

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	SHONES 2-5
Doc ID	1636077

All Electric Logs Run

BHCS
BHV
DIL
DUCP
MEL

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

Murfin Drilling Company Inc.

LEASE **Shones #2-5**

FIELD **Jones Canyon**

LOCATION **1960 fsl & 1800 fel**

SEC **5** TWP **1S** RGE **37W**

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

CONTRACTOR **Murfin Drilling Company Inc. Rig #110**

SPUD **12/10/2021** COMP **12/21/2021**

RTD **4780** LTD **4780**

MUD UP **3525** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3870 TO 4780**

DRILLING TIME KEPT FROM **3870 TO 4780**

SAMPLES EXAMINED FROM **3870 TO 4780**

GEOLOGICAL SUPERVISION FROM **3745**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ANHYDRITE **3184 (+36)**

TOPEKA **3964 (-742)**

LANSING **4173 (-953)**

STARK SHALE **4392 (-1172)**

MOUND CITY **4448 (-1228)**

FT SCOTT **4568 (-1348)**

OAKLEY **4653 (-1433)**

AP# 15-023-21562-00-00

ELEVATIONS
KB 3220

GL 3215

Measurements Are All From **Kelly Bushing**

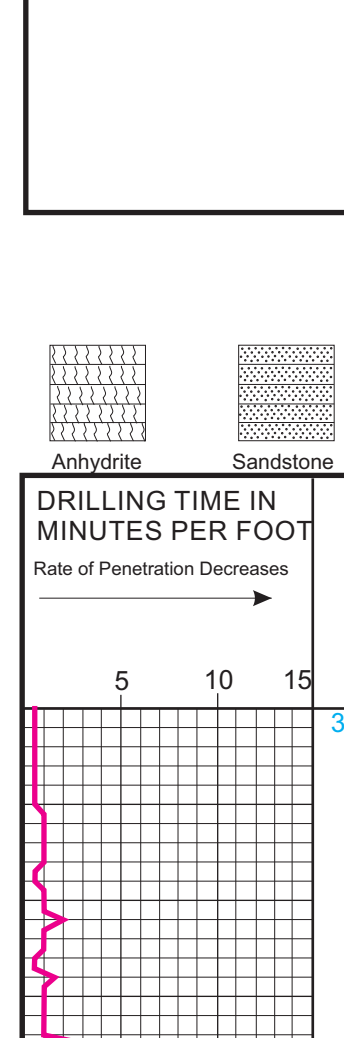
CASING

CONDUCTOR SURFACE **8-5/8" at 277**

PRODUCTION **5 1/2" @ 4770**

ELECTRICAL SURVEYS

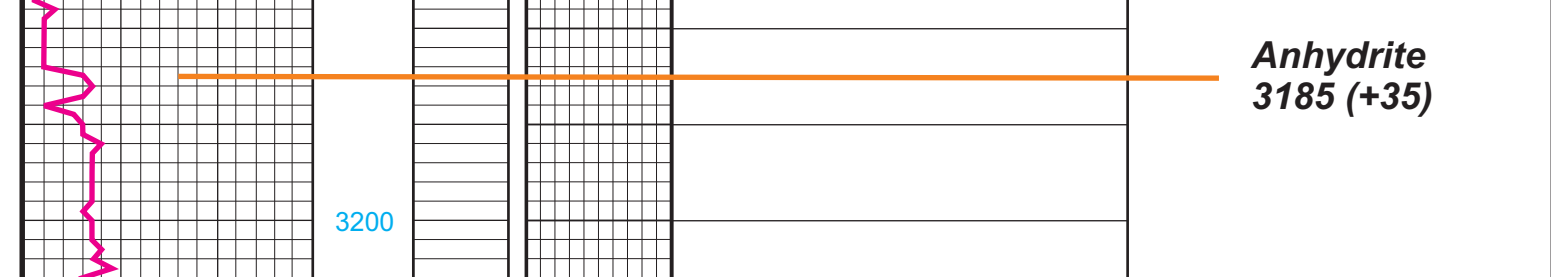
Dual Comp Potency 1 Data Induction
Microlog Source Midwest Wireline



REMARKS: Due to positive results on 2 DST's the decision was made to set 5 1/2" casing for production purposes.

RTD: 4780'. CT: 20 1/2 hrs. Ran 114fts of 15.5 5/8" prod csg set @ 4770'. HSI cmt w/365sxs H-Con, 170sxs HLD. 30sxs RH. PD @ 11:30PM 12/21. Circ 10sxs. RR @ 3:30AM 12/22/2021

LEGEND



DEPTH	LITHOLOGY	SAMPLE DESCRIPTION	REMARKS
3150	Anhydrite		Anhydrite 3185 (+35)
3200	Anhydrite		Base Anhydrite 3215 (+5)
3250			
3800			Geologist on location 3745' at 12:01 am 12/14/2021 Bit Trip at 3745' to change from PDC to button. Strap out of hole was 2.53' long to board. NOTE: Lost Circulation on trip back in hole during bit trip. Mud Check @ 3772 wt 8.6, vis. 69, lcm 4# Morgan Mud, Cade Lines @3818, 8:00am, 12/14/2021
3900	Limestone	Limestone: tan to gray, f-xln, oolitic, chaly, fossiliferous, no vis por, 3% sample heavy black surface stain, nfo, no odor	
3950	Limestone	Limestone: white, f-mxln, chaly, oolitic in part, v-fossiliferous, no vis por, 10% sample heavy black sat stain, slsfo on break, no odor	
4000	Limestone	Limestone: white to tan, f-mxln, oolitic, chaly, v-fossiliferous, no vis por, 10% sample heavy black sat stain, slsfo on break, no odor	
4050	Limestone	Limestone: white to tan, f-mxln, oolitic, chaly, v-fossiliferous, no vis por, 10% sample heavy black sat stain, slsfo on break, no odor	
4100	Limestone	Limestone: tan, f-xln, oolitic in part, chaly, fossiliferous, no vis por, 1% sample dark spotty stain, nfo, no odor	
4150	Limestone	Limestone: tan, f-xln, chaly, fossiliferous, no vis por, ns	
4200	Limestone	Limestone: white, f-mxln, chaly, blocky, fossiliferous, no vis por, ns	
4250	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4300	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4350	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4400	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4450	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4500	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4550	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4600	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4650	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4700	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4750	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	
4800	Limestone	Limestone: tan to white, f-xln, chaly, blocky, fossiliferous, no vis por, ns	

DST #1
4122-4261
30-60-60-90
1st open: blow built to 9 1/4"
1st shut in: no returns
2nd open: bob 19 min
2nd shut in: 1/4" return, died 15 min
Rec: 200' gmco 15/35/50 hydro: 2042-2038 psi lf: 28-81 psi ff: 77-100 psi sip: 1311-1249 psi bht: 123' F

DST #2
4258-4309
30-60-30-60
1st open: wk blow built to 3/4"
2nd open: wk blow built to 1/4"
Rec: 35' mud w oil spots hydro: 2126-2038 psi lf: 19-28 psi ff: 30-35 psi sip: 1019-953 psi bht: 125' F

DST #3
4305-4396
30-60-60-90
Slid 10' to bottom
1st open: blow built to 2 1/4"
1st shut in: no return
2nd open: blow built to 7"
2nd shut in: surface return
Rec: 47' gocm 10/10/80 hydro: 2159-2125 psi lf: 46-74 psi ff: 69-88 psi sip: 1402-1400 psi bht: 129' F

DST #4
4547-4594
30-60-30-60
1st open: wk blow built to 3/4"
2nd open: wk blow built to 1/4"
Rec: 15' mud w oil spots hydro: 2290-2179 psi lf: 17-19 psi ff: 20-21 psi sip: 51-35 psi bht: 127' F

DST #5 (straddle)
4686-4708
30-60-60-90
1st open: blow built to 4" (diesel)
2nd open: blow built to 4 1/2" no returns
Rec: 55' mw 44/56 120' smcw 5/95 hydro: 2378-2315 psi lf: 19-52 psi ff: 54-93 psi sip: 1128-1110 psi bht: 144' F



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water STE 300
Wichita, KS 67202

ATTN: Robert Hendrex

Shones #2-5

5-1s-37w Cheyenne,KS

Start Date: 2021.12.15 @ 22:09:00

End Date: 2021.12.16 @ 07:33:00

Job Ticket #: 67706 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.12.22 @ 15:26:17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67706

DST#: 1

ATTN: Robert Hendrex

Test Start: 2021.12.15 @ 22:09:00

GENERAL INFORMATION:

Formation: **Lansing A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:48:15

Time Test Ended: 07:33:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4122.00 ft (KB) To 4261.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4261.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press@RunDepth: 100.60 psig @ 4123.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.15

End Date:

2021.12.16

Last Calib.:

2021.12.16

Start Time: 22:09:05

End Time:

07:33:00

Time On Btm:

2021.12.16 @ 00:47:30

Time Off Btm:

2021.12.16 @ 04:54:45

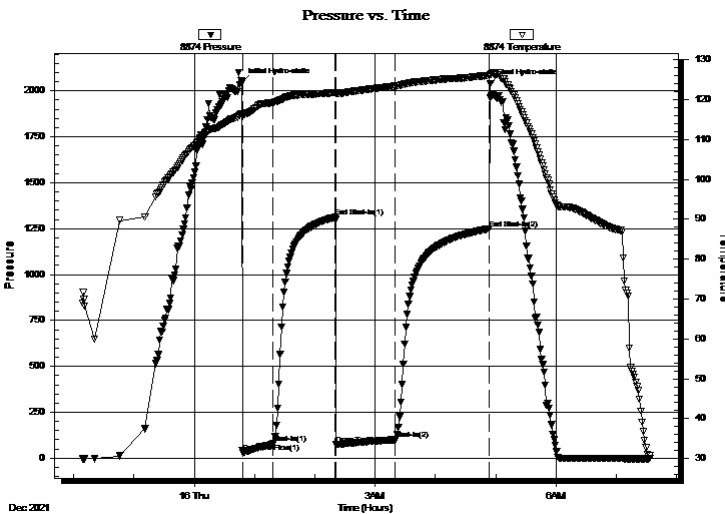
TEST COMMENT: IF: 9 14" blow .

IS: No return.

FF: BOB @ 19 min, 19" blow .

