



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1185107
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: _____

1185107

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Palmer Oil, Inc.
Well Name	UPC 23-4
Doc ID	1185107

Tops

Name	Top	Datum
Heebner	4142'	-1016
Lansing	4264'	-1138
Marmaton	4924'	-1798
Cherokee	5120'	-1994
Morrow	5635'	-2509
St.Gen	6218'	-3092
St.Louis	6304'	-3178
St.Louis B	6366'	-3240

ALLIED OIL & GAS SERVICES, LLC 052321

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Liberal 21

DATE <u>8-17-13</u>	SEC <u>23</u>	TWP. <u>32S</u>	RANGE <u>37W</u>	CALLED OUT	ON LOCATION	JOB START <u>0000</u>	JOB FINISH <u>0230</u>
LEASE <u>UAC</u>		WELL # <u>23-4</u>		LOCATION <u>Hugoton KS - North to Rd "A",</u>		COUNTY <u>Stevens</u>	STATE <u>KS</u>
OLD OR <u>NEW</u> (Circle one)				<u>East 2 miles, South into</u>			

CONTRACTOR Duke #9

TYPE OF JOB Surface

HOLE SIZE <u>12 1/4</u>	T.D. <u>1750 ft</u>
CASING SIZE <u>8 5/8 24#</u>	DEPTH <u>1744.74</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>42.27</u>
CEMENT LEFT IN CSG. <u>2.6 BBL</u>	
PERFS.	
DISPLACEMENT <u>108 BBL</u>	

OWNER _____

CEMENT

AMOUNT ORDERED 425 sk AMD - 3% CC,

14# Dada Flo-Seal

150 sk Class C - 2% CC

COMMON	<u>425 sk</u>	@ <u>17.90</u>	<u>7,607.50</u>
POZMIX Class C	<u>150 sk</u>	@ <u>24.40</u>	<u>3,660.00</u>
GET SPS	<u>799 LB</u>	@ <u>3.30</u>	<u>2,636.70</u>
CHLORIDE	<u>19 sk</u>	@ <u>64.00</u>	<u>1,216.00</u>
ASE Gyp Seal	<u>8 sk</u>	@ <u>37.50</u>	<u>300.00</u>
Flo-Seal	<u>106 LB</u>	@ <u>2.97</u>	<u>314.82</u>
SASI	<u>80 LB</u>	@ <u>17.55</u>	<u>1,404.00</u>
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>629 ft³</u>	@ <u>2.48</u>	<u>1,559.92</u>
MILEAGE	<u>1317.50 TM</u>	@ <u>2.60</u>	<u>3,425.50</u>
TOTAL			<u>22,125.14</u>

REMARKS:

SERVICE

DEPTH OF JOB	<u>1744.74</u>	
PUMP TRUCK CHARGE		<u>2213.75</u>
EXTRA FOOTAGE	@	
MILEAGE Heavy	<u>50 MT</u>	@ <u>7.70</u> <u>385.00</u>
MANIFOLD	<u>1 Day</u>	@ <u>275.00</u> <u>275.00</u>
Light Mileage	<u>50 MT</u>	@ <u>4.40</u> <u>220.00</u>
	@	

TOTAL 3,093.75

CHARGE TO: Palmer Oil

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

Guide Shoe	<u>1 EA</u>	@ <u>250.70</u>	<u>250.70</u>
AFU Inset	<u>1 EA</u>	@ <u>299.50</u>	<u>299.50</u>
Centralizer	<u>3 EA</u>	@ <u>37.50</u>	<u>112.50</u>
Basket	<u>1 EA</u>	@ <u>226.50</u>	<u>226.50</u>
Top Rubber Plug	<u>1 EA</u>	@ <u>76.50</u>	<u>76.50</u>
TOTAL			<u>965.70</u>

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 26,183.94

DISCOUNT _____ IF PAID IN 30 DAYS

Net - 20,947.16

PRINTED NAME Emilio Rojas

SIGNATURE [Signature]

ALLIED OIL & GAS SERVICES, LLC 052322

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Liberal 21

DATE <u>8-13-13</u>	SEC. <u>3</u>	TWP. <u>32S</u>	RANGE <u>37W</u>	CALLED OUT	ON LOCATION	JOB START <u>1530</u>	JOB FINISH <u>1630</u>
LEASE <u>UPC</u>		WELL # <u>23-4</u>		LOCATION <u>Hogston KS - North - Rd "U"</u>		COUNTY <u>Stevens</u>	STATE <u>KS</u>
OLD OR NEW (Circle one)			<u>2 MI East, South into</u>				

CONTRACTOR Duke #9
 TYPE OF JOB Surface Top Out
 HOLE SIZE 12 1/4" T.D.
 CASING SIZE 8 7/8" 24 DEPTH
 TUBING SIZE 1" DEPTH 75ft
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT

OWNER
 CEMENT
 AMOUNT ORDERED 200 sk Class A-Neat

COMMON	<u>75sk @ 17.90</u>	<u>1,342.50</u>
POZMIX	@	
GEL	@	
CHLORIDE	@	
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING	<u>200 ft³ @ 2.48</u>	<u>380.00</u>
MILEAGE	<u>176.25 @ 2.60</u>	<u>458.25</u>
TOTAL		<u>2,180.75</u>

EQUIPMENT

PUMP TRUCK CEMENTER Kicky H
 #530-454 HELPER Herberto V
 BULK TRUCK
 #472-554 DRIVER Alex C
 BULK TRUCK
 # DRIVER

REMARKS:

SERVICE

DEPTH OF JOB	<u>75ft</u>	
PUMP TRUCK CHARGE		<u>1250.00</u>
EXTRA FOOTAGE	@	
MILEAGE	<u>50 MI @ 7.70</u>	<u>385.00</u>
MANIFOLD	@	
	<u>50 MI @ 4.40</u>	<u>220.00</u>
	@	
TOTAL		<u>1,855.00</u>

CHARGE TO: Palmer Oil
 STREET
 CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
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.

