#### JAMES C. MUSGROVE

Petroleum Geologist 212 Main Street P.O. Box 215 Claflin, KS 67525

Office (620) 588-4250

≺ '

Res. Claflin (620) 587-3444

American Warrior Inc. Volkland #5-32 SE-SW-NW-SE (1425' FSL & 2100' FEL) Section 32-18s-9w Rice County, Kansas Page 1

### **Dry and Abandoned**

Contractor:

Duke Drilling Co. (Rig #8)

Commenced:

August 24, 2013

Completed:

August 29, 2013

Elevation:

1729' K.B; 1723' D.F; 1721' G.L.

Casing program:

Surface; 8 5/8" @ 325'

Production; none.

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.

Formation Tests: There were two (2) Drill Stem Test ran by Trilobite Testing.

Electric Log:

By Pioneer; Dual Induction, Dual Compensated Porosity and Micro Log.

<u>Formation</u>	Log Depth	Sub-Sea Datum
Anhydrite	381	+1348
Base Anhydrite	396	+1333
Heebner	2747	-1018
Toronto	2770	-1041
Douglas	2781	-1052
Brown Lime	2873	-1144
Lansing	2900	-1171
Base Kansas City	3167	-1438
Conglomerate	3186	-1457
Arbuckle	3237	<b>-1508</b>
Rotary Total Depth	3325	-1596
Log Total Depth	3317	-1588
- THE COUNTY TO COUNTY TO THE PLANE AND THE PROPERTY OF THE P	Particular to the property of the particular to	CONTROL OF THE CONTRO

(All tops and zones corrected to Electric Log measurements).

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

## TOPEKA THROUGH DOUGLAS SECTION

2600-2873'

No shows of oil and/or gas was noted in the drilling of the

Topeka through Douglas Section.

American Warrior Inc.
Volkland #5-32
SE-SW-NW-SE (1425' FSL & 2100' FEL)
Section 32-18s-9w
Rice County, Kansas
Page 2

#### **LANSING SECTION**

2900-2906'	Limestone; cream, tan, finely crystalline, few fossiliferous/oolitic, poor visible porosity.
2920-2930'	Limestone; cream, white, gray, finely crystalline, oolitic, poor scattered intercrystalline porosity, chalky in part.
2938-2950'	Limestone; white, light gray, finely crystalline, oolitic, oomoldic, chalky, scattered porosity, no shows.
2958-2964'	Limestone; cream, tan, finely oolitic, poor intercrystalline porosity, trace stain, no free oil and no chalky odor.
2970-2982'	Limestone; as above, no shows.
2990-3010'	Limestone; cream, tan, finely crystalline, oolitic, chalky, oomoldic, good oomoldic porosity.
3047-3050'	Limestone; cream, tan, finely crystalline, oolitic, poor porosity, trace stain, no free oil and no odor.
3062-3074'	Limestone; cream, white, finely crystalline, oolitic, few oomoldic, poor porosity, trace stain, no free oil and no odor.
3071-3084'	Limestone; white, cream, fossiliferous/oolitic, few sub oomoldic, poor porosity, trace stain, no free oil and gassy odor.
3114-3130'	Limestone; as above, sub oomoldic, dark brown stain, no free oil and gassy odor in fresh samples.

# **CONGLOMERATE SECTION**

3181-3237' Varied colored chert in matrix of colored shales. Trace chalky and cherty limestone.

## **ARBUCKLE SECTION**

3237-3250'

Dolomite; cream, tan, fine and medium crystalline, poor intercrystalline porosity, golden brown to dark brown stain, show of free oil and good odor in fresh samples.

Delli Ctore Took #4	3180-3250'
Drill Stem Test #1	3100-3230

Times:

30-45-30-45

Blow:

Weak

Recovery:

30' mud

Pressures: ISIP

psi

psi

FSIP 195 psi IFP 60-69 psi FFP 50-49 psi

HSH 1555-1536

305

3250-3255'

Dolomite; tan, cream, finely crystalline, few medium crystalline, scattered porosity, golden brown and brown stain, trace of free

American Warrior Inc. Volkland #5-32 SE-SW-NW-SE (1425' FSL & 2100' FEL) Section 32-18s-9w Rice County, Kansas Page 3

oil and faint odor in fresh samples.

**Drill Stem Test #2** 

3179-3255'

Times:

30-30-30-30

Blow:

Weak

Recovery:

15' very slightly oil cut watery mud

(2% oil, 8% water, 90% mud)

Pressures: ISIP

275 psi **FSIP 240** psi 17-24 psi IFP FFP 18-23 psi HSH 1540-1526 psi

3255-3280'

Dolomite; tan, cream, finely crystalline, poor porosity, trace stain,

trace free oil and faint odor plus chert, white, gray, boney.

3280-3300'

Dolomite; white, cream, tan, fine and medium crystalline, few sub

oomoldic, poorly developed porosity, no shows.

3300-3310'

Dolomite; tan, buff, cream, fine and medium crystalline, poor

porosity, dense, no shows, plus gray, white chert.

3310-3317'

Dolomite and chert as above.

**Rotary Total Depth** 

3325

Log Total Depth

3317

#### Recommendations:

The Volkland #5-32 was plugged and abandoned at the Rotary Total Depth 3325.

Respectfully submitted;

Kurt Talbott,

Petroleum Geologist