

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO

23 October 1985

EXAMINER HEARING

IN THE MATTER OF:

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

BEFORE: Michael S. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

TIMOTHY R. MacDONALD

Direct Examination by Mr. Carr	3
Cross Examination by Mr. Stogner	14

E X H I B I T S

Chama Exhibit One, C-108	5
Chama Exhibit Two, Map	7
Chama Exhibit Three, Well Profile	8
Chama Exhibit Four, Water Sample	10
Chama Exhibit Five, Analysis	12
Chama Exhibit Six, Log	12
Chama Exhibit Seven, Correspondence	13

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

5 MR. TAYLOR: The application of  
6 Chama Petroleum Company for salt water disposal, Eddy Coun-  
7 ty, New Mexico.

8 MR. CARR: May it please the  
9 Examiner, my name is William F. Carr with the law firm Camp-  
10 bell and Black P. A. of Santa Fe.

11 We represent Chama Petroleum  
12 Company. We have one witness.

13 MR. STOGNER: Are there any  
14 other appearances?

15 Will the witness please stand  
16 and be sworn.

17 (Witness sworn.)

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

21 DIRECT EXAMINATION

22 BY MR. CARR:

23 Q Will you state your full name and place  
24  
25

1  
2 of residence?

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

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

7 A Employed by Chama Petroleum Company as  
8 Engineering Manager.

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

12 A No, I have not.

13 Q Would you briefly summarize for Mr. Stog-  
14 ner your educational background and your work experience?

15 A Received a BS degree in petroleum engin-  
16 eering from Texas A & M University in 1981; worked for Delta  
17 U. S. Corporation as a petroleum engineer for the following  
18 four years; and I worked for Chama Petroleum Company as En-  
19 gineering Manager for the last four months.

20 Q Do your duties with Chama include respon-  
21 sibility for their activities in southeastern New Mexico?

22 A Yes, they do.

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

25 A Yes, I am.

Q And are you familiar with the particular

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?

1  
2 MR. CARR: And, Mr. Examiner,  
3 the advertisement contains the correct footage location. It  
4 does, however, indicate Unit G.

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

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

13 A Chama Exhibit Number One is the Form C-  
14 108 filed with the District Office. It includes the form as  
15 well as the well diagram showing the present status of the  
16 well, the proposed operations to be conducted, a geological  
17 data map showing a two mile radius around the well as well  
18 as a half mile radius of investigation. It includes letters  
19 with registered receipts attached that were sent to the off-  
20 set operators, and it also includes some water analyses from  
21 wells located in this area.

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

24 A Yes, it was.

25 Q When was the Fanning No. 1 Well original-  
ly 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 in the process of drilling.

6 Q And to what formation are these drilled?

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

9 Q And do they penetrate the Cisco Canyon?

10 A No, they do not.

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

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

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

18 Now this exhibit shows the proposed work-  
19 over of the well.

20 A Right.

21 Q Do you have a diagrammatic sketch attached 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

1  
2 the Cisco Canyon.

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

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

7 A Yes, it is.

8 Q And what volumes do you propose to in-  
9 ject?

10 A We propose a maximum injection rate of  
11 2500 barrels per day.

12 Q Will the system be open or closed?

13 A It will be a closed system.

14 Q Do you propose to inject by gravity or un-  
15 der pressure?

16 A Under pressure.

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

20 A Yes.

21 Q Would you now refer to what has been mar-  
22 ked as Chama Exhibit Number Four, identify this and review  
23 it, please?

24 A Okay. This a produced water sample taken  
25 9-29-85 of a Glorieta-Yeso well.

Q Does this show the characteristics of the

1  
2 water that you propose to dispose in this well, inject in  
3 this well?

4 A Yes, it does.

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

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

12 Q And there have been no compatibility pro-  
13 blems there?

14 A No.

15 Q Are there fresh water zones in the area?

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

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

20 A Yes, there's two.

21 Q And from what interval are they produc-  
22 ing?

23 A They're both from the artesian sands.

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

A Yes, I do.

1  
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

1  
2 Number Seven those letters are shown. The return receipts  
3 were xeroxed over the text of the letter but the letter is  
4 identical to the letters in the Form C-108.

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

8 A Yes, we have.

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

11 A No, there are not.

12 Q Are you aware of similar applications  
13 that have been filed for disposal of Glorieta-Yeso water in-  
14 to the Cisco Canyon formation?

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

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

20 A Yes.

21 Q And as a result of this examination have  
22 you discovered any evidence of open faults or other hydrolo-  
23 gic connections between the disposal zone and any source of  
24 underground drinking water?

25 A No.

Q In your opinion will granting this appli-

1  
2 cation be in the best interest of conservation, the preven-  
3 tion of waste, and the protection of correlative rights?

4 A Yes.

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

7 A Yes.

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

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

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

15 CROSS EXAMINATION

16 BY MR. STOGNER:

17 Q Mr. MacDonald, is there any Cisco forma-  
18 tion -- any Cisco production within the two mile radius of  
19 this well?

20 A No, there is not.

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

23 A Yes, there is.

24 Q For what reason did you bring this to  
25 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-

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 5-1/2 inch casing you propose to run, how much cement do you propose?

A We are not proposing the specific volume



1  
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 --

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.)

## 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 transcript of the proceedings in  
the Examination of Case No. 8738  
heard by me on 23 October 1985.

Michael E. Hogue Examiner  
Oil Conservation Division