SALES TAX (If Any)
 TOTAL CHARGES 4035.75
 DISCOUNT Net - 3228.00 IF PAID IN 30 DAYS

PRINTED NAME Enrique Rojas
 SIGNATURE [Signature]



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

1700 S. Country Estates Rd.
Liberal, Kansas 67905
Phone 620-624-2277

FIELD SERVICE TICKET
1717 04277 A

DATE _____ TICKET NO. _____

DATE OF JOB <u>8/25/13</u> DISTRICT, <u>1717</u>		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:								
CUSTOMER <u>Palmer Oil / American Water</u>		LEASE <u>UPC 234</u>		WELL NO.						
ADDRESS		COUNTY <u>Stevens</u>		STATE <u>KS</u>						
CITY		STATE		SERVICE CREW <u>Tommy Coar</u>						
AUTHORIZED BY <u>TUCI</u>		JOB TYPE: <u>-242</u>								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
<u>77937</u>	<u>7</u>						<u>5/25</u>			<u>5:30</u>
<u>372337726</u>	<u>7</u>					ARRIVED AT JOB				<u>8:00</u>
<u>1035411575</u>	<u>7</u>					START OPERATION	<u>8/25</u>			<u>02:00</u>
						FINISH OPERATION				<u>3:15</u>
						RELEASED				<u>4:00</u>
						MILES FROM STATION TO WELL				<u>50</u>

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: [Signature]
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CL105	AA-2	SK	200		
CL103	60/40 2x2	SK	50		
CC113	Gypsum	Lb	940		
CC111	Salt	Lb	1107		
CC103	C-15	Lb	113		
CC105	C-41P	Lb	47		
CC201	Gilsonite	Lb	1000		
CF1251	Auto Fill First Stage	FA	1		
CF607	Latch Down P+D	FA	1		
CF4457	Control Valve	FA	12		
CF4557	Basket	FA	1		
CF300	Threadlock Kit	FA	1		
CC151	Wash Fluid	gal	500		
FE11	Heavy Equip. Liner	mi	100		
CF210	Blending + Mixing of Chemicals	SK	250		
E113	Bulk Delivery	Tm	578		
CF207	Dial Change Valve to 7000	4hr	1		
CF501	Play Container	Sub	1		
FE10	Pickup Mileage	Lb	50		
SUB TOTAL					10854.69
CHEMICAL / ACID DATA:					
SERVICE & EQUIPMENT				%TAX ON \$	
MATERIALS				%TAX ON \$	
TOTAL					

SERVICE REPRESENTATIVE <u>[Signature]</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>[Signature]</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
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FIELD SERVICE ORDER NO.

Customer Palmer Oil / American Warrior	Lease No.	Date 8/25/13
Lease UPC	Well # 23-4	Service Receipt
Casing 5 1/2	Depth 6490	County Stevens
Job Type L.S.	Formation	State KS
		Legal Description 23-37-37

Pipe Data		Perforating Data		Cement Data
Casing size 5 1/2	Tubing Size	Shots/Ft		Lead 200 SX AA-2 @ 14.5 #
Depth 6497	Depth	From	To	
Volume 1497	Volume	From	To	1.51 6.64
Max Press	Max Press	From	To	Tail in 50 SX 6490 @ 13.5 #
Well Connection P.C.	Annulus Vol.	From	To	
Plug Depth	Packer Depth	From	To	1.48 7.37

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
02.00					miloc, start R.V. Safety
02.00	300				Test Lines
02.14	330		12	5	Pump Mud/Flush
02.16	330		5	5	1120 spacer
02.20					Plug RTM
02.30	310		0	5	Start Mixing @ 14.5 #
02.40	0		54	0	Finished Mixing, Prep Plug, Washing
02.47	110		0	7	Start Disps
03.07	650		139	2.5	slow Rate
03.11	550-1950				Plug Down
03.13	0				Release P, FT out hold
					Job Complete

Service Units	78939	3722337726	1475/1957's		
Driver Names	Chavez	T. Marcellus	C. Garcia		

Customer Representative: _____ Station Manager: Janis Bennett Cementer: Chad Chavez

OPERATOR

Company: Palmer Oil, Inc.
 Address: 3118 N. Cummings Rd.
 P.O. Box 399
 Garden City, KS 67846

Contact Geologist:
 Contact Phone Nbr: 620-275-9231
 Well Name: UPC #23-4
 Location: Sec. 23 - T32S - R37W
 Pool:
 State: Kansas

API: 15-189-22813-0000
 Field: Willis
 Country: USA

Scale 1:240 Imperial

Well Name: UPC #23-4
 Surface Location: Sec. 23 - T32S - R37W
 Bottom Location:
 API: 15-189-22813-0000
 License Number: 34904
 Spud Date: 8/16/2013
 Region: Stevens County
 Drilling Completed: 8/23/2013
 Surface Coordinates: 900' FSL & 2120' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 3114.00ft
 K.B. Elevation: 3126.00ft
 Logged Interval: 4700.00ft
 Total Depth: 6490.00ft
 Formation: Mississippian - St. Louis
 Drilling Fluid Type: Chemical/Fresh Water Gel

Time: 00:00
 Time: 20:55
 To: 6490.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 N/S Co-ord: 900' FSL
 E/W Co-ord: 2120' FWL

Latitude:

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
 Address: 3420 22nd Street
 Great Bend, KS 67530

Phone Nbr: 620-617-4091
 Logged By: KLG #136
 Name: Keith Reavis

CONTRACTOR

Contractor: Duke Drilling Company
 Rig #: 9
 Rig Type: mud rotary
 Spud Date: 8/16/2013
 TD Date: 8/23/2013
 Rig Release:

Time: 00:00
 Time: 20:55
 Time:

ELEVATIONS

K.B. Elevation: 3126.00ft
 K.B. to Ground: 12.00ft
 Ground Elevation: 3114.00ft

NOTES

Due to the results of DST #1 and structural position, the operator elected to run 5 1/2" production casing and utilize the UPC #23-4 as a saltwater injection well. Based on electrical logs, it is recommended that the interval from 6466 ft. - 6468 ft. be perforated and stimulated to determine if the zone proves economical.

A Bloodhound gas detection system operated by Bluestem Environmental was employed on this well. ROP and gas curves were imported into this mudlog. The gamma ray and caliper curves were also imported from the electrical log suite.


