

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	Pioneer Oil Company, Inc.
Well Name	BRETZ COMMUNITY UNIT 1-4
Doc ID	1660177

Tops

Name	Top	Datum
Anhydrite	2305	+373
Base Anhydrite	2340	+338
Elmont	3462	-784
Howard	3498	-820
Topeka	3548	-870
Plattsmouth	3780	-1120
Toronto	3784	-1106
Lansing	3795	-1117
Muncie Creek	3916	-1238
Base Kansas City	4030	-1352



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Pioneer Oil Company Inc
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

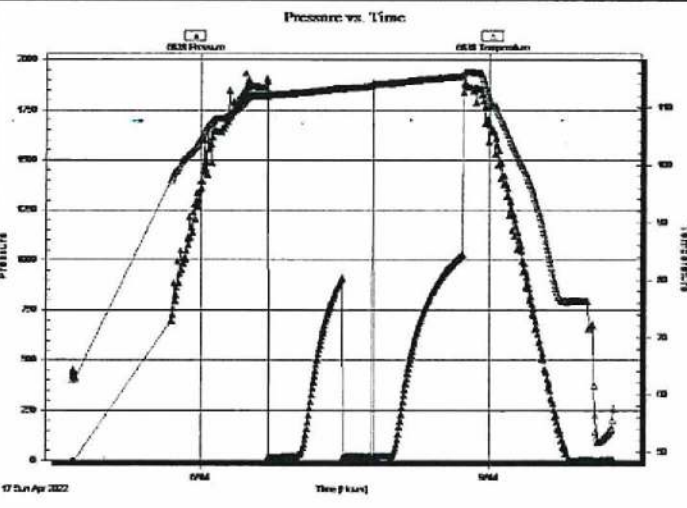
Bretz Community Unit #1-4
4-9s-28w Sheridan KS
Job Ticket: 68222 DST#: 1
Test Start: 2022.04.17 @ 04:40:00

GENERAL INFORMATION:

Formation: LKC
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:42:12 Test Type: Conventional Bottom Hole (Initial)
Time Test Ended: 10:18:32 Tester: Spencer J Staab
Unit No: 84
Interval: 3751.00 ft (KB) To 3788.00 ft (KB) (TVD) Reference Elevations: 2678.00 ft (KB)
Total Depth: 3788.00 ft (KB) (TVD) 2670.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6838 Inside
Press@RunDepth: psig @ 3752.00 ft (KB) Capacity: psig
Start Date: 2022.04.17 End Date: 2022.04.17 Last Calib.: 2022.04.17
Start Time: 04:40:01 End Time: 10:18:32 Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IF-Surface to 1/2" Died to Surface
30-IS-No Return
30-FF-Surface Flushed No Help
45-FS-No Return



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

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.07
0.00	Sampler= 50mL Oil 2950mL Mud @ 950	0.00

Gas Rates		
Choke (inches)	Pressure (psig)	Gas Rate (MMcfd)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pioneer Oil Company Inc
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

Bretz Community Unit #1-4
4-9s-28w Sheridan KS
Job Ticket: 68222 DST#: 1
Test Start: 2022.04.17 @ 04:40:00

Tool Information

Drill Pipe:	Length: 3748.00 ft	Diameter: 3.82 inches	Volume: 53.13 bbl	Tool Weight: 2500.00 daN
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 daN
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 daN
			<u>Total Volume: - bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 45000.00 daN
Depth to Top Packer:	3751.00 ft			Final 45000.00 daN
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3717.00	
Shut In Tool	5.00			3722.00	
Sampler	3.00			3725.00	
Hydraulic tool	5.00			3730.00	
Jars	5.00			3735.00	
Gap Sub	4.00			3739.00	
Safety Joint	3.00			3742.00	
Packer	5.00			3747.00	35.00 Bottom Of Top Packer
Packer	4.00			3751.00	
Stubb	1.00			3752.00	
Recorder	0.00	6838	Inside	3752.00	
Recorder	0.00	8875	Outside	3752.00	
Perforations	33.00			3785.00	
Bullnose	3.00			3788.00	37.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Company Inc
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

Bretz Community Unit #1-4
4-9s-28w Sheridan KS
Job Ticket: 68222 DST#: 1
Test Start: 2022.04.17 @ 04:40:00

Mud and Cushion Information

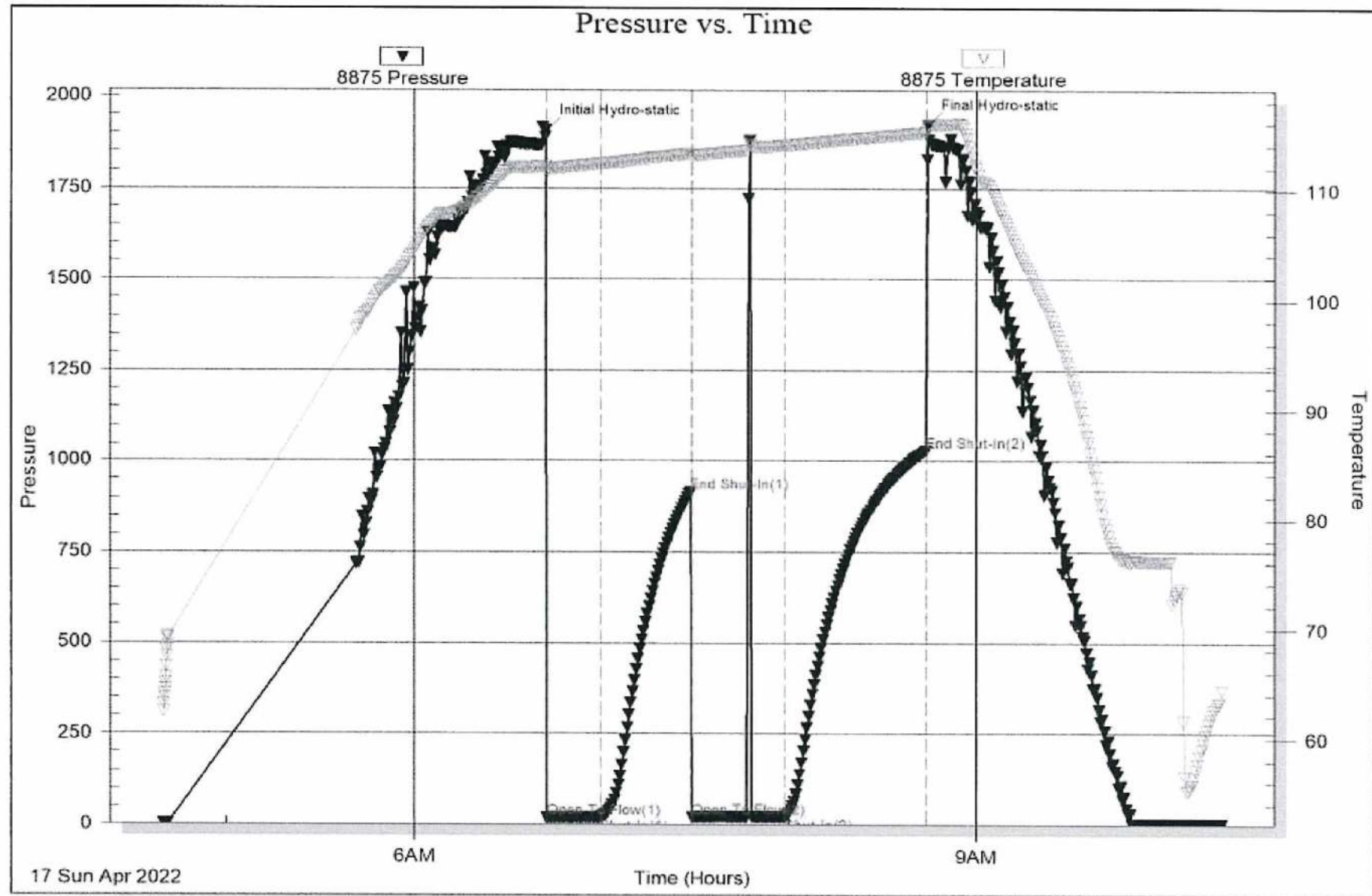
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: inches			

