

**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. 11663
Order No. R-10721**

**APPLICATION OF GECKO INC. FOR A
PRESSURE MAINTENANCE PROJECT AND
QUALIFICATION FOR THE RECOVERED
OIL TAX RATE PURSUANT TO THE "NEW
MEXICO ENHANCED OIL RECOVERY ACT",
LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 21, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 19th day of December, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, GECKO, Inc., seeks authority to institute a pressure maintenance project on its State "35" Lease in Section 35, Township 16 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Strawn formation, Casey-Strawn Pool, through the perforated interval from approximately 11,583 feet to 11,640 feet in its Gecko State "35" Well No. 1 located at a surface location 434 feet from the North line and 1762 feet from the East line (Unit B), and at a bottomhole location 962 feet from the North line and 1761 feet from the East line (Unit B), both in Section 35, Township 16 South, Range 37 East.

(3) The applicant proposes that the project area comprise the NE/4 of Section 35, being a single state lease commonly owned and operated by GECKO, Inc.

(4) Within the proposed project area, the applicant currently operates two wells, the aforesaid Gecko State "35" Well No. 1, and the Gecko State "35" Well No. 2 located 1874 feet from the North and East lines (Unit G). Both the Gecko State "35" Well Nos. 1 and 2 are currently producing from the Casey-Strawn Pool at rates of approximately 15 BOPD and 65 BOPD, respectively.

(5) Applicant's geologic evidence and testimony indicate that:

- a) the Gecko State "35" Well Nos. 1 and 2 are producing from a small Strawn "algal mound" which encompasses the W/2 NE/4 of Section 35;
- b) this Strawn "algal mound" is a solution gas drive reservoir with good permeability as evidenced by the communication between the Gecko State "35" Well Nos. 1 and 2;
- c) a larger Strawn "algal mound", located primarily within the NW/4 of Section 36, extends into and encompasses the E/2 NE/4 of Section 35. This reservoir is currently being developed by the Gecko State "36" Well No. 2 located in Unit D of Section 36;
- d) the two "algal mounds" within the NE/4 of Section 35 are separate porosity pods and are not in communication.

(6) Applicant's engineering evidence and testimony indicate that:

- a) cumulative production from the Gecko State "35" Well Nos. 1 and 2 is approximately 141,000 barrels of oil as of July 1, 1996;
- b) the remaining primary reserves from the Gecko State "35" Well Nos. 1 and 2 are 6,000 and 87,000 barrels of oil, respectively;
- c) the remaining primary producing life of the Gecko State "35" Well No. 1 is approximately 11-13 months;
- d) the initiation of pressure maintenance operations at this time should result in the recovery of an additional 47,000 barrels of oil from this Strawn reservoir which may otherwise not be recovered, thereby preventing waste.

(7) Testimony indicates that due to the size and nature of this Strawn reservoir, applicant has no plans to drill additional wells.

(8) The proposed pressure maintenance project should be approved.

(9) Due to the size and location of this Strawn reservoir, the project area should be limited to the W/2 NE/4 of Section 35.

(10) The applicant submitted data on the proposed injection well, water wells in the area, and all other wells which penetrate the zone of interest within ½ mile of the proposed injection well. This data shows that wells in the area are cased and plugged so as to protect fresh water and prevent fluid migration from the injection zone, and includes testimony indicating no evidence of open faults or any other hydrologic connection between the injection zone and the fresh water resources in the area.

(11) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(12) The injection of water into the proposed injection well should be accomplished through 2 7/8-inch plastic-lined tubing installed in a packer set at approximately 11,500 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.

(13) Prior to commencing injection operations into the subject well, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(14) The injection well or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 2,316 psi.

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

(16) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

(17) The proposed pressure maintenance project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(18) The project allowable should be equal to top unit allowable for the Casey-Strawn Pool (445 barrels of oil per day) times the number of developed (production or injection) proration units within the project area, or 890 barrels of oil per day.

(19) The applicant further requested that the subject pressure maintenance project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(20) The evidence presented indicates that the subject pressure maintenance project meets all the criteria for approval.

(21) The approved "project area" should comprise the W/2 NE/4 of Section 35.

(22) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(23) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(24) The injection authority granted herein for the proposed injection well 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 thereof for good cause shown.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, GECKO, Inc., is hereby authorized to institute a pressure maintenance project on its State "35" Lease in Section 35, Township 16 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Strawn formation, Casey-Strawn Pool, through the perforated interval from approximately 11,583 feet to 11,640 feet in its Gecko State "35" Well No. 1 located at a surface location 434 feet from the North line and 1762 feet from the East line (Unit B), and at a bottomhole location 962 feet from the North line and 1761 feet from the East line (Unit B), both in Section 35, Township 16 South, Range 37 East.

(2) The project area for the subject pressure maintenance project shall comprise the W/2 NE/4 of Section 35.

(3) The operator shall take all steps necessary to ensure that the injected water 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.

(4) Injection shall be accomplished through 2 7/8 inch plastic-lined tubing installed in a packer set at approximately 11,500 feet; the casing-tubing annulus shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(5) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 2,316 psi.

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

(7) Prior to commencing injection operations, the casing shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(8) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure test in order that the same may be witnessed.

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

(10) The subject pressure maintenance project is hereby designated the Casey Strawn State "35" Pressure Maintenance Project, and the operator shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(11) The subject pressure maintenance project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(12) The approved "project area" shall comprise the W/2 NE/4 of Section 35.

(13) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(14) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(15) The project allowable shall be equal to top unit allowable for the Casey-Strawn Pool (445 barrels of oil per day) times the number of developed (production or injection) proration units within the project area, or 890 barrels of oil per day.

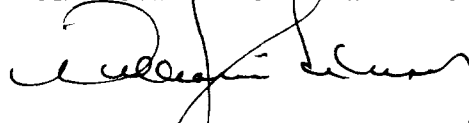
(16) The injection authority granted herein for the proposed injection well shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(17) Jurisdiction of this cause is 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.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LeMAY
Director