

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

12 June 1986

## EXAMINER HEARING

IN THE MATTER OF:

Application of Chase Energy, Inc. water disposal, Lea County, New Mexico.	CASE 8914
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BEFORE: David R. Catanach, Examiner

## TRANSCRIPT OF HEARING

## A P P E A R A N C E S

For the Division: Jeff Taylor  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87501

For the Applicant:

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## I N D E X

JAMES R. ALLEN

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MR. CATANACH: Let's call next  
Case 8914.

MR. TAYLOR: The application of  
Chase Energy, Incorporated, for salt water disposal, San  
Juan County, New Mexico.

MR. CATANACH: Are there ap-  
pearances in this case?

MR. BAGGETT: Appearing for  
Chase Energy, my name is B. J. Baggett. I'm an attorney at  
law. My address is 6909 Drinen Lane, Farmington, New Mex-  
ico, 87401.

The witness that will appear on  
behalf of Chase Energy in this case will be James R. Allen,  
and I'm sorry, Mr. Allen, you'll have to give your own name  
and address.

MR. ALLEN: Okay.

MR. BAGGETT: I mean your own  
address.

MR. CATANACH: That's all  
right, we don't need that.

Are there any other appearances  
in this case?

Will the witness please stand  
and be sworn in?

1  
2 (Witness sworn.)  
3

4 JAMES R. ALLEN,  
5 being called as a witness and being duly sworn upon his  
6 oath, testified as follows, to-wit:  
7

8 DIRECT EXAMINATION

9 BY MR. BAGGETT:

10 A Mr. Allen, would you tell the examiner  
11 what your connection is with Chase Energy, Inc., please?

12 A I'm employed by Chase Energy, Inc. as  
13 Superintendent.

14 Q And how long have you been so employed?

15 A Approximately a year and a half.

16 Q Would you -- when was the first time you  
17 commenced work in the oil fields?

18 A Approximately fifteen years of age, about  
19 twenty-two years ago.

20 Q All right. Where has your experience  
21 been, in the State of New Mexico?

22 A In the State of New Mexico; primarily in  
23 Lea County.

24 Q All right. Mr. Allen, are you the person  
25 who prepared the application in this Case Number 8914?

1           A           Yes, sir.

2           Q           All right.

3                       MR. BAGGETT: Let the record  
4 show that I have presented to the Hearing Examiner some ad-  
5 ditional exhibits that were not included in the original ap-  
6 plication.

7                       Exhibit Number One is an  
8 amended map showing five additional wells within the one-  
9 half mile area of review. This brings to a total -- this  
10 brings to a total of 41 wells, including the five new wells  
11 that are in the area of review.

12                      All of the requested informaton  
13 is included in the original application with the exception  
14 of the five new wells which I -- which are in Exhibit -- the  
15 data is in Exhibit Number Four that I have handed the exam-  
16 iner.

17                      Exhibits Numbers Two and Three  
18 are the receipts for the certified mail to the neighboring  
19 operators, Dugan Production and the Navajo Nation.

20                      Exhibit Number Five is the Af-  
21 fidavit of Publication containing the required information.

22           Q           Mr. Allen, would you go through the ap-  
23 plication and give us the information on the proposed aver-  
24 age maximum daily rate and volume of fluids to be injected?

25           A           Yes, sir. We propose to inject between

1 25 and 150 barrels a day in the proposed well.

2 The proposed system is a closed system.  
3 There is a 210 barrel settling tank, 210 barrel water stor-  
4 age tank on site with flow lines running to the disposal  
5 well.

6 The average injection pressure of the  
7 well is 150 pounds per square inch. The fluid to be in-  
8 jected is produced water from the Slick Rock Dakota forma-  
9 tion, which will be injected back into the same formation.  
10 The Slick Rock Dakota formation is oil producing.

11 There is no proposed stimulation program  
12 for this disposal well and Chase Energy, Incorporated, has  
13 examined available geologic and engineering data and we find  
14 no evidence of open faults or any other hydrological connec-  
15 tion between the disposal well and any other underground  
16 source of drinking water.

17 Q Thank you, Mr. Allen.

18 MR. BAGGETT: Are there any  
19 questions from the Examiner?

20 MR. CATANACH: Not so far.  
21 Would you please continue to proceed?

22 MR. BAGGETT: Okay.

23 Q Have you -- have you -- is there any log-  
24 ging and test data on the well?

25 A No, sir, the well was drilled in April of

1 1969 and was not logged at the time and there has been no  
2 log run since.

3 Q Have you included an analysis of the  
4 water from the wells that's available?

5 A Yes, sir.

6 Q Producing within -- okay. Would you give  
7 us that data, that information, please?

8 A Okay. The total hardness of the water is  
9 30. The total dissolved solids is 2438.34 parts per mil-  
10 lion.

11 There are -- there are traces of hydrogen  
12 sulfide in the water and the specific gravity is 1.0035 at  
13 66-1/2 degrees Fahrenheit. Specific gravity corrected to 60  
14 degrees Fahrenheit is 1.004475 with a ph of 9. Resistivity  
15 is zero ohms, meters at zero degrees Fahrenheit bottom hole.

