



## DRILL STEM TEST REPORT

Prepared For: **Tengasco INC**

PO Box 458  
Hays KS 67601

ATTN: Mike Bair

### **Amrein #3**

### **34-8s-19w Rooks,KS**

Start Date: 2014.07.13 @ 20:52:05

End Date: 2014.07.14 @ 03:25:35

Job Ticket #: 58913                      DST #: 1

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

Printed: 2014.07.16 @ 08:30:48



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Tengasco INC

**34-8s-19w Rooks,KS**

PO Box 458  
Hays KS 67601

**Amrein #3**

Job Ticket: 58913

**DST#: 1**

ATTN: Mike Bair

Test Start: 2014.07.13 @ 20:52:05

## GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:00:15

Time Test Ended: 03:25:35

Test Type: Conventional Straddle (Initial)

Tester: Tate Lang

Unit No: 77

**Interval: 3452.00 ft (KB) To 3470.00 ft (KB) (TVD)**

Reference Elevations: 2005.00 ft (KB)

Total Depth: 3514.00 ft (KB) (TVD)

1998.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8898**

**Outside**

Press@RunDepth: 18.39 psig @ 3453.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.13

End Date:

2014.07.14

Last Calib.:

2014.07.14

Start Time: 20:52:06

End Time:

03:25:35

Time On Btm:

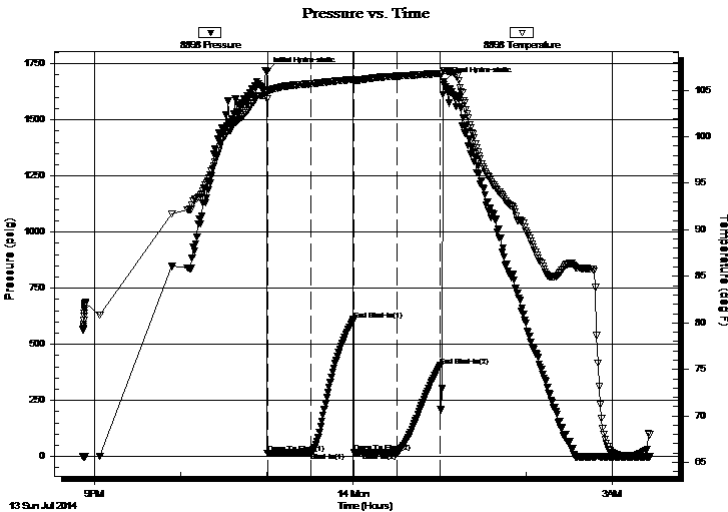
2014.07.13 @ 23:00:05

Time Off Btm:

2014.07.14 @ 01:02:45

**TEST COMMENT:** Weak surface blow died in 4 mins  
Dead no blow back  
Dead no blow  
Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.67	104.96	Initial Hydro-static
1	13.04	104.03	Open To Flow (1)
31	17.03	105.70	Shut-In(1)
60	610.33	106.16	End Shut-In(1)
61	18.22	105.86	Open To Flow (2)
91	18.39	106.51	Shut-In(2)
121	404.98	106.80	End Shut-In(2)
123	1670.27	107.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100%M	0.02

## Gas Rates

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



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**34-8s-19w Rooks,KS**

PO Box 458  
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**DST#: 1**

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1998.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

**Serial #: 8897**

**Inside**

Press@RunDepth: psig @ 3453.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.13

End Date:

2014.07.14

Last Calib.:

2014.07.14

Start Time: 20:52:33

End Time:

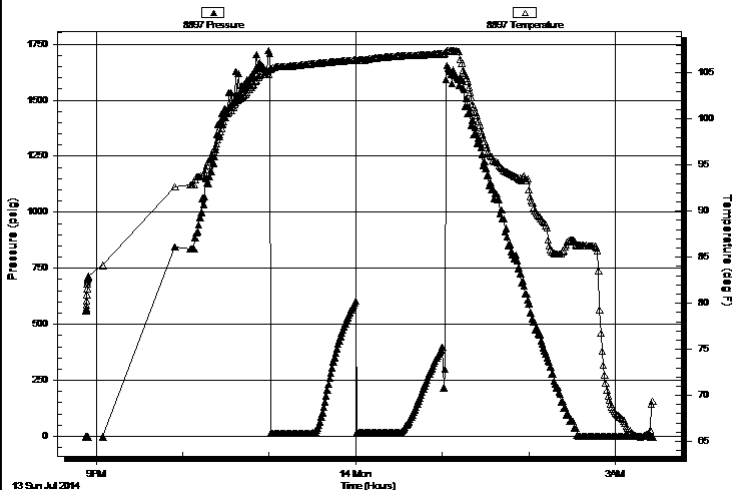
03:26:02

Time On Btm:

Time Off Btm:

**TEST COMMENT:** Weak surface blow died in 4 mins  
Dead no blow back  
Dead no blow  
Dead no blow back

Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	100%M	0.02

### Gas Rates

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



TRILOBITE TESTING, INC

# DRILL STEM TEST REPORT

Tengasco INC

34-8s-19w Rooks,KS

PO Box 458  
Hays KS 67601

Amrein #3

Job Ticket: 58913

DST#: 1

ATTN: Mike Bair

Test Start: 2014.07.13 @ 20:52:05

## GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:00:15

Time Test Ended: 03:25:35

Test Type: Conventional Straddle (Initial)

Tester: Tate Lang

Unit No: 77

Interval: 3452.00 ft (KB) To 3470.00 ft (KB) (TVD)

Reference Elevations: 2005.00 ft (KB)

Total Depth: 3514.00 ft (KB) (TVD)

1998.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8354 Below (Straddle)

Press@RunDepth: psig @ 3484.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.13

End Date:

2014.07.14

Last Calib.:

2014.07.14

Start Time: 20:52:26

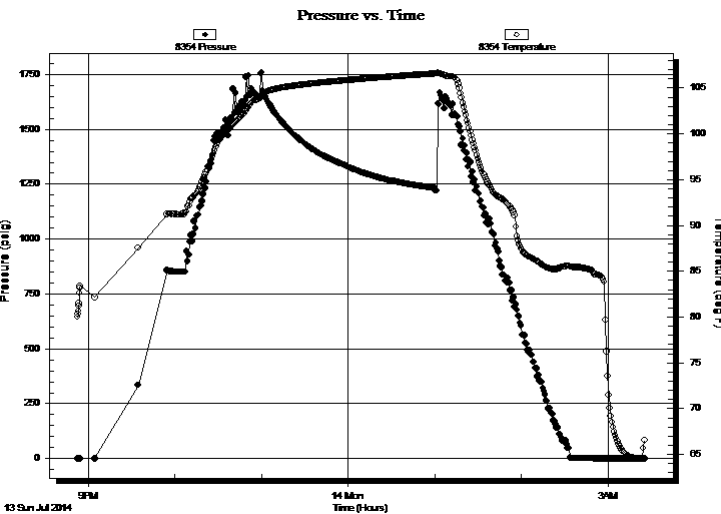
End Time:

03:25:50

Time On Btm:

Time Off Btm:

TEST COMMENT: Weak surface blow died in 4 mins  
Dead no blow back  
Dead no blow  
Dead no blow back



## PRESSURE SUMMARY

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

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
5.00	100%M	0.02

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Tengasco INC

**34-8s-19w Rooks,KS**

PO Box 458  
Hays KS 67601

**Amrein #3**

Job Ticket: 58913

**DST#: 1**

ATTN: Mike Bair

Test Start: 2014.07.13 @ 20:52:05

## Tool Information

Drill Pipe:	Length: 3401.00 ft	Diameter: 3.80 inches	Volume: 47.71 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:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 47.86 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3452.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	3470.00 ft				
Interval between Packers:	18.00 ft				
Tool Length:	94.00 ft				
Number of Packers:	3	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Shut In Tool	5.00			3430.00	
Hydraulic tool	5.00			3435.00	
Jars	5.00			3440.00	
Safety Joint	2.00			3442.00	
Packer	5.00			3447.00	27.00 Bottom Of Top Packer
Packer	5.00			3452.00	
Stubb	1.00			3453.00	
Recorder	0.00	8897	Inside	3453.00	
Recorder	0.00	8898	Outside	3453.00	
Perforations	12.00			3465.00	
Blank Off Sub	1.00			3466.00	
Blank Spacing	4.00			3470.00	18.00 Tool Interval
Packer	5.00			3475.00	
Stubb	1.00			3476.00	
Perforations	8.00			3484.00	
Recorder	0.00	8354	Below	3484.00	
Change Over Sub	1.00			3485.00	
Drill Pipe	30.00			3515.00	
Change Over Sub	1.00			3516.00	
Bullnose	3.00			3519.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 94.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Tengasco INC

