

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top _____ Bottom _____
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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QUALITY WELL SERVICE, INC.

7930

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-727-3410
Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	4-3-22	Sec.	19	Twp.	33S	Range	1EA	County	SUMNER	State	KS	On Location		Finish	
Lease	Rusk	Well No.	"1			Location Wellington, KS S on Hwy 91 to 90th									
Contractor	DUKE DELG RIG #7							Owner Z E 1/2 S ENTO							
Type Job	PTA							To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	7 7/8		T.D.		4360'										
Csg.			Depth		Charge To ARP OPERATING LLC										
Tbg. Size	4 1/2 DS		Depth		Street										
Tool			Depth		City State										
Cement Left in Csg.			Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line			Displace		Cement Amount Ordered 105 x 60/40 4 1/2 FEL										
EQUIPMENT															
Pumptrk	8	No.			Common 63 x										
Bulktrk	15	No.			Poz. Mix 42 x										
Bulktrk		No.			Gel. 361 #										
Pickup		No.			Calcium										
JOB SERVICES & REMARKS															
Rat Hole	25 x 60/40 4 1/2 FEL							Hulls							
Mouse Hole	20 x 60/40 4 1/2 FEL							Salt							
Centralizers								Flowseal							
Baskets								Kol-Seal							
D/V or Port Collar								Mud CLR 48							
1st Plug	320' 35 x 60/40 4 1/2 FEL							CFL-117 or CD110 CAF 38							
Pump H2O								Sand							
Micro Pump	35 x 60/40 4 1/2 FEL							Handling 109							
Disp H2O								Mileage 30/3720							
2nd Plug	60' 25 60/40 4 1/2 FEL							FLOAT EQUIPMENT							
Micro Pump	25 x 60/40 4 1/2 FEL							Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								SERVICE Spv 1EA							
								LM/30							
								Pumptrk Charge PTA							
								Mileage 160							
THANK YOU PLEASE CALL AGAIN TODD MIKE BRYAN 7 min Chubb												Tax			
Signature												Discount			
												Total Charge			

FRANKS Oilfield Service, LLC

815 Main Street
Victoria, KS 67671

Office (785) 639-3949
24 Hour Service Line (785) 639-7269

Email: franksoilfield@yahoo.com

Invoice

Date	Invoice #
3/29/2022	0548

Please Pay from this Invoice.
Remit Payment to:
815 Main Street
Victoria, KS 67671
Billing Questions-Call Tianna at
(785) 639-3949

Bill To
ARP Operating 1444 Wazee St. Suite 125 Denver CO 80202

DTL
4/11/22
1249

County/State	Lease/Well#	Terms	Job Type
Sumner County, Kan...	Rusk #1	Net 30	Surface

Description	Quantity	Rate	Amount
Pump Charge	1	1,150.00	1,150.00
Mileage	110	6.50	715.00
8.68 tons at 110 miles	954.8	1.50	1,432.20
Surface Blend	175	24.50	4,287.50T
Discount		-1,137.70	-1,137.70

Thank-You!

Accounts Due Net 10th. 1-1/2% Per Month on all Past Due Accounts. 18% Annual Rate.	Subtotal	\$6,447.00
<i>We appreciate your business and look forward to serving you again!</i>	Sales Tax (7.5%)	\$273.33
	Balance Due	\$6,720.33

FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0548
 LOCATION Victoria
 FOREMAN Tom Williams

FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-29-22	35695	Rush #1	19	38	1 E	Sumner
CUSTOMER ARP Operating LLC			TRUCK #			
MAILING ADDRESS 1444 Wazee Street Suite 125			101		DRIVER Tom W	
CITY Denver						
STATE CO						
ZIP CODE 80202						

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 276' CASING SIZE & WEIGHT 8 3/8" 23#
 CASING DEPTH 270' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.8 SLURRY VOL 1.4 WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT 15.5 bbl DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting & rig up on Duke #7. Circulated mud. 175 sacks surface & displace with 15.5 bbl
 cement did circulate

Thanks Tom

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
P1002	1	PUMP CHARGE Surface	\$1150 ⁰⁰	\$1150 ⁰⁰
M001	110	MILEAGE	\$6 ⁵⁰	\$715 ⁰⁰
M002	8168 tons	Ton Mileage delivery	\$1432 ²⁰	\$1432 ²⁰
C3004	175 sacks	class A 2 9/16 gal 3900	\$24 ⁵⁰	\$4287 ⁵⁰
			sub total	\$7584 ⁷⁰
			less 15% disc.	\$1137 ⁷⁰
			sub total	\$6447 ⁰⁰
			SALES TAX	273.33
			ESTIMATED TOTAL	6720.33

AUTHORIZATION _____ TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



DRILL STEM TEST REPORT

Prepared For: **ARP Operating LLC**

1444 Wazee St. , Suite 125
Denver, CO 80202

ATTN: Sean Deenihan

Rusk #1

19-33s-1e Sumner,KS

Start Date: 2022.04.02 @ 01:19:18

End Date: 2022.04.02 @ 07:00:18

Job Ticket #: 67912 DST #: 1

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

Printed: 2022.04.08 @ 16:52:31



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

ARP Operating LLC
1444 Wazee St. , Suite 125
Denver, CO 80202
ATTN: Sean Deenihan

19-33s-1e Sumner,KS
Rusk #1
Job Ticket: 67912 **DST#: 1**
Test Start: 2022.04.02 @ 01:19:18

GENERAL INFORMATION:

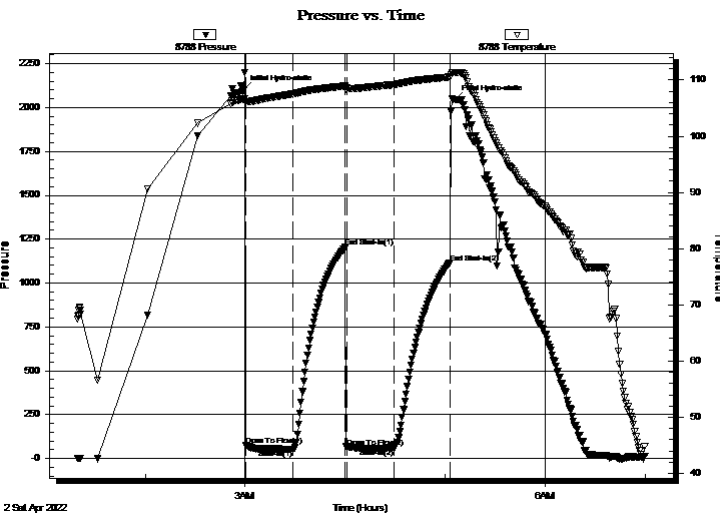
Formation: **Woodford**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:00:33
Time Test Ended: 07:00:18
Interval: **4125.00 ft (KB) To 4260.00 ft (KB) (TVD)**
Total Depth: 4260.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Matt Smith
Unit No: 68
Reference Elevations: 1249.00 ft (KB)
1238.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8788

