

Form	ACO1 - Well Completion
Operator	Ritchie Exploration, Inc.
Well Name	MCPHERSON COLLEGE 4D 1
Doc ID	1724268

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.63	23	225	H-325	200	
Production	7.88	5.5	15.5	4615	Common	150	10% salt, 2% gel, 0.65% FLM, 0.25% FR, 0.5% defoamer & 5#/sack of Kol-Seal



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70374

DST#: 1

Test Start: 2023.05.29 @ 05:56:00

GENERAL INFORMATION:

Formation: **LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:28:30

Time Test Ended: 13:21:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Day

Unit No: 70

Interval: 4027.00 ft (KB) To 4060.00 ft (KB) (TVD)

Total Depth: 4060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 3365.00 ft (KB)

3357.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: 981.60 psig @ 4028.00 ft (KB)

Start Date: 2023.05.29

End Date:

2023.05.29

Start Time: 05:56:05

End Time:

13:21:29

Capacity: 8000.00 psig

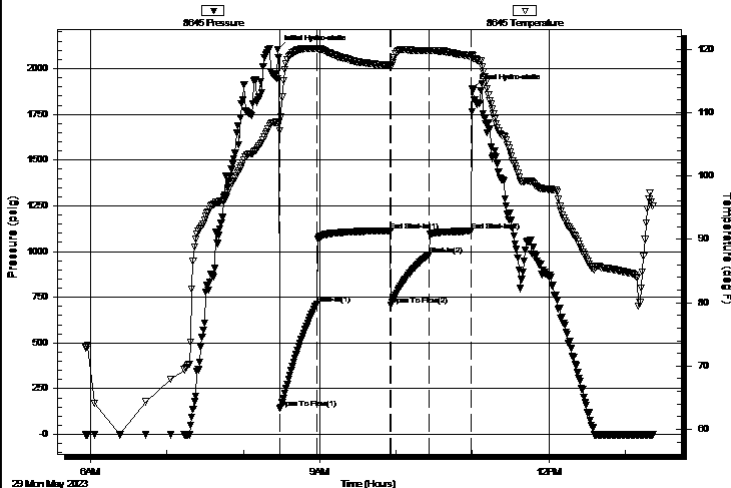
Last Calib.: 2023.05.29

Time On Btm: 2023.05.29 @ 08:27:00

Time Off Btm: 2023.05.29 @ 11:00:00

TEST COMMENT: IF-30- BOB in 1 min 45 sec, built to 189"
SI2-57- No return
FF-30- BOB in 2 min 30 sec, built to 86.35"
SI2-30- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2105.34	108.50	Initial Hydro-static
2	144.51	107.17	Open To Flow (1)
31	712.79	120.07	Shut-In(1)
89	1114.29	117.46	End Shut-In(1)
89	707.00	117.16	Open To Flow (2)
119	981.60	119.77	Shut-In(2)
152	1111.69	118.97	End Shut-In(2)
153	1890.15	118.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
181.00	MW 50% mud 50% w ater	2.54
255.00	MCW 20% mud 80% w ater	3.58
1724.00	VSMCW 3% mud 97% w ater	24.18

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

4-17S-37W Wichita, KS

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

Duke Rig #2

Job Ticket: 70374

DST#: 1

Test Start: 2023.05.29 @ 05:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 6.40 in³

Resistivity: ohm.m

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 52000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
181.00	MW 50% mud 50% w ater	2.539
255.00	MCW 20% mud 80% w ater	3.577
1724.00	VSMCW 3% mud 97% w ater	24.183

Total Length: 2160.00 ft

Total Volume: 30.299 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 8# LCM

