



DRILL STEM TEST REPORT

Prepared For: **Palmer Oil, Inc.**

PO Box 399
Garden, City KS 67846

ATTN: Wyatt Urban

Willis #23-6

23-32s-37w Stevens,KS

Start Date: 2014.01.10 @ 12:41:00

End Date: 2014.01.10 @ 23:03:45

Job Ticket #: 56704 DST #: 1

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

Printed: 2014.01.14 @ 08:49:47



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Palmer Oil, Inc.
PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS

Willis #23-6

Job Ticket: 56704

DST#: 1

Test Start: 2014.01.10 @ 12:41:00

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:23:30
 Time Test Ended: 23:03:45
 Interval: **6323.00 ft (KB) To 6384.00 ft (KB) (TVD)**
 Total Depth: 6384.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Sam Esparza
 Unit No: 64
 Reference Elevations: 3118.00 ft (KB)
 3106.00 ft (CF)
 KB to GR/CF: 12.00 ft

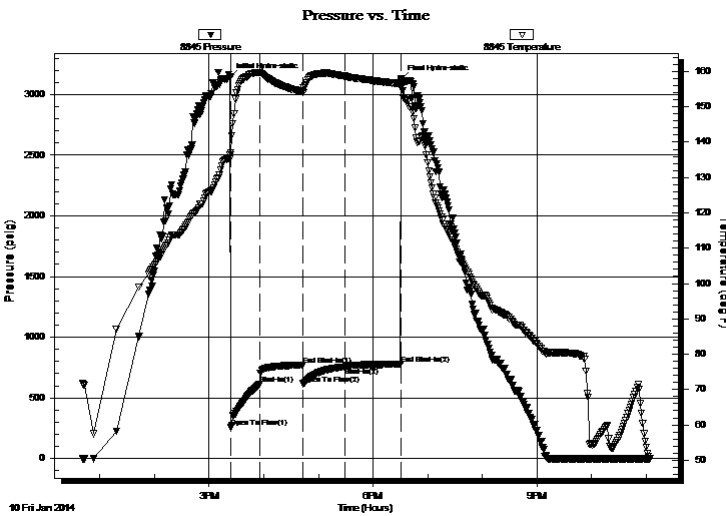
Serial #: 8845

Outside

Press@RunDepth: 756.11 psig @ 6324.00 ft (KB)
 Start Date: 2014.01.10 End Date: 2014.01.10
 Start Time: 12:41:05 End Time: 23:03:45
 Capacity: 8000.00 psig
 Last Calib.: 2014.01.10
 Time On Btm: 2014.01.10 @ 15:23:00
 Time Off Btm: 2014.01.10 @ 18:30:45

TEST COMMENT: IF: BOB @ 2 1/2 min.
 IS: Bled off for 2 min. No Return.
 FF: BOB @ 9 min.
 FS: Bled off for 2 min. 1/4" Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3139.93	136.54	Initial Hydro-static
1	259.61	135.66	Open To Flow (1)
33	610.36	159.72	Shut-In(1)
80	769.26	154.23	End Shut-In(1)
81	616.78	154.05	Open To Flow (2)
127	756.11	158.66	Shut-In(2)
188	776.10	156.57	End Shut-In(2)
188	3126.36	157.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1010.00	GOMCW 20g 5o 10m 65w	12.49
635.00	GOWCM 10g 5o 20w 65m	8.91
0.00	180' GIP	0.00

Gas Rates

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



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PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS
Willis #23-6
Job Ticket: 56704 **DST#: 1**
Test Start: 2014.01.10 @ 12:41:00

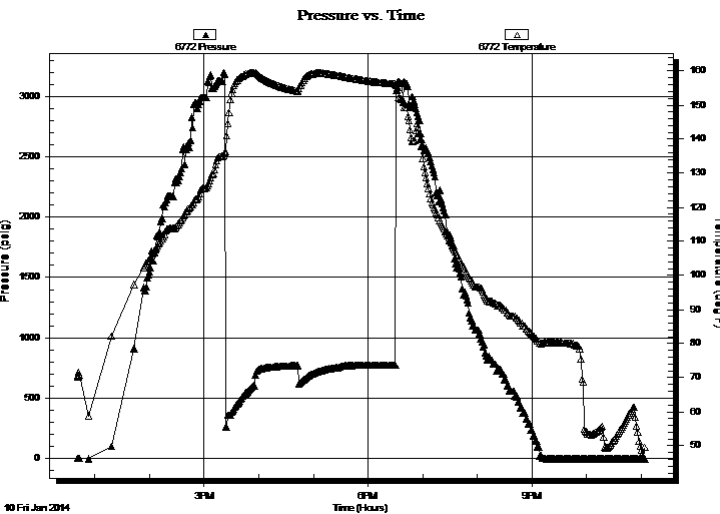
GENERAL INFORMATION:

