

TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating**

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

GBM Unit #29-1

29-7s-24w Graham,KS

Start Date: 2013.08.15 @ 21:50:15

End Date: 2013.08.16 @ 07:39:15

Job Ticket #: 54388 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.21 @ 09:18:58

H&C Oil Operating
29-7s-24w Graham,KS
GBM Unit #29-1
DST # 1
LKC E&F
2013.08.15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating

29-7s-24w Graham,KS

PO Box 86
Plainville KS 67663

GBM Unit #29-1

Job Ticket: 54388

DST#: 1

ATTN: Marc Downing

Test Start: 2013.08.15 @ 21:50:15

GENERAL INFORMATION:

Formation: **LKC E&F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:50:35

Time Test Ended: 07:39:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 41

Interval: 3835.00 ft (KB) To 3858.00 ft (KB) (TVD)

Reference Elevations: 2482.00 ft (KB)

Total Depth: 3858.00 ft (KB) (TVD)

2475.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8322 Outside

Press @ Run Depth: 73.50 psig @ 3840.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.15

End Date:

2013.08.16

Last Calib.:

2013.08.16

Start Time: 21:50:16

End Time:

07:39:15

Time On Btm:

2013.08.15 @ 23:50:05

Time Off Btm:

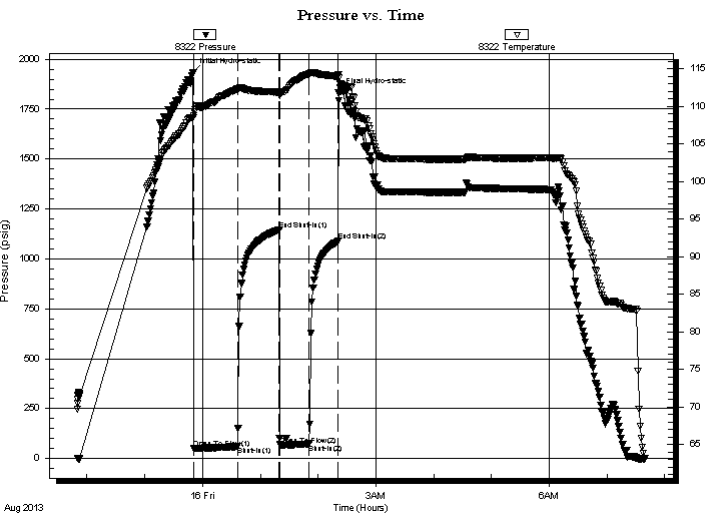
2013.08.16 @ 02:21:15

TEST COMMENT: Slid 10 feet to bottom Fair surface blow built to 5"

Dead no blow back

Dead no blow Flushed tool w eaksurface blow

Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1934.24	108.44	Initial Hydro-static
1	51.43	108.76	Open To Flow (1)
47	60.04	112.26	Shut-In(1)
90	1145.15	111.90	End Shut-In(1)
90	69.29	111.56	Open To Flow (2)
121	73.50	114.34	Shut-In(2)
151	1089.21	113.98	End Shut-In(2)
152	1831.12	114.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	100%M w ith few oil spots	1.68

Gas Rates

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



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Total Depth: 3858.00 ft (KB) (TVD)

2475.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6752 Inside

Press @ Run Depth: psig @ 3840.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.15

End Date:

2013.08.16

Last Calib.:

2013.08.15

Start Time: 21:50:58

End Time:

07:40:16

Time On Btm:

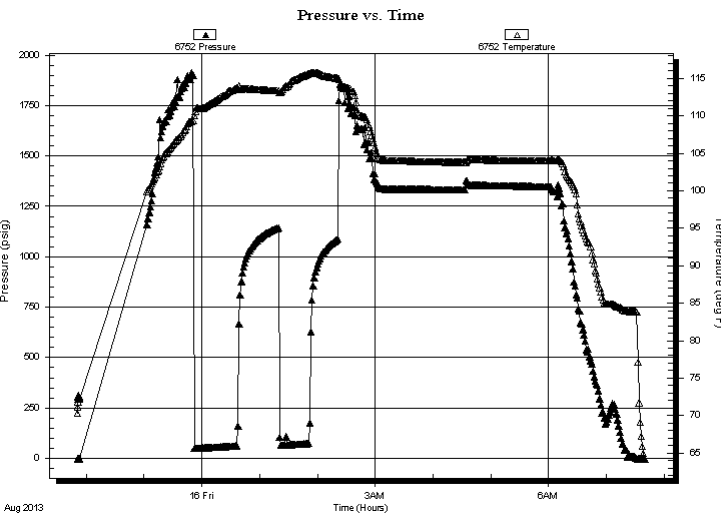
Time Off Btm:

TEST COMMENT: Slid 10 feet to bottom Fair surface blow built to 5"

Dead no blow back

Dead no blow Flushed tool w eak surface blow

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PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	100%M with few oil spots	1.68

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating

29-7s-24w Graham,KS

PO Box 86
Plainville KS 67663

GBM Unit #29-1

Job Ticket: 54388

DST#: 1

ATTN: Marc Downing

Test Start: 2013.08.15 @ 21:50:15

Tool Information

Drill Pipe:	Length: 3836.00 ft	Diameter: 3.80 inches	Volume: 53.81 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 53.81 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3835.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3820.00	
Hydraulic tool	5.00			3825.00	
Packer	5.00			3830.00	20.00 Bottom Of Top Packer
Packer	5.00			3835.00	
Stubb	1.00			3836.00	
Perforations	4.00			3840.00	
Recorder	0.00	6752	Inside	3840.00	
Recorder	0.00	8322	Outside	3840.00	
Perforations	15.00			3855.00	
Bullnose	3.00			3858.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
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FLUID SUMMARY

H&C Oil Operating

29-7s-24w Graham,KS

PO Box 86
Plainville KS 67663

GBM Unit #29-1

Job Ticket: 54388

DST#: 1

ATTN: Marc Downing

Test Start: 2013.08.15 @ 21:50:15

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	100%M with few oil spots	1.683

