

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	KMM 1-22
Doc ID	1663204

All Electric Logs Run

DIL
DUCP
MEL
BHCS

DRILLING REPORT - LOG TOPS - KMM 1-22

MDCI KMM #1-22 1650 FSL 660 FEL Sec. 22-T3S-R39W 3466' KB						
Formation	Sample top	Datum	Ref	Log Top	Datum	Ref
Anhydrite	3340	+126	-15	3306	+160	+20
B/Anhydrite	3368	+98	-17	3337	+129	+14
Topeka	4154	-688	-8	4148	-682	-2
Lansing	4358	-892	-2	4356	-890	0
Mound City	4648	-1182	+1	4648	-1182	+1
FT Scott	4776	-1310	+3	4778	-1312	+1
Oakley	4855	-1389	+6	4860	-1394	+1
Miss	5123	-1657	+38	5121	-1655	+40
RTD	5200					
LTD						



CEMENT TREATMENT REPORT

Customer:	Murfin Drilling Co	Well:	KMM # 1-22	Ticket:	WP-3123
City, State:	Wheeler KS	County:	Cheyenne KS	Date:	7/22/2022
Field Rep:	Ricky	S-T-R:	22-3S-39W	Service:	Surface

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	303 ft
Casing Size:	8 5/8 in
Casing Depth:	302 ft
Tubing / Liners:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	18.0 bbbls

Calculated Slurry - Lead	
Blend:	H-325
Weight:	14.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.41 ft ³ / sx
Annular Bbls / Ft.:	0.0735 bbls / ft.
Depth:	303 ft
Annular Volume:	22.3 bbbls
Excess:	
Total Slurry:	75.3 bbbls
Total Sacks:	300 sx

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

TIME	RATE	PSI	BBLs	STAGE TOTAL BBLs	REMARKS
2:20p			-	-	Arrival
2:25p				-	Safety Meeting
3:00p				-	Rig up
4:51p				-	Circulate hole
4:58p	6.2	150.0	5.0	5.0	H2O ahead
4:59p	6.3	380.0	75.3	80.3	Mixed 300 sks of H-325 @ 14.8 ppg @ 303'
5:15p	4.0	240.0	18.0	98.3	Displace H2O
5:30p				98.3	Plug down
5:33p				98.3	Wash up
5:40p				98.3	Rig down
6:00p				98.3	Depart location
					Circulated 5 bbl to pit

CREW		UNIT		SUMMARY		
Cementer:	Jesse		78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Michael		230	4.8 bpm	257 psi	98 bbbls
Bulk #1:	Tyler		180-530			
Bulk #2:						



CEMENT TREATMENT REPORT

Customer: Murfin Drilling	Well: KMM # 1-22	Ticket: WP-3162
City, State: BirdCity KS	County: Cheyenne KS	Date: 8/1/2022
Field Rep: Gary	S-T-R: 22-3S-39W	Service: Longstring

Downhole Information	
Hole Size:	7 7/8 in
Hole Depth:	5190 ft
Casing Size:	5 1/2 in
Casing Depth:	5189.6 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	123.0 bbls

Calculated Slurry - Lead	
Blend:	H-con
Weight:	12.0 ppg
Water / Sx:	15.5 gal / sx
Yield:	2.56 ft ³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	5190 ft
Annular Volume:	160.4 bbls
Excess:	
Total Slurry:	170.9 bbls
Total Sacks:	375 sx

Calculated Slurry - Tail	
Blend:	H-LD
Weight:	14.8 ppg
Water / Sx:	6.5 gal / sx
Yield:	1.51 ft ³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	5190 ft
Annular Volume:	160.371 bbls
Excess:	
Total Slurry:	55.1 bbls
Total Sacks:	205 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
5:00p			-	-	Arrival
5:05p			-	-	Safety meeting
7:20p			-	-	Run float equipment
8:40p			-	-	Drop ball
8:42p		600.0	-	-	Circulate at joint 61 @ 2624' for half hour
9:45p			-	-	Rlg up
10:00p			-	-	Circulate hole for 2 hours lost circulation 20 minutes of starting
11:55p	3.2	260.0	5.0	5.0	H2O ahead
11:57p	5.3	500.0	12.0	17.0	Mixed 500 gallons of super flush
11:59p	5.0	430.0	5.0	22.0	H2O behind
12:04a	5.5	420.0	170.9	192.9	Mixed 375 sks of H-Con @ 12 ppg @ 5190'
12:07a	5.5	420.0	13.6		Mixed 30 sks of H-Con @ 12 ppg @ Rat hole
12:40a	5.0	430.0	55.1		Mixed 205 sks of H-LD @ 14.8 ppg @ 5190'
12:56a					Shut down and wash up
12:58a					Drop plug
1:00a	6.6	310.0	123.0		Displace H2O with 2 % KCL
1:30a	3.0	2,550.0	123.0		Land plug got 1 bbl H2O back
1:30a					Plug down
1:34a					Wash up
1:41a					Rlg down
2:00a					Depart Location
					Did not circulate cement to surface
					Lost circulation at 100 bbl out on displacing H2O

CREW		UNIT	SUMMARY		
Cementer:	Jesse	78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	John	230	4.9 bpm	658 psi	508 bbls
Bulk #1:	Kale	205			
Bulk #2:	Tyler	165-254			

