



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

February 18, 1999

Shahara Oil, LLC
207 W. McKay
Carlsbad, New Mexico 88220

Attn: Mr. Perry L. Hughes

Re: Request for Extension of Implementation Period for Division Orders No R-11027 and R-11027-A.

Dear Mr. Hughes:

My staff has reviewed your request to extend the implementation period on the above referenced Division Orders. Providing that all conditions contained in the orders remain the same and there are no wells drilled in the area of review, the expiration date of the R-11027 is hereby extended to October 28, 2000.

In the event any drilling activity occurs in the subject area of review, Shahara Oil, LLC will notify the supervisor of the Artesia District office and the Division office. An administrative review of the permit will be conducted, and the status of the permit will be determined.

All other provisions and conditions of Division Orders No R-11027 and R-11027-A, and Division Rules 706 and 1120 shall remain in full force and effect.

Sincerely,

A handwritten signature in cursive script that reads "Lori Wrotenbery, Director".

Lori Wrotenbery
Director

LS/MWA/kv

cc: Oil Conservation Division - Artesia
Case No. 11973, WFX-756

Shahara Oil, LLC

207 W. McKay ♦ Carlsbad, NM 88220 ♦ 505-885-5433 ♦ Fax 505-885-4989

December 29, 1999

JAN - 6 2000

Mr. David Catanach
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

RE: Order Nos. R-11027, R-11027A, and WFX-756

Dear Mr. Catanach:

Under the terms of the Division's original Order No. R-11027 dated August 3, 1998, paragraph (18) on page 9 provided that

The injection authority granted herein for the injection wells shown on Exhibit "A" 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.

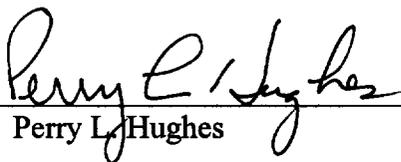
As you may recall, that Order also contained a provision directing Shahara to re-enter and replug five wells which called for subsequent review and later hearing. That part of the referenced Order was thereafter amended by the Division's Order No. R-11027-A dated April 5, 1999, and Administrative Order No. WFX-756 dated October 28, 1999.

With this brief history, and so that there may be no possibility of confusion, would you supplement the quoted paragraph (18) of the August 3, 1998 Order No. R-11027 by extending the date to one year after the date of the Administrative Order WFX-756 to October 28, 2000?

Should there be any problem in this regard, your prompt advice would be most appreciated so that the matter may be resolved.

Very truly yours,

SHAHARA OIL, LLC

By 
Perry L. Hughes

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. 11973
ORDER NO. R-11027

APPLICATION OF SHAHARA OIL L.L.C.
FOR A WATERFLOOD PROJECT AND
QUALIFICATION FOR THE RECOVERED
OIL TAX RATE PURSUANT TO THE "NEW
MEXICO 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 May 28 and June 11, 1998, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 3rd day of August, 1998, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

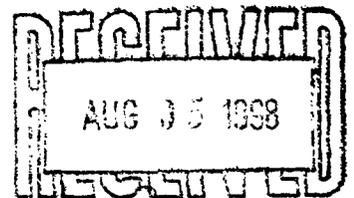
FINDS THAT:

- (1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.
- (2) The applicant, Shahara Oil, L.L.C. (Shahara), seeks authority to institute a waterflood project on its Beeson "F" Federal Lease, which comprises the following described 440 acres, more or less, in Eddy County, New Mexico, by the injection of water into the Queen, Grayburg and San Andres formations, Loco Hills Queen-Grayburg-San Andres Pool through twelve injection wells described on Exhibit "A" attached to this order:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

Section 29: S/2 SW/4, SW/4 SE/4

Section 31: NE/4, SW/4



(3) Division records and testimony presented by the applicant indicate that by Order No. R-2031, entered in Case No. 2334 on July 13, 1961, the Division authorized General American Oil Company of Texas (General American) to institute a waterflood project on that portion of its Beeson "F" Federal lease comprising the NE/4 and SW/4 of Section 31, Township 17 South, Range 30 East, NMPM, and on that portion of State Lease No. B-1778 comprising the SE/4 SE/4 of Section 36, Township 17 South, Range 29 East, NMPM, by the injection of water into the Loco Hills Queen-Grayburg-San Andres Pool through seven initial injection wells.

