

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	CWA 'G' 1-8
Doc ID	1604296

All Electric Logs Run

DIL
DUCP
MEL
BHCS

MDCI
 CWA G #1-8
 330' FNL 1080'FWL
 Sec. 8-3S-37W
 3436' KB

Formation	Sample top	Datum	Ref	Log tops	Datum	Ref
Anhydrite	3310	+126	-12	3308	+128	-10
B/Anhydrite	3340	+96	-5	3338	+98	-3
Topeka	4151	-715	-10	4147	-711	-6
Oread	4282	-846	-5	4283	-847	-6
Lansing	4359	-923	-7	4358	-922	-7
Stark	4590	-1154	-5	4587	-1151	-2
Mound City	4630	-1194	+8	4640	-1204	-2
Ft Scott	4764	-1328	-3	4765	1329	-4
Oakley	4846	-1410	-8	4840	-1404	-2
Mississippian	5060	-1624	+1	5039	-1603	+21
RTD	5150					
LTD				5150		



CEMENT TREATMENT REPORT		
Customer: Murfin Drilling	Well: CWA G # 1-8	Ticket: WP-2035
City, State: Oakley KS	County: Cheyenne KS	Date: 10/27/2021
Field Rep: Ricky Hilgers	S-T-R: 8-3S-37W	Service: Surface

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	403 ft
Casing Size:	8 5/8 in
Casing Depth:	400 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	24.0 bbls

Calculated Slurry - Lead	
Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	1.4 gal / sx
Yield:	1.41 ft ³ / sx
Annular Bbls / Ft.:	0.0735 bbs / ft.
Depth:	402 ft
Annular Volume:	29.5 bbls
Excess:	200%
Total Slurry:	88.6 bbls
Total Sacks:	350 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	STAGE BBLs	TOTAL BBLs	REMARKS
815p			-	-	Arrival
820p				-	Safety meeting
825p				-	Rig up
845p	5.4	300.0	5.0	5.0	H2O ahead
850p	5.0	500.0	57.3	62.3	Mixed 360 sks @ 14.8 ppg @ 402'
907p	5.3	400.0	24.0	86.3	Displaced with H2O
911p				86.3	Plug down Circulate 2 bbls cement to pit
915p				86.3	Wash up
920p				86.3	Rig down
935p				86.3	Depart location
				86.3	

CREW		UNIT	SUMMARY		
Cementer:	Jesse J	78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Michael R	230	5.2 bpm	400 psi	86 bbls
Bulk #1:	Kale O	205			
Bulk #2:					



CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: CWA 'G' # 1-8	Ticket: WP 2064
City, State: Oakley KS	County: Cheyenne KS	Date: 11/5/2021
Field Rep: Josh Mosier	S-T-R: 8-3S-37W	Service: Longstring

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 In	Blend:	H- Con	Blend:	H- LD
Hole Depth:	5150 ft	Weight:	12.0 ppg	Weight:	14.8 ppg
Casing Size:	5 1/2 In	Water / Sx:	15.5 gal / sx	Water / Sx:	6.8 gal / sx
Casing Depth:	5135 ft	Yield:	2.57 ft ³ / sx	Yield:	1.57 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	0.0309 bbs / ft.	Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft	Depth:	5135 ft	Depth:	5135 ft
Tool / Packer:		Annular Volume:	158.7 bbls	Annular Volume:	158.6715 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	121.7 bbls	Total Slurry:	187.7 bbls	Total Slurry:	53.1 bbls
		Total Sacks:	410 sx	Total Sacks:	190 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
900P			-	-	GOT TO LOCATION/ RIG WAS LAYING DOWN DP
905P				-	SAFTY MEETING
910P				-	RIGGED UP TRUCKS
1000P				-	STARTED RUNNING CASING
1100P				-	CIRCULATED FOR 30 MIN ON 61 JOINT @ 2533FT
1220A				-	LANDED CASING
1235A				-	CIRCULATED HOLE
214A	4.5	230.0	5.0	5.0	PUMPED H2O AHEAD
215A	4.0	350.0	12.0	17.0	PUMPED 500 GAL OF SUPER MUD FLUSH
218A	4.0	350.0	10.0	27.0	PUMPED H2O TO WASH UP
227A	3.0	150.0	13.7	40.7	PUMPED 30 SKS OF H-CON IN RH
233A	5.5	780.0	173.9		PUMPED 380 SKS OF H- CON @ 5135 FT
308A	4.0	900.0	53.1		PUMPED 190 SKS OF H- LD @ 5135 FT
321A					SHUT DOWN
					WASHED UP PUMP / LOADED LD PLUG IN CASING
330A	4.8	1,900.0	121.7		DISPLACED WITH H2O
355A					PLUG DOWN WITH 30 SKS TO PIT
C035					1.0
415A					RIGGED DOWN TRUCKS
345A					OFF LOCATION

CREW		UNIT	SUMMARY		
Cementer:	Josh	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	John	230	4.3 bpm	666 psi	389 bbls
Bulk #1:	Kale	194/250			
Bulk #2:	Trevino	205			



DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

CWA 'G' #1-8

8-3s-37w Cheyenne, KS

Start Date: 2021.10.30 @ 18:05:00

End Date: 2021.10.31 @ 03:19:50

Job Ticket #: 68526 DST #: 1

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

Printed: 2021.11.04 @ 17:07:21



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68526

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.10.30 @ 18:05:00

GENERAL INFORMATION:

Formation: **Oread- LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:45:51

Time Test Ended: 03:19:50

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder/ Nathan

Unit No: 73

Interval: 4256.00 ft (KB) To 4374.00 ft (KB) (TVD)

Reference Elevations: 3436.00 ft (KB)

Total Depth: 4374.00 ft (KB) (TVD)

3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 209.25 psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.10.30

End Date:

2021.10.31

Last Calib.: 2021.10.31

Start Time: 18:05:01

End Time:

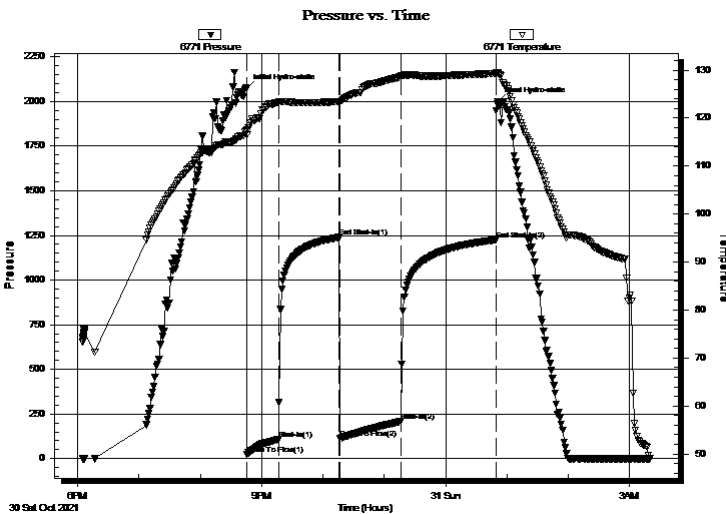
03:19:50

Time On Btm: 2021.10.30 @ 20:45:36

Time Off Btm: 2021.10.31 @ 00:51:06

TEST COMMENT: 30: IF Blow built to BOB (11") @ 30 min
60: ISI No blow back
60: FF Blow built to BOB @ 37 min built to 17"
90: FSI No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.01	117.53	Initial Hydro-static
1	24.82	116.52	Open To Flow (1)
31	108.12	123.24	Shut-In(1)
91	1239.67	123.46	End Shut-In(1)
91	113.64	123.18	Open To Flow (2)
151	209.25	128.70	Shut-In(2)
244	1224.68	129.28	End Shut-In(2)
246	1998.24	129.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	WCM w/trace oil 75%M 25%W	0.29
59.00	MCW w/trace oil 75%W 25%M	0.29
190.00	WM w/trace oil 56%M 44%W	2.67
110.00	Mud w/trace oil 100%m	1.54

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68526

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.10.30 @ 18:05:00

GENERAL INFORMATION:

Formation: **Oread- LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:45:51

Time Test Ended: 03:19:50

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder/ Nathan

Unit No: 73

Interval: 4256.00 ft (KB) To 4374.00 ft (KB) (TVD)

Reference Elevations: 3436.00 ft (KB)

Total Depth: 4374.00 ft (KB) (TVD)

3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.10.30

End Date:

2021.10.31

Last Calib.:

2021.10.31

Start Time: 18:05:01

End Time:

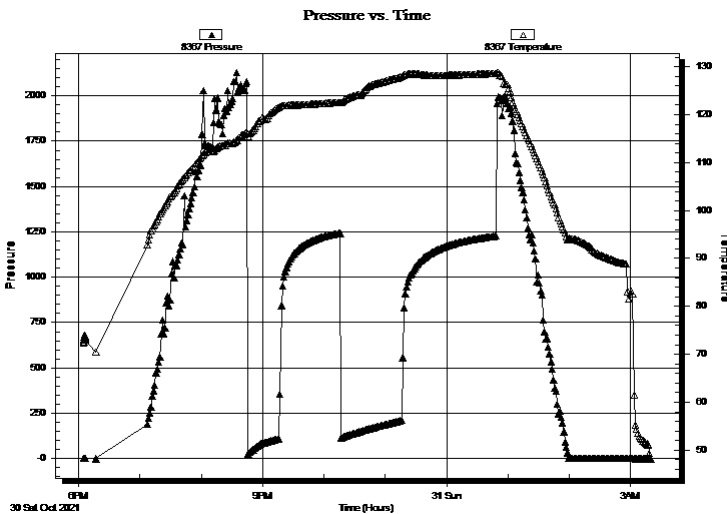
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Time On Btm:

