

Geological Report

Hammond E. #23-18
2140' FNL; 830' FEL
Sec. 8, T24S, R16E
Woodson County, Kansas
6/24/2018

Operator: Petroleum Resource Management Company
733 Highgrove Park
Houston, Texas 77024

Drilling Contractor: Leis Oil Services, Matt Leis, driller

Well-site Geologist: Julie Shaffer
480 Fox Rd
Toronto, Kansas 66777

Dates Drilled: June 21, 2018

Size Hole: 5 7/8"

Total Depth: 1102'

Elevation: 1067' (est.)

Drilling Fluid: Mud

Surface Casing: 42' of 7"

Electric Logs Run: CDL-CNL-DIL-TEMP.

Formation Tops: Formation tops were picked in the field

Rock Color Desc.: GSA rock color chart (dry cuttings)

Status: **OIL WELL**

Gas Shows: N/A

Oil Shows:

Upper Squirrel Sandstone	998-1009'	Very Good
Lower Squirrel Sandstone	1044-1052'	Good

Notes: Well cuttings were collected and bagged at the drill rig by the drillers. Samples of the select zones of interest were saved and reviewed in the laboratory under the black light and microscope.

- 0-996' Samples not examined
- 996-998' Oswego Limestone, light gray, very fine grain, locally medium crystalline, no visible porosity

Top of the Upper Squirrel Sandstone @ 998' (+69')

- 998-999' Sandstone, light gray, very fine grain, sub-rounded to round grains, abundant siltstone, minor petroliferous odor, minor mottled very pale yellowish-brown oil staining, <5% mottled to uniform medium-bright pale-yellow hydrocarbon fluorescence
- 999-1004' Sandstone (70%), moderate to dark yellowish-brown oil stained cuttings, good saturation, very fine grain, sub-rounded to round grains, well sorted, hi sphericity quartz, abundant siltstone, minor mica, 16+% porosity, friable, strong petroliferous odor, uniform bright brownish-yellow hydrocarbon fluorescence, no acid reaction; Shale (30%), light gray, silty, minor loose chips of limestone
- 1004-1006' Sandstone, dark yellowish-brown oil stained cuttings, excellent saturation, very fine grain, sub-rounded to rounded grains, well sorted, hi sphericity quartz, minor siltstone, minor mica, 18-20% porosity, highly friable, strong odor, uniform bright yellow to brownish-yellow hydrocarbon fluorescence, no acid reaction
- 1006-1009' Sandstone (70%), light gray with heavily mottled dark yellowish-brown oil staining and black thick oil in pore space, excellent saturation, very fine to fine grain, sub-rounded to rounded grains, moderately well sorted, hi sphericity quartz, minor siltstone, abundant mica, 16+% porosity, friable, strong odor, mottled bright brownish-yellow with bright speckled yellow hydrocarbon fluorescence, weak acid reaction; Shale (30%), medium-light gray, silty to sandy, micaceous, minor loose chips of limestone
- 1009-1010' Siltstone, light gray, minor black shale partings, minor sandstone, shaley, abundant mica, no odor, no oil show, no fluorescence
- 1010-1042' Samples not examined
- 1042-1044' Shale, medium gray, calcareous and pyritic

Top of the Lower Squirrel Sandstone @ 1044' (+23')

- 1044-1052' Sandstone, very dark yellowish-brown to black oil stained cuttings, excellent saturation, fine grain, sub-angular to sub-rounded grains, well sorted, hi sphericity quartz, minor silt, micaceous, 18-20% porosity, highly friable, good odor, speckled to heavily mottled bright yellowish-white hydrocarbon fluorescence, no acid reaction
- 1052-1058' Siltstone, light to medium gray, minor shale, minor very fine grained sandstone grains, abundant mica, very well cemented, no hydrocarbon odor, no oil show, minor speckled yellow fluorescence
- 1058-1102' Samples not examined

T.D. = 1102'

Julie Shaffer
Geologist