



DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Comp Inc**

PO Box 48788
Wichita, KS 67201

ATTN: Max Lovely

Helen Wells #2

18-20s-35w Wichita,KS

Start Date: 2013.10.04 @ 19:55:43

End Date: 2013.10.05 @ 06:00:58

Job Ticket #: 54639 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.08 @ 13:19:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raymond Oil Comp Inc
 PO Box 48788
 Wichita, KS 67201
 ATTN: Max Lovely

18-20s-35w Wichita,KS

Helen Wells #2

Job Ticket: 54639

DST#: 1

Test Start: 2013.10.04 @ 19:55:43

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 22:33:43

Time Test Ended: 06:00:58

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane McBride

Unit No: 55

Interval: 4472.00 ft (KB) To 4499.00 ft (KB) (TVD)

Reference Elevations: 3166.00 ft (KB)

Total Depth: 4499.00 ft (KB) (TVD)

3156.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6667

Inside

Press @ Run Depth: 247.81 psig @ 4473.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.04

End Date:

2013.10.05

Last Calib.: 2013.10.05

Start Time: 19:55:43

End Time:

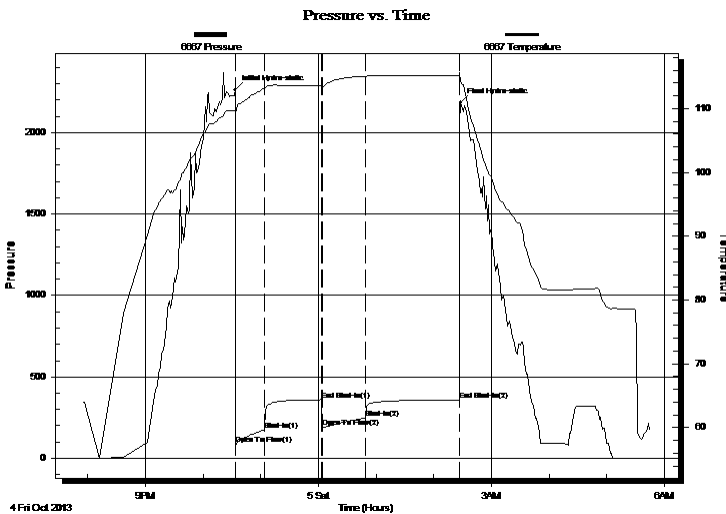
05:44:58

Time On Btm: 2013.10.04 @ 22:33:13

Time Off Btm: 2013.10.05 @ 02:27:58

TEST COMMENT: B.O.B. in 3 1/2 min.
 B.O.B. return blow in 31 min.
 B.O.B. @ open
 Bled off through out shut in

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2263.52	109.69	Initial Hydro-static
1	83.71	109.26	Open To Flow (1)
31	173.83	113.08	Shut-In(1)
90	359.75	113.66	End Shut-In(1)
91	191.17	113.54	Open To Flow (2)
136	247.81	115.04	Shut-In(2)
234	358.74	115.11	End Shut-In(2)
235	2184.25	114.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	m c g o 20g 30m 50o under circ sub	0.59
378.00	c g o 20g 80o reversed out	4.14
60.00	c g o 15g 85o	0.84
0.00	720' gas in pipe	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Comp Inc

18-20s-35w Wichita,KS

PO Box 48788
Wichita, KS 67201

Helen Wells #2

Job Ticket: 54639

DST#: 1

ATTN: Max Lovely

Test Start: 2013.10.04 @ 19:55:43

Tool Information

Drill Pipe:	Length: 4229.00 ft	Diameter: 3.80 inches	Volume: 59.32 bbl	Tool Weight: 1500.00 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: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4472.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4445.00	
Shut In Tool	5.00			4450.00	
Hydraulic tool	5.00			4455.00	
Jars	5.00			4460.00	
Safety Joint	3.00			4463.00	
Packer	5.00			4468.00	28.00 Bottom Of Top Packer
Packer	4.00			4472.00	
Stubb	1.00			4473.00	
Recorder	0.00	6667	Inside	4473.00	
Recorder	0.00	8368	Outside	4473.00	
Perforations	21.00			4494.00	
Bullnose	5.00			4499.00	27.00 Bottom Packers & Anchor

Total Tool Length: 55.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Comp Inc

