

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 Recompletion Date _____ 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	Ritchie Exploration, Inc.
Well Name	BOW CREEK UNIT 1
Doc ID	1709966

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	3569	3573			500 GALS 15% MCA
4	3496	3499			375 GALS 15% MCA
4	3487	3490			375 GALS 15% MCA
4	3475	3478			375 GALS 15% MCA
4	3461	3464			375 GALS 15% MCA
4	3429	3432			500 GALS 15% MCA
4	3411	3415			500 GALS 15% MCA
4	3358	3362			500 GALS 15% MCA



EXPLORATION, INC.
Wichita, Kansas

#1 Bow Creek Unit

1,641' FNL & 2,292' FWL

9' N & 18' W of NE SE NW Section 7-6S-21W

Graham County, Kansas

API# 15-065-24229-0000

Elevation: GL: 2,183', KB: 2,190'

Sample Tops			Ref. Well
Anhydrite	1839	+351	+1
B/Anhydrite	1870	+320	+2
Stotler	3153	-963	-1
Topeka	3196	-1006	-1
Heebner	3382	-1192	+3
Toronto	3412	-1222	-1
Lansing	3426	-1236	+2
Muncie	3535	-1345	+3
Stark	3589	-1399	-1
Hushpuckney	3602	-1412	+2
BKC	3615	-1425	Flat
Marmaton	3639	-1449	+1
Conglomerate	3659	-1469	+5
Pre-Cambrian	3678	-1488	+2
RTD	3680	-1490	



CHARGE TO: Ritchie Exploration
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 35836

PAGE 1 OF

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. <u>Hays</u>	# <u>1</u>	<u>Bow Creek Unit</u>	<u>Graham</u>	<u>KS</u>		<u>1/20/23</u>	
2. <u>Ness City</u>	TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>STP</u>	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO <u>LOCATION</u>	ORDER NO.	
3.	WELL TYPE <u>D-1</u>	WELL CATEGORY <u>development</u>	JOB PURPOSE <u>Long String</u>		WELL PERMIT NO.	WELL LOCATION	
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
535					TRK 111	60 mi					7.50	420.00
528					Pump Charge - Long String	1 EA					1600.00	1600.00
290					A-Ric	2 EA					42.00	84.00
281					Mustash	500 EA					2.00	1000.00
221					Liquid Kel	2 EA					25.00	50.00
403					Cement Basket	3 EA				5 1/2	300.00	900.00
404					Port Collar	1 EA					2500.00	2500.00
406					Catch Down Plug & Baffle	1 EA					250.00	250.00
402					Insert Floor shoe w/ Aero Fill	1 EA					350.00	350.00
409					Turbolizer	7 EA					100.00	700.00

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

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UNDECIDED	DISAGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

PAGE TOTAL 7854.00
 TOTAL 13956.27

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR David Edgerton APPROVAL _____

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 1/20/28

PAGE NO.

CUSTOMER Kitchie Exploration		WELL NO. 1	LEASE Bow Creek Unit	JOB TYPE Long String	TICKET NO. 35836
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CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1600							On location
								Csg - 5 1/2 x 15.5
								RTO - 3680 LTD - 3680
								Set @ 3676
								Shoe - 20 Insert @ 3653
								Port Collar - 45 @ 1823
								Turbolaxs - 1, 4, 5, 6, 8, 44, 46
								Baskets - 45, 61, 73
	1830							START Running Csg
	2015							BREAK Circ. on Bottom
	2100	2	8			0		plug rate hole - 30 sx
		5	12			300		pump mud flush - 500 GAL
		5	20			300		pump Kel spacer
		5	36			300		pump CMT - 125 sx @ 15 #
								Drop plug - wash p&l
	2130	7	0			400		START Disp
	2145	6	87			900		land plug @ 1500 #
								Release psi - Dry
								JOB Complete
								Thanks
								Davis, Seth & John



CHARGE TO: *Lithic Exploration*
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 35842

PAGE 1 OF 1

1. SERVICE LOCATIONS <i>Flays</i>	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
2. <i>Ness City</i>		<i>Bob Quail Unit</i>	<i>Grattan</i>	<i>KS</i>		<i>2/2/03</i>	
3.	TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.	
	WELL TYPE	<i>Expenses</i>		<i>BY</i>	<i>Exploration</i>		
4.	WELL TYPE	WELL CATEGORY	JOB PURPOSE		WELL PERMIT NO.	WELL LOCATION	
	<i>Oil</i>	<i>development</i>	<i>Per Collar</i>				
REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY. U/M			UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
<i>581</i>					<i>Trk 111</i>	<i>60 mi.</i>				<i>8.00</i>	<i>480.00</i>	
<i>526D</i>					<i>Ramp Charge - Per Collar</i>	<i>1 ea</i>				<i>1200.00</i>	<i>1200.00</i>	
<i>290</i>					<i>D-Air</i>	<i>2 ea</i>				<i>42.00</i>	<i>84.00</i>	
<i>225</i>					<i>Coston Sees Halls</i>	<i>1 ea</i>				<i>40.00</i>	<i>40.00</i>	
<i>329-8</i>					<i>60/40 pozmix 8% gel</i>	<i>225 sx</i>				<i>14.00</i>	<i>3150.00</i>	
<i>226</i>					<i>Fluocel</i>	<i>50 lbs</i>				<i>4.00</i>	<i>200.00</i>	
<i>581</i>					<i>Service Charge Out</i>	<i>400 sx</i>				<i>2.00</i>	<i>800.00</i>	
<i>583</i>					<i>Drayage</i>	<i>1452 tm</i>				<i>1.00</i>	<i>1452.00</i>	
LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.						SURVEY			PAGE TOTAL			
MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.						OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UNDECIDED	DISAGREE	<i>2911.00</i>		
X						WE UNDERSTOOD AND MET YOUR NEEDS?						
DATE SIGNED						OUR SERVICE WAS PERFORMED WITHOUT DELAY?						
TIME SIGNED						WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?						
						ARE YOU SATISFIED WITH OUR SERVICE?						
						<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND						
TOTAL										<i>8111.50</i>		

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

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

X

DATE SIGNED

TIME SIGNED

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE?

CUSTOMER DID NOT WISH TO RESPOND

TOTAL

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR *David Edgerston* APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 2/2/23 PAGE NO.

CUSTOMER *Kitchie Exploration* WELL NO. *1* LEASE *Bow Creek unit* JOB TYPE *Port Collar* TICKET NO. *35842*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	<i>1300</i>							<i>On location</i>
								<i>TBL - 2 3/8</i>
								<i>CSG - 5 1/2</i>
								<i>Port Collar - 1823</i>
						<i>1200</i>		<i>Test tools - good</i>
								<i>open port collar</i>
		<i>3</i>				<i>400</i>		<i>take rate</i>
		<i>5</i>	<i>0</i>			<i>500</i>		<i>START Cement @ 12.2 PPG</i>
		<i>5</i>	<i>65</i>			<i>1800</i>		<i>circ cmt - 200 sx</i>
		<i>5</i>	<i>65</i>			<i>1200</i>		<i>raise wgt for 25 sx</i>
		<i>5</i>	<i>70</i>			<i>1200</i>		<i>END cmt</i>
								<i>close port collar</i>
						<i>1200</i>		<i>TEST - good</i>
								<i>Run 5 JIS</i>
		<i>3</i>	<i>20</i>					<i>Reverse out</i>
								<i>JOB Complete</i>
								<i>Thanks</i>
								<i>Davis, Seth & Brett</i>



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.14 @ 17:33:00

End Date: 2023.01.15 @ 01:50:15

Job Ticket #: 69986 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.01.20 @ 10:27:36



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69986 **DST#: 1**
Test Start: 2023.01.14 @ 17:33:00

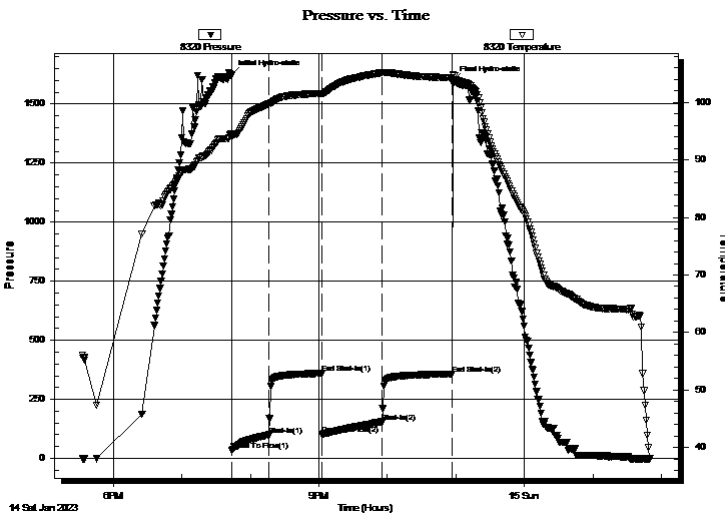
GENERAL INFORMATION:

Formation: **Oread**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:43:30
Time Test Ended: 01:50:15
Interval: **3332.00 ft (KB) To 3371.00 ft (KB) (TVD)**
Total Depth: 3371.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole (Initial)
Tester: Terrance
Unit No: 75
Reference Elevations: 2191.00 ft (KB)
2184.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8320 Outside
Press@RunDepth: 154.81 psig @ 3333.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2023.01.14 End Date: 2023.01.15 Last Calib.: 2023.01.15
Start Time: 17:33:05 End Time: 01:50:14 Time On Btm: 2023.01.14 @ 19:43:15
Time Off Btm: 2023.01.14 @ 22:57:30

TEST COMMENT: IF-30-%" blow
IS-45- No return
FF-45 7" blow
FS-60 -No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1623.18	94.49	Initial Hydro-static
1	32.30	93.98	Open To Flow (1)
34	100.02	99.77	Shut-In(1)
80	358.90	101.59	End Shut-In(1)
80	102.23	101.53	Open To Flow (2)
133	154.81	105.17	Shut-In(2)
194	357.02	104.31	End Shut-In(2)
195	1597.05	104.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	w ater	0.61
120.00	MW 40% mud 60% w ater	1.67
60.00	OCWM 10% oil 20 %w ater 70% mud	0.84

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69986 **DST#: 1**
Test Start: 2023.01.14 @ 17:33:00

Tool Information

Drill Pipe:	Length: 3205.00 ft	Diameter: 3.79 inches	Volume: 44.72 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 60000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3332.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3302.00	
Shut In Tool	5.00			3307.00	
Hydraulic tool	5.00			3312.00	
Jars	5.00			3317.00	
EM Tool	3.00			3320.00	
Safety Joint	3.00			3323.00	
Packer	5.00			3328.00	31.00 Bottom Of Top Packer
Packer	4.00			3332.00	
Stubb	1.00			3333.00	
Recorder	0.00	8368	Inside	3333.00	
Recorder	0.00	8320	Outside	3333.00	
Perforations	1.00			3334.00	
Change Over Sub	1.00			3335.00	
Drill Pipe	32.00			3367.00	
Change Over Sub	1.00			3368.00	
Bullnose	3.00			3371.00	39.00 Bottom Packers & Anchor
Total Tool Length:	70.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69986 **DST#: 1**
Test Start: 2023.01.14 @ 17:33:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 30 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 16000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.39 in ³	Gas Cushion Type:	
Resistivity: 0.95 ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: 1.00 inches		

