## **Geological Report**

American Warrior, Inc. **B-F Unit #1** 200' FNL & 1375' FEL Sec. 24 T18s R22w Ness County, Kansas



# **American Warrior, Inc.**

## **General Data**

Well Data:	American Warrior, Inc. B-F Unit #1 200' FNL & 1375' FEL Sec. 24 T18s R22w Ness County, Kansas API # 15-135-25763-0000
Drilling Contractor:	Petromark Drilling, LLC. Rig #1
Geologist:	Jason T Alm
Spud Date:	April 14, 2014
Completion Date:	April 23, 2014
Elevation:	2147' Ground Level 2153' Kelly Bushing
Directions:	Bazine KS, at the intersection of Hwy 96 and Austin St. North 2 mi. to 150 Rd. West <sup>1</sup> / <sub>4</sub> mi. South into location.
Casing:	<ul><li>222' 8 5/8" surface casing</li><li>4242' 5 1/2" production casing</li></ul>
Samples:	10' wet and dry, 3900' to RTD
Drilling Time:	3600' to RTD
Electric Logs:	None
Drillstem Tests:	Three, Trilobite Testing, Inc. "Bob Hamel"
Problems:	DST #1 was a mis-run due to packers failing to hold. While cutting the Labette shale and the Fort Scott Limestone the computer running gas detection software was having issues.
Remarks:	Due to the computer having issues while cutting the Labette shale there was no constant to set gas calibration. Lack of calibration led to the Mississippian gas kicks to be higher than normal.

	American Warrior, Inc.
	B-F Unit #1
	Sec. 24 T18s R22w
Formation	200' FNL & 1375' FEL
Anhydrite	1418', +735
Base	1455', +698
Heebner	3612', -1459
Lansing	3659', -1506
BKc	3974', -1821
Pawnee	4061', -1908
Fort Scott	4137', -1984
Cherokee	4157', -2004
Mississippian	4230', -2077
RTD	4243', -2090

## **Formation Tops**

## **Sample Zone Descriptions**

#### Mississippian Osage (4230', -2077): Covered in DST #2,3

Dolo  $-\Delta$  – Fine sucrosic crystalline with poor to fair intercrystalline and scattered vuggy porosity, heavy triptolic chert, weathered with fair vuggy porosity, light to fair oil stain in porosity, slight show of free oil, good odor, bright yellow fluorescents, 210-300 units hotwire.

## **Drill Stem Tests**

Trilobite Testing, Inc. "Bob Hamel"

DST #1	Mississippian Osage Interval (4183' – 4238') Anchor Length 55' Mis-run, Packer Failure
<b>DST #2</b>	<u>Mississippian Osage</u> Interval (4152' – 4240') Anchor Length 88'

IHP	- 2101 #	
IFP	– 45" – Built to 2 in.	63-74 #
ISI	– 45'' – Dead	749 #
FFP	$-45''$ – Built to $\frac{3}{4}$ in.	78-83 #
FSI	– 45'' – Dead	649 #
FHP	- 2038 #	
BHT	$-108^{\circ}\mathrm{F}$	

Recovery:	2' Clean Oil	
	120' SOCM	1% Oil

## DST #3 <u>Mississippian Osage</u>

Interval	(4234' – 4243') Anchor Length 9'	
IHP	- 2096 #	
IFP	$-45''$ – Built to 4 $\frac{1}{2}$ in.	22-43 #
ISI	– 45" – W.S.B.	1147 #
FFP	– 45" – Built to 3 in.	47-62 #
FSI	– 45" – W.S.B.	1014 #
FHP	- 2023 #	
BHT	– 115°F	

Recovery:	60' Clean Oil
	60' W&OCM 20% Oil, 15% Water

	American Warrior, Inc.	High Plains Oil Exploration		American Warrior, Inc.	
	B-F Unit #1	Wunder A #1		Baumgarten Unit #1-24	
	Sec. 24 T18s R22w	Sec. 24 T18s R22w		Sec. 24 T18s R22w	
Formation	200' FNL & 1375' FEL	SE SE SE		2550' FSL & 335' FEL	
Anhydrite	1418', +735	1423', +732	(+3)	1419', +736	(-1)
Base	1455', +698	1459', +696	(+2)	1452', +703	(-5)
Heebner	3612', -1459	3622', -1467	(+8)	3618', -1463	(-4)
Lansing	3659', -1506	3669', -1514	(+8)	3662', -1507	(+1)
BKc	3974', -1821	NA	NA	3976', -1821	FL
Pawnee	4061', -1908	4074', -1919	(+11)	4058', -1903	(-5)
Fort Scott	4137', -1984	4150', -1995	(+11)	4134', -1979	(-5)
Cherokee	4157', -2004	4171', -2016	(+12)	4155', -2000	(-4)
Mississippian	4230', -2077	4253', -2098	(+21)	4228', -2073	(-4)

### **Structural Comparison**

#### Summary

The location for the B-F Unit #1 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Three Drill Stem Tests were conducted one 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  $5\frac{1}{2}$  inch production casing to further evaluate the B-F Unit #1 well.

#### **Recommended Perforations**

Mississippian Osage (423

(4230' – 4240')

DST #2,3

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.