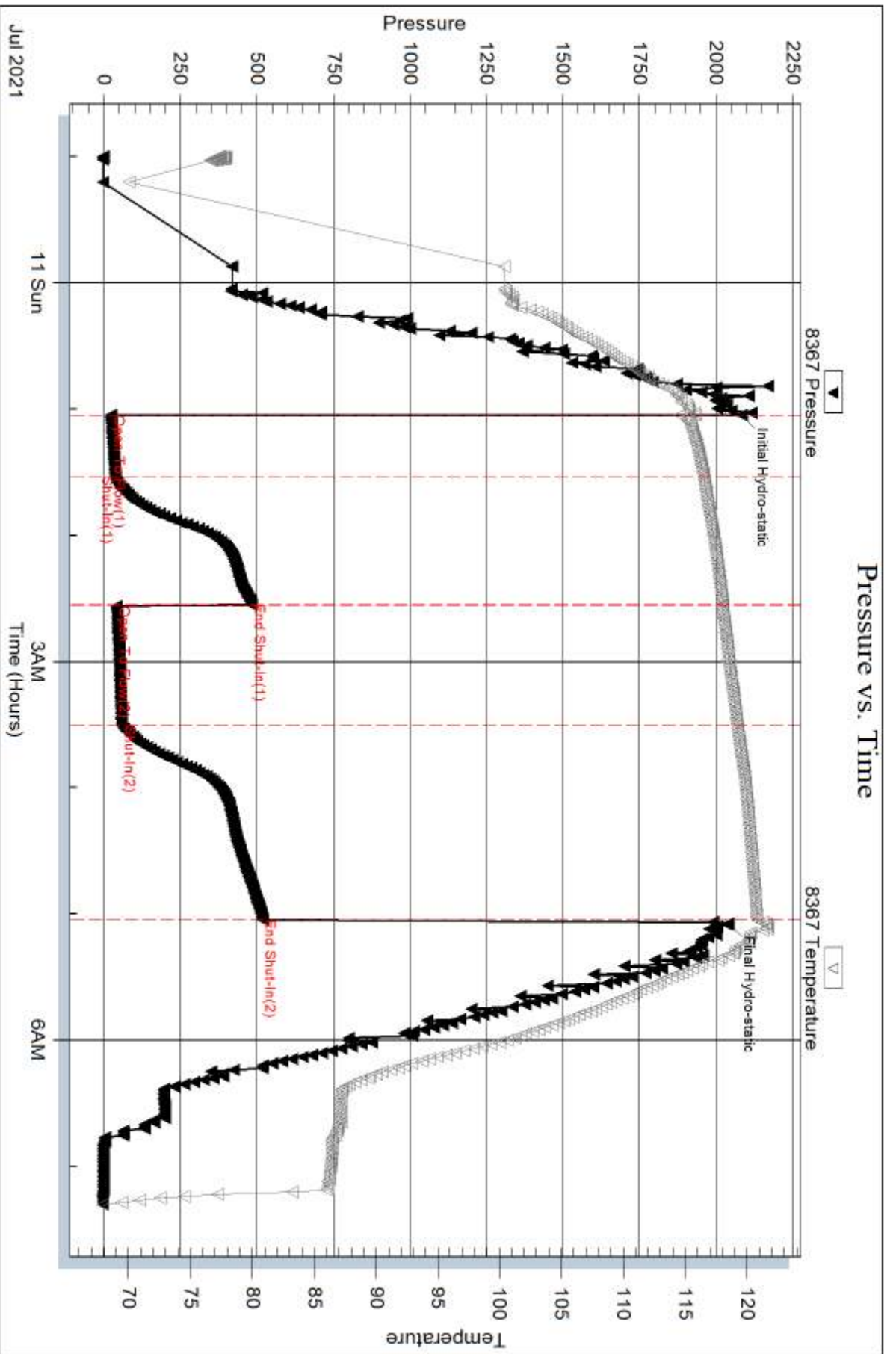
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