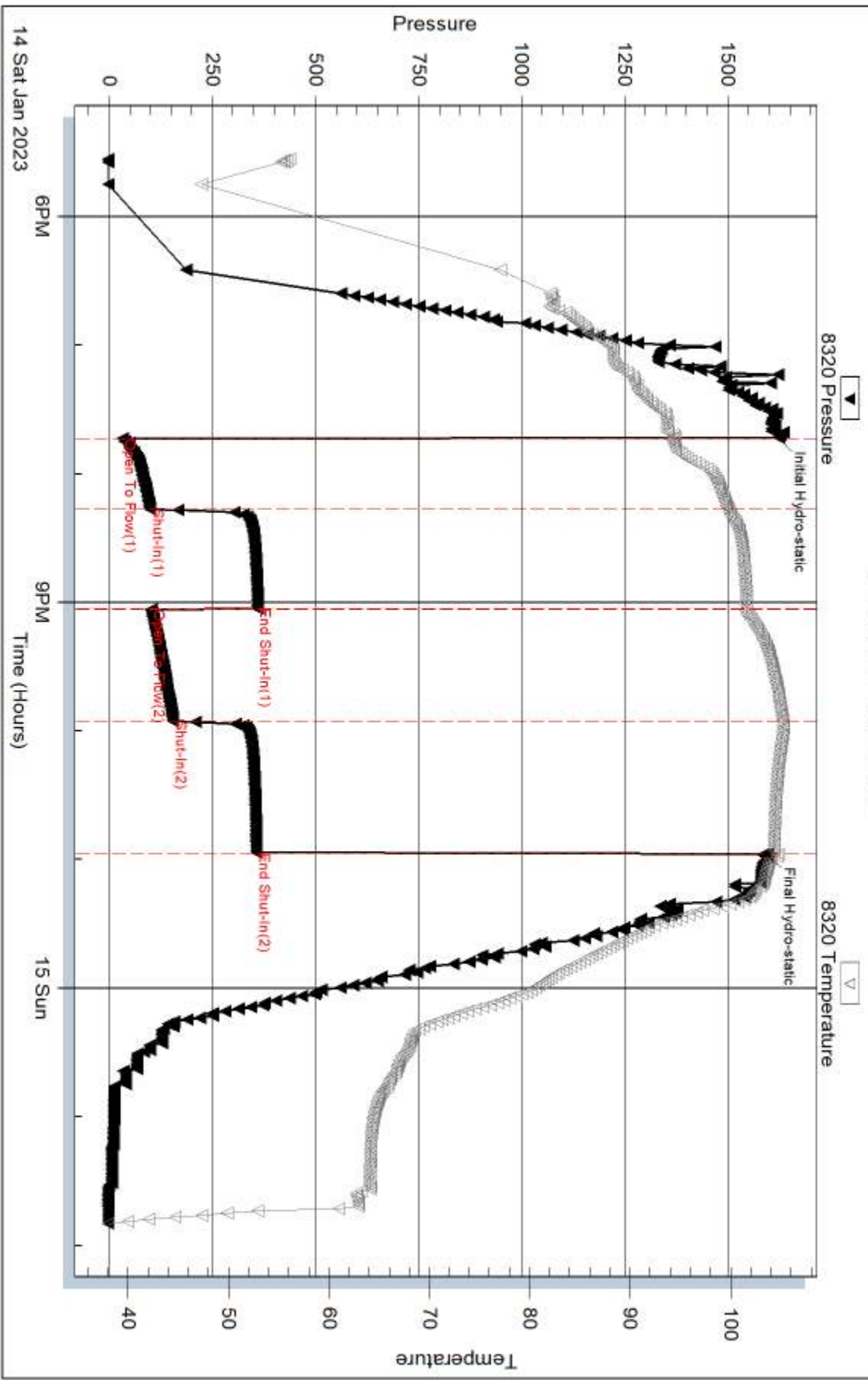
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	water	0.608
120.00	MW 40% mud 60% water	1.670
60.00	OCWM 10% oil 20 % water 70% mud	0.835

Total Length: 300.00 ft Total Volume: 3.113 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time



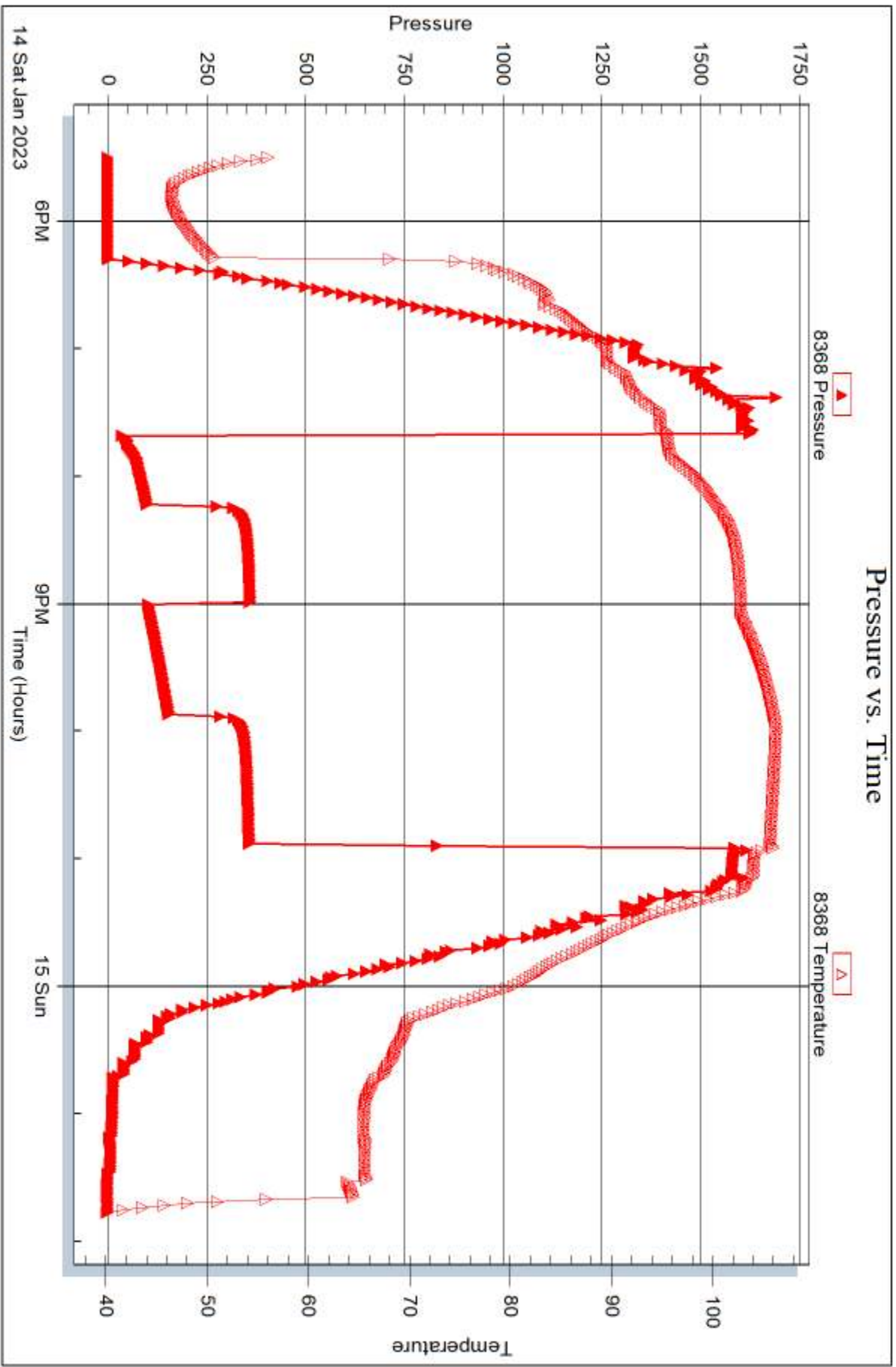
Serial #: 8368

Inside

Richie Exploration

Bow Creek Unit #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 69986

Printed: 2023.01.20 @ 10:27:37



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.15 @ 15:30:00

End Date: 2023.01.15 @ 21:31:47

Job Ticket #: 69987 DST #: 2

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

Printed: 2023.01.20 @ 10:27:05

Ritchie Exploration
7-6-21w Graham.KS
Bow Creek Unit #1
DST # 2
Toronto - LKC A
2023.01.15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69987 **DST#: 2**
Test Start: 2023.01.15 @ 15:30:00

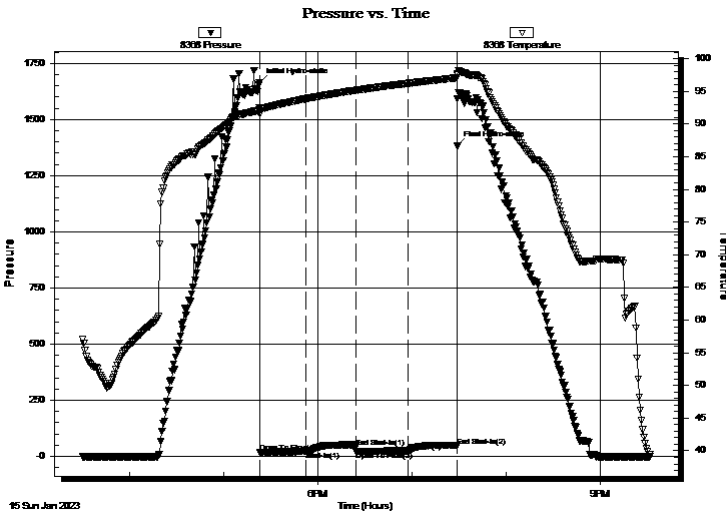
GENERAL INFORMATION:

Formation: **Toronto - LKC A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:22:50
Time Test Ended: 21:31:47
Interval: **3378.00 ft (KB) To 3446.00 ft (KB) (TVD)**
Total Depth: 3446.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Terrance
Unit No: 75
Reference Elevations: 2191.00 ft (KB)
2184.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8368 **Inside**
Press@RunDepth: 24.11 psig @ 3382.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2023.01.15 End Date: 2023.01.15 Last Calib.: 2023.01.15
Start Time: 15:30:01 End Time: 21:31:47 Time On Btm: 2023.01.15 @ 17:22:48
Time Off Btm: 2023.01.15 @ 19:28:55

TEST COMMENT: IF-30-Surface blow
IS-30-No return
FF-30-No blow
FS-30-No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1663.15	92.43	Initial Hydro-static
1	16.06	91.48	Open To Flow (1)
30	21.40	93.85	Shut-In(1)
62	42.17	95.16	End Shut-In(1)
62	21.38	95.15	Open To Flow (2)
95	24.11	96.22	Shut-In(2)
126	46.08	97.07	End Shut-In(2)
127	1381.09	97.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69987 **DST#: 2**
Test Start: 2023.01.15 @ 15:30:00

Tool Information

Drill Pipe:	Length: 3240.00 ft	Diameter: 3.79 inches	Volume: 45.21 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: lb
		Total Volume: - bbl		Tool Chased ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3378.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.88 inches		

Tool Comments:

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

Change Over Sub	1.00			3348.00	
Shut In Tool	5.00			3353.00	
Hydraulic tool	5.00			3358.00	
Jars	5.00			3363.00	
EM Tool	3.00			3366.00	
Safety Joint	3.00			3369.00	
Packer	5.00			3374.00	31.00 Bottom Of Top Packer
Packer	4.00			3378.00	
Stubb	1.00			3379.00	
Perforations	3.00			3382.00	
Recorder	0.00	8368	Inside	3382.00	
Recorder	0.00	8320	Outside	3382.00	
Change Over Sub	1.00			3383.00	
Drill Pipe	63.00			3446.00	68.00 Bottom Packers & Anchor

Total Tool Length: 99.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

7-6-21w Graham.KS

PO Box 783188
Wichita, KS 67278-3188

Bow Creek Unit #1

Job Ticket: 69987

DST#: 2

ATTN: Max Lovely

Test Start: 2023.01.15 @ 15:30:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

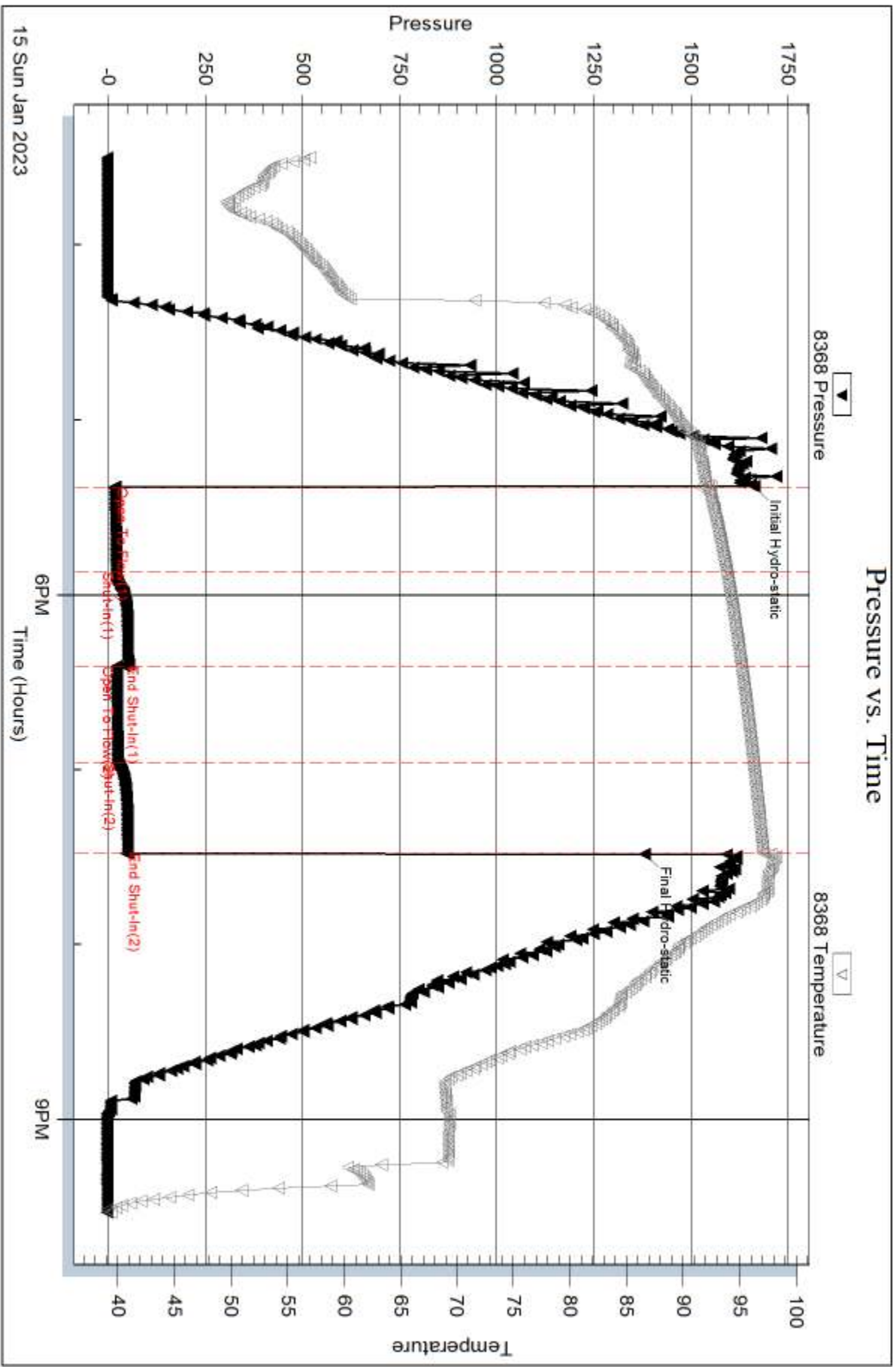
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



