

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 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) (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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## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

#### **15-12S-20W Ellis,KS**

Start Date: 2023.06.10 @ 11:07:00

End Date: 2023.06.10 @ 16:23:45

Job Ticket #: 70803                      DST #: 1

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

Printed: 2023.06.13 @ 10:58:11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

## GENERAL INFORMATION:

Formation: **LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:56:45

Time Test Ended: 16:23:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Day

Unit No: 70

**Interval: 3622.00 ft (KB) To 3684.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3684.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.38 psig @ 3623.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.10 End Date: 2023.06.10

Last Calib.: 2023.06.10

Start Time: 11:07:05 End Time: 16:23:44

Time On Btm: 2023.06.10 @ 12:55:00

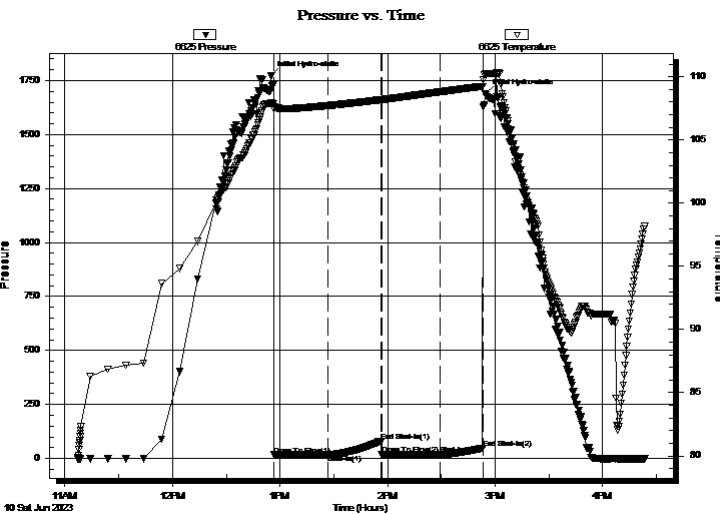
Time Off Btm: 2023.06.10 @ 14:54:45

**TEST COMMENT:** IF-30- WSB died in 10 min.

SI1-30- No return

FF-30- No blow

SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1771.64	107.94	Initial Hydro-static
2	16.47	107.46	Open To Flow (1)
32	17.03	107.72	Shut-In(1)
62	80.86	108.19	End Shut-In(1)
62	17.54	108.19	Open To Flow (2)
95	17.38	108.81	Shut-In(2)
119	47.72	109.26	End Shut-In(2)
120	1688.24	110.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100%	0.03

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

## Tool Information

Drill Pipe:	Length: 3610.00 ft	Diameter: 3.80 inches	Volume: 50.64 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 50.64 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3622.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	93.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3592.00	
shut In Tool	5.00			3597.00	
hydraulic tool	5.00			3602.00	
Jars	5.00			3607.00	
EM Tool	3.00			3610.00	
Safety Joint	3.00			3613.00	
Packer	5.00			3618.00	31.00 Bottom Of Top Packer
Packer	4.00			3622.00	
Stubb	1.00			3623.00	
Recorder	0.00	6625	Inside	3623.00	
Recorder	0.00	8645	Outside	3623.00	
perforations	23.00			3646.00	
change Over Sub	1.00			3647.00	
drill Pipe	32.00			3679.00	
change Over Sub	1.00			3680.00	
Bullnose	4.00			3684.00	62.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>93.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

### 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: 43.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud 100%	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

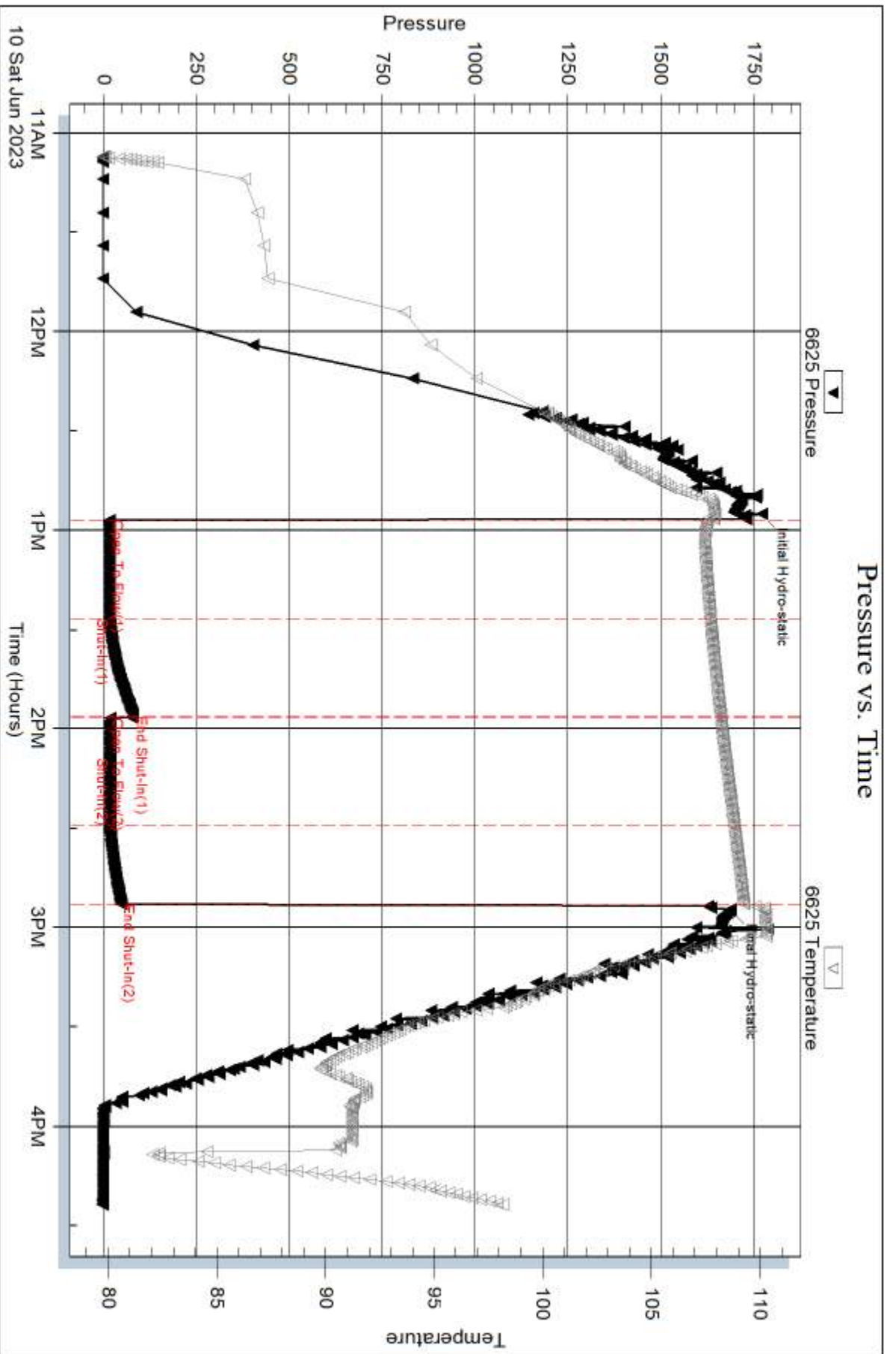
Num Gas Bombs: 0

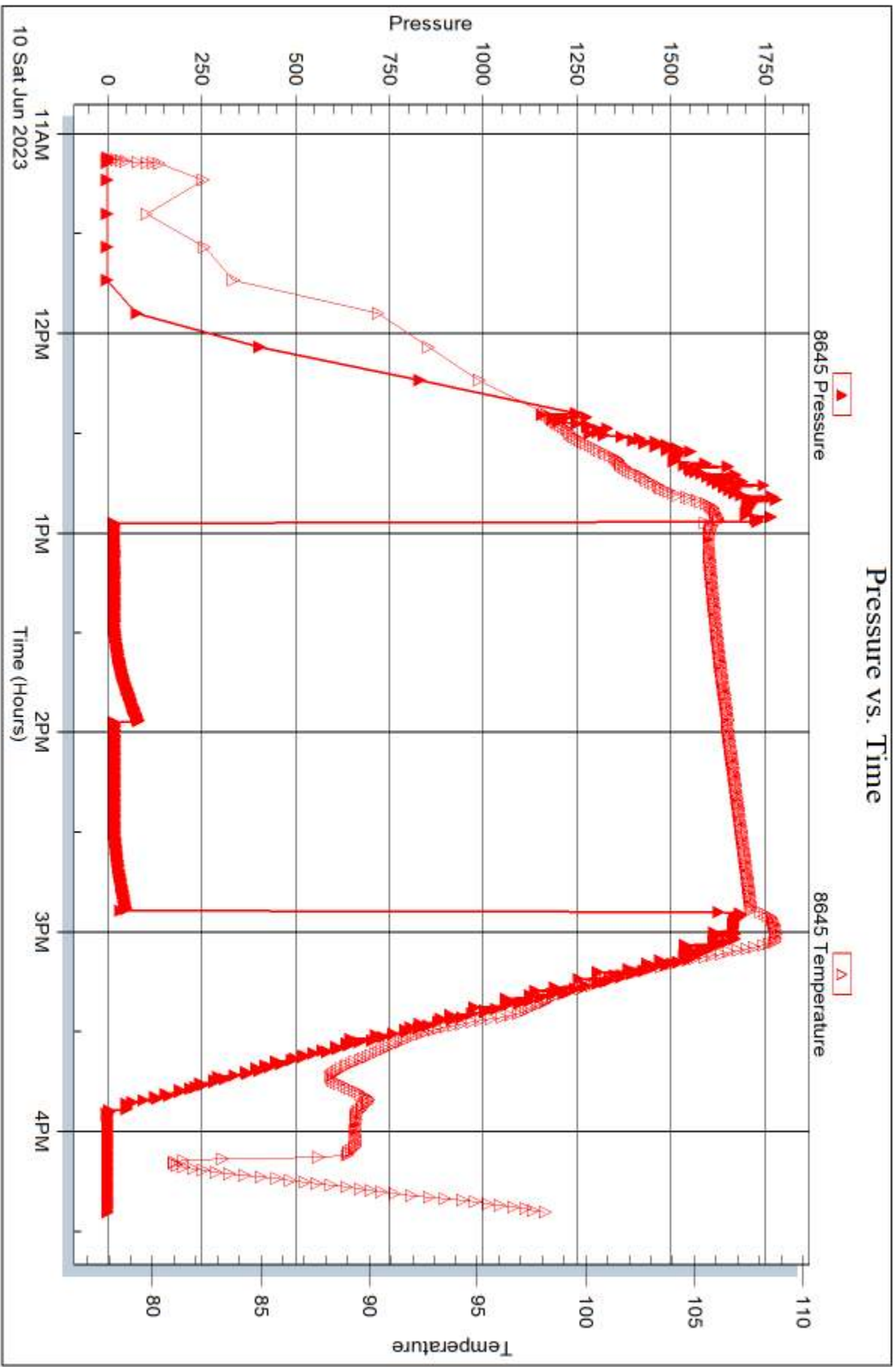
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1# LCM







## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

### **15-12S-20W Ellis,KS**

Start Date: 2023.06.11 @ 01:39:00

End Date: 2023.06.11 @ 07:43:45

Job Ticket #: 70804                      DST #: 2

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

Printed: 2023.06.13 @ 10:52:36



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:15

Time Test Ended: 07:43:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

**Interval: 3758.00 ft (KB) To 3808.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3808.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.10 psig @ 3759.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.11

End Date:

2023.06.11

Last Calib.:

2023.06.11

Start Time: 01:39:05

End Time:

07:43:44

Time On Btm:

2023.06.11 @ 03:40:30

Time Off Btm:

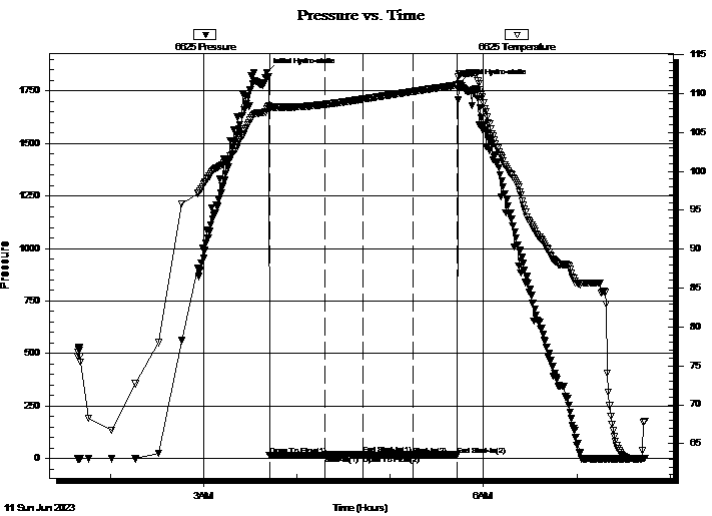
2023.06.11 @ 05:44:30

TEST COMMENT: IF-30- Built to 1/4", died to a WSB

SI1-30- No return

FF-30- No blow

SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1838.26	108.05	Initial Hydro-static
2	15.58	108.01	Open To Flow (1)
38	17.05	108.61	Shut-In(1)
62	20.92	109.28	End Shut-In(1)
63	16.09	109.29	Open To Flow (2)
94	17.10	110.26	Shut-In(2)
123	17.85	111.07	End Shut-In(2)
124	1786.34	112.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud 100%	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**

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

## Tool Information

Drill Pipe:	Length: 3737.00 ft	Diameter: 3.80 inches	Volume: 52.42 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 52.42 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3758.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3728.00	
shut In Tool	5.00			3733.00	
hydraulic tool	5.00			3738.00	
Jars	5.00			3743.00	
EM Tool	3.00			3746.00	
Safety Joint	3.00			3749.00	
Packer	5.00			3754.00	31.00 Bottom Of Top Packer
Packer	4.00			3758.00	
Stubb	1.00			3759.00	
Recorder	0.00	6625	Inside	3759.00	
Recorder	0.00	8645	Outside	3759.00	
perforations	11.00			3770.00	
change Over Sub	1.00			3771.00	
drill Pipe	32.00			3803.00	
change Over Sub	1.00			3804.00	
Bullnose	4.00			3808.00	50.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>81.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

### 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: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud 100%	0.014

Total Length: 1.00 ft      Total Volume: 0.014 bbl

Num Fluid Samples: 0

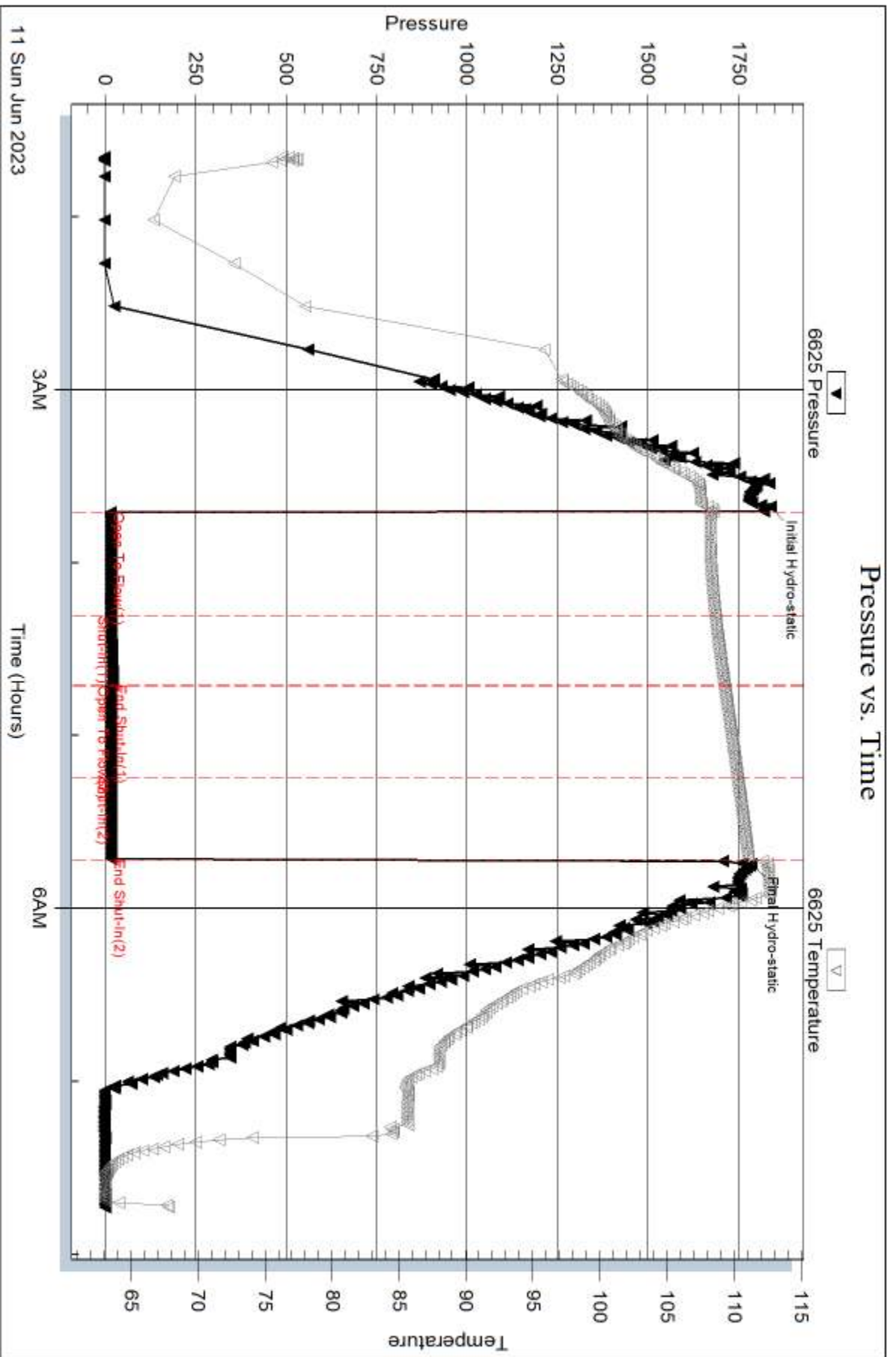
Num Gas Bombs: 0

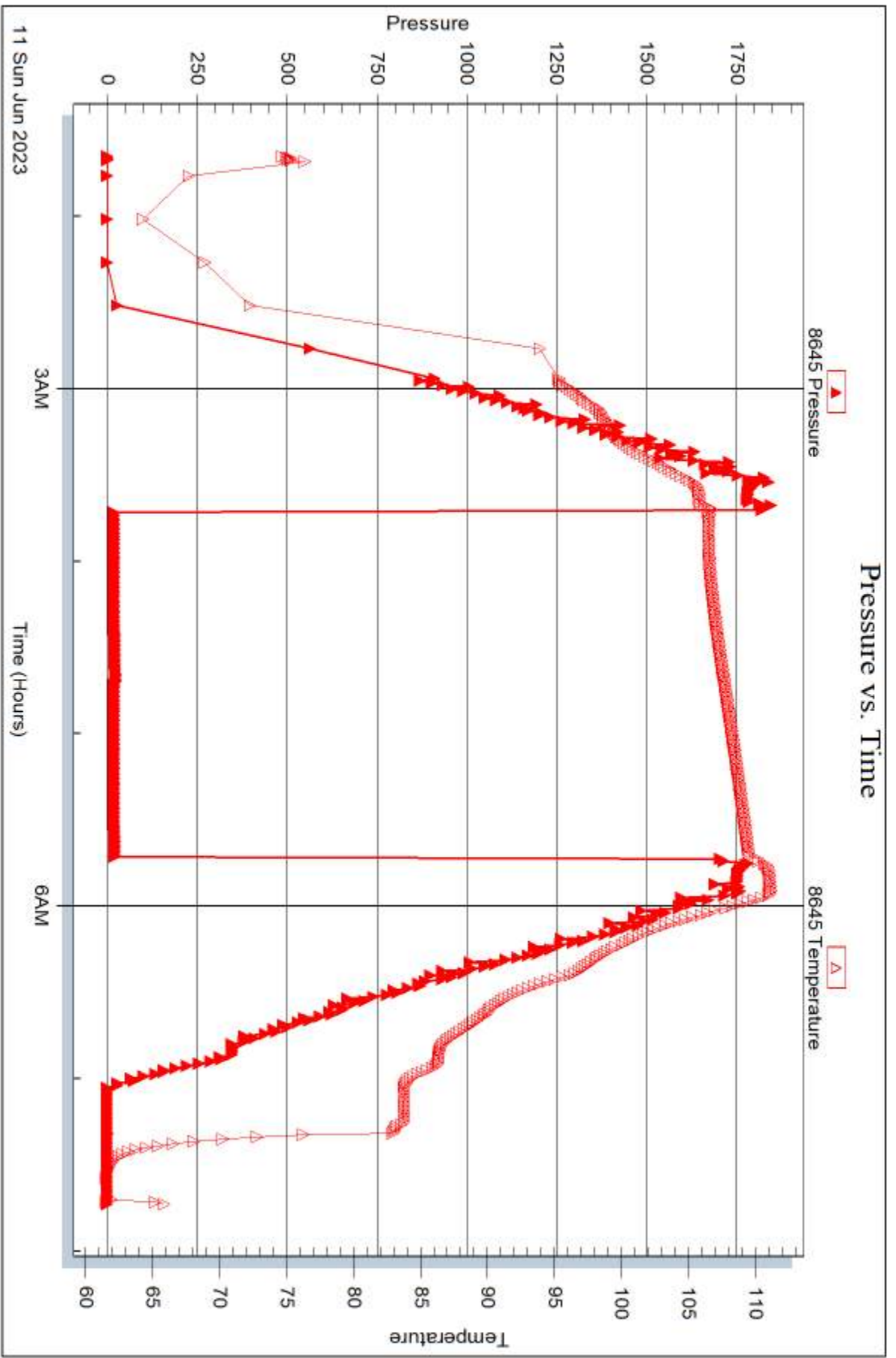
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1# LCM







## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

#### **15-12S-20W Ellis,KS**

Start Date: 2023.06.11 @ 14:42:00

End Date: 2023.06.11 @ 19:42:15

Job Ticket #: 70805                      DST #: 3

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

Printed: 2023.06.13 @ 10:51:05



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

## GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:07:45

Time Test Ended: 19:42:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

**Interval: 3810.00 ft (KB) To 3860.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3860.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.36 psig @ 3811.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.11

End Date:

2023.06.11

Last Calib.:

2023.06.11

Start Time: 14:42:05

End Time:

19:42:14

Time On Btm:

2023.06.11 @ 16:05:45

Time Off Btm:

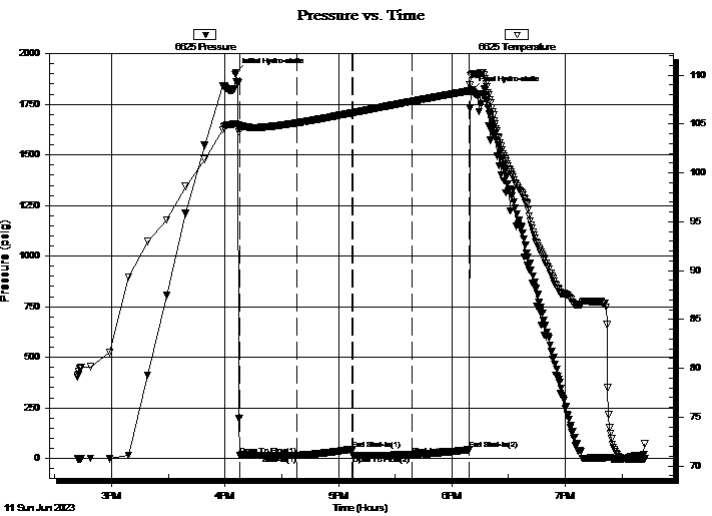
2023.06.11 @ 18:10:30

TEST COMMENT: IF-30- Built to 1/2"

SI1-30- No return

FF-30- No blow

SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.37	104.99	Initial Hydro-static
2	16.81	104.74	Open To Flow (1)
32	16.27	105.10	Shut-In(1)
62	47.66	106.13	End Shut-In(1)
62	16.75	106.14	Open To Flow (2)
93	17.36	107.31	Shut-In(2)
124	43.80	108.38	End Shut-In(2)
125	1819.94	110.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	VSOCM 2% oil 98% mud	0.03

\* 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

**15-12S-20W Ellis, KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

## Tool Information

Drill Pipe:	Length: 3801.00 ft	Diameter: 3.80 inches	Volume: 53.32 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 53.32 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3810.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3780.00	
shut In Tool	5.00			3785.00	
hydraulic tool	5.00			3790.00	
Jars	5.00			3795.00	
EM Tool	3.00			3798.00	
Safety Joint	3.00			3801.00	
Packer	5.00			3806.00	31.00 Bottom Of Top Packer
Packer	4.00			3810.00	
Stubb	1.00			3811.00	
Recorder	0.00	6625	Inside	3811.00	
Recorder	0.00	8645	Outside	3811.00	
perforations	12.00			3823.00	
change Over Sub	1.00			3824.00	
drill Pipe	32.00			3856.00	
change Over Sub	1.00			3857.00	
Bullnose	3.00			3860.00	50.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>81.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	VSOCM 2% oil 98% mud	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

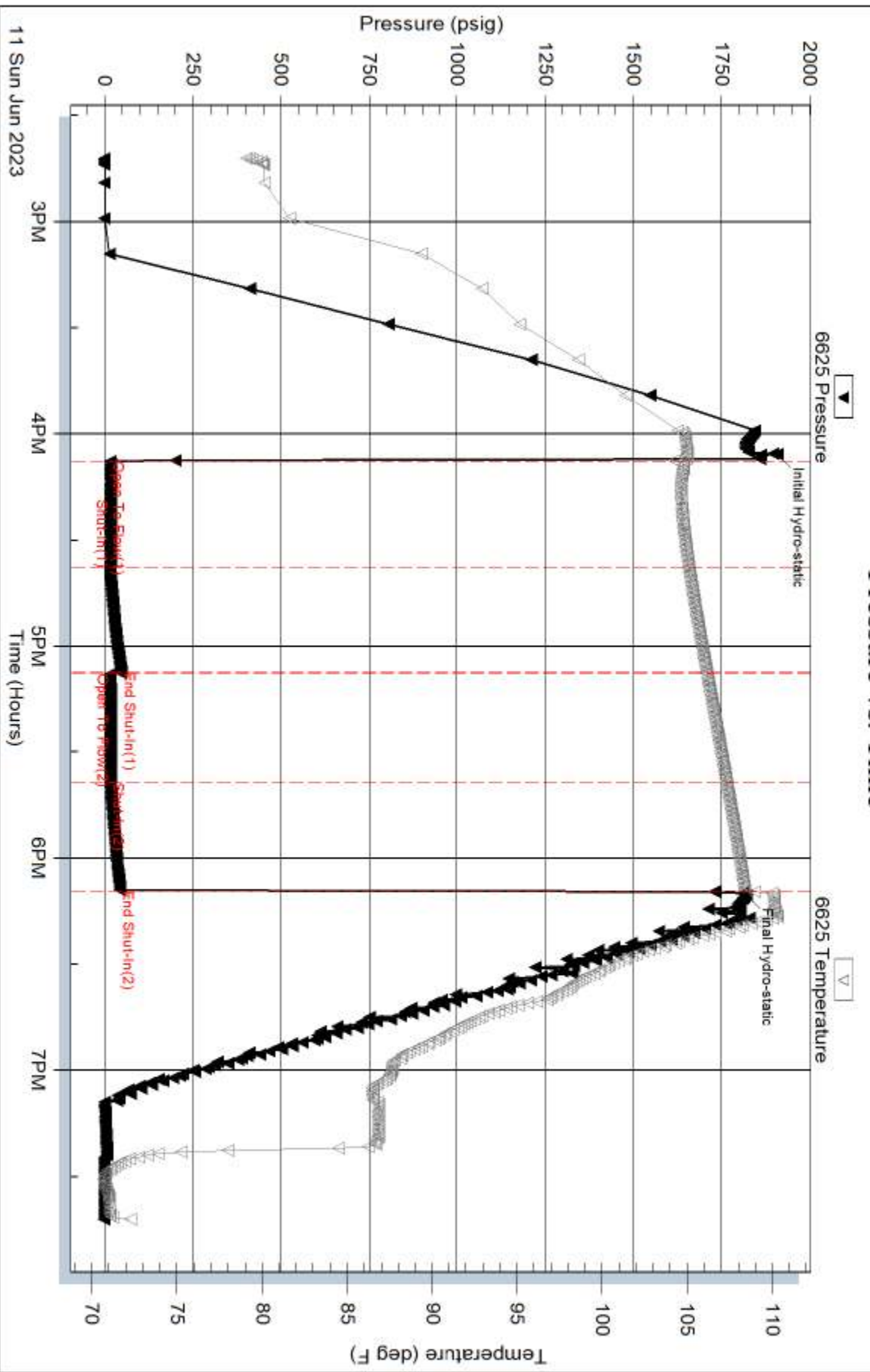
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

