



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc**

PO Box 399  
Garden City KS 67846

ATTN: Jason T Alm

### **Hinnergardt #4-12**

#### **12 20s 21w Ness,KS**

Start Date: 2015.03.16 @ 19:44:00

End Date: 2015.03.17 @ 00:49:00

Job Ticket #: 62376                      DST #: 1

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

Printed: 2015.03.18 @ 09:19:08

American Warrior Inc  
12 20s 21w Ness,KS  
Hinnergardt #4-12  
DST # 1  
Mississippian  
2015.03.16



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Jason T Alm

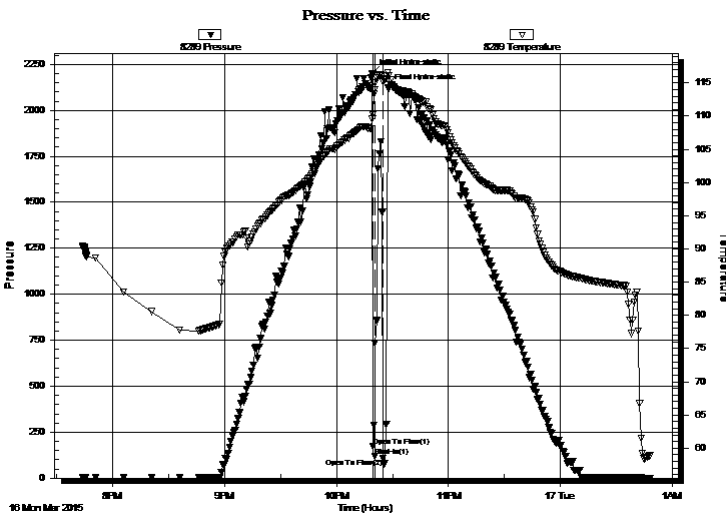
**12 20s 21w Ness,KS**  
**Hinnergardt #4-12**  
 Job Ticket: 62376 **DST#: 1**  
 Test Start: 2015.03.16 @ 19:44:00

## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:19:30  
 Time Test Ended: 00:49:00  
 Interval: **4390.00 ft (KB) To 4400.00 ft (KB) (TVD)**  
 Total Depth: 4400.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 2251.00 ft (KB)  
 2243.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8289 Outside**  
 Press@RunDepth: psig @ 4392.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.16 End Date: 2015.03.17 Last Calib.: 2015.03.17  
 Start Time: 19:44:02 End Time: 00:48:00 Time On Btm: 2015.03.16 @ 22:19:15  
 Time Off Btm: 2015.03.16 @ 22:27:30

TEST COMMENT: Packers Failed in 7min. Miss-Run.....



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2201.25	109.57	Initial Hydro-static
1	174.86	110.25	Open To Flow (1)
2	118.50	114.01	Shut-In(1)
6	108.55	115.14	Open To Flow (2)
9	2120.26	116.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	Mud 100%	2.87

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Jason T Alm

**12 20s 21w Ness, KS**  
**Hinnergardt #4-12**  
 Job Ticket: 62376      **DST#: 1**  
 Test Start: 2015.03.16 @ 19:44:00

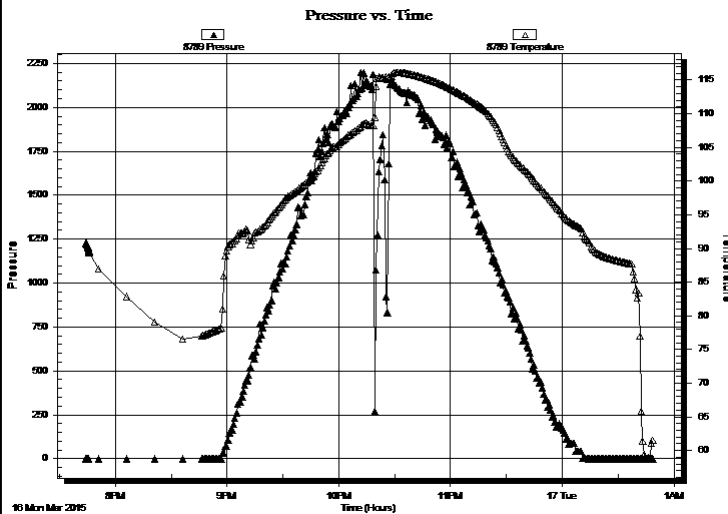
## GENERAL INFORMATION:

Formation: <b>Mississippian</b>		
Deviated: No    Whipstock:                  ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 22:19:30	Tester: Jim Svaty	
Time Test Ended: 00:49:00	Unit No: 76	
<b>Interval: 4390.00 ft (KB) To 4400.00 ft (KB) (TVD)</b>	Reference Elevations: 2251.00 ft (KB)	
Total Depth: 4400.00 ft (KB) (TVD)	2243.00 ft (CF)	
Hole Diameter: 7.88 inches    Hole Condition: Fair	KB to GR/CF: 8.00 ft	

**Serial #: 8789    Inside**

Press@RunDepth:                  psig @ 4392.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2015.03.16    End Date: 2015.03.17	Last Calib.: 2015.03.17
Start Time: 19:44:02    End Time: 00:49:00	Time On Btm:
	Time Off Btm:

TEST COMMENT: Packers Failed in 7min. Miss-Run.....



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	Mud 100%	2.87

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Inc  
PO Box 399  
Garden City KS 67846  
ATTN: Jason T Alm

**12 20s 21w Ness, KS**  
**Hinnergardt #4-12**  
Job Ticket: 62376      **DST#: 1**  
Test Start: 2015.03.16 @ 19:44:00

**Tool Information**

Drill Pipe:	Length: 4341.00 ft	Diameter: 3.80 inches	Volume: 60.89 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume: 61.04 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4390.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4363.00	
Shut In Tool	5.00			4368.00	
Hydraulic tool	5.00			4373.00	
Jars	5.00			4378.00	
Safety Joint	2.00			4380.00	
Packer	5.00			4385.00	28.00      Bottom Of Top Packer
Packer	5.00			4390.00	
Stubb	1.00			4391.00	
Perforations	1.00			4392.00	
Recorder	0.00	8789	Inside	4392.00	
Recorder	0.00	8289	Outside	4392.00	
Perforations	5.00			4397.00	
Bullnose	3.00			4400.00	10.00      Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