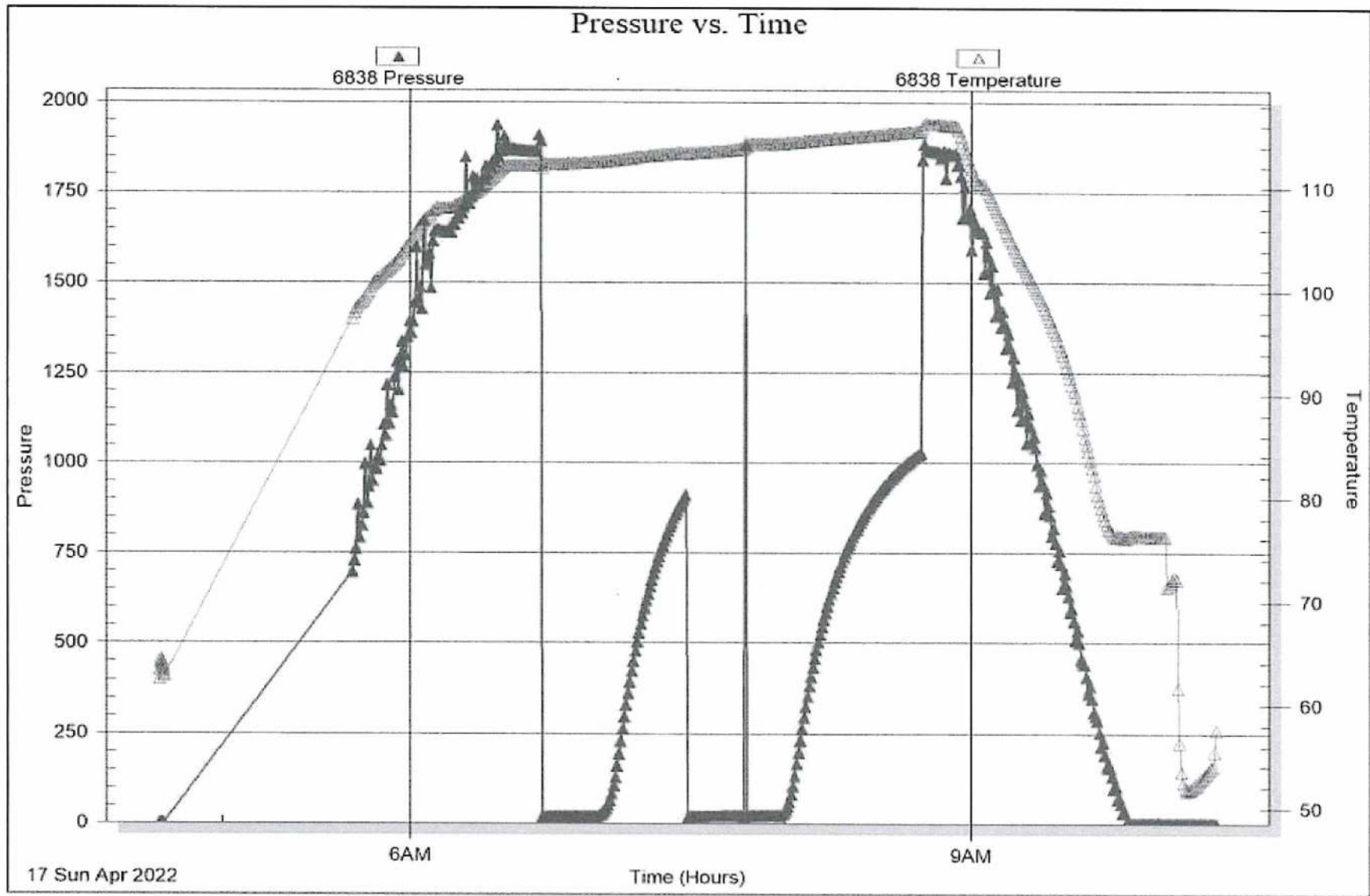
Recovery Information

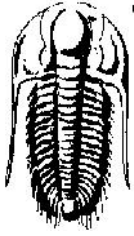
Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100%M	0.071
0.00	Sampler= 50mL Oil 2950mL Mud @ 950PSI	0.000

Total Length: 5.00 ft Total Volume: 0.071 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 2#LCM







**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pioneer Oil Company Inc
400 Main Street
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

Bretz Community Unit #1-4

4-9s-28w Sheridan KS

Job Ticket: 68223 **DST#: 2**

Test Start: 2022.04.17 @ 17:23:00

GENERAL INFORMATION:

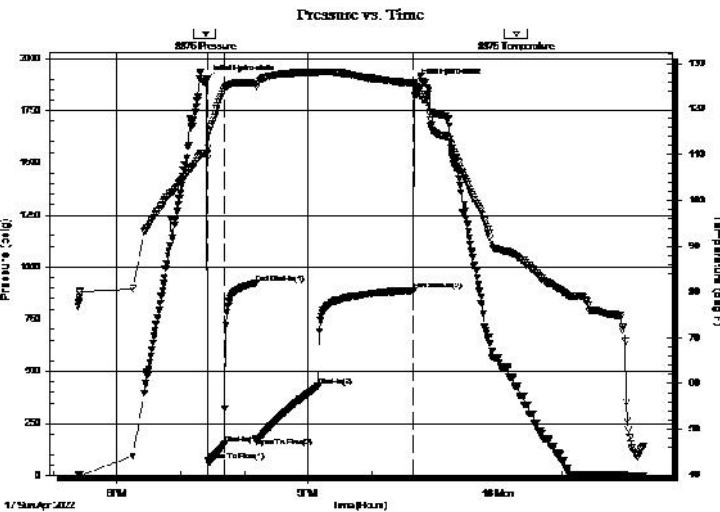
Formation: **LKC A**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:24:57
 Tester: Spencer J Staab
 Time Test Ended: 02:16:42
 Unit No: 84
 Interval: **3786.00 ft (KB) To 3802.00 ft (KB) (TVD)**
 Reference Elevations: 2678.00 ft (KB)
 Total Depth: 3802.00 ft (KB) (TVD)
 2670.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 8875

Outside

Press @ Run Depth: 428.52 psig @ 3787.00 ft (KB) Capacity: psig
 Start Date: 2022.04.17 End Date: 2022.04.18 Last Calib.: 2022.04.18
 Start Time: 17:23:01 End Time: 02:16:42 Time On Btm: 2022.04.17 @ 19:24:52
 Time Off Btm: 2022.04.17 @ 22:40:22

TEST COMMENT: 15-IF-BOB 2 mins Built to 80"
 30-ISI-4 mins to Bleed off 1/4" Blow Built to BOB 10 mins Blow Built to 23"
 60-FF-BOB 3 mins Built to 135"
 90-FSI-3 mins to Bleed off Surface Blow built to 11.5"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1899.95	110.51	Initial Hydro-static
1	72.76	109.55	Open To Flow (1)
17	153.31	124.44	Shut-In(1)
46	920.00	125.42	End Shut-In(1)
46	180.31	125.16	Open To Flow (2)
105	428.52	128.08	Shut-In(2)
195	888.00	125.57	End Shut-In(2)
196	1883.04	122.93	Final Hydro-static

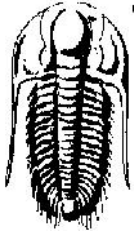
Recovery

Length (ft)	Description	Volume (bbl)
20.00	GWCM 10%G 10%W 80%M	0.28
70.00	GOM 20%G 30%O 50%M	0.99
1080.00	GO 15%G 85%O	15.31
0.00	1525 GIP 100%G	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Company Inc
400 Main Street
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

Bretz Community Unit #1-4
4-9s-28w Sheridan KS
Job Ticket: 68223 **DST#: 2**
Test Start: 2022.04.17 @ 17:23:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 82000 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.98 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	GWCM 10%G 10%W 80%M	0.284
70.00	GOM 20%G 30%O 50%M	0.992
1080.00	GO 15%G 85%O	15.309
0.00	1525 GIP 100%G	0.000

Total Length: 1170.00 ft Total Volume: 16.585 bbl

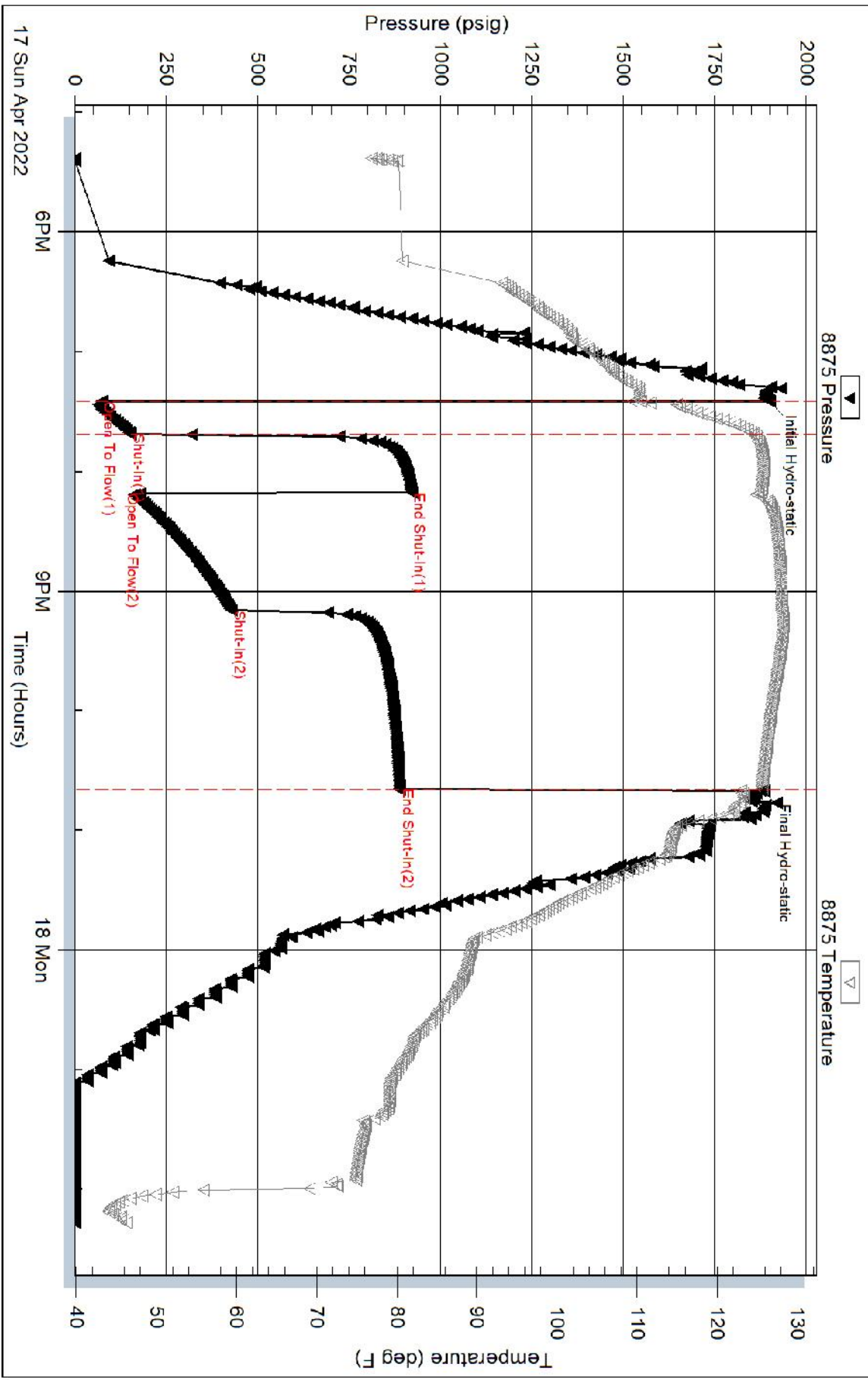
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: 2#LCM

