# **Geological Report**

Weber #1-7
993' FNL & 1845' FWL
Sec. 7 T13s R19w
Ellis County, Kansas



American Warrior, Inc.

## **General Data**

Well Data:	American Warrior, Inc. Weber #1-7 993' FNL & 1845' FWL Sec. 7 T13s R19w Ellis County, Kansas API # 15-051-26817-0000
Drilling Contractor:	Discovery Drilling Co. Inc. Rig #3
Geologist:	Jason T Alm
Spud Date:	December 1, 2015
Completion Date:	December 8, 2015
Elevation:	2124' Ground Level 2132' Kelly Bushing
Directions:	Yocemento KS, West on Hwy 40 to 160 Ave, North 2 mi. to Feedlot Rd, East ¼ mi, South into location.
Casing:	231' 8 5/8" surface casing 3948' 5 1/2" production casing
Samples:	10' wet and dry, 3050' to RTD
Drilling Time:	3150' to RTD
Electric Logs:	Pioneer Energy Services "Dan Schmidt" CNL/CDL, DIL, MEL, BHCS
Drillstem Tests:	Four, Trilobite Testing, Inc. "Ray Schwager"
Problems:	None
Remarks:	None

## **Formation Tops**

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	American Warrior, Inc.
	Weber #1-7
	Sec. 7 T13s R19w
Formation	993' FNL & 1845' FWL
Anhydrite	1470', +662
Base	1514', +618
Topeka	3187', -1055
Heebner	3422', -1290
Toronto	3443', -1311
Lansing	3463', -1331
BKC	3712', -1580
Marmaton	3756', -1624
Conglomerate Sand	3782', -1650
Arbuckle	3858', -1726
LTD	3949', -1817
RTD	3950', -1818

## **Sample Zone Descriptions**

#### LKC "C" zone

#### (3495', -1363): Covered in DST #1

Ls – Fine crystalline, oolitic with poor to fair oolicastic porosity, light to fair oil stain with light scattered saturation, show of free oil, light odor, dull yellow fluorescents.

#### LKC "D" zone

#### (3515', -1383): Covered in DST #1

Ls – Fine to sub-crystalline, oolitic with poor oomoldic and intercrystalline porosity, light to fair oil stain with very scattered light saturation, slight show of free oil, very light odor, dull yellow fluorescents.

#### LKC "E" zone

#### (3538', -1406): Covered in DST #2

Ls – Fine crystalline, micro-oolitic with fair pinpoint oomoldic porosity, light to fair oil stain with light spotted saturation, slight show of free oil when broken, light odor, dull yellow fluorescents.

#### LKC "J" zone

#### (3643', -1511): Covered in DST #3

Ls – Fine to sub-crystalline, oolitic with fair oomoldic and intercrystalline porosity, light heavy oil stain with light to fair saturation, slight show of free oil, fair odor, light yellow fluorescents.

#### Conglomerate Sand (3782', -1650): Covered in DST #4

Ss – Quartz, clear, fine to coarse grained, poor to very poorly sorted, fair to poorly cemented, sub-rounded to sub-angular with poor to good inter-granular porosity in cluster, fair to good show of free oil, light to very good oil stain and saturation in cluster, fair show of free oil on cup, good odor, light spotted yellow fluorescents.

#### **Drill Stem Tests**

Trilobite Testing, Inc. "Ray Schwager"

637 #

#### DST #1 LKC "C-D" zones

Interval (3485' – 3530') Anchor Length 45'

IHP - 1651 #

IFP -30" – Built to  $\frac{1}{4}$  in. 19-25 #

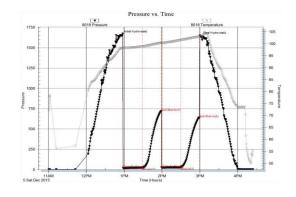
ISI – 30" – Dead 716 #

FFP - 30" - Built to ¼ in. 25-30 #

FSI -30" – Dead

FHP - 1634 # BHT - 102°F

Recovery: 20' SOCM 2% Oil



#### DST #2 LKC "E-F" zones

Interval (3525' – 3555') Anchor Length 30'

