

**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 FOR THE PURPOSE OF
CONSIDERING:**

*CASE NO. 12223
Order No. R-11246*

**APPLICATION OF POGO PRODUCING COMPANY FOR APPROVAL OF A
PILOT PRESSURE MAINTENANCE PROJECT AND TO QUALIFY THE
PROJECT FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE
ENHANCED OIL RECOVERY ACT, EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on August 5, 1999, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8th day of September, 1999, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Pogo Producing Company (Pogo), seeks authority to institute a pilot pressure maintenance project within an area encompassing 320 acres and comprised of four Federal leases, described as follows, by the injection of water into the West Sand Dunes-Delaware Pool through its Pure Gold "B" Federal Well No. 20 located 1260 feet from the South line and 250 feet from the East line (Unit P) of Section 20, Township 23 South, Range 31 East, NMPM, Eddy County, New Mexico:

<u>Federal Lease Name & Number</u>	<u>Lease Description</u>
Pure Gold "B" Federal (NM-38463)	SE/4 of Section 20
Pure Gold "A" Federal (NM-38464)	W/2 SW/4 of Section 21
Pure Gold "D" Federal (NM-40859)	NW/4 NW/4 of Section 28
Mobil Federal (NM-0281482-A)	NE/4 NE/4 of Section 29

(All in Township 23 South, Range 31 East)

- (3) The applicant presented testimony indicating that:
- a) Pogo is the owner of 100% of the working interest within the Pure Gold "A", "B" and "D" Federal Leases;
 - b) Pogo owns 46.06% of the working interest in the Mobil Federal Lease. The remaining 53.94% working interest is owned by Hunt, Southwest Royalty and Devon Energy Corporation;
 - c) Pogo is the operator of all four leases; and
 - d) the royalty interest is common throughout all of the leases.

(4) The West Sand Dunes-Delaware Pool was created by Division Order No. R-9709 dated August 25, 1992. The pool was discovered by Pogo Producing's Mobil Federal Well No. 1 located in Unit J of Section 29 and currently comprises portions of Sections 20, 21, 28, 29, 31, 32, and 33, Township 23 South, Range 31 East, and Sections 4, 5, and 9, Township 24 South, Range 31 East.

- (5) The applicant presented geologic evidence indicating that:
- a) the proposed injection interval, identified by the applicant as the "BC-4" interval, is located within the Brushy Canyon member of the Delaware formation;
 - b) the "BC-4" interval, which occurs at a depth of approximately 7,725 feet to 7,800 feet in the Pure Gold "B" Federal Well No. 20, is the main producing interval within the West Sand Dunes-Delaware Pool and is continuous across the proposed pilot project area; and
 - c) the only other interval currently being produced within the pilot project area is the "BC-2" interval. The "BC-2" interval may be in pressure communication with the "BC-4" interval due to fracture stimulations and, as a result, may benefit from pressure maintenance operations within the pilot project area.

(6) The applicant proposes to utilize eight producing wells identified as follows within the pilot project area:

<u>Well Name & Number</u>	<u>API Number</u>	<u>Well Location</u>
Pure Gold "B" Federal No. 3	30-015-27237	SW/4 SE/4 (Unit O) Section 20
Pure Gold "B" Federal No. 4	30-015-27238	SE/4 SE/4 (Unit P) Section 20
Pure Gold "B" Federal No. 5	30-015-27289	NE/4 SE/4 (Unit I) Section 20
Pure Gold "B" Federal No. 6	30-015-27290	NW/4 SE/4 (Unit J) Section 20
Pure Gold "A" Federal No. 2	30-015-27243	SW/4 SW/4 (Unit M) Section 21
Pure Gold "A" Federal No. 4	30-015-27388	NW/4 SW/4 (Unit L) Section 21
Pure Gold "D" Federal No. 2	30-015-26987	NW/4 NW/4 (Unit D) Section 28
Mobil Federal No. 4	30-015-27114	NE/4 NE/4 (Unit A) Section 29

(7) The producing wells within the pilot project area currently produce at an average rate of approximately 19 BOPD and 227 MCFGPD.

(8) As a result of implementing pressure maintenance operations, the applicant estimates that 127,000 barrels of oil and 177 MMCF of gas will ultimately be recovered from the pilot project area that would otherwise not be recovered, thereby preventing waste.

(9) The applicant estimates that \$150,000 in capital costs will be required to initiate pressure maintenance operations within the pilot project area.

(10) The proposed pilot pressure maintenance project should be approved.

(11) The applicant proposes to inject into the Pure Gold "B" Federal Well No. 20 through the perforated interval from approximately 7,695 feet to 7,774 feet. The evidence presented indicates that the Pure Gold "B" Federal Well No. 20 is cased and cemented adequately so as to preclude the migration of fluid from the proposed injection zone.

(12) There is a well located within the "area of review" of the Pure Gold "B" Federal Well No. 20 that is not adequately cemented so as to preclude migration of fluid from the proposed injection zone. Division records indicate that within the Kaiser-Francis Oil Company Pure Gold "A" Federal Well No. 1, located 800 feet from the South line and 1980 feet from the West line (Unit N) of Section 21, 9 5/8 inch production casing was set at 12,398 feet and cemented with 1,450 sacks of cement. Division records further indicate that the cement top is at 7,850 feet as determined by temperature survey.

(13) Prior to commencing injection operations into the Pure Gold "B" Federal Well No. 20, the applicant should be required to cement the production casing within the Pure Gold "A" Federal Well No. 1 across and above the proposed injection interval in a manner satisfactory to the supervisor of the Division's Artesia District Office.