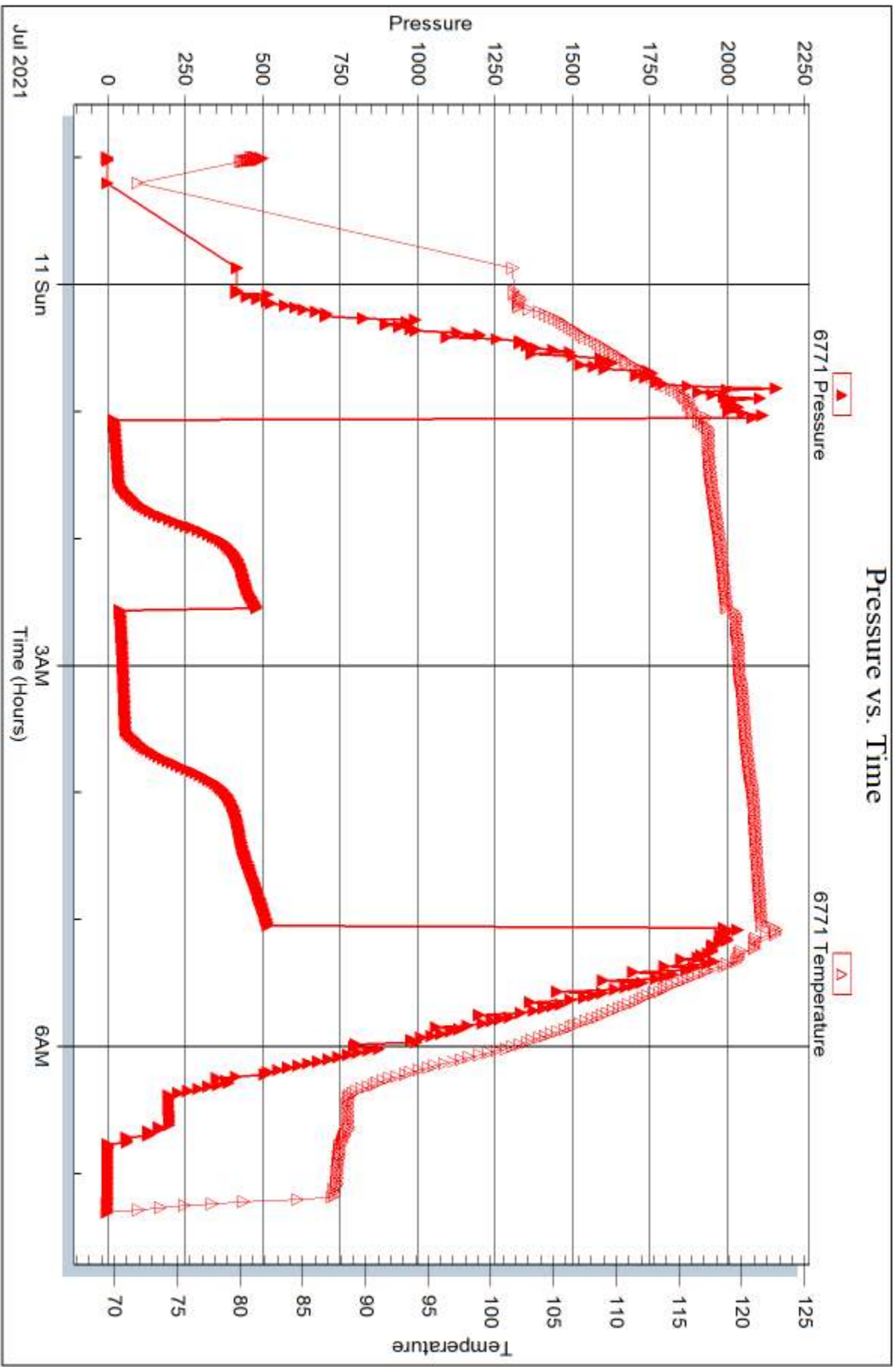
Serial #: 6771

Inside

Marfin Drilling

MB "A" 3-35

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 67532

Printed: 2021.07.14 @ 10:01:40



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

MB "A" 3-35

35-4S-31W Rawlins,KS

Start Date: 2021.07.11 @ 17:40:00

End Date: 2021.07.11 @ 23:38:51

Job Ticket #: 67533 DST #: 4

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

Printed: 2021.07.14 @ 09:42:48

Murfin Drilling
35-4S-31W Rawlins,KS
MB "A" 3-35
DST # 4
LKC 'K'
2021.07.11



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling
250 N Water STE 300
Wichita KS 67202
ATTN: Robert Hendrix