IHP - 1657 #

IFP - 30" - W.S.B. 18-18 #

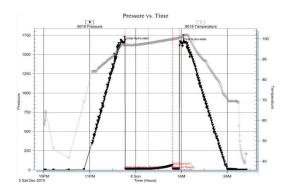
ISI – 30" – Dead 64 #

FFP - 10" - Dead 18-19 #

FHP - 1647 #

BHT  $-100^{\circ}$ F

Recovery: 1' Mud



## DST #3 LKC "J-L" zones

Interval (3640' – 3708') Anchor Length 68'

IHP - 1715 #

IFP -45" – Built to 4 in. 22-31 #

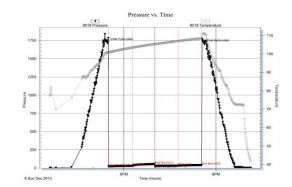
ISI – 45" – Dead 55 #

FFP - 45" - Built to 1 ½ in. 24-32 # FSI - 45" - Dead 41 #

FSI – 45" – Dead FHP – 1698 # BHT – 110°F

Recovery: 150' GIP

30' MGO 65% Oil 10' MGO 75% Oil



#### **DST #4** Conglomerate Sand

Interval (3767' – 3809') Anchor Length 42'

IHP - 1763 #

IFP – 1/03 #
IFP – 15" – B.O.B. 4 min. 81-169 #

ISI -30" – Built to ½ in. 996 #

FFP - 15" - B.O.B. 4 min. 171-242 # FSI - 30" - Built to ½ in. 913 #

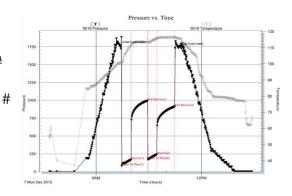
FSI -30" – Built to ½ in. FHP -1739 #

BHT – 116°F

Recovery: 145' GIP

525' GCO

63' MGO 50% Oil



## **Structural Comparison**

	American Warrior, Inc.	Graham Michaelis Corp		Petroleum, Inc.	
	Weber #1-7	Weber #1-7		Amrein #2	
	Sec. 7 T13s R19w	Sec. 7 T13s R19w		Sec. 6 T13s R19w	
Formation	993' FNL & 1845' FWL	SW SW NW		E2 SW SW	
Anhydrite	1470', +662	NA	NA	1514', +657	(+5)
Base	1514', +618	NA	NA	1558', +613	(+5)
Topeka	3187', -1055	3178', -1043	<b>(-12)</b>	3225', -1054	<b>(-1)</b>
Heebner	3422', -1290	3416', -1281	<b>(-9</b> )	3461', -1290	FL
Toronto	3443', -1311	3438', -1303	(-8)	NA	NA
Lansing	3463', -1331	3458', -1323	(-8)	3503', -1332	(+1)
BKC	3712', -1580	3700', -1565	(-15)	3744', -1573	<b>(-7)</b>
Marmaton	3756', -1624	3750', -1615	<b>(-9</b> )	NA	NA
Cong Sand	3782', -1650	Not Present	NP	3846', -1673	(+23)
Arbuckle	3858', -1726	Not Present	NP	3875', -1704	(-22)

## **Summary**

The location for the Weber #1-7 well was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Four Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Conglomerate Sand. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Weber #1-7 well.

### **Recommended Perforations**

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Conglomerate Sand (3	3786' – 3794')	<b>DST #4</b>
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#### **Before Abandonment:**

LKC "J"	(3612' – 3615')	<b>DST #3</b>
LKC "C"	(3499' – 3502')	<b>DST #1</b>
	(3505' – 3509')	

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.