

DRILL STEM TEST REPORT

Prepared For: **Palmer Oil**

3118 N Cummings Rd
Garden City, KS 67846

ATTN: Wyatt Urban

Lola #21-4

21-31s-35w Stevens,KS

Start Date: 2013.11.02 @ 07:35:41

End Date: 2013.11.02 @ 16:20:26

Job Ticket #: 54656 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
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TESTING, INC.**

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Palmer Oil
3118 N Cummings Rd
Garden City, KS 67846
ATTN: Wyatt Urban

21-31s-35w Stevens, KS

Lola #21-4

Job Ticket: 54656

DST#: 1

Test Start: 2013.11.02 @ 07:35:41

GENERAL INFORMATION:

Formation: **Lower Chester**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:54:41
 Time Test Ended: 16:20:26
 Interval: **5980.00 ft (KB) To 6015.00 ft (KB) (TVD)**
 Total Depth: 6015.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3011.00 ft (KB)
 3000.00 ft (CF)
 KB to GR/CF: 11.00 ft

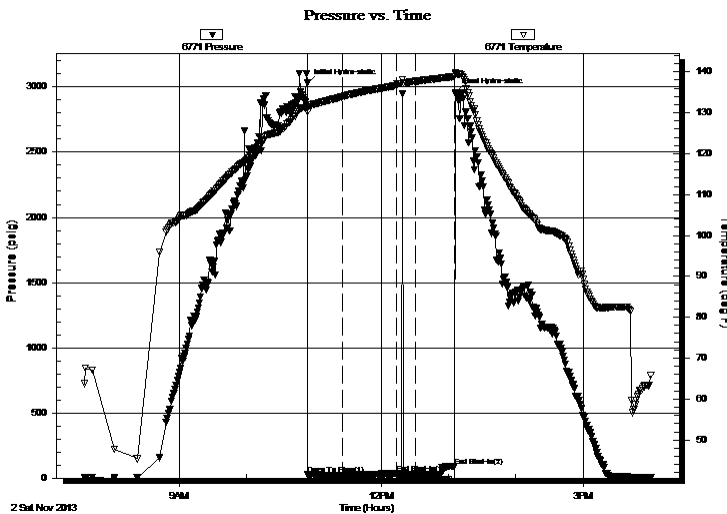
Serial #: 6771

Inside

Press @ Run Depth: 25.39 psig @ 5981.00 ft (KB)
 Start Date: 2013.11.02 End Date: 2013.11.02
 Start Time: 07:35:41 End Time: 16:00:26
 Capacity: 8000.00 psig
 Last Calib.: 2013.11.02
 Time On Btm: 2013.11.02 @ 10:54:26
 Time Off Btm: 2013.11.02 @ 13:05:56

TEST COMMENT: 1/4" blow
 No return
 No blow, Flush tool after 5 min good surge, No blow
 No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3029.45	131.57	Initial Hydro-static
1	30.57	130.20	Open To Flow (1)
32	22.54	133.97	Shut-In(1)
79	34.69	136.62	End Shut-In(1)
79	28.22	136.68	Open To Flow (2)
96	25.39	137.67	Shut-In(2)
131	92.62	138.82	End Shut-In(2)
132	2957.75	139.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud 100% m	0.01

Gas Rates

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



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TOOL DIAGRAM

Palmer Oil
3118 N Cummings Rd
Garden City, KS 67846
ATTN: Wyatt Urban

21-31s-35w Stevens,KS
Lola #21-4
Job Ticket: 54656 **DST#: 1**
Test Start: 2013.11.02 @ 07:35:41

Tool Information

Drill Pipe:	Length: 5782.00 ft	Diameter: 3.80 inches	Volume: 81.11 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 102000.0 lb
			<u>Total Volume: 82.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 85000.00 lb
Depth to Top Packer:	5980.00 ft			Final 85000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			5953.00	
Shut In Tool	5.00			5958.00	
Hydraulic tool	5.00			5963.00	
Jars	5.00			5968.00	
Safety Joint	3.00			5971.00	
Packer	5.00			5976.00	28.00 Bottom Of Top Packer
Packer	4.00			5980.00	
Stubb	1.00			5981.00	
Recorder	0.00	6771	Inside	5981.00	
Recorder	0.00	8844	Outside	5981.00	
Perforations	29.00			6010.00	
Bullnose	5.00			6015.00	35.00 Bottom Packers & Anchor

Total Tool Length: 63.00



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FLUID SUMMARY

Palmer Oil
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21-31s-35w Stevens,KS
Lola #21-4
Job Ticket: 54656 **DST#: 1**
Test Start: 2013.11.02 @ 07:35:41

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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud 100%m	0.015

