

# **Geological Report**

American Warrior, Inc.

## **Lexington Morrow #1HZ**

521' FNL & 841' FEL

Sec 19, T31s, R21w

Clark County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
Lexington Morrow #1HZ  
521' FNL & 841' FEL  
Sec. 19, T31s, R21w  
Clark County, Kansas  
API # 15-025-21592-00-00

Drilling Contractor: Duke Drilling Co. Rig #7

Geologist: Luke Thompson

Spud Date: August 23, 2016

Completion Date: September 4, 2016

Elevation 2172' G.L.  
2185' K.B.

Directions: From the center of Bucklin, KS at the intersection of Hwy 54 and Hwy 34 go 15 miles south to the NE corner of 19-31s-21w, go 0.4 miles south on Hwy 34 to ingress with cattle guard. Take lease road N then W then N to location

Casing: 60' 20" Conductor Casing  
670' 9 5/8" Surface Casing

Samples: 4300' to RTD 30' wet & dry

Drilling Time: 4300' to RTD

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

Drillstem Tests: Three-Trilobite Testing "Ken Swinney"

Problems: Bridge @ 4670'

**Formation Tops**  
**Lexington Morrow #1HZ**  
**521' FNL & 841' FEL**  
**Sec. 19, T31s, R21w**

<b>Anhydrite</b>	<b>1184' +1001</b>
<b>Base</b>	<b>1210' +975</b>
<b>Heebner</b>	<b>4304' -2119</b>
<b>Lansing</b>	<b>4500' -2315</b>
<b>BKC</b>	<b>4959' -2774</b>
<b>Marmaton</b>	<b>4980' -2795</b>
<b>Cherokee</b>	<b>5140' -2955</b>
<b>Morrow</b>	<b>5214' -3029</b>
<b>Morrow Sand</b>	<b>5235' -3050</b>
<b>Mississippi</b>	<b>5322' -3137</b>
<b>RTD</b>	<b>5400' -3215</b>
<b>LTD</b>	<b>5402' -3217</b>

**Sample Zone Descriptions**

**Morrow**

**(5240', -3055): Covered in DST #1-3**

Sandstone, clear/white/brown, med grain, sub round, poor to fair sorting, poor cementation, good inter-crystalline porosity, fair/light odor, fair/poor show of free oil, fair show of free oil when crushed, good flush cut. Gas

**Drill Stem Tests**

Trilobite Testing

“Ken Swinney”

**DST #1**

**Morrow (straddle)**

Interval (5192' – 5240') Anchor Length 48', Tail Pipe 162'

**Hit bridge at 4670'**

**DST #2**

**Morrow (straddle)**

Interval (5192' – 5204') Anchor Length 48', Tail Pipe 162'

IHP - 2728 #

IFP - 30" – 2" in 6 min (light surging) 77-76 #

ISI - 30" – no return 301 #

FFP - 30" – wsb died in 2 min Flush no help 62-118#

FSIP - 30" – no return 301 #

FHP - 2626 #

BHT - 114 ° F

**Recovery:** 120' M

**Tool Plugged**

**DST #3**

**Morrow (straddle)**

Interval (5192' – 5245') Anchor Length 53', Tail Pipe 157'

IHP - 2669 #

IFP - 30" – BOB 3 min 221-300#

ISI - 45" – No Return 301#

FFP - 30" – No Blow Flush surged and died 301-303 #

FSIP - 45" – no return 303#

FHP - 2552 #

BHT - 114 ° F

**Recovery:** 542' MW w/skim of oil in sample

## Structural Comparison

	American Warrior, Inc. Lexington Morrow #1HZ Sec. 19, T31s, R21w 521' FNL & 841' FEL		Mesa Petroleum Co. Seacat #5-19 Sec. 19, T31s, R21w 660, FNL & 660' FEL		Mesa Petroleum Co. Seacat #14-19 Sec. 19, T31s, R21w 4720' FSL & 1720' FEL
<b>Formation</b>					
<b>Heebner</b>	4304' -2119	-8	4300' -2111	+4	4265' -2123
<b>Lansing</b>	4500' -2315	-10	4494' -2305	-5	4452 -2310
<b>BKC</b>	4959' -2774	-13	4950' -2761	0	4916' -2774
<b>Marmaton</b>	4980' -2795	-14	4970' -2781	-3	4934' -2792
<b>Cherokee</b>	5140' -2955	-12	5132' -2943	+8	5105' -2963
<b>Morrow</b>	5214' -3029	-14	5204' -3015	+9	5180' -3038
<b>Morrow SD</b>	5235' -3050	-13	5226' -3037	+5	5197' -3055
<b>Mississippi</b>	5322' -3137	-14	5302' -3113	-19	5260' -3118

### Summary

The location for the Lexington Morrow #1HZ well was found via 3-D seismic survey. The new well ran structurally as expected. Three drill stem test were conducted, none of which recovered commercial quantities of oil. After all the gathered data had been examined, the decision was made plug and abandon the Lexington Morrow #1HZ well.

Respectfully Submitted,

Lukas Thompson  
American Warrior, Inc.