

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1262572  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1262572



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Palmer Oil, Inc.
Well Name	Hatcher 12-1
Doc ID	1262572

Tops

Name	Top	Datum
Anhy	1595	+1263
B/Anhy	1664	+1194
Heebner	4360	-1502
Lansing	4518	-1660
B/KC	5204	-2346
Marmaton	5216	-2358
Cherokee	5440	-2582
Morrow	5806	-2948
Keyes	5953	-3095
Chester	6060	-3209
St.Gen	8394	-3536





## DRILL STEM TEST REPORT

Prepared For: **Palmer Oil Co**

PO Box 399  
Garden City, KS 67846

ATTN: Luke Thompson

### **Hatcher #12-1**

#### **12-34S-33W Seward,KS**

Start Date: 2015.06.11 @ 11:06:41

End Date: 2015.06.11 @ 16:43:26

Job Ticket #: 59769                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.19 @ 11:19:22





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Palmer Oil Co  
PO Box 399  
Garden City, KS 67846  
ATTN: Luke Thompson

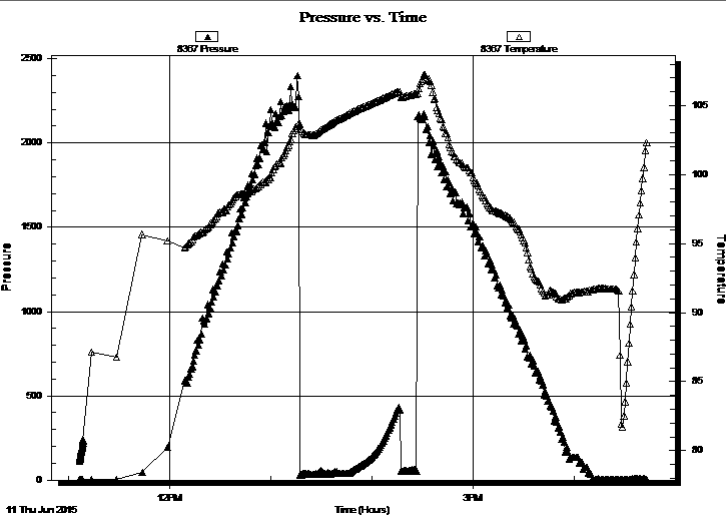
**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
Job Ticket: 59769 **DST#: 1**  
Test Start: 2015.06.11 @ 11:06:41

## GENERAL INFORMATION:

Formation: **Toronto**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 13:16:56  
Time Test Ended: 16:43:26  
Interval: **4430.00 ft (KB) To 4490.00 ft (KB) (TVD)**  
Total Depth: 4490.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Leal Cason  
Unit No: 74  
Reference Elevations: 2858.00 ft (KB)  
2847.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8367 Outside**  
Press@RunDepth: psig @ 4431.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.06.11 End Date: 2015.06.11 Last Calib.: 2015.06.11  
Start Time: 11:06:42 End Time: 16:43:11 Time On Btm:  
Time Off Btm:

TEST COMMENT: IF: Weak Surface Blow  
IS: No Blow Back  
FF: No Blow / Pulled @ 10 minutes



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Palmer Oil Co  
PO Box 399  
Garden City, KS 67846  
ATTN: Luke Thompson

**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
Job Ticket: 59769      **DST#: 1**  
Test Start: 2015.06.11 @ 11:06:41

**Tool Information**

Drill Pipe:	Length: 4142.00 ft	Diameter: 3.80 inches	Volume: 58.10 bbl	Tool Weight: 2100.00 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: 270.00 ft	Diameter: 2.25 inches	Volume: 1.33 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 59.43 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4430.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Shut In Tool	5.00			4409.00	
Hydraulic tool	5.00			4414.00	
Jars	5.00			4419.00	
Safety Joint	2.00			4421.00	
Packer	5.00			4426.00	26.00      Bottom Of Top Packer
Packer	4.00			4430.00	
Stubb	1.00			4431.00	
Recorder	0.00	6798	Inside	4431.00	
Recorder	0.00	8367	Outside	4431.00	
Perforations	2.00			4433.00	
Change Over Sub	1.00			4434.00	
Drill Pipe	32.00			4466.00	
Change Over Sub	1.00			4467.00	
Perforations	20.00			4487.00	
Bullnose	3.00			4490.00	60.00      Bottom Packers & Anchor

**Total Tool Length: 86.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Palmer Oil Co

**12-34S-33W Seward,KS**

PO Box 399  
Garden City, KS 67846

**Hatcher #12-1**

Job Ticket: 59769

**DST#: 1**

ATTN: Luke Thompson

Test Start: 2015.06.11 @ 11:06:41

### 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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

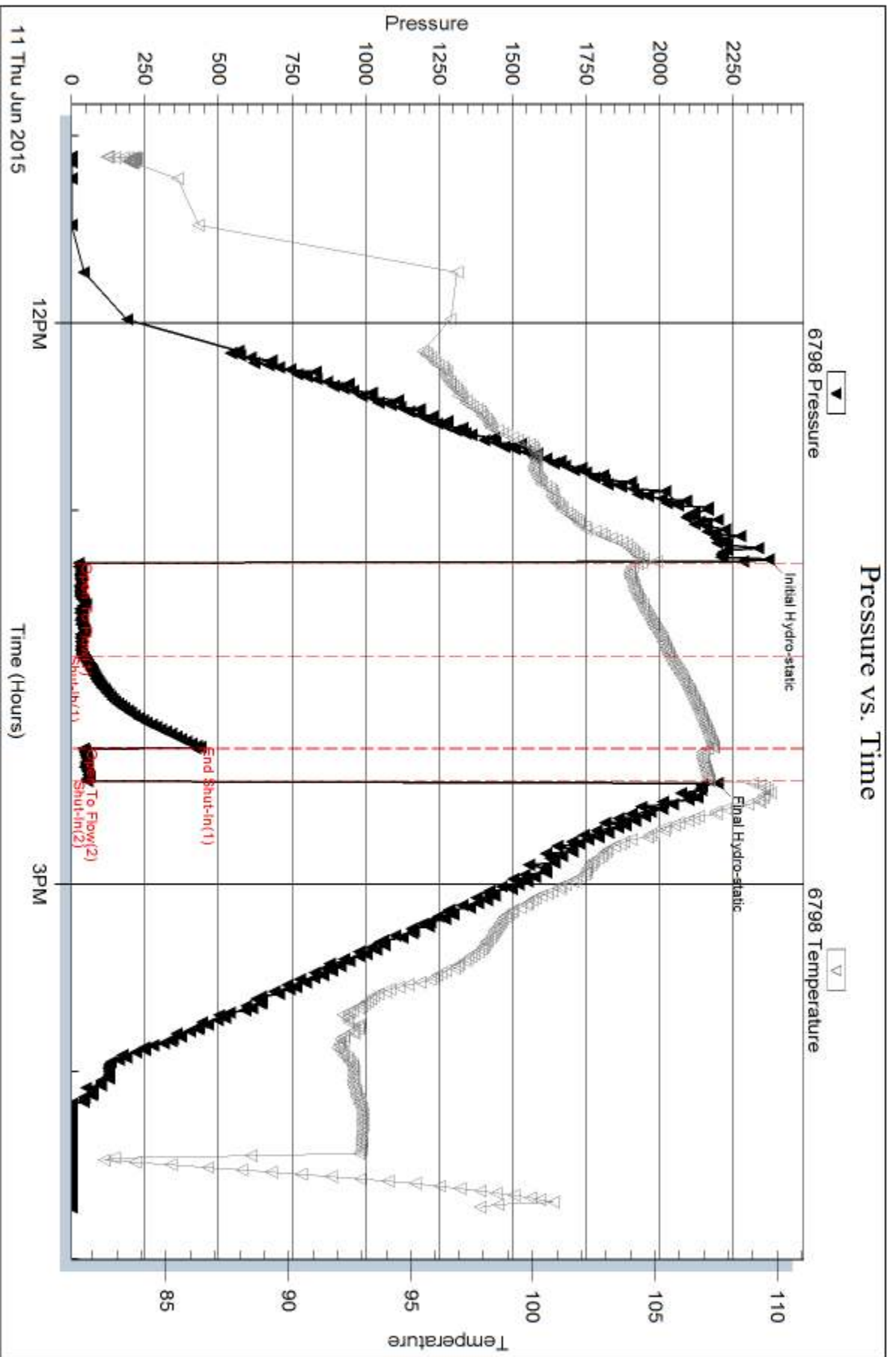
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