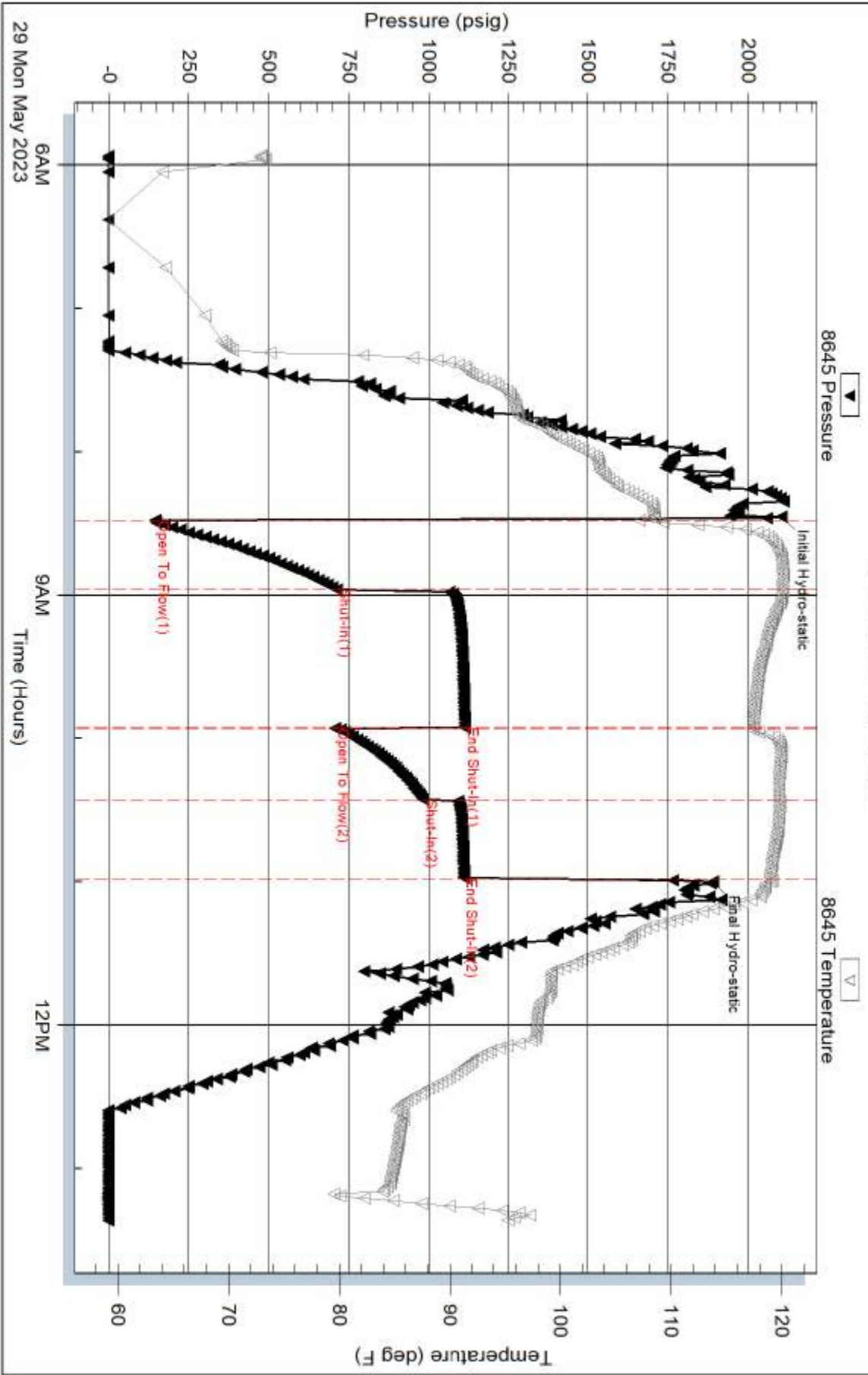
Serial #: 8645

Outside Ritchie Exploration Inc

Duke Rig #2

DST Test Number: 1

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70375

DST#: 2

Test Start: 2023.05.30 @ 14:02:00

GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:46:45

Time Test Ended: 19:23:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

Interval: 4275.00 ft (KB) To 4300.00 ft (KB) (TVD)

Reference Elevations: 3365.00 ft (KB)

Total Depth: 4300.00 ft (KB) (TVD)

3357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: 26.86 psig @ 4276.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.30

End Date:

2023.05.30

Last Calib.: 2023.05.30

Start Time: 14:02:05

End Time:

19:23:44

Time On Btm: 2023.05.30 @ 15:45:15

Time Off Btm: 2023.05.30 @ 17:47:15

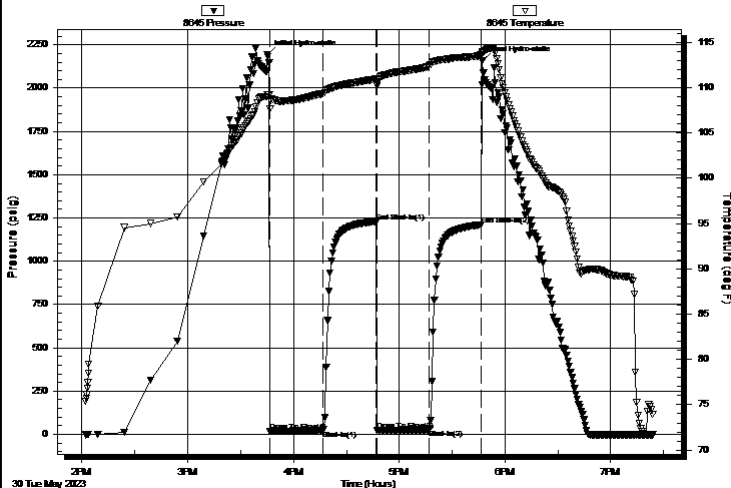
TEST COMMENT: IF-30- WSB

SI1-30- No return

FF-30- No blow

SI2-30- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2192.54	109.17	Initial Hydro-static
2	18.99	107.69	Open To Flow (1)
32	22.71	109.36	Shut-In(1)
62	1229.38	110.97	End Shut-In(1)
63	23.49	110.17	Open To Flow (2)
92	26.86	112.43	Shut-In(2)
121	1209.99	113.59	End Shut-In(2)
122	2160.42	113.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100%	0.28

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70375

DST#: 2

Test Start: 2023.05.30 @ 14:02:00

GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:46:45

Time Test Ended: 19:23:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

Interval: 4275.00 ft (KB) To 4300.00 ft (KB) (TVD)

Reference Elevations: 3365.00 ft (KB)

Total Depth: 4300.00 ft (KB) (TVD)

3357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: psig @ 4276.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.30

End Date:

2023.05.30

Last Calib.:

2023.05.30

Start Time: 14:02:05

End Time:

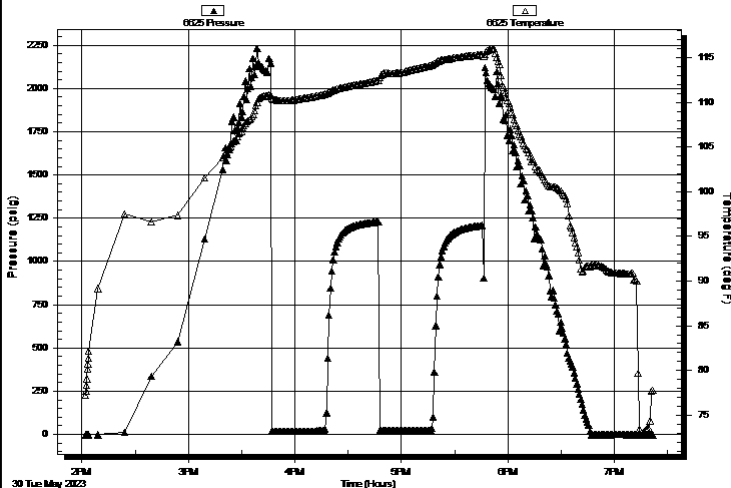
19:21:29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-30- WSB
SI1-30- No return
FF-30- No blow
SI2-30- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100%	0.28

