



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1207987  
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: \_\_\_\_\_

1207987

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> _____ <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	Brookover 4-5
Doc ID	1207987

Tops

Name	Top	Datum
Anhy	1865'	+1002
B/Anhy	1930'	+937
Heebner	3906'	-1039
Lansing	3969'	-1102
B/KC	4443'	-1576
Marmaton	4466'	-1599
Ft.Scott	4578'	-1711
Morrow	4779'	-1912
Mississippian	4797'	-1930

# ALLIED OIL & GAS SERVICES, LLC 063410

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dalkey, KS

DATE <u>5/12/17</u>	SEC <u>4</u>	TWP. <u>25</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION	JOB START <u>4:30 PM</u>	JOB FINISH <u>5:30 AM</u>
LEASE <u>Breakover</u>	WELL # <u>4-8</u>	LOCATION <u>Garden City 5 to mile marker</u>			COUNTY <u>Finnery</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)			65 <u>EG N - E - N - TD</u>				

CONTRACTOR Duke 9

TYPE OF JOB PTA Rotary

HOLE SIZE \_\_\_\_\_ T.D. \_\_\_\_\_

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

OWNER Gene

CEMENT AMOUNT ORDERED 200 60/40 407ozal  
1/4 lbs Seal

COMMON <u>100</u>	@ <u>17.90</u>	<u>2148.00</u>
POZMIX <u>80</u>	@ <u>9.35</u>	<u>748.00</u>
GEL <u>7</u>	@ <u>23.90</u>	<u>167.30</u>
CHLORIDE _____	@ _____	_____
ASC _____	@ _____	_____
<u>Fuel Seal 50lb</u>	@ <u>2.92</u>	<u>148.00</u>
<u>Material total</u>	@ _____	<u>3208.30</u>
<u>(691.66/20%)</u>	@ _____	_____
_____	@ _____	_____
_____	@ _____	_____
HANDLING <u>218 CF</u>	@ <u>2.48</u>	<u>540.64</u>
MILEAGE <u>2 hr 700/mile 8.969 hrs</u>	@ _____	<u>1515.76</u>
TOTAL		_____

**EQUIPMENT**

PUMP TRUCK CEMENTER Alan Ryan

# 403281 HELPER Kevin Ryan

BULK TRUCK DRIVER Scott (TWS)

# 810

BULK TRUCK DRIVER \_\_\_\_\_

**REMARKS:**

50 SK @ 1750'

40 SK @ 930'

40 SK @ 450'

20 SK @ 60'

30 SK - RH

20 SK - MH

Thank You  
Alan, Kevin, Scott

CHARGE TO: Palmer Oil Inc.

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE 2213.25

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE 65 @ 7.80 507.00

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

150 Valve 65 @ 4.40 286.00

(1,011.33/20%) TOTAL 5,056.65

**PLUG & FLOAT EQUIPMENT**

_____	@ _____	_____
_____	@ _____	_____
_____	@ _____	_____
_____	@ _____	_____
_____	@ _____	_____
<u>(0)</u>	@ _____	_____
TOTAL		_____

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.

PRINTED NAME Emigdio Rojas

SIGNATURE Emigdio Rojas

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 8,264.95

DISCOUNT 1,652.99 (20%) IF PAID IN 30-DAYS

6,611.96 Net



# CEMENTING LOG

Date 5/5/2014 District Liberal # 21 Ticket No. 52448  
 Company Palmer Oil Inc Rig Duke 9  
 Lease Brookover Well No 4-9  
 County Finney State Ks  
 Location \_\_\_\_\_  
 Field \_\_\_\_\_  
 Casing Data  Conductor  PTA  Squeeze  Misc.  
 Surface  Intermediate  Production  Liner  
 Size 8 5/8 Type \_\_\_\_\_ Weight 24# Collar \_\_\_\_\_

CEMENT DATA  
 Spacer Type \_\_\_\_\_ Water \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density 8.33 PPG

