

**CASE 4560: Application of RIJAN
FOR PRESSURE MAINTENANCE PROJECT,
SAN JUAN COUNTY, NEW MEXICO.**



Case Number
4560

Application

Transcripts

Small Exhibits

ETC.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

209 SUMMIT BLDG. • P.O. BOX 1097 • PHOENIX 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 14, 1971

EXAMINEE HEARING

IN THE MATTER OF:

Application of Rigan Oil
Company, Inc., for a pressure
maintenance project, San Juan
County, New Mexico.

Case No. 4560

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

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MR. NUTTER: Call next Case Number 4560.

MR. HATCH: Case 4560. Application of Rijan Oil Company, Inc. for a pressure maintenance project, San Juan County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant.

We have one witness I would like to have sworn.

(Witness sworn)

VAL R. REESE

having been first duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Val R. Reese.

Q What business are you engaged in, Mr. Reese?

A I am a consulting geologist.

Q And where are you located?

A I live in Albuquerque, New Mexico.

Q Do you have any connection with the applicants in this case, Rijan Oil Company?

A Yes. I work or do consulting work for the Rijan Oil Company, Inc.

Q And in connection with your consulting work, have you

1 studied the proposed pressure maintenance project, as
2 Plat Four in Case 4560?

3 A Yes, I have. I have prepared a structure map and a
4 schematic diagram, as well as the check, or gone over
5 and prepared a land map.

6 Q Have you ever testified before the Oil Conservation
7 Commission and made your qualifications a matter of
8 record?

9 A Yes, I have. I testified for Pacific Northwest
10 Pipeline when I was with Pacific.

11 MR. KELLAHIN: Are the witnesses' qualifications
12 acceptable?

13 MR. NUTTER: Yes, they are.

14 Q (Mr. Kellahin continuing) Mr. Reese, briefly, what
15 is proposed by the applicant in Case 4560?

16 A In reference to the land map --

17 Q You are referring to what has been marked as Exhibit
18 Number 1; is that correct?

19 A Yes. Rijan Oil Company has Section 31 of Township
20 30 North, Range 16 West, in the San Juan County,
21 New Mexico, which is an Indian, a Navajo Indian lease,
22 and Rijan Oil Company has drilled several shallow wells
23 on the tract which are about 900 feet in depth, and
24 has produced Dakota oil from these wells.

25 Q Is that in the Slick Rock Dakota Pool?

1 A It is in the Slick Rock Dakota Pool, and the proposal
2 is to pressure up or reinject produced water on flank
3 wells, and in an attempt to extract more oil from the
4 present producing wells.

5 Q Now, on Exhibit Number 1 it also shows the offsetting
6 wells and the ownerships of the other leases in the
7 area, does it not?

8 A Yes, sir. Yes, it does. Section 36 to the west is
9 operated by Clyde C. Kennedy, and Section 6 to the
10 south is operated by Walter Duncan, and the acreage
11 to the north and the east is on leased Navajo land.

12 Q Now, referring to what has been marked as the
13 Applicant's Exhibit Number 2, would you identify that
14 exhibit, please?

15 A This Exhibit Number 2 is a Dakota structure map.
16 Datum is for the top of the Dakota Sand Stone, and
17 the structure map shows northeast trending anticline
18 in which Rijan's Numbers 9 and 11 and 13 wells are
19 located.

20 Contrary interval on the map is five feet.
21 Enclosure on the structure is approximately twenty
22 feet.

23 And on the southwest side of the structure, a
24 structurally low area is present, as determined from
25 the subsurface information and the wells drilled in

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1 anticlinal area.

2 The Rijan Number 10 well is on the northeast
3 side of the structure, and the Rijan Number 14 well is
4 on the southeast side, and on the Rijan Number 12 is --
5 on the southwest flank, and these are structurally low
6 wells, and incur proposal to inject produced water into
7 the Rijan 12 -- 10, 12 and 14 wells from the
8 producing wells, also.

9 We may produce some water from the Rijan Number
10 15 by perforating the overlying Gallup formation.

11 Q That is in the event you need additional water?

12 A In the event that we need it, yes.

13 Q What volume of water are you producing from those
14 wells at the present time?

15 A Approximately sixty-five to seventy barrels of water
16 per day.

17 Q What is the producing mechanism in the Slick Rock
18 Dakota Pool?

19 A It is a water drive. There is very little gas. The
20 Dakota formation has an excellent low pressure water
21 drive.

22 One reason for my proceeding with this method
23 of expecting more oil is that from the formation, is
24 that the hug back oil field located due south of this
25 small closure has had water.

1 It produced water, injected on the flanks of
2 the well, and it seems to keep the field in balance,
3 and results in sustained production.