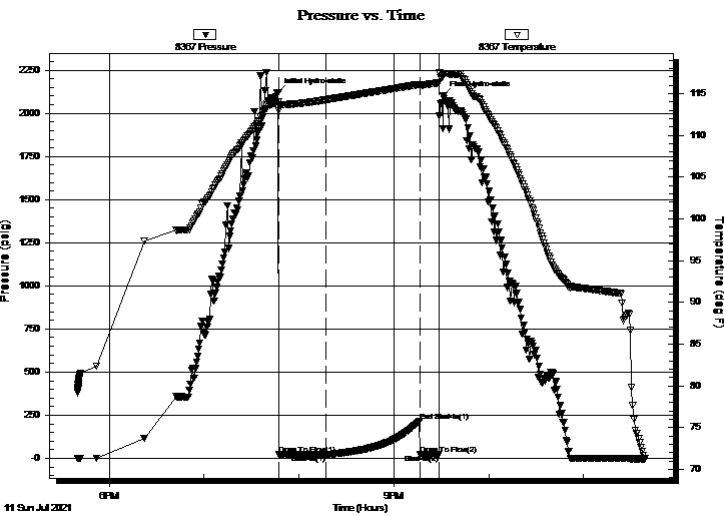
35-4S-31W Rawlins,KS
MB "A" 3-35
Job Ticket: 67533 **DST#: 4**
Test Start: 2021.07.11 @ 17:40:00

GENERAL INFORMATION:

Formation: **LKC 'K'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:47:06
Time Test Ended: 23:38:51
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder/Justin
Unit No: 73
Interval: **4051.00 ft (KB) To 4090.00 ft (KB) (TVD)**
Reference Elevations: 2859.00 ft (KB)
Total Depth: 3924.00 ft (KB) (TVD) 2854.00 ft (CF)
Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8367 Outside
Press@RunDepth: 21.39 psig @ 4052.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2021.07.11 End Date: 2021.07.11 Last Calib.: 2021.07.11
Start Time: 17:40:01 End Time: 23:38:51 Time On Btm: 2021.07.11 @ 19:46:51
Time Off Btm: 2021.07.11 @ 21:31:21

TEST COMMENT: 30 IF- Built to 1/4" in 15 min blow died back to weak surface blow
60 IS- No blow back
10 FF- No blow pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.05	114.02	Initial Hydro-static
1	21.64	112.98	Open To Flow (1)
31	21.39	114.26	Shut-In(1)
90	216.64	116.10	End Shut-In(1)
90	23.29	115.98	Open To Flow (2)
102	22.61	116.30	Shut-In(2)
105	2101.46	117.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 92%M, 6%O, 2%G	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67533

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.07.11 @ 17:40:00

GENERAL INFORMATION:

Formation: **LKC 'K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:47:06

Time Test Ended: 23:38:51

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/Justin

Unit No: 73

Interval: 4051.00 ft (KB) To 4090.00 ft (KB) (TVD)

Reference Elevations: 2859.00 ft (KB)

Total Depth: 3924.00 ft (KB) (TVD)

2854.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 4052.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.07.11

End Date: 2021.07.11

Last Calib.: 2021.07.11

Start Time: 17:40:01

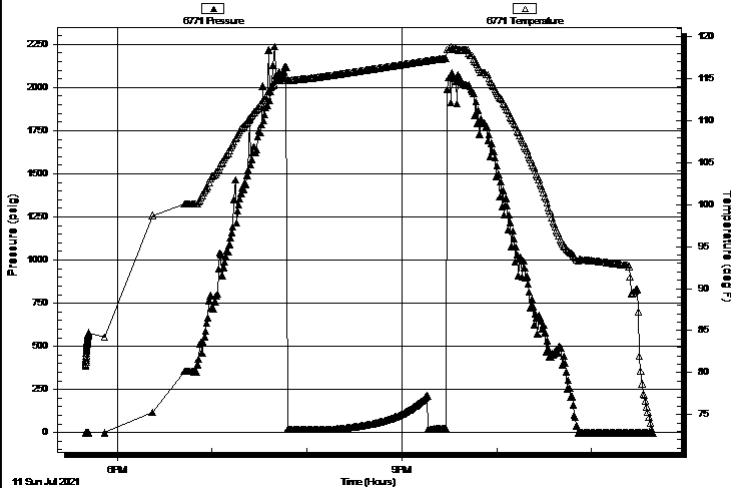
End Time: 23:38:51

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 IF- Built to 1/4" in 15 min blow died back to weak surface blow
60 IS- No blow back
10 FF- No blow pulled tool