Time Off Btm:

TEST COMMENT: 30: IF Blow built to BOB (11") @ 30 min
60: ISI No blow back
60: FF Blow built to BOB @ 37 min built to 17"
90: FSI No blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
59.00	WCM w/trace oil 75%M 25%W	0.29
59.00	MCW w/trace oil 75%W 25%M	0.29
190.00	WM w/trace oil 56%M 44%W	2.67
110.00	Mud w/trace oil 100%m	1.54

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68526

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.10.30 @ 18:05:00

Tool Information

Drill Pipe:	Length: 4130.00 ft	Diameter: 3.80 inches	Volume: 57.93 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4256.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	118.00 ft			
Tool Length:	151.00 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			4224.00	
Shut In Tool	5.00			4229.00	
Hydraulic tool	5.00			4234.00	
Jars	5.00			4239.00	
Gap Sub	4.00			4243.00	
Safety Joint	3.00			4246.00	
Packer	5.00			4251.00	33.00 Bottom Of Top Packer
Packer	5.00			4256.00	
Stubb	1.00			4257.00	
Recorder	0.00	6771	Inside	4257.00	
Recorder	0.00	8367	Outside	4257.00	
Perforations	15.00			4272.00	
Blank Spacing	97.00			4369.00	
Perforations	2.00			4371.00	
Bullnose	3.00			4374.00	118.00 Bottom Packers & Anchor

Total Tool Length: 151.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68526

DST#: 1

ATTN: Robert Hendrix

Test Start: 2021.10.30 @ 18:05:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 62.00 sec/qt
Water Loss: 6.78 in³
Resistivity: ohm.m
Salinity: 1200.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 17000 ppm

Recovery Information

Recovery Table

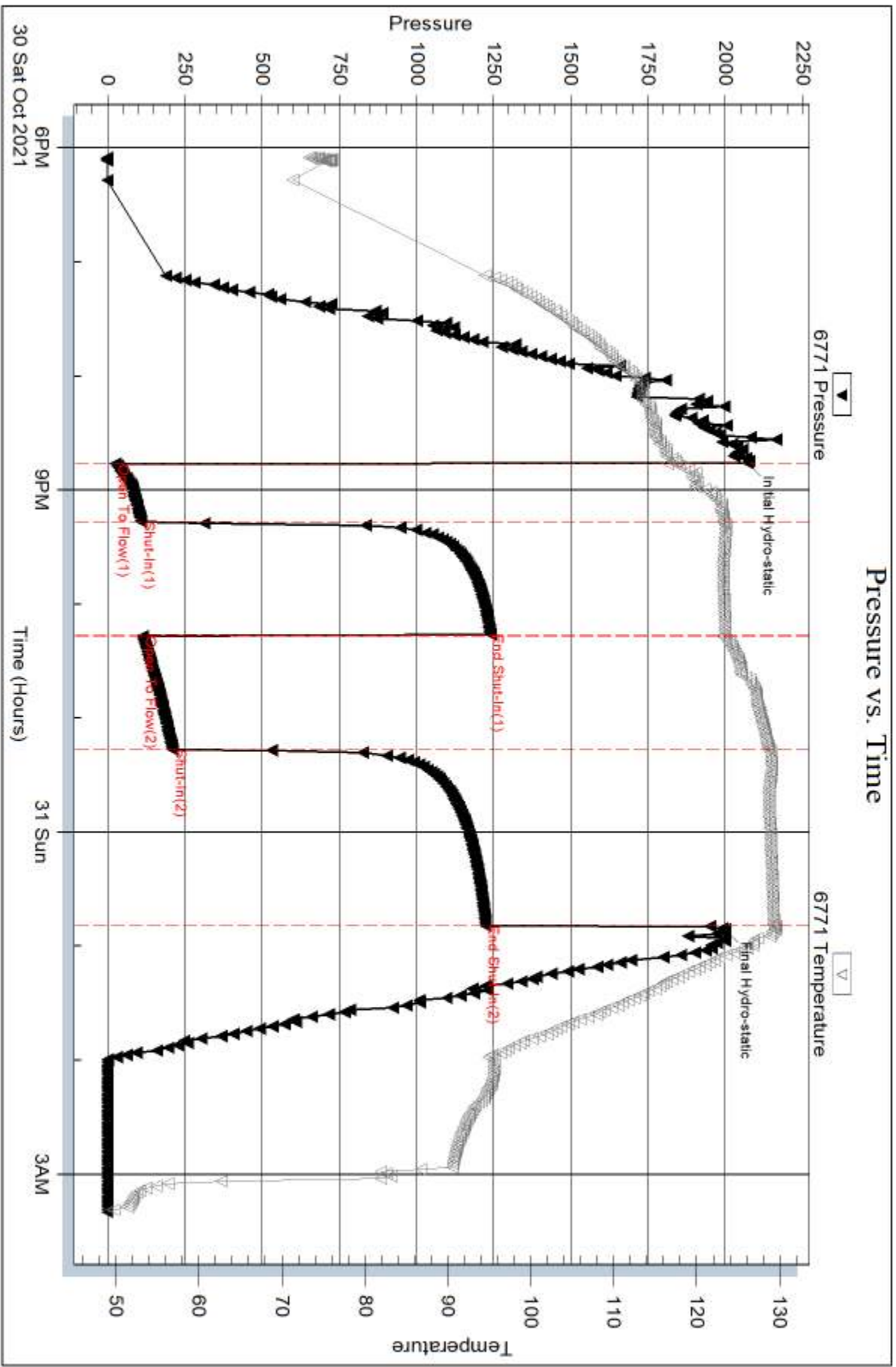
Length ft	Description	Volume bbl
59.00	WCM w /trace oil 75%M 25%W	0.290
59.00	MCW w /trace oil 75%W 25%M	0.290
190.00	WM w /trace oil 56%M 44%W	2.665
110.00	Mud w /trace oil 100%m	1.543

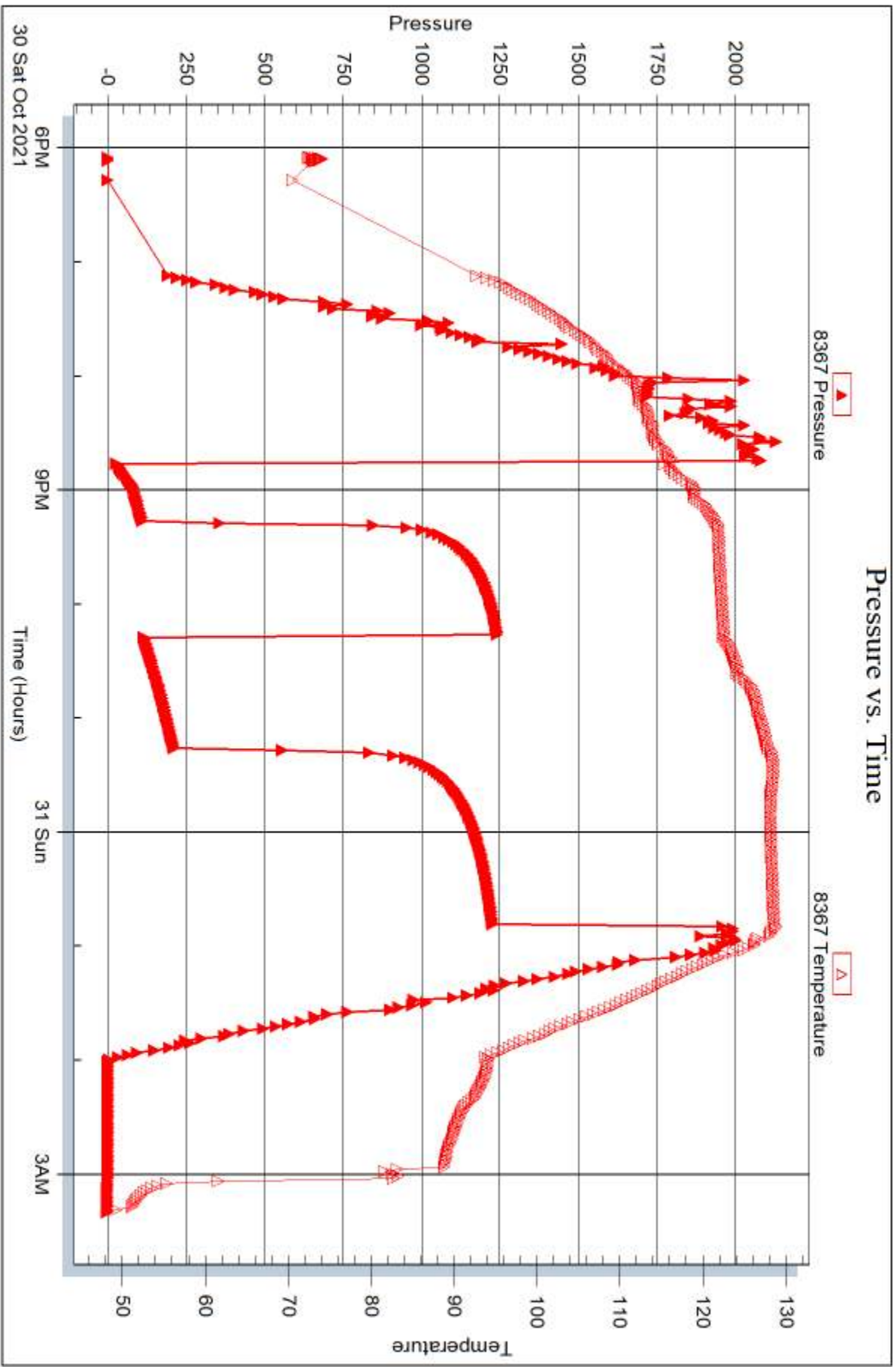
Total Length: 418.00 ft Total Volume: 4.788 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW = .508 ohms @54 Deg F Chlorides = 17000 ppm







DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

CWA 'G' #1-8

8-3s-37w Cheyenne, KS

Start Date: 2021.10.31 @ 17:05:00

End Date: 2021.11.01 @ 01:41:20

Job Ticket #: 68527 DST #: 2

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

Printed: 2021.11.04 @ 17:06:46



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68527

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.10.31 @ 17:05:00

GENERAL INFORMATION:

Formation: **Lansing "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:31:06

Time Test Ended: 01:41:20

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder/ Nathan

Unit No: 73

Interval: 4384.00 ft (KB) To 4457.00 ft (KB) (TVD)

Reference Elevations: 3436.00 ft (KB)

Total Depth: 4457.00 ft (KB) (TVD)

3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 500.06 psig @ 4385.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.10.31

End Date:

2021.11.01

Last Calib.: 2021.11.01

Start Time: 17:05:01

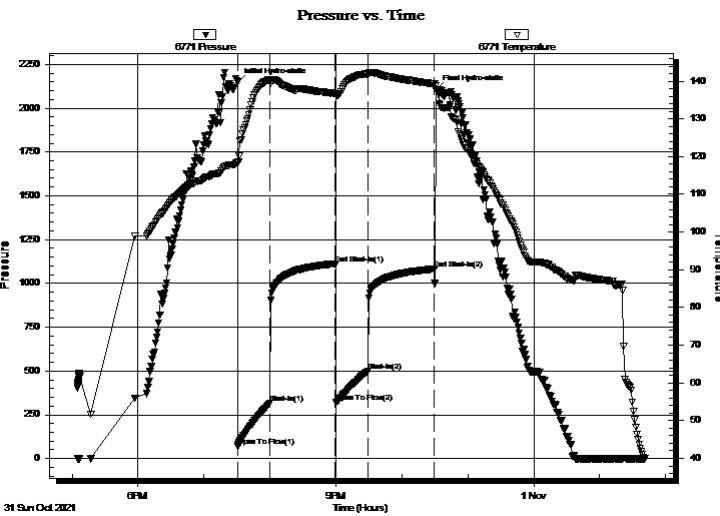
End Time:

01:41:20

Time On Btm: 2021.10.31 @ 19:30:21

Time Off Btm: 2021.10.31 @ 22:30:51

TEST COMMENT: 30: IF Blow built to BOB @ 7min Blow built to 52"
60: ISI No Blow back
30: FF Blow built to BOB @ 7min Blow built to 43"
60: FSI No Blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2148.40	118.46	Initial Hydro-static
1	69.48	118.65	Open To Flow (1)
30	317.28	140.47	Shut-In(1)
89	1112.48	136.68	End Shut-In(1)
90	320.66	136.33	Open To Flow (2)
119	500.06	141.86	Shut-In(2)
180	1082.41	139.29	End Shut-In(2)
181	2107.87	138.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
695.00	SMCW 97%W 3%M	8.67
125.00	MCW 81%W 19%M	1.75
250.00	MW 51%W 49%M	3.51

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68527

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.10.31 @ 17:05:00

GENERAL INFORMATION:

Formation: **Lansing "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:31:06

Time Test Ended: 01:41:20

Test Type: Conventional Bottom Hole (Reset)

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Reference Elevations: 3436.00 ft (KB)

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3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8367 Outside

Press@RunDepth: psig @ 4385.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.10.31 End Date: 2021.11.01

Last Calib.: 2021.11.01

Start Time: 17:05:01 End Time: 01:40:35

Time On Btm:

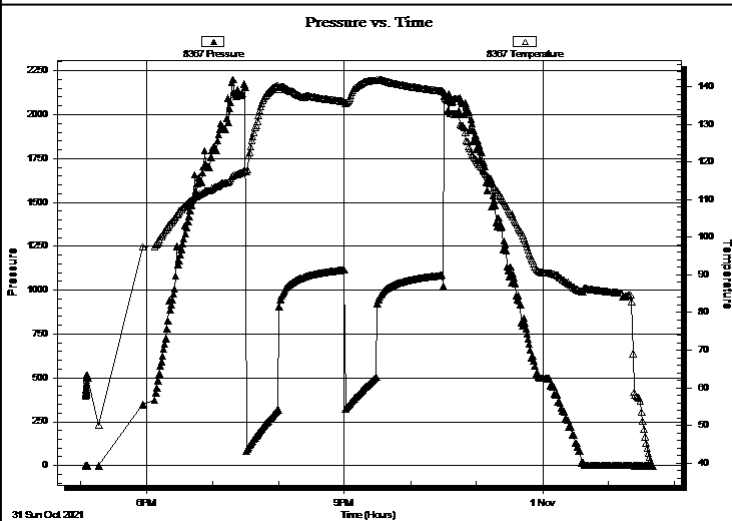
Time Off Btm:

TEST COMMENT: 30: IF Blow built to BOB @ 7min Blow built to 52"

60: ISI No Blow back

30: FF Blow built to BOB @ 7min Blow built to 43"

60: FSI No Blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
695.00	SMCW 97%W 3%M	8.67
125.00	MCW 81%W 19%M	1.75
250.00	MW 51%W 49%M	3.51

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68527

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.10.31 @ 17:05:00

Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4384.00 ft			Final 81000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4352.00	
Shut In Tool	5.00			4357.00	
Hydraulic tool	5.00			4362.00	
Jars	5.00			4367.00	
Gap Sub	4.00			4371.00	
Safety Joint	3.00			4374.00	
Packer	5.00			4379.00	33.00 Bottom Of Top Packer
Packer	5.00			4384.00	
Stubb	1.00			4385.00	
Recorder	0.00	6771	Inside	4385.00	
Recorder	0.00	8367	Outside	4385.00	
Perforations	33.00			4418.00	
Blank Spacing	34.00			4452.00	
Perforations	2.00			4454.00	
Bullnose	3.00			4457.00	73.00 Bottom Packers & Anchor

Total Tool Length: 106.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68527

DST#: 2

ATTN: Robert Hendrix

Test Start: 2021.10.31 @ 17:05:00

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:

16000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
695.00	SMCW 97%W 3%M	8.674
125.00	MCW 81%W 19%M	1.753
250.00	MW 51%W 49%M	3.507

Total Length: 1070.00 ft Total Volume: 13.934 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

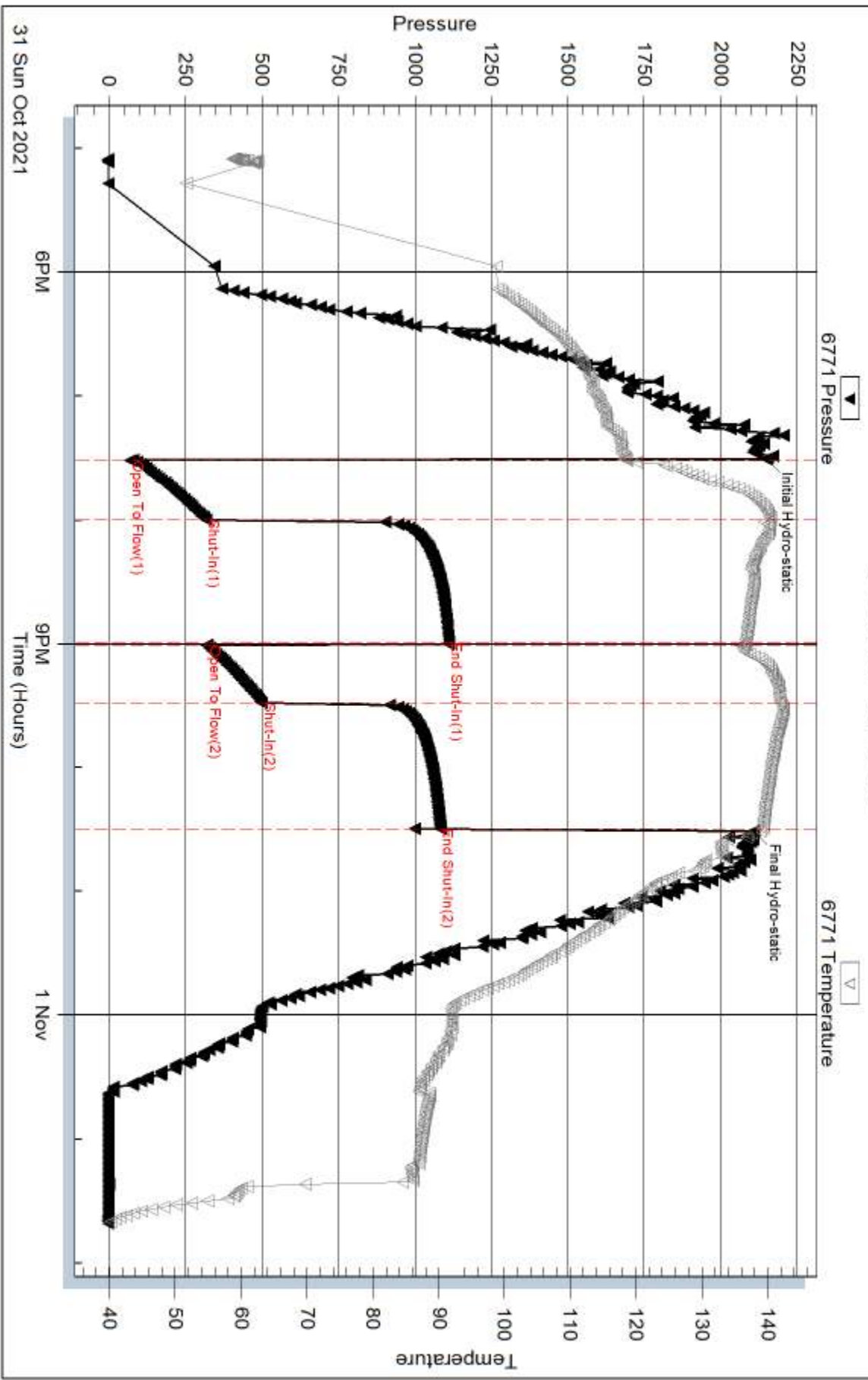
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .524 Ohms@ 36.5 Chlorides= 16000