4 These three wells have produced through May, the
5 end of May, approximately, or very close to 20,000
6 barrels of oil.

7 MR. NUTTER: Which wells do you mean, Mr.
8 Reese?

9 THE WITNESS: The Numbers 9, 11 and 13 wells,
10 and the Number 9 was originally flowing well. Also, the
11 Number 11, the Number 13 would bring oil to the surface,
12 but it was not possible to flow it to the tanks.

13 Q (Mr. Kellahin continuing) At the present time you are
14 pumping all three of the wells; is that correct?

15 A All three wells are on pump, and the reservoir
16 pressure has declined enough to where none of the
17 wells will flow.

18 At the present time the wells are shut in. We
19 shut the wells in at the end of June, partially to
20 allow the pressure to stabilize, and also because
21 that we have water problems.

22 We have a large pit by the Number 9, but the
23 ground does not absorb the water, and we do need
24 to dispose of that water underground.

25 Q What is the well head pressure at the present time,

1 approximately?

2 A It is very low. We haven't taken a well head
3 pressure. The original pressure I saw on the well
4 head is about a hundred pounds.

5 I would say the pressure now is about ten or
6 fifteen pounds. It probably will go up as the wells
7 go, the longer that they are left shut in.

8 Q Now, referring to what has been marked as Exhibits
9 3, 4 and 5, would you identify those exhibits?

10 A Exhibit 3 is a set of logs. The first one is the
11 Number 10 well. The log has the formation tops
12 marked on it.

13 The Dakota Sand Stone, and this well is at 909
14 feet, and the total depth is 925.

15 The log on the Number 12 well --

16 Q Exhibit Number 4.

17 A Would this be all part of the same exhibit?

18 Q 3, 4 and 5.

19 A Oh, Exhibit Number 4 is the Navajo Tribal Number 12
20 well, and the top of the Dakota Sand Stone is at 883
21 in this well, and it's open hole to 899 total depth.

22 Exhibit Number 5 is the Rian Number 14 well,
23 top of the Dakota Sand Stone is 891, for the total
24 depth at 912, 912 feet.

25 Q Now, referring to the next series of exhibits, Numbers

1 6, 7 and 8, would you discuss the information shown
2 on those?

3 A Exhibit 6 is a schematic diagram of the Rijan Number
4 10 well. It shows four and a half inch casing set
5 to 912 feet, and cemented with sixty sacks of regular
6 cement from 912 feet to 280 feet from the surface.

7 Open hole in this well is from 912 to 925 feet.
8 Exhibit Number 7 is Rijan Number 12 well, which shows
9 the four and a half inch casing set to 887 feet.

10 Total depth is 899 feet, and this well was
11 cemented with seventy sacks of regular cement from
12 887 feet to 166 feet.

13 Exhibit Number 8 is Rijan Number 14 well, with
14 the casing set at 901 feet, and total depth to
15 912 feet, and the well was cemented with seventy
16 sacks of cement from 901 feet to 160 feet from the
17 surface.

18 Q Now, how do you propose to complete those three wells
19 for water injection, Mr. Reese? Can you inject on
20 the casing, or how do you propose to do it?

21 A I guess we will inject right through the casing into
22 the open hole.

23 Q Now, you have cemented behind the pipes through all
24 the producing formations; is that correct?

25 A That's right. The top of the cement is above the

1 Gallup Sand Stone at 314 feet, and to where the pipe
2 is set at the top of the Dakota formation.

3 Q Now, at the surface is there any water formation or
4 any other water formation that could be damaged by
5 water?

6 A No. There is no surface -- no known formation. It
7 is in the Mancos shale, except for the Gallup Sand
8 Stone member of this.

9 Q Now, this is produced water you are going to inject
10 in these wells; is that correct?

11 A That's correct.

12 Q Now, referring to Exhibit Number 9, would you
13 identify that exhibit?

14 A Exhibit Number 9 is water analysis prepared by Core
15 Laboratories in Farmington, New Mexico.

16 Q Now, does that analysis indicate that that water
17 would be corrosive and possibly cause damage through
18 the casing to which you propose to inject?

19 A No, sir. The total dissolved solids is 3584 parts
20 per million, and the chemical analysis does not show any
21 corrosion.

