



DRILL STEM TEST REPORT

Prepared For: **American Warrior**
PO Box 399
Garden City, KS 67846

ATTN: Jason Alm / Scott Co

T Isern #3-13

13-20s-21w Ness,KS

Start Date: 2014.02.28 @ 15:00:00

End Date: 2014.02.28 @ 22:48:00

Job Ticket #: 56157 DST #: 1

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

Printed: 2014.03.04 @ 11:43:12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

American Warrior

13-20s-21w Ness,KS

PO Box 399
Garden City, KS 67846

T Isern #3-13

Job Ticket: 56157

DST#: 1

ATTN: Jason Alm / Scott Co

Test Start: 2014.02.28 @ 15:00:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:30

Time Test Ended: 22:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Interval: 4365.00 ft (KB) To 4380.00 ft (KB) (TVD)

Reference Elevations: 2221.00 ft (KB)

Total Depth: 4380.00 ft (KB) (TVD)

2215.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 6625 Outside

Press@RunDepth: 62.11 psig @ 4366.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.28

End Date:

2014.02.28

Last Calib.:

2014.02.28

Start Time: 15:00:01

End Time:

22:48:00

Time On Btm:

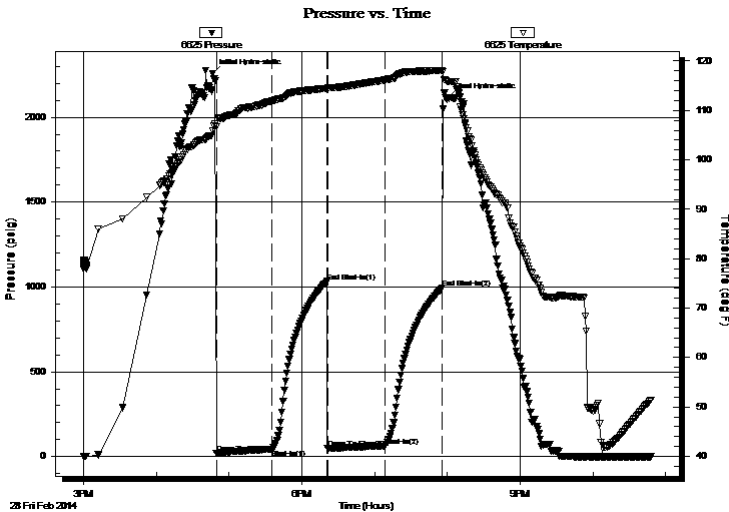
2014.02.28 @ 16:46:30

Time Off Btm:

2014.02.28 @ 20:00:30

TEST COMMENT: I.F. - 45 - Weak surface blow built to 2 1/2"
I.S.I. - 45 - No blow back
F.F. - 45 - Weak surface blow built to 1 1/4"
F.S.I. - 45 - No blow back

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2256.29 | 105.88 | Initial Hydro-static |
| 3 | 17.58 | 106.66 | Open To Flow (1) |
| 49 | 43.68 | 111.88 | Shut-In(1) |
| 94 | 1031.17 | 114.48 | End Shut-In(1) |
| 95 | 47.78 | 114.47 | Open To Flow (2) |
| 142 | 62.11 | 116.18 | Shut-In(2) |
| 189 | 992.19 | 118.11 | End Shut-In(2) |
| 194 | 2115.75 | 115.85 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 61.00 | O,C,M, 30 % OIL 70 % MUD | 0.30 |
| 65.00 | CLEAN OIL 100% | 0.32 |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
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DRILL STEM TEST REPORT

American Warrior

13-20s-21w Ness, KS

PO Box 399
Garden City, KS 67846

T Isern #3-13

Job Ticket: 56157

DST#: 1

ATTN: Jason Alm / Scott Co

Test Start: 2014.02.28 @ 15:00:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:49:30
 Time Test Ended: 22:48:00
 Interval: **4365.00 ft (KB) To 4380.00 ft (KB) (TVD)**
 Total Depth: 4380.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

