

Pet CASE 5812: Petroleum Development Corp. *ratio*
for an exception to Order No. R-3221,
Lea County, New Mexico

CASE NO.

5812

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.



OIL CONSERVATION COMMISSION

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

**LAND COMMISSIONER
PHIL R. LUCERO**

January 26, 1977



STATE GEOLOGIST
EMERY C. ARNOLD

DIRECTOR
JOE D. RAMEY

Mr. John B. Bigelow
Kegel & Royer
Attorneys at Law
1231 Paseo de Peralta
Santa Fe, New Mexico

Re: CASE NO. 5812
ORDER NO. R-5355

Applicant:

Petroleum Development Corporation

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 23, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Petroleum Development
Corporation for an exception to
Order No. R-3221, Lea County,
New Mexico.

CASE
5812

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

John B. Bigelow, Esq.
KEGEL & ROYER, P.A.
Attorneys at Law
1231 Paseo de Peralta
Santa Fe, New Mexico

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1 MR. NUTTER: We will call Case Number 5812.

2 MS. TESCHENDORF: Case 5812, application of Petroleum
3 Development Corporation for an exception to Order No. R-3221,
4 Lea County, New Mexico.

5 MR. BIGELOW: John Bigelow appearing for the applicant.
6 I have one witness to be sworn.

7 (THEREUPON, the witness was duly sworn.)

8

9 CHARLES W. SANDERS

10 called as a witness, having been first duly sworn, was
11 examined and testified as follows:

12

13 DIRECT EXAMINATION

14 BY MR. BIGELOW:

15 Q Sir, please state your full name and current
16 residence address?

17 A My name is Charles W. Sanders and I'm from
18 Albuquerque, New Mexico.

19 Q And what is your occupation?

20 A I'm an engineer working for Petroleum Development
21 Corporation.

22 Q Have you appeared before this Commission before?

23 A Yes, I have.

24 Q And have your qualifications as a petroleum engineer
25 before this Commission been made a matter of record?

1 A Yes, sir.

2 Q And have you familiarized yourself with the area
3 which is the subject of this application today?

4 A Yes, sir, I have.

5 MR. BIGELOW: I ask the Examiner, are the gentleman's
6 qualifications acceptable?

7 MR. NUTTER: Yes, he is qualified, please proceed.

8 MR. BIGELOW: Thank you.

9 Q (Mr. Bigelow continuing.) Now, would you please give
10 a brief statement as to the state of the well in question,
11 Petroleum Development's well?

12 A The well in question is the CleveRock-Pedco State
13 No. 1 originally drilled under the name of CleveRock Energy
14 Corporation. We have recently filed a notice to change the
15 name of the operator to Petroleum Development Corporation,
16 which does not change the ownership of the well, merely the
17 legal operator. We have operated a field in the operations
18 since the beginning of the well.

19 This well was drilled in the latter part of 1974 and
20 went on the line in November of '74 and after several months
21 it began to produce a little bit of water and production
22 declined. The initial production was very high, in the
23 neighborhood of four million cubic feet per day, making about
24 four hundred barrels of condensate per day.

25 The initial drill stem test showed the presence of

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1 a barrier at a calculated distance of eighty-one feet from
2 the well and at the time we didn't know whether this was a
3 physical barrier, such as a permeability barrier, or a water
4 table or what but as the well produced over the next several
5 months an oil ring showed up which was reflected in the color
6 of the distillate, going from clear to dark and the gravity of
7 the oil reducing by several degrees and within a very short
8 time after this the water production began to increase, the
9 well declined and died.

10 The well has not quite paid out and we are proposing
11 to install a gas lift system, an artificial lift system, to
12 enable the well to be produced to an economical abandonment.
13 In the process, of course, we will produce large volumes of
14 water, at least for awhile. We feel that part of this water
15 may have been coned up due to the high withdrawal rates and
16 as such it may have saturated the formation in the vicinity of
17 the wellbore and that the lower rates at which we expect to
18 produce will not cause this coning and that the water will
19 gradually deplete. We feel that perhaps this could be the
20 case.

21 Q What do you base that feeling on?

22 A We feel that there is not an active water drive in
23 the well because prior to the tests that were made in the
24 latter part of 1975 which are shown on Exhibit G, the fluid
25 level indicated a bottom-hole pressure in the neighborhood of

1 two thousand pounds. The original bottom-hole pressure was in
2 excess of four thousand pounds and we feel that if there were
3 an actual active water drive the pressure would have been much
4 higher than this after a shut-in time of some six to eight
5 months.

6 Q You would expect water production to decrease, based
7 on the information that you have at this point?

8 A We hope that it will and certainly the evidence
9 indicates that it quite possibly could.

10 Q What in your opinion is your most economic and
11 practical alternative to dispose of this water?

12 A We are requesting an exception to the state-wide
13 rule of pitting of produced water as the most economical means
14 of approaching the problem and certainly it will result in the
15 recovery of more oil and gas because it will delay the economic
16 abandonment of the well.

17 Q Have you made any sort of an economic projection as
18 to when you would have to abandon this well if you weren't
19 allowed to pit the water that you are going to produce?

20 A Yes, if we do not pit the water, that is if we had
21 to truck the water it would cost about thirty-five cents a
22 barrel to truck it to a disposal site, to an approved disposal
23 site.

24 Q What does that mean roughly in terms of when you
25 might have to abandon the well as opposed to pitting it?

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1 A. Well, the production would decrease to about a
2 hundred and forty MCF per day and six to eight barrels of
3 condensate per day at the time of abandonment. This would be
4 opposed to being able to produce the well on down to about
5 ~~seventy MCF per day and about three barrels of oil per day if~~
6 we are allowed to pit the water and not have to be out the
7 expense of hauling it.

8 Q. What amount of water do you estimate will be produced?

9 A. Table G indicates that the initial production rate
10 will be in the neighborhood of two hundred and sixty barrels
11 of water per day.

12 Q. And have you made any investigation as to what will
13 happen to this water that is pitted after it is pitted?

14 A. Yes, sir, refer to Exhibit A which is a USGS
15 quadrangle map of the area, which shows the topography. We'll
16 note that about -- let me locate the well first. The well is
17 located in the south half of Section 16, Township 19 South,
18 32 East. About five miles south of this we have the Laguna
19 Plata and the Laguna Toston, the Laguna Gatuna, G-a-t-u-n-a,
20 and then over to the west a couple of miles Potash Lake which
21 is a depression into which the National Potash Company disposes
22 of their brine from their mining operations.

