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 # 5259
Name: Mai Oil Operations, Inc.
Address 1: 8411 PRESTON RD STE 800
Address 2:
City: DALLAS State: TX Zip: 75225 + 5520
Contact Person: Brent Homeier
Phone: (214) 219-8883
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Jim Musgrove
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 #:

6/29/2019	7/07/2019	7/22/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-051-26956-00-00
Spot Description:
NW - SE - NE - SW Sec. 5 Twp. 14 S. R. 17 ☐ East ☑ West
1840 Feet from ☐ North / ☑ South Line of Section
2260 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: Ellis
Lease Name: PFEIFER Well #: 3
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 2020 Kelly Bushing: 2029
Total Vertical Depth: 3650 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1226 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: 88000 ppm Fluid volume: 80 bbls
Dewatering method used: Evaporated
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: 08/06/2019
☐ **Confidential Release Date:** 08/05/2021
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 08/07/2019

Page Two

Operator Name: Mai Oil Operations, Inc. Lease Name: PFEIFER Well #: 3

Sec. 5 Twp. 14 S. R. 17 ☐ East ☑ West County: Ellis

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 ☑ Yes ☐ No
(Attach Additional Sheets)

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:

CDNL
DIL
Micro

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

Name	Top	Datum
Anhydrite	1225	804
Heebner	3267	-1238
Toronto	3294	-1255
Lansing	3309	-1280
Base KC	3526	-1497
Arbucle	3551	-1522

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	20	1226	60/40 POZ	450	4%CC,2%gel
Production	7.875	5.5	14	3648	60/40POZ	160	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: 8/5/2019

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: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
3575	3578

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)*
4	3575	3578			150gal 15% MCA

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	Mai Oil Operations, Inc.
Well Name	PFEIFER 3
Doc ID	1467805

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	20	1226	60/40 POZ	450	4%CC,2% gel
Production	7.875	5.5	14	3648	60/40POZ	160	2%gel

JAMES C. MUSGROVE
Petroleum Geologist, LLC
212 Main Street
P.O. Box 215
Claflin, KS 67525
Office (620) 588-4250 Res. Claflin (620) 786-0839

Mai Oil Operations Inc.
Pfeifer #3
NW-SE-NE-SW (1840' FSL & 2260' FWL)
Section 5-14s-17w
Ellis County, Kansas

5 ½" Production Casing Set

.**Contractor:** Southwind Drilling Co. (rig #3)

Commenced: June 28, 2019

Completed: July 6, 2019

Elevation: 2029' K.B., 2027' D.F., 2020' G.L.

Casing program: Surface; 8 5/8" @ 1226
Production, 5 ½" @ 3647'

Sample: Samples saved and examined 3000' to the Rotary Total Depth.

Drilling time: One (1) foot drilling time recorded and kept 3000' to the Rotary Total Depth.

Measurements: All depths measured from the Kelly Bushing.

Drill Stem Tests: There were four (4) Drill Stem Tests ran by Trilobite Testing Co.

Electric Log: By Eli; Dual Induction, Compensated Density/Neutron and Micro

Formation	Log Depth	Sub-Sea Datum
Anhydrite	1223	+806
Base Anhydrite	1261	+768
Heebner	3267	-1238
Toronto	3284	-1255
Lansing	3310	-1281
Base Kansas City	3527	-1498
Arbuckle	3551	-1522
Rotary Total Depth	3650	-1621
Log Total Depth	3650	-1621

(All tops and zone(s) corrected to Electric Log Measurements)

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

TOPEKA SECTION

3050-3060' Limestone, tan, brown, fossiliferous, poor scattered porosity, trace brown stain; no show of free oil and no odor in fresh samples.

3074-3082' Limestone, tan cream, few fossiliferous, dense.

3086-3094' Limestone, tan, buff, fossiliferous, poorly developed pinpoint porosity, chalky, trace brown stain, no show of free oil and no odor.

3138-3150' Limestone, tan, cream, chalky, poor scattered pinpoint porosity, trace brown, black stain, trace brown flaky (dead) free oil and no odor.

3150-3170' Limestone, tan, slightly dolomitic, trace brown stain,, weak show of free oil and no odor in fresh samples.

3174-3184' Limestone, tan, cream, scattered porosity, trace black stain, no free oil and no odor. Trace white, tan opaque chert.

3197-3217' Limestone, tan, cream, buff scattered pinpoint porosity; trace brown to black stain, no free oil and questionable odor in fresh samples.

TORONTO SECTION

3284-3292' Limestone, tan, cream, slightly chalky, scattered vuggy to pinpoint type porosity, trace brown stain, no free oil and questionable odor in fresh samples.

LANSING SECTION

3311-3320' Limestone, tan, buff, few fossiliferous, scattered pinpoint type porosity, slightly chalky, black stain, dark brown free oil and faint odor in fresh samples.

3322-3328' Limestone, buff, few fossiliferous, poorly developed porosity, chalky, brown stain, show of free oil and strong odor.

Drill Stem Test #1 3288-3360

Times: 15-15-30-30

Blow: Weak

Recovery: 93' mud

Pressures:	**ISIP**	**373**	**psi**
	FSIP	**379**	**psi**
	IFP	**35-48**	**psi**
	FFP	**49-56**	**psi**
	HSH	**1618-1552**	**psi**

3334-3342' Limestone, tan, gray, dense, poor visible porosity, few cherty; trace black stain, no free oil and no odor.

3352-3358' Limestone, tan, brown, poorly developed porosity, brown stain; show of free oil and strong odor in fresh samples.

Drill Stem Test #2 3342-3408

Times: **30-45-45-60**

Blow: **Weak to fair**

Recovery: **104' oil cut muddy water**
(10% oil; 40% mud; 50% water)

Pressures:			
	ISIP	**428**	**psi**
	FSIP	**408**	**psi**
	IFP	**14-34**	**psi**
	FFP	**14-34**	**psi**
	HSH	**1639-1599**	**psi**

3412-3430' Limestone, white, finely crystalline, few cherty; poor porosity, no shows; plus white chalk.

3444-3454' Limestone, cream, tan, fair pinpoint porosity, dark brown stain, show of free oil and faint odor samples broken.

3461-3480' Limestone, white, tan, scattered porosity, dark brown and black stain and saturation, show of free oil and faint odor fresh samples.

3481-3490' Limestone, white, tan, buff, few fossiliferous; poor visible porosity; black stain, no free oil and questionable odor.

3505-3520' Limestone, brown, gray, cream, finely crystalline; dense, poor porosity, no shows.

CONGLOMERATE SECTION

3542-3557' Chert; white, boney; trace limestone, brown, gray, cream, finely crystalline, dense in matrix of maroon shales.

ARBUCKLE SECTION

3551-3570' Dolomite, tan, brown; fine to medium crystalline, good inter-crystalline porosity; dark brown stain; show of free oil and fair odor in fresh samples.

Drill Stem Test #3 3503-3570

Times: **30-30-30-30**

Blow: **Strong**

Recovery: **252' gassy oil**
378' gassy muddy oil
(30% gas; 65% oil; 5% mud)
283' muddy oil; trace of water
(70% oil; 5% water; 25% mud)

Pressures:			
	ISIP	**470**	**psi**
	FSIP	**467**	**psi**
	IFP	**114-279**	**psi**
	FFP	**288-365**	**psi**
	HSH	**1781-1673**	**psi**

3570-3575' --Missed Sample--

3575-3582' Dolomite, white, cream, medium crystalline, fair inter-crystalline porosity, brown stain, fair show of free oil and good odor in fresh samples.

3582-3597' Dolomite, brown, tan; sucrosic; scattered pinpoint porosity, brown and golden brown stain, good show of free oil.

Drill Stem Test #4 3575-3597

Times: **30-30-45-45**

Blow: **Strong**

Recovery: **31' oil cut muddy water**
(30% gas; 40% oil; 30% mud)
567' oil and gas cut muddy water
(10% gas; 15% oil; 60% water; 15% mud)
378' muddy water; trace of oil

Pressures:			
	ISIP	**695**	**psi**
	FSIP	**681**	**psi**
	IFP	**212-495**	**psi**
	FFP	**495-635**	**psi**
	HSH	**1810-1704**	**psi**

3600-3610' Dolomite, tan, brown, sucrosic, slightly chalky, scattered pinpoint porosity, brown stain, good show of free oil and good odor in fresh samples.

3610-3625' Dolomite, tan, cream, medium to coarse crystalline, fair inter-crystalline porosity; dark brown stain, show of free oil and strong odor in fresh samples.

3625-3640' Dolomite, tan, cream, medium and coarse crystalline; fair porosity, dark brown stain, show of free oil and no odor in fresh samples.

3640-3650'	Dolomite, white, tan, cream, finely crystalline, dense, poor inter-crystalline porosity, black stain; no free oil and no odor in fresh samples.

Rotary Total Depth: 3650
Log Total Depth: 3650

Recommendations:

5 ½" production casing was set and cemented on the Mai Oil Operations, Inc., Pfeifer #3.

