

PETROLEUM GEOLOGIST

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August 2, 2011

## **Geological Report**

At the operator's request, only an abbreviated summary of a geological report was prepared on the Sommers No 2.

Noble Petroleum, Inc. Sommers No. 2 3922' FSL & 2970' FEL Section 27-T24S-R4E Butler County, Kansas API #15-015-23,909

Contractor:

**C&G** Drilling Company

Spud Date:

July 2, 2011

Completed: Elevation:

August 2, 2011 1369 GL and 1378 KB

Surface Casing:

8 5/8" at 221' with 120 sacks.

Production Casing: 5 ½" at 2618' with 100 sacks of cement.

This hole was drilled to a total depth of 2619 feet. At this point a suite of Log-Tech open hole logs were run.

Log Tops:		×			
Iatan	1749	-371	Marmaton	2350	-972
Lansing	1847	-469	Cherokee Shale	2485	-1107
Kansas City	2125	-747	Mississippian	2545	-1167
Base Kansas City	2285	-907	LTD	2619	-1241

Geological supervision on this test was limited to 2440 to 2619, 10 dry samples were saved from 1600 to RTD and were deposited at the Kansas Geological Survey.

Mississippian sample description:

2545 to 2550 Chert white, 100% weathered with poor weathered porosity, kaolinite, chalky, no fluorescence, odor or shows.

2550 to 2556 Chert 40% gray and fresh, 60% white weathered, with some poor edgy and patchy weathered porosity, 8% of sample with fluorescence, very slight show light free oil and light stain, weak odor.

2556 to 2562 Chert 75% gray and fresh, 25% white to light gray, mostly poor weathered porosity, moderate amount of free oil, bleeding from tight rocks, some very light stain in weathered porosity, fair to good odor.

2562 to 2572 (Best show) Chert 65% gray and fresh, 35% white, cream & gray, weathered, poor to fair and some scattered good weathered and tripolitic porosity, 35% of sample with good fluorescence, slight show free oil, fair very light stain, fair to good odor. Slight decrease in fluorescence to 30% towards base of this zone and patchy fluorescence do to fresh and mottled weathered porosity network of rock.

2572 to 2583 Chert 60% gray and fresh, 40% gray to light gray mottled with some poor to fair solution vugs, fair patchy 15% fluorescence in edgy weathered porosity, fair odor.

2583 to 2610 Chert 90% blue-gray & fresh, 10% of sample carries edgy tripolitic porosity, which also carries spotty fluorescence, very slight show oil specks on break, weak odor. Shows and decrease rapidly to no shows with depth in this unit.

2610 to 2619 Chert, 80% white to pale blue-gray & fresh, 20% white weathered with poor to fair weathered and tripolitic porosity, no shows, no odor & no fluorescence.

No cores or drill stem tests were run. Log-Tech ran open hole logs on this hole. Based on samples shows and the structural position, it was recommended that 5 ½" production casing be set. It is my recommendation that the interval from 2550 to 2553 & 2557 to 2560 be perforated and treated. Although, the above perforations are above the best sample show (2562-2572), it is recommended that testing start at these shallower zones. If no commercial fluid rate is established at through these perforations, I recommend perforating 2562 to 2565.

Respectfully submitted,

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Geologist