# **Geological Report**

American Warrior, Inc.

Lee A #6-28

381' FSL & 335' FWL

Sec 28, T25s, R36w

Kearny County, Kansas



American Warrior, Inc.

## **General Data**

Well Data:	American Warrior, Inc. Lee A #6-28 381' FSL & 335' FWL Sec. 28, T25s, R36w Kearny County, Kansas API # 15-093-21952-00-00				
Drilling Contractor:	Duke Drilling Co. Rig #5				
Geologist:	Luke Thompson				
Spud Date:	January 12, 2017				
Completion Date:	January 26, 2017				
Elevation	3045' G.L. 3056' K.B.				
Directions:	From center of Lakin, KS at the intersection of Hwy 50 & Hwy 25 – Now go 7.2 miles South on Hwy 25 to RD. R – Now go South on Rd. R – East into				
Casing:	1817' 8 5/8" 5041' 5 ½"	#23 #17	Surface Casing Production Casing		
Samples:	3600' to RTD	10' W	0' Wet & Dry		
Drilling Time:	3500' to RTD				
Electric Logs:	Pioneer Energy Services "D. Schmidt" Stack Micro				
Drillstem Tests:	Five-Trilobite Testing "Bradley Walter"				
Problems:	none encountered				

# **Formation Tops**

Lee A #6-28 Sec. 28, T25s, R36w 381' FSL & 335' FWL

Heebner	3658' -602
Toronto	3671' -615
Lansing	3744' -688
Stark	4048' -992
Bkc	4224' -1168
Marmaton	4250' -1194
Pawnee	4348' -1292
Fort Scott	4376' -1320
Cherokee	4388' -1332
Morrow	4684' -1628
St. Gen	4838' -1782
RTD	5050' -1994
LTD	5050' -1994

### **Sample Zone Descriptions**

#### Toronto (3718', -662): Covered in DST #1

Limestone, tan, sub crystalline, chalky, occasional fossil fragments, poor scattered pinpoint vuggy porosity, slight odor, poor stain and saturation, fair flush cut. Gas 13 units hotwire.

#### Lansing H (3950', -894): Covered in DST #2

Limestone, tan, sub crystalline, scattered oolitic packstone, chalky, scat Dolomitic recrystallization, poor oolicastic and inter-crystalline porosity, strong odor, fair stain and saturation, good stream cut. Gas 14 units hotwire.

#### Marmaton (4295', -1239): Covered in DST #3

Limestone, cream/tan, oolitic packstone, slightly chalky, scattered poor oolicastic and pinpoint vuggy porosity, fair to poor odor, poor stain and saturation, slight show of free oil in porosity, poor slow stream cut. Gas 25 units hotwire.

#### Morrow (4814', -1758): Covered in DST #4

Sandstone, gray/green, very fine grain, sub round to sub angular, well sorted, fair cementation, medium hard, glauconitic, fair to good inter crystalline porosity, very strong odor, good show of free oil in porosity, fair stain, good saturation, slow string cut, fair amount of oil in cup with oil scum on water. Gas 100+ units hotwire.

#### St. Louis (4935', -1879): Covered in DST #5

Limestone, cream, oolitic packstone, chalky, poor oolicastic porosity, slight odor, poor stain and saturation, slow stream cut. Gas 48 units hotwire.

### **Drill Stem Tests**

Trilobite Testing "Bradley Walter"

### DST #1 Toronto

Interval (3675' – 3730') Anchor Length 55'

IHP - 1765 #

IFP - 30" – BOB 3 min

ISI - 45" – No Return

FFP - 45" - BOB 4 min

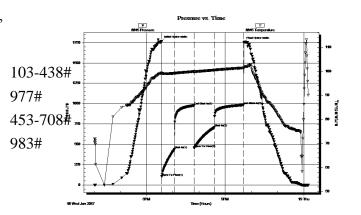
FSIP - 60" – No Return

FHP - 1755 #

BHT - 102° F

**Recovery:** 1570' SMCW (oil spots)

Puddle of oil in tool



### DST #2 <u>Lansing H</u>

Interval (3928' – 3980') Anchor Length 52'