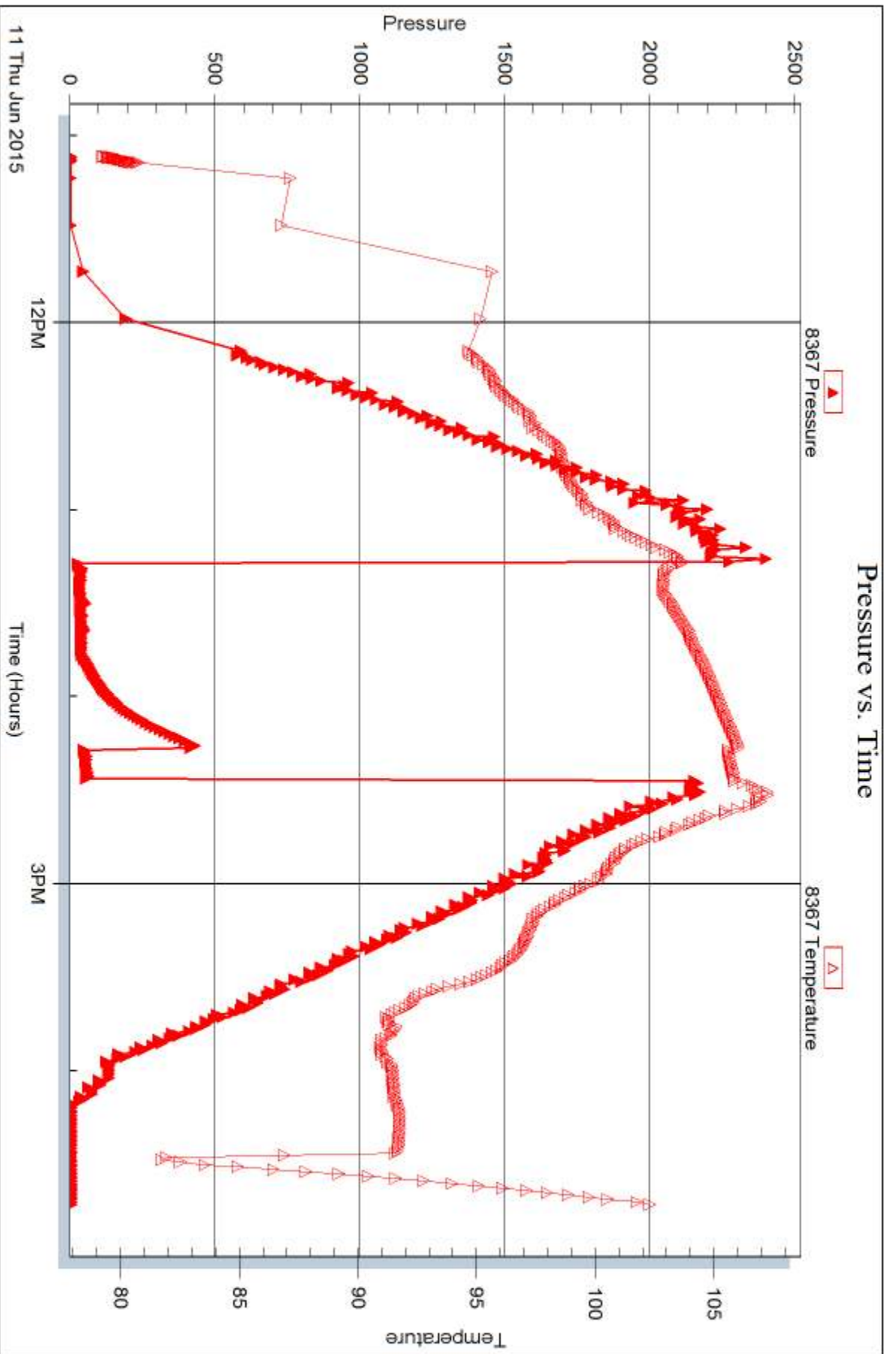


Serial #: 8367

Outside Palmer Oil Co

Hatcher #12-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 59769

Printed: 2015.06.19 @ 11:19:24



## DRILL STEM TEST REPORT

Prepared For: **Palmer Oil Co**

PO Box 399  
Garden City, KS 67846

ATTN: Luke Thompson

### **Hatcher #12-1**

### **12-34S-33W Seward,KS**

Start Date: 2015.06.18 @ 17:11:53

End Date: 2015.06.18 @ 23:38:53

Job Ticket #: 59770                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.19 @ 11:15:49



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Palmer Oil Co  
 PO Box 399  
 Garden City, KS 67846  
 ATTN: Luke Thompson

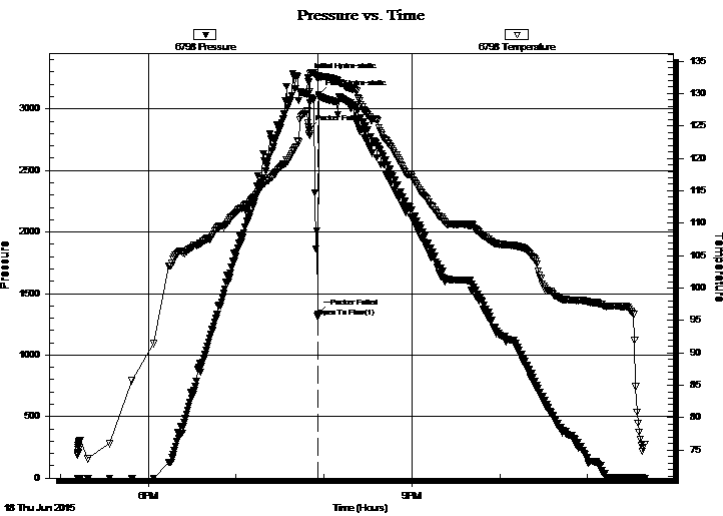
**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
 Job Ticket: 59770 **DST#: 2**  
 Test Start: 2015.06.18 @ 17:11:53