18-20s-35w Wichita,KS

PO Box 48788
Wichita, KS 67201

Helen Wells #2

Job Ticket: 54639

DST#: 1

ATTN: Max Lovely

Test Start: 2013.10.04 @ 19:55:43

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	m c g o 20g 30m 50o under circ sub	0.590
378.00	c g o 20g 80o reversed out	4.136
60.00	c g o 15g 85o	0.842
0.00	720' gas in pipe	0.000

Total Length: 558.00 ft

Total Volume: 5.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

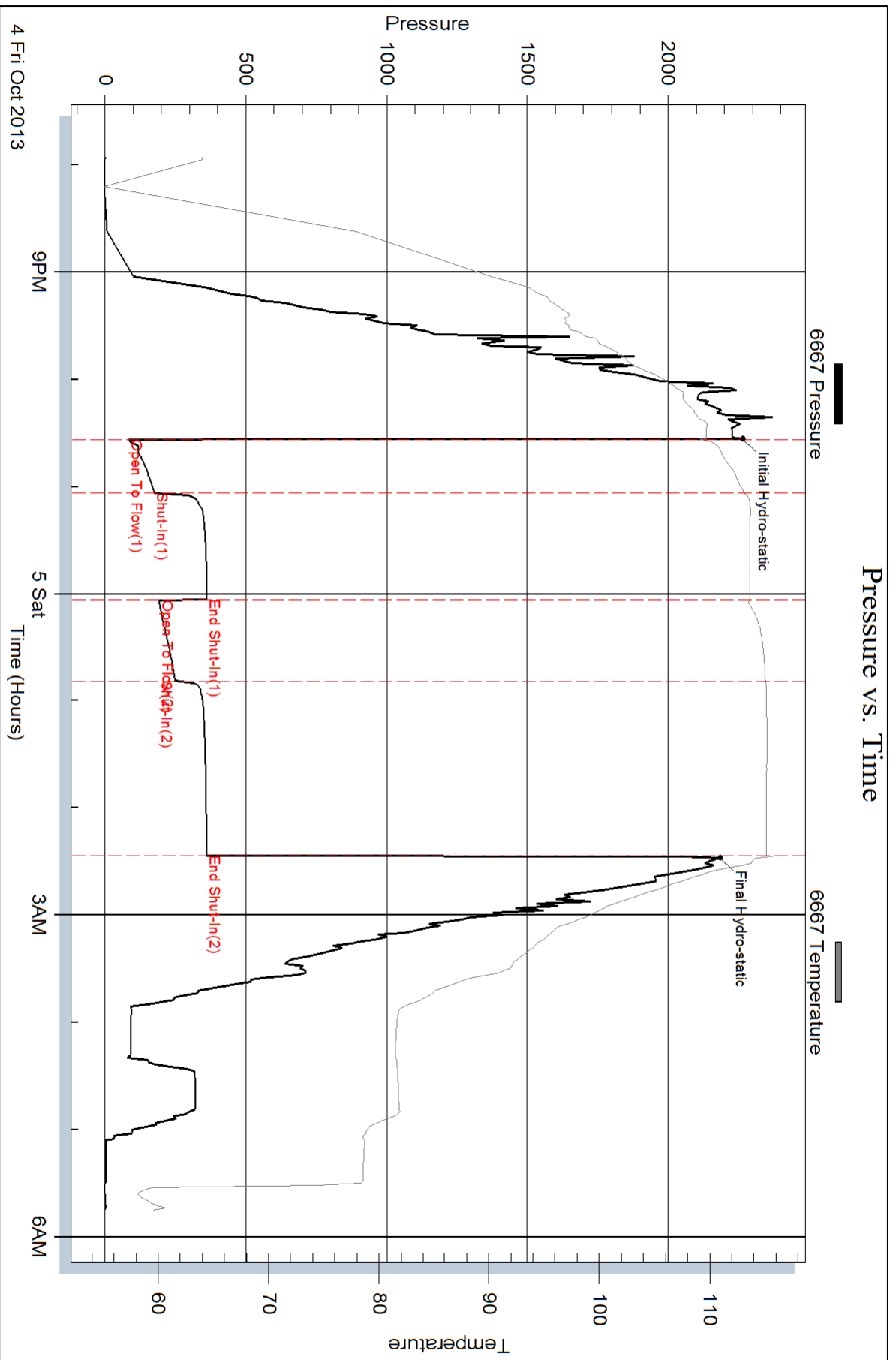
Serial #:

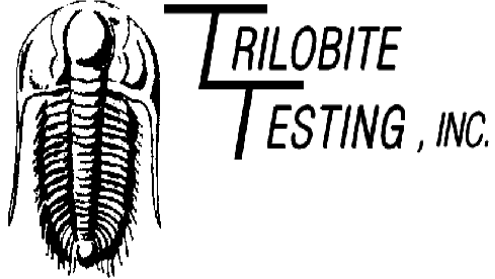
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Raymond Oil Comp Inc**

PO Box 48788
Wichita, KS 67201

ATTN: Max Lovely

Helen Wells #2

18-20s-35w Wichita,KS

Start Date: 2013.10.05 @ 20:10:52

End Date: 2013.10.06 @ 05:15:07

Job Ticket #: 54640 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.08 @ 13:17:57

Raymond Oil Comp Inc

18-20s-35w Wichita,KS

Helen Wells #2

DST # 2

Pawnee, Myrick Stati

2013.10.05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raymond Oil Comp Inc
 PO Box 48788
 Wichita, KS 67201
 ATTN: Max Lovely

18-20s-35w Wichita, KS

Helen Wells #2

Job Ticket: 54640

DST#: 2

Test Start: 2013.10.05 @ 20:10:52

GENERAL INFORMATION:

Formation: **Pawnee, Myrick Stati**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 22:54:07

Time Test Ended: 05:15:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: 4557.00 ft (KB) To 4608.00 ft (KB) (TVD)

Total Depth: 4608.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3166.00 ft (KB)

3156.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6667

Inside

Press @ Run Depth: 35.31 psig @ 4558.00 ft (KB)

Start Date: 2013.10.05

End Date:

2013.10.06

Start Time: 20:10:52

End Time:

05:05:07

Capacity: 8000.00 psig

Last Calib.: 2013.10.06

Time On Btm: 2013.10.05 @ 22:53:52

Time Off Btm: 2013.10.06 @ 02:42:37

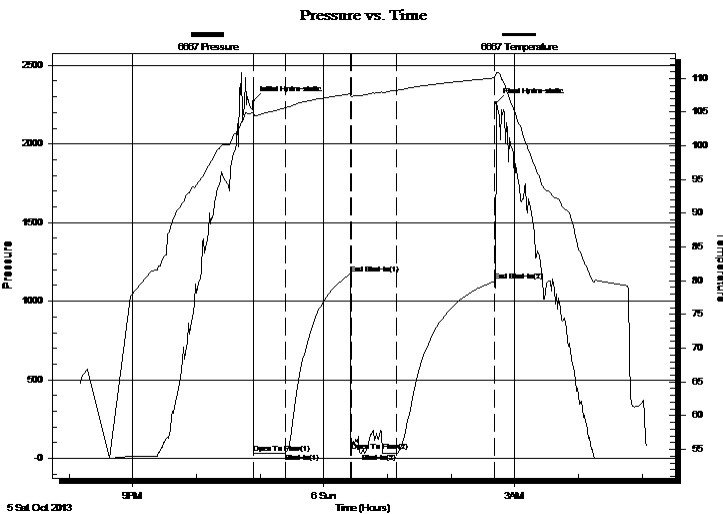
TEST COMMENT: 1/4" blow died in 26 min.

No return

No blow

No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2275.18	105.08	Initial Hydro-static
1	30.16	104.24	Open To Flow (1)
31	32.53	105.64	Shut-In(1)
92	1173.98	107.70	End Shut-In(1)
92	48.38	107.37	Open To Flow (2)
135	35.31	108.22	Shut-In(2)
228	1126.34	110.07	End Shut-In(2)
229	2260.78	110.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	heavy mud 100%m	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raymond Oil Comp Inc

18-20s-35w Wichita,KS

PO Box 48788
Wichita, KS 67201

Helen Wells #2

Job Ticket: 54640

DST#: 2

ATTN: Max Lovely

Test Start: 2013.10.05 @ 20:10:52

Tool Information

Drill Pipe:	Length: 4293.00 ft	Diameter: 3.80 inches	Volume: 60.22 bbl	Tool Weight:	1500.00 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: 248.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 61.44 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4557.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	51.00 ft				
Tool Length:	79.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4530.00	
Shut In Tool	5.00			4535.00	
Hydraulic tool	5.00			4540.00	
Jars	5.00			4545.00	
Safety Joint	3.00			4548.00	
Packer	5.00			4553.00	28.00 Bottom Of Top Packer
Packer	4.00			4557.00	
Stubb	1.00			4558.00	
Recorder	0.00	6667	Inside	4558.00	
Recorder	0.00	8368	Outside	4558.00	
Perforations	11.00			4569.00	
Change Over Sub	1.00			4570.00	
Drill Pipe	32.00			4602.00	
Change Over Sub	1.00			4603.00	
Bullnose	5.00			4608.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raymond Oil Comp Inc
PO Box 48788
Wichita, KS 67201
ATTN: Max Lovely

