KOLAR Document ID: 1531416

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 # 34903
Name: Jaspar Co.
Address 1: PO BOX 1120
Address 2:
City: HAYS State: KS Zip: 67601 + 1120
Contact Person: Shane Vehige
Phone: (785) 623-6982
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Jeff Lawler
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 #:

9/16/2020 Spud Date or Recompletion Date
9/23/2020 Date Reached TD
9/23/2020 Completion Date or Recompletion Date

API No.: 15-163-24415-00-00
Spot Description:
NW - NE - SE - SW Sec. 20 Twp. 9 S. R. 19 ☐ East ☑ West
1280 Feet from ☐ North / ☑ South Line of Section
2210 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Rooks
Lease Name: COP UNIT Well #: 1
Field Name: unknown
Producing Formation: DRYHOLE
Elevation: Ground: 2132 Kelly Bushing: 2140
Total Vertical Depth: 3680 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 222 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: 41000 ppm Fluid volume: 500 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: JASPAR CO
Lease Name: Green D License #: 34903
Quarter SW Sec. 22 Twp. 8 S. R. 19 ☐ East ☑ West
County: ROOKS Permit #: D30943.0

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: 10/12/2020
☐ **Confidential Release Date:** 10/12/2022
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 10/12/2020

Operator Name: Jaspar Co. Lease Name: COP UNIT Well #: 1

Sec. 20 Twp. 9 S. R. 19 ☐ East ☑ West County: Rooks

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☐ Yes	☑ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:

MICRO
COMPENSATED DENSITY/NEUTRON
DUAL INDUCTION

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
ANHYDRITE	1544	596
TOPEKA	3092	-952
HEEBNER	3296	-1156
TORONTO	3318	-1178
LKC	3338	-1198
ARBUCKLE	3584	-1444

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	23	222	COMMON	160	8 3%CC 2% GEL

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Jaspar Co.
Well Name	COP UNIT 1
Doc ID	1531416

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	222	COMMON	160	8 3%CC 2% GEL

JASPAR COMPANY INC.

Scale 1:240 Imperial

Well Name:	COP UNIT #1		
Surface Location:	NW NE SE SW Section 20 - 9S - 19W		
Bottom Location:			
API:	15-163-24415		
License Number:	34903		
Spud Date:	9/16/2020	Time:	4:15 PM
Region:	ROOKS COUNTY		
Drilling Completed:	9/23/2020	Time:	9:34 AM
Surface Coordinates:	1280' FSL & 2210' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2132.00ft		
K.B. Elevation:	2140.00ft		
Logged Interval:	2950.00ft	To:	3680.00ft
Total Depth:	3680.00ft		
Formation:	LANSING-KANSAS CITY; ARBUCKLE		
Drilling Fluid Type:	FRESH WATER / CHEMICAL GEL		

OPERATOR

Company:	JASPAR CO.		
Address:	P.O. BOX 1120 HAYS, KS 67601		
Contact Geologist:	SHANE VEHIGE		
Contact Phone Nbr:	(785) 623-6982		
Well Name:	COP UNIT #1		
Location:	NW NE SE SW Section 20 - 9S - 19W		
API:	15-163-24415		
Pool:		Field:	UNKNOWN
State:	KANSAS	Country:	USA

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-99.4668
Latitude:	39.2522
N/S Co-ord:	1280' FSL
E/W Co-ord:	2210' FWL

LOGGED BY

BIG CREEK CONSULTING

Company:	BIG CREEK CONSULTING, INC.
Address:	3504 DUNCAN ST ST. JOE, MO 64507

ST. JOE, MO 64651

Phone Nbr: (785) 259-3737
Logged By: GEOLOGIST Name: JEFF LAWLER

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 4
Rig Type: MUD ROTARY
Spud Date: 9/16/2020 Time: 4:15 PM
TD Date: 9/23/2020 Time: 9:34 AM
Rig Release: 9/24/2020 Time: 8:00 AM

ELEVATIONS

K.B. Elevation: 2140.00ft Ground Elevation: 2132.00ft
K.B. to Ground: 8.00ft

NOTES

DUE TO LACK OF ECONOMICAL RECOVERY ON ALL DST'S IT WAS DECIDED TO PLUG & ABANDONED THE COP UNIT #1.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

	COP UNIT #1				JASPAR CO. LARRY #1 W2 SE SE 20-9-19						ELDORADO REFINING CASY B #1 NW NW SE 20-9-19						LAURA JANE & BROOKS HALL CASY #1 SW NE SW 20-9-19						SWD JASPAR CO. LARRY B #1 SE SW NE NW 29-9-19					
	KB	2140	GL	2132	KB	2146					KB	2134					KB	2122					KB	2155				
	LOG TOPS		SAMPLE TOPS		LOG		LOG CORR.		SMPL. CORR.		COMP. CARD		LOG CORR.		SMPL. CORR.		LOGS		LOG CORR.		SMPL. CORR.		COMP. CARD		LOG CORR.		SMPL. CORR.	
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM					DEPTH	DATUM					DEPTH	DATUM					DEPTH	DATUM				
ANHYDRITE TOP	1544	596	1540	600	1546	600	-	4	+	0													1560	595	+	1	+	5
BASE	1577	563	1580	560	1585	561	+	2	-	1													1591	564	-	1	-	4
TOPEKA	3092	-952	3091	-951	3094	-948	-	4	-	3													3109	-954	+	2	+	3
HEEBNER SHALE	3296	-1156	3298	-1158	3296	-1150	-	6	-	8	3307	-1173	+	17	+	15	3288	-1166	+	10	+	8	3311	-1156	+	0	-	2
TORONTO	3318	-1178	3320	-1180	3320	-1174	-	4	-	6	3329	-1195	+	17	+	15	3307	-1185	+	7	+	5	3333	-1178	+	0	-	2
LKC	3338	-1198	3341	-1201	3341	-1195	-	3	-	6	3350	-1216	+	18	+	15	3326	-1204	+	6	+	3	3353	-1198	+	0	-	3
BKC	3552	-1412	3552	-1412	3557	-1411	-	1	-	1													3571	-1416	+	4	+	4
CONGLOMERATE											3596	-1462																
ARBUCKLE	3584	-1444	3582	-1442	3582	-1436	-	8	-	6							3571	-1449	+	5	+	7	3606	-1451	+	7	+	9
TOTAL DEPTH	3682	-1542	3680	-1540	3599	-1453	-	89	-	87							3633	-1511	-	31	-	29	3706	-1551	+	9	+	11

DST #1 ARBUCKLE 3536' - 3605'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar

PO BOX 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks KS

COP Unit #1

Job Ticket: 66400 **DST#: 1**

Test Start: 2020.09.21 @ 12:51:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:11:52
Time Test Ended: 19:04:11

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

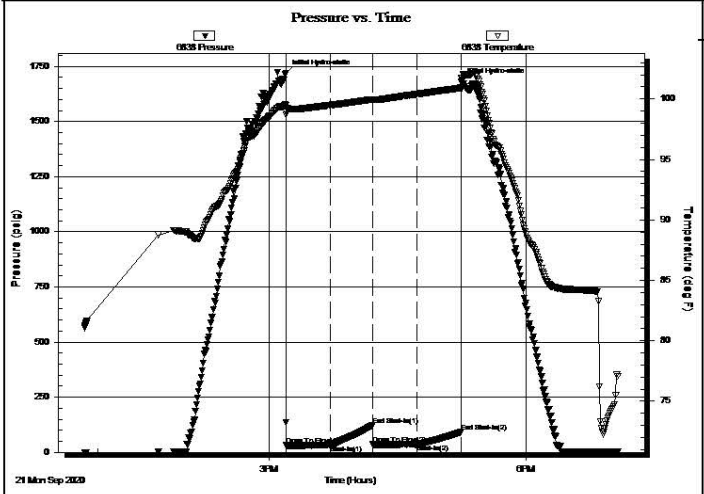
Interval: 3536.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 36.48 psig @ 3539.00 ft (KB)
Start Date: 2020.09.21 End Date: 2020.09.21
Start Time: 12:51:01 End Time: 19:04:12

Capacity: psig
Last Calib.: 2020.09.21
Time On Btm: 2020.09.21 @ 15:11:42
Time Off Btm: 2020.09.21 @ 17:14:27

TEST COMMENT: 30-IF-Weak; Built to 3/4"; Died to 1/2"
30-ISI-No Return
30-FF-No Blow
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1718.03	99.49	Initial Hydro-static
1	32.25	98.91	Open To Flow (1)
32	32.73	99.49	Shut-In(1)
61	122.78	99.96	End Shut-In(1)
61	36.92	99.96	Open To Flow (2)
92	36.48	100.41	Shut-In(2)
123	91.48	100.94	End Shut-In(2)
123	1678.72	101.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
29.00	VSOCM 2%O 98%M	0.14
1.00	CO 100%O	0.00

Gas Rates

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

Trilobite Testing, Inc Ref. No: 66400 Printed: 2020.09.21 @ 22:48:42

DST #2 LKC J - ARBUCKLE 3496' - 3605'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar

PO BOX 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks KS

COP Unit #1

Job Ticket: 67428 **DST#: 2**

Test Start: 2020.09.22 @ 19:14:00

GENERAL INFORMATION:

Formation: **LKC J - Arb**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:05:22
Time Test Ended: 00:55:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3496.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

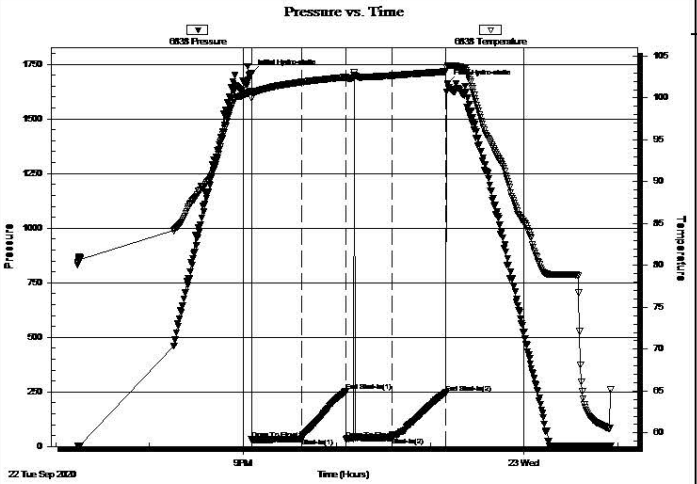
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 40.54 psig @ 3499.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.23
Start Time: 19:14:01 End Time: 00:55:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm: 2020.09.22 @ 21:05:17
Time Off Btm: 2020.09.22 @ 23:11:07

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

30-ISI-No Return
30-FF-No Blow ; Flushed; Surge died after 5 min
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.15	100.76	Initial Hydro-static
1	33.25	100.00	Open To Flow (1)
33	35.91	101.90	Shut-In(1)
61	251.49	102.44	End Shut-In(1)
61	34.51	102.43	Open To Flow (2)
90	40.54	102.67	Shut-In(2)
125	246.25	103.16	End Shut-In(2)
126	1662.02	103.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%M	0.10

* Recovery from multiple tests

Gas Rates

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

DST #3 ARBUCKLE 3606' - 3618'

DRILL STEM TEST REPORT

Jaspar

PO BOX 1120
Hays KS 67601+1120

ATTN: Jeff Law ler

20-9s-19w Rooks KS

COP Unit #1

Job Ticket: 67429 **DST#: 3**

Test Start: 2020.09.22 @ 07:44:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:33:47
Time Test Ended: 13:11:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3606.00 ft (KB) To 3618.00 ft (KB) (TVD)
Total Depth: 3618.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

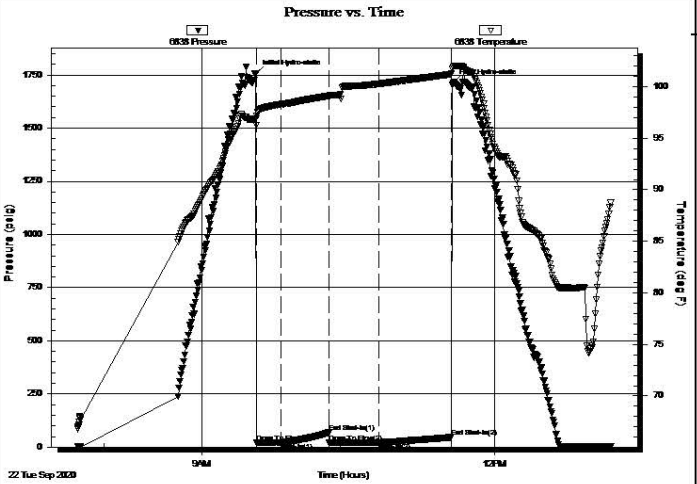
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 21.80 psig @ 3607.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.22
Start Time: 07:44:01 End Time: 13:11:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm: 2020.09.22 @ 09:33:37
Time Off Btm: 2020.09.22 @ 11:34:42

TEST COMMENT: 15-IF-Weak; Built to 1/2"
30-ISI-No Return

30-FF-No Blow ; Flushed; No Help
45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1757.85	96.90	Initial Hydro-static
1	22.31	96.25	Open To Flow (1)
16	20.75	98.28	Shut-In(1)
45	67.85	99.10	End Shut-In(1)
45	21.52	99.10	Open To Flow (2)
76	21.80	100.27	Shut-In(2)
120	46.48	101.24	End Shut-In(2)
122	1713.40	101.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc Ref. No: 67429 Printed: 2020.09.22 @ 14:01:04

DST #4 ARBUCKLE 3616' - 3628'

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar

PO BOX 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks KS

COP Unit #1

Job Ticket: 67430 **DST#: 4**

Test Start: 2020.09.23 @ 20:34:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:40:07
Time Test Ended: 02:20:32

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3616.00 ft (KB) To 3628.00 ft (KB) (TVD)
Total Depth: 3628.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

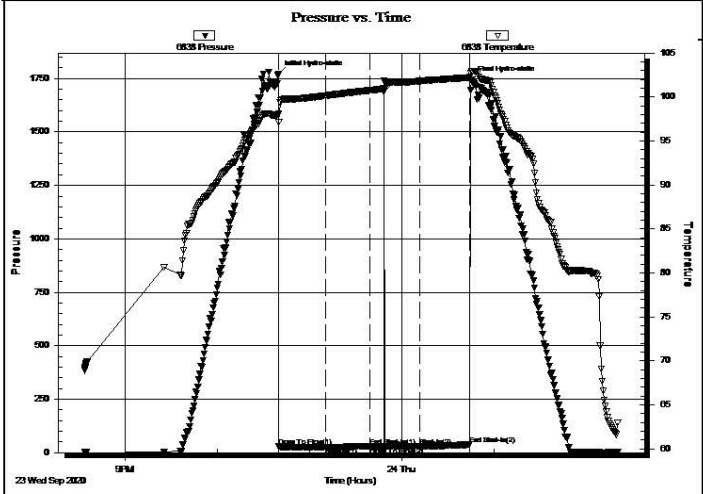
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 28.48 psig @ 3617.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 20:34:01 End Time: 02:20:32

Capacity: psig
Last Calib.: 2020.09.23
Time On Btm: 2020.09.23 @ 22:40:02
Time Off Btm: 2020.09.24 @ 00:45:22

TEST COMMENT: 30-IF-Weak Surface
30-ISI-No Return
30-FF-No Blow ; Flushed; No Help
30-FSI-No Return

30-FSFNS Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1769.15	98.03	Initial Hydro-static
1	28.48	97.12	Open To Flow (1)
31	24.12	100.15	Shut-In(1)
60	31.03	100.74	End Shut-In(1)
60	24.11	100.74	Open To Flow (2)
69	1687.98	101.80	Flushed Tool
92	28.48	101.79	Shut-In(2)
125	37.64	102.24	End Shut-In(2)
126	1743.50	102.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc Ref. No: 67430 Printed: 2020.09.23 @ 07:41:03

ROCK TYPES

Congl
CglSandy
Dolprim
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
Shblck
shale, red
Ss

ACCESSORIES

FOSSIL
Oolite

STRINGER
Chert

OTHER SYMBOLS

MISC
Daily Report
Digital Photo
Document
Folder
Link
Vertical Log File
Horizontal Log File
Core Log File
Drill Cuttings Rpt

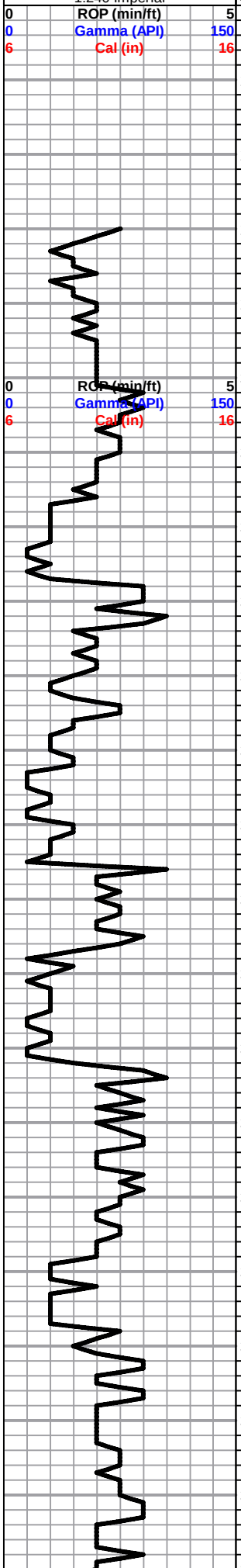
DST
DST Int
DST alt

Curve Track #1
ROP (min/ft)
Gamma (API)
Cal (in)

Depth | Intervals
DST
Lithology
Oil Show
Geological Descriptions
Curve Track #3

1:240 Imperial

Cored Inter
DST Interva



1:240 Imperial

1' DRILL TIME THROUGH ANHYDRITE FROM 1530' - 1590'
1' DRILL TIME FROM 2980' - RTD
10' WET/DRY SAMPLES FROM 3030' - RTD

GEOLOGICAL SUPERVISION BY JEFF LAWLER FROM 2980' - RTD

8 5/8" SURFACE PIPE SET @ 222' SURVEY 1/2 deg.