## GENERAL INFORMATION:

Formation: **Chester**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:55:38  
 Time Test Ended: 23:38:53  
**Interval: 6210.00 ft (KB) To 6410.00 ft (KB) (TVD)**  
 Total Depth: 6410.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2858.00 ft (KB)  
 2847.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6798 Inside**  
 Press@RunDepth: psig @ 6211.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.06.18 End Date: 2015.06.18 Last Calib.: 2015.06.19  
 Start Time: 17:11:54 End Time: 23:38:53 Time On Btm: 2015.06.18 @ 19:49:08  
 Time Off Btm: 2015.06.18 @ 19:56:38

TEST COMMENT: Packer Failure, Tried To Reset, Failed, Pulled Test



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3251.67	125.53	Initial Hydro-static
1	2830.21	123.74	Packer Failed
7	1312.89	132.38	Open To Flow (1)
7	1334.03	132.29	--Packer Failed
8	3118.38	132.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1365.00	Mud	16.69

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Palmer Oil Co  
PO Box 399  
Garden City, KS 67846  
ATTN: Luke Thompson

**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
Job Ticket: 59770      **DST#: 2**  
Test Start: 2015.06.18 @ 17:11:53

**Tool Information**

Drill Pipe:	Length: 5926.00 ft	Diameter: 3.80 inches	Volume: 83.13 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 40000.00 lb
Drill Collar:	Length: 270.00 ft	Diameter: 2.25 inches	Volume: 1.33 bbl	Weight to Pull Loose: 110000.0 lb
			<u>Total Volume: 84.46 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 97000.00 lb
Depth to Top Packer:	6210.00 ft			Final 100000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	200.00 ft			
Tool Length:	226.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Shut In Tool	5.00			6189.00	
Hydraulic tool	5.00			6194.00	
Jars	5.00			6199.00	
Safety Joint	2.00			6201.00	
Packer	5.00			6206.00	26.00      Bottom Of Top Packer
Packer	4.00			6210.00	
Stubb	1.00			6211.00	
Recorder	0.00	6798	Inside	6211.00	
Recorder	0.00	8367	Outside	6211.00	
Perforations	7.00			6218.00	
Change Over Sub	1.00			6219.00	
Drill Pipe	187.00			6406.00	
Change Over Sub	1.00			6407.00	
Bullnose	3.00			6410.00	200.00      Bottom Packers & Anchor

**Total Tool Length: 226.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Palmer Oil Co

**12-34S-33W Seward,KS**

PO Box 399  
Garden City, KS 67846

**Hatcher #12-1**

Job Ticket: 59770

**DST#: 2**

ATTN: Luke Thompson

Test Start: 2015.06.18 @ 17:11:53

### 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: 56.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1300.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1365.00	Mud	16.688

Total Length: 1365.00 ft      Total Volume: 16.688 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

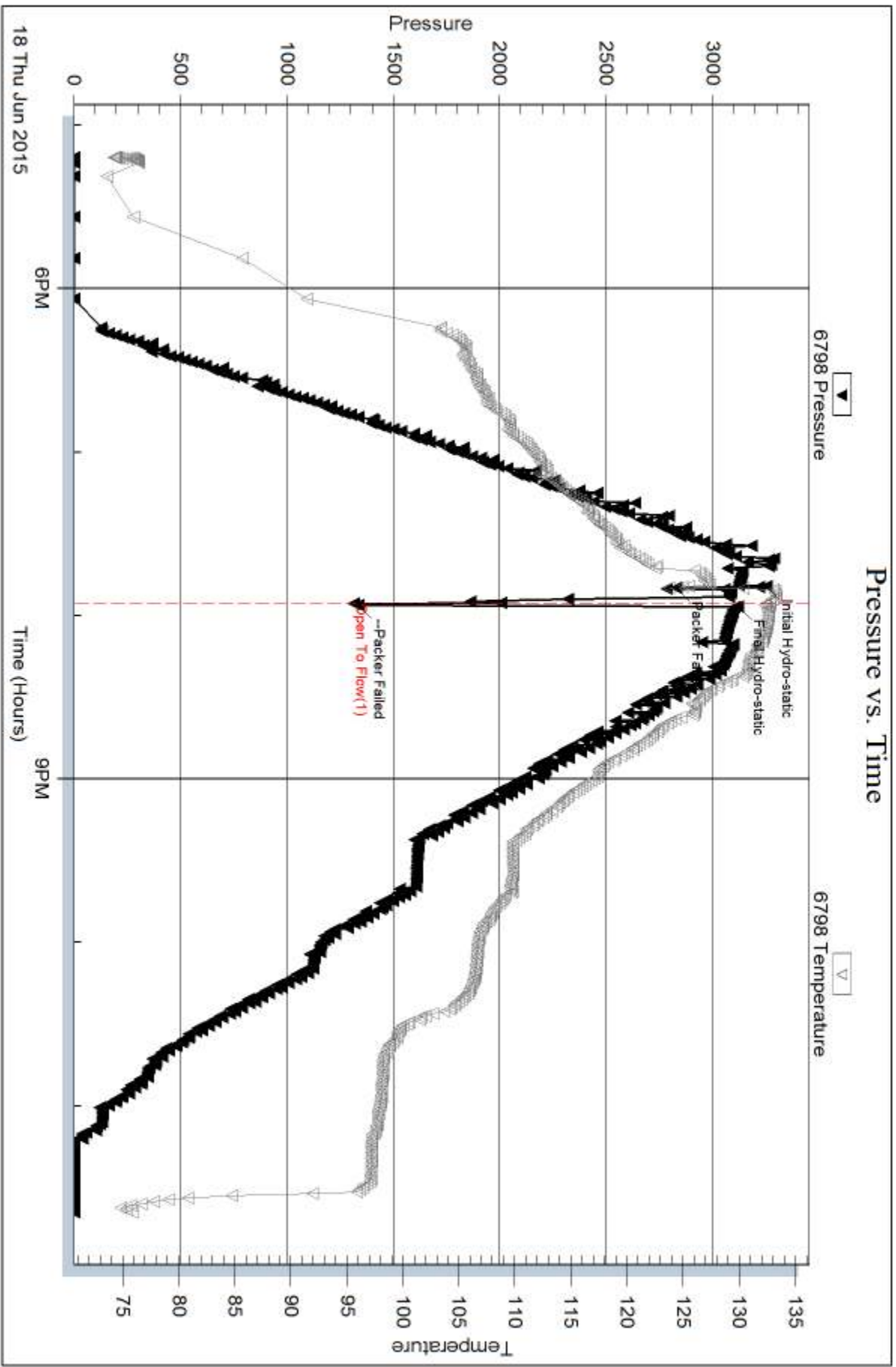
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



