



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc**

PO Box 399  
Garden City, KS 67846

ATTN: Jason Alm

**Van #1-28**

**28-20S-22W Ness,KS**

Start Date: 2017.12.07 @ 15:42:00

End Date: 2017.12.07 @ 22:58:02

Job Ticket #: 62097                      DST #: 1

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

Printed: 2017.12.12 @ 13:38:32



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

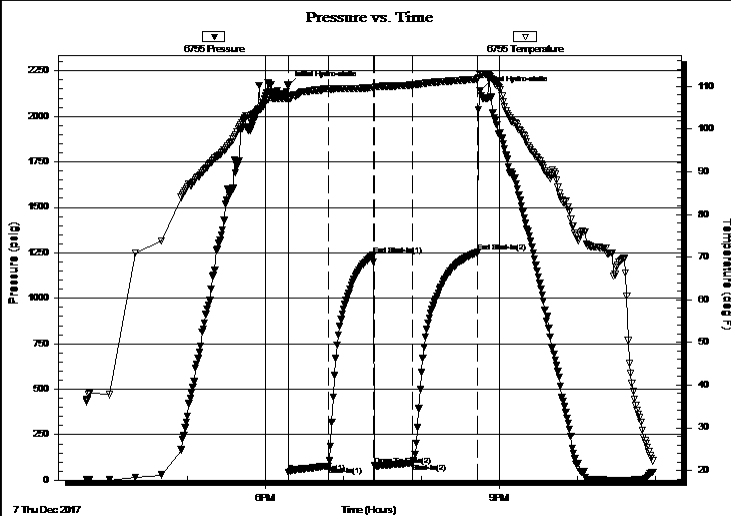
**28-20S-22W Ness,KS**  
**Van #1-28**  
 Job Ticket: 62097 **DST#: 1**  
 Test Start: 2017.12.07 @ 15:42:00

## GENERAL INFORMATION:

Formation: **Ft. Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:17:32  
 Time Test Ended: 22:58:02  
 Interval: **4230.00 ft (KB) To 4275.00 ft (KB) (TVD)**  
 Total Depth: 4370.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 2186.00 ft (KB)  
 2178.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6755 Inside**  
 Press@RunDepth: 94.03 psig @ 4265.53 ft (KB) Capacity: psig  
 Start Date: 2017.12.07 End Date: 2017.12.07 Last Calib.: 2017.12.07  
 Start Time: 15:42:01 End Time: 22:58:02 Time On Btm: 2017.12.07 @ 18:17:02  
 Time Off Btm: 2017.12.07 @ 20:44:47

**TEST COMMENT:** IFP 30 Minutes Surface blow died in 2 minutes  
 ISI 35 Minutes No blow back  
 FFP 30 Minutes Surface blow died in 2 minutes  
 FSI 45 Minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.38	107.44	Initial Hydro-static
1	44.57	106.92	Open To Flow (1)
31	76.66	109.43	Shut-In(1)
66	1236.78	109.72	End Shut-In(1)
67	81.35	109.69	Open To Flow (2)
96	94.03	110.32	Shut-In(2)
146	1253.36	111.70	End Shut-In(2)
148	2141.61	112.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud w /show of oil/ Mud 100%	1.41

