

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

30 April 1986

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Cor-      CASE  
poration for salt water disposal,      8883  
Chaves County, New Mexico.

BEFORE; Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

For the Applicant:      William F. Carr  
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For Kerr McGee:      Karen Aubrey  
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MR. STOGNER: Call next Case Number 8883.

MR. TAYLOR: Application of Yates Petroleum Corporation for salt water disposal, Chaves County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr, with the law firm Campbell & Black, P. A., of Santa Fe, appearing on behalf of Yates Petroleum Corporation.

I have one witness who needs to be sworn.

MR. STOGNER: Are there any other appearances in this matter?

MR. CARR: Mr. Examiner, I believe that Karen Aubrey of Kellahin & Kellahin has entered her appearance in this case on behalf of Kerr McGee. She also had an exhibit which we have stipulated can be admitted in this case, which is a letter that has been executed by Yates agreeing to certain -- agreeing to supply certain information on the well to Kerr McGee.

MR. STOGNER: As of today I did receive an exhibit from Ms. Aubrey on behalf of Kerr McGee Corporation and the exhibit is marked Exhibit Number One, which is a letter from Kerr McGee Corporation to Yates waiv-

1 ing any protest.

2 Mr. Carr, do you have a copy of  
3 that letter?

4 MR. CARR: I don't have it with  
5 me. I do have it, however, and we have no objection to that  
6 being included in the record of this case.

7 MR. STOGNER: Then let the re-  
8 cord so show that Ms. Karen Aubrey entered an appearance on  
9 behalf of Kerr McGee and has submitted an Exhibit Number  
10 One.

11 With no objection Exhibit Num-  
12 ber One of Kerr McGee's will be admitted into evidence in  
13 this case.

14 Will the witness please stand  
15 and be sworn at this time?

16  
17 (Witness sworn.)

18  
19 MR. CARR: Now, Mr. Stogner,  
20 initially I would just like to note that the case has been  
21 advertised for salt water disposal.

22 It is the intent of Yates Pet-  
23 roleum Corporation, however, at this time to limit disposal  
24 in this well to water produced from the subject lease.

25 We have been in communication

1 with the landowner and advised them of that fact and agreed  
2 to advise the Commission of that at the beginning of this  
3 hearing.

4 MR. STOGNER: I'm not sure I  
5 follow you there, Mr. Carr.

6 MR. CARR: We're not seeking  
7 authority, Mr. Stogner, for a commercial disposal well.  
8 We're going to limit disposal to water produced on this  
9 particular lease.

10 MR. STOGNER: Is this on State,  
11 Federal, or fee land?

12 MR. MAHFOOD: Federal.

13 MR. STOGNER: All right. So,  
14 Mr. Carr, you're just -- it's still a salt water disposal  
15 well but you want to limit the salt water --

16 MR. CARR: Yes.

17 MR. STOGNER: -- disposal to  
18 lease use only on the --

19 MR. MAHFOOD: Sun "UW" Lease.

20 MR. STOGNER: -- Sun "UW"  
21 Federal Lease. Okay.

22 MR. CARR: All right?

23 MR. STOGNER: Mr. Carr.  
24  
25



1 qualifications acceptable?

2 MR. STOGNER: They are.

3 Q Would you briefly state what Yates is  
4 seeking with this application?

5 A We seek authority to dispose of waters  
6 produced from the San Andres formation to be re-injected in-  
7 to the San Andres formation on this lease.

8 Q Would you refer to what has been marked  
9 as Yates Exhibit Number One and identify that for Mr.  
10 Stogner, please?

11 A This is a Form C-108 requesting  
12 permission -- authority for disposal of salt water.

13 Q And was this form filed with the  
14 Division and the other interest owners in the area, as  
15 required by Division rules?

16 A Yes, sir.

17 Q What is the date of the -- that the well  
18 was actually drilled?

19 A The well was drilled back in 1983.

20 Q And what is its current status?

21 A And it's been temporarily abandoned since  
22 '83.

23 Q Will you now refer to the plat which is  
24 the second page of this exhibit and review the information  
25 contained thereon for the examiner?

1           A           The second page is a plat of the area  
2 showing two circles, one half mile circle for the area of  
3 review and a two mile circle identifying all the other wells  
4 and offset operators within the area.

5           Q           Are the -- is the leasehold ownership set  
6 forth on this exhibit?

7           A           Yes, sir.

8           Q           Will you now refer to the tabular data on  
9 the wells within the area that penetrate the injectin zone?

10          A           Yes, sir. On page 3 and 4 three is the  
11 data on the wells in review area.

12                    The first well, the Sun "UW" No. 3 is the  
13 producing well and I have one correction I just noted. The  
14 completion date was March 12th '84, not '85. Typo.

