

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	Presley Operating LLC
Well Name	THORNBURG TRUST A 1-34
Doc ID	1644003

All Electric Logs Run

DIL
MEL
POR
SON

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 2659
12-5-21

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-4-21	34	15	16	Gove	KS		12:30 AM
Location Quintex S to Coline 2 1/2 E 1 N							

Lease	Well No.	Owner	
THORNBERG TRUST	A-1-34	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Contractor	Type Job	Charge To	
Duke 5	SURFACE	Mull Drig. Co.	
Hole Size	T.D.	Street	
12 1/4			
Csg.	Depth	City	
8 5/8		State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
Tool	Depth	Cement Amount Ordered	
		150yd 80/20 3-2	
Cement Left in Csg.	Shoe Joint		
1.5			

Meas Line	Displace	Common
	13 1/4	120
EQUIPMENT		
Pumptrk	No.	Cementer
17		Helper
		Bru
Bulktrk	No.	Driver
		Craig
Bulktrk	No.	Driver
9		Jordan
		Calcium
		6

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
Rgn 5 Jts of 8 5/8 set e		Handling 159
Cemt sw/ 150yd 13 1/2 bbls		Mileage
Cemt did CIR		

FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	35

Signature	Hector Jones	Thanks	Tax
			Discount
			Total Charge



CHARGE TO: **Mull Drilg Co.**
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 34058

PAGE 1 OF 2

SERVICE LOCATIONS
 1. **Ness City, KS**

WELL/PROJECT NO. **1-34** LEASE **THORNBURG TRUST "A"** COUNTY/PARISH **GOVE** STATE **KS** CITY
 TICKET TYPE **SALES** CONTRACTOR **Dove Drilg #5** RIG NAME/NO. **TOP** SHIPPED VIA **CT** DELIVERED TO **located** DATE **12-13-2021** OWNER **same**
 WELL TYPE **Oil** WELL CATEGORY **Development** JOB PURPOSE **5 1/2" LONGSTROKE BOTTOM** WELL PERMIT NO. **NW/Utra, KS**

REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	MILEAGE	QTY.		UNIT PRICE	AMOUNT	
		LOC	ACCT			DF	U/M			U/M
575		1			# 112	40	MZ	6.00	240.00	
579		1		PUMP CHANGE - Top to Bottom Lg. Stroke		1	T08	4596	FR	2050.00
221		1		Ground Key		6	GA		150.00	
280		1		FLOCHECK 21		1000	GA	3.50	3500.00	
400		1		GUIDE SHOE		1	EA	180.00	180.00	
403		1		CEMENT BASKET		3	EA	275.00	825.00	
409		1		TURBIDIZERS		14	EA	90.00	1260.00	
410		1		TOP PLUG		1	EA	100.00	100.00	
415		1		INSERT FLOAT COLLAR w/ FILL UP		1	EA	350.00	350.00	
419		1		Refracting Head Repair		1	T08	2500.00	2500.00	

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

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 X *[Signature]*

DATE SIGNED **12-13-2021** TIME SIGNED **5:44 P.M.**

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICES? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL #1	86551.00
TOTAL	21826.25
TAX	20481.95
Grove	1311.94
TOTAL	21826.25

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR **Wayne Johnson** APPROVAL *[Signature]*
 Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 12-13-2021 PAGE NO. 1

CUSTOMER Mull Drig. Co. WELL NO. 1-34 LEASE THORNBURG TRUST "A" JOB TYPE 5 1/2" LONGSTROKE TICKET NO. 3405'8

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1830							ON LOCATION
	2130							START 5 1/2" CASING
								TO - 4578 SET = 4569
								TP - 4569 (4577) 5 1/2 # 14
								SJ - 42.76
								TURBOIZERS - 1,2,3,4,5,6,7,8,9,10,11,12, 21, 61
								CMY BSKTS - 4, 21, 61
	0005							DROP BALL - CIRCULATE ROTATE
	0155	6	15		✓	400		PUMP KCL FLUSH
	0158	6	24		✓	400		PUMP FLOCHECK 21
	0202	6	5		✓	400		PUMP KCL FLUSH
	0205		7.5					PLUG RH = MH (30SKS - 20SKS)
	0220	6	194		✓	250		MIX CEMENT - 350 SKS SMD @ 11.2 PPG
		4 1/2	29		✓	100		125 SKS 50/50 PO2 @ 14.38 PPG
	0300							WASH OUT PUMP - LINES
	0300							RELEASE CATCH DOWN ^{TOP-SW} PLUG
	0305	7	0		✓			DISPLACE PLUG (1ST 24 BBLs KCL WATER)
	0330		110.4			1700		PLUG DOWN - PLUG UP CATCH IN PLUG
	0340					OK		RELEASE, PLUG - HELD
								CIRCULATED 75 SKS CEMENT TO PIT
								WASH TRUCK
	0500							JOB COMPLETE
								THANK YOU
								WAYNE, GIDEON, MARK, SHAWN, JOHN
								* LAST 72 BBLs DISPLACED WITH MUD

**WELL REPORT
THORNBURG TRUST 'A' 1-34
GOVE COUNTY, KANSAS
(NE SE NE NW)**

Operator: Mull Drilling Company, Inc.
 Well Name: Thornburg Trust 'A' 1-34
 Location: 896' FNL & 2475' FWL Section 34-T15S-R26W
 Surface Casing: 8-5/8" @ 228', 23#
 Hole Size: 7-7/8"
 Total Depth Reached: December 12, 2021 @ 4578'
 Drilling Contractor: Duke Drilling Co.
 Wellsite Geologist: Blake Miller, Wichita, KS
 Status: Set Pipe: 5-1/2" @ 4578'
 Logging Services: ELI Logging: DIL/GR; 3650'-4576'
 CDL/CNL/GR; 3650'-4554'
 ML/GR; 3650'-4560'

Elevations: **GL: 2533' DF: 2542' KB: 2544'**

<u>Formation Tops</u>	<u>Depth</u>	<u>Subsea</u>
Heebner Shale	3792	-1248
Toronto	3810	-1266
Lansing A	3832	-1288
Lansing B	3866	-1322
Lansing C	3882	-1338
Lansing E	3908	-1364
Lansing F	3940	-1396
Lansing G	3982	-1438
Lansing H	3994	-1450
Lansing I	4018	-1474
Lansing J	4050	-1506
Stark Shale	4074	-1530
Kansas City A	4082	-1538
Kansas City B	4108	-1564
Marmaton	4144	-1600
Pawnee	4270	-1726
Ft. Scott	4334	-1790
Cherokee	4364	-1820
Unconformity	4430	-1886
Mississippi Warsaw	4442	-1898
Mississippi Osage	4504	-1960

The Mull Drilling Co., Thornburg Trust 'A' 1-34, NE SE NE NW, Section 34-T15S-R26W, is located in an area of established Mississippi (Warsaw) and Lansing production. Be advised no mudlog/hotwire-chromatograph was recorded on this well. However, a wellsite geologist, Blake Miller, was present and submitted a drilltime and sample log.