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 92%M, 6%O, 2%G	0.02

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

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67533

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.07.11 @ 17:40:00

Tool Information

Drill Pipe:	Length: 3801.00 ft	Diameter: 3.80 inches	Volume: 53.32 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 234.00 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	15000.00 lb
			<u>Total Volume: 54.47 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	76000.00 lb
Depth to Top Packer:	4051.00 ft			Final	76000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	39.00 ft				
Tool Length:	72.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4019.00	
Shut In Tool	5.00			4024.00	
Hydraulic tool	5.00			4029.00	
Jars	5.00			4034.00	
EM Tool	4.00			4038.00	
Safety Joint	3.00			4041.00	
Packer	5.00			4046.00	33.00 Bottom Of Top Packer
Packer	5.00			4051.00	
Stubb	1.00			4052.00	
Recorder	0.00	6771	Inside	4052.00	
Recorder	0.00	8367	Outside	4052.00	
Perforations	35.00			4087.00	
Bullnose	3.00			4090.00	39.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling

35-4S-31W Rawlins,KS

250 N Water STE 300
Wichita KS 67202

MB "A" 3-35

Job Ticket: 67533

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.07.11 @ 17:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

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 bbl
5.00	SOCM 92%M, 6%O, 2%G	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

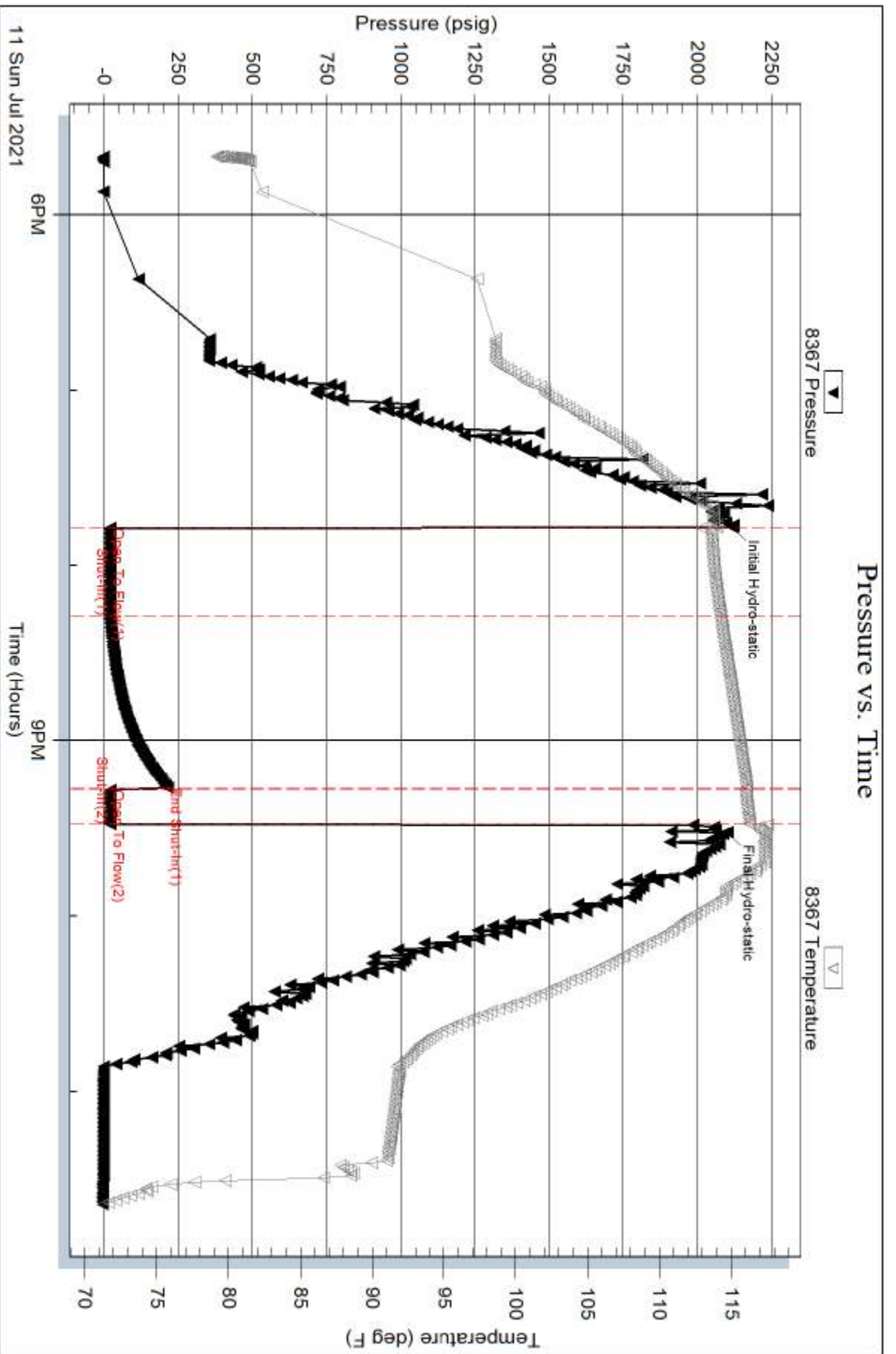
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