FS: 1/4" return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2042.72	116.49	Initial Hydro-static
1	28.95	116.11	Open To Flow (1)
31	81.39	119.29	Shut-In(1)
93	1311.62	121.79	End Shut-In(1)
94	77.07	121.49	Open To Flow (2)
152	100.60	123.44	Shut-In(2)
246	1249.48	126.04	End Shut-In(2)
248	2038.89	126.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	gmco 15g 35m 50o	1.73
0.00	45'GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67706

DST#: 1

ATTN: Robert Hendrex

Test Start: 2021.12.15 @ 22:09:00

Tool Information

Drill Pipe:	Length: 3983.00 ft	Diameter: 3.80 inches	Volume: 55.87 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 56.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4122.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	139.00 ft			
Tool Length:	169.00 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			4093.00	
Shut In Tool	5.00		Fluid	4098.00	
Hydraulic tool	5.00			4103.00	
Em Tool	3.00			4106.00	
Jars	5.00			4111.00	
Safety Joint	2.00			4113.00	
Packer	5.00		Inside	4118.00	30.00 Bottom Of Top Packer
Packer	4.00			4122.00	
Stubb	1.00			4123.00	
Recorder	0.00	8874	Inside	4123.00	
Recorder	0.00	8319	Outside	4123.00	
Perforations	8.00			4131.00	
Change Over Sub	1.00			4132.00	
Drill Pipe	125.00			4257.00	
Change Over Sub	1.00			4258.00	
Bullnose	3.00			4261.00	139.00 Bottom Packers & Anchor
Total Tool Length:	169.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67706

DST#: 1

ATTN: Robert Hendrex

Test Start: 2021.12.15 @ 22:09:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	gmco 15g 35m 50o	1.731
0.00	45'GIP	0.000

Total Length: 200.00 ft Total Volume: 1.731 bbl

Num Fluid Samples: 0

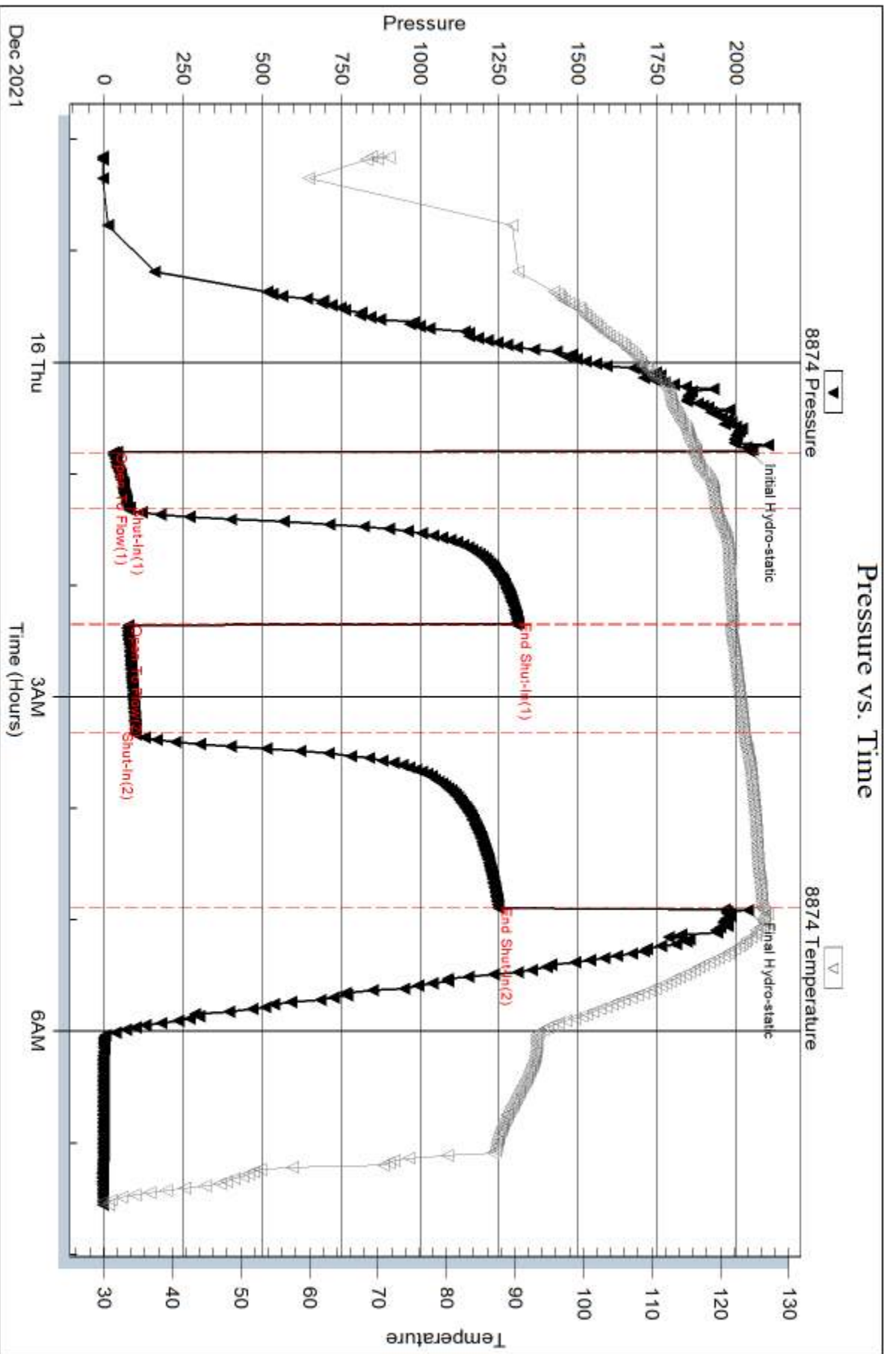
Num Gas Bombs: 0

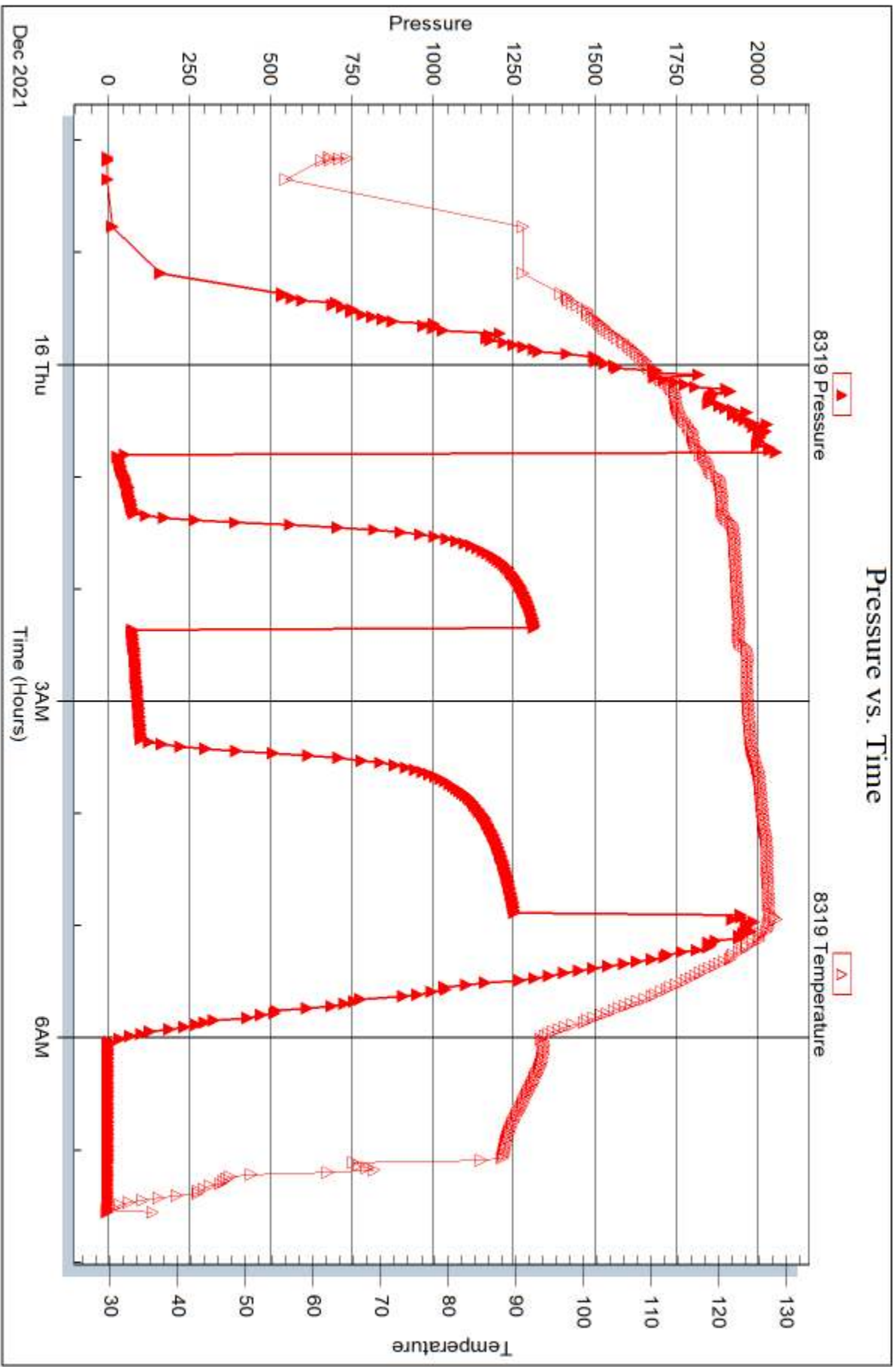
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water STE 300
Wichita, KS 67202

ATTN: Robert Hendrex

Shones #2-5

5-1s-37w Cheyenne,KS

Start Date: 2021.12.16 @ 22:57:00

End Date: 2021.12.17 @ 08:08:00

Job Ticket #: 67707 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.12.22 @ 15:22:42



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

5-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67707

DST#: 2

ATTN: Robert Hendrex

Test Start: 2021.12.16 @ 22:57:00

GENERAL INFORMATION:

Formation: **Lansing G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:27:15

Time Test Ended: 08:08:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4258.00 ft (KB) To 4308.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4308.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874

Inside

Press@RunDepth: 35.70 psig @ 4259.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.16

End Date:

2021.12.17

Last Calib.:

2021.12.17

Start Time: 22:57:05

End Time:

08:08:00

Time On Btm:

2021.12.17 @ 02:27:00

Time Off Btm:

2021.12.17 @ 05:39:30

TEST COMMENT:

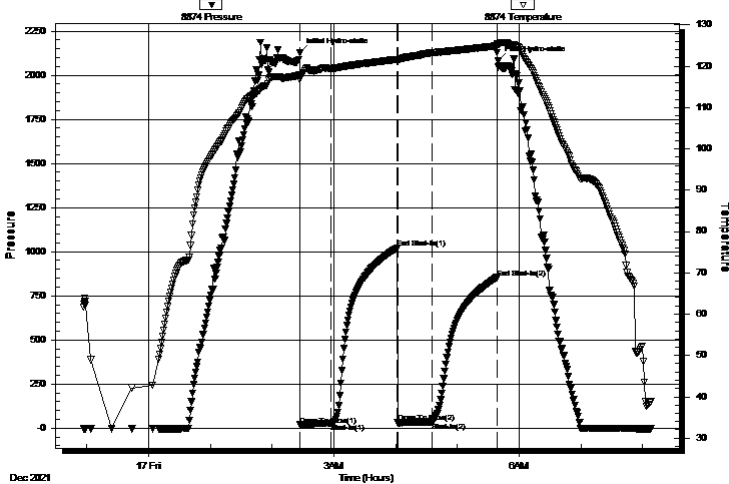
IF: 3/4" blow .

