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American Warrior Inc. Eulert #20-35 NW-NE-NW-SW (2470' FSL & 720' FWL) Section 35-11s-15w Russell County, Kansas

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### 5 1/2" Production Casing Set

Contractor: Duke Drilling Co. (rig #8)

Commenced: July 10, 2014

Completed: July 17, 2014

**Elevation:** 1824' K.B., 1822' D.F., 1816' G.L.

Casing program: Surface; 8 5/8" @ 883'

Production, 5 1/2" @ 3386'

**Sample:** Samples saved and examined 2600' to the Rotary Total Depth.

**Drilling time:** One (1) foot drilling time recorded and kept 2600 ft. to the Rotary Total

Depth.

**Measurements:** All depths measured from the Kelly Bushing.

**Drill Stem Tests:** There were one (1) Drill Stem Tests ran by Trilobite Testing Co.

Electric Log: By Pioneer Energy Services; Dual Induction, Dual Compensated

Density/Neutron, and Micro.

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	883	+941
Base Anhydrite	919	-905
Topeka	2666	-842
Heebner	2917	-1093
Toronto	2938	-1114
Lansing	2971	-1147
Base Kansas City	3243	-1419
Arbuckle	3273	-1449
Rotary Total Depth	3386	-1562
Log Total Depth	3387	-1563

(All tops and zones corrected to Electric Log Measurement)

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# SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

# **TOPEKA SECITON**

2701-2708'	Limestone, gray, white, finely crystalline, fossiliferous, chalky, questionable stain, no show of free oil and no odor in fresh samples.
2847-2867'	Limestone, tan, brown, finely crystalline, fossiliferous, granular in part, chalky in part, trace brown stain, no show of free oil and no odor in fresh samples.
2880-2900'	Limestone, tan, finely crystalline, few medium crystalline, scattered inter- crystalline porosity, dark brown and black stain, trace of free oil and faint odor in fresh samples.

# **TORONTO SECTION**

2938-2950' Limestone, white/tan, finely crystalline, fossiliferous, slightly chalky, poor visible porosity, poor stain, show of free oil and no odor in fresh samples.

## **LANSING SECTION**

2971-2980'	Limestone, tan, gray/cream, fossiliferous, poor visible porosity; light brown stain, trace of free oil and faint odor in fresh samples.
2998-3006'	Limestone, tan, finely crystalline, sub-oomoldic, oolitic, scattered sub-oomoldic, trace of brown stain, weak show of oil and faint odor in fresh samples.
3010-3020'	Limestone, as above, increase in stain, show of free oil and odor in samples
3038-3050'	Limestone, white/gray, oolitic/fossiliferous, poor visible porosity, brown and black stain, trace of free oil and no odor in fresh samples.
3058-3064'	Limestone, as above, chalky poor to fair porosity, brown and dark brown stain, show of free oil and faint odor in fresh samples.
3070-3080'	Limestone, cream, shite, oolitic, oomoldic, fair oomoldic porosity, poor spotty stain, trace of free oil and questionable odor in fresh sample.
3110-3120'	Limestone, tan, fossiliferous, chalky, poorly developed porosity; questionable stain, now show of free oil and no odor in fresh samples.
3130-3140'	Limestone, cream, tan, finely crystalline, fossiliferous, poor to fair porosity; dark brown spotty stain, trace of free oil and no odor in fresh samples.

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Limestone, tan, oolitic, chalky, poorly developed porosity, gray and brown stain and saturation, show of free oil and questionable odor in fresh samples.
Limestone, gray, cream finely crystalline, oolitic, poor visible porosity, trace brown stain, no show of free oil and questionable odor in fresh samples.
Limestone, white, finely crystalline, few fossiliferous, chalky, poor visible porosity, questionable stain, no show of free oil and no odor in fresh

#### **ARBUCKLE SECTION**

Dolomite, cream, white, finely crystalline, sucrosic in part, scattered

porosity, brown stain, and saturation, trace of free oil and faint odor.

3280-3286' Dolomite, tan, finely crystalline, sucrosic, few medium crystalline, fair to good inter-crystalline and pinpoint type porosity, brown stain and

saturation, show of free oil and fair odor in fresh samples.

<u>Drill Stem Test #1</u> 3218-3286

Times: 30-30-30-45

Blow: Strong

samples.

Recovery: 509' clean oil

63' slightly oil cut mud (10% oil; 90% mud)

Pressures: ISIP 1052 psi

FSIP 1043 psi IFP 36-116 psi FFP 127-200 psi HSH 1633-1511 psi

Dolomite, tan, medium crystalline, sucrosic in part; fair to good intercrystalline porosity, fair stain and saturation, show of free oil and good

odor in fresh samples.

3310-3330' Dolomite, white, cream, medium crystalline, sucrosic, fair inter-

crystalline; dark brown stain, show of free oil and faint/fair odor in fresh

samples, plus white chert.

3330-3350' Dolomite, as above.

3350-3370' Dolomite, as above, increasingly sandy, poor to fair porosity, trace poor

stain, no show of free oil and no odor in fresh samples.

3370-3386' Dolomite, as above, plus white chert and white chalk, no shows.

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Rotary Total Depth: 3386 Log Total Depth: 3387

### **Recommendations:**

5 ½ production casing was set and cemented on the American Warrior Inc., Eulert #20-35.

Respectfully Submitted,

James C. Musgrove and Adam Folk Petroleum Geologist