22 Q In your past experience in handling that produced
23 water, have you had any corrosion problems?

24 A No, we haven't.

25 Q None whatever?

- 1 A None, no.
- 2 Q Do you think it would be safe, then, to inject that
- 3 type of water down the casing of these wells?
- 4 A I believe it would. I can't see why, from the
- 5 analysis, it would harm the casing or cause damage
- 6 to any formation.
- 7 Q Now, in your opinion, will the injection of water in
- 8 these three wells cause any damage to the offsetting
- 9 operators?
- 10 A No, I don't believe it will, because this is a
- 11 close structure, and I believe that the water will --
- 12 the way we are planning and putting this water in is
- 13 to try and get the wells in balance, and that will
- 14 only affect the area of your close structure.
- 15 Q You only affect the applicant's wells in this; is
- 16 that right?
- 17 A That's correct, yes, on our land.
- 18 Q In your opinion, will it result in the recovery of
- 19 oil that would not otherwise be recovered?
- 20 A Yes. I think it will recover additional oil. Our
- 21 present production, before we ceased producing, was
- 22 about twenty to thirty barrels per day, and I think
- 23 if we don't inject this, that our production will
- 24 decline further, that the wells could be produced
- 25 for a long time, but I believe by repressuring, we

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1 would bring this production back up to about a
2 hundred barrels, estimated, about a hundred barrels
3 per day, and that we would be more economically able
4 to recover this additional oil.

5 We have produced approximately twenty thousand
6 barrels, and I believe we can produce as much as
7 fifty thousand barrels additional.

8 Q Additional oil?

9 A Yes, estimated.

10 Q Were exhibits 1 through 8 prepared by you or under
11 your supervision?

12 A Yes, sir.

13 Q And Exhibit 9 is a water analysis furnished to you
14 by Core Laboratories?

15 A That's correct.

16 MR. KELLAHIN: At this time I would like to
17 enter in evidence Exhibits 1 through 9, inclusive.

18 MR. NUTTER: Applicant's Exhibits 1 through 9
19 will be admitted in evidence.

20 Q (Mr. Kellahin continuing) Do you have anything else,
21 Mr. Reese?

22 A No, I don't. I would like to thank the commission
23 for setting this hearing up from the original time.

24 I wasn't able to get here at that time, and I
25 appreciate the commission's setting the time up.

1 MR. NUTTER: That's perfectly all right.

2 CROSS EXAMINATION

3 BY MR. NUTTER:

4 Q Mr. Reese, I notice from Exhibits 3 -- I guess it's
5 4 and 5 that you have indicated that the Mancos shale
6 extends from the surface down to some 340 or 300 and
7 some odd feet.

8 A That's correct.

9 Q So we have no gravel beds or any other source of
10 water in these wells that might be contaminated; is
11 this correct?

12 A That's correct.

13 Q And do you visualize having to use any pressure
14 for the injection of this water?

15 A Yes. I think we will have to inject it about two
16 hundred pounds pressure.

17 Q About two hundred pounds pressure?

18 A Yes.

19 Q Now, I interpret from your structure map, being
20 Exhibit Number 2, that you feel that Rijan occupies
21 a small anticline completely to itself from the rest
22 of the pool and that you are separated by this
23 anticlinal load that extends across the southwest
24 quarter of Section 31, and therefore, any injection
25 into your anticline wouldn't affect the other

1 production; is this correct?

2 A Yes, that's correct. Our Rijan Number 4 well, we
3 offset the producer just to the west, the Number
4 31, and expect it to be at least as high structurally
5 as that well.

6 The well came in low, and finally to help to find
7 this structure resulted in a dry hole and showed a
8 structural separation from the section or Number 31
9 well of Slick Kennedy's.

10 Q So you have depicted this incline just coming right
11 through the middle of that well?

12 A Yes, I have. That is my structural control extending
13 from the Humble One K and the Rijan Number 3 to the
14 southeast.

15 Q Now, what amount of relief do you have on this
16 anticline that you have depicted here from that
17 Rijan 4? What contour would it be on?

18 A It is between the Class 4185 contour and the plus
19 4190. There is a little bit -- a little better than
20 twenty-five feet.

21 Q I see.

22 A I mean twenty feet -- almost twenty-five feet.

23 MR. NUTTER: Are there any further questions of
24 Mr. Reese? He may be excused.

25 (Witness excused)

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MR. NUTTER: Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That's all, Mr. Nutter. Thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 4560?

We'll take the case under advisement.

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PAGE 15

I N D E X

WITNESS

PAGE

VAL R. REESE

Direct Examination by Mr. Kellahin

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Cross Examination by Mr. Nutter

12

E X H I B I T S

Applicant's Exhibits 1 - 9

1 STATE OF NEW MEXICO)
2)
3 COUNTY OF BERNALILLO)

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

9 Linda Malone
10 Court Reporter

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22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the Examiner hearing of Case No. 4560,
25 heard by me on 7/14 1971.

Chambers, Examiner
New Mexico Oil Conservation Commission

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 253-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 30, 1971

EXAMINER HEARING

IN THE MATTER OF:

Application of Rijan Oil Company,
Inc. for a pressure maintenance
project, San Juan County, New
Mexico.

Case No. 4560

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

dearnley-meier reporting service, inc.