11 Sun Jul 2021

Time (Hours)

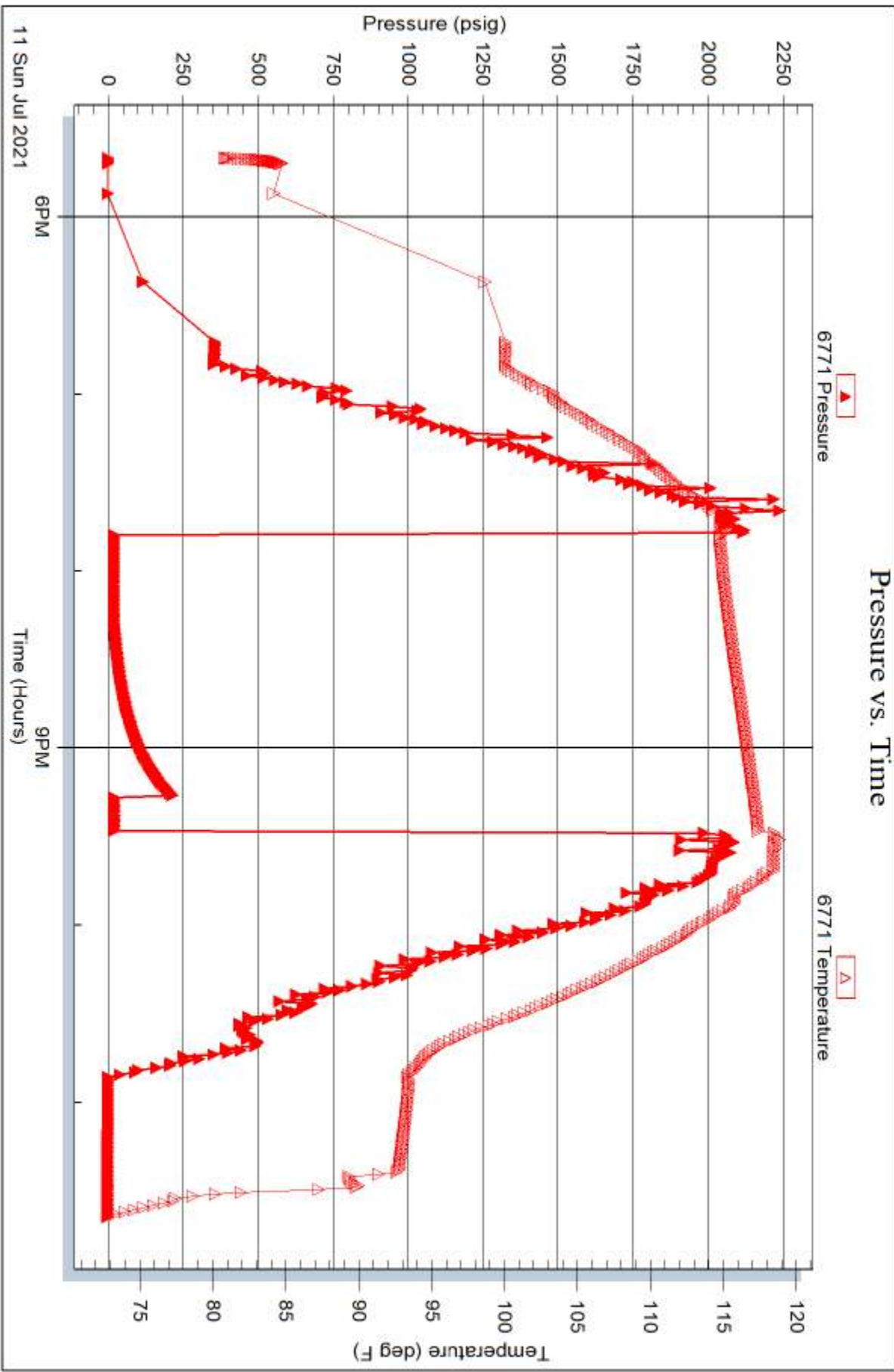
Serial #: 6771

Inside

Murfin Drilling

MB "A" 3-35

DST Test Number: 4

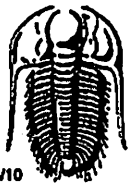


11 Sun Jul 2021

Trilobite Testing, Inc

Ref. No: 675533

Printed: 2021.07.14 @ 09:42:49



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67530

Well Name & No. MB 'A' # 3-35 Test No. 1 Date 7-9-21
 Company Murfin Drilling Co. Inc. Elevation 2859 KB 2854 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #7
 Location: Sec. 35 Twp 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3832-3924 Zone Tested Toronto - Lans. "B"
 Anchor Length 92 Drill Pipe Run 3581 Mud Wt. 9.2
 Top Packer Depth 3827 Drill Collars Run 234 Vis 73
 Bottom Packer Depth 3832 Wt. Pipe Run - WL 6.4
 Total Depth 3924 Chlorides 1000 ppm System LCM 4
 Blow Description IF: 1/2" Blow at open, built to 3"
ISI: No blowback
FF: Blow built to 4 1/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>11</u>	<u>MW w/trace oil</u>	<u>trace</u>	<u>55</u>	<u>45</u>	<u></u>
<u>234</u>	<u>MCW w/trace oil</u>	<u>trace</u>	<u>88</u>	<u>12</u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

Rec Total 245 BHT 123 Gravity 1200 API RW 098 @ 89.8° F Chlorides 60,000 ppm
 (A) Initial Hydrostatic 1962 Test 1200 T-On Location 3:50
 (B) First Initial Flow 21 Jars 250 T-Started 5:38
 (C) First Final Flow 63 Safety Joint 75 T-Open 7:52
 (D) Initial Shut-In 1291 Circ Sub _____ T-Pulled 11:54
 (E) Second Initial Flow 68 Hourly Standby _____ T-Out 14:10
 (F) Second Final Flow 134 Mileage 58 RT 72.50 Comments _____
 (G) Final Shut-In 1285 Sampler _____
 (H) Final Hydrostatic 1945 Straddle _____ EM Tool 350
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1597.50
 Sub Total 350
 Total 1947.50
 MP/DST Disc't _____

Approved By RLD. [Signature] Our Representative James [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. 67531

Well Name & No. MB 'A' #3-35 Test No. 2 Date 7-10-21
 Company Murfin Drilling Co. Inc Elevation 2859 KB 2854 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #7
 Location: Sec. 35 Twp 4s Rge. 31w Co. Rawlins State KS