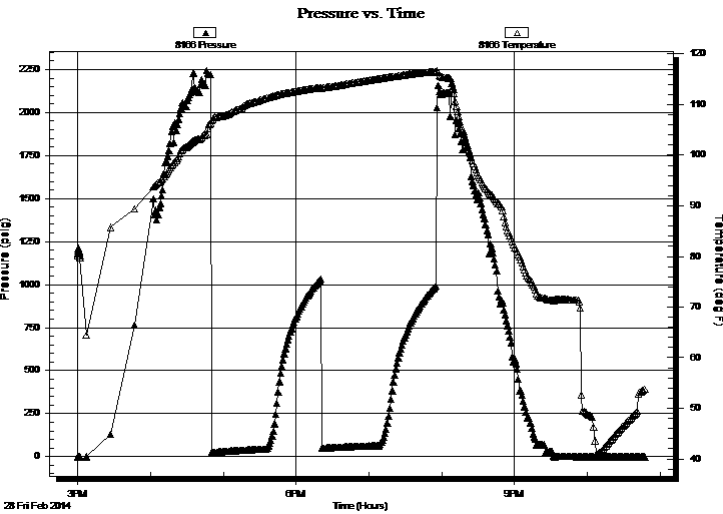
Test Type: Conventional Bottom Hole (Initial)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 2221.00 ft (KB)
 2215.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8166

Inside

Press@RunDepth: psig @ 4366.00 ft (KB)
 Start Date: 2014.02.28 End Date: 2014.02.28
 Start Time: 15:00:02 End Time: 22:48:00
 Capacity: 8000.00 psig
 Last Calib.: 1899.12.30
 Time On Btm:
 Time Off Btm:

TEST COMMENT: I.F. - 45 - Weak surface blow built to 2 1/2"
 I.S.I. - 45 - No blow back
 F.F. - 45 - Weak surface blow built to 1 1/4"
 F.S.I. - 45 - No blow back



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 61.00 | O,C,M, 30 % OIL 70 % MUD | 0.30 |
| 65.00 | CLEAN OIL 100% | 0.32 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

American Warrior

13-20s-21w Ness,KS

PO Box 399
Garden City, KS 67846

T lsern #3-13

Job Ticket: 56157

DST#: 1

ATTN: Jason Alm / Scott Co

Test Start: 2014.02.28 @ 15:00:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|----------------------|------------------------|-------------|
| Drill Pipe: | Length: 4225.00 ft | Diameter: 3.80 inches | Volume: 59.27 bbl | Tool Weight: | 2500.00 lb |
| Heavy Wt. Pipe: | Length: ft | Diameter: 2.70 inches | Volume: - bbl | Weight set on Packer: | 30000.00 lb |
| Drill Collar: | Length: 126.00 ft | Diameter: 2.25 inches | Volume: 0.62 bbl | Weight to Pull Loose: | 70000.00 lb |
| | | | <u>Total Volume:</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 6.00 ft | | | String Weight: Initial | 54000.00 lb |
| Depth to Top Packer: | 4365.00 ft | | | Final | 54000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 15.00 ft | | | | |
| Tool Length: | 35.00 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 | | | 4346.00 | |
| Shut In Tool | 5.00 | | | 4351.00 | |
| Hydraulic tool | 5.00 | | | 4356.00 | |
| Packer | 4.00 | | | 4360.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4365.00 | |
| Stubb | 1.00 | | | 4366.00 | |
| Recorder | 0.00 | 6625 | Outside | 4366.00 | |
| Recorder | 0.00 | 8166 | Inside | 4366.00 | |
| Perforations | 10.00 | | | 4376.00 | |
| Bullnose | 4.00 | | | 4380.00 | 15.00 Bottom Packers & Anchor |
| Total Tool Length: | 35.00 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior

13-20s-21w Ness,KS

PO Box 399
Garden City, KS 67846

T Isern #3-13

Job Ticket: 56157

DST#: 1

ATTN: Jason Alm / Scott Co

Test Start: 2014.02.28 @ 15:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|--------------------------|----------------|
| 61.00 | O,C,M, 30 % OIL 70 % MUD | 0.300 |
| 65.00 | CLEAN OIL 100% | 0.320 |

Total Length: 126.00 ft Total Volume: 0.620 bbl

Num Fluid Samples: 0

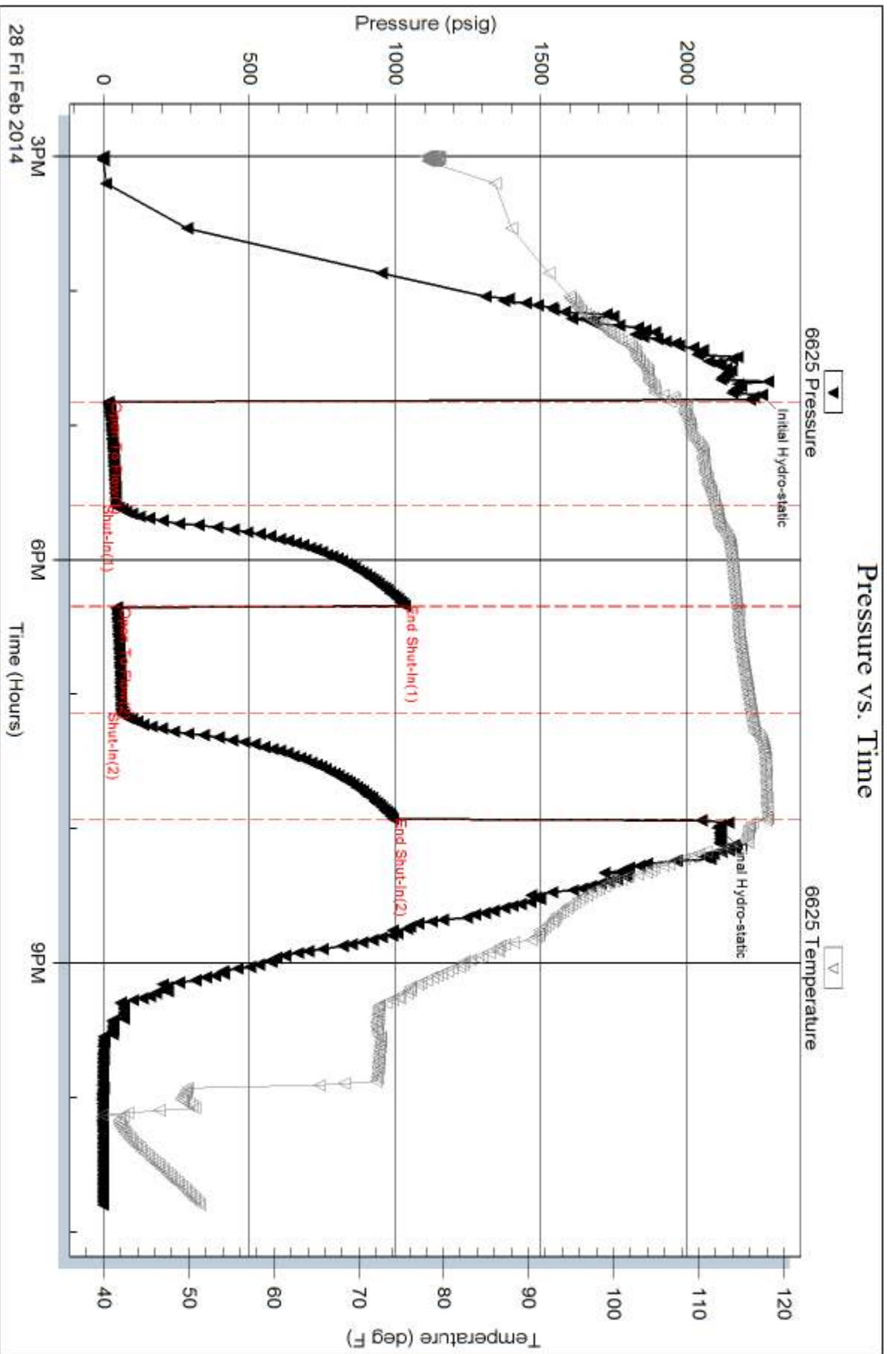
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API34.6 API @ 36 DEG.



