

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 4, 1976

EXAMINER HEARING

IN THE MATTER OF:)

Application of Pennzoil Company for an) CASE
exception to Order No. R-3221,) 5728
Lea County, New Mexico.)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

J. C. RANEY

	<u>Page</u>
Direct Examination by Mr. Kellahin	3
Cross Examination by Mr. Nutter	11
Redirect Examination by Mr. Kellahin	14
Cross Examination by Mr. Ramey	14

EXHIBIT INDEX

	<u>Page</u>
Pennzoil Exhibit One, Water Analysis	11
Pennzoil Exhibit Two, Water Analysis	11
Pennzoil Exhibit Three, Map	11
Pennzoil Exhibit Four, Structure Map	11
Pennzoil Exhibit Five, Photographs	11
Pennzoil Exhibit Six, Letter	11

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1 MR. NUTTER: We will call Case Number 5728.

2 MR. CARR: Case 5728, application of Pennzoil Company
3 for an exception to Order No. R-3221, Lea County, New Mexico.

4 MR. KELLAHIN: If the Examiner please, Jason Kellahin,
5 Kellahin and Fox, appearing for the applicant and we have one
6 witness.

7 (THEREUPON, the witness was duly sworn.)

8
9 J. C. RANEY
10 called as a witness, having been first duly sworn, was
11 examined and testified as follows:

12
13 DIRECT EXAMINATION

14 BY MR. NUTTER:

15 Q Will you state your name, please?

16 A J. C. Raney.

17 Q By whom are you employed and in what position,
18 Mr. Raney?

19 A I'm employed by Pennzoil Company as a Petroleum
20 Engineer.

21 Q Where are you located?

22 A In Midland, Texas.

23 Q Have you ever testified before the Oil Conservation
24 Commission and made your qualifications a matter of record?

25 A Yes, I have.

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1 MR. KELLAHIN: Are the witness' qualifications
2 acceptable?

3 MR. NUTTER: Yes, they are.

4 Q (Mr. Kellahin continuing.) Mr. Raney, are you
5 familiar with the application of Pennzoil in Case Number
6 5728?

7 A Yes, sir.

8 Q What does the applicant propose in this case?

9 A We request approval for an exception to Order
10 R-3221 to permit the use of an unlined pit to dispose of
11 produced water in the Mescalero Ridge Unit No. 1 located in
12 Section 20 of 19 South, 34 East, Lea County, New Mexico.

13 Q Are you personally familiar with the area involved
14 in this application?

15 A Yes, sir.

16 Q Have you been on the ground and examined it yourself?

17 A Yes, sir.

18 Q Now, referring to what has been marked as Exhibit
19 Number One, would you identify that exhibit, please?

20 A Yes, sir, this is the water analysis of the produced
21 water that the Mescalero Ridge Unit No. 1 produces in
22 conjunction with the gas and condensate.

23 Q Is this a recent analysis?

24 A Yes, sir.

25 Q It was made in June of this year was it not?

1 A. Yes, sir, June 30th.

2 Q. Now, are there any water supplies in the vicinity
3 of your proposed disposal pit?

4 A. The closest known water is a windmill that is
5 located approximately two-and-a-half miles west on what is
6 known as the Smith Ranch.

7 Q. And its location will be shown on a later exhibit,
8 will it not?

9 A. Yes, sir.

10 Q. Do you have a water analysis from that windmill?

11 A. Yes, sir, that is Exhibit Number Two. It is a
12 complete water analysis of the windmill or well water there.
13 The water analysis shows the composition of this water and
14 attached to the back of that is excerpts from the Groundwater
15 Report Number Six put out by the New Mexico State Bureau of
16 Mines and on the last page this shows the chemical standards
17 as set by the U. S. Department of Public Health.

18 Q. Now, according to those standards is this potable
19 water?

20 A. No, sir, it is not for human consumption.

21 Q. Do you know whether it is being used for any
22 purpose at the present time?

23 A. The only purpose that we know of in talking to the
24 rancher of the Smith Ranch is for cattle and in the five or
25 six years I have been working on this lease I have never seen

1 any cattle around our lease at all.