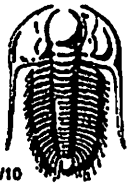
Interval Tested 3943 - 3980 Zone Tested Lans "F-G"
 Anchor Length 37 Drill Pipe Run 3707 Mud Wt. 9.2
 Top Packer Depth 3938 Drill Collars Run 234 Vis 73
 Bottom Packer Depth 3943 Wt. Pipe Run - WL 6.0
 Total Depth 3980 Chlorides 1000 ppm System LCM 4
 Blow Description IF: Blow built to BOB (11") at 19 1/2 min., built to 15"
ISI: No blowback
FF: Blow built to BOB at 24 min., built to 15"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>145</u>	<u>Feet of MW w/trace oil</u>	<u>trace</u>	<u>49</u>	<u>51</u>	<u></u>
<u>680</u>	<u>Feet of SMCW w/trace oil</u>	<u>trace</u>	<u>93</u>	<u>7</u>	<u></u>
<u></u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u></u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u></u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 825 BHT _____ Gravity _____ API RW .111 @ 72.8° F Chlorides 70,000 ppm

(A) Initial Hydrostatic <u>2030</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1:10</u>
(B) First Initial Flow <u>28.</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2:04</u>
(C) First Final Flow <u>207</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>4:19 am</u>
(D) Initial Shut-In <u>1037</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>8:26 pm</u>
(E) Second Initial Flow <u>211</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>10:30</u>
(F) Second Final Flow <u>403</u>	<input checked="" type="checkbox"/> Mileage <u>58RT</u> 72.50	Comments _____
(G) Final Shut-In <u>1033</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1953</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool <u>350</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 _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1947.50</u>
	Sub Total <u>1597.50</u>	MP/DST Disc't _____

Approved By [Signature] 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. 67532

Well Name & No. MB "A" 3-35 Test No. 3 Date 7-10-21
 Company Murfin Drilling Co. Elevation 2859 KB 2854 GL
 Address 250 N. Water St E 300 Wichita KS, 67201
 Co. Rep / Geo. Robert Hendrix Rig Murfin # 7
 Location: Sec. 35 Twp 45 Rge. 31W Co. Rawlins State KS