ANHYDRITE TOP 1540' (+600) E-LOG 1544' (+596)
ANHYDRITE BASE 1580' (+560) E-LOG 1577' (+563)

Lm- Cream Off White, FXLN, dense, well cemented, fsl w/ dense XLN porosity, barren

Sh- Gray Green, silty, some sandy, few pcs of dove gray Fn Grn loosley cemented sand clusters, barren

Lm- Buff Cream, FXLN, fsl, some sl clastic, several loose crinoids, poor to sctrd XLN porosity, barren

Sh- Gray Green, silty, soft, argillaceous, some sl sandy

A/A w/ influx of gummy & sandy

A/A w/ dove gray VFn Grn SS clusters, min. cementation, barren

Sh/Ss- Ss A/A, sl micaceous, Sh- Maroon Gray White, abundant gummy clumps

TOPEKA 3091' (-951) E-LOG 3092' (-952) Lm- Cream, FXLN, fsl, sctred XLN porosity, barren

Lm- Buff Gray, VF-FXLN, dense, well cemented, sl trashy w/ fsl fragments, sctrd XLN porosity

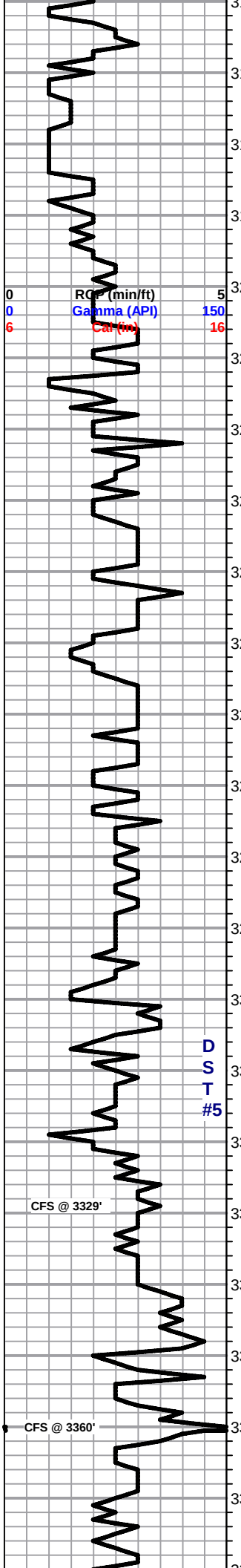
Lm- Buff Tan, VFXLN, vry well cemented, tight w/ poor-min. vis. porosity

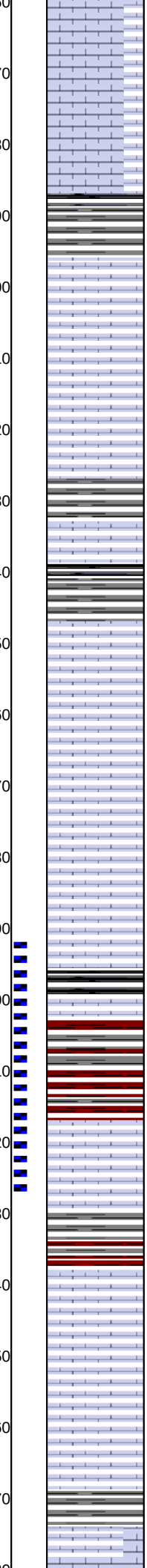
Sh- Black, sl fissile

Lm- Buff Cream, VF-FXLN, dense, well cemented, poorly dev/ w/ sctrd XLN porosity

Lm- Cream Gray, FXLN, sl trashy w/ fsl fragments, some loosely cemented & sl chalky in part, scttrd XLN porosity

Lm- Tan, VFXLN, dense well cemented sl dolomitic Ls w/o vis. porosity, barren





Lm- Tan, FXLN, dense, well cemented, sctrd clear replacement cementation & secondary porosity, sctrd XLN porosity, barren, sl dolomitic

Lm- Cream Tan, FXLN, sl fsl, well cemented, sctrd to dense XLN porosity,

Sh- Black, fissile, carbonaceous

Lm- Cream Off White, FXLN, massive, fsl, some loosely cemented, dense XLN porosity, barren

Lm- Off White, VFXLN, dense, well cemented, tight w/ min. vis. porosity, pristine clean & barren

Lm- Cream Off White, well cemented, poorl dev. fsl w/ dense XLN porosity, some clear replacement cementation

Sh- Black Gray, fissile & carbonaceous, silty & soft

Lm- Cream Tan, FXLN, fsl, well cemented, sctrd to dense XLN porosity, 2 PCS W/ SCTRD FN PPT POROSITY & SCTRD DRK STN, NSFO, TR ODR

Lm- Cream Off White, FXLN, fsl, sctrd dev. w/ sctrd XLN & fn ppt porosity, 1 PC SL OOLITLIC W/ SCTRD PPT INTEROOLITTE POROSITY, DRK STN, NSFO, TR ODR

Lm- Cream Off White, fsl, strd to dense XLN porosity, clean & barren

DST #5 TORONTO
3293' - 3327'
30-45-30-60

440' MW
(20%M, 80%W)
1' CLEAN OIL

IFP: 32-141#
FFP: 152-230#
SIP: 790-781#
BHT: 103 deg.

HEEBNER 3298' (-1158) E-LOG 3296' (-1156) Sh- Black Gray Maroon, fissile & carbonaceous, silty & soft, gritty

TORONTO 3320' (-1180) E-LOG 3318' (-1178) Lm- Cream Off White, fsl & sl oolitic, well dev. w/ mostly consistent fn ppt porosity througout, DRK STN, TR FO, WK ODR

3329'.jpg

DST #5.jpg

DST #5.1....

Sh- Maroon Gray, soft, gritty & earthy

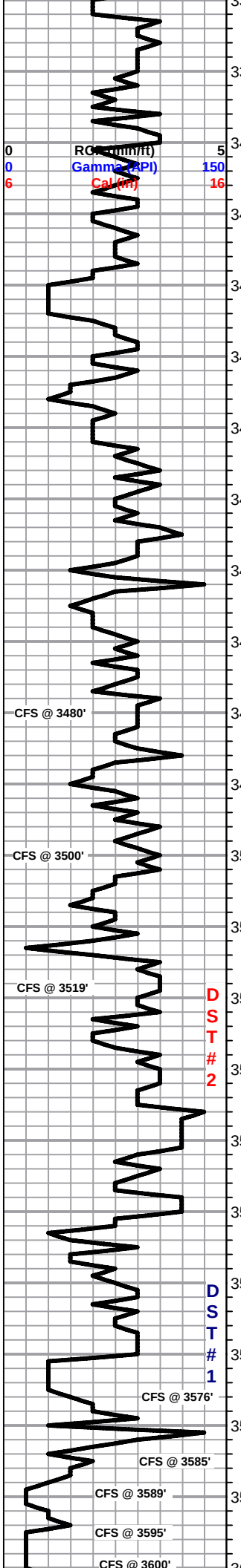
LKC 3341' (-1201) E-LOG 3338' (-1198) Lm- Off White, FXLN, fsl & oolitic, sctrd dev. w/ sctrd XLN & fn ppt inter fsl porosity, SCTRD LT STN, NSFO, TR ODR

3345'.jpg

Lm- White Cream, VFXLN, dense well cemented cherty Ls w/o vis. porosity, some sl cherty w/ sctrd micro XLN porosity, clean & barren, several pcs of sl dolomitic Ls w/ consistent micro XLN porosity, clean & barren

Sh- Gray Maroon Green, dense & waxy, gritty & earthy, silty

Lm- Cream Off White, FXLN, oolitic, w/ mostly sctrd vry fn-fn ppt interoolite porosity,



SCTRD LT STN, NSFO, TR ODR

Lm- Cream Off White, VF-FXLN, dense, sl fsl/oolitic, micro XLN porosity, clean & barren

Sh- Gray Maroon Green, dense & semi-waxy, gritty, soft & silty

Lm- Off White, F-MXLN, fsl & sl oolitic, sctrd dev. from sctrd XLN to sctrd ppt porosity, SCTRD LT BRWN STN, NSFO, FR ODR

Lm- Cream Off White, VF-FXLN, dense, well cemented, mostly tight w/ sctrd micro XLN porosity, some pcs of soft white chalk

Lm- Off White, FXLN, sl fsl, sctrd dev. from XLN to rare sctrd fn ppt porosity, WK LT STN, NSFO, FR ODR

Lm- Cream Tan, F-MXLN, oolitic, sctrd dev. from micro XLN to vuggy porosity, SCTRD DRK STN, GD SHEEN, TR FO, FR ODR

Lm/Chert- Off White, VFXLN, dense, well cemented & poorly dev. oolitic, sctrd micro XLN porosity, several pcs of fresh bedded chert, barren

Chert/Lm- Dover Gray, fresh bedded vitreous chert w/o porosity, Off White/Cream, VFXLN, dense tight cherty Ls w/ min. vis. porosity, all clean & barren

Sh- Black Gray Maroon, dense & carbonaceous, silty, gritty & earthy

Lm- Off White, F-MXLN, fsl & oolitic, sctrd dev. from mod. w/ XLN-vuggy porosity, some reXLN w/in vugs, DRK TO BLK STN, NSFO, FR ODR, to poorly dev. w/ sctrd-dense XLN porosity, clean & barren

Lm/Chert- Off White, VFXLN, dense cherty Ls/Chert w/ no vis to min. vis. porosity

Lm- Tan, VFXLN, dense, massive, very well cemented, most w/ consistent vry fn ppt porosity, few w/ rare sctrd ppt & clear replacement cementation, LT STN, NSFO, FR ODR

Lm- Cream Tan, VF-FXLN, dense & tight w/ sctrd micro XLN porosity at best, barren

Sh- Green Maroon, gummy clumps/wash, gritty & dense

Lm- Cream Off White, FXLN, oolitic/sl oomoldic, sctrd to dense XLN & vuggy porosity, SCTRD LT STN, GSY OIL UPON CRUSH, FLOATING GLOBULES ON WET CUP, GD ODR

Sh- Black Gray, fissile & carbonacous, dense & semi-waxy

Lm- Cream Buff, FXLN, sl fsl, poorly dev. w/ dense XLN porosity, SCTRD LT STN, NSFO, TR ODR

Lm- Cream Buff Tan, VFXLN, dense, well cemented, tight w/ sctrd micro XLN porosity, barren

Sh- Black Maroon, fissile & carbonaceous, semi-gummy

Lm- Cream/Yellow, FXLN, sl oolitic, well cemented, dense XLN porosity, barren

BKC 3552' (-1412) E-LOG 3552' (-1412) Sh- Gray Maroon Green, soft & silty, gritty & earthy, some sandy, soft & silty

Conglomerate- Maroon Ls, dense & well cemented, no vis. porosity, Ss- Lt Green, Fn Grn, consolidated & well sorted, loosely cemented, sub-rounded, barren, some sandy maroon shale

ARBUCKLE 3582' (-1442) E-LOG 3584' (-1444) Dol- White Tan, FXLN, loosley cemented, consistent interXLN porosity, DRK STN, NSFO, TR ODR, several pcs of Tan, VFXLN, dense, well cemented, micro XLN w/ rare sctrd ppt porosity, barren

Dol- Cream Tan, VFXLN, dense, well cemented, tight w/ micro XLN porosity, barren

Dol- Cream Tan, F-MXLN, dense, mostly tight w/ consistent micro XLN & XLN porosity, barren

Dol- Cream Buff Tan, F-MXLN, mix of mod. dev. w/ consistent microXLN to XLN

3380.jpg

3400'.jpg

3410'.jpg

3420'.jpg

3475'.jpg

3490'.jpg

3510'.jpg

3525'.jpg

DST #2
LKC J - ARBUCKLE
3496' - 3605'
30-30-30-30

20' MUD

IFP: 33-35#
FFP: 34-40#
SIP: 251-246#

SHORT TRIP SURVEY 2 deg.

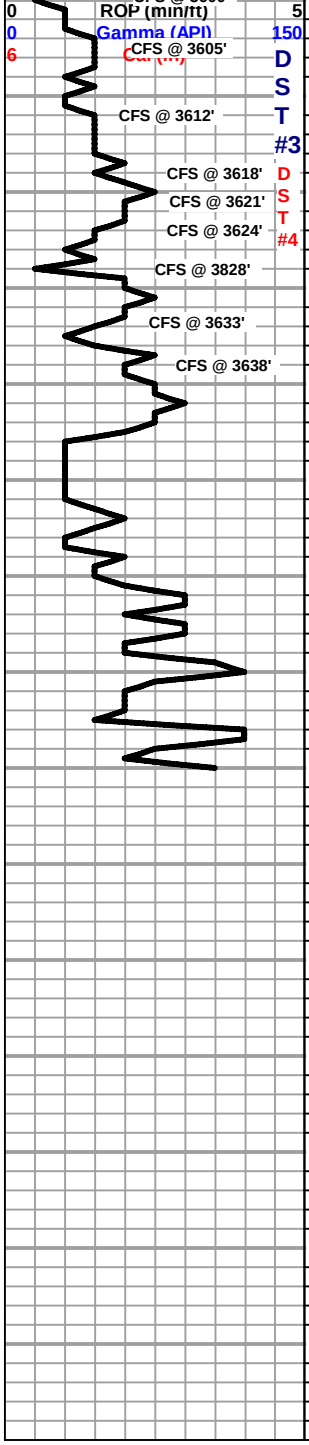
DST #1
ARBUCKLE
3536' - 3605'
30-30-30-30

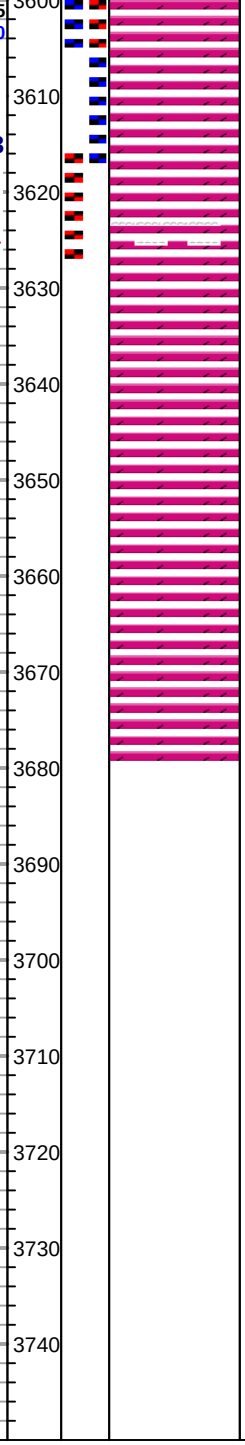
30' TOTAL FLUID
29' VSOCM
(2%O, 98%M)
1' CLN OIL