Inside

Press@RunDepth: 56.62 psig @ 4126.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2022.04.02 End Date: 2022.04.02 Last Calib.: 2022.04.02
Start Time: 01:19:23 End Time: 07:00:17 Time On Btm: 2022.04.02 @ 02:59:03
Time Off Btm: 2022.04.02 @ 05:05:48

TEST COMMENT: IF: Weak Blow . Built to 4" in the Bucket. (30)
IS: No Blow . (30)
FF: Weak Blow . Built Surface to 1/4:. (30)
FS: No Blow . (30)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2100.59	106.54	Initial Hydro-static
2	75.06	106.15	Open To Flow (1)
30	53.84	107.52	Shut-In(1)
61	1203.05	108.95	End Shut-In(1)
62	64.61	108.55	Open To Flow (2)
90	56.62	109.18	Shut-In(2)
124	1115.74	110.55	End Shut-In(2)
127	2044.16	111.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
48.00	GM 1%g 99%m	0.67
0.00	78' GIP 100%g	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67912

DST#: 1

ATTN: Sean Deenihan

Test Start: 2022.04.02 @ 01:19:18

Tool Information

Drill Pipe:	Length: 4098.00 ft	Diameter: 3.80 inches	Volume: 57.48 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 57.48 bbl</u>	Tool Chased	8.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	4125.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	135.00 ft				
Tool Length:	165.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4100.00	
Hydraulic tool	5.00			4105.00	
Jars	5.00			4110.00	
EMT	3.00			4113.00	
Safety Joint	3.00			4116.00	
Packer	4.00			4120.00	30.00 Bottom Of Top Packer
Packer	5.00			4125.00	
Stubb	1.00			4126.00	
Recorder	0.00	8788	Inside	4126.00	
Recorder	0.00	8737	Outside	4126.00	
Perforations	2.00			4128.00	
Change Over Sub	1.00			4129.00	
Blank Spacing	123.00			4252.00	
Change Over Sub	1.00			4253.00	
Perforations	4.00			4257.00	
Bullnose	3.00			4260.00	135.00 Bottom Packers & Anchor
Total Tool Length:	165.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67912

DST#: 1

ATTN: Sean Deenihan

Test Start: 2022.04.02 @ 01:19:18

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:

1400 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
48.00	GM 1%g 99%m	0.673
0.00	78' GIP 100%g	0.000