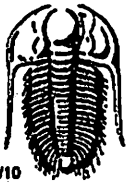
Interval Tested 3988-4055 Zone Tested LKC H-5
 Anchor Length 67 Drill Pipe Run 3738 Mud Wt. 9.2
 Top Packer Depth 3983 Drill Collars Run 234 Vis 65
 Bottom Packer Depth 3983 Wt. Pipe Run _____ WL 6.0
 Total Depth 4055 Chlorides 1,400 ppm System LCM 4#
 Blow Description IF - Built To 2 1/2"
ISI - NO Blow Back
FF - Built To 7"
FSI - NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free Oil</u>	<u>100</u>			
<u>90</u>	<u>GHOcm</u>	<u>8</u>	<u>39</u>	<u>53</u>	
	<u>GIP = 145'</u>				

Rec Total 91 BHT 121° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2083 Test 1300 T-On Location 21:50 7/10
 (B) First Initial Flow 23 Jars 250 T-Started 23:00
 (C) First Final Flow 37 Safety Joint 75 T-Open 01:02
 (D) Initial Shut-In 483 Circ Sub _____ T-Pulled 05:02
 (E) Second Initial Flow 41 Hourly Standby _____ T-Out 7:20 7/11
 (F) Second Final Flow 59 Mileage 58 RT 72.50 Comments _____
 (G) Final Shut-In 518 Sampler _____
 (H) Final Hydrostatic 2040 Straddle _____ EM Tool 350
 Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 60 Extra Packer _____ Ruined Packer _____
 Final Flow 60 Extra Recorder _____ Extra Copies _____
 Final Shut-In 90 Day Standby _____ Sub Total 350
 Accessibility _____ Total 2047.50
 Sub Total 1697.50 MP/DST Disc't _____

Approved By Robert Hendrix 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. 67533

Well Name & No. MB "A" 3-35 Test No. 4 Date 7-11-21
 Company Murfin Drilling Co. Elevation 2859 KB 2854 GL
 Address 250 N. Water STE 300 Wichita KS, 67201
 Co. Rep / Geo. Robert Hendrix Rig Murfin #7
 Location: Sec. 35 Twp 45 Rge. 31 W Co. Rawlins State KS

Interval Tested 4051-4090 Zone Tested LKC "K"
 Anchor Length 39' Drill Pipe Run 3801 Mud Wt. 9.3
 Top Packer Depth 4046 Drill Collars Run 234' Vls 58
 Bottom Packer Depth 4051 Wt. Pipe Run — WL 6.4
 Total Depth 4090 Chlorides 1900 ppm System LCM 4*
 Blow Description IF - Built To 1/4 in 15 min Died Back To Weak Surface Blow
ISI - NO Blow Back
FF - NO Blow
FSI - Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>50CM</u>	<u>2</u>	<u>6</u>	<u>92</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 5 BHT 116° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2119 Test 1300 T-On Location 2:45 pm
 (B) First Initial Flow 22 Jars 250 T-Started 5:40 pm
 (C) First Final Flow 21 Safety Joint 75 T-Open 19:46
 (D) Initial Shut-In 217 Circ Sub _____ T-Pulled 21:31
 (E) Second Initial Flow 23 Hourly Standby _____ T-Out 11:35 pm
 (F) Second Final Flow 23 Mileage 58 RT 72.50 Comments Tools loaded @ 10:50 7.3
 (G) Final Shut-In _____ Sampler _____ 72.50
 (H) Final Hydrostatic 2101 Straddle _____ EM Tool 350
 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1770 Sub Total 350
 Total 2120.00
 MP/DST Disc't _____

Approved By [Signature] 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.

DRILLING REPORT - LOG TOPS

MB 'A' #3-35 985' FNL 2200' FEL Sec. 35-4S-31W 2859' KB						
Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	2600	+259	-1	2599	+260	Flat
B/Anhydrite	2635	+224	-1	2635	+224	-2
Topeka	3669	-810	Flat	3671	-812	-2
Heebner	3833	-974	+2	3837	-978	-2
Lansing	3887	-1028	-2	3888	-1029	-3
Stark	4054	-1195	-5	4052	-1193	-3
Mound City	4107	-1248	-4	4099	-1240	+4
Ft Scott	4212	-1353	-3	4218	-1359	-3
Oakley	4300	-1441	-1	4300	-1441	-1
Mississippi	4413	-1554	-16	4423	-1564	----
RTD	4520					
LTD				4520		