Pressure vs. Time

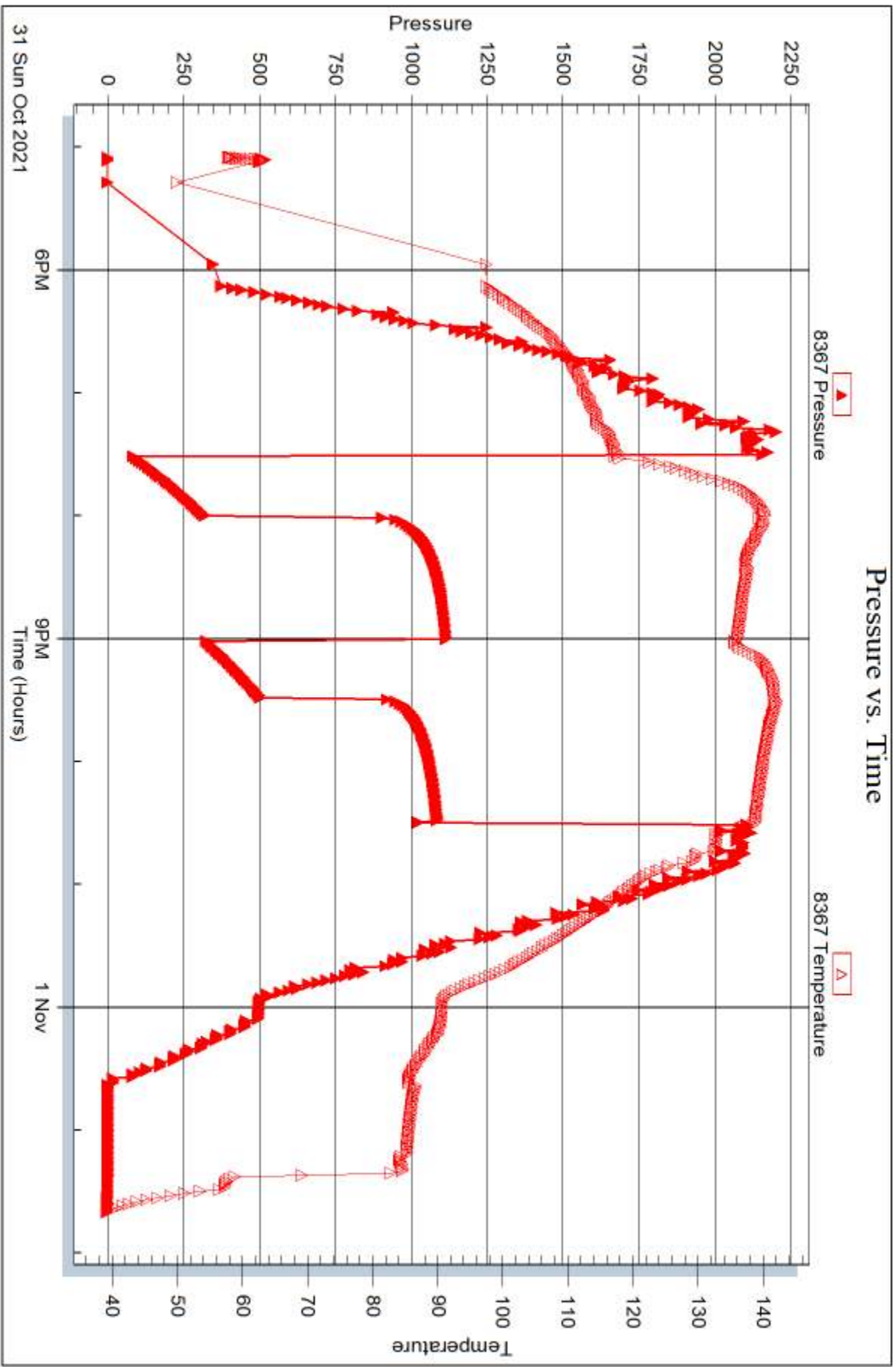


Serial #: 8367

Outside Marfin Drilling Co. Inc.

OWA 'G' #1-8

DST Test Number: 2





DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

CWA 'G' #1-8

8-3s-37w Cheyenne, KS

Start Date: 2021.11.01 @ 21:40:00

End Date: 2021.11.02 @ 06:31:05

Job Ticket #: 68528 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.11.04 @ 17:04:57



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

8-3s-37w Cheyenne, KS

CWA 'G' #1-8

Job Ticket: 68528

DST#: 3

Test Start: 2021.11.01 @ 21:40:00

GENERAL INFORMATION:

Formation: **Lans. "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:59:36

Time Test Ended: 06:31:05

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 4527.00 ft (KB) To 4590.00 ft (KB) (TVD)

Reference Elevations: 3436.00 ft (KB)

Total Depth: 4590.00 ft (KB) (TVD)

3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 29.22 psig @ 4528.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.11.01

End Date:

2021.11.02

Last Calib.:

2021.11.02

Start Time: 21:40:01

End Time:

06:31:05

Time On Btm:

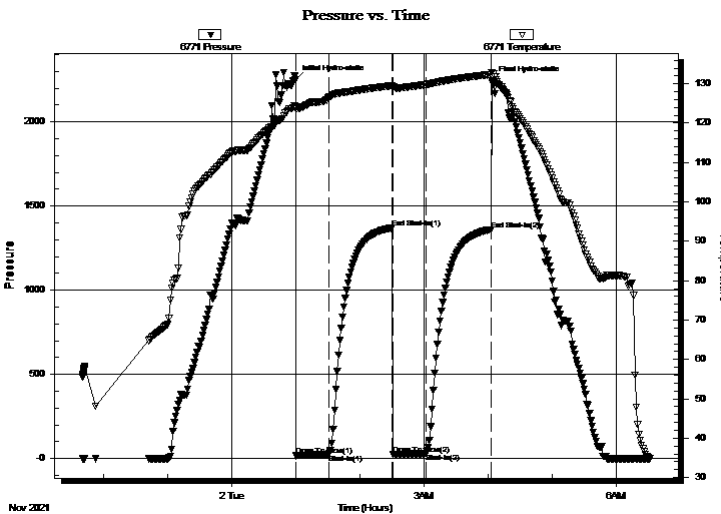
2021.11.02 @ 00:59:21

Time Off Btm:

2021.11.02 @ 04:03:06

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1 3/4"
60 - IS: No blow back
30 - FF: Surface blow from 18 min. to close
60 - FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2250.64	124.23	Initial Hydro-static
1	17.02	123.72	Open To Flow (1)
31	23.84	126.36	Shut-In(1)
91	1369.68	129.51	End Shut-In(1)
92	25.29	129.11	Open To Flow (2)
122	29.22	129.79	Shut-In(2)
184	1360.16	132.35	End Shut-In(2)
184	2245.83	132.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	WCM 84% _m , 16% _w	0.15

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

ATTN: Robert Hendrix

Job Ticket: 68528

DST#: 3

Test Start: 2021.11.01 @ 21:40:00

GENERAL INFORMATION:

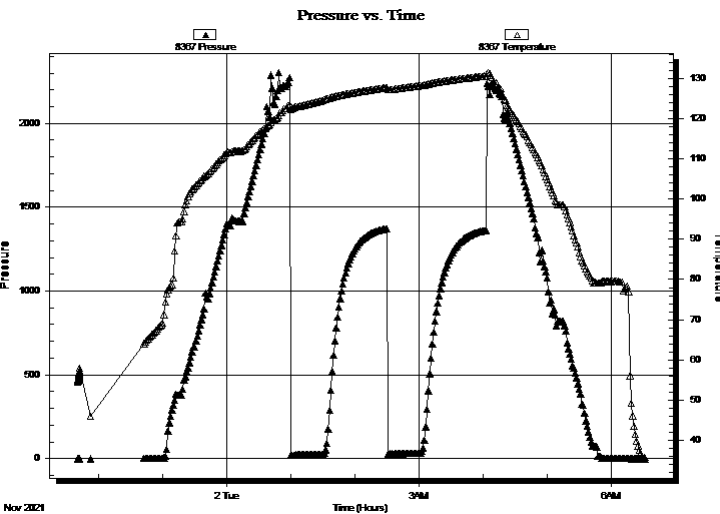
Formation:	Lans. "J"			Test Type:	Conventional Bottom Hole (Reset)
Deviated:	No	Whipstock:	ft (KB)	Tester:	James Winder
Time Tool Opened:	00:59:36			Unit No:	73
Time Test Ended:	06:31:05			Reference Elevations:	3436.00 ft (KB)
Interval:	4527.00 ft (KB) To 4590.00 ft (KB) (TVD)				3431.00 ft (CF)
Total Depth:	4590.00 ft (KB) (TVD)			KB to GR/CF:	5.00 ft
Hole Diameter:	7.88 inches	Hole Condition:	Fair		

Serial #: 8367

Outside

Press@RunDepth:	psig @	4528.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2021.11.01	End Date:	2021.11.02	Last Calib.:	2021.11.02
Start Time:	21:40:01	End Time:	06:30:50	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 30 - IF: 1/4" Blow at open, built to 1 3/4"
60 - ISI: No blow back
30 - FF: Surface blow from 18 min. to close
60 - FSI: No blow



PRESSURE SUMMARY

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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
30.00	WCM 84%m, 16%w	0.15

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68528

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.11.01 @ 21:40:00

Tool Information

Drill Pipe:	Length: 4383.00 ft	Diameter: 3.80 inches	Volume: 61.48 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 62.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4527.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	96.00 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			4495.00	
Shut In Tool	5.00			4500.00	
Hydraulic tool	5.00			4505.00	
Jars	5.00			4510.00	
Gap Sub	4.00			4514.00	
Safety Joint	3.00			4517.00	
Packer	5.00			4522.00	33.00 Bottom Of Top Packer
Packer	5.00			4527.00	
Stubb	1.00			4528.00	
Recorder	0.00	6771	Inside	4528.00	
Recorder	0.00	8367	Outside	4528.00	
Perforations	25.00			4553.00	
Blank Spacing	34.00			4587.00	
Bullnose	3.00			4590.00	63.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68528

DST#: 3

ATTN: Robert Hendrix

Test Start: 2021.11.01 @ 21:40:00

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:

10000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 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
30.00	WCM 84% _m , 16% _w	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

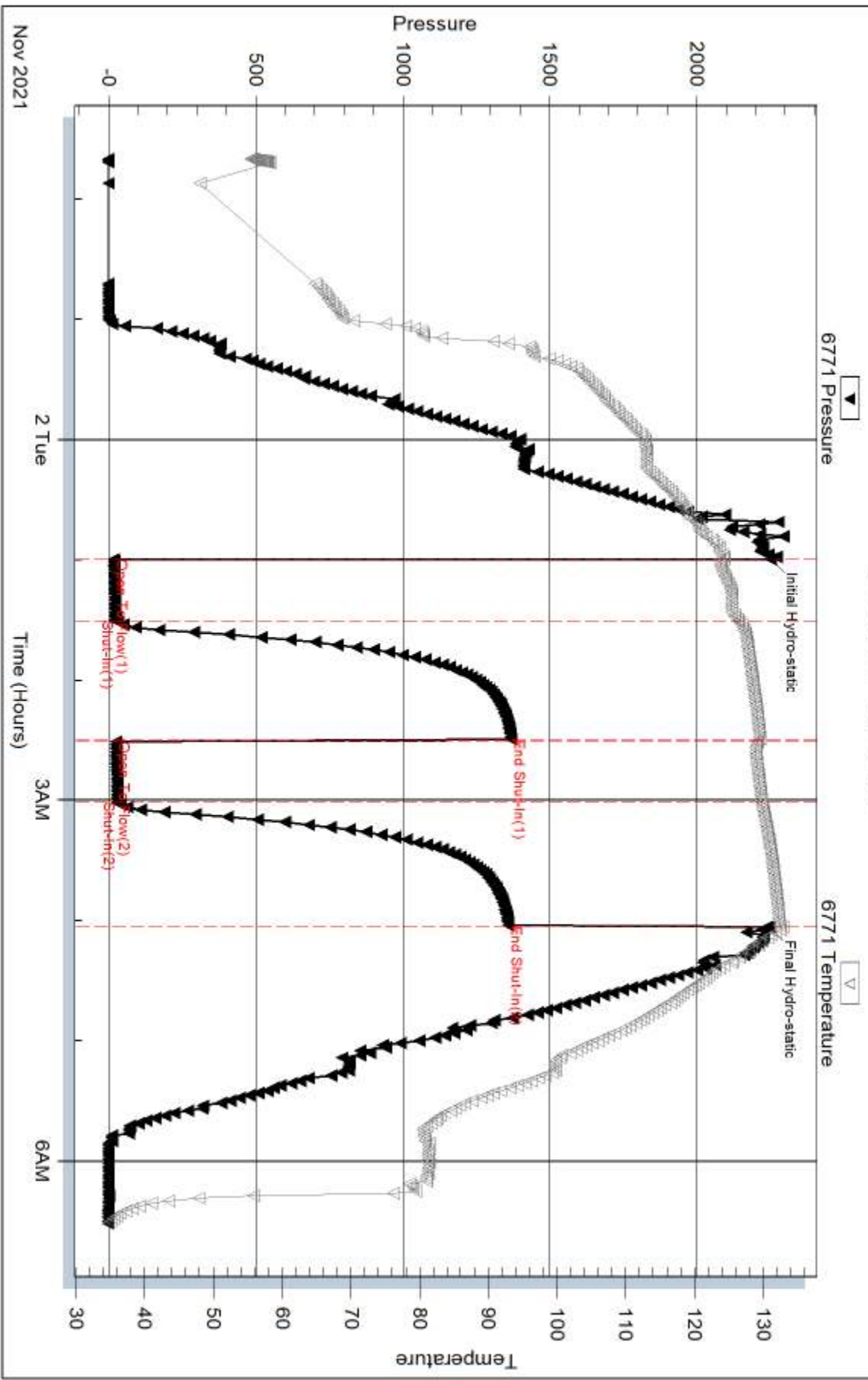
Serial #:

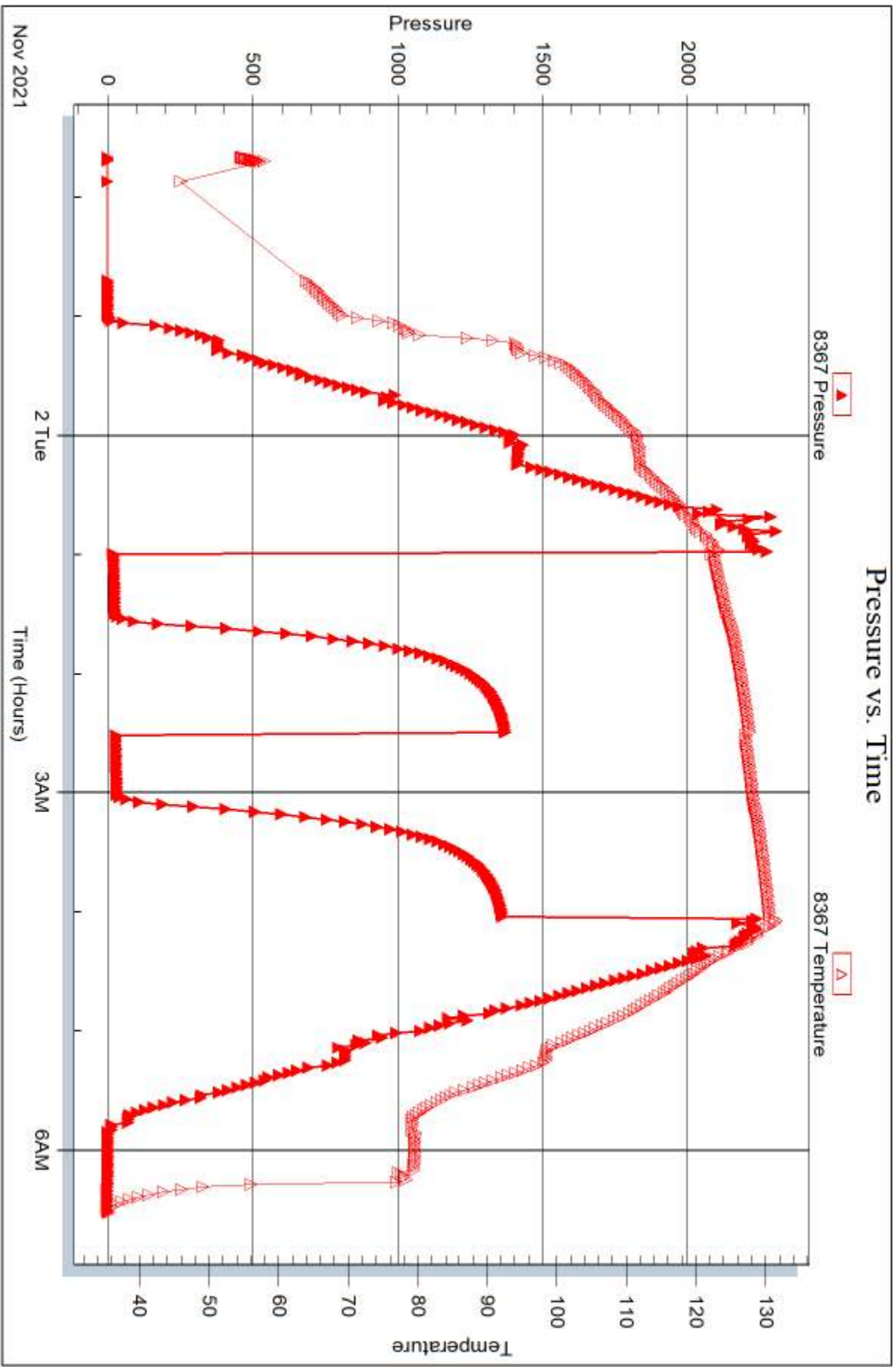
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .911 ohms @ 47 deg F Chlorides = 10,000 ppm