Respectfully submitted,
 Keith Reavis

Palmer Oil, Inc.
daily drilling report

DATE	7:00 AM DEPTH	REMARKS
08/20/2013		Geologist Keith Reavis on location @ 1915 hrs, 4741 ft, drilling ahead Lansing
08/21/2013	5404	drilling ahead, Marmaton, Cherokee, wiper trip @ 5500', drilling Morrow
08/22/2013	6093	drilling ahead, Morrow, Chester, St. Gen., St. Louis wiper trip @ 6320', back on bottom condition hole and mud, resume drilling, gas kick and show in St. Louis B warrants test, cfs, ctch, TOH for DST #1
08/23/2013	6405	trip test tools, conducting DST #1, successful test, TIH w/bit, rathole ahead to TD, 6490' @ 2055 hrs, ctch, TOH for logs
08/24/2013	6490	TOH for logs, conducting logging operations, truck on location only had enough wireline to log from 5800', logged from that depth until arrival relief, complete logging operations 1030 hrs, geologist mob off loc.

Palmer Oil, Inc.
well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Palmer - UPC #23-4					EOG - UPC #23-1				EOG - Willis #23-1			
900' FSL & 2120' FWL					2310' FSL & 1830' FWL				1650' FSL & 1750' FEL			
Sec. 23 -T32S - R37W					Sec. 23 -T32S - R37W				Sec. 23 -T32S - R37W			
3126 KB					3133 KB				3122 KB			
					Structural Relationship				Structural Relationship			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Base Heebner	4144	-1018	4144	-1016	4150	-1017	-1	1	4145	-1023	5	7
Lansing	4264	-1138	4264	-1138	4271	-1138	0	0	4266	-1144	6	6
Marmaton	4925	-1799	4924	-1798	4940	-1807	8	9	4926	-1804	5	6
Cherokee	5118	-1992	5120	-1994	5126	-1993	1	-1	5120	-1998	6	4
Morrow	5634	-2508	5635	-2509	5630	-2497	-11	-12	5630	-2508	0	-1
Morrow LS mark	5928	-2802	5936	-2810	5932	-2799	-3	-11	5923	-2801	-1	-9
St. Gen	6217	-3091	6218	-3092	6216	-3083	-8	-9	6201	-3079	-12	-13
St. Louis	6304	-3178	6304	-3178	6304	-3171	-7	-7	6293	-3171	-7	-7
St. Louis B	6365	-3239	6366	-3240	6367	-3234	-5	-6	6349	-3227	-12	-13
Total Depth	6490	-3364	6502	-3376	6499	-3366	2	-10	6582	-3460	96	84



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palmer Oil
 3118 N. Cummings Rd.
 Garden City KS 67846
 ATTN: Keith Reavis

23-32s-37w Steven, KS
UPC #23-4
 Job Ticket: 52904
 DST#: 1
 Test Start: 2013.08.23 @ 02:34:01

GENERAL INFORMATION:

Formation: **St. Louis**
 Deviated: No Whipstock ft (KB)
 Time Tool Opened: 05:55:41
 Time Test Ended: 12:29:38

Interval: **6360.00 ft (KB) To 6405.00 ft (KB) (TVD)**
 Total Depth: 6405.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 65

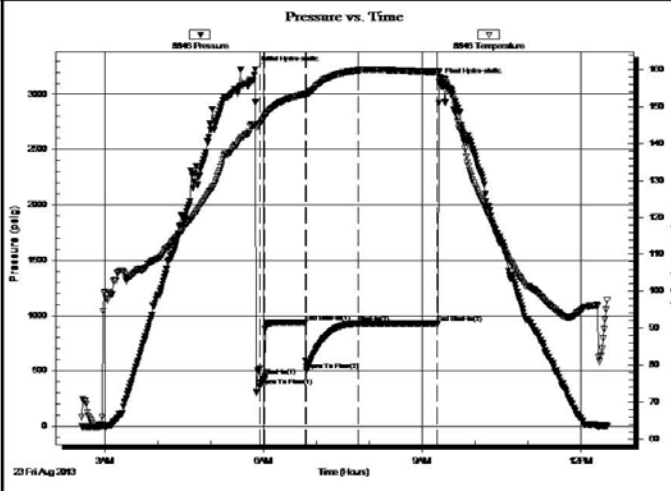
Reference Elevations: 3126.00 ft (KB)
 3116.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8846 Inside

Press@RunDepth: 931.04 psig @ 6361.00 ft (KB)
 Start Date: 2013.08.23 End Date: 2013.08.23
 Start Time: 02:34:01 End Time: 12:29:37

Capacity: 8000.00 psig
 Last Calib.: 2013.08.23
 Time On Btm: 2013.08.23 @ 05:50:24
 Time Off Btm: 2013.08.23 @ 09:18:37

TEST COMMENT: IF:BOB in 1 min.
 IS:No return blow
 FF:BOB in 1 min.
 FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3223.27	145.11	Initial Hydro-static
6	359.21	145.32	Open To Flow (1)
11	452.90	147.29	Shut-in(1)
57	936.72	153.33	End Shut-in(1)
59	503.22	153.32	Open To Flow (2)
117	931.04	159.79	Shut-in(2)
207	930.75	159.24	End Shut-in(2)
209	3115.35	159.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1055.00	mcsw 5% m 95% sw	13.10
434.00	mcgosw 5% m 15% go 80% sw	6.09
248.00	gcow m 5% g 5% go 20% w 70% m	3.48
248.00	mud 100% m	3.48

Gas Rates

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

ROCK TYPES

Clystgy
 Lmst fw<7
 shale, gry
 shale, red
 Slst
 sdy lmst
 Lmst fw>
 Carbon Sh
 Ss