Respectfully yours,

Wyatt Urban
Petroleum Geologist

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations, Inc.**

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

Pfeifer #3

5-14S-17W Ellis,KS

Start Date: 2019.07.04 @ 02:58:00

End Date: 2019.07.04 @ 08:45:00

Job Ticket #: 65939 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2019.07.08 @ 10:39:54

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65939 **DST#: 1**

Test Start: 2019.07.04 @ 02:58:00

GENERAL INFORMATION:

Formation: **LKC A - D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:18:30
Time Test Ended: 08:45:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

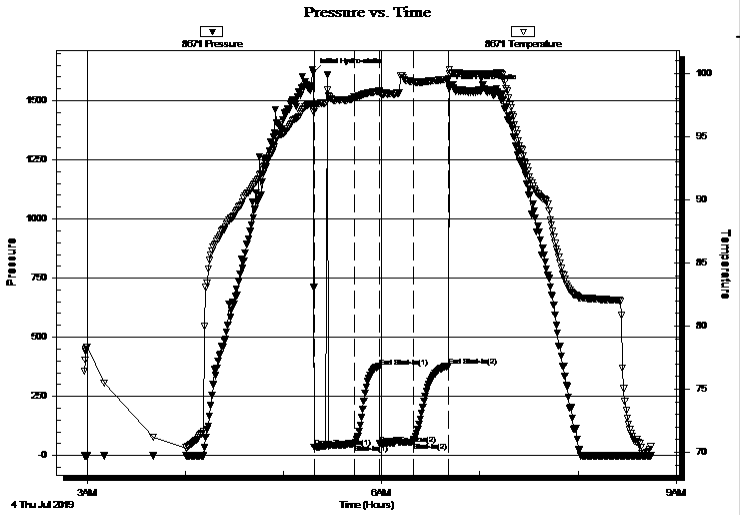
Interval: 3288.00 ft (KB) To 3360.00 ft (KB) (TVD)
Total Depth: 3360.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8671 **Outside**

Press@RunDepth:	56.21 psig @	3289.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.04	End Date:	2019.07.04	Last Calib.:	2019.07.04
Start Time:	02:58:05	End Time:	08:44:59	Time On Btm:	2019.07.04 @ 05:18:00
				Time Off Btm:	2019.07.04 @ 06:41:15

TEST COMMENT:
15 - IFP - Opened Tool chased 10' Flushed tool w eak blow for a few seconds then died
15 - ISI - No Return
20 - FFP - No blow Flushed tool w eak blow a couple seconds then died
20 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1617.63	97.63	Initial Hydro-static
1	35.46	97.16	Open To Flow (1)
26	47.74	98.10	Shut-In(1)
41	372.99	98.61	End Shut-In(1)
41	49.41	98.47	Open To Flow (2)
61	56.21	99.37	Shut-In(2)
83	379.02	99.55	End Shut-In(2)
84	1551.67	100.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
93.00	Mud - 100%m	0.95

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65939 **DST#: 1**

Test Start: 2019.07.04 @ 02:58:00

GENERAL INFORMATION:

Formation: **LKC A - D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:18:30
Time Test Ended: 08:45:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

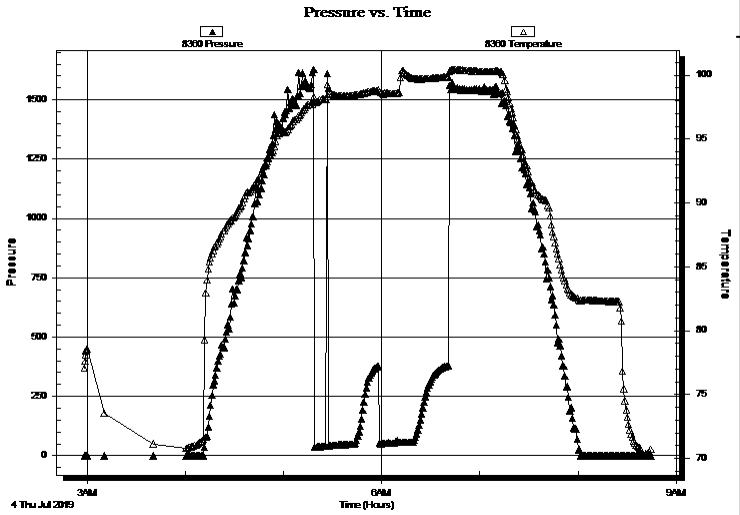
Interval: 3288.00 ft (KB) To 3360.00 ft (KB) (TVD)
Total Depth: 3360.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8360 **Inside**

Press@RunDepth:	psig @	3289.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.04	End Date:	2019.07.04	Last Calib.:	2019.07.04
Start Time:	02:58:05	End Time:	08:44:44	Time On Btm:	
				Time Off Btm:	

TEST COMMENT:
15 - IFP - Opened Tool chased 10' Flushed tool w eak blow for a few seconds then died
15 - ISI - No Return
20 - FFP - No blow Flushed tool w eak blow a couple seconds then died
20 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
93.00	Mud - 100%m	0.95

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65939 **DST#: 1**

Test Start: 2019.07.04 @ 02:58:00

Tool Information

Drill Pipe:	Length:	3290.51 ft	Diameter:	3.25	inches	Volume:	33.76	bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight to Pull Loose:	50000.00 lb
						Total Volume:	33.76	bbl	Tool Chased	10.00 ft
Drill Pipe Above KB:		22.51 ft							String Weight: Initial	30000.00 lb
Depth to Top Packer:		3288.00 ft							Final	30000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		72.00 ft								
Tool Length:		92.00 ft								
Number of Packers:		2	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3273.00		
Hydraulic tool	5.00			3278.00		
Packer	5.00			3283.00	20.00	Bottom Of Top Packer
Packer	5.00			3288.00		
Stubb	1.00			3289.00		
Recorder	0.00	8360	Inside	3289.00		
Recorder	0.00	8671	Outside	3289.00		
perforations	35.00			3324.00		
Change Over Sub	1.00			3325.00		
Drill Pipe	31.00			3356.00		
Change Over Sub	1.00			3357.00		
Bullnose	3.00			3360.00	72.00	Bottom Packers & Anchor
Total Tool Length:	**92.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65939 **DST#: 1**

Test Start: 2019.07.04 @ 02:58:00

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:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.97 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
93.00	Mud - 100%m	0.954

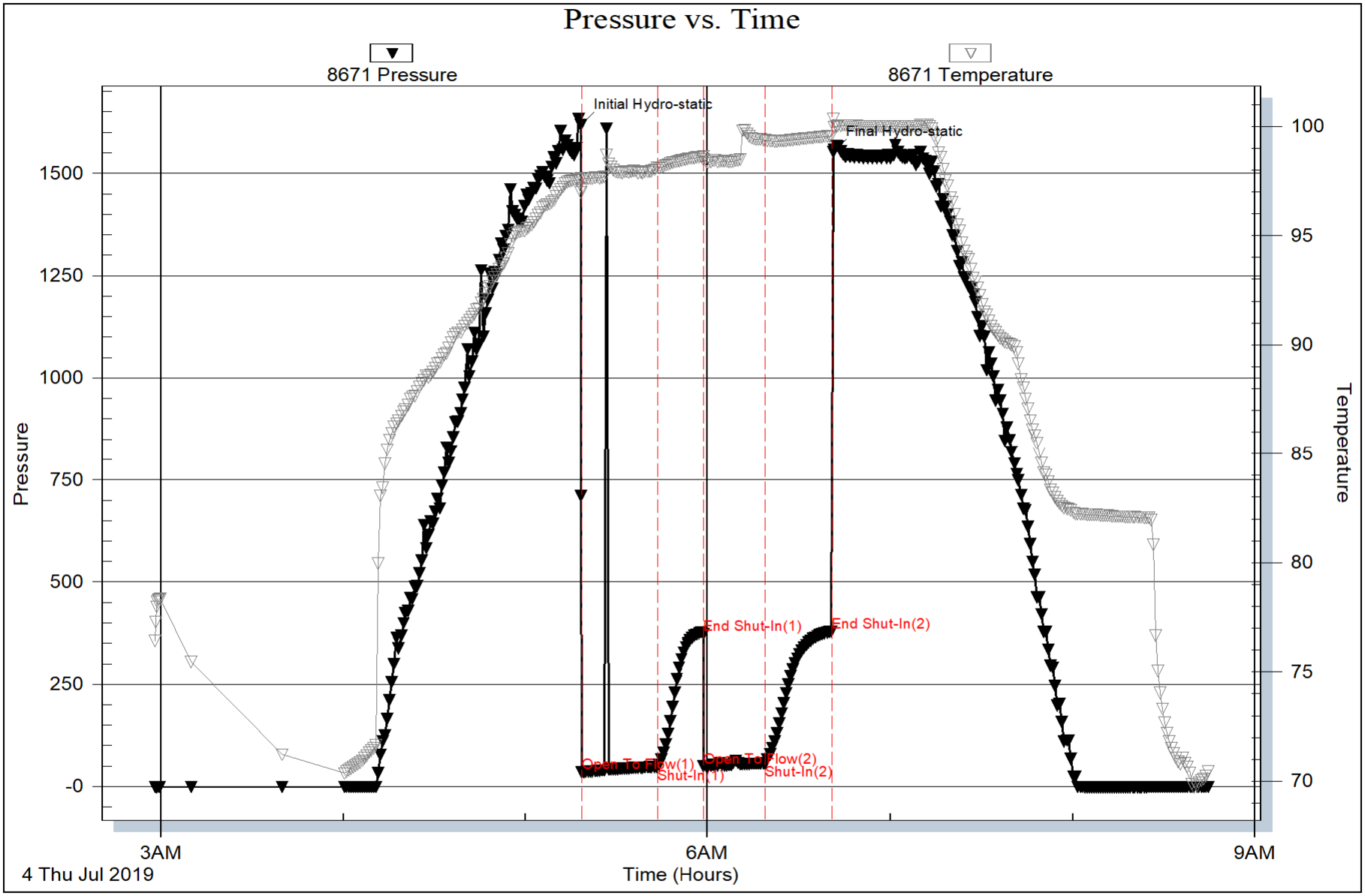
Total Length: 93.00 ft Total Volume: 0.954 bbl

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

Laboratory Name: Laboratory Location:

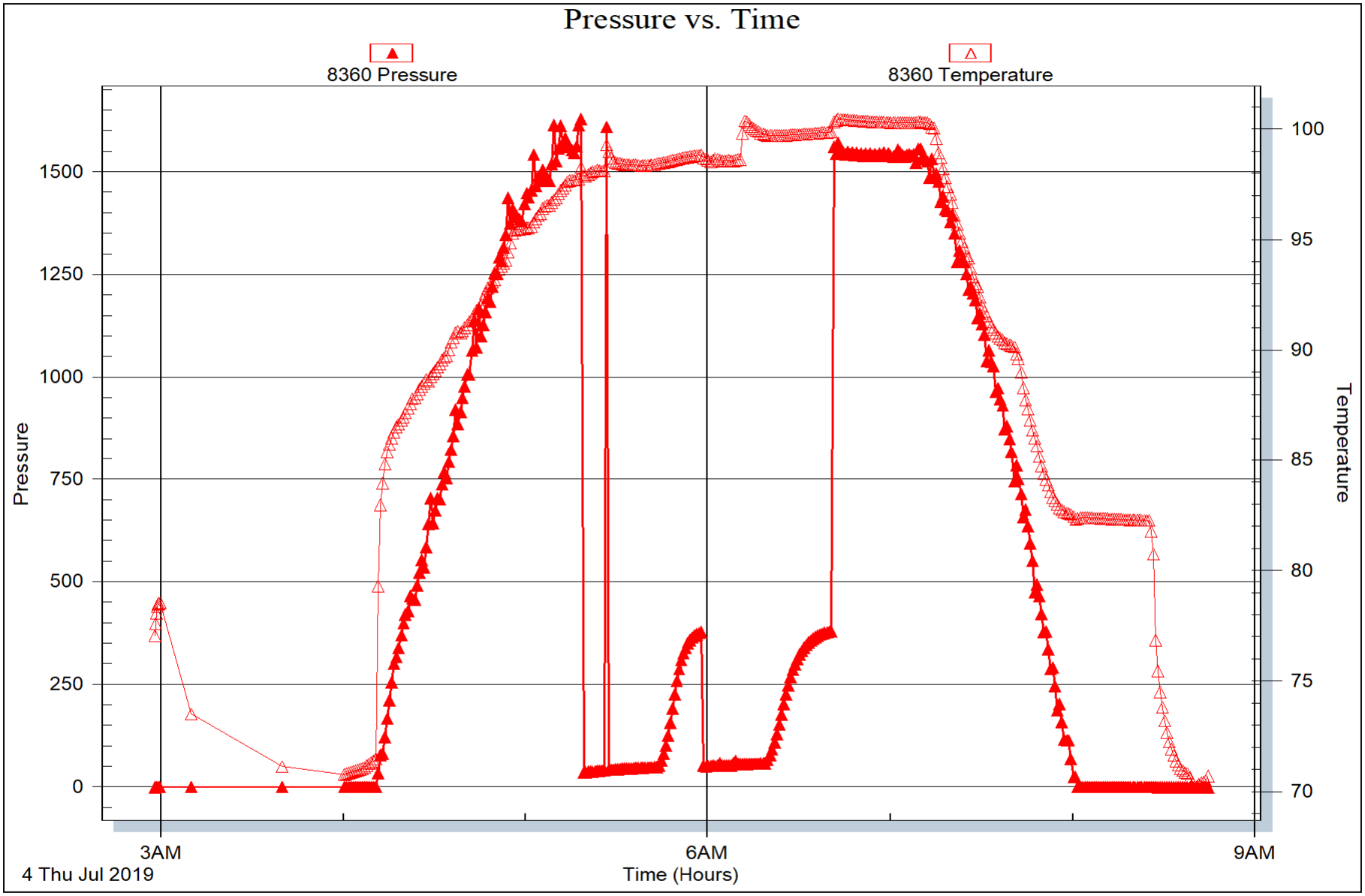
Recovery Comments:

Serial #: 8671 **Outside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65939 Printed: 2019.07.08 @ 10:39:55

Serial #: 8360 **Inside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65939 Printed: 2019.07.08 @ 10:39:55

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations, Inc.**

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

Pfeifer #3

5-14S-17W Ellis,KS

Start Date: 2019.07.04 @ 16:20:00

End Date: 2019.07.04 @ 22:51:30

Job Ticket #: 65940 DST #: 2

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2019.07.08 @ 10:39:27

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65940 **DST#: 2**

Test Start: 2019.07.04 @ 16:20:00

GENERAL INFORMATION:

Formation: **LKC D - F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:13:15
Time Test Ended: 22:51:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

Interval: 3342.00 ft (KB) To 3408.00 ft (KB) (TVD)
Total Depth: 3408.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

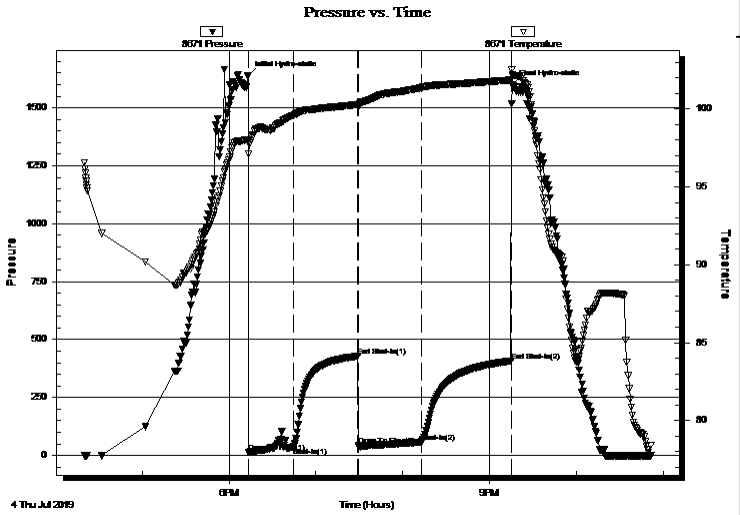
Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8671 **Outside**

Press@RunDepth: 56.97 psig @ 3343.00 ft (KB)
Start Date: 2019.07.04 End Date: 2019.07.04
Start Time: 16:20:05 End Time: 22:51:29

Capacity: 8000.00 psig
Last Calib.: 2019.07.04
Time On Btm: 2019.07.04 @ 18:13:00
Time Off Btm: 2019.07.04 @ 21:15:45

TEST COMMENT:
30 - IFP - Surface blow gradually built up to 4 1/4"
45 - ISI - No Return
45 - FFP - Surface blow built to 4 1/4"
60 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.32	98.03	Initial Hydro-static
1	13.88	97.10	Open To Flow (1)
32	34.42	99.58	Shut-In(1)
76	427.61	100.30	End Shut-In(1)
77	42.48	100.08	Open To Flow (2)
120	56.97	101.39	Shut-In(2)
182	407.59	101.86	End Shut-In(2)
183	1599.37	102.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
104.00	OCMW - 10%o - 40%m - 50%w	1.07

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65940 **DST#: 2**

Test Start: 2019.07.04 @ 16:20:00

GENERAL INFORMATION:

Formation: **LKC D - F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:13:15
Time Test Ended: 22:51:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

Interval: 3342.00 ft (KB) To 3408.00 ft (KB) (TVD)
Total Depth: 3408.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

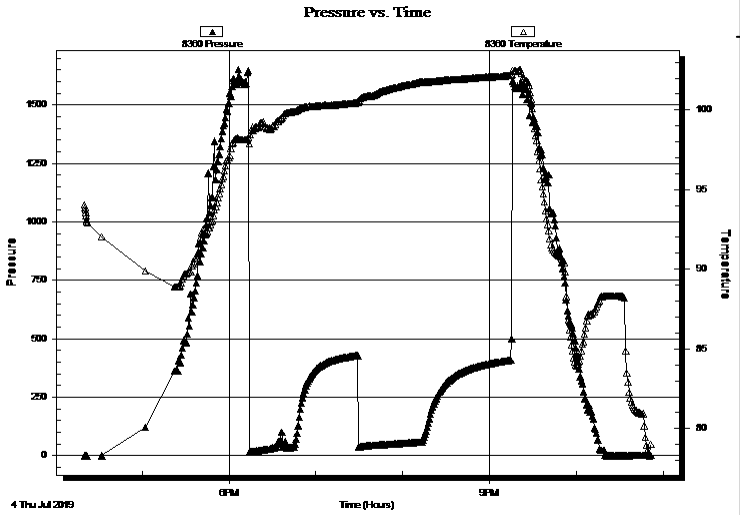
Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8360 **Inside**

Press@RunDepth: psig @ 3343.00 ft (KB)
Start Date: 2019.07.04 End Date: 2019.07.04
Start Time: 16:20:05 End Time: 22:51:29

Capacity: 8000.00 psig
Last Calib.: 2019.07.04
Time On Btm:
Time Off Btm:

TEST COMMENT:
30 - IFP - Surface blow gradually built up to 4 1/4"
45 - ISI - No Return
45 - FFP - Surface blow built to 4 1/4"
60 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
104.00	OCMW - 10%o - 40%m - 50%w	1.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65940 **DST#: 2**

Test Start: 2019.07.04 @ 16:20:00

Tool Information

Drill Pipe:	Length:	3353.44 ft	Diameter:	3.25	inches	Volume:	34.41	bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight to Pull Loose:	48000.00 lb
						Total Volume:	34.41	bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		31.44 ft							String Weight: Initial	32000.00 lb
Depth to Top Packer:		3342.00 ft							Final	33000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		66.00 ft								
Tool Length:		86.00 ft								
Number of Packers:		2	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3327.00		
Hydraulic tool	5.00			3332.00		
Packer	5.00			3337.00	20.00	Bottom Of Top Packer
Packer	5.00			3342.00		
Stubb	1.00			3343.00		
Recorder	0.00	8360	Inside	3343.00		
Recorder	0.00	8671	Outside	3343.00		
perforations	29.00			3372.00		
Change Over Sub	1.00			3373.00		
Drill Pipe	31.00			3404.00		
Change Over Sub	1.00			3405.00		
Bullnose	3.00			3408.00	66.00	Bottom Packers & Anchor
Total Tool Length:	**86.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65940 **DST#: 2**

Test Start: 2019.07.04 @ 16:20:00

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:	9000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
104.00	OCMW - 10%o - 40%m - 50%w	1.067

