# **Geological Report**

American Warrior, Inc.

O'Brate-Haskell #4-4

355' FNL & 2312' FWL

Sec 4, T28s, R33w

Haskell County, Kansas



American Warrior, Inc.

### **General Data**

Well Data:	American Warrior, Inc. O'Brate-Haskell #4-4 355' FNL & 2312' FWL Sec. 4, T28s, R33w Haskell County, Kansas API # 15-081-22140-00-00				
Drilling Contractor:	Duke Drilling Co. Rig #1				
Geologist:	Luke Thompson				
Spud Date:	April 5, 2016				
Completion Date:	April 10, 2016				
Elevation	2996' G.L. 3008' K.B.				
Directions:	intersection of Hwy 8	le of Sublette, KS at the vy 83 & Hwy 56 go 12 miles north e intersection of Hwy 83 and Rd. Rd 70. South into.			
Casing:	1744' 8 5/8" 5638' 5 ½"	#24 #15.5	Surface Casing Production Casing		
Samples:	4100' to RTD	10' Wet & Dry			
Drilling Time:	4000' to RTD				
Electric Logs:	Pioneer Energy Services "T. Martin" Stack Micro				
Drillstem Tests:	No tests				
Problems:	Pulled tight through Morrow				

# **Formation Tops**

O'Brate-Haskell #4-4 Sec. 4, T28s, R33w 355' FNL & 2312' FWL

Anhydrite	1922' +1086
Base	2002' +1006
Heebner	4148' -1140
Lansing	4232' -1224
Marmaton	4796' -1788
Cherokee	4942' -1934
Morrow	5238' -2230
Chester	5314' -2306
St. Gen	5417' -2445
RTD	5650' -2642
LTD	5651' -2643

## **Structural Comparison**

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	American Warrior, Inc.		American Warrior, Inc.		EOG Resources
	O'Brate-Haskell #4-4		O'Brate #1-4		O'Brate 33 #1
	Sec. 4, T28s, R33w		Sec. 4, T28s, R33w		Sec. 33, T27s, R33w
<b>Formation</b>	355' FNL & 2312' FWL		553' FNL & 927' FWL		575' FSL & 1910' FWL
Heebner	4148' -1140	-8	4140' -1132	-6	4132' -1134
Lansing	4232' -1224	-7	4225' -1217	-4	4218' -1220
Marmaton	4796' -1788	-10	4786' -1778	-11	4775' -1777
Cherokee	4942' -1934	-12	4930' -1922	-10	4922' -1924
Morrow	5238' -2230	-18	5220' -2212	-18	5210' -2212
Chester	5314' -2306	+12	5330° -2322	+71	5375' -2377
St. Gen	5417' -2445	-54	5399' -2391	+43	5486' -2488

## **Summary**

The location for the O'Brate-Haskell #4-4 well was found via 3-D seismic survey. The new well ran structurally as expected. No drill stem tests were conducted. After all the gathered data had been examined, the decision was made to run 5 ½" production casing to further evaluate the O'Brate-Haskell #4-4 well.

#### **Perforations:**

**Primary:** Chester (5316' – 5324')

**Gas:** Winfield (2858' – 2862')

Winfield (2816' – 2825')

Herrington (2758' – 2762')

Herrington (2742' – 2752')

Respectfully Submitted,

Lukas Thompson