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N Water Ste 300
Wichita, KS 67202

ATTN: Robert Hendrix

CWA 'G' #1-8

8-3s-37w Cheyenne, KS

Start Date: 2021.11.03 @ 17:25:00

End Date: 2021.11.04 @ 05:10:20

Job Ticket #: 68529 DST #: 4

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

Printed: 2021.11.04 @ 17:03:19

Murfin Drilling Co. Inc. 8-3s-37w Cheyenne, KS CWA 'G' #1-8 DST # 4 Ft. Scott - Celia 2021.11.03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68529

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.11.03 @ 17:25:00

GENERAL INFORMATION:

Formation: **Ft. Scott - Celia**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:56:51

Time Test Ended: 05:10:20

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 73

Interval: 4743.00 ft (KB) To 4884.00 ft (KB) (TVD)

Reference Elevations: 3436.00 ft (KB)

Total Depth: 4884.00 ft (KB) (TVD)

3431.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: 79.92 psig @ 4744.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.11.03

End Date:

2021.11.04

Last Calib.: 2021.11.04

Start Time: 17:25:01

End Time:

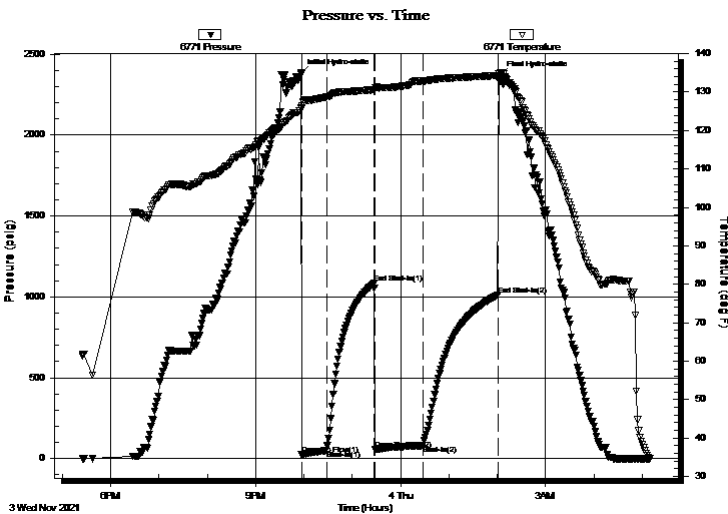
05:10:20

Time On Btm: 2021.11.03 @ 21:56:36

Time Off Btm: 2021.11.04 @ 02:03:35

TEST COMMENT: 30 - IF: Blow built to 3 3/4"
60 - IS: No blow back
60 - FF: Blow built to 4 3/4"
90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2379.09	126.01	Initial Hydro-static
1	23.61	125.83	Open To Flow (1)
32	49.71	128.72	Shut-In(1)
91	1083.14	130.63	End Shut-In(1)
92	54.88	130.58	Open To Flow (2)
151	79.92	132.86	Shut-In(2)
244	1010.18	134.31	End Shut-In(2)
247	2366.68	135.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	SW/OCM 61% _m , 22% _o , 11% _g , 6% _w	0.58
20.00	HOCM 53% _m , 42% _o , 5% _g	0.28
10.00	SMCO 85% _o , 8% _m , 7% _g	0.14
0.00	GIP = 30'+	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68529

DST#: 4

ATTN: Robert Hendrix

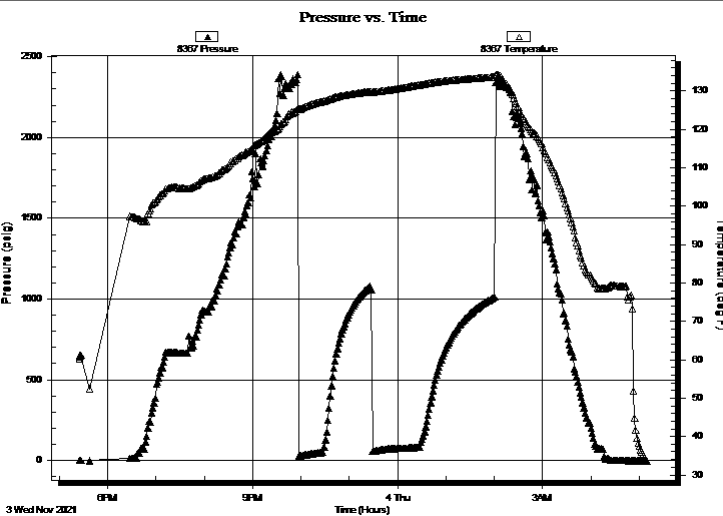
Test Start: 2021.11.03 @ 17:25:00

GENERAL INFORMATION:

Formation: **Ft. Scott - Celia**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:56:51
 Time Test Ended: 05:10:20
 Interval: **4743.00 ft (KB) To 4884.00 ft (KB) (TVD)**
 Total Depth: 4884.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 73
 Reference Elevations: 3436.00 ft (KB)
 3431.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8367 Outside
 Press@RunDepth: psig @ 4744.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2021.11.03 End Date: 2021.11.04 Last Calib.: 1899.12.30
 Start Time: 17:25:01 End Time: 05:10:05 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF: Blow built to 3 3/4"
 60 - ISI: No blow back
 60 - FF: Blow built to 4 3/4"
 90 - FSI: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
118.00	SW/OCM 61% _m , 22% _o , 11% _g , 6% _w	0.58
20.00	HOCM 53% _m , 42% _o , 5% _g	0.28
10.00	SMCO 85% _o , 8% _m , 7% _g	0.14
0.00	GIP = 30'+	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68529

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.11.03 @ 17:25:00

Tool Information

Drill Pipe:	Length: 4607.00 ft	Diameter: 3.80 inches	Volume: 64.62 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose:	100000.0 lb
			<u>Total Volume: 65.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4743.00 ft			Final	81000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	141.00 ft				
Tool Length:	174.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: Rig had to work on make up cathead while making up the tool and a few times going in the hole

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4711.00	
Shut In Tool	5.00			4716.00	
Hydraulic tool	5.00			4721.00	
Jars	5.00			4726.00	
Gap Sub	4.00			4730.00	
Safety Joint	3.00			4733.00	
Packer	5.00			4738.00	33.00 Bottom Of Top Packer
Packer	5.00			4743.00	
Stubb	1.00			4744.00	
Recorder	0.00	6771	Inside	4744.00	
Recorder	0.00	8367	Outside	4744.00	
Perforations	8.00			4752.00	
Blank Spacing	129.00			4881.00	
Bullnose	3.00			4884.00	141.00 Bottom Packers & Anchor
Total Tool Length:	174.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc.

8-3s-37w Cheyenne, KS

250 N Water Ste 300
Wichita, KS 67202

CWA 'G' #1-8

Job Ticket: 68529

DST#: 4

ATTN: Robert Hendrix

Test Start: 2021.11.03 @ 17:25:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 52.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 1500.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 26.4 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