Sampler= 500ml W 300ml M 1700ml O 500ml G
RW=.171 @40F

Pressure vs. Time



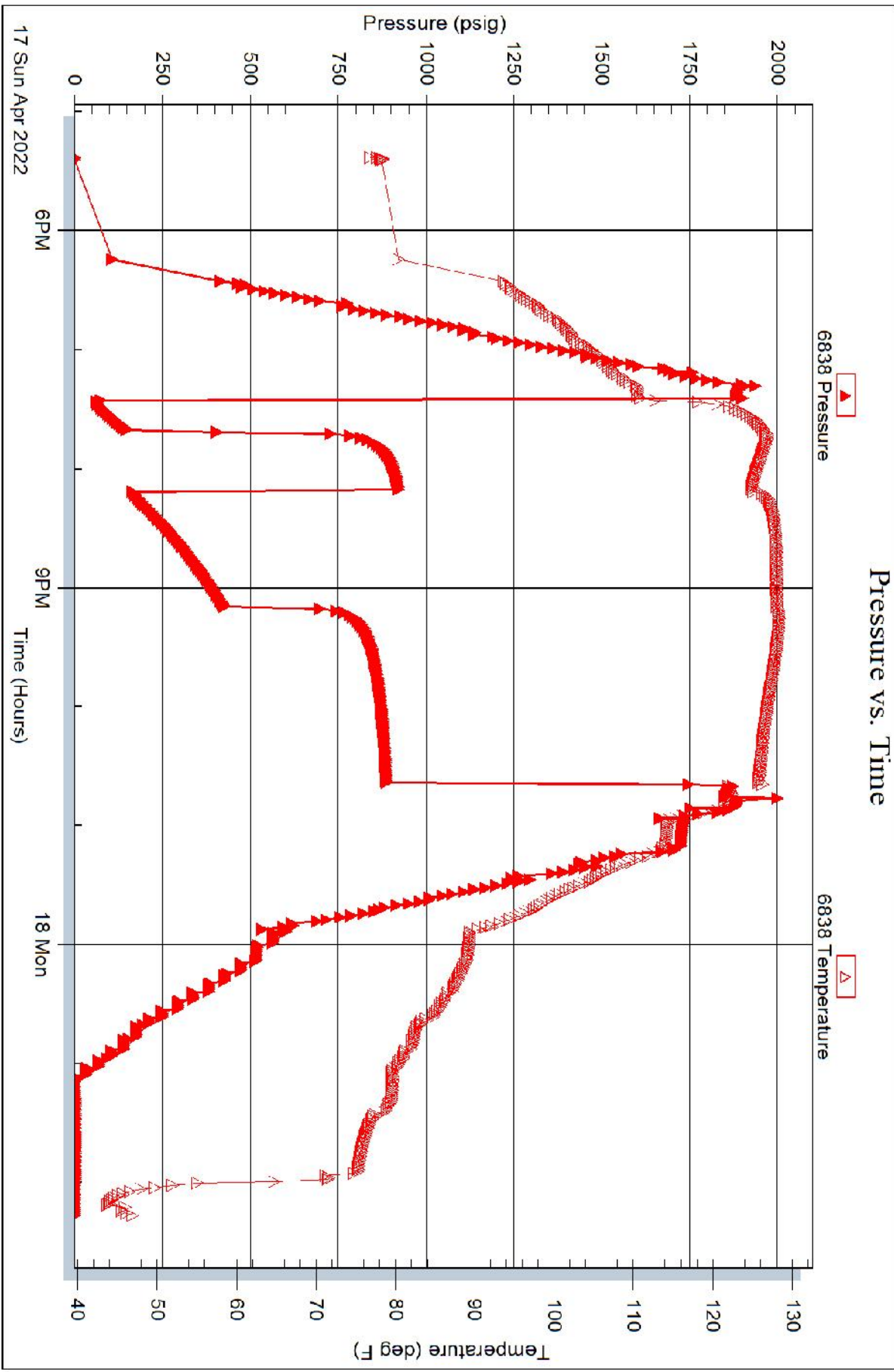
Serial #: 6838

Inside

Pioneer Oil Company Inc

4-9s-28w Sheridan KS

DST Test Number: 2





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Pioneer Oil Company Inc
 400 Main Street
 PO BOX 237
 Vincennes IN 47501+0237
 ATTN: Jim Musgrove

Bretz Community Unit #1-4

4-9s-28w Sheridan KS

Job Ticket: 68224 **DST#: 3**

Test Start: 2022.04.18 @ 17:30:00

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: **No Whipstock:** ft (KB)
 Test Type: **Conventional Bottom Hole (Reset)**
 Time Tool Opened: 19:44:02
 Tester: **Spencer J Staab**
 Time Test Ended: 23:52:32
 Unit No: **84**
 Interval: **3845.00 ft (KB) To 3900.00 ft (KB) (TVD)**
 Reference Elevations: **2678.00 ft (KB)**
 Total Depth: **3900.00 ft (KB) (TVD)**
2670.00 ft (CF)
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 KB to GR/CF: **8.00 ft**

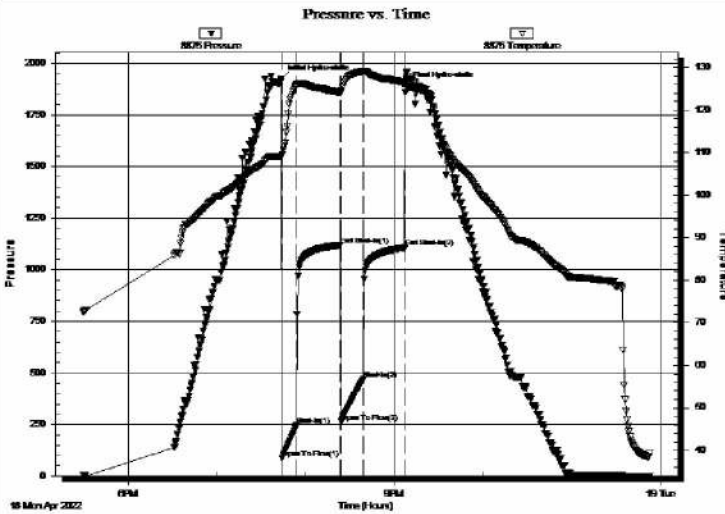
Serial #: 8875

Inside

Press@RunDepth: 468.65 psig @ 3849.00 ft (KB) Capacity: psig
 Start Date: 2022.04.18 End Date: 2022.04.18 Last Calib.: 2022.04.18
 Start Time: 17:30:01 End Time: 23:52:32 Time On Btm: 2022.04.18 @ 19:43:37
 Time Off Btm: 2022.04.18 @ 21:08:07

TEST COMMENT: 10-IF-BOB 2.5 mins Built to 41"
 30-ISI-No Return
 15-FF-BOB 2.5 mins Built to 46"
 30-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1921.88	109.20	Initial Hydro-static
1	87.69	109.30	Open To Flow (1)
11	246.97	125.89	Shut-In(1)
40	1117.63	124.11	End Shut-In(1)
41	262.77	124.13	Open To Flow (2)
56	468.65	129.04	Shut-In(2)
84	1106.16	126.45	End Shut-In(2)
85	1889.64	127.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
950.00	MW 10% M 90% W	13.47
0.00	Sampler 3000mL W @450PSI	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Company Inc

Bretz Community Unit #1-4

400 Main Street
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

4-9s-28w Sheridan KS

Job Ticket: 68224 **DST#: 3**

Test Start: 2022.04.18 @ 17:30:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 10.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 8.78 in³
Resistivity: ohm.m
Salinity: 2400.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 71000 ppm