Formation: **St. Louis**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:23:30
Time Test Ended: 23:03:45
Interval: **6323.00 ft (KB) To 6384.00 ft (KB) (TVD)**
Total Depth: 6384.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Sam Esparza
Unit No: 64
Reference Elevations: 3118.00 ft (KB)
3106.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6772 Outside

Press@RunDepth: psig @ 6324.00 ft (KB)
Start Date: 2014.01.10 End Date: 2014.01.10
Start Time: 12:41:05 End Time: 23:03:45
Capacity: 8000.00 psig
Last Calib.: 2014.01.10
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB @ 2 1/2 min.
IS: Bled off for 2 min. No Return.
FF: BOB @ 9 min.
FS: Bled off for 2 min. 1/4" Return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1010.00	GOMCW 20g 5o 10m 65w	12.49
635.00	GOWCM 10g 5o 20w 65m	8.91
0.00	180' GIP	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Palmer Oil, Inc.

23-32s-37w Stevens,KS

PO Box 399
Garden, City KS 67846

Willis #23-6

Job Ticket: 56704

DST#: 1

ATTN: Wyatt Urban

Test Start: 2014.01.10 @ 12:41:00

Tool Information

Drill Pipe:	Length: 6121.00 ft	Diameter: 3.80 inches	Volume: 85.86 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 140000.0 lb
			<u>Total Volume: 86.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 86000.00 lb
Depth to Top Packer:	6323.00 ft			Final 96000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			6296.00	
Shut In Tool	5.00			6301.00	
Hydraulic tool	5.00			6306.00	
Jars	5.00			6311.00	
Safety Joint	3.00			6314.00	
Packer	5.00			6319.00	28.00 Bottom Of Top Packer
Packer	4.00			6323.00	
Stubb	1.00			6324.00	
Recorder	0.00	6772	Outside	6324.00	
Recorder	0.00	8845	Outside	6324.00	
Perforations	22.00			6346.00	
Change Over Sub	1.00			6347.00	
Drill Pipe	31.00			6378.00	
Change Over Sub	1.00			6379.00	
Bullnose	5.00			6384.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



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FLUID SUMMARY

Palmer Oil, Inc.
PO Box 399
Garden, City KS 67846
ATTN: Wyatt Urban

23-32s-37w Stevens,KS
Willis #23-6
Job Ticket: 56704 **DST#: 1**
Test Start: 2014.01.10 @ 12:41:00

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:	85000 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1800.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1010.00	GOMCW 20g 5o 10m 65w	12.491
635.00	GOWCM 10g 5o 20w 65m	8.907
0.00	180' GIP	0.000