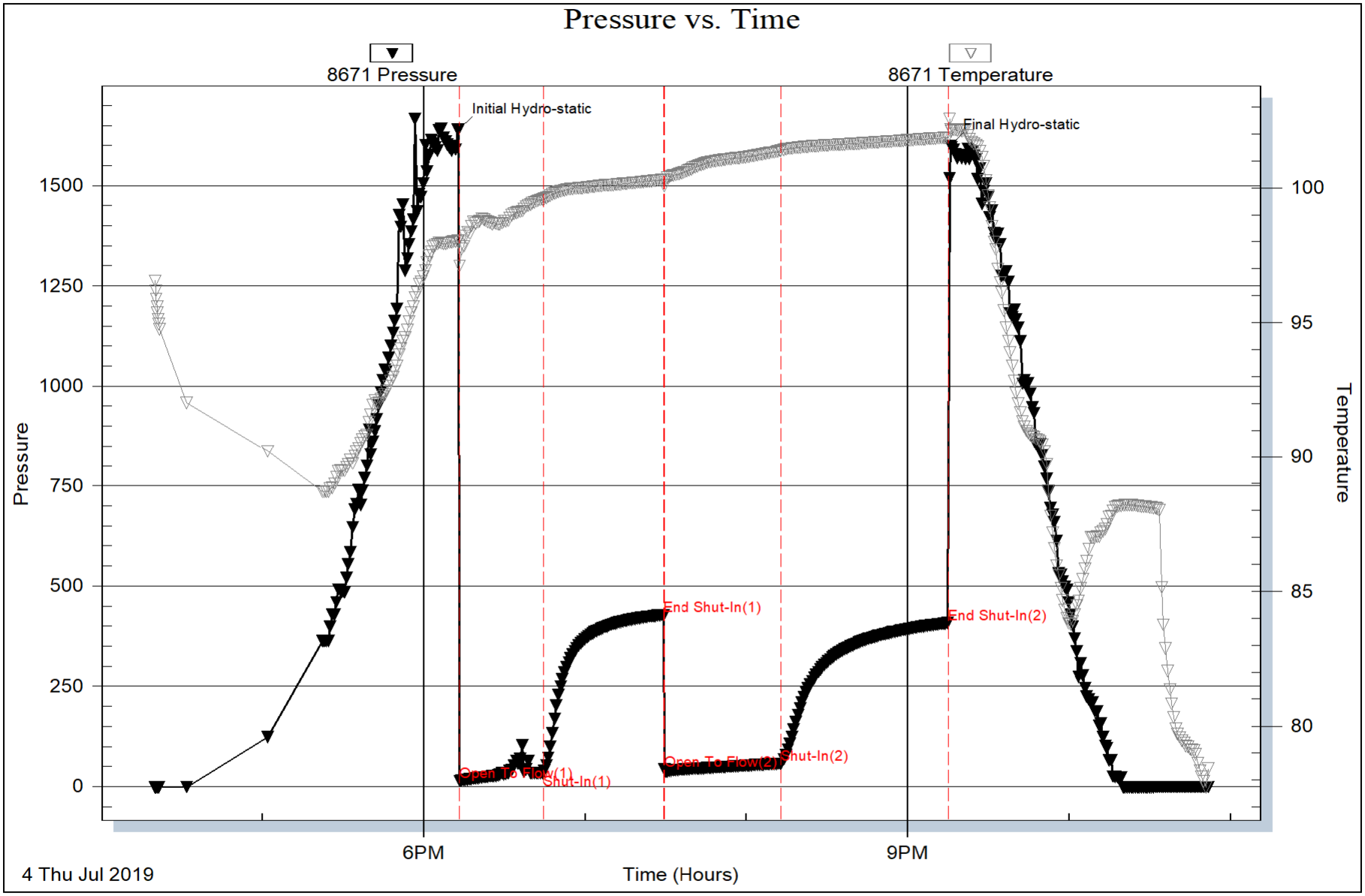
Total Length: 104.00 ft Total Volume: 1.067 bbl

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

Laboratory Name: Laboratory Location:

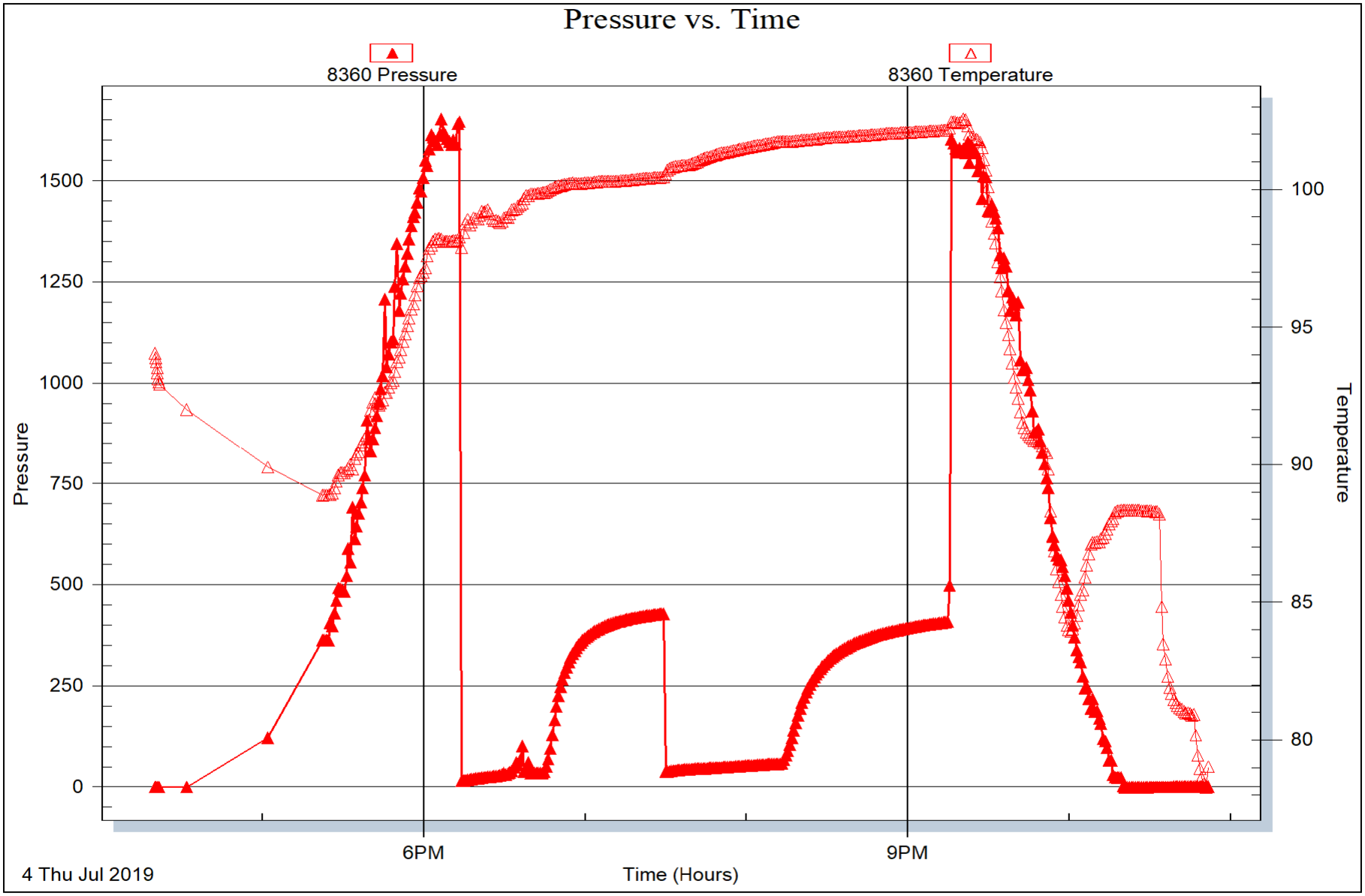
Recovery Comments: resistivity .600 @ 78 deg.

Serial #: 8671 **Outside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65940 Printed: 2019.07.08 @ 10:39:28

Serial #: 8360 **Inside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65940 Printed: 2019.07.08 @ 10:39:28

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations, Inc.**

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

Pfeifer #3

5-14S-17W Ellis,KS

Start Date: 2019.07.05 @ 15:16:00

End Date: 2019.07.05 @ 22:04:15

Job Ticket #: 65941 DST #: 3

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2019.07.08 @ 10:24:02

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65941 **DST#: 3**

Test Start: 2019.07.05 @ 15:16:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:48:30
Time Test Ended: 22:04:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

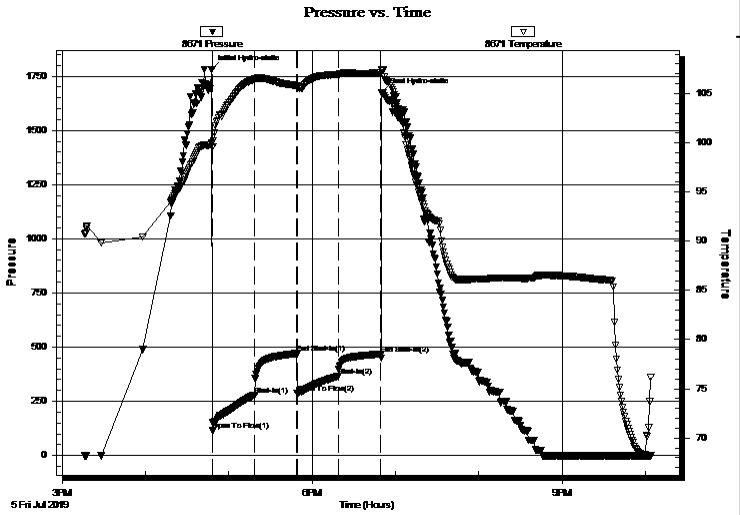
Interval: 3503.00 ft (KB) To 3570.00 ft (KB) (TVD)
Total Depth: 3570.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8671 **Outside**