American Warrior Inc  
PO Box 399  
Garden City KS 67846  
ATTN: Jason T Alm

**12 20s 21w Ness,KS**  
**Hinnergardt #4-12**  
Job Ticket: 62376      **DST#: 1**  
Test Start: 2015.03.16 @ 19:44:00

### Mud and Cushion Information

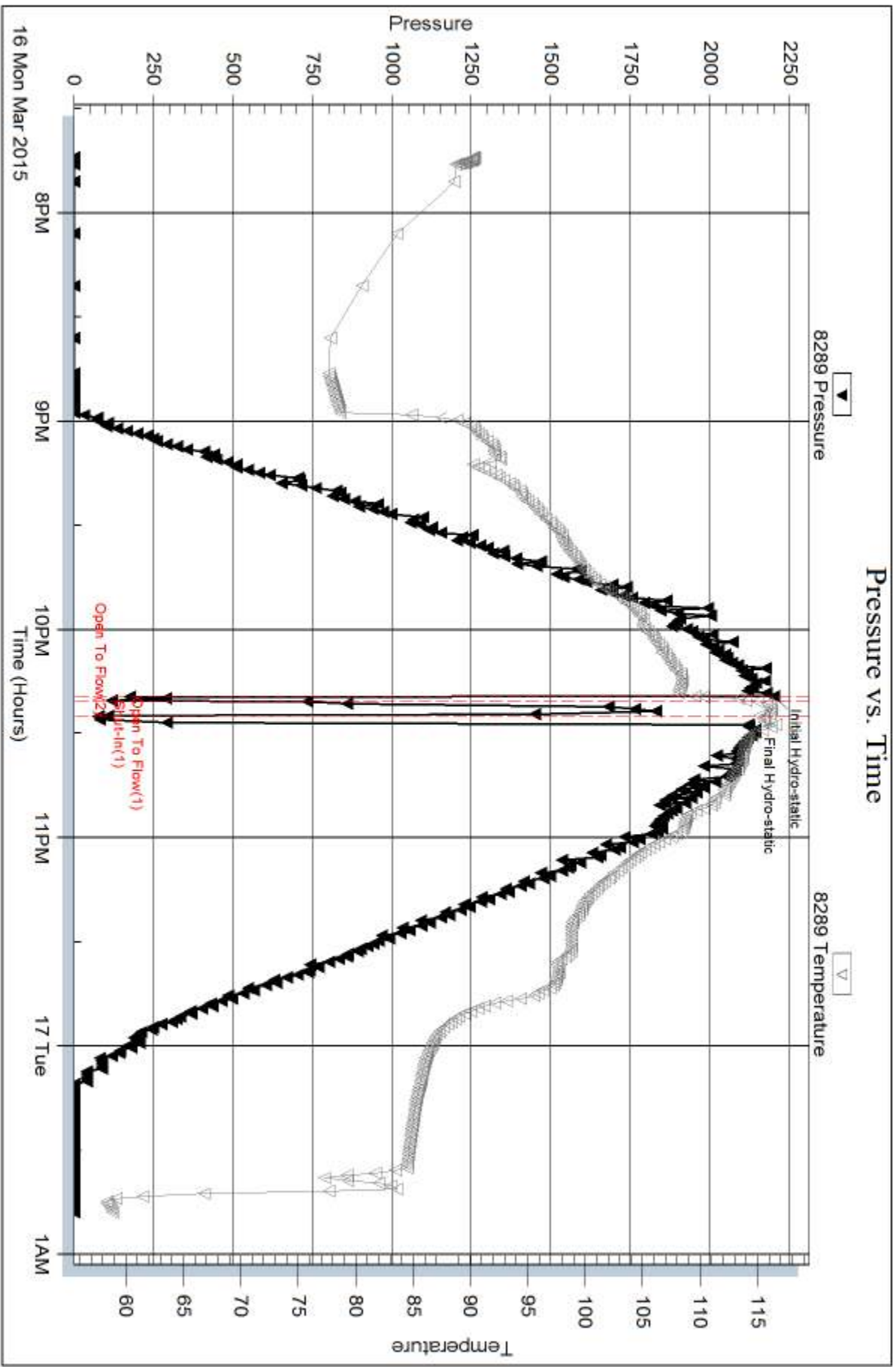
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5400.00 ppm			
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
225.00	Mud 100%	2.874

Total Length: 225.00 ft      Total Volume: 2.874 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