### Pressure vs. Time

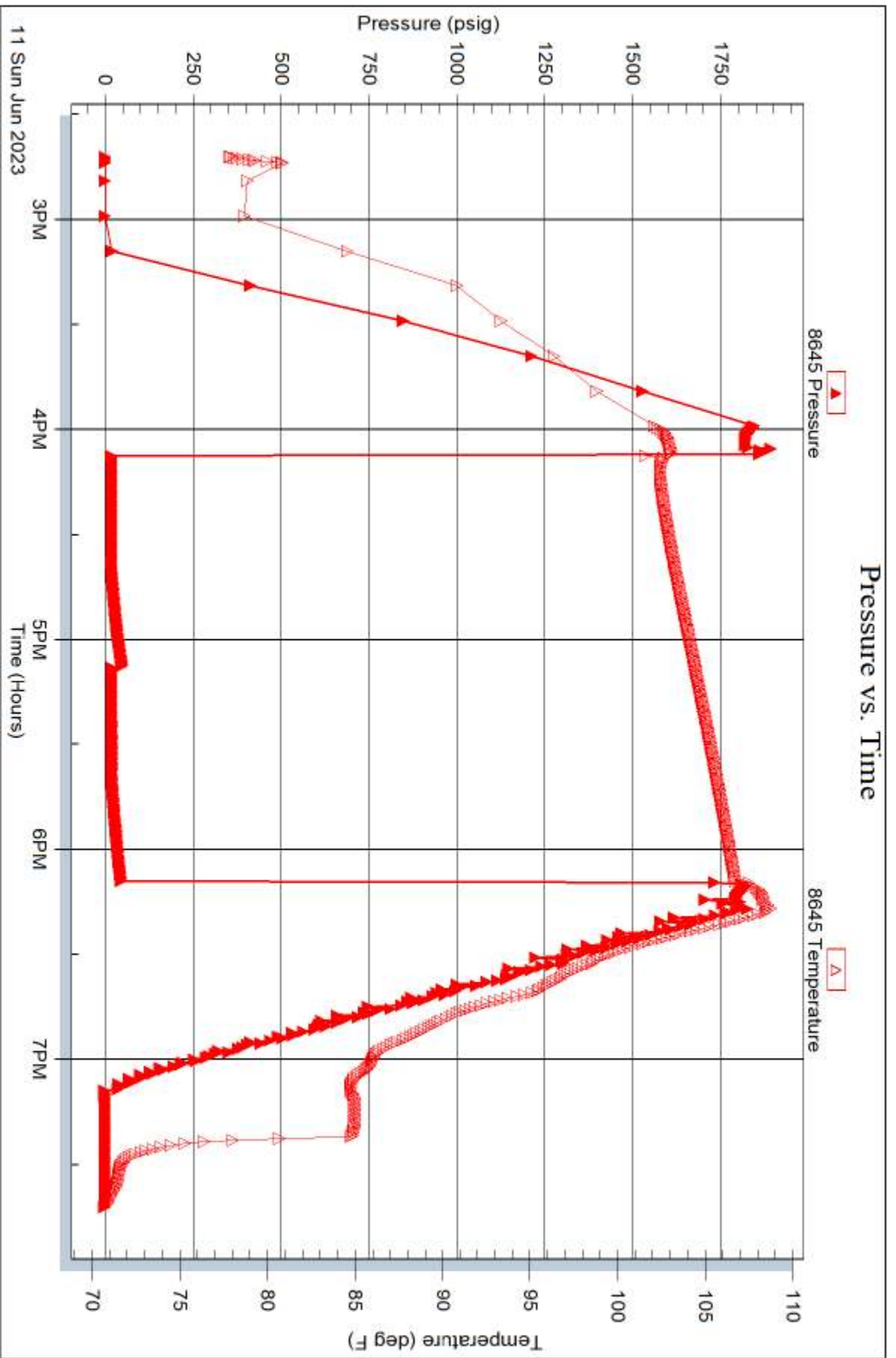


Serial #: 8645

Outside ARP Operating, LLC

Hudson #5-15

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 70805

Printed: 2023.06.13 @ 10:51:06



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 70803

Well Name & No. Hudson #5-15 Test No. 1 Date 6/10/23  
 Company ARP Operating, LLC Elevation 7293 KB 2285 GL  
 Address 730 17th St. STE 715 Denver, CO 80202  
 Co. Rep / Geo. Sean Deenihan Rig Duke Rig #2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. ELLIS State KS

Interval Tested 3622-3684 Zone Tested UKC B-D  
 Anchor Length 62 Drill Pipe Run 3610 Mud Wt. 8.9  
 Top Packer Depth 3617 Drill Collars Run 0 Vis 43  
 Bottom Packer Depth 3622 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3684 Chlorides 1400 ppm System LCM 1#

Blow Description IF-WSB, died in 10 min  
S11- No return  
FF- No blow  
S12- No return

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

Rec Total 2' BHT 108 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1772  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 116 to 17  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 81  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 18 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -175  
 Final Shut-In 48  Mileage 44 77  Accessibility \_\_\_\_\_  
 Final Hydrostatic 1688  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 08:30  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 11:07  Shale Packer \_\_\_\_\_  Sub Total -175  
 Initial Shut-In 30 T-Open 12:57  Extra Packer \_\_\_\_\_  Total 2002  
 Final Flow 30 T-Pulled 14:57  Extra Recorder \_\_\_\_\_  Tool Loaded \_\_\_\_\_ @ \_\_\_\_\_  
 Final Shut-In 30 T-Out 16:24  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

TriLOBITE TESTING INC. shall not be liable for damage of any kind of 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. 70804

Well Name & No. Hudson #5-15 Test No. 2 Date 6/11/23  
 Company ARL Operating LLC Elevation 2293 KB 2285 GL  
 Address 730 17th St STE 715 Denver, CO 80202  
 Co. Rep / Geo Sean Deenihan Rig Duke Rig #2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. Ellis State KS

Interval Tested 3758-3808 Zone Tested LKC J  
 Anchor Length 50 Drill Pipe Run 3237 Mud Wt. 8.9  
 Top Packer Depth 3753 Drill Collars Run 8 Vis 43  
 Bottom Packer Depth 3758 Wt. Pipe Run 8 WL 58  
 Total Depth 3808 Chlorides 1400 ppm System LCM 1#

Blow Description if Built to 2 1/4" died to a WSB  
S12- NO return  
FF- NO blow  
S12- 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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1838  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 16 to 17  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 21  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 16 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -300  
 Final Shut-In 18  Mileage 44 77  Accessibility \_\_\_\_\_  
 Final Hydrostatic 1786  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 00:30  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 01:39  Shale Packer \_\_\_\_\_  Sub Total -300  
 Initial Shut-In 30 T-Open 03:43  Extra Packer \_\_\_\_\_  Total 1827  
 Final Flow 30 T-Pulled 05:43  Extra Recorder \_\_\_\_\_  Tool Loaded \_\_\_\_\_ @ \_\_\_\_\_  
 Final Shut-In 30 T-Out 07:44  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Duffly

Trilobite Testing Inc. shall not be liable for damage of any kind of 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. 70805

Well Name & No. Hudson #5-15 Test No. 3 Date 6/11/23  
 Company ARPOperating LLC Elevation 2293 KB 2285 GL  
 Address 730 17th St STE 715 Denver, CO 80202  
 Co. Rep / Geo Sean Deenihan Rig Duke Rig#2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. Ellis State KS

Interval Tested 3810-3810 Zone Tested LKC K  
 Anchor Length 50 Drill Pipe Run 3801 Mud Wt. 9.0  
 Top Packer Depth 3805 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3810 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3810 Chlorides 3900 ppm System LCM 2#

Blow Description FF Built to 1/2"  
S12- No return  
FF- No blow  
S12- No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>VSOCM</u>		<u>2</u>		<u>78</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2' BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ \*F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1907  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 17 to 16  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 48  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 17 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -350  
 Final Shut-In 44  Mileage 44x2 154  Accessibility \_\_\_\_\_  
 Final Hydrostatic 1820  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 14:18  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 14:42  Shale Packer \_\_\_\_\_  Sub Total -350  
 Initial Shut-In 30 T-Open 16:08  Extra Packer \_\_\_\_\_  Total 1904  
 Final Flow 30 T-Pulled 18:08  Extra Recorder \_\_\_\_\_  Tool Loaded 6/12 @ 15:00  
 Final Shut-In 30 T-Out 19:42  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative DJF

Trilobite Testing Inc. shall not be liable for damage of any kind of 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.



## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

#### **15-12S-20W Ellis,KS**

Start Date: 2023.06.10 @ 11:07:00

End Date: 2023.06.10 @ 16:23:45

Job Ticket #: 70803                      DST #: 1

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

Printed: 2023.06.13 @ 10:58:11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

## GENERAL INFORMATION:

Formation: **LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:56:45

Time Test Ended: 16:23:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Day

Unit No: 70

**Interval: 3622.00 ft (KB) To 3684.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3684.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.38 psig @ 3623.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.10 End Date: 2023.06.10

Last Calib.: 2023.06.10

Start Time: 11:07:05 End Time: 16:23:44

Time On Btm: 2023.06.10 @ 12:55:00

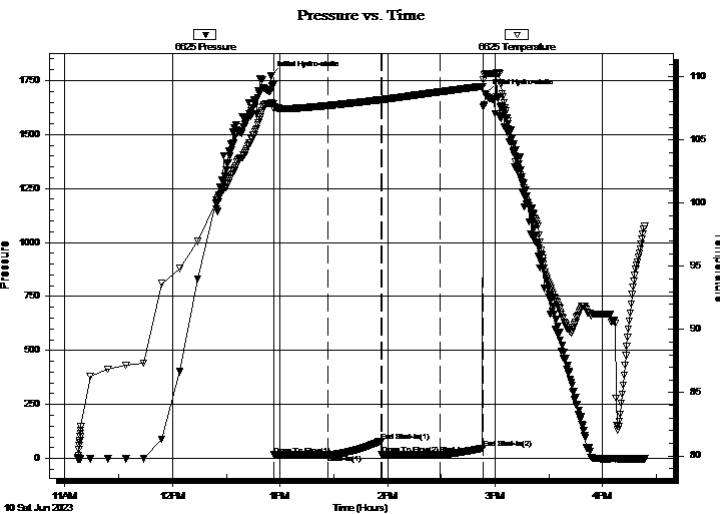
Time Off Btm: 2023.06.10 @ 14:54:45

**TEST COMMENT:** IF-30- WSB died in 10 min.

SI1-30- No return

FF-30- No blow

SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1771.64	107.94	Initial Hydro-static
2	16.47	107.46	Open To Flow (1)
32	17.03	107.72	Shut-In(1)
62	80.86	108.19	End Shut-In(1)
62	17.54	108.19	Open To Flow (2)
95	17.38	108.81	Shut-In(2)
119	47.72	109.26	End Shut-In(2)
120	1688.24	110.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100%	0.03

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

## Tool Information

Drill Pipe:	Length: 3610.00 ft	Diameter: 3.80 inches	Volume: 50.64 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 50.64 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3622.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	93.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3592.00	
shut In Tool	5.00			3597.00	
hydraulic tool	5.00			3602.00	
Jars	5.00			3607.00	
EM Tool	3.00			3610.00	
Safety Joint	3.00			3613.00	
Packer	5.00			3618.00	31.00 Bottom Of Top Packer
Packer	4.00			3622.00	
Stubb	1.00			3623.00	
Recorder	0.00	6625	Inside	3623.00	
Recorder	0.00	8645	Outside	3623.00	
perforations	23.00			3646.00	
change Over Sub	1.00			3647.00	
drill Pipe	32.00			3679.00	
change Over Sub	1.00			3680.00	
Bullnose	4.00			3684.00	62.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>93.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70803

**DST#: 1**

ATTN: Sean Deenihan

Test Start: 2023.06.10 @ 11:07:00

### 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: 43.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud 100%	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