Total Length: 48.00 ft Total Volume: 0.673 bbl

Num Fluid Samples: 0

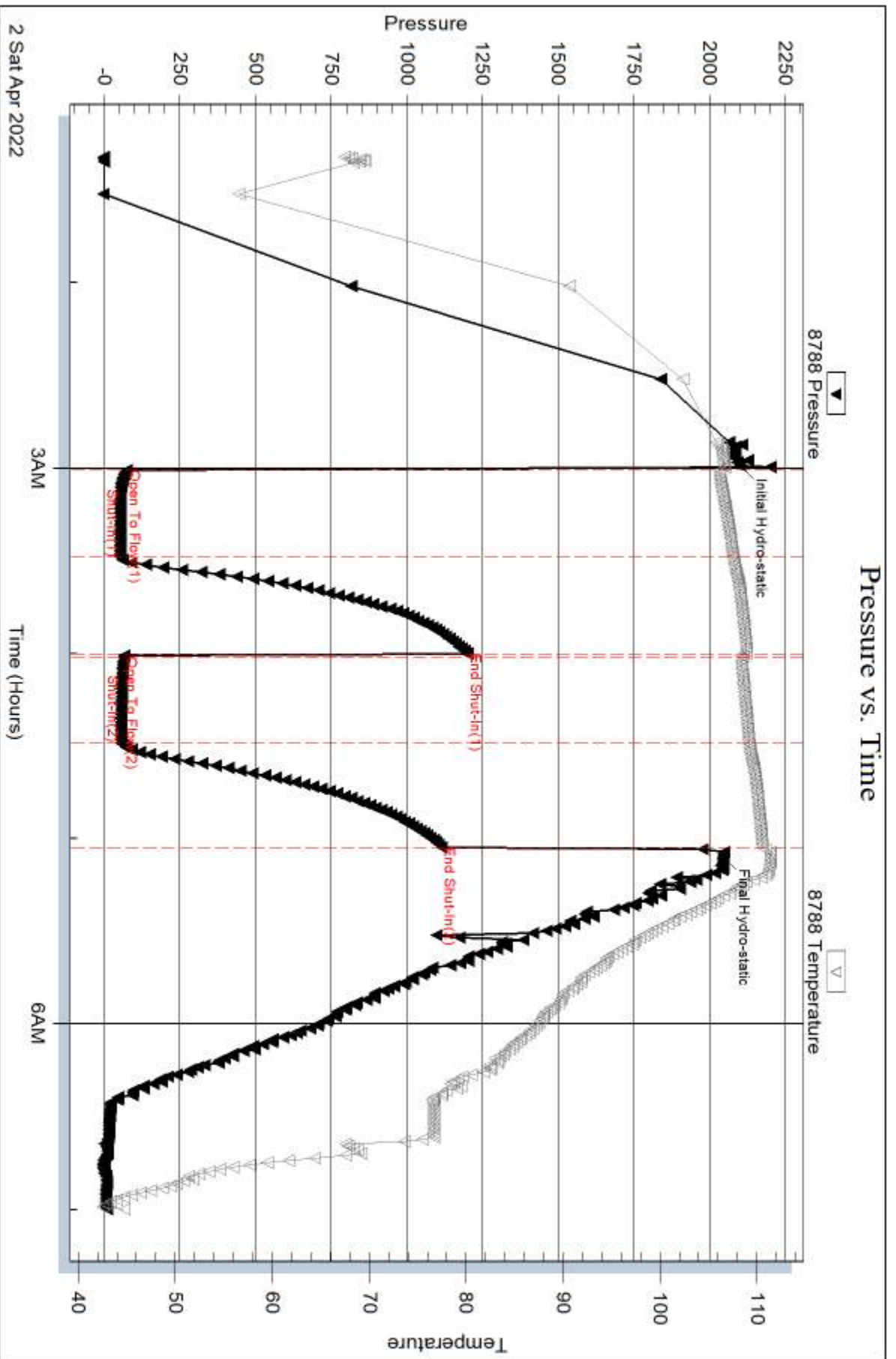
Num Gas Bombs: 0

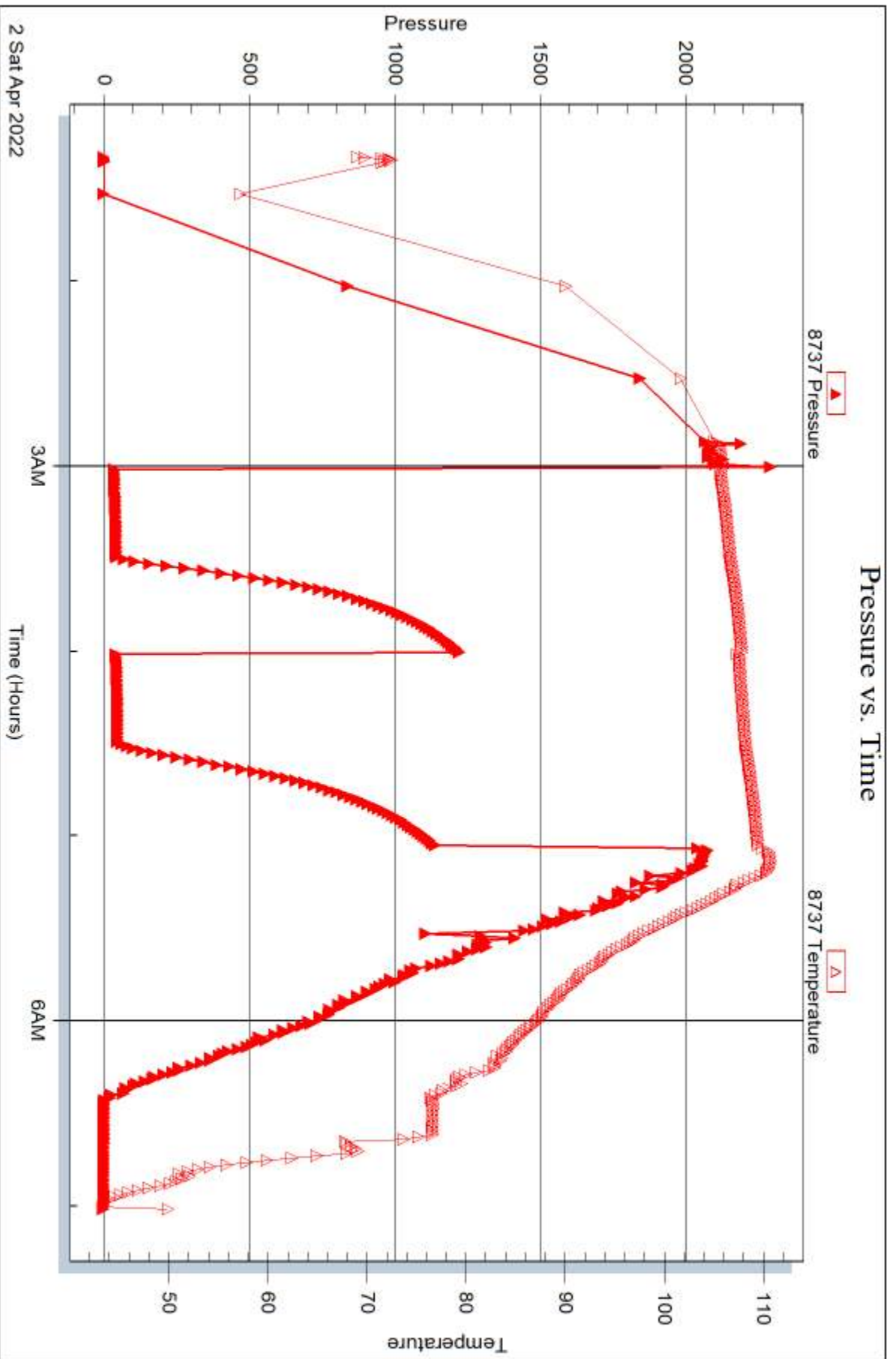
Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments: 78 Feet of Gas in Pipe.







DRILL STEM TEST REPORT

Prepared For: **ARP Operating LLC**

1444 Wazee St. , Suite 125
Denver, CO 80202

ATTN: Sean Deenihan

Rusk #1

19-33s-1e Sumner,KS

Start Date: 2022.04.02 @ 13:27:12

End Date: 2022.04.02 @ 19:19:27

Job Ticket #: 67913 DST #: 2

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

Printed: 2022.04.08 @ 16:51:22



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

ARP Operating LLC
1444 Wazee St. , Suite 125
Denver, CO 80202
ATTN: Sean Deenihan

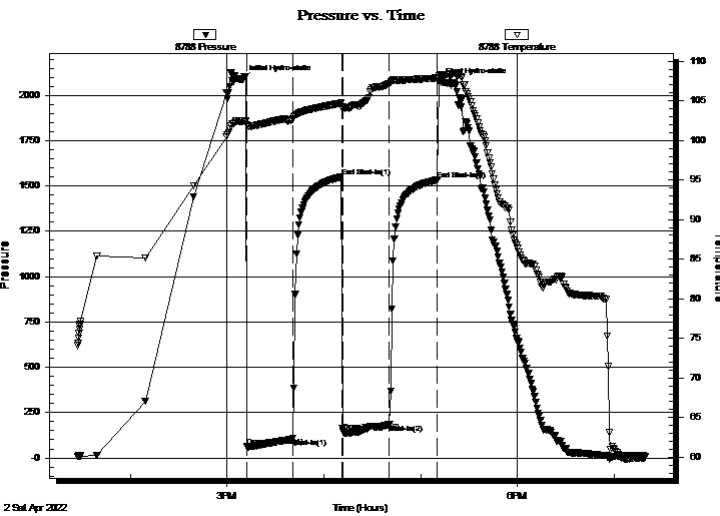
19-33s-1e Sumner,KS
Rusk #1
Job Ticket: 67913 **DST#: 2**
Test Start: 2022.04.02 @ 13:27:12

GENERAL INFORMATION:

Formation: **Simpson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:12:12
Time Test Ended: 19:19:27
Interval: **4127.00 ft (KB) To 4277.00 ft (KB) (TVD)**
Total Depth: 4277.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Matt Smith
Unit No: 68
Reference Elevations: 1249.00 ft (KB)
1238.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8788 Inside
Press@RunDepth: 183.51 psig @ 4128.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2022.04.02 End Date: 2022.04.02 Last Calib.: 2022.04.02
Start Time: 13:27:17 End Time: 19:19:26 Time On Btm: 2022.04.02 @ 15:09:57
Time Off Btm: 2022.04.02 @ 17:11:27

TEST COMMENT: IF: Strong Blow . B.O.B. in 21 mins. Built to 15.95". (30)
IS: No Blow . (30)
FF: Strong Blow . B.O.B. in 25 mins. Built to 14.08". (30)
FS: No Blow . (30)



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.37	102.44	Initial Hydro-static
3	65.55	101.91	Open To Flow (1)
31	106.60	102.69	Shut-In(1)
61	1550.48	104.72	End Shut-In(1)
62	144.40	104.22	Open To Flow (2)
91	183.51	107.21	Shut-In(2)
121	1533.27	107.86	End Shut-In(2)
122	2072.75	108.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GWCM 5%g 5%w 90%m	0.88
189.00	GM 2%g 98%m	2.65
31.00	GOSM 2%g 98%m	0.43
0.00	31' GIP 100%g	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

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67913

DST#: 2

ATTN: Sean Deenihan

Test Start: 2022.04.02 @ 13:27:12

Tool Information

Drill Pipe:	Length: 4129.00 ft	Diameter: 3.80 inches	Volume: 57.92 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 57.92 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	4127.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	150.00 ft				
Tool Length:	180.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4102.00	
Hydraulic tool	5.00			4107.00	
Jars	5.00			4112.00	
EMT	3.00			4115.00	
Safety Joint	3.00			4118.00	
Packer	4.00			4122.00	30.00 Bottom Of Top Packer
Packer	5.00			4127.00	
Stubb	1.00			4128.00	
Recorder	0.00	8788	Inside	4128.00	
Recorder	0.00	8737	Outside	4128.00	
Perforations	2.00			4130.00	
Change Over Sub	1.00			4131.00	
Blank Spacing	123.00			4254.00	
Change Over Sub	1.00			4255.00	
Perforations	19.00			4274.00	
Bullnose	3.00			4277.00	150.00 Bottom Packers & Anchor
Total Tool Length:	180.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67913

DST#: 2

ATTN: Sean Deenihan

Test Start: 2022.04.02 @ 13:27:12

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2500 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	GWCM 5%g 5%w 90%m	0.884
189.00	GM 2%g 98%m	2.651
31.00	GOSM 2%g 98%m	0.435
0.00	31' GIP 100%g	0.000

