

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO

6 23 October 1985

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Chama Petroleum Com- CASE
10 pany for salt water disposal, Eddy 8738
11 County, New Mexico.

12
13 BEFORE: Michael S. Stogner, Examiner
14

15
16 TRANSCRIPT OF HEARING

17
18 A P P E A R A N C E S

19 For the Division: Jeff Taylor
20 Attorney at Law
21 Legal Counsel to the Division
22 Energy and Minerals Dept.
23 Santa Fe, New Mexico 87501

24 For the Applicant: William F. Carr
25 Attorney at Law
CAMPBELL & BLACK P. A.
P. O. Box 2208
Santa Fe, New Mexico 87501

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I N D E X

TIMOTHY R. MacDONALD

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MR. STOGNER: We're now going to call Case Number 8738.

MR. TAYLOR: The application of Chama Petroleum Company for salt water disposal, Eddy County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr with the law firm Campbell and Black P. A. of Santa Fe.

We represent Chama Petroleum Company. We have one witness.

MR. STOGNER: Are there any other appearances?

Will the witness please stand and be sworn.

(Witness sworn.)

TIMOTHY R. MacDONALD,
being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q Will you state your full name and place

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of residence?

A It's Timothy R. MacDonald in Richardson, Texas.

Q Mr. MacDonald, by whom are you employed and in what capacity?

A Employed by Chama Petroleum Company as Engineering Manager.

Q Have you previously testified before this Commission or one of its examiners and had your credentials accepted and made a matter of record?

A No, I have not.

Q Would you briefly summarize for Mr. Stogner your educational background and your work experience?

A Received a BS degree in petroleum engineering from Texas A & M University in 1981; worked for Delta U. S. Corporation as a petroleum engineer for the following four years; and I worked for Chama Petroleum Company as Engineering Manager for the last four months.

Q Do your duties with Chama include responsibility for their activities in southeastern New Mexico?

A Yes, they do.

Q Are you familiar with the application that was filed in this case on behalf of Chama?

A Yes, I am.

Q And are you familiar with the particular

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subject area?

A Yes.

MR. CARR: We tender Mr. MacDonald as an expert witness in petroleum engineering.

MR. STOGNER: Mr. MacDonald is so qualified.

Q Would you briefly state what Chama seeks with this application?

A Chama Petroleum seeks authority to dispose of produced salt water into the Cisco Canyon formation perforated interval from 9023 to 8136 in the Fanning No. 1 Well, located 1980 feet from the south and west lines, Unit G, Section 3, Township 19 South, Range 26 East.

Q Would you refer to --

MR. TAYLOR: I don't -- it's from the south and west lines of that Unit G?

A Yes.

MR. TAYLOR: South and west?

MR. STOGNER: No, not from the south and west lines.

MR. TAYLOR: That would be Unit J or K.

A K.

MR. STOGNER: Well, we got the footage location right, didn't we?

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MR. CARR: And, Mr. Examiner, the advertisement contains the correct footage location. It does, however, indicate Unit G.

MR. STOGNER: Okay. Since Unit G is a unit letter designation only by the State and is not a legal location, we will just ignore that and scratch that out and it won't have to be continued since the footage and legal location is correct.

Q Mr. MacDonald, would you refer to what has been marked for identification as Chama Exhibit Number One and identify this for the examiner?

A Chama Exhibit Number One is the Form C-108 filed with the District Office. It includes the form as well as the well diagram showing the present status of the well, the proposed operations to be conducted, a geological data map showing a two mile radius around the well as well as a half mile radius of investigation. It includes letters with registered receipts attached that were sent to the off-set operators, and it also includes some water analyses from wells located in this area.

Q Was this information previously supplied to the Oil Conservation Division in Santa Fe and in Artesia?

A Yes, it was.

Q When was the Fanning No. 1 Well originally drilled?

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A It was originally drilled in November, 1973.

Q And who drilled this well?

A Samedan.

Q And it has since been acquired by Chama?

A Right.

Q And what is the present status of this well?

A The present status, it was plugged and abandoned by Samedan in December of 1978; has seven cement plugs set and a cast iron bridge plug set at 9190; and the 4-1/2 inch casing was pulled from a depth of 7995.

Q Would you now identify what has been marked as Chama Exhibit Number Two?

A Chama Exhibit Number Two is a map, a lease ownership map, showing the circle drawn for a half mile radius of investigation around the propose injection well, as well as a two-mile line drawn around the well.

Q And the location of the proposed well is indicated?

A Right.

Q Is this the same plat that was attached to the Form C-108 filed with the Division?

A Yes, it is.

Q How many wells within this one-half mile

1
2 area of review penetrate the subject formation?

3 A There's one well currently that was drilled
4 led by Chama Petroleum this month that was -- that hasn't
5 been completed, and there's one that Chama Petroleum is currently
6 in the process of drilling.

