



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Incorporated**

PO Box 399  
Garden City, KS 67846

ATTN: Jason Alm

### **Melvin Unit #2-16**

### **16-18s-21w Ness,KS**

Start Date: 2015.08.29 @ 21:36:00

End Date: 2015.08.30 @ 04:39:30

Job Ticket #: 63049                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.08.31 @ 16:40:44

American Warrior Incorporated  
16-18s-21w Ness,KS  
Melvin Unit #2-16  
DST # 1  
Mississippi  
2015.08.29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

American Warrior Incorporated

**16-18s-21w Ness, KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63049

**DST#: 1**

ATTN: Jason Alm

Test Start: 2015.08.29 @ 21:36:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:30

Time Test Ended: 04:39:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 58

**Interval: 4251.00 ft (KB) To 4260.00 ft (KB) (TVD)**

Reference Elevations: 2175.00 ft (KB)

Total Depth: 4260.00 ft (KB) (TVD)

2167.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 99.10 psig @ 4256.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.29

End Date:

2015.08.30

Last Calib.:

2015.08.30

Start Time: 21:37:00

End Time:

04:39:30

Time On Btm:

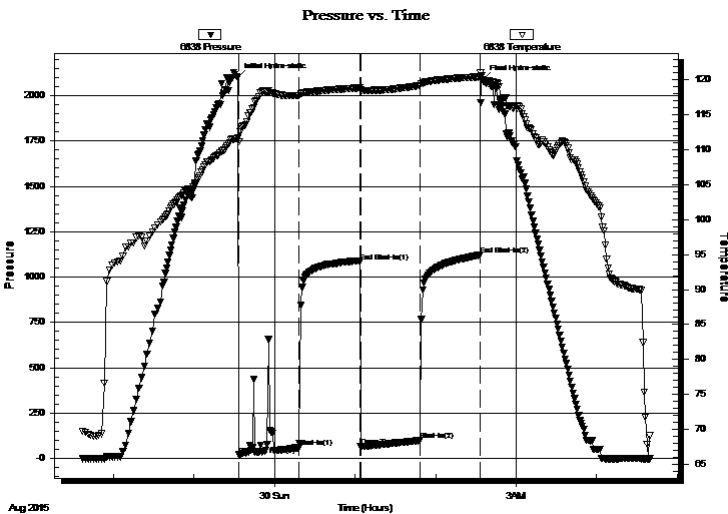
2015.08.29 @ 23:32:30

Time Off Btm:

2015.08.30 @ 02:35:30

**TEST COMMENT:** IFP 45 Minutes BOB in 42 minutes  
ISI 45 Minutes Blow back built to 1/4"  
FFP 45 Minutes Fair blow built to 8 1/2"  
FSI 45 Minutes Surface blow back for 15 minutes

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2098.42	111.67	Initial Hydro-static
1	18.94	111.21	Open To Flow (1)
46	59.15	117.73	Shut-In(1)
91	1081.41	118.88	End Shut-In(1)
92	64.24	118.55	Open To Flow (2)
136	99.10	119.20	Shut-In(2)
181	1120.88	120.46	End Shut-In(2)
183	2089.15	119.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	MCWEO Mud 5% Water 15% Emuls Oil	800.15
202.00	CGO Gas 10% Oil 90%	2.83
0.00	209' GIP	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

American Warrior Incorporated

**16-18s-21w Ness, KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63049

**DST#: 1**

ATTN: Jason Alm

Test Start: 2015.08.29 @ 21:36:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:30

Time Test Ended: 04:39:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 58

**Interval: 4251.00 ft (KB) To 4260.00 ft (KB) (TVD)**

Reference Elevations: 2175.00 ft (KB)

Total Depth: 4260.00 ft (KB) (TVD)

2167.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6663 Outside**

Press@RunDepth: 1123.75 psig @ 4257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.29

End Date:

2015.08.30

Last Calib.: 2015.08.30

Start Time: 21:37:00

End Time:

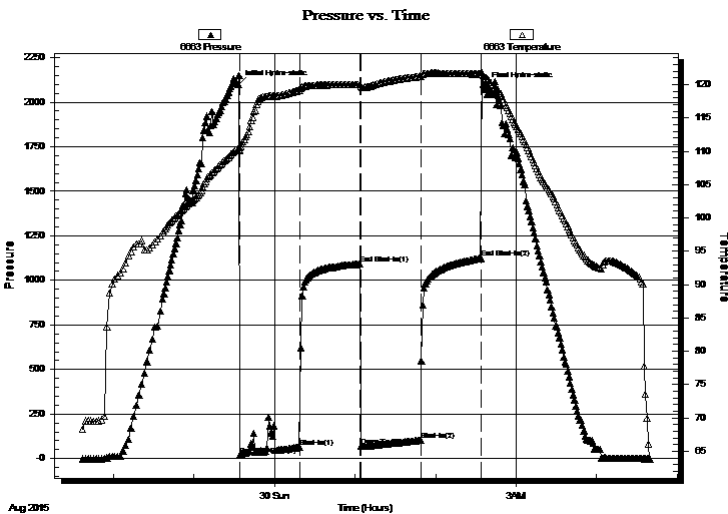
04:40:00

Time On Btm: 2015.08.29 @ 23:33:00

Time Off Btm: 2015.08.30 @ 02:36:30

**TEST COMMENT:** IFP 45 Minutes BOB in 42 minutes  
ISI 45 Minutes Blow back built to 1/4"  
FFP 45 Minutes Fair blow built to 8 1/2"  
FSI 45 Minutes Surface blow back for 15 minutes

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.83	110.33	Initial Hydro-static
1	21.24	110.19	Open To Flow (1)
46	62.37	119.17	Shut-In(1)
91	1092.52	120.04	End Shut-In(1)
92	67.26	119.70	Open To Flow (2)
136	102.25	121.23	Shut-In(2)
181	1123.75	121.58	End Shut-In(2)
184	2084.53	121.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	MCWEO Mud 5% Water 15% Emuls Oil	800.15
202.00	CGO Gas 10% Oil 90%	2.83
0.00	209' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Incorporated

**16-18s-21w Ness, KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63049

**DST#: 1**

ATTN: Jason Alm

Test Start: 2015.08.29 @ 21:36:00

## Tool Information

Drill Pipe:	Length: 4219.00 ft	Diameter: 3.80 inches	Volume: 59.18 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4251.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4229.00	
Hydraulic tool	5.00			4234.00	
Jars	5.00			4239.00	
Safety Joint	2.00			4241.00	
Top Packer	5.00			4246.00	
Packer	5.00			4251.00	27.00 Bottom Of Top Packer
Anchor	4.00			4255.00	
Recorder	1.00	6838	Inside	4256.00	
Recorder	1.00	6663	Outside	4257.00	
Bullnose	3.00			4260.00	9.00 Anchor Tool
<b>Total Tool Length:</b>	<b>36.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Incorporated

**16-18s-21w Ness,KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63049

**DST#: 1**

ATTN: Jason Alm

Test Start: 2015.08.29 @ 21:36:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	MCWEO Mud 5% Water 15% Emuls Oil 80%	0.148
202.00	CGO Gas 10% Oil 90%	2.834
0.00	209' GIP	0.000