PAGE 2

1 MR. UTZ: Case 4560.

2 MR. HATCH: Application of Rijan Oil Company, Inc.
3 for a pressure maintenance project, San Juan County, New
4 Mexico.

5 The Applicant has requested that this case be
6 continued, and I suggest it be continued to the Examiner
7 Hearing on July 14th.

8 MR. UTZ: Case 4560 will be continued to July 14th.
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1 STATE OF NEW MEXICO)
2) ss
3 COUNTY OF BERNALILLO)

4 I, BRENDA BURKS, Court Reporter in and for the County
5 of Bernalillo, State of New Mexico, do hereby certify that
6 the foregoing and attached Transcript of Hearing before the
7 New Mexico Oil Conservation Commission was reported by me;
8 and that the same is a true and correct record of the said
9 proceedings to the best of my knowledge, skill and ability.

10 Brenda Burks
11 Court Reporter

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22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the Examiner hearing of Case No. 4560,
25 heard by me on 6-30-71 19.....

James E. Hunsinger, Examiner
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN
LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

July 20, 1971

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 4560

Order No. R-4171

Applicant:

Rijan Oil Company, Inc.

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

Aztec OCC x

Other State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4560
Order No. R-4171

APPLICATION OF RIJAN OIL COMPANY,
INC. FOR A PRESSURE MAINTENANCE
PROJECT, SAN JUAN COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 14, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 19th day of July, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Rijan Oil Company, Inc., seeks authority to institute a pressure maintenance project in the Slick Rock-Dakota Pool on its Rijan Wells Nos. 10, 12, and 14 located, respectively, in Units F, L, and K of Section 31, Township 30 North, Range 16 West, NMPM, San Juan County, New Mexico, by injection of water into the Dakota formation.

(3) That the proposed pressure maintenance project is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(4) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

-2-

CASE NO. 4560

Order No. R-4171

IT IS THEREFORE ORDERED:

(1) That the applicant, Rijan Oil Company, Inc., is hereby authorized to institute a pressure maintenance project in the Slick Rock-Dakota Pool by the injection of produced water into the Dakota formation through its Rijan Wells Nos. 10, 12, and 14, located, respectively, in Units F, L, and K of Section 31, Township 30 North, Range 16 West, NMPM, San Juan County, New Mexico.

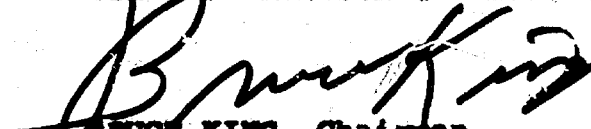
(2) That the subject pressure maintenance project is hereby designated the Rijan Slick Rock Pressure Maintenance Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

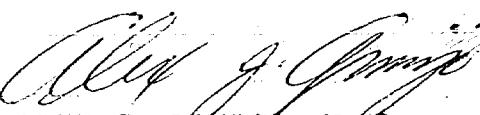
(3) That monthly progress reports of the pressure maintenance project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.


(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


BRUCE KING, Chairman


ALEX J. ARRIJO, Member


A. L. PORTER, Jr., Member & Secretary


S E A L

dr/

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 14, 1971

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:

- ALLOWABLE:** (1) Consideration of the allowable production of gas for August, 1971, from fifteen prorated pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico.
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, for August, 1971.

CASE 4565: Application of Tom L. Ingram to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill his State M Well No. 1, having a surface location 330 feet from the South line and 1650 feet from the East line of Section 18, Township 17 South, Range 36 East, Vacuum-Abo Reef Pool, Lea County, New Mexico. Applicant proposes to plug the well back to approximately 7200 feet and whipstock the well to a bottom-hole location northwest of the surface location and no nearer than 330 feet to the boundary of the dedicated proration unit.

CASE 4566: Application of W & H Production-Drilling, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to Rule 104 of the Commission Rules and Regulations, approval of an unorthodox gas well location for the Black River Corporation Cities-Federal Well No. 1, located 1650 feet from the North and West lines of Section 34, Township 25 South, Range 24 East, undesignated Morrow gas pool, Eddy County, New Mexico.

CASE 4568: Application of W. W. West for a unit agreement, Otero County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Dog Canyon Unit Area comprising 37,782 acres, more or less, of Federal, State and fee lands in Townships 25 and 26 South, Ranges 19 and 20 East, Otero County, New Mexico.

Examiner Hearing
July 14, 1971
-2-

Docket No. 14-71

CASE 4569: Application of Barber Oil, Inc., for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 1326 feet from the South line and 5 feet from the West line of Section 13, Township 20 South, Range 28 East, as an infill well in its waterflood project in the Russell (Yates) Pool, Eddy County, New Mexico.