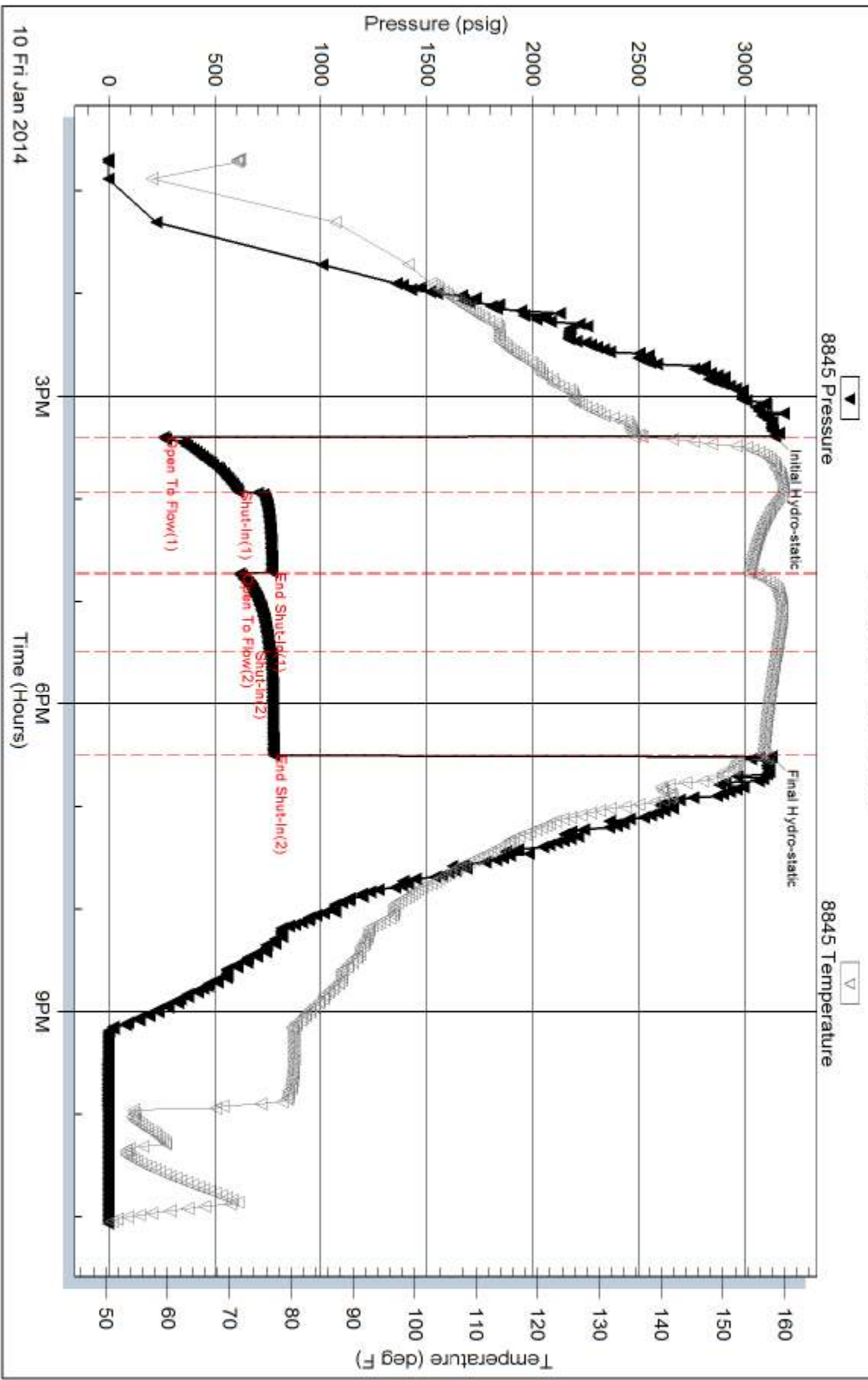
Total Length: 1645.00 ft Total Volume: 21.398 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Water Salinity: .179 @ 34 degrees= 85,000 ppm

