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. 12685
ORDER NO. R-11674

APPLICATION OF BEACH EXPLORATION, INC. FOR APPROVAL OF A WATERFLOOD 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 July 12, 2001, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 19th day of October, 2001, 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) Division Cases No. 12684 and 12685 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Beach Exploration, Inc. ("Beach"), seeks authority to institute a waterflood project within its West High Lonesome Unit Area (being the subject of companion Case No. 12684) by the injection of water into the Penrose Sand member of the Queen formation, High Lonesome (Queen) Pool, Eddy County, New Mexico, through 18 initial injection wells shown on Exhibit "A" attached to this order.

(4) The applicant further seeks to qualify the waterflood project as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(5) Mr. Bill Taylor and Mr. Harvey Taylor ("the Taylors"), working interest owners in the SE/4 NW/4 of Section 19, Township 16 South, Range 29 East, NMPM, being Tract No. 11 of the West High Lonesome Unit, appeared at the hearing, cross examined Beach's witnesses and made a statement at the conclusion of proceedings.

(6) The Taylors do not oppose the proposed secondary recovery project.

(7) The West High Lonesome Unit is proposed to comprise the following-described acreage in Eddy County, New Mexico:

Township 16 South, Range 29 East, NMPM

Section 17:	S/2 NW/4, SW/4, W/2 SE/4
Section 18:	Lots 2 through 4, S/2 NE/4, SE/4, SE/4 NW/4, E/2 SW/4
Section 19:	E/2 NW/4, NE/4
Section 20:	W/2 NW/4, NE/4 NW/4, NW/4 NE/4

(8) The evidence presented demonstrates that the wells in the project area are in an advanced state of depletion.

(9) During the Phase I portion of the project, the applicant proposes to utilize an 80-acre five-spot injection pattern with 13 injection wells and 14 producing wells.

(10) The applicant testified that the proposed secondary recovery project within the West High Lonesome Unit should result in the recovery of an additional 558,000 barrels of oil that would otherwise not be recovered, thereby preventing waste.

(11) Approval of the proposed waterflood project should result in the recovery of additional hydrocarbons from the Penrose Sand member of the Queen formation within the project area that may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(12) 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 to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(13) Injection into the wells shown on Exhibit "A" should be accomplished through 2 3/8 inch internally plastic-lined tubing installed in a packer located within 100 feet of the uppermost injection perforations or casing shoe. 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.

(14) Beach requested that it be authorized to inject into the wells shown on Exhibit "A" at a maximum surface injection pressure of 1100 psi.

(15) The Division normally approves a maximum surface injection pressure based upon a gradient of 0.2 psi per foot to the uppermost injection perforations. Utilizing this gradient, the proposed injection wells would normally be assigned maximum surface injection pressures ranging from 315 psi to 355 psi.

(16) Beach presented no step-rate test data or additional engineering evidence to demonstrate that its proposed maximum surface injection pressure will not cause fracturing of the injection formation or confining strata.

(17) The proposed injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 341 psi (based upon the average depth of injection for the wells shown on Exhibit "A").

(18) Prior to commencing injection operations, 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.

(19) The applicant identified two wells within the "area of review" that may not be adequately plugged so as to confine the injected fluid to the proposed injection interval.

(20) Prior to commencing injection operations into any injection well located within one-half mile of the following-described wells, the applicant should be required to re-enter and re-plug these wells in a manner that is satisfactory to the supervisor of the Division's Artesia District Office:

Well Name & Number	Well Location
George Atkins Iles No. 5	330' FSL & 1650' FEL, Unit O, Section 17, T-16S, R-29E
B. H. Nolan/George Atkins Iles No. 1	330' FSL & 330' FEL, Unit P, Section 17, T-16S, R-29E

(21) The operator should give advance notice to the supervisor of the Division's Artesia District Office of the date and time (i) injection equipment will be installed, (ii) the mechanical integrity pressure tests will be conducted on the proposed injection wells, and (iii) remedial plugging work will be conducted on the Iles Wells No. 1 and 5, so that these operations may be witnessed.

(22) The operator should immediately notify the supervisor of the Division's Artesia District Office of the failure of the tubing, casing or packer in any of the injection wells or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and should promptly take all steps necessary to correct such failure or leakage.

(23) The proposed waterflood project should be approved, and the project should be governed by Division Rules No. 701 through 708.

(24) The injection authority granted herein for each well shown on Exhibit "A" should terminate one year after the date of this order if the operator has not commenced injection operations into the well; however, the Division, upon written request by the operator, may grant an extension for good cause.

(25) The evidence presented demonstrates that:

(a) the application for approval of the proposed secondary recovery project has not been prematurely filed either for economic or technical reasons;

(b) the area affected by the proposed project has been so depleted by primary operations that it is prudent to apply secondary recovery techniques to maximize the ultimate recovery of crude oil from the pool; and

(c) the proposed secondary recovery project meets all the criteria for certification by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(26) The approved project area should initially comprise the entire West High Lonesome Unit, as described in Finding No. (7); 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.