LEAD: Time \_\_\_\_\_ hrs. Type Class A  
6% gel, 0.5 lbs/sk flo-seal, 3% calcium chloride Excess 100%  
 Amt. 700 Sks Yield 2 ft<sup>3</sup>/sk Density 12.46 PPG  
 TAIL: Time \_\_\_\_\_ hrs. Type Class A Common  
3% calcium chloride, 0.25#/sk flo-seal Excess 100%  
 Amt. 200 Sks Yield 1.2 ft<sup>3</sup>/sk Density 15.6 PPG  
 WATER Lead 10.9 Gal/sk Tail 5.2 Gal/sk Total 187 BBLs

Casing Depths Top \_\_\_\_\_ Bottom 1726

Pump Trucks Used: 530-484  
 Bulk Equipment 774-744  
363-554

Drill Pipe: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Open Hole: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Capacity Factors: BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Casing BBLs/LIN. FT 0.0636 LIN. FT/BBL \_\_\_\_\_  
 Open Holes BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL 13.6037  
 Drill Pipe BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Annulus BBLs/LIN. FT \_\_\_\_\_ LIN. FT/BBL \_\_\_\_\_  
 Perforations From \_\_\_\_\_ ft to \_\_\_\_\_ ft Amt \_\_\_\_\_

Float Equipment: Manufacturer \_\_\_\_\_  
 Shoe: Type REGULAR GUIDE SHOE Depth \_\_\_\_\_  
 Float: Type AFU FLOAT VALVE Depth \_\_\_\_\_  
 Centralizers: Quantity 3 Plugs Top 1 Bottom \_\_\_\_\_  
 Stage Collars Cement Basket  
 Special Equipment \_\_\_\_\_  
 Disp: Fluid Type FRESH WATER Amt 107 bbls Weight 8.33 PPG  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_ CEMENTER Edgar A. Rodriguez

TIME AM/PM	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	PUMPED PER TIME PERIOD	RATE BBLs/MIN	
8:00 pm						Got to location & spotted trucks
8:30						Rigged Up Trucks. Rig running casing
10:00						Casing on bottom. Will stab cmt head to circulate
10:50						Performed safety meeting
11:10	1500					Pressure tested lines 1000 psi
11:11	80		5		4	Pump 5 bbls of fresh water
11:14 pm	100		249		6	Pump 700 sks of lead cmt (249 bbls @12.4)
12:04 am	70		43		4	Pump 200 sks of tail cmt (43 bbls @15.6)
12:44						Shutdown / Drop top plug
12:47	60				5	Pump 107 bbls of displacement
12:59	280		35		5	Cement back to surface. 72 bbls of cement back to pit
1:18	480		90		3	Slow rate to bump plug
1:27	440		107		3	Bumped plug. Landed at 440 psi and took up to 910 psi
1:29						Check floats. 1/4 of bbl back
1:30						End job. Total of 72 bbls of cement back to pit.
1:35						Rig down trucks
2:00						Crew leave location

FINAL DISP. PRESS. 440 PSI BUMP PLUG TO 910 PSI BLEEDBACK 1/4 BBLs **THANK YOU**



## DRILL STEM TEST REPORT

Prepared For: **Palmer Oil Inc.**

PO Box 399  
Garden City KS. 67846

ATTN: Kevin Timson

### **Brookover #4-5**

### **4-25s-32w Finney,KS.**

Start Date: 2014.05.10 @ 15:54:00

End Date: 2014.05.10 @ 23:10:09

Job Ticket #: 57207                      DST #: 1

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

Printed: 2014.05.15 @ 11:32:59



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Palmer Oil Inc.  
PO Box 399  
Garden City KS. 67846  
ATTN: Kevin Timson