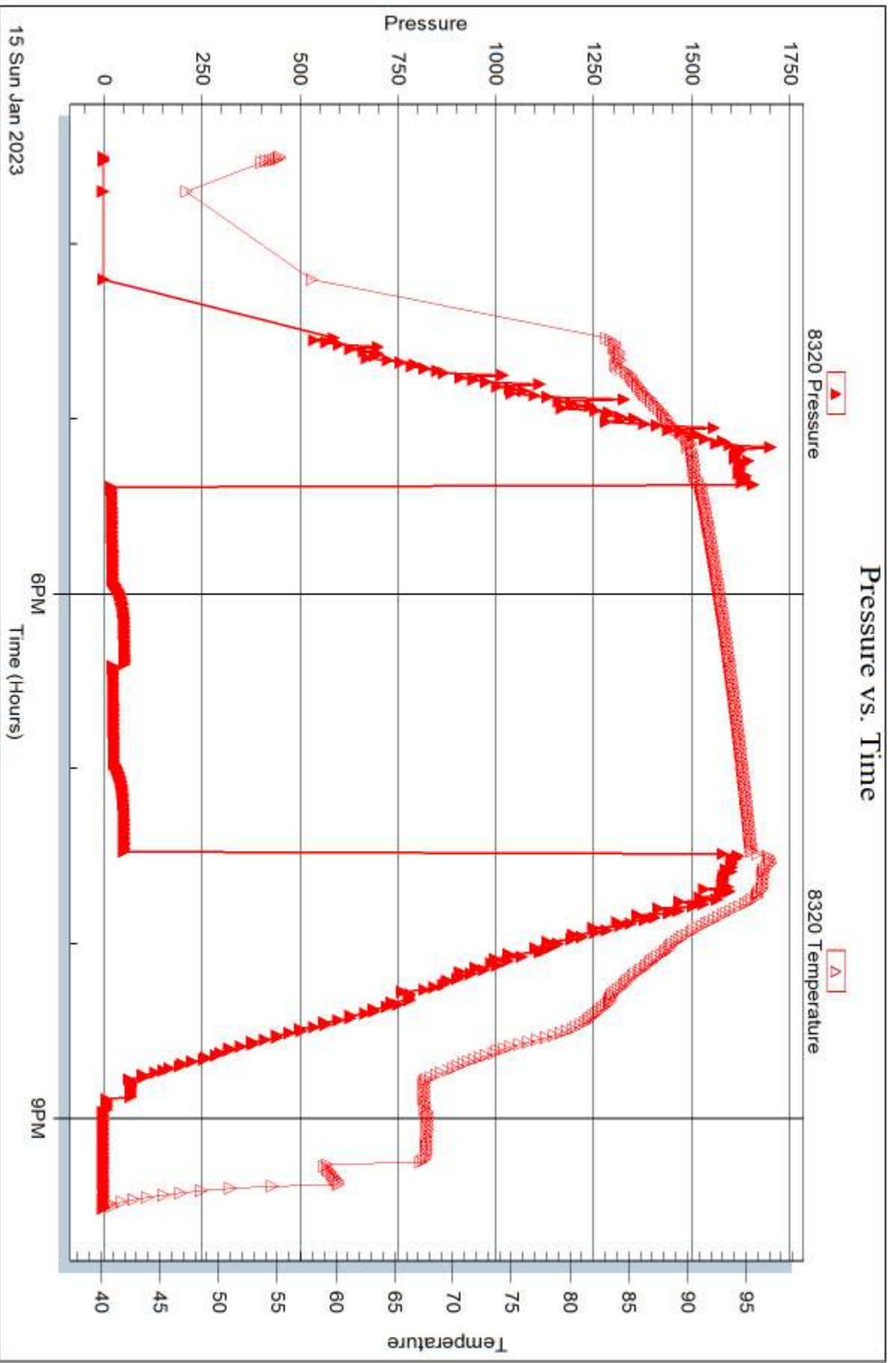
15 Sun Jan 2023

Serial #: 8320

Outside Ritchie Exploration

Bow Creek Unit #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.16 @ 07:00:00

End Date: 2023.01.16 @ 13:30:45

Job Ticket #: 69988 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.01.20 @ 10:26:38

Ritchie Exploration
7-6-21w Graham.KS
Bow Creek Unit #1
DST # 3
LKC-C-D
2023.01.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 PO Box 783188
 Wichita, KS 67278-3188
 ATTN: Max Lovely

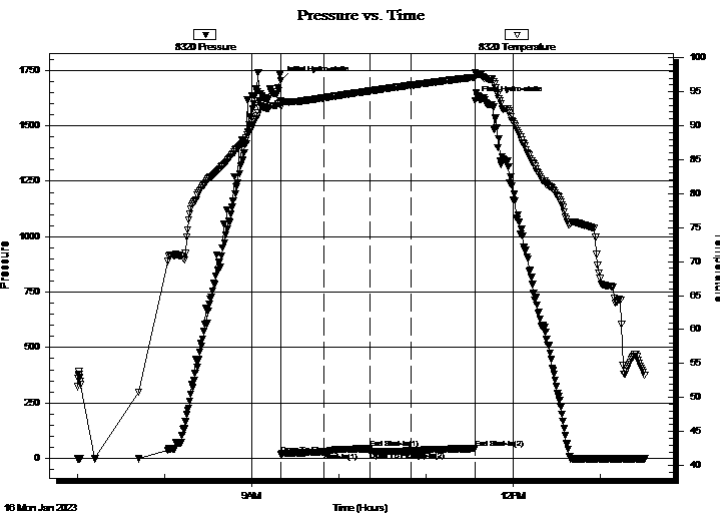
7-6-21w Graham.KS
Bow Creek Unit #1
 Job Ticket: 69988 **DST#: 3**
 Test Start: 2023.01.16 @ 07:00:00

GENERAL INFORMATION:

Formation: **LKC C-D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:20:15
 Time Test Ended: 13:30:45
 Interval: **3448.00 ft (KB) To 3484.00 ft (KB) (TVD)**
 Total Depth: 3484.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Terrance
 Unit No: 75
 Reference Elevations: 2191.00 ft (KB)
 2184.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8320 Outside
 Press@RunDepth: 33.50 psig @ 3449.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2023.01.16 End Date: 2023.01.16 Last Calib.: 2023.01.16
 Start Time: 07:00:05 End Time: 13:30:44 Time On Btm: 2023.01.16 @ 09:20:00
 Time Off Btm: 2023.01.16 @ 11:34:00

TEST COMMENT: IF-30- No blow
 IS-30-No return
 FF-30-No blow
 FS-30-No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.32	93.72	Initial Hydro-static
1	19.47	92.89	Open To Flow (1)
30	28.78	94.12	Shut-In(1)
62	43.76	95.11	End Shut-In(1)
62	31.12	95.11	Open To Flow (2)
90	33.50	95.96	Shut-In(2)
134	43.90	97.13	End Shut-In(2)
134	1612.76	97.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	OSM	0.01

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69988 **DST#: 3**
Test Start: 2023.01.16 @ 07:00:00

Tool Information

Drill Pipe:	Length: 3301.00 ft	Diameter: 3.79 inches	Volume: 46.06 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	50000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3448.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	67.00 ft				
Number of Packers:	2	Diameter: 688.00 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3418.00	
Shut In Tool	5.00			3423.00	
Hydraulic tool	5.00			3428.00	
Jars	5.00			3433.00	
EM Tool	3.00			3436.00	
Safety Joint	3.00			3439.00	
Packer	5.00			3444.00	31.00 Bottom Of Top Packer
Packer	4.00			3448.00	
Stubb	1.00			3449.00	
Recorder	0.00	8368	Inside	3449.00	
Recorder	0.00	8320	Outside	3449.00	
Perforations	32.00			3481.00	
Bullnose	3.00			3484.00	36.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69988 **DST#: 3**
Test Start: 2023.01.16 @ 07:00:00

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 57.93 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

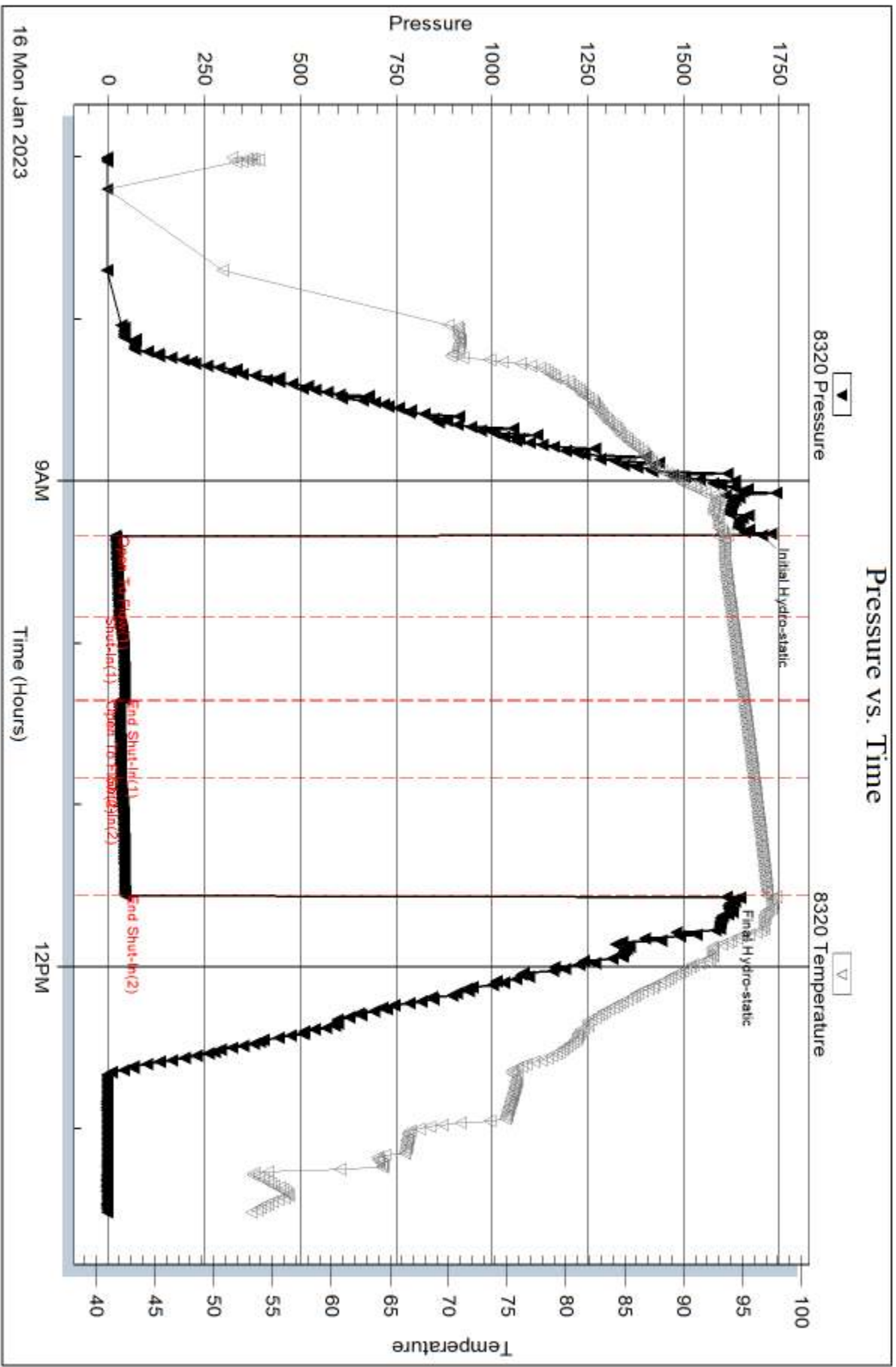
Length ft	Description	Volume bbl
3.00	OSM	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