16 Q All right, thank you. Have you attached  
17 with the application the well data on each of the wells, 41  
18 wells --

19 A Yes, sir.

20 Q -- that are in the one-half mile area of  
21 review?

22 A Yes, sir, I have.

23 Q All right. Is there anything you wish to  
24 add to the data that's already been submitted to the Exam-  
25 iner?

1           A           Other than the five new wells, no, sir.

2           Q           And did you prepare the same requirement  
3 -- data requirements for the 5 new wells that you prepared  
4 for the 36 wells that you submitted with your application?

5           A           Yes, sir.

6           Q           All right. What is the name of the in-  
7 jection formation in this case?

8           A           Slick Rock Dakota.

9           Q           And would you explain to the Commission  
10 whether this is an open hole or --

11          A           Yes, sir, it is. The DEB No. 18 is an  
12 open hole completed well. It was, like I said, drilled in  
13 1969 to a depth of -- total depth of 758 feet. The -- there  
14 is 25 feet of 7-inch casing and 750 feet of 4-1/2 inch cas-  
15 ing, and the cemented, calculated top of cement is 391 feet,  
16 so that from 750 feet to 391 feet is cemented on the outside  
17 of the casing with an 8-foot bottom hole open hole.

18          Q           And that is the area of injection?

19          A           Yes. We have found no evidence of any  
20 faults or any communication between the injection zone and  
21 any other zones producing drinking water for the area.

22          Q           Was this well originally drilled as an  
23 injection well?

24          A           No, sir, it was drilled as a producing  
25 oil well and converted somewhere, we think, in 1978 or '79



1 to a water injection well.

2 Q Okay. Are there any other perforated in-  
3 tervals in this well?

4 A No, sir.

5 Q Do you know the depth -- is there any  
6 shallower producing formations in this area?

7 A No, sir.

8 Q Do you know the next lower oil and gas  
9 formation or is there any producing formations?

10 A I believe the next formation would be the  
11 Dakota formation.

12 Q I realize that but are there any other  
13 producing wells in this particular lease of any other forma-  
14 tions that you know of?

15 A Oh, no, sir.

16 Q Okay. The Exhibits Two and Three that  
17 have been submitted to the examiner indicate a receipt for  
18 certified mail to Dugan Production and Navajo Nation. Are  
19 they, in fact, the neighboring operators --

20 A Yes, sir, the Navajo Nation is the owner  
21 of the land and Dugan Production operates the William Duncan  
22 Leases, which is the only adjoining operator.

23 Q Okay, and what is the intended purpose of  
24 the injection well?

25 A Disposal of salt water, produced water.

1 Q All right.

2 MR. BAGGETT: Mr. Examiner, I  
3 hope I haven't left anything out. If I have, I would ask  
4 your indulgence, and ask you if you have any questions or  
5 any other information you want me to divulge.

6 MR. CATANACH: How many  
7 exhibits did you have, Mr. Baggett?

8 MR. BAGGETT: I have five  
9 additional exhibits.

10 MR. CATANACH: Okay, would you  
11 like those entered at this time?

12 MR. BAGGETT: I certainly  
13 would. I thank you very much. I would move for their entry  
14 -- admission of these exhibits.

15 MR. CATANACH: Exhibits One  
16 through Five will be admitted into evidence and I have a few  
17 questions for the witness.

18 MR. BAGGETT: All right.

19

20 CROSS EXAMINATION

21 BY MR. CATANACH:

22 Q Mr. Allen, your Exhibit Number One, that  
23 prepared by you, your lease map exhibit?

24 A That one? No, sir, that was prepared by  
25 Caroline Taplan (sic). The original map included in the

1 original application was prepared by me.

2 Q Mr. Allen, is it possible for us to get a  
3 copy of this lease map, an official copy of a lease map in-  
4 stead of one that you would prepare?

5 A Yes, sir.

6 Q That would show -- is there a lease map  
7 in existence that would show these wells?

8 A Yes, sir.

9 Q Okay, can I get you to send a copy of  
10 that to us.

11 A Okay.

12 Q Now you said in the injection well the 4-  
13 inch casing is set at 750 feet?

14 A Yes, sir.

15 Q And you will be using tubing to inject?

16 A Yes, sir.

17 Q What size tubing is that?

18 A It will be 2-3/8ths.

19 Q Do you know where that's going to be set  
20 at?

21 A It will be set in the -- probably in the  
22 middle of the injection zone, about 754 feet.

23 Q Okay. Without -- do you know where  
24 you're going to set your packer?

25 A Well, at the present time it doesn't have

1 a packer in it. If you'll look at my schematic of the well,  
2 this is an old, older well and it has been used for injection  
3 purposes for several years, and when we purchased the  
4 company we were assured by the previous owners that all injection  
5 wells were permitted and in proper working order.

6 We find that this well was not permitted;  
7 at least we cannot find any in your records here in Santa Fe  
8 or of the records in Farmington or Aztec. We find no record  
9 of permit, so this well has been having fluid injected for  
10 the last, probably since 1979 as far as we can ascertain and  
11 there is no packer in there now.