7 Q And to what formation are these drilled?

8 A These will be drilled to the Glorieta-
9 Yeso.

10 Q And do they penetrate the Cisco Canyon?

11 A No, they do not.

12 Q Would you now refer to what has been marked
13 as Exhibit Number Three, identify this and review it?

14 A Exhibit Number Three is a well profile of
15 the proposed salt water injection well, showing what we
16 would propose to do.

17 We are proposing to run 5-1/2 inch casing
18 back in the hole tying into the 4-1/2 inch casing, and run
19 2-7/8ths plastic coated pipe, tubing, and perforating intervals
20 from 8023 to 8046 and from 8120 to 8136.

21 Now this exhibit shows the proposed work-
22 over of the well.

23 A Right.

24 Q Do you have a diagrammatic sketch attached
25 to the C-108 which shows the present completion of that
well?

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A Yes, we do.

Q And is that what you referred to a few
momments ago?

A Yes, it is.

Q Now as to the Glorieta-Yeso wells that
Chama is drilling in the area, these wells are -- neither of
the wells has been completed at this time.

A That's correct.

Q Are there other Chama wells in the area
which you are proposing to drill to this formation?

A None permitted at this time.

Q Does Chama have further plans for devel-
opment of the Glorieta-Yeso?

A If we can get approval on our salt water
injection and economically dispose of the water we do.

Q Now if we go back to the diagrammatic
sketch, Exhibit Number Three, do you propose to use lined
tubing in the well?

A Yes.

Q Will the annular space be filled with
fluid and will it be completed so that the annular space and
the fluid can be pressure tested in accordance with the Fed-
eral Underground Injection Control Program?

A Yes.

Q And you are going to be injecting into

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the Cisco Canyon.

A Right, the lower half of the Cisco Canyon formation.

Q And what is the source of the water? Is it just the Glorieta-Yeso wells that you've discussed?

A Yes, it is.

Q And what volumes do you propose to inject?

A We propose a maximum injection rate of 2500 barrels per day.

Q Will the system be open or closed?

A It will be a closed system.

Q Do you propose to inject by gravity or under pressure?

A Under pressure.

Q Will a pressure limitation of .2 of a pound per foot of depth to the top of the injection interval be sufficient for Chama's purposes in this matter?

A Yes.

Q Would you now refer to what has been marked as Chama Exhibit Number Four, identify this and review it, please?

A Okay. This a produced water sample taken 9-29-85 of a Glorieta-Yeso well.

Q Does this show the characteristics of the

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water that you propose to dispose in this well, inject in this well?

A Yes, it does.

Q In your opinion would the injection fluid be compatible with any water presently in the injection zone?

A We see no compatibility problem. Ralph Nix currently operates a salt water disposal well approximately two miles to the southwest where they inject Glorieta-Yeso water into the Cisco Canyon formation.

Q And there have been no compatibility problems there?

A No.

Q Are there fresh water zones in the area?

A Yes, there's the artesian sand which runs within several hundred feet of the surface.

Q Are there any fresh water wells within one mile of the proposed injection well?

A Yes, there's two.

Q And from what interval are they producing?

A They're both from the artesian sands.

Q Have you a water sample of water from these wells?

A Yes, I do.

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2 Q And is that what has been marked as Chama
3 Exhibit Number Five?

4 A Yes, it is.

5 Q Will you now go to Chama Exhibit Number
6 Six, identify this, and review this for Mr. Stogner?

7 A Chama Exhibit Number Six is a composite
8 log from the original Fanning well and we feel that this log
9 shows the porosity and permeability characteristics of the
10 well that it will be able to accept the proposed injection
11 volumes.

12 Q Has notice been given to the offsetting
13 interest owners and to the surface owner as required by Form
14 C-108?

15 A Yes, they have.

16 Q And does the C-108 contain copies of the
17 letters and return receipts?

18 A They do of offset operators and the land-
19 owner.

20 Q Subsequent to the time this application
21 or the C-108 was filed to the Commission were several other
22 unleased mineral interest owners discovered?

23 A Yes, they were.

24 Q And was notice given to these interest
25 owners?

A Yes, they were. And in Chama Exhibit

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Number Seven those letters are shown. The return receipts were xeroxed over the text of the letter but the letter is identical to the letters in the Form C-108.

Q And have you received back a return receipt from each of these unleased mineral interest owners, as required by Rule C-108?

A Yes, we have.

Q Are there any plugged and abandoned wells within the area of review?

A No, there are not.

Q Are you aware of similar applications that have been filed for disposal of Glorieta-Yeso water into the Cisco Canyon formation?

A The Ralph Nix disposal well. They began injection in 1982.