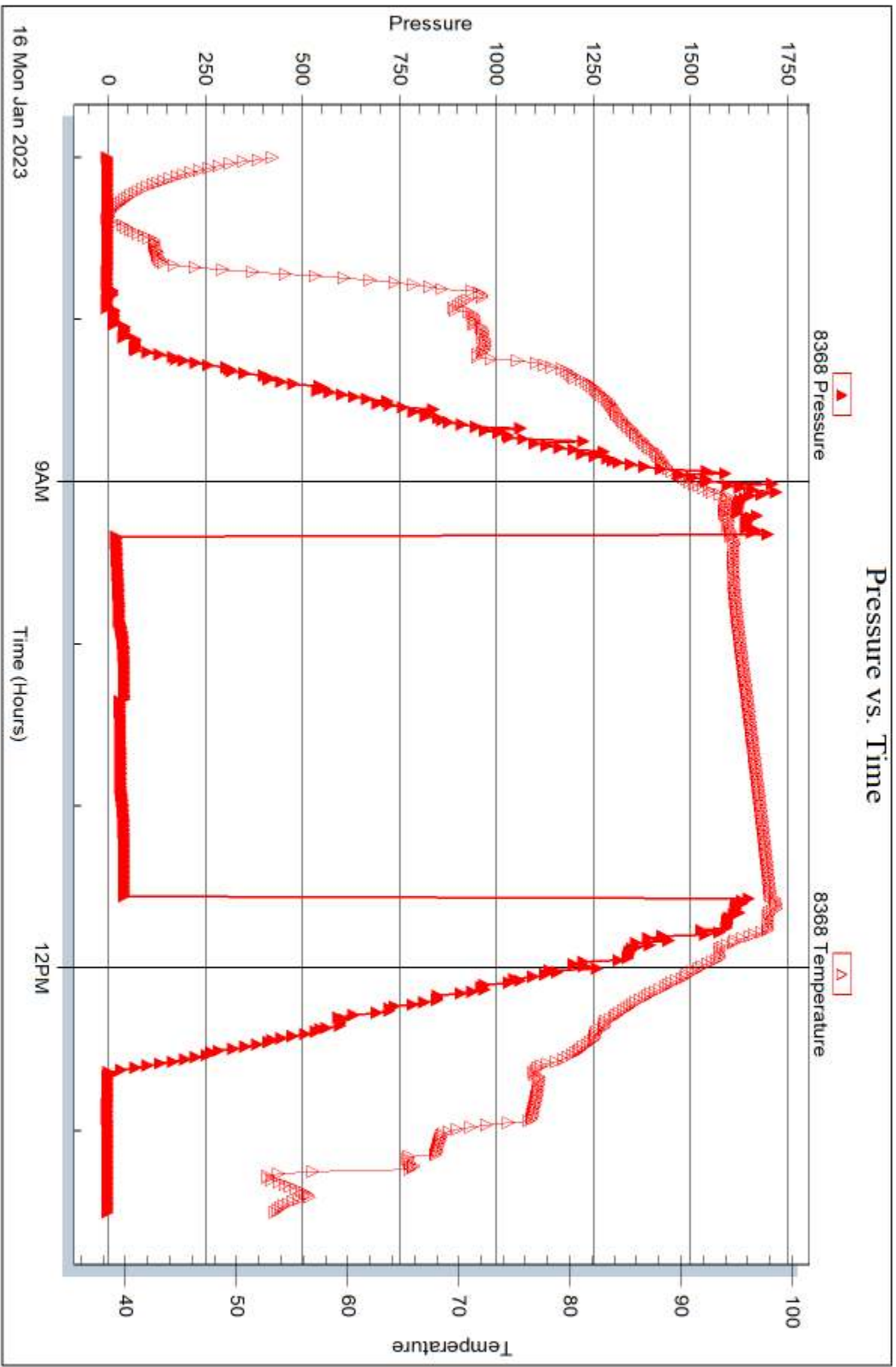
Serial #: 8368

Inside

Richie Exploration

Bow Creek Unit #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 69988

Printed: 2023.01.20 @ 10:26:39



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.16 @ 23:30:00

End Date: 2023.01.17 @ 08:16:15

Job Ticket #: 69989 DST #: 4

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

Printed: 2023.01.20 @ 10:25:57



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 PO Box 783188
 Wichita, KS 67278-3188
 ATTN: Max Lovely

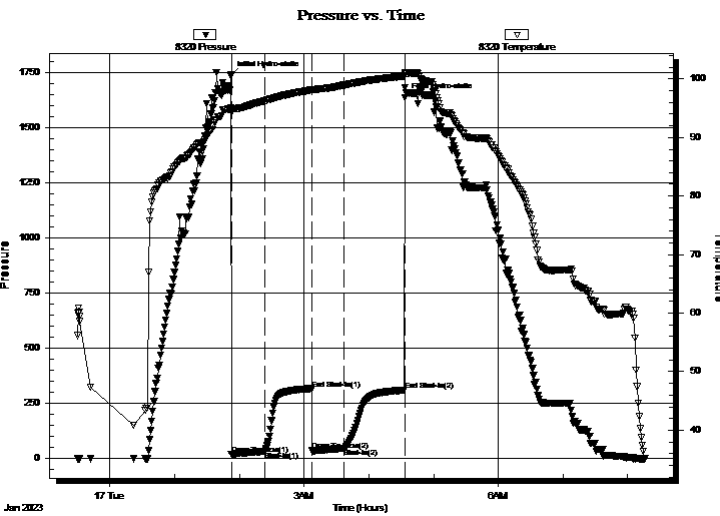
7-6-21w Graham.KS
Bow Creek Unit #1
 Job Ticket: 69989 **DST#: 4**
 Test Start: 2023.01.16 @ 23:30:00

GENERAL INFORMATION:

Formation: **LKC E-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:52:30
 Time Test Ended: 08:16:15
 Interval: **3485.00 ft (KB) To 3509.00 ft (KB) (TVD)**
 Total Depth: 3509.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Terrance
 Unit No: 75
 Reference Elevations: 2191.00 ft (KB)
 2184.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8320 Outside
 Press@RunDepth: 45.03 psig @ 3486.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2023.01.16 End Date: 2023.01.17 Last Calib.: 2023.01.17
 Start Time: 23:30:05 End Time: 08:16:15 Time On Btm: 2023.01.17 @ 01:52:15
 Time Off Btm: 2023.01.17 @ 04:33:30

TEST COMMENT: IF-30-Surface blow
 IS-45-No return
 FF-30-No blow
 FS-45-No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1732.93	95.01	Initial Hydro-static
1	16.77	94.20	Open To Flow (1)
32	32.07	96.29	Shut-In(1)
75	312.70	98.11	End Shut-In(1)
75	35.83	98.08	Open To Flow (2)
105	45.03	98.92	Shut-In(2)
161	308.40	100.50	End Shut-In(2)
162	1634.60	101.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 50%OIL 50%MUD	0.30

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69989 **DST#: 4**
Test Start: 2023.01.16 @ 23:30:00

Tool Information

Drill Pipe:	Length: 3363.00 ft	Diameter: 3.79 inches	Volume: 46.93 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 50000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3485.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.88 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3455.00	
Shut In Tool	5.00			3460.00	
Hydraulic tool	5.00			3465.00	
Jars	5.00			3470.00	
EM Tool	3.00			3473.00	
Safety Joint	3.00			3476.00	
Packer	5.00			3481.00	31.00 Bottom Of Top Packer
Packer	4.00			3485.00	
Stubb	1.00			3486.00	
Recorder	0.00	8368	Inside	3486.00	
Recorder	0.00	8320	Outside	3486.00	
Perforations	20.00			3506.00	
Bullnose	3.00			3509.00	24.00 Bottom Packers & Anchor

Total Tool Length: 55.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69989 **DST#: 4**
Test Start: 2023.01.16 @ 23:30:00

Mud and Cushion Information

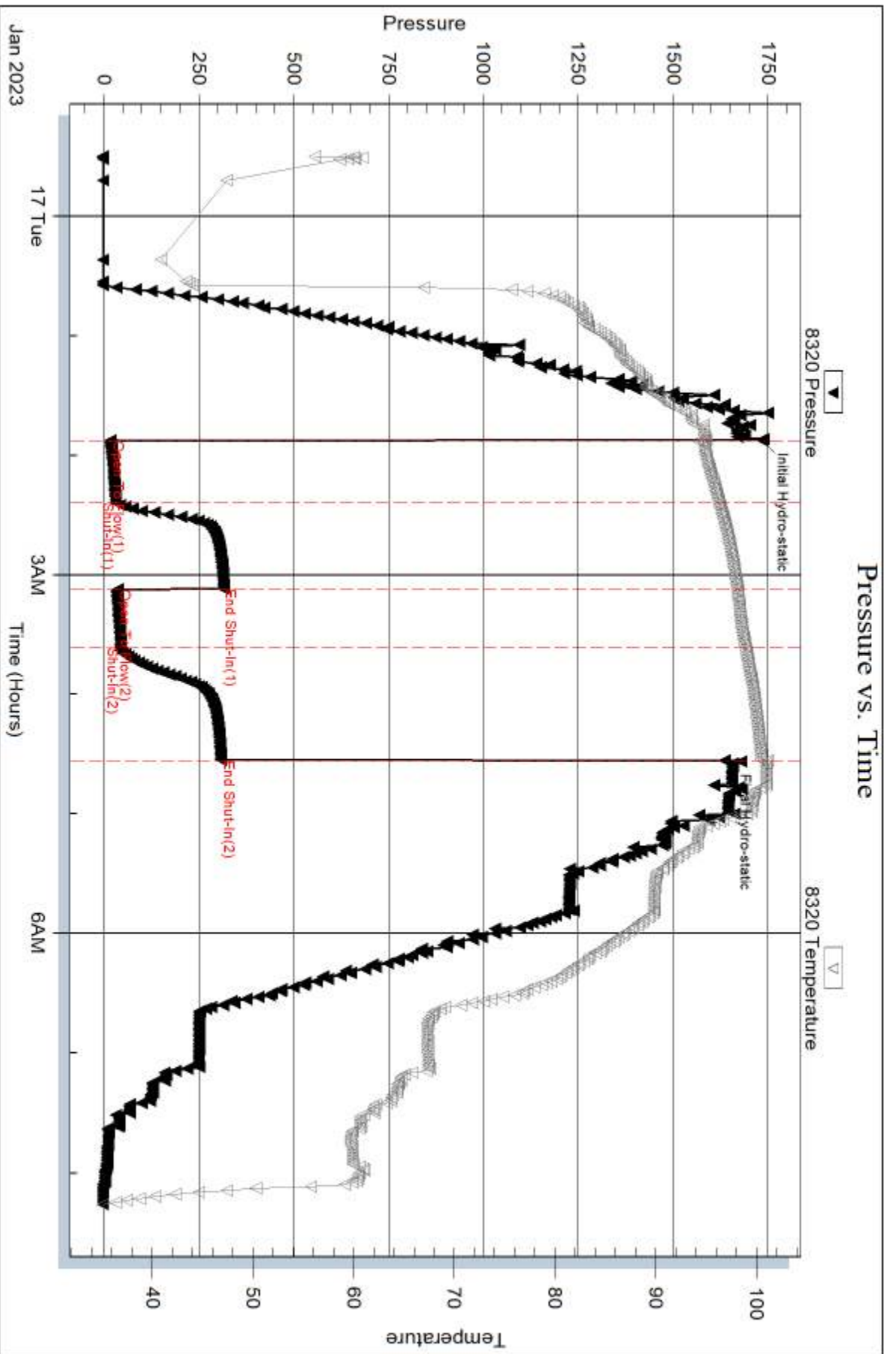
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCM 50%OIL 50%MUD	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