Total Length: 283.00 ft

Total Volume: 3.970 bbl

Num Fluid Samples: 0

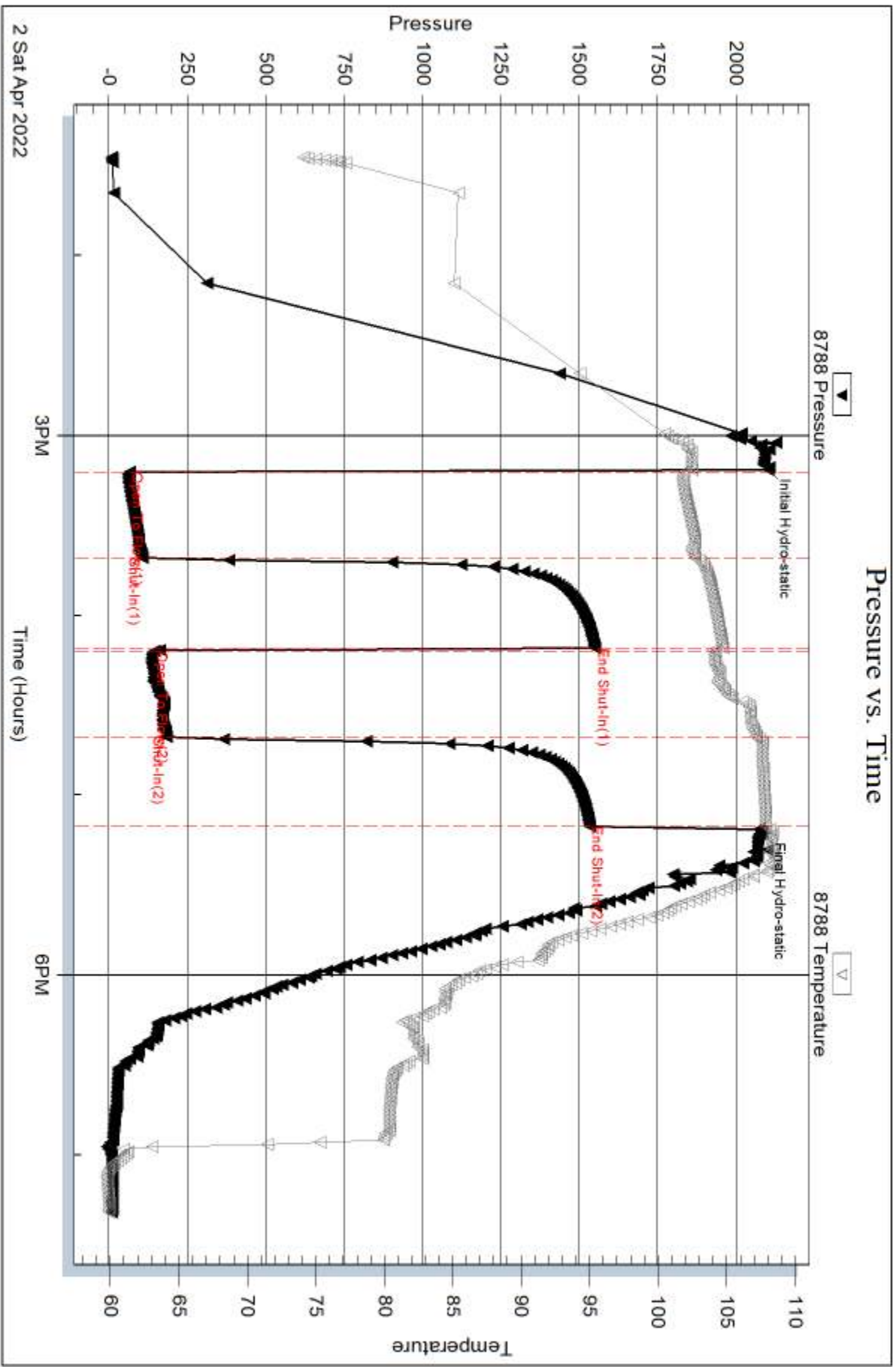
Num Gas Bombs: 0

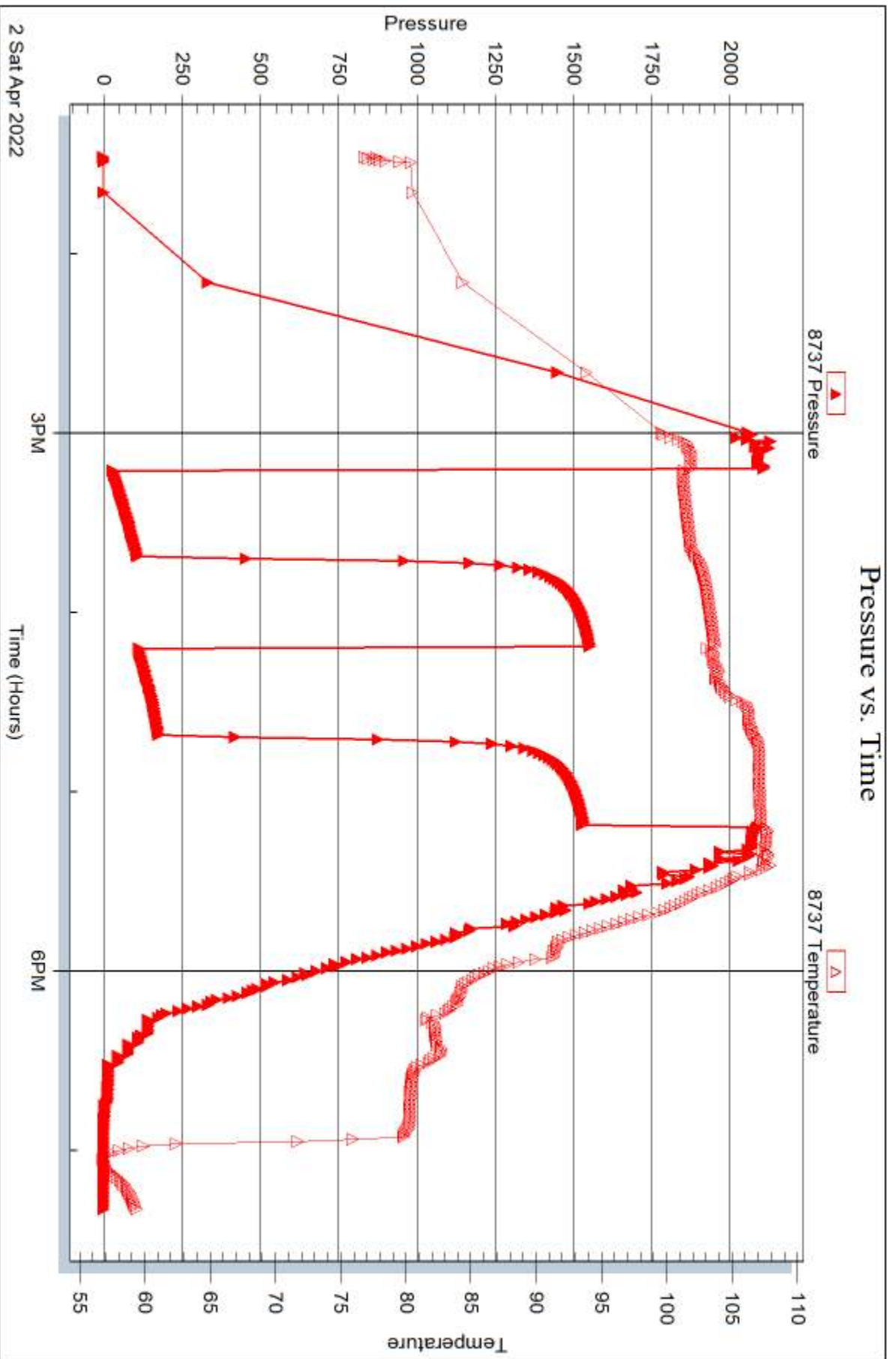
Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **ARP Operating LLC**

1444 Wazee St. , Suite 125
Denver, CO 80202

ATTN: Sean Deenihan

Rusk #1

19-33s-1e Sumner,KS

Start Date: 2022.04.03 @ 11:28:24

End Date: 2022.04.03 @ 17:39:24

Job Ticket #: 67914 DST #: 3

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

Printed: 2022.04.08 @ 16:49:55



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67914

DST#: 3

ATTN: Sean Deenihan

Test Start: 2022.04.03 @ 11:28:24

Tool Information

Drill Pipe:	Length: 4249.00 ft	Diameter: 3.80 inches	Volume: 59.60 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 59.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4260.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	4269.00 ft			
Interval between Packers:	9.00 ft			
Tool Length:	130.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			4230.00	
Shut In Tool	5.00			4235.00	
Hydraulic tool	5.00			4240.00	
Jars	5.00			4245.00	
EMT	3.00			4248.00	
Safety Joint	3.00			4251.00	
Packer	4.00			4255.00	31.00 Bottom Of Top Packer
Packer	5.00			4260.00	
Stubb	1.00			4261.00	
Recorder	0.00	8788	Inside	4261.00	
Recorder	0.00	8737	Outside	4261.00	
Perforations	7.00			4268.00	
Blank Off Sub	1.00			4269.00	
Packer	2.00			4271.00	9.00 Tool Interval
Packer	3.00			4274.00	
Stubb	1.00			4275.00	
Perforations	1.00			4276.00	
Change Over Sub	1.00			4277.00	
Blank Spacing	63.00			4340.00	
Change Over Sub	1.00			4341.00	
Perforations	15.00			4356.00	
Recorder	0.00	6799	Below	4356.00	
Bullnose	3.00			4359.00	90.00 Bottom Packers & Anchor
Total Tool Length:	130.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

ARP Operating LLC

19-33s-1e Sumner,KS

1444 Wazee St. , Suite 125
Denver, CO 80202

Rusk #1

Job Ticket: 67914

DST#: 3

ATTN: Sean Deenihan

Test Start: 2022.04.03 @ 11:28:24

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:

79000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	MCW 45% <i>m</i> 55% <i>w</i>	0.884
567.00	MCW 1% <i>m</i> 99% <i>w</i>	7.954
98.00	GWCM 1% <i>g</i> 24% <i>w</i> 75% <i>m</i>	1.375
0.00	126 GIP	0.000

Total Length: 728.00 ft Total Volume: 10.213 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

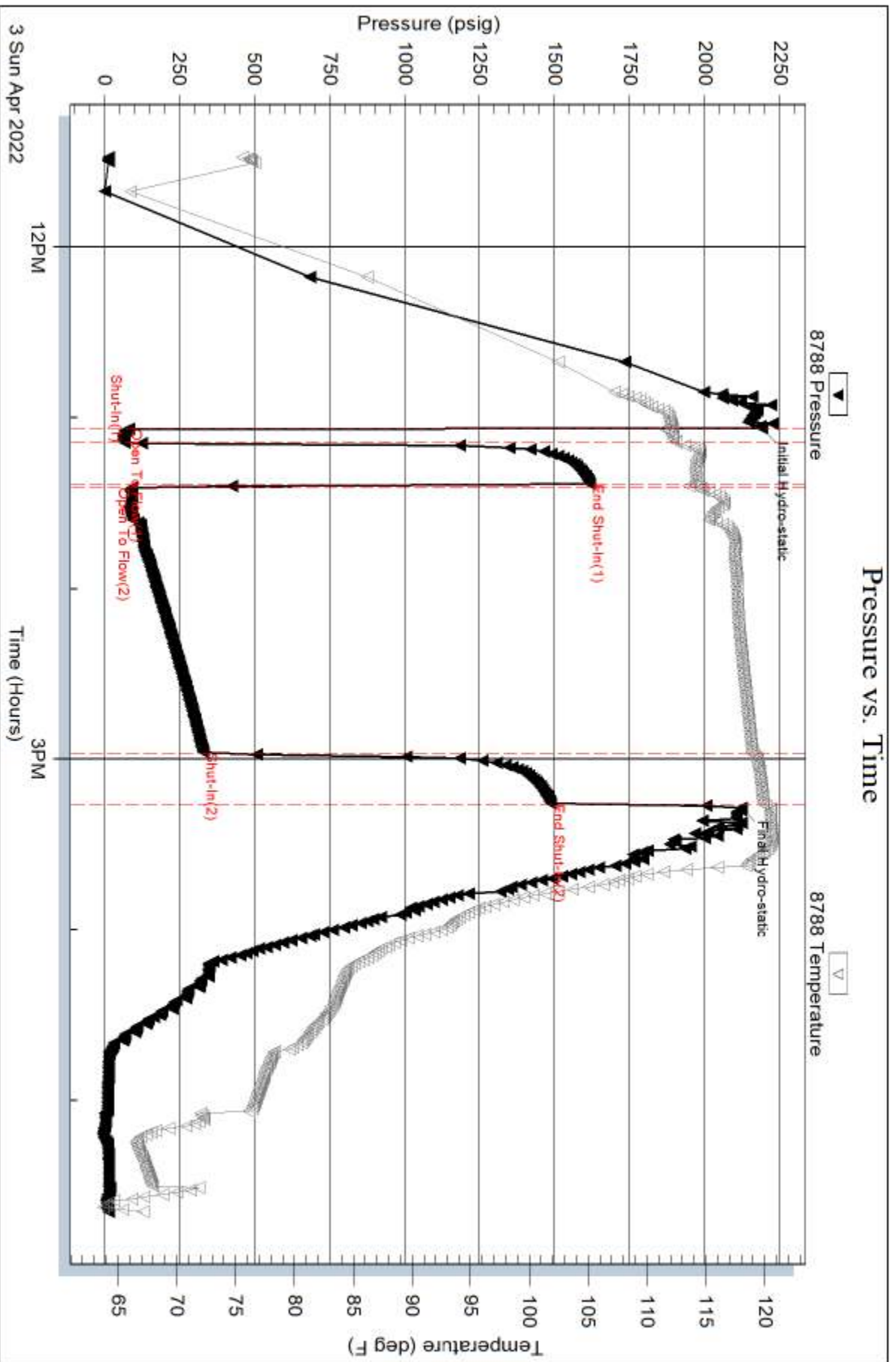
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: RW 0.1 @ 71 Degrees. 79000 Chlorides.