Total Length: 120.00 ft

Total Volume: 1.683 bbl

Num Fluid Samples: 0

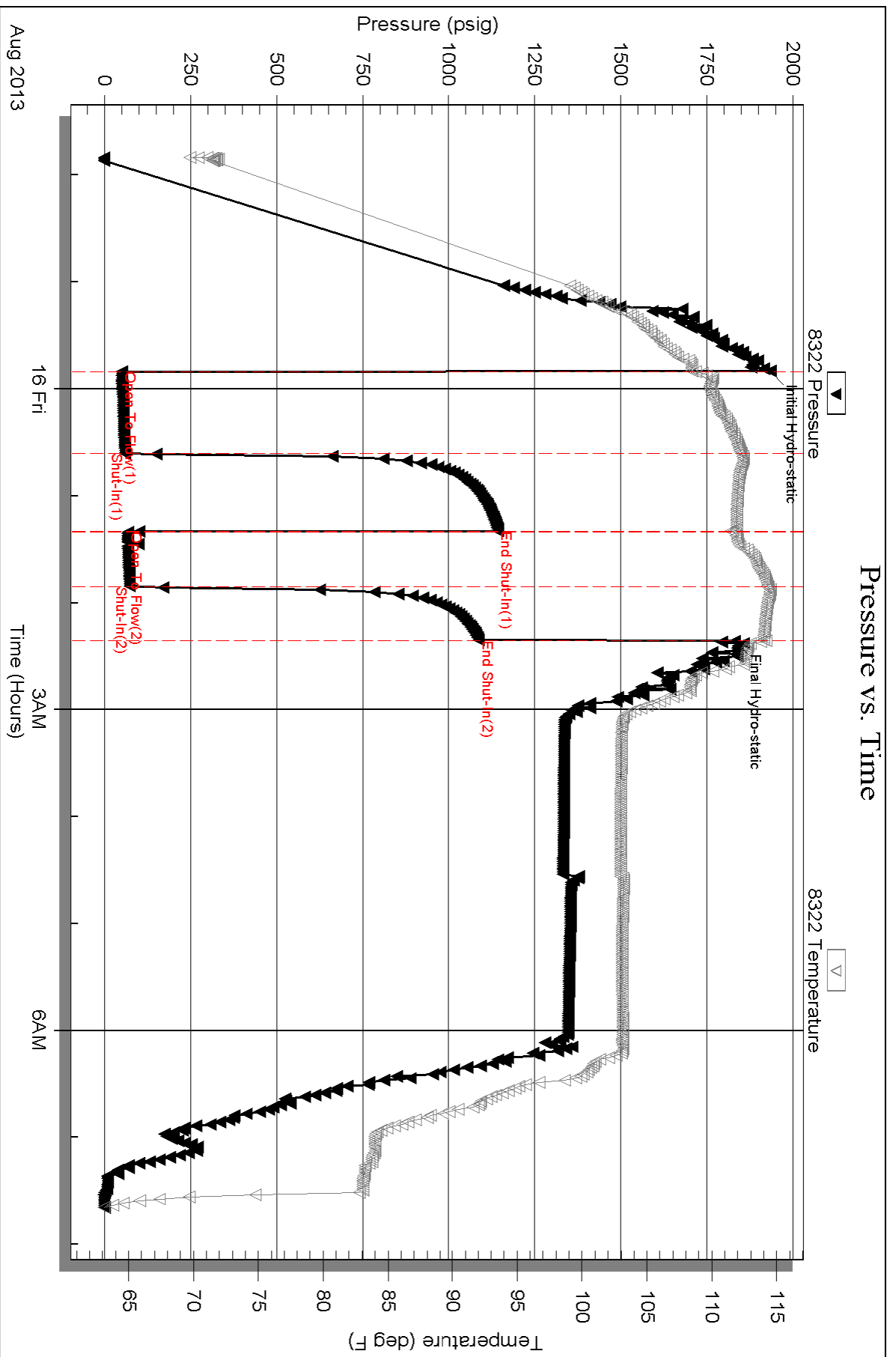
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