23 The general slope of the terrain is southward into
24 the sink which is encompassed by these lake beds that we
25 have mentioned. The slope is about fifty feet per mile and

1 this is reflected on the map of the Commission which shows
2 the contours of the water-bearing strata, the shallow water-
3 bearing strata in the area.

4 Q Your expectation then is that the water produced would
5 flow towards the Potash Lake which you have indicated on
6 Exhibit A?

7 A Yes, sir. There is five to ten feet of loose surface
8 sand in the area, the whole area is very sandy. This is
9 underlain by ten to fifteen feet of solid caliche and then
10 by over three hundred feet of sandy red bed before you get to
11 the possible aquifers in the area. The water would spread out
12 on top of the caliche and migrate downward in the direction
13 of the sinks that we have described.

14 Q Now, are you familiar with the area between your
15 well and the sinks that you have described?

16 A Yes, sir.

17 Q Have you made an investigation as to whether or not
18 there would be any expectation of contaminating any existing
19 fresh water supplies in that area?

20 A The only fresh water supplies that I have been able
21 to uncover are in Section 36 of the same Township. There is
22 a water well there and in Section 18 of the Township to the
23 east.

24 Q Both of those are away from the direction of flow
25 as far as you can determine?

1 A. Yes. As far as I can determine there is no significant
2 amount of water in the area. Phillips Petroleum Company
3 drilled a well about two and a half miles -- a water well
4 about two and a half miles west of the CleveRock-Pedco State
5 No. 1 to get fresh water for their plant. They did not have
6 enough water for either domestic use for their employees or
7 for operation of the plant and they had to take water from the
8 Potash Mine's fresh water line which comes from the Caprock
9 down into the area that we are talking about.

10 Excuse me, there is one windmill about two miles
11 northwest of our operation which produces enough water to water
12 livestock. Other than this I know of no significant amount of
13 water being produced in the area.

14 Q Are all of the examples that you have mentioned
15 away from the direction of the expected flow of the water that
16 you would produce in the direction of the potash sinks?

17 A. Yes.

18 Q Are you familiar with certain orders and rules of
19 the Commission in regards to similar situations of other
20 applicants in this general area?

21 A. Yes, there are four areas in the same township which
22 have been granted exceptions to the water pitting rule,
23 Rule 3221, and these are located as follows: These are all
24 in Township 19 South, 32 East, the east half of Section 13,
25 Case Number R-3554; Sections 28 and 33 which is Case Number

1 R-3788; the northwest quarter of Section 32 which is Order
2 Number R-3686; and the northwest quarter of Section 19 which
3 is Order 3775.

4 And to my knowledge there have been no denials of
5 requests in this particular township since the potable water
6 is practically non-existent.

7 Q Do you have anything else that you would like to add?

8 A Yes, we might refer to Exhibit E which is a summation
9 of the water analyses of Exhibits B, C and D.

10 This is a comparison of water in the area which is
11 being disposed of on the surface, being compared with the
12 CleveRock-Pedco State No. 1 produced water. The first column
13 is the CleveRock-Pedco well. The next column is in the
14 Laguna Gatuna disposal site which is approved by the State and
15 also, I believe, by the BLM for disposal of produced oil field
16 brines and the third column is from a sample taken at the
17 National Potash Lake itself, right at the plant, which is about
18 six miles south and slightly west of our location.

19 The sodium in the CleveRock well and the National
20 Potash Lake are practically the same at about fifty-one to
21 fifty-two thousand parts per million or milligrams per liter
22 as the case is here and the chlorides compare very closely
23 at ninety-five thousand and eighty-five thousand, respectively.
24 So the water is essentially the same as is already being
25 disposed of in the area.

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1 In addition to this, of course, the large lake
2 called Laguna Plata is a brine lake comprising some fifteen
3 hundred acres, which is only about five miles south of our
4 well and this is approved, not only for disposal but it is
5 used as a saturated brine source for drilling operations in
6 the area.

7 I believe that's about all I have unless there are
8 questions.

9
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. Sanders, in the course of your testimony at
13 one point you mentioned the Commission map, what did you have
14 reference to?

15 A Oh, excuse me. This is a copy of the map which I
16 copied from your office which shows the structural trend of
17 the aquifer.

18 MR. NUTTER: For the record I would like to state
19 that this map he refers to as the Commission map is Plate II,
20 entitled Ground Water Map of Southern Lea County, New Mexico,
21 which is a portion of Ground Water Report Number Six, Geology
22 and Ground Water Conditions in Southern Lea County, New Mexico
23 which is a book which is in the Commission offices. Okay,
24 now that we've got that taken care of.

25 THE WITNESS: Thank you.

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1 Q (Mr. Nutter continuing.) Referring to your Exhibit
2 A, Mr. Sanders, which is a map which you have taken from a
3 quadrangle map I think you stated was a USGS quad, right?

4 A Yes, sir.

5 Q Okay. Now, that shows some contour lines, what is
6 the interval of those contour lines on that map?

7 A I'm going to have to do a little studying. I should
8 be able to answer that question. These are --

9 Q They are ten foot?

10 A Let's see.

11 MR. NUTTER: Off the record.

12 (THEREUPON, a discussion was held
13 off the record.)

14 MR. NUTTER: Back on the record.

15 Q (Mr. Nutter continuing.) Okay, what is the contour
16 interval on this map, Mr. Sanders?

17 A These are ten-foot contours.

18 Q This would indicate that your proposed site is
19 maybe a hundred to a hundred and fifty feet higher than the
20 Laguna Plata, is that right?

21 A Yes, right.

22 Q And the surface drainage then from your site down
23 to Laguna Plata to the Potash Lake would be -- the surface
24 drainage would be towards those lakes?

25 A Yes, right.

1 Q Okay, now, to the northwest, say, two miles northwest
2 of your well site is a windmill, that's indicated on the
3 map?

4 A Right.

5 Q Is that windmill producing at this time?

6 A Yes, sir.

7 Q Is that fresh water in that windmill?

8 A Yes, sir, it is.

9 Q Do you have the depth of the well?

10 A The depth of the well doesn't show here but I believe
11 this top figure is the depth to the water sand itself, being
12 three hundred and sixty-five feet.

13 Q I don't know, the upper figure is the depth to the
14 water?

15 A Yes, sir, the depth to the water sand is three hundred
16 and sixty-five feet. The actual depth of the well does not
17 show. This agrees real closely with the log that we have.
18 There is a sand of questionable quality in the CleveRock-Pedco
19 State well at a depth of three hundred and sixty-five feet.