IS: No return.

FF: 1/4" blow .

FS: No return. 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2125.73	117.75	Initial Hydro-static
1	18.59	116.74	Open To Flow (1)
31	28.25	119.44	Shut-In(1)
95	1019.34	121.64	End Shut-In(1)
95	30.30	121.14	Open To Flow (2)
129	35.70	123.22	Shut-In(2)
192	853.18	124.90	End Shut-In(2)
193	2080.92	125.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100m (oil spots)	0.17

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

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67707

DST#: 2

ATTN: Robert Hendrex

Test Start: 2021.12.16 @ 22:57:00

Tool Information

Drill Pipe:	Length: 4140.00 ft	Diameter: 3.80 inches	Volume: 58.07 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 58.65 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4258.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	81.00 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			4229.00	
Shut In Tool	5.00		Fluid	4234.00	
Hydraulic tool	5.00			4239.00	
Em Tool	3.00			4242.00	
Jars	5.00			4247.00	
Safety Joint	2.00			4249.00	
Packer	5.00		Inside	4254.00	30.00 Bottom Of Top Packer
Packer	4.00			4258.00	
Stubb	1.00			4259.00	
Recorder	0.00	8874	Inside	4259.00	
Recorder	0.00	8319	Outside	4259.00	
Perforations	14.00			4273.00	
Change Over Sub	1.00			4274.00	
Drill Pipe	31.00			4305.00	
Change Over Sub	1.00			4306.00	
Bullnose	3.00			4309.00	51.00 Bottom Packers & Anchor
Total Tool Length:	81.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67707

DST#: 2

ATTN: Robert Hendrex

Test Start: 2021.12.16 @ 22:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
35.00	Mud 100m (oil spots)	0.172

Total Length: 35.00 ft Total Volume: 0.172 bbf

Num Fluid Samples: 0

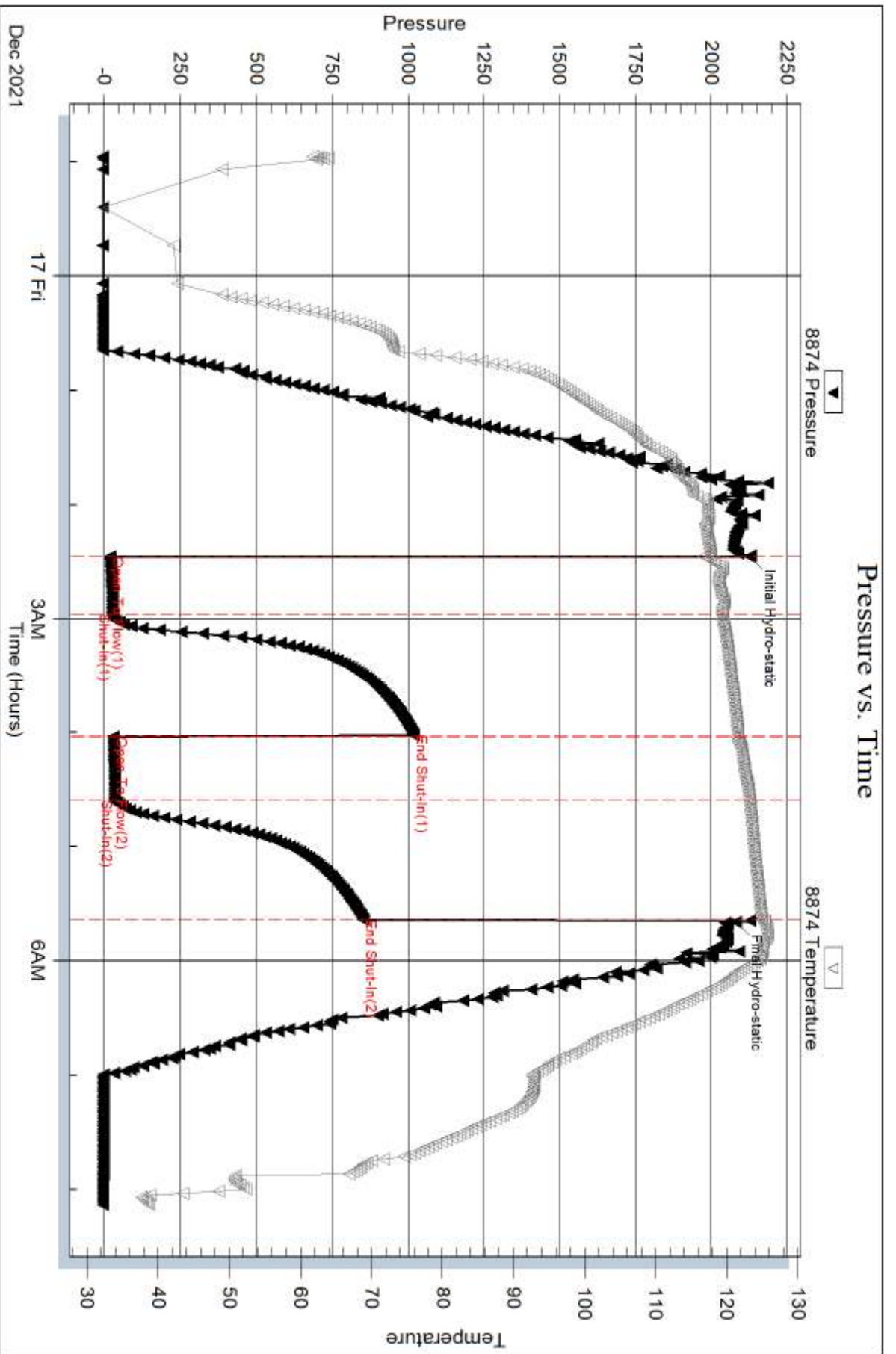
Num Gas Bombs: 0

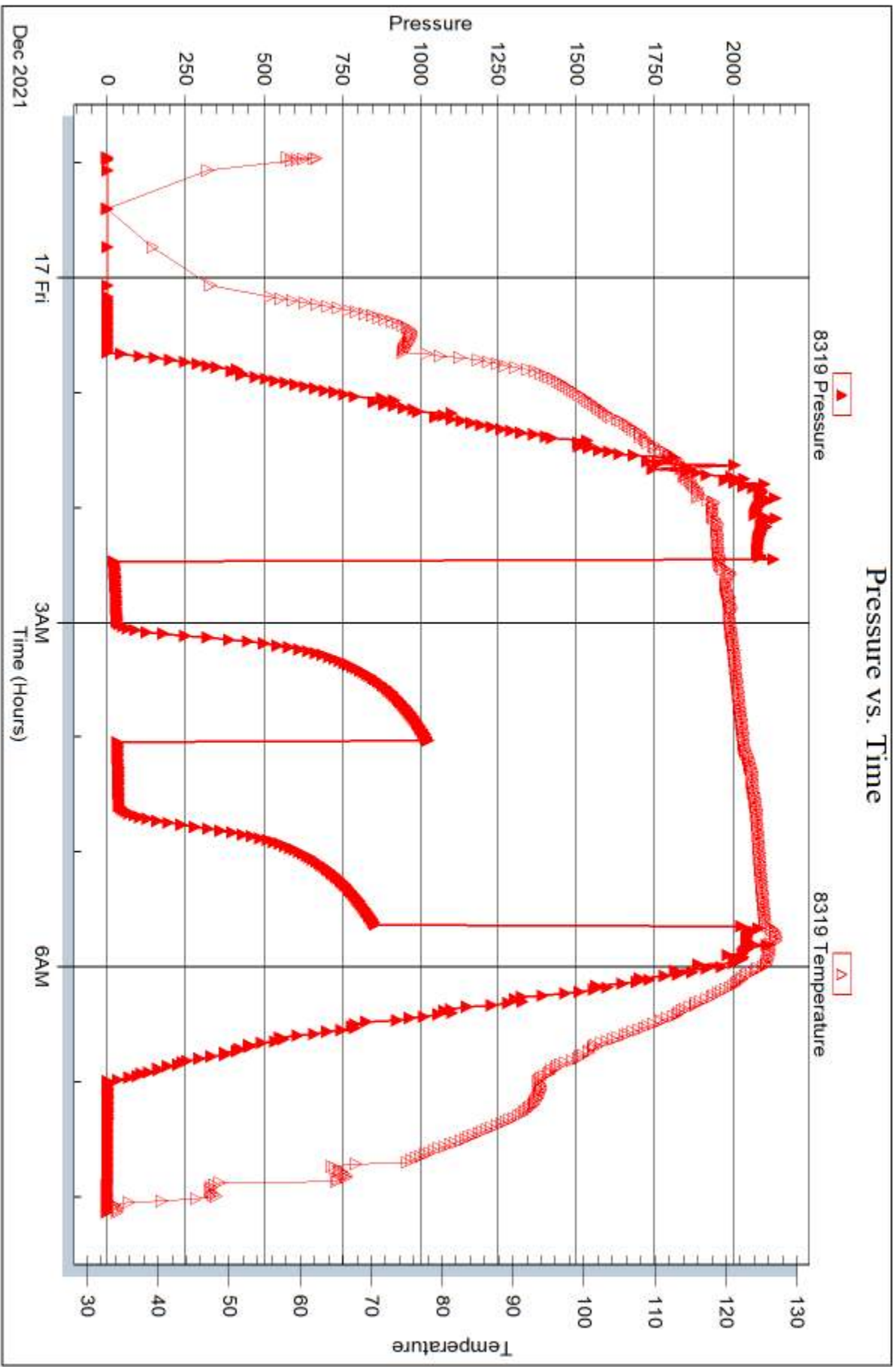
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water STE 300
Wichita, KS 67202