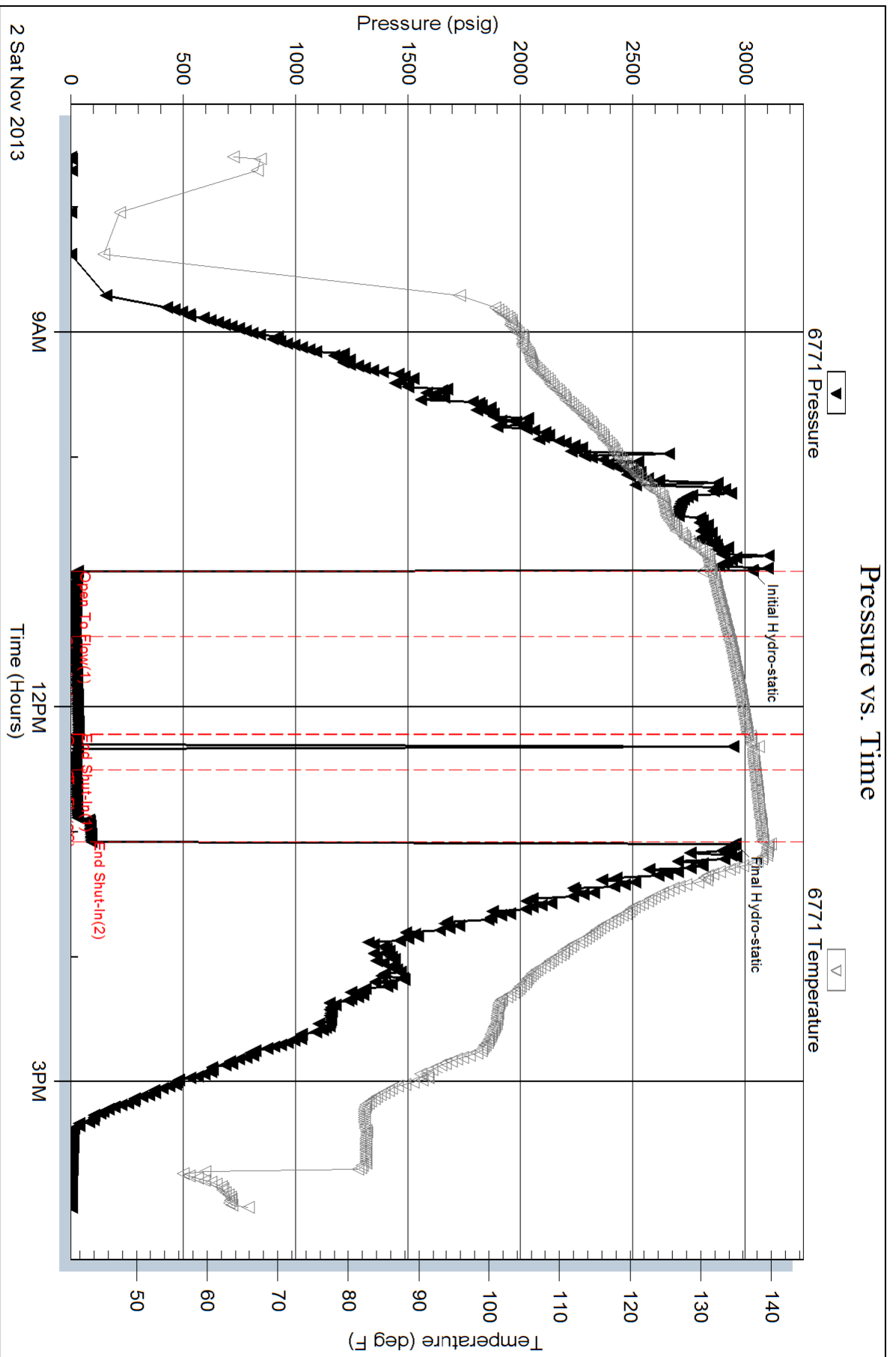
Total Length: 3.00 ft Total Volume: 0.015 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 6771

