

# **Geological Report**

American Warrior, Inc.  
**Williams #12**  
1550' FNL & 1980' FWL  
Sec. 36 T19s R22w  
Ness County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
Williams #12  
1550' FNL & 1980' FWL  
Sec. 36 T19s R22w  
Ness County, Kansas  
API # 15-135-25904-0000

Drilling Contractor: Discovery Drilling Co. Inc. Rig #3

Geologist: Jason T Alm

Spud Date: March 14, 2016

Completion Date: March 21, 2016

Elevation: 2250' Ground Level  
2258' Kelly Bushing

Directions: Bazine KS, 6 mi. South to 70 Rd, West 3/4 mi,  
South into location.

Casing: 228' 8 5/8" surface casing  
4375' 5 1/2" production casing

Samples: 10' wet and dry, 4000' to RTD

Drilling Time: 3700' to RTD

Electric Logs: None

Drillstem Tests: Two, Trilobite Testing, Inc. "Ray Schwager"

Problems: None

Remarks: None

## Formation Tops

	American Warrior, Inc. Williams #12 Sec. 36 T19s R22w 1550' FNL & 1980' FWL
<b>Formation</b>	
Anhydrite	1475', +783
Base	1507', +751
Heebner	3722', -1464
Lansing	3772', -1514
BKC	4084', -1826
Pawnee	4192', -1934
Fort Scott	4271', -2013
Cherokee	4294', -2036
Mississippian	4361', -2103
RTD	4376', -2118

## Sample Zone Descriptions

### **Mississippian Osage (4361 -2103): Covered in DST #1 & 2**

Δ – Dolo – White, slightly triptolic, weathered in part with good scattered vuggy porosity, light to fair oil stain with light spotted saturation, good show of free oil, good odor, bright yellow fluorescents, 65-55 units hotwire.

## Drill Stem Tests

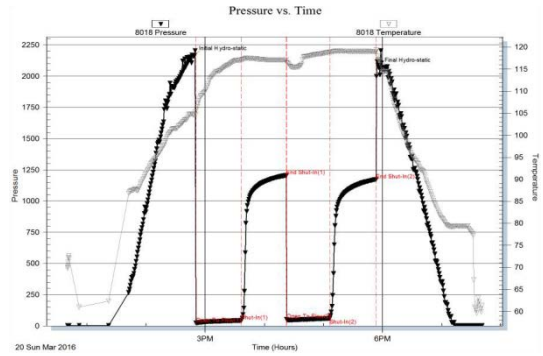
Trilobite Testing, Inc.  
"Ray Schwager"

### DST #1      Mississippian Osage

Interval (4363' – 4371') Anchor Length 8'

IHP	– 2159 #	
IFP	– 45" – Built to 4 ¼ in.	23-44 #
ISI	– 45" – Dead	1207 #
FFP	– 45" – Built to 3 in.	53-61 #
FSI	– 45" – Dead	
FHP	– 2063 #	
BHT	– 119°F	

Recovery:      60' GIP  
                   60' Clean Oil  
                   40' O&GCWM      15% Oil, 30% Water

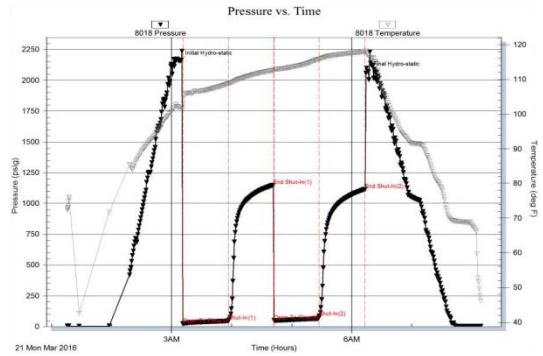


### DST #2      Mississippian Osage

Interval (4368' – 4376') Anchor Length 8'

IHP	– 2155 #	
IFP	– 45" – Built to 3 in.	22-47 #
ISI	– 45" – W.S.B.	1148 #
FFP	– 45" – Built to 3 in.	50-82 #
FSI	– 45" – Dead	1115 #
FHP	– 2066 #	
BHT	– 117°F	

Recovery:      70' GIP  
                   50' Clean Oil  
                   60' SO&GCWM      5% Oil, 35% Water



## Structural Comparison

	American Warrior, Inc. Williams #12 Sec. 36 T19s R22w 1550' FNL & 1980' FWL	American Warrior, Inc. Williams #9 Sec. 36 T19s R22w 2100' FNL & 1720' FWL		Sinclair Oil & Gas Anna Williams #1 Sec. 36 T19s R22w C NE NW	
<b>Formation</b>					
Anhydrite	<b>1475', +783</b>	1468', +787	<b>(-4)</b>	1487', +773	<b>(-10)</b>
Base	<b>1507', +751</b>	NA	<b>NA</b>	NA	<b>NA</b>
Heebner	<b>3722', -1464</b>	3718', -1463	<b>(-1)</b>	3722', -1462	<b>(-2)</b>
Lansing	<b>3772', -1514</b>	3767', -1512	<b>(-2)</b>	3773', -1513	<b>(-1)</b>
BKC	<b>4084', -1826</b>	NA	<b>NA</b>	NA	<b>NA</b>
Pawnee	<b>4192', -1934</b>	4188', -1933	<b>(-1)</b>	NA	<b>NA</b>
Fort Scott	<b>4271', -2013</b>	4269', -2014	<b>(+1)</b>	4272', -2012	<b>(-1)</b>
Cherokee	<b>4294', -2036</b>	4290', -2035	<b>(-1)</b>	NA	<b>NA</b>
Mississippian	<b>4361', -2103</b>	4353', -2098	<b>(-5)</b>	4363', -2103	<b>FL</b>

## Summary

The location for the Williams #12 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two Drill Stem Tests were conducted, both of which recovered commercial amounts of oil from the Mississippian Osage Formation. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Williams #12 well.

## Recommended Perforations

**Mississippian Osage**

**(4361' – 4375')**

**DST #1 & 2**

Respectfully Submitted,

Jason T Alm  
Hard Rock Consulting, Inc.