ATTN: Robert Hendrex

Shones #2-5

5-1s-37w Cheyenne,KS

Start Date: 2021.12.17 @ 22:18:00

End Date: 2021.12.18 @ 07:51:00

Job Ticket #: 67708 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.12.22 @ 15:20:08

Murfin Drilling Co

5-1s-37w Cheyenne,KS

Shones #2-5

DST # 3

LKC H-J

2021.12.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67708

DST#: 3

ATTN: Robert Hendrex

Test Start: 2021.12.17 @ 22:18:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:55:00

Time Test Ended: 07:51:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4305.00 ft (KB) To 4396.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4396.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874 Inside

Press@RunDepth: 88.86 psig @ 4306.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.17

End Date: 2021.12.18

Last Calib.: 2021.12.18

Start Time: 22:18:05

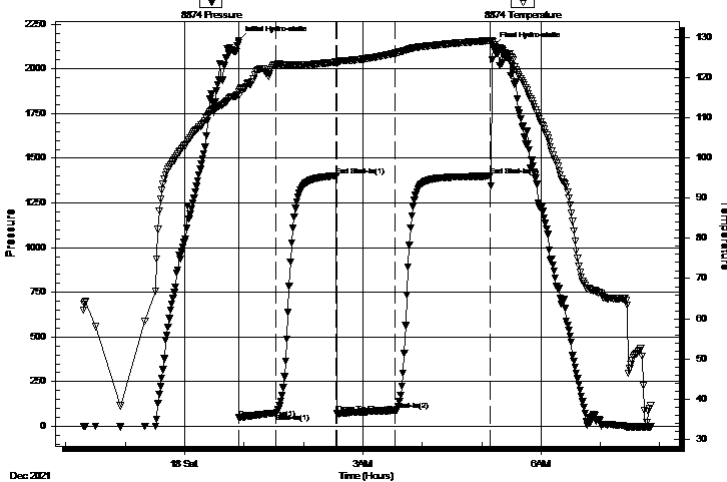
End Time: 07:51:00

Time On Btm: 2021.12.18 @ 00:54:45

Time Off Btm: 2021.12.18 @ 05:11:15

TEST COMMENT: IF: 2 1/4" blow. Slid 10' mud dropped 10' down anulis
IS: No return.
FF: 7" blow.
FS: Surface return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.36	116.42	Initial Hydro-static
1	46.94	115.38	Open To Flow (1)
38	74.24	123.19	Shut-In(1)
99	1402.29	123.81	End Shut-In(1)
99	69.80	123.39	Open To Flow (2)
158	88.86	126.02	Shut-In(2)
254	1400.06	129.12	End Shut-In(2)
257	2125.36	128.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	gocm 15g 35o 50m	0.58
47.00	gocm 10g 10o 80m	0.66

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

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67708

DST#: 3

ATTN: Robert Hendrex

Test Start: 2021.12.17 @ 22:18:00

Tool Information

Drill Pipe:	Length: 4171.00 ft	Diameter: 3.80 inches	Volume: 58.51 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.09 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4305.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	121.00 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			4276.00	
Shut In Tool	5.00		Fluid	4281.00	
Hydraulic tool	5.00			4286.00	
Em Tool	3.00			4289.00	
Jars	5.00			4294.00	
Safety Joint	2.00			4296.00	
Packer	5.00		Inside	4301.00	30.00 Bottom Of Top Packer
Packer	4.00			4305.00	
Stubb	1.00			4306.00	
Recorder	0.00	8874	Inside	4306.00	
Recorder	0.00	8319	Outside	4306.00	
Perforations	22.00			4328.00	
Change Over Sub	1.00			4329.00	
Drill Pipe	63.00			4392.00	
Change Over Sub	1.00			4393.00	
Bullnose	3.00			4396.00	91.00 Bottom Packers & Anchor
Total Tool Length:	121.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67708

DST#: 3

ATTN: Robert Hendrex

Test Start: 2021.12.17 @ 22:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	gocm 15g 35o 50m	0.580
47.00	gocm 10g 10o 80m	0.659

Total Length: 165.00 ft

Total Volume: 1.239 bbl

Num Fluid Samples: 0

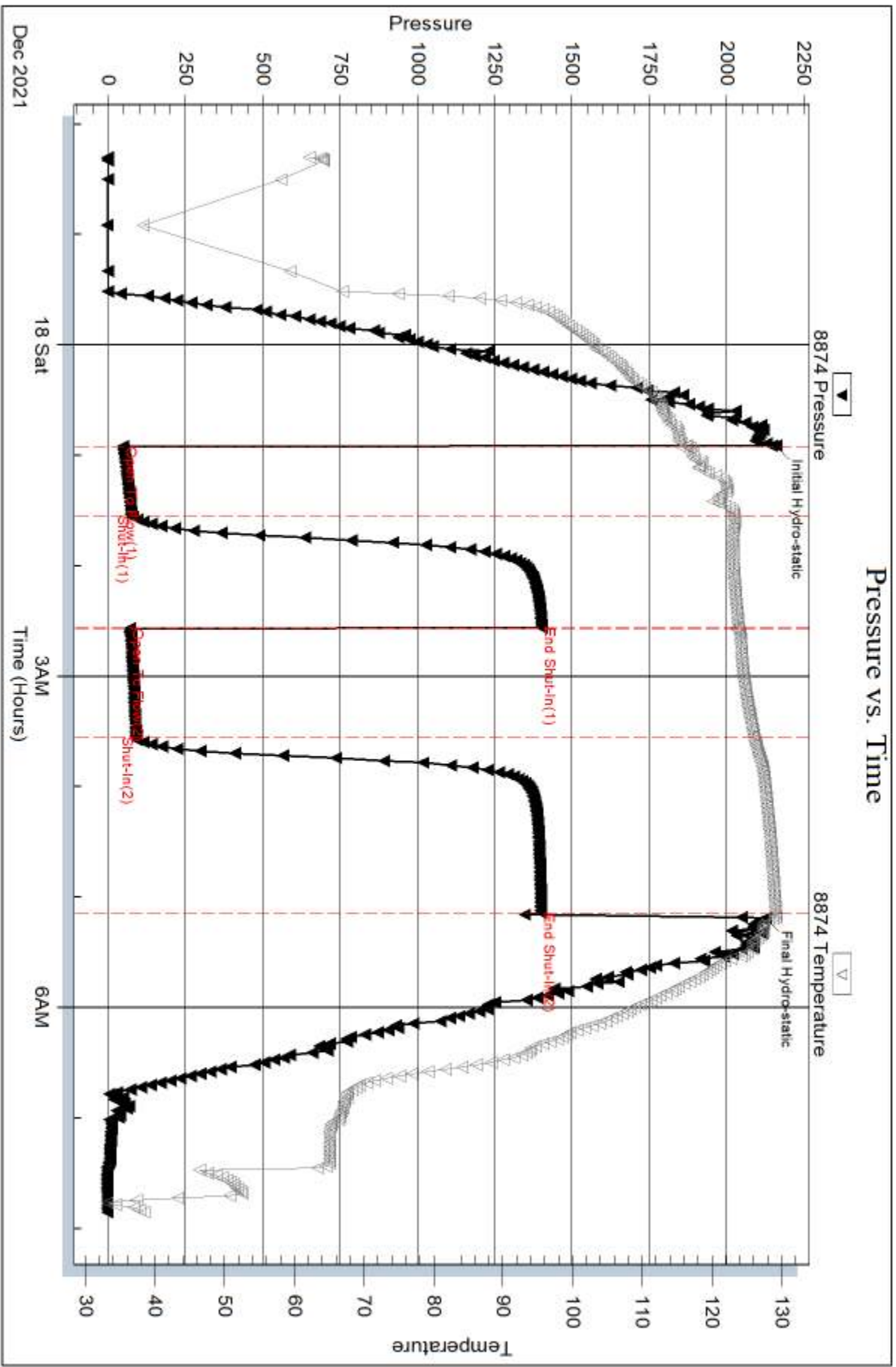
Num Gas Bombs: 0

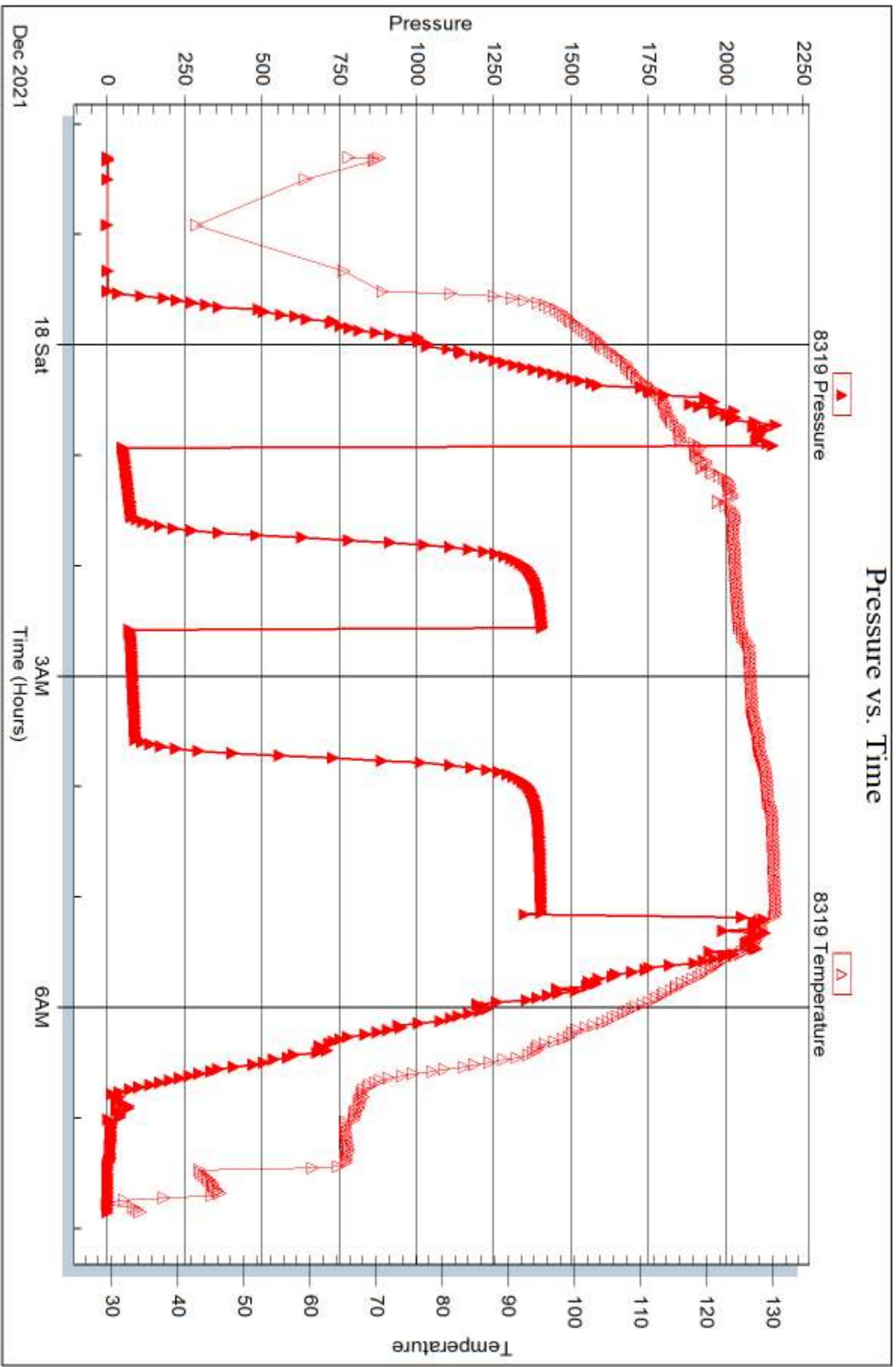
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water STE 300
Wichita, KS 67202