15                    All the other wells except the last --  
16 except for the ARCO "BF" No. 9 have been plugged.

17                    The ARCO "BF" No. 9 is a producing well  
18 but it's actually 20 feet outside of the half mile area of  
19 review.

20                    It's the very last one on that page.

21          Q           And this exhibit sets forth all the in-  
22 formation required to be filed with this application by Form  
23 C-108 and Division rules.

24          A           That is correct.

25          Q           Are there any plugged or abandoned wells

1 within the area of review?

2 A Yes, sir.

3 Q Do you have included as part of this ex-  
4 hibit schematic drawings on each of these wells?

5 A Yes, sir, I have. They're --

6 Q Are those --

7 A -- found on pages 5 and 6.

8 Q And do these schematic drawings show all  
9 plugging detail in each of these wells?

10 A Yes, they do. They all show that surface  
11 casing was set within 100 feet below the fresh water zone  
12 and cemented to the surface, and there's cement all the way,  
13 well above the injection zone.

14 Q Would you now refer to page 9 of Exhibit  
15 One, which is the schematic drawing for the proposed injec-  
16 tion well, and review the information contained on this ex-  
17 hibit for Mr. Stogner?

18 A Yes, sir, we note right away that there's  
19 10-3/4 surface casing set at 385 and cemented to the sur-  
20 face.

21 A 7-7/8ths hole was drilled to 4397. 4-  
22 1/2 casing was set at TD and cemented with top of cement at  
23 3425, which is above the top of the cemented formation.

24 The well was perforated initially at 4290  
25 to 4308; made oil there and the oil kind of went away, so

1 reperforated and refraced the entire interval; the new per-  
2 forations from 4058 to 4308, and all the well is producing  
3 since has been water.

4 Q When you convert this for disposal pur-  
5 poses will you be injecting through lined tubing?

6 A Yes, sir, we will.

7 Q Will you fill the annular space with an  
8 inert fluid and equip the well with a pressure gauge so  
9 that the pressure in the annular space can be tested?

10 A Yes, we will.

11 Q And will you agree to all testing re-  
12 quired to comply with the Federal Underground Injection Con-  
13 trol Program?

14 A Yes, we do.

15 Q And the particular formation you'll be  
16 disposing in is the San Andres.

17 A It is the San Andres formation.

18 Q All right. And the source of the water  
19 to be injected is water that is produced from the San An-  
20 dres?

21 A That is correct.

22 Q What is presently being done with this  
23 water?

24 A It is being trucked away.

25 Q What volumes do you propose to dispose of

1 in this well?

2 A The producing well makes approximately  
3 200 barrels of water per day right now. We will putting  
4 away all produced water into this well, roughly 200 barrels  
5 a day and eventually maybe 600, maybe even 1000 barrels a  
6 day; depends on how much we have to recycle.

7 Q 1000 would be the maximum authority  
8 you're seeking at this time?

9 A Yes, sir.

10 Q Is this going to be an open or a closed  
11 system?

12 A It will be a closed system.

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

15 A Eventually under pressure.

16 Q What pressure do you propose to use in  
17 this well?

18 A Eventually top pressure of 1150.

19 Q Now, would injection at this pressure in  
20 your opinion cause any danger of fracturing the strata which  
21 confines the injection interval?

22 A I don't believe it will.

23 Q And why is that?

24 A From the frac data in the area we find  
25 the ISDP to be above -- higher than 1200.

1           Q           Mr. Mahfood, are there fresh water zones  
2 in this area?

3           A           Yes, the Ogallala formation is found be-  
4 tween 200 and -- 250 and 300 feet from the surface in this  
5 area.

6           Q           Are there any fresh water wells within  
7 this area?

8           A           There is one well, one windmill, located  
9 approximately 500 feet southeast of the well and on page one  
10 of the exhibit it's identified with a red designation 500  
11 feet southeast of the proposed well.

12                   MR. CARR: Does your exhibit,  
13 Mr. Examiner, indicate it with a red mark?

14                   MR. STOGNER: Yep, there's a  
15 little red dot --

16                   MR. CARR: All right.

17           A           Yes.

18                   MR. STOGNER: -- underneath the  
19 "X" on "2X".

20           A           That is correct. That's the windmill.

21                   MR. STOGNER: Okay.

22           A           This -- my field people tell me this well  
23 apparently is dry at this time.

24           Q           So there is no water sample available on  
25 this well?

1           A           No water sample available.

2           Q           And there are no other fresh water wells  
3 within the area of review.

4           A           My field people cannot find any other  
5 within a mile radius.

6           Q           Do you have a log of the proposed injec-  
7 tion well?

8           A           Yes, sir, it's attached in here on page  
9 eight.

10          Q           And this log section shows the injection  
11 interval.

12          A           Yes, sir. It shows perforations from  
13 4058 to 4308; (not clearly understood) top of the San Andres  
14 to 800 feet below the top of the San Andres.

