

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 28, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 4913: (Continued from the February 28, 1973 Examiner Hearing)

Application of Lone Star Industries, Inc. for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the N/2 of Section 12, Township 30 North, Range 5 West, to be dedicated to a well to be drilled at a standard location to the Basin-Dakota Pool.

Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4919: Application of Mobil Oil Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard gas proration unit comprising the W/2 SW/4 and SE/4 SW/4 of Section 28, and the NW/4 and SW/4 NE/4 of Section 33, all in Township 21 South, Range 37 East, adjacent to the Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its E. O. Carson Well No. 4 located in Unit N of said Section 28.

CASE 4920: Application of Mobil Oil Corporation for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle marginal production from the Blinebry, Tubb, Drinkard, Paddock, and Wantz-Abo Oil Pools in the well-bore of its Stephens Estate Well No. 1 located in Unit L of Section 24, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 4921: Application of Sun Oil Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4267 feet to 4416 feet in its New Mexico A-3 State Well No. 5 located in Unit D of Section 33, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.

CASE 4922: Application of Pennzoil Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing well at an unorthodox location 1330 feet from the North and West lines of Section 20, Township 17 South, Range 33 East, Maljamar Pool, Lea County, New Mexico. Applicant further seeks the adoption of a procedure for administrative approval of additional producing and injection wells at unorthodox locations in its Western State Waterflood Project in Sections 17 and 20, Township 17 South, Range 33 East.

- CASE 4923: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 360-acre non-standard gas proration unit comprising Lots 16, 17, and 18 and the SE/4 and E/2 SW/4 of Section 4, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Meyer B-4 Well No. 4 located in Unit S of said Section 4.
- CASE 4924: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the perforated interval from 7025 feet to 7366 feet in its New Mexico "BZ" State Well No. 1, a triple tubingless completion, located in Unit K of Section 2, Township 25 South, Range 37 East, North Justis-Devonian Pool, Lea County, New Mexico.
- CASE 4925: Application of Shenandoah Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Robinson-Jackson Unit Area comprising 1160 acres, more or less, of Federal lands in Township 17 South, Range 29 East, Eddy County, New Mexico.
- CASE 4926: Application of Shenandoah Oil Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Robinson-Jackson Unit Area by the injection of water into the Grayburg-San Andres formation through 16 wells in Sections 27, 34, and 35, Township 17 South, Range 29 East, Grayburg-Jackson Pool, Eddy County, New Mexico.
- CASE 4927: Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the perforated interval from 12,000 feet to 12,010 feet in its Federal "D" Well No. 2 located in Unit J of Section 31, Township 9 South, Range 36 East, West Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4928: Application of Union Oil Company of California for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to the Atlantic Richfield Oil Company Pure-Federal Well No. 11 located in Unit K of said Section 11. Applicant further seeks a provision for the payment of proper costs to be borne by applicant for such well and the related well equipment, a provision for allocation of actual operating costs, and the establishment of charges for supervision of such well and the designation of an operator thereof; and for such other relief as proper. Also to be considered will be the risk involved in drilling the subject well.

CASE 4929: Application of Atlantic Richfield Company for simultaneous well dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of four wells to a standard 640-acre gas proration unit comprising all of Section 36, Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, said wells being the McDonald State Nos. 3, 4, 5, and 6 located in Units P, M, D, and B, respectively, of said Section 36, with unit production to be taken from said wells in any proportion.

CASE 4930: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a proposed gas well at a point 1650 feet from the North line and 660 feet from the West line of Section 18, Township 18 South, Range 26 East, West Atoka-Morrow Gas Pool, Eddy County, New Mexico.

CASE 4931: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Lea County, New Mexico:

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Abo production and designated as the Townsend-Abo Pool. The discovery well is the Remunda Oil and Gas Company Eidson Ranch No. 1 located in Unit E of Section 26, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 26: NW/4

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production and designated as the Townsend-Pennsylvanian Pool. The discovery well is the R. Williamson and J. Williamson Harrod State No. 1 located in Unit U of Section 4, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 4: SW/4

(c) Extend the vertical limits of the Tubb Gas Pool in Lea County, New Mexico, to include the entire interval from 100 feet above the Tubb marker to the top of the Drinkard formation.