20 Q I see. Now, immediately east of your well site, on
21 your Exhibit A, I see there in the east part of Section 15 a
22 quarry. Do you see that quarry on your Exhibit A?

23 A Yes, right.

24 Q Do you know whether that quarry is a wet quarry or
25 a dry quarry?

1 A No, sir, it's dry. It's a caliche quarry.

2 Q There is no water seepage in there?

3 A No, sir, there isn't even any water drainage into
4 it.

5 Q Okay, now, down in Section 34, about three miles
6 south-southeast of your well, there is the word "well" there
7 on the exhibit that I've got. It doesn't say what kind of a
8 well it is. Is that a water well that has been cut off the map
9 or is that an oil well or what kind of a well is that in
10 Section 34?

11 A I'm sorry, sir, I can't answer that question. It
12 does not show on this water resource map that we were talking
13 about.

14 Q But it does show on your Exhibit A?

15 A Yes.

16 Q Your Exhibit A that I have in my hand is two plats
17 that have been pasted together, is that the case with yours?

18 A Yes, sir.

19 Q And do you have the word "well" there?

20 A Yes, in 34.

21 Q Can you find out what that is there in Section 34
22 and let us know?

23 A Sure, I will.

24 Q If that's a windmill water well or another kind of
25 a water well that might be critical here.

1 A All right.

2 Q Okay, now, northeast of that in Section 26, in the
3 southeast quarter, there are the words "water tank". What is
4 that?

5 A This is on the aqueduct from the Caprock that I
6 mentioned awhile ago. Every once in awhile, I believe this
7 is on the Snyder Ranch, but every once in awhile they have
8 tapped this fresh water line and they have a galvanized water
9 tank about ten feet in diameter there for watering cattle.
10 The level of it is controlled by a float.

11 Q So that is a water tank that takes its water not
12 from the ground but from the aqueduct?

13 A Yes, sir, that is my understanding. I haven't
14 seen that actual tank but I have seen a number of others in
15 the same area along that aqueduct.

16 Q Now, you mentioned that Phillips when they drilled
17 their water well at their plant site in Section 18, could not
18 get enough water for their housing or for their plant. Do
19 you know how much water they were able to get when they drilled
20 the water well?

21 A No, sir. I couldn't find that out and they do not
22 use that well anymore.

23 Q Now, what is the actual location of the plant?

24 A The plant is located in the southwest quarter of
25 Section 18.

1 Q And you mentioned that one of the orders of the
2 Commission in granting an exception to R-3221 was for the
3 northwest quarter of Section 19?

4 A Yes, sir.

5 Q So the Commission has given an exception in the
6 acreage immediately offsetting the site of the Phillips water
7 well then, is that right?

8 A Yes, sir, that was in 1969. This was to Tenneco.

9 Q And the Commission has also granted an exception to
10 R-3221 in Sections 28 and 33, approximately a mile and a half
11 south of your well site, is that correct?

12 A Yes, sir, that was Order Number R-3788 and this
13 would have been to Pan American.

14 Q And also the Commission granted an exception in
15 Section 32 of that Township, is that correct?

16 A Yes, sir, in the southeast of the northwest, R-3686,
17 this would have been to Texaco.

18 Q Now, what about over here to the east. You mentioned
19 something in Section 13 to the east, what was that deal?

20 A This would be Order Number R-3554. This was Hudson
21 and Hudson covering the -- there is a little field there, the
22 name of it slips me. It covers the entire east half of
23 Section 13, the north half of Section 18 in the next township
24 to the east and the southwest quarter of Section 18.

25 Q Well, now, that is where you have indicated a water

1 well on your Exhibit A?

2 A Yes, sir, this is a well that was used by Wharton
3 Drilling Company in the drilling of Sun's Sharon Federal No. 1
4 in Section 15 right offsetting our well. This was about a year
5 before we drilled our well and they didn't have enough water
6 there to furnish drilling operations. They did run the pump
7 but they got -- the pusher told me about a two-finger stream
8 out of the two-inch piece of pipe.

9 Q But the Commission has granted an exception to
10 3221 right at the side of that water well?

11 A Yes, sir.

12 Q Do you know if that water well was drilled subsequent
13 to the time the Commission granted the exception or prior to
14 the time?

15 A No, sir, I don't. I understand that the water well
16 existed at the time Sun drilled their well but I don't know
17 when the water well was actually drilled. They just ran a
18 pump in it and used it.

19 Q What was the date of the exception for that?

20 A That was in 1968, November of 1968.

21 Q What was that order number again?

22 A Order Number R-3554.

23 Q Now, in referring to all of your exhibits, I didn't
24 get any exhibits here at the hearing but I had some that came
25 in with your application. I guess you were referring to the

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1 same numbers you used when you submitted them previously?

2 A Yes, right. Do you have those with you?

3 Q Yes, we are going to have to get these stamped.

4 I presume you are offering these as exhibits?

5 MR. BIGELOW: Yes, sir. I think probably Mr. Sanders
6 can identify the ones that he didn't directly refer to in
7 his testimony. Would you identify them and tell us exactly
8 what the exhibits are?

9 THE WITNESS: All right. Exhibit A is the quadrangle
10 map of the entire area.

11 Exhibit B is a water analysis from the National
12 Potash Lake to the south.

13 Exhibit C is an analysis from the Laguna Gatuna
14 disposal facility.

15 And Exhibit D is the water analysis from the CleveRock-
16 Pedco State No. 1.

17 Exhibit E is a table which is a summation of the
18 three water analyses for comparison purposes.

19 Exhibit F is a Form C-103 which was submitted
20 October 1st, 1976 to show the change of operator from CleveRock
21 Energy Corporation to Petroleum Development Corporation and to
22 outline the proposed procedure in placing the well back on
23 production.

24 Exhibit G is a table which is a summary of the last
25 production from our Bone Spring producing zone.

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1 MR. NUTTER: Now, do you want to identify what
 2 you had previously referred to as the Commission map and
 3 identify that as your next exhibit?

4 THE WITNESS: Okay, I didn't write all of that down.

5 MR. NUTTER: Well, you got to Exhibit G.

6 THE WITNESS: Could we call this H?

7 MR. NUTTER: That would be Exhibit H and you can just
 8 identify that as your Exhibit H, the rest of the identification
 9 is not necessary.

10 THE WITNESS: Okay, Exhibit H, Area Water --

11 MR. NUTTER: It's a ground water map.

12 THE WITNESS: A ground water map.

13 MR. NUTTER: Okay, are there any further questions
 14 of Mr. Sanders? He may be excused.

15 (THEREUPON, the witness was excused.)