CASE 4567: Southeastern New Mexico nomenclature case calling for an order for the creation, extension and contraction of certain pools in Lea, Chaves, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Sand Dunes-Morrow Gas Pool. The discovery well is the Texas American Oil Corporation Todd 36 State No. 1 located in Unit F of Section 36, Township 23 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
SECTION 36: W/2

(b) Contract the Red Lake Pool in Eddy County, New Mexico, by the deletion of the following described area:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
SECTION 18: SW/4 NW/4

(c) Extend the Atoka-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
SECTION 18: SW/4 NW/4

(d) Extend the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
SECTION 12: E/2

Examiner Hearing

July 14, 1971

-3-

Docket No. 14-71

(Case 4567 continued)

(e) Extend the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM

SECTION 14: SE/4 NW/4

SECTION 22: W/2 NE/4

SECTION 23: W/2 SW/4

SECTION 26: N/2 NW/4

SECTION 27: NE/4 NE/4

(f) Extend the Southwest Gladiola-Devonian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 37 EAST, NMPM

SECTION 26: N/2

(g) Extend the Haystack-Cisco Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 6 SOUTH, RANGE 27 EAST, NMPM

SECTION 28: All

(h) Extend the Vada-Pennsylvanian Pool in Lea and Roosevelt Counties, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 35 EAST, NMPM

SECTION 32: SW/4

TOWNSHIP 9 SOUTH, RANGE 34 EAST, NMPM

SECTION 3: SE/4

CASE 4560: (Continued from the June 30, 1971, Examiner Hearing

Application of Rijan Oil Company, Inc. for a pressure maintenance project, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot pressure maintenance project in the Slick Rock-Dakota Pool by the injection of water into the Dakota formation through its Rijan Wells Nos. 10, 12, and 14 located, respectively, in Units F, L, and K of Section 31, Township 30 North, Range 16 West, San Juan County, New Mexico.

Docket No. 13-71

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 30, 1971

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

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

CASE 4352: (Reopened) (Continued from April 14, April 28, and May 19, 1971, Examiner Hearings)

In the matter of Case 4352 being reopened by the Oil Conservation Commission upon its own motion to give all interested persons an opportunity to appear and present evidence to whether the Double L-Queen and Suble-Queen Pools, Chaves County, New Mexico, are in fact separate reservoirs or one common reservoir. Further, in the event it is found that the two pools comprise one common reservoir, the Commission will consider the adoption of special rules and regulations to provide for the classification of oil and gas wells, spacing and well location requirements for oil and gas wells, and an allocation formula for withdrawals from the gas wells and oil wells.

CASE 4539: (Continued from the May 19, 1971, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Doanbuy Lease & Company, Inc., and all other interested persons to appear and show cause why its following described wells in Section 27, Township 14 South, Range 33 East, Saunders Pool, Lea County, New Mexico, should not be plugged and abandoned, in accordance with a Commission-approved plugging program:

| | | |
|-----------------------|------------|--------|
| Atlantic State AC - 1 | Well No. 1 | Unit N |
| Atlantic State AC - 2 | Well No. 2 | Unit M |
| Atlantic State AC - 2 | Well No. 3 | Unit O |
| Atlantic State AC - 3 | Well No. 4 | Unit L |
| Atlantic State AC - 3 | Well No. 5 | Unit J |
| Atlantic State AC - 4 | Well No. 6 | Unit P |
| Atlantic State AC - 4 | Well No. 7 | Unit I |

CASE 4556: Application of Tenneco Oil Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Queen formation in the perforated interval from 3154 feet to 3159 feet in its USA-Reno Well No. 1 located in Unit L of Section 3, Township 15 South, Range 31 East, Caprock-Queen Pool, Chaves County, New Mexico.

CASE 4557: Application of Continental Oil Company for transfer of allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to transfer allowable across the boundaries of the participating area and the leases outside said area but within the Maljamar Cooperative Area, MCA Unit Area, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

CASE 4535: (Continued from the April 28, and the May 19, 1971, Examiner Hearings)

Application of Continental Oil Company for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Monument-Tubb and Weir Drinkard oil production in the well-bore of its SEMU Well No. 70, located in Unit I of Section 15, Township 20 South, Range 3 East, Lea County, New Mexico.

CASE 4558: Application of Midwest Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Little Inbe (Bough "C") Unit Area comprising 2,240 acres, more or less, of state lands in Sections 10, 11, 14 and 15 of Township 10 South, Range 33 East, Inbe Permo-Pennsylvanian Pool, Lea County, New Mexico.

CASE 4559: Application of Midwest Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Little Inbe (Bough "C") Unit Area, Inbe Permo-Pennsylvanian Pool, Lea County, New Mexico, by the injection of water through three wells located in Sections 11 and 14 of Township 10 South, Range 33 East, Lea County, New Mexico.

