

**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Mike Kelso Oil Inc**

PO Box 467  
Chase KS 67524+0467

ATTN: Mike Kelso

**FHW-Wierman #15-1**

**15-17s-21w Ness,KS**

Start Date: 2016.09.28 @ 08:07:00

End Date: 2016.09.28 @ 15:49:00

Job Ticket #: 63482                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Mike Kelso Oil Inc

15-17s-21w Ness,KS

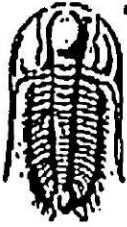
FHW-Wierman #15-1

DST # 3

Cherokee Sands 'A' a

2016.09.28

Printed: 2016.09.29 @ 13:49:15



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Mko Kelso Oil Inc  
PO Box 467  
Chase KS 67524+0467  
ATTN: Mko Kelso

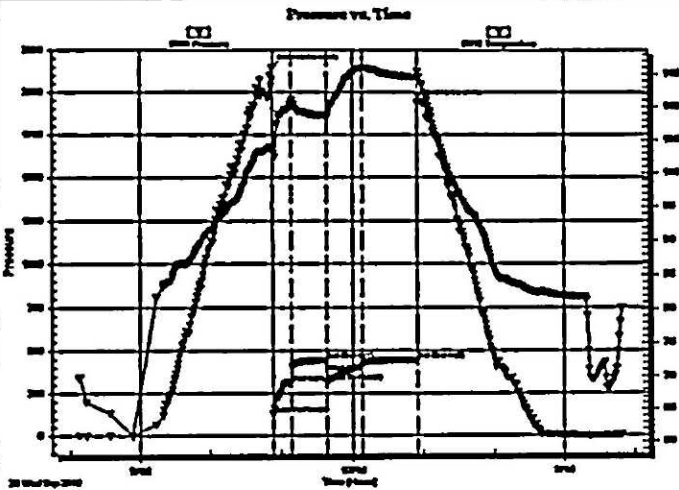
15-17s-21w Ness, KS  
FHW-Wierman #15-1  
Job Ticket: 63482 DST#: 3  
Test Start: 2016.09.28 @ 08:07:00

### GENERAL INFORMATION:

Formation: Cherokee Sands 'A' a  
Deviated: No Whipstock ft (KB)  
Time Tool Opened: 10:53:15  
Time Test Ended: 15:49:00  
Interval: 4083.00 ft (KB) To 4148.00 ft (KB) (TVD)  
Total Depth: 4148.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches  
Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Spencer J. Staab  
Unit No: 84  
Reference Elevations: 2210.00 ft (KB)  
2203.00 ft (CF)  
KB to GR/CF: 7.00 ft

Serial #: 8938 Inside  
Press@RunDepth: 422.42 psig @ 4153.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2016.09.28 End Date: 2016.09.28 Last Calib.: 2016.09.28  
Start Time: 08:07:15 End Time: 15:49:00 Time On Btm: 2016.09.28 @ 10:53:00  
Time Off Btm: 2016.09.28 @ 12:54:45

**TEST COMMENT:** 15-F- BOB in 3 Minutes  
30-ISI-Weak Surface Blow; Blow to 1/2" died  
30-FF-BOB in 9 Minutes; blow died at 29 minute mark  
45-FSI-No Blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2144.38	103.67	Initial Hydro-static
1	131.01	103.03	Open To Flow (1)
16	312.41	111.08	Shut-in(1)
45	446.70	108.81	End Shut-in(1)
46	315.67	108.58	Open To Flow (2)
76	422.42	116.08	Shut-in(2)
122	446.85	114.65	End Shut-in(2)
122	1934.35	115.48	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mud w/ few spots oil	1.42
400.00	MCW 30% M 70% W	3.83
300.00	Water	4.25

\* Recovery from multiple tests

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Mike Kelso Oil Inc  
PO Box 467  
Chase KS 67524+0467  
ATTN: Mike Kelso