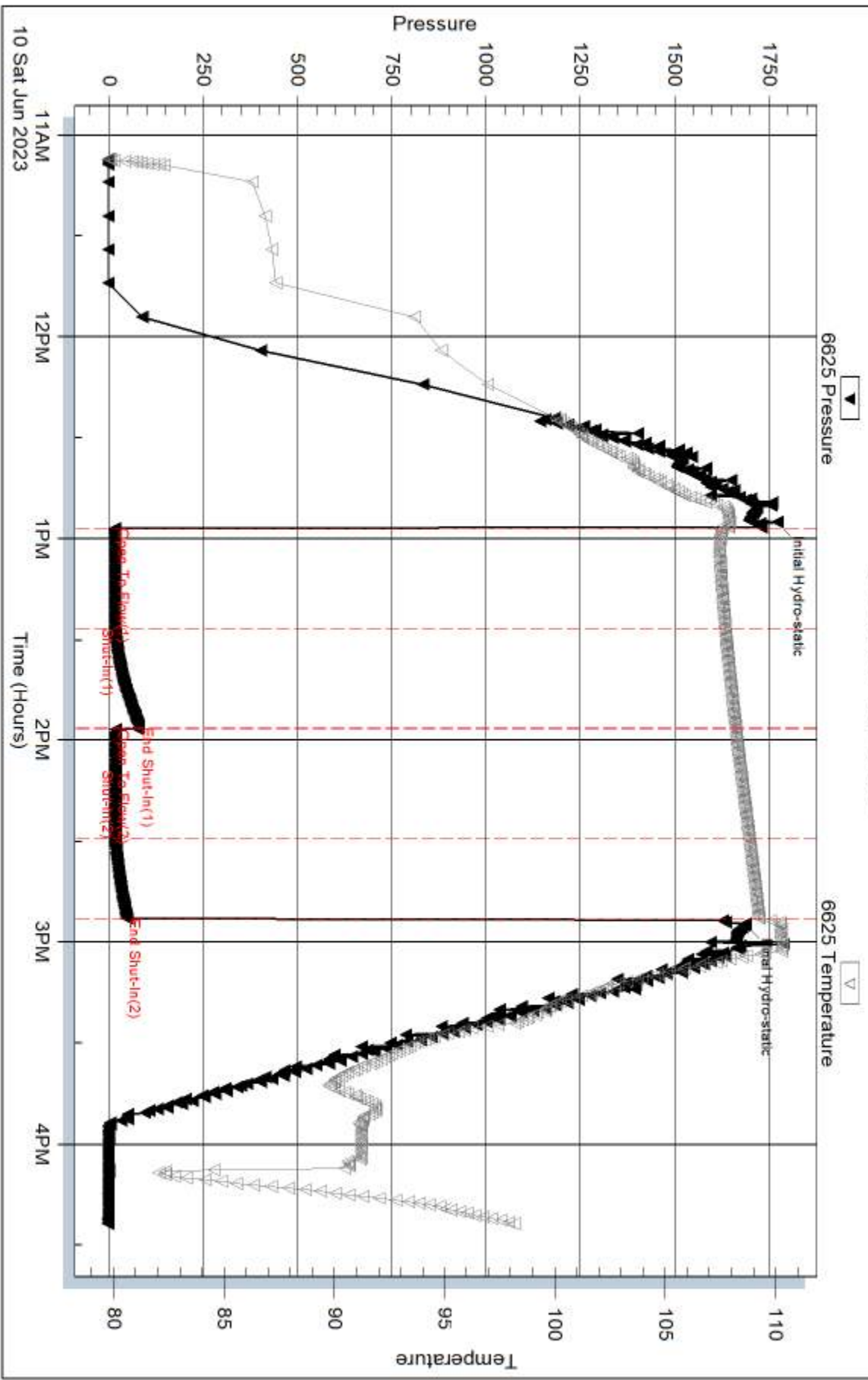
Serial #:

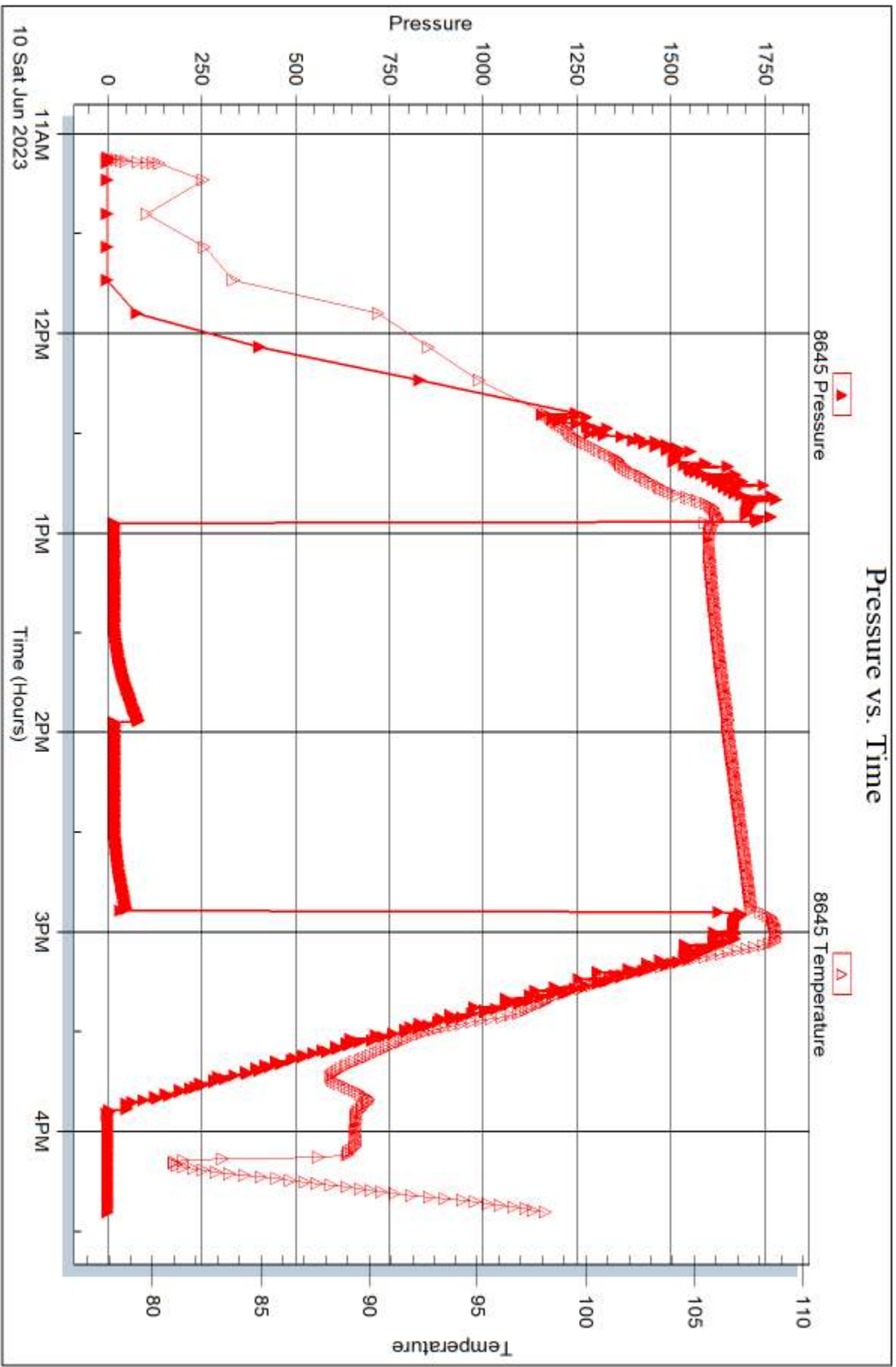
Laboratory Name:

Laboratory Location:

Recovery Comments: 1# LCM

# Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

### **15-12S-20W Ellis,KS**

Start Date: 2023.06.11 @ 01:39:00

End Date: 2023.06.11 @ 07:43:45

Job Ticket #: 70804                      DST #: 2

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

Printed: 2023.06.13 @ 10:52:36



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:15

Time Test Ended: 07:43:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

**Interval: 3758.00 ft (KB) To 3808.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3808.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.10 psig @ 3759.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.11 End Date: 2023.06.11

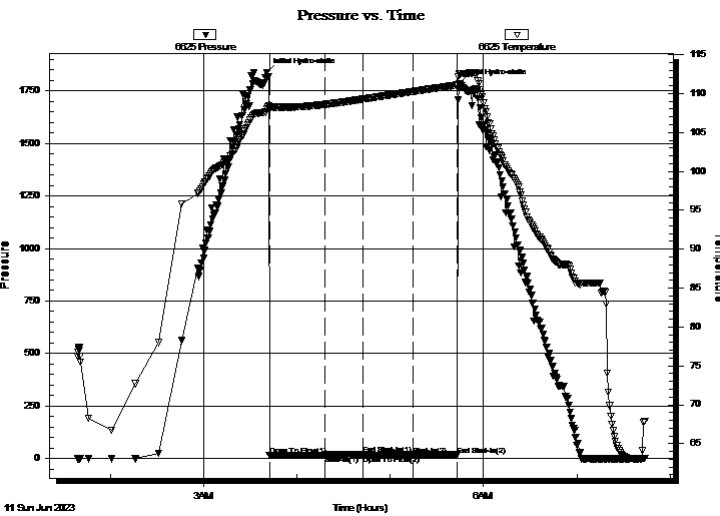
Last Calib.: 2023.06.11

Start Time: 01:39:05 End Time: 07:43:44

Time On Btm: 2023.06.11 @ 03:40:30

Time Off Btm: 2023.06.11 @ 05:44:30

**TEST COMMENT:** IF-30- Built to 1/4", died to a WSB  
SI1-30- No return  
FF-30- No blow  
SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1838.26	108.05	Initial Hydro-static
2	15.58	108.01	Open To Flow (1)
38	17.05	108.61	Shut-In(1)
62	20.92	109.28	End Shut-In(1)
63	16.09	109.29	Open To Flow (2)
94	17.10	110.26	Shut-In(2)
123	17.85	111.07	End Shut-In(2)
124	1786.34	112.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud 100%	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**

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

## Tool Information

Drill Pipe:	Length: 3737.00 ft	Diameter: 3.80 inches	Volume: 52.42 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 52.42 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3758.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3728.00	
shut In Tool	5.00			3733.00	
hydraulic tool	5.00			3738.00	
Jars	5.00			3743.00	
EM Tool	3.00			3746.00	
Safety Joint	3.00			3749.00	
Packer	5.00			3754.00	31.00 Bottom Of Top Packer
Packer	4.00			3758.00	
Stubb	1.00			3759.00	
Recorder	0.00	6625	Inside	3759.00	
Recorder	0.00	8645	Outside	3759.00	
perforations	11.00			3770.00	
change Over Sub	1.00			3771.00	
drill Pipe	32.00			3803.00	
change Over Sub	1.00			3804.00	
Bullnose	4.00			3808.00	50.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>81.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70804

**DST#: 2**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 01:39:00

## 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: 43.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
1.00	mud 100%	0.014