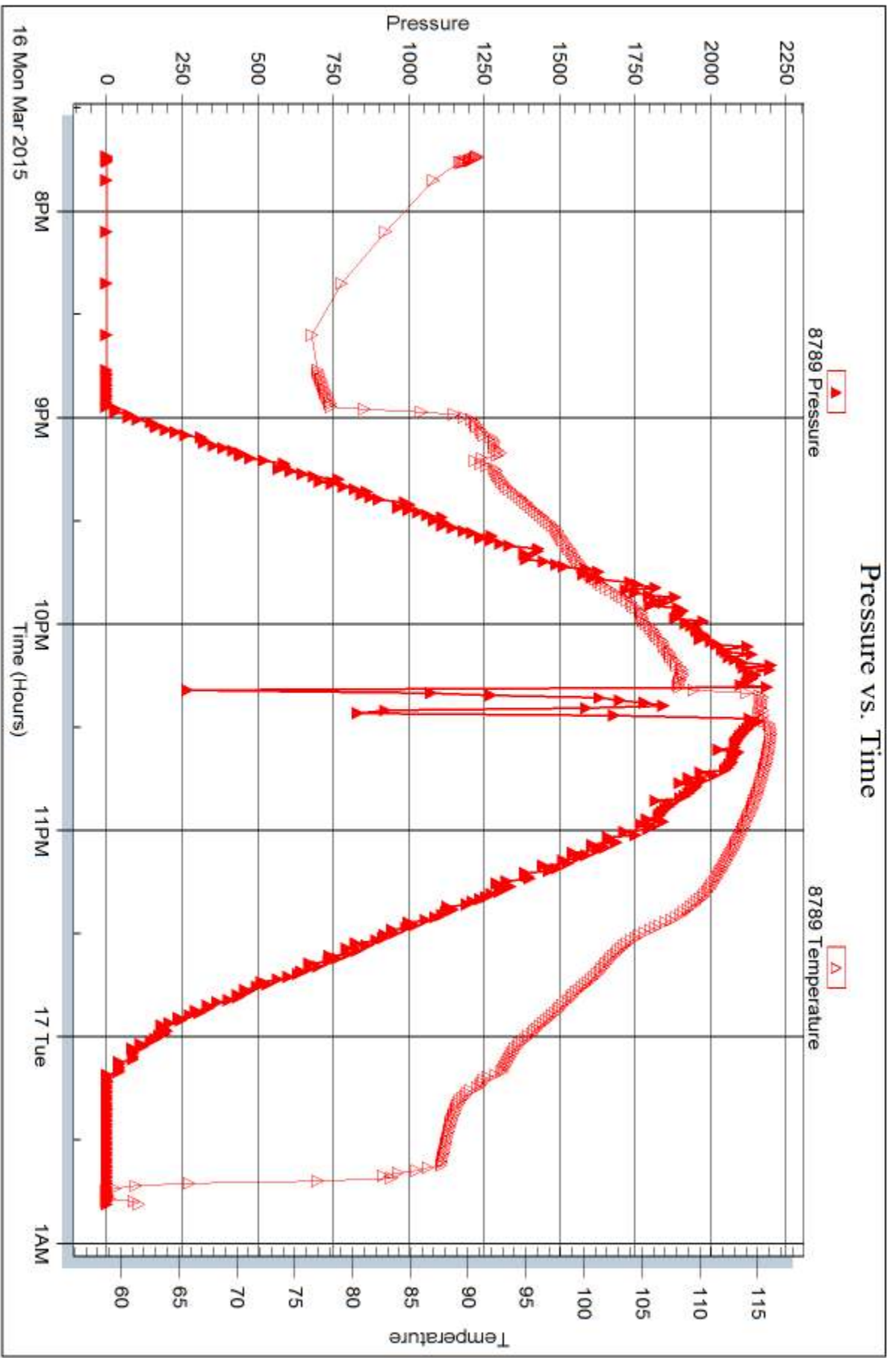
Serial #: 8789

Inside

American Warrior Inc

Hinnergardt #4-12

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc**

PO Box 399  
Garden City KS 67846

ATTN: Jason T Alm

### **Hinnergardt #4-12**

#### **12 20s 21w Ness,KS**

Start Date: 2015.03.17 @ 05:10:00

End Date: 2015.03.17 @ 12:37:00

Job Ticket #: 62377                      DST #: 2

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

Printed: 2015.03.18 @ 09:18:16





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Jason T Alm

**12 20s 21w Ness,KS**  
**Hinnergardt #4-12**  
 Job Ticket: 62377 **DST#: 2**  
 Test Start: 2015.03.17 @ 05:10:00

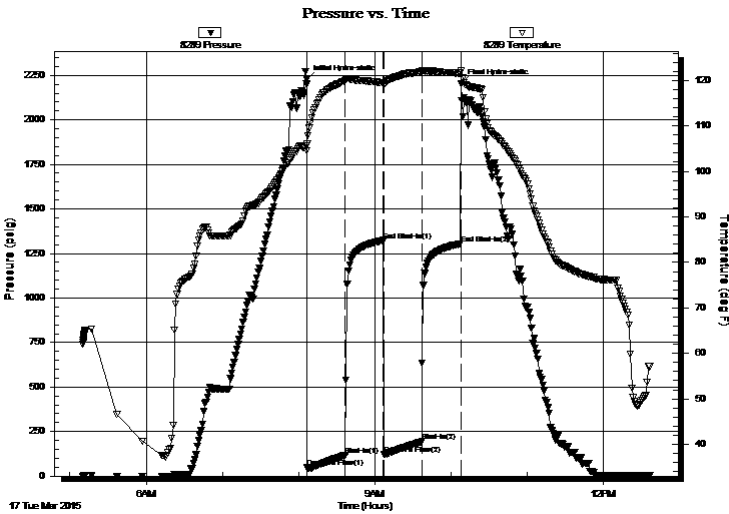
## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:06:45  
 Time Test Ended: 12:37:00  
 Interval: **4391.00 ft (KB) To 4400.00 ft (KB) (TVD)**  
 Total Depth: 4400.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jim Svaty  
 Unit No: 76  
 Reference Elevations: 2251.00 ft (KB)  
 2243.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8289 Outside**  
 Press@RunDepth: 195.96 psig @ 4392.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.17 End Date: 2015.03.17 Last Calib.: 2015.03.17  
 Start Time: 05:10:02 End Time: 12:37:00 Time On Btm: 2015.03.17 @ 08:06:30  
 Time Off Btm: 2015.03.17 @ 10:08:00