(27) To be eligible for the EOR tax rate, the operator should advise the Division of the date water injection commences within the secondary recovery project. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(28) 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 the specific wells eligible for the EOR tax rate. 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) Beach Exploration, Inc., is hereby authorized to institute a waterflood project within its West High Lonesome Unit Area, described below, by the injection of water into the Penrose Sand member of the Queen formation, High Lonesome (Queen) Pool, Eddy County, New Mexico, in the 18 wells shown on Exhibit "A" attached to this order located in Sections 17, 18, 19 and 20, Township 16 South, Range 29 East, NMPM:

Township 16 South, Range 29 East, NMPM

Section 17:	S/2 NW/4, SW/4, W/2 SE/4
Section 18:	Lots 2 through 4, S/2 NE/4, SE/4, SE/4 NW/4, E/2 SW/4
Section 19:	E/2 NW/4, NE/4
Section 20:	W/2 NW/4, NE/4 NW/4, NW/4 NE/4

(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) Injection into each of the wells shown on Exhibit "A" shall be accomplished through 2 3/8 inch internally plastic-lined tubing installed in a packer located within 100 feet of the uppermost injection perforations or casing shoe. The

casing-tubing annulus 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) The injection wells 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 341 psi.

(5) The Division Director may 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.

(6) Prior to commencing injection operations, 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.

(7) Prior to commencing injection operations into any injection well located within one-half mile of the following-described wells, the applicant shall re-enter and re-plug these wells in a manner that is satisfactory to the supervisor of the Division's Artesia District Office:

Well Name & Number	Well Location
George Atkins Iles No. 5	330' FSL & 1650' FEL, Unit O, Section 17, T-16S, R-29E
B. H. Nolan/George Atkins Iles No. 1	330' FSL & 330' FEL, Unit P, Section 17, T-16S, R-29E

(8) The operator shall give advance notice to the supervisor of the Division's Artesia District Office of the date and time (i) injection equipment will be installed, (ii) the mechanical integrity pressure test will be conducted on the proposed injection wells, and (iii) remedial plugging work will be conducted on the Iles Wells No. 1 and 5, so that these operations may be witnessed.

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

(10) The waterflood project is hereby designated the West High Lonesome Unit Waterflood 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 injection authority granted herein for each well shown on Exhibit "A" shall terminate one year after the 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.

(12) The West High Lonesome Unit Waterflood Project is hereby certified as an "Enhanced Oil Recovery Project." The project area shall initially comprise the entire West High Lonesome Unit, described in Ordering Paragraph No. (1), 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.

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

(14) 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 the specific wells eligible for the EOR tax rate. 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.

(15) 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.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Lori Wrotenbery

LORI WROTENBERY
Director

SEAL

Exhibit "A"
Division Order No. R-11674
West High Lonesome Unit Waterflood Project
Approved Injection Wells

Well Name & Number	API Number	Well Location	Injection Interval	Packer Depth
Exxon Federal "A" No. 1	30-015-25983	2310' FNL & 330' FEL, Unit H, Section 18, T-16S, R-29E	1,714'-1,728'	1,664'
Exxon Federal "A" No. 2	30-015-26035	2310' FNL & 1650' FEL, Unit G, Section 18, T-16S, R-29E	1,702'-1,722'	1,652'
Exxon Federal "A" No. 3	30-015-26123	2410' FNL & 1932' FWL, Unit F, Section 18, T-16S, R-29E	1,645'-1,655'	1,595'
Exxon Federal No. 1	30-015-24345	660' FSL & 660' FEL, Unit P, Section 18, T-16S, R-29E	1,722'-1,756'	1,672'
Exxon Federal No. 2	30-015-25375	330' FSL & 1650' FEL, Unit O, Section 18, T-16S, R-29E	1,713'-1,750'	1,663'
Exxon Federal No. 6	30-015-25672	560' FSL & 2035' FWL, Unit N, Section 18, T-16S, R-29E	1,708'-1,727'	1,658'
Rosewood State "18" No. 1	30-015-25733	1650' FSL & 330' FWL, Unit L, Section 18, T-16S, R-29E	1,576'-1,596'	1,526'
Shiloh Federal No. 3	30-015-25527	2310' FNL & 988' FWL, Unit E, Section 17, T-16S, R-29E	1,730'-1,758'	1,680'
Shiloh Federal No. 4	30-015-25606	2210' FNL & 1650' FWL, Unit F, Section 17, T-16S, R-29E	1,752'-1,764'	1,702'
Iles Federal No. 2	30-015-02752	1650' FSL & 2310' FWL, Unit K, Section 17, T-16S, R-29E	1,700'-1,812'	1,650'
Iles Federal No. 3	30-015-02759	330' FNL & 2310' FWL, Unit C, Section 20, T-16S, R-29E	1,590'-1,820'	1,580'
Iles Federal No. 4	30-015-01438	1650' FSL & 2310' FEL, Unit J, Section 17, T-16S, R-29E	1,740'-1,800'	1,717'
Iles Federal No. 8	30-015-25788	2310' FSL & 1950' FWL, Unit K, Section 17, T-16S, R-29E	1,740'-1,764'	1,690'
Renee Federal No. 1	30-015-25363	660' FSL & 330' FWL, Unit M, Section 17, T-16S, R-29E	1,729'-1,750'	1,679'
Renee Federal No. 3	30-015-25495	1650' FNL & 330' FWL, Unit E, Section 20, T-16S, R-29E	1,774'-1,793'	1,724'
Federal "19" No. 1	30-015-25392	660' FNL & 660' FEL, Unit A, Section 19, T-16S, R-29E	1,746'-1,772'	1,696'
Big Mac Federal No. 1	30-015-02758	660' FNL & 3300' FEL, Unit C, Section 19, T-16S, R-29E	1,683'-1,699'	1,633'
Coastal Federal No. 1	30-015-25304	1980' FNL & 1980' FEL, Unit G, Section 19, T-16S, R-29E	1,747'-1,797'	1,697'