IFP: 32-32#
FFP: 36-36#
SIP: 122-91#

3585'.jpg

3600'.jpg





porosity, few pcs w/ semi-friable, some sl friable, much barren rock, SEVERAL W/ SCTRD LT STN, NSFO, TR ODR, several pcs w/ blk residual stain

Dol- Off White, FXLN, well dev. & semi-friable, consistent interXLN porosity, DRK SCTRD STN, TR FO, WK ODR, several pcs w/ sub-rounded to rounded qtz. inclusions

3612'- Dol- Cream Off White, F-MXLN, mix of mod. dev. w/ sctrd to consistent XLN to vry fn ppt porosity through, 1-2 pcs mostly rhombic w/ SCTRD DRK STN, NSFO, several pcs of FXLN w/ consistent XLN porosity throughout, BLEEDING SAT DRK STN, ALL W/ TR ODR, 2-3 pcs Crs XLN, rhombic w/ mostly consistent ppt interXLN porosity, SCTRD DRK STN, NSFO

3618'- Dol- Off White Cream, mostly CrsXLN, sctrd dev. w/ sctrd fn ppt interXLN to consistent ppt interXLN porosity, SCTRD DRK STN, SHW FO, GD ODR

3621'- Dol- Cream Salmon/Yellow, FXLN, dense, well cemented, sctrd XLN porosity, clean & barren

3624'- Dol/Chert- Cream White, F-MXLN, mix of cherty dolomite, some massive & rounded (oolitic?) & fresh bedded & oolitic fresh bedded vitreous chert, barren

3828'- Dol- Cream Off White, F-MXLN, mostly well cemented, mostly w/ dense XLN porosity throughout, some sctrd dev. & sctrd fn ppt porosity, WK STN, NSFO, FR ODR

3833'- Dol- Cream, VF-FXLN, dense. well cemented, tight w/ consistent micro XLN throughout, barren

3838'- Dol- Cream Tan, FXLN, dense, well cemented, less dev. w/ consistent XLN porosity, clean & barren w/ RARE SCTRD EDGE STN, NSFO, NO ODR

3647'- Dol- Cream, F-CrXLN, well cemented mix w/ consistent porosity throughout, SAT BLK DO STN, NSFO, NO ODR

3663'- Dol- Tan, VFXLN, oolitic cherty Dol, sctrd porosity from inter ooolite to no vis., SCTRD BLK DEAD STN, NSFO, NO ODR

3671'- Dol- Tan, F-CrXLN, dense, tight, well cemented w/ poor vis. porosity, barren

3680'- Dol- Tan Buff, VFXLN, dense, tight w/ no vis. porosity, barren

RTD 3680' (-1540) LTD 3682' (-1542) @ 09:34 9/23/2020

3605'.jpg

3612'.jpg

3612.jpg

3618'.jpg

3628'.jpg

DST #3
ARBUCKLE
3606' - 3618'
15-30-30-45

5' OSPM

IFP: 22-20#
FFP: 21-21#
SIP: 67-46#
BHT: 102 deg.

3647'.jpg

3663'.jpg

DST #4
ARBUCKLE
3616' - 3628'
30-30-30-30

5: OSPM

IFP: 28-24#
FFP: 24-28#
SIP: 31-37#
BHT: 103 deg.

SURVEY 1 3/4 deg.

3329'.jpg

3329'

DST #5.jpg

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Jaspar

PO BOX 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:11:52
Time Test Ended: 01:07:07

Test Type: Conventional Straddle (Reset)
Tester: Spencer J Staab
Unit No: 84

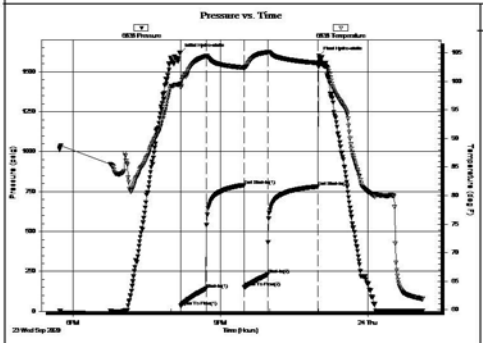
Interval: 3294.00 ft (KB) To 3327.00 ft (KB) (TVD)
Total Depth: 3682.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 230.98 psig @ 3295.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 17:44:01 End Time: 01:07:07

Capacity: psig
Last Calib.: 2020.09.24
Time On Btm: 2020.09.23 @ 20:11:42
Time Off Btm: 2020.09.23 @ 23:00:12

TEST COMMENT: 30-IF-Weak to Strong 13 min; Built to 20"
45-ISI-No Return
30-FF-Weak to Strong 18 min; Built to 13"
60-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1620.05	99.55	Initial Hydro-static
1	32.89	98.92	Open To Flow (1)
31	141.46	104.40	Shut-In(1)
78	790.03	102.36	End Shut-In(1)
78	152.52	102.13	Open To Flow (2)
107	230.98	105.11	Shut-In(2)
168	781.93	103.20	End Shut-In(2)
169	1598.97	103.22	Final Hydro-static

Recovery

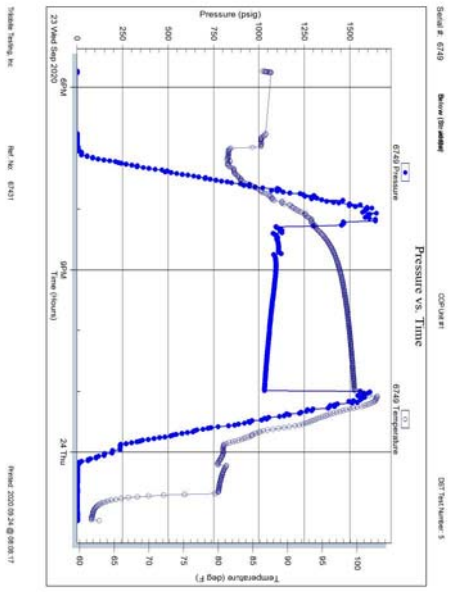
Length (ft)	Description	Volume (bbl)
440.00	MW 20%M 80%W	5.96
1.00	Clean Oil 100%O	0.01

* Recovery from multiple tests

Gas Rates

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

DST #5.1.jpg



3345'.jpg

3345'

3380.jpg

3380'

3400'.jpg

3400'

3410'.jpg

3410'

3420'.jpg

3420'

3475'.jpg

3475'

3490'.jpg

3490'

3510'.jpg

3510'

3525'.jpg

3525'

3585'.jpg

3585'

3600'.jpg

3600'

3605'.jpg

3605'

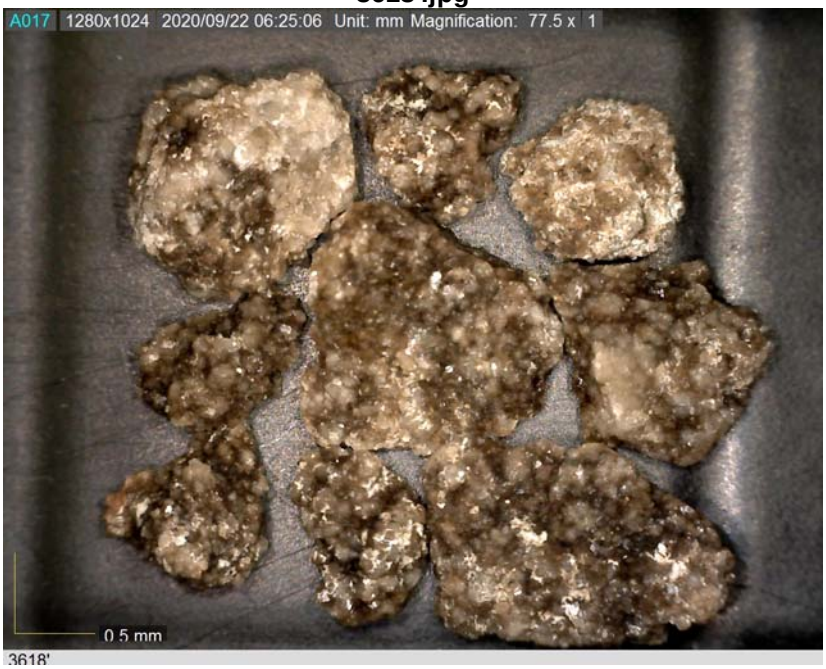
3612'.jpg

3612'

3612.jpg

3612' #2

3618'.jpg



3618'

3628'.jpg

3628'

3647'.jpg

3647'

3663'.jpg

3663'

DRILL STEM TEST REPORT

Prepared For: **Jaspar**

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

COP Unit #1

20-9s-19w Rooks,KS

Start Date: 2020.09.21 @ 12:51:00
End Date: 2020.09.21 @ 19:04:11
Job Ticket #: 66400 DST #: 1

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

Printed: 2020.09.24 @ 09:05:24

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 66400 **DST#: 1**

Test Start: 2020.09.21 @ 12:51:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:11:52
Time Test Ended: 19:04:11

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

Interval: 3536.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

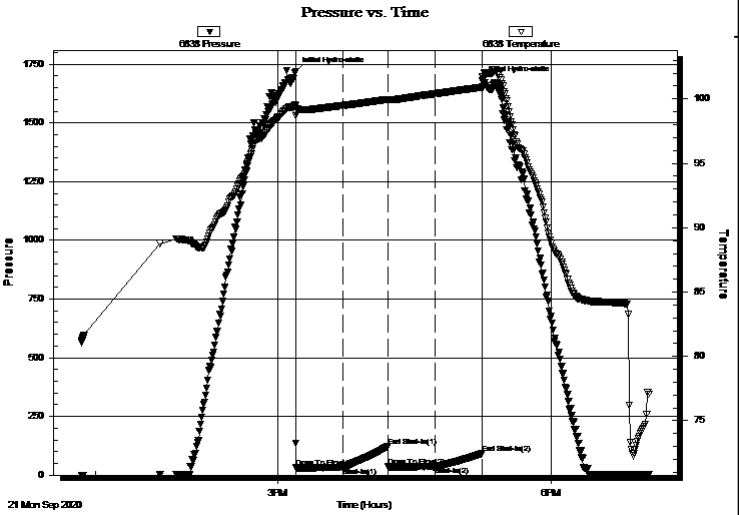
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 36.48 psig @ 3539.00 ft (KB)
Start Date: 2020.09.21 End Date: 2020.09.21
Start Time: 12:51:01 End Time: 19:04:11

Capacity: psig
Last Calib.: 2020.09.21
Time On Btm: 2020.09.21 @ 15:11:42
Time Off Btm: 2020.09.21 @ 17:14:27

TEST COMMENT: 30-IF-Weak; Built to 3/4"; Died to 1/2"
30-ISI-No Return
30-FF-No Blow
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1718.03	99.49	Initial Hydro-static
1	32.25	98.91	Open To Flow (1)
32	32.73	99.49	Shut-In(1)
61	122.78	99.96	End Shut-In(1)
61	36.92	99.96	Open To Flow (2)
92	36.48	100.41	Shut-In(2)
123	91.48	100.94	End Shut-In(2)
123	1678.72	101.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
29.00	VSOCM 2%O 98%M	0.14
1.00	CO 100%O	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 66400 **DST#: 1**

Test Start: 2020.09.21 @ 12:51:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:11:52
Time Test Ended: 19:04:11

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

Interval: 3536.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

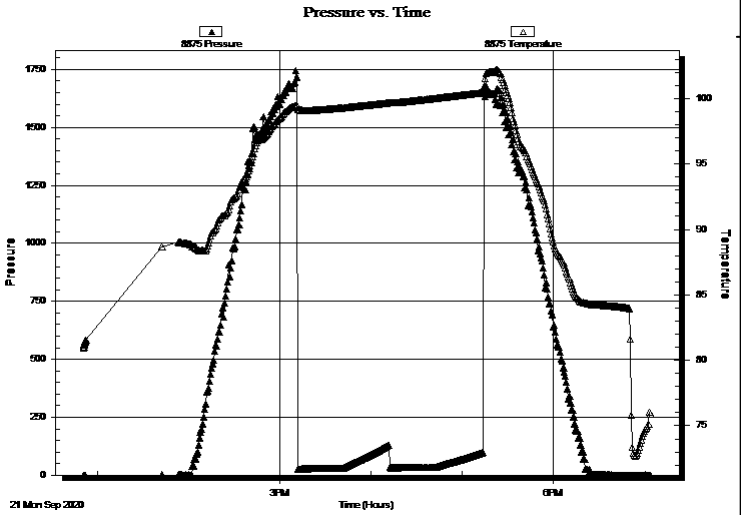
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: psig @ 3539.00 ft (KB)
Start Date: 2020.09.21 End Date: 2020.09.21
Start Time: 12:51:01 End Time: 19:04:11

Capacity: psig
Last Calib.: 2020.09.21
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Weak; Built to 3/4"; Died to 1/2"
30-ISI-No Return
30-FF-No Blow
30-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
29.00	VSOCM 2%O 98%M	0.14
1.00	CO 100%O	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 66400 **DST#: 1**

Test Start: 2020.09.21 @ 12:51:00

Tool Information

Drill Pipe:	Length:	3483.00 ft	Diameter:	3.82 inches	Volume:	49.37 bbl	Tool Weight:		2200.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75 inches	Volume:	- bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		80000.00 lb
					Total Volume:	- bbl	Tool Chased		ft
Drill Pipe Above KB:		4.00 ft					String Weight:	Initial	57000.00 lb
Depth to Top Packer:		3536.00 ft						Final	57000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		69.00 ft							
Tool Length:		96.00 ft							
Number of Packers:		1	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3510.00		
Change Over Sub	1.00			3511.00		
Shut In Tool	5.00			3516.00		
Hydraulic tool	5.00		Fluid	3521.00		
Gap Sub	3.00			3524.00		
Safety Joint	3.00			3527.00		
Packer	5.00			3532.00	27.00	Bottom Of Top Packer
Packer	4.00			3536.00		
Stubb	1.00			3537.00		
Perforations	1.00			3538.00		
Change Over Sub	1.00			3539.00		
Recorder	0.00	6838	Inside	3539.00		
Recorder	0.00	8875	Inside	3539.00		
Drill Pipe	31.00			3570.00		
Change Over Sub	1.00			3571.00		
Perforations	31.00			3602.00		
Bullnose	3.00			3605.00	69.00	Bottom Packers & Anchor
Total Tool Length:	**96.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 66400 **DST#: 1**

Test Start: 2020.09.21 @ 12:51:00

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.38 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