(4) The project was expanded by the addition of six injection wells by the following Division orders:

<u>Order Number</u>	<u>Order Date</u>
R-2031-A	October 3, 1962
WFX-155	November 8, 1963 F #13 K-31-17S-30E
WFX-165	January 31, 1964 F #7 A-31-17S-30E
WFX-186	October 30, 1964 F #6 A-31-17S-30E

(5) Division records further indicate that water injection within the General American waterflood project ceased during the early to mid 1970's.

(6) Pursuant to Division Rule No. 705.C, injection authority within the General American waterflood project has terminated.

(7) According to applicant's evidence and testimony, it acquired and assumed operation of the Beeson "F" Federal lease August 1, 1995.

(8) Applicant's evidence and testimony indicate that it proposes to:

- a) re-establish injection into the Beeson "F" Federal Well Nos. 2, 5, 6, 7, 11 and 13 and establish injection into the Beeson "F" Federal Well Nos. 3, 8, 9, 12, 26 and 27;
- b) alter the injection pattern utilized by General American;
- c) utilize the Beeson "F" Federal Well Nos. 18, 19, 20, 21, 22, 23, 24 and 25 as producing wells within the proposed project;

- d) establish waterflood operations within the S/2 SW/4 and SW/4 SE/4 of Section 29, which area has not previously been subject to secondary recovery operations; and
 - e) utilize micro-organisms within the fluid injection stream to improve the sweep efficiency of the project.
- (9) The evidence and testimony presented in this case indicate that:
- a) the applicant currently owns approximately 74.5 percent of the working interest within the proposed project area. The remaining interest (along with Shahara's) has been consolidated by means of an operating agreement dated August 1, 1995;
 - b) the addition of injection wells and resultant change in the injection pattern proposed to be utilized by the applicant within the subject waterflood project represents a more efficient injection pattern than that previously utilized by General American;
 - c) the inclusion of the S/2 SW/4 and SW/4 SE/4 of Section 29, an area which has not previously been subject to secondary recovery operations, within the proposed project should increase the recovery of oil within the project; and
 - d) applicant's proposed injection of micro-organisms represents a change in the technology utilized for secondary recovery purposes which should result in a greater sweep efficiency within the reservoir.

(10) Applicant testified that the proposed waterflood operations within the project area should result in the recovery of an additional 800,000 barrels of oil which would otherwise not be recovered, thereby preventing waste.

(11) The estimated cost to implement the proposed secondary recovery operation within the project area is \$2.8 million dollars.

(12) Approval of the proposed waterflood project should result in the recovery of additional oil from the project area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(13) At the time of the hearing the applicant requested approval of five unorthodox oil well locations within the proposed secondary recovery project area described as follows:

<u>Well Name & Number</u>	<u>Well Location</u>
Beeson "F" No. 18	1000' FSL & 2225' FWL (Unit N) Section 31, T-17S, R-30E
Beeson "F" No. 19	337' FSL & 1279' FWL (Unit N) Section 31, T-17S, R-30E
Beeson "F" No. 22	1974' FNL & 992' FEL (Unit H) Section 31, T-17S, R-30E
Beeson "F" No. 23	361' FSL & 2334' FEL (Unit O) Section 29, T-17S, R-30E
Beeson "F" No. 24	1340' FNL & 904' FEL (Unit H) Section 31, T-17S, R-30E

(14) Approval of the proposed unorthodox oil well locations is beyond the call of this case, and therefore, the applicant should be required to obtain approval for the above-described unorthodox oil well locations from the Division's Artesia District Office pursuant to Rule No. 104.F.(1).

(15) The injection of water into the wells shown on Exhibit "A" 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.

(16) The evidence presented by the applicant indicates that the following described five wells, located within the "area of review" of the applicant's proposed injection wells, are not adequately plugged so as to confine the injected fluid to the proposed injection interval:

<u>Well Name & Number</u>	<u>Well Location</u>
Aston & Fair State No. 1-B	3630' FNL & 3630' FEL (Unit K) Section 32, T-17S, R-30E
Yates Petroleum Corporation Yates "A" No. 9	990' FNL & 911' FWL (Unit D) Section 6, T-18S, R-30E

Roland R. Woolley Arnold No. 9D	1650' FSL & 1650' FEL (Unit J) Section 29, T-17S, R-30E
Yates Petroleum Corporation Brigham No. 2	2310' FSL & 990' FEL (Unit D) Section 31, T-17S, R-30E
R.R. Woolley Woolley No. 12-D	330' FNL & 330' FWL (Unit D) Section 33, T-17S, R-30E

(17) Prior to commencing injection operations into any of the wells shown on Exhibit "A", the applicant should be required to re-enter and re-plug the above-described wells in a manner which will ensure that these wellbores will not provide a conduit for the injected fluid to escape to other formations or to the surface.