Total Length: 1.00 ft      Total Volume: 0.014 bbf

Num Fluid Samples: 0

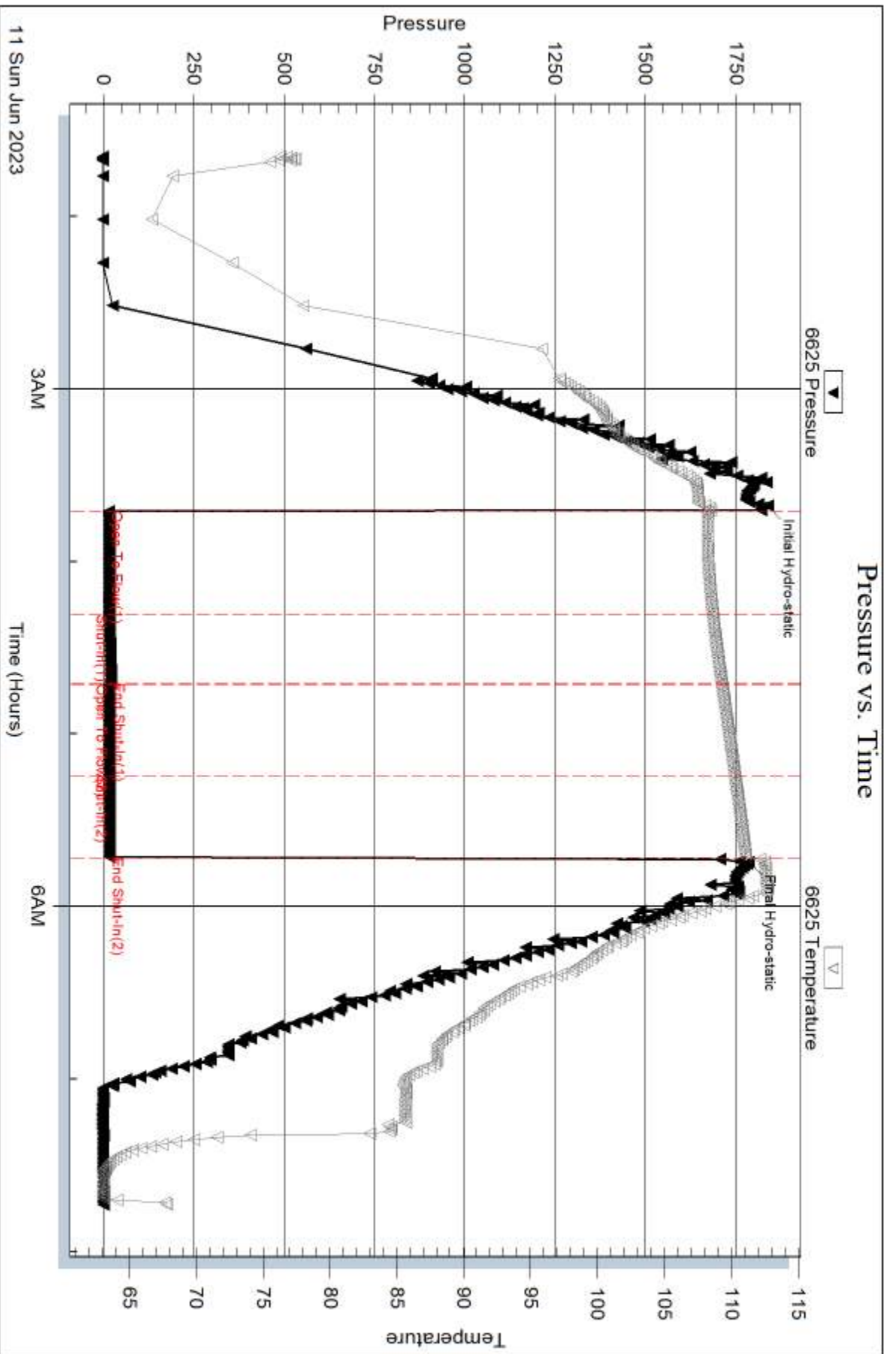
Num Gas Bombs: 0

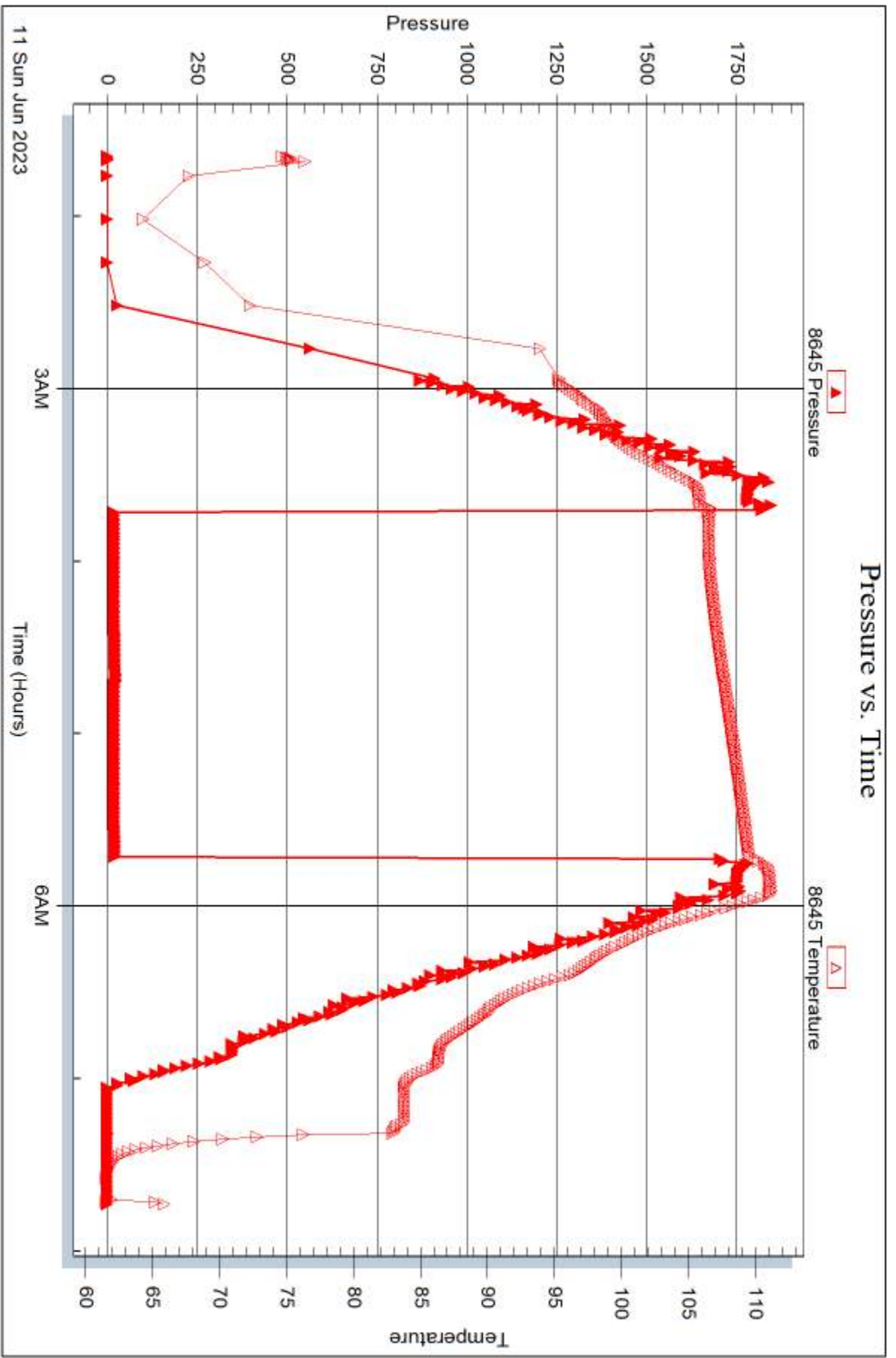
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1# LCM







## DRILL STEM TEST REPORT

Prepared For: **ARP Operating, LLC**

730 17TH St. Ste 715  
Denver, CO 80202

ATTN: Sean Deenihan

### **Hudson #5-15**

#### **15-12S-20W Ellis,KS**

Start Date: 2023.06.11 @ 14:42:00

End Date: 2023.06.11 @ 19:42:15

Job Ticket #: 70805                      DST #: 3

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

Printed: 2023.06.13 @ 10:51:05



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

## GENERAL INFORMATION:

Formation: **LKC K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:07:45

Time Test Ended: 19:42:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Dustin Day

Unit No: 70

**Interval: 3810.00 ft (KB) To 3860.00 ft (KB) (TVD)**

Reference Elevations: 2293.00 ft (KB)

Total Depth: 3860.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6625 Inside**

Press@RunDepth: 17.36 psig @ 3811.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.11

End Date:

2023.06.11

Last Calib.:

2023.06.11

Start Time: 14:42:05

End Time:

19:42:14

Time On Btm:

2023.06.11 @ 16:05:45

Time Off Btm:

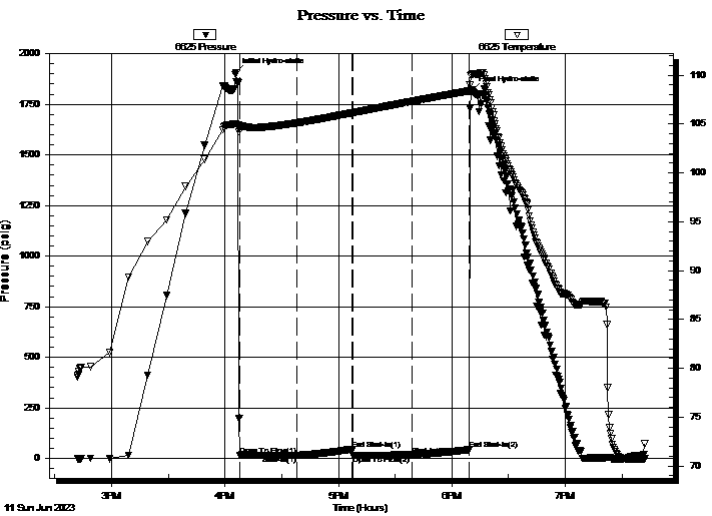
2023.06.11 @ 18:10:30

TEST COMMENT: IF-30- Built to 1/2"

SI1-30- No return

FF-30- No blow

SI2-30- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1907.37	104.99	Initial Hydro-static
2	16.81	104.74	Open To Flow (1)
32	16.27	105.10	Shut-In(1)
62	47.66	106.13	End Shut-In(1)
62	16.75	106.14	Open To Flow (2)
93	17.36	107.31	Shut-In(2)
124	43.80	108.38	End Shut-In(2)
125	1819.94	110.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	VSOCM 2% oil 98% mud	0.03

\* 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

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

## Tool Information

Drill Pipe:	Length: 3801.00 ft	Diameter: 3.80 inches	Volume: 53.32 bbl	Tool Weight:	2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 53.32 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3810.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	50.00 ft				
Tool Length:	81.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3780.00	
shut In Tool	5.00			3785.00	
hydraulic tool	5.00			3790.00	
Jars	5.00			3795.00	
EM Tool	3.00			3798.00	
Safety Joint	3.00			3801.00	
Packer	5.00			3806.00	31.00 Bottom Of Top Packer
Packer	4.00			3810.00	
Stubb	1.00			3811.00	
Recorder	0.00	6625	Inside	3811.00	
Recorder	0.00	8645	Outside	3811.00	
perforations	12.00			3823.00	
change Over Sub	1.00			3824.00	
drill Pipe	32.00			3856.00	
change Over Sub	1.00			3857.00	
Bullnose	3.00			3860.00	50.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>81.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

