

**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. 11368
Order No. R-10474**

**APPLICATION OF PLAINS PETROLEUM
COMPANY FOR A PRESSURE MAINTENANCE
PROJECT, SPECIAL PROJECT ALLOWABLE,
AND A 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 August 24 and September 21, 1995, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 3rd day of October, 1995, 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, Plains Petroleum Company, seeks authority to institute a cooperative pressure maintenance project on portions of its E. C. Hill "B" Federal and Baylus Cade Federal Leases, said project area to comprise the SE/4 of Section 34 and the SW/4 of Section 35, both in Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the McKee formation of the Teague (Simpson) Pool through the following described wells which will be converted to injection:

<u>WELL NAME</u>	<u>WELL LOCATION</u>
Baylus Cade Federal No. 5	985' FSL & 1650' FWL (N) 35-23S-37E
E.C. Hill "B" Federal No. 13	Surface Location 947' FSL & 1361' FEL (O) 34-23S-37E Bottomhole Location 1120' FSL & 1380' FEL (O) 34-23S-37E

(3) The applicant proposes to inject into the McKee sand member from a depth of approximately 9475 feet to 9641 feet in the aforesaid E. C. Hill "B" Federal Well No. 13, and from a depth of approximately 9408 feet to 9536 feet in the aforesaid Baylus Cade Federal Well No. 5.

(4) The Teague (Simpson) Pool was discovered in 1950 and created by Division Order No. 850. The main producing area of the field, which is located in the SW/4 of Section 22, all of Section 27, the NE/4 of Section 34 and the NW/4 of Section 35, Township 23 South, Range 37 East, has been extensively developed since its discovery. Nearly all of these producing wells are depleted and have now been plugged and abandoned.

(5) The applicant has discovered an area of the Teague (Simpson) Pool not previously developed. The applicant's geologic evidence and testimony indicate that the SE/4 of Section 34 and the SW/4 of Section 35 are effectively isolated from the main portion of the Teague (Simpson) Pool by a system of faults which traverse the area in southwest to northeast and southeast to northwest directions.

(6) The applicant has drilled five wells within the proposed project area. The applicant further testified that no additional wells will be drilled within the project area.

(7) The applicant proposes to utilize the E. C. Hill "B" Federal Well Nos. 10 and 12, located respectively in Unit M of Section 35 and Unit P of Section 34, and its Baylus Cade Federal Well No. 6 located in Unit K of Section 35, as its producing wells within the project area.

(8) Applicant proposes to inject water, for the purpose of pressure maintenance, into three distinct McKee producing sands within the Teague (Simpson) Pool.

(9) The current average producing rate within the proposed project area is approximately 215 barrels of oil per day per well.

(10) According to applicant's engineering evidence and testimony, the reservoir pressure within this isolated portion of the Teague (Simpson) Pool is approximately at bubble point pressure.

(11) Applicant testified that the initiation of pressure maintenance operations at this time should result in the recovery of an additional 400,000 barrels of secondary oil.

(12) Initial project costs are estimated to be approximately \$214,000.

(13) The proposed pressure maintenance project should result in the recovery of otherwise unrecoverable oil from this portion of the field, thereby preventing waste.

(14) The United States Bureau of Land Management (USBLM) has approved the applicant's proposed cooperative Federal lease pressure maintenance project.

(15) The pressure maintenance project area should be limited to the SE/4 of Section 34 and the SW/4 of Section 35.

(16) The injection of water into the proposed injection wells should be accomplished through 2 3/8 inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations; the casing-tubing annulus in each well 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.

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

(18) The injection wells 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 1881 psi.

(19) 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.

(20) 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 tests in order that the same may be witnessed.

(21) 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.

(22) The project allowable should be equal to top unit allowable for the Teague (Simpson) Pool (275 barrels of oil per day) times the number of developed (production or injection) proration units within the project area. Unless additional producing or injection wells are drilled within the project area, the allowable should be established at 1,375 barrels of oil per day.

(23) The transfer of allowable between wells within the project area should be permitted.

(24) The injection authority granted herein for the wells described in Finding No. (2) above should terminate one year after the effective date of this order if the operator has not commenced injection operations into these wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(25) 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).

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

(27) The approved "project area" should initially comprise the SE/4 of Section 34 and the SW/4 of Section 35.

(28) 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.

(29) 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.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Plains Petroleum Company, is hereby authorized to institute a cooperative pressure maintenance project on portions of its E. C. Hill "B" Federal and Baylus Cade Federal Leases, said project area to comprise the SE/4 of Section 34 and the SW/4 of Section 35, both in Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the McKee formation of the Teague (Simpson) Pool through the gross interval from approximately 9,408 feet to 9,641 feet in the following described wells which will be converted to injection:

<u>WELL NAME</u>	<u>WELL LOCATION</u>
Baylus Cade Federal No. 5	985' FSL & 1650' FWL (N) 35-23S-37E
E.C. Hill "B" Federal No. 13	Surface Location 947' FSL & 1361' FEL (O) 34-23S-37E Bottomhole Location 1120' FSL & 1380' FEL (O) 34-23S-37E

(2) 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.

(3) The injection of water into the above-described injection wells shall be accomplished through 2 3/8 inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations; the casing-tubing annulus in each well shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

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

(5) The injection wells or pressurization system shall be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 1881 psi.

(6) The Division Director shall 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.

(7) 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 tests in order that the same may be witnessed.

(8) 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 any of the injection wells, 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.

(9) The subject pressure maintenance project is hereby designated the Hill-Cayless McKee 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.

(10) The project allowable shall be equal to top unit allowable for the Teague (Simpson) Pool (275 barrels of oil per day) times the number of developed (production or injection) proration units within the project area. Unless additional producing or injection wells are drilled within the project area, the allowable shall be established at 1,375 barrels of oil per day.

(11) The transfer of allowable between wells within the project area shall be permitted.

(12) 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).

(13) The approved "project area" shall initially comprise the SE/4 of Section 34 and the SW/4 of Section 35, Township 23 South, Range 37 East.

(14) 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.

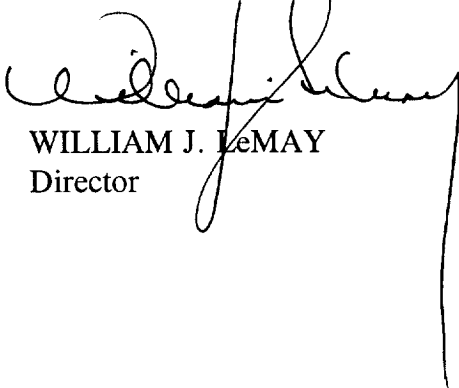
(15) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery 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.

(16) The injection authority granted herein for the injection wells described in Finding No. (2) shall terminate one year after the effective date of this order if the operator has not commenced injection operations into these wells, 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

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