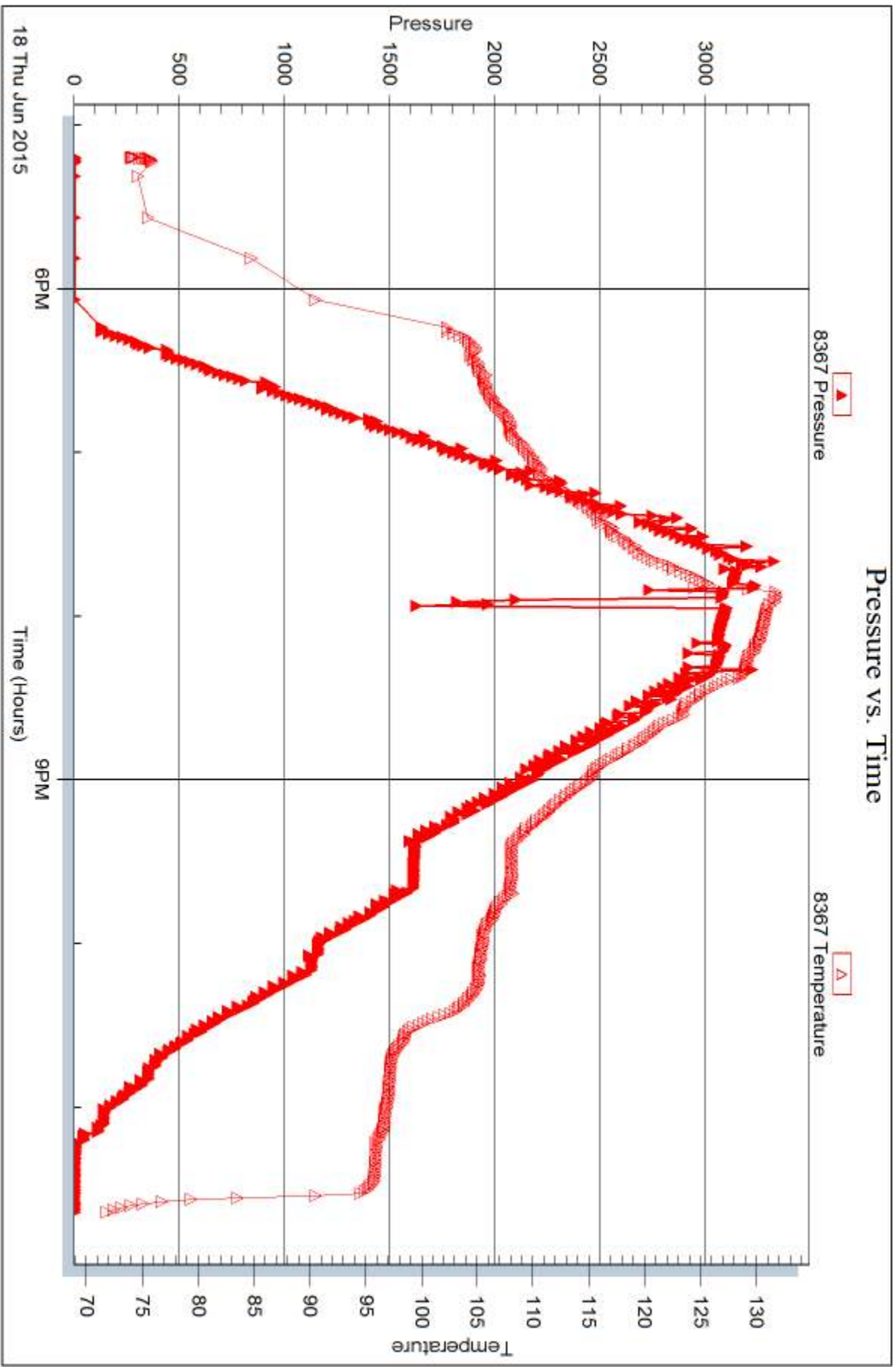


Serial #: 8367

Outside Palmer Oil Co

Hatcher #12-1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 59770

Printed: 2015.06.19 @ 11:15:51



## DRILL STEM TEST REPORT

Prepared For: **Palmer Oil Co**

PO Box 399  
Garden City, KS 67846

ATTN: Luke Thompson

### **Hatcher #12-1**

### **12-34S-33W Seward,KS**

Start Date: 2015.06.18 @ 23:56:36

End Date: 2015.06.19 @ 06:32:21

Job Ticket #: 59771                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.19 @ 11:15:15



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Palmer Oil Co  
PO Box 399  
Garden City, KS 67846  
ATTN: Luke Thompson

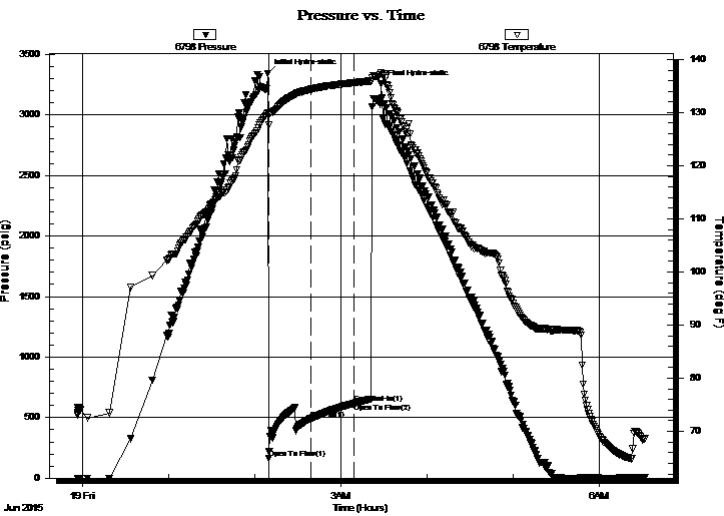
**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
Job Ticket: 59771      **DST#: 3**  
Test Start: 2015.06.18 @ 23:56:36

## GENERAL INFORMATION:

Formation: **Chester**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 02:09:51  
Time Test Ended: 06:32:21  
Interval: **6312.00 ft (KB) To 6410.00 ft (KB) (TVD)**  
Total Depth: 6410.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Leal Cason  
Unit No: 74  
Reference Elevations: 2858.00 ft (KB)  
2847.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 6798      Inside**  
Press@RunDepth: 490.95 psig @ 6313.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2015.06.18      End Date: 2015.06.19      Last Calib.: 2015.06.19  
Start Time: 23:56:37      End Time: 06:32:21      Time On Btm: 2015.06.19 @ 02:09:21  
Time Off Btm: 2015.06.19 @ 03:28:06

TEST COMMENT: IF: Weak Surface Blow , Dead @ 27 minutes  
IS: No Blow Back  
FF: No Blow , Pulled @ 10 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3344.29	130.02	Initial Hydro-static
1	165.62	127.65	Open To Flow (1)
30	490.95	134.39	Shut-In(1)
60	616.95	135.61	End Shut-In(1)
60	618.34	135.62	Open To Flow (2)
79	3254.49	137.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Palmer Oil Co  
PO Box 399  
Garden City, KS 67846  
ATTN: Luke Thompson