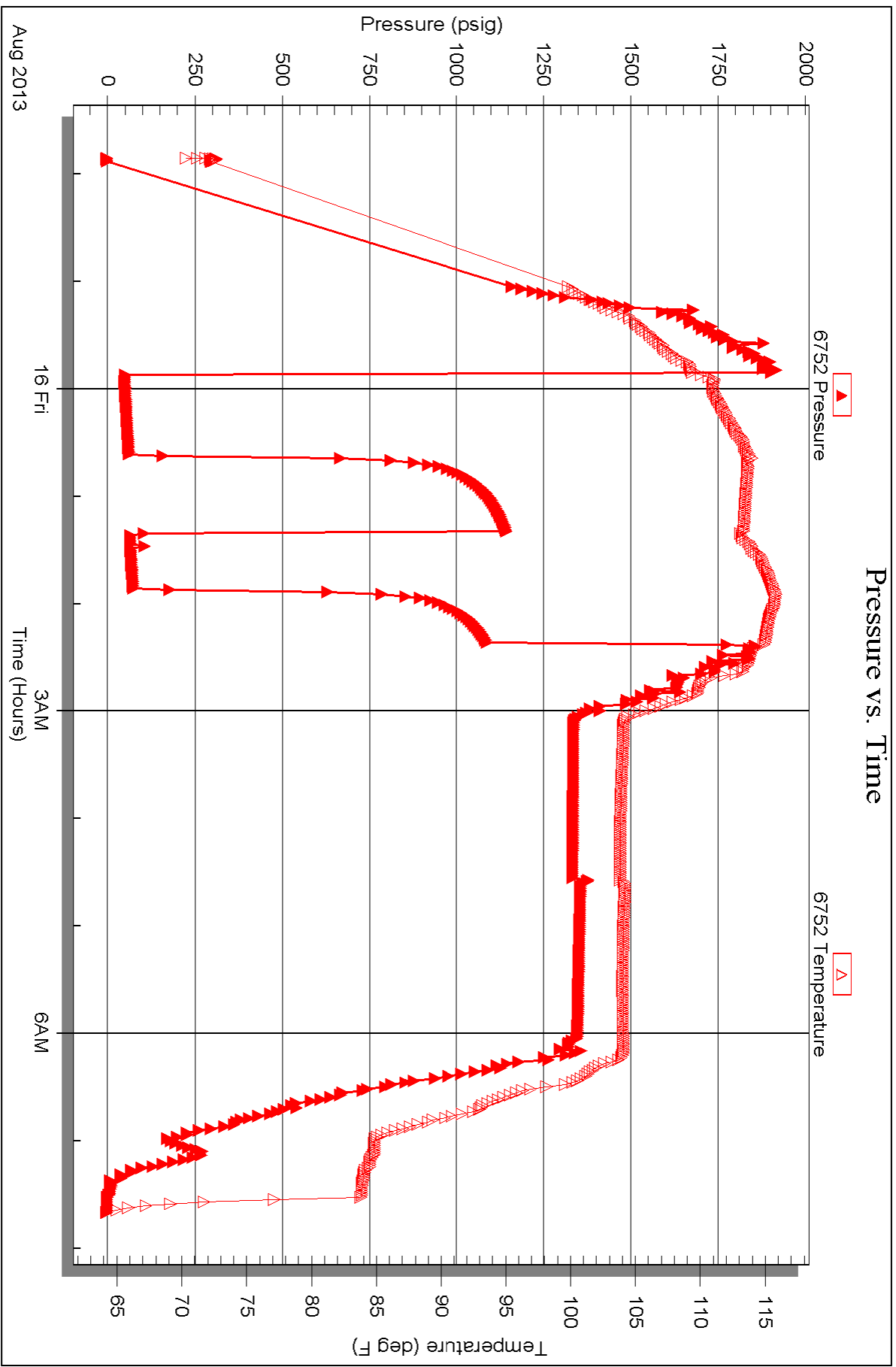
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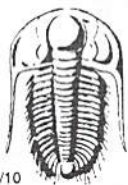
Inside

H&C Oil Operating

GBM Unit #29-1

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54388**

410

Well Name & No. GBM Unit #29-1 Test No. ~~29-1~~ 1 Date 8-15-13
 Company H&C Oil Operating Elevation 2482 KB 2475 GL
 Address PO Box 86 Plainville KS, 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 29 Twp. 7 Rge. 24 Co. Graham State KS

Interval Tested 3835 3858 Zone Tested LHC F+F
 Anchor Length 23 Drill Pipe Run 3836 Mud Wt. 9.2
 Top Packer Depth 3831 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3835 Wt. Pipe Run 0 WL 7.4
 Total Depth 3858 Chlorides 1200 ppm System LCM 2#

Blow Description Slid 10' to bottom Fair surface blow built to 5 in
Dead no blow back
Dead no blow Flushed tool wear surface blow
Dead no ~~to~~ blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>120</u>	Feet of <u>mud with oil spots</u>				<u>100</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total <u>120</u>	BHT	Gravity	API RW	@	° F Chlorides ppm

- (A) Initial Hydrostatic 1934
- (B) First Initial Flow 51
- (C) First Final Flow 60
- (D) Initial Shut-In 1145
- (E) Second Initial Flow 69
- (F) Second Final Flow 74
- (G) Final Shut-In 1089
- (H) Final Hydrostatic 1831

- Test 1150
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby ~~4:00~~ 4:15 ⁴⁰⁰
- Mileage 150 RT 232.50
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder 1d 31.25h
- Day Standby Loaded tools
- Accessibility 14:30 on 8-18-13

T-On Location 18:45
 T-Started 21:50
 T-Open 23:50
 T-Pulled 02:20
 T-Out 07:40 8-16-13
 Comments Work on DW while tripping out of hole + OWT
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 1600
 Total 3382.50
 MP/DST Disc't

Initial Open 45
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 30

Approved By _____ Our Representative [Signature] Thanks

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.