16 MR. NUTTER: Do you have anything further, Mr.
 17 Bigelow?

18 MR. BIGELOW: Will the Examiner hold the record open
 19 for a certain amount of time to get this information on this
 20 well that appears on one map and none of the others?

21 MR. NUTTER: Yes, we sure will until we hear from
 22 Mr. Sanders.

23 MR. BIGELOW: All right, thank you.

24 MR. NUTTER: Now, do you want to introduce these?

25 MR. BIGELOW: Yes, sir, I would like to offer those,

1 please.

2 MR. NUTTER: Petroleum Development Corporation's
3 Exhibits A through H will be admitted into evidence.

4 (THEREUPON, Applicant's Exhibits A through
5 H were admitted into evidence.)

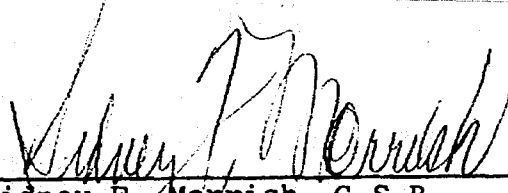
6 MR. NUTTER: Does anyone have anything further they
7 wish to offer in Case Number 5812? We will take the case
8 under advisement.

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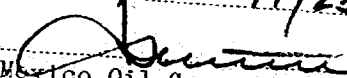
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REPORTER'S CERTIFICATE

1
2 I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
3 do hereby certify that the foregoing and attached Transcript
4 of Hearing before the New Mexico Oil Conservation Commission
5 was reported by me, and the same is a true and correct record
6 of the said proceedings to the best of my knowledge, skill and
7 ability.

8
9 
10 Sidney F. Morrish, C.S.R.

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11
12
13
14
15 I do hereby certify that the foregoing is
16 a complete record of the proceedings in
17 the Examiner hearing of Case No. 5812
18 heard by me on 11/23, 1976
19 , Examiner
20 New Mexico Oil Conservation Commission
21
22
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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. 5812
Order No. R-5355

APPLICATION OF PETROLEUM DEVELOPMENT
CORPORATION FOR AN EXCEPTION TO ORDER
NO. R-3221, AS AMENDED, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 23, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of January, 1977, 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, Petroleum Development Corporation, is the owner and operator of the CleveRock-Pedco State Well No. 1, located in Unit I of Section 16, Township 19 South, Range 32 East, NMPM, East Lusk-Bone Spring Pool, Lea County, New Mexico.

(3) That Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

-2-

Case No. 5812
Order No. R-5355

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks as an exception to the provisions of the aforesaid Order (3) to permit the disposal of salt water produced by applicant's above-described well into an unlined surface pit located in Unit I of said Section 16.

(7) That applicant's CleveRock-Pedco State Well No. 1 produces approximately 260 barrels of water per day.

(8) That there appears to be no shallow fresh water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from the subject pit.

(9) That the applicant should be permitted to dispose of water produced from said CleveRock-Pedco State Well No. 1 in an unlined surface pit on said lease until further order of the Commission or the Secretary-Director thereof.

IT IS THEREFORE ORDERED:

(1) That the applicant, Petroleum Development Corporation, is hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to dispose of water produced in conjunction with the production of oil or gas, or both, from its CleveRock-Pedco State Well No. 1, located in Unit I of Section 16, Township 19 South, Range 32 East, NMPM, East Lusk-Bone Spring Pool, Lea County, New Mexico, in an unlined surface pit located in Unit I of said Section 16.

(2) That the Secretary-Director of the Commission may by administrative order rescind such authority whenever it

-3-
Case No. 5812
Order No. R-5355

reasonably appears to the Secretary-Director that such
recission would serve to protect fresh water supplies from
contamination.

(3) 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

PHIL R. LUCERO, Chairman



Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/

EXHIBIT "B" -- WATER ANALYSIS: NATIONAL POTASH LAKE.

Case 5812

DEWELL DIVISION OF THE OIL COMPANY

WATER ANALYSIS REPORT

TO: PETROLEUM DEVELOPMENT CORP
NA
ALBUQUERQUE, NEW MEXICO

LABORATORY NO.: H060
DATE: 10-3-76

WELL NAME & NO.:	NATIONAL POTASH	DEPTH:	0 FT
FIELD:	S. L. 1	STATION:	11
COUNTY:	LEE	STATE:	NEW MEXICO
SAMPLE POINT:	SURFACE	SAMPLE ID:	DISPOSED

DISSOLVED SOLIDS

OTHER PROPERTIES

CATIONS	MG/L	PPM/L
---------	------	-------

SODIUM, NA	10340	1034	214	7.700
CALCIUM, CA	501	50	12.40	1.100
MAGNESIUM, MG	1157	115		

ANIONS

RESISTIVITY AT 25°C (CMH/CM)

CHLORIDES, CL	10340	1034	214	7.700
SULFATES, SO4	701	70	12.40	1.100
BICARBONATES, HCO3	1157	115		

ANIONS AND TOTAL SOLIDS

WELL NAME & NO.

287399

EXHIBIT "C" -- WATER ANALYSIS: LAGUNA GATUNA DISPOSAL.

Case 5812

OFFICE DIVISION OF THE GEOLOGICAL SURVEY

WATER ANALYSIS REPORT

TO: PETROLEUM DEVELOPMENT CORP
CANDELARIA NE
ALBUQUERQUE, NEW MEXICO

LABORATORY NO.: HD60
DATE: 10-3-74

WELL NAME & NO.: SALT DISPOSAL DEPTH: 0.0 FT
FIELD: WEST LANE FORMATION: A
COUNTY: LEA STATE: NEW MEXICO
SAMPLE POINT: SURFACE SAMPLE ID: DISPOSAL

DISSOLVED SOLIDS

OTHER PROPERTIES

CATIONS

MG/L MG/L

SODIUM, NA 32233 1412 PH 7.100
CALCIUM, CA 1112 42 SP 100 1.123
MAGNESIUM, MG 12551 312

ANIONS

RESISTIVITY AT 25°C 10.1 ohm-cm

CHLORIDES, CL 55735 1570 CALCULATED 1.0750
SULFATES, SO4 1500 43
BICARBONATES, HCO3 0 0

REMARKS AND RECOMMENDATIONS:
CARBONATE CONTENT IS 3.1 MG/L

DATE RECEIVED - DISTRICT LABORATORY

AVAILABLE FOR USE - DISTRICT LABORATORY

EXHIBIT "D" -- WATER ANALYSIS: CLEVEROCK-PEDCO
STATE #1.