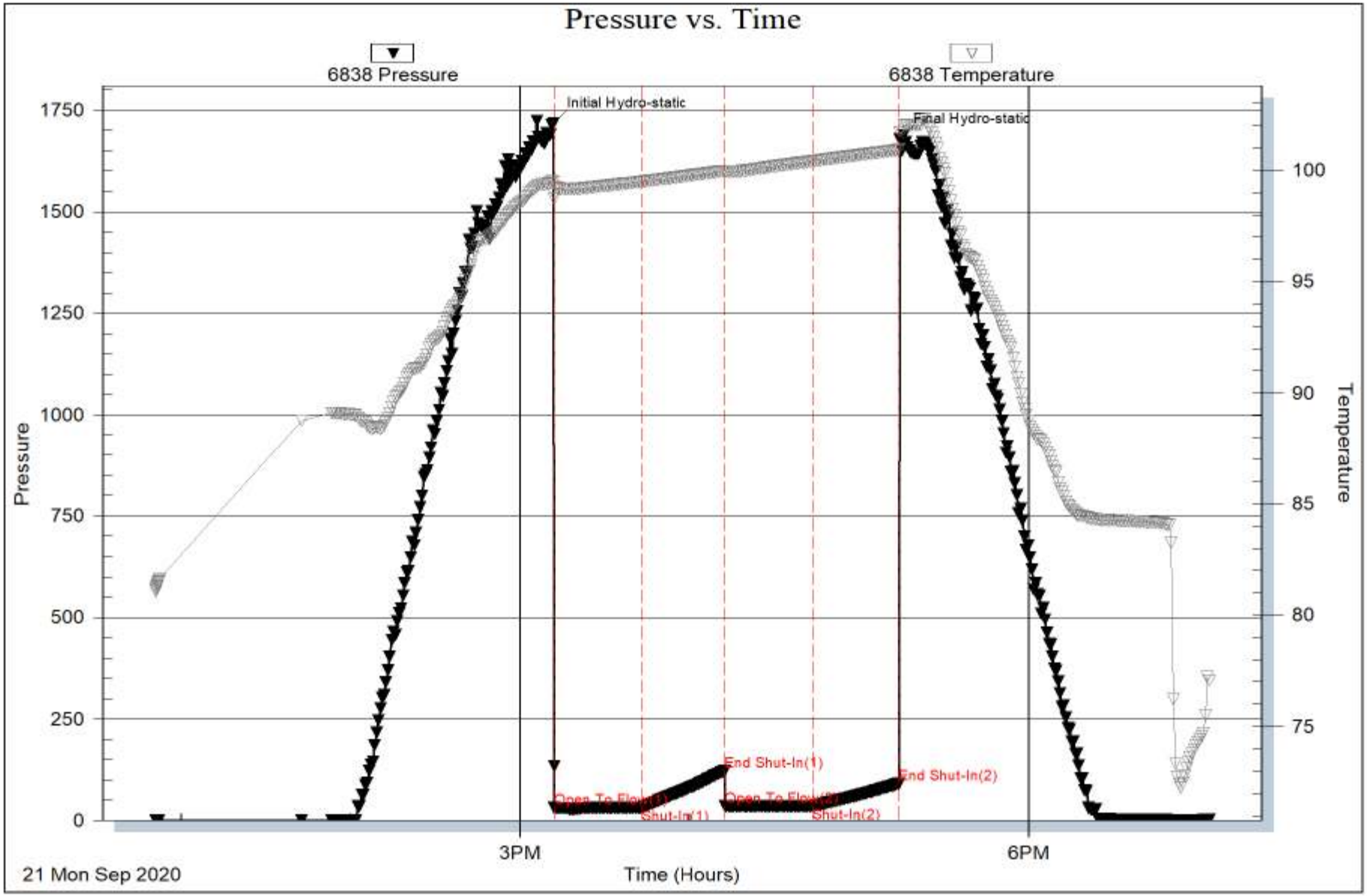
Recovery Table

Length ft	Description	Volume bbl
29.00	VSOCM 2%O 98%M	0.143
1.00	CO 100%O	0.005

Total Length: 30.00 ft Total Volume: 0.148 bbl

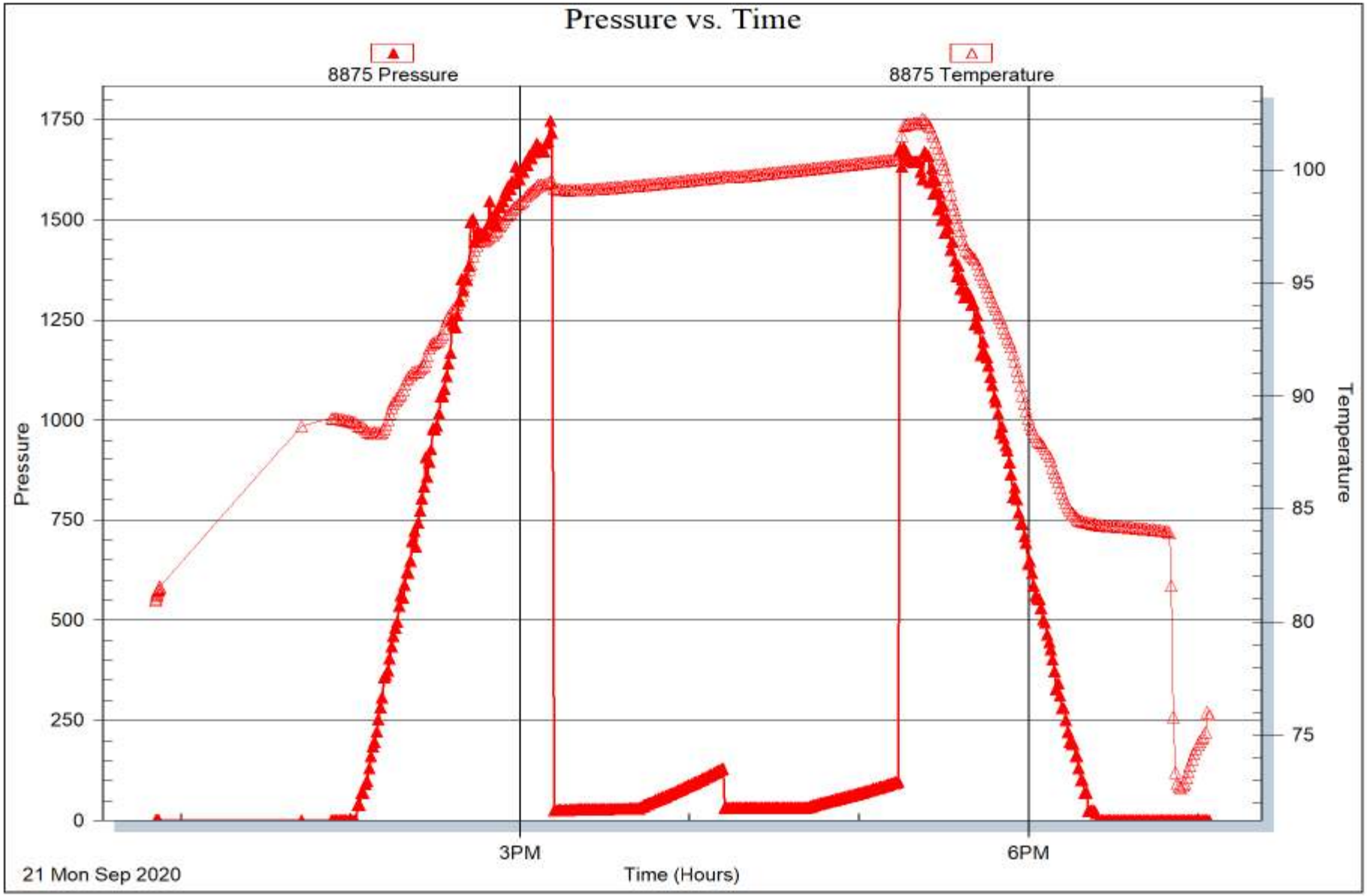
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 2#LCM

Serial #: 6838 **Inside** Jaspar COP Unit #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 66400 Printed: 2020.09.24 @ 09:05:44

Serial #: 8875 **Inside** Jaspar COP Unit #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 66400 Printed: 2020.09.24 @ 09:05:44

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Jaspar**

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

COP Unit #1

20-9s-19w Rooks,KS

Start Date: 2020.09.22 @ 19:14:00
End Date: 2020.09.23 @ 00:55:52
Job Ticket #: 67428 DST #: 2

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

Printed: 2020.09.24 @ 09:04:48

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67428 **DST#: 2**

Test Start: 2020.09.22 @ 19:14:00

GENERAL INFORMATION:

Formation: **LKC J - Arb**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:05:22
Time Test Ended: 00:55:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3496.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

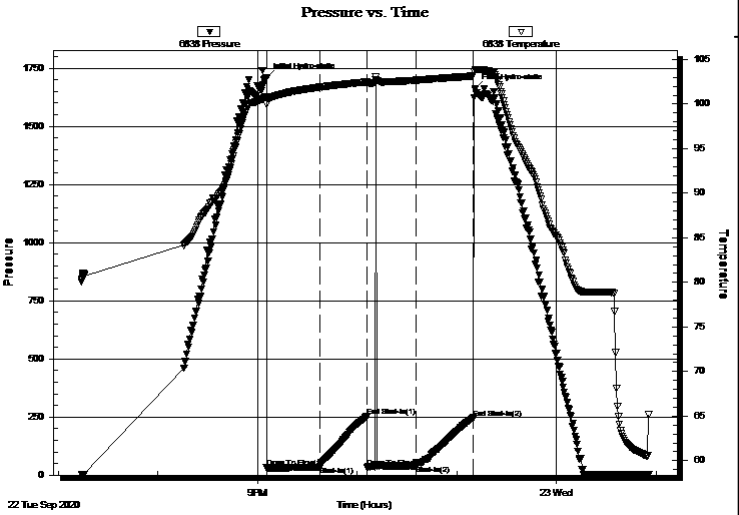
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 40.54 psig @ 3499.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.23
Start Time: 19:14:01 End Time: 00:55:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm: 2020.09.22 @ 21:05:17
Time Off Btm: 2020.09.22 @ 23:11:07

TEST COMMENT: 30-IF-Weak; Built to 1/2"
30-ISI-No Return
30-FF-No Blow ; Flushed; Surge died after 5 min
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.15	100.76	Initial Hydro-static
1	33.25	100.00	Open To Flow (1)
33	35.91	101.90	Shut-In(1)
61	251.49	102.44	End Shut-In(1)
61	34.51	102.43	Open To Flow (2)
90	40.54	102.67	Shut-In(2)
125	246.25	103.16	End Shut-In(2)
126	1662.02	103.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%M	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67428 **DST#: 2**

Test Start: 2020.09.22 @ 19:14:00

GENERAL INFORMATION:

Formation: **LKC J - Arb**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:05:22
Time Test Ended: 00:55:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3496.00 ft (KB) To 3605.00 ft (KB) (TVD)
Total Depth: 3605.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

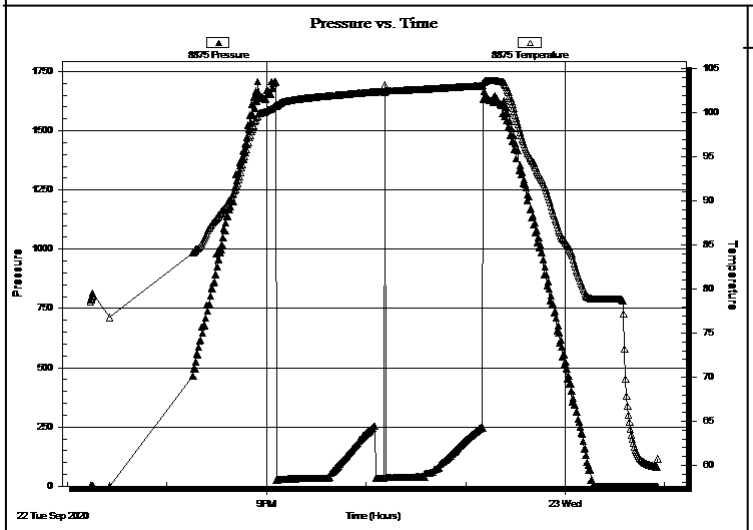
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: psig @ 3499.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.23
Start Time: 19:14:01 End Time: 00:55:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Weak; Built to 1/2"
30-ISI-No Return
30-FF-No Blow ; Flushed; Surge died after 5 min
30-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100%M	0.10

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67428 **DST#: 2**

Test Start: 2020.09.22 @ 19:14:00

Tool Information

Drill Pipe:	Length:	3452.00 ft	Diameter:	3.82 inches	Volume:	48.93 bbl	Tool Weight:		2200.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75 inches	Volume:	- bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		61000.00 lb
					Total Volume:	- bbl	Tool Chased		ft
Drill Pipe Above KB:		13.00 ft					String Weight:	Initial	56000.00 lb
Depth to Top Packer:		3496.00 ft						Final	56000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		109.00 ft							
Tool Length:		136.00 ft							
Number of Packers:		1	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3470.00		
Change Over Sub	1.00			3471.00		
Shut In Tool	5.00			3476.00		
Hydraulic tool	5.00		Fluid	3481.00		
Gap Sub	3.00			3484.00		
Safety Joint	3.00			3487.00		
Packer	5.00			3492.00	27.00	Bottom Of Top Packer
Packer	4.00			3496.00		
Stubb	1.00			3497.00		
Perforations	1.00			3498.00		
Change Over Sub	1.00			3499.00		
Recorder	0.00	6838	Inside	3499.00		
Recorder	0.00	8875	Inside	3499.00		
Drill Pipe	94.00			3593.00		
Change Over Sub	1.00			3594.00		
Perforations	8.00			3602.00		
Bullnose	3.00			3605.00	109.00	Bottom Packers & Anchor
Total Tool Length:	**136.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67428 **DST#: 2**

Test Start: 2020.09.22 @ 19:14:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

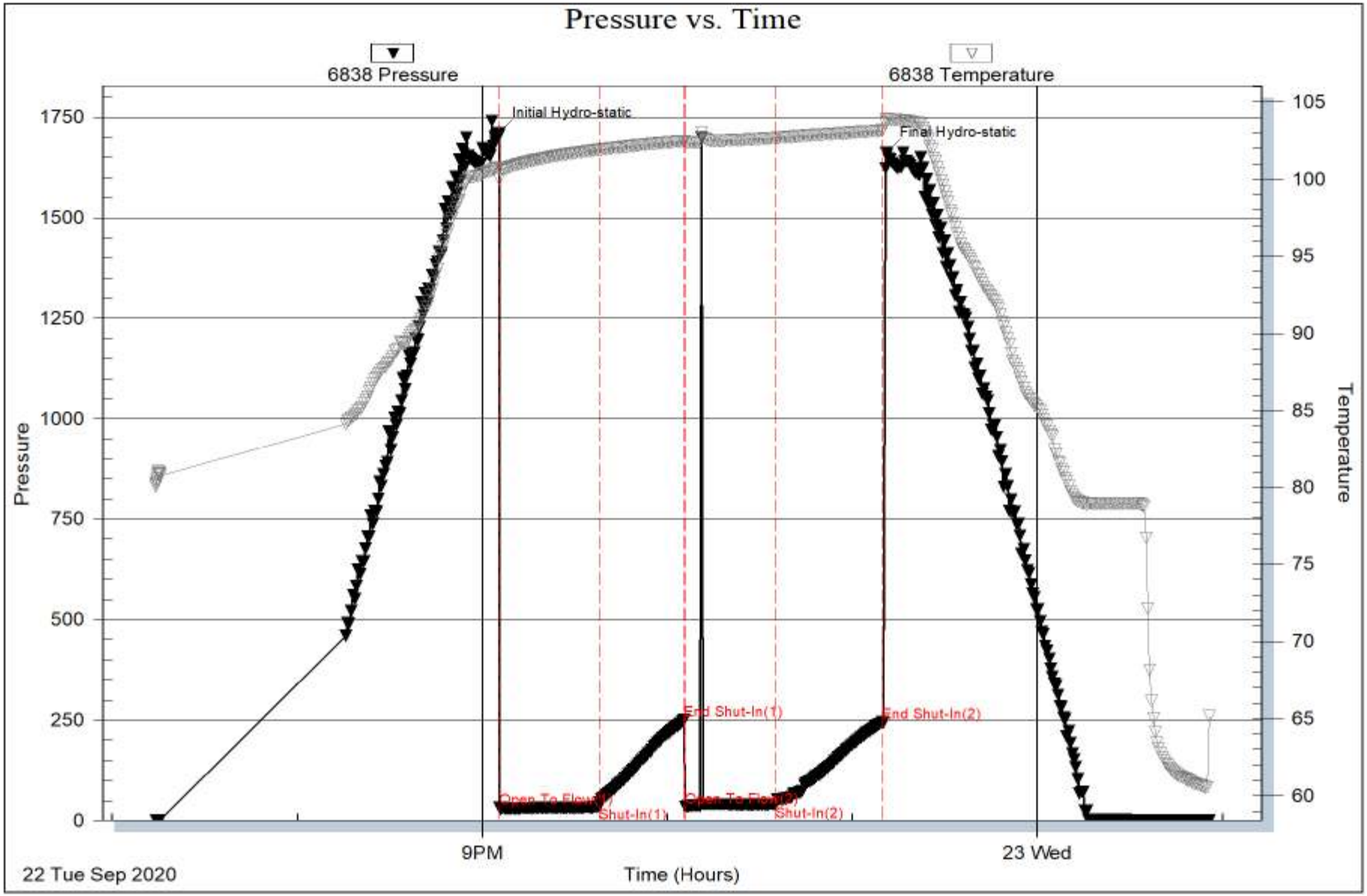
Recovery Table

Length ft	Description	Volume bbl
20.00	Mud 100%M	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