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Company Inc.**

LEASE **KMM #1-22**

FIELD **Wildcat**

LOCATION **1650' 1st & 660' 1st**

SEC. **22** TWP. **3S** RGE. **39W**

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

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

SPUD **7/22/2022** COMP **8/1/2022**

RTD **5200** LTD **5200**

MUD UP **3748** TYPE MUD **Chemical**

SAMPLES SAVED FROM **4050** TO **5200**

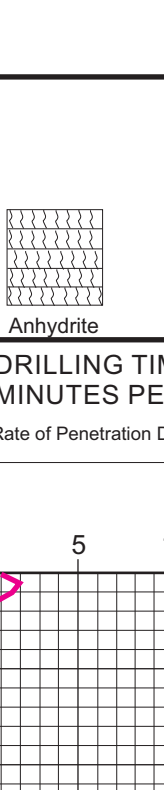
DRILLING TIME KEPT FROM **4050** TO **5200**

SAMPLES EXAMINED FROM **4050** TO **5200**

GEOLOGICAL SUPERVISION FROM **3969**

GEOLOGIST ON WELL **Robert D. Hendrix**

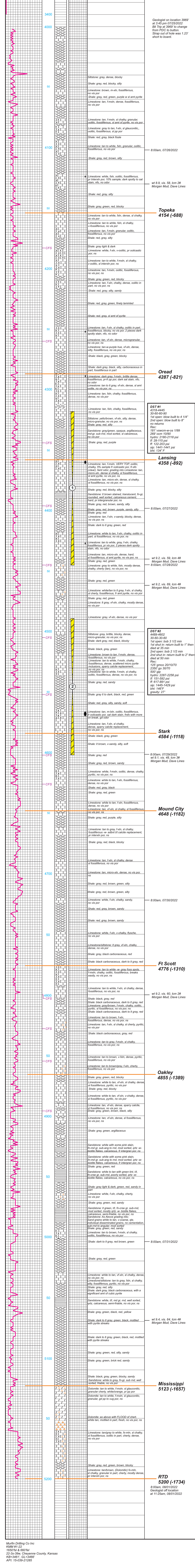
FORMATION TOPS	ELECTRIC LOG	SAMPLE
Amyntha	3306 (+160)	3340 (126)
Lansing	4148 (-882)	4154 (-888)
Stark	4356 (-890)	4358 (-892)
Stark Strale	4587 (-1121)	4584 (-1118)
B/C	4648 (-1182)	4648 (-1182)
FT Scott	4776 (-1311)	4776 (-1311)
Oakley	4860 (-1384)	4855 (-1389)
Mississippi	5122 (-1657)	5123 (-1657)



AP# 15-023-21574

REMARKS:
Due to positive results on DST #2 it was determined that this test should be completed for production.

Ran 123 Jts of 15.5#, 5 1/2 prod csg, set @ 5189', circ csg for 2Hrs (lost circ 20 min after starting, regained circ). HSI cmt w/550 Sxs(345sxs H-con, 205 sxs HLD). PD @ 1:30AM 08/02/2022. 30sxs RH. Cmt did not circ. RR: @ 5:30AM 08/02/2022.





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water STE 300
Wichita KS 67202+1216

ATTN: robert Hendricks

KMM #1-22

22-3s-39w Cheyenne,KS

Start Date: 2022.07.27 @ 16:48:00

End Date: 2022.07.28 @ 03:25:37

Job Ticket #: 69781 DST #: 1

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

Printed: 2022.08.04 @ 11:18:38



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69781

DST#: 1

ATTN: robert Hendricks

Test Start: 2022.07.27 @ 16:48:00

GENERAL INFORMATION:

Formation: **LKC A - D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:00:27

Time Test Ended: 03:25:37

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

Interval: 4318.00 ft (KB) To 4445.00 ft (KB) (TVD)

Reference Elevations: 3466.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8875

Inside

Press@RunDepth: 203.95 psig @ 4321.00 ft (KB)

Capacity: psig

Start Date: 2022.07.27

End Date:

2022.07.28

Last Calib.:

2022.07.28

Start Time: 16:48:01

End Time:

03:25:36

Time On Btm:

2022.07.27 @ 20:00:17

Time Off Btm:

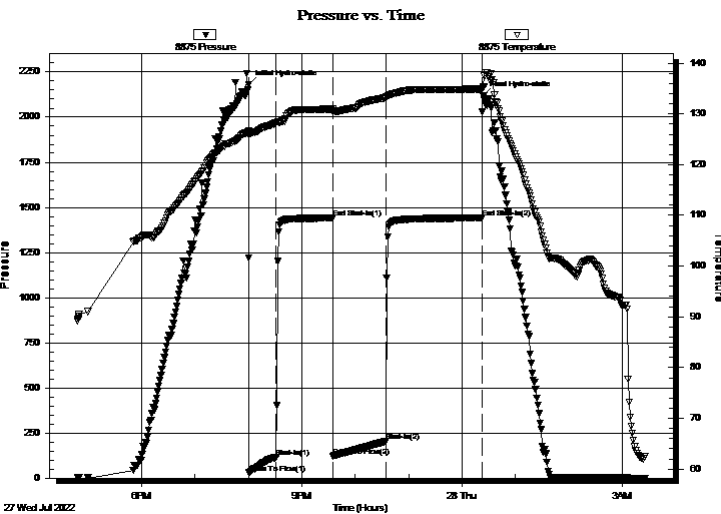
2022.07.28 @ 00:24:12

TEST COMMENT: 30-IF-Surface to 4.25"