**12-34S-33W Seward,KS**  
**Hatcher #12-1**  
Job Ticket: 59771      **DST#: 3**  
Test Start: 2015.06.18 @ 23:56:36

**Tool Information**

Drill Pipe:	Length: 6020.00 ft	Diameter: 3.80 inches	Volume: 84.44 bbl	Tool Weight: 2100.00 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: 270.00 ft	Diameter: 2.25 inches	Volume: 1.33 bbl	Weight to Pull Loose: 110000.0 lb
			<u>Total Volume: 85.77 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 97000.00 lb
Depth to Top Packer:	6312.00 ft			Final 97000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer On Bottom

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			6291.00	
Hydraulic tool	5.00			6296.00	
Jars	5.00			6301.00	
Safety Joint	2.00			6303.00	
Packer	5.00			6308.00	26.00      Bottom Of Top Packer
Packer	4.00			6312.00	
Stubb	1.00			6313.00	
Recorder	0.00	6798	Inside	6313.00	
Recorder	0.00	8367	Outside	6313.00	
Perforations	30.00			6343.00	
Change Over Sub	1.00			6344.00	
Drill Pipe	62.00			6406.00	
Change Over Sub	1.00			6407.00	
Bullnose	3.00			6410.00	98.00      Bottom Packers & Anchor

**Total Tool Length: 124.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Palmer Oil Co

**12-34S-33W Seward,KS**

PO Box 399  
Garden City, KS 67846

**Hatcher #12-1**

Job Ticket: 59771

**DST#: 3**

ATTN: Luke Thompson

Test Start: 2015.06.18 @ 23:56:36

## 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: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbf

Num Fluid Samples: 0

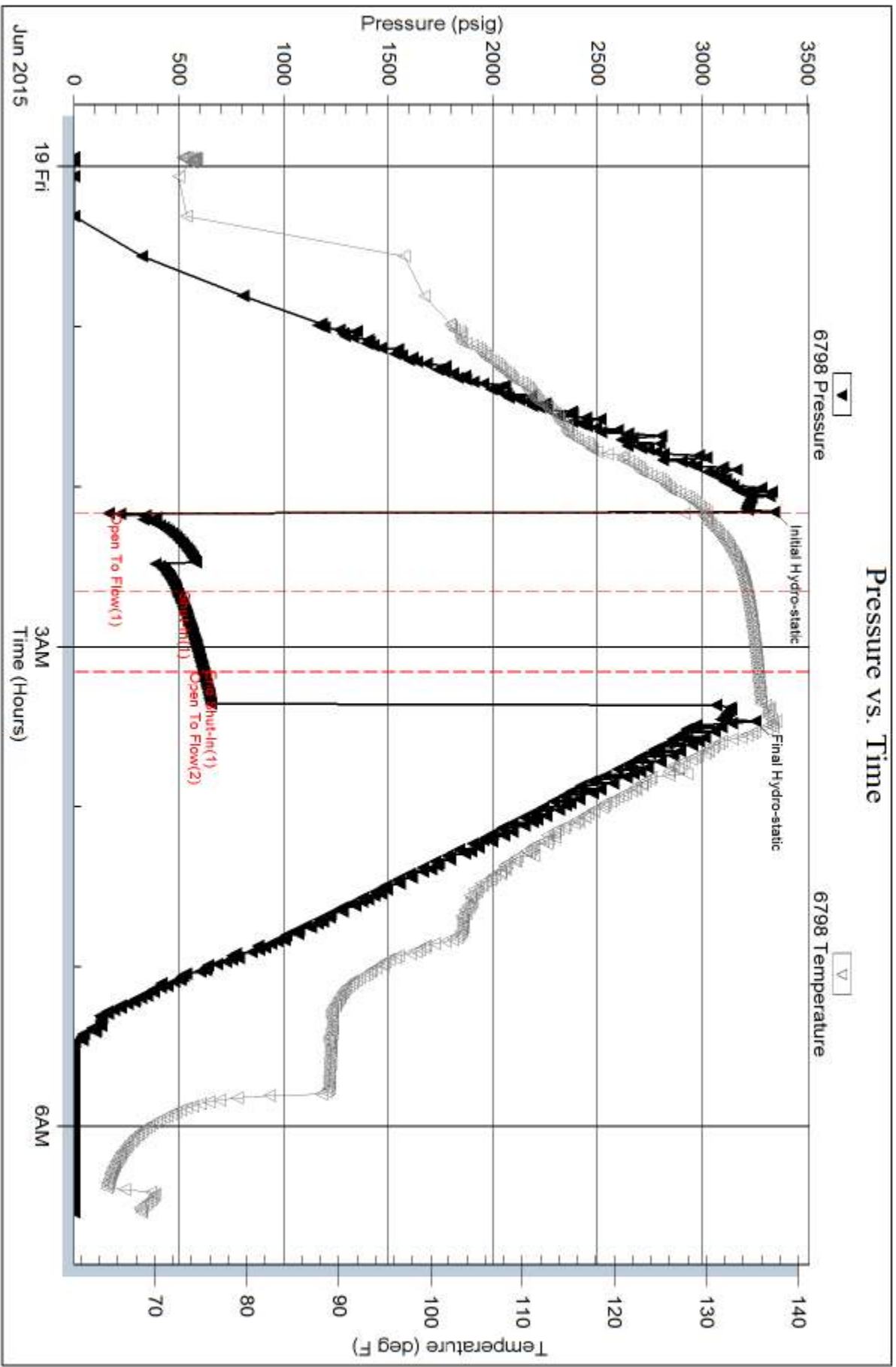
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