Pressure vs. Time

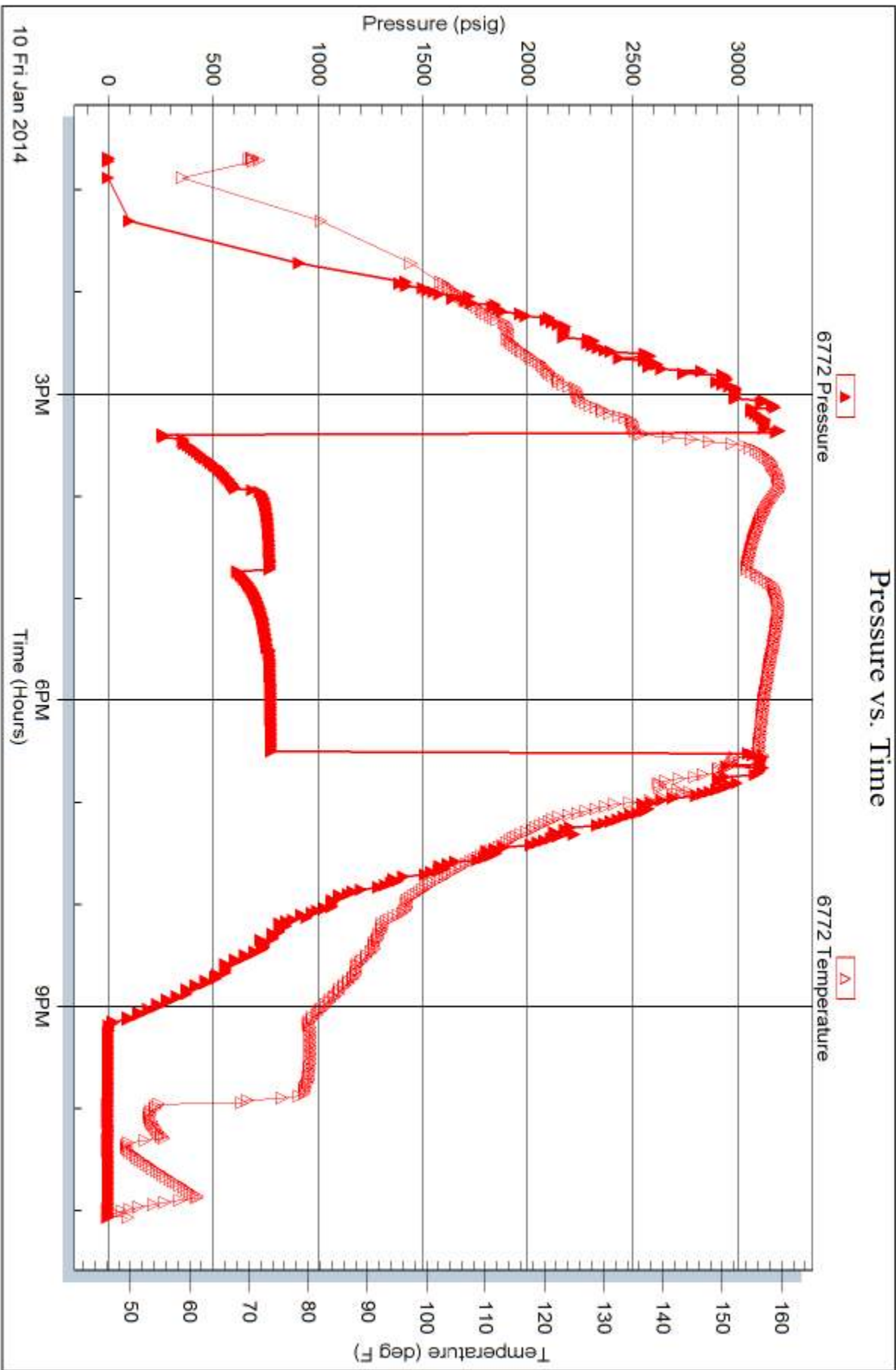


Serial #: 6772

Outside Palmer Oil, Inc.

Wells #23-6

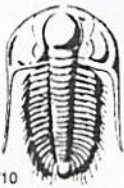
DST Test Number: 1



Tribble Testing, Inc

Ref. No: 56704

Printed: 2014.01.14 @ 08:49:50



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56704

Well Name & No. Willis #23-6 Test No. 1 Date 1/10/14
 Company Palmer O.I., Inc. Elevation 3118 KB 3106 GL
 Address 3118 N Cummings Rd PO Box 399 Garden City, KS 67846
 Co. Rep / Geo. Wyatt Urban Rig Duke #4
 Location: Sec. 23 Twp. 32S Rge. 37W Co. Stevens State KS

Interval Tested 6323 - 6384 Zone Tested ST. Louis
 Anchor Length 61" Drill Pipe Run 6121 Mud Wt. 9.4
 Top Packer Depth 6319 Drill Collars Run 184 Vis 48
 Bottom Packer Depth 6323 Wt. Pipe Run Ø WL 8.0
 Total Depth 6384 Chlorides 1800 ppm System LCM 2
 Blow Description IF: BOB @ 2 1/2 min.
ISI: Bled off for 2 min. No Return.
FF: BOB @ 9 min.
FSD: Bled off for 2 min. 1/4" Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>635</u>	<u>GOMCW</u>	<u>10</u>	<u>5</u>	<u>20</u>	<u>65</u>
<u>1010</u>	<u>GOMCW</u>	<u>20</u>	<u>5</u>	<u>65</u>	<u>10</u>
<u>180'</u>	<u>GIP</u>				

Rec Total 1645 BHT 157 Gravity — API RW .179 @ 34 °F Chlorides 85,000 ppm

(A) Initial Hydrostatic <u>3140</u>	<input checked="" type="checkbox"/> Test <u>1450</u>	T-On Location <u>11:45</u>
(B) First Initial Flow <u>260</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:41</u>
(C) First Final Flow <u>610</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:23</u>
(D) Initial Shut-In <u>769</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>18:30</u>
(E) Second Initial Flow <u>617</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:04</u>
(F) Second Final Flow <u>756</u>	<input checked="" type="checkbox"/> Mileage <u>210 R/T</u> 325.50	Comments <u>Loaded Tools</u>
(G) Final Shut-In <u>776</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>3126</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>2420.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2100.50</u>	

Approved By _____ Our Representative [Signature]

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