60-ISI-No Return

60-FF-Surface to 8"

90-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2180.01	126.61	Initial Hydro-static
1	28.37	125.90	Open To Flow (1)
31	115.63	128.31	Shut-In(1)
95	1441.46	130.96	End Shut-In(1)
96	122.83	130.50	Open To Flow (2)
154	203.95	133.16	Shut-In(2)
262	1441.66	134.91	End Shut-In(2)
264	2118.80	135.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
181.00	VSWCM w/oil spots 1%W 99%M	0.89
269.00	OCM 10%O 90%M	3.81

Gas Rates

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



DRILL STEM TEST REPORT

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69781

DST#: 1

ATTN: robert Hendricks

Test Start: 2022.07.27 @ 16:48:00

GENERAL INFORMATION:

Formation: **LKC A - D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:00:27

Time Test Ended: 03:25:37

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

Interval: 4318.00 ft (KB) To 4445.00 ft (KB) (TVD)

Reference Elevations: 3466.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6838

Inside

Press@RunDepth: psig @ 4321.00 ft (KB)

Capacity: psig

Start Date: 2022.07.27 End Date: 2022.07.28

Last Calib.: 2022.07.28

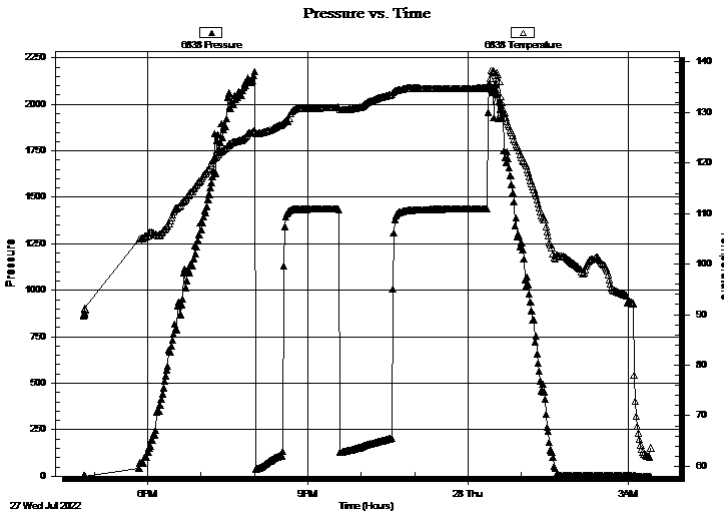
Start Time: 16:48:01 End Time: 03:25:36

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Surface to 4.25"
60-ISI-No Return
60-FF-Surface to 8"
90-FSI-No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
181.00	VSWCM w/oil spots 1%W 99%M	0.89
269.00	OCM 10%O 90%M	3.81

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69781

DST#: 1

ATTN: robert Hendricks

Test Start: 2022.07.27 @ 16:48:00

Tool Information

Drill Pipe:	Length: 4111.00 ft	Diameter: 3.82 inches	Volume: 58.28 bbl	Tool Weight:	2500.00 daN
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 daN
Drill Collar:	Length: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	86000.00 daN
			<u>Total Volume:</u>	Tool Chased	ft
				String Weight: Initial	78000.00 daN
Drill Pipe Above KB:	6.00 ft			Final	79000.00 daN
Depth to Top Packer:	4318.00 ft				
Depth to Bottom Packer:	ft				
Interval between Packers:	127.00 ft				
Tool Length:	159.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4287.00	
Shut In Tool	5.00			4292.00	
Hydraulic tool	5.00			4297.00	
Jars	5.00			4302.00	
Gap Sub	4.00			4306.00	
Safety Joint	3.00			4309.00	
Packer	5.00			4314.00	32.00 Bottom Of Top Packer
Packer	4.00			4318.00	
Stubb	1.00			4319.00	
Perforations	1.00			4320.00	
Change Over Sub	1.00			4321.00	
Recorder	0.00	6838	Inside	4321.00	
Recorder	0.00	8875	Inside	4321.00	
Drill Pipe	95.00			4416.00	
Change Over Sub	1.00			4417.00	
Perforations	25.00			4442.00	
Bullnose	3.00			4445.00	127.00 Bottom Packers & Anchor
Total Tool Length:	159.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69781

DST#: 1

ATTN: robert Hendricks

Test Start: 2022.07.27 @ 16:48:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
181.00	VSWCM w /oil spots 1%W 99%M	0.890
269.00	OCM 10%O 90%M	3.813