**15-17s-21w Ness, KS**  
**FHW-Wierman #15-1**  
Job Ticket: 63482      **DST#: 3**  
Test Start: 2016.09.28 @ 08:07:00

### Tool Information

Drill Pipe:	Length: 3688.00 ft	Diameter: 3.82 inches	Volume: 52.28 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 460.00 ft	Diameter: 2.70 inches	Volume: 3.26 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 55.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4148.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	93.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4125.00	
Shut In Tool	5.00			4130.00	
Hydraulic tool	5.00			4135.00	
Jars	5.00			4140.00	
Safety Joint	3.00			4143.00	
Packer	5.00			4148.00	24.00      Bottom Of Top Packer
Packer - Shale	4.00			4152.00	
Stubb	1.00			4153.00	
Recorder	0.00	9120	Outside	4153.00	
Recorder	0.00	8938	Inside	4153.00	
Perforations	25.00			4178.00	
Change Over Sub	1.00			4179.00	
Drill Pipe	32.00			4211.00	
Change Over Sub	1.00			4212.00	
Perforations	1.00			4213.00	
Bullnose	4.00			4217.00	69.00      Anchor Tool
<b>Total Tool Length:</b>	<b>93.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

Mika Kelso Oil Inc  
PO Box 467  
Chase KS 67524+0467  
ATTN: Mika Kelso

15-17s-21w Ness,KS  
FHW-Wierman #15-1  
Job Ticket: 63482      DST#:3  
Test Start: 2016.09.28 @ 08:07:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 59.00 sec/qt  
Water Loss: 8.79 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4000.00 ppm  
Filter Cake: inches

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

Oil API: deg API  
Water Salinity: 5700 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Mud w/ few spots oil	1.416
400.00	MCW 30% M70%W	3.826
300.00	Water	4.253

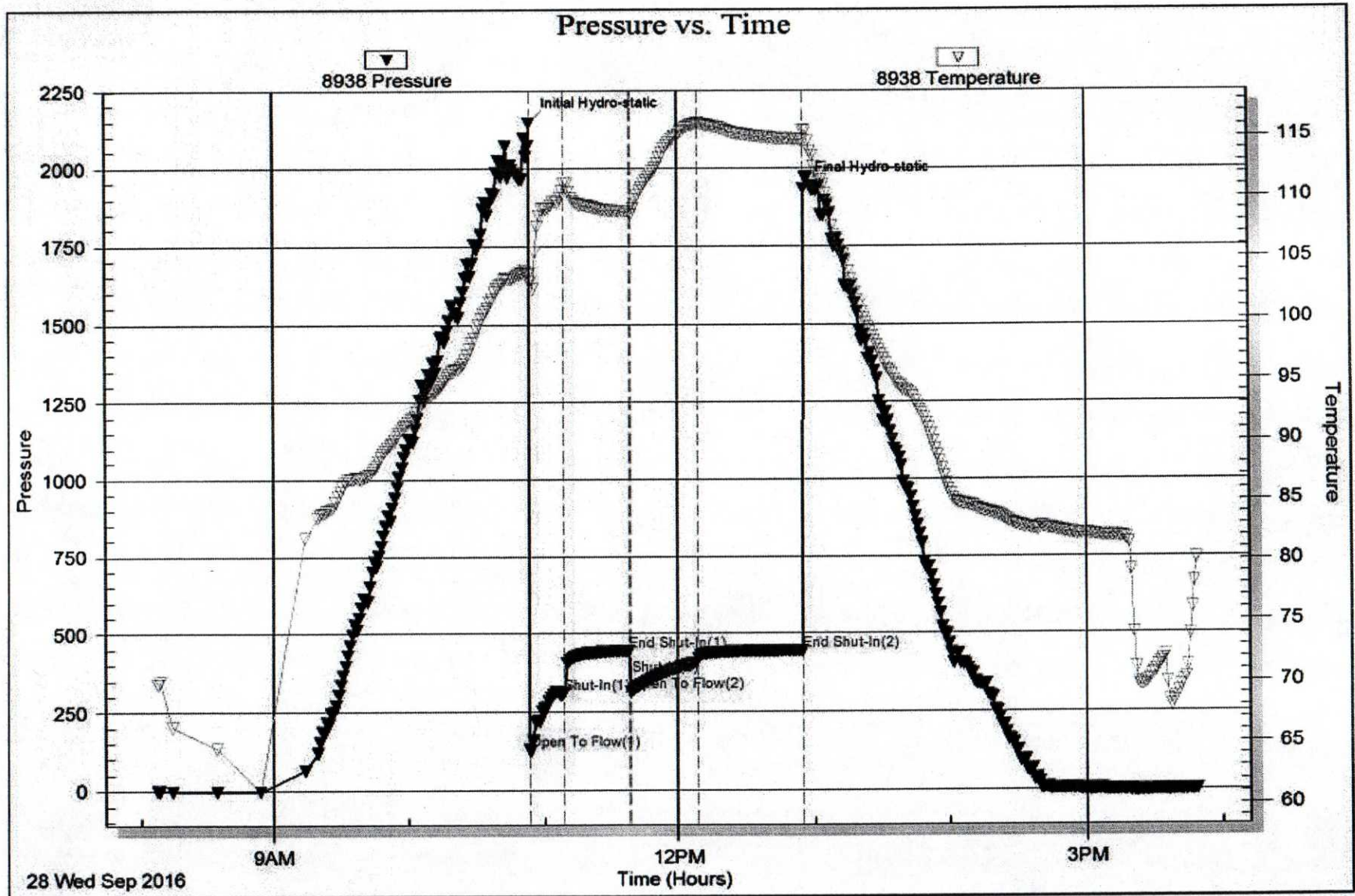
Total Length: 900.00 ft      Total Volume: 9.495 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:



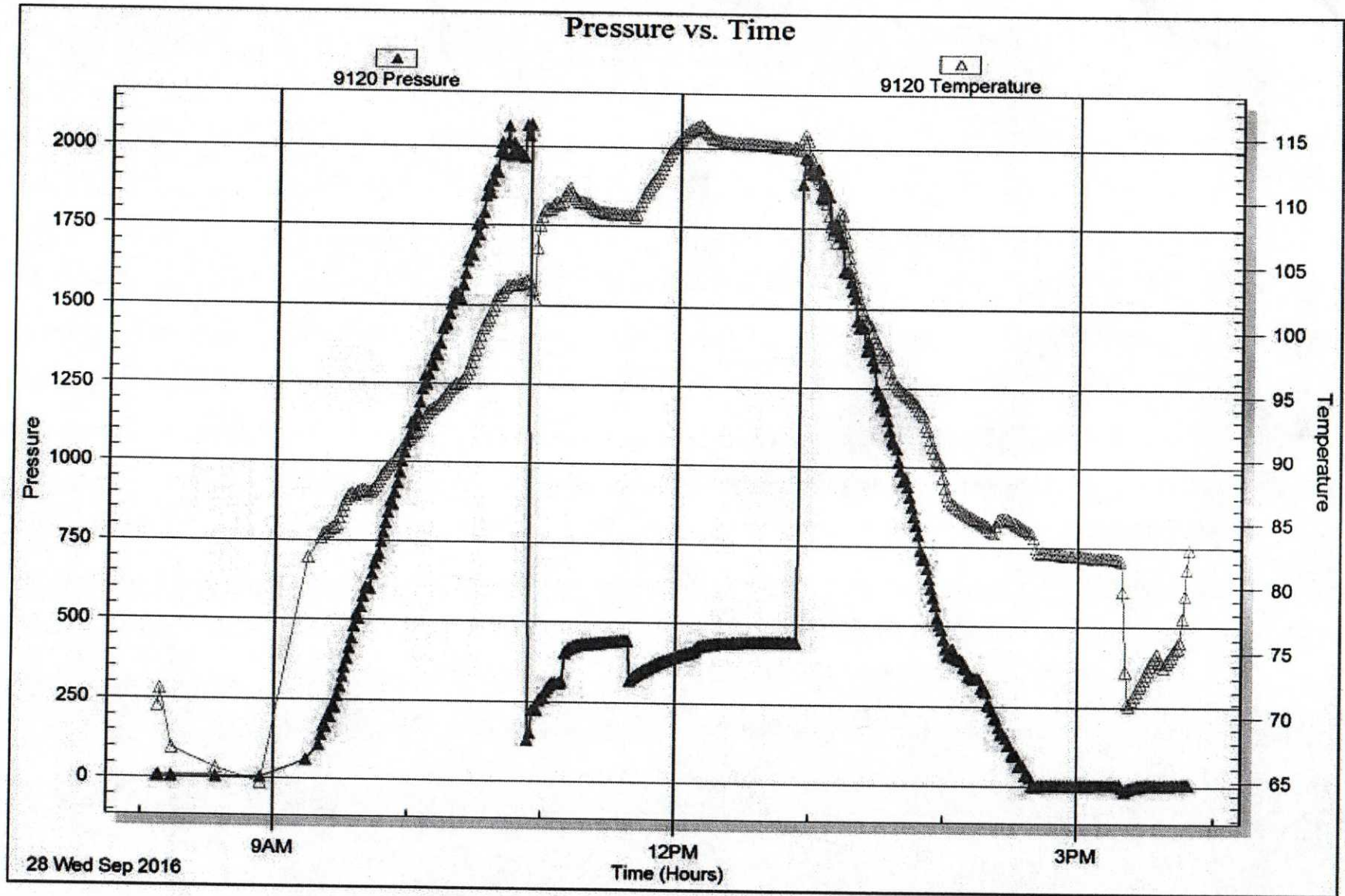


Serial #: 9120

Outside Mike Kelso Oil Inc

FHW-Wierman #15-1

DST Test Number: 3







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63482

Well Name & No. F.H.W. - Wierman #15-1 Test No. 3 Date 09/28/2016  
 Company Mike Kelso Oil Inc Elevation 2210 KB 2203 GL  
 Address PO BOX 467 Chase KS 67524 +0467  
 Co. Rep / Geo. Pat Dennihan/Sean Dennihan/Mike Kelso Rig Skytop #1  
 Location: Sec. 15 Twp. 17S Rge. 21W Co. Ness State KS

Interval Tested 4083-4148 Zone Tested Cherokee Sands 'A' and 'B'  
 Anchor Length 65 Drill Pipe Run 3688 Mud Wt. 9.4  
 Top Packer Depth 4078 Drill Collars Run — Vis 59  
 Bottom Packer Depth 4083 Wt. Pipe Run 460 WL 8.8  
 Total Depth 4148 Chlorides 4000 ppm System LCM 2#

Blow Description IF - BOB in 3 minutes  
ISI - Weak Surface Blow; built to 1/2 inch; died  
FF - BOB in 9 minutes; Blow died @ 29 mm mark  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>Mud w/ oil spots</u>			<u>100</u>	
<u>400</u>	<u>MCW</u>			<u>70</u>	<u>30</u>
<u>300</u>	<u>Water</u>			<u>100</u>	

Rec Total 900 BHT 115° Gravity — API RW 8 @ 90 °F Chlorides 5700 ppm

(A) Initial Hydrostatic <u>2144</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>06:23</u>
(B) First Initial Flow <u>131</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>08:07</u>
(C) First Final Flow <u>312</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:53</u>
(D) Initial Shut-In <u>446</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>12:53</u>
(E) Second Initial Flow <u>315</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>15:48</u>
(F) Second Final Flow <u>422</u>	<input checked="" type="checkbox"/> Mileage <u>84 RT</u>	Comments
(G) Final Shut-In <u>446</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1934</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Open <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1788</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1788</u>	

Approved By \_\_\_\_\_ Our Representative Spencer J. Frank

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.