



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



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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
Reference Elevations: 3126.00 ft (KB)
3116.00 ft (CF)
KB to GR/CF: 10.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 65

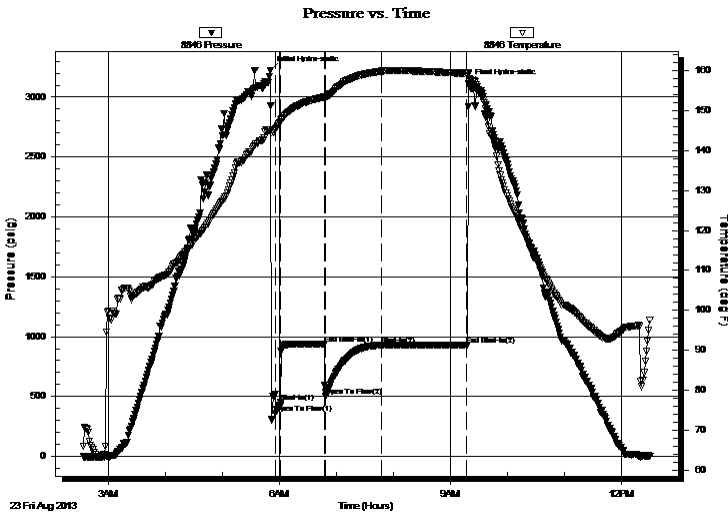
Serial #: 8846

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)



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Job Ticket: 52904

DST#: 1

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 Total Depth: 6405.00 ft (KB) (TVD) 3116.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

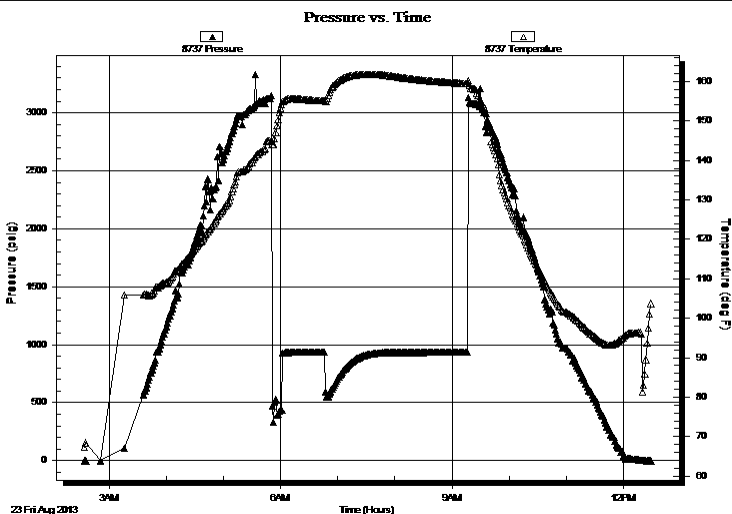
Serial #: 8737

Outside

Press@RunDepth: 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: 02:34:15 End Time: 12:29:15 Time On Btm:
 Time Off Btm:

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

Recovery

Length (ft)	Description	Volume (bbl)
1055.00	mcs w 5% m 95% sw	13.10
434.00	m c g o s w 5% m 15% g o 80% s w	6.09
248.00	g c o w m 5% g 5% g o 20% w 70% m	3.48
248.00	mud 100% m	3.48

Gas Rates

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



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TOOL DIAGRAM

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



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FLUID SUMMARY

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Job Ticket: 52904 **DST#: 1**
Test Start: 2013.08.23 @ 02:34:01

Mud and Cushion Information

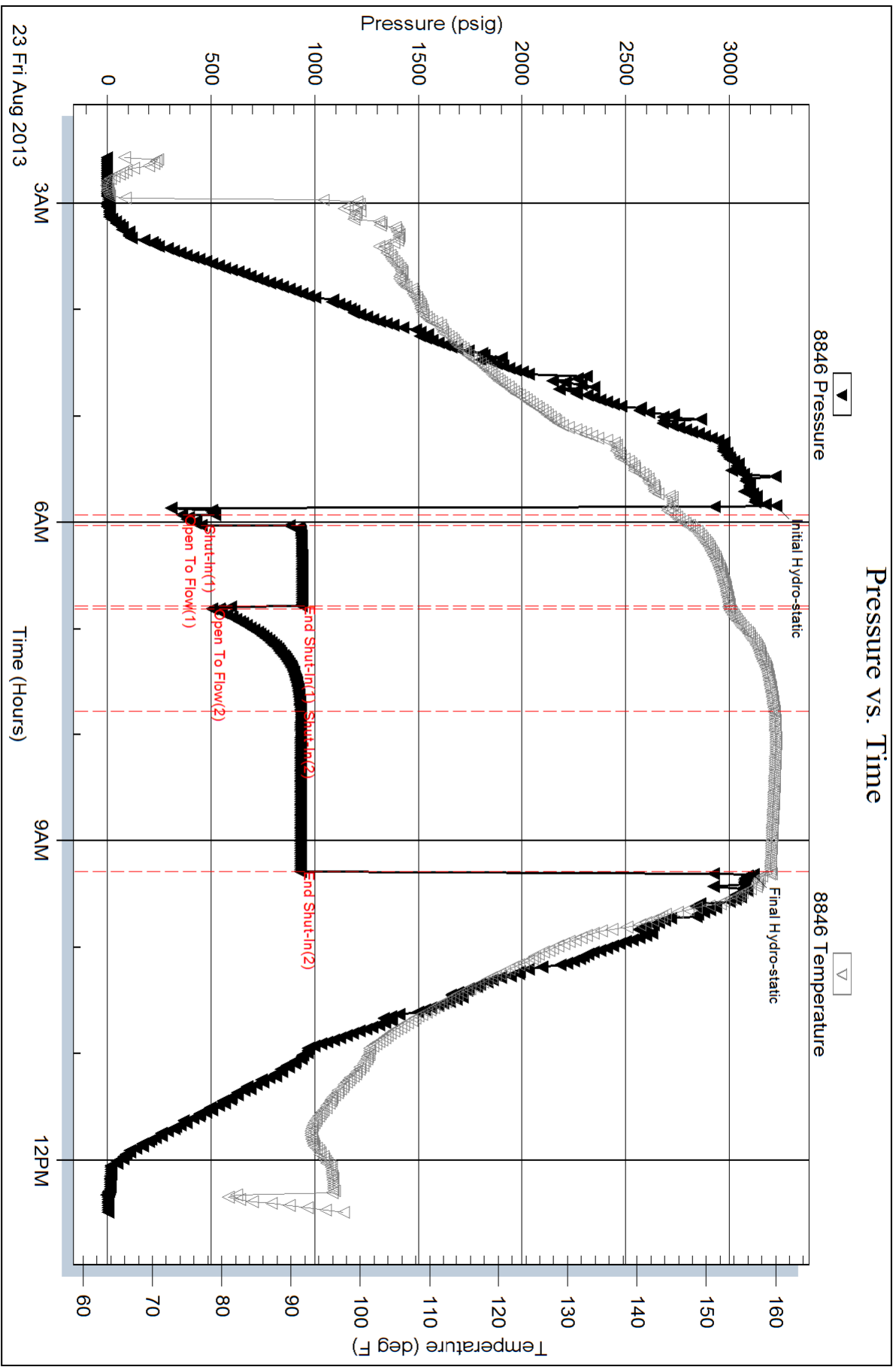
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 15000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.77 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3300.00 ppm		
Filter Cake: 1.00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

