



## DRILL STEM TEST REPORT

Prepared For: **Eternity Exploration, LLC**

338 Spyglass Dr  
Coppell TX 75019-5430

ATTN: Keith Reavis

### **Stecklein #1**

#### **20-15s-17w Ellis,KS**

Start Date: 2013.10.21 @ 13:15:47

End Date: 2013.10.21 @ 20:32:47

Job Ticket #: 52541                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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Printed: 2013.10.28 @ 15:32:47



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TESTING, INC.**

# DRILL STEM TEST REPORT

Eternity Exploration, LLC

**20-15s-17w Ellis,KS**

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Coppell TX 75019-5430

**Stecklein #1**

Job Ticket: 52541

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2013.10.21 @ 13:15:47

## GENERAL INFORMATION:

Formation: **LKC-A-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:49:17

Time Test Ended: 20:32:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 67

**Interval: 3300.00 ft (KB) To 3348.00 ft (KB) (TVD)**

Reference Elevations: 1999.00 ft (KB)

Total Depth: 3348.00 ft (KB) (TVD)

1989.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8679**

**Inside**

Press @ Run Depth: 21.09 psig @ 3369.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.21

End Date:

2013.10.21

Last Calib.:

2013.10.21

Start Time: 13:15:48

End Time:

20:31:47

Time On Btm:

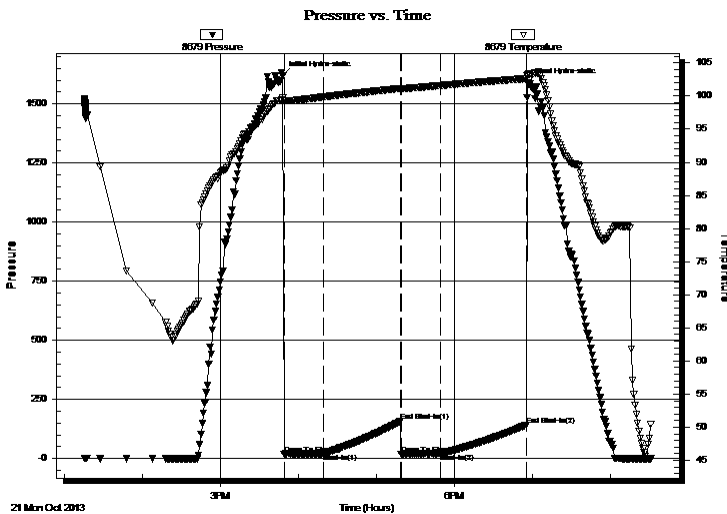
2013.10.21 @ 15:48:17

Time Off Btm:

2013.10.21 @ 18:56:47

**TEST COMMENT:** IFP=Weak blow built to 3-1/4"  
ISI=Dead no blow back  
FFP=Weak blow built to 2-1/4"  
FSI=Dead no blow back

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1618.56         | 99.73        | Initial Hydro-static |
| 1           | 19.01           | 99.33        | Open To Flow (1)     |
| 32          | 19.94           | 99.85        | Shut-In(1)           |
| 91          | 157.22          | 101.13       | End Shut-In(1)       |
| 91          | 16.90           | 101.04       | Open To Flow (2)     |
| 122         | 21.09           | 101.58       | Shut-In(2)           |
| 188         | 141.70          | 102.62       | End Shut-In(2)       |
| 189         | 1589.85         | 103.24       | Final Hydro-static   |

## Recovery

| Length (ft) | Description             | Volume (bbl) |
|-------------|-------------------------|--------------|
| 20.00       | Mud w ith a scum of oil | 0.28         |
| 0.00        | 74 GIP                  | 0.00         |
|             |                         |              |
|             |                         |              |
|             |                         |              |

## Gas Rates

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



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**Stecklein #1**

Job Ticket: 52541

**DST#: 1**

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Time Test Ended: 20:32:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 67

**Interval: 3300.00 ft (KB) To 3348.00 ft (KB) (TVD)**

Reference Elevations: 1999.00 ft (KB)

Total Depth: 3348.00 ft (KB) (TVD)

1989.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: psig @ 3369.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.21

