# **Geological Report**

American Warrior, Inc.

MMH #2-25

485' FNL & 725' FEL

Sec. 25 T20s R21w

Ness County, Kansas



American Warrior, Inc.

# **General Data**

Well Data:	American Warrior, Inc. MMH #2-25 485' FNL & 725' FEL Sec. 25 T20s R21w Ness County, Kansas API # 15-135-25837-0000
Drilling Contractor:	Discovery Drilling Rig #3
Geologist:	Jason T Alm
Spud Date:	December 15, 2014
Completion Date:	January 11, 2015
Elevation:	2207' Ground Level 2215' Kelly Bushing
Directions:	Bazine KS, 4 mi East on Hwy 96 to the HH Rd. 10 mi. South to 30 Rd. East 2 mi. to County Line Rd. 1 <sup>1</sup> / <sub>4</sub> mi. South, West into location.
Casing:	220' 8 5/8" surface casing 4367' 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. "Ken Swinney"
Problems:	None
Remarks:	Rig set up on December 15. They shut rig down over the holidays and started back up on January 6.

# **Formation Tops**

	American Warrior, Inc.	
	MMH #2-25	
	Sec. 25 T20s R21w	
Formation	485' FNL & 725' FEL	
Anhydrite	1395', +818	
Base	1425', +788	
Heebner	3721', -1508	
Lansing	3770', -1557	
BKc	4118', -1905	
Pawnee	4252', -2039	
Fort Scott	4275', -2063	
Cherokee	4295', -2083	
Mississippian	4358', -2145	
RTD	4367', -2154	

# **Sample Zone Descriptions**

#### Mississippian Osage (4358', -2145): Covered in DST #1

 $\Delta$  – Dolo – Fine sucrosic crystalline with poor to fair vuggy and inter-crystalline porosity, very heavy slightly triptolic chert, weathered with fair to good vuggy porosity, light to fair oil stain and saturation, fair show of free oil, good odor, fair to good yellow fluorescents, 52 units hotwire.

#### **Drill Stem Tests**

Trilobite Testing, Inc. "Ken Swinney"

#### DST #1 Mississippian Osage

Interval (4360' – 4367') Anchor Length 7'

IHP - 2217 #

IFP -45" - B.O.B. 16 ½ min. 44-138 #

ISI -45" – Built to 2 ½ in. 1243 #

FFP -45" - B.O.B. 32 min. 1243 #

FSI - 45" - Built to 1 3/4 in. 1206 #

FHP - 2128 #

BHT - 125°F

Recovery: 201' GIP

93' Clean Oil

263' M&OCW 10% Oil, 80% Water

124' MCW w/ Oil Show

# **Structural Comparison**

	American Warrior, Inc. MMH #2-25 Sec. 25 T20s R21w	D R Lauck Oil Co. Inc.  Martin #1  Sec. 25 T20s R21w		Horizon Petroleum Martin #1 Sec. 25 T20s R21w	
Formation	485' FNL & 725' FEL	C NE NE		N2 N2 NE	
Anhydrite	1395', +818	NA	NA	1402', +819	(-1)
Base	1425', +788	NA	NA	1432', +789	<b>(-1)</b>
Heebner	3721', -1508	3716', -1510	(+2)	3728', -1507	<b>(-1)</b>
Lansing	3770', -1557	3768', -1562	(+5)	3778', -1557	FL
BKc	4118', -1905	NA	NA	NA	NA
Pawnee	4252', -2039	NA	NA	NA	NA
Fort Scott	4275', -2063	4276', -2070	(+7)	4284', -2063	FL
Cherokee	4295', -2083	4295', -2089	(+6)	NA	NA
Mississippian	4358', -2145	4347', -2141	<b>(-4)</b>	4362', -2141	<b>(-4)</b>

### **Summary**

The location for the MMH #2-25 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 MMH #2-25 well.

#### **Recommended Perforations**

Mississippian Osage (4358' – 4363') DST #1

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.