(18) Prior to commencing injection operations into the Beeson "F" Federal Well No. 13, the applicant should run 4 1/2-inch casing to surface to a depth of approximately 3,200 feet and cement to surface in accordance with the procedure outlined on its Form C-108 presented at the hearing.

(19) Prior to commencing injection operations into any of the wells shown on Exhibit "A", 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.

(20) Within 90 days from initiating injection operations and every two years thereafter, the applicant should be required to conduct an injection tracer survey on the Beeson "F" Federal Well Nos. 2, 3, 5, 6, 7, 8, 9, 11 and 12 in order to demonstrate external mechanical integrity.

(21) 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 that shown on Exhibit "A", or to a pressure not to exceed 0.2 psi per foot of depth to the uppermost injection perforation or casing shoe.

(22) 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.

(23) The operator should give advance notification to the supervisor of the Division's Artesia District Office of the date and time it intends to perform: 1) re-plugging operations on the wells described in Finding No. 16; 2) injection equipment installation and mechanical integrity pressure tests; and 3) injection tracer surveys on the wells described in Finding No. 20, in order that the same may be witnessed.

(24) The proposed waterflood 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.

(25) The injection authority granted herein for the wells shown on Exhibit "A" 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.

(26) The applicant further requested that the proposed waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "New Mexico Enhanced Oil Recovery Act", Sections 7-29A-1 through 7-29A-5, NMSA 1978.

(27) The evidence presented indicates that the proposed waterflood project meets all the criteria for approval.

(28) The approved project area should initially comprise the SW/4 and NE/4 of Section 31 and the S/2 SW/4 and SW/4 SE/4 of Section 29.

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

(30) 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 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, Shahara Oil, L.L.C., is hereby authorized to institute a waterflood project on its Beeson "F" Federal Lease which comprises the following described 440 acres, more or less, in Eddy County, New Mexico, by the injection of water and micro-organisms into the Queen, Grayburg and San Andres formations, Loco Hills Queen-Grayburg-San Andres Pool through twelve injection wells described on Exhibit "A" attached to this order:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

Section 29: S/2 SW/4, SW/4 SE/4

Section 31: NE/4, SW/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) The injection of water into the wells shown on Exhibit "A" 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 any of the wells shown on Exhibit "A", 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) Prior to commencing injection operations into any of the wells shown on Exhibit "A", the applicant shall re-enter and re-plug the following described wells in a manner which will ensure that these wellbores will not provide a conduit for the injected fluid to escape to other formations or to the surface:

<u>Well Name & Number</u>	<u>Well Location</u>
Aston & Fair State No. 1-B	3630' FNL & 3630' FEL (Unit K) Section 32, T-17S, R-30E
Yates Petroleum Corporation Yates "A" No. 9	990' FNL & 911' FWL (Unit D) Section 6, T-18S, R-30E
Roland R. Woolley Arnold No. 9D	1650' FSL & 1650' FEL (Unit J) Section 29, T-17S, R-30E
Yates Petroleum Corporation Brigham No. 2	2310' FSL & 990' FEL (Unit D) Section 31, T-17S, R-30E
R.R. Woolley Woolley No. 12-D	330' FNL & 330' FWL (Unit D) Section 33, T-17S, R-30E

(6) Prior to commencing injection operations into the Beeson "F" Federal Well No. 13, the applicant shall run 4 1/2-inch casing from surface to a depth of approximately 3,200 feet and cement to surface in accordance with the procedure outlined on its Form C-108 presented at the hearing.

(7) Within 90 days from initiating injection operations and every two years thereafter, the applicant shall conduct an injection tracer survey on the Beeson "F" Federal Well Nos. 2, 3, 5, 6, 7, 8, 9, 11 and 12 in order to demonstrate external mechanical integrity.

(8) 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 that shown on Exhibit "A", or to a pressure not to exceed 0.2 psi per foot of depth to the uppermost injection perforations or casing shoe.

(9) 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.