Mississippi (Warsaw)

The top of the Mississippi (Warsaw) was encountered at 4442' (-1898). It was described as a tan/off white w/patchy brown dolomite/limestone; very fine sucrosic crystalline dolomite, very friable; limey in parts w/visible fossils; fair pinpoint and intercrystalline porosity, rare vugular. Good odor, show free oil, brown stain. Summary of the O/H log analysis (detail attached) as follows:

4443'-4450'	2 porosity feet	19% porosity	41% Sw	
4450'-4452'	2 porosity feet	17% porosity	52% Sw	Avg Ø=17%
4452'-4454'	2 porosity feet	18.5% porosity	49% Sw	Avg Sw=49%
4454'-4456'	2 porosity feet	14% porosity	56% Sw	

The following Drillstem Test were recorded over the Mississippi (Warsaw) interval:

DST #4 4433'-4459' (Mississippi Warsaw)

5-30-30-70

IFP: 23-24 ISIP: 1249

FFP: 24-24 FSIP: 1245

Recovered:

15' OSM (100% mud)

Lansing J

The top of the Lansing J was encountered at 44050' (-1506). It was described as a tan to light brown limestone; very fine to fine crystalline, heavily oomoldic, large oomoldic voids with brown stain and very good porosity. Strong odor, brown show of free oil and few bubbles with oil meniscus. Summary of the O/H log analysis (detail attached) as follows:

4052'-4054'	2 porosity feet	21% porosity	15% Sw	
4054'-4056'	2 porosity feet	24% porosity	13% Sw	Avg Ø=21.5%
4056'-4058'	2 porosity feet	19.5% porosity	15% Sw	Avg Sw=14%

The following Drillstem Test were recorded over the Lansing F, H, I, J intervals:

DST #4 3976-4060' (Lansing F, H, I, J)

10-30-60-90

IFP: 25-24 ISIP: 746

FFP: 25-29 FSIP: 796

Recovered:

15' OSM (5%, gas 95% mud)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling Inc.
1700 N Waterfront prkw
Bldg 1200
Wichita, KS. 67206
ATTN: Blake Miller

Thornburg Trust A #1-34

34-15s-26w Gove,KS

Job Ticket: 67139

DST#: 1

Test Start: 2021.12.09 @ 00:51:09

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:56:59

Time Test Ended: 11:06:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Eric Burgess

Unit No: 80

Interval: 3976.00 ft (KB) To 4060.00 ft (KB) (TVD)

Reference Elevations: 2544.00 ft (KB)

Total Depth: 4060.00 ft (KB) (TVD)

2533.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8369

Inside

Press@RunDepth: 28.78 psig @ 3977.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.09

End Date:

2021.12.09

Last Calib.:

2021.12.09

Start Time: 00:51:10

End Time:

11:06:39

Time On Btm:

2021.12.09 @ 03:55:49

Time Off Btm:

2021.12.09 @ 07:10:39

TEST COMMENT:

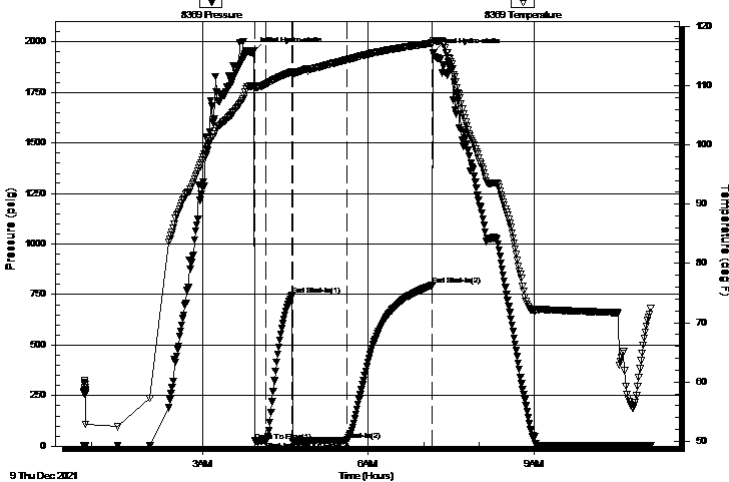
IF: Weak blow in bucket .71" (10)

IS: No Blow (30)

FF: No Blow flush tool after 15 mins w eak blow built to 1\8" in bucket (60)

FS: No blow (90)

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1953.81	110.04	Initial Hydro-static
2	25.33	109.65	Open To Flow (1)
14	24.49	110.28	Shut-In(1)
42	745.91	112.29	End Shut-In(1)
42	25.07	111.96	Open To Flow (2)
101	28.78	114.35	Shut-In(2)
194	796.61	117.18	End Shut-In(2)
195	1947.28	117.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	GOSM G5% M95%	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling Inc.
1700 N Waterfront prkw
Bldg 1200
Witchita, KS. 67206
ATTN: Blake Miller

Thornburg Trust A #1-34

34-15s-26w Gove,KS

Job Ticket: 67139 **DST#: 1**

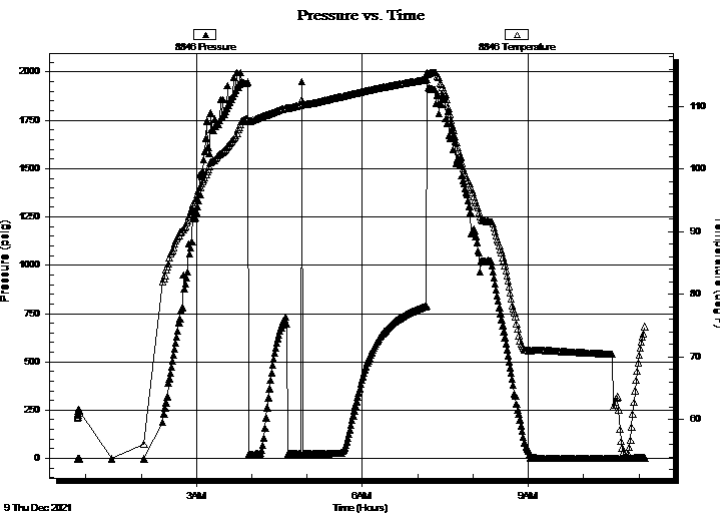
Test Start: 2021.12.09 @ 00:51:09

GENERAL INFORMATION:

Formation: **LKC H - J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:56:59
 Time Test Ended: 11:06:39
 Interval: **3976.00 ft (KB) To 4060.00 ft (KB) (TVD)**
 Total Depth: 4060.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Eric Burgess
 Unit No: 80
 Reference Elevations: 2544.00 ft (KB)
 2533.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8846 Outside
 Press@RunDepth: psig @ 3977.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2021.12.09 End Date: 2021.12.09 Last Calib.: 2021.12.09
 Start Time: 00:51:04 End Time: 11:06:33 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak blow in bucket .71" (10)
 IS: No Blow (30)
 FF: No Blow flush tool after 15 mins w eak blow built to 1\8" in bucket (60)
 FS: No blow (90)



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	GOSM G5% M95%	0.21

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.