Recovery Information

Recovery Table

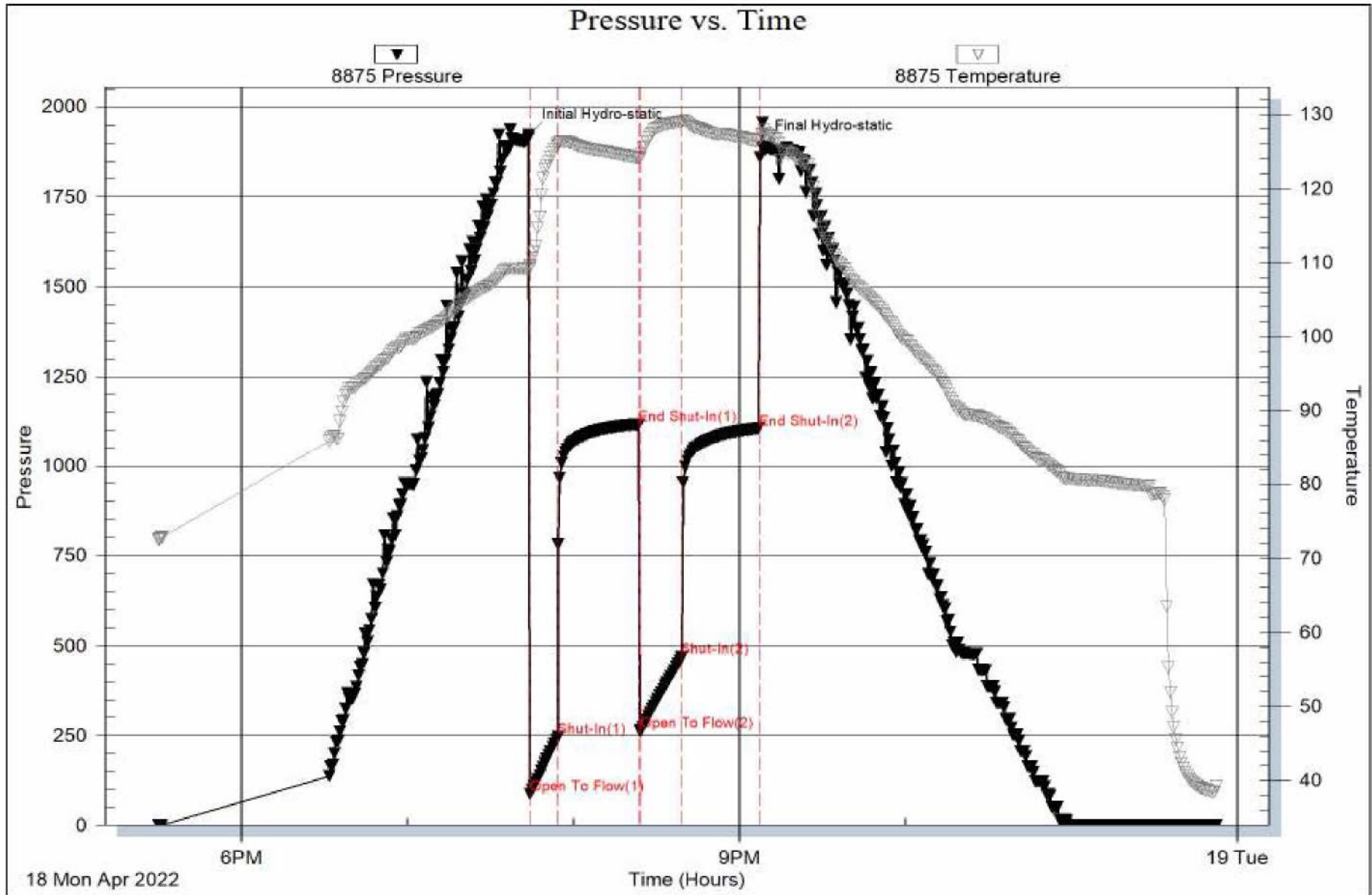
Length ft	Description	Volume bbl
950.00	MW 10%M 90%W	13.467
0.00	Sampler 3000mL W @450PSI	0.000

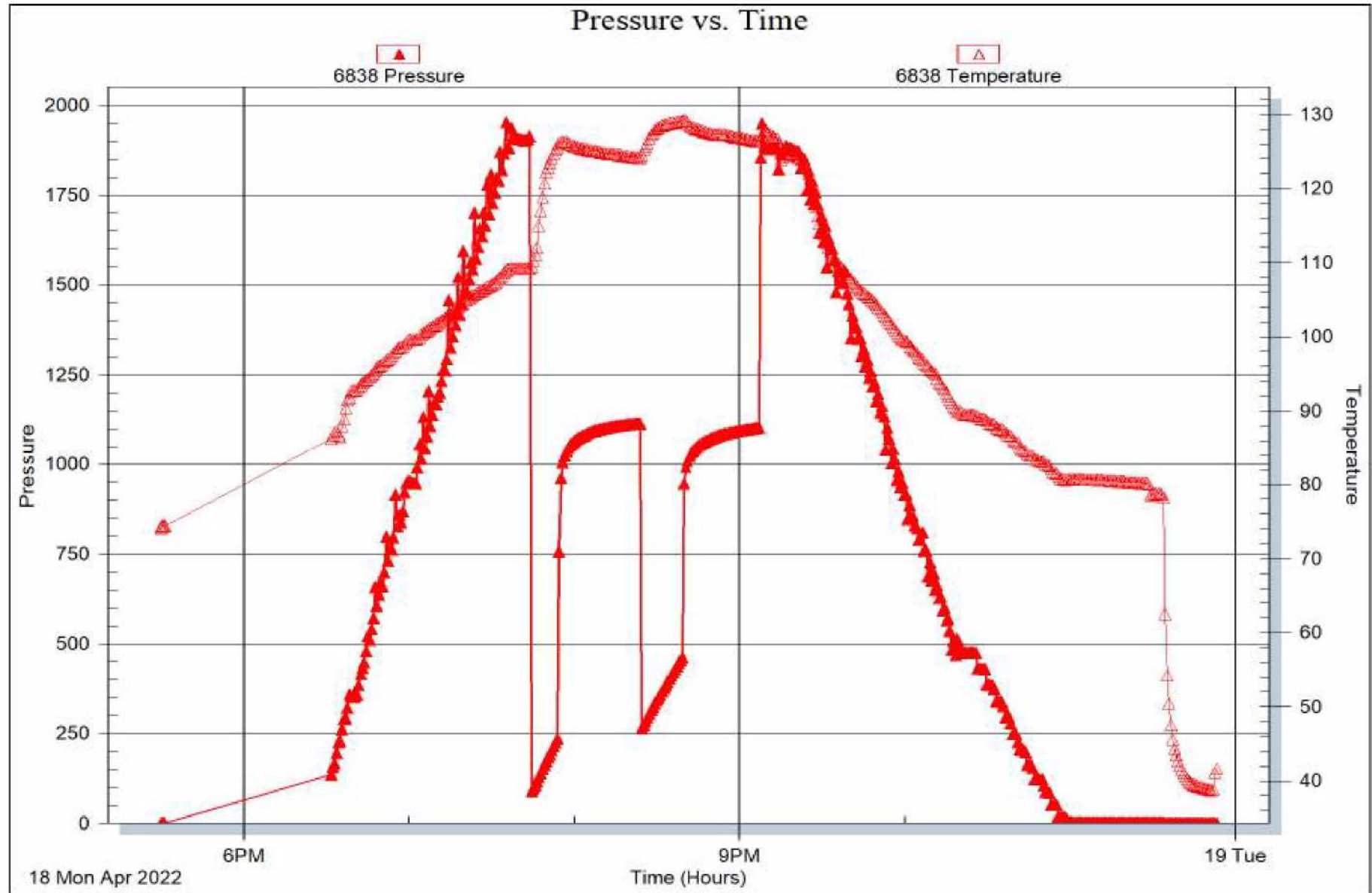
Total Length: 950.00 ft Total Volume: 13.467 bbl

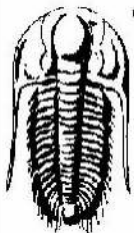
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: 2#LCM
RW=.196@39F







**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Company Inc
400 Main Street
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

Bretz Community Unit #1-4
4-9s-28w Sheridan KS
Job Ticket: 68225 **DST#: 4**
Test Start: 2022.04.19 @ 13:58:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