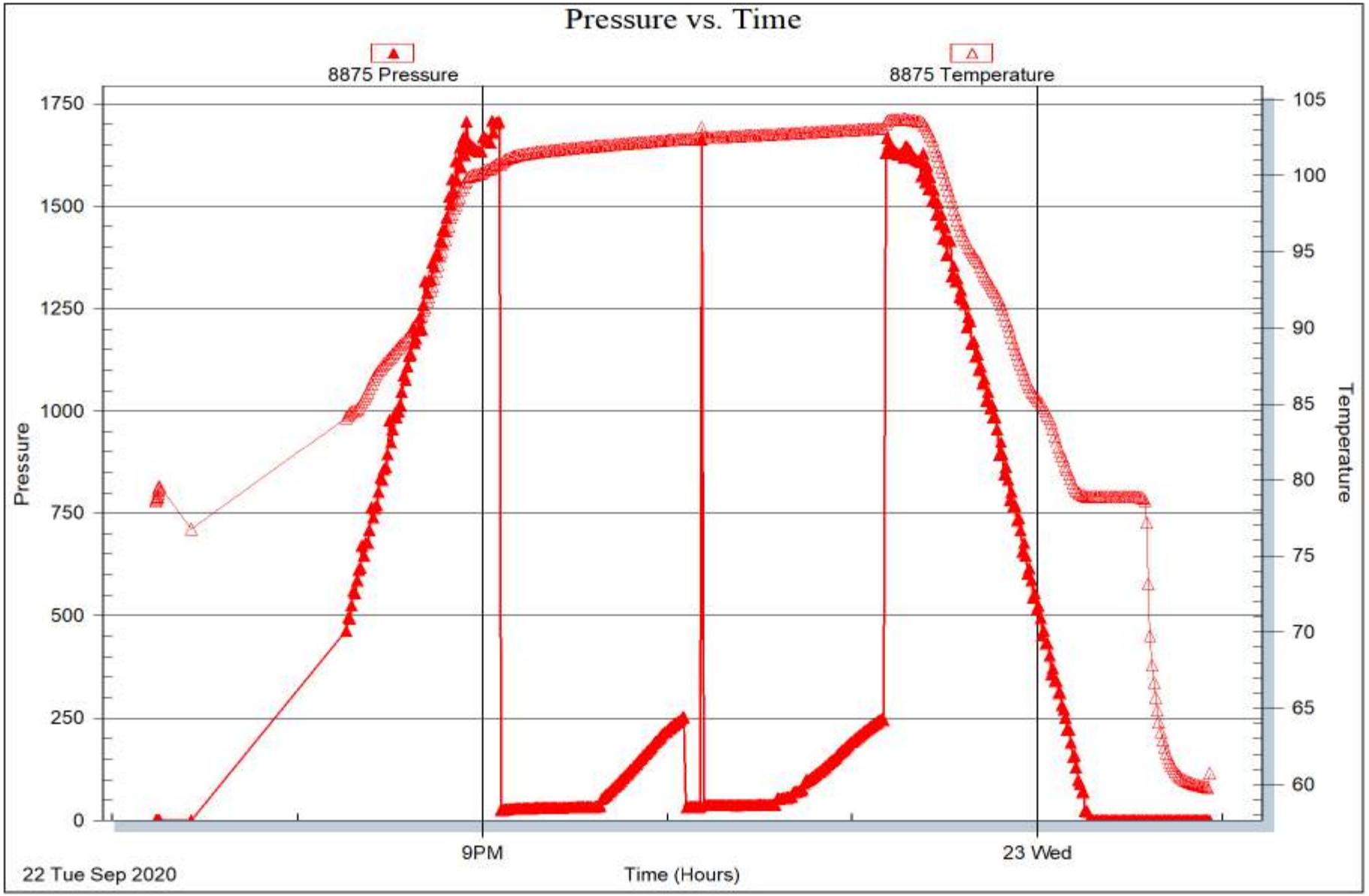
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 5#LCM

Serial #: 6838 **Inside** Jaspar COP Unit #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 67428 Printed: 2020.09.24 @ 09:04:53

Serial #: 8875 **Inside** Jaspar COP Unit #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 67428 Printed: 2020.09.24 @ 09:04:53

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Jaspar**

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

COP Unit #1

20-9s-19w Rooks,KS

Start Date: 2020.09.22 @ 07:44:00
End Date: 2020.09.22 @ 13:11:52
Job Ticket #: 67429 DST #: 3

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

Printed: 2020.09.24 @ 09:02:49

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67429 **DST#: 3**

Test Start: 2020.09.22 @ 07:44:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:33:47
Time Test Ended: 13:11:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3606.00 ft (KB) To 3618.00 ft (KB) (TVD)
Total Depth: 3618.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

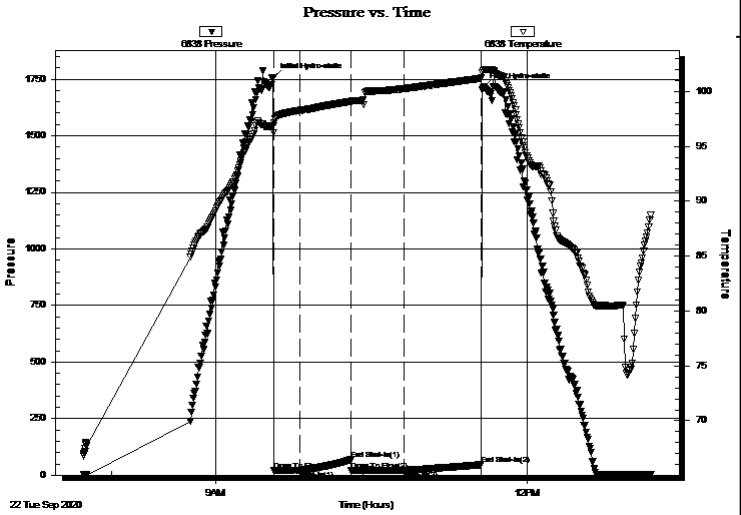
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 21.80 psig @ 3607.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.22
Start Time: 07:44:01 End Time: 13:11:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm: 2020.09.22 @ 09:33:37
Time Off Btm: 2020.09.22 @ 11:34:42

TEST COMMENT: 15-IF-Weak; Built to 1/2"
30-ISI-No Return
30-FF-No Blow ; Flushed; No Help
45-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1757.85	96.90	Initial Hydro-static
1	22.31	96.25	Open To Flow (1)
16	20.75	98.28	Shut-In(1)
45	67.85	99.10	End Shut-In(1)
45	21.52	99.10	Open To Flow (2)
76	21.80	100.27	Shut-In(2)
120	46.48	101.24	End Shut-In(2)
122	1713.40	101.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67429 **DST#: 3**

Test Start: 2020.09.22 @ 07:44:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:33:47
Time Test Ended: 13:11:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3606.00 ft (KB) To 3618.00 ft (KB) (TVD)
Total Depth: 3618.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

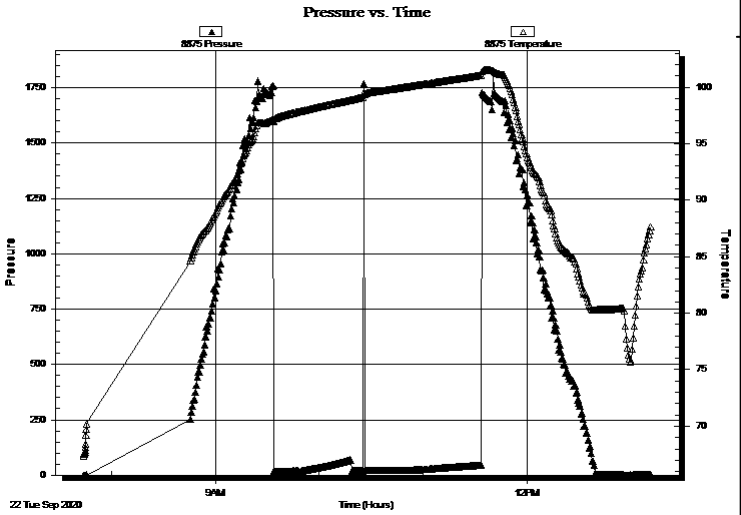
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: psig @ 3607.00 ft (KB)
Start Date: 2020.09.22 End Date: 2020.09.22
Start Time: 07:44:01 End Time: 13:11:52

Capacity: psig
Last Calib.: 2020.09.22
Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IF-Weak; Built to 1/2"
30-ISI-No Return
30-FF-No Blow ; Flushed; No Help
45-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67429 **DST#: 3**

Test Start: 2020.09.22 @ 07:44:00

Tool Information

Drill Pipe:	Length:	3579.00 ft	Diameter:	3.82	inches	Volume:	50.73	bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75	inches	Volume:	-	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	Weight to Pull Loose:	73000.00 lb
						Total Volume:	-	bbl	Tool Chased	ft
Drill Pipe Above KB:		30.00 ft							String Weight: Initial	55000.00 lb
Depth to Top Packer:		3606.00 ft							Final	55000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		12.00 ft								
Tool Length:		39.00 ft								
Number of Packers:		1	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3580.00		
Change Over Sub	1.00			3581.00		
Shut In Tool	5.00			3586.00		
Hydraulic tool	5.00		Fluid	3591.00		
Gap Sub	3.00			3594.00		
Safety Joint	3.00			3597.00		
Packer	5.00			3602.00	27.00	Bottom Of Top Packer
Packer	4.00			3606.00		
Stubb	1.00			3607.00		
Recorder	0.00	6838	Inside	3607.00		
Recorder	0.00	8875	Inside	3607.00		
Perforations	8.00			3615.00		
Bullnose	3.00			3618.00	12.00	Bottom Packers & Anchor
Total Tool Length:	**39.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67429 **DST#: 3**

Test Start: 2020.09.22 @ 07:44:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

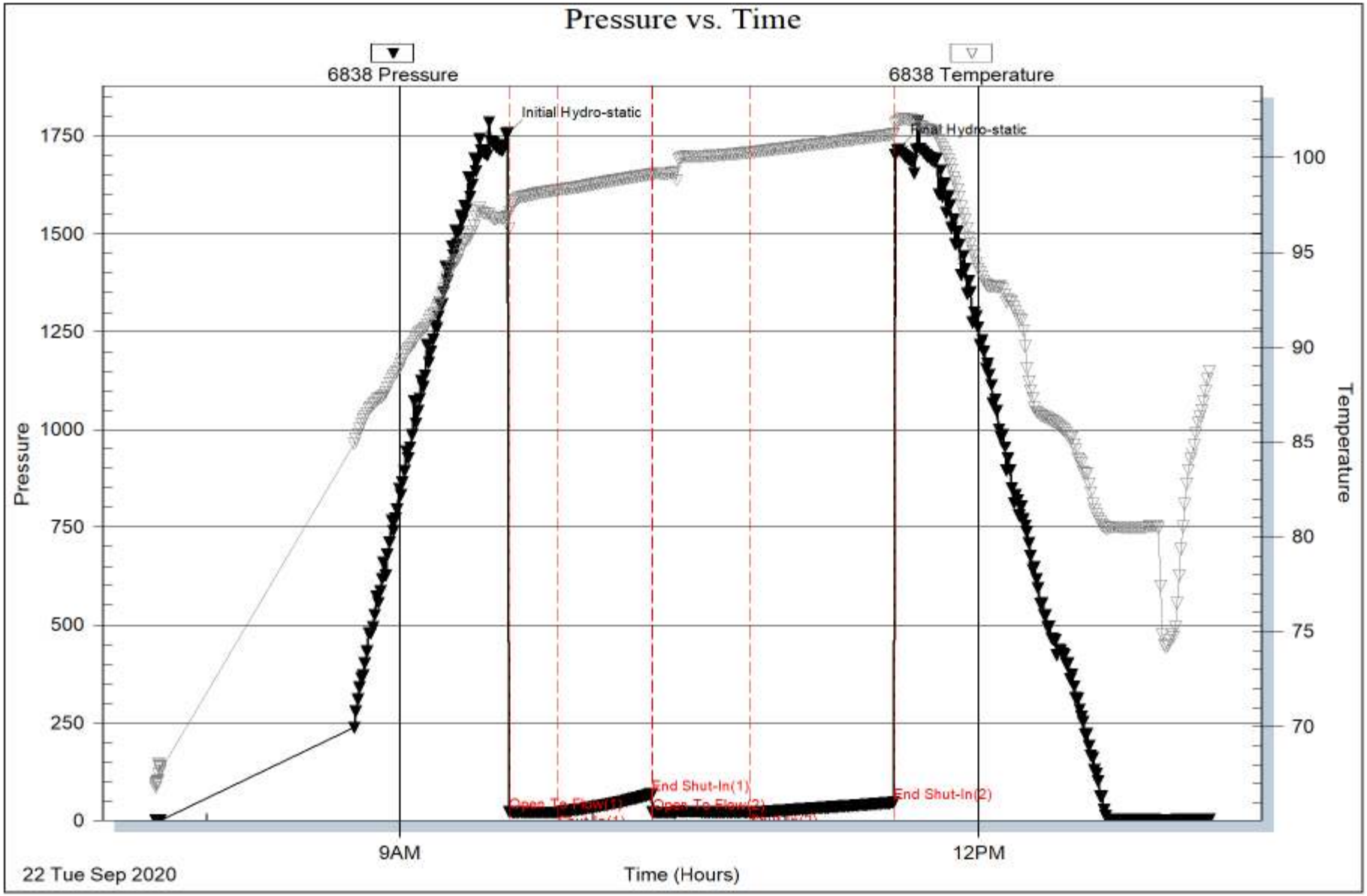
Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

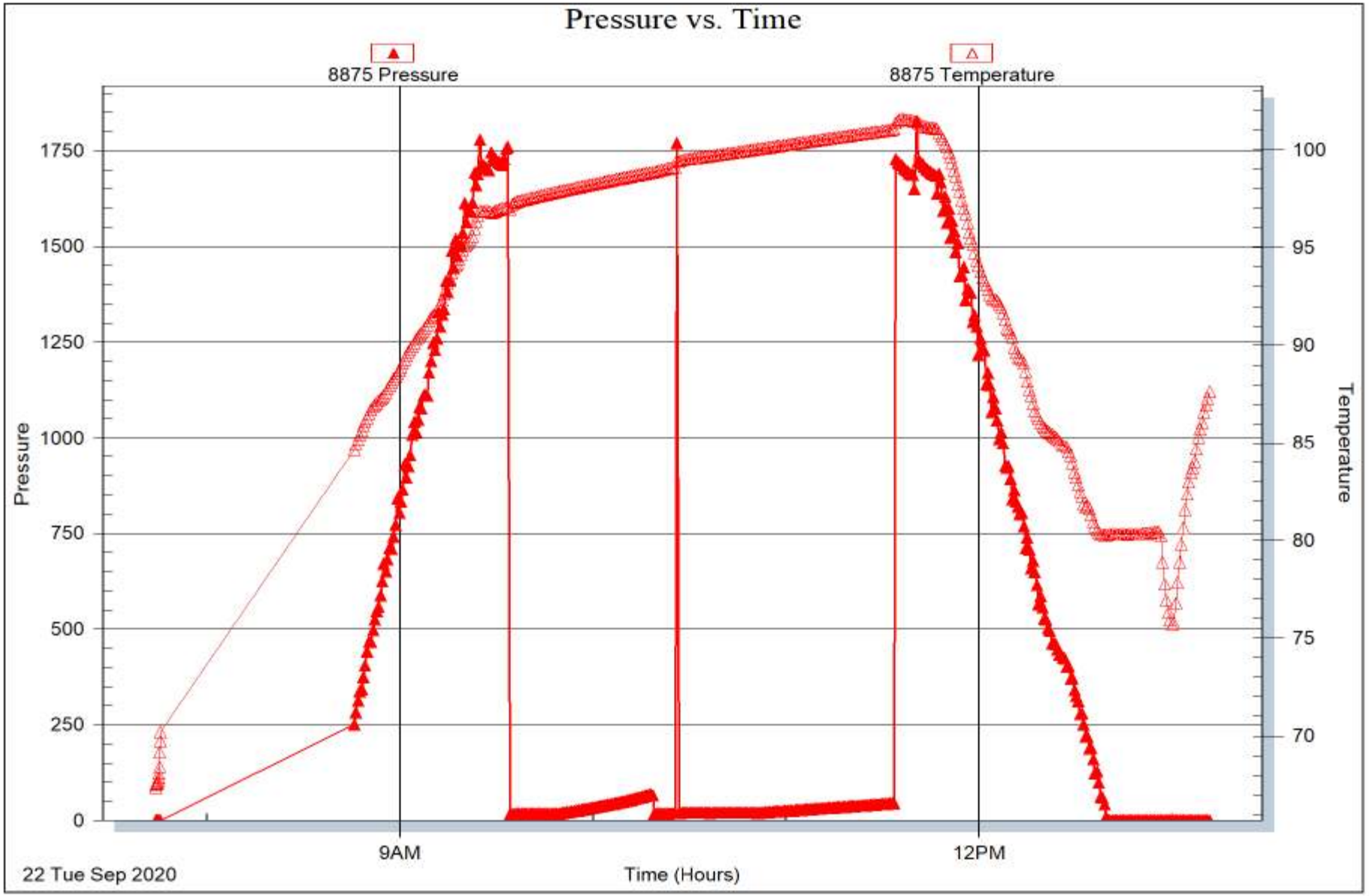
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 5#LCM