Inside Palmer Oil

Lola #21-4

DST Test Number: 1

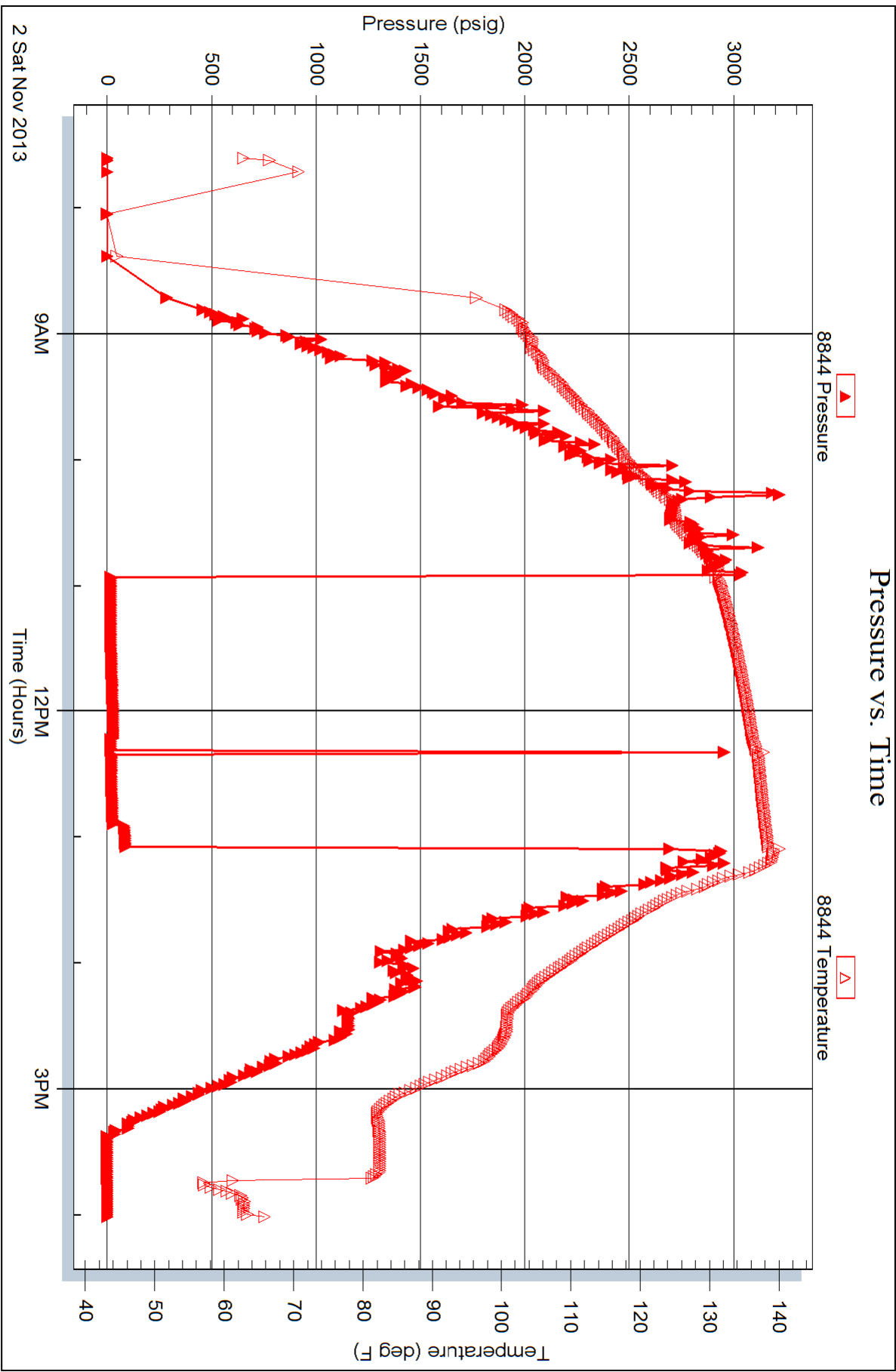


Serial #: 8844

Outside Palmer Oil

Lola #21-4

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54656**

Well Name & No. Lopa #21-4 Test No. #1 Date 11/2/13
 Company Palmer O. & I. Elevation 3011 KB 3000 GL
 Address 3118 N. Cummings Rd Garden City, KS 67846
 Co. Rep / Geo. Wyatt Urban Rig Duke #9
 Location: Sec. 21 Twp. 31 Rge. 35 Co. Stevens State Ks

Interval Tested 5980 6015 Zone Tested Lower Chester
 Anchor Length 35 Drill Pipe Run 5782 Mud Wt. 9.1
 Top Packer Depth 5975 Drill Collars Run 180' Vis 53
 Bottom Packer Depth 5980 Wt. Pipe Run --- WL 8.0
 Total Depth 6015 Chlorides 3300 ppm System LCM #3

Blow Description 1/4" in blow
No return
No blow, Flush Tool after Smith load surge, No blow
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Mud</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 3' BHT 140° Gravity --- API RW --- @ ---°F Chlorides --- ppm

(A) Initial Hydrostatic <u>3029</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>06:35</u>
(B) First Initial Flow <u>30</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>07:35</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:56</u>
(D) Initial Shut-In <u>34</u>	<input checked="" type="checkbox"/> Circ Sub <u>n/c</u>	T-Pulled <u>12:56</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:20</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>180 RT</u> <u>582.80</u>	Comments <u>loaded tools 11/4 9:00</u>
(G) Final Shut-In <u>92</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2957</u>	<input type="checkbox"/> Straddle	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>800</u>
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Total <u>3477.80</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>1d 16.75h</u>	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>2357.80</u>	

Approved By _____ Our Representative

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