Total Length: 450.00 ft

Total Volume: 4.703 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 4#LCM

Serial #: 8875

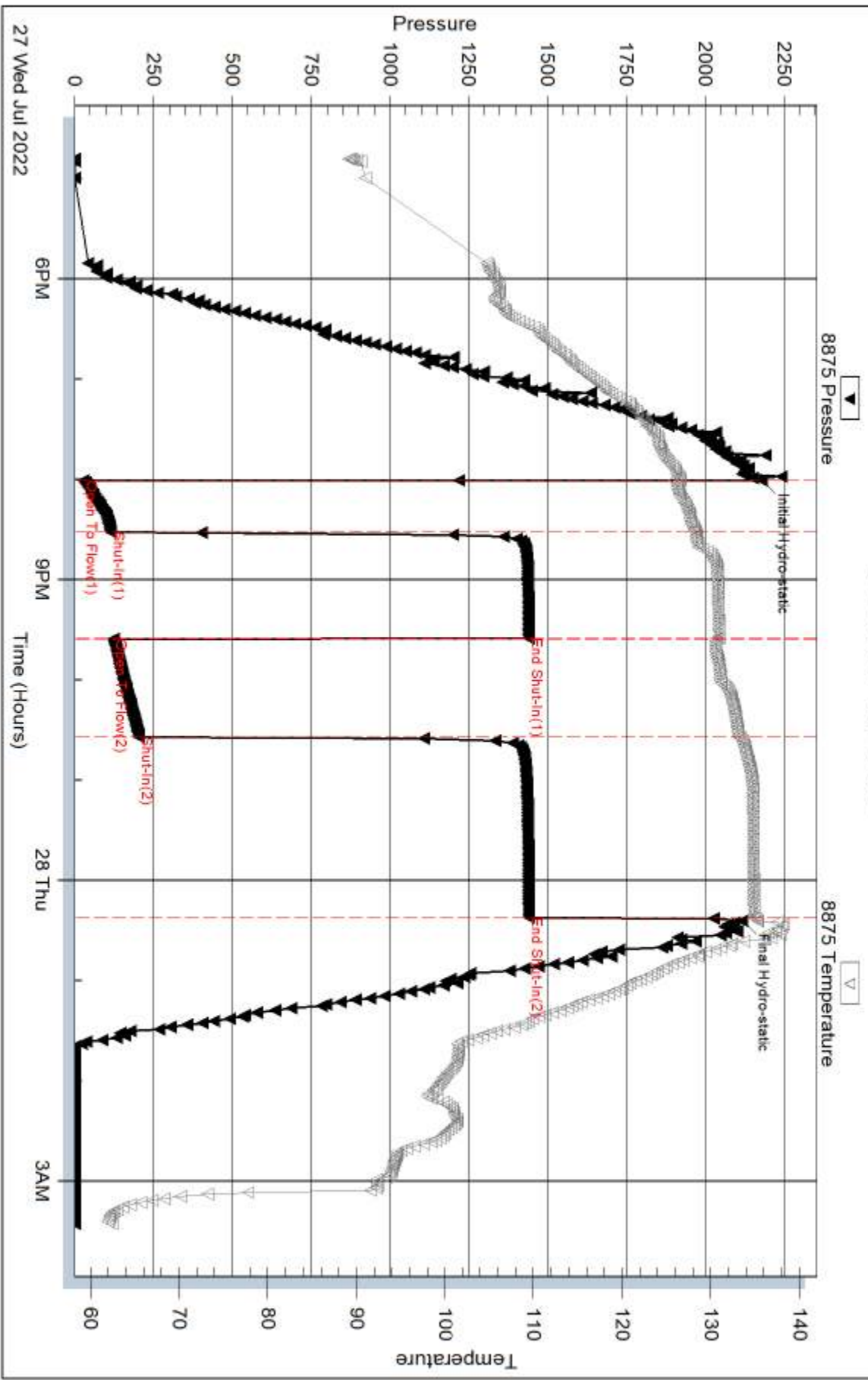
Inside

Murfin Drilling Company Inc

KMM#1-22

DST Test Number: 1

Pressure vs. Time



Trilobe Testing, Inc

Ref. No: 69781

Printed: 2022.08.04 @ 11:18:40

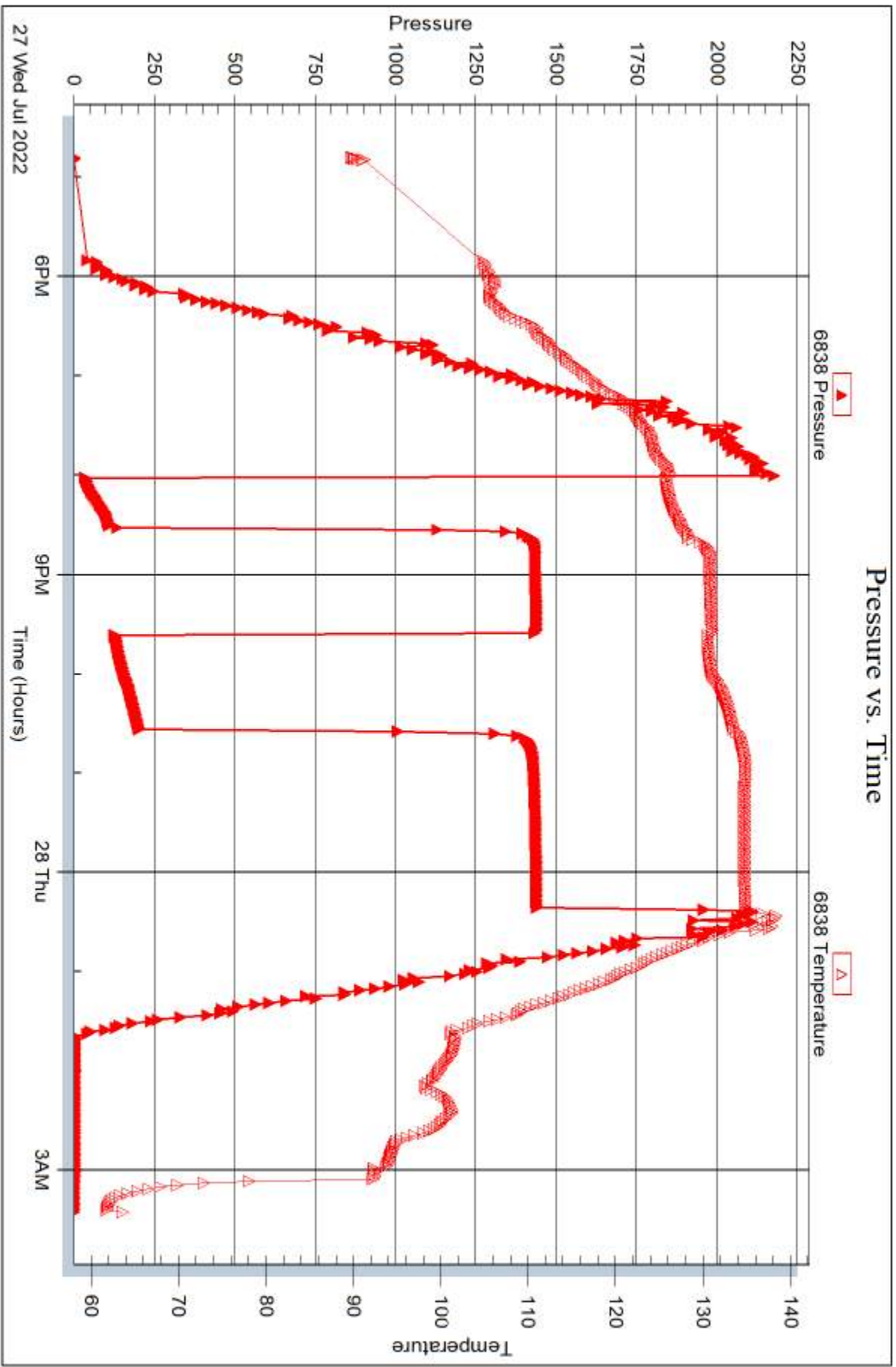
Serial #: 6838

Inside

Murfin Drilling Company Inc

KMM#1-22

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 69781

Printed: 2022.08.04 @ 11:18:40



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc**

250 N Water STE 300
Wichita KS 67202+1216

ATTN: robert Hendricks

KMM #1-22

22-3s-39w Cheyenne,KS

Start Date: 2022.07.29 @ 04:52:00

End Date: 2022.07.29 @ 14:36:57

Job Ticket #: 69782 DST #: 2

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

Printed: 2022.08.04 @ 11:17:59



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69782

DST#: 2

ATTN: robert Hendricks

Test Start: 2022.07.29 @ 04:52:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:54:27

Time Test Ended: 14:36:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

Interval: 4489.00 ft (KB) To 4602.00 ft (KB) (TVD)