18-20s-35w Wichita,KS
Helen Wells #2
Job Ticket: 54640 **DST#: 2**
Test Start: 2013.10.05 @ 20:10:52

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5800.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	heavy mud 100%m	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

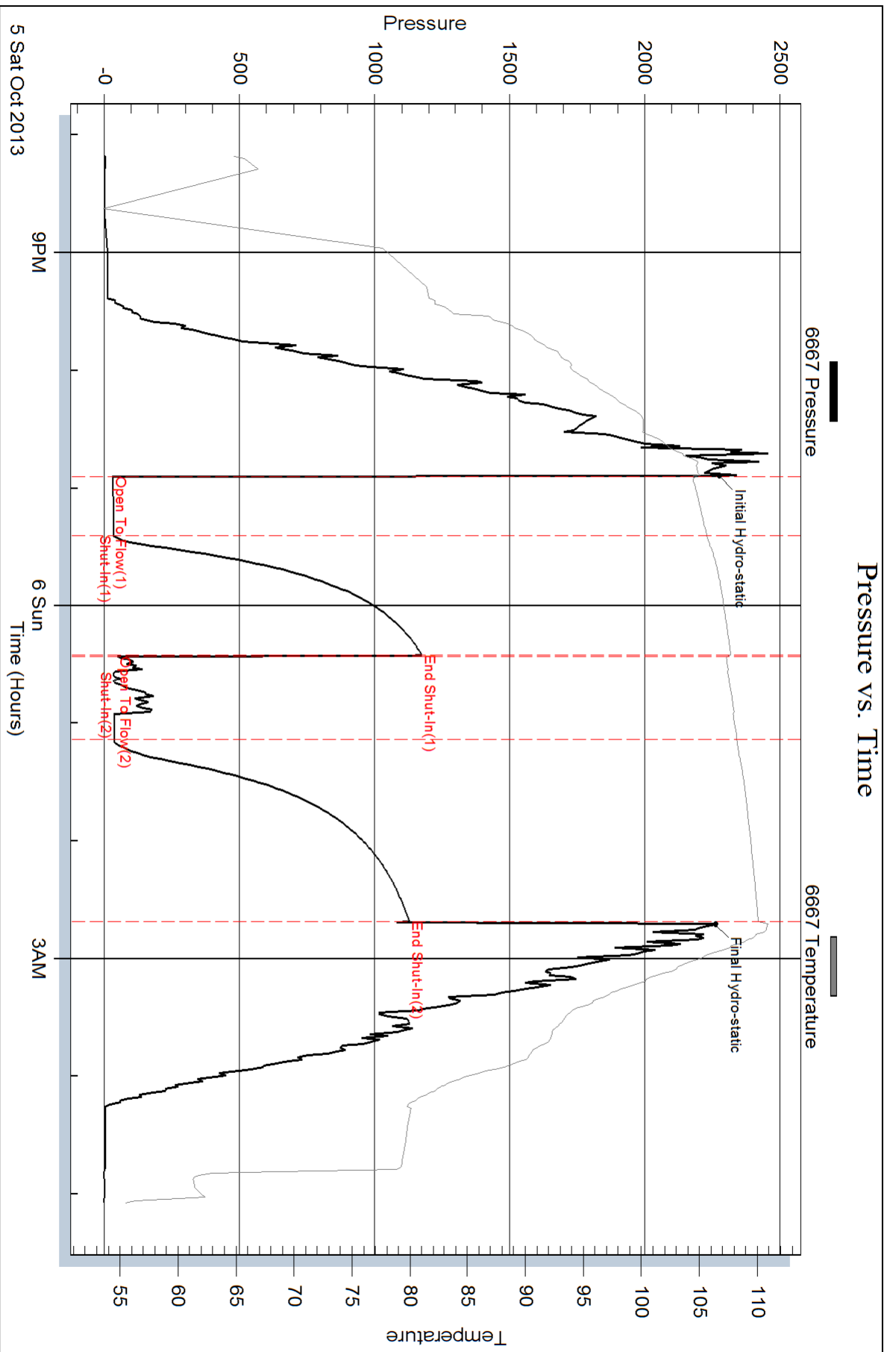
Serial #: 6667

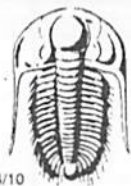
Inside

Raymond Oil Comp Inc

Helen Wells #2

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54639**

Well Name & No. Helen Wells #2 Test No. #1 Date 10/5/13
 Company Raymond O T Comp Inc Elevation 3166 KB 3154 GL
 Address P.O. Box 48788 Wichita, KS 67201
 Co. Rep / Geo. Marschally Rig #2#4
 Location: Sec. 18 Twp. 20 Rge. 35 Co. Wichita State Ks