Serial #: 6838 **Inside** Jaspar COP Unit #1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 67429 Printed: 2020.09.24 @ 09:02:50

Serial #: 8875 **Inside** Jaspar COP Unit #1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 67429 Printed: 2020.09.24 @ 09:02:50

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Jaspar**

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

COP Unit #1

20-9s-19w Rooks,KS

Start Date: 2020.09.23 @ 20:34:00
End Date: 2020.09.24 @ 02:20:32
Job Ticket #: 67430 DST #: 4

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

Printed: 2020.09.24 @ 09:02:10

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67430 **DST#: 4**

Test Start: 2020.09.23 @ 20:34:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:40:07
Time Test Ended: 02:20:32

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3616.00 ft (KB) To 3628.00 ft (KB) (TVD)
Total Depth: 3628.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

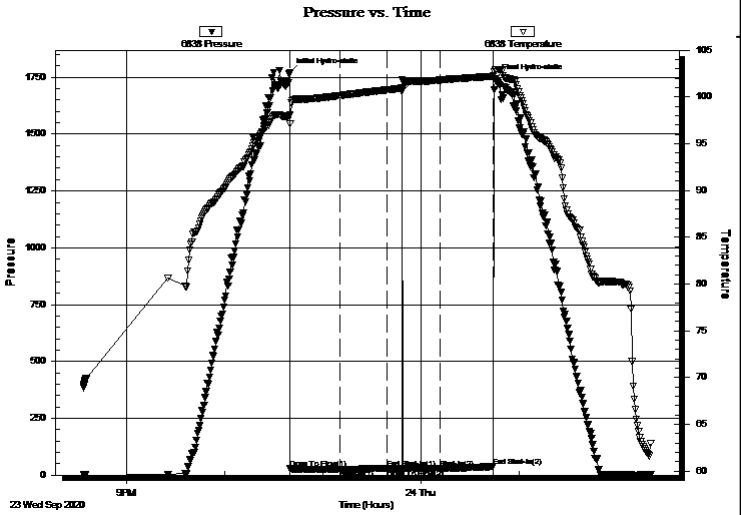
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 28.48 psig @ 3617.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 20:34:01 End Time: 02:20:32

Capacity: psig
Last Calib.: 2020.09.23
Time On Btm: 2020.09.23 @ 22:40:02
Time Off Btm: 2020.09.24 @ 00:45:22

TEST COMMENT: 30-IF-Weak Surface
30-ISI-No Return
30-FF-No Blow ; Flushed; No Help
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1769.15	98.03	Initial Hydro-static
1	28.48	97.12	Open To Flow (1)
31	24.12	100.15	Shut-In(1)
60	31.03	100.74	End Shut-In(1)
60	24.11	100.74	Open To Flow (2)
69	1687.98	101.80	Flushed Tool
92	28.48	101.79	Shut-In(2)
125	37.64	102.24	End Shut-In(2)
126	1743.50	102.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67430 **DST#: 4**

Test Start: 2020.09.23 @ 20:34:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:40:07
Time Test Ended: 02:20:32

Test Type: Conventional Bottom Hole (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3616.00 ft (KB) To 3628.00 ft (KB) (TVD)
Total Depth: 3628.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

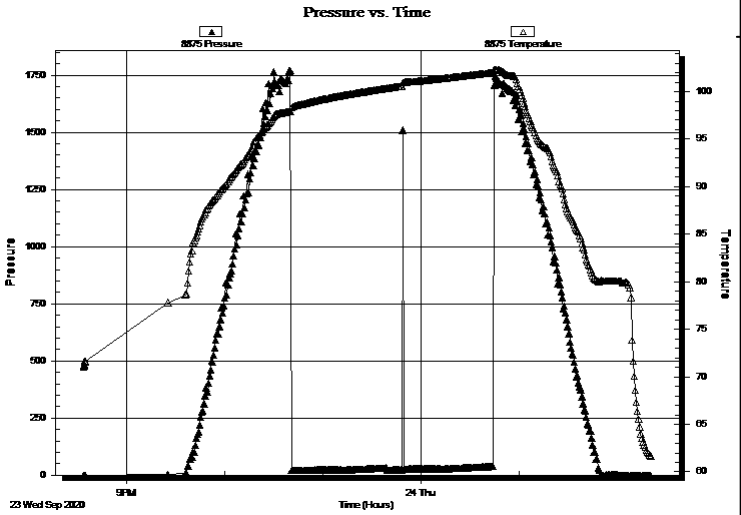
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Outside**

Press@RunDepth: psig @ 3617.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 20:34:01 End Time: 02:20:32

Capacity: psig
Last Calib.: 2020.09.23
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Weak Surface
30-ISI-No Return
30-FF-No Blow ; Flushed; No Help
30-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67430 **DST#: 4**

Test Start: 2020.09.23 @ 20:34:00

Tool Information

Drill Pipe:	Length:	3579.00 ft	Diameter:	3.82	inches	Volume:	50.73	bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75	inches	Volume:	-	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	Weight to Pull Loose:	67000.00 lb
						Total Volume:	-	bbl	Tool Chased	ft
Drill Pipe Above KB:		20.00 ft							String Weight: Initial	55000.00 lb
Depth to Top Packer:		3616.00 ft							Final	55000.00 lb
Depth to Bottom Packer:		ft								
Interval betw een Packers:		12.00 ft								
Tool Length:		39.00 ft								
Number of Packers:		1	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3590.00		
Change Over Sub	1.00			3591.00		
Shut In Tool	5.00			3596.00		
Hydraulic tool	5.00		Fluid	3601.00		
Gap Sub	3.00			3604.00		
Safety Joint	3.00			3607.00		
Packer	5.00			3612.00	27.00	Bottom Of Top Packer
Packer	4.00			3616.00		
Stubb	1.00			3617.00		
Recorder	0.00	6838	Inside	3617.00		
Recorder	0.00	8875	Outside	3617.00		
Perforations	8.00			3625.00		
Bullnose	3.00			3628.00	12.00	Bottom Packers & Anchor
Total Tool Length:	**39.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67430 **DST#: 4**

Test Start: 2020.09.23 @ 20:34:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

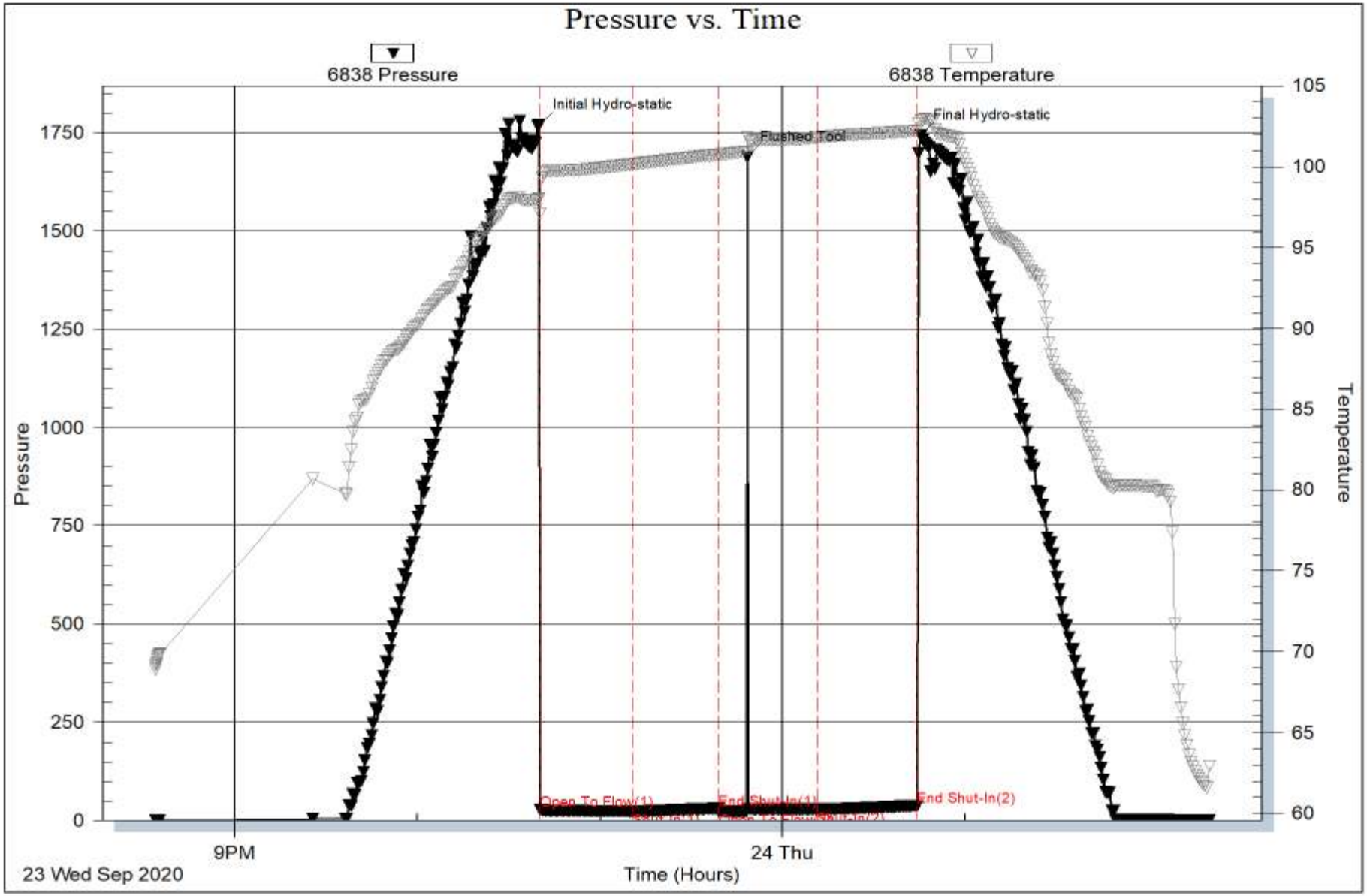
Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

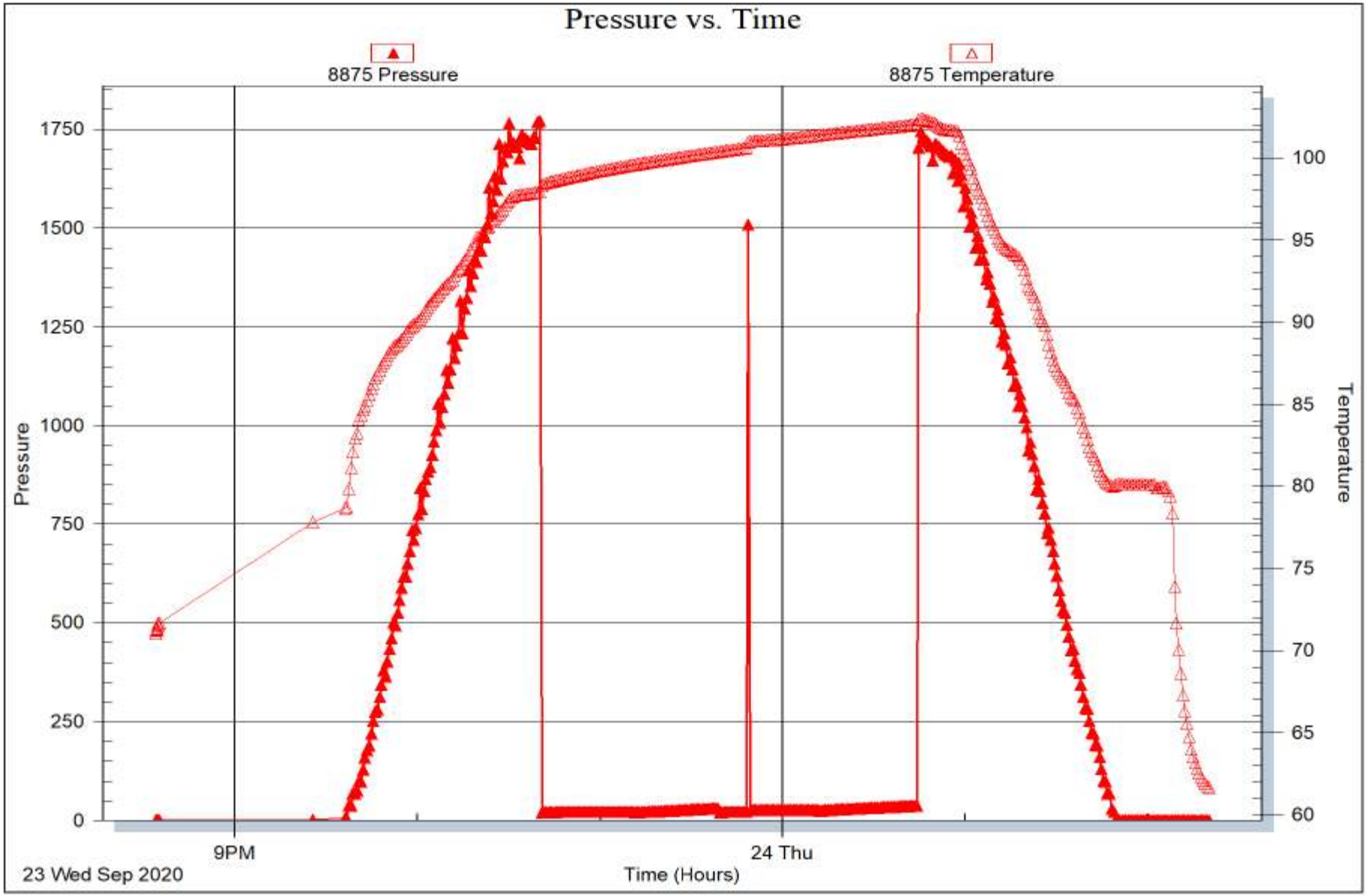
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: 5#LCM

Serial #: 6838 **Inside** Jaspar COP Unit #1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 67430 Printed: 2020.09.24 @ 09:02:13

Serial #: 8875 **Outside** Jaspar COP Unit #1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 67430 Printed: 2020.09.24 @ 09:02:13

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Jaspar**

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

COP Unit #1

20-9s-19w Rooks,KS

Start Date: 2020.09.23 @ 17:44:00
End Date: 2020.09.24 @ 01:07:07
Job Ticket #: 67431 DST #: 5

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

Printed: 2020.09.24 @ 08:53:45

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:11:52
Time Test Ended: 01:07:07

Test Type: Conventional Straddle (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3294.00 ft (KB) To 3327.00 ft (KB) (TVD)
Total Depth: 3682.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

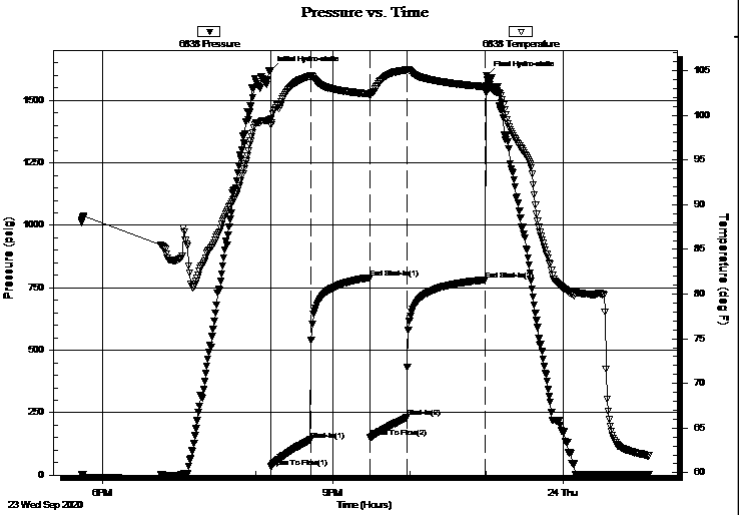
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 230.98 psig @ 3295.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 17:44:01 End Time: 01:07:07