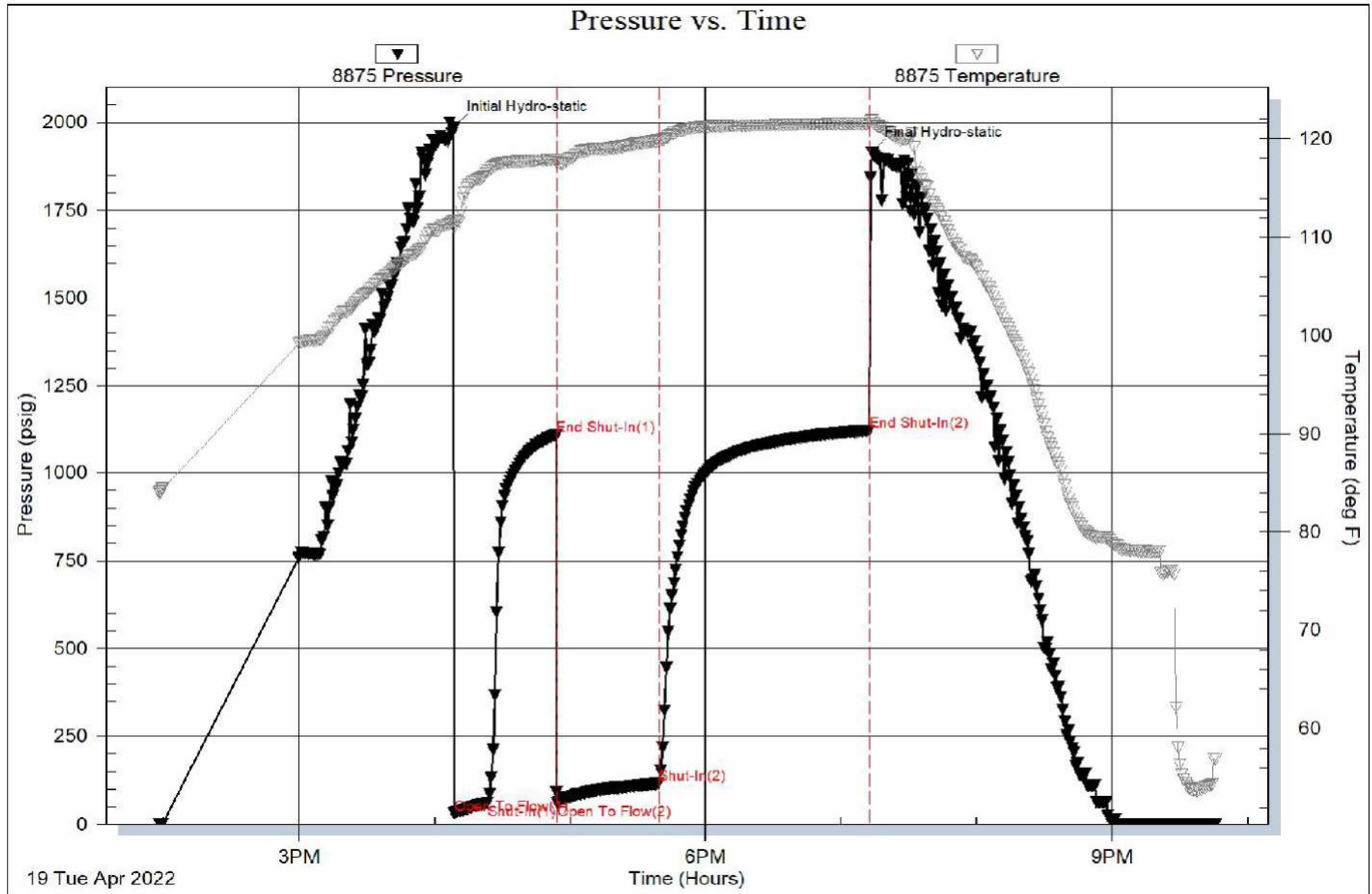
Length ft	Description	Volume bbl
200.00	GMO 20%G 30%M 50%O	2.835
40.00	GO 10%G 90%O	0.567
0.00	1080 GIP	0.000
0.00	Sampler 150ml G 2850ml O @ 500PSI	0.000

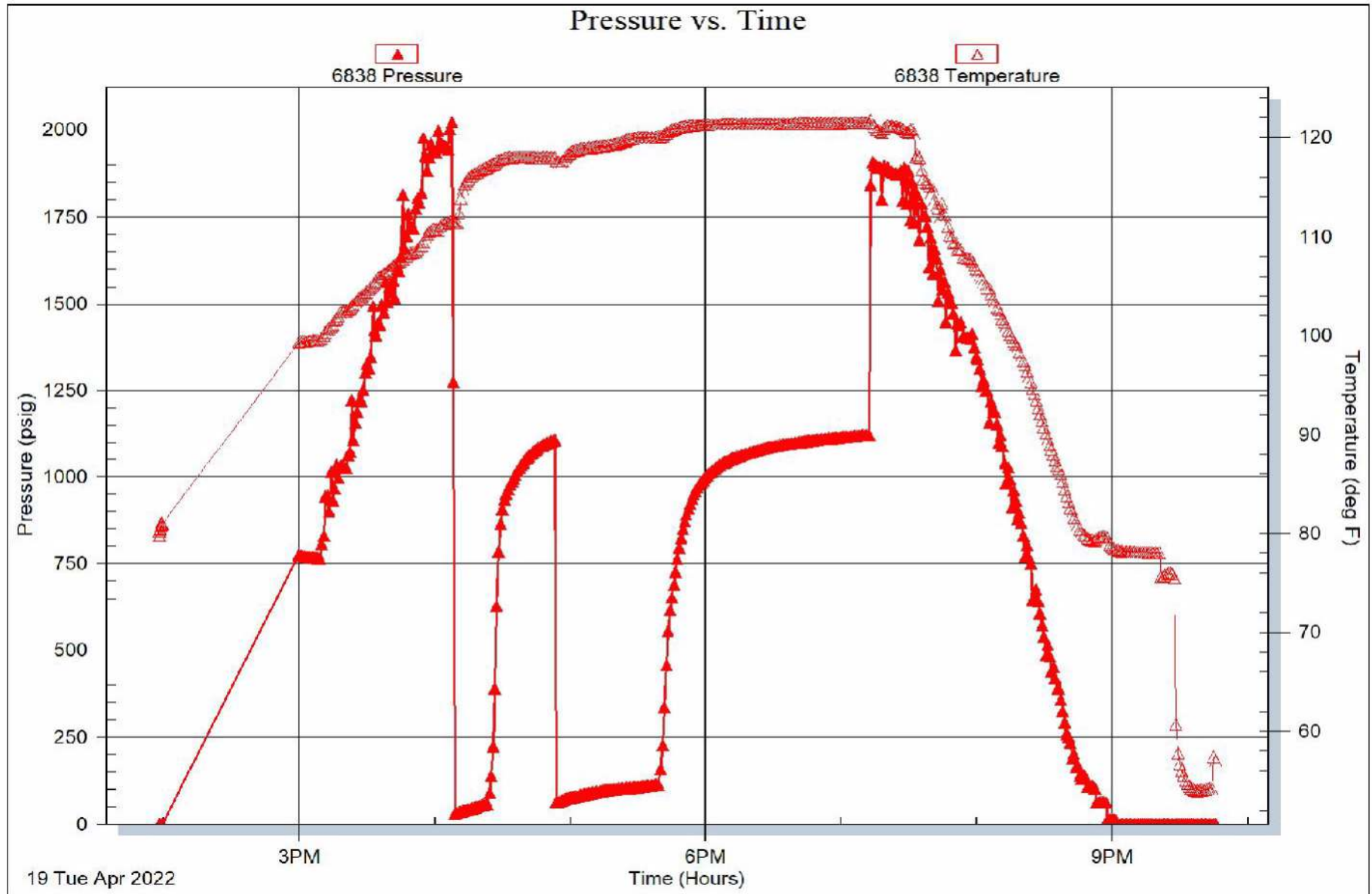
Total Length: 240.00 ft Total Volume: 3.402 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 2#LCM







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Pioneer Oil Company Inc
 400 Main Street
 PO BOX 237
 Vincennes IN 47501+0237
 ATTN: Jim Musgrove

Bretz Community Unit #1-4

4-9s-28w Sheridan KS

Job Ticket: 68226 **DST#: 5**

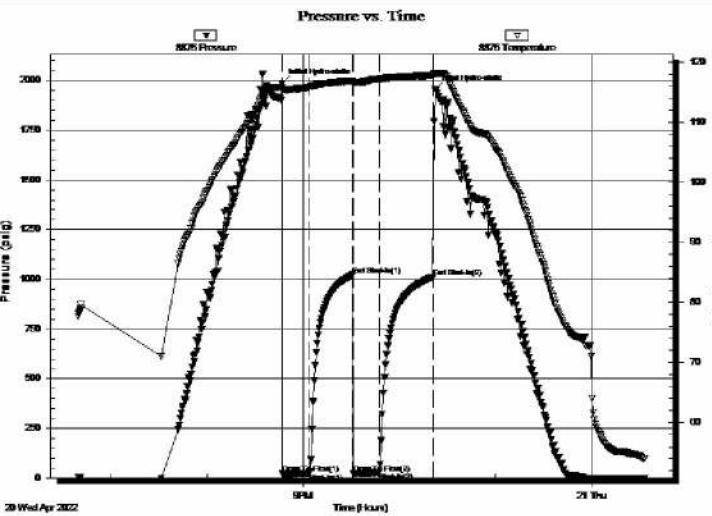
Test Start: 2022.04.20 @ 18:40:00

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 20:47:02
 Time Test Ended: 00:33:12
 Interval: **3814.00 ft (KB) To 3852.00 ft (KB) (TVD)**
 Total Depth: 4128.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Reset)
 Tester: Spencer J Staab
 Unit No: 84
 Reference Elevations: 2678.00 ft (KB)
 2670.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8875 Outside
 Press@RunDepth: 27.30 psig @ 3815.00 ft (KB) Capacity: psig
 Start Date: 2022.04.20 End Date: 2022.04.21 Last Calib.: 2022.04.21
 Start Time: 18:40:01 End Time: 00:33:12 Time On Btm: 2022.04.20 @ 20:46:52
 Time Off Btm: 2022.04.20 @ 22:22:07

TEST COMMENT: 15-IF-Surface to 1/2" Died @ 15 mins
 30-IS-No Return
 15-FF-No Blow Flushed No Help
 30-FS-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1988.37	115.86	Initial Hydro-static
1	22.23	115.28	Open To Flow (1)
17	24.53	115.88	Shut-In(1)
44	1021.88	116.88	End Shut-In(1)
45	24.52	116.58	Open To Flow (2)
61	27.30	117.21	Shut-In(2)
94	1011.87	117.85	End Shut-In(2)
96	1956.32	118.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
14.00	MO 50%M 50%O	0.20
1.00	Clean Oil 100%O	0.01
0.00	Sampler 1500mL M 1500mL O @ 900Psi	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Pioneer Oil Company Inc