Q Have you examined in preparation for this hearing the available geologic and engineering data on the subject area?

A Yes.

Q And as a result of this examination have you discovered any evidence of open faults or other hydrologic connections between the disposal zone and any source of underground drinking water?

A No.

Q In your opinion will granting this appli-

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cation be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A Yes.

Q Were Exhibits One through Seven prepared by you or under your direction and supervision?

A Yes.

MR. CARR: At this time, Mr. Stogner, we would offer into evidence Chama Exhibits One through Seven.

MR. STOGNER: Exhibits One through Seven will be admitted in evidence.

MR. CARR: And that concludes my direct examination of Mr. MacDonald.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. MacDonald, is there any Cisco formation -- any Cisco production within the two mile radius of this well?

A No, there is not.

Q There isn't? Is there any production deeper than the Cisco formation in this area?

A Yes, there is.

Q For what reason did you bring this to hearing and not go administrative?

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A Well, we were advised that we had to submit this at a hearing.

Q Who advised you, may I ask?

A Our counsel.

Q Okay. Let's go to Exhibit Number Four and you show here that this water sample is from Morrison Com Well No. 1. What's the location of that Morrison Com Well No. 1?

A I don't have the exact location record with me.

Q Do you know what section it's in?

A 5, Section 5.

Q How many other wells are in Section 5 besides this proposed -- no, you're in Section 4, aren't you?

A Right.

Q Okay. Do do you know the completion depth of that particular well, the Morrison Com No. 1?

A I'm not sure of the exact depth.

Q Does it take on any of the other formations, Pennsylvanian formations besides the Cisco?

A Yeah, it was originally drilled as a Morrow well.

Q Are the Morrow completions still there?

A No, they've been (not clearly under-

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stood.)

Q Is this Morrison Com Well No. 1 producing at the present?

A It's shut-in at the present time. It has produced.

Q I see why it came to hearing, then.
Okay, let's go to Exhibit Number Five.
Where are these two water wells located?

A One of them is located -- they're both in Section 4 within that half mile radius and I don't have the exact location of either one.

Q Can you obtain that information for me?

A I can obtain that and send it to you, yes.

Q If you would, please.

MR. STOGNER: Are there any other questions of this witness?

Does anybody else have any questions of Mr. MacDonald?

Q Mr. MacDonald, one more question before you take off, please.

In your proposed re-entry, in the 4-1/2 inch casing that you propose to run, or 5-/12 inch casing you propose to run, how much cement do you propose?

A We are not proposing the specific volume

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2 of cement. We plan to cement it sufficiently as approved by
3 the District to isolate this injection zone.

4 Q Have you made the application yet to --

5 A No, we have not. All we've submitted is
6 what's shown on the C-108.

7 MR. STOGNER: Is there anything
8 further of Mr. MacDonald?

9 MR. CARR: Nothing further.

10 MR. STOGNER: If not, he may be
11 excused.

12 Anything further in Case Number
13 8738?

14 MR. TAYLOR: Did you send
15 copies of the application to all these people that have let-
16 ters?

17 Our rules require that at
18 least, I think, is it the landowner or is it everybody gets
19 a copy of the application?

20 Well, at least, let's see --
21 Rule 701(d)2. The applicant shall furnish by certified or
22 registered mail a copy of the application to the owner of
23 the surface of the land on which each injection or disposal
24 well is to be located and to each leasehold operator within
25 one-half mile.

So you're going to have to --

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MR. CARR: Okay.

MR. TAYLOR: -- send those out to them.

We might let it go if you had told them that they had to object, but your letter doesn't really tell them --

MR. CARR: Okay.

MR. TAYLOR: -- what they have to do.

MR. CARR: We will send that and send copies of that to you, and also send copies of the return receipts on those.

MR. TAYLOR: Okay.

MR. STOGNER: You'd have let it go by if what?

MR. TAYLOR: Well, if they would have, you know, in the letter if you explain all the information and tell them who to get in contact with --

MR. CARR: Okay.

MR. TAYLOR: -- it might, you know, the letter was not clear enough that they who to contact or how many days you have --

MR. CARR: All right.

Thank you. We'll do that. We'll get copies of the return receipts to you so that they

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can have the appropriate time as if it were administrative to object.

MR. TAYLOR: When were these last letters sent out?

MR. CARR: They were sent out on the 7th.

MR. TAYLOR: There were just interest owners, though.

MR. CARR: Yes, these were unleased mineral interest owners.

MR. TAYLOR: That's all.

MR. STOGNER: Is there anything further in this case?

If not, it will be pending -- the record will be left open pending the twenty days Mr. Taylor prescribed.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a correct and true copy of the proceedings in the Examinatory Hearing of Case No. 8738 heard by me on 23 October 1985.
Michael E. Rogers Examiner
Oil Conservation Division