ACCESSORIES

MINERAL
 ▲ Chert, dark
 P Pyrite
 ● Silty
 △ Chert White

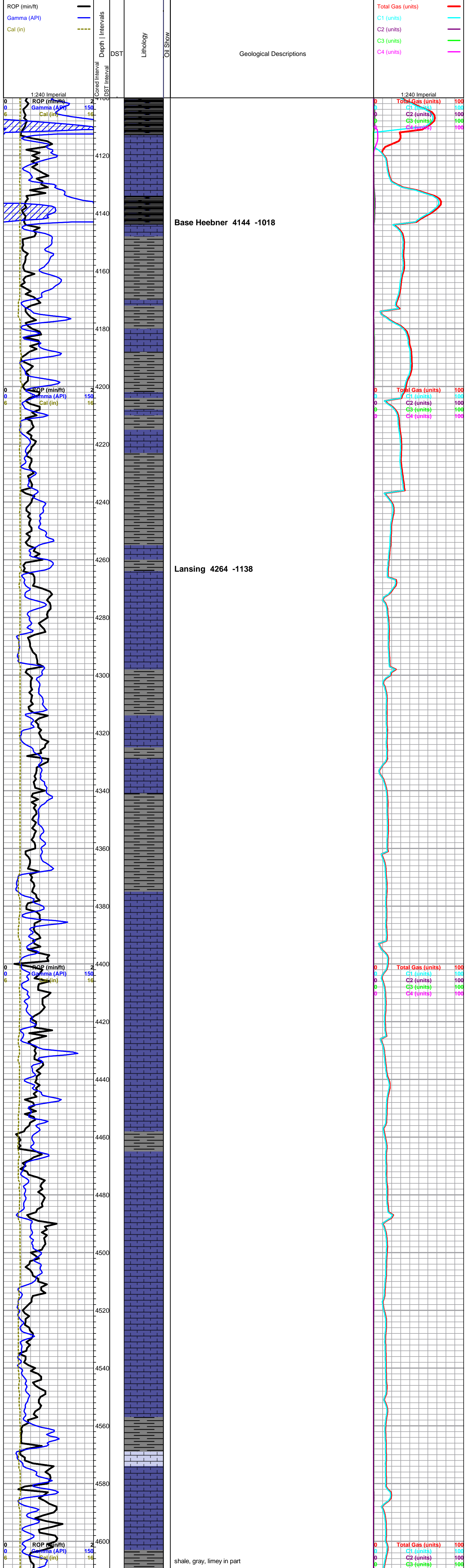
FOSSIL
 ∩ Bioclastic or Fragmental
 ∩ Fossils < 20%
 ∩ Oolite
 ∩ Pellets
 ∩ Oomoldic

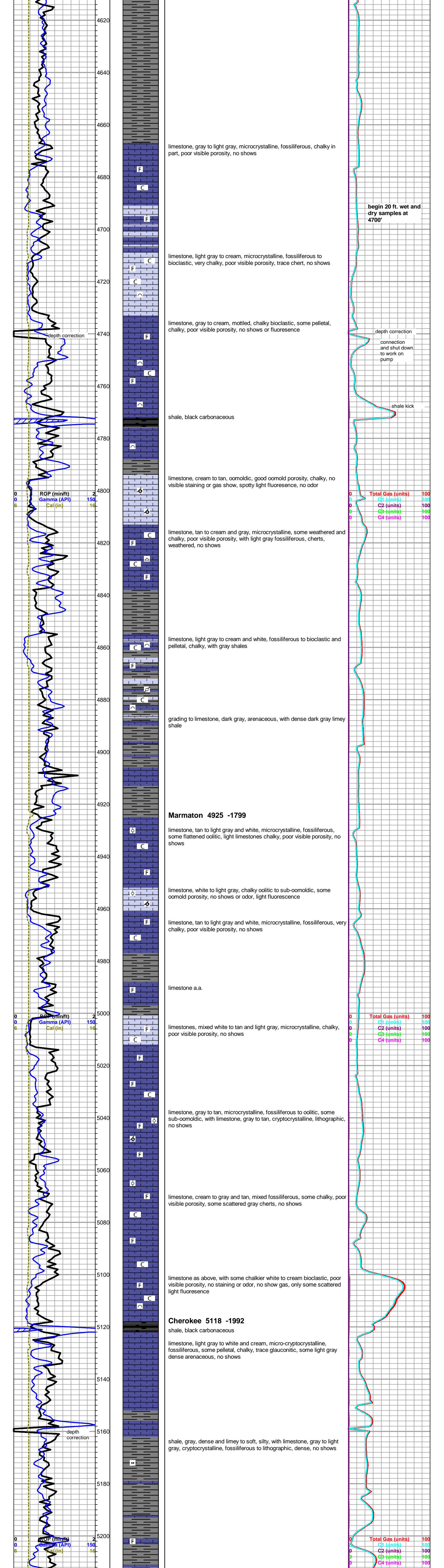
STRINGER
 ■ Dolomite
 ■ Limestone
 ■ Sandstone

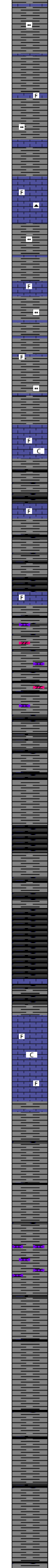
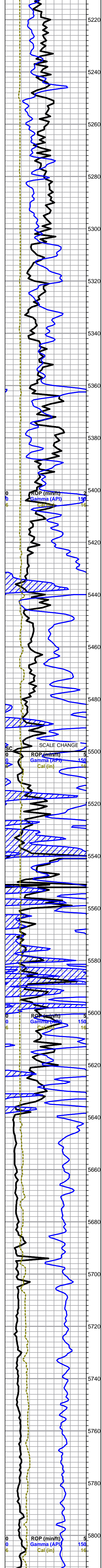
TEXTURE
 C Chalky
 L Lithog

OTHER SYMBOLS

MISC	Oil Show	DST
<ul style="list-style-type: none"> Daily Report Digital Photo Document Folder Link Vertical Log File Horizontal Log File Core Log File Drill Cuttings Rpt 	<ul style="list-style-type: none"> Good Show Fair Show Poor Show Spotted or Trace Questionable Stn Dead Oil Stn Fluorescence Gas 	<ul style="list-style-type: none"> DST Int DST alt Core tail pipe







a.a.