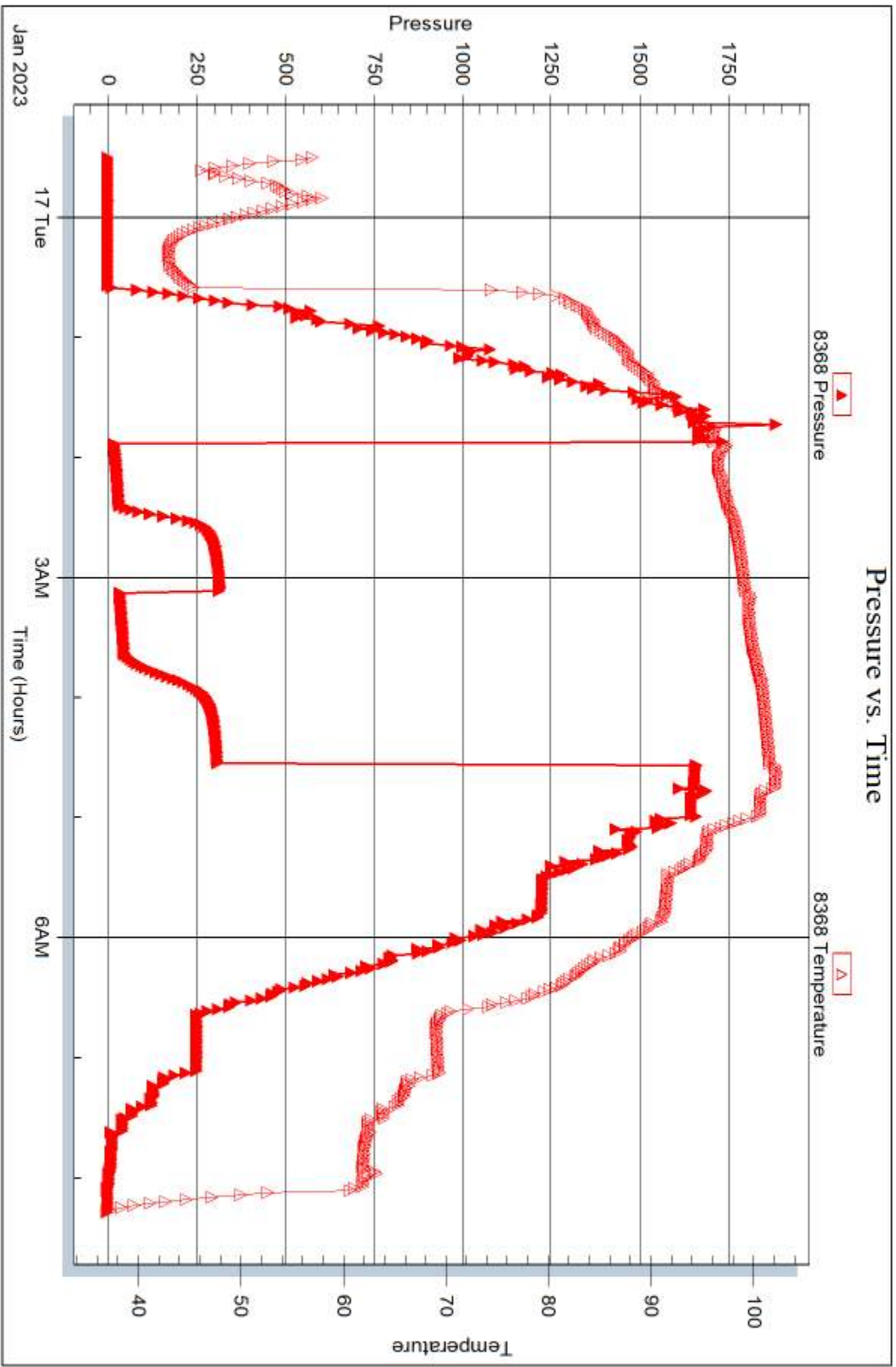
Serial #: 8368

Inside

Ritchie Exploration

Bow Creek Unit #1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 69989

Printed: 2023.01.20 @ 10:25:58



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.17 @ 21:00:00

End Date: 2023.01.18 @ 05:26:15

Job Ticket #: 69990 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.01.20 @ 10:19:48



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

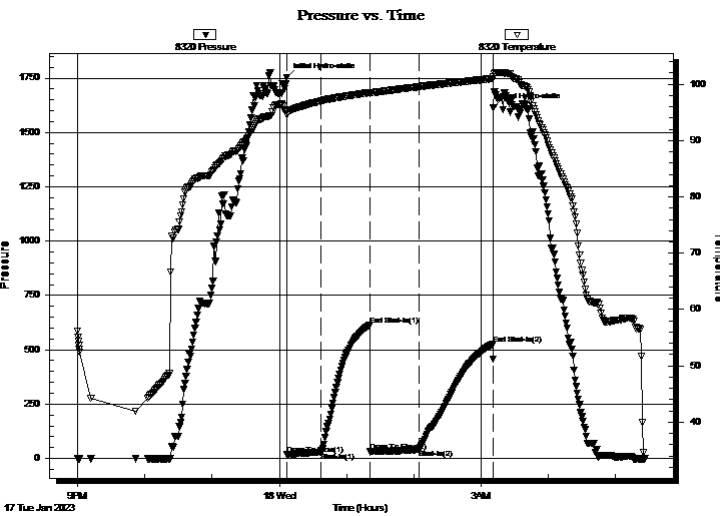
7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69990 **DST#: 5**
Test Start: 2023.01.17 @ 21:00:00

GENERAL INFORMATION:

Formation: **LKC H - J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:06:45
Time Test Ended: 05:26:15
Interval: **3527.00 ft (KB) To 3586.00 ft (KB) (TVD)**
Total Depth: 3586.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Reference Elevations: 2191.00 ft (KB)
2184.00 ft (CF)
KB to GR/CF: 7.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Terrance
Unit No: 75

Serial #: 8320 Outside
Press@RunDepth: 40.14 psig @ 3530.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2023.01.17 End Date: 2023.01.18 Last Calib.: 2023.01.18
Start Time: 21:00:05 End Time: 05:26:14 Time On Btm: 2023.01.18 @ 00:06:30
Time Off Btm: 2023.01.18 @ 03:11:00

TEST COMMENT: IF-30-Surface blow
IS-45-No return
FF-45-No blow
FS-60-No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1751.00	95.26	Initial Hydro-static
1	17.36	94.52	Open To Flow (1)
31	28.76	97.02	Shut-In(1)
74	614.55	98.51	End Shut-In(1)
75	31.50	98.37	Open To Flow (2)
118	40.14	99.55	Shut-In(2)
184	526.14	101.00	End Shut-In(2)
185	1614.37	101.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MCO 65%OIL 35%MUD	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69990 **DST#: 5**
Test Start: 2023.01.17 @ 21:00:00

Tool Information

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.79 inches	Volume: 47.39 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 50000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3527.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.88 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3497.00	
Shut In Tool	5.00			3502.00	
Hydraulic tool	5.00			3507.00	
Jars	5.00			3512.00	
EM Tool	3.00			3515.00	
Safety Joint	3.00			3518.00	
Packer	5.00			3523.00	31.00 Bottom Of Top Packer
Packer	4.00			3527.00	
Stubb	1.00			3528.00	
Perforations	1.00			3529.00	
Change Over Sub	1.00			3530.00	
Recorder	0.00	8368	Inside	3530.00	
Recorder	0.00	8320	Outside	3530.00	
Drill Pipe	32.00			3562.00	
Change Over Sub	1.00			3563.00	
Perforations	20.00			3583.00	
Bullnose	3.00			3586.00	59.00 Bottom Packers & Anchor
Total Tool Length:	90.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69990 **DST#: 5**
Test Start: 2023.01.17 @ 21:00:00

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

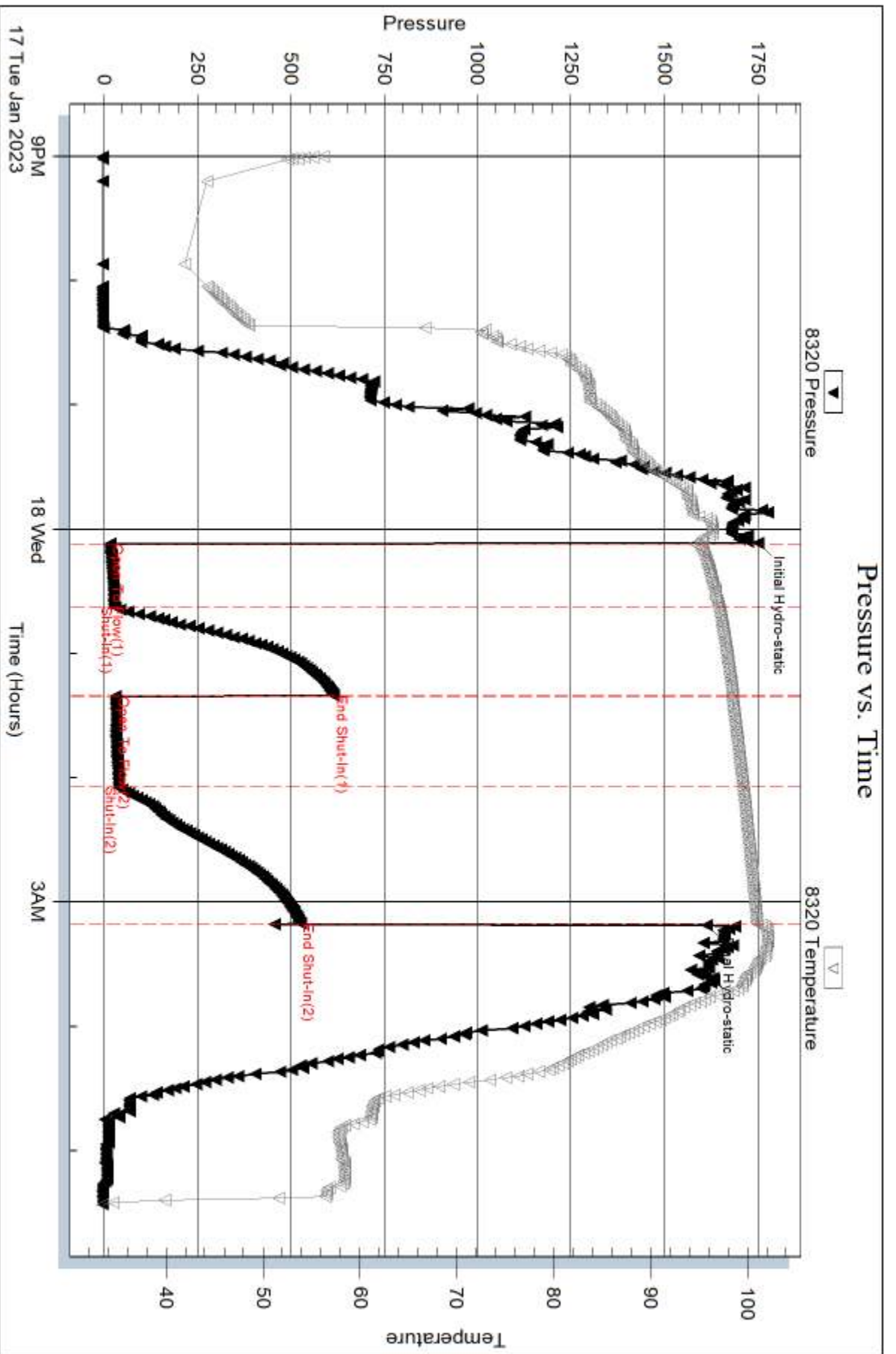
Length ft	Description	Volume bbl
10.00	MCO 65%OIL 35%MUD	0.049