Reference Elevations: 3466.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8875

Inside

Press@RunDepth: 891.45 psig @ 4492.00 ft (KB)

Capacity: psig

Start Date: 2022.07.29

End Date:

2022.07.29

Last Calib.:

2022.07.29

Start Time: 04:52:01

End Time:

14:36:57

Time On Btm:

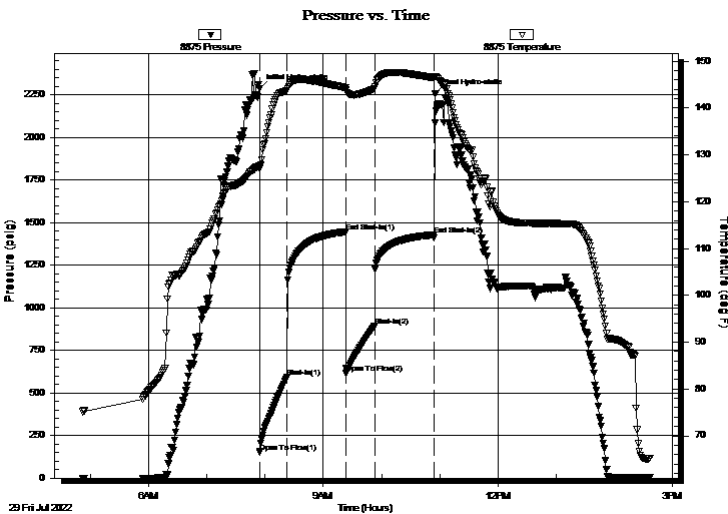
2022.07.29 @ 07:54:12

Time Off Btm:

2022.07.29 @ 10:55:26

TEST COMMENT: 30-IF-BOB 3.5 mins Built to 130"
60-ISI-Surface to 1" Died @35 mins
30-FF-BOB 2.5 mins Built to 107"
60-FSI-Surface to 2" Died @50 mins

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2287.37	127.70	Initial Hydro-static
1	151.44	127.27	Open To Flow (1)
29	592.79	143.76	Shut-In(1)
89	1445.68	144.30	End Shut-In(1)
90	617.33	143.82	Open To Flow (2)
119	891.45	144.14	Shut-In(2)
180	1429.02	146.44	End Shut-In(2)
182	2256.37	146.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCO 20%G 10%M 70%O	0.61
2350.00	GO 30%G 70%O	32.79
0.00	500 GIP	0.00

Gas Rates

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

* Recovery from multiple tests

**TRILOBITE TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS250 N Water STE 300
Wichita KS 67202+1216**KMM #1-22**