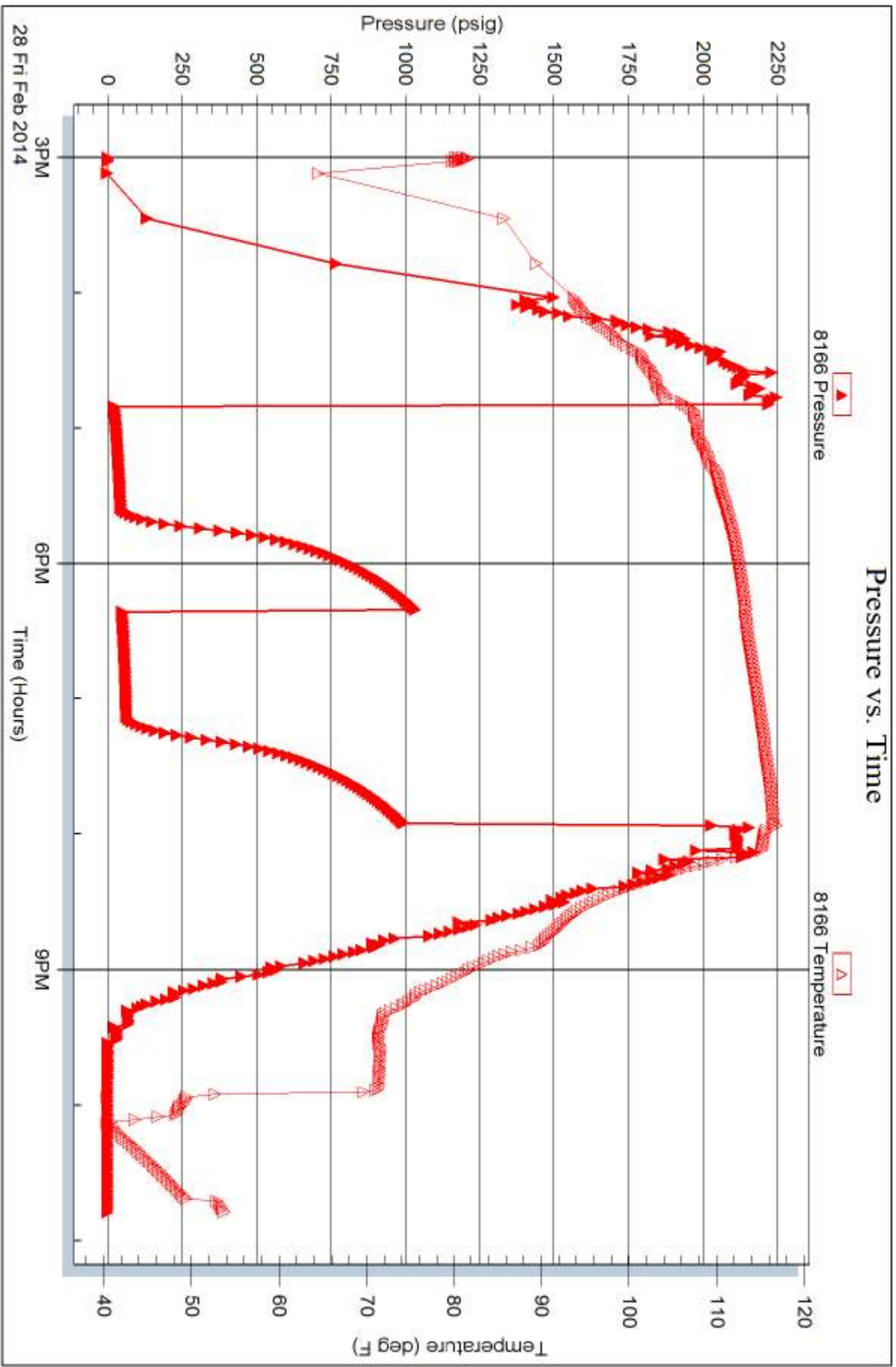
Serial #: 8166

Inside

American Warrior

T Item #3-13

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56157

Printed: 2014.03.04 @ 11:43:14



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56157

Well Name & No. T. Isern #3-13 Test No. 1 Date 2-28-14
 Company American Warrior Elevation 2221 KB 2215 GL
 Address 3118 Cummings Rd, P.O. Box 399 Garden City KS. 67846
 Co. Rep / Geo. Jason Alm, / Scott Corsair Rig Petromark Rig #1
 Location: Sec. 13 Twp. 20 S. Rge. 21 W. Co. NESS State KS.

Interval Tested 4365-4380 Zone Tested MISS.
 Anchor Length 15' Drill Pipe Run 4225 Mud Wt. 9.4
 Top Packer Depth 4360 Drill Collars Run 126 Vis 56
 Bottom Packer Depth 4365 Wt. Pipe Run --- WL 8.4
 Total Depth 4380 Chlorides 8,000 ppm System LCM 0

Blow Description I.F-45-1/2 INT. Blow Built to (2 1/2" in 45 min.)
I.S.I-45-No B.B.
F.F-45W S.B. Started @ 5 min. Built to (1 1/4" in 45 min.)
F.S.I-45 No B.B.

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|------------------|------|------------|--------|-----------|
| <u>65</u> | <u>Clean oil</u> | | <u>100</u> | | |
| <u>61</u> | <u>O.C.M.</u> | | <u>30</u> | | <u>70</u> |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 126 BHT 116 Gravity 37 API RW --- @ --- °F Chlorides --- ppm

| | | |
|--------------------------------------|--|--|
| (A) Initial Hydrostatic <u>2,223</u> | <input checked="" type="checkbox"/> Test <u>1250</u> | T-On Location <u>14:00:00</u> |