End Date: 2013.10.21

Last Calib.: 2013.10.21

Start Time: 13:15:35

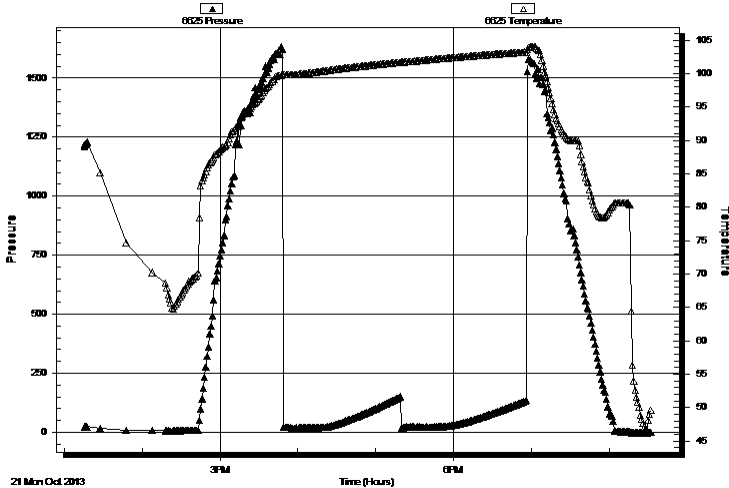
End Time: 20:32:34

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IFP=Weak blow built to 3-1/4"  
ISI=Dead no blow back  
FFP=Weak blow built to 2-1/4"  
FSI=Dead no blow back

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

| Length (ft) | Description             | Volume (bbl) |
|-------------|-------------------------|--------------|
| 20.00       | Mud w ith a scum of oil | 0.28         |
| 0.00        | 74 GIP                  | 0.00         |
|             |                         |              |
|             |                         |              |
|             |                         |              |
|             |                         |              |

## Gas Rates

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



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Eternity Exploration, LLC

**20-15s-17w Ellis,KS**

338 Spyglass Dr  
Coppell TX 75019-5430

**Stecklein #1**

Job Ticket: 52541

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2013.10.21 @ 13:15:47

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3311.00 ft | Diameter: 3.80 inches | Volume: 46.44 bbl              | Tool Weight: 2200.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 2.70 inches | Volume: 0.00 bbl               | Weight set on Packer: 22000.00 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: 46.44 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 7.00 ft            |                       |                                | String Weight: Initial 55000.00 lb |
| Depth to Top Packer:      | 3332.00 ft         |                       |                                | Final 55000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 48.00 ft           |                       |                                |                                    |
| Tool Length:              | 76.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

| Tool Description          | Length (ft)  | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub           | 1.00         |            |          | 3305.00    |                               |
| Shut In Tool              | 5.00         |            |          | 3310.00    |                               |
| Hydraulic tool            | 5.00         |            |          | 3315.00    |                               |
| Jars                      | 5.00         |            |          | 3320.00    |                               |
| Safety Joint              | 3.00         |            |          | 3323.00    |                               |
| Packer                    | 4.00         |            |          | 3327.00    | 28.00 Bottom Of Top Packer    |
| Packer                    | 5.00         |            |          | 3332.00    |                               |
| Stubb                     | 1.00         |            |          | 3333.00    |                               |
| Perforations              | 3.00         |            |          | 3336.00    |                               |
| Change Over Sub           | 1.00         |            |          | 3337.00    |                               |
| Drill Pipe                | 31.00        |            |          | 3368.00    |                               |
| Change Over Sub           | 1.00         |            |          | 3369.00    |                               |
| Recorder                  | 0.00         | 6625       | Outside  | 3369.00    |                               |
| Recorder                  | 0.00         | 8679       | Inside   | 3369.00    |                               |
| Perforations              | 7.00         |            |          | 3376.00    |                               |
| Bullnose                  | 4.00         |            |          | 3380.00    | 48.00 Bottom Packers & Anchor |
| <b>Total Tool Length:</b> | <b>76.00</b> |            |          |            |                               |



