

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION TO CONSIDER:**

**CASE NO. 20253  
ORDER NO. R-20825**

**APPLICATION OF SEGURO OIL AND GAS, LLC FOR APPROVAL OF THE  
EXPANSION OF THE UNITIZED INTERVAL IN THE WEST SQUARE LAKE UNIT,  
EDDY COUNTY, NEW MEXICO**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing on June 27, 2019 at Santa Fe, New Mexico, before Examiners Leonard E. Lowe and Michael A. McMillan.

NOW, on this 3<sup>rd</sup> day of September 2019, the Division Director, having considered the testimony, the record, and the recommendations of Examiner McMillan,

**FINDS THAT:**

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) The applicant, Seguro Oil and Gas, LLC ("Seguro"; OGRID 372066) seeks an order approving a vertical expansion of the unitized interval in the West Square Lake Unit, the "Unit".
- (3) The Unit is comprised of 3,320 acres (more or less) of Federal and New Mexico State Trust lands situated in Eddy County, New Mexico:

**Township 16 South, Range 30 East, NMPM**

Section 26: SE/4, S/2 NE/4  
Section 32: E/2 SE/4, SE/4 NE/4  
Section 33: All  
Section 34: All  
Section 35: All  
Section 36: SE/4, N/2 SW/4, SE/4 SW/4

Township 17 North, Range 30 East, NMPM  
Section 2: N/2 N/2  
Section 4: E/2, NW/4, N/2 SW/4, and SE/4 SW/4

(4) The Commissioner of the New Mexico State Land Office (“SLO”) entered an appearance. No other party made an appearance or otherwise objected to the application.

(5) The Applicant presented testimony as follows:

a. Applicant is requesting a vertical expansion of the unitized interval to eliminate a depth severance.

b. The Unit is approximately 83 percent federal (BLM) acreage and 17 percent SLO acreage. The Unit is comprised of 25 tracts, five (5) SLO leases and five (5) BLM leases.

c. The Unitized Interval as defined in the Unit Agreement includes the Lower Grayburg and upper San Andres formations more particularly described as that interval underlying the Unit Area which is productive of Unitized Substances, the top of which having been heretofore found to occur in the Newmont Oil Company Ext “C” No. 1 Well [“Newmont Well”; 30-015-03980], located in Section 34, Township 16 South, Range 30 East NMPM, Eddy County, New Mexico, at an indicate depth of 2,818, feet as recorded on the Borehole Compensated Sonic Log, and the bottom of which has been heretofore found to occur in the Carmen 3 Federal Com No. Well No. 15H [API No. 30-015-40539], located at 330 feet NL and 330 feet FEL [Lot 1/ Unit A] of Section 3, Township 17 South, range 30 East, NMPM, Eddy County, New Mexico, at an indicated depth of 4,493 feet, as see on the Platform Express Compensated Neutron/ Three Detector Litho-Density Log.

d. Applicant has received approval by the working interest owners.

e. Applicant stated that the initial Unit from 2812 feet to 3112 feet as seen in the Newmont Well was created to cover the upper San Andres formation which was waterflooded.

f. Applicant stated that the BLM intended to grant preliminary approval, but they want to confer with the SLO. Applicant did not have preliminary approval from either the SLO or the BLM.

g. SLO is looking at the allocation formula for primary production from the expanded Unit.

h. Applicant stated that the allocation percentage is based on 33% of surface acreage, 33% from production between July 1982 and December 1982, and 33% based on cumulative production prior to January 1, 1960.

i. Applicant stated that the original waterflood interval was continuous throughout the Unit.

j. Applicant plans to develop the production in the middle and lower-middle San Andres formation.

k. A middle San Andres zone was continuous throughout the Unit and would make a good waterflood candidate, which had good shows in the Apache Corporation Thunderbird Unit Well No. 5H, ("Thunderbird Well"; API 30-015-44436).

l. A lower middle San Andres Pay zone exists within the Unit and could be a viable horizontal well target which had good shows in the Thunderbird Well, which is the ROZ.

m. The initial interval was partially flooded, but records are very difficult to determine.

n. Applicant will use water from the ROZ to waterflood the initial zone, because of the expected high water cut.

o. Applicant's engineer stated the viability of the waterflood projects and horizontal well target. Further, the produced water from the horizontal well target could provide makeup water for the water flood zones.

#### The Division Finds

(6) Subsequent to the Hearing, the Applicant provided a legal description of the different tracts in the Unit, and a cross-section which is more legible.

(7) Applicant provided a core analysis of the middle and lower middle San Andres zones which shows the two zones are viable targets.

(8) Applicant provided a more detailed description of the different estimated recoveries of the middle and lower middle San Andres intervals.

(9) Applicant provided an Authority for Expenditure (AFE) cost estimate for vertical wells.

(10) The ROZ is the residual oil zone which has a high initial water cut, which decreases as the well is produced, and the oil cut increases.

(11) Although the evidence provided at Hearing and supplemental exhibits added some validity to the Applicant's case, this application **should be dismissed**:



- a. Applicant testified the Unit was a voluntary Unit and was recognized as such by Order No. R-7375, as of October 12, 1983. However, Division records indicate that the Unit is a Statutory Unit approved by the Oil Conservation Division in Order No. R-7375-A, signed May 9, 1984. To obtain that approval as a Statutory Unit, the Unit was presented as for purposes of waterflooding.
- b. Applicant stated there are 37 producers but only one injection well, which does not indicate that the Unit remains as a valid waterflood. Applicant did not propose a specific waterflood pattern or specify which wells would be utilized for injection.
- c. Applicant said all working interest owners were supportive but did not show proof of notice to the cost interests and did not state that the overriding royalty interest owners were notified.
- d. Applicant did not present enough evidence that the waterflood remains viable and the Statutory Unit should remain in place.
- e. Conversely, Applicant did not propose the Statutory Unit be vacated or terminated and re-formed as a voluntary unit. There was not adequate evidence of approval from the owners of a voluntary unit. The major landowners (BLM/SLO) have not given preliminary approval.
- f. Applicant did not provide a recapitulation and a map showing the different tracts, and overall contribution of each tract to the Unit.
- g. Applicant's cross-section did not show that a barrier exists between the original Unitized interval and the lower middle San Andres Pay zone.
- h. Applicant needs to show where the horizontal pay zone could be reasonably expected to be located.
- i. Applicant also needs to show that a barrier exists between the lower middle San Andres Pay and the horizontal well target.
- j. Applicant did not provide data of the expected waterflood pattern, and the number of proposed wells.
- k. Applicant did not state how much makeup water will be needed for each waterflood zone.
- l. Applicant did not show how much each tract will contribute to the existing and future waterflood projects.
- m. Applicant needs to show the economic viability of the waterflood zones, including expected well costs, operation charges, and facilities and batteries associated with

the waterflood. Applicant should provide an expected Return of investment on the overall project, the individual waterflood zones, and the horizontal well zone.

(12) Applicant should meet with the Division prior to submitting the amended application to review the deficiencies in the Application.

**IT IS THEREFORE ORDERED THAT**

- (1) The application of Seguro Oil and Gas, LLC **is hereby denied** without prejudice.
- (2) Applicant shall meet the requirements of Findings paragraph (11) if it seeks to reapply for an amended application.
- (3) Jurisdiction is retained for the entry of further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in blue ink, appearing to read "ASD".

ADRIENNE SANDOVAL  
Director