limestone, gray, cryptocrystalline, fossiliferous, dense, with limestone, gray arenaceous, no shows, some tan chert

shale, gray, dense and limey to soft, silty, with limestone, gray to light gray, cryptocrystalline, fossiliferous to lithographic, dense, no shows

influx limestone, white to cream, microcrystalline, chalky, fossiliferous, poor visible porosity, no shows

shale, black carbonaceous, black and gray, some scattered limestones, tan to gray, dense, fossiliferous, no shows

as above

shales, black carbonaceous, black and gray, some scattered brown to gray fossiliferous limestone, some light brown sub-sucrosic dolomite, dense, no shows

shales, black carbonaceous, black and gray

shale, mostly black carbonaceous

shale, black carbonaceous

limestone, gray mottled, cryptocrystalline, fossiliferous, chalky in part, no visible porosity, no shows

Morrow 5634 -2508

shale, gray to light gray, some black, plated to fissile, some silty, fairly soft

shale as above, some scattered gray-tan fossiliferous limestones

shales as above

shales as above

Total Gas (units)	200
C1 (units)	200
C2 (units)	200
C3 (units)	200
C4 (units)	200

Total Gas (units)	200
C1 (units)	200
C2 (units)	200
C3 (units)	200
C4 (units)	200

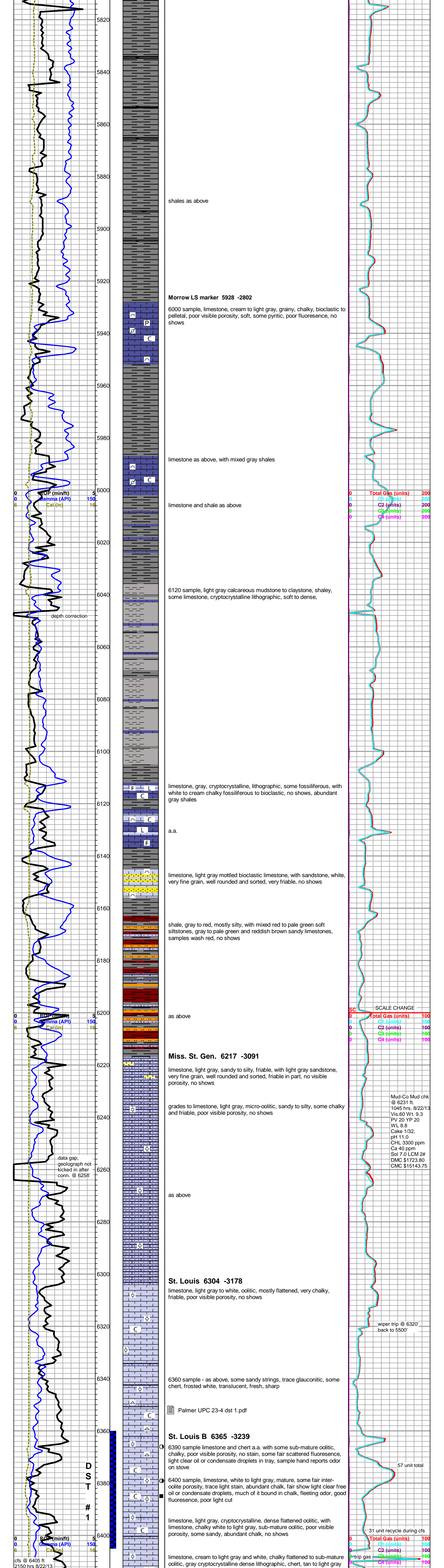
shale gas

short trip @ 5500', back to surface casing

Mud-Co Mud chk @ 5500 ft.
0945 hrs. 8/21/13
Vis. 64 Wt. 9.4
PV 22 YP 24
WL 8.8
Cake 1/32,
pH 10.5
CHL 4000 ppm
Ca 20 ppm
Sol 7.6 LCM tr#
DMC \$3917.60
CMC \$13419.95

Total Gas (units)	200
C1 (units)	200
C2 (units)	200
C3 (units)	200
C4 (units)	200

Total Gas (units)	200
C1 (units)	200
C2 (units)	200
C3 (units)	200
C4 (units)	200



shales as above

Morrow LS marker 5928 -2802

6000 sample, limestone, cream to light gray, grainy, chalky, bioclastic to pelletal, poor visible porosity, soft, some pyritic, poor fluorescence, no shows

limestone as above, with mixed gray shales

limestone and shale as above

6120 sample, light gray calcareous mudstone to claystone, shaley, some limestone, cryptocrystalline lithographic, soft to dense,

depth correction

limestone, gray, cryptocrystalline, lithographic, some fossiliferous, with white to cream chalky fossiliferous to bioclastic, no shows, abundant gray shales

a.a.

limestone, light gray mottled bioclastic limestone, with sandstone, white, very fine grain, well rounded and sorted, very friable, no shows

shale, gray to red, mostly silty, with mixed red to pale green soft siltstones, gray to pale green and reddish brown sandy limestones, samples wash red, no shows

as above

Miss. St. Gen. 6217 -3091

limestone, light gray, sandy to silty, friable, with light gray sandstone, very fine grain, well rounded and sorted, friable in part, no visible porosity, no shows

grades to limestone, light gray, micro-oolitic, sandy to silty, some chalky and friable, poor visible porosity, no shows

data gap, geolograph not kicked in after conn. @ 6258'

as above

St. Louis 6304 -3178

limestone, light gray to white, oolitic, mostly flattened, very chalky, friable, poor visible porosity, no shows

Mud-Co Mud chk @ 6231 ft. 1045 hrs. 8/22/13 Vis.60 Wt. 9.3 PV 20 YP 20 WL 8.8 Cake 1/32, pH 11.0 CHL 3300 ppm Ca 40 ppm Sol 7.0 LCM 2# DMC \$1723.80 CMC \$15143.75

wiper trip @ 6320' back to 5500'

6360 sample - as above, some sandy strings, trace glauconitic, some chert, frosted white, translucent, fresh, sharp

Palmer UPC 23-4 dst 1.pdf

St. Louis B 6365 -3239

6390 sample limestone and chert a.a. with some sub-mature oolitic, chalky, poor visible porosity, no stain, some fair scattered fluorescence, light clear oil or condensate droplets in tray, sample hand reports odor on stove