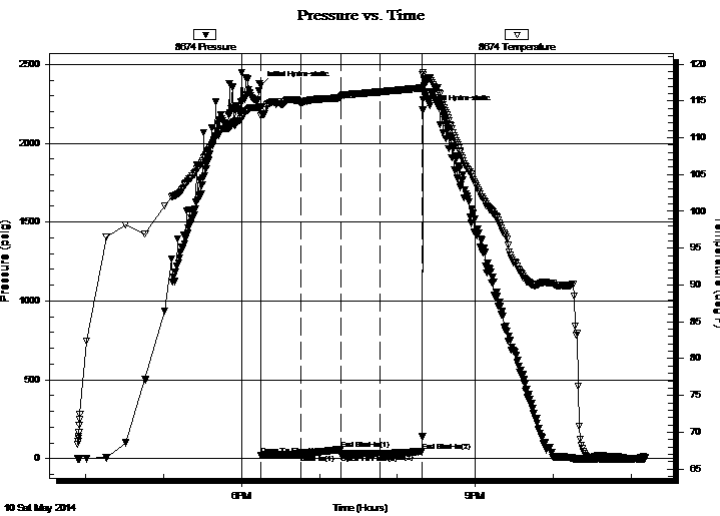
**4-25s-32w Finney,KS.**  
**Brookover #4-5**  
Job Ticket: 57207 **DST#: 1**  
Test Start: 2014.05.10 @ 15:54:00

## GENERAL INFORMATION:

Formation: **Morrow / St. Louis**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 18:14:55 Tester: Will MacLean  
 Time Test Ended: 23:10:09 Unit No: 72  
 Interval: **4774.00 ft (KB) To 4874.00 ft (KB) (TVD)** Reference Elevations: 2867.00 ft (KB)  
 Total Depth: 4874.00 ft (KB) (TVD) 2854.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

**Serial #: 8674 Inside**  
 Press@RunDepth: 32.44 psig @ 4775.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.05.10 End Date: 2014.05.10 Last Calib.: 2014.05.10  
 Start Time: 15:54:00 End Time: 23:10:09 Time On Btm: 2014.05.10 @ 18:14:40  
 Time Off Btm: 2014.05.10 @ 20:19:24

TEST COMMENT: IF- Weak Surface Blow Built to 3/4"  
 IS- No Blow  
 FF- No Blow  
 FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2367.47	114.12	Initial Hydro-static
1	21.21	113.03	Open To Flow (1)
31	28.52	114.76	Shut-In(1)
62	58.23	115.42	End Shut-In(1)
63	29.29	115.59	Open To Flow (2)
92	32.44	116.21	Shut-In(2)
125	45.32	116.75	End Shut-In(2)
125	2210.47	118.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 2%oil 98%m	0.05

## Gas Rates

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



**TRILOBITE**  
**TESTING, INC.**

# DRILL STEM TEST REPORT

Palmer Oil Inc.  
PO Box 399  
Garden City KS. 67846  
ATTN: Kevin Timson

**4-25s-32w Finney,KS.**

**Brookover #4-5**

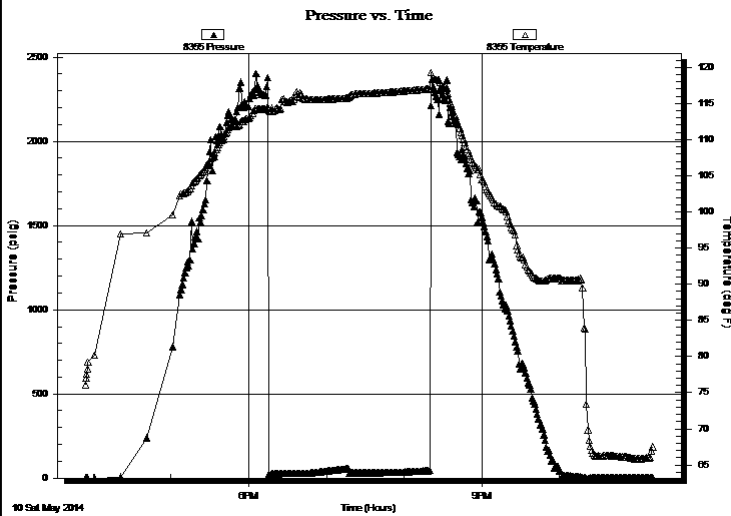
Job Ticket: 57207      **DST#: 1**  
Test Start: 2014.05.10 @ 15:54:00