2 Q Now, in the five or six years that you have been
3 working there are you out on the lease frequently?

4 A Approximately on an average of once every two months
5 or more often.

6 Q If cattle were being grazed in the area is it
7 likely that you would see them?

8 A Yes.

9 Q And in the five years you haven't seen any?

10 A No, sir.

11 Q Now, referring to what has been marked as Exhibit
12 Number Three, would you identify that exhibit, please?

13 A Exhibit Number Three is a geological map of southern
14 Lea County that is marked as Plate One. This is a structure
15 map contoured on the surface elevation and the Pennzoil well is
16 noted in 19, 34 with a red arrow. It shows the location of
17 the well. In the area of this well the structure dips to the
18 southwest towards what is known as the Laguna Gatuna salt lakes
19 and towards Halfway Bar.

20 Q So the surface drainage would be towards these
21 salt lakes?

22 A Yes, sir, this is where the water is currently being
23 hauled and disposed of at a cost of approximately sixty-two
24 cents per barrel.

25 Q As I understand it you are disposing of the water in

1 the Laguna Gatuna?

2 A. Yes, sir, through a trucking company.

3 Q. And if the water is going to migrate on the surface
4 at all would it go in the direction of Laguna Gatuna?

5 A. Yes, sir, to the southwest.

6 Q. Now, referring to what has been marked as Exhibit
7 Number Four, would you identify that exhibit, please?

8 A. It is noted as Plate Two. This also comes from
9 the Groundwater Report Number Six. It is a structure map
10 contoured on top of the Tertiary, Quaternary and Triassic rocks
11 in the area and over in 19, 33 you will note a windmill there
12 approximately two-and-a-half miles west of the Pennzoil
13 Mescalero Ridge Unit No. 1.

14 Q. Is that the windmill on which you just gave the
15 water analysis?

16 A. Yes, sir. As can be noted the structure dips to
17 the southwest again in this area where our well is located
18 and the proposed pit. This area is contoured on top of the
19 Triassic and the structure dips towards the southwest, towards
20 the Laguna Gatuna salt lakes where the current water is being
21 disposed of by truck.

22 Q. Now, on account of the nature of the underground
23 structure and the surface contours, in your opinion would water
24 in your pit if it migrated, migrate toward the windmill?

25 A. No, sir, it would tend more to migrate towards the

1 southwest towards the Laguna Gatuna salt lakes.

2 Q What is the nature of the surface of this area?

3 A This is shown on the next exhibit which is Exhibit
4 Number Five and the soil is loose blow sand and it is only
5 partially covered with shinnery oak. This is a series of
6 Polaroid photographs and all of the exhibits that you have are
7 pictures or Xerox pictures of that but this does tend to show
8 the type of vegetation and general terrain in the area.

9 Q Now, you say it is blow sand so if you put water on
10 the surface would it go immediately underground or would it
11 go slowly?

12 A Our experience in the general area is that some of
13 it will percolate down but a big majority of the water because
14 of the climate in that area is going to evaporate but that that
15 does percolate down is going to percolate in the subsurface
16 drainage just to the southwest.

17 Q And will putting water in a surface pit as you
18 propose to do, damage any underground water supply?

19 A It will not further damage the water supply in that
20 area, in my opinion.

21 Q Now, have you examined the area to determine if
22 there are any surface ponds or dams in any arroyos to create
23 soft water?

24 A There are none that can be seen on the surface. We
25 have driven six or eight miles around this thing and we've

1 got wells on back to the north.

2 Q. So in your opinion will any damage to any surface
3 water occur?

4 A. No, sir.

5 Q. Have you contacted the United States Geological
6 Survey in connection with your proposal?

7 A. Yes, sir, that is Exhibit Number Six. That is a
8 letter that was written ^{to} through the Hobbs office ^{of} ~~to~~ the USGS
9 on July 14th requesting their approval and also notifying them
10 of this hearing.

11 Q. What will be the dimensions of your proposed pit?

12 A. We propose to construct a pit that will be
13 approximately one hundred feet by one hundred feet by four feet
14 deep and will be fenced by a five-strand barbed wire fence with
15 steel posts set in concrete and the pit will be diked to
16 prevent water leaving the enclosed area.