## Gas Rates

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



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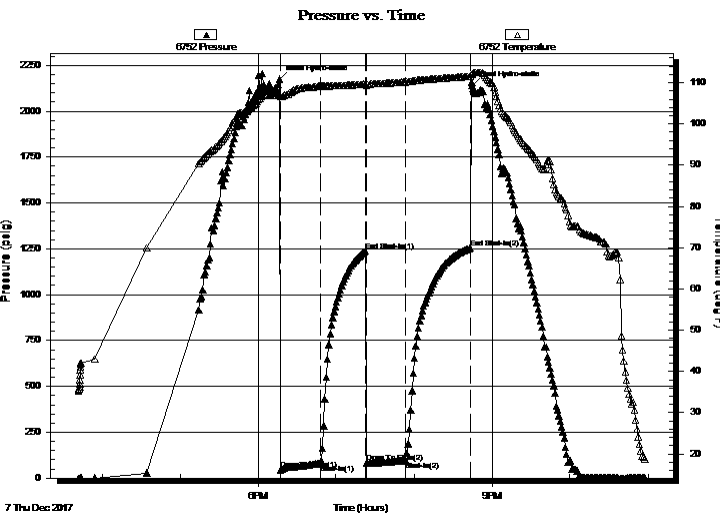
**28-20S-22W Ness, KS**  
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 Job Ticket: 62097 **DST#: 1**  
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 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 2186.00 ft (KB)  
 2178.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 6752 Outside**  
 Press@RunDepth: 1255.50 psig @ 4265.53 ft (KB) Capacity: psig  
 Start Date: 2017.12.07 End Date: 2017.12.07 Last Calib.: 2017.12.07  
 Start Time: 15:42:01 End Time: 22:58:02 Time On Btm: 2017.12.07 @ 18:16:47  
 Time Off Btm: 2017.12.07 @ 20:44:47

**TEST COMMENT:** IFP 30 Minutes Surface blow died in 2 minutes  
 ISI 35 Mintues No blow back  
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## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2174.16	106.97	Initial Hydro-static
1	45.73	106.53	Open To Flow (1)
32	77.87	109.16	Shut-In(1)
66	1237.56	109.60	End Shut-In(1)
67	83.81	109.34	Open To Flow (2)
97	94.41	110.16	Shut-In(2)
147	1255.50	111.56	End Shut-In(2)
148	2140.65	112.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud w /show of oil/ Mud 100%	1.41

## Gas Rates

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



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# DRILL STEM TEST REPORT

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 Garden City, KS 67846  
 ATTN: Jason Alm

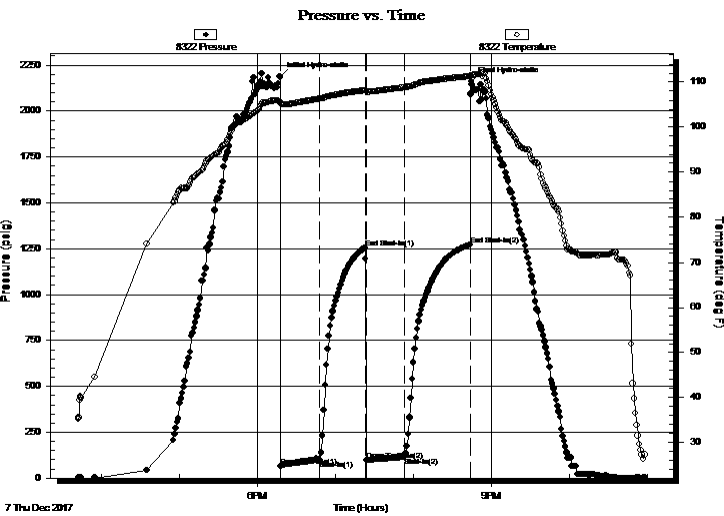
**28-20S-22W Ness, KS**  
**Van #1-28**  
 Job Ticket: 62097 **DST#: 1**  
 Test Start: 2017.12.07 @ 15:42:00

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**Interval: 4230.00 ft (KB) To 4275.00 ft (KB) (TVD)**  
 Total Depth: 4370.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Ken Swinney  
 Unit No: 72  
 Reference Elevations: 2186.00 ft (KB)  
 2178.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8322 Below (Straddle)**  
 Press@RunDepth: 1271.43 psig @ 4301.40 ft (KB) Capacity: psig  
 Start Date: 2017.12.07 End Date: 2017.12.07 Last Calib.: 2017.12.07  
 Start Time: 15:42:01 End Time: 22:58:02 Time On Btm: 2017.12.07 @ 18:17:17  
 Time Off Btm: 2017.12.07 @ 20:44:47