Job Ticket: 69782

DST#: 2

ATTN: robert Hendricks

Test Start: 2022.07.29 @ 04:52:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:54:27

Time Test Ended: 14:36:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 84

Interval: 4489.00 ft (KB) To 4602.00 ft (KB) (TVD)

Reference Elevations: 3466.00 ft (KB)

Total Depth: 4445.00 ft (KB) (TVD)

3461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4492.00 ft (KB)

Capacity: psig

Start Date: 2022.07.29

End Date:

2022.07.29

Last Calib.:

2022.07.29

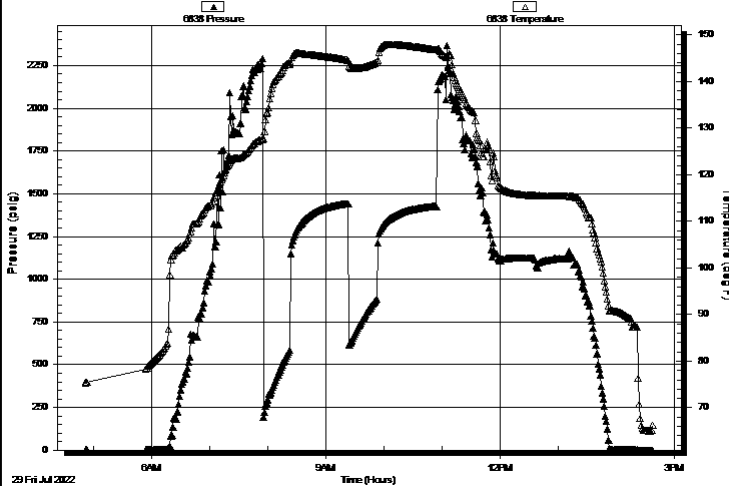
Start Time: 04:52:01

End Time:

14:37:36

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-BOB 3.5 mins Built to 130"
60-ISI-Surface to 1" Died @35 mins
30-FF-BOB 2.5 mins Built to 107"
60-FSI-Surface to 2" Died @50 mins**Pressure vs. Time**

PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCO 20%G 10%M 70%O	0.61
2350.00	GO 30%G 70%O	32.79
0.00	500 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69782

DST#: 2

ATTN: robert Hendricks

Test Start: 2022.07.29 @ 04:52:00

Tool Information

Drill Pipe:	Length: 4296.00 ft	Diameter: 3.82 inches	Volume: 60.90 bbl	Tool Weight:	2500.00 daN
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 daN
Drill Collar:	Length: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	91000.00 daN
			<u>Total Volume:</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	79000.00 daN
Depth to Top Packer:	4489.00 ft			Final	89000.00 daN
Depth to Bottom Packer:	ft				
Interval between Packers:	113.00 ft				
Tool Length:	145.00 ft				
Number of Packers:	1	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4458.00	
Shut In Tool	5.00			4463.00	
Hydraulic tool	5.00			4468.00	
Jars	5.00			4473.00	
Gap Sub	4.00			4477.00	
Safety Joint	3.00			4480.00	
Packer	5.00			4485.00	32.00 Bottom Of Top Packer
Packer	4.00			4489.00	
Stubb	1.00			4490.00	
Perforations	1.00			4491.00	
Change Over Sub	1.00			4492.00	
Recorder	0.00	6838	Inside	4492.00	
Recorder	0.00	8875	Inside	4492.00	
Drill Pipe	95.00			4587.00	
Change Over Sub	1.00			4588.00	
Perforations	11.00			4599.00	
Bullnose	3.00			4602.00	113.00 Bottom Packers & Anchor
Total Tool Length:	145.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc

22-3s-39w Cheyenne,KS

250 N Water STE 300
Wichita KS 67202+1216

KMM #1-22

Job Ticket: 69782

DST#: 2

ATTN: robert Hendricks

Test Start: 2022.07.29 @ 04:52:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	GMCO 20%G 10%M 70%O	0.615
2350.00	GO 30%G 70%O	32.794
0.00	500 GIP	0.000