17 Q. What volume of water will you put in the pit?

18 A. Between one hundred and one hundred and twenty
19 barrels a day and all of this water is produced from the
20 Mescalero Ridge Unit No. 1 and that is the only well that
21 will be served by this pit.

22 Q. And it will be immediately adjacent to the well?

23 A. Yes, sir.

24 Q. Will the pit, as you propose, handle the volume of
25 water you are talking about?

1 A. Yes, sir.

2 Q. Now, you say the water is presently being trucked,
3 what is the cost of trucking?

4 A. At the current time the charges are sixty-one, point,
5 six cents per barrel which is running us about two thousand
6 dollars a month to haul this.

7 Q. What is the production from this well?

8 A. We are making one-and-a-half million cubic feet of
9 gas, about eighty barrels of condensate and a hundred to a
10 hundred and twenty barrels of water per day.

11 Q. In your opinion will granting permission to dispose
12 of water on the surface prolong the productive life of your
13 well?

14 A. Yes, it will prevent waste and the economic limit
15 will be extended about ten times because out of twenty-two
16 hundred dollars operating costs, two thousand of this is for
17 hauling the water.

18 Q. So that will result in the ultimate recovery of
19 more oil and gas than would otherwise be recovered?

20 A. Yes, sir.

21 Q. Were Exhibits One through Six prepared by you or
22 under your supervision?

23 A. Yes, sir.

24 MR. KELLAHIN: At this time I would like to offer
25 into evidence Exhibits One through Six, inclusive.

1 MR. NUTTER: Pennzoil's Exhibits One through Six
2 will be admitted into evidence.

3 (THEREUPON, Pennzoil's Exhibits One through
4 Six were admitted into evidence.)

5

6 CROSS EXAMINATION

7 BY MR. NUTTER:

8 Q Mr. Raney, on your Exhibit Number Four, southwest
9 of your Mescalero Ridge Unit Well No. 1 is a well at approxi-
10 mately Section 31 of Township 19 South, Range 34 East. Also
11 the Commission's records indicate there may be two wells
12 in Section 31 of that Township which would be southwest of
13 your well and with respect to Exhibit Number Three, in the
14 direct line of the surface drainage from the Mescalero Unit
15 to the Laguna Gatuna. Do you know the status of those two
16 wells that are in Section 31?

17 A You are talking about the one in 19, 34 that shows
18 the 66?

19 Q Yes, the one that has the 66.

20 A Yes, that well is plugged and abandoned. That's
21 the only well we found other than one over in 19, 33.

22 Q Which is the one that has the four thousand parts
23 per million?

24 A Yes, that shows ninety-three P over one, oh, one.
25 Yes, sir, that is the only well we have been able to find out

1 there. We did find this other one but it is capped. It
2 didn't have a windmill, no structure nor any kind of pumping
3 equipment on it at all and we made a search out there. There
4 is one way up north there, it shows a 29 with a question mark,
5 that well's not there either.

6 Q. So there is no active windmill then southwest of your
7 Mescalero Ridge No. 1?

8 A. No, sir, not that we can find on the surface anywhere
9 out there and talking to the rancher when we got these water
10 samples over here on this one in 19, 33, this is the only one
11 that we could find anywhere.

12 Q. Did he know anything about those wells over in 33?

13 A. No, sir, he didn't and he didn't know of any wells
14 out there. This little report that I mention, Report Number
15 Six, this was made I believe in 1961 and these wells, the well
16 in 19, 33 was not included in there.

17 Q. It was included on their map, though, when they
18 made the report?

19 A. Yes, but there was not a water analysis of that
20 water. That was what I was looking for primarily to find out
21 what had gone on over the last fifteen years.

22 Q. Did you ask the rancher about this well down here
23 in Section 31?

24 A. Over in 19, 34, yeah, and we found it ourselves, it's
25 right by a road going in through there.

1 Q What did he say about it?

2 A He said it had been plugged as long as he had been
3 there and as far as that, I don't know how long he has been
4 there. But we couldn't find any more out there other than
5 this one over in 19, 33 because we wanted to find out what kind
6 of water is being produced in the area. I would have liked to
7 have gone out five or six miles but this one shown down here
8 in 20, 34, that's a way down south of the --

9 Q Where it says, one, forty?

10 A Yeah, that's down in the Lea-Bone Springs Field area.
11 If there is a windmill out there we couldn't find it.

12 Q You went down there looking for that one too?

13 A Yes, sir.

14 Q Apparently there are some old wells out there that
15 have been abandoned for one reason or another and they are
16 not producing anymore?