**TEST COMMENT:** IFP 30 Minutes Surface blow died in 2 minutes  
 ISI 35 Mintues No blow back  
 FFP 30 Minutes Surface blow died in 2 minutes  
 FSI 45 Minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.10	105.62	Initial Hydro-static
1	63.86	105.16	Open To Flow (1)
31	99.38	106.23	Shut-In(1)
66	1253.87	108.11	End Shut-In(1)
67	98.84	107.84	Open To Flow (2)
96	114.04	108.76	Shut-In(2)
147	1271.43	111.24	End Shut-In(2)
148	2159.15	111.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud w /show of oil/ Mud 100%	1.41

## 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  
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ATTN: Jason Alm

**28-20S-22W Ness,KS**  
**Van #1-28**  
Job Ticket: 62097      **DST#: 1**  
Test Start: 2017.12.07 @ 15:42:00

**Tool Information**

Drill Pipe:	Length: 4195.00 ft	Diameter: 3.80 inches	Volume: 58.84 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: 65000.00 lb
			<u>Total Volume: 58.99 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.75 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4230.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	4368.89 ft			
Interval between Packers:	138.89 ft			
Tool Length:	163.64 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			4210.25	
Hydraulic tool	5.00			4215.25	
Jars	6.00			4221.25	
Safety Joint	2.00			4223.25	
Top Packer	5.00			4228.25	
Packer	1.75			4230.00	24.75      Bottom Of Top Packer
Anchor	2.00			4232.00	
Change Over Sub	1.02			4233.02	
Drill Pipe	31.66			4264.68	
Change Over Sub	0.85			4265.53	
Recorder	0.00	6755	Inside	4265.53	
Recorder	0.00	6752	Outside	4265.53	
Anchor	5.00			4270.53	
Packer (test side)	3.17			4273.70	
Packer (tail side)	1.65			4275.35	
Blank Off Sub	1.00			4276.35	
Perforations	24.00			4300.35	
Change Over Sub	1.05			4301.40	
Recorder	0.00	8322	Below	4301.40	
Drill Pipe	63.37			4364.77	
Change Over Sub	1.12			4365.89	
Bullnose	3.00			4368.89	138.89      Anchor Tool

**Total Tool Length: 163.64**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Inc  
PO Box 399  
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ATTN: Jason Alm

**28-20S-22W Ness,KS**  
**Van #1-28**  
Job Ticket: 62097      **DST#: 1**  
Test Start: 2017.12.07 @ 15:42:00

## 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:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6200.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

