# **Geological Report**

American Warrior, Inc.

SNS #2-7

2260' FSL & 600' FWL

Sec. 7 T20s R20w

Pawnee County, Kansas



American Warrior, Inc.

## **General Data**

| Well Data:           | American Warrior, Inc. SNS #2-7 2260' FSL & 600' FWL Sec. 7 T20s R20w Pawnee County, Kansas API # 15-145-21780-0000                 |
|----------------------|---|
| Drilling Contractor: | Discovery Drilling Co. Inc. Rig #3  |
| Geologist:           | Jason T Alm   |
| Spud Date:           | November 11, 2014   |
| Completion Date:     | November 17, 2014   |
| Elevation:           | 2230' Ground Level<br>2238' Kelly Bushing   |
| Directions:          | Bazine KS, 4 mi East on Hwy 96 to the HH Rd. 8 mi. South to 50 Rd. East 2 mi. to County Line Rd. 3/4 mi. South, East into location. |
| Casing:              | 221' 8 5/8" surface casing 4380' 5 1/2" production casing   |
| Samples:             | 10' wet and dry, 4000' to RTD   |
| Drilling Time:       | 3700' to RTD  |
| Electric Logs:       | None  |
| Drillstem Tests:     | One, Trilobite Testing, Inc. "Brennan Lonsdale"   |
| Problems:            | Tool showed plugging action throughout DST #1   |
| Remarks:             | Gas Detector was reading the gas lightly throughout the well. Cold weather makes gas detection difficult.                           |

## **Formation Tops**

|               | American Warrior, Inc. |  |  |  |
|---------------|------------------------|--|--|--|
|               | SNS #2-7               |  |  |  |
|               | Sec. 7 T20s R20w       |  |  |  |
| Formation     | 2260' FSL & 600' FWL   |  |  |  |
| Anhydrite     | 1430', +808            |  |  |  |
| Base          | 1461', +777            |  |  |  |
| Heebner       | 3749', -1511           |  |  |  |
| Lansing       | 3797', -1559           |  |  |  |
| BKc           | 4132', -1894           |  |  |  |
| Pawnee        | 4260', -2022           |  |  |  |
| Fort Scott    | 4286', -2048           |  |  |  |
| Cherokee      | 4304', -2066           |  |  |  |
| Mississippian | 4370', -2132           |  |  |  |
| RTD           | 4381', -2143           |  |  |  |

#### **Sample Zone Descriptions**

#### Mississippian Osage (4370', -2132): Covered in DST #1

 $\Delta$  – Dolo – Fine sucrosic crystalline with fair inter-crystalline and vuggy porosity, very heavy triptolic chert, weathered with fair to good vuggy porosity, light to good oil stain and saturation, good show of free oil, good odor, fair to good yellow fluorescents, 10 units hotwire.

## **Drill Stem Tests**

Trilobite Testing, Inc. "Brannan Lonsdale"

#### DST #1 <u>Mississippian Osage</u>

Interval (4371' – 4378') Anchor Length 7'

IHP - 2190 #

| IFP  | -45" – Built to 3 ¼ in. | 30-40 # |
|------|-------------------------|---------|
| ISI  | – 45'' – Dead           | 1444 #  |
| FFP  | -45" – Built to 3 ¼ in. | 51-55 # |
| FSI  | – 45" – Dead            | 1386#   |
| DIID | 2171 #                  |         |

FHP – 2171 # BHT – 118°F

Recovery: 15' Clean Oil

80' SWMCO 55% Oil, 5% Water

## **Structural Comparison**

| Formation<br>Anhydrite | American Warrior, Inc.  SNS #2-7  Sec. 7 T20s R20w  2260' FSL & 600' FWL  1430', +808 | American Energies Corp.  Smith A #1  Sec. 7 T20s R20w  C NW SW  NA | NA<br>(15)   | American Warrior, Inc. SNS #1-7 Sec. 7 T20s R20w 2310' FNL & 1700' FEL 1437', +804 | (+4)         |
|------------------------|---|--|--------------|--|--------------|
| Base                   | 1461', +777   | 1460', +772  | (+5)         | 1465', +776  | (+1)         |
| Heebner<br>Lansing     | 3749', -1511<br>3797', -1559  | 3744', -1512<br>3793', -1561                                       | (+1)<br>(+2) | 3755', -1514<br>3806', -1565   | (+3)<br>(+6) |
| BKc                    | 4132', -1894  | 4132', -1900   | (+6)         | 4138', -1897   | (+3)         |
| Pawnee                 | 4260', -2022  | NA   | NA           | 4266', -2025   | (+3)         |
| Fort Scott             | 4286', -2048  | 4285', -2053   | (+5)         | 4296', -2055   | (+7)         |
| Cherokee               | 4304', -2066  | 4303', -2071   | (+5)         | 4311', -2070   | (+4)         |
| Mississippian          | 4370', -2132  | 4362', -2130   | (-2)         | 4375', -2134   | <b>(+2)</b>  |

## **Summary**

The location for the SNS #2-7 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 well.

#### **Recommended Perforations**

Mississippian Osage (4370' – 4380') DST #1

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.