Case 5812
TELEPHONE: HOBBS 393-7751
AREA CODE - 505



UNITED CHEMICAL CORPORATION
OF NEW MEXICO

601 NORTH LEECH

P. O. BOX 1499

HOBBS, NEW MEXICO 88240

Company Cleverock Energy Corporation

Field Cleverock Petroleum

Lease State #1

Sampling Date 9-12-75

Type of Sample _____

WATER ANALYSIS

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	362.00	7,240
Magnesium (Mg++)	107.80	1,294
Sodium (Na+)	(CALCULATED) 2,240.37	51,506
Iron (Total)		26
Bicarbonate (HCO ₃ -)	3.10	189
Carbonate (CO ₃ -)	Not q	Found
Hydroxide (OH-)	Not	Found
Sulphate (SO ₄ -)	28.07	1,348
Chloride (Cl-)	2,679.00	95,000
Total Dissolved Solids		156,577
6.6 pH	68° F	
Dissolved Solids on Evap. at 103°-105° C		
Hardness as CaCO ₃	469.80	23,490
Carbonate Hardness as CaCO ₃ (temporary)	3.10	155
Non-Carbonate Hardness as CaCO ₃ (permanent)	466.70	23,335
Alkalinity as CaCO ₃	3.10	155
Specific Gravity @ 68° F	1.105	

MOORE BUSINESS FORMS INC. LA

* mg/l = milligrams per Liter

* me/l = milliequivalents per Liter

CaCO₃ Scaling Index is slightly positive @ 86°F(.21)

CaSO₄ Scaling Index negative

//////////////////////////////////// *Makes Water Work* //////////////////////////////////////

Case 5812

EXHIBIT "E" -- TABLE: WATER ANALYSIS COMPARISON.

	PETROLEUM DEVELOPMENT CORPORATION- CLEVEROCK-PEDCO STATE #1 <u>mg/l</u>	LAGUNA GATUNA DISPOSAL <u>mg/l</u>	NATIONAL POTASH LAKE <u>mg/l</u>
Calcium:	7,240	1,002	601
Magnesium:	1,294	2,551	1,154
Sodium:	51,506	32,288	52,540
Iron:	26	-	-
Bicarbonate:	189	0	213
Carbonate:	0	360	-
Hydroxide:	0	-	-
Sulphate:	1,348	4,500	760
Chloride:	95,000	55,735	84,845
pH	6.6	8.1	7.7
S.G.	1.105	1.088	1.096

EXHIBIT "F" -- FORM C103 - PROPOSED WORKOVER PROCEDURE.

Case 5812

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

1. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
WILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.
LG 605

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator	8. Farm or Lease Name
PETROLEUM DEVELOPMENT CORPORATION	CleveRock-Pedco State
3. Address of Operator	9. Well No.
9720 B Candelaria, N. E., Albuquerque, NM 87111	1
4. Location of Well	10. Field and Pool, or Wildcat
UNIT LETTER I 660 FEET FROM THE east LINE AND 2030 FEET FROM south LINE, SECTION 16 TOWNSHIP 19 South RANGE 32 E NMPM.	East Lusk Bone Spring
15. Elevation (Show whether DF, RT, GR, etc.)	12. County
3617 GL	Lea

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☒PLUG AND ABANDON ☐REMEDIAL WORK ☐ALTERING CASING ☐TEMPORARILY ABANDON ☐COMMENCE DRILLING OPNS. ☐PLUG AND ABANDONMENT ☐PULL OR ALTER CASING ☐CHANGE PLANS ☐CASING TEST AND CEMENT JOB ☐OTHER ☐

Change of Operator; extend TA status

OTHER ☒

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

NOTE change of Operator only. Previously: CleveRock Energy Corporation.

Request extension of TA status in accordance with Rule 202-B.

The following remedial work will be done upon approval by working interest owners and after fabrication of compressor (est. 12 weeks).

PROPOSED PROCEDURE

1. Drill out cement and bridge plug 9840-9852 with 4-3/4" bit; push junk to below 9930. Pull tubing and bit.
2. Run tubing, packer and gas lift valves.
3. Install compressor and lines; place well on production.

Expires 10-1-77

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED

Charles W. Sanders

TITLE

Vice President

DATE

10/1/76

Orig. Signed By

Jerry L. Ford

APPROVED BY

Dir. L. Smith

TITLE

DATE

OCT 4 1976

CONDITIONS OF APPROVAL, IF ANY:

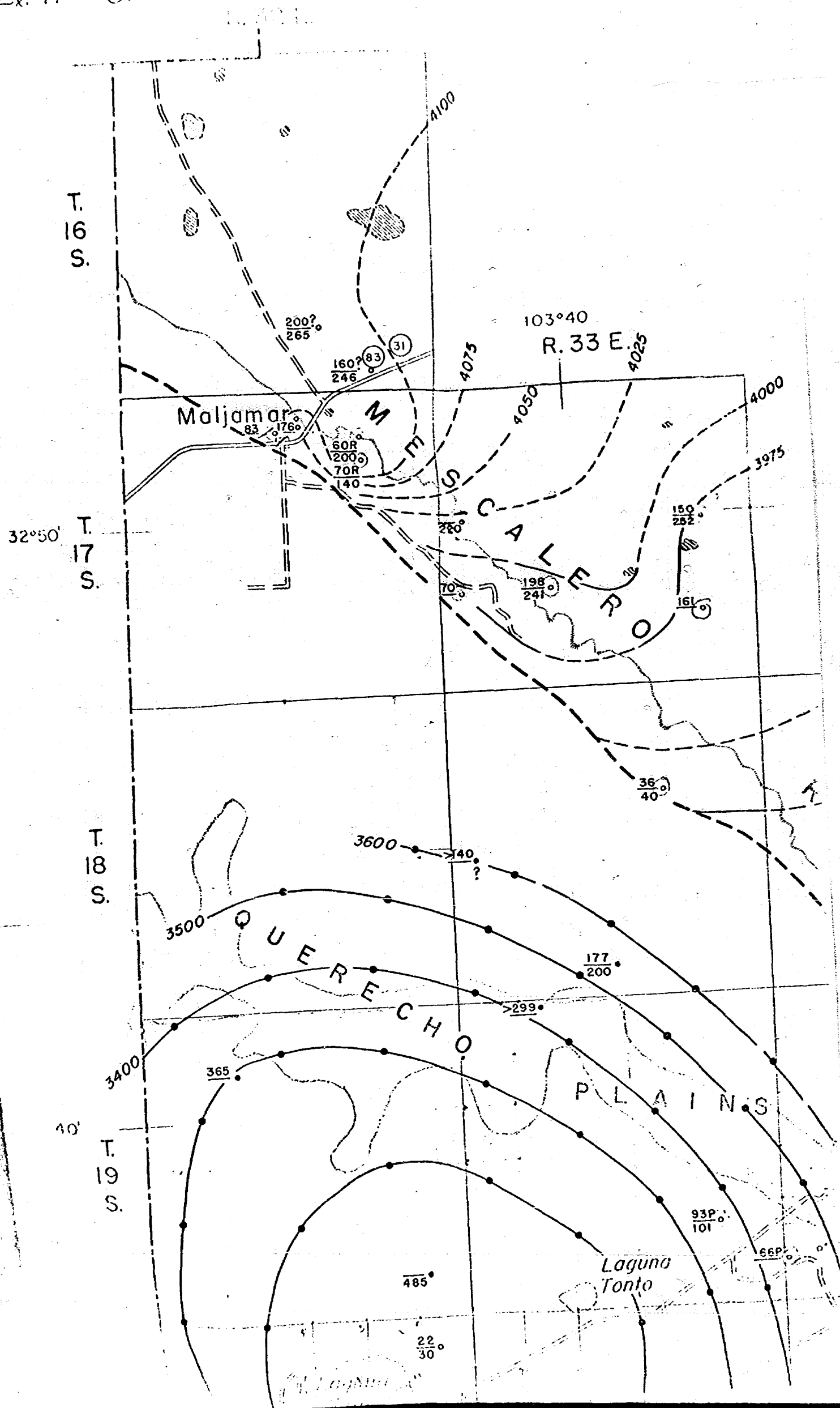
Case 5812

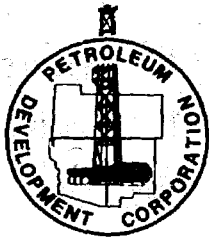
EXHIBIT "G" -- TABLE: SUMMARY OF LAST PRODUCTION FROM PROPOSED
COMPLETION ZONE.

<u>DATE</u>	<u>FTP</u>	<u>Fluid Bbls.</u>	<u>Oil Bbls.</u>	<u>Wtr. Bbls.</u>	<u>MCF</u>	<u>Gas Fluid Ratio</u>
9/12/75	75	279	13	266	728	2609
9/13/75	80	256	12	244	608	2375
9/14/75	90	276	50	226	470	1702
9/15/75	60	297	19	278	353	1188
9/16/75	Flowed 159 BF, 10% oil, plus 150 MCF. Well dead last 6-1/2 hours. SI to pressure up.					

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
____ EXHIBIT NO. G
CASE NO. _____

EX. "H" GROUND WATER MAP





Case 5812
PEDCO 11/23

~~XXXXXXXXXXXXXXXXXXXX~~
~~XXXXXXXXXXXXXXXXXXXX~~
~~XXXXXXXXXXXXXXXXXXXX~~

ENGINEERING OPERATIONS
9720-B CANDELARIA, NE
ALBUQUERQUE, NM 87112
TELEPHONE: (505) 293-4044

REPLY TO: ALBUQUERQUE

October 28, 1976

Mr. Joe D. Ramey, Secretary-Director
OIL CONSERVATION COMMISSION
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

RE: Surface Disposal Produced Water - Petroleum Development Corporation - CleveRock-Pedco State #1, East Lusk, Bone Spring Field, 16-19S-32E, Lea County, New Mexico.

Petroleum Development Corporation respectfully requests administrative approval for surface disposal of produced water from the subject well. This request is based upon the following premises:

1. Prevention of the waste of recoverable petroleum products will be enhanced by elimination of hauling, thereby extending the economic life of the well.
2. No significant supply of fresh ground water exists in the area. Phillips Gasoline Plant, two miles to the west, pipes fresh water in from the Caprock. One windmill, about two miles to the northwest, supplies fresh water for cattle. Another water well, 3½ miles to the east, will not supply enough water for drilling operations. (See Map, Exhibit "A").
3. Large volumes of industrial brine water are now being pitted in the area by National Potash Company, about five miles to the south, and by area oil producers into a salt lake about five miles to the southeast. Copies of water analyses from both these sources are attached and are summarized on a separate sheet in comparison with produced water from the subject well (Exhibit "E").

Case 5812

Page 2

Mr. Joe D. Ramey, Secretary-Director
Oil Conservation Commission

October 28, 1976

4. As indicated by last production tests (Exhibit "C"), total water production should be less than 300 barrels per day. It is considered likely that water production will diminish since pressure data indicates no presence of an active water drive.

Sincerely,
PETROLEUM DEVELOPMENT CORPORATION

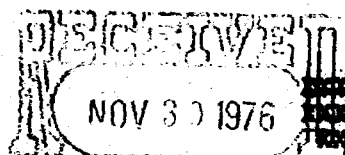
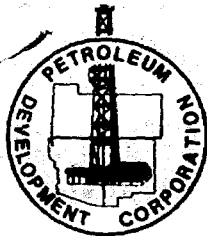


Charles W. Sanders, Vice President

CWS:cmp

Exhibits:

"A"	Composite Quadrangle Map.
"B"	Water Analysis: National Potash Lake.
"C"	Water Analysis: Laguna Gatuna Disposal.
"D"	Water Analysis: Cleveland-Rock-Pedco State #1.
"E"	Table: Water Analysis Comparison.
"F"	Form C-103: Proposed Workover Procedure.
"G"	Table: Summary of Last Production from Proposed Completion Zone.



PEDCO

ENGINEERING OPERATIONS
9720-B CANDELARIA, NE
ALBUQUERQUE, NM 87112
TELEPHONE: (505) 293-4044

OIL CONSERVATION COMMISSION
Santa Fe

REPLY TO: ALBUQUERQUE

November 29, 1976

OIL CONSERVATION COMMISSION
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. Dan Nutter, Examiner

RE: Case # 5812 - November 23, 1976 - Petroleum Development
Corporation - CleveRock-Pedco State #1, 16-19S-32E, Lea
County, New Mexico -- Exception to Commission Order
No. R-3221.

Gentlemen:

At the request of counsel, and upon approval by the Examiner,
the docket was left open for the submission of additional
evidence.