Thornburg Trust A #1-34

1700 N Waterfront prkw
Bldg 1200
Witchita, KS. 67206
ATTN: Blake Miller

34-15s-26w Gove,KS

Job Ticket: 67139 **DST#: 1**

Test Start: 2021.12.09 @ 00:51:09

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:	3400 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.40 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3400.00 ppm			
Filter Cake: 0.20 inches			

Recovery Information

Recovery Table

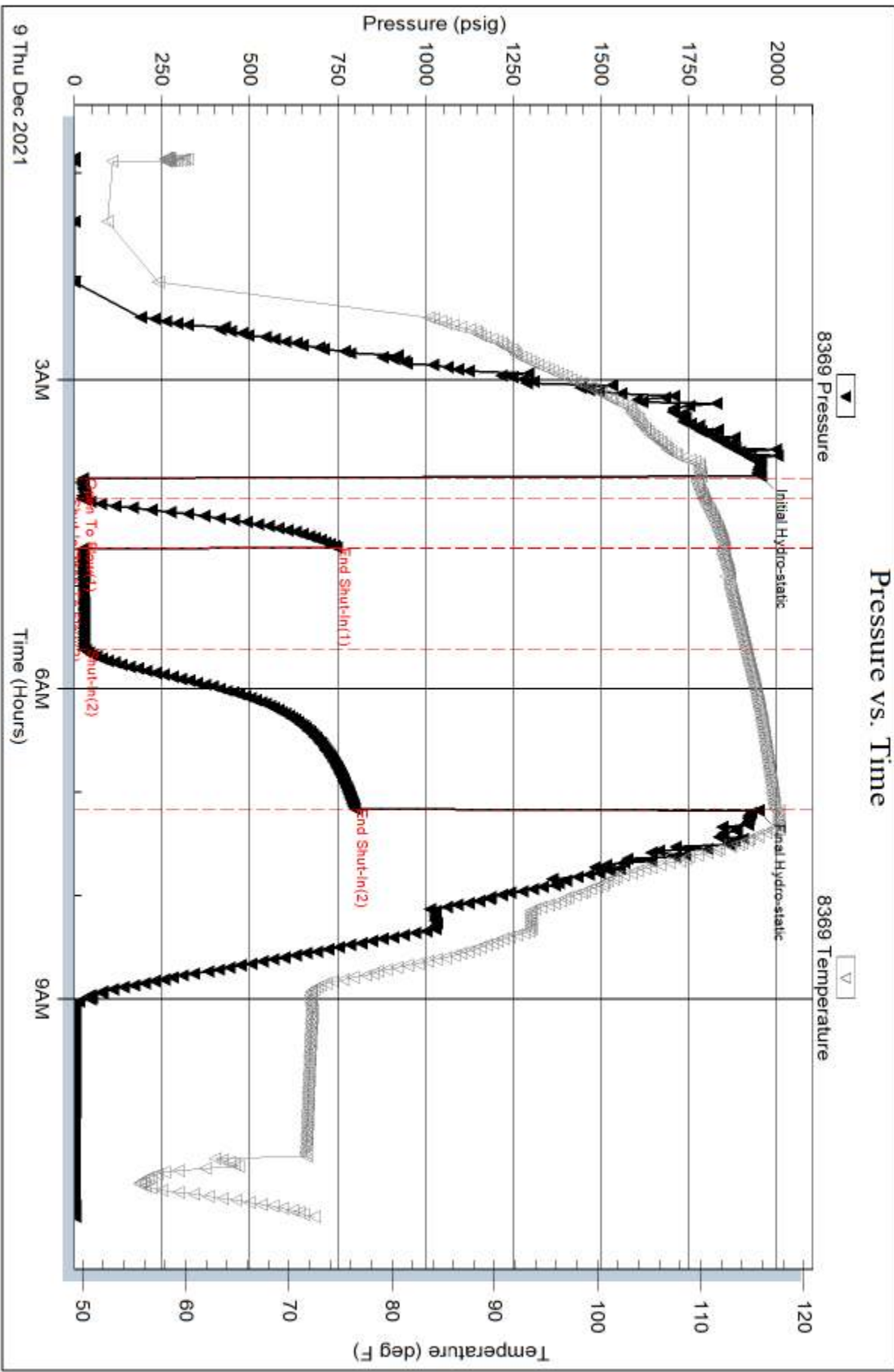
Length ft	Description	Volume bbl
15.00	GOSM G5% M95%	0.210

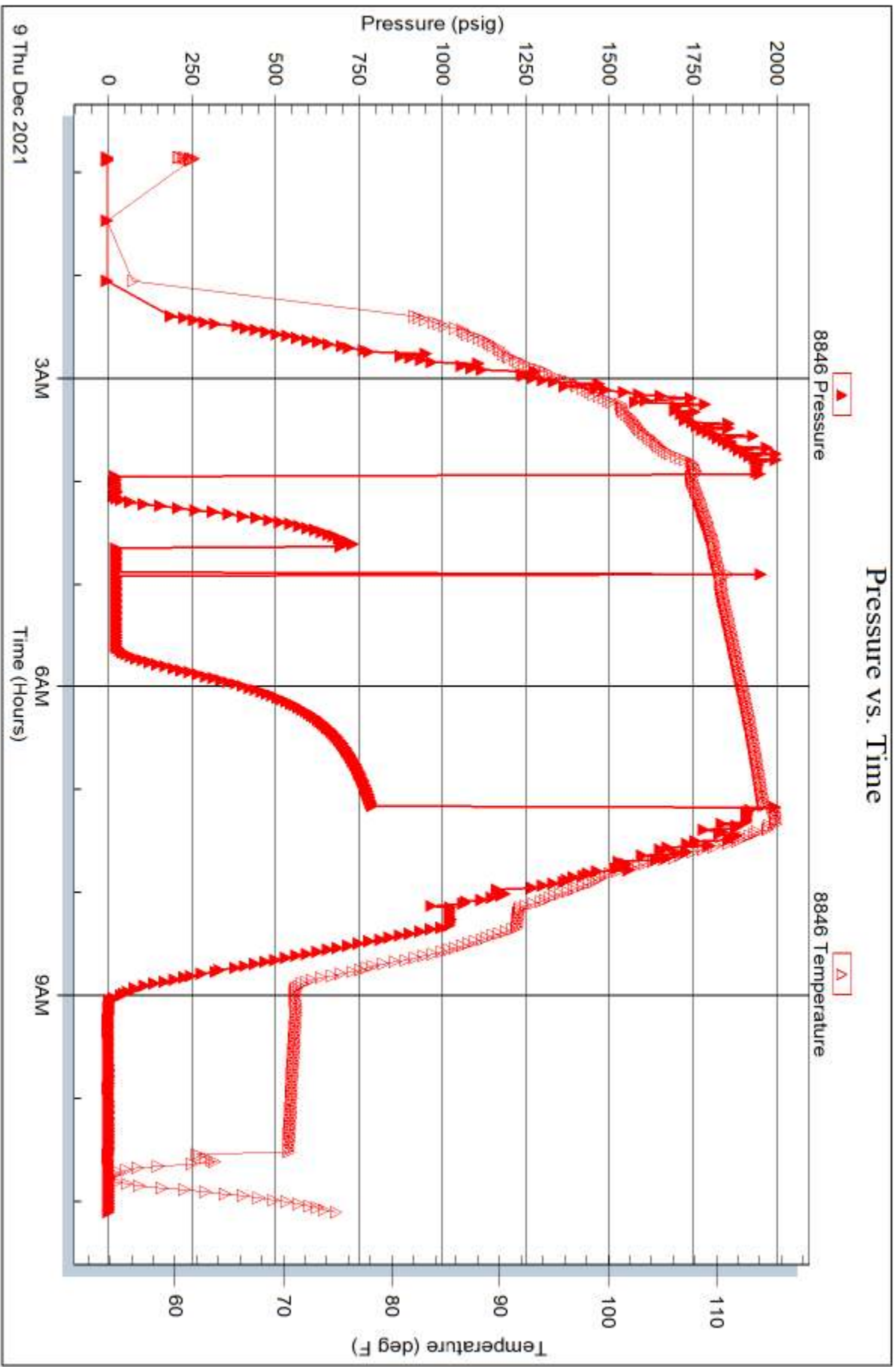
Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: None

