# **Geological Report**

American Warrior, Inc. Hinnergardt #3-12 1000' FNL & 2240' FWL Sec. 12 T20s R21w Ness County, Kansas



## **American Warrior, Inc.**

### **General Data**

Well Data:	American Warrior, Inc. Hinnergardt #3-12 1000' FNL & 2240' FWL Sec. 12 T20s R21w Ness County, Kansas API # 15-135-25836-0000
Drilling Contractor:	Discovery Drilling Rig #3
Geologist:	Jason T Alm
Spud Date:	January 16, 2015
Completion Date:	January 23, 2015
Elevation:	2240' Ground Level 2248' Kelly Bushing
Directions:	Bazine KS, 4 mi East on Hwy 96 to the HH Rd. 8 mi South to 50 Rd. East 1 <sup>1</sup> / <sub>2</sub> mi, South into location.
Casing:	<ul><li>221' 8 5/8" surface casing</li><li>4393' 5 1/2" production casing</li></ul>
Samples:	10' wet and dry, 4000' to RTD
Drilling Time:	3700' to RTD
Electric Logs:	None
Drillstem Tests:	One, Trilobite Testing, Inc. "Phillip Gage"
Problems:	None
Remarks:	None

	American Warrior, Inc.		
	Hinnergardt #3-12		
	Sec. 12 T20s R21w		
Formation	1000' FNL & 2240' FWL		
Anhydrite	1449', +799		
Base	1477', +771		
Heebner	3763! 1515		
	3763', -1515		
Lansing	3814', -1566		
BKc	4144', -1896		
Pawnee	4272', -2024		
Fort Scott	4300', -2052		
Cherokee	4316', -2068		
Mississippian	4374', -2126		
RTD	4394', -2146		

#### **Formation Tops**

#### **Sample Zone Descriptions**

Fort Scott(4300', -2052):Not TestedLs – Fine to sub-crystalline with poor pinpoint inter-crystalline<br/>porosity, very light brown oil stain in porosity, slight show of free<br/>oil when broken, no odor, fair to good yellow fluorescents, slight<br/>chert, 10 units hotwire.

#### Mississippian Osage (4374', -2126): Covered in DST #1

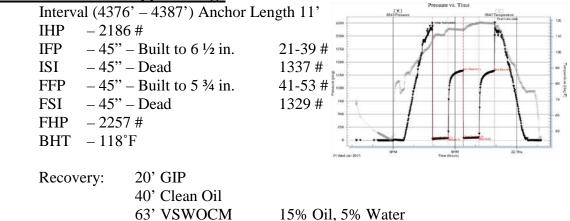
 $\Delta$  – Dolo – fine crystalline with poor to fair vuggy and intercrystalline porosity, very heavy slightly triptolic chert, weathered in part. with fair to good vuggy porosity, light to good oil stain and fair spotted saturation, fair show of free oil, good odor, light to good yellow fluorescents, 55 units hotwire.

#### **Drill Stem Tests**

Trilobite Testing, Inc.

"Phillip Gage"

#### **Mississippian Osage DST #1**



15% Oil, 5% Water

### **Structural Comparison**

Formation	American Warrior, Inc. Hinnergardt #3-12 Sec. 12 T20s R21w 1000' FNL & 2240' FWL	American Warrior, Inc. Hinnergardt #1-12 Sec. 12 T20s R21w 690' FNL & 1530' FWL		Ben Hinnergardt #1 National Oil Co. Sec. 12 T20s R21w 810' FNL & 1830' FEL	
Anhydrite	1449', +799	1455', +800	(-1)	1450', +796	(+3)
Base	1477', +771	NA	NA	NA	NA
	, ,				
Heebner	3763', -1515	3784', -1526	(+14)	3764', -1518	(+3)
Lansing	3814', -1566	3833', -1578	(+12)	3815', -1569	(+3)
BKc	4144', -1896	NA	NA	NA	NA
Pawnee	4272', -2024	4293', -2038	(+14)	NA	NA
Fort Scott	4300', -2052	4320', -2065	(+13)	4305', -2059	(+7)
Cherokee	4316', -2068	4335', -2080	(+14)	NA	NA
Mississippian	4374', -2126	4397', -2142	(+16)	4378', -2132	(+6)

#### Summary

The location for the Hinnergardt #3-12 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  $\frac{1}{2}$  inch production casing to further evaluate the Hinnergardt #3-12 well.

#### **Recommended Perforations**

Primary:		
Mississippian Osage	(4374' – 4389')	<b>DST #1</b>
Before Abandonment:		
Fort Scott	(4302' – 4308')	Not Tested

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.