Total Length: 232.00 ft

Total Volume: 2.982 bbl

Num Fluid Samples: 0

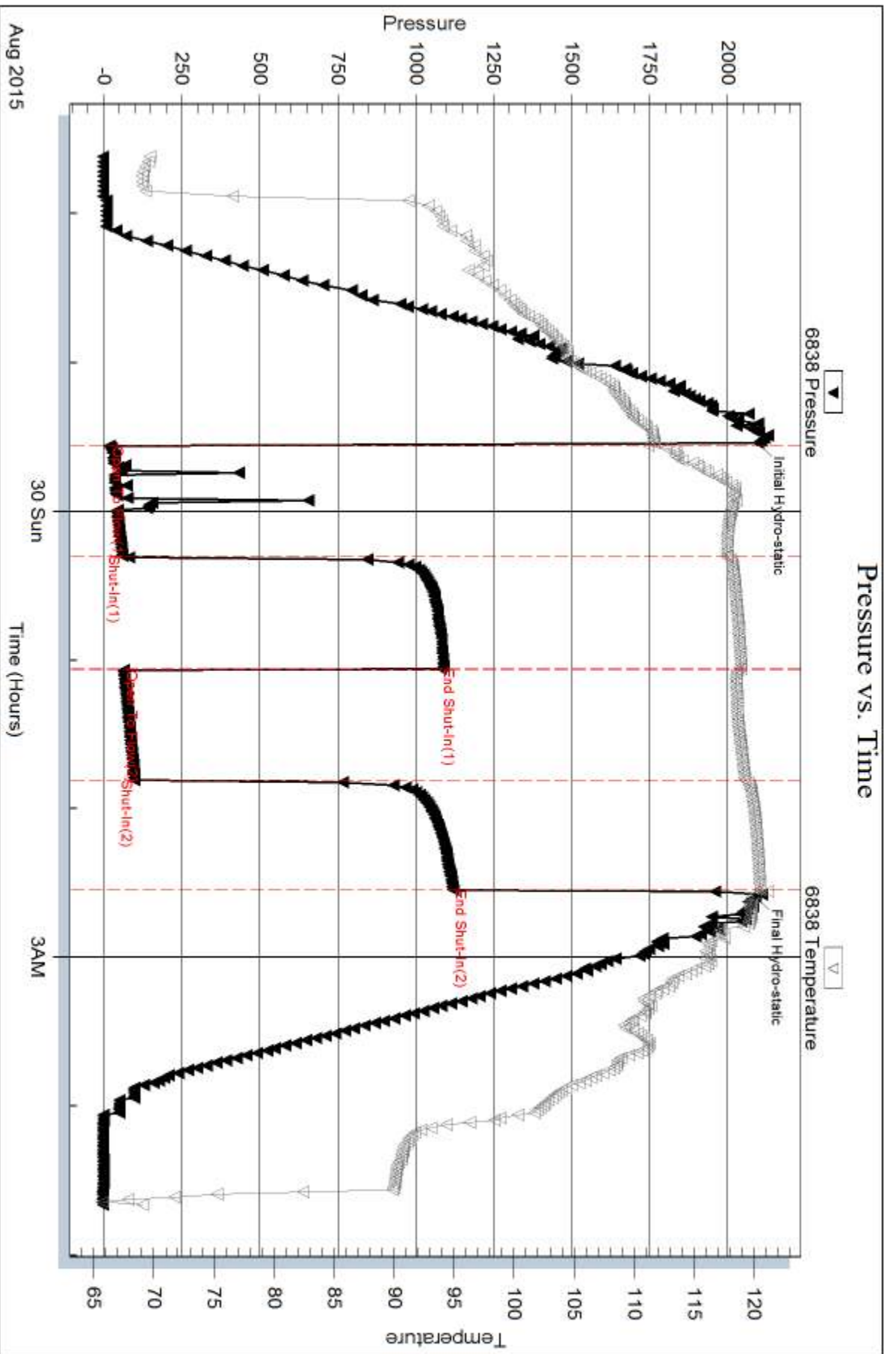
Num Gas Bombs: 0

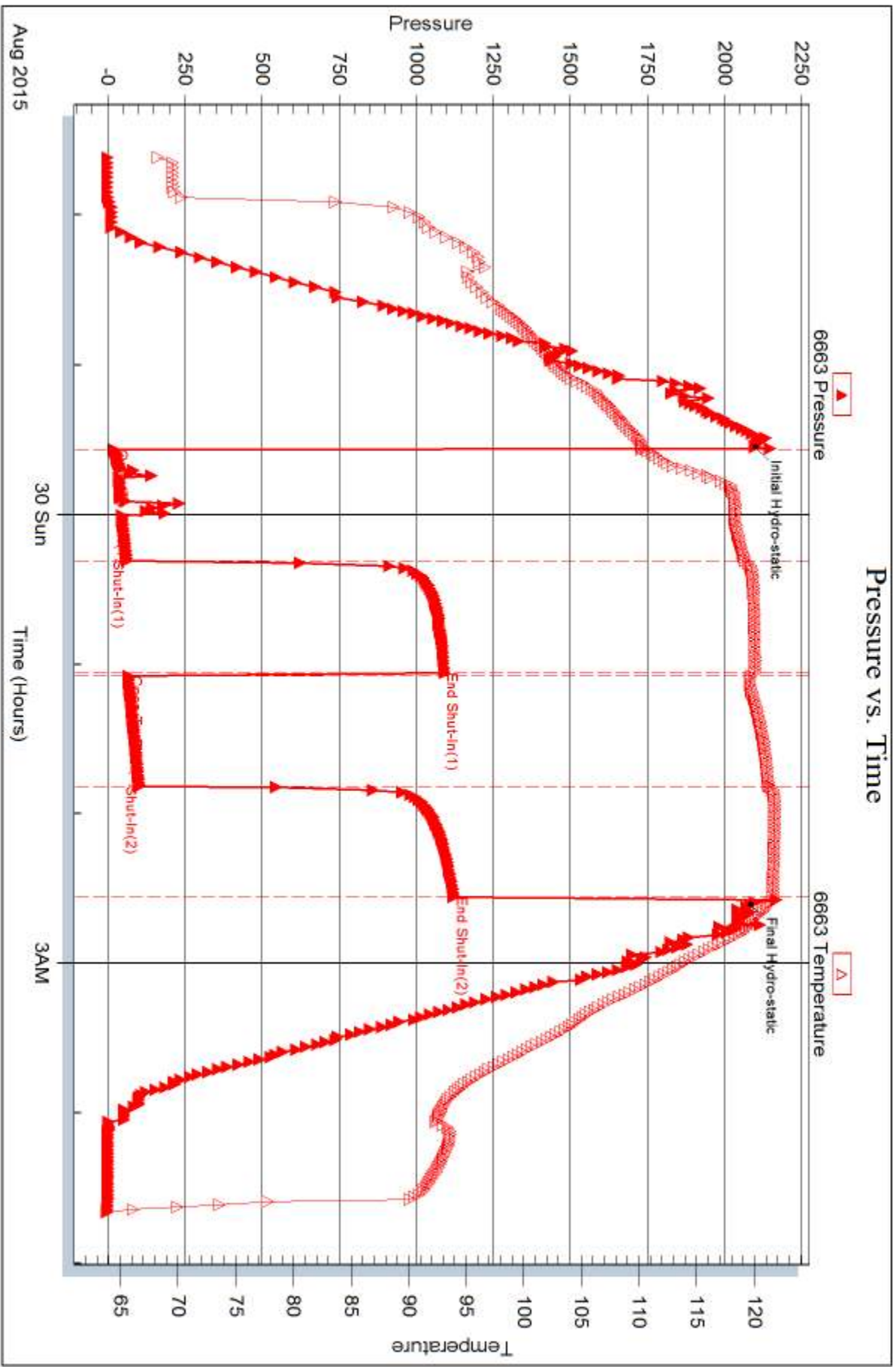
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **American Warrior Incorporated**

PO Box 399  
Garden City, KS 67846

ATTN: Jason Alm

### **Melvin Unit #2-16**

### **16-18s-21w Ness,KS**

Start Date: 2015.08.30 @ 11:05:00

End Date: 2015.08.30 @ 16:00:00

Job Ticket #: 63050                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.08.31 @ 16:40:04



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

American Warrior Incorporated

