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

May 23, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Tesoro
Petroleum Corporation for a
secondary recovery project,
McKinley County, New Mexico.

Case No. 4971

BEFORE: Elvis A. Utz,
Examiner.

TRANSCRIPT OF HEARING

1 MR. UTZ: Case 4971.

2 MR. CARR: Case 4971: Application of Tesoro
3 Petroleum Corporation for a secondary recovery project,
4 McKinley County, New Mexico.

5 MR. LOPEZ: Mr. Examiner, I am Owen Lopez, with
6 Montgomery, Federici, Andrews, Hannahs and Morris, Santa Fe,
7 New Mexico, appearing on behalf of the Applicant. I have
8 one witness to be sworn.

9 * * * *

10 GEORGE A. O'BRIEN,

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

13 DIRECT EXAMINATION

14 BY MR. LOPEZ:

15 Q Would you please state your name and for whom you work?

16 A My name is George A. O'Brien, and I am employed by
17 Tesoro Petroleum Corporation in San Antonio, Texas.

18 Q Have you previously testified before the Commission?

19 A No, I have not.

20 Q Would you please tell the Examiner your educational
21 background?

22 A I have a bachelor of science degree in petroleum
23 engineering from the University of Texas, which I
24 received in 1971, December, 1971. I have been employed
25 since that time by Tesoro in the capacity of reservoir

1 engineer.

2 Q Do your duties include the supervision of the South
3 Hospah Lower Sand Pool in McKinley County, New Mexico?

4 A Yes.

5 Q Are you familiar with the application of Tesoro
6 Petroleum Corporation in Case 4971?

7 A Yes, I am.

8 MR. LOPEZ: Mr. Examiner, are the witness'
9 qualifications acceptable?

10 MR. UTZ: Yes, they are.

11 Q (By Mr. Lopez) Please turn to Exhibit Number One, and
12 would you please identify this exhibit, Mr. O'Brien?

13 A Exhibit One is simply a location plat showing the wells
14 that are producing in the Lower Hospah Zone. They
15 are all enclosed by the squares on the plat. The
16 plat also shows the proposed location of the Santa Fe
17 Railroad "A" Well No. 84 in Section 1. This is the
18 well we propose to drill and inject water and/or gas
19 into the Lower Hospah Sand.

20 Q Are there any other operators in this field other than
21 Tesoro?

22 A No.

23 Q Has Tesoro previously sought an application for
24 converting a producing well for injection?

25 A Yes, in Case 4793 before the Commission, and this

1 application was granted in Order Number R-4389. They
2 are currently injecting gas and water into Well No.
3 33, which is located in the Northeast Quarter of the
4 Northwest Quarter of Section 12. They also have
5 authority to inject gas and/or water into Well No. 36,
6 which is located in the Northwest Quarter of the
7 Northeast Quarter of Section 12.

8 They are not currently injecting into this well
9 pending the result of this application today.

10 Q Have you consulted with representatives of Tenneco,
11 and have they given their approval to this application
12 on behalf of Tesoro?

13 A Yes, I have. Tenneco submitted a letter to the
14 Commission on May 18th, 1973, waiving any objection
15 to our application, and showing their support.

16 Q Will Tenneco be the operator of this secondary recovery
17 project?

18 A Yes. We propose to have Tesoro drill the well and
19 complete it, and Tenneco will then operate it, due
20 to the fact they already have the existing facilities
21 to handle this project.

22 Q Please turn to Exhibit Number Two, and identify that.

23 A Exhibit Two is the proposed cross section of the
24 injection well showing the way in which we propose
25 to complete it. It will be drilled into the top of

1 the Lower Hospah Zone, whereupon a seven-inch casing
2 will be set inside this casing after drilling out
3 into the Lower Hospah using a compression rig. We
4 will then set two and seven-eighths inch plastic-coated
5 pipe, and it will be set in tension on a packer.

