



DRILL STEM TEST REPORT

Prepared For: **Eternity Exploration LLC**

338 Spyglass Dr.
Coppell, Tx 75019

ATTN: Kim Shoemaker

#1 Landenburger

13-9s-32w Thomas, Ks

Start Date: 2016.12.08 @ 07:52:21

End Date: 2016.12.08 @ 16:01:21

Job Ticket #: 65646 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
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Printed: 2016.12.08 @ 16:51:28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Eternity Exploration LLC

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DST#: 3

Test Start: 2016.12.08 @ 07:52:21

GENERAL INFORMATION:

Formation: **LKC L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:30:21

Time Test Ended: 16:01:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4307.00 ft (KB) To 4333.00 ft (KB) (TVD)

Reference Elevations: 3032.00 ft (KB)

Total Depth: 4333.00 ft (KB) (TVD)

3027.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press@RunDepth: 140.96 psig @ 4308.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.12.08

End Date:

2016.12.08

Last Calib.:

2016.12.08

Start Time: 07:52:26

End Time:

16:01:20

Time On Btm:

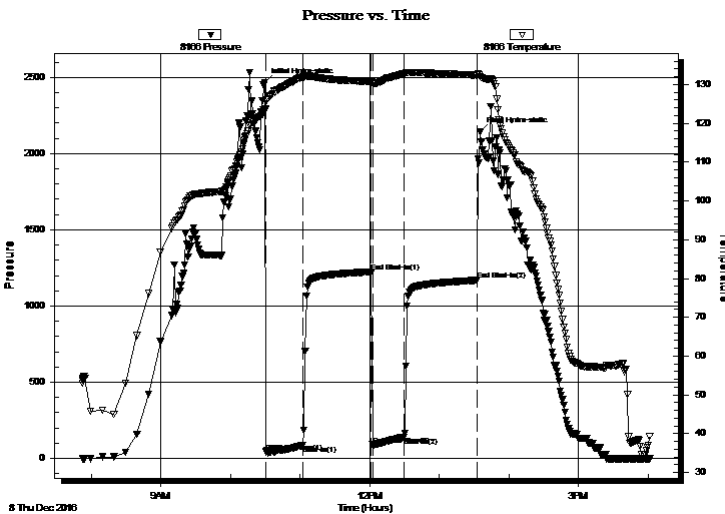
2016.12.08 @ 10:29:21

Time Off Btm:

2016.12.08 @ 13:35:21

TEST COMMENT: IF: BOB in 3 min.
IS: Surface blow built to 3 died in 47 min.
FF: BOB in 6 min.
FS: BOB in 11 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2466.63	123.63	Initial Hydro-static
1	42.47	123.62	Open To Flow (1)
33	85.98	131.92	Shut-In(1)
92	1223.61	130.80	End Shut-In(1)
93	88.71	130.27	Open To Flow (2)
121	140.96	132.83	Shut-In(2)
183	1169.16	132.43	End Shut-In(2)
186	2141.49	132.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	gocw m 20%g 5%o 5%w 70%m	1.77
234.00	go 20%g 80%o	3.28
0.00	2223 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



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TOOL DIAGRAM

Eternity Exploration LLC

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Test Start: 2016.12.08 @ 07:52:21

Tool Information

Drill Pipe:	Length: 4283.00 ft	Diameter: 3.80 inches	Volume: 60.08 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 60.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4307.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4281.00	
Shut In Tool	5.00			4286.00	
Hydraulic tool	5.00			4291.00	
Jars	5.00			4296.00	
Safety Joint	2.00			4298.00	
Packer	5.00			4303.00	27.00 Bottom Of Top Packer
Packer	4.00			4307.00	
Stubb	1.00			4308.00	
Recorder	0.00	8875	Inside	4308.00	
Recorder	0.00	8166	Outside	4308.00	
Perforations	20.00			4328.00	
Bullnose	5.00			4333.00	26.00 Bottom Packers & Anchor

Total Tool Length: 53.00



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FLUID SUMMARY

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Test Start: 2016.12.08 @ 07:52:21

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	gocw m 20%g 5%o 5%w 70%m	1.767
234.00	go 20%g 80%o	3.282
0.00	2223 GIP	0.000

