

# **Geological Report**

American Warrior, Inc.

**Lee #4-28**

1900' FSL & 767' FWL

Sec. 28, T25s, R36w

Kearny County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
Lee #4-28  
1900' FSL & 767' FWL  
Sec. 28, T25s, R36w  
Kearny County, Kansas  
API # 15-093-21934-00-00

Drilling Contractor: Duke Drilling Co. Rig #10

Geologist: Kevin Timson

Spud Date: January 23, 2015

Completion Date: February 2, 2015

Elevation 3053' G.L.  
3064' K.B.

Directions: From Lakin, KS. Go South on Hwy 25 7.2 Miles.  
Go South on Rd R 1/4 mile. East by tank batteries  
and South into.

Casing: 1889' 8 5/8" #24 Surface Casing  
5098' 5 1/2" #15.5 Production Casing

Samples: 3600' to RTD 10' Wet & Dry

Drilling Time: 3600' to RTD

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

Drillstem Tests: Two-Trilobite Testing "Shane McBride"

Problems: Shut in tool on DST #1 failed.

## Formation Tops

Lee #4-28

Sec. 28, T25s, R36w

1900' FSL & 767' FWL

Anhydrite	1780' +1284
Base	1855' +1209
Heebner	3678' -614
Lansing	3755' -691
Stark	4070' -1006
Bkc	4245' -1181
Marmaton	4266' -1202
Pawnee	4366' -1302
Fort Scott	4396' -1332
Cherokee	4407' -1343
Morrow	4693' -1629
Miss	4835' -1771
RTD	5100' -2036
LTD	5102' -2038

## Sample Zone Descriptions

**Morrow** (4693', -1629): Covered in DST #2

Ss. Grey. Glauconitic. Medium to coarse grain. Poorly cemented. Well rounded. Well sorted. Good stain. Good saturation. Show of free oil when broken. Good odor. 30 unit gas kick.

**Drill Stem Tests**  
Trilobite Testing  
"Shane McBride & Mike Roberts"

**DST #3**

**Marmaton**

Interval (4284' - 4367') Anchor Length 83'

IHP - 2088 #

IFP - 30" - BOB in 10 min 33-187#

ISI - 45" - No return 1148 #

FFP - 45" - BOB in 13 min 192-363 #

FSIP - 60" - 10" return 541 #

FHP - 2021 #

BHT - 114° F

Recovery: 113' WCM

186' MCW

186' SMCW

651' Water

**DST #4**

**Morrow**

Interval (4824' - 4836') Anchor Length 12'

IHP - 2411 #

IFP - 30" - WSB built to 5" 18-28 #

ISI - 45" - No return 1145 #

FFP - 45" - BOB in 41 min 84-46 #

FSIP - 45" - No return 1105 #

FHP - 2342 #

BHT - 118° F

Recovery: 92' GMCO (50% Oil)

92' GIP

## Structural Comparison

	American Warrior, Inc. Lee #4-28 Sec. 28, T25s, R36w 1900' FSL & 767' FWL		Merit Energy Corp. Lee #28-2 Sec. 28, T25s, R36w 100' FNL & 510' FWL		Merit Energy Corp. Lee #1-28 Sec 28, T25s, R36w SE SE SW
<b>Formation</b>					
Heebner	3678' -614	-2	3671' -612	+11	3694' -625
Lansing	3755' -691	-1	3749' -690	+16	3776' -707
Stark	4070' -1006	-1	4064' -1005	NA	NA
BKC	4245' -1181	+2	4242' -1183	NA	NA
Marmaton	4266' -1202	+3	4264' -1205	FL	4271' -1202
Pawnee	4366' -1302	-1	4360' -1301	NA	NA
Fort Scott	4396' -1332	FL	4391' -1332	NA	NA
Cherokee	4407' -1343	FL	4402' -1343	+25	4437' -1368
Morrow	4693' -1629	+14	4702' -1643	+47	4745' -1676
Miss	4835' -1771	+19	4849' -1790	+58	4898' -1829

## Summary

The location for the LEE #4-28 well was found via 3-D seismic survey. The new well ran structurally as expected. Two drill stem tests were conducted, which did recover commercial quantities of oil from the Morrow Sandstone formation. After all the gathered data had been examined, the decision was made to run 5 1/2" production casing to further evaluate the Lee #4-28 well.

### Perfs

<b>Primary:</b>	<b>St. Louis</b>	<b>(4962' - 4966')</b>	<b>Not Tested</b>
<b>Secondary:</b>	<b>Morrow</b>	<b>(4825' - 4834')</b>	<b>DST #2</b>
<b>Before Abd.</b>	<b>St. Louis</b>	<b>(5071' - 5076')</b>	<b>Not Tested</b>
<b>Before Abd</b>	<b>Cherokee</b>	<b>(4412' - 4417')</b>	<b>Not Tested</b>