**34-8s-19w Rooks,KS**

PO Box 458  
Hays KS 67601

**Amrein #3**

Job Ticket: 58913

**DST#: 1**

ATTN: Mike Bair

Test Start: 2014.07.13 @ 20:52:05

## 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: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

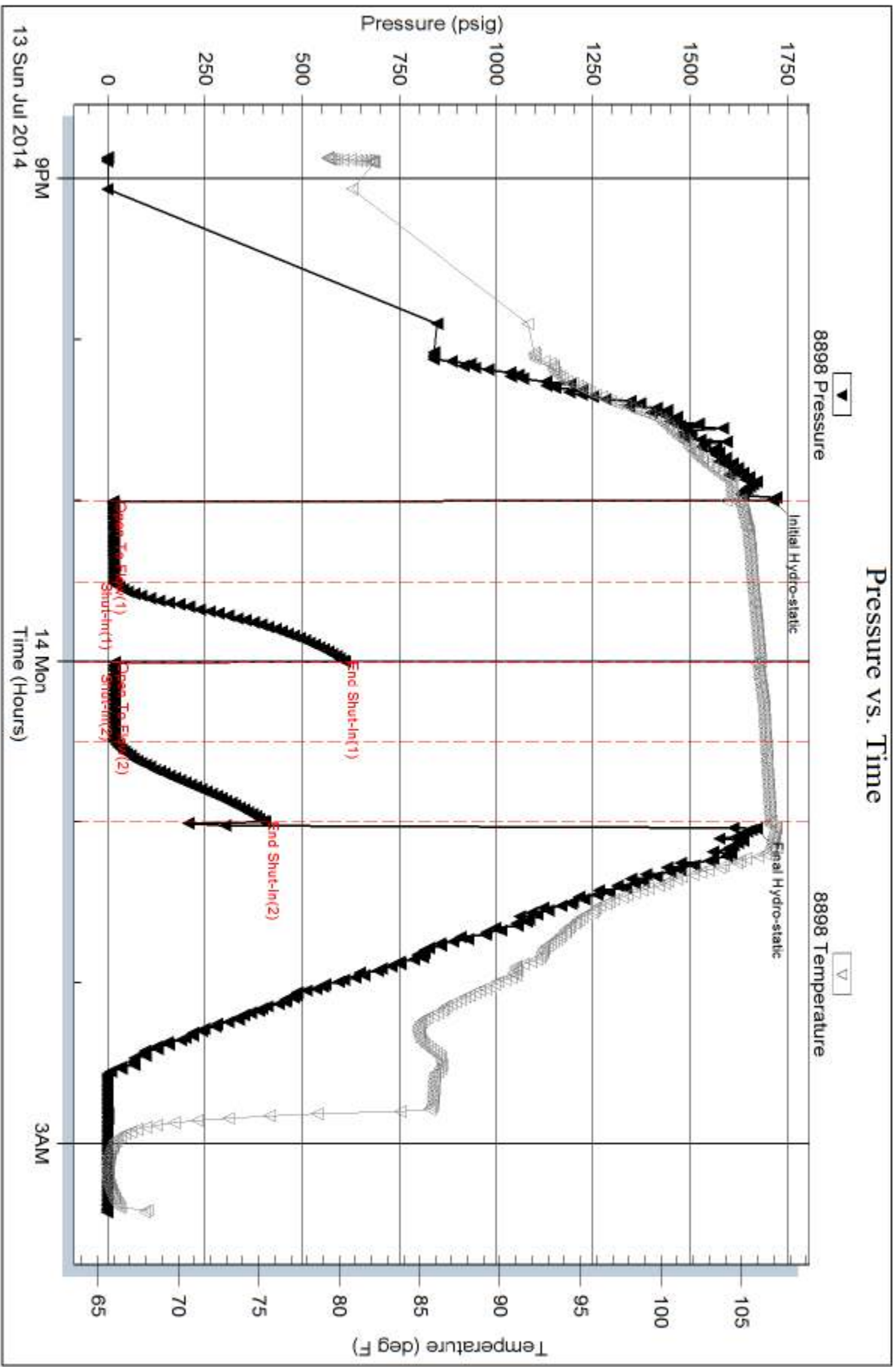
Recovery Comments:

Serial #: 8898

Outside Tengasco INC

Arrein #3

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 58913

Printed: 2014.07.16 @ 08:30:50

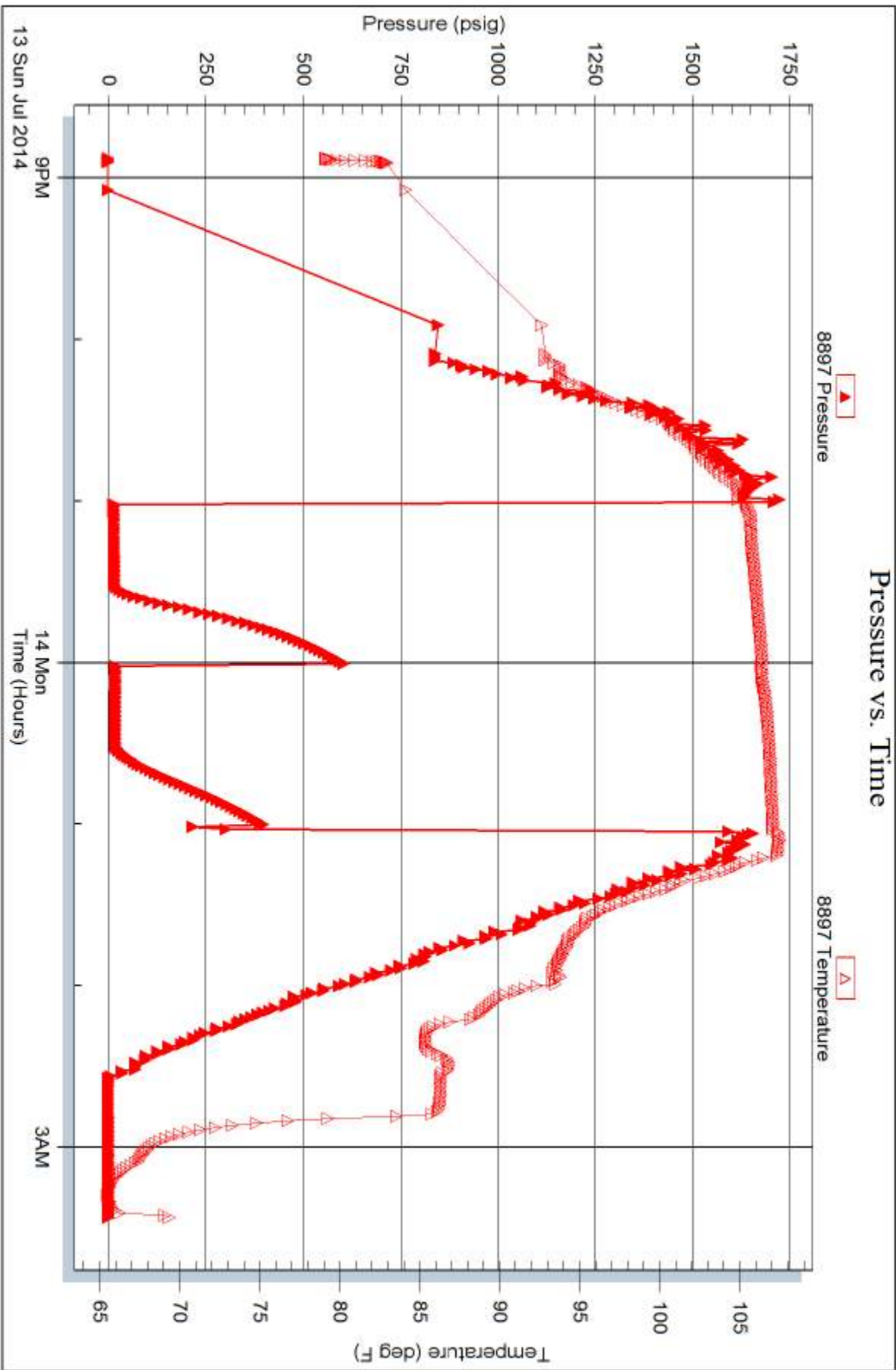
Serial #: 8897

Inside

Tengasco INC

Anrein #3

DST Test Number: 1



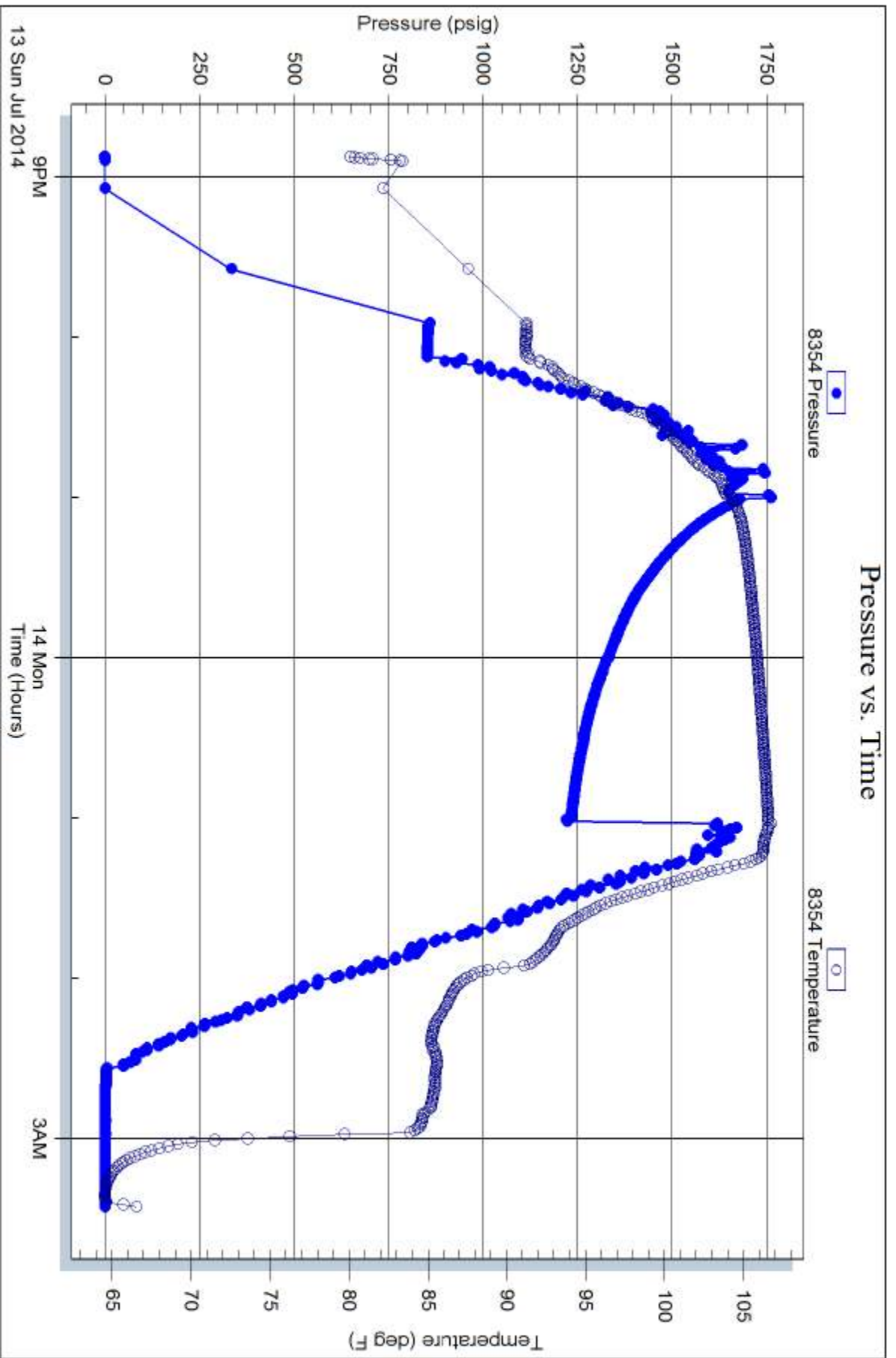


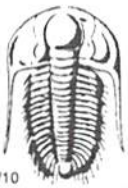
Serial #: 8354

Below (Strat)psco INC

Anrein #3

DST Test Number: 1





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58913

Well Name & No. Amrein #3 Test No. 1 Date 7-13-14  
 Company Tengasco ILL Elevation 2005 KB 1998 GL  
 Address 1327 Noose Rd Po Box 458 67601  
 Co. Rep / Geo. Mike Blair Rig American Eagle #  
 Location: Sec. 34 Twp. 8 Rge. 19 Co. Rootis State KS

Interval Tested 3452 3470 Zone Tested \_\_\_\_\_  
 Anchor Length 18' 47' Int Drill Pipe Run 3401 Mud Wt. 9.0  
 Top Packer Depth 34 Drill Collars Run 50 Vis 54  
 Bottom Packer Depth 3452 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3514 Chlorides 1700 ppm System LCM 3#

Blow Description Weck surface died in 4mins  
Dead no blow back  
Dead no blow  
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>5</u>	Feet of <u>Mud</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 1060 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 1714  Test 1150 T-On Location 2060  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 2052  
 (C) First Final Flow 17  Safety Joint \_\_\_\_\_ T-Open 2300  
 (D) Initial Shut-In 610  Circ Sub \_\_\_\_\_ T-Pulled 0100  
 (E) Second Initial Flow 18  Hourly Standby \_\_\_\_\_ T-Out 0325  
 (F) Second Final Flow 18  Mileage 80R/7 86.80 Comments Loaded  
 (G) Final Shut-In 405  Sampler \_\_\_\_\_ Tools  
 (H) Final Hydrostatic 1670  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1836.80  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1836.80

Approved By \_\_\_\_\_ Our Representative [Signature]

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.