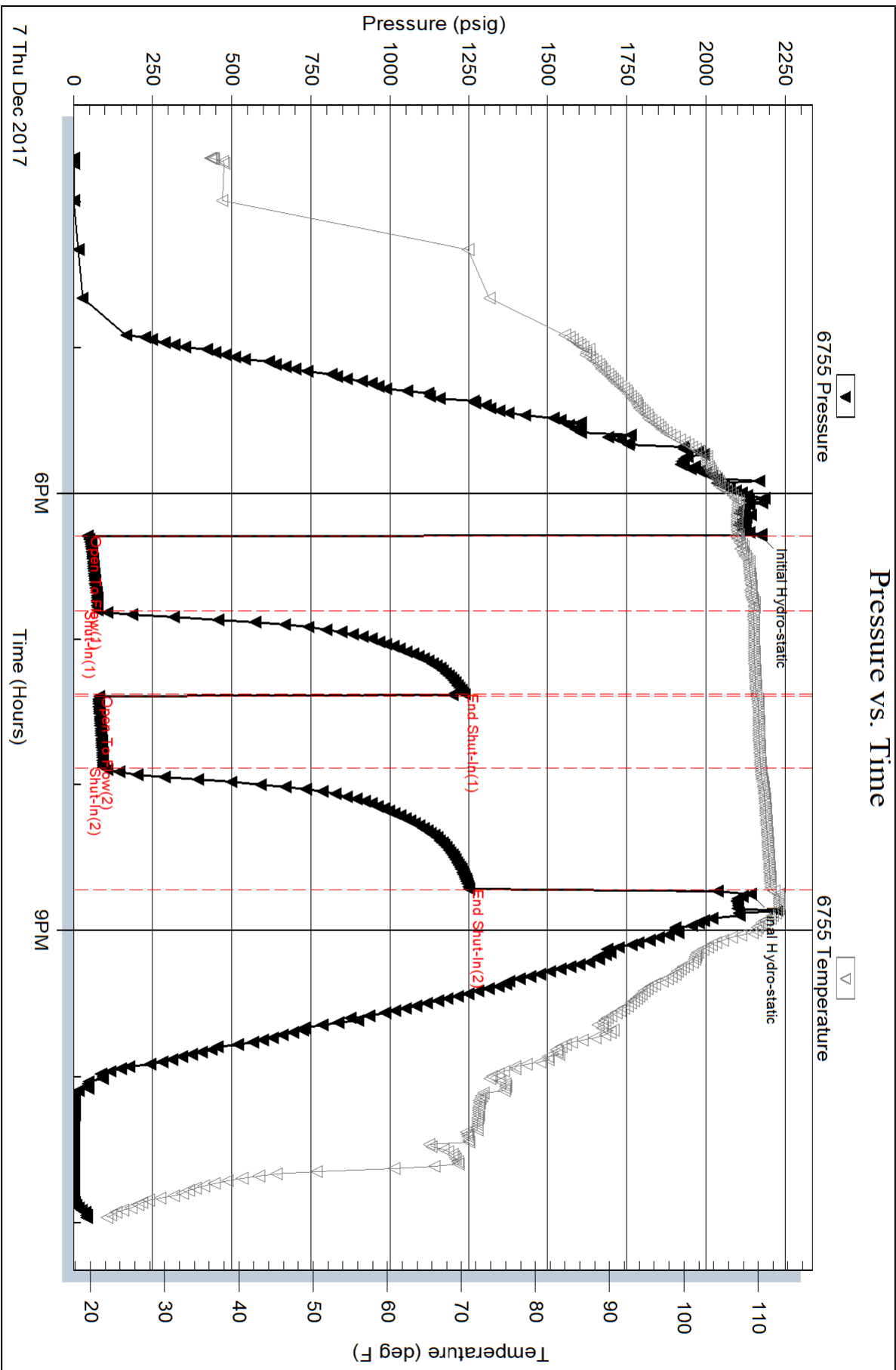
Length ft	Description	Volume bbl
120.00	Mud w/show of oil/ Mud 100%	1.410