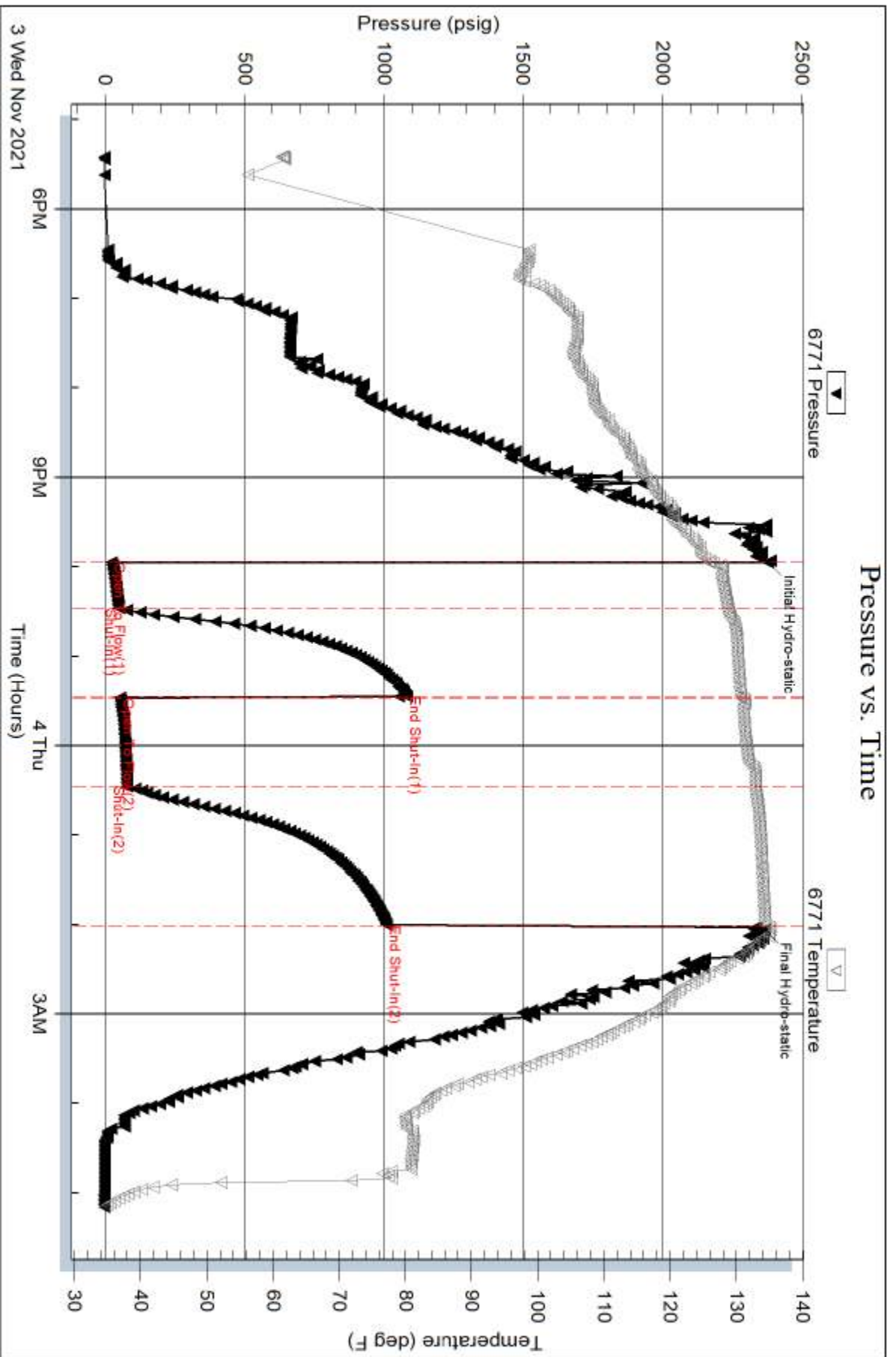
Length ft	Description	Volume bbl
118.00	SW/OCM 61%m, 22%o, 11%g, 6%w	0.580
20.00	HOCM 53%m, 42%o, 5%g	0.281
10.00	SMCO 85%o, 8%m, 7%g	0.140
0.00	GIP = 30'+	0.000

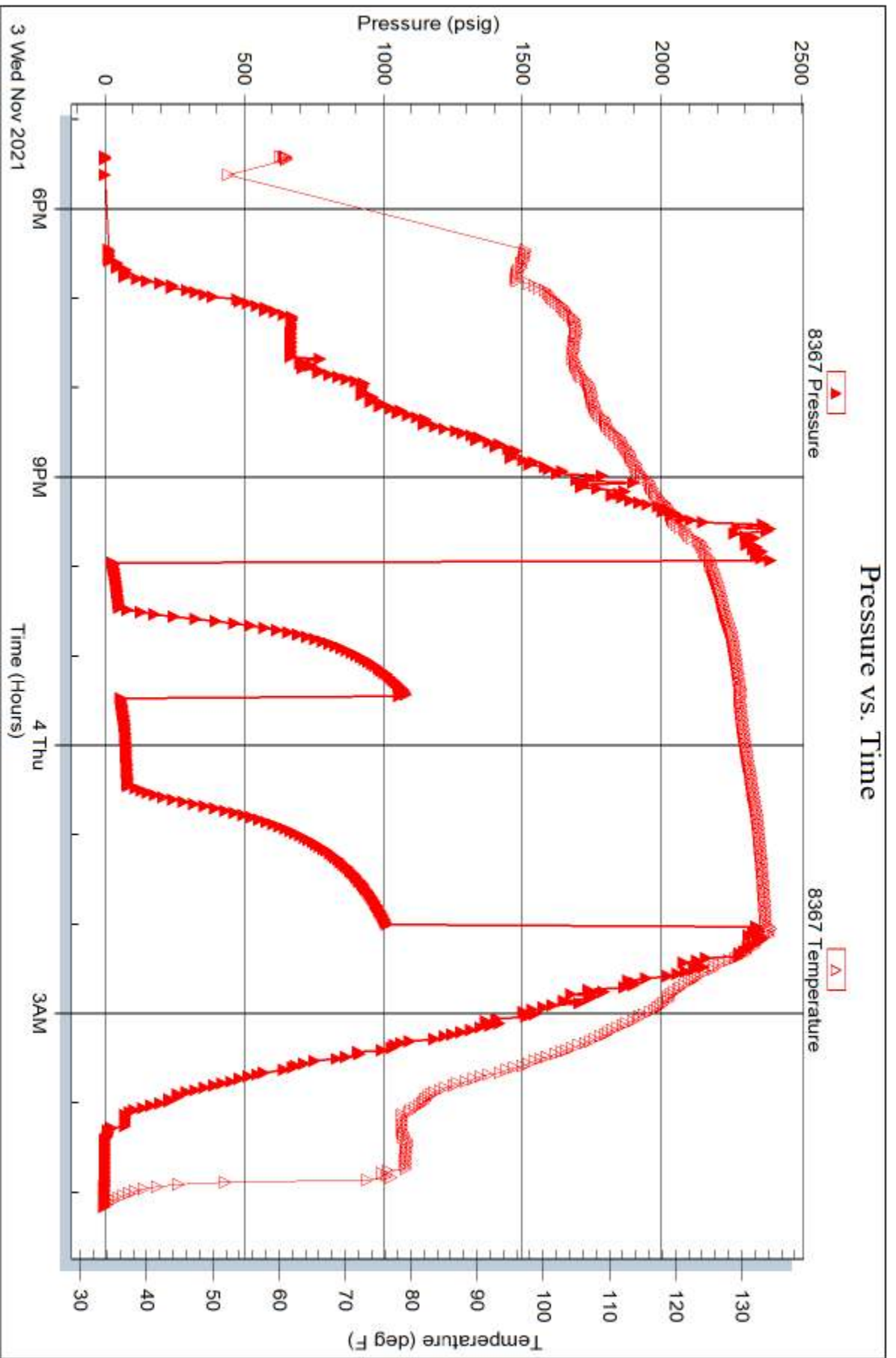
Total Length: 148.00 ft Total Volume: 1.001 bbl

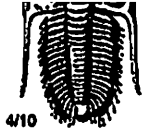
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 24 api @ 36 deg F Corrected Gravity = 26.4







Well Name & No. CWA 'G' #1-8 Test No. 1 Date 10-30-21
 Company Murfin Drilling Co. Inc. Elevation 3436 KB 3431 GL
 Address 250 N water ste 300 witchita, Ks 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin 110
 Location: Sec. 8 Twp 3s Rge. 37w Co. Cheyenne State KS

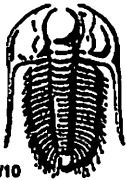
Interval Tested 4256 - 4374 Zone Tested Oread - 'A'
 Anchor Length 118' Drill Pipe Run 4130 Mud Wt. 8.8
 Top Packer Depth 4251 Drill Collars Run 118' Vis 62
 Bottom Packer Depth 4256 Wt. Pipe Run _____ WL 6.8
 Total Depth 4374 Chlorides 1200 ppm System LCM Trace
 Blow Description IF: Blow built to BOB(11") @ 30min
ISI: No Blow back
FF: Blow built to BOB @ 37min, built to 17"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
110'	Mud w/Trace oil	Trace	Trace	100	Trace
190'	WM w/Trace oil	Trace	44	56	Trace
59'	MCWw/Trace oil	Trace	75	25	Trace
59'	wcm w/Trace oil	Trace	25	75	Trace

Rec Total 418' BHT 129 Gravity _____ API RW .508 @ 54 °F Chlorides 17,000 ppm

(A) Initial Hydrostatic 2071 Test 1450 T-On Location 16:00
 (B) First Initial Flow 25 Jars 250 T-Started 18:05
 (C) First Final Flow 108 Safety Joint 75 T-Open 20:45
 (D) Initial Shut-In 1240 Circ Sub _____ T-Pulled 00:49
 (E) Second Initial Flow 114 Hourly Standby _____ T-Out 3:15
 (F) Second Final Flow 209 Mileage 114RT 142.50 Comments _____
 (G) Final Shut-In 1225 Sampler _____
 (H) Final Hydrostatic 1998 Straddle _____ EM Tool 350
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 350
 Accessibility _____ Total 2267.50
 Sub Total 1917.50 MP/DST Disc't _____

Approved By _____ Our Representative Jennell Rain
 Tribble 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. 68527