ATTN: Robert Hendrex

Shones #2-5

5-1s-37w Cheyenne,KS

Start Date: 2021.12.19 @ 08:03:00

End Date: 2021.12.19 @ 16:15:45

Job Ticket #: 67709 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.12.22 @ 15:15:43



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67709

DST#: 4

ATTN: Robert Hendrex

Test Start: 2021.12.19 @ 08:03:00

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:58:15

Time Test Ended: 16:15:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4547.00 ft (KB) To 4594.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4594.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8874 Inside

Press@RunDepth: 21.07 psig @ 4548.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.19

End Date:

2021.12.19

Last Calib.:

2021.12.19

Start Time: 08:03:05

End Time:

16:15:44

Time On Btm:

2021.12.19 @ 10:58:00

Time Off Btm:

2021.12.19 @ 14:04:30

TEST COMMENT:

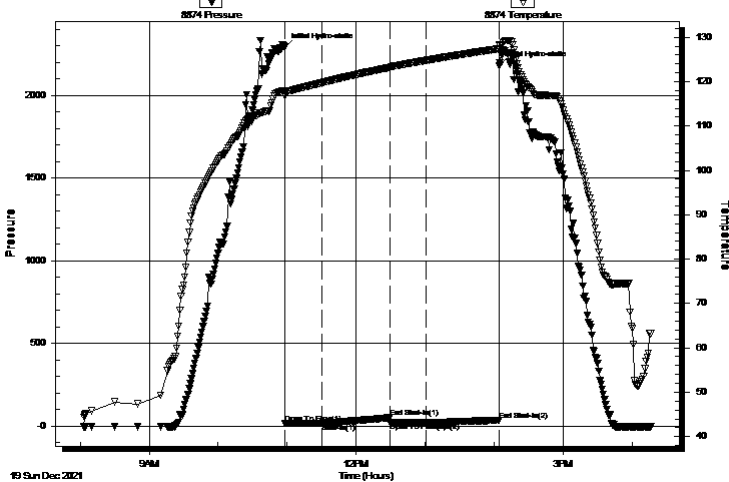
IF: 3/4" blow .

IS: No return.

FF: 1/4" blow .

FS: No return 30-60-30-60

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2290.81	117.99	Initial Hydro-static
1	17.00	116.89	Open To Flow (1)
32	19.47	119.76	Shut-In(1)
91	51.57	123.21	End Shut-In(1)
92	20.75	123.22	Open To Flow (2)
123	21.07	124.77	Shut-In(2)
186	35.56	127.39	End Shut-In(2)
187	2179.46	128.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100m (oil spots)	0.07

* 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

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67709

DST#: 4

ATTN: Robert Hendrex

Test Start: 2021.12.19 @ 08:03:00

Tool Information

Drill Pipe:	Length: 4422.00 ft	Diameter: 3.80 inches	Volume: 62.03 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 62.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4547.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	77.00 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			4518.00	
Shut In Tool	5.00		Fluid	4523.00	
Hydraulic tool	5.00			4528.00	
Em Tool	3.00			4531.00	
Jars	5.00			4536.00	
Safety Joint	2.00			4538.00	
Packer	5.00		Inside	4543.00	30.00 Bottom Of Top Packer
Packer	4.00			4547.00	
Stubb	1.00			4548.00	
Recorder	0.00	8874	Inside	4548.00	
Recorder	0.00	8319	Outside	4548.00	
Perforations	10.00			4558.00	
Change Over Sub	1.00			4559.00	
Drill Pipe	31.00			4590.00	
Change Over Sub	1.00			4591.00	
Bullnose	3.00			4594.00	47.00 Bottom Packers & Anchor
Total Tool Length:	77.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 67709

DST#: 4

ATTN: Robert Hendrex

Test Start: 2021.12.19 @ 08:03:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 60.01 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 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
15.00	mud 100m (oil spots)	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

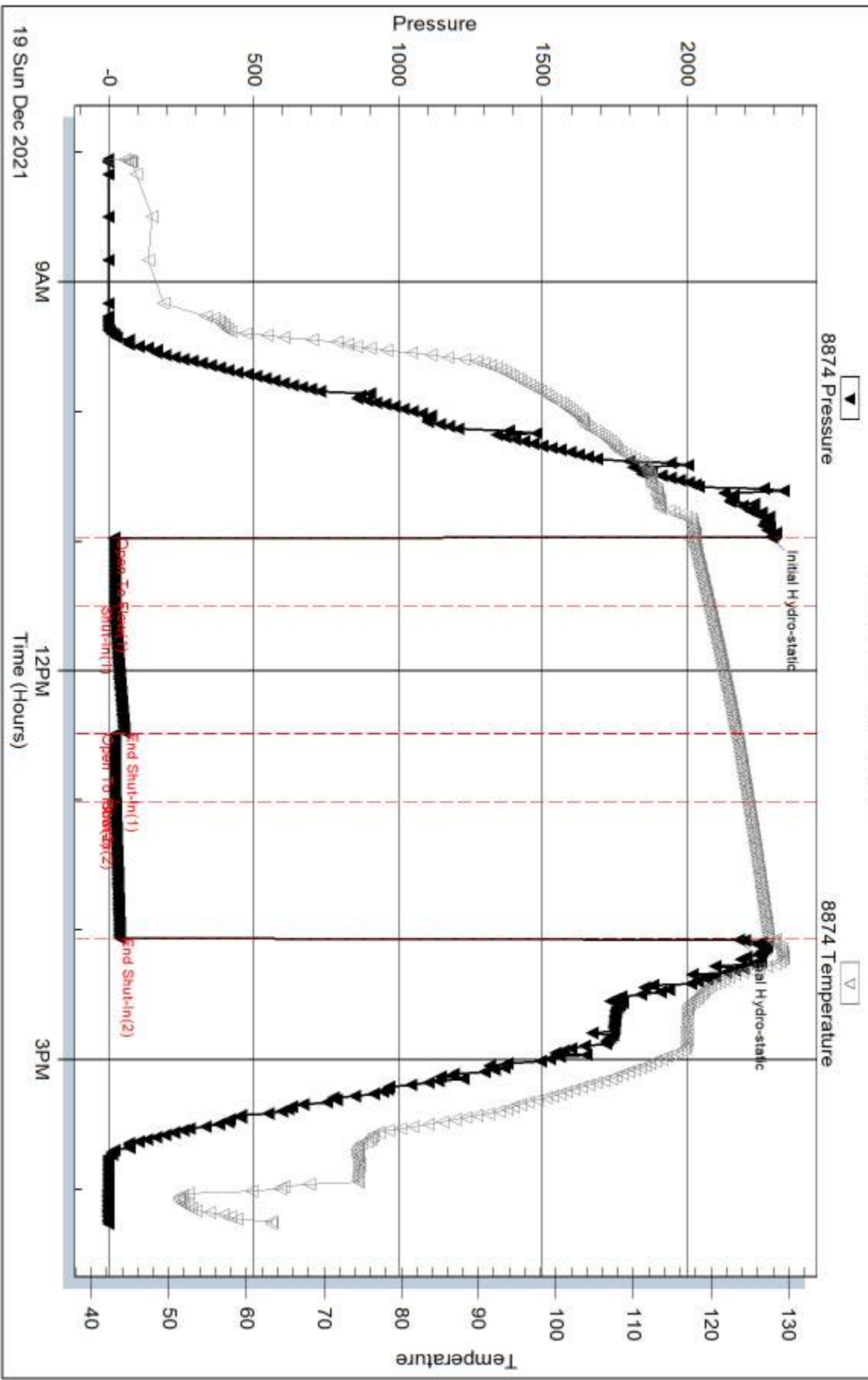
Serial #:

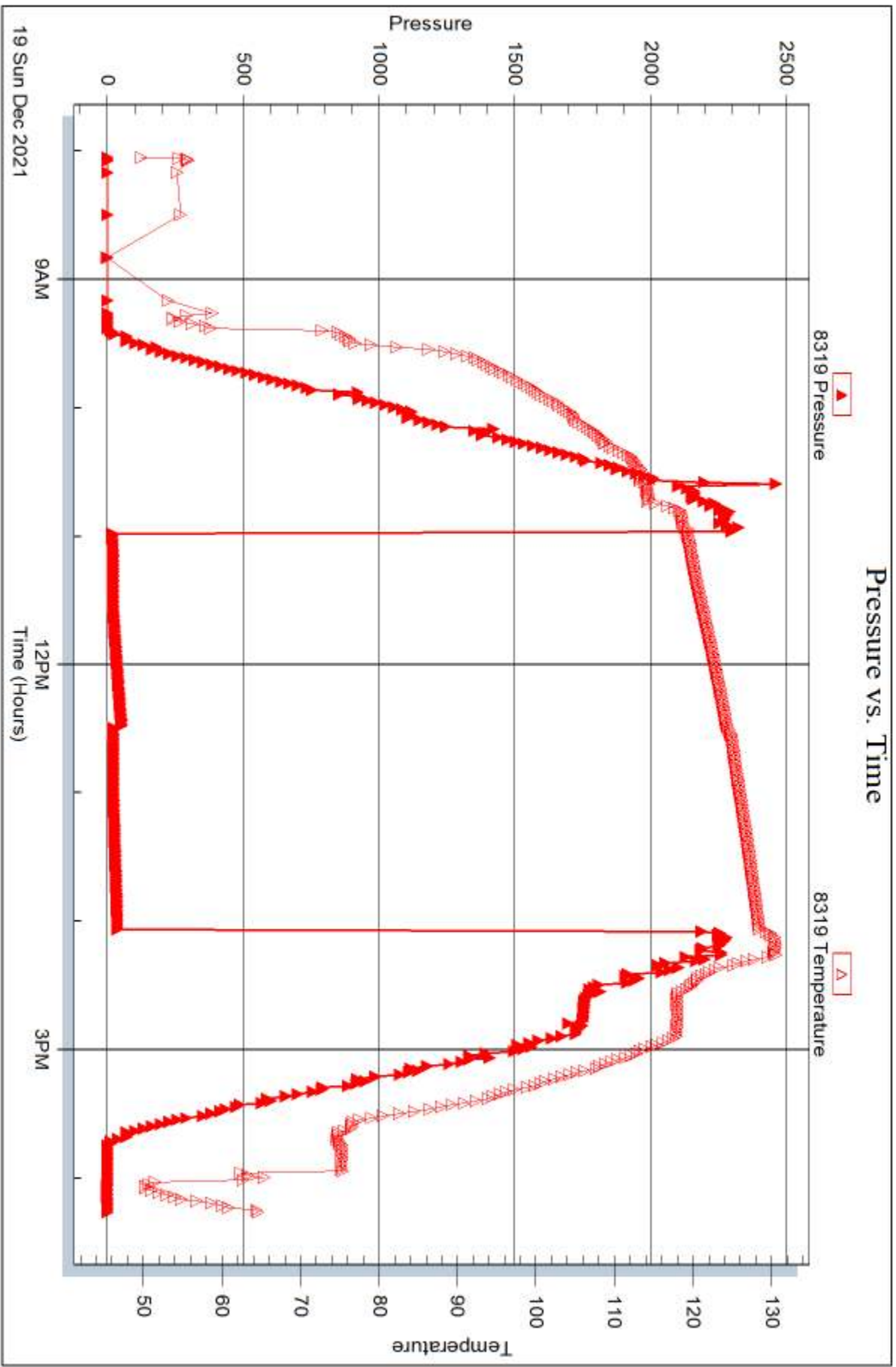
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co**

250 N Water STE 300
Wichita, KS 67202

ATTN: Robert Hendrex

Shones #2-5

5-1s-37w Cheyenne,KS

Start Date: 2021.12.20 @ 19:35:00

End Date: 2021.12.21 @ 05:13:35

Job Ticket #: 68549 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2021.12.22 @ 15:13:20

Murfin Drilling Co
5-1s-37w Cheyenne,KS
Shones #2-5
DST # 5
Cherokee Sand
2021.12.20



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co

5-1s-37w Cheyenne, KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 68549

DST#: 5

ATTN: Robert Hendrex

Test Start: 2021.12.20 @ 19:35:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:14:36

Time Test Ended: 05:13:35

Test Type: Conventional Straddle (Reset)

Tester: James Winder

Unit No: 73

Interval: 4686.00 ft (KB) To 4708.00 ft (KB) (TVD)

Reference Elevations: 3220.00 ft (KB)

Total Depth: 4780.00 ft (KB) (TVD)

3215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 92.69 psig @ 4687.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.20

End Date: 2021.12.21

Last Calib.: 2021.12.21

Start Time: 19:35:01

End Time: 05:13:35

Time On Btm: 2021.12.20 @ 22:14:06

Time Off Btm: 2021.12.21 @ 02:21:21

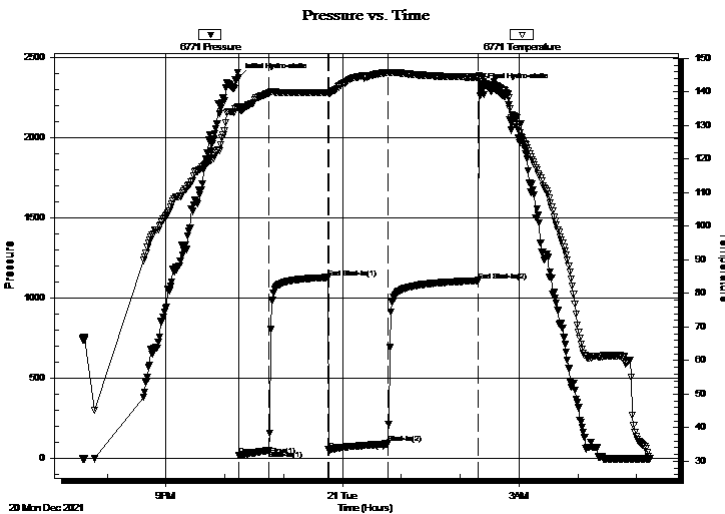
TEST COMMENT: 30 - IF: 1/2" Blow at open, built to 4" (Diesel in bucket)

60 - IS: Blow back built to 3/4"

60 - FF: Blow built to 4 1/2"

90 - FS: Blow back built to 3/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2377.92	135.62	Initial Hydro-static
1	19.07	135.07	Open To Flow (1)
31	52.02	139.62	Shut-In(1)
91	1129.45	139.91	End Shut-In(1)
92	54.22	139.62	Open To Flow (2)
152	92.69	145.82	Shut-In(2)
245	1110.09	144.42	End Shut-In(2)
248	2315.02	143.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	SMCW 95%w, 5%m	0.59
55.00	MW 56%w, 44%m	0.77

* 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

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 68549

DST#: 5

ATTN: Robert Hendrex

Test Start: 2021.12.20 @ 19:35:00

Tool Information

Drill Pipe:	Length: 4548.00 ft	Diameter: 3.80 inches	Volume: 63.80 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 64.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4686.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	4708.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	127.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4654.00	
Shut In Tool	5.00			4659.00	
Hydraulic tool	5.00			4664.00	
Jars	5.00			4669.00	
EM Tool	4.00			4673.00	
Safety Joint	3.00			4676.00	
Packer	5.00			4681.00	33.00 Bottom Of Top Packer
Packer	5.00			4686.00	
Stubb	1.00			4687.00	
Recorder	0.00	6771	Inside	4687.00	
Recorder	0.00	8367	Outside	4687.00	
Perforations	16.00			4703.00	
Blank Off Sub	1.00			4704.00	
Blank Spacing	4.00			4708.00	22.00 Tool Interval
Packer	0.00			4708.00	
Packer - Shale	0.00			4708.00	
Stubb	1.00			4709.00	
Recorder	0.00	8700	Below	4709.00	
Perforations	3.00			4712.00	
Blank Spacing	65.00			4777.00	
Bullnose	3.00			4780.00	72.00 Bottom Packers & Anchor

Total Tool Length: 127.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co

5-1s-37w Cheyenne,KS

250 N Water STE 300
Wichita, KS 67202

Shones #2-5

Job Ticket: 68549

DST#: 5

ATTN: Robert Hendrex

Test Start: 2021.12.20 @ 19:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

23000 ppm

Viscosity: 78.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	SMCW 95%w , 5%m	0.590
55.00	MW 56%w , 44%m	0.772

Total Length: 175.00 ft Total Volume: 1.362 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .298 ohms @ 69.5 deg F Chlorides = 23,000 ppm