6400 sample, limestone, white to light gray, mature, some fair inter-oolite porosity, trace light stain, abundant chalk, fair show light clear free oil or condensate droplets, much of it bound in chalk, fleeting odor, good fluorescence, poor light cut

limestone, light gray, cryptocrystalline, dense flattened oolitic, with limestone, chalky white to light gray, sub-mature oolitic, poor visible porosity, some sandy, abundant chalk, no shows

limestone, cream to light gray and white, chalky flattened to sub-mature oolitic, gray cryptocrystalline dense lithographic, chert, tan to light gray

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

SCALE CHANGE

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

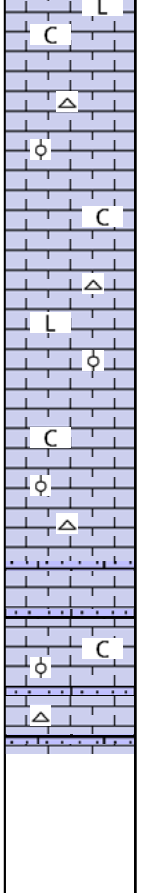
0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

57 unit total

31 unit recycle during cfs

DST # 1

6420
6440
6460
6480
6500

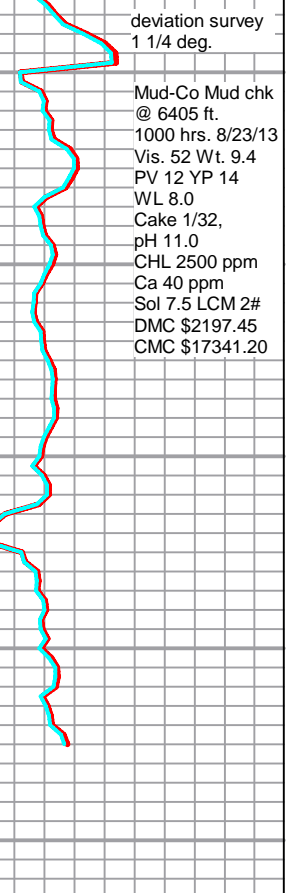


to frosted translucent, sharp, fresh, abundant chalk, no shows

as above

limestone and chert as above, with influx some gray sandy/argillaceous limestone, no shows

Rotary TD 6490 ft. 2055 hrs 8/23/13
Pioneer Wireline TD 6502 ft.
Complete Logging Operations, 1030 hrs 8/24/13



deviation survey
1 1/4 deg.

Mud-Co Mud chk
@ 6405 ft.
1000 hrs. 8/23/13
Vis. 52 Wt. 9.4
PV 12 YP 14
WL 8.0
Cake 1/32,
pH 11.0
CHL 2500 ppm
Ca 40 ppm
Sol 7.5 LCM 2#
DMC \$2197.45
CMC \$17341.20



DRILL STEM TEST REPORT

Prepared For: **Palmer Oil**

3118 N. Cummings Rd.
Garden City KS 67846

ATTN: Keith Reavis

UPC #23-4

23-32s-37w Steven,KS

Start Date: 2013.08.23 @ 02:34:01

End Date: 2013.08.23 @ 12:29:38

Job Ticket #: 52904 DST #: 1

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

Printed: 2013.08.26 @ 11:13:15

Palmer Oil
23-32s-37w Steven,KS
UPC #23-4
DST # 1
St.Louis
2013.08.23



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palmer Oil
3118 N. Cummings Rd.
Garden City KS 67846
ATTN: Keith Reavis

23-32s-37w Steven,KS

UPC #23-4

Job Ticket: 52904

DST#: 1

Test Start: 2013.08.23 @ 02:34:01

GENERAL INFORMATION:

Formation: **St.Louis**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:55:41
 Time Test Ended: 12:29:38
 Interval: **6360.00 ft (KB) To 6405.00 ft (KB) (TVD)**
 Total Depth: 6405.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 65
 Reference Elevations: 3126.00 ft (KB)
 3116.00 ft (CF)
 KB to GR/CF: 10.00 ft

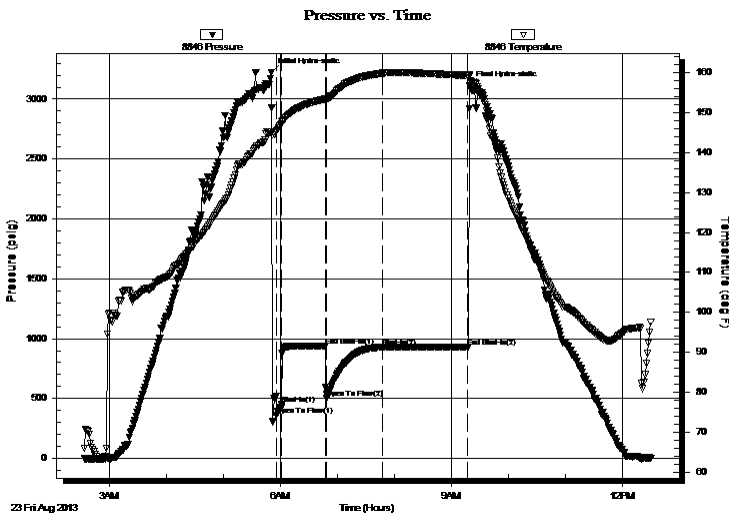
Serial #: 8846

Inside

Press @RunDepth: 931.04 psig @ 6361.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.23 End Date: 2013.08.23 Last Calib.: 2013.08.23
 Start Time: 02:34:01 End Time: 12:29:37 Time On Btm: 2013.08.23 @ 05:50:24
 Time Off Btm: 2013.08.23 @ 09:18:37

TEST COMMENT: IF:BOB in 1 min.
 IS:No return blow
 FF:BOB in 1 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3223.27	145.11	Initial Hydro-static
6	359.21	145.32	Open To Flow (1)
11	452.90	147.29	Shut-In(1)
57	936.72	153.33	End Shut-In(1)
59	503.22	153.32	Open To Flow (2)
117	931.04	159.79	Shut-In(2)
207	930.75	159.24	End Shut-In(2)
209	3115.35	159.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1055.00	mcsw 5%m 95%sw	13.10
434.00	mcosw 5%m 15%go 80%sw	6.09
248.00	gcow m 5%g 5%go 20%w 70%m	3.48
248.00	mud 100%m	3.48

