

GEOLOGIC REPORT
For
Application for Compulsory Pooling

Trilogy Operating, Inc.
"Selman" No. 1
2170' FEL & 2310' FSL
Section 11, Unit "J", T-19-S, R-38-E
Lea County, New Mexico

INTRODUCTION

The Selman Prospect is located one mile south of the city limits of Hobbs, New Mexico. It is three miles northwest of and on trend with recently established Drinkard and Abo production in Sections 24 and 25, T-19-S, R-38-E, in wells on the "Emerald", "Ruby", "Diamond", Sapphire" and "Topaz" Leases. Situated on the eastern flank of the Hobbs (San Andres) Field, the Prospect is two miles north of the Nadine (Drinkard-Abo) Field and twelve miles northwest of the Tex-Mex, SE (Wichita Albany) Field. The initial wildcat well will be drilled to a depth deemed sufficient to test the Silurian.

STRUCTURE

The Selman Prospect is a low-relief anticline with approximately 40 ft. of closure at the level of the Wichita Albany. It is situated along the eastern flank of the giant Hobbs Field anticline. The prospect is based on the interpretation of seismic data combined with well control. A well drilled at the Proposed Location is expected to encounter the Tubb Formation at a structural elevation, which is 20 feet high to the same horizon in the Ralph Lowe No. 1 "Selman" well, located ½ mile southwest of the proposed location. The slight structural advantage is expected to be greater at the levels of the Drinkard and Abo. A deeper structural closure also exists at the Silurian horizon. It has approximately 90 feet of vertical closure, but only 40 acres of areal extent. The Selman No. 1 will be drilled approximately 1,000 to 1,500 feet below the top of the Wichita Albany to a depth sufficient to test the Silurian or Fusselman.

RESERVOIR DEVELOPMENT

The prospect lies on the northern edge of the Central Basin Platform, a shallow water Permian carbonate shelf. Drinkard reservoir facies consist of dolomitized pelletal grainstones and packstones, and intertidal dolomudstones. The same depositional facies exist in the Abo (Wichita Albany), and Blinbry (Upper Clearfork) formations. Dolomitic quartz sandstones and siltstones in the Tubb and Paddock (Glorieta) can also form commercial reservoirs. The Silurian reservoir is believed to consist of dolomitized shallow subtidal skeletal-pelletal wackestones.

Drinkard Reservoir - A few wells in the Nadine Field have been completed in the Drinkard reservoir. In most cases the Drinkard and Abo production has been commingled, so it is not possible to distinguish Drinkard production from Abo production. In the wells operated by Trilogy Operating, Inc., the primary producing zone is the Drinkard, with minor contributions per well from the Abo. In the Ralph Lowe, well several hydrocarbon shows were encountered in the Drinkard. Four intervals were drill stem tested. During the first three tests, the Drinkard yielded a few hundred feet of oil and gas cut drilling mud with no trace of water. The fourth test recovered 1,037 feet of slightly oil and gas cut drilling mud. If the Drinkard is encountered at an elevation structurally flat or slightly high to the Ralph Lowe well, it should be possible to fracture stimulate the Drinkard and establish commercial production.

Abo Reservoir - The Abo reservoir at Selman is expected to be similar to that at Nadine and "Emerald", two to three miles to the south. In the Nadine Field, production has been established throughout the entire Abo section (approximately 600' thick). In the Ralph Lowe, well seven drill stem tests were run within the Abo and Wolfcamp. All of the tests recovered gas, oil, or oil-cut drilling mud. None of the drill stem tests recovered any water. The Abo was perforated in two intervals from 7500' to 7578' (-3866' to -3964' subsea) and 7592' to 7645' (-3978' to -4031' subsea). After being treated with a total of 5,250 gallons of acid, the lower zone yielded 40 barrels of sulfur water during 10 hours of swab testing. The upper perforated interval was treated with a total of approximately 17,250 gallons of acid and yielded a total of 306 barrels of oil after swabbing 64 hours. The well was subsequently plugged on July 1, 1949.

Secondary Objectives - The Silurian is a deeper secondary objective for the prospect. The nearest production from the Silurian is from the Signal Oil and Gas No. 1 Ford well, located 4.5 miles to the East in Gaines County, Texas. The well produced only 70,000 BO from the Silurian. The productive porosity zone has been removed by erosion in the Ralph Lowe well (west of the Proposed Location) and is absent in all other wells west and south of the prospect. There is a genuine risk that the porosity zone may be absent, even though a structure may be present. In that case, the well may be drilled deeper to test the Fusselman Dolomite reservoir.

SUMMARY

Trilogy Operating, Inc. proposes to drill the Selman No. 1 wildcat well at the proposed location to a depth sufficient to test the Drinkard, Abo and Silurian (or Fusselman) Formations.



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