Pressure vs. Time

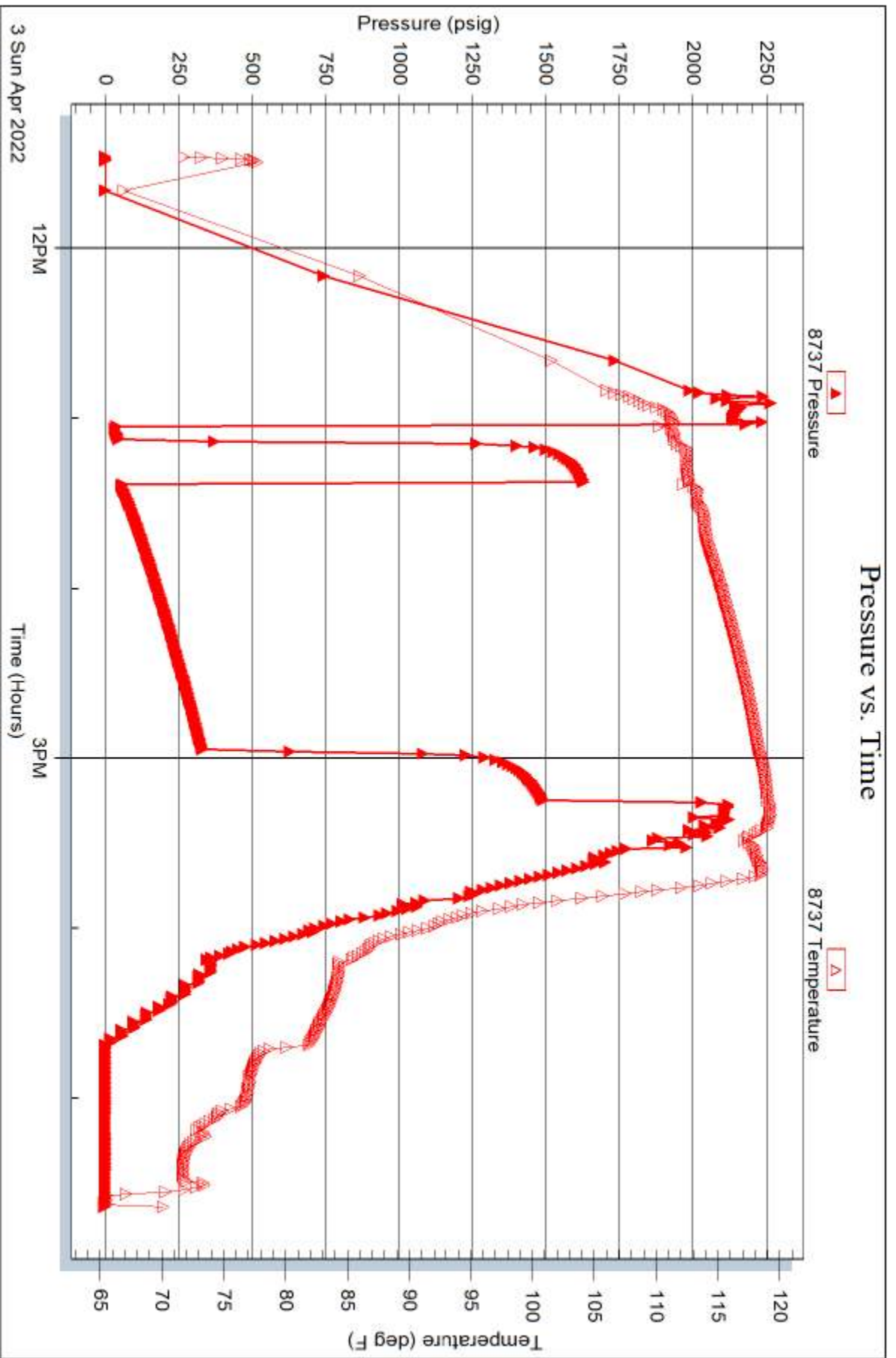


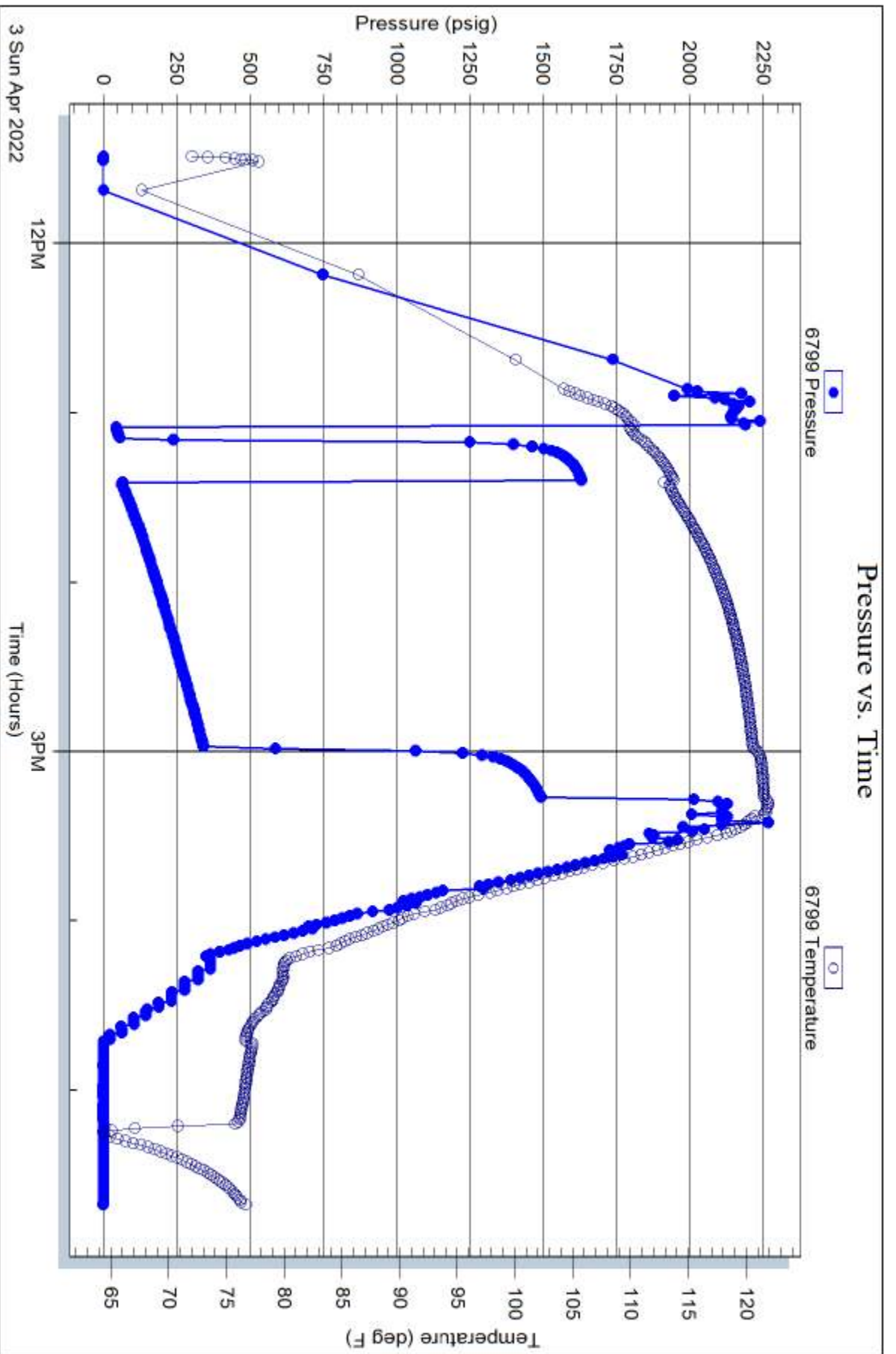
Serial #: 8737

Outside ARP Operating LLC

Rusk #1

DST Test Number: 3







TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 67912

Well Name & No. Rusk #1 Test No. 1 Date 4/2/22
 Company ARP Operating, LLC Elevation 1249 KB 1238 GL
 Address 1444 Wazee Street, Suite 125 Denver, Co. 80202
 Co. Rep / Geo. Rich Tabaka Sean Deenihan Rig Duke #7
 Location: Sec. 19 Twp 33S Rge. 1e Co. Sumner State KS

Interval Tested 4125 - 4260 Zone Tested Woodford
 Anchor Length 135' Drill Pipe Run 4098 Mud Wt. 9.2
 Top Packer Depth 4120 Drill Collars Run 8 Vis 54
 Bottom Packer Depth 4125 Wt. Pipe Run 8 WL 7.2
 Total Depth 4260 Chlorides 1400 ppm System LCM 4 1/2*

Blow Description IF: Weak Blow; Built to 4" in the Bucket.