Serial #: 6771

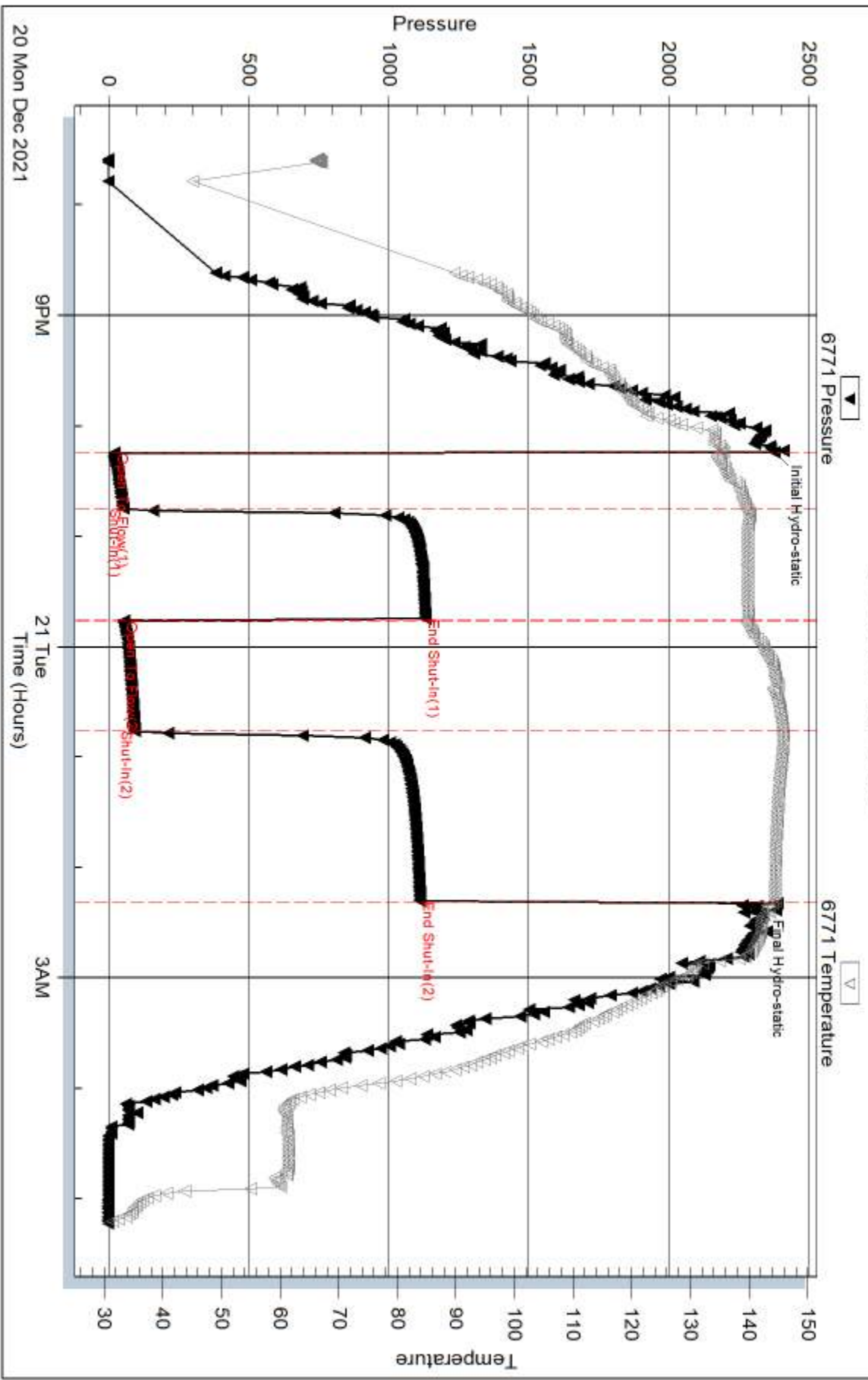
Inside

Marfin Drilling Co

Shones #2-5

DST Test Number: 5

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 68549

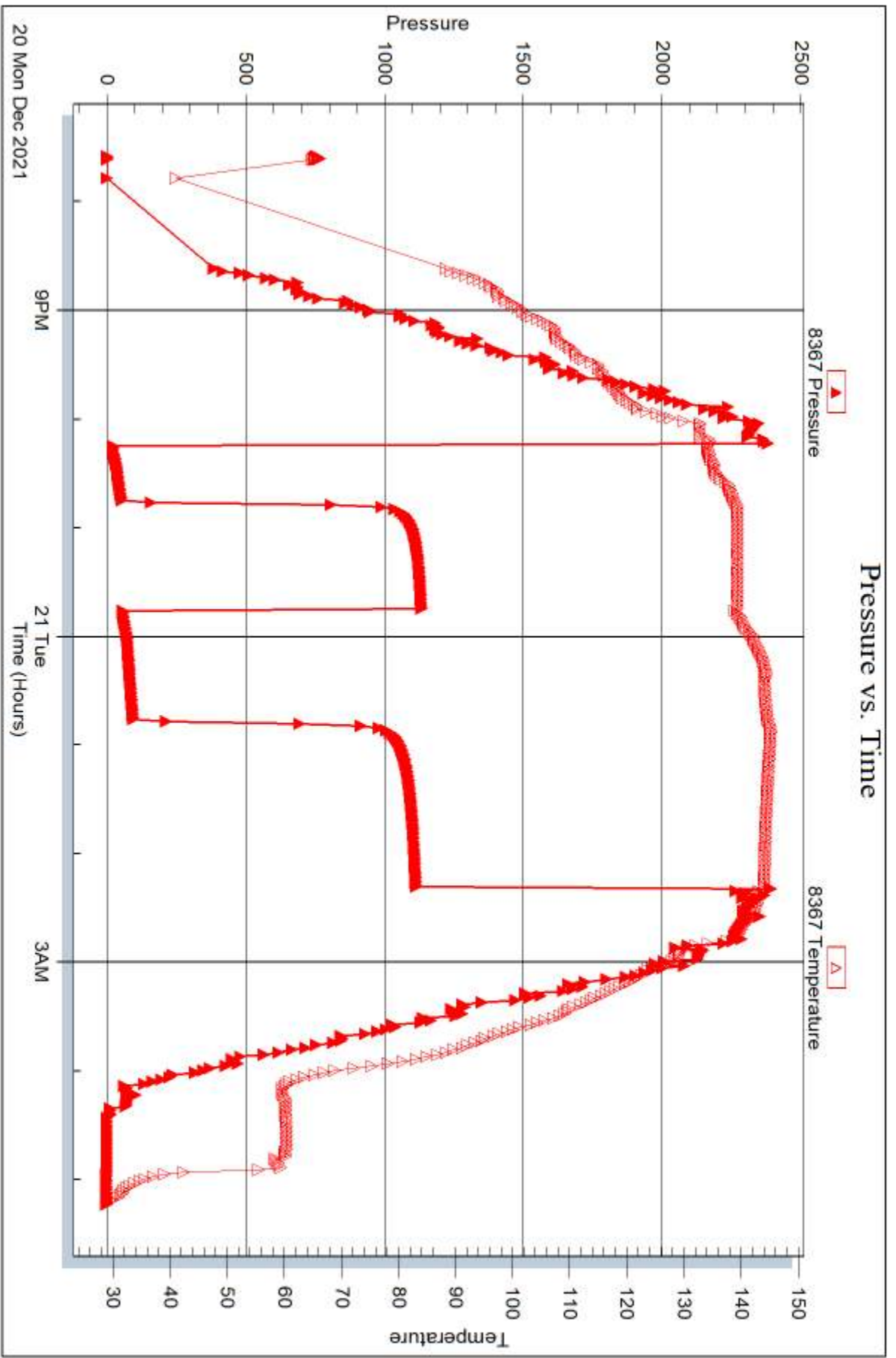
Printed: 2021.12.22 @ 15:15:06

Serial #: 8367

Outside Marfin Drilling Co

Shones #2-5

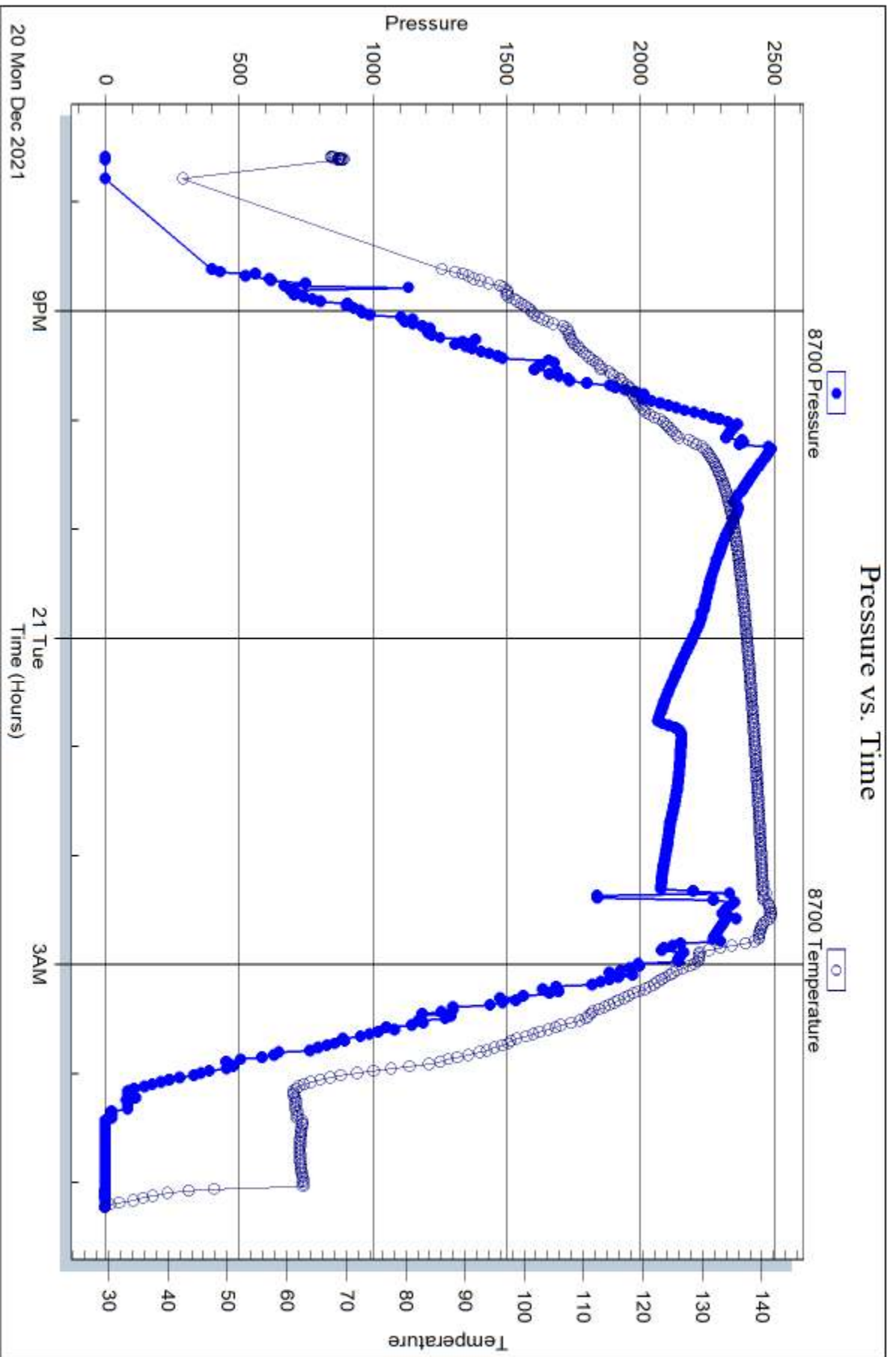
DST Test Number: 5

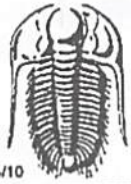


Triobite Testing, Inc

Ref. No: 68549

Printed: 2021.12.22 @ 15:15:07





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67706

Well Name & No. Shones #2-5 Test No. 1 Date 12/16/2021
 Company Martin Drilling Co, Inc Elevation 3220 KB 3215 GL
 Address Wichita, ks
 Co. Rep / Geo. Robert Hendvex Rig Martin 110
 Location: Sec. 5 Twp 1s Rge. 37W Co. Cheyenc State KS

Interval Tested 4122-4261 Zone Tested Lansing A-D
 Anchor Length 139 Drill Pipe Run 3987 Mud Wt. 9.1
 Top Packer Depth 4117 Drill Collars Run 118 Vis 60
 Bottom Packer Depth 4122 Wt. Pipe Run 0 WL 6.8
 Total Depth 4261 Chlorides 800 ppm System LCM 5#

Blow Description IF 9 1/4" blow
ISI No return.
FF BOB @ 19 min - 19" blow
FSI 4" return. died @ 15 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>GMCO</u>	<u>15</u>	<u>50</u>	<u>35</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>45' GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

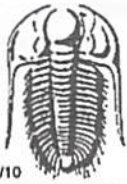
Rec Total 200 BHT 123 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2042</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>2100</u>
(B) First Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2209</u>
(C) First Final Flow <u>81</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0046</u>
(D) Initial Shut-In <u>1311</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0459</u>
(E) Second Initial Flow <u>77</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0733</u>
(F) Second Final Flow <u>100</u>	<input checked="" type="checkbox"/> Mileage <u>152rt 190</u>	Comments
(G) Final Shut-In <u>1249</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2038</u>	<input type="checkbox"/> Straddle	

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Shale Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>350</u>
	Sub Total <u>1965</u>	Total <u>2315</u>
		MP/DST Disc't

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **67707**

Well Name & No. Shones #2-5 Test No. 2 Date 12/17/2021
 Company Murkin Drilling Co Inc Elevation 3820 KB 3215 GL
 Address Wichita, KS
 Co. Rep / Geo. Robert Hendrix Rig Murkin 110
 Location: Sec. 5 Twp 15 Rge. 37W Co. Cherokee State Ks

Interval Tested 4258-4309 Zone Tested Lansing G
 Anchor Length 51' Drill Pipe Run 4150 Mud Wt. 9.0
 Top Packer Depth 4253 Drill Collars Run 118 Vis 60
 Bottom Packer Depth 4258 Wt. Pipe Run 0 WL 6.0
 Total Depth 4309 Chlorides 1500 ppm System LCM 4#

Blow Description IF 3/4" blow
ISI No return.
FF 1/4" blow
FSS No return.