(10) The operator shall give advance notification to the supervisor of the Division's Artesia District Office of the date and time it intends to perform: 1) re-plugging operations on the wells described in Finding No. 16; 2) injection equipment installation and mechanical integrity pressure tests; and 3) injection tracer surveys on the wells described in Finding No. 20, in order that the same may be witnessed.

(11) 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, 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.

(12) The project should be designated the Beeson "F" Federal Waterflood Project.

(13) 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.

(14) The Beeson "F" Federal Waterflood Project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "New Mexico Enhanced Oil Recovery Act", Sections 7-29A-1 through 7-29A-5, NMSA 1978.

(15) The approved project area shall initially comprise the SW/4 and NE/4 of Section 31 and the S/2 SW/4 and SW/4 SE/4 of Section 29.

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

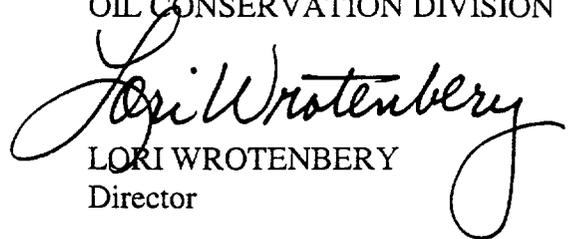
(17) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced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

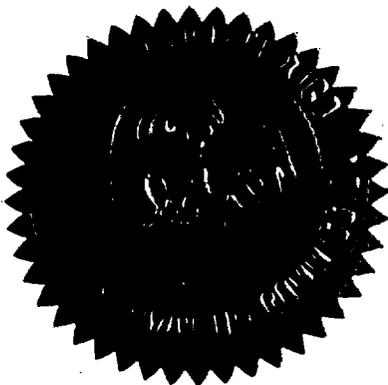
(18) The injection authority granted herein for the injection wells shown on Exhibit "A" shall terminate one year after the effective date of this order if the operator has not commenced injection operations into these wells, provided however, the Division, upon written request by the operator, may grant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

(19) Jurisdiction of this case 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


LORI WROTENBERY
Director



S E A L

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. 11973 (Reopened)
Order No. R-11027-A

APPLICATION OF SHAHARA OIL, L.L.C. TO AMEND DIVISION ORDER NO.
R-11027, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on March 18, 1999, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this ^{5th} day of April, 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) By Order No. R-11027 issued in Case No. 11973 on August 3, 1998, the Division authorized Shahara Oil, L.L.C. (Shahara) to institute a waterflood project on its Beeson "F" Federal Lease, comprising portions of Sections 29 and 31, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico, by the injection of water and micro-organisms into the Queen, Grayburg and San Andres formations, Loco Hills Queen-Grayburg-San Andres Pool, through twelve initial injection wells.

(3) Order No. R-11027 also contained a provision directing Shahara to re-enter and re-plug the following described wells prior to commencing injection operations into the twelve injection wells:

Well Name & Number

Aston & Fair State No. 1B

Yates Petroleum Corporation
Yates "A" No. 9

Roland R. Woolley
Arnold No. 9D

Well Location

3630' FNL & 3630' FEL (Unit K)
Section 32, T-17S, R-30E

990' FNL & 911' FWL (Unit D)
Section 6, T-18S, R-30E

1650' FSL & 1650' FEL (Unit J)
Section 29, T-17S, R-30E

EASTHAM JOHNSON

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Yates Petroleum Corporation
Brigham No. 2

2310' FSL & 990' FEL (Unit I)
Section 31, T-17S, R-30E

R.R. Woolley
Woolley No. 12-D

330' FNL & 330' FWL (Unit D)
Section 33, T-17S, R-30E

(4) The applicant, Shahara Oil L.L.C., seeks to amend Division Order No. R-11027 by deleting the requirement that it re-enter and re-plug the wells described in Finding No. (3) above prior to commencing injection operations within its Beeson "F" Federal Waterflood Project.