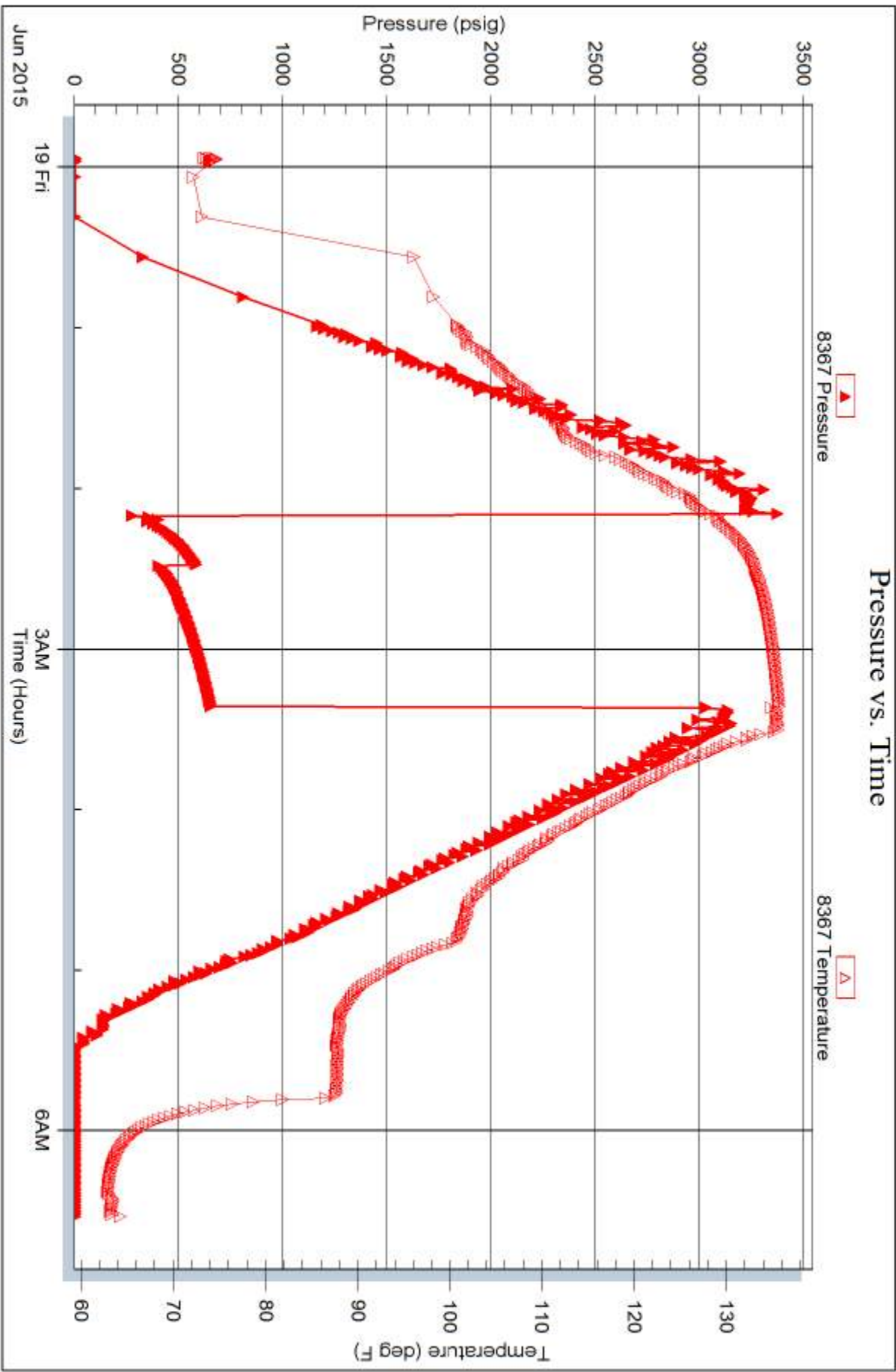


Serial #: 8367

Outside Palmer Oil Co

Hatcher #12-1

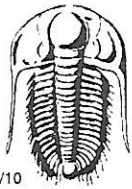
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 59771

Printed: 2015.06.19 @ 11:15:17



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59769

Well Name & No. Hatcher 12-1 Test No. 1 Date 06/11/15  
 Company Palmer Oil Inc Elevation 2858 KB 2847 GL  
 Address PO Box 399 Garden City, KS 67846  
 Co. Rep / Geo. Luke Thompson Rig Duke 5  
 Location: Sec. 12 Twp. 34 S Rge. 33 W Co. Jeward State KS

Interval Tested 4430 - 4490 Zone Tested Toronto  
 Anchor Length 60 Drill Pipe Run 4142 Mud Wt. 9.1  
 Top Packer Depth 4425 Drill Collars Run 270 Vis 56  
 Bottom Packer Depth 4430 Wt. Pipe Run 0 WL 9.2  
 Total Depth 4490 Chlorides 1300 ppm System LCM 12  
 Blow Description IF: weak surface blow  
FSI: No blow back  
FF: No blow / pulled @ 10 minutes

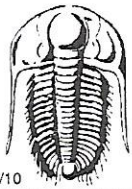
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				

Rec Total 5 BHT 109 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic <u>2371</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:30</u>
(B) First Initial Flow <u>25</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>11:06</u>
(C) First Final Flow <u>35</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:16</u>
(D) Initial Shut-In <u>438</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>14:27</u>
(E) Second Initial Flow <u>42</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:43</u>
(F) Second Final Flow <u>N/A</u>	<input checked="" type="checkbox"/> Mileage <u>2607</u> 65	Comments
(G) Final Shut-In <u>N/A</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>14:27</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>10</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>N/A</u>	<input type="checkbox"/> Day Standby	Total <u>1540</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1540</u>	

Approved By \_\_\_\_\_ 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. 59770

Well Name & No. Hatcher 12-1 Test No. 2 Date 06/18/15  
 Company Palmer Oil Co Inc Elevation 2858 KB 2847 GL  
 Address PO Box 399 Garden City, KS 67846  
 Co. Rep / Geo. Luke Thompson Rig Duke 5  
 Location: Sec. 12 Twp. 34S Rge. 33W Co. Seward State KS

Interval Tested 6210 - 6410 Zone Tested Chester  
 Anchor Length 200 Drill Pipe Run 5926 Mud Wt. 9.4  
 Top Packer Depth 6205 Drill Collars Run 270 Vis 5-5  
 Bottom Packer Depth 6210 Wt. Pipe Run 0 WL 8.8  
 Total Depth 6410 Chlorides 1350 ppm System LCM 10  
 Blow Description Packer Failure, Tried to reset, Failed, Pulled TEST

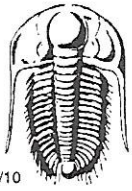
Rec	Feet of	%gas	%oil	%water	%mud
<u>1365</u>	<u>Mud</u>				

Rec Total 1365 BHT 132 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>3252</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>15:30</u>
(B) First Initial Flow <u>N/A</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:11</u>
(C) First Final Flow <u>N/A</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>19:55</u>
(D) Initial Shut-In <u>N/A</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>19:56</u>
(E) Second Initial Flow <u>N/A</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:38</u>
(F) Second Final Flow <u>N/A</u>	<input checked="" type="checkbox"/> Mileage <u>260</u> 65	Comments
(G) Final Shut-In <u>N/A</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>3118</u>	<input type="checkbox"/> Straddle	
Initial Open <u>N/A</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>N/A</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>N/A</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>800</u>
Final Shut-In <u>N/A</u>	<input checked="" type="checkbox"/> Day Standby <u>6.5d 10.75h</u>	Total <u>2340</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1540</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59771

Well Name & No. Hatcher 12-1 Test No. 3 Date 06/18/15  
 Company Palmer oil co inc Elevation 2858 KB 2847 GL  
 Address Po Box 399 Garden City, KS 67846  
 Co. Rep / Geo. Luke Thompson Rig Duke 5  
 Location: Sec. 12 Twp. 34S Rge. 33W Co. Seward State KS

Interval Tested 6312 - 6410 Zone Tested Chester  
 Anchor Length 98 Drill Pipe Run 6020 Mud Wt. 9.4  
 Top Packer Depth 6307 Drill Collars Run 270 Vis 0.55  
 Bottom Packer Depth 6312 Wt. Pipe Run 0 WL 8.8  
 Total Depth 6410 Chlorides 1350 ppm System LCM 10

Blow Description IF: weak surface blow, dead @ 27 minutes  
ISI: NO BLOW BACK  
FF: NO BLOW, Pulled @ 10 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				

Rec Total 5 BHT 137 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>3344</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>23:45</u>
(B) First Initial Flow <u>165</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>23:56</u>
(C) First Final Flow <u>498</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>02:09</u>
(D) Initial Shut-In <u>617</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u><del>03:28</del> 03:28</u>
(E) Second Initial Flow <u>618</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>06:37</u>
(F) Second Final Flow <u>N/A</u>	<input type="checkbox"/> Mileage	Comments
(G) Final Shut-In <u>N/A</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>3254</u>	<input type="checkbox"/> Straddle	
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Flow <u>10</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
Final Shut-In <u>N/A</u>	<input type="checkbox"/> Accessibility	Total <u>1725</u>
	Sub Total <u>1725</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative [Signature]

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# **Geological Report**

Palmer Oil, Inc.