(d) Extend the Crosby Fusselman Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 33: NE/4

(Case No. 4931 continued from page 3)

(e) Extend the East E K Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 28: NW/4

(f) Extend the Humble City-Atoka Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
Section 12: SW/4

(g) Extend the Sawyer-San Andres Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
Section 23: NE/4
Section 24: W/2 NW/4 & SE/4 NW/4

(h) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
Section 34: NE/4

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
March 28, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Shenandoah Oil
Corporation for a unit agreement
and for a waterflood project,
Eddy County, New Mexico.

Case No. 4925 and 4926

BEFORE: Daniel S. Nutter
Examiner

TRANSCRIPT OF HEARING

dearnley, meier & mc cormick

1 MR. NUTTER: We will now call Cases 4925 and 4926.

2 Case 4925: Application of Shenandoah Oil Corporation for a
3 unit agreement, Eddy County, New Mexico. Case 4926: Application
4 of Shenandoah Oil Corporation for a waterflood project, Eddy
5 County, New Mexico.

6 Cases 4926 and 4926 will be consolidated for the
7 purpose of hearing.

8 MR. JENNINGS: James T. Jennings appearing on behalf
9 of Shenandoah. We have one witness. Does the Examiner have
10 any preference as to how we proceed?

11 MR. NUTTER: Probably take the unit agreement first
12 so we can get acquainted with the land.

13 NEIL F. TOLER

14 was called as a witness and, after being duly sworn according
15 to law, testified as follows:

16 DIRECT EXAMINATION

17 BY MR. JENNINGS:

18 Q Would you state your name, place of residence, and occupa-
19 tion, sir.

20 A My name is Neil Toler and I am employed by Shenandoah Oil
21 Corporation.

22 Q Mr. Toler, have you appeared before and testified before
23 the Commission or one of its examiners in the past?

24 A Yes, I have.

25 MR. JENNINGS: Are Mr. Toler's qualifications

1 acceptable?

2 MR. NUTTER: By whom are you employed?

3 THE WITNESS: Shenandoah Oil Corporation.

4 MR. NUTTER: Yes, they are.

5 Q (By Mr. Jennings) Are you familiar with the application
6 filed by Shenandoah seeking approving of the Robinson-
7 Jackson Unit Area Agreement?

8 A Yes, sir.

9 Q I believe, Mr. Toler, this was the unit agreement originally
10 put together by Atlantic-Richfield.

11 A Yes, sir.

12 Q And after being put together and preliminary negotiations
13 worked out, your company acquired the acreage from Atlantic-
14 Richfield.

15 A That's correct.

16 Q And I believe the agreement covers 1160 acres of Federal
17 land.

18 A Correct.

19 Q That is all in Eddy County and all in Township 17 South,
20 Range 29 East.

21 A Right.

22 Q Is Shenandoah Oil Corporation the unit operator?

23 A Shenandoah will be the operator.

24 Q What percentage of working interests does it own?

25 A 100%.

1 Q What is the unitized substance as defined by the unit
2 agreement?

3 A The Grayburg-San Andres formation.

4 Q Is that specifically defined in the unit agreement?

5 A Yes, sir. The Robinson B Well which is the offset well
6 of the No. 8 well in Section 27 is 1830 feet from the
7 south and 1730 feet from the west lines of Section 27.

8 Q Have you submitted this for tentative approval of the
9 USGS?

10 A Yes, sir. I have a letter dated March 15th, 1973.

11 Q Mr. Toler, who is the record title holder of all this
12 acreage?

13 A Atlantic-Richfield is the lessee of record.

14 Q And they have joined in the unit agreement?

15 A Yes, they have signed it.

16 Q Do you think the proposed unit agreement will prevent
17 waste and protect the correlative rights of all interests
18 in the area?