Total Length: 2475.00 ft

Total Volume: 33.409 bbl

Num Fluid Samples: 0

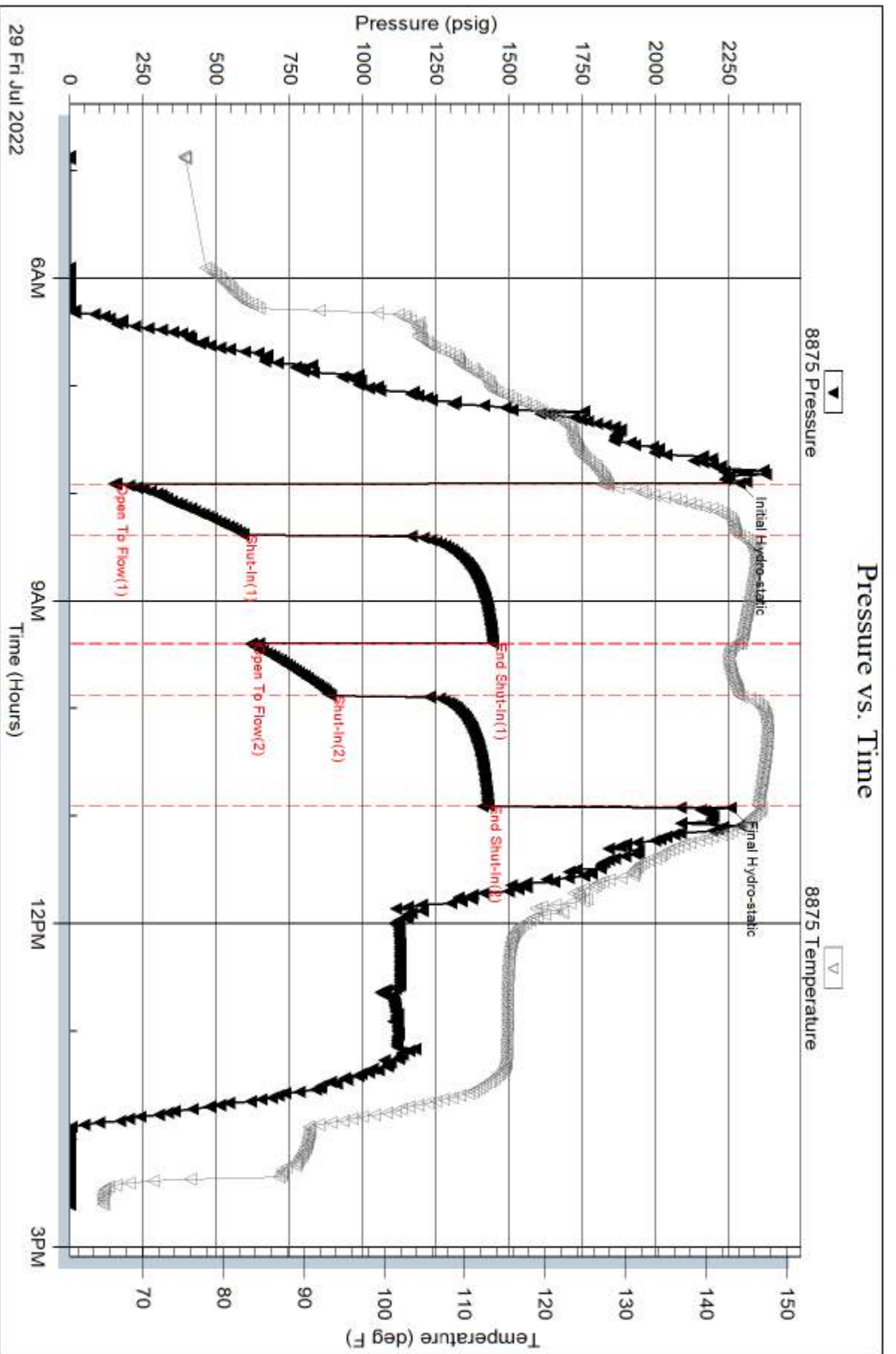
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 4#LCM