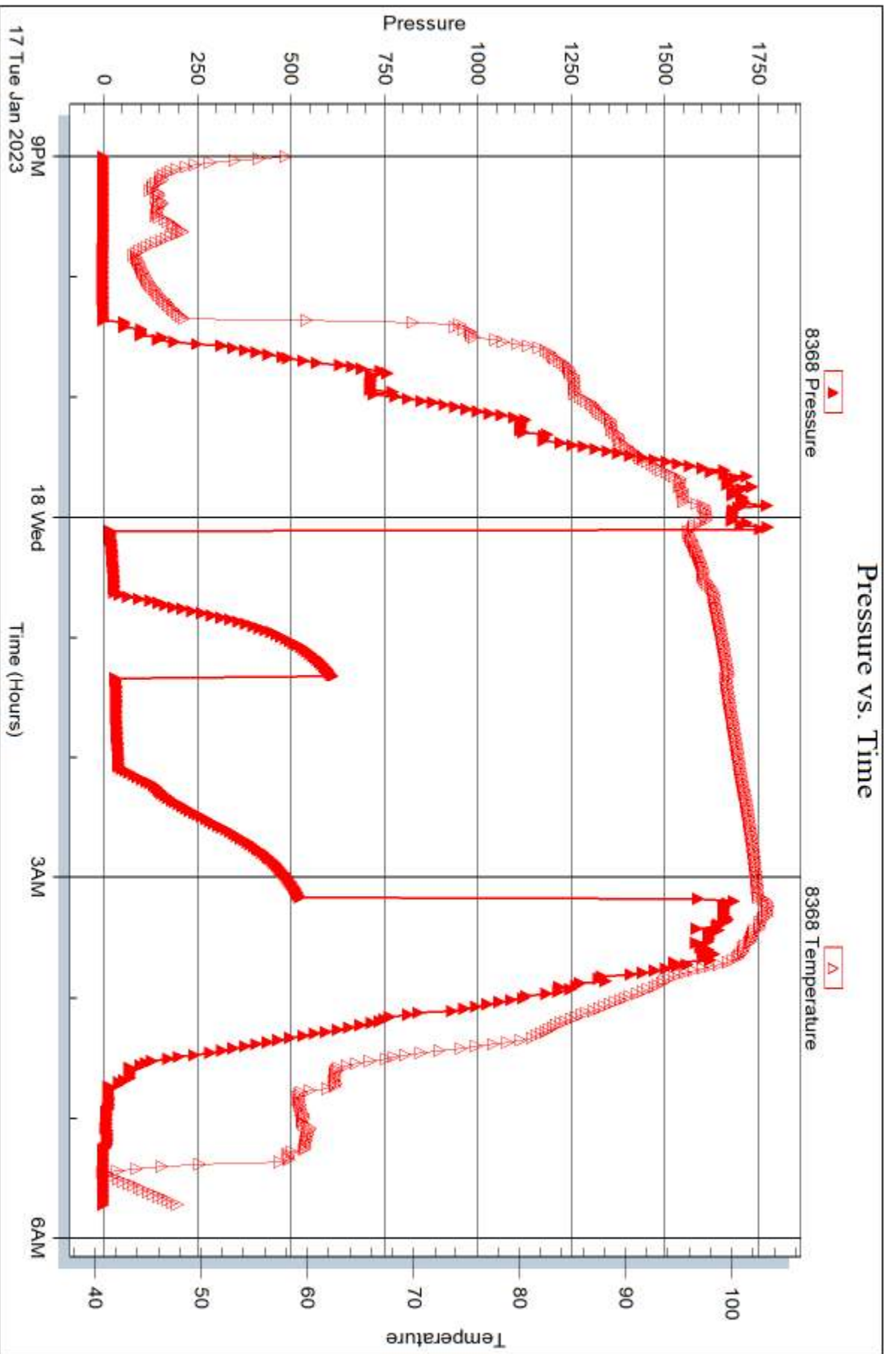
Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.18 @ 16:00:00

End Date: 2023.01.19 @ 02:03:30

Job Ticket #: 69991 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2023.01.20 @ 10:19:12

Ritchie Exploration

7-6-21w Graham.KS

Bow Creek Unit #1

DST # 6

LKC K-L

2023.01.18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69991 **DST#: 6**
Test Start: 2023.01.18 @ 16:00:00

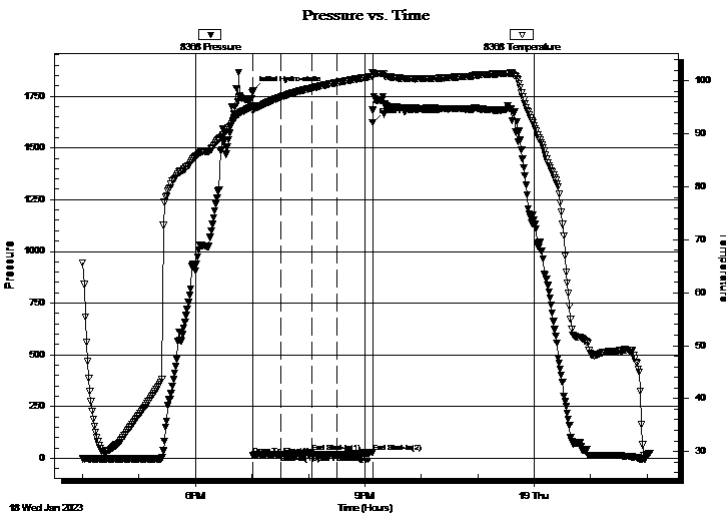
GENERAL INFORMATION:

Formation: **LKC K-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:01:16
Time Test Ended: 02:03:30
Test Type: Conventional Bottom Hole (Reset)
Tester: Terrance
Unit No: 75
Interval: **3588.00 ft (KB) To 3624.00 ft (KB) (TVD)**
Reference Elevations: 2191.00 ft (KB)
Total Depth: 3624.00 ft (KB) (TVD) 2184.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8368 **Inside**
Press@RunDepth: 18.08 psig @ 3594.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2023.01.18 End Date: 2023.01.19 Last Calib.: 2023.01.19
Start Time: 16:00:01 End Time: 02:03:30 Time On Btm: 2023.01.18 @ 19:01:14
Time Off Btm: 2023.01.18 @ 21:08:07

TEST COMMENT: IF-30-Surface blow
IS-30-No return
FF-30-No blow
FS-30-No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1778.23	95.39	Initial Hydro-static
1	15.27	94.36	Open To Flow (1)
30	18.09	96.97	Shut-In(1)
63	27.22	98.69	End Shut-In(1)
63	18.99	98.69	Open To Flow (2)
89	18.08	99.69	Shut-In(2)
127	28.44	100.88	End Shut-In(2)
127	1622.95	101.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69991 **DST#: 6**
Test Start: 2023.01.18 @ 16:00:00

Tool Information

Drill Pipe:	Length: 3459.00 ft	Diameter: 3.79 inches	Volume: 48.27 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	50000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3588.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	67.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3558.00	
Shut In Tool	5.00			3563.00	
Hydraulic tool	5.00			3568.00	
Jars	5.00			3573.00	
EM Tool	3.00			3576.00	
Safety Joint	3.00			3579.00	
Packer	5.00			3584.00	31.00 Bottom Of Top Packer
Packer	4.00			3588.00	
Stubb	1.00			3589.00	
Perforations	5.00			3594.00	
Recorder	0.00	8368	Inside	3594.00	
Recorder	0.00	8320	Outside	3594.00	
Perforations	27.00			3621.00	
Bullnose	3.00			3624.00	36.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69991 **DST#: 6**
Test Start: 2023.01.18 @ 16:00:00

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

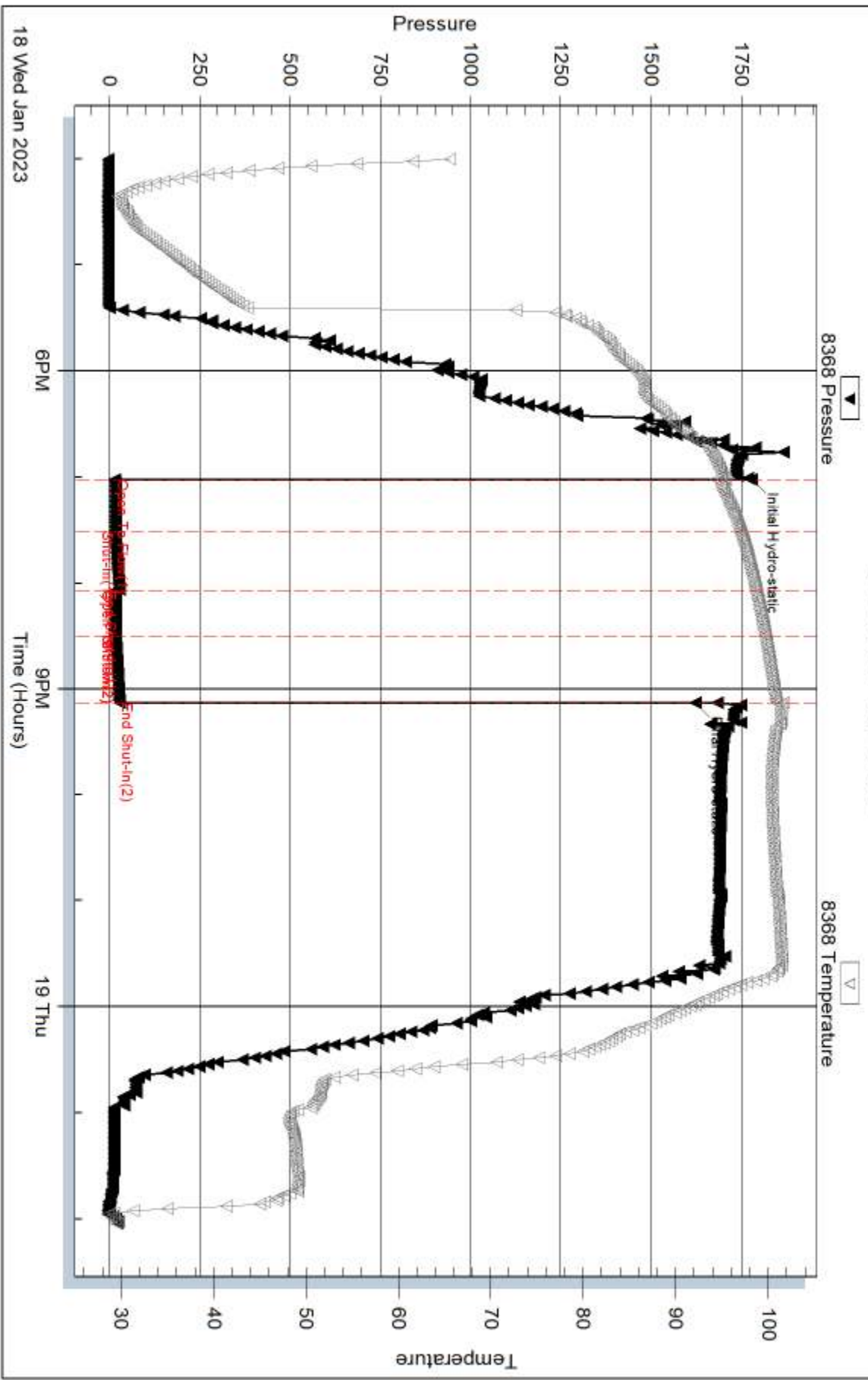
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

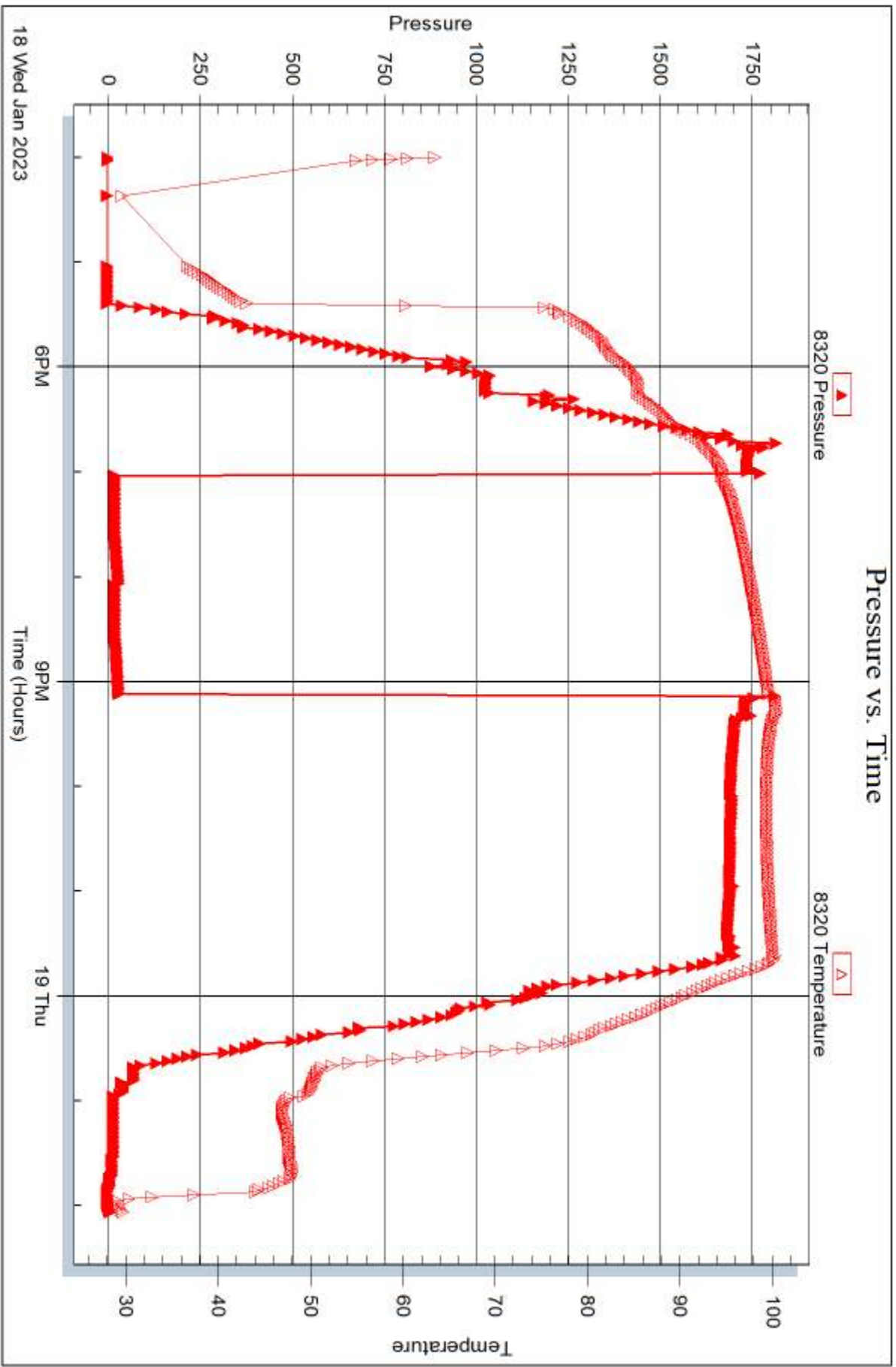


Serial #: 8320

Outside Ritchie Exploration

Bow Creek Unit #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 69991

Printed: 2023.01.20 @ 10:19:13



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

PO Box 783188
Wichita, KS 67278-3188

ATTN: Max Lovely

Bow Creek Unit #1

7-6-21w Graham.KS

Start Date: 2023.01.19 @ 15:45:00

End Date: 2023.01.19 @ 22:41:47

Job Ticket #: 69992 DST #: 7

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

Printed: 2023.01.20 @ 10:13:14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69992 **DST#: 7**
Test Start: 2023.01.19 @ 15:45:00