19 A I am a firm believer in that.

20 Q Have you obtained the approval of all royalty owners,
21 overriding royalty owners?

22 A Yes, we have obtained approval of the USGS. It is all
23 Federal land and we have obtained USGS approval. There
24 are overriding royalties in Tracts 1 and 1A and we
25 previously obtained approximately 77% of the overriding

1 interest owners besides the USGS.

2 Q What percentage of the owners have you obtained approval
3 from?

4 A Approximately 77.19% of the overriding royalty interest
5 owners.

6 MR. JENNINGS: At this time we will offer the unit
7 agreement which has been executed by all parties concerned and
8 I will just proceed with the other case.

9 MR. NUTTER: Go right ahead with your waterflood
10 project now.

11 (Whereupon Applicant's Exhibit 1 in Case 4925 was
12 admitted in evidence)

13 Q (By Mr. Jennings) Mr. Toler, are you also familiar with
14 the Shenandoah application for a waterflood project in
15 Eddy County, New Mexico?

16 A I am.

17 Q Briefly what does Shenandoah propose in connection with this
18 application?

19 A A desire to initiate a waterflood project to inject fresh
20 water into the Grayburg-San Andres formation through 16
21 existing wells as described in the application in Section
22 27, 34, and 35, Township 17 South, Range 29 East.

23 Q Are these wells all described in the application?

24 A Yes, sir.

25 Q With the locations set forth therein?

1 A Right, sir.

2 Q. And will you state what you propose to inject into those
3 wells.

4 A We propose to inject fresh water into the wells at a rate
5 of approximately 900 barrels a day in three separate zones
6 which are described later on in the application.

7 Q Please refer to what has been marked as Exhibit A and
8 explain just what that is and what it shows.

9 A Exhibit A is a plat showing the locations of our project.
10 In this particular plat, we have the unit outlined, the
11 project area. You will notice that two wells outside of
12 the unit area are included in the project area. This is
13 comprised of 16 injection wells and approximately 22 pro-
14 ducing wells at the present time that will probably be put
15 on production and injection in the San Andres and Grayburg
16 formations.

17 Q Mr. Toler, this area is in the unit agreement we have just
18 been discussing along with some adjacent land, is that true?

19 A It is shown more clearly in Exhibit B. The adjacent lands
20 are located to the east in Section 26 as shown by the
21 exhibit.

22 Q Referring again to Exhibit A, Mr. Toler, on that you have
23 outlined all of your present injection wells with solid
24 triangles.

25 A. That's correct.

1 Q And the injection wells you propose are outlined in
2 dashed triangles.

3 A That's correct.

4 Q Do you propose to flood these 16 wells simultaneously?

5 A Yes, we propose to put all of those wells on initially.

6 Q What is the general nature of production in the area at
7 this time?

8 A At the present time it is in the range of 80 to 90 barrels
9 a day from a total of 22 producing wells.

10 Q Do you feel that waterflooding these formations, the
11 Grayburg and San Andres, is feasible?

12 A Yes, I do.

13 Q And will it result in ultimate increased recovery.

14 A Yes.

15 Q And I believe you have stated that you're virtually sur-
16 rounded by currently operating waterflood projects.

17 A That's correct.

18 Q Are these offsetting projects successful?

19 A They are successful in several different categories.

20 They are partially unsuccessful because of loss of control
21 and injection. I think we will probably control our in-
22 jection more specifically with bottom hole flow regulators.

23 Q Do you contemplate, assuming the flood is successful,
24 converting additional wells to water injection?

25 A We have an 80 acre five-spot pattern and it's possible

1 that at some future date we might want to convert additional
2 wells to injection in order to form a 40 acre five-spot
3 flood plan.

4 Q And you are requesting the Commission to grant administra-
5 tive approval for such an application?

6 A Yes.

7 Q Now, where do you propose to obtain your water from,
8 Mr. Toler?

9 A There is a commercial water company in the area to the
10 east and we will probably be getting it from one of the
11 commercial water companies.

12 Q Will you inject the produced water when it is available?

13 A Yes, when water breakthrough occurs in conjunction with
14 fresh water.

15 Q What are the exact zones that you propose to flood?

16 A The Grayburg formation to a depth of 2359 feet and into
17 the Jackson zone of the San Andres formation to a depth
18 of approximately 2774 feet.