(14) The injection of water into the Pure Gold "B" Federal Well No. 20 should be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at approximately 7,645 feet. The casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(15) Prior to commencing injection operations into the Pure Gold "B" Federal Well No. 20, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of the casing.

(16) The injection well or pressurization system should be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1,540 psi.

(17) The Division Director should have the authority to administratively authorize an increase in injection pressure upon a showing by the operator that such higher pressure will not result in fracturing of the injection formation or confining strata.

(18) The operator should give advance notice to the supervisor of the Division's Artesia District Office of the date and time i) remedial cement operations will be conducted on the Pure Gold "A" Federal Well No. 1, ii) injection equipment will be installed, and iii) the mechanical integrity pressure test will be conducted on the Pure Gold "B" Federal Federal Well No. 20, so these operations may be witnessed.

(19) The pressure maintenance project should be governed by Rules No. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(20) The oil allowable for the pilot pressure maintenance project should be established at 1,496 barrels of oil per day.

(21) The injection authority granted herein for the Pure Gold "B" Federal Well No. 20 should terminate one year after the effective date of this order if the operator has not commenced injection operations into the well; provided however the Division, upon written request by the operator, may grant an extension for good cause.

(22) The applicant seeks to qualify the pilot pressure maintenance project as an “Enhanced Oil Recovery Project” pursuant to the “Enhanced Oil Recovery Act” (Sections 7-29A-1 through 7-29A-5, NMSA 1978).

(23) The evidence presented indicates that the pilot pressure maintenance project meets all the criteria for certification.

(24) The certified project area should initially comprise the SE/4 of Section 20, W/2 SW/4 of Section 21, NW/4 NW/4 of Section 28, and NE/4 NE/4 of Section 29, all in Township 23 South, Range 31 East; provided however the “project area” and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

(25) To be eligible for the EOR tax rate, the operator should advise the Division of the date and time water injection commences within the pilot pressure maintenance project. At such time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(26) At such time as a positive production response occurs and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area benefiting from enhanced oil recovery operations and shall identify the specific wells eligible for the tax credit. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Pogo Producing Company, is hereby authorized to institute a pilot pressure maintenance project within an area encompassing 320 acres and comprised of four Federal leases, described as follows, by the injection of water into the West Sand Dunes-Delaware Pool through its Pure Gold “B” Federal Well No. 20 located 1260 feet from the South line and 250 feet from the East line (Unit P) of Section 20, Township 23 South, Range 31 East, NMPM, Eddy County, New Mexico:

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(All in Township 23 South, Range 31 East)

(2) The applicant shall take all steps necessary to ensure that the injected fluid enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production or plugged and abandoned wells.

(3) The injection of water into the Pure Gold "B" Federal Well No. 20 shall be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at approximately 7,645 feet. The casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(4) Prior to commencing injection operations into the Pure Gold "B" Federal Well No. 20, the applicant shall cement the production casing within the Kaiser-Francis Oil Company Pure Gold "A" Federal Well No. 1, located 800 feet from the South line and 1980 feet from the West line (Unit N) of Section 21, across and above the proposed injection interval in a manner satisfactory to the supervisor of the Division's Artesia District Office.

(5) Prior to commencing injection operations into the Pure Gold "B" Federal Well No. 20, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of the casing.

(6) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1,540 psi.

(7) The Division Director shall have the authority to administratively authorize an increase in injection pressure upon a showing by the operator that such higher pressure will not result in fracturing of the injection formation or confining strata.

(8) The operator shall give advance notice to the supervisor of the Division's Artesia District Office of the date and time i) remedial cement operations will be conducted on the Pure Gold "A" Federal Well No. 1, ii) injection equipment will be installed, and iii) the mechanical integrity pressure test will be conducted on the Pure Gold "B" Federal Federal Well No. 20, so these operations may be witnessed.

(9) The applicant shall immediately notify the supervisor of the Division's Artesia District Office of the failure of the tubing, casing or packer in the injection well or the leakage of water or oil from or around any producing or plugged and abandoned well within the project area, and shall take such steps as may be necessary and timely to correct the failure or leakage.

(10) The pilot pressure maintenance project is hereby designated the Pure Gold Federal Pressure Maintenance Project, and the applicant shall conduct injection operations in accordance with Division Rules No. 701 through 708, and shall submit monthly progress reports in accordance with Division Rules No. 706 and 1115.

(11) The oil allowable for the pilot pressure maintenance project is hereby established at 1,496 barrels of oil per day.

(12) The injection authority granted herein for the Pure Gold "B" Federal Well No. 20 shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the well; provided however the Division, upon written request by the operator, may grant an extension for good cause.

(13) The Pure Gold Federal Pressure Maintenance Project is hereby qualified as an "Enhanced Oil Recovery Project." The project area shall initially comprise the SE/4 of Section 20, W/2 SW/4 of Section 21, NW/4 NW/4 of Section 28, and NE/4 NE/4 of Section 29, all in Township 23 South, Range 31 East; provided however the project area and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

(14) To be eligible for the EOR tax rate, the operator shall advise the Division of the date and time water injection commences within the pressure maintenance project. At such time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(15) At such time as a positive production response occurs and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area actually benefiting from enhanced oil recovery operations and shall identify the specific wells eligible for the tax credit. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

(16) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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



S E A L

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Lori Wrotenbery
LORI WROTENBERY
Director