(5) The applicant proposes to amend its operations within the Beeson "F" Federal Waterflood Project in the following described manner in order to minimize the possibility that the five inadequately plugged wells will provide a conduit for injected fluid to migrate to other formations or to fresh water sources:

Yates "A" Well No. 9 (Unit D, Section 6)

Injection into the Beeson "F" Federal Wells No. 2, 3, 12, 13 and 26, located respectively in Units M, N, N, K, and L of Section 31 (collectively contained within the SW/4 of Section 31), will be limited to 350 barrels of water per day per well for an initial reservoir fill-up period of six months. Thereafter, the cumulative volume injected into these wells will be limited to no more than the cumulative volume withdrawn from the Beeson "F" Federal Wells No. 18, 19, 20 and 21, producing wells within the SW/4 of Section 31;

Brigham Well No. 2 (Unit I, Section 31)

The injection/production pattern within the NE/4 of Section 31 will be altered in the following manner:

- a) the Beeson "F" Federal Well No. 14, located in Unit G of Section 31, which was to be utilized as a producing well, will now be utilized as an injection well within the waterflood project; and
- b) the Beeson "F" Federal Wells No. 5 and 6, located respectively in Units G and H of Section 31, which were to be utilized as injection wells, will now be utilized as producing wells within the waterflood project.

The alteration of the injection/production pattern within the NE/4 of Section 31 will result in the presence of a

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The alteration of the injection/production pattern within the NE/4 of Section 31 will result in the presence of a producing well in-between the proposed injection wells and the Brigham Well No. 2.

Aston & Fair State No. 1B, (Unit K, Section 32)

As a result of altering the injection/production pattern within the NE/4 of Section 31, the Aston & Fair State Well No. 1B will not be located within the 1/2 mile "area of review" for the waterflood project.

Arnold No. 9D (Unit J, Section 29)

The Beeson "F" Federal Well No. 28 will be drilled as a producing well at a location in Unit O of Section 29. As a result, there will be producing wells, the Beeson "F" Federal Wells No. 25 and 28, between the injection wells, the Beeson "F" Federal Wells No. 8 and 9, and the Arnold No. 9D.

- (6) The applicant presented geologic evidence and testimony indicating that:
- a) the Woolley Well No. 12D, located in Unit D of Section 33, was originally drilled as a producing well to test the Loco Hills Queen-Grayburg-San Andres Pool. The well did not encounter commercial production from this pool and was subsequently plugged;
 - b) the Woolley Well No. 12D is located in a non-productive portion of the reservoir in which the quality and permeability of the reservoir rock is significantly reduced; and
 - c) due to the geologic properties of the reservoir encountered within the Woolley Well No. 12D, it is not likely that injected fluid from the Beeson "F" Federal Waterflood Project will be transmitted to this wellbore.

(7) The applicant further testified that it currently has no interest within the acreage on which the five inadequately plugged wells are located; consequently, it would be difficult to obtain authority from the lessor to re-enter and re-plug the wells.

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Order No. R-11027-A

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- (8) The evidence and testimony presented in this case demonstrate that:
- a) although the applicant has been unable to locate any windmills in the vicinity of the Beeson "F" Federal Waterflood Project, there is a good possibility that fresh water is present in shallow sands in this area;
 - b) recent drilling activity by the applicant in this area has not detected waterflows or water "out of zone" even though this area has previously been subject to waterflood operations;
 - c) plugging records, which are available for the subject wells, generally indicate that the Yates "A" Well No. 9 and the Brigham Well No. 2 have adequate surface casing, cement and cement plugs so as to provide protection of shallow fresh water sands;
 - d) the Woolley Well No. 12D should not be affected by injection;
 - e) the Aston & Fair State No. 1B is outside the "area of review" of any proposed injection well within the project; and
 - f) the actions proposed by the applicant will minimize the potential for injected fluid to migrate to other formations or to fresh water sources through the five subject plugged and abandoned wells.
- (9) The application should be approved subject to the following additional conditions:
- a) the applicant shall file an annual report with the Division's Santa Fe Office showing the injected and produced volumes for the wells within the SW/4 of Section 31 (Beeson "F" Federal Wells No. 2, 3, 12, 13, 26, 18, 19, 20 and 21);

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Order No. R-11027-A

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- b) continued authority to inject into the Beeson "F" Federal Wells No. 8, 9, 11 and 14 shall be contingent upon the applicant producing the Beeson "F" Federal Wells No. 5, 6, 25 and 28. If production operations cease for any reason in these producing wells, the applicant shall notify the Division, at which time the injection authority will be re-evaluated;
- c) the applicant shall file a Form C-108 for the Beeson "F" Federal Well No. 14 and obtain approval to utilize this well as an injection well prior to commencing injection operations into this well; and
- d) injection into the Beeson "F" Federal Waterflood Project shall cease if it becomes apparent that injected fluid is not being contained within the Loco Hills Queen-Grayburg-San Andres Pool.