IHP - 1895 #

IFP - 30" – BOB 6 min

ISI - 45" – No Return

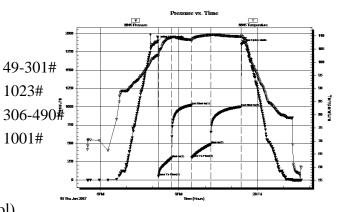
FFP - 45" - BOB 8 min

FSIP - 60" - No Return

FHP - 1850 #

BHT - 110° F

**Recovery:** 1070' SMCW (oil spots in tool)



## DST #3 <u>Marmaton</u>

Interval (4259' – 4333') Anchor Length 74'

IHP - 2100 #

IFP - 30" – BOB 9 min

ISI -45" -5" blow fell to 1"

FFP - 45" – BOB 8 min

FSIP -60" -9" blow fell to 3"

FHP - 2048 #

BHT - 113° F

**Recovery:** 560' GIP

130' CGO

120' GWOCM 30% O

300' SOMCW 3% O

330' W

#### DST #4 Morrow

Interval (4810' – 4845') Anchor Length 35'

IHP - 2411 #

IFP  $-30" - \frac{3}{4}"$  Blow

ISI - 30" – No Return

FFP - 10" – No Blow

FSIP - Pulled Tool

FHP - 2365 #

BHT - 117° F

**Recovery:** 10' M (with oil spots)

#### DST #5 St. Louis

Interval (4915' – 4950') Anchor Length 35'

IHP - 2486 #

ISI

IFP -30" – Built to  $1\frac{1}{2}$ "

- 30" – No Return 773#

FFP  $-45" - \frac{1}{2}"$  receded to Surface Blow 23-24#

FSIP - 45" - No Return

FHP - 2451 #

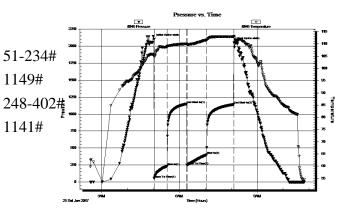
BHT - 119° F

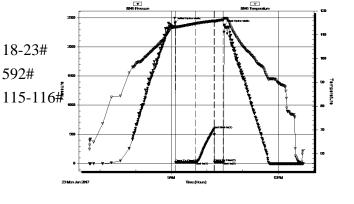
**Recovery:** 100' GIP

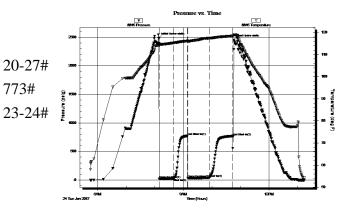
40' GO

40' GOCM

35% O







## **Structural Comparison**

	American Warrior, Inc.		American Warrior, Inc.		Merit Energy Corp
	Lee A #6-28	Lee A #5-28			Lee #1-28
	Sec. 28, T25s, R36w		Sec. 28, T25s, R36w	Sec. 28, T25s, R36w	
<u>Formation</u>	381' FSL & 335' FWL		1311' FSL & 335' FWL		330' FSL & 2970' FEL
Heebner	3658' -602	+4	3674' -606	+23	3694' -625
Lansing	3744' -688	0	3756' -688	+27	3776' -715
Stark	4048' -992	+4	4064' -996	+39	4100' -1031
BKC	4224' -1168	+4	4240' -1172	+35	4272' -1203
Marmaton	4250' -1194	+2	4264' -1196	+31	4294' -1225
Pawnee	4348' -1292	+6	4366' -1298	+37	4398' -1329
Fort Scott	4376' -1320	+8	4396' -1328	+39	4428' -1359
Cherokee	4388' -1332	+7	4407' -1339	+36	4437' -1368
Morrow	4684' -1628	-1	4695' -1627	+48	4745' -1676
Miss	4838' -1782	+13	4863' -1795	+145	4906' -1927

## **Summary**

The location for the Lee A #6-28 well was found via 3-D seismic survey. The new well ran structurally as expected. Five drill stem tests were conducted, two of which recovered commercial quantities of oil. After all the gathered data had been examined, the decision was made to run  $5 \frac{1}{2}$ " casing to further evaluate the Lee A #6-28 well.

## **Perforations**

**Primary:** St. Louis (4935' – 4945')

**Secondary: Marmaton** (4287' – 4292')

Before Abandonment: Lansing H (3950' – 3962')

Morrow (4808' – 4816')

(Morrow, tight, shut in never broke over, lower pressure)

Respectfully Submitted,

Lukas Thompson American Warrior, Inc.