## GENERAL INFORMATION:

Formation:	<b>Morrow / St. Louis</b>			Test Type:	Conventional Bottom Hole (Initial)
Deviated:	No Whipstock:	ft (KB)		Tester:	Will MacLean
Time Tool Opened:	18:14:55			Unit No:	72
Time Test Ended:	23:10:09			Reference Elevations:	2867.00 ft (KB) 2854.00 ft (CF)
<b>Interval:</b>	<b>4774.00 ft (KB) To 4874.00 ft (KB) (TVD)</b>			KB to GR/CF:	13.00 ft
Total Depth:	4874.00 ft (KB) (TVD)				
Hole Diameter:	7.88 inches	Hole Condition: Good			

<b>Serial #: 8355</b>	<b>Outside</b>			Capacity:	8000.00 psig
Press@RunDepth:	psig @ 4775.00 ft (KB)			Last Calib.:	2014.05.10
Start Date:	2014.05.10	End Date:	2014.05.10	Time On Btm:	
Start Time:	15:54:05	End Time:	23:11:44	Time Off Btm:	

TEST COMMENT: IF- Weak Surface Blow Built to 3/4"  
IS- No Blow  
FF- No Blow  
FS- No Blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 2%oil 98%m	0.05

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Palmer Oil Inc.  
PO Box 399  
Garden City KS. 67846  
ATTN: Kevin Timson

**4-25s-32w Finney,KS.**  
**Brookover #4-5**  
Job Ticket: 57207      **DST#: 1**  
Test Start: 2014.05.10 @ 15:54:00

**Tool Information**

Drill Pipe:	Length: 4584.00 ft	Diameter: 3.80 inches	Volume: 64.30 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: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 65.20 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4774.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	100.00 ft			
Tool Length:	127.00 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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Change Over Sub	1.00			4748.00	
Shut In Tool	5.00			4753.00	
Hydraulic tool	5.00			4758.00	
Jars	5.00			4763.00	
Safety Joint	2.00			4765.00	
Packer	5.00			4770.00	27.00 Bottom Of Top Packer
Packer	4.00			4774.00	
Stubb	1.00			4775.00	
Recorder	0.00	8355	Outside	4775.00	
Recorder	0.00	8674	Inside	4775.00	
Perforations	29.00			4804.00	
Change Over Sub	1.00			4805.00	
Drill Pipe	63.00			4868.00	
Change Over Sub	1.00			4869.00	
Bullnose	5.00			4874.00	100.00 Bottom Packers & Anchor

**Total Tool Length: 127.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Palmer Oil Inc.  
PO Box 399  
Garden City KS. 67846  
ATTN: Kevin Timson

**4-25s-32w Finney,KS.**  
**Brookover #4-5**  
Job Ticket: 57207      **DST#: 1**  
Test Start: 2014.05.10 @ 15:54:00

## 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:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2300.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 2%oil 98%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:

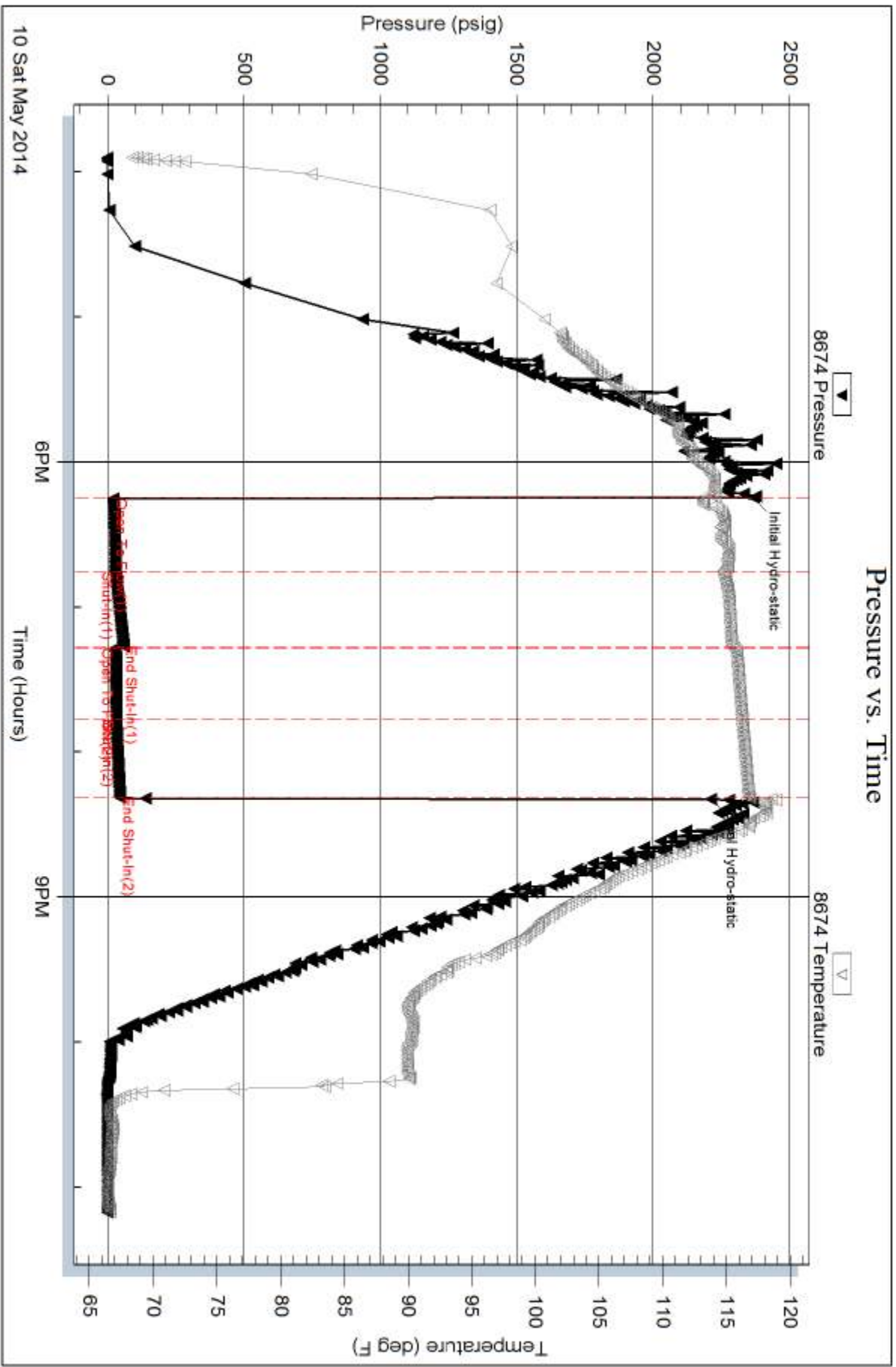
Serial #: 8674

Inside

Palmer Oil Inc.