**TEST COMMENT:** 30-IF- BOB in 11 min.  
 30-IS- Surface Blow in 2 min. Building to 1 1/2"  
 30-FF- BOB in 13 min.  
 30-FS- Surface Blow in 1 1/2 min. Building to 1 1/2"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.42	105.70	Initial Hydro-static
1	48.57	106.09	Open To Flow (1)
31	118.21	119.92	Shut-In(1)
61	1322.50	119.43	End Shut-In(1)
61	120.52	118.82	Open To Flow (2)
91	195.96	121.94	Shut-In(2)
121	1302.35	121.56	End Shut-In(2)
122	2201.61	122.05	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	MCW 5% m 95% w	1.49
30.00	OMCW 10% o 35% m 55% w	0.42
33.00	MWCO 20% m 40% w 40% o	0.46
247.00	CO 100%	3.46
0.00	189 GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



TRILOBITE  
TESTING, INC

# DRILL STEM TEST REPORT

American Warrior Inc  
PO Box 399  
Garden City KS 67846  
ATTN: Jason T Alm

12 20s 21w Ness, KS

Hinnergardt #4-12

Job Ticket: 62377

DST#: 2

Test Start: 2015.03.17 @ 05:10:00

## GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:06:45

Time Test Ended: 12:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: **4391.00 ft (KB) To 4400.00 ft (KB) (TVD)**

Total Depth: 4400.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2251.00 ft (KB)

2243.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: **8789**

Inside

Press@RunDepth: psig @ 4392.00 ft (KB)

Start Date: 2015.03.17

End Date: 2015.03.17

Start Time: 05:10:02

End Time: 12:36:30

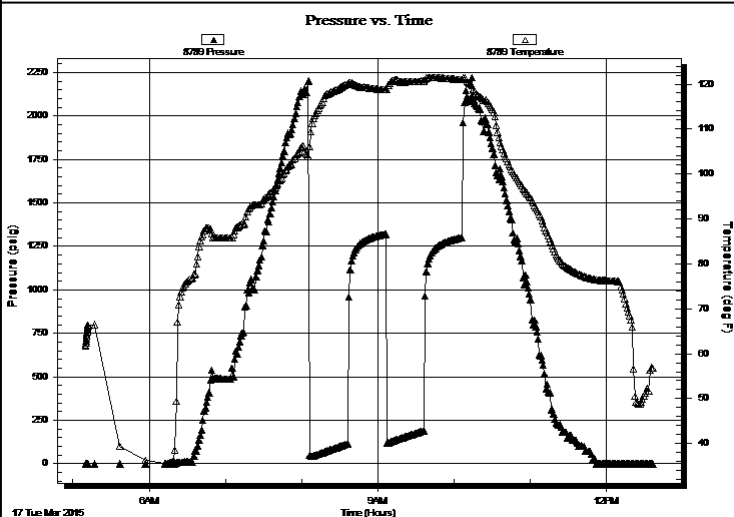
Capacity: 8000.00 psig

Last Calib.: 2015.03.17

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF- BOB in 11 min.  
30-IS- Surface Blow in 2 min. Building to 1 1/2"  
30-FF- BOB in 13 min.  
30-FS- Surface Blow in 1 1/2 min. Building to 1 1/2"



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	MCW 5% m 95% w	1.49
30.00	OMCW 10% o 35% m 55% w	0.42
33.00	MWCO 20% m 40% w 40% o	0.46
247.00	CO 100%	3.46
0.00	189 GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Inc  
PO Box 399  
Garden City KS 67846  
ATTN: Jason T Alm

**12 20s 21w Ness, KS**  
**Hinnergardt #4-12**  
Job Ticket: 62377      **DST#: 2**  
Test Start: 2015.03.17 @ 05:10:00

**Tool Information**

Drill Pipe:	Length: 4341.00 ft	Diameter: 3.80 inches	Volume: 60.89 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 61.04 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	4391.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	9.00 ft				
Tool Length:	37.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4364.00	
Shut In Tool	5.00			4369.00	
Hydraulic tool	5.00			4374.00	
Jars	5.00			4379.00	
Safety Joint	2.00			4381.00	
Packer	5.00			4386.00	28.00      Bottom Of Top Packer
Packer	5.00			4391.00	
Stubb	1.00			4392.00	
Recorder	0.00	8789	Inside	4392.00	
Recorder	0.00	8289	Outside	4392.00	
Perforations	5.00			4397.00	
Bullnose	3.00			4400.00	9.00      Bottom Packers & Anchor