Total Length: 360.00 ft

Total Volume: 5.049 bbl

Num Fluid Samples: 0

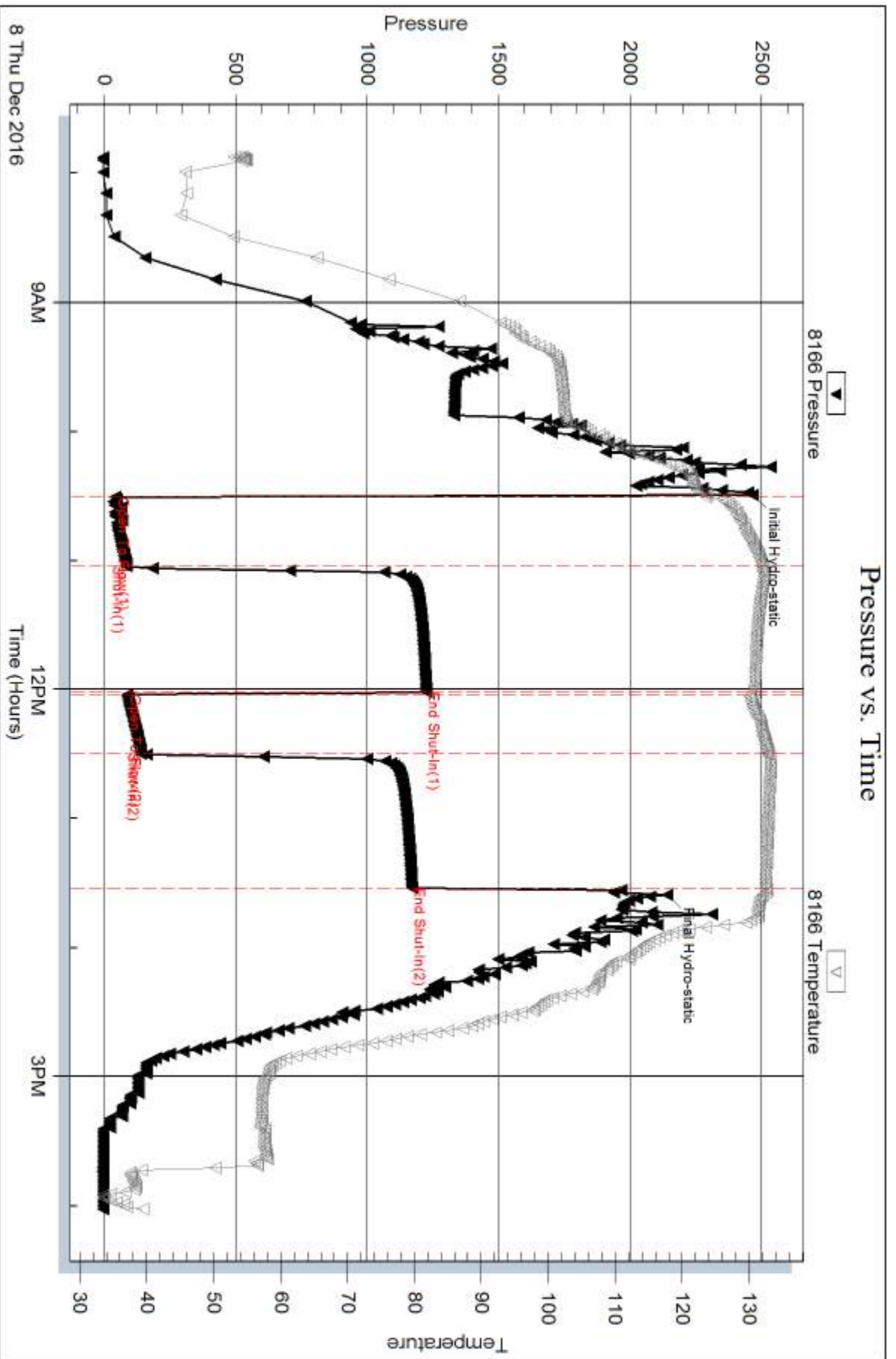
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 38@30=41



Serial #: 8875

Inside

Eternity Exploration LLC

#1 Landenburger

DST Test Number: 3