6 The surface hook-up on the well will be such
7 that we will be able to determine any leakage in the
8 pipe, and we will be able to control the injection of
9 the gas and water.

10 Q Now, turning your attention to Exhibits Three, Four
11 and Five, would you please explain what these are?

12 A Exhibits Three, Four and Five were submitted in
13 Tenneco's application for a secondary recovery project.

14 Exhibit Three is a net pay isopack map on the
15 Lower Hospah formation showing the extent of the
16 Lower Hospah Pool on Tenneco's and Tesoro's leases.

17 Exhibit Four is the cross section A A Prime as
18 shown on Exhibit Three. It shows the Lower Hospah
19 Zone showing the top of the Lower Hospah and the oil-
20 water contact. It also shows the approximate subsurface
21 depth of the Lower Hospah Zone.

22 Exhibit Five is a north-south cross section from
23 Tenneco's leases onto Tesoro's leases, again showing
24 the Lower Hospah Zone. You will note that most of
25 the wells did not penetrate the Lower Hospah. These

1 wells were the most recent wells drilled in the
2 field, and they were drilled only into the top of
3 the zone in order to hinder water production from the
4 zone.

5 Q Do I understand correctly that your purpose in producing
6 Exhibits Three, Four and Five is to show your
7 concurrence with Tenneco in their previous case whereby
8 the Commission granted an order allowing their secondary
9 recovery project in this pool?

10 A That's correct, we do concur with their interpretations
11 as previously set forth.

12 Q Essentially then, am I correct in assuming that you
13 are asking the Commission to extend the special rules
14 and regulations for Tenneco's Lower Hospah pressure
15 maintenance project to include your lease area? And
16 also to grant you the ability to get administrative
17 approval if need be in the future to convert or drill
18 new wells as necessary to continue the secondary
19 recovery project?

20 A That's correct. What we are trying to establish by
21 this expansion is to maintain a three-well pilot
22 program so that we can adequately evaluate the merits
23 of this water injection program into the Lower Hospah.

24 The current one-well pilot which is now operating
25 in Tenneco's Well No. 33 has not developed sufficiently

1 to provide adequate engineering knowledge of the
2 reservoir.

3 Q Is it your opinion, if your application is granted in
4 this case, that it will prevent waste and protect
5 correlative rights?

6 A Yes. That is the reason for the location of the well
7 to be five feet from the lease line in order to
8 prevent any drainage across lease lines from Tesoro's
9 lease to Tenneco's lease, or vice versa, and also to
10 obtain maximum production from that corner of the
11 reservoir.

12 Q Were Exhibits One and Two prepared by you or under
13 your supervision?

14 A Yes.

15 Q Were Exhibits Three, Four and Five prepared by
16 representatives of Tenneco, and introduced in their
17 previous case?

18 A Yes.

19 MR. LOPEZ: At this time, I would like to introduce
20 Exhibits One through Five.

21 MR. UTZ: Without objection, Exhibits One through
22 Five will be entered into the record of this case.

23 (Whereupon Applicant's Exhibits One through Five
24 were entered in evidence.)

25 MR. LOPEZ: I have no further questions.

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CROSS EXAMINATION

BY MR. UTZ:

Q Mr. O'Brien, with regard to your Exhibit Number Two, do you intend to put in-earth equipment in this injection well?

A Yes.

Q With a gauge at the surface?

A Yes.

Q To check for leaks?

A Yes.

MR. UTZ: Are there any other questions of the witness?

(No response)

MR. UTZ: If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in the case?

(No response)

MR. UTZ: Let the record note Tenneco's letter of May 18th, which waives objection to this location. The case will be taken under advisement.

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25I N D E XWITNESSPAGE

GEORGE A. O'BRIEN

Direct Examination by Mr. Lopez

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Cross Examination by Mr. Utz

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Applicant's #1

Location plat

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Applicant's #2

Cross section

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Applicant's #3

Isopack map

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Applicant's #4

Cross section

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Applicant's #5

Cross section

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