Laboratory Name: Laboratory Location:

Recovery Comments: 15ft GOSM G5% M95%







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mull Drilling Inc.
 1700 N Waterfront prkw
 Bldg 1200
 Wichita, Ks. 67206
 ATTN: Blake Miller

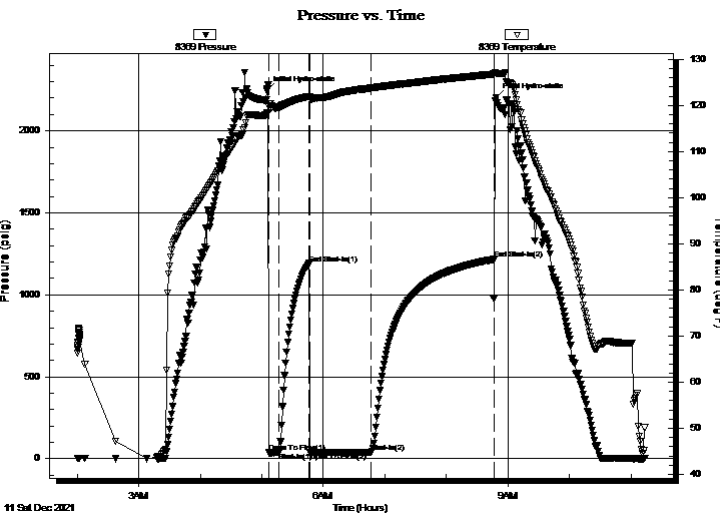
34-15s-26w Gove Co
ThornburgTrust A1-34
 Job Ticket: 67140 **DST#: 2**
 Test Start: 2021.12.11 @ 02:00:31

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:06:41
 Time Test Ended: 11:13:41
 Interval: **4414.00 ft (KB) To 4449.00 ft (KB) (TVD)**
 Total Depth: 4449.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Eric Burgess/Matt Sm
 Unit No: 80
 Reference Elevations: 2544.00 ft (KB)
 2533.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8369 Inside
 Press@RunDepth: 37.19 psig @ 4415.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2021.12.11 End Date: 2021.12.11 Last Calib.: 2021.12.11
 Start Time: 02:00:32 End Time: 11:13:41 Time On Btm: 2021.12.11 @ 05:05:01
 Time Off Btm: 2021.12.11 @ 08:48:10

TEST COMMENT: IF: Weak Blow . Built to 3" in the Bucket. (10)
 IS: No Blow . (30)
 FF: No Blow . (60)
 FS: No Blow . (120)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.71	118.15	Initial Hydro-static
2	36.61	119.68	Open To Flow (1)
12	38.20	119.60	Shut-In(1)
42	1191.24	121.95	End Shut-In(1)
42	39.02	121.56	Open To Flow (2)
102	37.19	123.78	Shut-In(2)
221	1215.82	126.77	End Shut-In(2)
224	2202.11	126.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
33.00	DM 100%m	0.46

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.

34-15s-26w Gove Co

1700 N Waterfront prkw
Bldg 1200
Wichita, Ks. 67206
ATTN: Blake Miller

ThornburgTrust A1-34

Job Ticket: 67140

DST#: 2

Test Start: 2021.12.11 @ 02:00:31

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:

2400 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
33.00	DM 100%m	0.463

Total Length: 33.00 ft Total Volume: 0.463 bbl

Num Fluid Samples: 0

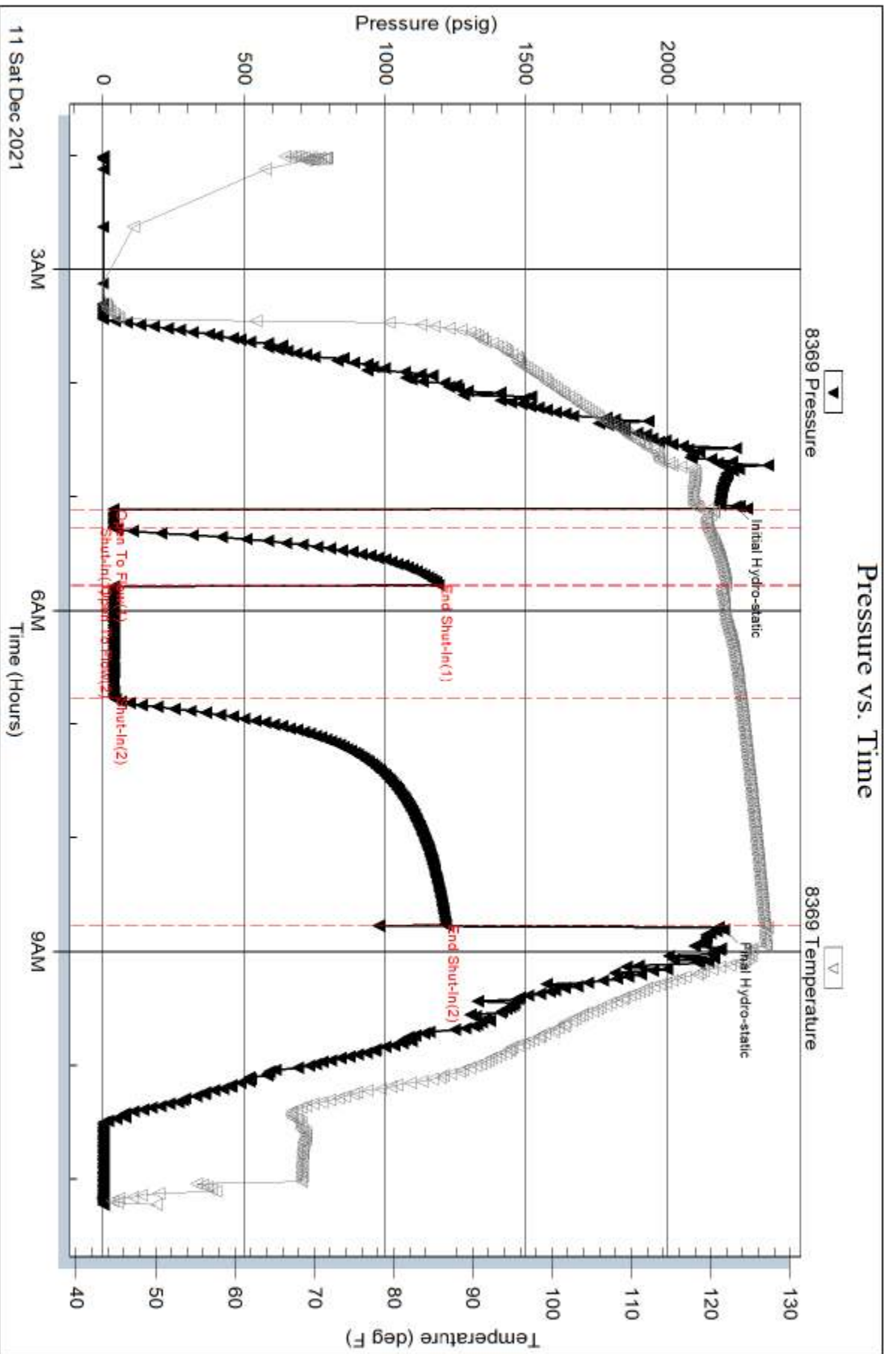
Num Gas Bombs: 0

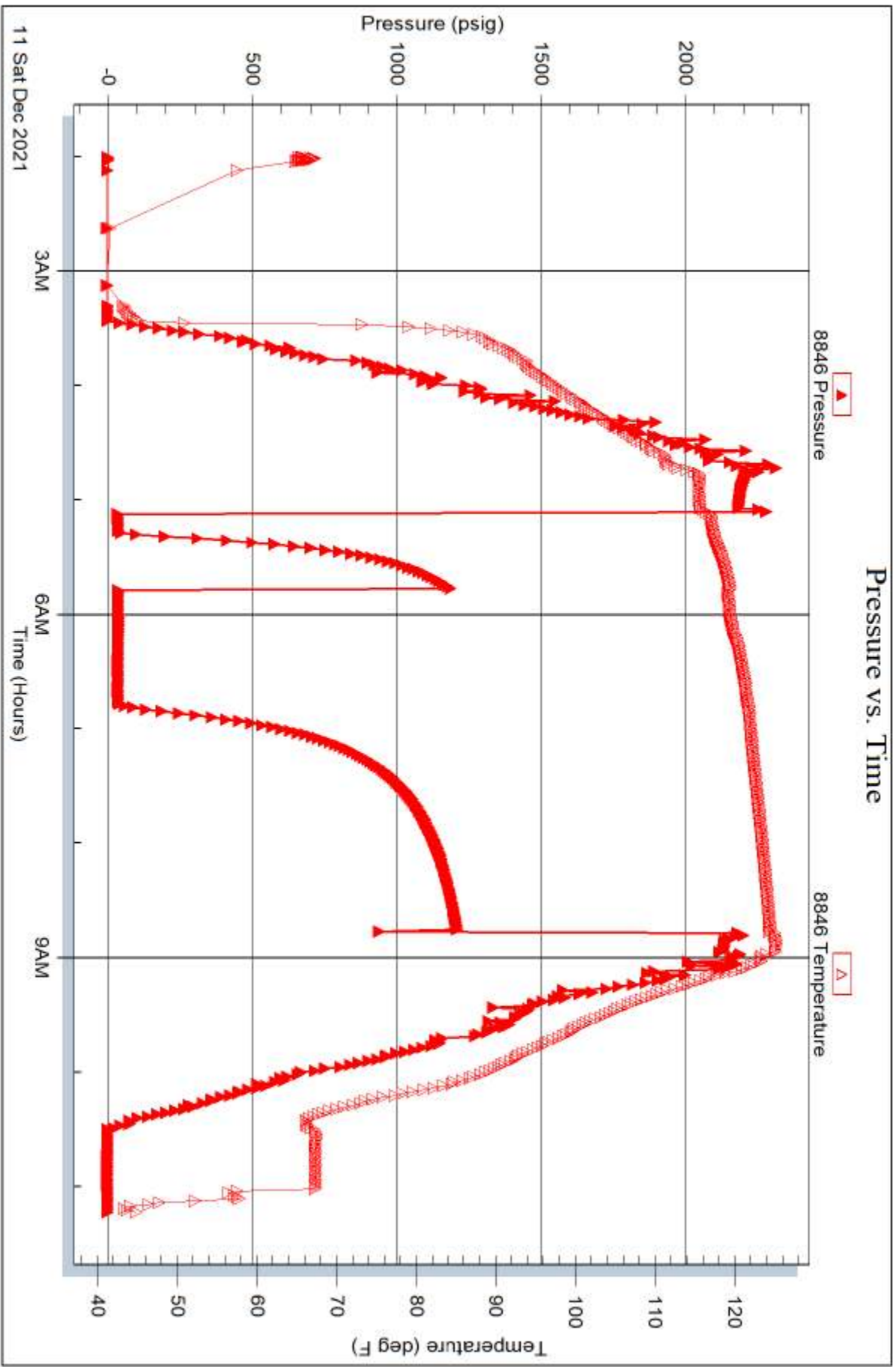
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:







**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Mull Drilling Inc.
1700 N Waterfront prkw
Bldg 1200
Witchita, Ks. 67206
ATTN: Blake Miller

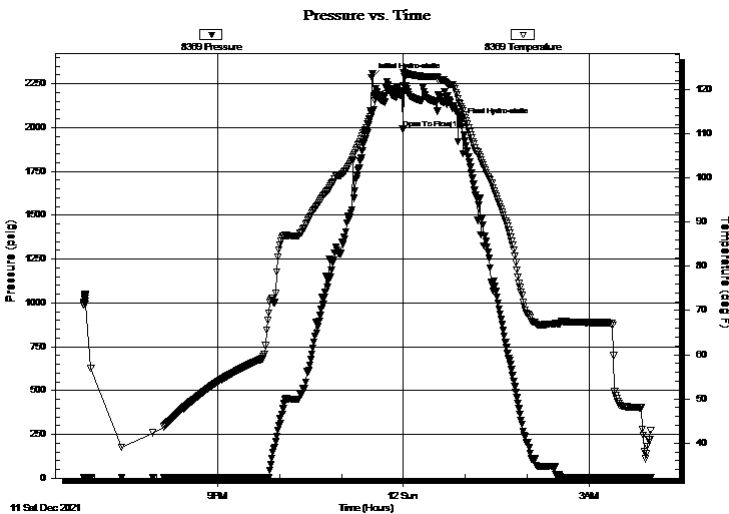
34-15s-26w Gove Co
ThornburgTrust A1-34
Job Ticket: 67141 **DST#: 3**
Test Start: 2021.12.11 @ 18:49:28