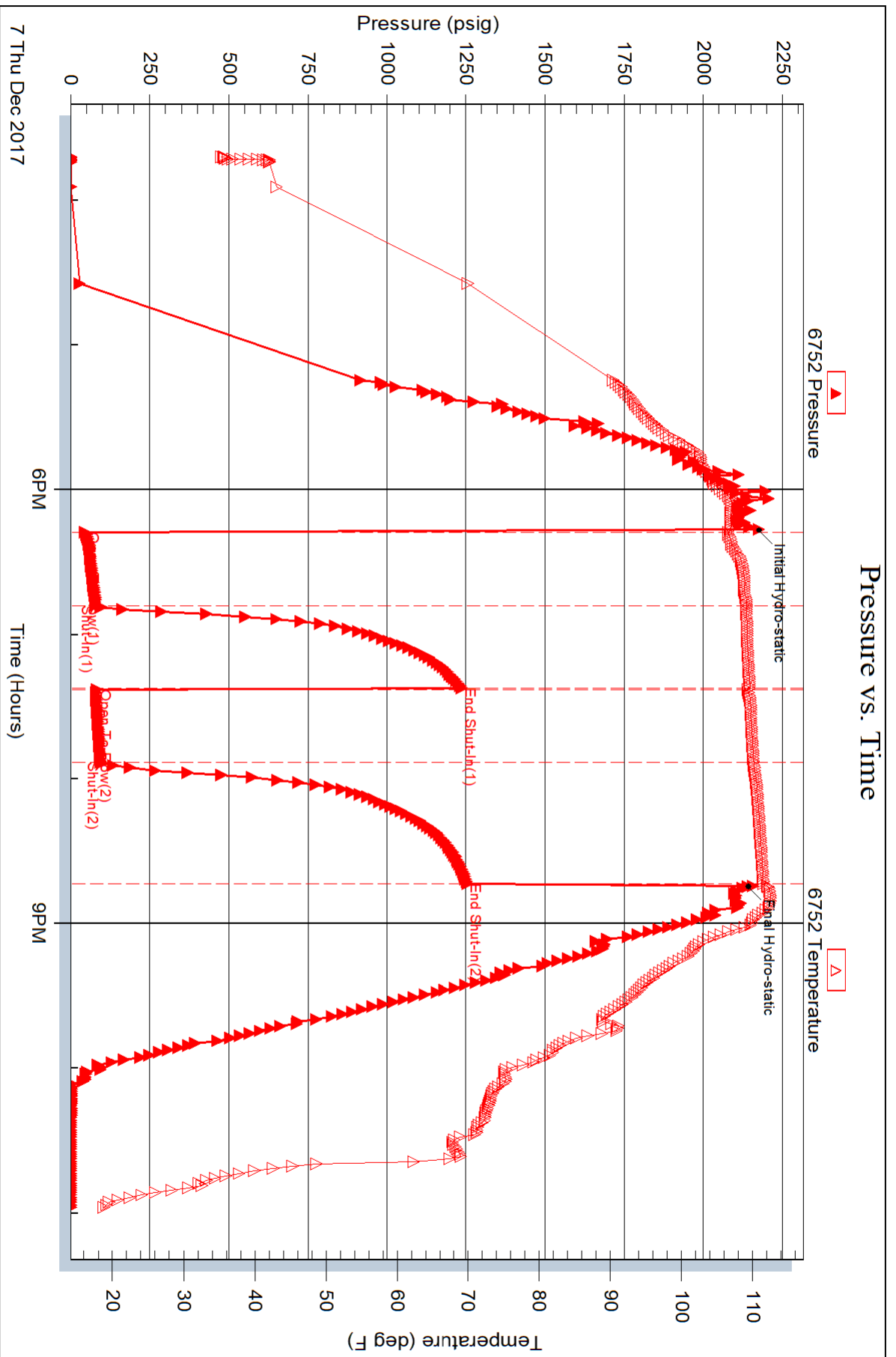
Total Length: 120.00 ft      Total Volume: 1.410 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