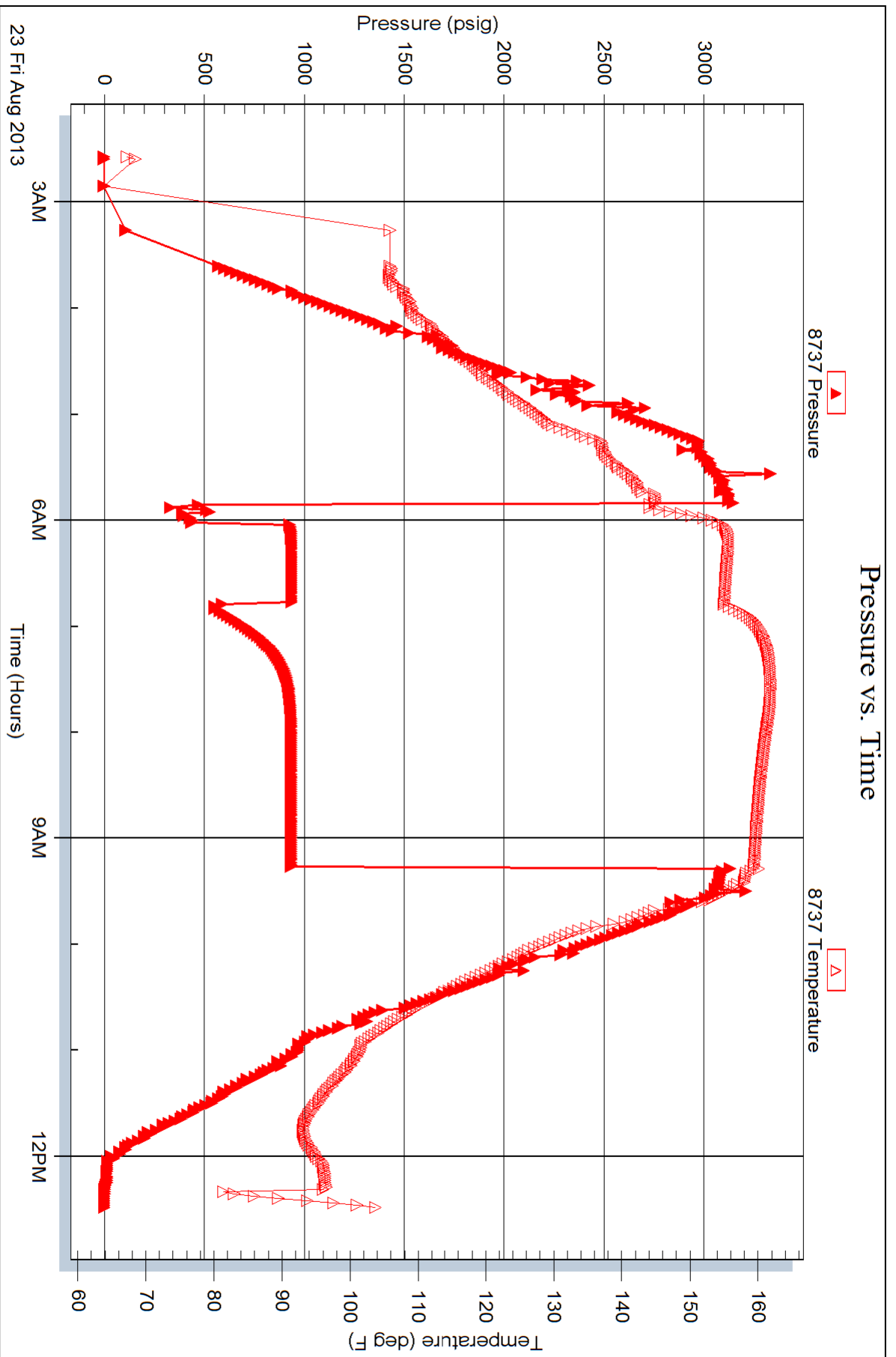
Recovery Information

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







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>MC5W</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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