**16-18s-21w Ness,KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63050

**DST#: 2**

ATTN: Jason Alm

Test Start: 2015.08.30 @ 11:05:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:55:30

Time Test Ended: 16:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 58

**Interval: 4259.00 ft (KB) To 4265.00 ft (KB) (TVD)**

Reference Elevations: 2175.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2167.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 37.92 psig @ 4261.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.30

End Date:

2015.08.30

Last Calib.:

2015.08.30

Start Time:

11:06:00

End Time:

16:00:00

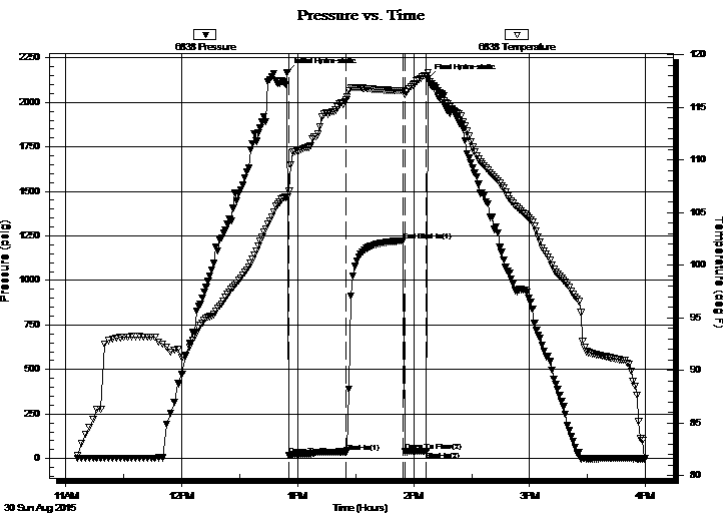
Time On Btm:

2015.08.30 @ 12:54:30

Time Off Btm:

2015.08.30 @ 14:07:30

**TEST COMMENT:** IFP 30 Minutes Weak blow built to 1/4" in 15 min - Flush tool - Built to 1/2 inch  
 ISI 30 Minutes No blow back  
 FFP 10 Minutes Few bubble at open then dead - Pulled after 10 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.10	106.51	Initial Hydro-static
1	17.62	107.09	Open To Flow (1)
31	37.92	115.72	Shut-In(1)
60	1222.74	116.55	End Shut-In(1)
61	38.30	116.20	Open To Flow (2)
72	42.28	117.99	Shut-In(2)
73	2131.55	118.31	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCMW Oil 5% Mud 35% Water 60%	0.57
3.00	Clean Oil 100%	0.04

## Gas Rates

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

American Warrior Incorporated

**16-18s-21w Ness,KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63050

**DST#: 2**

ATTN: Jason Alm

Test Start: 2015.08.30 @ 11:05:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:55:30

Time Test Ended: 16:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 58

**Interval: 4259.00 ft (KB) To 4265.00 ft (KB) (TVD)**

Reference Elevations: 2175.00 ft (KB)

Total Depth: 4265.00 ft (KB) (TVD)

2167.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6663 Outside**

Press@RunDepth: 1226.08 psig @ 4262.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.30

End Date: 2015.08.30

Last Calib.: 2015.08.30

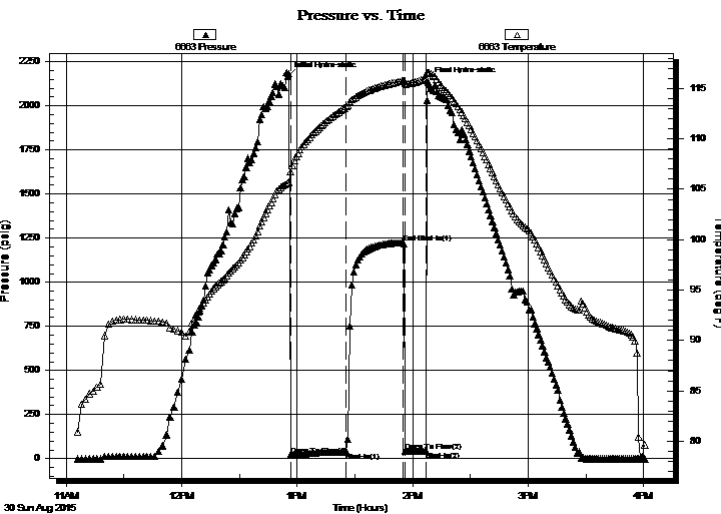
Start Time: 11:06:00

End Time: 16:00:30

Time On Btm: 2015.08.30 @ 12:55:00

Time Off Btm: 2015.08.30 @ 14:08:00

**TEST COMMENT:** IFP 30 Minutes Weak blow built to 1/4" in 15 min - Flush tool - Built to 1/2 inch  
ISI 30 Minutes No blow back  
FFP 10 Minutes Few bubble at open then dead - Pulled after 10 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.64	105.59	Initial Hydro-static
2	21.68	106.73	Open To Flow (1)
31	38.82	113.19	Shut-In(1)
60	1226.08	115.77	End Shut-In(1)
61	39.98	115.47	Open To Flow (2)
72	44.59	116.04	Shut-In(2)
73	2135.30	116.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCMW Oil 5% Mud 35% Water 60%	0.57
3.00	Clean Oil 100%	0.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Incorporated

**16-18s-21w Ness, KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63050

**DST#: 2**

ATTN: Jason Alm

Test Start: 2015.08.30 @ 11:05:00

## Tool Information

Drill Pipe:	Length: 4219.00 ft	Diameter: 3.80 inches	Volume: 59.18 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4259.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	6.00 ft			
Tool Length:	33.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4237.00	
Hydraulic tool	5.00			4242.00	
Jars	5.00			4247.00	
Safety Joint	2.00			4249.00	
Top Packer	5.00			4254.00	
Packer	5.00			4259.00	27.00 Bottom Of Top Packer
Anchor	1.00			4260.00	
Recorder	1.00	6838	Inside	4261.00	
Recorder	1.00	6663	Outside	4262.00	
Bullnose	3.00			4265.00	6.00 Anchor Tool
<b>Total Tool Length:</b>	<b>33.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