**Total Tool Length: 37.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Inc  
PO Box 399  
Garden City KS 67846  
ATTN: Jason T Alm

**12 20s 21w Ness,KS**  
**Hinnergardt #4-12**  
Job Ticket: 62377      **DST#: 2**  
Test Start: 2015.03.17 @ 05:10:00

## Mud and Cushion Information

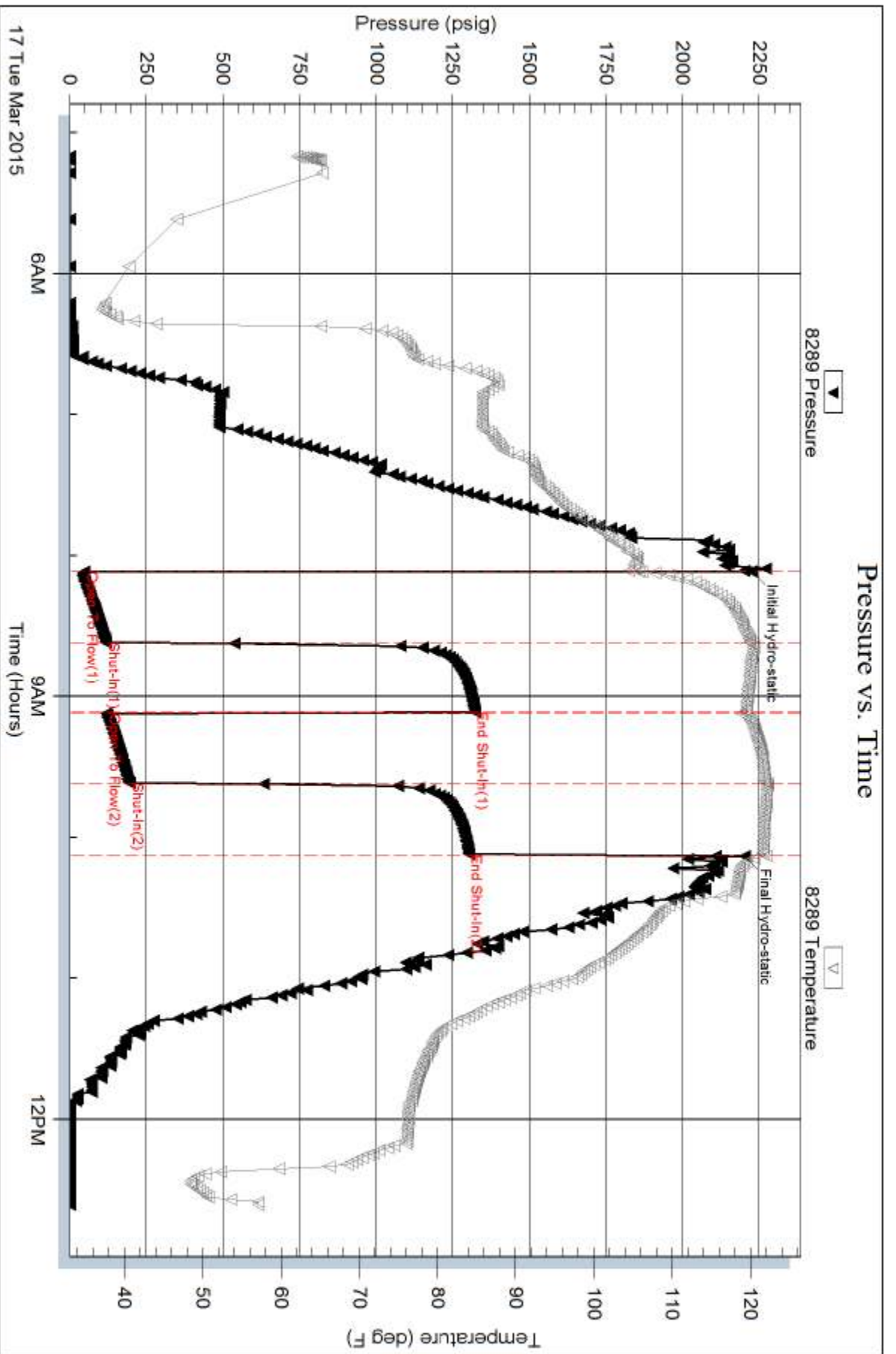
Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 19000 ppm
Viscosity: 68.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 5700.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	MCW 5%m 95%w	1.485
30.00	OMCW 10%o 35%m 55%w	0.421
33.00	MWCO 20%m 40%w 40%o	0.463
247.00	CO 100%	3.465
0.00	189 GIP	0.000