Brookover #4-5

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 57207

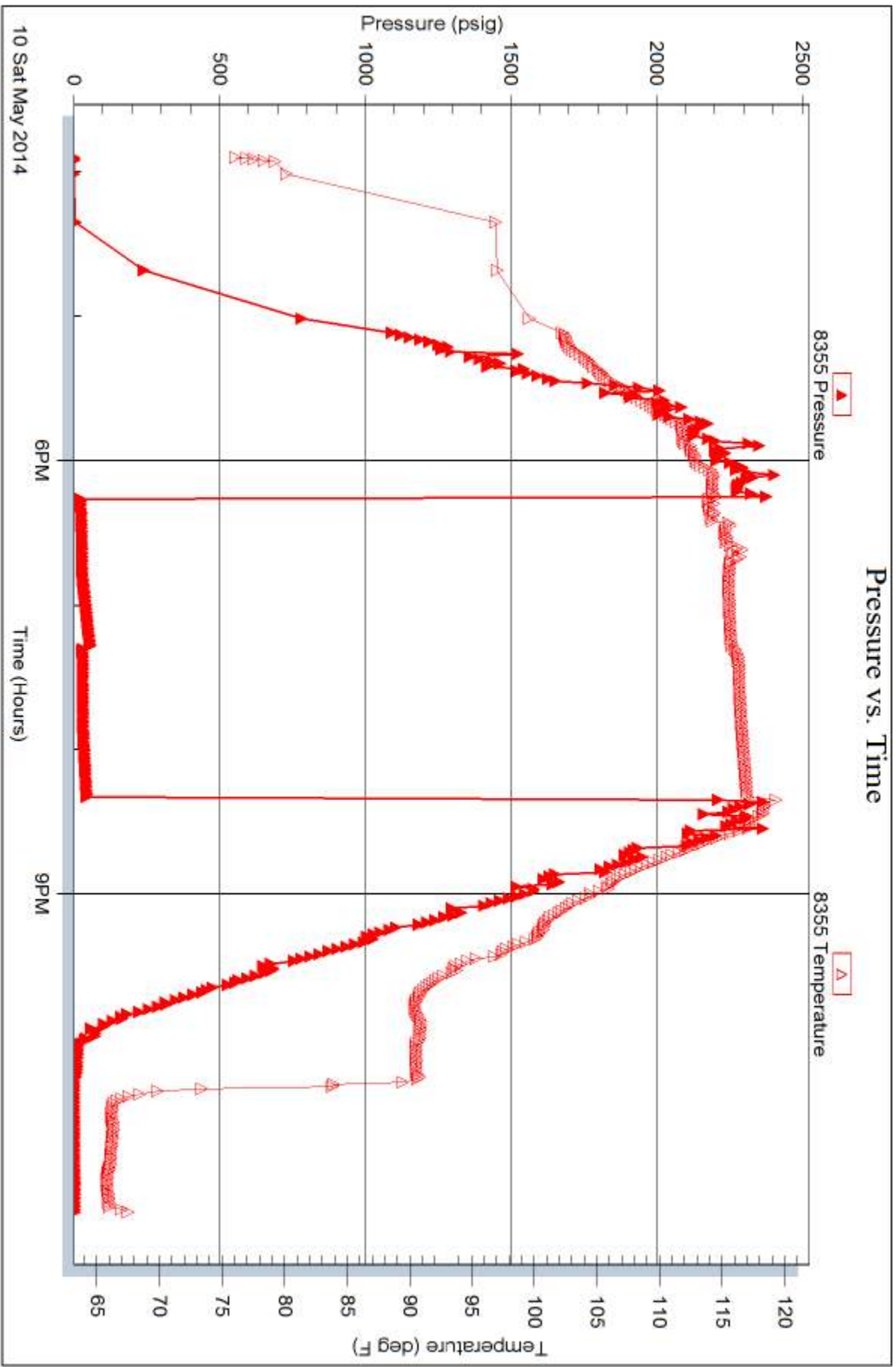
Printed: 2014.05.15 @ 11:33:00

Serial #: 8355

Outside Palmer Oil Inc.

Brookover #4-5

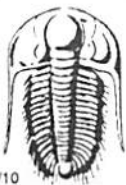
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 57207

Printed: 2014.05.15 @ 11:33:01



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 57207

Well Name & No. Brookover #4-5 Test No. DST #1 Date 5-10-14  
 Company Palmer Oil Inc Elevation 2867 KB 2854 GL  
 Address P.O. Box 399 Garden City KS 67846  
 Co. Rep / Geo. Kevin Timson Rig Duke #9  
 Location: Sec. 4 Twp. 25S Rge. 32W Co. Finney State KS

Interval Tested 4774-4874 Zone Tested Morrow / St. Louis  
 Anchor Length 100 Drill Pipe Run 4584 Mud Wt. 9.3  
 Top Packer Depth 4770 Drill Collars Run 183 Vis 50  
 Bottom Packer Depth 4774 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4874 Chlorides 2300 ppm System LCM 216

Blow Description IF- Work Surface Blow Built to 34"  
ISI- No Blow  
FF- No Blow  
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OCM</u>		<u>2</u>		<u>98</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 119 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2367  Test 1250 T-On Location 15:18  
 (B) First Initial Flow 21  Jars 250 T-Started 15:54  
 (C) First Final Flow 28  Safety Joint 75 T-Open 18:14  
 (D) Initial Shut-In 58  Circ Sub N/C T-Pulled 20:19  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 23:10  
 (F) Second Final Flow 32  Mileage 98 R/T 151.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 45  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2210  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1726.90  
 Final Shut-In 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1726.90

Approved By \_\_\_\_\_ Our Representative Kevin Timson

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.

# **Geological Report**

Palmer Oil, Inc.