Interval Tested 4472 4499 Zone Tested Marmaton
 Anchor Length 27 Drill Pipe Run 4229 Mud Wt. 9.5
 Top Packer Depth 4467 Drill Collars Run 248 Vis 57
 Bottom Packer Depth 4472 Wt. Pipe Run --- WL 7.6
 Total Depth 4499 Chlorides 5000 ppm System LCM #2

Blow Description B.O.B. in 3 1/2 min.
B.O.B. return blow in 3 min
B.O.B. @ open
Bled off through out shut-in

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>CGO</u>	<u>15</u>	<u>85</u>		
<u>378</u>	<u>CGO (Reversed)</u>	<u>20</u>	<u>80</u>		
<u>120</u>	<u>McGO (under core sub)</u>	<u>20</u>	<u>50</u>		<u>30</u>
	<u>720' GAS IN PIPE</u>				

Rec Total 558 BHT 115° Gravity 31 API RW --- @ ---° F Chlorides --- ppm

(A) Initial Hydrostatic <u>2263</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>19:10</u>
(B) First Initial Flow <u>83</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>19:55</u>
(C) First Final Flow <u>173</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>22:36</u>
(D) Initial Shut-In <u>359</u>	<input checked="" type="checkbox"/> Circ Sub <u>50.00</u>	T-Pulled <u>62:21</u>
(E) Second Initial Flow <u>191</u>	<input type="checkbox"/> Hourly Standby .75h 75	T-Out <u>06:00</u>
(F) Second Final Flow <u>247</u>	<input checked="" type="checkbox"/> Mileage <u>60RT</u> 93	Comments _____
(G) Final Shut-In <u>358</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2184</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> Ruined Shale Packer <u>350</u>

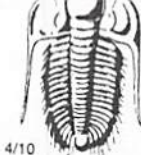
Initial Open 30
 Initial Shut-In 60
 Final Flow 45
 Final Shut-In 90

Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility 150.00
 Sub Total 2193

MP/DST Disc't _____

Approved By MJ Long Our Representative [Signature]

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

Test Ticket

NO. 54640

Well Name & No. Helen Wells #2 Test No. #2 Date 10/6/13
 Company Raymond Oil Comp Inc. Elevation 3166 KB 3156 GL
 Address P.O. Box 48788 Wichita KS 67201
 Co. Rep / Geo. Max Lowry Rig H2#4
 Location: Sec. 18 Twp. 20 Rge. 35 Co. Wichita State Ks

Interval Tested 4557 4608 Zone Tested Pawnee Myrick Station
 Anchor Length 51 Drill Pipe Run 4293 Mud Wt. 9.3
 Top Packer Depth 4552 Drill Collars Run 248' Vis 60
 Bottom Packer Depth 4557 Wt. Pipe Run WL 8.0
 Total Depth 4608 Chlorides 5800 ppm System LCM #2

Blow Description 1/4" in blow dried w/ 2L/min
No return
No blow
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>Mud (Heavy)</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT 110° Gravity API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>2275</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>19:25</u>
(B) First Initial Flow <u>30</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:10</u>
(C) First Final Flow <u>32</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:53</u>
(D) Initial Shut-In <u>1173</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/A</u>	T-Pulled <u>02:38</u>
(E) Second Initial Flow <u>48</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>05:15</u>
(F) Second Final Flow <u>35</u>	<input checked="" type="checkbox"/> Mileage <u>6000</u>	Comments <u>loaded tools 10/7 11:00</u>
(G) Final Shut-In <u>1126</u>	<input type="checkbox"/> Sampler <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
(H) Final Hydrostatic <u>2260</u>	<input type="checkbox"/> Straddle <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer <u> </u>	Sub Total <u>800</u>
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder <u> </u>	Total <u>2618</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u>1d 5.75h</u>	MP/DST Disc't <u> </u>
	<input checked="" type="checkbox"/> Accessibility <u>150.00</u>	
	Sub Total <u>1818</u>	

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged or 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.