American Warrior Incorporated

**16-18s-21w Ness,KS**

PO Box 399  
Garden City, KS 67846

**Melvin Unit #2-16**

Job Ticket: 63050

**DST#: 2**

ATTN: Jason Alm

Test Start: 2015.08.30 @ 11:05:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

12000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCMW Oil 5% Mud 35% Water 60%	0.568
3.00	Clean Oil 100%	0.042

Total Length: 63.00 ft      Total Volume: 0.610 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recov. Resit. .38ohms @ 95 deg

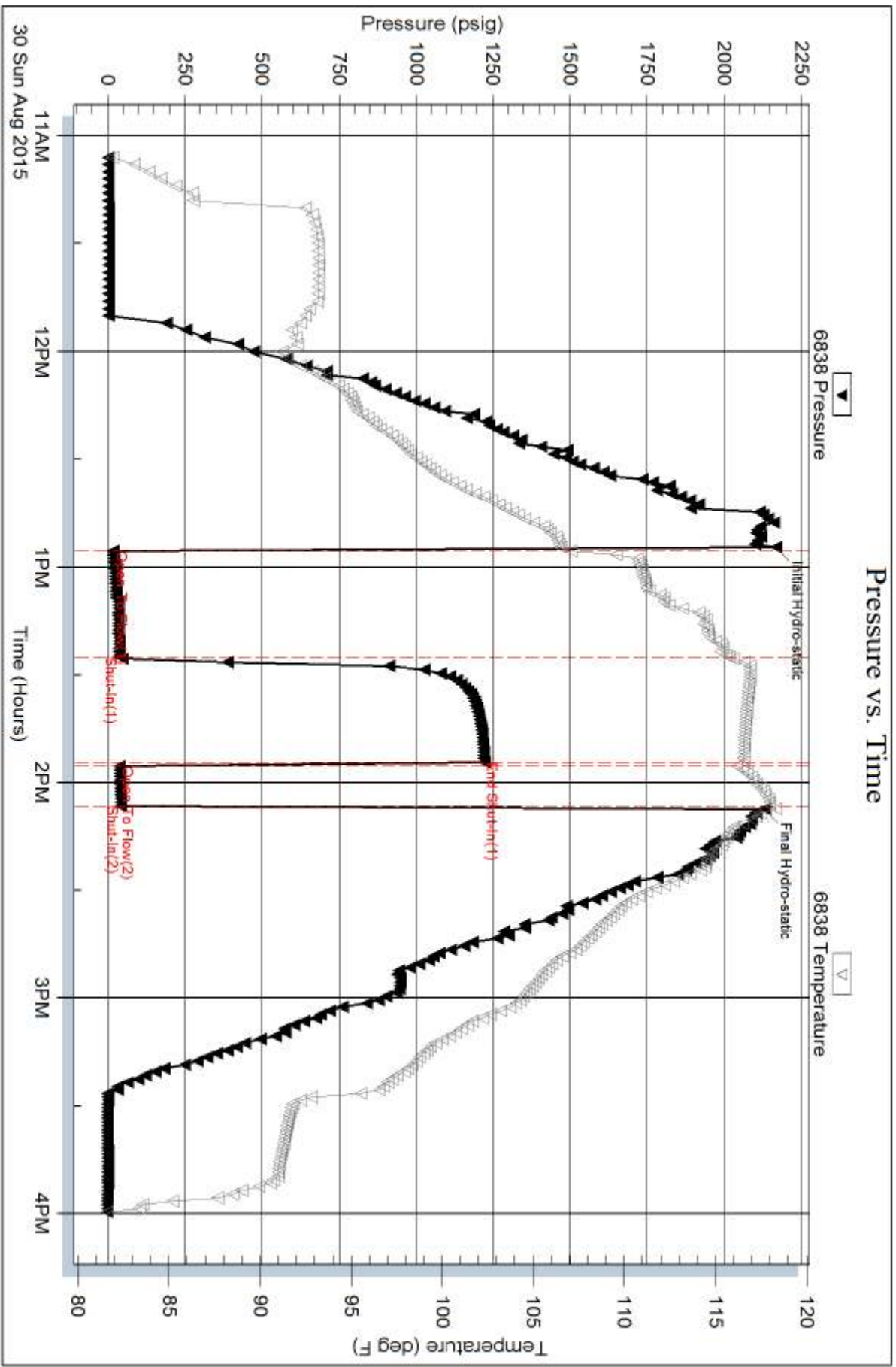
Serial #: 6838

Inside