19 Q How much water do you propose to inject per day?

20 A A total of 900 barrels a day. There are two zones within
21 the Grayburg formation and we will inject 300 barrels a
22 day per zone and 300 barrels into the Jackson zone of the
23 San Andres, making a total of 900 barrels of water per
24 day per well.

25 Q Mr. Toler, referring now to what has been designated as

1 Exhibit C and which consists of 16 separate parts, would
2 you state what this is and describe the exhibit?

3 A Exhibit C are diagrametic sketches of the injection wells
4 which we propose to convert to injection wells. Each
5 sketch contains the same information as to casing and
6 cementing and the perforated intervals.

7 Q You have this information on each, the same information
8 on each of the wells reflected in the exhibit?

9 A Yes, it is essentially the same information on each dia-
10 grametic sketch.

11 Q Mr. Toler, referring now to what has been marked as
12 Exhibit D, would you tell us just what that exhibit shows.

13 A Exhibit D is a diagram showing the typical down hole
14 equipment to be installed in each injection well.

15 Q Do you have logs of the wells, Mr. Toler?

16 A I have the available logs given to us by Atlantic-Richfield
17 which consist of ten at the present time, ten of the
18 16 wells listed in the application.

19 Q Mr. Toler, have you requested the approval of the USGS for
20 the waterflood project?

21 A We have.

22 Q I hand you a letter dated March 15th, 1973, from the USGS
23 and ask you if that is the letter you received from them
24 approving the project.

25 A This is a copy of the letter we received from the USGS

1 outlining their approval and recommendations for further
2 requirements in regard to plats showing treating plat
3 locations.

4 Q Are you prepared to comply with all of the regulations
5 and requirements made by the USGS?

6 A Yes, I am.

7 Q Do you have anything further you wish to add in connection
8 with this application?

9 A Not at this time.

10 MR. JENNINGS: We have nothing further to offer, but
11 we do offer Exhibits A through E and we would also like to
12 offer the logs as exhibits if you would like them.

13 MR. NUTTER: Would you offer them as a package under
14 Exhibit F?

15 MR. JENNINGS: As a package, yes.

16 MR. NUTTER: Without objection Applicant's Exhibits
17 A through F will be admitted in evidence.

18 (Whereupon Applicant's Exhibits A through F were
19 admitted in evidence)

20 CROSS EXAMINATION

21 BY MR. NUTTER:

22 Q Do you anticipate that each of the injection wells will
23 have three injection zones?

24 A I anticipate every injection well will --- we have yet
25 alot of work to do in this area and I must point out

1 that the Jackson zone is the predominant producing zone in
2 the area. The metex tends to thin out in Section 27 and
3 it might be possible that we might not have metex in one
4 or two of the injection wells. However, I feel that
5 Loco Hills is productive in the area and we may have Loco
6 Hills and Jackson in all the wells.

7 Q Whether or not you had all three zones, you would still
8 have this uppermost packer shown on Exhibit B?

9 A Yes, sir.

10 Q So in all cases, your annulus will be added above a packer
11 and have a gauge at the surface.

12 A Yes.

13 Q And you anticipate that this 300 barrels would be the rate
14 of injection into each of the zones per day.

15 A Yes. We are limiting it to that right now because if you
16 take the total number of wells times 900 barrels, it's
17 approximately 14,400 barrels a day. At some later date,
18 we may be able to increase that.

19 MR. NUTTER: Are there any further questions of Mr.
20 Toler?

21 (No response)

22 MR. NUTTER: He may be excused.

23 (Witness excused)

24 MR. NUTTER: Do you have anything further, Mr.
25 Jennings?

1 MR. JENNINGS: I would offer one observation even
2 though I'm sure it's not required. We have to have this
3 approved by July 1st.