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**FLUID SUMMARY**

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**Stecklein #1**

Job Ticket: 52541

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2013.10.21 @ 13:15:47

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

| Length<br>ft | Description            | Volume<br>bbl |
|--------------|------------------------|---------------|
| 20.00        | Mud with a scum of oil | 0.281         |
| 0.00         | 74 GIP                 | 0.000         |

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

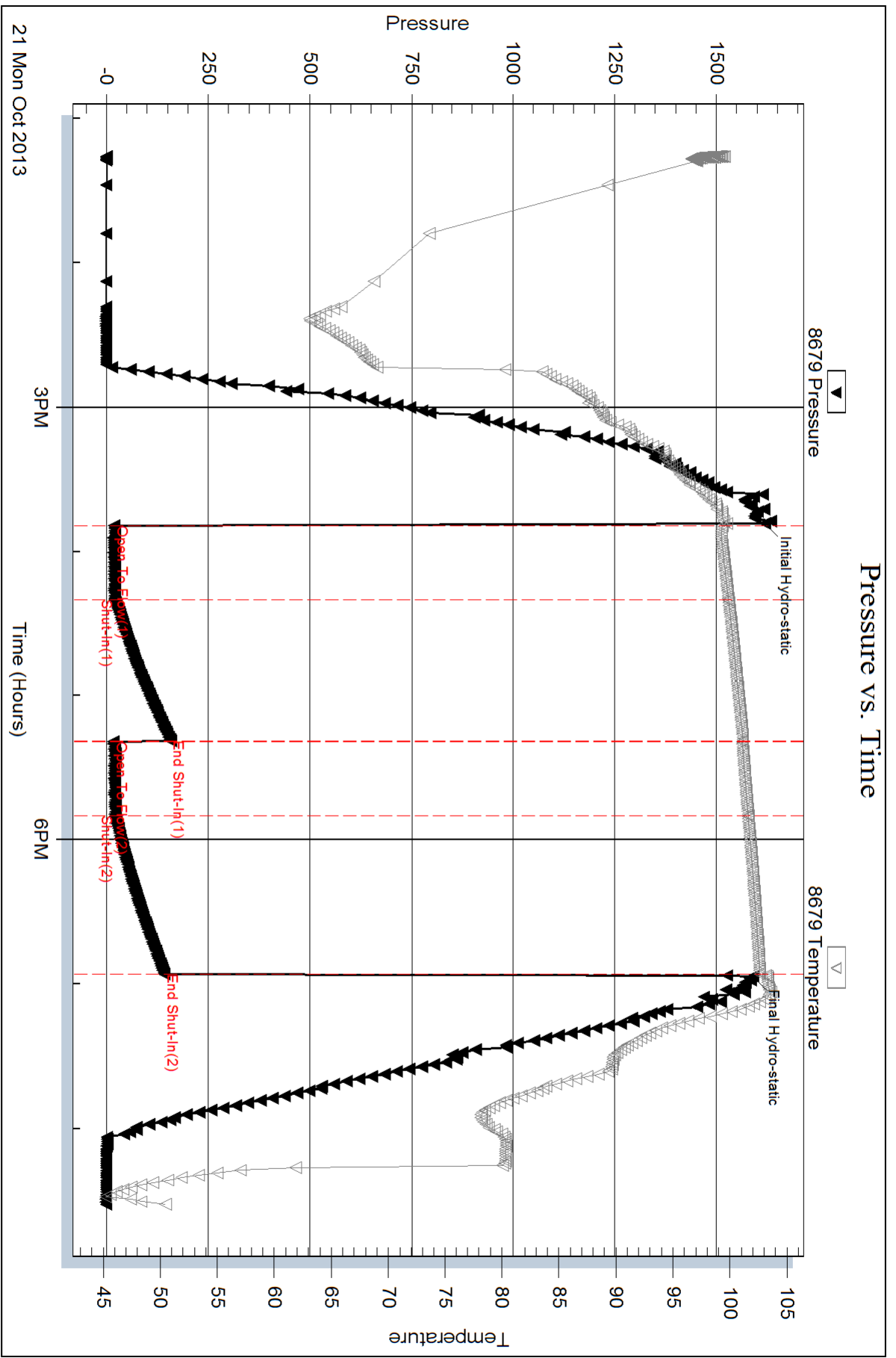
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