| (B) First Initial Flow <u>18</u> | <input checked="" type="checkbox"/> Jars <u>250</u> | T-Started <u>15:00:00</u> |
| (C) First Final Flow <u>44</u> | <input checked="" type="checkbox"/> Safety Joint <u>75</u> | T-Open <u>16:50:00</u> |
| (D) Initial Shut-In <u>1,031</u> | <input type="checkbox"/> Circ Sub | T-Pulled <u>19:50:00</u> |
| (E) Second Initial Flow <u>48</u> | <input type="checkbox"/> Hourly Standby | T-Out <u>22:48:00</u> |
| (F) Second Final Flow <u>62</u> | <input checked="" type="checkbox"/> Mileage <u>116 / RT 179.80</u> | Comments <u>"Thank-you"</u> |
| (G) Final Shut-In <u>992</u> | <input type="checkbox"/> Sampler | <input type="checkbox"/> Ruined Shale Packer |
| (H) Final Hydrostatic <u>2,116</u> | <input type="checkbox"/> Straddle | <input type="checkbox"/> Ruined Packer |
| Initial Open <u>45</u> | <input type="checkbox"/> Shale Packer | <input type="checkbox"/> Extra Copies |
| Initial Shut-In <u>45</u> | <input type="checkbox"/> Extra Packer | Sub Total <u>0</u> |
| Final Flow <u>45</u> | <input type="checkbox"/> Extra Recorder | Total <u>1754.80</u> |
| Final Shut-In <u>45</u> | <input type="checkbox"/> Day Standby | MP/DST Disc't |
| | <input type="checkbox"/> Accessibility | Sub Total <u>1754.80</u> |

Approved By _____ Our Representative Bob Adams

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