ISI: No Blow.

FF: Weak Blow; Surface - 1/4"

FSI: No Blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>78</u>	<u>G.I.P</u>	<u>100</u>			
<u>48</u>	<u>GM</u>	<u>1</u>			<u>99</u>

Rec Total 48' Fluid BHT _____ Gravity N/A API RW N/A @ _____ °F Chlorides 1400 ppm

(A) Initial Hydrostatic	<u>2101</u>	<input checked="" type="checkbox"/> Test	<u>1950</u>	T-On Location	<u>0020</u>
(B) First Initial Flow	<u>75</u>	<input checked="" type="checkbox"/> Jars	<u>300</u>	T-Started	<u>0119</u>
(C) First Final Flow	<u>54</u>	<input checked="" type="checkbox"/> Safety Joint		T-Open	<u>0300</u>
(D) Initial Shut-In	<u>1203</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>0505</u>
(E) Second Initial Flow	<u>65</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>0700</u>
(F) Second Final Flow	<u>57</u>	<input checked="" type="checkbox"/> Mileage <u>(222) PRATT</u> 333		Comments	<u>Slid 8'</u>
(G) Final Shut-In	<u>1116</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2044</u>	<input type="checkbox"/> Straddle		<input checked="" type="checkbox"/> EM Tool	

Initial Open	<u>30</u>	<input type="checkbox"/> Ruined Shale Packer	
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Ruined Packer	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Copies	
Final Shut-In	<u>30</u>	Sub Total	<u>0</u>
		Total	<u>2583</u>
		MP/DST Disc't	

Approved By _____ Our Representative Matthew A. Smith

Triobite 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. **67913**

Well Name & No. Rusk #1 Test No. 2 Date 4/2/22
 Company ARP Operating, LLC Elevation 1249 KB 1238 GL
 Address 1444 Wazee Street, Suite 125 Denver, Co. 80202
 Co. Rep / Geo. Sean Deenihan Rig Duke #7
 Location: Sec. 19 Twp 33S Rge. 1e Co. Sumner State KS.

Interval Tested 4127 - 4277 Zone Tested Simpson
 Anchor Length 150' Drill Pipe Run 4129 Mud Wt. 9.4
 Top Packer Depth 4122 Drill Collars Run 0 Vls 53
 Bottom Packer Depth 4127 Wt. Pipe Run 0 WL 2.2
 Total Depth 4277 Chlorides 2500 ppm System LCM 4"

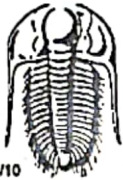
Blow Description IF: Strong Blow. B.O.B. in 21 mins. Built to 15.95"
ISI: No Blow.
FF: Strong Blow. B.O.B. in 25 mins. Built to 14.08"
FSI: No Blow.

Rec	Feet of	%gas	%oil	%water	%mud
31	GOSM	2		98	
189	Gm	2		98	
63	GWCM	5		90	
31	G.I.P.	100			

Rec Total 283' Fluid BHT _____ Gravity N/A API RW N/A @ _____ °F Chlorides 2500 ppm

(A) Initial Hydrostatic <u>2089</u>	<input checked="" type="checkbox"/> Test <u>1950</u>	T-On Location <u>1240</u>
(B) First Initial Flow <u>66</u>	<input checked="" type="checkbox"/> Jars <u>300</u>	T-Started <u>1327</u>
(C) First Final Flow <u>107</u>	<input checked="" type="checkbox"/> Safety Joint _____	T-Open <u>1512</u>
(D) Initial Shut-In <u>1550</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1716</u>
(E) Second Initial Flow <u>144</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1919</u>
(F) Second Final Flow <u>184</u>	<input checked="" type="checkbox"/> Mileage <u>(222) PRATT</u>	Comments <u>Call with * Back to</u>
(G) Final Shut-In <u>1533</u>	<input type="checkbox"/> Sampler _____	<u>Back & Stayed on location</u>
(H) Final Hydrostatic <u>2073</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>2250</u>
	Sub Total <u>2250</u>	MP/DST Disc't _____

Approved By _____ Our Representative Matthew A. Smith
 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.



TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **67914**

Well Name & No. Rusk #1 Test No. 3 Date 4/13/22
 Company ARP Operating, LLC Elevation 1249 KB 1238 GL
 Address 1444 Wazee Street, Suite 125 Denver, CO, 80202
 Co. Rep / Geo. Sean Deenihan Rig Duke #7
 Location: Sec. 19 Twp 33s Rge. 1e Co. Sumner State Ks.

Interval Tested 4260 - 4270 Zone Tested Simpson
 Anchor Length 10' / 186' Total Drill Pipe Run 4249 Mud Wt. 9.2
 Top Packer Depth 4255 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 4260 Wt. Pipe Run 2 WL 7.19
 Total Depth 4270 4356 Chlorides 1400 ppm System LCM 40

Blow Description IF: Weak - Fair, Built 5 3/4" in the Bucket.
ISI: No Blow,

FF: Strong Blow, B.O.B. in 4 mins. Built to

FSI: Weak Blow, Built to 1/4" in the Bucket.

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>G.I.P.</u>	<u>100</u>			
<u>98</u>	<u>GWCM</u>	<u>1</u>		<u>24</u>	<u>75</u>
<u>567</u>	<u>MCW</u>			<u>99</u>	<u>1</u>
<u>63</u>	<u>MCW</u>			<u>55</u>	<u>45</u>

Rec Total 728' Fluid BHT _____ Gravity N/A API RW 0.1 @ 71 °F Chlorides 95000 ppm

- (A) Initial Hydrostatic 2190
- (B) First Initial Flow 82
- (C) First Final Flow 68
- (D) Initial Shut-In 1619
- (E) Second Initial Flow 92
- (F) Second Final Flow 330
- (G) Final Shut-In 1489
- (H) Final Hydrostatic 2121

Initial Open 5
 Initial Shut-In 15
 Final Flow 60
 Final Shut-In 15

- Test 1500
- Jars 300
- Safety Joint _____
- Circ Sub _____
- Hourly Standby _____
- Mileage (222) 333
- Sampler _____
- Straddle 600
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____
- Sub Total 2733

T-On Location 1015
 T-Started 1128
 T-Open 1303
 T-Pulled 1530
 T-Out 1739

Comments * Mobil
 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 2733

Approved By _____ Our Representative [Signature]
 Tribolite 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.