

# **Geological Report**

American Warrior, Inc.

**O'Brate-Gray #1-4**

1757' FNL & 906' FWL

Sec. 5, T25s, R29w

Gray County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
O'Brate-Gray #1-4  
1757' FNL & 906' FWL  
Sec. 5, T25s, R29w  
Gray County, Kansas  
API # 15-069-20447-00-00

Drilling Contractor: Duke Drilling Co. Rig #5

Geologist: Kevin Timson

Spud Date: October 12, 2013

Completion Date: October 23, 2013

Elevation 2824' G.L.  
2835' K.B.

Directions: From Kalvesta, KS. Go 14.5 miles West on Hwy 96 to Haflich Rd. Go 10 miles South to G Rd, go 1 ½ miles East on G Rd and South into location.

Casing: 438' 8 5/8" #24 Surface Casing

Samples: 4050' to RTD 10' Wet & Dry

Drilling Time: 4050' to RTD

Electric Logs: Pioneer Energy Services "D. Kerr"  
Full Sweep

Drillstem Tests: Three, Trilobite Testing, Inc. "Sam Esparza"

Problems: None

## Formation Tops

O'Brate-Gray #1-4

Sec. 5, T25s, R29w

1757' FNL & 906' FWL

Anhydrite	1903' +913
Base	1966' +850
Heebner	4107' -1291
Toronto	4120' -1304
Lansing	4193' -1377
Stark	4482' -1666
Bkc	4615' -1799
Marmaton	4637' -1821
Pawnee	4713' -1897
Fort Scott	4739' -1923
Cherokee	4755' -1939
Morrow	4880' -2064
St. Louis	4897' -2081
RTD	5000' -2184
LTD	5000' -2184

### Sample Zone Descriptions

**Pawnee** (4713', -1897): Covered in DST #1

Ls – Sub-crystalline with fair vuggy and fair oomoldic/oolycastic porosity. Slight to fair stain. Poor saturation. No show of free oil. Slight odor. 20 Units Hotwire.

**Morrow Sand** (4880', -2064): Covered in DST #2

Ss – Fine to medium grain. Fair to well sorted sub-angular to well rounded grains. Good stain. Good saturation. Show of free oil. Strong odor. 30 Units Hotwire.

**Drill Stem Tests**  
Trilobite Testing Inc.  
"Sam Esparza"

**DST #1**

**Pawnee to Fort Scott**

Interval (4684' – 4750') Anchor Length 66'

IHP	- 2354 #	
IFP	- 45" – WSB built to 2"	25-54 #
ISI	- 45" – No Return	1222 #
FFP	- 45" – WSB built to ¾"	58-80 #
FSIP	- 45" – No Return	1185 #
FHP	- 2337 #	
BHT	- 113 ° F	
Recovery:	130' Mud with scum of oil	

**DST #2**

**Morrow Sandstone**

Interval (4836' – 4897') Anchor Length 61'

IHP	- 2390 #	
IFP	- 30" – ¼" died to WSB	19-23 #
ISI	- 30" – No Return	51 #
FFP	- 30" – No blow	24-25 #
FSIP	- 30" – No Return	38 #
FHP	- 2351 #	
BHT	- 115 ° F	
Recovery:	5' Mud with oil spots	

**DST #3**

**Morrow to St. Louis**

Interval (4837' – 4933') Anchor Length 96'

IHP	- 2423 #	
IFP	- 30" – ¼" blow	20-26 #
ISI	- 30" – No Return	272 #
FFP	- 30" – No blow	28-31 #
FSIP	- 30" – No Return	100 #
FHP	- 2386 #	
BHT	- 114 ° F	
Recovery:	5' Mud with oil spots	

## Structural Comparison

Formation	American Warrior, Inc. O'Brate-Gray #1-4 Sec. 4, T25s, R29w 1757' FNL & 906' FWL		Frontier Oil Co. Moeschl #1 Sec. 9, T25s, R29w SW NW NW		American Warrior, Inc. City of Ingalls #1-5 Sec 5, T24s, R29w 1500' FSL & 1150' FWL
	Heebner	4107' -1291	<b>FL</b>	4104' -1291	<b>-2</b>
Toronto	4120' -1304	<b>+3</b>	4120' -1307	<b>-1</b>	4127' -1303
Lansing	4193' -1377	<b>+4</b>	4194' -1381	<b>FL</b>	4201' -1377
Stark	4482' -1666	<b>NA</b>	NA	<b>-2</b>	4488' -1664
BKC	4615' -1799	<b>-4</b>	4608' -1795	<b>-7</b>	4616' -1792
Marmaton	4637' -1821	<b>NA</b>	NA	<b>-13</b>	4632' -1808
Pawnee	4713' -1897	<b>-1</b>	4709' -1896	<b>-5</b>	4716' -1892
Fort Scott	4739' -1923	<b>NA</b>	NA	<b>-7</b>	4740' -1916
Cherokee	4755' -1939	<b>-3</b>	4749' -1936	<b>-9</b>	4754' -1930
Morrow	4880' -2064	<b>-9</b>	4868' -2055	<b>-10</b>	4878' -2054
St. Louis	4897' -2081	<b>-3</b>	4891' -2078	<b>-2</b>	4903' -2079

### Summary

The location for the O'Brate-Gray #1-4 well was found via 3-D seismic survey. The new well ran structurally as expected. Three drill stem tests were conducted, which were all negative. After all the gathered data had been examined, the decision was made to plug and abandon the O'Brate-Gray #1-4 well.

Respectfully Submitted,

Kevin Timson  
American Warrior, Inc.