CASE 4560: Application of RiJan Oil Company, Inc. for a pressure maintenance project, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot pressure maintenance project in the Slick Rock-Dakota Pool by the injection of water into the Dakota formation through its RiJan Wells Nos. 10, 12, and 14 located, respectively, in Units F, L and K of Section 31, Township 30 North, Range 16 West, San Juan County, New Mexico.

CASE 4561: Application of Great Plains Land Company for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seek an exception to

(Case 4561 continued)

Order No. R-3221, as amended, to dispose of water produced by its well located in the NW/4 NW/4 of Section 31, Township 18 South, Range 30 East, Shigart Field, Eddy County, New Mexico.

CASE 4562: Application of Texas Oil and Gas Corporation, for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the special rules and regulations governing the Indian Basin-Upper Pennsylvanian Gas Pool to permit the drilling of a well at an unorthodox gas well location 990 feet from the North and West lines of Section 22, Township 22 South, Range 23 East, Eddy County, New Mexico.

CASE 4563: Application of Corinne Grace for special gas-oil ratio limitation and pressure maintenance project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce her State Well No. 1 located in Unit A of Section 1, Township 15 South, Range 29 East, Double L-Queen Pool, Chaves County, New Mexico, with no gas-oil ratio limitation, strip the liquids, and institute a pressure maintenance project by the injection of all said gas back into the producing formation through her State Well No. 2 located in Unit B of said Section 1. Applicant further seeks to transfer an oil allowable from said Well No. 2 to said Well No. 1.

CASE 4564: Application of Penroc Oil Corporation for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre non-standard oil proration unit comprising the SW/4 NE/4 and NW/4 SE/4 of Section 33, Township 18 South, Range 38 East, Hobbs-Drinkard Pool, Lea County, New Mexico, to be dedicated to its Conoco-State Well No. 1 located 1980 feet from the North line and 2130 feet from the East line of said Section 33.

CASE 4542: (Continued from the June 16, 1971, Examiner Hearing)

Application of Tom L. Ingram for unorthodox gas well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for his Light Well No. 1 located 1980 feet from the South line and 660 feet from the East line of Section 15, Township 8 South, Range 37 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico, the S/2 of said Section 15 to be dedicated to the well.

CASE 4543:

Application of George L. Ingram for unorthodox gas well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for his Light Well No. 1 located 1980 feet from the South line and 660 feet from the East line of Section 15, Township 8 South, Range 37 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico, the S/2 of said Section 15 to be dedicated to the well.

CASE 4544:

Application of George L. Ingram for unorthodox gas well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for his Light Well No. 1 located 1980 feet from the South line and 660 feet from the East line of Section 15, Township 8 South, Range 37 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico, the S/2 of said Section 15 to be dedicated to the well.

RIJAN OIL COMPANY
T30N, R16W-2400' F/N, 1620' F/W
ELEVATION: 5114' SEC. 31
SAN JUAN COUNTY, NEW MEXICO

0'

DRILLED $9\frac{5}{8}$ " HOLE 34' SET $7\frac{5}{8}$ "
W/15 SACKS CEMENT

MANCOS SHALE
0'-340'

TOP OF CEMENT 280'-912'

MANCOS SHALE
280'-340'

GALLUP 340'-378'

LOWER MANCOS SHALE 378'-788'

SCHEMATIC DIAGRAM RIJAN NO. 10

JUNE 2, 1971
SCALE: 1"=100'
V.R. REESE C.P.G.

4.5" CASING
GAMMA RAY LOG
9-29-70

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Rijan EXHIBIT NO. 6

CASE NO. 4560

GREENHORN SHALE 788'-868'

GRANEROS SHALE 868'-909'

OPEN HOLE FROM
912'-925'
925'

DAKOTA SANDSTONE 909'-925'
DRILLED $6\frac{1}{4}$ " HOLE TO 912', SET 4.5", 9.5lbs. CASING
TO 912', CEMENTED W/60 SACKS OF REGULAR CEMENT
FROM 912'-280' NOTE: WELL PLUGGED W/40 SACKS OF
OF CEMENT INSIDE OF 4.5" CASING. PLAN TO DRILL OUT
PLUG.

RIJAN OIL COMPANY
T20N, R16W-2475' F/S, 700' F/W
ELEVATION: 5093' - SEC. 31
SAN JUAN COUNTY, NEW MEXICO

0'

DRILLED 9 $\frac{5}{8}$ " TO 37', SET 37' OF 7 $\frac{5}{8}$ "
W/30 SACKS OF CEMENT

MANCOS SHALE
0' - 314'

TOP OF CEMENT FROM 166' - 887'

GALLUP 314' - 350'

LOWER MANCOS 350' - 756'

SCHEMATIC DIAGRAM
NAVAJO TRIBAL NO.12

JUNE 2, 1971

SCALE: 1" = 100'

V.R. REESE C.P.G.