ARP Operating, LLC

**15-12S-20W Ellis,KS**

730 17TH St. Ste 715  
Denver, CO 80202

**Hudson #5-15**

Job Ticket: 70805

**DST#: 3**

ATTN: Sean Deenihan

Test Start: 2023.06.11 @ 14:42:00

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	VSOCM 2% oil 98% mud	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

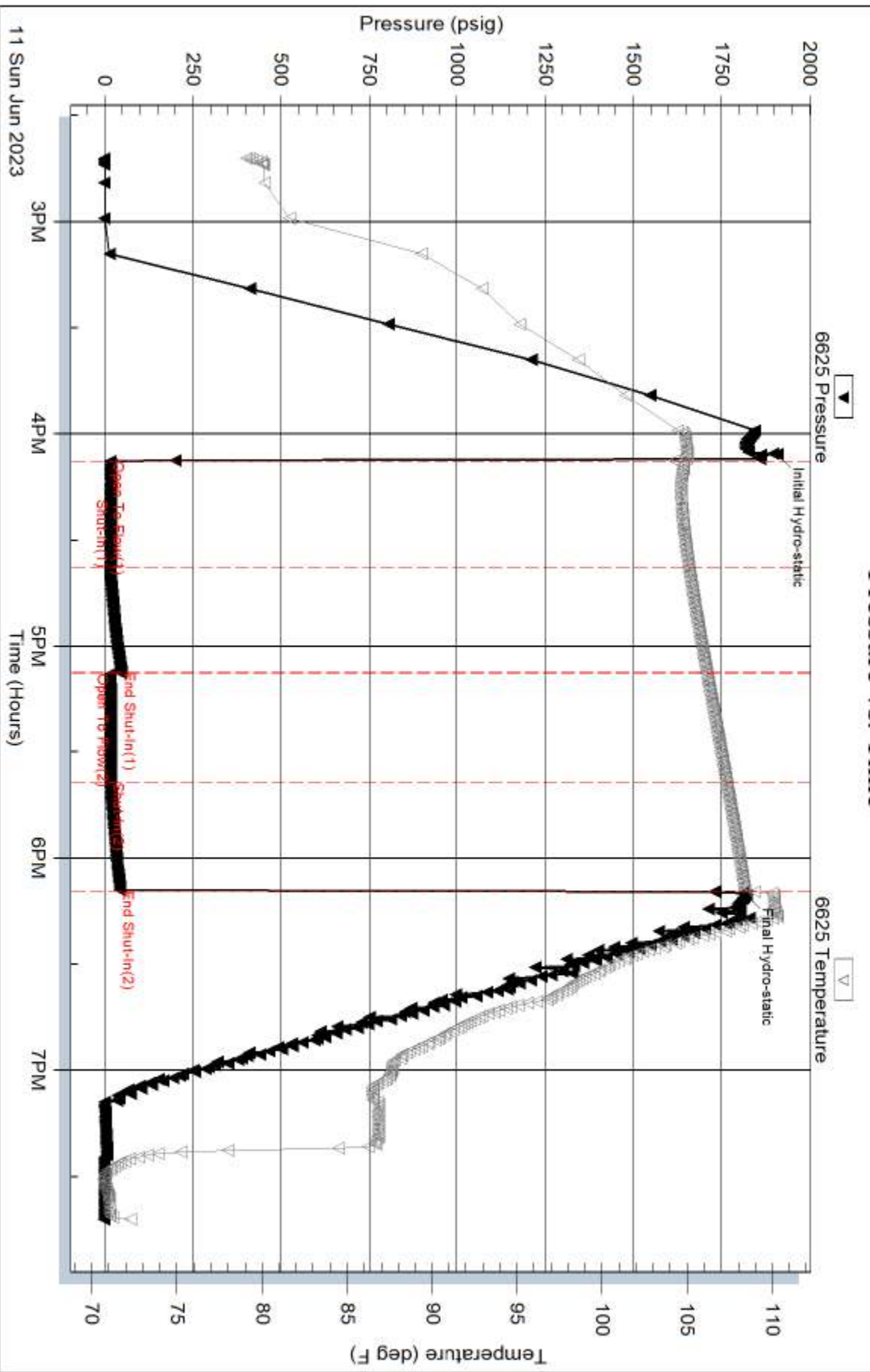
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

### Pressure vs. Time

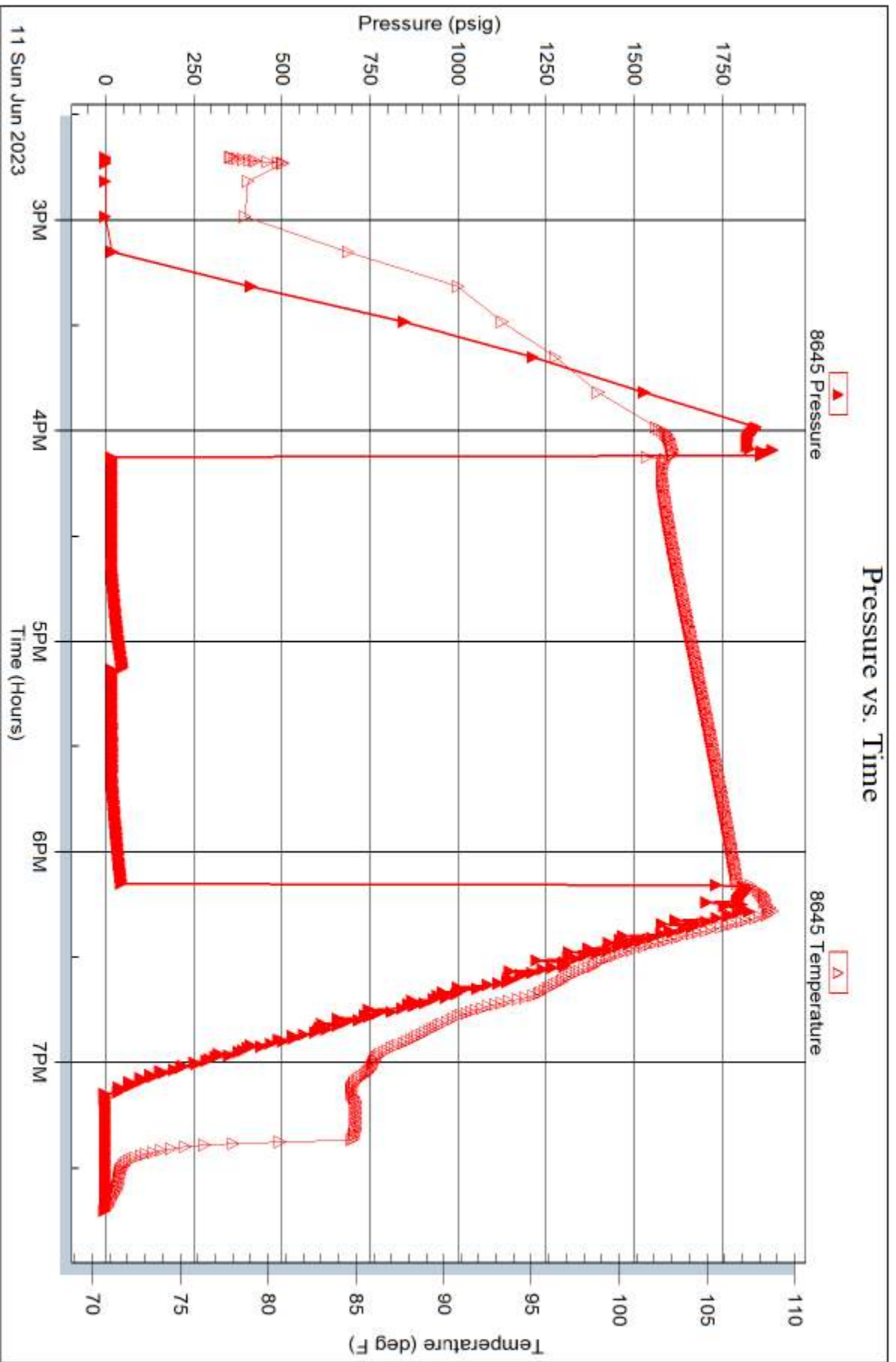


Serial #: 8645

Outside ARP Operating, LLC

Hudson #5-15

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 70805

Printed: 2023.06.13 @ 10:51:06



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 70803

Well Name & No. Hudson #5-15 Test No. 1 Date 6/10/23  
 Company ARP Operating, LLC Elevation 7293 KB 2285 GL  
 Address 730 17th St. STE 715 Denver, CO 80202  
 Co. Rep / Geo. Sean Deenihan Rig Duke Rig #2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. ELLIS State KS

Interval Tested 3622-3684 Zone Tested UKC B-D  
 Anchor Length 62 Drill Pipe Run 3610 Mud Wt. 8.9  
 Top Packer Depth 3617 Drill Collars Run 0 Vis 43  
 Bottom Packer Depth 3622 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3684 Chlorides 1400 ppm System LCM 1#

Blow Description IF-WSB, died in 10 min  
S11- No return  
FF- No blow  
S12- No return

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

Rec Total 2' BHT 108 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1772  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 116 to 17  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 81  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 18 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -175  
 Final Shut-In 48  Mileage 44 77  Accessibility \_\_\_\_\_  
 Final Hydrostatic 11688  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 08:30  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 11:07  Shale Packer \_\_\_\_\_  Sub Total -175  
 Initial Shut-In 30 T-Open 12:57  Extra Packer \_\_\_\_\_  Total 2002  
 Final Flow 30 T-Pulled 14:57  Extra Recorder \_\_\_\_\_  Tool Loaded \_\_\_\_\_ @ \_\_\_\_\_  
 Final Shut-In 30 T-Out 16:24  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

TriLOBITE TESTING INC. shall not be liable for damage of any kind of 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. 70804

Well Name & No. Hudson #5-15 Test No. 2 Date 6/11/23  
 Company ARL Operating LLC Elevation 2293 KB 2285 GL  
 Address 730 17th St STE 715 Denver, CO 80202  
 Co. Rep / Geo Sean Deenihan Rig Duke Rig #2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. Ellis State KS

Interval Tested 3758-3808 Zone Tested LKC J  
 Anchor Length 50 Drill Pipe Run 3237 Mud Wt. 8.9  
 Top Packer Depth 3753 Drill Collars Run 8 Vis 43  
 Bottom Packer Depth 3758 Wt. Pipe Run 8 WL 58  
 Total Depth 3808 Chlorides 1400 ppm System LCM 1#

