# **Geological Report**

Doll-Mabel #1-18

196' FSL & 1909' FEL Sec. 18 T23s R23w Hodgeman County, Kansas



# **American Warrior, Inc.**

## **General Data**

Well Data:	American Warrior, Inc. Doll-Mabel #1-18 196' FSL & 1909' FEL Sec. 18 T23s R23w Hodgeman County, Kansas API # 15-083-21928-0000
Drilling Contractor:	Discovery Drilling Co. Inc. Rig #3
Geologist:	Jason T Alm, Marc A Downing
Spud Date:	September 1, 2016
Completion Date:	September 8, 2016
Elevation:	2425' Ground Level 2433' Kelly Bushing
Directions:	Jetmore KS, East 1 mile to SE 219 Rd. South 2 miles, West and South into location.
Casing:	218' 8 5/8" surface casing
Samples:	10' wet and dry, 4300' to RTD
Drilling Time:	3900' to RTD
Electric Logs:	Pioneer Energy Services "Jared Long" CNL/CDL, DIL, MEL
Drillstem Tests:	Two, Trilobite Testing, Inc. "Ken Swinney"
Problems:	None
Remarks:	DST #2 was pulled early due to such strong blows.

	American Warrior, Inc.	
	Doll-Mabel #1-18	
	Sec. 18 T23s R23w	
Formation	196' FSL & 1909' FEL	
Anhydrite	1618', +815	
Base	1647', +790	
Heebner	4022', -1589	
Lansing	4074', -1642	
BKC	4492', -2059	
Marmaton	4505', -2072	
Pawnee	4602', -2169	
Fort Scott	4638', -2205	
Cherokee	4665', -2232	
Basil Cher Sand	4746', -2313	
Mississippian	4783', -2350	
LTD	4845', -2412	
RTD	4846', -2413	

### **Formation Tops**

### **Sample Zone Descriptions**

Basil Cher Sand (4746', -2313): Covered in DST #1,2 Ss – Quartz, clear, fine too coarse grained, poorly sorted, poor to fair cementation, sub-rounded with fair inter-granular porosity, light spotted oil stain in cluster, slight show of free oil when broken, fair odor, fair cut fluorescents, 40-21 units hotwire.

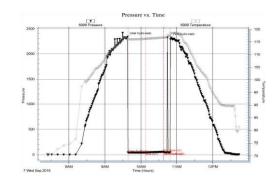
### **Drill Stem Tests**

Trilobite Testing, Inc.

"Ken Swinney"

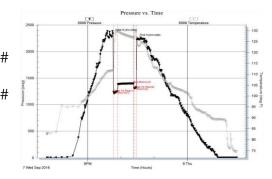
#### DST #1 Basil Cherokee Sand

Interv	al (4685' – 4746') Anch	nor Length 61'
IHP	- 2336 #	
IFP	- 30" - W.S.B.	42-43 #
ISI	– 30" – Dead	57 #
FFP	– 10" – Dead	44-46 #
FHP	- 2319 #	
BHT	- 118°F	



Recovery: 5' Mud

DST #	2 Basil Cherokee Sa	nd
Interv	al (4686' – 4767') Anchor L	ength 81'
IHP	- 2338 #	
IFP	- 5" - B.O.B. 30 sec.	1233-1250 #
ISI	– 30" – Dead	1399 #
FFP	-5" - B.O.B. 30 sec.	1306-1324 #
FHP	- 2243 #	
BHT	– 129°F	



Recovery: 2418' Muddy Water 95% Water

## **Structural Comparison**

	American Warrior, Inc.	American Warrior, Inc.		Rains & Williamson	
	Doll-Mabel #1-18	Mabel #1-19		Bailey #1	
	Sec. 18 T23s R23w	Sec. 19 T23s R23w		Sec. 20 T23s R23w	
Formation	196' FSL & 1909' FEL	2459' FNL & 1756' FEL		C NW NW	
Anhydrite	1618', +815	1624', +825	(-10)	1608', +821	(-6)
Base	1647', +790	1652', +797	(-7)	1630', +799	(-9)
Heebner	4022', -1589	4024', -1575	(-14)	4011', -1582	(-7)
Lansing	4074', -1642	4079', -1630	(-12)	4070', -1641	(-1)
ВКС	4492', -2059	4488', -2039	(-20)	NA	NA
Marmaton	4505', -2072	4500', -2051	(-19)	4495', -2066	(-6)
Pawnee	4602', -2169	4599', -2150	(-19)	4588', -2159	(-10)
Fort Scott	4638', -2205	4634', -2185	(-20)	4632', -2203	(-2)
Cherokee	4665', -2232	4662', -2213	(-19)	4657', -2228	(-4)
Basil Cher Sand	4746', -2313	4717', -2268	(-45)	Not Encountered	NE
Mississippian	4783', -2350	4787', -2338	(-12)	4744', -2315	(-35)

#### Summary

The location for the Doll-Mabel #1-18 was found via 3-D seismic survey. The new well ran structurally as expected via the survey. Two Drill Stem Tests were conducted, both of which were negative. After all gathered data had been examined the decision was made to plug and abandon the Doll-Mabel #1-18 well.

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.