17 A Yes, and with the type of vegetation, as you get
18 further south there you get into a little bit of mesquite but
19 up north here ninety percent of the land is covered, that is
20 covered with shinnery oak.

21 Q This location is actually two or three miles south-
22 west of the edge of a ridge that comes across through there,
23 right?

24 A Yes, it's off the caprock.

25 Q Mescalero Ridge is what it is called?

1 A. Yes.

2 Q. And this is down in the bottom below that ridge?

3 A. Yes.

4 MR. NUTTER: Are there any other questions of
5 Mr. Raney.

6 MR. KELLAHIN: I have one more, please.

7

8 REDIRECT EXAMINATION

9 BY MR. KELLAHIN:

10 Q. Mr. Raney, did you make any inquiries as to the
11 value of shinnery oak for grazing?

12 A. Yes, sir, I called the county agent in Midland
13 and he said that it was only eaten a very short period of time,
14 just prior to the time it becomes toxic and as far as food
15 value to cattle or wildlife it has little or no value.

16 Q. And that is predominantly what the cover of this
17 area is?

18 A. Yes, sir.

19 MR. KELLAHIN: That's all the questions I have.

20 MR. NUTTER: If there are no further questions of
21 this witness -- oh, Mr. Ramey?

22

23 CROSS EXAMINATION

24 BY MR. RAMEY:

25 Q. Mr. Raney, I assume on looking at your Exhibits One

1 and Two, the water analysis, that we can add up the trace
2 elements and get the total hardness or thereabout.

3 A. Yes. If you want me to get that I can get it
4 through a commercial lab, both of these waters if you would
5 like that. Normally these service company labs don't normally
6 run the hardness.

7 Q. What you are looking at roughly from the windmill
8 the total dissolved solvents are seven thousand?

9 A. Yes, sir, as compared to around thirty-six or
10 thirty-seven.

11 Q. In your disposed water?

12 A. Yes, sir.

13 Q. What do they do in the area for water?

14 A. For human consumption?

15 Q. Yes.

16 A. What they did at the Smith ranch, they hauled their
17 water for human consumption.

18 Q. Are there potash mine water lines available for
19 water in this area?

20 A. I don't know. A company that Pennzoil owns has a
21 line coming across not too far from the Mescalero Ridge itself,
22 you know, the ridge or caprock and I don't know if they allow
23 those people to buy water. It's good fresh water from up on
24 the caprock.

25 Q. Are you aware that the Water Quality Control Commission

1 and the State Engineers say waters of less than ten thousand
2 total dissolved solids must be protected from further
3 contamination?

4 A. No, sir.

5 MR. RAMEY: No other questions.

6 MR. NUTTER: If there are no further questions of
7 this witness he may be excused.

8 (THEREUPON, the witness was excused.)

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

11 MR. KELLAHIN: No, sir, that's all.

12 MR. NUTTER: Does anyone have anything they wish to
13 offer in Case Number 5728? We will take the case under
14 advisement.

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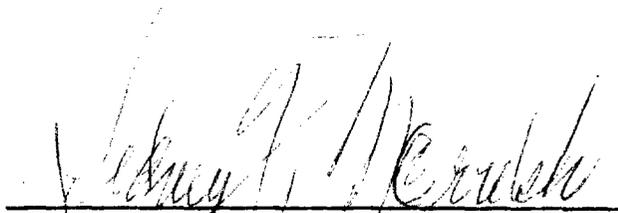
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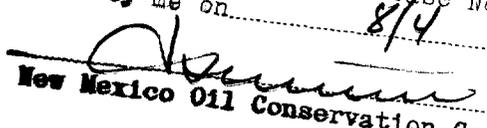
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REPORTER'S CERTIFICATE

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



Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is
* complete record of the proceedings in
the Examiner hearing of Case No. 5728,
heard by me on 8/4, 1976.

_____, Examiner
New Mexico Oil Conservation Commission

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