Bretz Community Unit #1-4

400 Main Street
PO BOX 237
Vincennes IN 47501+0237
ATTN: Jim Musgrove

4-9s-28w Sheridan KS

Job Ticket: 68226 **DST#: 5**

Test Start: 2022.04.20 @ 18:40:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
14.00	MO 50%M 50%O	0.198
1.00	Clean Oil 100%O	0.014
0.00	Sampler 1500mL M 1500mL O @ 900PSI	0.000

Total Length: 15.00 ft Total Volume: 0.212 bbl

Num Fluid Samples: 0

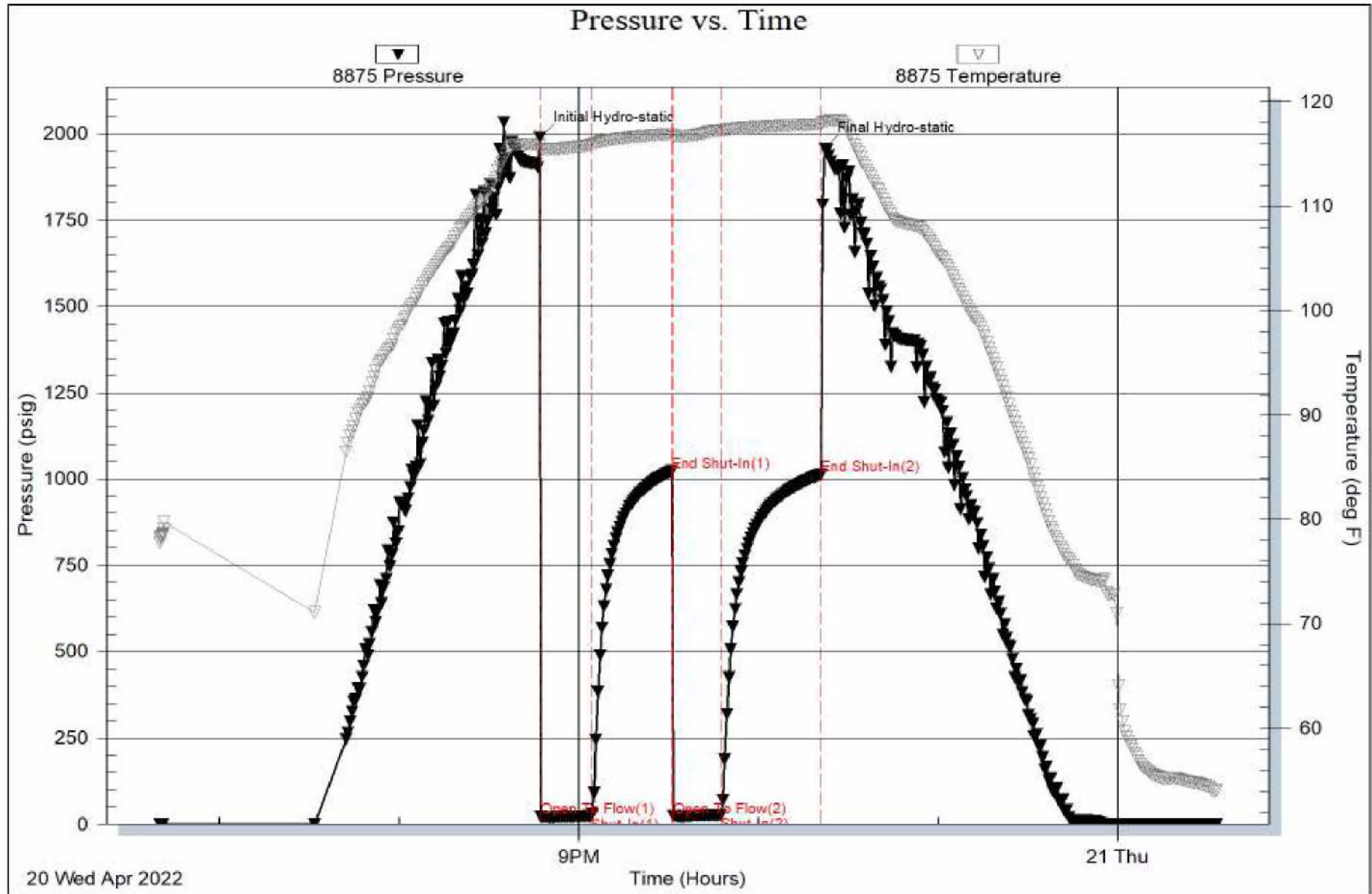
Num Gas Bombs: 0

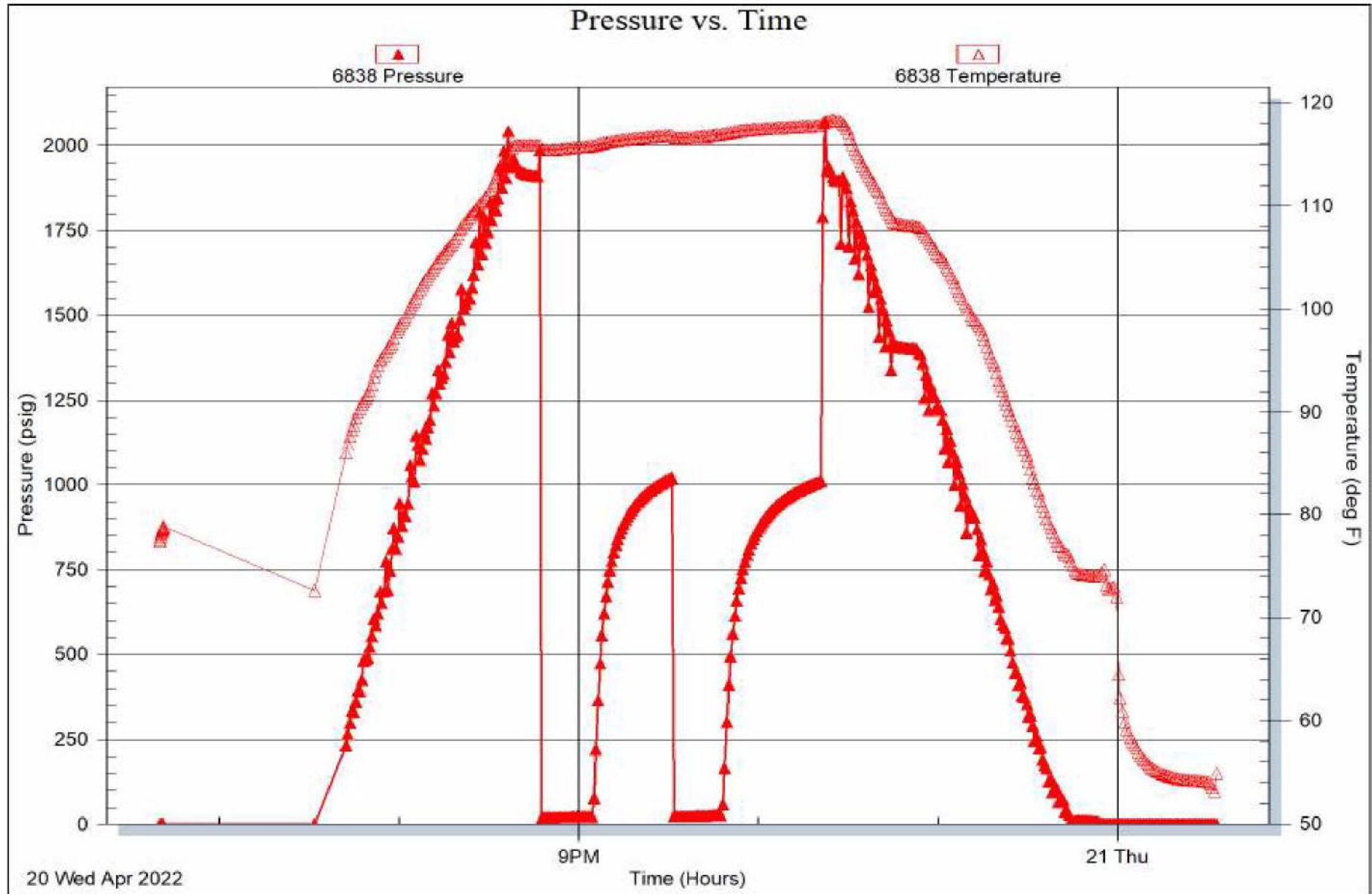
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 1#LCM





Freda West
1517921481



HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:
PIONEER OIL COMPANY
PO BOX 237
VINCENNES, IN 47591-0237

Invoice Date: 4/12/2022
Invoice #: 0360114
Lease Name: Bretz Community Unit
Well #: 1-4 (New)
County: Sheridan, Ks
Job Number: WP2668
District: Oakley

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
H-325	200.000	20.700	4,140.00
Heavy Eq Mileage	40.000	4.000	160.00
Light Eq Mileage	40.000	2.000	80.00
Ton Mileage	366.300	1.500	549.45
Depth Charge 0'-500'	1.000	920.000	920.00
Cement Blending & Mixing	200.000	1.288	257.60
Service Supervisor	1.000	253.000	253.00

Total 6,360.05

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 1/2% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!