4.5" CASING
GAMMA RAY LOG
10-9-70

MANCOS SHALE

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Rijan EXHIBIT NO. 7

CASE NO. 4560

GREENHORN LIMESTONE 756' - 840'

GRAMEROS SHALE 840' - 883'

DAKOTA 883' - 899'

OPEN HOLE FROM
887' - 899'

T.D. 899'

DRILLED 6 $\frac{1}{4}$ " HOLE SET 4.5" 9.5lbs. CASING
TO 887', CEMENTED W/70 SACK OF REGULAR
CEMENT, FROM 887' - 166'. NOTE: WELL PLUGGED W/40
SACKS OF CEMENT INSIDE OF 4.5" CASING PLAN TO
DRILL OUT PLUG.

RIJAN OIL COMPANY
T30N, R16W-2380' F/S, 1720' F/W
ELEVATION: 5105' - SEC. 31
SAN JUAN COUNTY, NEW MEXICO

0'
DRILLED 9 ⁵/₈" TO 20', SET 20' OF 7 ¹/₂"
W/15 SACKS CEMENT CIRCULATED

MANCOS SHALE
0'-330'

TOP OF CEMENT FROM 160' TO 901'

GALLUP 330'-366'

LOWER MANCOS SHALE 366'-752'

SCHEMATIC DIAGRAM

RIJAN NO. 14

JUNE 2, 1971

SCALE: 1" = 100'

V.R. REESE C.P.G.

4.5" CASING

GAMMA RAY LOG

12-8-70

MANCOS SHALE
366'-752'

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Ryan EXHIBIT NO. 8

CASE NO. 4560

GREENHORN LIMESTONE 752'-847'

GRANEROS SHALE 847'-891'

OPEN HOLE FROM
901'-912'

DAKOTA SANDSTONE 891'-912'
DRILLED 6 ¹/₄" HOLE, SET 4.5" 9.5 lbs CASING
TO 901' CEMENTED, W/70 SACKS OF REGULAR
CEMENT FROM 160' TO 901' NOTE: WELL PLUGGED W/40
SACKS OF CEMENT INSIDE 4.5" CASING, PLAN TO DRILL
OUT PLUG.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

DALLAS, TEXAS
July 1, 1971

Ryan Oil Company
900 Bank of New Mexico Building
Albuquerque, New Mexico 87101

Subject: Water Analysis
Slick Rock Field
San Juan County, New Mexico
Our File Number: IWTL-7150

Gentlemen:

This report presents the results of an analysis on one sample of water from the Slick Rock Field. Gravimetric procedures were used in determining the barium and the sulfate contents. Total iron determination was made by electro-photometric means, and the remainder of the constituents were analyzed with conventional titrimetric procedures.

We are pleased to be of service.

Very truly yours,

Core Laboratories, Inc.

Dare K. Keelan (RLC)

Dare K. Keelan, Manager
Industrial Water Technology

DKK:RLC:dl
3 cc. - Addressee



CORE LABORATORIES, INC.
Petroleum Reserve Engineering
DALLAS, TEXAS
WATER ANALYSIS

Page 1 of 1
File IWTL-7150

Mixture of Nos. 9, 11

Company Ryan Oil Company Well Name & 13 Sample No. 1

Formation Dakota Depth _____ Sampled From _____

Location _____ Field Slick Rock County San Juan State New Mexico

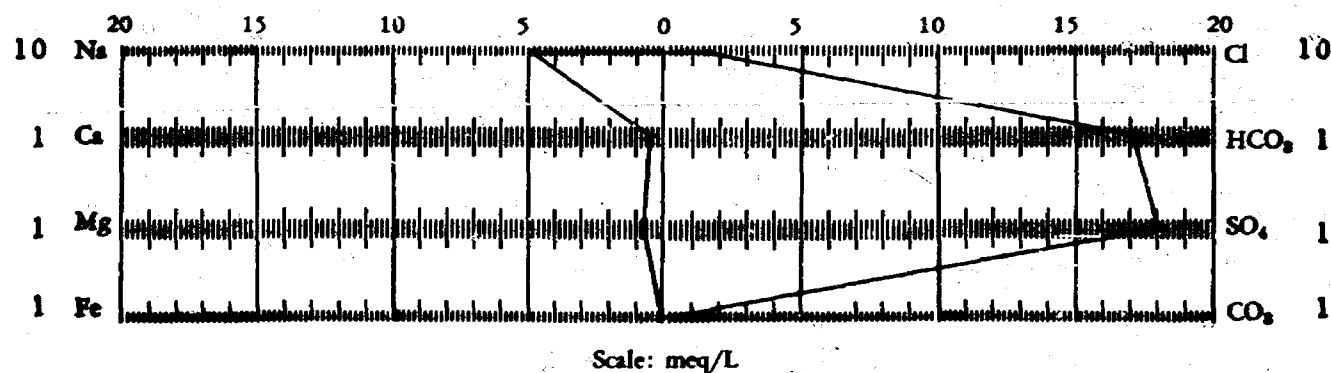
Date Sampled 6-1-71 Date Analyzed 6-16-71 Analyst RLC

Total Dissolved Solids 3584 mg/L calculated Specific Gravity 1.0123 60° F.
1.0095 @ 74° F.