## **Brookover #4-5**

335' FSL & 1042' FWL

Sec. 4, T25s, R32w

Finney County, Kansas



**Palmer Oil, Inc.**

## General Data

Well Data: Palmer Oil, Inc.  
Brookover #4-5  
335' FSL & 1042' FWL  
Sec. 4, T25s, R32w  
Finney County, Kansas  
API # 15-055-22297-00-00

Drilling Contractor: Duke Drilling Co. Rig #9

Geologist: Kevin Timson

Spud Date: May 3, 2014

Completion Date: May 12, 2014

Elevation 2854' G.L.  
2867' K.B.

Directions: From Garden City, KS. Go South on Hwy 83 1 mile South of Southwind. Turn East on lease road and continue East 2 miles, North into.

Casing: 1726' 8 5/8" #24 Surface Casing

Samples: 3800' to RTD 10' Wet & Dry

Drilling Time: 3800' to RTD

Electric Logs: Pioneer Energy Services "J. Henrickson"  
Stacked-Micro

Drillstem Tests: One-Trilobite Testing "Will MacLean"

Problems: None

## Formation Tops

Brookover #4-5

Sec. 4, T25s, R32w

335' FSL & 1042' FWL

Anhydrite	1865' +1002
Base	1930' +937
Heebner	3906' -1039
Lansing	3969' -1102
Stark	4321' -1454
Bkc	4443' -1576
Marmaton	4466' -1599
Pawnee	4552' -1685
Fort Scott	4578' -1711
Cherokee	4594' -1727
Morrow	4779' -1912
Miss	4797' -1930
RTD	5000' -2133
LTD	5000' -2133

### Sample Zone Descriptions

**Morrow** (4779', -1912): Covered in DST #1  
No sand!

**St. Louis** (4797', -1930): Covered in DST #1  
Ls. Tan. Medium to sub crystalline. Fair oomoldic and poor oolycastic porosity. Fair stain in porosity. Poor saturation. No show of free oil. Slight odor. 25 Unit hotwire.



**Drill Stem Tests**  
 Trilobite Testing  
 "Will MacLean"

**DST #1**

**Morrow/St. Louis**

Interval (4774' - 4874') Anchor Length 100'

IHP	-2367 #	
IFP	- 30" – WSB built to 3/4"	21-28 #
ISI	- 30" – No return	58 #
FFP	- 30" – No blow	29-32 #
FSIP	- 30" – No return	45 #
FHP	- 2210 #	
BHT	- 119° F	
Recovery:	10' OCM (2% Oil)	

**Structural Comparison**

<b>Formation</b>	<b>Palmer Oil, Inc.</b> <b>Brookover #4-5</b> Sec. 4, T25s, R32w 335' FSL & 1042' FWL	Palmer Oil, Inc. Brookover #4-6 Sec. 4, T25s, R32w 780' FSL & 1070' FEL	EOG Resources Brookover #4-1 Sec 4, T25s, R32w 330' FSL & 1709' FWL
Heebner	3906' -1039	+1	3898' -1040
Lansing	3969' -1102	+2	3962' -1104
Stark	4321' -1454	-2	4310' -1452
BKC	4443' -1576	+13	4447' -1589
Marmaton	4466' -1599	+16	4473' -1615
Pawnee	4552' -1685	+10	4553' -1695
Fort Scott	4578' -1711	+17	4586' -1728
Cherokee	4594' -1727	+15	4600' -1742
Morrow	4779' -1912	+13	4783' -1925
Miss	4797' -1930	+73	4861' -2003
			-2 <b>FL</b> +7 +6 +4 +2 +3 <b>FL</b> +9 <b>+87</b>
			3905' -1037 3970' -1102 4329' -1461 4450' -1582 4471' -1603 4555' -1687 4582' -1714 4595' -1727 4789' -1921 4885' -2017

## Summary

The location for the Brookover #4-5 well was found via 3-D seismic survey. The new well ran structurally as expected. One drill stem test was conducted, which was negative. After all the gathered data had been examined, the decision was made to plug and abandon the Brookover #4-5 well.

Respectfully Submitted,

Kevin Timson  
Palmer Oil, Inc.