CEMENT TREATMENT REPORT

Customer: Murfin Drilling Co	Well: MB 'A' # 3-35	Ticket: WP 1556
City, State: Oakley Ks	County: Rawlins KS	Date: 7/5/2021
Field Rep: Arturo	S-T-R: 35-4S-31W	Service: Surface

Downhole Information	
Hole Size:	12.25 In
Hole Depth:	311 ft
Casing Size:	In
Casing Depth:	ft
Tubing / Liner:	In
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	19.9 bbls

Calculated Slurry - Lead	
Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	6.4 gal / sx
Yield:	1.38 ft ³ / sx
Annular Bbls / Ft.:	0.0735 bbs / ft.
Depth:	311 ft
Annular Volume:	22.9 bbls
Excess:	
Total Slurry:	65.1 bbls
Total Sacks:	265 sx

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

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
600P			-	-	GOT TO LOCATION
605P				-	SAFETY MEETING
610P				-	RIGGED UP TRUCKS
730P				-	LANDED CASING
741P				-	CIRCULATED HOLE
745P	3.0	200.0	5.0	5.0	PUMPED H2O AHEAD
747P	4.0	400.0	65.1	70.1	PUMPED 265 SKS OF H-325 @ 311 FT
803P	4.5	300.0	18.6	88.7	DISPLACED WITH H2O
807P				88.7	PLUG DOWN WITH 10 BBL TO PIT
810P				88.7	WASHED UP PUMP TRUCK
820P				88.7	RIGGED DOWN TRUCKS
845P					OFF LOCATION

CREW		UNIT	SUMMARY		
Cementer:	Josh	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	John	208	3.9 bpm	300 psi	89 bbls
Bulk #1:	Hugo	242			
Bulk #2:					



CEMENT TREATMENT REPORT

Customer:	Murfin Drilling	Well:	MB A # 3-35	Ticket:	WP 1578
City, State:		County:	Rawlins KS	Date:	7/14/2021
Field Rep:	Fennis Garduno	S-T-R:	35-4S-31W	Service:	5.5" Longstring

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	12.25 in	Blend:	H-con	Blend:	H-LD
Hole Depth:	4593 ft	Weight:	12.0 ppg	Weight:	14.8 ppg
Casing Size:	5 1/2 in	Water / Sx:	14.5 gal / sx	Water / Sx:	6.5 gal / sx
Casing Depth:	4514.63 ft	Yield:	2.47 ft ³ / sx	Yield:	1.54 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packer:		Annular Volume:	0.0 bbls	Annular Volume:	0 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	107.0 bbls	Total Slurry:	143.0 bbls	Total Slurry:	63.0 bbls
		Total Sacks:	325 sx	Total Sacks:	230 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
2:15 AM			-	-	Journey management meeting
2:30 AM				-	Convoy to location
4:30 AM				-	Arrive on location
4:35 AM				-	Safety meeting
5:00 AM				-	Spot in / rig up equipment
				-	Total casing ran 4514.63' shoe trac - 21.1' Baskets on pin of joints 19,46,61
				-	Turbolizers on Jts 1,2,3,5,7,9,10,11,12,14,16,17,18,45,60
6:00 AM				-	Start running casing
7:00 AM		400.0		-	Circulate @ Jt 55
8:15 AM		800.0		-	Land casing , drop ball, rig circulate
9:20 AM	5.0	360.0	12.0	12.0	Hook cementing equipment to casing pump 500 gal mud flush
9:20 AM	5.0	360.0	5.0		Pump fresh water spacer
9:30 AM	2.0	80.0	12.5		Plug rh with 30 sx , mh with 20 sx
9:37 AM	8.0	430.0	130.5		Mix H-Con @ 12 ppg
10:00 AM	6.0	130.0	63.0		Mix H-LD @ 14.8 ppg
10:20 AM					S/D wash pumps and lines
10:25 AM	6.0	100.0			Drop plug start kcl displacement
10:34 AM	7.0	650.0	46.0		See lift pressure
10:45 AM			100.0		Come off line due to cut gasket in cement line, shut in casing bleed off pressure, replace gasket, came back online
10:47 AM	2.5	1,900.0	97.0		Slow to land plug
10:53 AM	2.5	2,400.0	107.0		Land plug 500 psi over lift pressure of 1900 psi = 2400 psi
10:58 AM					Check floats , floats held got 1 bbl back
12:00 PM					Rig down leave location
					Circulated 20sx cement to surface

CREW		UNIT	SUMMARY		
Cementer:	Fennis	78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Mike	180/620	4.9 bpm	692 psi	573 bbls
Bulk #1:	Kale	194/254			
Bulk #2:	Kale	205			