American Warrior Incorporated

Mevin Unit #2-16

DST Test Number: 2

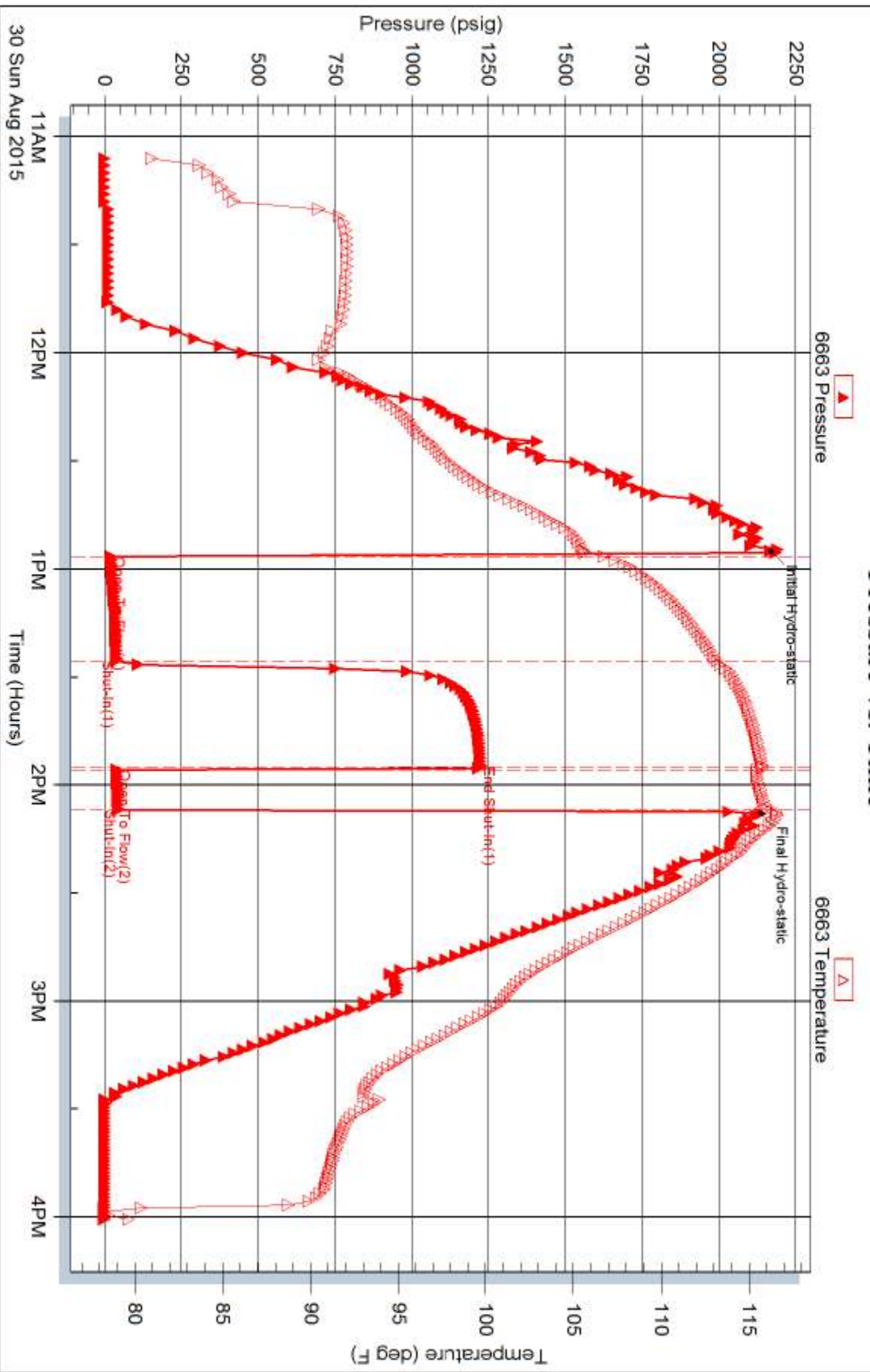


Trilobite Testing, Inc

Ref. No: 63050

Printed: 2015.08.31 @ 16:40:07

### Pressure vs. Time





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63049

Well Name & No. Melvin Unit #2-16 Test No. 1 Date 29 Aug 15  
 Company American Warrior Incorporated Elevation 2175 KB 2167 GL  
 Address 3118 Cummings Road PO Box 399 Garden City, Kansas 67846  
 Co. Rep / Geo. Jason Alm Rig Discovery Rig 3  
 Location: Sec. 16 Twp. 18S Rge. 21W Co. Ness State KS