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

4-17S-37W Wichita, KS

8100 E 22nd St. N #700

Duke Rig #2

PO Box 783188

Job Ticket: 70375

DST#: 2

Whichita, KS 67278

Test Start: 2023.05.30 @ 14:02:00

ATTN: Max Lovely

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: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud 100%	0.281

Total Length: 20.00 ft

Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5# LCM

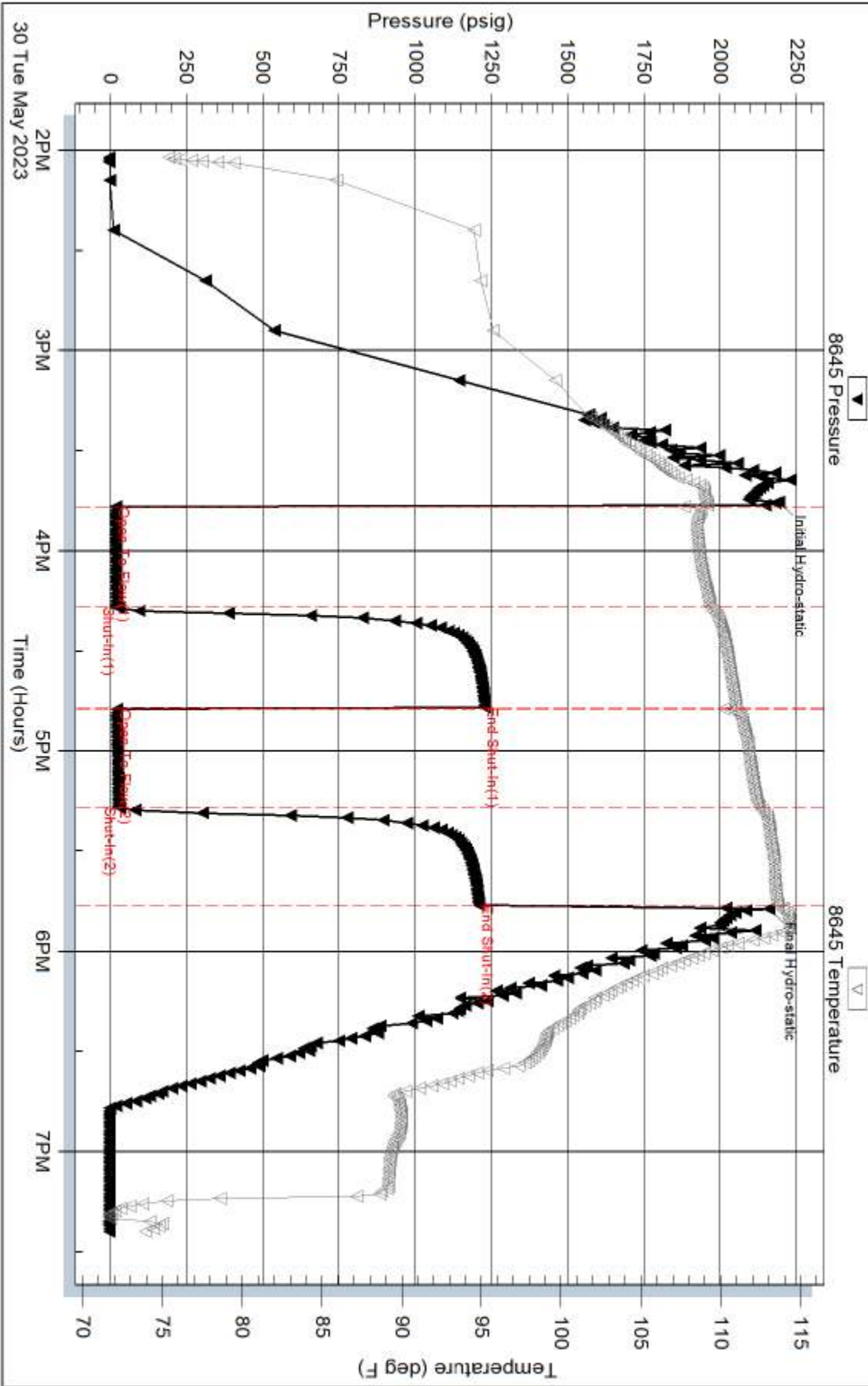
Serial #: 8645

Outside Ritchie Exploration Inc

Duke Rig #2

DST Test Number: 2

Pressure vs. Time



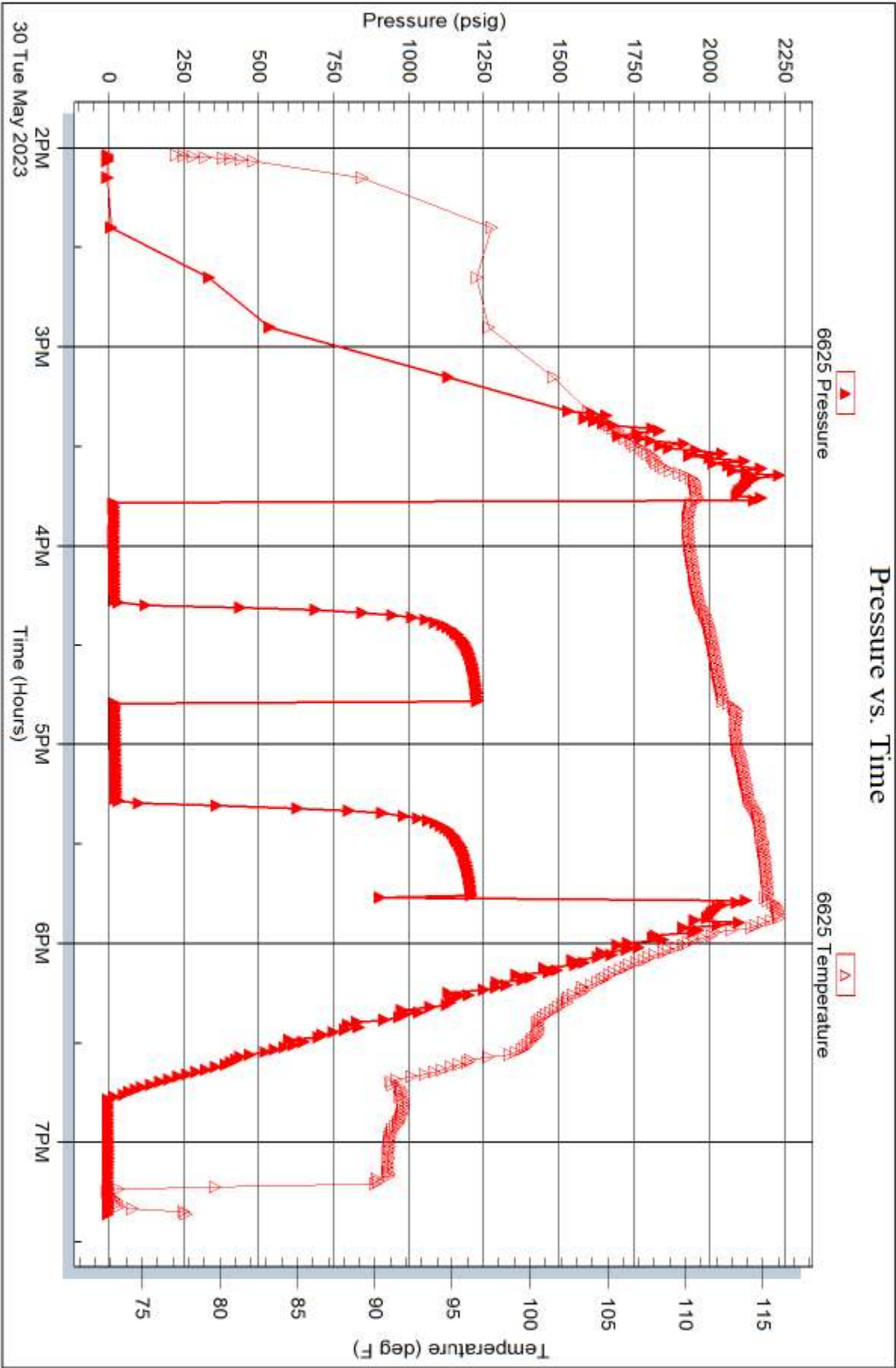
Serial #: 6625

Inside

Ritchie Exploration Inc

Duke Rig #2

DST Test Number: 2





#1 McPherson College 4D

2,190' FSL & 1,268' FEL

120' S & 52' E of SW NW NE SE Section 4-17S-37W

Wichita County, Kansas

API# 15-203-20383-0000

Elevation: GL: 3,357', KB: 3,365'

Sample Tops			Ref. Well
Anhydrite	2524	+841	+4
B/Anhydrite	2542	+823	+5
Stotler	3617	-252	+9
Heebner	3984	-619	+13
Toronto	4000	-635	+10
Lansing	4038	-673	+10
Muncie	4226	-861	+9
Stark	4320	-955	+7
Hushpuckney	4366	-1001	+6
BKC	4420	-1055	-1
Marmaton	4471	-1106	+1
Altamont	4483	-1118	-1
Pawnee	4560	-1195	+3
Myrick	4598	-1233	+3
Ft. Scott	4612	-1247	+3
Cherokee	4637	-1272	+4
Johnson	4742	-1377	-3
Morrow	4809	-1444	-2
Mississippian	4915	-1550	-15
RTD	4973	-1608	

(316) 691-9500

Fax (316) 691-9550

rei@ritchie-exp.com

8100 E. 22nd St. N., Bldg. 700

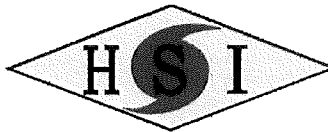
Wichita, Kansas 67226-2328

P.O. Box 783188
Wichita, Kansas 67278-3188



TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of Invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/4% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net Invoice price. Upon recollection, the full Invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of Issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