Press@RunDepth:	365.12 psig @	3504.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.05	End Date:	2019.07.05	Last Calib.:	2019.07.05
Start Time:	15:16:05	End Time:	22:04:14	Time On Btm:	2019.07.05 @ 16:47:45
				Time Off Btm:	2019.07.05 @ 18:50:00

TEST COMMENT:
30 - IFP - Surface blow built to BOB in 2 mins.
30 - ISI - Return started 5 mins. in and built to 3"
30 - FFP - Surface blow built to BOB in 6 mins.
30 - FSI - Return started 10 mins. in and stayed at a w eak blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1781.15	99.95	Initial Hydro-static
1	114.13	99.63	Open To Flow (1)
31	279.18	106.46	Shut-In(1)
61	470.21	105.82	End Shut-In(1)
62	288.07	105.74	Open To Flow (2)
91	365.12	106.94	Shut-In(2)
122	466.93	107.09	End Shut-In(2)
123	1673.23	107.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
283.00	WMO - 5%w - 25%m - 70%o	2.90
378.00	GMO - 5%m - 30%g - 65%o	3.88
252.00	GO - 30%g - 70%o	2.59
0.00	126' - GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65941 **DST#: 3**

Test Start: 2019.07.05 @ 15:16:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:48:30
Time Test Ended: 22:04:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

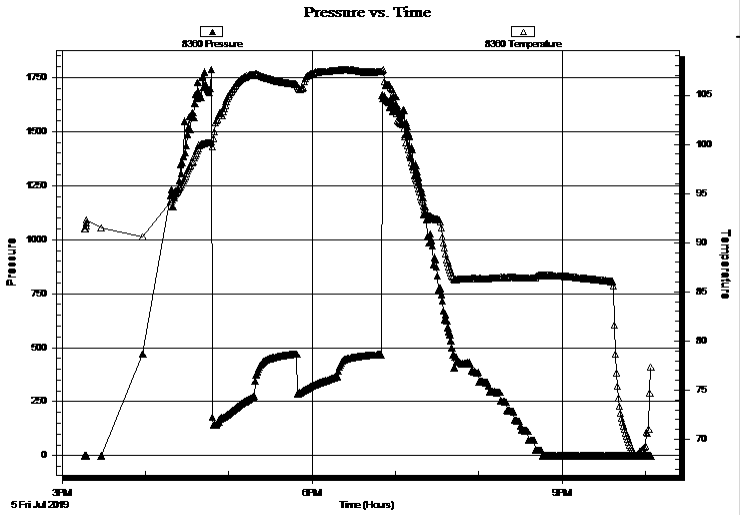
Interval: 3503.00 ft (KB) To 3570.00 ft (KB) (TVD)
Total Depth: 3570.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8360 **Inside**

Press@RunDepth:	psig @	3504.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.05	End Date:	2019.07.05	Last Calib.:	2019.07.05
Start Time:	15:16:05	End Time:	22:04:14	Time On Btm:	
				Time Off Btm:	

TEST COMMENT:
30 - IFP - Surface blow built to BOB in 2 mins.
30 - ISI - Return started 5 mins. in and built to 3"
30 - FFP - Surface blow built to BOB in 6 mins.
30 - FSI - Return started 10 mins. in and stayed at a w eak blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
283.00	WMO - 5%w - 25%m - 70%o	2.90
378.00	GMO - 5%m - 30%g - 65%o	3.88
252.00	GO - 30%g - 70%o	2.59
0.00	126' - GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65941 **DST#: 3**

Test Start: 2019.07.05 @ 15:16:00

Tool Information

Drill Pipe:	Length:	3511.13 ft	Diameter:	3.25	inches	Volume:	36.03	bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight to Pull Loose:	50000.00 lb
						Total Volume:	36.03	bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		28.13 ft							String Weight: Initial	34000.00 lb
Depth to Top Packer:		3503.00 ft							Final	40000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		67.00 ft								
Tool Length:		87.00 ft								
Number of Packers:		2	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3488.00		
Hydraulic tool	5.00			3493.00		
Packer	5.00			3498.00	20.00	Bottom Of Top Packer
Packer	5.00			3503.00		
Stubb	1.00			3504.00		
Recorder	0.00	8360	Inside	3504.00		
Recorder	0.00	8671	Outside	3504.00		
perforations	30.00			3534.00		
Change Over Sub	1.00			3535.00		
Drill Pipe	31.00			3566.00		
Change Over Sub	1.00			3567.00		
Bullnose	3.00			3570.00	67.00	Bottom Packers & Anchor
Total Tool Length:	**87.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65941 **DST#: 3**

Test Start: 2019.07.05 @ 15:16:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	35 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	46.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
283.00	WMO - 5%w - 25%m - 70%o	2.904
378.00	GMO - 5%m - 30%g - 65%o	3.879
252.00	GO - 30%g - 70%o	2.586
0.00	126' - GIP	0.000

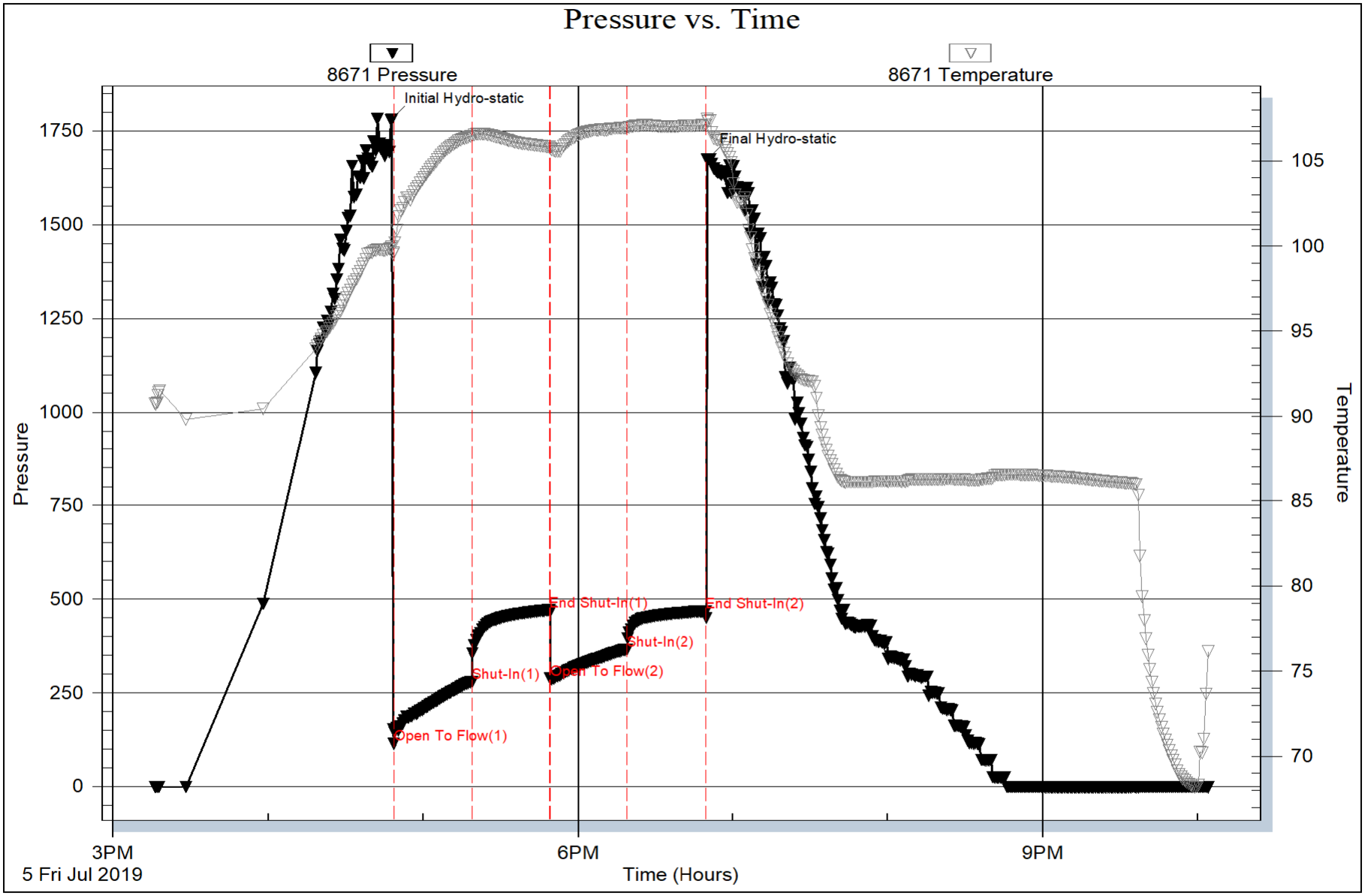
Total Length: 913.00 ft Total Volume: 9.369 bbl

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

Laboratory Name: Laboratory Location:

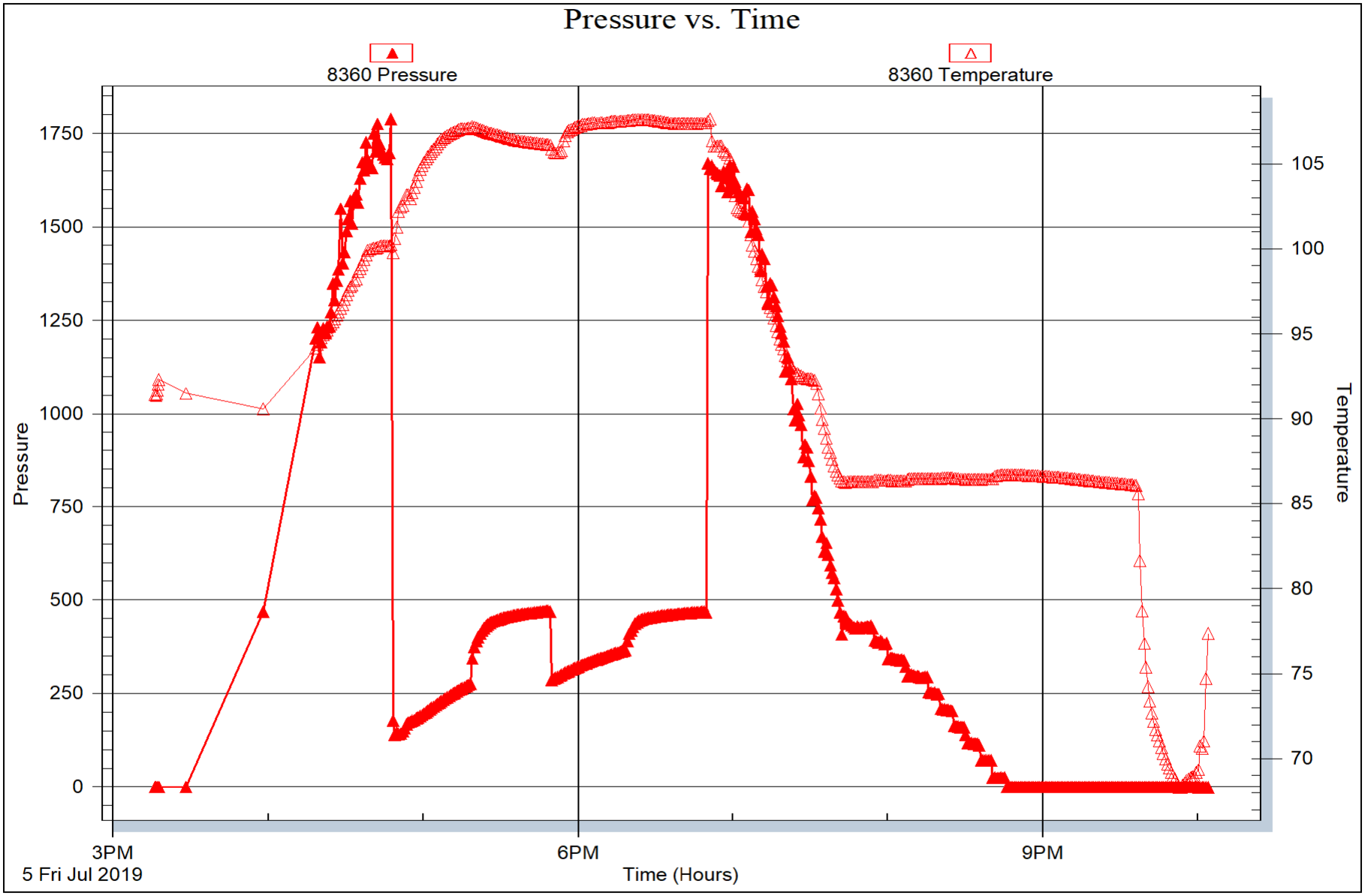
Recovery Comments:

Serial #: 8671 **Outside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 65941 Printed: 2019.07.08 @ 10:24:03

Serial #: 8360 **Inside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 65941 Printed: 2019.07.08 @ 10:24:04

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations, Inc.**

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

Pfeifer #3

5-14S-17W Ellis,KS

Start Date: 2019.07.06 @ 03:58:00

End Date: 2019.07.06 @ 10:47:30

Job Ticket #: 65942 DST #: 4

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2019.07.08 @ 10:20:04

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65942 **DST#: 4**

Test Start: 2019.07.06 @ 03:58:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:37:30
Time Test Ended: 10:47:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

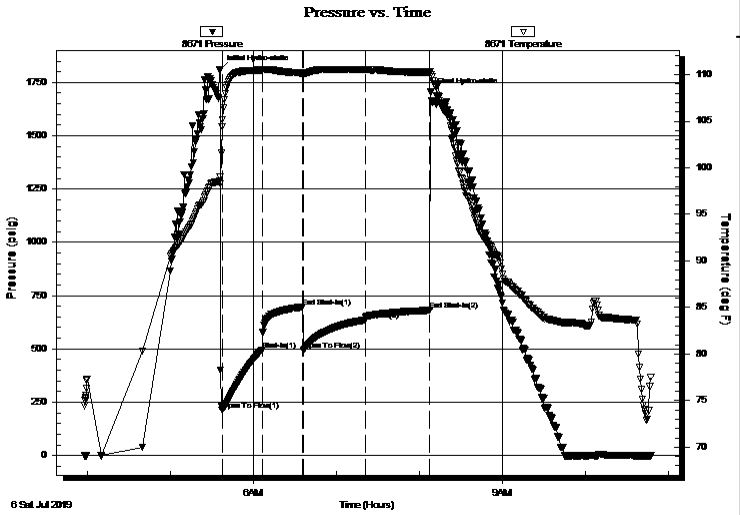
Interval: 3575.00 ft (KB) To 3597.00 ft (KB) (TVD)
Total Depth: 3597.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8671 **Outside**

Press@RunDepth:	634.96 psig @	3576.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.06	End Date:	2019.07.06	Last Calib.:	2019.07.06
Start Time:	03:58:05	End Time:	10:47:29	Time On Btm:	2019.07.06 @ 05:36:00
				Time Off Btm:	2019.07.06 @ 08:08:30

TEST COMMENT:
30 - IFP - Surface blow built to BOB in 2 mins.
30 - ISI - No Return
45 - FFP - Surface blow built to BOB in 4 mins.
45 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1810.04	99.02	Initial Hydro-static
2	212.36	104.38	Open To Flow (1)
31	494.76	110.51	Shut-In(1)
60	695.48	110.16	End Shut-In(1)
61	495.07	110.08	Open To Flow (2)
105	634.96	110.52	Shut-In(2)
152	681.03	110.28	End Shut-In(2)
153	1704.32	110.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
441.00	OSMW - Oil Skim 3%M 97%W	4.52
378.00	OSMW - Oil Skim - 5%M - 95%w	3.88
567.00	GOCMW 10G 14%O 15%M 60%W	5.82
31.00	OCMW 30%O 30%M 40%W	0.32

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.
8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65942 **DST#: 4**

Test Start: 2019.07.06 @ 03:58:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:37:30
Time Test Ended: 10:47:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Royal Fisher
Unit No: 77

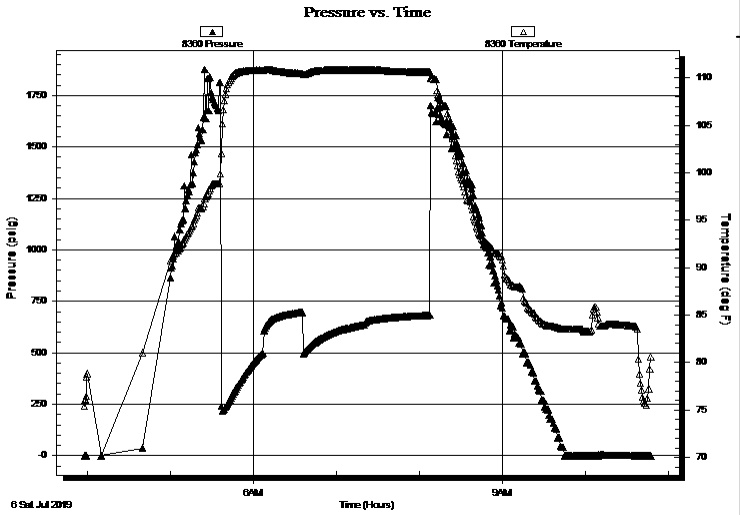
Interval: 3575.00 ft (KB) To 3597.00 ft (KB) (TVD)
Total Depth: 3597.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2029.00 ft (KB)
2020.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8360 **Inside**

Press@RunDepth:	psig @	3576.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2019.07.06	End Date:	2019.07.06	Last Calib.:	2019.07.06
Start Time:	03:58:05	End Time:	10:47:29	Time On Btm:	
				Time Off Btm:	

TEST COMMENT:
30 - IFP - Surface blow built to BOB in 2 mins.
30 - ISI - No Return
45 - FFP - Surface blow built to BOB in 4 mins.
45 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
441.00	OSMW - Oil Skim 3%M 97%W	4.52
378.00	OSMW - Oil Skim - 5%M - 95%w	3.88
567.00	GOCMW 10G 14%O 15%M 60%W	5.82
31.00	OCMW 30%O 30%M 40%W	0.32

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65942 **DST#: 4**

Test Start: 2019.07.06 @ 03:58:00

Tool Information

Drill Pipe:	Length:	3574.37 ft	Diameter:	3.25	inches	Volume:	36.68	bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	Weight to Pull Loose:	48000.00 lb
						Total Volume:	36.68	bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		19.37 ft							String Weight: Initial	32000.00 lb
Depth to Top Packer:		3575.00 ft							Final	37000.00 lb
Depth to Bottom Packer:		ft								
Interval between Packers:		22.00 ft								
Tool Length:		42.00 ft								
Number of Packers:		2	Diameter:	6.75	inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			3560.00		
Hydraulic tool	5.00			3565.00		
Packer	5.00			3570.00	20.00	Bottom Of Top Packer
Packer	5.00			3575.00		
Stubb	1.00			3576.00		
Recorder	0.00	8360	Inside	3576.00		
Recorder	0.00	8671	Outside	3576.00		
perforations	18.00			3594.00		
Bullnose	3.00			3597.00	22.00	Bottom Packers & Anchor
Total Tool Length:	**42.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations, Inc.

