

Geological Report

Riedel #2-31

344' FSL & 893' FEL

Sec. 31 T13s R19w

Ellis County, Kansas



American Oil, LLC.

General Data

Well Data: American Oil, LLC.
Riedel #2-31
344' FSL & 893' FEL
Sec. 31 T13s R19w
Ellis County, Kansas
API # 15-051-26914-0000

Drilling Contractor: Discovery Drilling, Inc. Rig #1

Geologist: Jason T Alm

Spud Date: May 31, 2018

Completion Date: June 5, 2018

Elevation: 2287' Ground Level
2295' Kelly Bushing

Directions: Yocemento KS, South 3 mi to Victoria Rd. West 3
¼ mi. North into location.

Casing: 221' 8 5/8" surface casing
3982' 5 1/2" production casing

Samples: 10' wet and dry, 3250' to RTD

Drilling Time: 3150' to RTD

Electric Logs: Gemini Wireline "Casey Patterson"
CNL/CDL, DIL

Drillstem Tests: None

Problems: None

Remarks: Lost a little fluid when first cutting Arbuckle, mixed
hulls.

Formation Tops

	American Oil, LLC. Riedel #2-31 Sec. 31 T13s R19w 344' FSL & 893' FEL
Formation	
Anhydrite	1665' +730
Base	1611' +684
Topeka	3288' -993
Heebner	3532' -1237
Toronto	3552' -1257
Lansing	3574' -1279
BKC	3816' -1521
Arbuckle	3867' -1572
LTD	3983' -1688
RTD	3980' -1685

Sample Zone Descriptions

Topeka 30'	(3318' -1023): Not Tested Ls – Fine crystalline with good inter-crystalline and vuggy porosity, light to fair oil stain with light spotted saturation in part, slight show of free oil when broken, light odor, very dull yellow-green fluorescents.
Plattsmouth	(3490' -1195): Not Tested Ls – Fine crystalline, oolitic packstone with good oomoldic porosity, light brown oil stain in porosity with light saturation, slight show of free oil, good odor, bright yellow fluorescents.
LKC “C” zone	(3600' -1305): Not Tested Ls – Fine crystalline, oolitic with poor to fair inter-crystalline and oolitic porosity, light to fair oil stain with light spotted saturation, slight show of free when broken, light odor, dull yellow fluorescents.
LKC “E” zone	(3644' -1349): Not Tested Ls – Fine to sub-crystalline, oolitic in part, few pieces with poor oolitic porosity, light to good oil stain in porosity, slight show of free oil, very light odor.
LKC “F” zone	(3654' -1359): Not Tested Ls – Fine crystalline, oolitic with poor to fair oomoldic and inter-crystalline porosity, light to fair oil stain in part, slight show of free oil when broken, dull yellow-green fluorescents, very light odor.

LKC “J” zone (3748’ -1453): Not Tested
 Ls – Fine crystalline, oolitic packstone in part with fair to good oomoldic porosity, light to good oil stain in porosity, fair show of free when broken, light odor, many gas bubbles, bright yellow fluorescents.

LKC “L” zone (3800’ -1505): Not Tested
 Ls – Fine crystalline, oolitic packstone with poor oolitic and oomoldic porosity, light spotted oil stain in porosity, light spotted oil stain in porosity, very slight show of free oil when broken, no odor, very dull spotted yellow fluorescents, mostly dense.

Arbuckle (3867’ -1572): Not Tested
 Dolo – Fine to coarse rhombic crystalline with fair to good inter-crystalline and scattered vuggy porosity, light to good brown oil stain with light to fair spotted saturation, fair show of free oil when broken, good odor, light to fair spotted yellow-green fluorescents.

Structural Comparison

	American Oil, LLC. Riedel #2-31 Sec. 31 T13s R19w 344' FSL & 893' FEL	Texas Company Gus Riedel #7 Sec. 31 T13s R19w SW SE SE		Murfin Drilling Co. Riedel #15 Sec. 31 T13s R19w 330' FSL & 330' FEL	
Formation					
Anhydrite	1665' +730	1566' +724	(+6)	1570' +720	(+10)
Base	1611' +684	NA	NA	NA	NA
Topeka	3288' -993	3290' -1000	(+7)	3281' -991	(-2)
Heebner	3532' -1237	3531' -1241	(+6)	3533' -1243	(+6)
Toronto	3552' -1257	3531' -1263	(+6)	NA	NA
Lansing	3574' -1279	3574' -1284	(+4)	3576' -1286	(+7)
BKC	3816' -1521	3818' -1528	(+7)	3820' -1530	(+9)
Arbuckle	3867' -1572	3872' -1582	(+10)	3886' -1596	(+24)

Summary

The location for the Riedel #2-31 was found via sub-surface study. The new well ran structurally as expected via the survey. No Drill Stem Tests were conducted. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Riedel #2-31 well.

Recommended Perforations

Primary:

Arbuckle	3868' – 3872'	Not Tested
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Secondary:

LKC J zone	3752' – 3758'	Not Tested
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LKC C zone	3603' – 3609'	Not Tested
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Before Abandonment:

LKC F zone	3655' – 3662'	Not Tested
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LKC E zone	3645' – 3648'	Not Tested
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Plattsmouth	3496' – 3504'	Not Tested
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Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.