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:59:07
Time Test Ended: 04:00:38
Interval: **4414.00 ft (KB) To 4459.00 ft (KB) (TVD)**
Total Depth: 4459.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Eric Burgess/Matt Sm
Unit No: 80
Reference Elevations: 2544.00 ft (KB)
2533.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8369 Inside
Press@RunDepth: psig @ 4415.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2021.12.11 End Date: 2021.12.12 Last Calib.: 2021.12.12
Start Time: 18:49:29 End Time: 04:00:38 Time On Btm: 2021.12.11 @ 23:29:07
Time Off Btm: 2021.12.12 @ 00:56:07

TEST COMMENT: IF: Packer Failure.. Pulled Test.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2286.57	114.54	Initial Hydro-static
30	1991.14	119.55	Open To Flow (1)
87	2026.87	116.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.

34-15s-26w Gove Co

1700 N Waterfront prkw
Bldg 1200
Witchita, Ks. 67206
ATTN: Blake Miller

ThornburgTrust A1-34

Job Ticket: 67141

DST#: 3

Test Start: 2021.12.11 @ 18:49:28

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:

2500 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl

Total Length: ft

Total Volume: bbl

Num Fluid Samples: 0

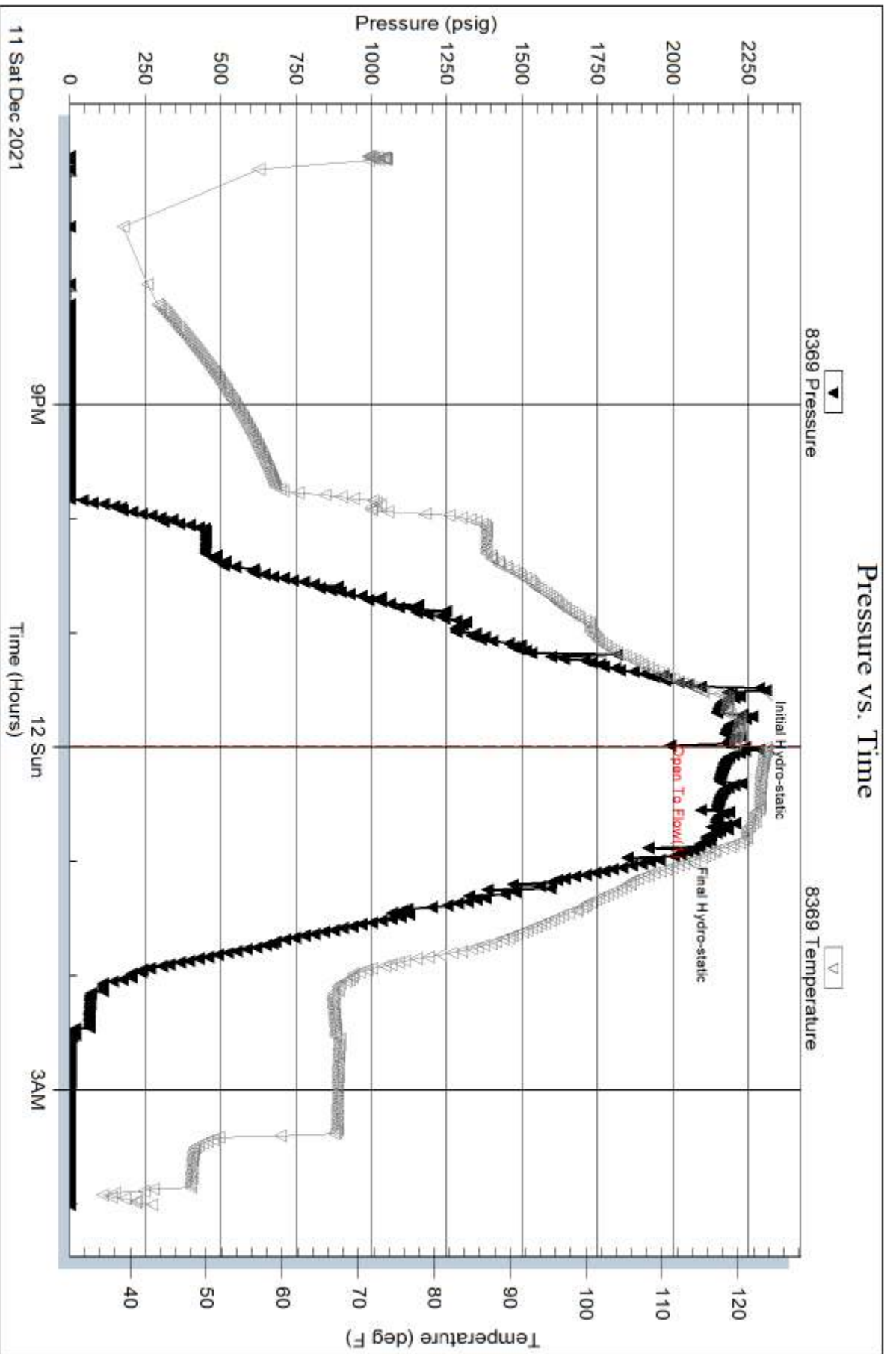
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