The evidence in question concerns the determination of whether
a certain location marked "well" in SE/4, Section 34, T19S,
R32E on Exhibit "A" is an oil well or a water well. Such
determination was judged pertinent by Examiner since such well,
if determined to be a water well, would apparently be the only
fresh water well within the possible path of flow of disposed
water from the disposal site in 16-19S-32E toward the sink
occupied by the brine lake called Laguna Plata (Exhibit "A").

Applicant, therefore, finds and submits as evidence to case
#5812, the following:

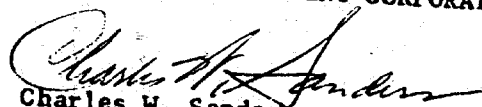
1. The records and maps of Snyder Ranches, surface user,
Lovington, New Mexico, show no water well in Section
34, T19S, R32E.
2. County Ownership Map, prepared by Midland Map Company,
Midland, Texas, shows a dry hole drilled by Leonard
Boellner at the above-described location. The well was
abandoned March 3, 1958, according to the map record.

Page 2
Oil Conservation Commission

November 29, 1976

3. Insofar as applicant is able to determine, no fresh water wells exist between the proposed disposal site in Section 16 and the sink about five miles to the south encompassing Laguna Plata brine lake and the National Potash disposal lake. However, within this path, two exceptions to Commission Order No. R-3221 have been granted (R-3783 in Sections 28 and 33, and R-3686 in Section 32).

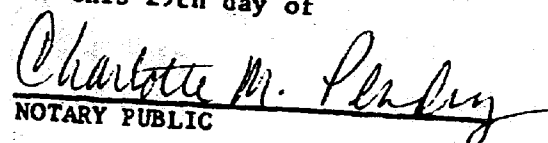
Sincerely,
PETROLEUM DEVELOPMENT CORPORATION


Charles W. Sanders
Vice President

CWS:cmp

State of New Mexico)
County of Bernalillo) ss.

The foregoing was acknowledged before me this 29th day of
November, 1976.


NOTARY PUBLIC

My commission expires 3/12/78.

Docket No. 33-76

Dockets Nos. 34-76 and 1-77 are tentatively set for hearing on December 15, 1976 and January 5, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - WEDNESDAY - DECEMBER 1, 1976

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

CASE 5719: Application of La Rue and Muncy for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its McClay Federal Wells Nos. 9 and 10, located in Units G and F, respectively, of Section 33, Township 18 South, Range 30 East, North Benson Queen-Grayburg Pool, Eddy County, New Mexico.

Upon application of La Rue and Muncy, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 5720: Application of Harvey E. Yates for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from his State Wells Nos. 1, 2, 3, 4, and 6 located in Units G, B, A, J, and H, respectively, of Section 32, Township 18 South, Range 30 East, North Benson Queen-Grayburg Pool, Eddy County, New Mexico.

Upon application of Harvey E. Yates, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 5721: Application of H&S Oil Company for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its McClay Well No. 7, located in Unit C of Section 33, Township 18 South, Range 30 East, North Benson Queen-Grayburg Pool, Eddy County, New Mexico.

Upon application of H&S Oil Company, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 5722: Application of Gene Snow for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from his Elk Well No. 1, located in Unit L of Section 32, Township 18 South, Range 30 East, North Benson Queen-Grayburg Pool, Eddy County, New Mexico.

Upon application of Gene Snow, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 5723: Application of Marbob Energy Corporation for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its Elliott Well No. 1 located in Unit E of Section 28, and its Elliott Wells Nos. 2 and 3 located in Units H and G, respectively, of Section 29, all in Township 18 South, Range 30 East, North Benson Queen-Grayburg Pool, Eddy County, New Mexico.

Upon application of Marbob Energy Corporation, this case will be heard De Novo pursuant to the provisions of Rule 1220.

Docket No. 32-76

Dockets Nos. 34-76 and 1-77 are tentatively set for hearing on December 15, 1976 and January 5, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 23, 1976

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 Richard L. Stamets, Alternate Examiner:

CASE 5810: Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Stonewall "EP" Com Well No. 1, located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico, to produce gas from the North Burton Flat-Wolfcamp Gas Pool and an undesignated Morrow gas pool.

CASE 5811: Application of Coquina Oil Corporation for an offset allowable reduction, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a restricted allowable for the Monsanto Company Cerf Federal Com Well No. 2 for the Strawn and Morrow zones in said well, a dual completion located in Unit F of Section 10, Township 21 South, Range 27 East, Burton Flat Field, Eddy County, New Mexico, on the grounds that a dry hole in both of said zones was previously drilled on the acreage assigned to the subject well.

CASE 5812: Application of Petroleum Development Corporation for an exception to Order No. R-3221, Lea County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its CleveRock-Pedco State Well No. 1, located in Unit I of Section 16, Township 19 South, Range 32 East, East Lusk-Bone Spring Field, Lea County, New Mexico.

CASE 5813: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the adoption of General Rules and Regulations governing all associated oil and gas pools of Southeast and Northwest New Mexico. Also to be considered will be the adoption of special rules for certain associated pools, including well location and acreage dedication requirements, classification of oil wells and gas wells, gas-oil ratio limitations, gas allocation, and well testing.

CASE 5814: Southeastern New Mexico nomenclature case calling for the creation and extension of certain pools in Lea and Eddy Counties, New Mexico:

a) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Cedar Canyon-Delaware Pool. The discovery well is the Skelly Oil Company Cedar Canyon Well No. 1 located in Unit P of Section 9, Township 24 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM
Section 9: SE/4

b) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Delaware production and designated as the West Corbin-Delaware Pool. The discovery well is the Aztec Oil and Gas Company West Corbin Well No. 2 located in Unit H of Section 18, Township 18 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 33 EAST, NMPM
Section 18: NE/4

c) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Elbow Canyon-Delaware Pool. The discovery well is the C & K Petroleum, Inc. Allied Chemical Federal Well No. 1 located in Unit E of Section 4, Township 24 South, Range 26 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 4: NW/4

d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the North Grayburg-Atoka Gas Pool. The discovery well is the Depco Inc. Conoco State Com Well No. 1 located in Unit K of Section 15, Township 17 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 15: W/2

e) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Cisco production and designated as the Vacuum-Cisco Pool. The discovery well is the Southern Union Supply Company Pennzoil State Well No. 1 located in Unit H of Section 18, Township 17 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 18: NE/4

- f) EXTEND the Atoka-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 22: SE/4
Section 27: N/2 NW/4
Section 28: S/2 NE/4

- g) EXTEND the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 32 EAST, NMPM
Section 1: SE/4