ftv: 13-2021/01/19
mplv: 397-2023/05/19

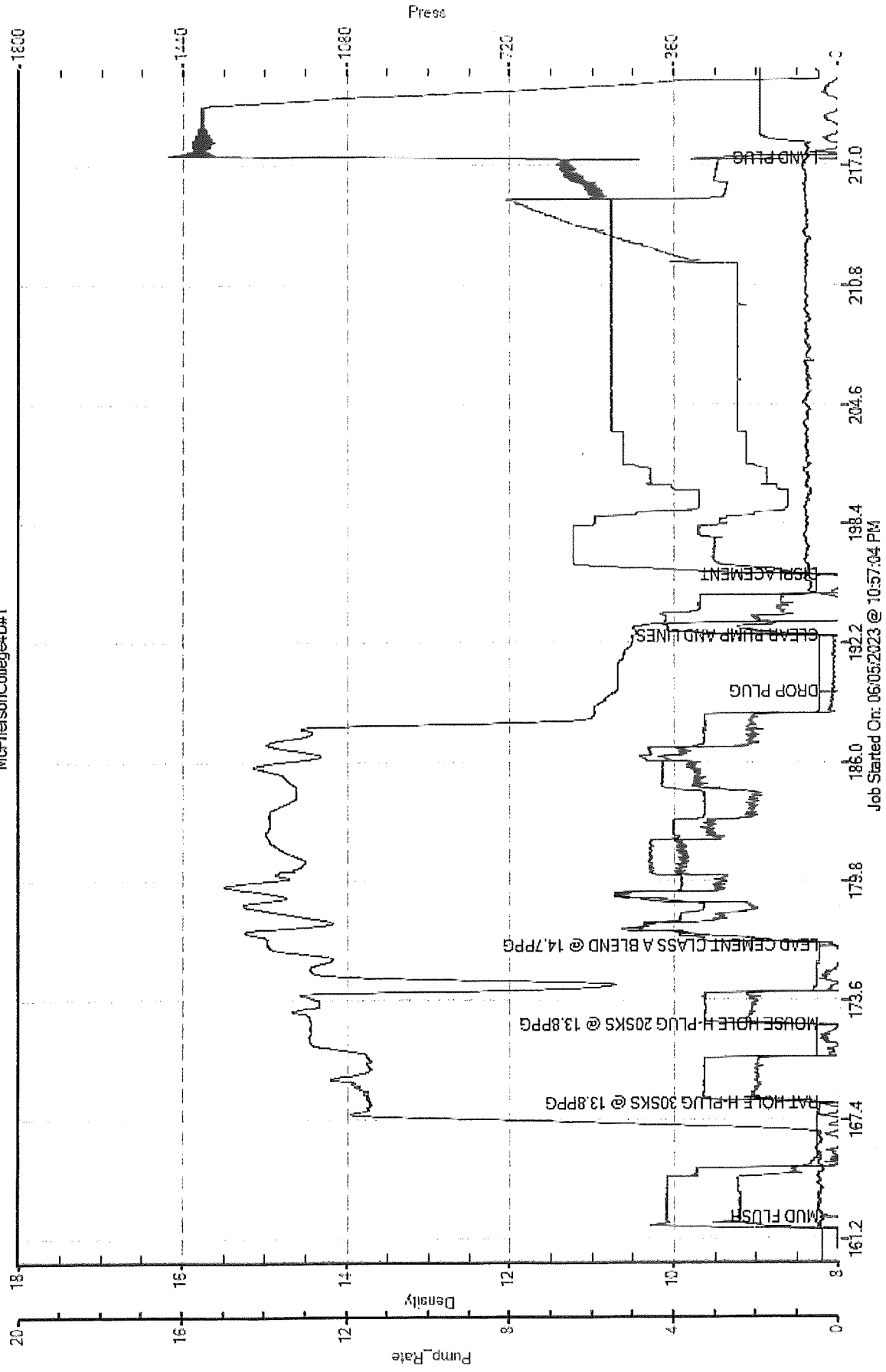


Customer	Ritchie Exploration		Lease & Well #	McPherson Collo 4D #1		Date	6/4/2023	
Service District	Oakley KS		County & State	Wichita KS		Legals S/T/R	4-17S-37W	
Job Type	Longstring	☒ PROD ☐ INJ ☐ SWD	New Well?	☒ YES ☐ No		Job #		
Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures						
947	John	☒ Hard hat	☒ Gloves	☐ Lockout/Tagout		☐ Warning Signs & Flagging		
230	Jose V	☒ H2S Monitor	☒ Eye Protection	☐ Required Permits		☐ Fall Protection		
180-530	Jake	☒ Safety Footwear	☐ Respiratory Protection	☒ Slip/Trip/Fall Hazards		☒ Specific Job Sequence/Expectations		
		☒ FRC/Protective Clothing	☐ Additional Chemical/Acid PPE	☒ Overhead Hazards		☒ Muster Point/Medical Locations		
		☐ Hearing Protection	☒ Fire Extinguisher	☐ Additional concerns or issues noted below				
Comments								
Product/ Service Code	Description	Unit of Measure	Quantity					Net Amount
CP010	Class A Cement	sack	150.00					\$3,000.00
CP055	H-Plug A	sack	50.00					\$700.00
CP095	Bentonite Gel	lb	282.00					\$112.80
CP132	Cement Fluid Loss 2	lb	92.00					\$1,380.00
CP133	Cement Friction Reducer	lb	35.00					\$280.00
CP135	Defoamer Powder	lb	71.00					\$284.00
CP140	Granulated Salt	lb	837.00					\$418.50
CP111	Gilsonite	lb	750.00					\$1,125.00
FE130	5 1/2" Cement Basket	ea	3.00					\$900.00
FE132	5 1/2" Stop Ring	ea	3.00					\$90.00
FE135	5 1/2 Turbolizer	ea	7.00					\$875.00
FE165	5 1/2" Port Collar	ea	1.00					\$3,500.00
FE170	5 1/2" Latch Down Plug & Baffle	ea	1.00					\$350.00
FE180	5 1/2" Type B Basket Shoe	ea	1.00					\$1,500.00
CP170	Mud Flush	gal	500.00					\$500.00
C030	Cement Service - Standby	hr	2.00					\$700.00
M015	Light Equipment Mileage	mi	65.00					\$130.00
M010	Heavy Equipment Mileage	mi	130.00					\$520.00
M020	Ton Mileage	tn	595.00					\$892.50
D015	Depth Charge: 4001'-5000'	job	1.00					\$2,500.00
C035	Cement Data Acquisition	job	1.00					\$250.00
C050	Cement Plug Container	job	1.00					\$250.00
C060	Cement Blending & Mixing Service	sack	200.00					\$280.00
R061	Service Supervisor	day	1.00					\$275.00
Customer Section: On the following scale how would you rate Hurricane Services Inc.?								Net:
								\$20,812.80
Based on this job, how likely is it you would recommend HSI to a colleague?								Total Taxable
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐								\$ -
Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely								Tax Rate:
								State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.
								Sale Tax:
								\$ -
								Total:
								\$ 20,812.80
HSI Representative: John Polley								

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/2% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X _____ **CUSTOMER AUTHORIZATION SIGNATURE**

Ritchie Exploration McPhersonCollege4D#1



JOB LOG

SWIFT Services, Inc.

DATE

6-20-23

PAGE NO.

1

CUSTOMER

Richie Exploration

WELL NO.

#1

LEASE

Maphason College

JOB TYPE

Port Celler

TICKET NO.

