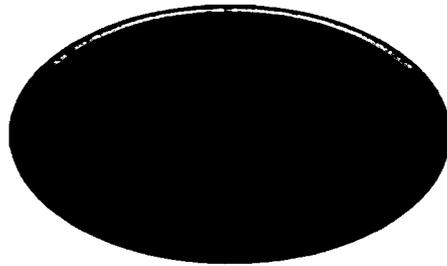


# **Geological Report**

American Warrior, Inc.  
**Brehm-Kleweno #1-19**  
1965' FNL & 1245' FWL  
Sec. 19 T18s R21w  
Ness County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
Brehm-Kleweno #1-19  
1965' FNL & 1245' FWL  
Sec. 19 T18s R21w  
Ness County, Kansas  
API # 15-135-25057-0000

Drilling Contractor: Discovery Drilling Co, Inc. Rig #3

Geologist: Jason Alm

Spud Date: June 3, 2010

Completion Date: June 10, 2010

Elevation: 2134' Ground Level  
2142' Kelly Bushing

Directions: Bazine KS, North on DD rd. 2 mi. East on 150 rd.  
½ mi. South into location.

Casing: 1410' 8 5/8" surface casing  
4234' 5 1/2" production casing

Samples: 10' wet and dry, 3500' to RTD

Drilling Time: 3500' to RTD

Electric Logs: Log-Tech, Inc. "Jared Long"

Drillstem Tests: Two, Trilobite Testing, Inc. "Brian Fairbank"

Problems: Could not get packers to seat on DST #1 causing  
misrun

Remarks: None

## Formation Tops

Formation	American Warrior, Inc. Brehm-Kleweno #1-19 Sec. 19 T18s R21w 1965' FNL & 1245' FWL
Anhydrite	1402', +740
Base	1436', +706
Heebner	3594', -1452
Lansing	3642', -1500
BKc	3962', -1821
Pawnee	4042', -1900
Fort Scott	4120', -1978
Cherokee	4140', -1998
Mississippian	4227', -2085
RTD	4235', -2093

## Sample Zone Descriptions

**Mississippian Osage (4227', -2085):**      **Covered in DST #1,2**  
 Dolo – Δ – Fine crystalline with fair vuggy and inter-crystalline porosity, heavy chert, triptolitic, heavily weathered, with good vuggy porosity, fair oil stain and saturation, show of free oil, good odor, fair yellow fluorescents. 18 units hotwire.

**Drill Stem Tests**  
Trilobite Testing, Inc.  
"Brian Fairbanks"

**DST #1**      Mississippian Osage  
Interval (4227' – 4235') Anchor Length 8'  
Mis-run, Packer Failure

**DST #2**      Mississippian Osage  
Interval (4176' – 4235') Anchor Length 59'

IHP	– 2139 #	
IFP	– 45" – B.O.B. 14 min.	110-170 #
ISI	– 45" – Dead	1316 #
FFP	– 45" – B.O.B. 20 min.	170-256 #
FSI	– 45" – Dead	1308 #
FHP	– 2037 #	
BHT	– 121°F	

Recovery:	70' GIP	
	5' CO	Gravity: 39° API
	45' MCO	65% Oil
	340' GW&HOCM	35% Oil, 10% Water
	120' MW	
	5' Mud	

**Structural Comparison**

	American Warrior, Inc. Brehm-Kleweno #1-19 Sec. 19 T18s R21w 1965' FNL & 1245' FWL	Mack Oil Co. Roth #1 Sec. 19 T18s R21w 2310' FNL & 500' FWL		Wild Boys & Silver Bullets Suppes U Bad Whisky #7 Sec. 19 T18s R21w 330' FNL & 2310' FEL	
<b>Formation</b>					
Anhydrite	1402', +740	1416', +734	(+6)	NA	NA
Base	1436', +706	NA	NA	NA	NA
Heebner	3594', -1452	NA	NA	3652', -1473	(+21)
Lansing	3642', -1500	3664', -1505	(+5)	3699', -1520	(+20)
BKc	3962', -1821	NA	NA	NA	NA
Pawnee	4042', -1900	4068', -1909	(+9)	4093', -1914	(+14)
Fort Scott	4120', -1978	4142', -1983	(+5)	4175', -1996	(+18)
Cherokee	4140', -1998	NA	NA	NA	NA
Mississippian	4227', -2085	4239', -2080	(-5)	4303', -2124	(+39)

## **Summary**

The location for the Brehm-Kleweno #1-19 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two drill stem tests were conducted one of which recovered commercial amounts of oil from the Mississippian Osage Formation. After all gathered data had examined the decision was made to run 5 1/2 inch production casing to further evaluate the Brehm-Kleweno #1-19 well.

## **Recommended Perforations**

**Primary:**

**Mississippian Osage**

**(4227' – 4232')**

**DST #2**

Respectfully Submitted,

Jason Alm  
Hard Rock Consulting, Inc.