Resistivity 2.53 ohm-meters @ 74° F. measured Hydrogen Sulfide present

pH _____ @ _____ °F.

| * Constituents | meq/L | mg/L | Constituents | meq/L | mg/L |
|----------------|-------|-------------|--------------|-------|-------------|
| Sodium | 49 | 1127 | Chloride | 15 | 532 |
| Calcium | 0.4 | 8 | Bicarbonate | 17 | 1056 |
| Magnesium | 0.6 | 7 | Sulfate | 18 | 854 (Grav.) |
| Iron | Trace | | Carbonate | -0- | -0- |
| Barium | -0- | -0- (Grav.) | Hydroxide | -0- | -0- |



* All analyses except iron determination performed on a filtered sample.

Oil/Gas/Mining

Val R. Reese, C.P.G.

Geological Consultant
900 Bank of New Mexico Building
Albuquerque, New Mexico 87101

June 3, 1971

Office: Phone 243-0665
Home: Phone 255-9749

971 JUN 4 PM 12 30

Mr. Dan S. Nutter
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 4560

Re: Case No. ~~4544~~
Rijan Oil Company, Inc.

Dear Mr. Nutter:

Rijan Oil Company, Inc. previously made application for salt water disposal into the Dakota formation at the Rijan No. 15 well located in Unit F in Section 31 of Township 30 North, Range 16 West, N.M.P.M., San Juan County, New Mexico. This application was designated as your Case No. 4544, and the application was subsequently withdrawn due to the high structural position of the No. 15 well within the Dakota producing area.

We desire to have the following wells included in re-pressuring of the producing area located in Section 31 of Township 30 North, Range 16 West. These wells are low structurally to the producing wells on the lease which are producing from the Dakota formation.

Rijan No. 10 - 2400' fnl, 1620' fwl F

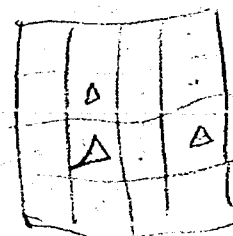
Rijan No. 12 - 2475' fsl, 700' fwl L

Rijan No. 14 - 2380' fsl, 1720' fwl K

We would like to have this application included in the July hearing. Please call me collect if we need to furnish further information.

Sincerely,

Val R. Reese
VAL R. REESE



VRR:mb

CC: Mr. Claude C. Kennedy
Mr. Walter Duncan

DOCKET MAILED

Date 7-2-71

DOCKET MAILED

Date 6-15-71

DRAFT

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4560

Order No. R- 4171

APPLICATION OF RIJAN OIL COMPANY,
INC. FOR A PRESSURE MAINTENANCE
PROJECT, SAN JUAN COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 14, 1971,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15 day of July, 19 71, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Rijan Oil Company, Inc., seeks
authority to institute a pressure maintenance project in the
Slick Rock-Dakota Pool on its Rijan Wells Nos. 10, 12, and 14
located, respectively, in Units F, L, and K of Section 31,
Township 30 North, Range 16 West, NMPM, San Juan County, New
Mexico, by injection of water into the Dakota formation.

-2-

CASE NO. 4560

Order No. R-

(3) That the proposed pressure maintenance project is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(4) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Rijan Oil Company, Inc., is hereby authorized to institute a pressure maintenance project in the Slick Rock-Dakota Pool ^{by the injection of produced water into the} on its Rijan Wells Nos. 10, 12, and 14, located, respectively, in Units F, L, and K of Section 31, NMPM, Township 30 North, Range 16 West, San Juan County, New Mexico. ~~by injection of produced salt water into the Dakota formation through its above-described wells in said Section 31.~~

~~PROVIDED HOWEVER, that the casing-tubing annulus shall be filled with an inert fluid and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the tubing, casing, or packer.~~

(2) That the subject pressure maintenance project is hereby designated the Rijan Slick Rock Pressure Maintenance Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

subject formation through it

-3-

CASE NO. 4560

Order No. R-

(3) That monthly progress reports of the pressure maintenance project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

CASE 4561: Application of GREAT
PLAINS LAND COMPANY FOR AN
EXCEPTION TO ORDER R-3221.