36181

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	12:30							ON location
								238" 516" PC 2477'
	13:15				✓		1200	Test BS
	13:20							open PC
	13:30	2 1/2		✓		500		Injection Rate
	13:35			✓				mix 1500 lbs of gel w/ 25K 500ppm seed hulls
	14:50		99	✓				mix 150 SK w/ 4 SK hulls
wait 30 min								30 SK w/out hulls 180 total
	15:50		28	✓				mix 50 SK cmt
wait 30 min								
	16:40		66	✓				mix 120 SK cmt
wait 30 min								
	17:45		66	✓				mix 120 SK cmt
								no cmt to surface
			8.5	✓				displace cmt
	18:20			✓		1200		close & test
	18:30							Run 5 joints
	18:40		30	✓				Reverse Clean
	19:00							Wash pump truck
	19:30							load well
	19:45							Job Complete
								Thanks!
								Preston, Kirby, Brett, Josh
								470 SKs SMD used mix @ 11.24%

SWIFT Services, Inc.

DATE _____

PAGE NO.

6-28-23

✓

CUSTOMER

WELL NO.

LEASE

JOB TYPE

TICKET NO.

Richie Exploration

4-D-1

Mejorada College

Fill Area w/ cement

36188

[illegible]



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70801

DST#: 3

Test Start: 2023.05.31 @ 05:47:00

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:56:15

Time Test Ended: 11:33:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

Interval: 4314.00 ft (KB) To 4337.00 ft (KB) (TVD)

Reference Elevations: 3365.00 ft (KB)

Total Depth: 4337.00 ft (KB) (TVD)

3357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8645 Outside

Press@RunDepth: 20.13 psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.31

End Date:

2023.05.31

Last Calib.: 2023.05.31

Start Time: 05:47:05

End Time:

11:33:44

Time On Btm: 2023.05.31 @ 07:54:30

Time Off Btm: 2023.05.31 @ 09:59:45

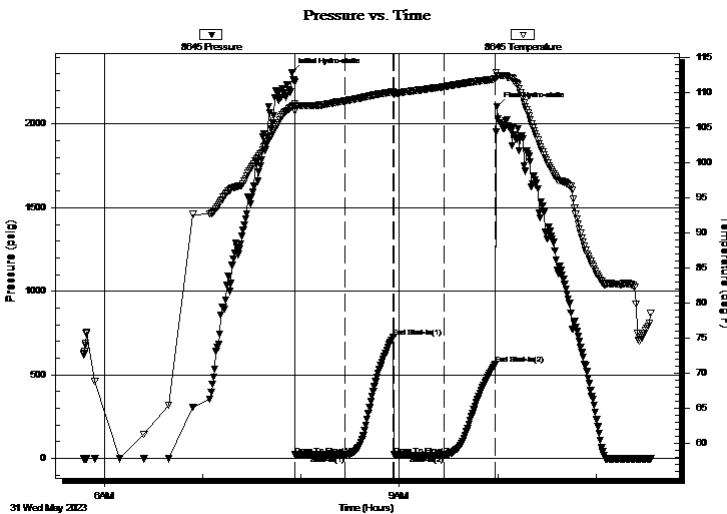
TEST COMMENT: IF-30- WSB

SI1-30- No return

FF-30- No blow

SI2-30- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2309.34	108.02	Initial Hydro-static
2	21.03	107.40	Open To Flow (1)
33	20.29	108.84	Shut-In(1)
62	727.64	110.13	End Shut-In(1)
63	21.10	109.73	Open To Flow (2)
93	20.13	110.86	Shut-In(2)
124	561.75	111.94	End Shut-In(2)
126	2104.04	112.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.07

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70801

DST#: 3

Test Start: 2023.05.31 @ 05:47:00

GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:56:15

Time Test Ended: 11:33:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

Interval: 4314.00 ft (KB) To 4337.00 ft (KB) (TVD)

Reference Elevations: 3365.00 ft (KB)

Total Depth: 4337.00 ft (KB) (TVD)

3357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.05.31

End Date:

2023.05.31

Last Calib.:

2023.05.31

Start Time: 05:47:05

End Time:

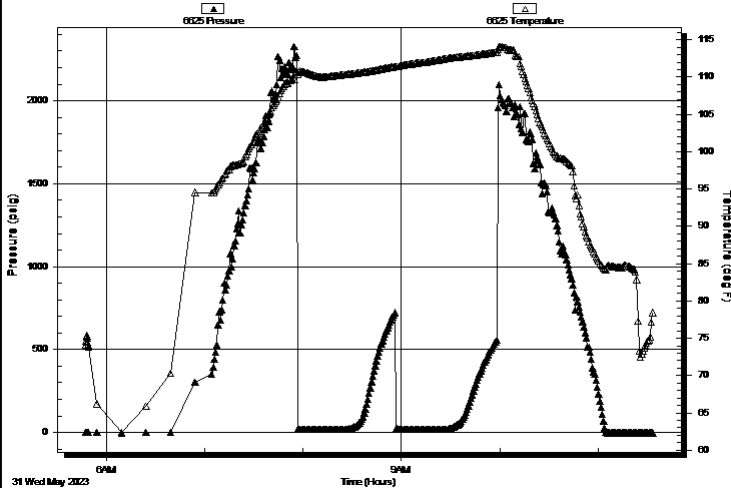
11:33:29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-30- WSB
SI1-30- No return
FF-30- No blow
SI2-30- No return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%	0.07

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

4-17S-37W Wichita, KS

8100 E 22nd St. N #700

Duke Rig #2

PO Box 783188

Job Ticket: 70801

DST#: 3

Whichita, KS 67278

Test Start: 2023.05.31 @ 05:47:00

ATTN: Max Lovely

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: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%	0.070