Well Name & No. CWA 'G' #1-8 Test No. 2 Date 10/31/21
 Company Murfin Drilling Co. Inc. Elevation 3436 KB 3431 GL
 Address 250 N Water Ste 300 Witch. Ia, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin Rig 110
 Location: Sec. 8 Twp 3S Rge. 37W Co. Cheyenne State KS

Interval Tested 4384-4457 Zone Tested Lansing D
 Anchor Length 73 Drill Pipe Run _____ Mud Wt. 8.9
 Top Packer Depth 4379 Drill Collars Run 118 Vis 61
 Bottom Packer Depth 4384 Wt. Pipe Run _____ WL 6.8
 Total Depth 4457 Chlorides 1300 ppm System LCM Trace
 Blow Description IF: Blow built to BOB@7min Blow built to 52
IST: No Blow back
FF: Blow built to BOB@7min Blow built to 43
FSI: No Blow back

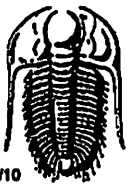
Rec	Feet of	%gas	%oil	%water	%mud
<u>250</u>	<u>MW</u>		<u>51</u>	<u>49</u>	
<u>125</u>	<u>MW</u>		<u>81</u>	<u>19</u>	
<u>695</u>	<u>SMCW</u>		<u>97</u>	<u>3</u>	
_____	_____				
_____	_____				

Rec Total 1070 BHT 139 Gravity _____ API RW 524 @ 36.5° F Chlorides 16000 ppm

(A) Initial Hydrostatic <u>2148</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>15:50</u>
(B) First Initial Flow <u>69</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:05</u>
(C) First Final Flow <u>317</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>19:31</u>
(D) Initial Shut-In <u>1112</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:29</u>
(E) Second Initial Flow <u>321</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1:40 11/1/21</u>
(F) Second Final Flow <u>500</u>	<input checked="" type="checkbox"/> Mileage <u>114 RT</u> 142.50	Comments _____
(G) Final Shut-In <u>1092</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2108</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>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>350</u>
	<input type="checkbox"/> Accessibility _____	Total <u>2267.50</u>
	Sub Total <u>1917.50</u>	MP/DST Disc't _____

Approved By _____ Our Representative Jamaal Williams

Triobite 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. 68528

Well Name & No. CWA "5" #1-8 Test No. 3 Date 11-1-21
 Company Murfin Drilling Co. Inc Elevation 3436 KB 3431 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #110
 Location: Sec. 8 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4527 - 4590 Zone Tested Lans. "J"
 Anchor Length 63 Drill Pipe Run 4383 Mud Wt. 8.9
 Top Packer Depth 4522 Drill Collars Run 118 Vis 58
 Bottom Packer Depth 4527 Wt. Pipe Run - WL 6.8
 Total Depth 4590 Chlorides 1400 ppm System LCM -

Blow Description IF: 1/4" Blow at open, built to 1 3/4"
ISI: No blowback
FF: Surface blow from 18 min. to close
FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>wcm</u>		<u>16</u>	<u>84</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 132 Gravity API RW .911 @ 47 °F Chlorides 10,000 ppm

(A) Initial Hydrostatic 2251
 (B) First Initial Flow 17
 (C) First Final Flow 24
 (D) Initial Shut-In 1370
 (E) Second Initial Flow 25
 (F) Second Final Flow 29
 (G) Final Shut-In 1360
 (H) Final Hydrostatic 2246

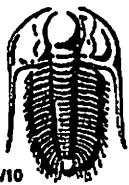
- Test 1450
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 114 RT 142.50
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1917.50

T-On Location 19:15
 T-Started 21:40
 T-Open 00:59
 T-Pulled 4:02
 T-Out 6:30
 Comments _____
 EM Tool 350
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 350
 Total 2267.50
 MP/DST Disc't _____

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

Approved By [Signature] Our Representative James Winkler

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. 68529

Well Name & No. CWA'G' #1-8 Test No. 4 Date 11-3-21
 Company Murfin Drilling Co. Inc Elevation 3436 KB 3431 GL
 Address 250 N. Water StE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #110
 Location: Sec. 8 Twp 3s Rge. 37w Co. Cheyenne State KS

Interval Tested 4743 - 4884 Zone Tested Ft Scott - Celia
 Anchor Length 141 Drill Pipe Run 4607 Mud Wt. 9.3
 Top Packer Depth 4738 Drill Collars Run 118 Vis 52
 Bottom Packer Depth 4743 Wt. Pipe Run - WL 7.2
 Total Depth 4884 Chlorides 1500 ppm System LCM 3

Blow Description IF: Blow built to 3 3/4"
ISI: No blowback
FF: Blow built to 4 3/4"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>smco</u>	<u>7</u>	<u>85</u>	<u>-</u>	<u>8</u>
<u>20</u>	<u>HOCm</u>	<u>5</u>	<u>42</u>	<u>-</u>	<u>53</u>
<u>118</u>	<u>SW/OCm</u>	<u>11</u>	<u>22</u>	<u>6</u>	<u>61</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 148 BHT 134 Gravity 26.4 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 2379 Test 1450 T-On Location 15:40 1/3
 (B) First Initial Flow 24 Jars 250 T-Started 17:25
 (C) First Final Flow 50 Safety Joint 75 T-Open 21:56
 (D) Initial Shut-In 1083 Circ Sub _____ T-Pulled 2:00
 (E) Second Initial Flow 55 Hourly Standby 3.5h 350 T-Out 5:10 1/4
 (F) Second Final Flow 80 Mileage 114 RT 142.50 Comments _____
 (G) Final Shut-In 1010 Sampler _____
 (H) Final Hydrostatic 2367 Straddle _____ EM Tool 350 NS
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby 1d 9.25h
 Accessibility _____
 Sub Total 2267.50 Total 2575.83
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

Approved By [Signature] Our Representative James Winder

Tribolite 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.

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Company Inc.**

LEASE **CWA 'G' #1-8**

FIELD **Midcat**

LOCATION **3301 fml & 1080 fwl**

SEC. **8** TWPSP **3S** RGE **37W**

COUNTY **Cheyenne** STATE **Kansas**

CONTRACTOR **Murfin Drilling Company Inc Rq #10**

SP UD **10/29/2021** COMP **11/6/2021**

RTD **5150** LTID **5150**

MUD UP **3153** TYPE MUD **Chemical**

SAMPLES SAVED FROM **4040** TO **5150**

DRILLING TIME KEPT FROM **4040** TO **5150**

SAMPLES EXAMINED FROM **4040** TO **5150**

GEOLOGICAL SUPERVISION FROM **4039**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ELECTRIC LOG

SAMPLE

Anhydrite 3306 (-128)

Oread 4141 (-711)

Lansing 4359 (-923)

Mound City 4630 (-1194)

Ft Scott 4764 (-1328)

Mississippian 5039 (-1603)

ELEVATIONS

KB **3436'**

DF

GL **3431'**

Measurements Are All From **Kelly Bushing**

CASING

CONDUCTOR

PRODUCTIVE **8-8/8" at 403'**

PRODUCTION **5-1/2" at 5135'**

ELECTRICAL

SURVEYS

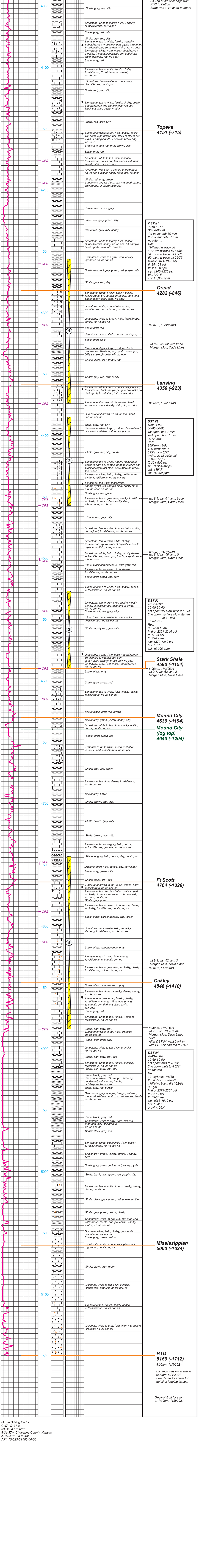
Source: Pottery, mch-cog, Data Induction
Sonic, Midway Wellbore

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	3306 (-128)	3305 (-131)
Oread	4141 (-711)	4151 (-715)
Lansing	4359 (-923)	4359 (-923)
Mound City	4630 (-1194)	4630 (-1194)
Ft Scott	4764 (-1328)	4764 (-1328)
Mississippian	5039 (-1603)	5060 (-1624)

REMARKS:

It was decided to set production casing and complete this well.
Note*
Log tech was on scene at 9:00pm 11/4/2021. Repeated attempts at first run failed to loosen power supply to logging unit twice. At 1:16am 11/5/2021 a new power unit was set in transit. It failed as well so at 6:15am a new truck was brought on site to complete logging on well. Logs were complete by 12:00pm.

Midwest finished logging @ 12:00PM 11/5. LTD: 5150'. Ran 123jts of 15.5# 5 1/2" prod csg set @ 5135'. HSI cmt w/4108xs. 30sxs RH. PD @ 4:15AM 11/6. Cmt Circ.



Murfin Drilling Co Inc
CWA 'G' #1-8
3301 fml & 1080 fwl
8-3s-37w, Cheyenne County, Kansas
KB=3436', GL=3431'
API: 15-023-21560-00-00