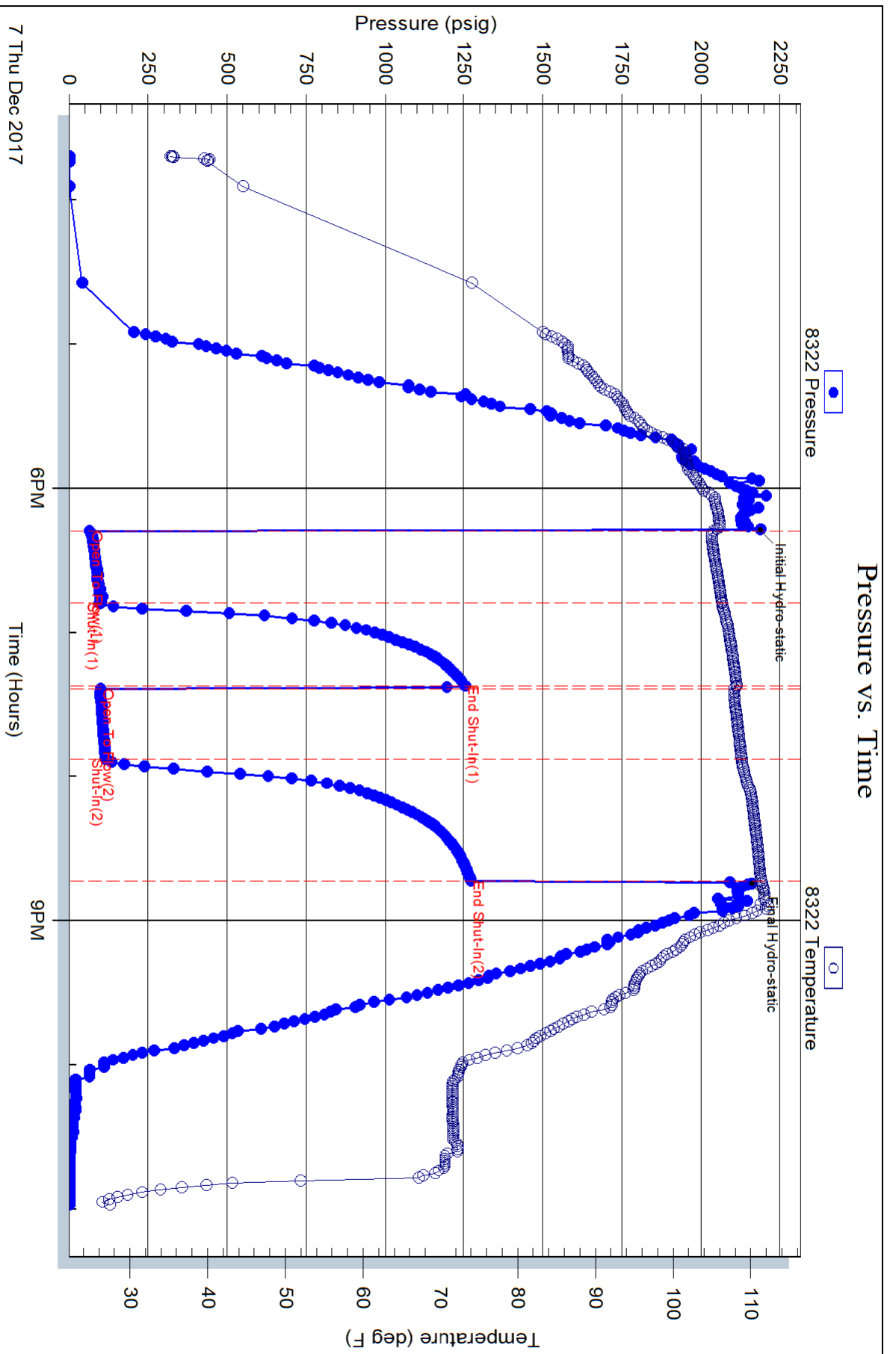
Laboratory Name:      Laboratory Location:

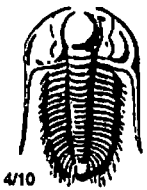
Recovery Comments: bottom packer did not hold











# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62097

Well Name & No. Van #1-28 Test No. 1 Date 7 DEC 17  
 Company American Warrior Inc Elevation 2186 KB 2178 GL  
 Address PO Box 399 Garden City Kansas 67846  
 Co. Rep / Geo. Jasen Alm Rig Discovery Rig 4  
 Location: Sec. 28 Twp. 20S Rge. 22W Co. Ness State \_\_\_\_\_

Interval Tested 4230-4275 Zone Tested Ft. Scott  
 Anchor Length 45 Drill Pipe Run 4195 Mud Wt. 9.6  
 Top Packer Depth 4225 Drill Collars Run 30 Vis 50  
 Bottom Packer Depth 4230 Wt. Pipe Run - WL 8.8  
 Total Depth 4275 Chlorides 6200 ppm System LCM 1#

Blow Description I.F. Surface blow died in 2 minutes  
I.S.T. No blow sack  
E.F. Surface blow died in 2 minutes  
E.S.I. No blow sack

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>Mud w/show of oil</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 _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 120 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2171  Test 950 T-On Location 1:58 pm  
 (B) First Initial Flow 44  Jars 250 T-Started 3:42 pm  
 (C) First Final Flow 76  Safety Joint 75 T-Open 6:17 pm  
 (D) Initial Shut-In 1236  Circ Sub \_\_\_\_\_ T-Pulled 8:37 pm  
 (E) Second Initial Flow 81  Hourly Standby \_\_\_\_\_ T-Out 10:58 pm  
 (F) Second Final Flow 94  Mileage 136 <sup>102</sup> Comments \_\_\_\_\_  
 (G) Final Shut-In 1253  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2141  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1977  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1977

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

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