Total Length: 5.00 ft

Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5# LCM

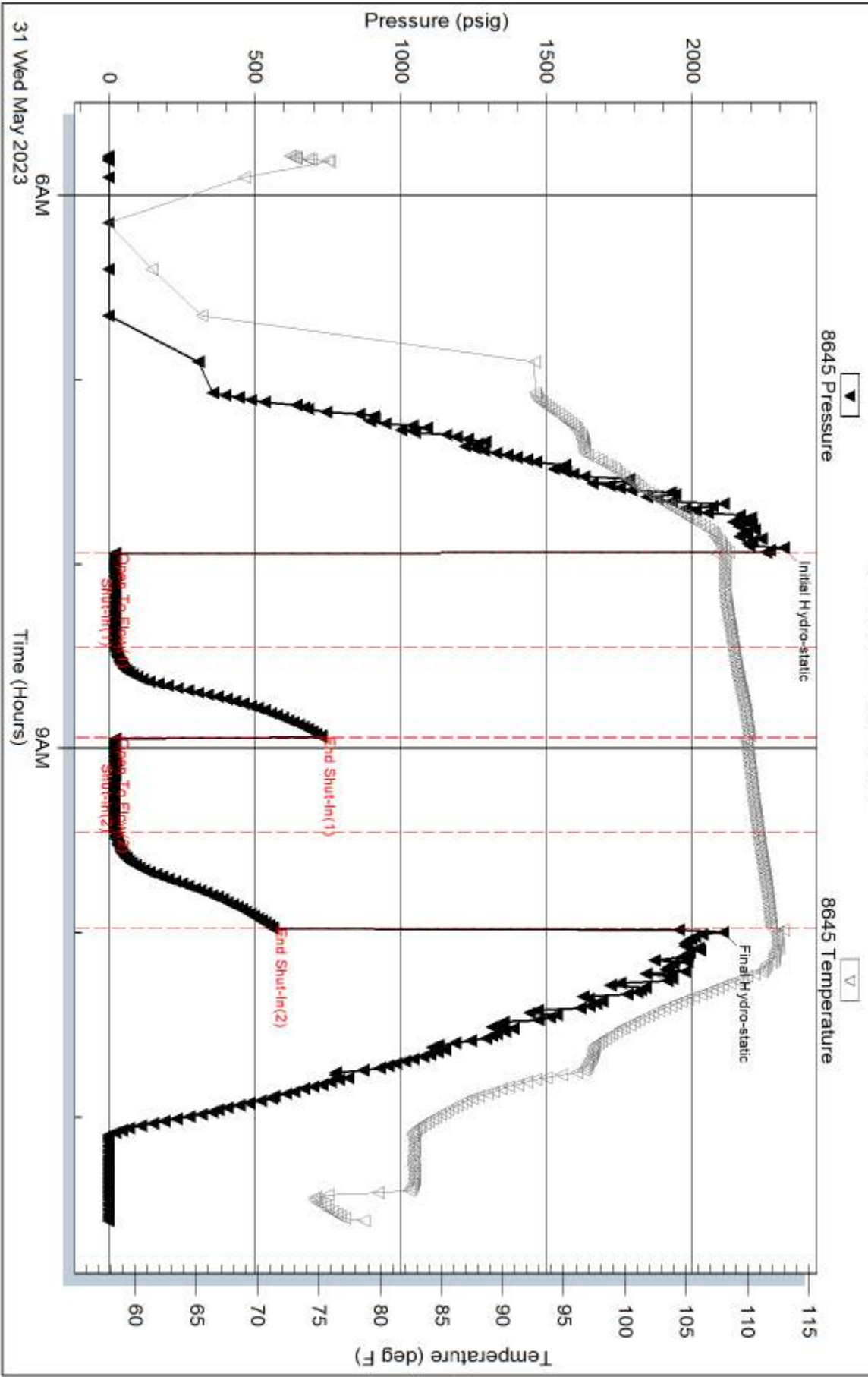
Serial #: 8645

Outside Ritchie Exploration Inc

Duke Rig #2

DST Test Number: 3

Pressure vs. Time



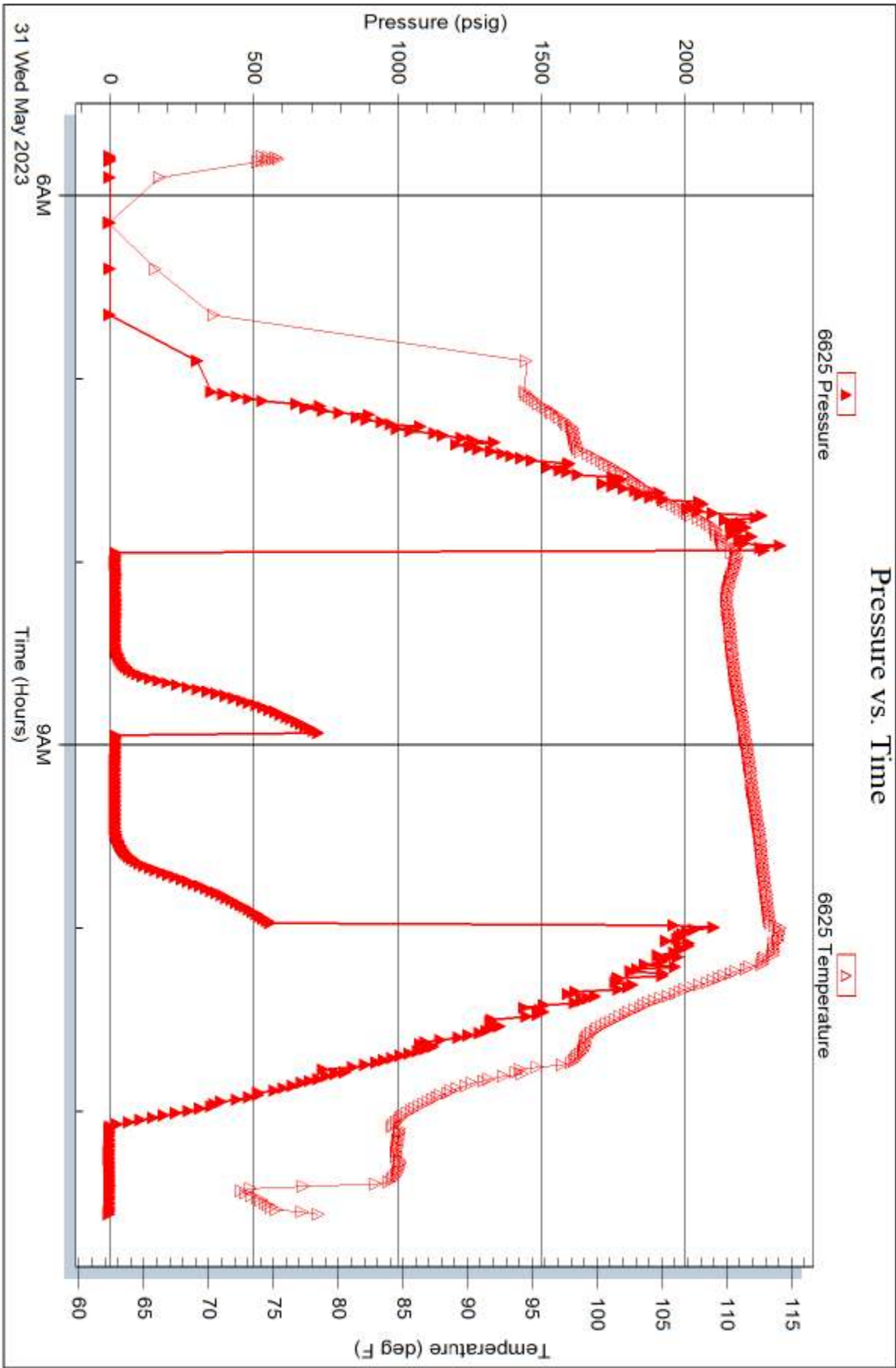
Serial #: 6625

Inside

Ritchie Exploration Inc

Duke Rig #2

DST Test Number: 3





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc

8100 E 22nd St. N #700
PO Box 783188
Whichita, KS 67278
ATTN: Max Lovely

4-17S-37W Wichita, KS

Duke Rig #2

Job Ticket: 70802

DST#: 4

Test Start: 2023.06.01 @ 09:42:00

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:44:00

Time Test Ended: 18:01:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

Interval: 4454.00 ft (KB) To 4515.00 ft (KB) (TVD)

Total Depth: 4515.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 3365.00 ft (KB)

3357.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8645

Press@RunDepth: 498.82 psig @ ft (KB)

Start Date: 2023.06.01

End Date:

2023.06.01

Start Time: 09:42:05

End Time:

18:01:14

Capacity: 8000.00 psig

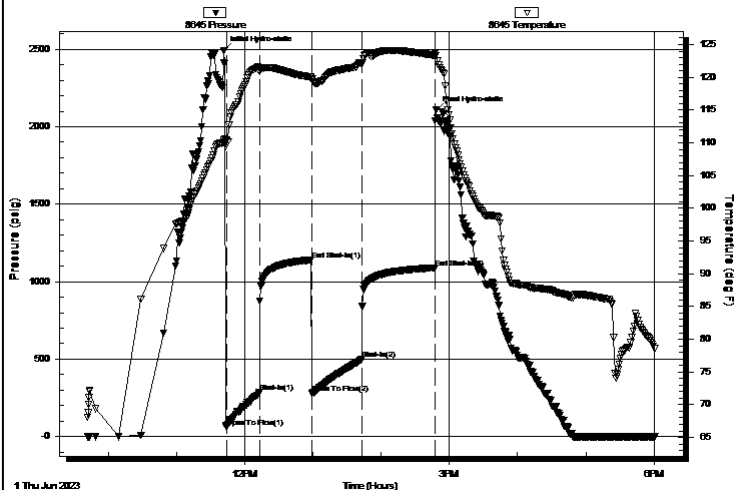
Last Calib.: 1899.12.30

Time On Btm: 2023.06.01 @ 11:42:00

Time Off Btm: 2023.06.01 @ 14:48:30

TEST COMMENT: IF-30- BOB in 4 min 40 sec, built to 71.81"