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palmer Oil
3118 N. Cummings Rd.
Garden City KS 67846
ATTN: Keith Reavis

23-32s-37w Steven,KS
UPC #23-4
Job Ticket: 52904 **DST#: 1**
Test Start: 2013.08.23 @ 02:34:01

Tool Information

Drill Pipe:	Length: 6159.00 ft	Diameter: 3.80 inches	Volume: 86.39 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: 2500.00 lb
Drill Collar:	Length: 187.00 ft	Diameter: 2.25 inches	Volume: 0.92 bbl	Weight to Pull Loose: 11000.00 lb
			<u>Total Volume: 87.31 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	6360.00 ft			Final 90000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	74.00 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			6332.00	
Shut In Tool	5.00			6337.00	
Hydraulic tool	5.00			6342.00	
Jars	5.00			6347.00	
Safety Joint	3.00			6350.00	
Packer	5.00			6355.00	29.00 Bottom Of Top Packer
Packer	5.00			6360.00	
Stubb	1.00			6361.00	
Recorder	0.00	8846	Inside	6361.00	
Recorder	0.00	8737	Outside	6361.00	
Perforations	5.00			6366.00	
Change Over Sub	1.00			6367.00	
Drill Pipe	32.00			6399.00	
Change Over Sub	1.00			6400.00	
Bullnose	5.00			6405.00	45.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palmer Oil
3118 N. Cummings Rd.
Garden City KS 67846
ATTN: Keith Reavis

23-32s-37w Steven,KS
UPC #23-4
Job Ticket: 52904 **DST#: 1**
Test Start: 2013.08.23 @ 02:34:01

Mud and Cushion Information

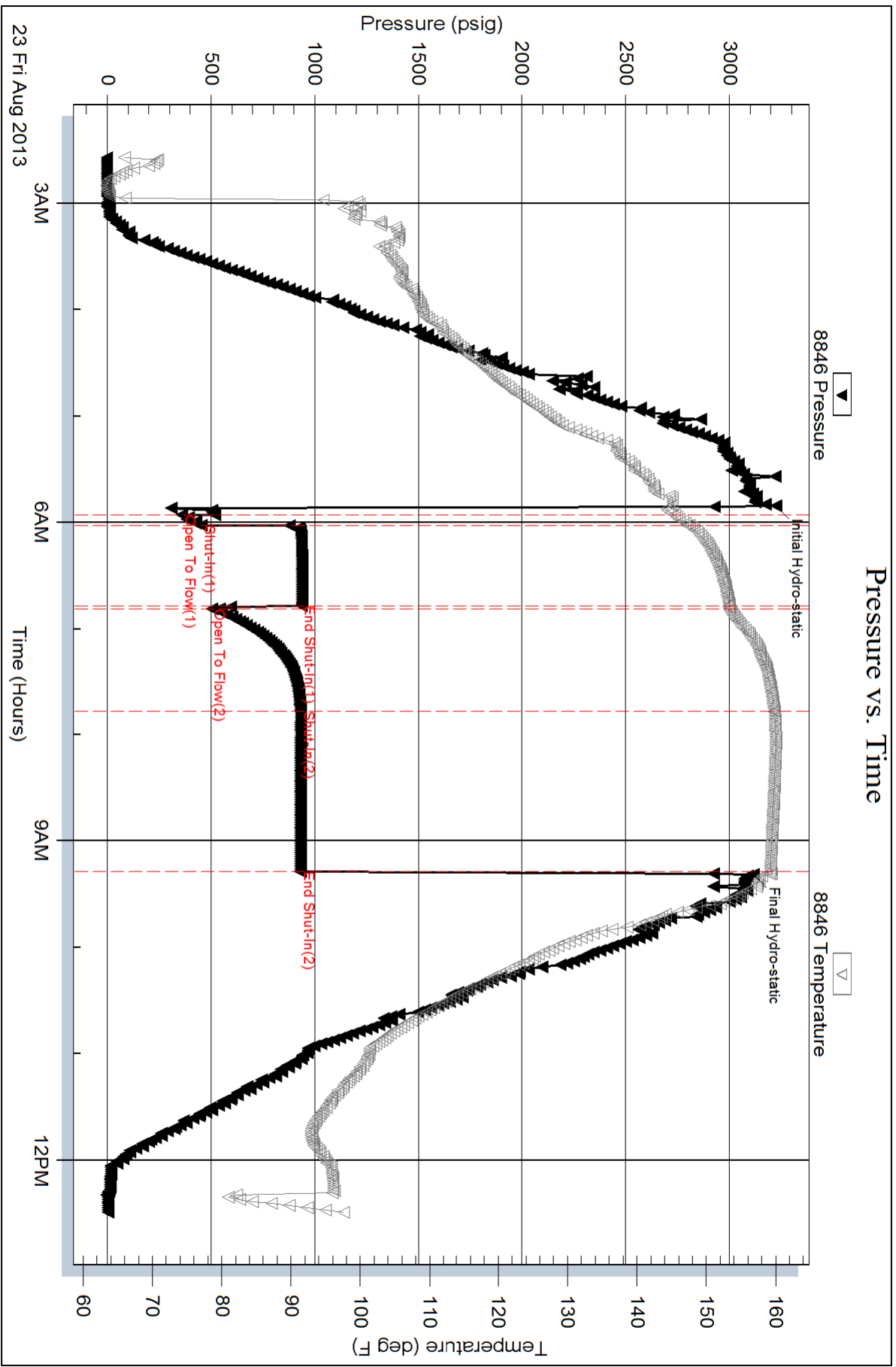
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 15000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.77 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3300.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1055.00	mcsw 5%m 95%sw	13.095
434.00	mcgosw 5%m 15%go 80%sw	6.088
248.00	gcow m 5%g 5%go 20%w 70%m	3.479
248.00	mud 100%m	3.479

Total Length: 1985.00 ft Total Volume: 26.141 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW= .345@95.4*=15,000 ppm