Freda West
P# 1517921481



HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:
PIONEER OIL COMPANY
PO BOX 237
VINCENNES, IN 47591-0237

Invoice Date: 4/21/2022
Invoice #: 0360172
Lease Name: Bretz Community Unit
Well #: 1-4 (New)
County: Sheridan, Ks
Job Number: WP2710
District: Oakley

Date/Description	HRS/QTY	Rate	Total
Longstring	0.000	0.000	0.00
H-CON	425.000	25.000	10,625.00
H-LD Cement Blend	125.000	50.000	6,250.00
Cement baskets 5 1/2"	4.000	300.000	1,200.00
5 1/2" Turbolizers	10.000	125.000	1,250.00
5 1/2" Floatshoe-Flapper AFU	1.000	375.000	375.00
5 1/2" LD Plug & Baffle	1.000	350.000	350.00
Mud flush	500.000	1.250	625.00
KCL-CS701	10.000	30.000	300.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	1,111.000	1.500	1,666.50
Depth Charge 4001'-5000'	1.000	2,500.000	2,500.00
Cement Data Acquisition	1.000	275.000	275.00
Cement plug container	1.000	275.000	275.00
Cement Blending & Mixing	600.000	1.400	840.00
Service Supervisor	1.000	275.000	275.00

Total 27,206.50

TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 1/2% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!



Customer	Pioneer Oil Co	Lease & Well #	Bretz Community # 1-4		Date	4/21/2022
Service District	Oakley KS	County & State	Sheridan KS	Legals S/T/R	4-9S-28W	Job #
Job Type	Longstring	<input checked="" type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> SWD	New Well?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> No	Ticket #	
Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures				
78	Jesse	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging	
230	Michael	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection	
194-253	Jose	<input checked="" type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input checked="" type="checkbox"/> Slip/Trip/Fall Hazards	<input checked="" type="checkbox"/> Specific Job Sequence/Expectations	
527-250	Kale	<input checked="" type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input checked="" type="checkbox"/> Overhead Hazards	<input checked="" type="checkbox"/> Muster Point/Medical Locations	
		<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below		
Comments						

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
CP025	H-Con	sack	425.00	\$10,625.00
CP014	H-LD Cement Blend	sack	125.00	\$6,250.00
FE130	5 1/2' Cement Basket	ea	4.00	\$1,200.00
FE135	5 1/2 Turbolizer	ea	10.00	\$1,250.00
FE145	5 1/2" Float Shoe - AFU Flapper Type	ea	1.00	\$375.00
FE170	5 1/2" Latch Down Plug & Baffle	ea	1.00	\$350.00
CP170	Mud Flush	gal	500.00	\$625.00
AF055	Liquid KCL Substitute	gal	10.00	\$300.00
M015	Light Equipment Mileage	mi	40.00	\$80.00
M010	Heavy Equipment Mileage	mi	80.00	\$320.00
M020	Ton Mileage	tm	1,111.00	\$1,666.50
D015	Depth Charge: 4001'-5000'	job	1.00	\$2,500.00
C035	Cement Data Acquisition	job	1.00	\$275.00
C050	Cement Plug Container	job	1.00	\$275.00
C060	Cement Blending & Mixing Service	sack	600.00	\$840.00
R061	Service Supervisor	day	1.00	\$275.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?		Net:	\$27,206.50
Based on this job, how likely is it you would recommend HSI to a colleague?		Total Taxable	\$ -
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Tax Rate:	
1 2 3 4 5 6 7 8 9 10 Unlikely Extremly Likely		State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.	Sale Tax:
		Total:	\$ 27,206.50
		HSI Representative: <i>Jesse Jones</i>	

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

X _____ **CUSTOMER AUTHORIZATION SIGNATURE**



CEMENT TREATMENT REPORT

Customer: Pioneer Oil Co	Well: Bretz Community # 1-4	Ticket: WP-2710
City, State: Oakley KS	County: Sheridan KS	Date: 4/21/2022
Field Rep: Rick Popp	S-T-R: 4-9S-28W	Service: Longstring

Downhole Information	
Hole Size:	7 7/8 in
Hole Depth:	4130 ft
Casing Size:	5 1/2 in
Casing Depth:	4117 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	99.4 bbls

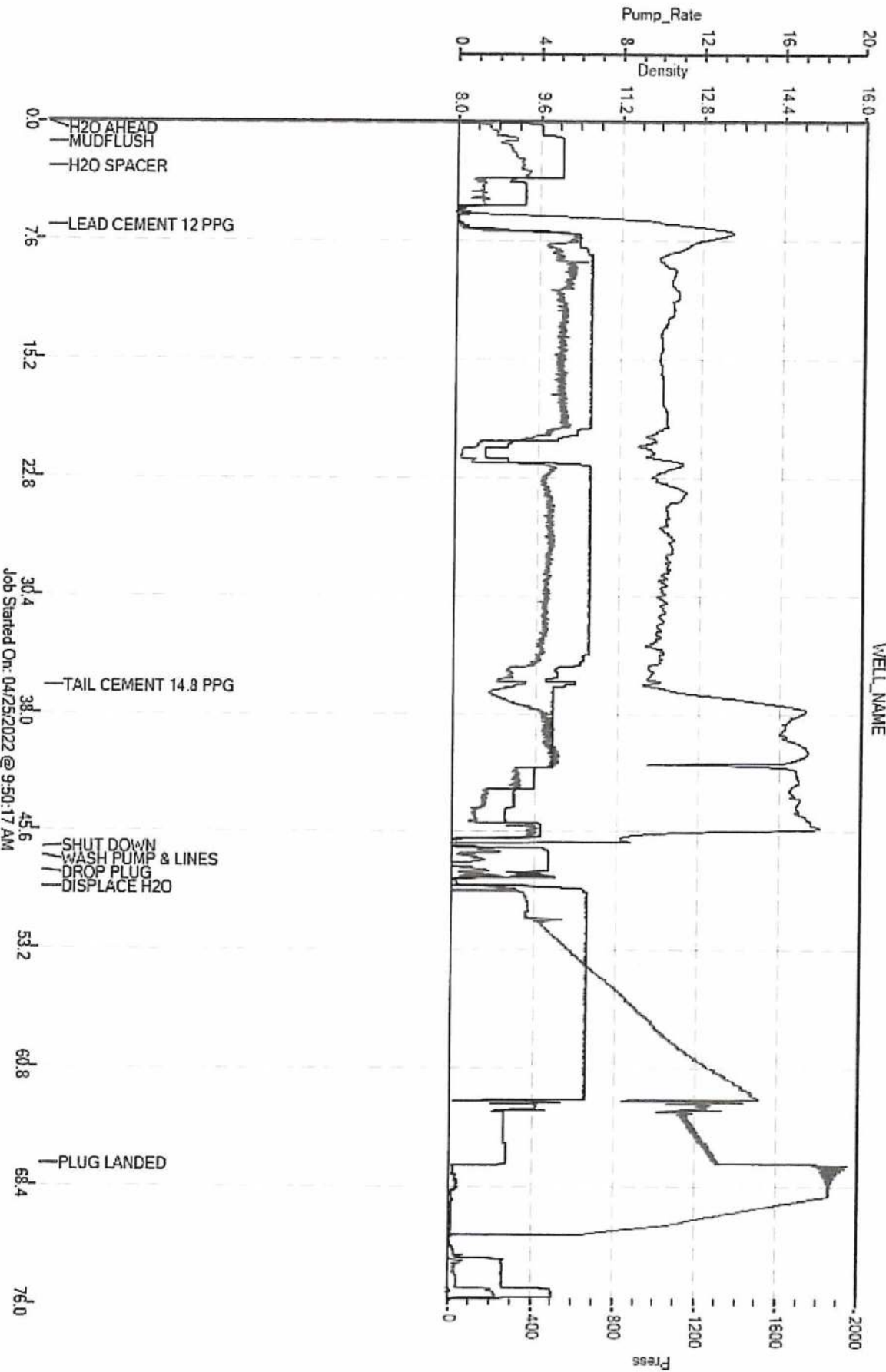
Calculated Slurry - Lead	
Blend:	H-Con
Weight:	12.0 ppg
Water / Sx:	14.5 gal / sx
Yield:	2.47 ft ³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	4117 ft
Annular Volume:	127.2 bbls
Excess:	
Total Slurry:	186.9 bbls
Total Sacks:	425 sx

Calculated Slurry - Tail	
Blend:	H-LD
Weight:	14.8 ppg
Water / Sx:	6.3 gal / sx
Yield:	1.34 ft ³ / sx
Annular Bbls / Ft.:	0.0309 bbs / ft.
Depth:	4117 ft
Annular Volume:	127.2153 bbls
Excess:	
Total Slurry:	29.8 bbls
Total Sacks:	125 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
8:45a			-	-	Arrival
9:37a					Run float equipment
10:45a					Safety meeting
10:50a					Dropped ball
10:55a		500.0			Circulate hole for half hour @ joint # 80
11:56a		400.0			Circulate hole for one hour
1:04p	5.1	280.0	5.0	5.0	H2O ahead
1:06p	5.1	210.0	12.0	17.0	Mixed 500 gallons of mud flush
1:09p	5.1	320.0	5.0	22.0	H2O behide
1:11p	6.6	500.0	186.9	208.9	Mix 375 sks of H-Con @ 12 ppg @ 4117'
1:15p	6.0	430.0	13.1	222.0	Mixed 30 sks of H-Con @ 12 ppg @ Rat hole
1:20p	6.0	430.0	8.8		Mixed 20 sks of H-Con @ 12 ppg @ Mouse hole
1:41p	5.0	520.0	29.8		Mixed 125 sks of H-LD @ 14.8 @ 4117'
1:50p					Wash up pump and lines
1:51p					Drop plug
1:54p	6.6	520.0	99.4		Displace H2O
2:15p	2.7	1,900.0	99.0		Land plug
2:20p					Wash up pump and lines
2:28p					Rig down
3:00p					Depart location
					Circulated 30 sks to pit

