# **Geological Report**

Mid-Continent Resources, Inc.

Humburg #3X

1700' FSL & 335' FEL

Sec. 25 T19s R21w

Ness County, Kansas



Mid-Continent Resources, Inc.

# **General Data**

Well Data:	American Warrior, Inc. Humburg #3X 1700' FSL & 335' FEL Sec. 25 T19s R21w Ness County, Kansas API # 15-135-25933-0000
Drilling Contractor:	Discovery Drilling Rig #3
Geologist:	Jason T Alm
Spud Date:	January 25, 2017
Completion Date:	February 1, 2017
Elevation:	2273' Ground Level 2281' Kelly Bushing
Directions:	Bazine KS, Intersection of Hwy 96 and Austin St 5 ½ mi south, West into location.
Casing:	221' 8 5/8" surface casing 4405' 5 1/2" production casing
Samples:	10' wet and dry, 3900' to RTD
Drilling Time:	3700' to RTD
Electric Logs:	None
Drillstem Tests:	One, Trilobite Testing, Inc. "Ray Schwager"
Problems:	None
Remarks:	None

# **Formation Tops**

	Mid-Continent Res. Inc.		
	Humburg #3X		
	Sec. 25 T19s R21w		
Formation	1700' FSL & 335' FEL		
Anhydrite	1487' +794		
Base	1520' +761		
Heebner	3741' -1460		
Lansing	3787' -1506		
BKC	4096' -1815		
Pawnee	4204' -1923		
Fort Scott	4284' -2003		
Cherokee	4305' -2024		
Mississippian	4375' -2094		
RTD	4406' -2125		

# **Sample Zone Descriptions**

### Mississippian Osage (4386', -2135): Covered in DST #1

 $\Delta$  – White to light gray, mostly fresh, slightly triptolic with scattered vuggy porosity, dolomite, tan, sucrosic crystalline with fair inter-crystalline porosity, light to fair oil stain and saturation, fair show of free oil, good odor, fair yellow spotted fluorescents, 35-70 units hotwire.

#### **Drill Stem Tests**

Trilobite Testing, Inc. "Ray Schwager"

#### **DST** #1 Mississippian Osage

Interval (4334' – 4401') Anchor Length 67'

- 2075 # IHP

-45" – Built to 5 ½ in. -45" – Dead 30-64 # IFP 1086#

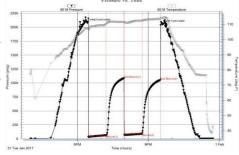
ISI

-45" – Built to 5 ½ in. 67-91# FFP 1053 #

-45" - Dead FSI

**FHP** - 2050 #

BHT -119°F



Recovery: 145' GIP

40' GCO

124' GMO 45% Oil

# **Structural Comparison**

Formation	Mid-Continent Res. Inc. Humburg #3X Sec. 25 T19s R21w 1700' FSL & 335' FEL	Mid-Continent Res. Inc. Humburg #1X Sec. 25 T19s R21w 2086' FSL & 554' FEL		Cities Service Humburg A #1 Sec. 25 T19s R21w C NE SE	
Anhydrite	1487' +794	1482' +797	(-3)	1478' +795	<b>(-1)</b>
Base	1520' +761	NA	NA	NA	NA
Heebner Lansing BKC Pawnee Fort Scott Cherokee Mississippian	3741' -1460 3787' -1506 4096' -1815 4204' -1923 4284' -2003 4305' -2024 4375' -2094	3734' -1455 3780' -1501 NA 4198' -1919 4276' -1997 4298' -2019 4368' -2089	(-5) (-5) NA (-4) (-6) (-5) (-5)	3731' -1458 3780' -1507 NA 4197' -1924 4277' -2004 4296' -2023 4366' -2093	(-2) (+1) NA (+1) (+1) (-1)

### **Summary**

The location for the Humburg #3X was found via 3-D seismic survey. The new well ran structurally as expected via the survey. One Drill Stem Test was conducted which recovered commercial amounts of oil from the Mississippian Osage Formation. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Humburg #3X well.

#### **Recommended Perforations**

**Primary:** 

Mississippian Osage (4381' – 4401') DST #1

**Before Abandonment:** 

Fort Scott (4290' – 4296') Not Tested

Respectfully Submitted,

Jason T Alm Hard Rock Consulting, Inc.