(10) Approval of the application will provide the applicant the opportunity to recover additional oil and gas reserves from the Loco Hills Queen-Grayburg-San Andres Pool underlying Sections 29 and 31 by conducting waterflood operations within the Beeson "F" Federal Waterflood Project, and will serve to minimize the risk of injected fluid migrating from the injection zone into other formations or fresh water sources.

(14) All other provisions contained within Division Order No. R-11027 should remain in full force and effect.

IT IS THEREFORE ORDERED THAT:

(1) The application of Shahara Oil, L.L.C. to amend Division Order No. R-11027 by deleting the requirement that it re-enter and re-plug five plugged and abandoned wells located in Sections 29, 31, 32 and 33, Township 17 South, Range 30 East, and Section 6, Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico, prior to commencing injection operations into the Beeson "F" Federal Waterflood Project is hereby approved.

(2) The applicant shall not be required to re-enter and re-plug the five wells described in Finding No. (3) above, subject to the following conditions:

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- a) injection into the Beeson "F" Federal Wells No. 2, 3, 12, 13 and 26, located respectively in Units M, N, N, K, and L of Section 31 shall be limited to 350 barrels of water per day per well for an initial reservoir fill-up period of six months. Thereafter, the cumulative volume injected into these wells shall be limited to no more than the cumulative volume withdrawn from the Beeson "F" Federal Wells No. 18, 19, 20 and 21;
- b) the injection pattern within the NE/4 of Section 31 shall be altered in the following manner:
 - i) the Beeson "F" Federal Well No. 14, located in Unit G of Section 31, which was to be utilized as a producing well, shall be utilized as an injection well within the waterflood project; and
 - ii) the Beeson "F" Federal Wells No. 5 and 6, located respectively in Units G and H of Section 31, which were to be utilized as injection wells, shall be utilized as producing wells within the waterflood project.
- c) the applicant shall drill the Beeson "F" Federal Well No. 28 as a producing well at a location in Unit O of Section 29;
- d) the applicant shall file an annual report with the Santa Fe Office of the Division showing the injected and produced volumes for the wells within the SW/4 of Section 31 (Beeson "F" Federal Wells No. 2, 3, 12, 13, 26, 18, 19, 20 and 21);
- e) continued authority for injection into the Beeson "F" Federal Wells No. 8, 9, 11 and 14 shall be contingent upon the applicant producing the Beeson "F" Federal Wells No. 5, 6, 25 and 28. If production operations cease for any reason in these producing wells, the applicant shall notify the Division, at which time the injection authority will be re-evaluated;

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Page -7-

- f) the applicant shall file a Form C-108 for the Beeson "F" Federal Well No. 14 and obtain approval to utilize this well as an injection well prior to commencing injection operations into this well; and
- g) injection into the Beeson "F" Federal Waterflood Project shall cease if it becomes apparent that injected fluid is not being contained within the Loco Hills Queen-Grayburg-San Andres Pool.

(4) All other provisions contained within Division Order No. R-11027 shall remain in full force and effect.