Interval Tested 4251-4260 Zone Tested Mississippi  
 Anchor Length 9 Drill Pipe Run 4219 Mud Wt. 9.4  
 Top Packer Depth 4246 Drill Collars Run 30 Vis 50  
 Bottom Packer Depth 4251 Wt. Pipe Run - WL 8.8  
 Total Depth 4260 Chlorides 3400 ppm System LCM ~~3400~~ 1/2 #  
 Blow Description Good blow/ Blow built to bottom of bucket in 42 minutes  
Blow back built to 1/4 inch  
Fair blow/ Blow built to 8 1/2 inches  
Surface blow back for 15 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Mud cut Watery Emulsified oil</u>	<u>80%</u>	<u>15%</u>	<u>5%</u>	
<u>202</u>	<u>Clean Gassy Oil</u>	<u>10%</u>	<u>90%</u>		
<u>209</u>	<u>Gas in pipe</u>	<u>100%</u>			

Rec Total 232 BHT 121 Gravity 35 API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 2098  Test 1150 T-On Location 8:42 pm  
 (B) First Initial Flow 18  Jars 250 T-Started 9:36 pm  
 (C) First Final Flow 59  Safety Joint 75 T-Open 11:34 pm  
 (D) Initial Shut-In 1081  Circ Sub \_\_\_\_\_ T-Pulled 2:34 am  
 (E) Second Initial Flow 64  Hourly Standby \_\_\_\_\_ T-Out 4:40 am  
 (F) Second Final Flow 99  Mileage 106 Comments \_\_\_\_\_  
 (G) Final Shut-In 1120  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  
 \_\_\_\_\_  Shale Packer \_\_\_\_\_  
 \_\_\_\_\_  Shale Packer \_\_\_\_\_  
 \_\_\_\_\_  Extra Packer \_\_\_\_\_  
 \_\_\_\_\_  Extra Recorder \_\_\_\_\_  
 \_\_\_\_\_  Day Standby \_\_\_\_\_  
 \_\_\_\_\_  Accessibility \_\_\_\_\_  
 Sub Total 1581

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Approved By Jason T Alm Our Representative Keith Sniff  
 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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63050

Well Name & No. Melvin Unit 2-16 Test No. 2 Date 30 Aug 15  
 Company American Warrior Incorporated Elevation 2175 KB 2167 GL  
 Address 3118 Cumming Road PO Box 399 Garden City Kansas 67846  
 Co. Rep / Geo. Jason Alm Rig Discovery Rig 3  
 Location: Sec. 16 Twp. 18S Rge. 21W Co. Ness State KS

Interval Tested 4259-4265 Zone Tested Mississippi  
 Anchor Length 6 Drill Pipe Run 4219 Mud Wt. 9.5  
 Top Packer Depth 4254 Drill Collars Run 30 Vis 52  
 Bottom Packer Depth 4259 Wt. Pipe Run - WL 9.2  
 Total Depth 4265 Chlorides 4800 ppm System LCM  
 Blow Description Weak blow / Blow to 1/4 inch 15 minutes / Flush tool / Build to 1/2 inch  
No blow back  
Few bubbles at open then dead pulled after 10 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>0.7 cut Muddy Water</u>		<u>5%</u>	<u>60%</u>	<u>35%</u>
<u>3</u>	<u>Clean 0.7</u>		<u>100%</u>		

Rec Total 63 BHT 117 Gravity 1150 API RW .38 @ 95 ° F Chlorides 12,000 ppm  
 Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub  
 Hourly Standby  
 Mileage 106  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1475

T-On Location Stayed on location  
 T-Started 11:05 am  
 T-Open 12:56 pm  
 T-Pulled 2:06 pm  
 T-Out 4:00 pm  
 Comments  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1475  
 MP/DST Disc't

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 10  
 Final Shut-In NA

Approved By [Signature] 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 of 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.