SI1-45- BOB in 14 min, built to 12.4", died back to 12.1"
FF-45- BOB in 7 min 40 sec, built to 79.87"
SI2-60- Built to 2", died back to 1.15"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2493.15	110.51	Initial Hydro-static
2	60.32	110.37	Open To Flow (1)
31	283.82	120.91	Shut-In(1)
77	1140.49	120.01	End Shut-In(1)
78	277.20	119.61	Open To Flow (2)
122	498.82	122.04	Shut-In(2)
185	1089.87	123.36	End Shut-In(2)
187	2106.42	123.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
94.00	GO 15% gas 85% oil	1.32
128.00	GMCO 20% gas 60% oil 20% mud	1.80
127.00	GSWMC0 40% gas 40% oil 5% water	51.78ud
829.00	GMCO 20% gas 70% oil 10% mud	11.63
0.00	416' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

4-17S-37W Wichita, KS

8100 E 22nd St. N #700

Duke Rig #2

PO Box 783188

Job Ticket: 70802

DST#: 4

Whichita, KS 67278

Test Start: 2023.06.01 @ 09:42:00

ATTN: Max Lovely

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	GO 15% gas 85% oil	1.319
128.00	GMCO 20% gas 60% oil 20% mud	1.796
127.00	GSWMCO 40% gas 40% oil 5% water 15% n	1.781
829.00	GMCO 20% gas 70% oil 10% mud	11.629
0.00	416' GIP	0.000

Total Length: 1178.00 ft

Total Volume: 16.525 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 5# LCM