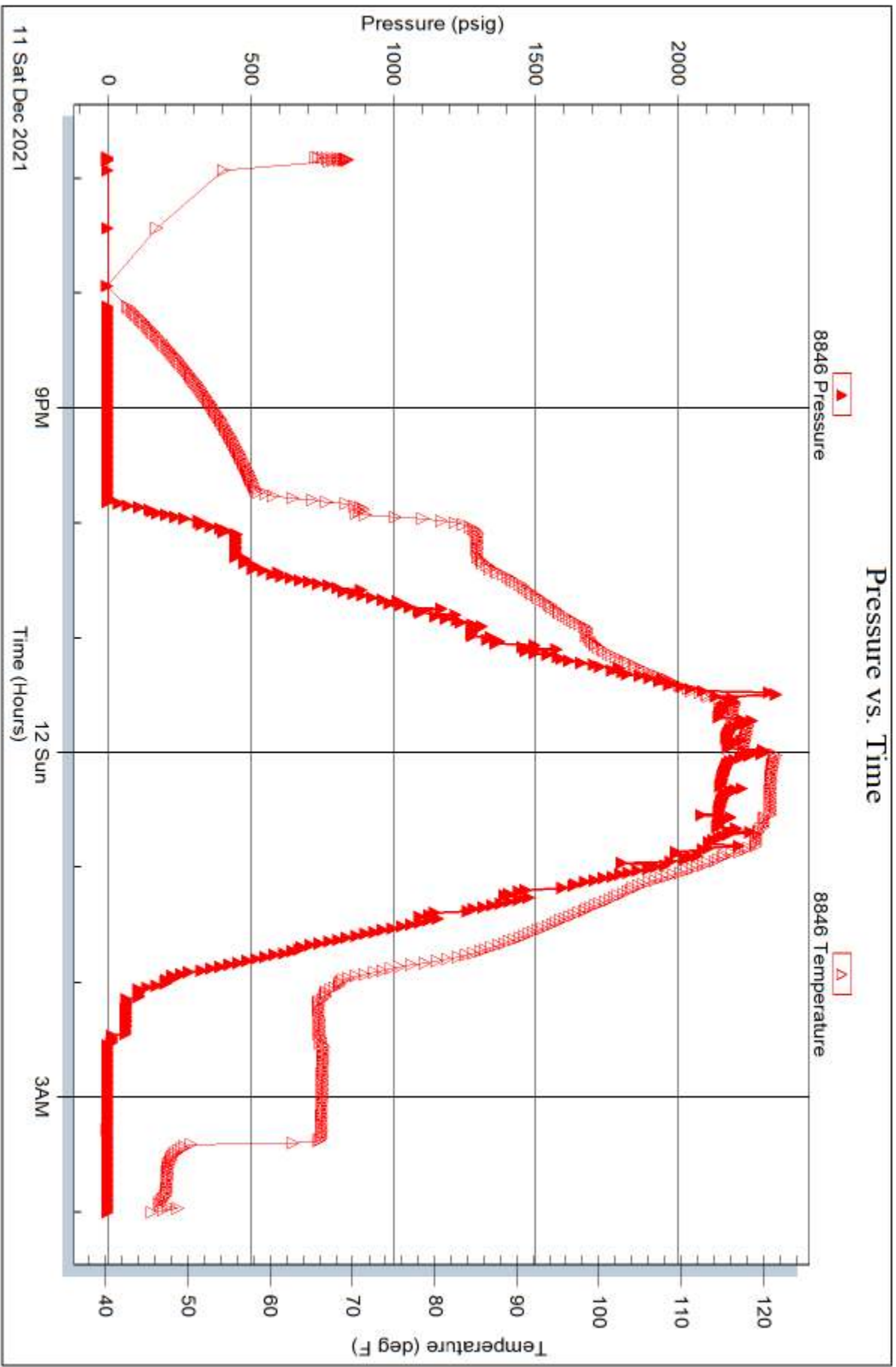


Serial #: 8846

Outside Mall Drilling Inc.

ThornburgTrust A-1-34

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 67141

Printed: 2021.12.12 @ 07:44:55



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mull Drilling Inc.
 1700 N Waterfront prkw
 Bldg 1200
 Wichita, Ks. 67206
 ATTN: Blake Miller

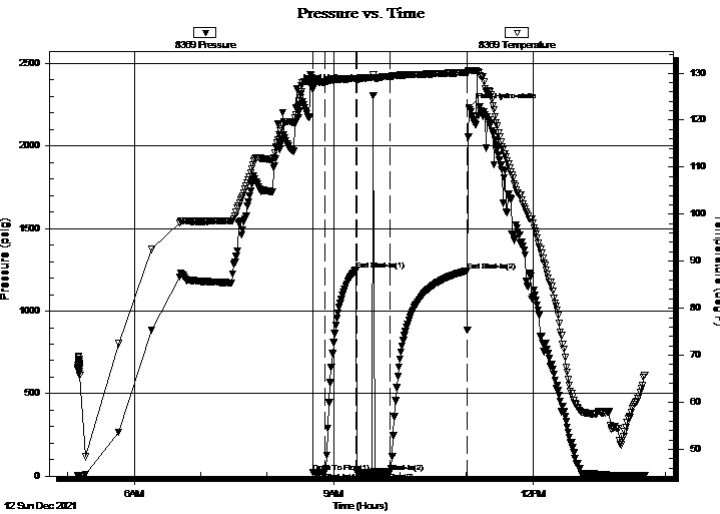
34-15s-26w Gove Co
ThornburgTrust A1-34
 Job Ticket: 67142 **DST#: 4**
 Test Start: 2021.12.12 @ 05:08:54

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:41:34
 Time Test Ended: 13:41:43
 Interval: **4433.00 ft (KB) To 4459.00 ft (KB) (TVD)**
 Total Depth: 4459.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Eric Burgess/Matt Sm
 Unit No: 80
 Reference Elevations: 2544.00 ft (KB)
 2533.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8369 Inside
 Press@RunDepth: 24.40 psig @ 4434.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2021.12.12 End Date: 2021.12.12 Last Calib.: 2021.12.12
 Start Time: 05:08:55 End Time: 13:41:43 Time On Btm: 2021.12.12 @ 08:27:04
 Time Off Btm: 2021.12.12 @ 11:02:44

TEST COMMENT: IF:Weak blow built to .25in in bucket (10)
 IS:No blow back (30)
 FF:No blow back. Flushed tool after 15min. No Blow (30)
 FS:No blow back (60)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2347.77	122.23	Initial Hydro-static
15	23.00	128.24	Open To Flow (1)
26	23.84	128.16	Shut-In(1)
54	1249.22	128.86	End Shut-In(1)
55	23.56	128.69	Open To Flow (2)
85	24.40	129.31	Shut-In(2)
154	1244.74	130.14	End Shut-In(2)
156	2235.11	130.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100% m	0.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Inc.

34-15s-26w Gove Co

1700 N Waterfront prkw
Bldg 1200
Wichita, Ks. 67206
ATTN: Blake Miller

ThornburgTrust A1-34

Job Ticket: 67142

DST#: 4

Test Start: 2021.12.12 @ 05:08:54

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:

2500 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
15.00	OSM 100%m	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbf

Num Fluid Samples: 0

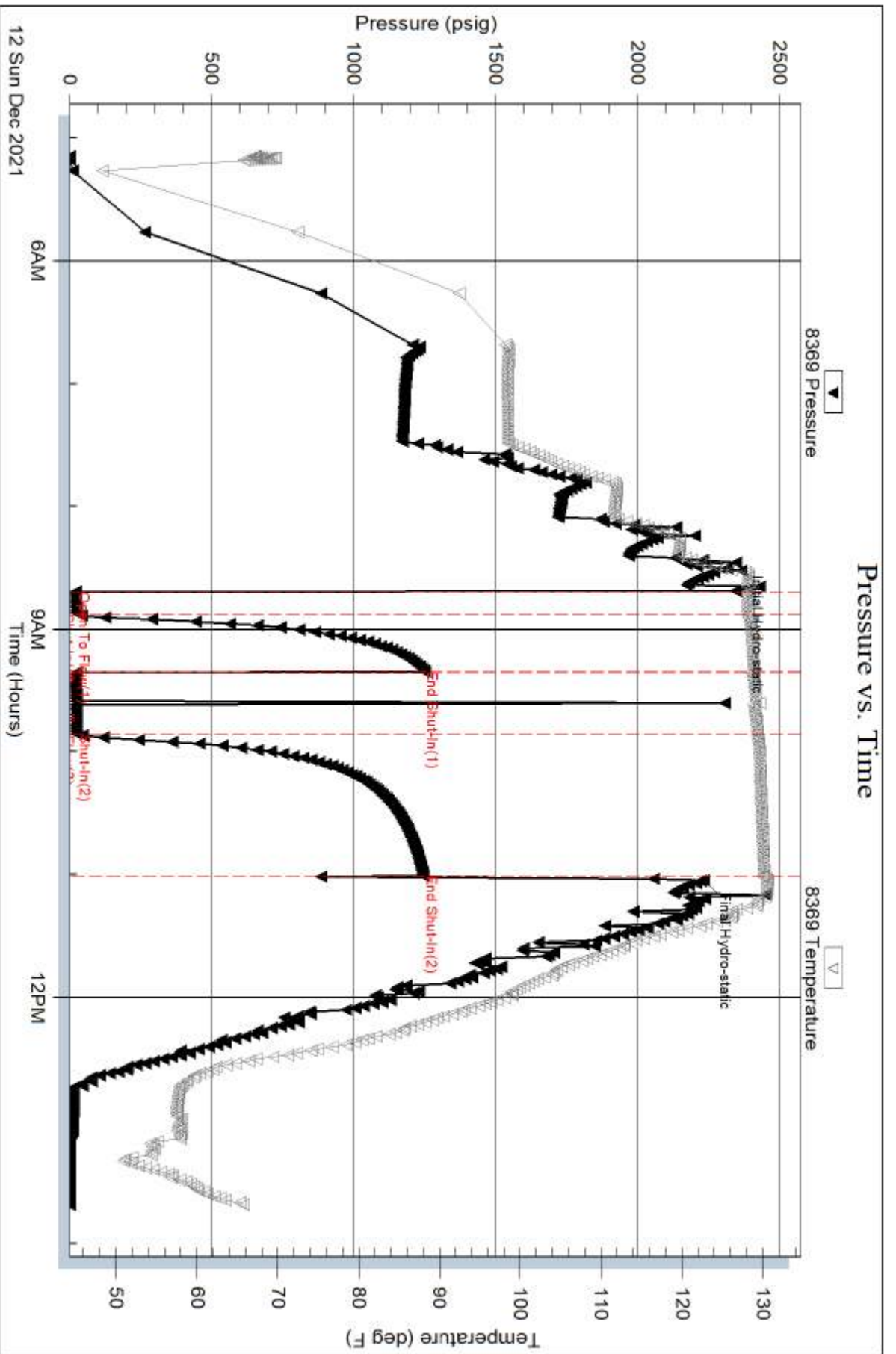
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Requested Shale Packer

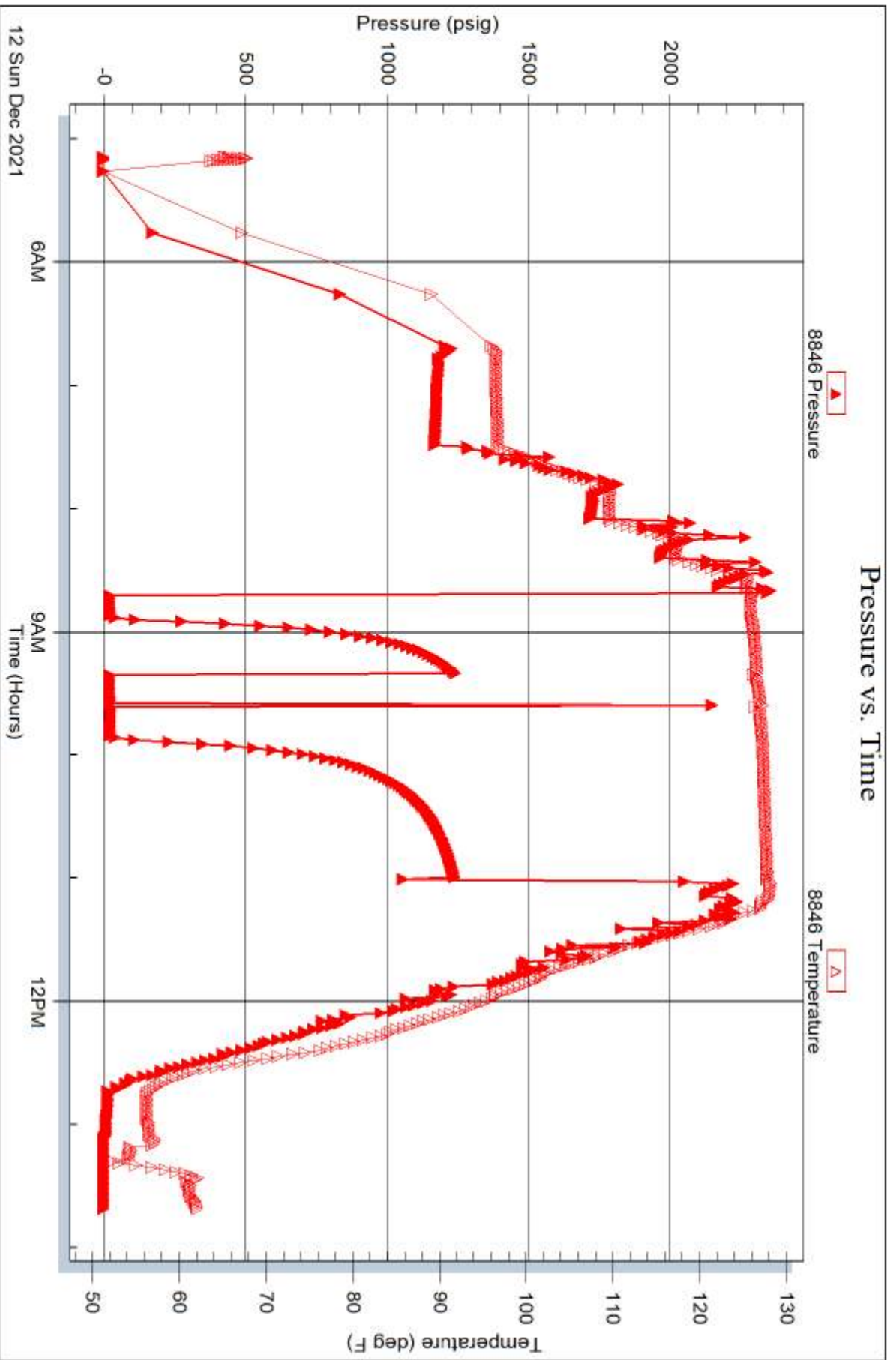


Serial #: 8846

Outside Mall Drilling Inc.

ThornburgTrust A1-34

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 67142

Printed: 2021.12.12 @ 16:16:10