(5) 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
Director



S E A L

EXHIBIT "A"
DIVISION ORDER NO. R-11027
APPROVED INJECTION WELLS
BEESON FEDERAL WATERFLOOD PROJECT

<u>Number</u>	<u>Well Location</u>	<u>Injection Interval</u>	<u>Packer Setting Depth</u>	<u>Max. Surface Inj. Pressure</u>
Well No. 2	330' FSL & 330' FWL, Unit M, Section 31, T-17S, R-30E	2,570'-3,014' (Est.)	2,470'	514 PSIG
Well No. 3	345' FSL & 2310' FWL, Unit N, Section 31, T-17S, R-30E	2,679'-3,200'	2,625'	536 PSIG
Well No. 5	2310' FNL & 1650' FEL, Unit G, Section 31, T-17S, R-30E	2,829'-3,101'	2,729'	566 PSIG
Well No. 6	2310' FNL & 330' FEL, Unit H, Section 31, T-17S, R-30E	2,859'-3,136'	2,759'	572 PSIG
Well No. 7	990' FNL & 330' FEL, Unit A, Section 31, T-17S, R-30E	2,826'-3,087'	2,726'	565 PSIG
Well No. 8	330' FSL & 1650' FEL, Unit O, Section 29, T-17S, R-30E	2,320'-3,350'	2,250'	464 PSIG
Well No. 9	330' FSL & 2310' FWL, Unit N, Section 29, T-17S, R-30E	2,537'-3,350'	2,475'	507 PSIG
Well No. 11	1650' FNL & 330' FEL, Unit H, Section 31, T-17S, R-30E	2,836'-3,100'	2,736'	567 PSIG
Well No. 12	990' FSL & 1571' FWL, Unit N, Section 31, T-17S, R-30E	2,814'-3,081'	2,714'	563 PSIG
Well No. 13	2310' FSL & 2232' FWL, Unit K, Section 31, T-17S, R-30E	2,618'-3,200' (Est.)	2,518'	524 PSIG
Well No. 26	1976' FSL & 820' FWL, Unit L, Section 31, T-17S, R-30E	2,806'-3,237'	2,725'	561 PSIG
Well No. 27	1015' FNL & 1524' FEL, Unit B, Section 31, T-17S, R-30E	2,789'-3,126'	2,700'	558 PSIG

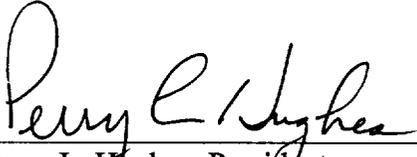
AFFIDAVIT

STATE OF NEW MEXICO
COUNTY OF EDDY

Perry L. Hughes, Affiant, being first duly sworn upon his oath, deposes and states that I graduated from West Virginia University in 1965 with a B.S. degree in Petroleum Engineering and since that time I have been associated with the oil industry in various capacities, both within the United States and overseas. For the last 15 years, I have been a consulting petroleum engineer and an independent producer in West Texas and Southeastern New Mexico.

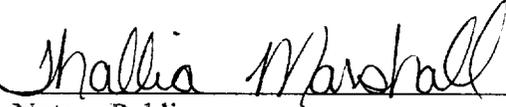
I am familiar with the land on which the proposed water injection well is situate and have examined the available geologic and engineering data there for. I have found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Further, Affiant says not.

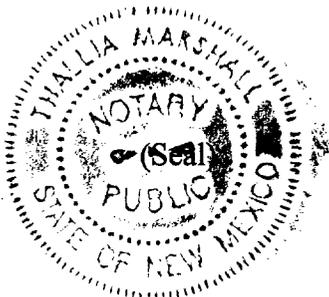


Perry L. Hughes, President

This instrument was sworn and subscribed to before me on October 22, 1999 by Perry L. Hughes, President of Shahara Oil, LLC.



Notary Public



My commission expires: November 6, 2000

Exhibit "E"
AFFIDAVIT OF MAILING

STATE OF NEW MEXICO

: ss

COUNTY OF EDDY

I, Perry L. Hughes, do solemnly swear that a copy of this application has been mailed by certified mail, return receipt requested, to each of the following interested parties:

Surface Owner

United States Department of the Interior
Bureau of Land Management
2909 W Second
Roswell, NM 88201

Grazing Permittee

Williams & Son Cattle Co.
PO Box 30
Maljamar, NM 88264

Offset Operators:

Yates Petroleum Corp
105 S 4th
Artesia, NM 88210

Southwest Royalties Inc.
PO Drawer 11390
Midland, TX 79702

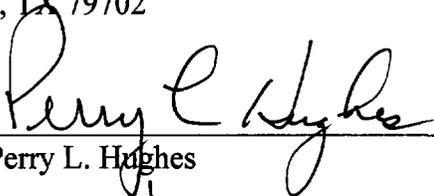
MNA Enterprises
106 W Alabama
Hobbs, NM 88242

Marbob Energy Corp.
PO Box 227
Artesia, NM 88210

GP II Energy, Inc.
PO Box 50682
Midland, TX 79710

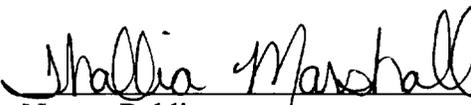
Mack Energy Corporation
PO Box 960
Artesia, NM 88210

Enron Oil & Gas Corp.
PO Box 2267
Midland, TX 79702



Perry L. Hughes

SWORN AND SUBSCRIBED TO before me this 22nd day of October, 1999,



Thalia Marshall
Notary Public

