# Geological Report 

American Warrior, Inc.
O'Brate-FLB \#2-29
493' FNL \& 439' FWL
Sec 29, T25s, R31w
Finney County, Kansas


American Warrior, Inc.

## General Data

| Well Data: | American Warrior, Inc. O'Brate-FLB \#2-29 493' FNL \& 439' FWL Sec. 29, T25s, R31w Finney County, Kansas API \# 15-055-22440-00-00 |
| :---: | :---: |
| Drilling Contractor: | Duke Drilling Co. Rig \#5 |
| Geologist: | Luke Thompson |
| Spud Date: | October 6, 2016 |
| Completion Date: | October 18, 2016 |
| Elevation | $\begin{aligned} & 2844^{\prime} \text { G.L. } \\ & 2855^{\prime} \text { K.B. } \end{aligned}$ |
| Directions: | From the intersection of Highway 50 and Main St. in Pierceville, KS, go 3.8 miles south to Parallel Rd, go West 3 miles to trail, now go North 1.5 miles to white gate, go through gate and West 1 miles, go North about 2000', then east into location. |
| Casing: | $1660^{\prime}$ $85 / 8^{\prime \prime}$ $\# 23$ Surface Casing <br> $5023^{\prime}$ $51 / 2 \prime$ $\# 15.5$ Production Casing |
| Samples: | 3900' to RTD 10' Wet \& Dry |
| Drilling Time: | 3800' to RTD |
| Electric Logs: | Pioneer Energy Services "J. Long" Stack Micro |
| Drillstem Tests: | Two-Trilobite Testing "Jim Svaty" |
| Problems: | none encountered |

## Formation Tops

O'Brate-FLB \#2-29
Sec. 29, T25s, R31w 493' FNL \& 439' FWL

| Anhydrite | 1856 ${ }^{\text {+ }}$ 999 |
| :---: | :---: |
| Base | 1924' +931 |
| Heebner | 3932'-1077 |
| Lansing | 3982' -1127 |
| Stark | 4357' -1502 |
| Bkc | 4479'-1624 |
| Marmaton | 4502' -1647 |
| Pawnee | 4584'-1729 |
| Fort Scott | 4611' -1756 |
| Cherokee | 4622'-1767 |
| Morrow | 4776' - 1921 |
| Miss | 4800' -1945 |
| RTD | 5050' -2195 |
| LTD | 5050' -2195 |
|  |  |
|  |  |

## Sample Zone Descriptions

Marmaton (4505', -1650): Covered in DST \#1
Limestone, cream, sub to fine crystalline, chalky, slightly oolitic, poor, pinpoint vuggy porosity, very strong odor, slight show of free oil in porosity, poor to fair stream cut. Gas 100 units hotwire.

Fort Scott (4628’, -1773): Covered in DST \#2
Limestone, $\tan$ /cream, fine-sub crystalline, sub oolitic fossil hash, slightly chalky, slight odor, very poor fracture porosity, very slight show of free oil in porosity, fair stream cut. Gas 90 units hotwire.

## Pawnee (4590, - $\mathbf{1 7 3 5}$ ): Not Covered in DST

Limestone, cream/white, sub crystalline oolitic packstone, chalky, tight, very slight odor, poor oolicastic porosity, poor show of free oil in porosity, poor slow stream cut. Gas 75 units hotwire.

Atoka (4760, -1905): Not Covered in DST
Limestone, cream, fine crystalline, very slight odor, poor fracture \& pinpoint vuggy porosity, very slight show of free oil in porosity, slow string cut. Gas 95 units hotwire.

## Drill Stem Tests

Trilobite Testing
"Jim Svaty"

## DST \#1 Marmaton

Interval (4468' - 4535') Anchor Length 67'
IHP - 2250 \#
IFP - 30" - BOB in 9 min
ISI $-45^{\prime \prime}-$ WSB in 3 min
FFP - 30" - BOB 45 sec
FSIP - 60" - built to $13 / 4$ " in 5 min
FHP - 2185 \#
BHT $-117^{\circ} \mathrm{F}$
Recovery: 434' GIP

| $62^{\prime}$ GCOM | $10 \% \mathrm{O}$ |
| :--- | :--- |
| $62^{\prime} \mathrm{GOCM}$ | $15 \% \mathrm{O}$ |
| $62^{\prime} \mathrm{GOCM}$ | $25 \% \mathrm{O}$ |
| $14^{\prime} \mathrm{OCM}$ | $5 \% \mathrm{O}$ |

## DST \#1

Fort Scott
Interval (4602' - 4635') Anchor Length 33'
IHP - 2325 \#
IFP - $45^{\prime \prime}$ - built to $21 / 2 "$
ISI $-45^{\prime \prime}-$ No return
FFP $-45^{\prime \prime}-$ WSB in 14 min built to $1 "$
FSIP -45" - No return
FHP - 2206 \#
BHT $-119^{\circ} \mathrm{F}$
Recovery: 225’ OSMCW


## Structural Comparison



## Summary

The location for the O'Brate-FLB \#2-29 well was found via 3-D seismic survey. The new well ran structurally as expected. Two drill stem test were conducted, one of which recovered commercial quantities of oil. After all the gathered data had been examined, the decision was made to run $51 / 2$ " casing to further evaluate the O'Brate-FLB \#2-29 well.

## Perforations

## Primary:

Marmaton
Marmaton
(4567' - 4570')

Pawnee
(4586' - 4592')
Fort Scott
$\left(4615{ }^{\prime}-4617{ }^{\prime}\right)$

Before Abandonment: Atoka (4757'-4761')


Respectfully Submitted,

Lukas Thompson
American Warrior, Inc.