Capacity: psig
Last Calib.: 2020.09.24
Time On Btm: 2020.09.23 @ 20:11:42
Time Off Btm: 2020.09.23 @ 23:00:12

TEST COMMENT: 30-IF-Weak to Strong 13 min; Built to 20"
45-ISI-No Return
30-FF-Weak to Strong 18 min; Built to 13"
60-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1620.05	99.55	Initial Hydro-static
1	32.89	98.92	Open To Flow (1)
31	141.46	104.40	Shut-In(1)
78	790.03	102.36	End Shut-In(1)
78	152.52	102.13	Open To Flow (2)
107	230.98	105.11	Shut-In(2)
168	781.93	103.20	End Shut-In(2)
169	1598.97	103.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
440.00	MW 20%M 80%W	5.96
1.00	Clean Oil 100%O	0.01

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:11:52
Time Test Ended: 01:07:07

Test Type: Conventional Straddle (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3294.00 ft (KB) To 3327.00 ft (KB) (TVD)
Total Depth: 3682.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

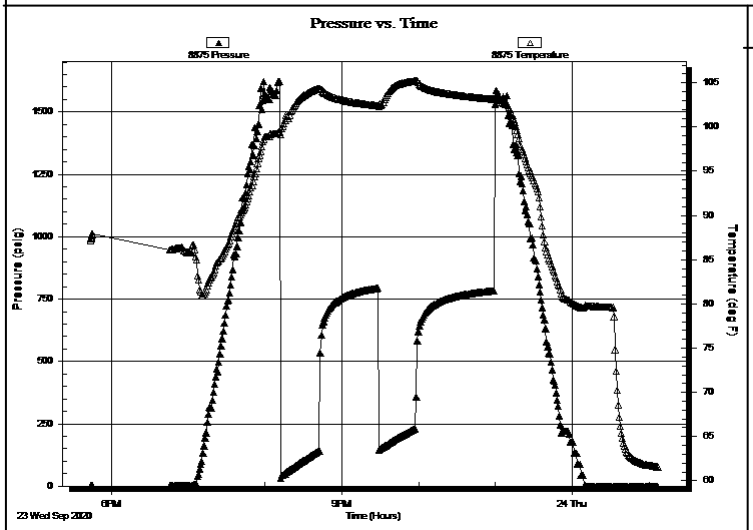
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8875 **Inside**

Press@RunDepth: psig @ 3295.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 17:44:01 End Time: 01:07:07

Capacity: psig
Last Calib.: 2020.09.24
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Weak to Strong 13 min; Built to 20"
45-ISI-No Return
30-FF-Weak to Strong 18 min; Built to 13"
60-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
440.00	MW 20%M 80%W	5.96
1.00	Clean Oil 100%O	0.01

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:11:52
Time Test Ended: 01:07:07

Test Type: Conventional Straddle (Reset)
Tester: Spencer J Staab
Unit No: 84

Interval: 3294.00 ft (KB) To 3327.00 ft (KB) (TVD)
Total Depth: 3682.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

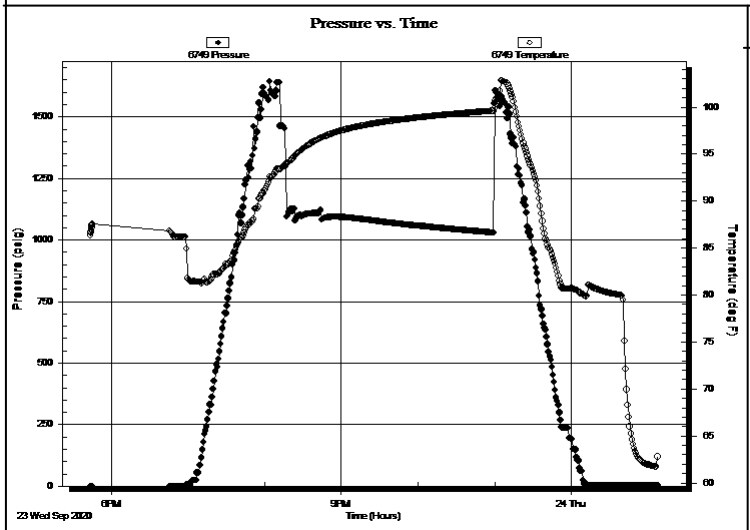
Reference Elevations: 2140.00 ft (KB)
2132.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6749 **Below (Straddle)**

Press@RunDepth: psig @ 3331.00 ft (KB)
Start Date: 2020.09.23 End Date: 2020.09.24
Start Time: 17:44:01 End Time: 01:07:47

Capacity: psig
Last Calib.: 2020.09.24
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-Weak to Strong 13 min; Built to 20"
45-ISI-No Return
30-FF-Weak to Strong 18 min; Built to 13"
60-FSI-No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
440.00	MW 20%M 80%W	5.96
1.00	Clean Oil 100%O	0.01

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

Tool Information

Drill Pipe:	Length:	3260.00 ft	Diameter:	3.82 inches	Volume:	46.21 bbl	Tool Weight:		2200.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75 inches	Volume:	- bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		64000.00 lb
					Total Volume:	- bbl	Tool Chased		ft
Drill Pipe Above KB:		23.00 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		3294.00 ft						Final	61000.00 lb
Depth to Bottom Packer:		3683.00 ft							
Interval betw een Packers:		389.00 ft							
Tool Length:		416.00 ft							
Number of Packers:		1	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3268.00		
Change Over Sub	1.00			3269.00		
Shut In Tool	5.00			3274.00		
Hydraulic tool	5.00		Fluid	3279.00		
Gap Sub	3.00			3282.00		
Safety Joint	3.00			3285.00		
Packer	5.00			3290.00	27.00	Bottom Of Top Packer
Packer	4.00			3294.00		
Stubb	1.00			3295.00		
Recorder	0.00	6838	Inside	3295.00		
Recorder	0.00	8875	Inside	3295.00		
Perforations	27.00			3322.00		
Change Over Sub	1.00			3323.00		
Top S. Packer	4.00			3327.00		
packer	1.00			3328.00		
Stubb	1.00			3329.00		
Perforations	1.00			3330.00		
Change Over Sub	1.00			3331.00		
Recorder	0.00	6749	Below	3331.00		
Drill Pipe	348.00			3679.00		
Change Over Sub	1.00			3680.00		
Bullnose	3.00			3683.00	389.00	Bottom Packers & Anchor
Total Tool Length:	**416.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar

PO Box 1120
Hays KS 67601+1120

ATTN: Jeff Lawler

20-9s-19w Rooks,KS

COP Unit #1

Job Ticket: 67431 **DST#: 5**

Test Start: 2020.09.23 @ 17:44:00

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:	70000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

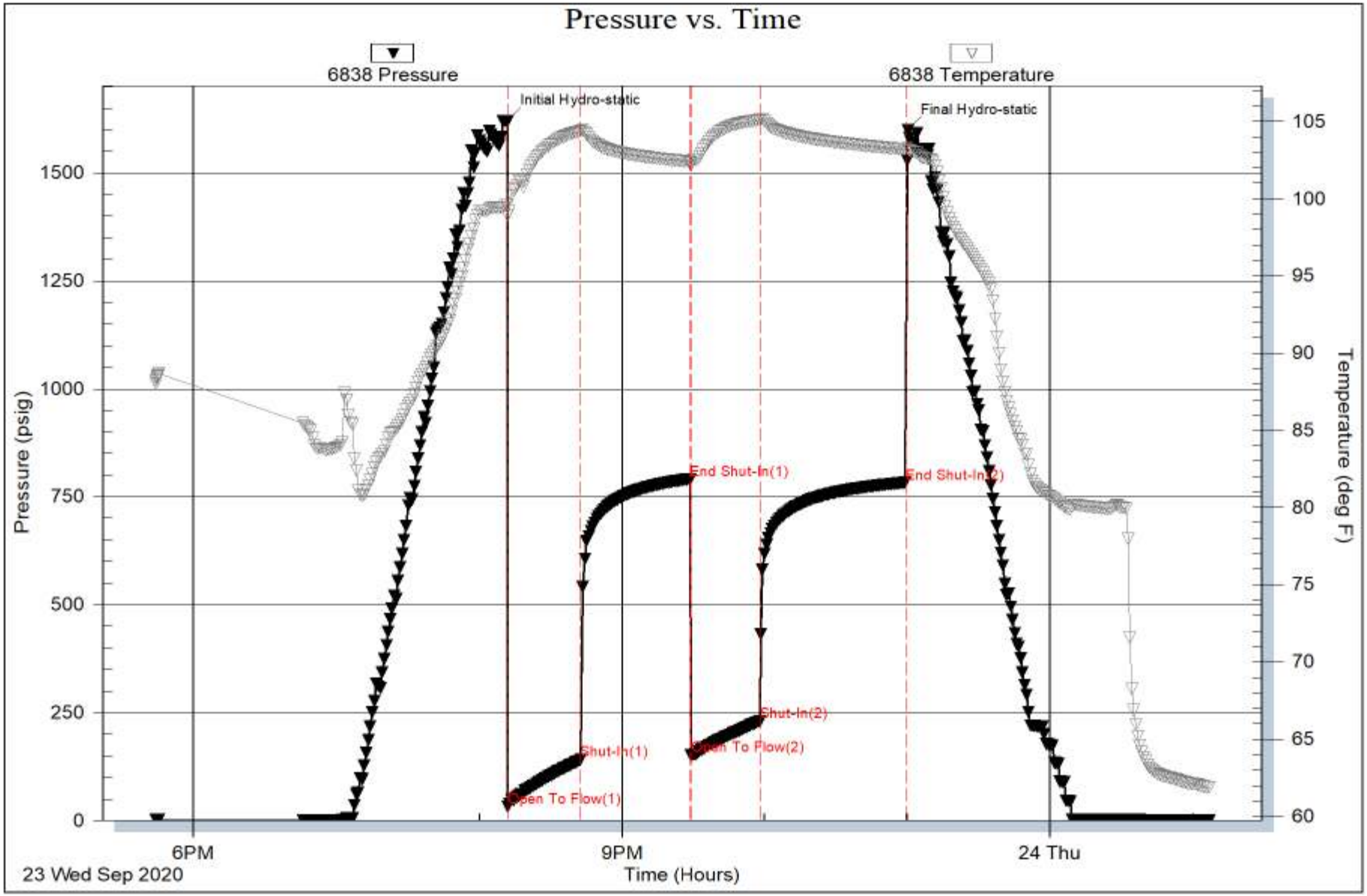
Length ft	Description	Volume bbl
440.00	MW 20%M 80%W	5.959
1.00	Clean Oil 100%O	0.014

Total Length: 441.00 ft Total Volume: 5.973 bbl

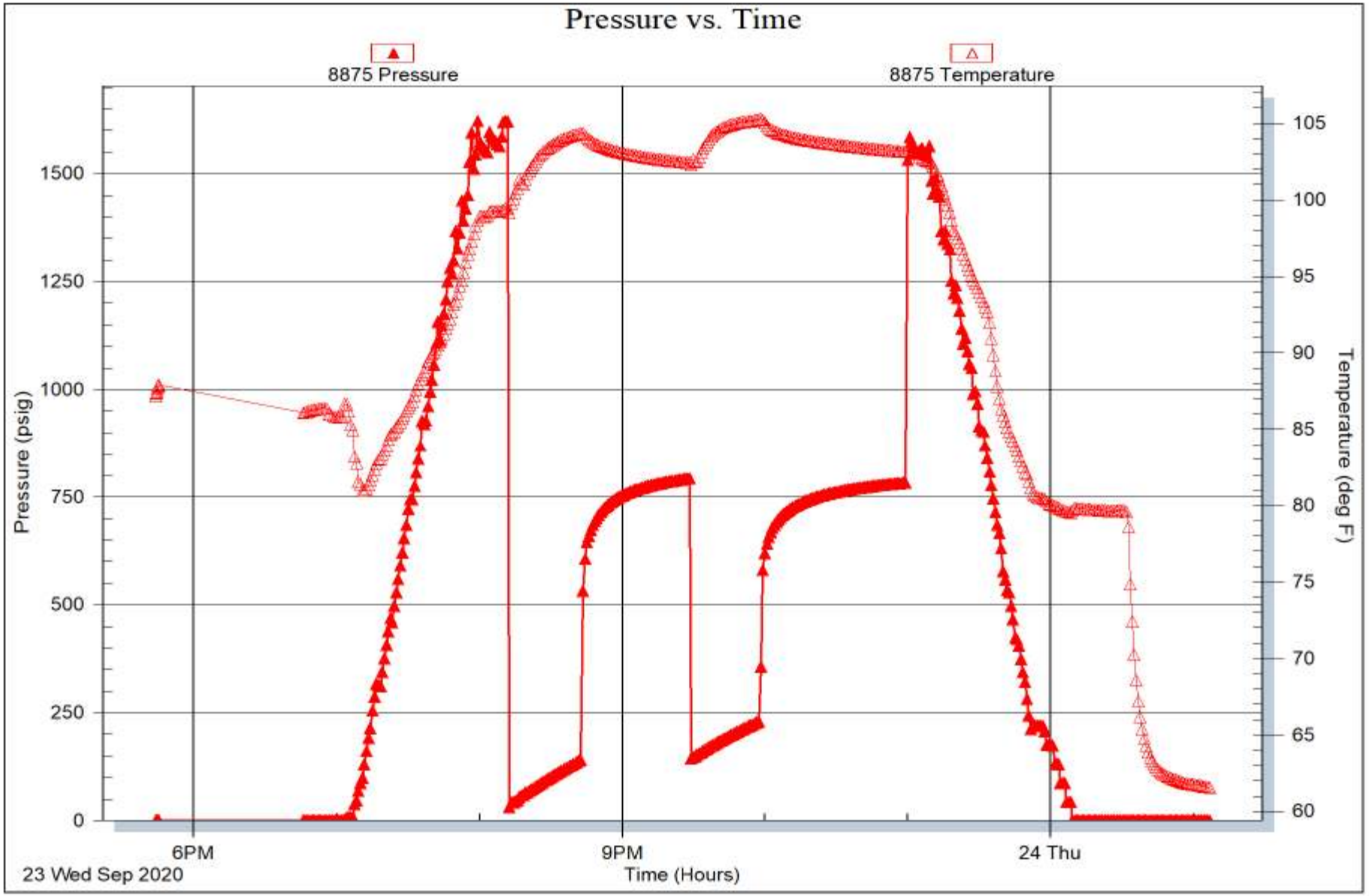
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: 4#LCM
RW=.129@61F