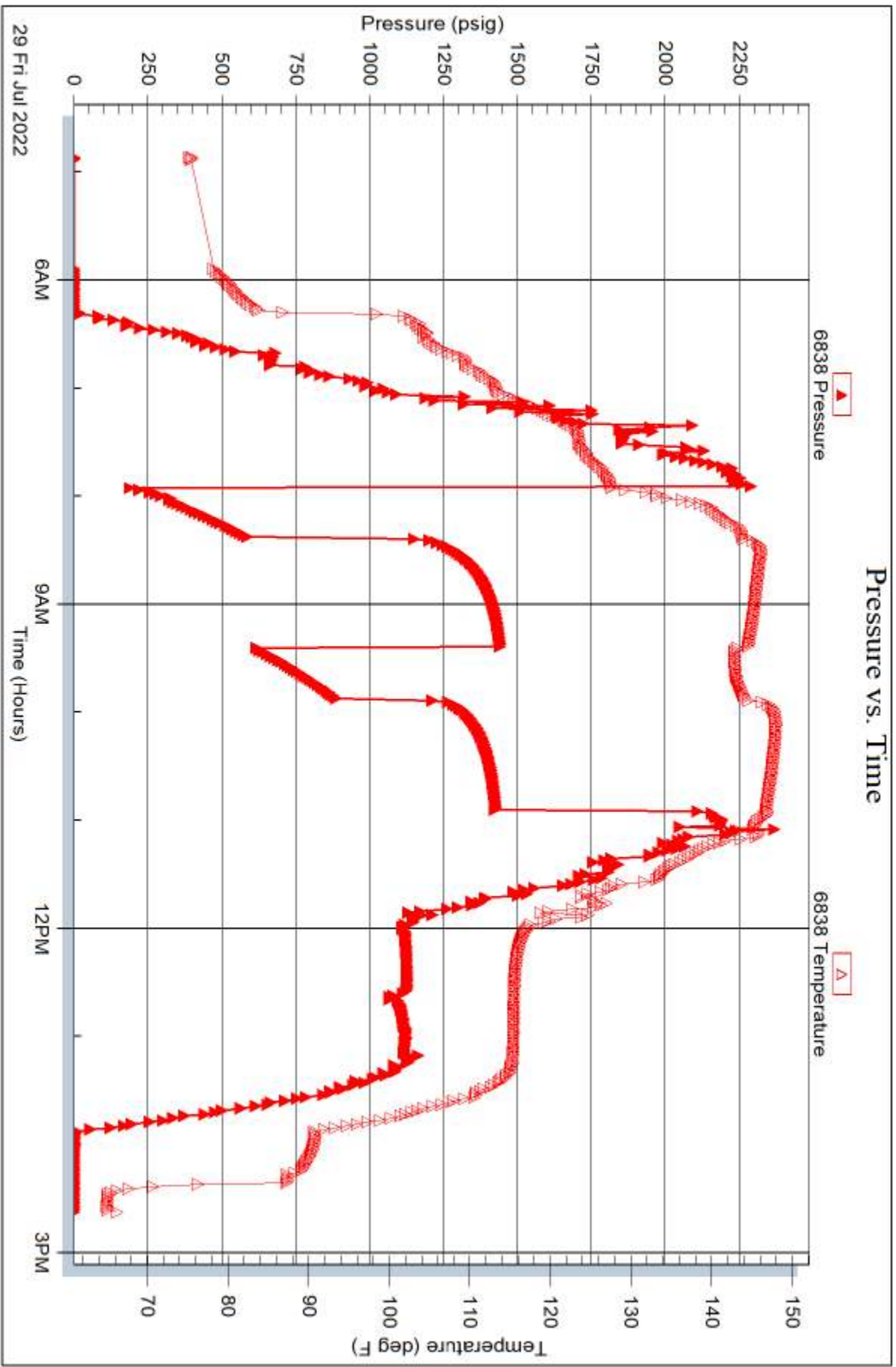
Serial #: 6838

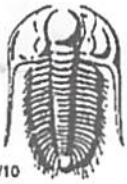
Inside

Murfin Drilling Company Inc

KMM#1-22

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69781**

Well Name & No. KMM #1-22 Test No. 1 Date 07/27/2022
 Company Murfin Drilling Company Inc Elevation 3466 KB 3461 GL
 Address 250 N Water STE 300 Wichita KS 67202 +1216
 Co. Rep / Geo. Robert Hendry Rig Murfin #110
 Location: Sec. 22 Twp 3s Rge. 39w Co. Cheyenne State KS

Interval Tested 4318'-4445' Zone Tested LAC A-D
 Anchor Length 127' Drill Pipe Run 4111' Mud Wt. 9.2
 Top Packer Depth 4313' Drill Collars Run 181 Vis 39
 Bottom Packer Depth 4318' Wt. Pipe Run - WL 6.8
 Total Depth 4445' Chlorides 600 ppm System LCM 4#

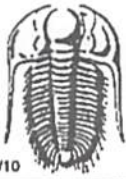
Blow Description 07-Surface to 4 1/4"
1st- No Return
07-Surface to 8"
73- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>180'</u>	<u>VSWCM w/oil spots</u>		<u>1</u>	<u>99</u>	
<u>280'</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 450' BHT 1340 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2180</u>	<input checked="" type="checkbox"/> Test <u>1950</u>	T-On Location <u>15:40</u>
(B) First Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>16:48</u>
(C) First Final Flow <u>115</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>19:59</u>
(D) Initial Shut-In <u>1441</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>23:59</u>
(E) Second Initial Flow <u>122</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>03:24</u>
(F) Second Final Flow <u>203</u>	<input checked="" type="checkbox"/> Mileage <u>12827</u> 192	Comments
(G) Final Shut-In <u>1441</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2118</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>2442</u>
	Sub Total <u>2442</u>	MP/DST Disc't

Approved By _____ Our Representative Spencer J. Staal Thanks!
 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.
 785-259-0058



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69782**

Well Name & No. KMM # 1-22 Test No. 2 Date 07/29/2022
 Company Murfin Drilling Company DMC Elevation 3466 KB 3461 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Robert Hendricks Rig Murfin #110
 Location: Sec. 22 Twp 31 Rge. 39w Co. Cheyenne State KS

Interval Tested 4489'-4602' Zone Tested LHC 4-J
 Anchor Length 113' Drill Pipe Run 4296' Mud Wt. 9.2
 Top Packer Depth 4484' Drill Collars Run 181' Vis 69
 Bottom Packer Depth 4489' Wt. Pipe Run - WL 7.2
 Total Depth 4602' Chlorides 600 ppm System LCM 4#

Blow Description J7-BOB 3.5 mins; Built to 130"
JSD - Surface to lined; Died @ 35 mins
M7-BOB 2.5 mins; Built to 107"
JSD Surface to 2"; Died @ 50 mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>125'</u>	<u>GMCO</u>	<u>20</u>	<u>70</u>	<u>10</u>	
<u>2350</u>	<u>GO</u>	<u>30</u>	<u>70</u>		
	<u>500 GIP</u>	<u>100</u>			

Rec Total ~~2000~~ 2475 BHT 146° Gravity 27° API RW - @ - °F Chlorides - ppm
 Test 1950
 Jars 300
 Safety Joint
 Circ Sub 50
 Hourly Standby
 Mileage 12827 192
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby 24 hrs 1d .5h
 Accessibility
 Sub Total 2492

(A) Initial Hydrostatic 2287
 (B) First Initial Flow 151
 (C) First Final Flow 592
 (D) Initial Shut-In 1445
 (E) Second Initial Flow 617
 (F) Second Final Flow 891
 (G) Final Shut-In 1429
 (H) Final Hydrostatic 2256

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

T-On Location 03:58
 T-Started 04:52
 T-Open 07:50
 T-Pulled 10:50
 T-Out _____
 Comments Dropped bar loaded after test for days off
 EM Tool
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 16.67
 Total 2508.67
 MP/DST Disc't _____

Approved By _____ Our Representative Spencer J Jacob Thanks!
 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.

785-259-0056