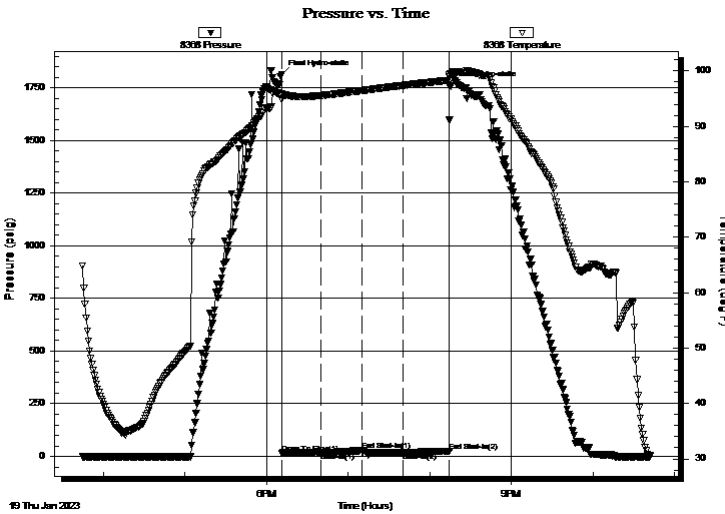
GENERAL INFORMATION:

Formation: **Conglomerate**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:11:15
Time Test Ended: 22:41:47
Interval: **3641.00 ft (KB) To 3673.00 ft (KB) (TVD)**
Total Depth: 3673.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Terrance
Unit No: 75
Reference Elevations: 2191.00 ft (KB)
2184.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8368 **Inside**
Press@RunDepth: 18.46 psig @ 3642.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2023.01.19 End Date: 2023.01.19 Last Calib.: 2023.01.19
Start Time: 15:45:01 End Time: 22:41:47 Time On Btm:
Time Off Btm: 2023.01.19 @ 18:11:13

TEST COMMENT: IF-30-No blow
IS-30-No return
FF-30-No blow
FS-30-No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1812.57	95.82	Final Hydro-static
1	16.11	94.77	Open To Flow (1)
29	17.77	95.55	Shut-In(1)
59	27.70	96.44	End Shut-In(1)
59	27.70	96.44	Open To Flow (2)
89	18.46	97.36	Shut-In(2)
124	24.63	98.32	End Shut-In(2)
124	1757.69	99.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69992 **DST#: 7**
Test Start: 2023.01.19 @ 15:45:00

Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.79 inches	Volume: 49.10 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:</u> - bbl	Tool Chased	ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3641.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	32.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter: 6.88 inches			

Tool Comments:

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

Change Over Sub	1.00			3611.00	
Shut In Tool	5.00			3616.00	
Hydraulic tool	5.00			3621.00	
Jars	5.00			3626.00	
EM Tool	3.00			3629.00	
Safety Joint	3.00			3632.00	
Packer	5.00			3637.00	31.00 Bottom Of Top Packer
Packer	4.00			3641.00	
Stubb	1.00			3642.00	
Recorder	0.00	8368	Inside	3642.00	
Recorder	0.00	8320	Outside	3642.00	
Perforations	28.00			3670.00	
Bullnose	3.00			3673.00	32.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
PO Box 783188
Wichita, KS 67278-3188
ATTN: Max Lovely

7-6-21w Graham.KS
Bow Creek Unit #1
Job Ticket: 69992 **DST#: 7**
Test Start: 2023.01.19 @ 15:45:00

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

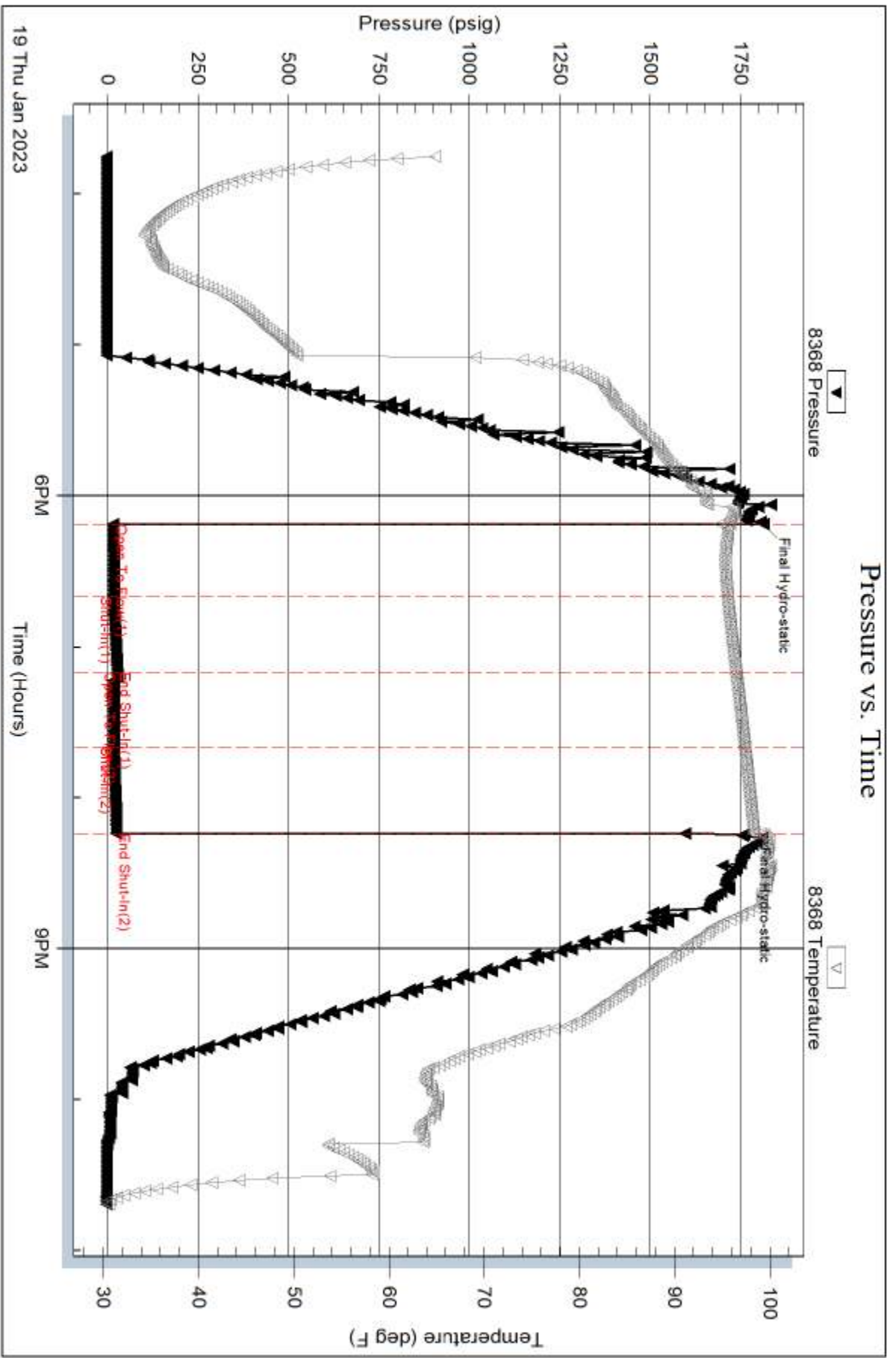
Serial #: 8368

Inside

Richie Exploration

Bow Creek Unit #1

DST Test Number: 7



Trilobite Testing, Inc

Ref. No: 69992

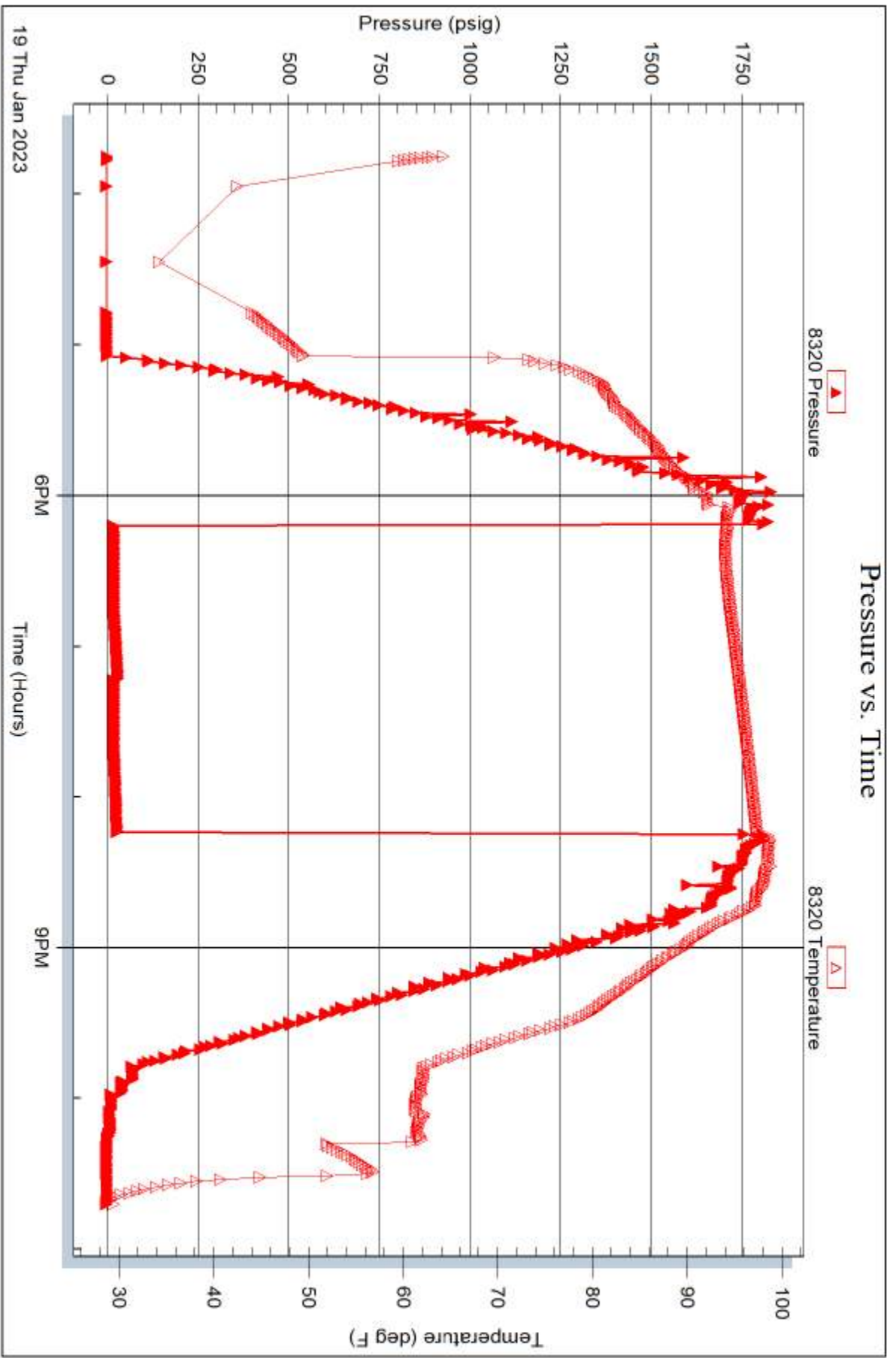
Printed: 2023.01.20 @ 10:13:15

Serial #: 8320

Outside Ritchie Exploration

Bow Creek Unit #1

DST Test Number: 7



Trilobite Testing, Inc

Ref. No: 69992

Printed: 2023.01.20 @ 10:13:15



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69986**

Well Name & No. Bow Creek Unit Test No. 1 Date 1-14-23
 Company Ritchie Exploration Elevation 2191 KB 2184 GL
 Address P.O. Box 783188 Wichita, KS 67288
 Co. Rep / Geo. Max Lavelly Rig STP 2
 Location: Sec. 7 Twp 6 Rge. 21w Co. Coraham State KS