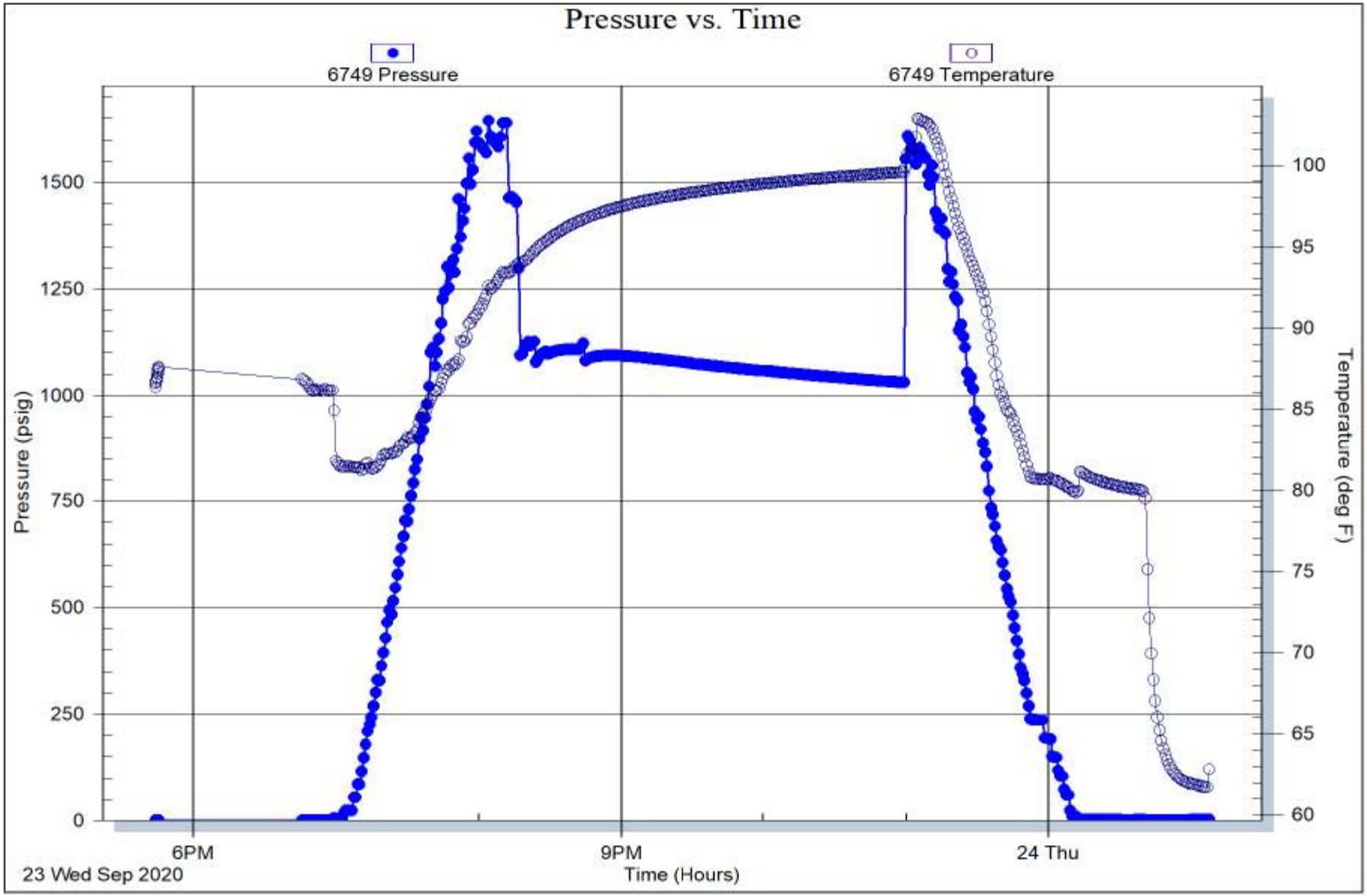

Pressure vs. Time
6838 Pressure
6838 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Shut-In(2)
Open To Flow(1)
Open To Flow(2)
Pressure (psig)
Temperature (deg F)
1500
1250
1000
750
500
250
0
105
100
95
90
85
80
75
70
65
60
6PM
9PM
24 Thu
23 Wed Sep 2020
Time (Hours)

Serial #: 8875 **Inside** Jaspar COP Unit #1 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 67431 Printed: 2020.09.24 @ 08:53:47

Serial #: 6749 Below (Straddle) COP Unit #1 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 67431 Printed: 2020.09.24 @ 08:53:47

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket 66400

NO.

Well Name & No. COP Unit #1 Test No. 1 Date 09/21/2020

Company Jspar Elevation 2140 KB 2132 GL

Address PO Box 1120 Hays Ks 67601+1120

Co. Rep / Geo. Jeff Lawler Rig Discovery #4

Location: Sec. 20 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3536'-3605' Zone Tested Arbuckle

Anchor Length 69' Drill Pipe Run 3483' Mud Wt. 8.7

Top Packer Depth 3531' Drill Collars Run 30' Vis 56

Bottom Packer Depth 3536' Wt. Pipe Run — WL 8.4

Total Depth 3605 Chlorides 1500 ppm System LCM 2#

Blow Description IF- Weak; Built to 3/4"; Died to 1/2"

ISI- No Return

FF- No Blow

FSI- No Return

Rec 29	Feet of VSOCM	%gas 2	%oil	%water 98	%mud		
Rec 1	Feet of CO	%gas 100	%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 30 BHT 100° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1718	☒ Test 1200	T-On Location 09:56	
(B) First Initial Flow 32	☐ Jars	T-Started 12:51	
(C) First Final Flow 32	☐ Safety Joint	T-Open 15:10	
(D) Initial Shut-In 122	☐ Circ Sub	T-Pulled 17:10	
(E) Second Initial Flow 36	☐ Hourly Standby	T-Out 19:02	
(F) Second Final Flow 36	☒ Mileage 76	Comments	
(G) Final Shut-In 91	☐ Sampler		
(H) Final Hydrostatic 1678	☐ Straddle	☒ EM Tool 350	
	☐ Shale Packer	☐ Ruined Shale Packer	
Initial Open 30	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In 30	☐ Extra Recorder	☐ Extra Copies	
Final Flow 30	☐ Day Standby	Sub Total 0	
Final Shut-In 30	☐ Accessibility	Total 1276	
	Sub Total 1276	MP/DST Disc't	

Approved By Our Representative Thanks!

785-259-0056

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 67428

Well Name & No. COP Unit #1 Test No. 2 Date 09/21/2020

Company Jaspar Elevation 2140 KB 2132 GL

Address PO BOX 1120 Hays Ks 67601 +1120

Co. Rep / Geo. Jeff Lawler Rig Discovery #4

Location: Sec. 20 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3496 - 3605 Zone Tested LKC J - Arbuckle

Anchor Length 109' Drill Pipe Run 3452' Mud Wt. 8.9

Top Packer Depth 3491' Drill Collars Run 30 Vis 54

Bottom Packer Depth 3496' Wt. Pipe Run — WL 8.8

Total Depth 3605' Chlorides 1500 ppm System LCM 5#

Blow Description IF- Weak; Built to ½"

ISI- No Return

FF- No Blow; Flushed; Surge died after 5 min

FSI- No Return

Rec 20' Feet of Mud %gas %oil %water 100 %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 20' BHT 103° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1710	☒ Test	1200	T-On Location	19:02
(B) First Initial Flow	33	☐ Jars		T-Started	19:14
(C) First Final Flow	35	☐ Safety Joint		T-Open	21:01
(D) Initial Shut-In	251	☐ Circ Sub		T-Pulled	23:01
(E) Second Initial Flow	34	☐ Hourly Standby		T-Out	00:52 09/22/2020
(F) Second Final Flow	40	☐ Mileage		Comments	
(G) Final Shut-In	246	☐ Sampler			
(H) Final Hydrostatic	1662	☐ Straddle		☒ EM Tool	350
		☐ Shale Packer		☐ Ruined Shale Packer	
Initial Open	30	☐ Extra Packer		☐ Ruined Packer	
Initial Shut-In	30	☐ Extra Recorder		☐ Extra Copies	
Final Flow	30	☐ Day Standby		Sub Total	0
Final Shut-In	30	☐ Accessibility		Total	1200
		Sub Total	1200	MP/DST Disc't	

Approved By ____ Our Representative ____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 67429

Well Name & No. COP Unit #1 Test No. 3 Date 09/22/2020

Company Jaspar Elevation 2140 KB 2132 GL

Address PO Box 1120 Hays Ks 67601 + 1120

Co. Rep / Geo. Jeff Lowler Rig Discovery #4

Location: Sec. 20 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3606'-3618' Zone Tested Arbuckle

Anchor Length 12' Drill Pipe Run 3579' Mud Wt. 9.0

Top Packer Depth 3601' Drill Collars Run 30 Vis 54

Bottom Packer Depth 3606' Wt. Pipe Run — WL 8.4

Total Depth 3618' Chlorides 1500 ppm System LCM 5#

Blow Description IF- Weak; Built to ½"

ISI- No Return

FF- No Blow; Flushed tool; No help

FSI- No Return

Rec 5'	Feet of OSM	%gas	%oil	%water 100	%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 5' BHT — Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1757	☒ Test 1200	T-On Location 06:58	
(B) First Initial Flow 22	☐ Jars	T-Started 07:44	
(C) First Final Flow 20	☐ Safety Joint	T-Open 09:32	
(D) Initial Shut-In 67	☐ Circ Sub	T-Pulled 11:32	
(E) Second Initial Flow 21	☐ Hourly Standby	T-Out 13:10	
(F) Second Final Flow 21	☒ Mileage 76R7 76	Comments	
(G) Final Shut-In 46	☐ Sampler		
(H) Final Hydrostatic 1713	☐ Straddle	☒ EM Tool 350 NS	
	☐ Shale Packer	☐ Ruined Shale Packer	
Initial Open 15	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In 30	☐ Extra Recorder	☐ Extra Copies	
Final Flow 30	☐ Day Standby	Sub Total 0	
Final Shut-In 45	☐ Accessibility	Total 1276	
	Sub Total 1276	MP/DST Disc't	

Approved By Our Representative Jeff Lowler Thanks!

785-259-0056

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 67430

Well Name & No. COP Unit #1 Test No. 4 Date 09/22/2020

Company Jaspar Elevation 2140 KB 2132 GL

Address PO BOX 1120 Hays Ks 67601+1120

Co. Rep / Geo. Jeff Lawler Rig Discovery #4

Location: Sec. 20 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3616' - 3628' Zone Tested Arbuckle

Anchor Length 12' Drill Pipe Run 3579' Mud Wt. 9.0

Top Packer Depth 3611' Drill Collars Run 30 Vis 54

Bottom Packer Depth 3616' Wt. Pipe Run WL 8.4

Total Depth 3628' Chlorides 1500 ppm System LCM 5#

Blow Description IF- Weak Surface
ISI- No Return
FF- No Blow; Flushed; No help
FSI- No Return

Rec 5'	Feet of OSM	%gas	%oil	%water 100	%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 5' BHT 102° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	1769	☒ Test	1200	T-On Location	20:18
(B) First Initial Flow	28	☐ Jars		T-Started	20:34
(C) First Final Flow	24	☐ Safety Joint		T-Open	22:38
(D) Initial Shut-In	31	☐ Circ Sub		T-Pulled	00:38 09/23/2020
(E) Second Initial Flow	24	☐ Hourly Standby		T-Out	02:18
(F) Second Final Flow	28	☒ Mileage	76R7 76	Comments	
(G) Final Shut-In	37	☐ Sampler			
(H) Final Hydrostatic	1743	☐ Straddle		☒ EM Tool	350
		☐ Shale Packer		☐ Ruined Shale Packer	
Initial Open	30	☐ Extra Packer		☐ Ruined Packer	
Initial Shut-In	30	☐ Extra Recorder		☐ Extra Copies	
Final Flow	30	☐ Day Standby		Sub Total	0
Final Shut-In	30	☐ Accessibility		Total	1276
		Sub Total	1276	MP/DST Disc't	

Approved By Our Representative Jeff Lawler

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

785-259-0856

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 67431

Well Name & No. COP Unit #1 Test No. 5 Date 09/23/2020

Company Jaspar Elevation 2140 KB 2132 GL

Address PO BOX 1120 Hays Ks 67601+1120

Co. Rep / Geo. Jeff Lawler Rig Discovery #4

Location: Sec. 26 Twp 9s Rge. 19w Co. Rooks State Ks

Interval Tested 3294' - 3327' Zone Tested Toronto

Anchor Length 33' 355' tail Drill Pipe Run 3260' Mud Wt. 9.0

Top Packer Depth 3294' Drill Collars Run 30 Vis 53

Bottom Packer Depth 3327' Wt. Pipe Run — WL 8.4

Total Depth 3682' Chlorides 1500 ppm System LCM 4#

Blow Description IF- Weak to Strong 13 min; Built to 20"

ISI- No Return

FF- Weak to Strong 18 mins; Built to 13"

FSI- No Return

Rec 440'	Feet of MW	%gas	%oil 80	%water 20	%mud	
Rec 1	Feet of Clean Oil	%gas 100	%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 441' BHT 103° Gravity — API RW .129 @ 61 °F Chlorides 70,000 ppm

(A) Initial Hydrostatic 1620	☒ Test 1200	T-On Location 16:15	
(B) First Initial Flow 32	☐ Jars	T-Started 17:44	
(C) First Final Flow 141	☐ Safety Joint	T-Open 20:10	
(D) Initial Shut-In 790	☐ Circ Sub	T-Pulled 22:55	
(E) Second Initial Flow 152	☐ Hourly Standby	T-Out 01:05 09/24/2020	
(F) Second Final Flow 230	☒ Mileage 76R7 76	Comments Loaded after test	
(G) Final Shut-In 781	☐ Sampler		
(H) Final Hydrostatic 1598	☒ Straddle 600	☒ EM Tool 350 NS	
	☐ Shale Packer	☐ Ruined Shale Packer	
Initial Open 30	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In 45	☐ Extra Recorder	☐ Extra Copies	
Final Flow 30	☐ Day Standby	Sub Total 0	
Final Shut-In 60	☐ Accessibility	Total 1876	
	Sub Total 1876	MP/DST Disc't	

Approved By _____ Our Representative Josh Stoab Thanks

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

785-259-0056

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 | Home Office P.O. Box 32 Russell, KS 67665 | No. 1398

Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 9-16-20	20	9	19	Rooks	KS		1:30pm

Location Zurich 1N 1 1/2W Vinto

Lease C O P Unit	Well No. 1	Owner	
Contractor Discovery #4		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job Surface			
Hole Size 12 1/4	T.D. 223	Charge To Jaspar	
Csg. 8 5/8	Depth 222	Street	
Tbg. Size	Depth	City	State
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg. 10'	Shoe Joint	Cement Amount Ordered 160 80/20 3%cc 2%Gel	
Meas Line	Displace 13 BBL		

EQUIPMENT

	No.		
Pumptrk	20	Cementer	Greg
		Helper	
Bulktrk	No.	Driver	Nick
		Driver	
Bulktrk	No. 9	Driver	Tom
		Driver	

Common	128
Poz. Mix	32
Gel.	3
Calcium	6
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	169
Mileage	

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8 5/8 on bottom Est Circulation

Mix 160sk + Displace

Cement Circulated!

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	33
Tax	
Discount	
Total Charge	

X Signature [signature]

Thanks

DEFINITIONS: In these terms and conditions, "Quality" shall mean Quality Oilwell Cementing, Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

– TERMS: Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "QUALITY" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "QUALITY," refunded directly to "CUSTOMER." For purposes of this paragraph, QUALITY and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

– ATTORNEY FEES: In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

– PRICES AND TAXES: All merchandise listed in "QUALITY'S" current price shall schedule are F.O.B. QUALITY'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by QUALITY shall be added to the quoted prices charged to CUSTOMER.

– TOWING CHARGES: QUALITY will make a reasonable attempt to get to and from each job site using its own equipment. Should QUALITY be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by QUALITY, will be charged to and paid by CUSTOMER.

– PREPARATION CHARGES: If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay QUALITY for the expenses incurred by QUALITY as a result of the cancellation.

– DEADHAUL, CHARGES: Unless otherwise specified on the front of this Contract, a deadhaul charges as set forth in QUALITY'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

– SERVICE CONDITIONS AND LIABILITIES: 1. QUALITY carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond QUALITY'S control, QUALITY shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless QUALITY, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

3. QUALITY does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

WARRANTIES: 1. QUALITY warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. QUALITY'S obligation under this warranty is expressly limited to repair replacement, or allowance for credit, at its option, for any merchandise which is determined by QUALITY to be defective. THIS IS THE SOLE WARRANTY OF QUALITY AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and QUALITY shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be constructed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by QUALITY or any interpretation of test, meter readings, chart information, analysis or research, or recommendations made by QUALITY, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of QUALITY or its employees in the preparation or furnishing of such facts, information or data. (C) Work done by QUALITY shall be under the direct supervision and control of the CUSTOMER or his agent and QUALITY will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071 Home Office P.O. Box 32 Russell, KS 67665 No. 2100

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-24-20	20	9	19	Rooks	KS		8:00AM

Location Zurich 1N 1½W

Lease Cop Unit Well No. 1

Contractor Discovery #4

Type Job Rotary Plug

Hole Size 7 7/8 T.D. 3680

Csg. Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

EQUIPMENT

Pumptrk 20 No. Cementer Helper Craig

Bulktrk No. Driver Driver

Bulktrk 21 No. Driver Driver Tom

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30SK

Mouse Hole 15SK

Centralizers

Baskets

D/V or Port Collar

1st 3602 50SK

2nd 1560 50SK

3rd 880 100SK

4th 270 50SK

5th 40' 10SK

Owner

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To Jasper

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 305 60/40 4% Gel ¼# Flo

Common 183

Poz. Mix 122

Gel. 11

Calcium

Hulls

Salt

Flowseal 75#

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 316

Mileage

FLOAT EQUIPMENT 8⅝ Dry Hole Plug

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge Plug

Mileage 33

Tax

Discount

Total Charge

X Signature Dale Gardner

GENERAL TERMS AND CONDITIONS

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– ATTORNEY FEES: In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

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(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

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2. More specifically:

(A) Nothing in this contract shall be constructed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

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