- h) EXTEND the Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 33 EAST, NMPM
Section 19: SW/4
Section 30: NW/4

- i) EXTEND the South Carlsbad-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 20: NE/4 SW/4

- j) EXTEND the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM
Section 14: N/2 NE/4
Section 27: S/2 NE/4

- k) EXTEND the Garrett-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
Section 20: SE/4

- l) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 1: N/2

- m) EXTEND the Indian Flats-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 35: NW/4 SW/4

- n) EXTEND the Malaga-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 11: W/2

- o) CONTRACT the vertical limits of the Kemnitz-Pennsylvanian Pool in Lea County, New Mexico, to the Cisco formation only, redesignating said pool the Kemnitz-Cisco Pool and redefining said pool to comprise:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 13: N/2 and SE/4

- p) EXTEND the vertical limits of the North Vacuum-Morrow Gas Pool in Lea County, New Mexico, to include the Atoka formation, redesignating said pool the North Vacuum-Atoka-Morrow Gas Pool. Also, extend said North Vacuum-Atoka-Morrow Gas Pool to include therein:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 7: E/2
Section 8: W/2

- q) EXTEND the White City-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 35: All

Case 5913
Proposed Revision of Associated Pool Rules

1. GENERAL RULES AND REGULATIONS FOR THE ASSOCIATED POOLS OF SOUTHEASTERN AND NORTHWESTERN NEW MEXICO (PROPOSED)

(See Special Pool Rules in each pool for orders applicable to those pools only. Special Pool Rules will be found in the same classification order as in the General Section, and, unless the special rules conflict with the general rule, the general rule is also applicable.)

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 1: Any well drilled to the producing formation of an associated pool regulated by this order and within said pool or within one mile outside the boundary of that pool, and not nearer to nor within the boundaries of another designated pool producing the same formation, shall be spaced, drilled, operated, and prorated in accordance with the regulations in effect in that pool.

RULE 2: After the effective date of this order each well drilled or recompleted on a standard proration unit within an associated pool regulated by this order shall be located as provided below:

OIL WELLS - SOUTHEAST NEW MEXICO

Standard Proration Unit	Location Requirements
40 Acres	Not closer than 330 feet to the boundary of the tract
80 and 160 acres	Must be located within 150 feet of the center of the quarter-quarter section wherein located

GAS WELLS - SOUTHEAST NEW MEXICO

Standard Proration Unit	Location Requirements
160 acres	Must be located within 150 feet of the center of the quarter-quarter section wherein located.
320 acres	Not closer than 660 feet to the nearest side boundary nor closer than 1980 feet to the nearest end boundary of the spacing unit.

ALL WELLS - NORTHWEST NEW MEXICO

Standard Proration Unit	Location Requirements
40 Acres	Not closer than 330 feet to the boundary of the tract
80, 160 and 320 acres	Not closer than 790 feet to any quarter section line nor closer than 330 feet to any quarter-quarter section line.

RULE 3: (a) Each gas well shall be located on a standard unit containing 160 acres or 320 acres, more or less, as provided in the special pool rules therefor.

(b) Each oil well shall be located on a standard unit containing 40 acres, 80 acres or 160 acres, more or less, as provided in the special pool rules therefor.

RULE 4: (a) The District Supervisor of the appropriate district Office of the Commission shall have the authority to approve a non-standard unit as an exception to Rule 3(a) or 3(b) without notice and hearing when the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is not less than

75% nor more than 125% of a standard unit.

The District Supervisor of the appropriate district office of the Commission may approve the non-standard unit by:

- (1) Accepting a plat showing the proposed non-standard unit and the acreage to be dedicated to the non-standard unit, and
- (2) Assigning an allowable to the non-standard unit.

(b) The Secretary-Director of the Commission may grant an exception to the requirements of Rule 3(a) or Rule 3(b), when the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is less than 75% or more than 125% of a standard unit, or where the following facts exist and the following provisions are complied with:

(1) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(2) The non-standard unit lies wholly within a governmental subdivision or subdivisions which would be a standard unit for the well (half quarter section, quarter section, or half section) but contains less acreage than a standard unit.

(3) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the half quarter section, quarter section or half section (for 80-acre, 160-acre, and 320-acre standard dedications respectively,) in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(4) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the foresaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

B. WELL CLASSIFICATION AND GAS-OIL RATIO LIMITATION

RULE 5: A well shall be classified as a gas well if it has a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons. A well shall be classified as an oil well if it has a gas-liquid ratio of less than 30,000 cubic feet of gas per barrel of liquid hydrocarbons. The simultaneous dedication of any acreage to an oil well and a gas well is prohibited.

RULE 6: That the limiting gas-oil ratio shall be 2,000 cubic feet of gas for each barrel of oil produced.

RULE 7: An oil well shall be permitted to produce only that amount of gas determined by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool. In the event there is more than one oil well on an oil proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by the limiting gas-liquid ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is a number equal to the number of acres in a standard oil proration unit in such pool. In the event there is more than one gas well on a gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion.

C. WELL TESTING

RULE 8: The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well, provided however, that in no event shall the test be commenced later than 30 days from the date of first production unless the well is connected to a gas-gathering facility and is producing under

ROUGH DRAFT

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. 5812

Order No. R- 5355

APPLICATION OF PETROLEUM DEVELOPMENT CORPORATION

FOR AN EXCEPTION TO ORDER NO. R-3221,

AS AMENDED, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 23, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. N.

NOW, on this day of January, 1977, 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, Petroleum Development Corporation, is the owner and operator of the CleveRock-Pedco State Well No. 1, located in Unit I of Section 16, Township 19 South, Range 32 East, NMPM, East Lusk-Bone Spring Field, Lea County, New Mexico.

(3) That Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks as an exception to the provisions of the aforesaid Order (3) to permit the disposal of salt water produced by applicant's above-described well into an unlined surface pit located in Unit I of said Section 16.

(7) That applicant's CleveRock-Pedco State Well No. 1 produces approximately 260 barrels of water per day.

(8) That there appears to be no shallow fresh water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from the subject pit.

~~(9) That the nature of the reservoir of said~~

~~Pool is such that reinjection of produced water into said reservoir would result in greater ultimate recovery of oil and gas therefrom thereby preventing waste.~~

~~(10) That to prevent the waste of oil and gas in said East Lusk-Bone Spring Field, ~~XXXXXX~~ permanent authority to dispose of produced water from applicant's CleveRock-Pedco State Well No. 1 in an unlined surface pit on said lease should not be granted.~~

IT IS THEREFORE ORDERED:

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