Interval Tested 3332-3371 Zone Tested Oread
 Anchor Length 39 Drill Pipe Run 3205 Mud Wt. 8.9
 Top Packer Depth 3327 Drill Collars Run 118 Vis 60+
 Bottom Packer Depth 3332 Wt. Pipe Run _____ WL 5.4
 Total Depth 3371 Chlorides 500 ppm System LCM 2#

Blow Description IF-30-5 inches
ISI-45-No Return
FF-45-7 inches
FSI-60-No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>Water</u>		<u>100</u>		
<u>120</u>			<u>60</u>	<u>40</u>	
<u>40</u>			<u>10</u>	<u>20</u>	<u>70</u>

Rec Total 300 BHT 104 Gravity _____ API RW .95 @ 30 ° F Chlorides 16,000 ppm

(A) Initial Hydrostatic 1623 Test 1800 T-On Location 15:30
 (B) First Initial Flow 32 Jars 300 T-Started 17:00
 (C) First Final Flow 100 Safety Joint T-Open 19:45
 (D) Initial Shut-In 359 Circ Sub T-Pulled 22:45
 (E) Second Initial Flow 102 Hourly Standby T-Out 2:04
 (F) Second Final Flow 155 Mileage 68x2 119
 (G) Final Shut-In 357 Sampler 22 38.50
 (H) Final Hydrostatic 1597 Straddle EM Tool Successful
 Shale Packer Ruined Shale Packer
 Extra Packer Ruined Packer
 Extra Recorder Extra Copies
 Initial Open 30 Day Standby Sub Total 0
 Initial Shut-In 45 Accessibility Total 2257.50
 Final Flow 45 Sub Total 2257.50 MP/DST, Disc't
 Final Shut-In 60

Approved By _____ Our Representative Gene White
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69987**

Well Name & No. Bow Creek Unit #1 Test No. 2 Date 1-15-23
 Company Ritchie Exploration Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 743188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig STP #2
 Location: Sec. 7 Twp 6 Rge. 21S Co. Graham State KS

Interval Tested 3378-3446 Zone Tested Toronto LKC
 Anchor Length 68' Drill Pipe Run 3240 Mud Wt. 8.9
 Top Packer Depth 3373 Drill Collars Run 118 Vis 60
 Bottom Packer Depth 3378 Wt. Pipe Run _____ WL 5.4
 Total Depth 3446 Chlorides 500 ppm System LCM 21#
 Blow Description IF - 30 - Surface Blow
ISF - 30 - No Return
FF - 30 - No Blow
FSF - 30 - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>				<u>100</u>	

Rec Total 2 BHT 97 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1663 Test 1800 T-On Location 3:00 1500
 (B) First Initial Flow 16 Jars 300 T-Started 3:30 15:30
 (C) First Final Flow 21 Safety Joint _____ T-Open 17:20
 (D) Initial Shut-In 42 Circ Sub _____ T-Pulled 19:20
 (E) Second Initial Flow 21 Hourly Standby _____ T-Out 21:30
 (F) Second Final Flow 24 Mileage 64x2 44rt 77 Comments _____
 (G) Final Shut-In 46 Sampler _____
 (H) Final Hydrostatic 1381 Straddle _____ EM Tool Successful
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Initial Open 30 Day Standby _____ Sub Total 0
 Initial Shut-In 30 Accessibility _____ Total 2177
 Final Flow 30 Sub Total 2177 MP/DST Disc't _____
 Final Shut-In 30

Approved By _____ Our Representative Terrance Wickham

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69988**

Well Name & No. Bow Creek Unit #1 Test No. 3 Date 1-16-22
 Company Ritchie Exploration, Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 743188 Wichita Ks 67278
 Co. Rep / Geo. Max Lovely Rig STP #2
 Location: Sec. 7 Twp 6 Rge. 21s Co. Graham State Ks

Interval Tested 3448 - 3484 Zone Tested LKC C-D
 Anchor Length 36 Drill Pipe Run 3301 Mud Wt. 9.0
 Top Packer Depth 3443 Drill Collars Run 118 Vis 54
 Bottom Packer Depth 3448 Wt. Pipe Run _____ WL 5.8
 Total Depth 3484 Chlorides 1000 ppm System LCM 1#

Blow Description IF-30 - No Blow
ISI-30 - No Return
FF-30 - No Blow
ISI-30 - No Return

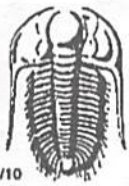
Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>OSM</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 3 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1705 Test 1800 T-On Location 6:00
 (B) First Initial Flow 19 Jars 300 T-Started 7:00
 (C) First Final Flow 29 Safety Joint _____ T-Open 9:27
 (D) Initial Shut-In 44 Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow 31 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 34 Mileage 68x2 77 Comments _____
 (G) Final Shut-In 44 Sampler _____
 (H) Final Hydrostatic 1613 Straddle _____ EM Tool Successful
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Initial Open 30 Day Standby _____ Sub Total 0
 Initial Shut-In 30 Accessibility _____ Total 2177
 Final Flow 30 Sub Total 2177 MP/DST Disc't _____
 Final Shut-In 30

Approved By _____ Our Representative Terrance Wickham

TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69989**

Well Name & No. Bow Creek Unit #1 Test No. 4 Date 1-16-22
 Company Ritchie Exploration, Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 783188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig STP #2
 Location: Sec. 7 Twp 6 Rge. 21s Co. Graham State KS

Interval Tested 3485-3509 Zone Tested LKC
 Anchor Length 24 Drill Pipe Run 3363 Mud Wt. 9
 Top Packer Depth 3480 Drill Collars Run 118 Vis 54
 Bottom Packer Depth 3485 Wt. Pipe Run _____ WL 5.8
 Total Depth 3509 Chlorides 1000 ppm System LCM 1

Blow Description IF-30 - Surface Blow
IF-45 - No Return
FF-30 - No Blow
FSE-45 - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>OCM</u>		<u>50</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

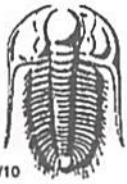
Rec Total 60 BHT 101 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1733 Test 1800 T-On Location 22:30
 (B) First Initial Flow 17 Jars 300 T-Started 23:30
 (C) First Final Flow 32 Safety Joint _____ T-Open 2:00
 (D) Initial Shut-In 313 Circ Sub _____ T-Pulled 4:30
 (E) Second Initial Flow 36 Hourly Standby _____ T-Out 8:30
 (F) Second Final Flow 45 Mileage 68 x 2 77 Comments _____
 (G) Final Shut-In 308 Sampler _____
 (H) Final Hydrostatic 1635 Straddle _____ EM Tool _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Extra Packer _____ Ruined Packer _____
 Final Flow 30 Extra Recorder _____ Extra Copies _____
 Final Shut-In 45 Day Standby _____ Sub Total 0
 Sub Total 2177 Total 2177 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69990**

Well Name & No. Bow Creek Unit #1 Test No. 5 Date 1-17-22
 Company Ritchie Exploration, Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 783188 Wichita KS 67278
 Co. Rep / Geo. Max Lovely Rig STP#2
 Location: Sec. 7 Twp 6 Rge. 21s Co. Graham State KS

Interval Tested 3527-3586 Zone Tested LKL H-1
 Anchor Length 59 Drill Pipe Run 3384 Mud Wt. 9.0
 Top Packer Depth 3522 Drill Collars Run 118 Vis 54
 Bottom Packer Depth 3527 Wt. Pipe Run _____ WL 5.8
 Total Depth 3586 Chlorides 1000 ppm System LCM 1#
 Blow Description IF-30- Surface Blow
FSI-45- No Return
FF-45- No Blow
FSI-60- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MLO</u>		<u>65</u>	<u>35</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 102 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1751</u>	<input checked="" type="checkbox"/> Test 1800	T-On Location <u>19:45</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars 300	T-Started <u>21:00</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>12:05</u>
(D) Initial Shut-In <u>615</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>3:05</u>
(E) Second Initial Flow <u>31</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:00</u>
(F) Second Final Flow <u>40</u>	<input checked="" type="checkbox"/> Mileage <u>68 x 2 77</u>	Comments _____
(G) Final Shut-In <u>526</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1614</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool <u>-350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Sub Total <u>-350</u>
	<input type="checkbox"/> Accessibility	Total <u>1827</u>
	Sub Total <u>2177</u>	MP/DST Disc't _____

Approved By _____ Our Representative Terrance Wickham

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway - Hays, Kansas 67601

Test Ticket

NO. **69991**

Well Name & No. Bow Creek Unit #1 Test No. 6 Date 1-18-23
 Company Ritchie Exploration, Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 783188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig STPH 2
 Location: Sec. 7 Twp 6 Rge. 21 Co. Graham State KS

Interval Tested 3588-3624 Zone Tested Lansing K-L
 Anchor Length 36' Drill Pipe Run 3459 Mud Wt. 9.1
 Top Packer Depth 3583 Drill Collars Run 118 Vis 55
 Bottom Packer Depth 3588 Wt. Pipe Run _____ WL 5.8
 Total Depth 3624 Chlorides 1000 ppm System LCM 1#

Blow Description FF-30 - Surface Blow
FSI-30 - No Return
FF-30 - No Blow
SSI-30 - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

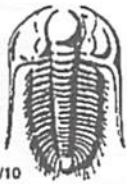
Rec Total 1 BHT 99 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1778 Test 1800 T-On Location 15:00
 (B) First Initial Flow 15 Jars 300 T-Started 16:00
 (C) First Final Flow 18 Safety Joint T-Open 19:05
 (D) Initial Shut-In 27 Circ Sub T-Pulled 21:05
 (E) Second Initial Flow 20 Hourly Standby T-Out 2:00
 (F) Second Final Flow 18 Mileage 68 x 2 77 Comments _____
 (G) Final Shut-In 28 Sampler _____
 (H) Final Hydrostatic 1623 Straddle EM Tool Successful

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Sub Total 2177 Accessibility _____
 Sub Total 2177 Ruined Packer _____
 Sub Total 0 Extra Copies _____
 Sub Total 2177 MP/DST Disc't _____

Approved By _____ Our Representative Terrance Wickham

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **69992**

Well Name & No. Bow Creek Unit #1 Test No. 7 Date 1-19-22
 Company Ritchie Exploration, Inc. Elevation 2191 KB 2184 GL
 Address P.O. Box 783188 Wichita, KS, 67278
 Co. Rep / Geo. Max Lowely Rig STP#2
 Location: Sec. 7 Twp 6 Rge. 21 Co. Graham State KS

Interval Tested 3641-3673 Zone Tested Conglomerate
 Anchor Length 32 Drill Pipe Run 3519 Mud Wt. 9.2
 Top Packer Depth ~~3641-3673~~ Drill Collars Run 118 Vis 55
 Bottom Packer Depth 3641 Wt. Pipe Run _____ WL 6.8
 Total Depth 3673 Chlorides 1500 ppm System LCM 1
 Blow Description FS-30-No Blow
ISI-30-No Return
FS-30-No Blow
FSI-30-NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 98 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1813</u>	<input checked="" type="checkbox"/> Test 1800	T-On Location <u>2:00 14:00</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars 300	T-Started <u>15:45</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>18:05</u>
(D) Initial Shut-In <u>28</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>20:05</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>22:45</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>68 x 2</u> 119	Comments _____
(G) Final Shut-In <u>24</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1758</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> EM Tool -350

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

Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 2257.50 MP/DST Disc't _____

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Max R. Lovely

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: Ritchie Exploration, Inc

LEASE #1 Bow Creek Unit

FIELD: Boys West

LOCATION: 1641 ENL 2297 EWL

SEC 7 T15P 6 RGE 21W

COUNTY: Graham STATE: KS

CONTRACTOR: STP Rig #2

SPUD: 1-10-23 OOMP: 1-20-23

RID: 3680 LTD: 3680

MUD UP: 2897 TYPE: MUD Chem

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Anhydrite	1839	1836	354	350
Base Anhydrite	1870	1868	322	318
Stotler	3153	3152	-962	-974
Lodeka	3196	3196	-1006	-1017
Heebner	3382	3385	-1195	-1206
Toronto	3412	3411	-1221	-1233
Lansing	3428	3428	-1238	-1250
Mudite	3535	3537	-1347	-1361
BKC	3615	3614	-1424	-1438
Marathon	3639	3639	-1450	-1462
Conglomerate	3659	3659	-1469	-1494
Granite	3678	3678	-1488	-1507

REFERENCE WELLS FOR STRUCTURE
 a Ritchie #3 Nola Frazey 2310 ENL 2310 EWL 7-6-21W
 b Ritchie #4 Nola Frazey 1005 S12 NW 7-6-21W
 c Vincent Oil #1 Harvey 6800 ENL 2300 EWL 7-6-21W

REMARKS

LEGEND