**Hatcher #12-1**

335' FSL & 335' FWL

Sec 12, T34s, R33w

Seward County, Kansas



**Palmer Oil, Inc.**

## General Data

Well Data: Palmer Oil, Inc.  
Hatcher #12-1  
335' FSL & 335' FWL  
Sec. 12, T34s, R33w  
Seward County, Kansas  
API # 15-175-22237-00-00

Drilling Contractor: Duke Drilling Co. Rig #5

Geologist: Luke Thompson

Spud Date: June 3, 2015

Completion Date: June 21, 2015

Elevation 2847' G.L.  
2858' K.B.

Directions: From the North side of Liberal, KS go north on Highway 83 approx. 2 miles to road 7, east 2 miles to road K, north 1 mile to road 8, east 1 mile to road L, north 200 feet, east into.

Casing: 1700' 8 5/8" #24 Surface Casing  
6479' 5 1/2" #15.5 Production Casing

Samples: 4300' to RTD 10' Wet & Dry

Drilling Time: 1550' – 1700' & 4200' to RTD

Electric Logs: Pioneer Energy Services "D. Schmidt"  
Full Sweep

Drillstem Tests: Three-Trilobite Testing "Leal Cason"

Problems: Lost Circulation @ 3185' (loss 60 bbls)  
Lost Circulation @ 3538 & 3550' (loss 210 bbls)

## Formation Tops

Hatcher #12-1

Sec. 12, T34s, R33w

335' FSL & 335' FWL

Anhydrite	1595' +1263
Base	1664 +1194
Heebner	4360' -1502
Lansing	4518' -1660
BKC	5204' -2346
Marmaton	5216' -2358
Cherokee	5440' -2582
Morrow	5806' -2948
Keyes	5953' -3095
Chester Lime	6060' -3202
St. Gen	6394' -3536
RTD	6500' -3642
LTD	6496' -3638

### Sample Zone Descriptions

**Toronto (4450, -1592): Covered in DST #1**

Limestone, tan, fine crystalline, occasionally sucrosic, poor inter-crystalline porosity, slight odor, scattered bright green fluorescence, slow milky cut when broke. Gas 75 units hotwire.

**Chester (6340, -3482): Covered in DST #2 & 3**

Sandstone, white/grey, fine grain, sub-round, well sorted, poor cement, dead oil stain, no fluorescence, slight odor, good flush cut, excellent flush cut when broke. Gas 250 units hotwire.

**Drill Stem Tests**  
Trilobite Testing  
“Leal Cason”

**DST #1**

**Toronto**

Interval (4430' – 4490') Anchor Length 60'

IHP - 2371 #

IFP - 30" – wsb 25-35 #

ISI - 30" – no return 438 #

FFP - 10" – no blow 42-54 #

FSIP - pulled tool

FHP - 2197 #

BHT - 109° F

**Recovery:** 5' mud

**DST #3**

**Chester**

Interval (6210' – 6410') Anchor Length 200'

Details: N/A

Packer Failure

**DST #2**

**Chester**

Interval (6312' – 6410') Anchor Length 98'

IHP - 3344 #

IFP - 30" – wsb died in 27 min 166-491 #

ISI - 30" – no return 617 #

FFP - 10" – no blow 618#

FSIP - Pulled tool

FHP - 3255 #

BHT - 138 ° F

**Recovery:** 5' mud



## Structural Comparison

	Palmer Oil, Inc. Hatcher #12-1 Sec. 12, T34s, R33w 335' FSL & 335' FWL		EOG Resources Wilson #13-1 Sec. 13, T34s, R33w 660' FNL & 330' FEL		Dunne Equities Hatcher #1-12 Sec. 12, T34s, R33w 3300' FSL & 1980' FWL
<b>Formation</b>					
<b>Heebner</b>	4360' -1502	+1	4333' -1503	-2	4334' -1500
<b>Lansing</b>	4518' -1660	+7	4497' -1667	+8	4502' -1668
<b>BKC</b>	5204' -2346	+8	5184' -2354	+4	5184' -2350
<b>Marmaton</b>	5216' -2358	+7	5195' -2365	+6	5198' -2364
<b>Cherokee</b>	5440' -2582	+4	5416' -2586	-3	5413' -2579
<b>Morrow</b>	5806' -2948	-4	5774' -2944	-7	5775' -2941
<b>Keyes</b>	5953' -3095	+1	5916' -3096	-24	5905' -3071
<b>Chester Lm</b>	6060' -3202	+8	6040' -3210	-32	6004' -3170
<b>St. Gen</b>	6394' -3536	-26	6342' -3510	-49	6321' -3487

### Summary

The location for the Hatcher #12-1 well was found via 3-D seismic survey. The new well ran structurally as expected. Three drill stem tests were conducted, none of which recovered commercial quantities of gas and oil. After all the gathered data had been examined, the decision was made to run 5 ½" casing to further evaluate the Hatcher #12-1 well.

### Perforations:

<b>Primary:</b>	<b>Chester</b>	<b>(6337' – 6344')</b>
<b>Secondary:</b>	<b>Chester</b>	<b>(6305' – 6312')</b>
<b>Gas:</b>	<b>Herrington</b>	<b>(2654' – 2664')</b>
	<b>Krider</b>	<b>(2689' – 2709')</b>
<b>Disposal:</b>	<b>Lansing</b>	<b>(5040' – 5060')</b>

Respectfully Submitted,

Lukas Thompson (Palmer Oil, Inc.)