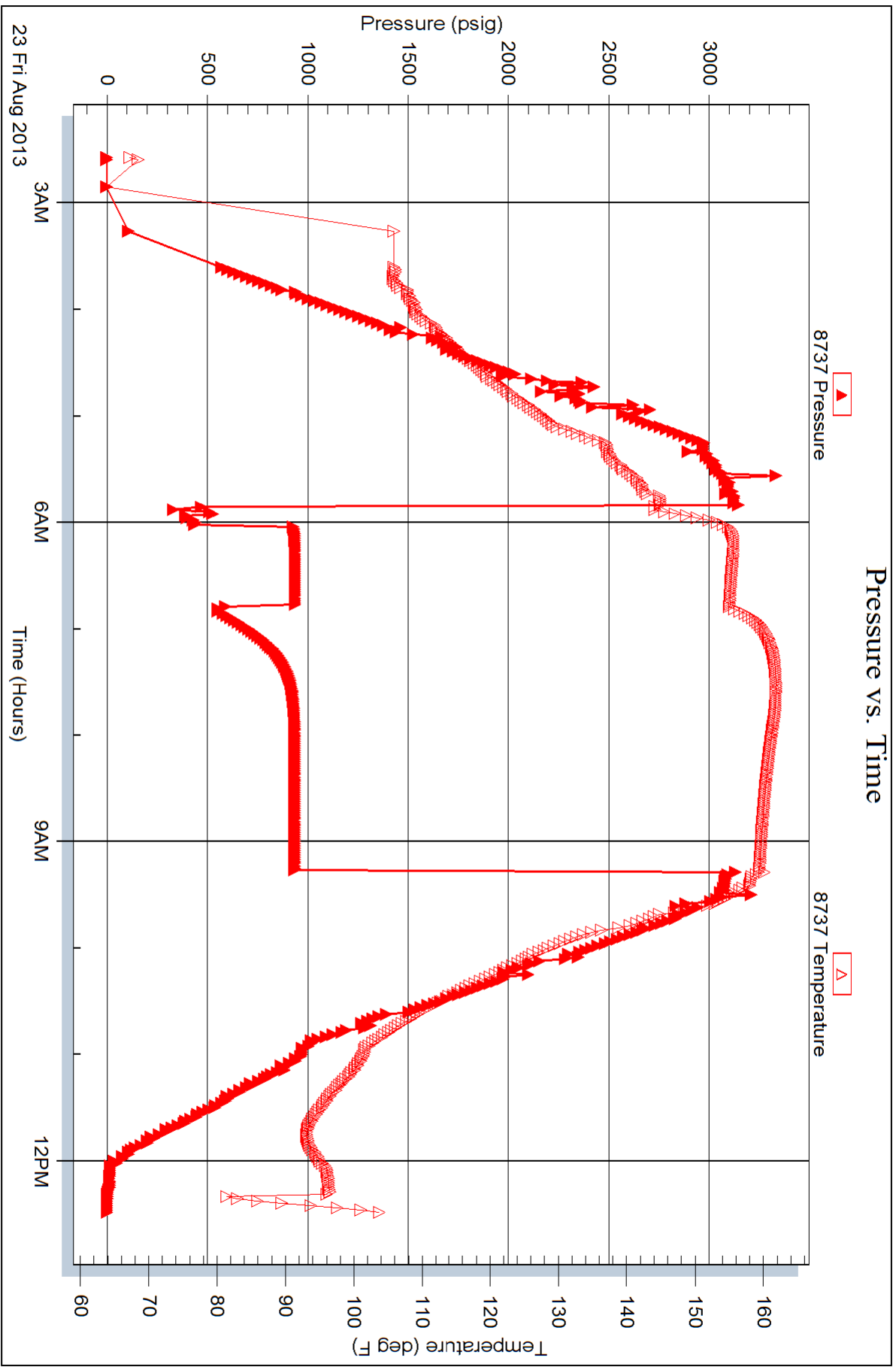


Serial #: 8737

Outside Palmer Oil

UPC #23-4

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52904

Well Name & No. UPC #234 Test No. 1 Date 8-23-13
 Company Palmer Oil Elevation 3126 KB 3114 GL
 Address 3118 N. Cummings Rd. Garden City KS 67846
 Co. Rep / Geo. Keith Reavis Rig Duke #9
 Location: Sec. 23 Twp. 32S Rge. 37W Co. Stevens State KS

Interval Tested 6360-6405 Zone Tested St. Louis
 Anchor Length 45 Drill Pipe Run 6159 Mud Wt. 9.3
 Top Packer Depth 6356 Drill Collars Run 187 Vis 60
 Bottom Packer Depth 6360 Wt. Pipe Run Ø WL 8.8
 Total Depth 6405 Chlorides 3300 ppm System LCM 2
 Blow Description IF! BOB in 1 Min.
IS! No Return Blow
FF! BOB in 1 Min.
FS! No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>248</u>	<u>MUD</u>			<u>100</u>	
<u>248</u>	<u>GCOWM</u>	<u>Skim of oil on top 5</u>	<u>5</u>	<u>20</u>	<u>70</u>
<u>434</u>	<u>MCOSW</u>	<u>Skim of oil on top 15</u>	<u>80</u>	<u>5</u>	<u>5</u>
<u>1055</u>	<u>MCOSW</u>		<u>95</u>	<u>5</u>	

Rec Total 1985 BHT 160 Gravity - API RW .345 @ 95.4° F Chlorides 15000 ppm
 (A) Initial Hydrostatic 3223 Test 1450.00/- T-On Location 01:30
 (B) First Initial Flow 359 Jars 250.00/- T-Started 02:34
 (C) First Final Flow 452 Safety Joint 75.00/- T-Open 05:52
 (D) Initial Shut-In 936 Circ Sub _____ T-Pulled 09:17
 (E) Second Initial Flow 503 Hourly Standby _____ T-Out 12:29
 (F) Second Final Flow 931 Mileage 206 RT 319.30/- Comments _____
 (G) Final Shut-In 930 Sampler _____
 (H) Final Hydrostatic 3115 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 10 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 2094.30
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 2094.30/-

Approved By Keith Reavis Our Representative Mike Rohlf

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