# **Geological Report**

American Warrior, Inc.
Seltman #11
440' FSL & 440' FWL
Sec. 24 T18s R21w
Ness County, Kansas



American Warrior, Inc.

## **General Data**

Well Data:	American Warrior, Inc. Seltman #11 440' FSL & 440' FWL Sec. 24 T18s R21w Ness County, Kansas API # 15-135-25455-0000
Drilling Contractor:	Discovery Drilling Co., Inc. Rig #3
Geologist:	Jason T Alm
Spud Date:	August 28, 2013
Completion Date:	September 3, 2013
Elevation:	2092' Ground Level 2100' Kelly Bushing
Directions:	Alexander KS, West 3 Mi. North 1/4 mi. along lease rd. West and South into location.
Casing:	1309' 8 5/8" surface casing 4171' 5 1/2" production casing
Samples:	10' wet and dry, 3800' to RTD
Drilling Time:	3500' to RTD
Electric Logs:	Pioneer Energy Services "Daylan Kerr" CNL/CNL, DIL
Drillstem Tests:	One, Trilobite Testing, Inc. "Ray Schwager"
Problems:	None

None

Remarks:

## **Formation Tops**

	American Warrior, Inc.		
	Seltman #11		
	Sec. 24 T18s R21w		
Formation	440' FSL & 440' FWL		
Anhydrite	1300', +800		
Base	1330', +770		
Heebner	3532', -1432		
Lansing	3576', -1476		
BKc	3896', -1796		
Pawnee	3977', -1877		
Fort Scott	4040', -1940		
Cherokee	4056', -1956		
Mississippian	4130', -2030		
LTD	4172', -2072		
RTD	4171', -2071		

### **Sample Zone Descriptions**

#### Cherokee A Sand

(4066', -1966): Covered in DST #1

Ss – Quartz, clear, fine grained, well sorted, well rounded, poor to fair cementation with fair inter-granular porosity, few clusters with very light oil stain, no show of free oil, very dull yellow fluorescents, no odor, 22 units hotwire.

#### **Drill Stem Tests**

Trilobite Testing, Inc. "Ray Schwager"

#### DST #1 Cherokee A Sand

Interval (4052' – 4080') Anchor Length 28'

IHP - 1945 #

IFP - 30" - Built to ¼ in. 15-33 #
ISI - 30" - Dead 262 #
FFP - 10" - Dead, Flush, Dead 34-36 #

FHP - 1933 # BHT - 114°F

Recovery: 45' Slightly Oil Spotted Mud

## **Structural Comparison**

	American Warrior, Inc.	American Warrior, Inc.		American Warrior, Inc.	
	Seltman #11	Seltman #9		Seltman #10	
	Sec. 24 T18s R21w	Sec. 24 T18s R21w		Sec. 25 T18s R21w	
Formation	440' FSL & 440' FWL	1455' FSL & 850' FWL		720' FNL & 1100' FWL	
Anhydrite	1300', +800	1297', +798	(+2)	1293', +802	(-2)
Base	1330', +770	1328', +767	(+3)	1327', +768	(+2)
Heebner	3532', -1432	3528', -1433	(+1)	3538', -1443	(+9)
Lansing	3576', -1476	3572', -1477	(+1)	3581', -1486	(+10)
BKc	3896', -1796	3892', -1797	(+1)	3898', -1803	(+7)
Pawnee	3977', -1877	3973', -1878	(+1)	3984', -1889	(+12)
Fort Scott	4040', -1940	4034', -1939	<b>(-1)</b>	4046', -1951	(+11)
Cherokee	4056', -1956	4051', -1956	FL	4061', -1966	(+10)
Mississippian	4130', -2030	4131', -2036	(+6)	4134', -2039	<b>(+9)</b>

## **Summary**

The location for the Seltman #11 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. One drill stem test was conducted which was inconclusive. After all gathered data had been examined the decision was made to run 5 ½ inch production casing later convert the Seltman #11 into an injection well for a waterflood project.

#### **Recommended Perforations**

Cherokee A Sand: (4066' – 4072') DST #1

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.