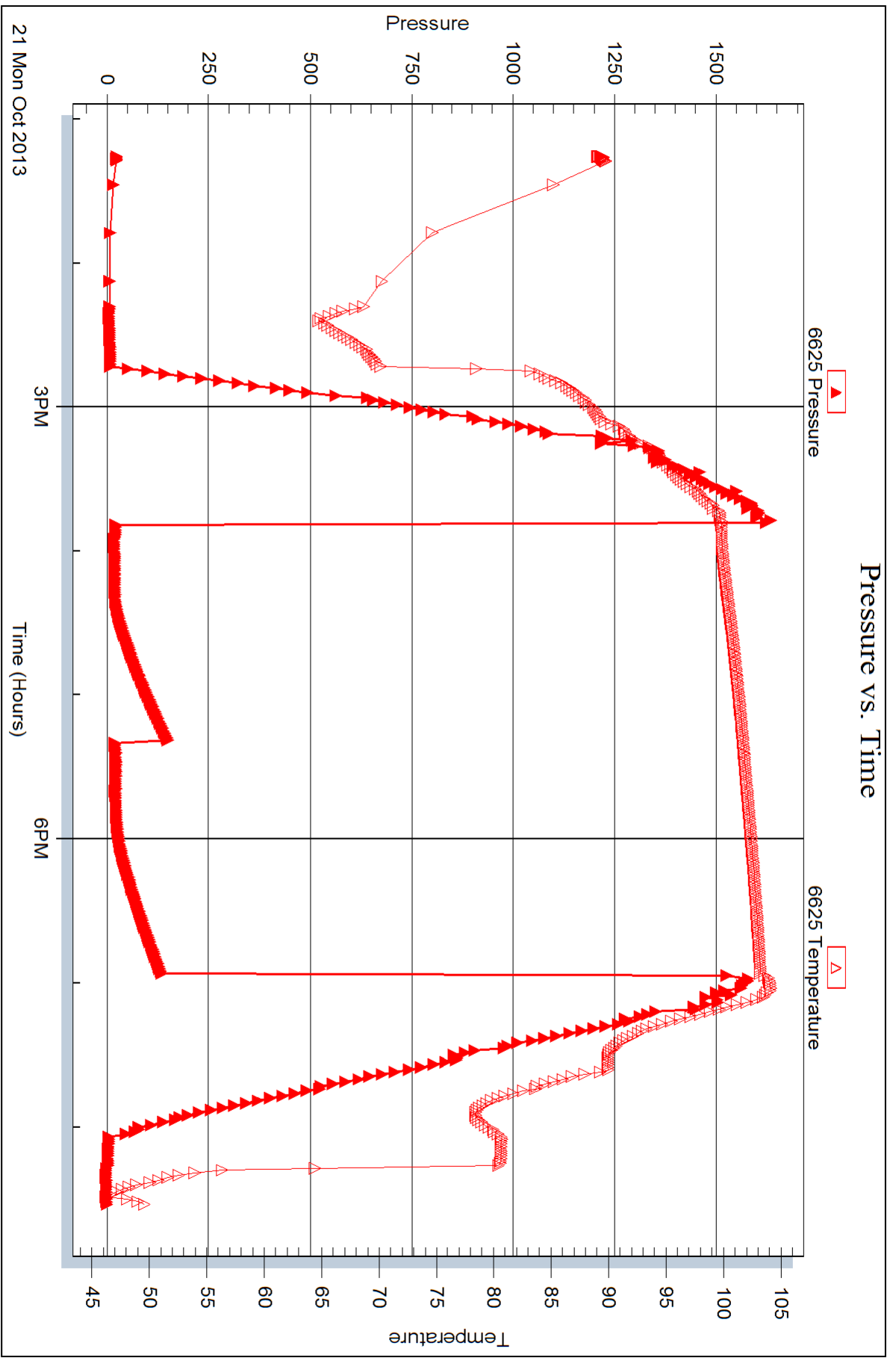


Serial #: 6625

Outside Eternity Exploration, LLC

Stecklein #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 52541

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