

# **Geological Report**

American Warrior, Inc.

## **CAH Unit #1**

2550' FNL & 100' FEL

Sec. 23 T20s R22w

Ness County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
CAH Unit #1  
2550' FNL & 100' FEL  
Sec. 23 T20s R22w  
Ness County, Kansas  
API # 15-135-25977-0000

Drilling Contractor: Discovery Drilling Rig #4

Geologist: Jason T Alm

Spud Date: November 22, 2017

Completion Date: November 29, 2017

Elevation: 2214' Ground Level  
2222' Kelly Bushing

Directions: Bazine KS, South 10 mi. to 30 rd. West 1 mi. South  
½ mi. West into location.

Casing: 211' 8 5/8" surface casing  
4374' 5 1/2" production casing

Samples: 10' wet and dry, 3950' to RTD

Drilling Time: 3650' to RTD

Electric Logs: None

Drillstem Tests: One, Trilobite Testing, Inc. "Mike Roberts"

Problems: Main Drive Clutch was slipping during short trip for  
DST #1. Clutch slip resulted in short trip taking  
around two extra hours.

Remarks: None

## Formation Tops

<b>Formation</b>	<b>American Warrior, Inc.</b>
	<b>CAH Unit #1</b>
	<b>Sec. 23 T20s R22w</b>
	<b>2550' FNL &amp; 100' FEL</b>
Anhydrite	<b>1432' +790</b>
Base	<b>1466' +756</b>
Heebner	<b>3699' -1477</b>
Lansing	<b>3749' -1527</b>
BKc	<b>4072' -1850</b>
Pawnee	<b>4185' -1963</b>
Fort Scott	<b>4265' -2043</b>
Cherokee	<b>4289' -2067</b>
Mississippian	<b>4361' -2139</b>
RTD	<b>4374' -2152</b>

## Sample Zone Descriptions

**Mississippian Osage (4361', -2139):      Covered in DST #1**

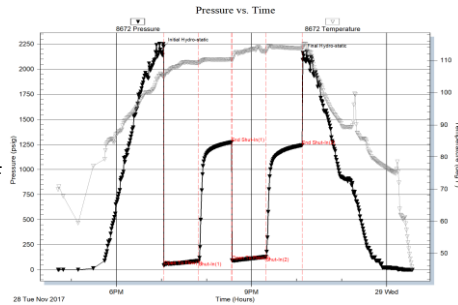
Δ – White, heavily weathered with good vuggy porosity, slightly dolomitic, fine sucrosic crystalline with pinpoint inter-crystalline and vuggy porosity, light to good oil stain with light scattered saturation, fair show of free oil, good odor, bright yellow fluorescents, 55 units hotwire.

**Drill Stem Tests**  
Trilobite Testing, Inc.  
"Mike Roberts"

**DST #1      Mississippian Osage**

Interval (4312' – 4369') Anchor Length 57'

IHP	– 2224 #	
IFP	– 45" – B.O.B. 31 min.	24-90 #
ISI	– 45" – Dead	1273 #
FFP	– 45" – B.O.B. 26 min.	93-129 #
FSI	– 45" – W.S.B.	1244 #
FHP	– 2162 #	
BHT	– 114°F	



Recovery:      248' GIP  
                   92' GCO      80% Oil  
                   62' GOCM    5 % Oil  
                   62' GCM      2% Gas

**Structural Comparison**

	American Warrior, Inc. CAH Unit #1 Sec. 23 T20s R22w 2550' FNL & 100' FEL	American Warrior, Inc. Cox #3-23 Sec. 23 T20s R22w 1750' FNL & 940' FEL		American Warrior, Inc. Albers-Cox #1 Sec. 24 T20s R22w 2050' FNL & 100' FWL	
<b>Formation</b>					
Anhydrite	<b>1432' +790</b>	1426' +788	<b>(+2)</b>	1438' +790	<b>FL</b>
Base	<b>1466' +756</b>	1463' +751	<b>(+5)</b>	NA	<b>NA</b>
Heebner	<b>3699' -1477</b>	3699' -1485	<b>(+7)</b>	3706' -1478	<b>(+1)</b>
Lansing	<b>3749' -1527</b>	3749' -1535	<b>(+8)</b>	3755' -1527	<b>FL</b>
BKc	<b>4072' -1850</b>	4068' -1854	<b>(+4)</b>	NA	<b>NA</b>
Pawnee	<b>4185' -1963</b>	4182' -1968	<b>(+5)</b>	4194' -1966	<b>(+3)</b>
Fort Scott	<b>4265' -2043</b>	4261' -2047	<b>(+4)</b>	4273' -2045	<b>(+2)</b>
Cherokee	<b>4289' -2067</b>	4287' -2073	<b>(+6)</b>	4297' -2069	<b>(+2)</b>
Mississippian	<b>4361' -2139</b>	4357' -2143	<b>(+4)</b>	4394' -2166	<b>(+27)</b>

## **Summary**

The location for the CAH Unit #1 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. One Drill Stem Test was conducted 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 CAH Unit #1 well.

## **Recommended Perforations**

**Primary:**

**Mississippian Osage**

**(4363' – 4370')**

**DST #1**

Respectfully Submitted,

Jason T Alm  
Hard Rock Consulting, Inc.