P.O. Box 205803  
Dallas, TX 75320-5803

Voice: (832) 482-3742  
Fax: (832) 482-3738

# INVOICE

Invoice Number: 149782

Invoice Date: Jun 4, 2015

Page: 1

Federal Tax I.D.#: 20-8651475

Bill To:
Palmer Oil Inc P O Box 399 Garden City, KS 67846-0399

Customer ID	Field Ticket #	Payment Terms	
Palm	65280	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Liberal	Jun 4, 2015	7/4/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Hatcher #12-1		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
2,391.00	CEMENT MATERIALS	Chloride	1.10	2,630.10
700.00	CEMENT MATERIALS	Light Weight	19.88	13,916.00
400.00	CEMENT MATERIALS	Cellophane Flakes	2.97	1,188.00
1,035.00	CEMENT SERVICE	Cubic Feet Charge	2.48	2,566.80
862.00	CEMENT SERVICE	Ton Mileage Charge	2.75	2,370.50
1.00	CEMENT SERVICE	Surface	2,213.75	2,213.75
20.00	CEMENT SERVICE	Pump Truck Mileage	7.70	154.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
20.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	88.00
3.00	CEMENT SERVICE	Waiting on Location	440.00	1,320.00
1.00	EQUIPMENT SALES	8-5/8 Guide Shoe	460.00	460.00
1.00	EQUIPMENT SALES	8-5/8 AFU Insert Float	447.00	447.00
1.00	EQUIPMENT SALES	8-5/8 Basket	560.00	560.00
3.00	EQUIPMENT SALES	8-5/8 Centralizer	75.00	225.00
1.00	EQUIPMENT SALES	8-5/8 Top Rubber Plug	131.00	131.00
1.00	CEMENT SUPERVISOR	Ruben Chavez		
1.00	OPERATOR ASSISTANT	Ivan Carrillo		
1.00	OPERATOR ASSISTANT	Jose Calderon		

Subtotal	32,125.15
Sales Tax	1,712.15
Total Invoice Amount	33,837.30
Payment/Credit Applied	
<b>TOTAL</b>	<b>33,837.30</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$ 12,850.06

ONLY IF PAID ON OR BEFORE  
Jul 4, 2015

# ALLIED OIL & GAS SERVICES, LLC 065280

Federal Tax I.D. # 20-8651475

EMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Liberal Ks

DATE <u>06-04-15</u>	SEC <u>12</u>	TWP. <u>34S</u>	RANGE <u>33W</u>	CALLED OUT	ON LOCATION	JOB START <u>12:00</u>	JOB FINISH <u>1:00 a.m.</u>
WELL# <u>12-1</u>	LOCATION <u>Liberal N to CR 7, E 4 M.</u>			COUNTY <u>Seward</u>	STATE <u>Ks</u>		
OLD OR NEW (Circle one) <u>NEW</u>				To <u>CR M. N. I. M. W into.</u>			

CONTRACTOR Duke # 5 OWNER Palmer Oil

TYPE OF JOB Surface  
 HOLE SIZE 12 1/4 T.D. 1700 + fr  
 CASING SIZE 8 5/8 24 # DEPTH 1700 + fr  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 CROWFOOT DEPTH  
 RES. MAX 1200 PSI MINIMUM  
 LEAS. LINE SHOE JOINT 12 #  
 CEMENT LEFT IN CSG. 2.7 BBls  
 PERFS.  
 DISPLACEMENT 105.6 Bbls

CEMENT  
 AMOUNT ORDERED 700 sk ALWC 1A, 3% CC + 516/sk Cellop. Flakes,  
200 sk A, 3% CC, 1/4 16/sk C. Flakes

EQUIPMENT  
 PUMP TRUCK CEMENTER Ruben Chavez  
531-541 HELPER Ivan Carrillo  
 BULK TRUCK  
993-1066 DRIVER Jose Calderon  
 BULK TRUCK  
705-842 DRIVER Ruben Chavez

COMMON class A 200sk @ 17.90	3,580.00
POZMIX @	
GEL @	
CHLORIDE 2391 Lb @ 1.10	2,630.10
ASC @	
ALWC 1A 700 sk @ 19.65	13,916.00
Cell. Flakes 400 Lb @ 2.97	1,188.00
@	
@	
@	
@	
@	
@	

REMARKS:

8525.64 / 40% TOTAL 21,314.10

SERVICE

Mat. Handling 1035 CF @ 2.48	-2,566.50
PUMP TRUCK CHARGE	2,213.75
Drayage 862 T.M @ 2.75	2,370.50
MILEAGE heavy 20 M. @ 7.70	154.00
MANIFOLD head 1 @	275.00
Light Vehicle 20 M. @ 4.40	88.00
Stand by hours 3 @ 440.00	1,320.00

3595.22 / 40% TOTAL 8,988.05

CHARGE TO: Palmer Oil  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

Guide Shoe 1 @	460.00
AFU Insert Float 1 @	447.00
Cement Basket 1 @	560.00
Centralizers 3 @ 75.00	225.00
Top rubber plug 1 @	131.00

729.20 / 40% TOTAL 1,023.00

To: Allied Oil & Gas Services, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 32,125.15

PRINTED NAME KENNETH MCGUIRE  
 SIGNATURE Kenneth McGuire

DISCOUNT 12,850.06 / 40% PAID IN 30 DAYS  
NET = 19,275.09





PO Box 466  
Ness City, KS 67560  
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 28611

CUSTOMER Palmer Oil Co. WELL Hatcher #12-1 DATE 6-20-15 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		U/M		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF			QTY	U/M	QTY	U/M			
330		1				SMD Cement					15.75	5906	25
276		1				Flocele	1/4	lb			2.25	225	00
281		1				Mud Flush					1.25	625	00
221		1				Liquid HCL					25.00	100	00
290		1				D-Air					42.00	168	00
581		1				SERVICE CHARGE					1.50	562	50
583		1				MILEAGE CHARGE					0.75	1460	88
						TOTAL WEIGHT	37350						
						LOADED MILES	140						
						TON MILES	2614.5						

CONTINUATION TOTAL 9547.63

JOB LOG

SWIFT Services, Inc.

DATE 6-20-15 PAGE NO.

CUSTOMER Palmer Oil Co. WELL NO. #12-1 LEASE Hatcher JOB TYPE Cement 5 1/2" Longstring TICKET NO. 28611

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2100							on location
								RTD - 6500 LTD - 6496 TP - 6479 Sct - 6478 SJ - #1 21.23 D.U. #70 3549 cont - #1 #2 #3 #4 #5 #7 #9 #11 #15 #20 #64 #74 Basket - #5 #70 #75 5 1/2" 15.5"
	2200							start 5 1/2" 15.5" casing in well
6-21-15	0045							Drop Ball circulate
	0150	6 1/2	12				500	Pump 500 gal Mud Flush
		6 1/2	20				500	Pump 20 bbl HCL Flush
	0157	4 1/2	62				400	mix 200 sks SMD w/ 1/4" Flo @ 13.5ppg
								wash out Pump + Lines Release Latch Down Plug
	0219	6 1/2	0				200	Start Displacement
		6 1/2	69				300	pump mud
		6 1/2	120				500	Lift Pressure
		6 1/2	153				1000	max lift Pressure
	0244	6 1/2	153.5				2000	Land Latch Down Plug Release Pressure *Hold*
	0305	0	5				1400	open D.U. Tool circulate
	0410	6 1/2	20				500	Pump 20 bbl HCL Flush Plug RH - MH (30-20)
	0421	4 1/2	35				300	mix 125 sks SMD w/ 1/4" Flo @ 14 ppg wash out Pump + Lines Release Top Plug
	0437	6 1/2	0				300	Start Displacement
		6 1/2	84				900	Lift Pressure
	0450	6 1/2	84.5				1800	Land Top Plug - Close D.U. Tool *Hold* wash up truck
	0530							Job Complete Thank You Dave Wynne John Tyler