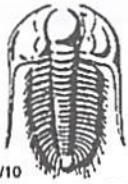
Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>mud</u>			<u>100</u>	
	<u>oil spots</u>				

Rec Total 35 BHT 125 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2126</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>2100</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2257</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0229</u>
(D) Initial Shut-In <u>1019</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0541</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0808</u>
(F) Second Final Flow <u>35</u>	<input checked="" type="checkbox"/> Mileage <u>190</u>	Comments
(G) Final Shut-In <u>853</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2080</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool <u>350</u>
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Day Standby	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility	Total <u>2315</u>
	Sub Total <u>1965</u>	MP/DST Disc't

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **67708**

Well Name & No. Shones #2-5 Test No. 3 Date 12/18/2021
 Company Mutan Drilling Co, Inc Elevation 3220 KB 3215 GL
 Address Wichita KS
 Co. Rep / Geo. Robert Hendrix Rig Mutan 110
 Location: Sec. 5 15 Twp 37w Rge. _____ Co. Cherokee State Ks

Interval Tested 4305-4396 Zone Tested Ltc H-J
 Anchor Length 91 Drill Pipe Run 4171 Mud Wt. 9.1
 Top Packer Depth 4300 Drill Collars Run 118 Vis 55
 Bottom Packer Depth 4305 Wt. Pipe Run Ø WL 6.4
 Total Depth 4396 Chlorides 2,000 ppm System LCM 3#
 Blow Description IF 2 1/4" blow - Tool slid 10' mud fell 10' down annulus
ISI No return
FF 7" blow
FSI No return surface return

Rec	Feet of	%gas	%oil	%water	%mud
<u>47</u>	<u>60cm</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>118</u>	<u>60cm</u>	<u>15</u>	<u>35</u>	<u>50</u>	
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 165 BHT 129 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2159</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>2100</u>
(B) First Initial Flow <u>46</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>2218</u>
(C) First Final Flow <u>74</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0055</u>
(D) Initial Shut-In <u>1402</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0505</u>
(E) Second Initial Flow <u>69</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0758</u>
(F) Second Final Flow <u>98</u>	<input checked="" type="checkbox"/> Mileage <u>190</u>	Comments _____
(G) Final Shut-In <u>1400</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2125</u>	<input type="checkbox"/> Straddle _____	
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Ruined Packer _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Accessibility _____	Sub Total <u>350</u>
	Sub Total <u>1965</u>	Total <u>1965</u>
		MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67709

Well Name & No. Shones # 2-5 Test No. 4 Date 12 19 2021
 Company Murkin Drilling Co, Inc Elevation 3220 KB 3215 GL
 Address Wichita, ks
 Co. Rep / Geo. Robert Mendrix Rig Murkin 110
 Location: Sec. ~~5~~ Twp 153 Rge. 37W Co. Cheyenne State KS

Interval Tested 4547 - 4594 Zone Tested FL Scott
 Anchor Length 47 Drill Pipe Run 4422 Mud Wt. 9.1
 Top Packer Depth 4542 Drill Collars Run 118 Vis 66
 Bottom Packer Depth 4547 Wt. Pipe Run Ø WL 6.0
 Total Depth 4594 Chlorides 1000 ppm System LCM 4#

Blow Description IF 3/4" blow
IST No return,
FF 1/4" blow
FSI No return,

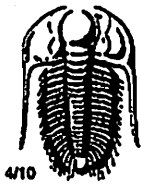
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
	<u>oil spots</u>				

Rec Total 15 BHT 127 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2290</u>	<input type="checkbox"/> Test <u>1450</u>	T-On Location <u>0700</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0802</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1100</u>
(D) Initial Shut-In <u>51</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1402</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1616</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>190</u>	Comments
(G) Final Shut-In <u>35</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2179</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool <u>350</u>
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Day Standby	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility	Total <u>2315</u>
	Sub Total <u>1965</u>	MP/DST Disc't

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 68549

Well Name & No. Shones #2-5 Test No. 5 Date 12-20-21
 Company Murfin Drilling Co Inc Elevation 3220 KB 3215 GL
 Address 250 N. Water STE 300 Wichita, KS 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #110
 Location: Sec. 5 Twp 15 Rge. 37w Co. Cheyenne State KS

Interval Tested 4686-4708 Zone Tested Cherokee Sand
 Anchor Length 22 Anchor 72 Tail Drill Pipe Run 4548 Mud Wt. 9.2
 Top Packer Depth 4681 Drill Collars Run 120 Vis 78
 Bottom Packer Depth 4686 Wt. Pipe Run - WL 7.2
 Total Depth 4780 Chlorides 1500 ppm System LCM 4
 Blow Description IF: 1/2" Blow at open, built to 4" (diesel in bucket)
ISI: Blowback built to 3/4"
FF: Blow built to 4 1/2"
FSI: Blowback built to 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>55</u>	<u>mw</u>		<u>56</u>	<u>44</u>	
<u>120</u>	<u>SMCW</u>		<u>95</u>	<u>5</u>	

Rec Total 175 BHT 144 Gravity _____ API RW .298 @ 69.5° F Chlorides 23,000 ppm
 (A) Initial Hydrostatic 2378 Test 1450 T-On Location 18:40 12/20
 (B) First Initial Flow 19 Jars 250 T-Started 19:35
 (C) First Final Flow 52 Safety Joint 75 T-Open 22:14
 (D) Initial Shut-In 1129 Circ Sub _____ T-Pulled 2:18
 (E) Second Initial Flow 54 Hourly Standby _____ T-Out 5:10 12/21
 (F) Second Final Flow 93 Mileage 152RT 190 Comments _____
 (G) Final Shut-In 1110 Sampler _____
 (H) Final Hydrostatic 2315 Straddle 250 EM Tool 350
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 350
 Accessibility _____ Total 2565
 Sub Total 2215 MP/DST Disc't _____

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

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CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: Shones # 2-5	Ticket: WP 2249
City, State: Oakley KS	County: Cheyenne KS	Date: 12/21/2021
Field Rep: Josh Mosier	S-T-R: 5-1S-37W	Service: Longstring

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7.875 in	Blend:	H- con	Blend:	H- LD
Hole Depth:	4780 ft	Weight:	12.0 ppg	Weight:	14.8 ppg
Casing Size:	5 1/2 in	Water / Sk:	15.5 gal / sk	Water / Sk:	6.5 gal / sk
Casing Depth:	4770.32 ft	Yield:	2.55 ft³ / sk	Yield:	1.81 ft³ / sk
Tubing / Liner:	in	Annular Bbls / Ft.:	0.0309 bbs / ft.	Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	ft	Depth:	4770.32 ft	Depth:	4770.32 ft.
Tool / Packer:		Annular Volume:	147.4 bbls	Annular Volume:	147.4029 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	113.0 bbls	Total Slurry:	177.8 bbls	Total Slurry:	45.7 bbls
		Total Sacks:	398 ax	Total Sacks:	170 ax

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
300P					GOT TO LOCATION
305P					SAFETY MEETING
310P					RIGGED UP TRUCKS
945P	3.0	100.0	5.0	5.0	PUMPED H2O AHEAD
947P	3.0	100.0	12.0	17.0	PUMPED 600 GAL OF MUD FLUSH
951P	3.0	100.0	5.0	22.0	WASHED UP WITH H2O
953P	3.0	100.0	11.3	33.3	PUMPED 25 SKS H- CON IN RH
957P	5.3	180.0	166.4	199.7	PUMPED 365 SKS OF H- CON @ 12 PPG
1025P	3.8	180.0	45.7	245.4	PUMPED 170 SKS OF H- LD @ 14.8 PPG
1040P				245.4	SHUT DOWN WASHED UP PUMP AND LINES/ LOADED PLUG
1048P	1,500.0		113.0	358.4	DISPLACED WITH H2O
1112P	2,000.0				PLUG DOWN/ CIRCULATED 10 BBLs TO FIT
1115P					RELEASED PRESSURE/ PLUG HELD
1118P					WASHED UP PUMP TRUCK
1130P					RIGGED DOWN TRUCKS
1155P					OFF LOCATION

CREW		UNIT	SUMMARY		
Comerter:	Josh	73	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jimmie	180/530	3.5 bpm	533 psi	358 bbls
Bulk #1:	Trevino	194/250			
Bulk #2:	Trevino	242			

DRILLING REPORT - LOG TOPS

MDCI
Shones #2-5
2980' FSL 1800' FEL
Sec. 5-T1S-R37W
3220' KB

Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3185	+35	Flat	3184	+36	+1
B/Anhydrite	3215	+5	+4	3214	+6	+6
Topeka	3964	-744	+4	3962	-742	+6
Oread	4096	-876	+7	4097	-877	+6
Lansing	4172	-952	+9	4173	-953	+8
Stark	4396	-1176	+4	4392	-1172	+8
Mound City	4452	-1232	+5	4448	-1228	+9
Ft Scott	4568	-1348	+5	4568	-1348	+5
Oakley	4656	-1436	+6	4653	-1433	+9
Mississippi	NDE			NDE		
RTD	4780					
LTD				4780		