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

5-14S-17W Ellis,KS

Pfeifer #3

Job Ticket: 65942 **DST#: 4**

Test Start: 2019.07.06 @ 03:58:00

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:	46.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
441.00	OSMW - Oil Skim 3%M 97%W	4.525
378.00	OSMW - Oil Skim - 5%M - 95%w	3.879
567.00	GOCMW 10G 14%O 15%M 60%W	5.818
31.00	OCMW 30%O 30%M 40%W	0.318

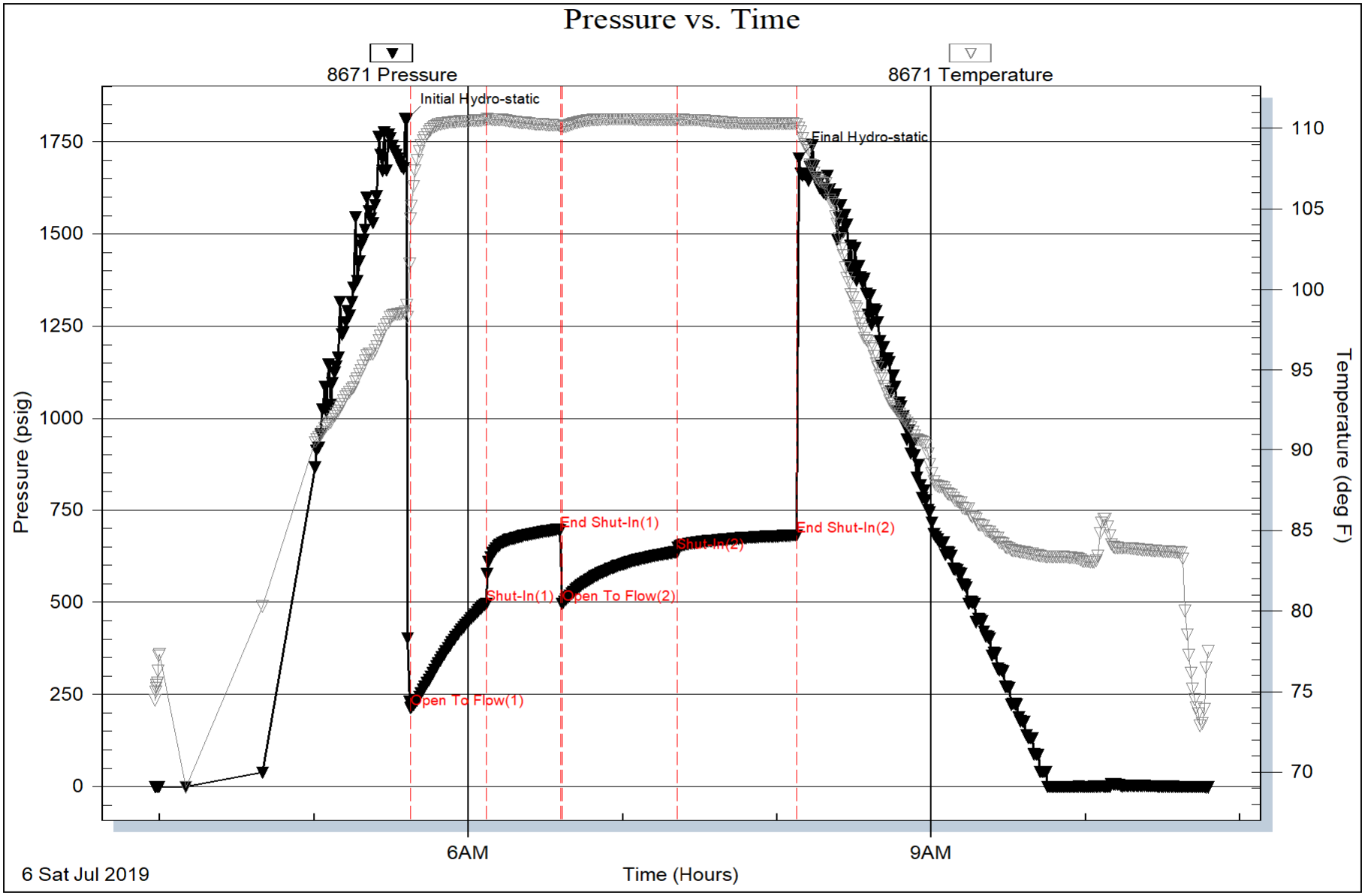
Total Length: 1417.00 ft Total Volume: 14.540 bbl

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

Laboratory Name: Laboratory Location:

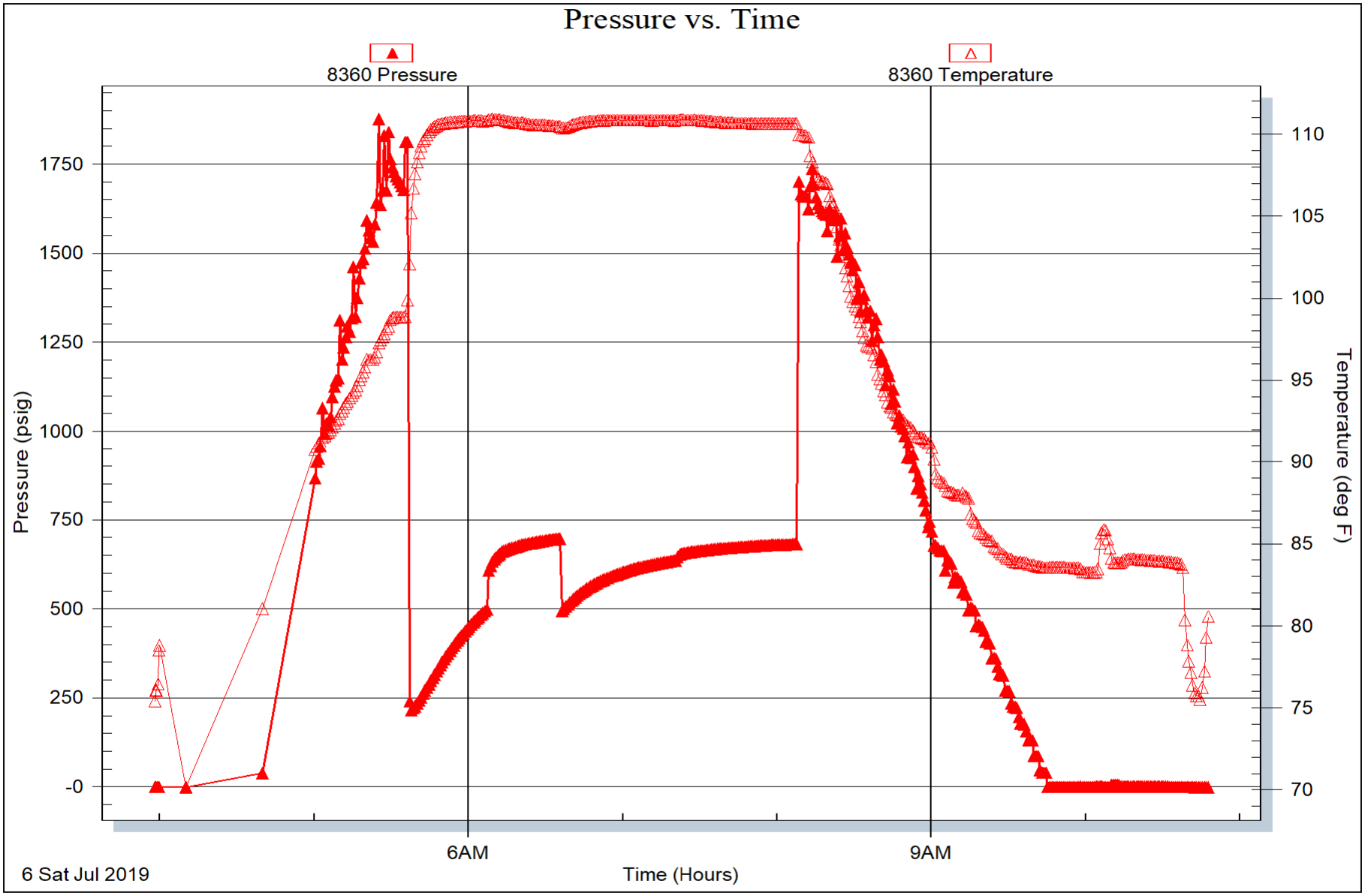
Recovery Comments: .467@87deg - salinity

Serial #: 8671 **Outside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 65942 Printed: 2019.07.08 @ 10:20:05

Serial #: 8360 **Inside** Mai Oil Operations, Inc. Pfeifer #3 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 65942 Printed: 2019.07.08 @ 10:20:05

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket 65939

NO.

Well Name & No. Pfeifer #3 Test No. 1 Date 7-3-19
Company Mai Oil Operations, Inc. Elevation 2029 KB 2020 GL
Address 8411 Preston Rd Ste 800, Dallas TX 75225
Co. Rep / Geo. Wyatt Urban Rig Southwind #3
Location: Sec. 5 Twp 14S Rge. 17W Co. Ellis State Ks

Interval Tested 3288 - 3360 Zone Tested Lansing A-D
Anchor Length 72' Drill Pipe Run 3290.57' Mud Wt. 8.7
Top Packer Depth 3283 Drill Collars Run 0 Vis 68
Bottom Packer Depth 3288 Wt. Pipe Run 0 WL 8
Total Depth 3360' Chlorides 2000 ppm System LCM 1/2#

Blow Description IFP - Open tool chased 10' flushed tool weak blow for a few seconds died
ISI - No Return
FFP - No blow flushed tool weak blow a couple seconds then died
FSI - No Return

Rec 93'	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 93' BHT 100°F Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1618
(B) First Initial Flow 35
(C) First Final Flow 48
(D) Initial Shut-In 373
(E) Second Initial Flow 49
(F) Second Final Flow 56
(G) Final Shut-In 379
(H) Final Hydrostatic 1552

Initial Open 15
Initial Shut-In 15
Final Flow 20
Final Shut-In 20

- [x] Test
- [ ] Jars
- [ ] Safety Joint
- [ ] Circ Sub
- [x] Hourly Standby 3hrs
- [x] Mileage 12 R/T
- [ ] Sampler
- [ ] Straddle
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total

T-On Location 11:30pm
T-Started 2:58am
T-Open 5:28am
T-Pulled 6:38am
T-Out 8:45am
Comments Geo said they would be on bank between 12-12:30

- [ ] EM Tool
- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total
Total
MP/DST Disc't

Approved By ____ Our Representative Raymal Sotter

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

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket 65940

NO.