4 MR. NUTTER: If there is nothing further, we will
5 take Cases 4925 and 4926 under advisement.

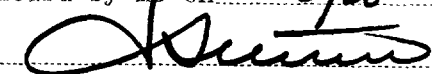
6 * * * *

1 STATE OF NEW MEXICO)
) ss.
2 COUNTY OF BERNALILLO)

3 I, RICHARD E. McCORMICK, a Certified Shorthand Reporter,
4 do hereby certify that the foregoing and attached Transcript of
5 Hearing before the New Mexico Oil Conservation Commission was
6 reported by me; and that the same is a true and correct record
7 of the said proceedings, to the best of my knowledge, skill and
8 ability.

9 
10 Certified Shorthand Reporter

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22
23 I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4925-4926
24 heard by me on 3/28, 19 73.

25 , Examiner
New Mexico Oil Conservation Commission

I N D E XWITNESSPage

NEIL F. TOLER

Direct Examination by Mr. Jennings

3

Cross Examination by Mr. Nutter

11

EXHIBITSOfferedAdmitted

Exhibit 1 in Case 4925

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6

Exhibit A in Case 4926

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Exhibit C in Case 4926

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Exhibit D in Case 4926

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Exhibit E in Case 4926

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Exhibit F in Case 4926

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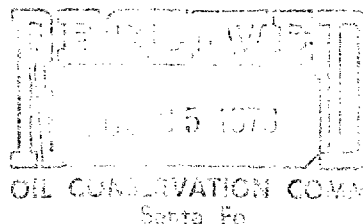


SHENANDOAH OIL CORPORATION

B. J. KELLENBERGER
PRESIDENT

1500 COMMERCE BUILDING
FORT WORTH, TEXAS 76102
817/332-7381
TWX: 910 890 5023

July 24, 1973



Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. A. L. Porter

Re: Commission Order #R-4502
Shenandoah Robinson-Jackson Unit,
Grayburg-Jackson Field
Eddy County, New Mexico

Dear Mr. Porter:

In compliance with Rule 703(a) of the New Mexico Rules and Regulation Book, this is to advise you that water injection was commenced July 24, 1973 into the below listed wells as set forth in Case No. 4926. All of the following wells are located in Township 17 South, Range 29 East, NMPM, Eddy County, New Mexico (see attached plat):

<u>WELL NAME</u>	<u>TRACT</u>	<u>UNIT</u>	<u>SECTION</u>
F. M. Robinson "A" Well No. 4	1	G	34
F. M. Robinson "A" Well No. 7	1	I	27
F. M. Robinson "A" Well No. 9	1	O	27
F. M. Robinson "A" Well No. 11	1A	E	35
F. M. Robinson "A" Well No. 12	1A	A	34
F. M. Robinson "B" Well No. 15	2	G	27
F. M. Robinson "B" Well No. 16	2	I	35
F. M. Robinson "B" Well No. 17	2	K	35
F. M. Robinson "B" Well No. 4	2A	A	35
F. M. Robinson "B" Well No. 6	2A	G	35
F. M. Robinson "B" Well No. 8	2A	K	27
F. M. Robinson "B" Well No. 11	2A	C	35
F. M. Robinson "B" Well No. 19	3	I	34

Oil Conservation Commission
July 24, 1973

Page 2

Completion reports on the preceding wells will follow.

Very truly yours,

SHENANDOAH OIL CORPORATION



T. P. Bates
Vice President

TPB/cf

Attachment

cc: New Mexico Oil Conservation Commission

P. O. Drawer DD

Artesia, New Mexico 88210

U. S. Department of Interior

Geological Survey

P. O. Drawer U

Artesia, New Mexico 88210

Jennings & Copple

P. O. Box 1180

Roswell, New Mexico 88201

Mr. C. W. Downey

P. O. Box 2189

Hobbs, New Mexico 88240



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

April 10, 1973

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

Mr. James T. Jennings
Jennings, Christy & Copple
Attorneys at Law
Post Office Box 1180
Roswell, New Mexico 88201

Re: Case No. 4925, 4926
Order No. R-4501 & R-4502
Applicant:

Shenandoah Oil Corporation

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

OTHER R-4501 - Unit Division, State Land Office
 R-4502 - State Engineer Office