Total Length: 436.00 ft      Total Volume: 5.834 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: .475 @ 50



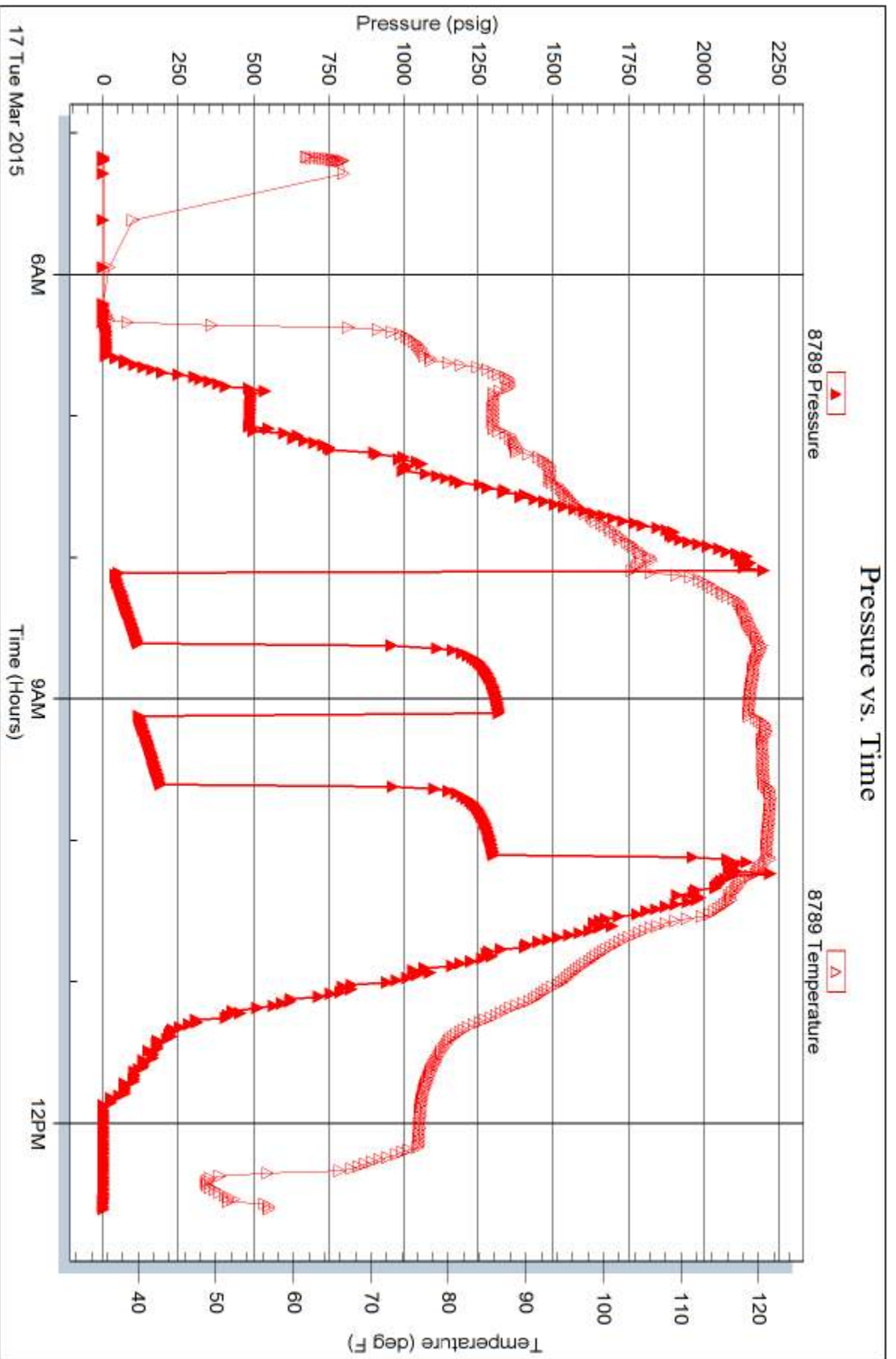
Serial #: 8789

Inside

American Warrior Inc

Hinnergardt #4-12

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 62377

Printed: 2015.03.18 @ 09:18:17





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62376

Well Name & No. Hinnergardt #4-12 Test No. 1 Date 3-16-15  
 Company American Warrior, Inc Elevation 2251 KB 2243 GL  
 Address 3118 Cummings Rd. Box 399 Garden City KS, 67846  
 Co. Rep / Geo. JASON T. ALM Rig Discovery #3  
 Location: Sec. 12 Twp. 20<sup>S</sup> Rge. 21<sup>W</sup> Co. Ness State KS

Interval Tested 4390-4400 Zone Tested Miss.  
 Anchor Length 10' Drill Pipe Run 4341 Mud Wt. 9.3  
 Top Packer Depth 4385 Drill Collars Run 31 Vis 54  
 Bottom Packer Depth 4390 Wt. Pipe Run Ø WL 8.8  
 Total Depth 4400 Chlorides 5400 ppm System LCM TR

Blow Description FF - Slid 7ft.  
ISI -  
FF -  
FSI - Miss - But Packers Failed in 7min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>225</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 225 BHT 116 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2201  Test 950 T-On Location 17:15  
 (B) First Initial Flow 174  Jars 250 T-Started 19:44  
 (C) First Final Flow 118  Safety Joint 75 T-Open 22:19  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 22:27  
 (E) Second Initial Flow 108  Hourly Standby \_\_\_\_\_ T-Out 00:49  
 (F) Second Final Flow \_\_\_\_\_  Mileage 112 RT 112 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2120  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1387

Initial Open \_\_\_\_\_  
 Initial Shut-In \_\_\_\_\_  
 Final Flow \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total \_\_\_\_\_  
 MP/DST Disc't \_\_\_\_\_