Well Name & No. Pfeifer #3 Test No. 2 Date 7-4-19
Company Mai Oil Operations, Inc Elevation 2029 KB 2020 GL
Address 8411 Preston Rd Ste 800, Dallas Tx 75225
Co. Rep / Geo. Wyatt Urban Rig Southwind #3
Location: Sec. 5 Twp 14S Rge. 17W Co. Ellis State KS

Interval Tested 3342' - 3408' Zone Tested Lansing D-F
Anchor Length 66' Drill Pipe Run 3353.44 Mud Wt. 8.9
Top Packer Depth 3337' Drill Collars Run 0 Vis 48
Bottom Packer Depth 3342' Wt. Pipe Run 0 WL 10.8
Total Depth 3408' Chlorides 5000 ppm System LCM 1/2#

Blow Description IFP-Surface blow gradually built to 4¼"
ISI-No Return
FFP-Surface blow built to 4¼"
FSI-No Return

Rec 104'	Feet of ~~GCM~~ OCMW	%gas 10	%oil 50	%water 40	%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 104' BHT 102°F Gravity ____ API RW .600 @ 78 °F Chlorides 9,000 ppm

(A) Initial Hydrostatic 1639	☒ Test	T-On Location 3:45pm
(B) First Initial Flow 14	☐ Jars	T-Started 4:20pm
(C) First Final Flow 34	☐ Safety Joint	T-Open 6:13pm
(D) Initial Shut-In 428	☐ Circ Sub	T-Pulled 9:13pm
(E) Second Initial Flow 42	☐ Hourly Standby	T-Out 10:51pm
(F) Second Final Flow 57	☒ Mileage 12 R/T	Comments
(G) Final Shut-In 408	☐ Sampler	
(H) Final Hydrostatic 1599	☐ Straddle	☐ EM Tool
	☐ Shale Packer	☐ Ruined Shale Packer
Initial Open 30	☐ Extra Packer	☐ Ruined Packer
Initial Shut-In 45	☐ Extra Recorder	☐ Extra Copies
Final Flow 45	☐ Day Standby	Sub Total
Final Shut-In 60	☐ Accessibility	Total
	Sub Total	MP/DST Disc't

Approved By ____ Our Representative [signature]

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TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 65941

NO.

Well Name & No. Pfeifer #3 Test No. 3 Date 7-5-19
Company Mai Oil Operations, Inc. Elevation 2029 KB 2020 GL
Address 8411 Preston Rd Ste 800 Dallas Tx 75225
Co. Rep / Geo. Wyatt Urban Rig Southwind #3
Location: Sec. 5 Twp 14S Rge. 17W Co. Ellis State Ks

Interval Tested 3503'-3570' Zone Tested Arbuckle
Anchor Length 67' Drill Pipe Run 3511.13' Mud Wt. 9
Top Packer Depth 3498 Drill Collars Run 0 Vis 46
Bottom Packer Depth 3503' Wt. Pipe Run 0 WL 10.8
Total Depth 3570' Chlorides 6000 ppm System LCM 1.5#

Blow Description IFP-Surface blow built to B.o.B in 2 mins
ISI-Return started 5 mins. in a built to 3"
FFP-Surface blow built to B.o.B in 6 mins.
FSI-Return started 10 mins. in and stayed at a weak blow

Rec	283'	Feet of	WMO	%gas	70	%oil	5	%water	25 %mud
Rec	378'	Feet of	GMO	30 %gas	65	%oil		%water	5 %mud
Rec	252'	Feet of	GO	30 %gas	70	%oil		%water	%mud
Rec		Feet of		%gas		%oil		%water	%mud
Rec		Feet of		%gas		%oil		%water	%mud

Rec Total 913' BHT 107°F Gravity 35° API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1781	☒ Test	T-On Location 2:40pm
(B) First Initial Flow 114	☐ Jars	T-Started 3:16pm
(C) First Final Flow 279	☐ Safety Joint	T-Open 4:48pm
(D) Initial Shut-In 470	☐ Circ Sub	T-Pulled 6:48pm
(E) Second Initial Flow 288	☐ Hourly Standby	T-Out 10:04pm
(F) Second Final Flow 365	☒ Mileage 12 R/T	Comments
(G) Final Shut-In 467	☐ Sampler	
(H) Final Hydrostatic 1673	☐ Straddle	☐ EM Tool
	☐ 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
Final Shut-In 30	☐ Accessibility	Total
	Sub Total	MP/DST Disc't

Approved By ____ Our Representative Royal Foster

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

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket 65942

NO.

Well Name & No. Pfeifer #3 Test No. 4 Date 7-6-19
Company Mai Oil Operations Elevation 2029 KB 2020 GL
Address 8411 Preston Rd Ste 800 Dallas TX 75225
Co. Rep / Geo. Wyatt Urban Rig Southwind #3
Location: Sec. 5 Twp 14S Rge. 17W Co. Ellis State KS

Interval Tested ~~3580~~, 3576-3598' Zone Tested Arbuckle
Anchor Length 22' Drill Pipe Run 3574.37 Mud Wt. 9
Top Packer Depth 3570' Drill Collars Run 0 Vis 46
Bottom Packer Depth 3576 Wt. Pipe Run 0 WL 10.8
Total Depth 3598' Chlorides 6000 ppm System LCM 1.5#

Blow Description IFP-Surface blow built to B.o.B. in 2mins.
ISI-No Return
FFP-Surface blow built to B.o.B. in 4mins.
FSI-No Return

Rec 31'	Feet of OCMW		%gas 30	%oil 40	%water 30	%mud
Rec 567'	Feet of GOCMW	10	%gas 15	%oil 60	%water 15	%mud
Rec 378'	Feet of OSMW		%gas Skim	%oil 95	%water 5	%mud
Rec 441'	Feet of OSMW		%gas Skim	%oil 97	%water 3	%mud
Rec	Feet of		%gas	%oil	%water	%mud

Rec Total 1417' BHT 110°F Gravity ____ API RW .467 @ 87 °F Chlorides 11,000 ppm

(A) Initial Hydrostatic 1810
(B) First Initial Flow 212
(C) First Final Flow 495
(D) Initial Shut-In 695
(E) Second Initial Flow 495
(F) Second Final Flow 635
(G) Final Shut-In 681
(H) Final Hydrostatic 1704

Initial Open 30
Initial Shut-In 30
Final Flow 45
Final Shut-In 45

☒ Test
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☒ Mileage 12 R/T
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
Sub Total

T-On Location 3:30am
T-Started 3:58am
T-Open 5:36am
T-Pulled 8:06am
T-Out 10:47am
Comments

☐ EM Tool
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
Sub Total
Total
MP/DST Disc't

Approved By Our Representative Wayne Tester

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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 1462

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-7-19	5	14	17	Ellis	Ks		12:15 PM

Location Toulon + I-70, 1 S, E into

Lease Pfeifer Well No. #3

Contractor Southwind #3

Type Job Longstring

Hole Size 7 7/8" T.D. 3650'

Csg. 5 1/2" 14# New Depth 3648'

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 21.27' Shoe Joint 21.27'

Meas Line Displace 88 1/2 BLS

EQUIPMENT

	No.		
Pumptrk 17		Cementer	David
		Helper	
Bulktrk 14		Driver	Jack
		Driver	
~~Bulktrk~~ p.u.		Driver	Rick
		Driver	

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 sx

Mouse Hole

Centralizers 1-10

Baskets Pipe on bottom break Circulation

D/V or Port Collar pump 1000 gal mud Clear 48

Plug Rathole w/ 30 sx. Cement 5 1/2" Casing w/ 130 sx. Shut down wash pump + lines Displaced plug w/ 88 1/2 BLS. Released & held.

Lift Pressure 700 #

Land plug to 1500 #

Thanks

x Signature Kent

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 Mai oil operations

Street

City State

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

Cement Amount Ordered 160 60/40 10% Salt 2% Gel 1000 gal mud Clear 48

Common	90
Poz. Mix	60
Gel.	3
Calcium	
Hulls	
Salt	13
Flowseal	40#
Kol-Seal	
Mud CLR 48	1000 gal
CFL-117 or CD110 CAF 38	
Sand	
Handling	176
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	10
Baskets	
AFU Inserts	
Float Shoe	1
Latch Down	1

Pumptrk Charge Prod String

Mileage 15 (min)

Tax

Discount

Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 1333

Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 6-30-19	5	14	17	Ellis	KS		11:30pm

Location I-70 Towson rd 1 s E into

Lease Pfeifer Well No. #3

Contractor Southwind Drilling

Type Job

Hole Size 12¼ T.D. 1226'

Csg. 8⅝ #23 Depth 1226'

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint 32.21

Meas Line Displace 76 bbl H2O

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 Mai Oil

Street

City State

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

Cement Amount Ordered 450 sk 60/40 4% + 2

EQUIPMENT

Pumptrk #5 No. Cementer Tony P
Helper
Bulktrk No. Driver Craig
Driver
Bulktrk #19 No. Driver
Driver Jack

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8⅝ set @ 1226' circulated mud.

Mixed 450 sk 60/40 + 4% + 2%.

Displaced Plug @ 76 bbl H2O landed plug @ 400 psi.

Cement to Surface.

X Signature Jay Hess

Common	270
Poz. Mix	180
Gel.	9
Calcium	20
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	479
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
~~AFU~~ Inserts	1 x 8⅝ Composite Baffle pl
Float Shoe	
~~Latch Down~~	1 x 8⅝ Black Rubber Plug

Pumptrk Charge	~~Long~~ Long Surface
Mileage	15 min
Tax	
Discount	
Total Charge	