12 Q Is the tubing annulus kept filled with  
13 some kind of fluid or is that (not clearly understood) with  
14 the disposal well.

15 A Yes, with the disposal (not clearly understood.)  
16

17 Q How do you monitor the pressure to see if  
18 there's anything wrong with the casing?

19 Is that -- do you do that at all?

20 A We have only done that one time. With  
21 the open hole completion and no packer, an integrity -- a  
22 pressure test will not prove one way or the other if there  
23 is something wrong with the casing.

24 So there is really, unless we run a  
25 packer in there, there is no way to test the casing at the

1 proper -- properly at the present time.

2                   The integrity test, when you try to pres-  
3 sure up the annulus, it goes into the formation. The forma-  
4 tion, like I stated before, is at approximately 150 pounds  
5 per square inch. It's very low pressures and so it -- any  
6 attempt to pressure up the annulus goes out into the forma-  
7 tion.

8                   Q               Would Chase Energy be opposed to putting  
9 a packer in there?

10                               MR. BAGGETT: They wouldn't be  
11 opposed to it, Mr. Examiner, but we would request your  
12 indulgence in delaying such a placement of a packer some  
13 time. It's been there quite a few years and right now Chase  
14 Energy is just hanging on by its teeth, as a matter of fact,  
15 financially, and I'm not sure that we could at this point  
16 afford to go in and start reworking this well.

17                               MR. CATANACH: What we're con-  
18 cerned with, Mr. Baggett, is that there's no way to deter-  
19 mine the integrity of the casing in this well without put-  
20 ting a packer in it.

21                               MR. BAGGETT: Yes, that's true.  
22 I agree with you there.

23                               It is cemented quite high and  
24 we simply -- as a matter of fact, Caroline Taplan (sic) was  
25 employed by us as a consultant prior to going to work for

1 the OCD and I believe she was the one that discovered and  
2 brought to our attention the fact that it had been misrep-  
3 resented to us that this well was in fact permitted when it  
4 wasn't.

5 There are two injection wells  
6 within about a half a mile of one another and the other one  
7 was permitted; this one was not; however, they've both been  
8 used for approximately the same period of time.

9 The person that assured us,  
10 from whom we bought this lease, is still insisting that this  
11 well was permitted and somebody's misplaced the file. I  
12 don't know whether that's true.

13 Q I see. Your -- Chase Energy's other in-  
14 jection wells, do they use packers?

15 A Yes, I think the one up north has a pac-  
16 ker. I believe so.

17 Q Mr. Allen, do you know if there's any  
18 fresh water in the area?

19 A Oh, there's some -- I believe most of the  
20 water is -- there's some farming around there and it's all  
21 irrigation coming from the river.

22 I'm not aware of any wells that are with-  
23 in the area of review. There are some Navajo Indians living  
24 within this -- well, not quite within this area or review,  
25 but I'm not sure there's a fresh water source.

1 I don't think there's any water wells  
2 within this area of review.

3 Q So you're not aware of any formations  
4 above the Dakota that have any fresh water in them?

5 A Not -- not personally, no, sir.

6 Q Mr. Allen, I see you've looked at the 41  
7 wells in the area of review.

8 The way that these wells are completed or  
9 plugged, do you see any chance of any injection water  
10 migrating up any of these wellbores?

11 A No, sir. We've physically inspected all  
12 of the plugged wells and abandoned wells and see no evidence  
13 whatsoever of any leakage within the area of review at all.

14 Q Most of the wells that were drilled in  
15 that area do have cement behind the casing.

16 A Yes. All of these are open hole and are  
17 not perforated zones. They're just open hole and all of  
18 them had the cement plug placed at the -- back up the casing  
19 from the open hole.

20 Q Okay. You are aware of the pressure  
21 limitation of 150 psi?

22 A Yes, sir.

23 Q Mr. Allen, notice was sent to the -- any  
24 operators within one mile of the injection well?

25 A That was the certified receipt to Dugan

1 Production; the operator is listed as Walter T. Duncan but  
2 Dugan Production is his man in town that handles the leases,  
3 so I sent it to that address where they'd have a current ad-  
4 dress for Mr. Duncan.

5 I received no adverse reply from them.

6 And I also sent to the landowner, the  
7 Navajo Tribe, a copy of the application.

8 MR. CATANACH: I think that's  
9 all I have for Mr. Allen at this time.

10 Are there any other questions  
11 of the witness?

12 If not, he may be excused.

13 MR. BAGGETT: We have no fur-  
14 ther witnesses, Mr. Examiner.

15 MR. CATANACH: There being no-  
16 thing further in Case Number 8914, it will be taken under  
17 advisement.

18

19 (Hearing concluded.)

20

21

22

23

24

25



## C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY  
CERTIFY 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 complete record of the proceedings in  
the Examiner hearing of Case No. 8914.  
heard by me on June 12, 1986.

David R. Catanach Examiner  
Oil Conservation Division