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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62377

Well Name & No. Hinnergard J 4-12 Test No. 2 Date 3-17-15  
 Company American Warrior, Inc. Elevation 2251 KB 2243 GL  
 Address 3118 Cummings Rd Box 399 Garden City KS, 67846  
 Co. Rep / Geo. JASON T. ALM Rig Discovery #3  
 Location: Sec. 12 Twp. 20<sup>S</sup> Rge. 21<sup>W</sup> Co. Ness State KS

Interval Tested 4391-4400 Zone Tested Miss  
 Anchor Length 9 Drill Pipe Run 4341 Mud Wt. 9.3  
 Top Packer Depth 4386 Drill Collars Run 31 Vis 68  
 Bottom Packer Depth 4391 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4400 Chlorides 5700 ppm System LCM 0

Blow Description IF- BOB in 11min.  
FSI - Surface Blow in 2min. Building to 1 1/2 in.  
FF- BOB in 13min.  
FSI - Surface Blow in 1 1/2 min. Building to 1 1/2 in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>mew</u>		<u>95</u>	<u>5</u>	
<u>30</u>	<u>omcw</u>	<u>10</u>	<u>55</u>	<u>35</u>	
<u>33</u>	<u>mwc0</u>	<u>40</u>	<u>40</u>	<u>20</u>	
<u>247</u>	<u>CO</u>	<u>100</u>			
	<u>189 SIP</u>				

Rec Total 436 BHT 122 Gravity 34 API RW .475 @ 50 °F Chlorides 19000 ppm

(A) Initial Hydrostatic 2224  Test 1150 T-On Location 17:15  
 (B) First Initial Flow 48  Jars 250 T-Started 05:10  
 (C) First Final Flow 118  Safety Joint 75 T-Open 08:07  
 (D) Initial Shut-In 1322  Circ Sub \_\_\_\_\_ T-Pulled 10:07  
 (E) Second Initial Flow 120  Hourly Standby \_\_\_\_\_ T-Out 12:37  
 (F) Second Final Flow 195  Mileage N/A Comments \_\_\_\_\_  
 (G) Final Shut-In 1302  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2201  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1475  
 Final Shut-In 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1475

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.