CREW		UNIT	SUMMARY		
Cementer:	Jesse	78	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Michael	230	5.4 bpm	546 psi	459 bbls
Bulk #1:	Jose	194-253			
Bulk #2:	Kale	527-250			

Pioneer
WELL_NAME



Freda West

JAMES C. MUSGROVE

Petroleum Geologist, LLC

212 Main Street

P.O. Box 215

Clafin, KS 67525

Office (620) 588-4250

Cell (620) 786-0839

Pioneer Oil Company, Inc.
Bretz Community Unit #1-4
NE-NE-NW-NE (265' FNL & 1496' FEL)
Section 4-9s-28w
Sheridan County, Kansas

Page 1

5 1/2" Production Casing

Contractor: Duke Drilling (rig #2)
Commenced: April 13, 2022
Completed: April 21, 2022
Elevation: 2678' K.B., 2676' D.F., 2670' G.L.
Casing program: Surface; 8 5/8" @ 225'
Production, 5 1/2: @ 4119'
Sample: Samples saved and examined 3300' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3300' to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were five (5) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Midwest Wireline LLC; Dual Induction, Compensated Neutron/Density, and Micro and Sonic.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	2305	+373
Base Anhydrite	2340	+338
Elmont	3462	-784
Howard	3498	-820
Topeka	3548	-870
Plattsmouth	3780	-1102
Toronto	3784	-1106
Lansing	3795	-1117
Muncie Creek	3916	-1238
Base Kansas City	4030	-1352
Rotary Total Depth	4125	-1447
Log Total Depth	2128	-1450

(All tops and zones corrected to Electric Log Measurements)

SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

WABUNSEE SECTION

3420-3434' Limestone; gray and dark gray, fossiliferous, chalky, scattered porosity, black and dark brown stain, trace of free oil and odor.

ELMONT SECTION

- 3462-3470' Limestone, white, tan, fine and medium crystalline, fossiliferous, chalky, black tarry gilsonitic stain, no free oil and no odor.
- 3481-3489' Limestone, white, and cream, finely fossiliferous, poor porosity; black tarry (dead) stain, no free oil and no odor.

HOWARD SECTION

- 3498-3510' Limestone, white and cream, finely crystalline, fossiliferous, dense, black dead stain, no free oil and no odor.
- 3517-3530' Limestone; tan, white, finely crystalline, slightly chalky; few sucrosic, dense.
- 3531-3541' Limestone, gray, white, granular, very fine "fossil hash: (bioclastic) chalky, gray and black stain and saturation, (dead appearing) trace free oil and no odor.

TOPEKA SECTION

- 3548-3560' Limestone, white, gray, slightly fossiliferous, dense, trace black and brown stain, no free oil and no odor.
- 3573-3589' Limestone, tan, gray, fine crystalline, granular, chalky, trace gray and black stain, no free oil and no odor with chert, white, boney.
- 3603-3619' Limestone, white, cream, highly fossiliferous and oolitic, fair porosity, black tarry stain, gilsonitic, show of free oil (tarry dead) and no odor, with iron pyrite inclusions.
- 3626-3636' Limestone, white, tan, fossiliferous, with white, chalky, boney.
- 3686-3696' Limestone, white, gray, oolitic, fossiliferous, chalky in part, fair porosity, black tarry (dead) stain with abundant fine iron pyrite crystals.
- 3763-3710' Limestone, white, gray, fine and medium crystalline, oolitic, chalky, brown and black stain, trace of free oil and no odor.

PLATTSMOUTH SECTION

- 3720-3730' Limestone, white, fine crystalline, chalky, scattered pinpoint type porosity, black tarry stain, (asphaltic) stain, show of free oil (80-90% dead) and no odor.
- 3737-3750' Limestone, white, tan, fossiliferous, chalky, trace brown to black stain, no free oil and questionable odor.

TORONTO SECTION

3784-3790' Limestone, tan, white, finely crystalline, fossiliferous, fair porosity, good light brown and golden brown stain; show of free oil and faint odor.

Drill Stem Test #1 **3751-3788**

Times: 15-30-30-45

Blow: Weak (1/2 inch)
2nd Opening; Surface, flushed no help

Recovery: 5' oil specked mud

Pressures: ISIP 914 psi
FSIP 1029 psi
IFP 17-20 psi
FFP 20-21 psi
HSH 1908-1922 psi

LANSING SECTION

3795-3800 Limestone, white, gray, oolitic; fair vuggy porosity, brown and dark brown stain and saturation, show of free oil and questionable odor.

Drill Stem Test #2 **3786-3802**

Times: 15-30-45-90

Blow: Strong (B.o.b. 2 mins)
2nd Opening; Strong (B.o.b. 3 mins)

Recovery: 1525' gas in pipe
1080' gassy oil
70' heavily oil and gas cut mud
(20% gas; 30% oil; 50% mud)
20' thin watery gas cut mud
(10% gas; 10% water; 80% mud)

Pressures: ISIP 920 psi
FSIP 888 psi
IFP 73-154 psi
FFP 180-429 psi
HSH 1900-1885 psi

3826-3834' Limestone; tan, gray; oolitic/fossiliferous, poor visible porosity, trace dark brown stain, show of free oil and no odor.

3838-3846' Limestone, white, cream, dolomitic, poor visible porosity, abundant fine pyrite inclusions, no visible shows.

3850-3860' Limestone, white, cream, slightly, chalky, (dense)

3862-3870' Limestone, white, gray, chalky, dense, with chert, white, boney.

3870-3880' Limestone, white, oolitic, fossiliferous, fair fossil cast and vuggy porosity, fair brown stain and saturation, show of free oil and fair odor in fresh samples.

3884-3890' Dolomite, white, clear, fine and medium crystalline, fair to good intercrystalline porosity, spotty brown stain; show of free oil and fair odor.

Drill Stem Test #3 **3845-3900**

Times: 10-30-15-30

Blow: Strong (B.o.b. 2 1/2 mins)
2nd Opening; Strong (B.o.b. 2 1/2 mins)

Recovery: 950' muddy water

Pressures: ISIP 1117 psi
FSIP 1106 psi
IFP 87-246 psi
FFP 202-468 psi
HSH 1921-1889 psi

3890-3910' Limestone, white, gray, finely crystalline, few fossiliferous, chalky, dense

3928-3934' Limestone; white, cream, oolitic, chalky, poor visible porosity, brown and golden brown stain, trace of free oil and no odor.

3956-3966' Limestone, white, cream, slightly fossiliferous, chalky, poorly developed porosity, brown to black stain (some tarry) no free oil and no odor in fresh samples.

3968-3972' Limestone, white, tan, fossiliferous, poor visible porosity, dark brown to gray and black spotted stain, trace of free oil and no odor.

3994-4000' Limestone, white; gray, finely crystalline, scattered pinpoint to vuggy porosity, dark brown to gray and black spotted stain, trace of free oil and no odor.

Drill Stem Test #4 **3904-4000**

Times: 15-30-45-90

Blow: Good (B.o.b. 8 mins)
2nd Opening; Good (B.o.b. 8 mins)

Recovery: 1080' gas in pipe
40' gassy oil
200' muddy gassy oil
(20% gas; 50% oil; 30% mud)

Pressures: ISIP 1109 psi
FSIP 1123 psi
IFP 30-61 psi
FFP 60-115 psi
HSH 1985-1914 psi

Pioneer Oil Company, Inc.
Bretz Community Unit #1-4
NE-NE-NW-NE (265' FNL & 1496' FEL)
Section 4-9s-28w
Sheridan County, Kansas

Page 5

4018-4030' Limestone, white, gray, finely crystalline, slightly fossiliferous, poor spotty brown stain, no free oil and no odor.

Base Kansas City 4130 (-1432)

Remarks; After Electric Log Analysis, it was decided by all parties involved to run Drill Stem Test #5 (Straddle)

Drill Stem Test #5 3814-3852
(Straddle)

Times: 15-30-15-30

Blow: Weak (1/2 inch)
2nd Opening; No blow, flushed, no help

Recovery: 1' clean oil
14' muddy oil
(50% mud; 50% oil)

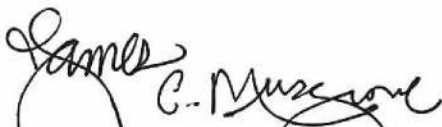
Pressures: ISIP 1022 psi
FSIP 1012 psi
IFP 22-25 psi
FFP 25-27 psi
HSH 1989-1956 psi

Rotary Total Depth 4125
Log Total Depth 4128

Recommendations:

5 1/2" production casing was set and cemented on the Pioneer Oil Company, Inc., Bretz Community Unit #1-4

Respectfully submitted,


James C. Musgrave
Petroleum Geologists



Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Dwight D. Keen, Chair
Susan K. Duffy, Commissioner
Andrew J. French, Commissioner

Laura Kelly, Governor

August 18, 2022

Brandi Stennett
Pioneer Oil Company, Inc.
400 MAIN STREET
PO BOX 237
VINCENNES, IN 47501-0237

Re: ACO-1
API 15-179-21481-00-00
BRETZ COMMUNITY UNIT 1-4
NE/4 Sec.04-09S-28W
Sheridan County, Kansas

Dear Brandi Stennett:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 04/12/2022 and the ACO-1 was received on August 12, 2022 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department