Blow Description if Built to 2 1/4" died to a WSB  
S12- NO return  
FF- NO blow  
S12- 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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 112 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1838  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 16 to 17  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 21  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 16 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -300  
 Final Shut-In 18  Mileage 44 77  Accessibility \_\_\_\_\_  
 Final Hydrostatic 1786  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 00:30  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 01:39  Shale Packer \_\_\_\_\_  Sub Total -300  
 Initial Shut-In 30 T-Open 03:43  Extra Packer \_\_\_\_\_  Total 1827  
 Final Flow 30 T-Pulled 05:43  Extra Recorder \_\_\_\_\_  Tool Loaded \_\_\_\_\_ @ \_\_\_\_\_  
 Final Shut-In 30 T-Out 07:44  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Duff

Trilobite Testing Inc. shall not be liable for damage of any kind of 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. 70805

Well Name & No. Hudson #5-15 Test No. 3 Date 6/11/23  
 Company ARPOperating LLC Elevation 2293 KB 2285 GL  
 Address 730 17th St STE 715 Denver, CO 80202  
 Co. Rep / Geo Sean Deenihan Rig Duke Rig#2  
 Location: Sec. 15 Twp 12S Rge. 20W Co. Ellis State KS

Interval Tested 3810-3810 Zone Tested LKC K  
 Anchor Length 50 Drill Pipe Run 3801 Mud Wt. 9.0  
 Top Packer Depth 3805 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3810 Wt. Pipe Run 0 WL 5.8  
 Total Depth 3810 Chlorides 3900 ppm System LCM 2#

Blow Description FF Built to 1/2"  
S12- No return  
FF- No blow  
S12- No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>VSOCM</u>		<u>2</u>		<u>78</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2' BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ \*F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 1907  Test 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 17 to 16  Jars 300  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 48  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 17 to 17  Hourly Standby \_\_\_\_\_  EM Tool Successful -350  
 Final Shut-In 44  Mileage 44x2 154  Accessibility \_\_\_\_\_  
 Final Hydrostatic 1820  Sampler \_\_\_\_\_  Gas Sample \_\_\_\_\_  
 T- On Location 14:18  Straddle \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 Initial Flow 30 T-Started 14:42  Shale Packer \_\_\_\_\_  Sub Total -350  
 Initial Shut-In 30 T-Open 16:08  Extra Packer \_\_\_\_\_  Total 1904  
 Final Flow 30 T-Pulled 18:08  Extra Recorder \_\_\_\_\_  Tool Loaded 6/12 @ 15:00  
 Final Shut-In 30 T-Out 19:42  Day Standby \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

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# Sean Deenihan

## Petroleum Geologist

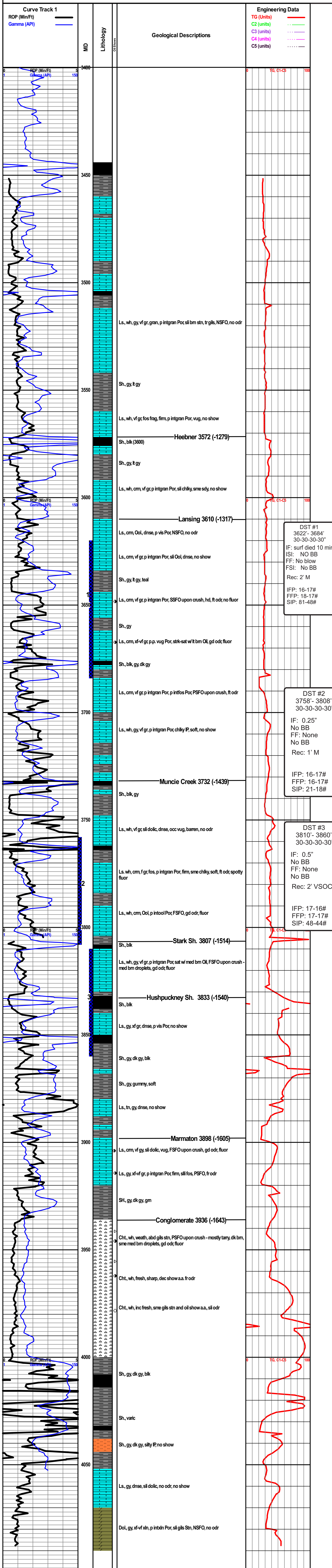
### GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY	ARP Operating, LLC	ELEVATIONS	KB 2293'
LEASE	Hudson #5-15	DF	
FIELD	Wildcat	GL	2285'
LOCATION	2640' FSL & 660' FWL	Measurements Are All From Kelly Bushing	
SEC	15 TWP 12S RGE 20W	CASING	CONDUCTOR 8-5/8" at 224' SURFACE 5.5" @ TD PRODUCTION 5.5" @ TD
COUNTY	Ellis STATE Kansas		
CONTRACTOR	Duke Drilling Rig #2		
SPUD	6/04/23 COMP 6/11/23		
RTD	4090' LTD 4090'		
MUD UP	3300' TYPE MUD Chemical		
SAMPLES SAVED FROM	3600' TO RTD		
DRILLING TIME KEPT FROM	3600' TO RTD		
SAMPLES EXAMINED FROM	3600' TO RTD		
GEOLOGICAL SUPERVISION FROM	3600'		
REFERENCE WELL	CND/DIL. ELI MIC/SON		

REMARKS The Hudson #5-15 had several shows of oil and gas that will be further evaluated through 5.5" production casing.

Respectfully Submitted,

Sean P. Deenihan



DST #1  
3622'- 3684'  
30-30-30-30"  
IF: surf died 10 min  
ISI: NO BB  
FF: No blow  
FSI: No BB  
Rec: 2' M  
IFP: 16-17#  
FFP: 18-17#  
SIP: 81-48#

DST #2  
3758'- 3808'  
30-30-30-30"  
IF: 0.25"  
No BB  
FF: None  
No BB  
Rec: 1' M  
IFP: 16-17#  
FFP: 16-17#  
SIP: 21-18#

DST #3  
3810'- 3860'  
30-30-30-30"  
IF: 0.5"  
No BB  
FF: None  
No BB  
Rec: 2' VSOCM  
IFP: 17-16#  
FFP: 17-17#  
SIP: 48-44#

RTD: 4090'  
LTD: 4090'

**ARP Operating, LLC**  
Hudson # 5-15  
15-12S-20W  
Ellis Co., KS

KB: 2293'

# 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 0966  
 LOCATION Holt  
 FOREMAN Tam Williams

## FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-7-23	35695	Hudson 5-15	15	12	20	Edis
CUSTOMER <u>ARP</u>			TRUCK #			
MAILING ADDRESS			DRIVER			
CITY			TRUCK #			
STATE			DRIVER			
ZIP CODE			TRUCK #			
			DRIVER			

JOB TYPE Surf HOLE SIZE 12 1/4" HOLE DEPTH 230' CASING SIZE & WEIGHT 5 3/8 23#  
 CASING DEPTH 224' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Set up on Duke #2. Hooked up to their head.  
m: & 165# surface blend & displace 12.5BH spot in 345  
Cement did circulate

Thanks Tom & Chris

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
<del>11002</del>	<u>1</u>	PUMP CHARGE <u>surface</u>	\$1150.00	\$1150.00
<del>11002</del>	<u>32</u>	MILEAGE	\$14.50	\$468.00
<del>11002</del>	<u>9.09 tons</u>	<u>Ton Mileage delivery</u>	\$873.72	\$873.72
<del>18004</del>	<u>165#</u>	<u>Class A 3900 290gel</u>	\$25.50	\$4207.50
			<u>sub total</u>	<u>\$11,199.22</u>
			<u>less 5% disc</u>	<u>\$334.94</u>
			<u>sub total</u>	<u>\$11,344.24</u>
			SALES TAX	279.80
			ESTIMATED TOTAL	6644.06

AUTHORIZATION Dion Vazguy TITLE Pusher DATE 6-07-23

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.

# 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 0974  
 LOCATION Horie  
 FOREMAN Tom Williams

## FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-13-23		Hudson 5-15	15	12	20	Ellis

CUSTOMER	TRUCK #	DRIVER	TRUCK #	DRIVER
ARP Operating LLC	103	Tom W		
	301	Jack T		
	202	Chris K		

CITY	STATE	ZIP CODE

JOB TYPE D.U. Tool HOLE SIZE 7 7/8" HOLE DEPTH 4090' CASING SIZE & WEIGHT 5 1/2" 14"  
 CASING DEPTH 4084' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting. Rig up on Duke 2. Run 5 1/2" casing. Circulate to condition hole. make use down to 37 Pump 600 gal mudfish. 20 B&B KCL Mix 75 sacks lite. Tab in by 150 sacks OWC. Displace. keep plug. Release to track-held. open D.U. tool. Circulate for 2 hours. mud pump pressured up. Plug pin broke. Drop shutting plug. Back up track.

*Tom Williams*  
Tom & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
PC004	1	PUMP CHARGE	\$7500 <sup>00</sup>	\$7500 <sup>00</sup>
MD01	72	MILEAGE	\$6 <sup>50</sup>	\$468 <sup>00</sup>
MD02	12.02 tons	Ton mileage delivery	\$1298 <sup>16</sup>	\$1298 <sup>16</sup>
CB050	150 sacks	Class A 10% w/c 2% adm, 1/16 plaster 5" hole seal	\$29 <sup>55</sup>	\$4432 <sup>50</sup>
CB010	75 sacks	1 1/4" 4" w/c 1/4" fl-seal	\$17 <sup>35</sup>	\$1301 <sup>25</sup>
FG033	1	AIU 5 1/2" guide shoe	\$600 <sup>00</sup>	\$600 <sup>00</sup>
FG051	1	5 1/2" level down plug ass	\$195 <sup>00</sup>	\$195 <sup>00</sup>
FE014	8	5 1/2" turbolizer	\$108 <sup>00</sup>	\$864 <sup>00</sup>
FE022	3	5 1/2" basket	\$385 <sup>00</sup>	\$1155 <sup>00</sup>
FE102	3	5 1/2" stop rings	\$35 <sup>00</sup>	\$105 <sup>00</sup>
FE050	1	5 1/2" D.U. tool	\$4200 <sup>00</sup>	\$4200 <sup>00</sup>
CP013	500 gal	mudfish	\$1 <sup>00</sup>	\$500 <sup>00</sup>
CP014	2 gal	KCL	\$30 <sup>00</sup>	\$10 <sup>00</sup>
			sub total	\$18,178 <sup>91</sup>
			less 5% disc	\$908 <sup>94</sup>
			sub total	\$17,269 <sup>97</sup>
			SALES TAX	925.20
			ESTIMATED TOTAL	18195.17

AUTHORIZATION *[Signature]* 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.