15          Q           Mr. Mahfood, was notice of this applica-  
16 tion provided to the offsetting property owners and to the  
17 surface owner in this area?

18          A           Yes, sir.

19          Q           I hand you now what's been marked as  
20 Yates Exhibit Number Two and ask you to identify that for  
21 Mr. Stogner.

22          A           These are Xeroxed copies of the certifi-  
23 cation where these people were notified by certified mail.

24          Q           And have you received these return re-  
25 ceipts from all interest owners to whom notice was given?

1           A           That is correct.

2           Q           Are you aware of any similar applications  
3 which have been granted for injection in the same general  
4 area of (not understood clearly.)

5           A           Yes, sir, back in '68, I believe, it was,  
6 in March of -- in April of '68 Sun Oil Company operated this  
7 lease that we now call the Sun "UW" Lease. At that time  
8 they got a permit from this Commission, Order R-3406, for  
9 pressure maintenance in the San Andres formation.

10          Q           So they were injecting water into this  
11 formation at that time pursuant to this previous Commission  
12 order.

13          A           That is correct.

14          Q           Mr. Mahfood, have you examined the geolo-  
15 gical and engineering data available in this area?

16          A           Yes, I have.

17          Q           As a result of this examination have you  
18 discovered any evidence of faults or other hydrologic con-  
19 nections between the disposal zone and any underground  
20 source of drinking water?

21          A           There is no evidence of open faults or  
22 other hydrologic connection in the disposal zone and fresh  
23 water zones.

24          Q           In your opinion will granting this appli-  
25 cation be in the best interest of conservation, the preven-

1 tion of waste, and the protection of correlative rights?

2 A Yes, it certainly will.

3 Q Were Exhibits One and Two either prepared  
4 by you or compiled under your direction and supervision?

5 A Yes, sir.

6 Q And can you testify as to the accuracy of  
7 these exhibits?

8 A Yes, sir.

9 MR. CARR: Mr. Stogner, at this  
10 time we would offer into evidence Yates Exhibits One and Two.

11 MR. STOGNER: Exhibit One and  
12 Two will be admitted into evidence.

13 MR. CARR: That concludes my  
14 direct examination of Mr. Mahfood.

15 MR. STOGNER: Thank you, Mr.  
16 Carr.

17

18

#### CROSS EXAMINATION

19 BY MR. STOGNER:

20 Q Mr. Mahfood, who's the surface owner out  
21 here?

22 A A fellow named Mr. Seed.

23 Q I thought this was on a Federal lease.

24 A Well, I'm told it's a Federal lease and  
25 he has a -- are there grazing rights on it, or something

1 like that.

2 Q So he's just got the surface lease.

3 A I believe that is correct.

4 Q But the surface does belong to the BLM.

5 A As far as I know, yes, and they were  
6 notified.

7 MR. STOGNER: Mr. Mahfood, Mr.  
8 Carr.

9 MR. CARR: Yes.

10 MR. STOGNER: I have a letter  
11 here, I don't know if you're aware of it, dated April 12th,  
12 1986, from Huston Ranch (sic) in Hobbs, (not understood) to  
13 Yates from a Charles E. Seed and he is objecting to this ap-  
14 plication on several grounds and one down here, he claims  
15 that the Sun "UW" Federal No. 2 is on deeded land and has  
16 been plugged.

17 But as far as you understand  
18 Mr. Seed is the surface lessee?

19 A This is what my land people tell me, sir.

20 Q Also he claims in here that -- well, he  
21 uses the word fresh water wells in Section 11 and Section  
22 15, which, of course, Section 11 is within your half mile  
23 radius. Are you aware of any fresh water wells over in that  
24 area?

25 A No, sir, my field people did not report

1 any.

2 Q Okay, because he mentions here and these  
3 wells are subject to contamination, and he doesn't elaborate  
4 on that.

5 As a surface lessee, if he happens to be  
6 that, is there any agreement that needs to be reached be-  
7 tween the surface lessee and the operator to dispose of  
8 water out there?

9 A We made him an offer at one time and he  
10 was -- he did not agree to it. He wanted more money and I  
11 believe, if that was the case, if he is liable that our com-  
12 pany would take care of the liability.

13 Q When you say you tried to reach an agree-  
14 ment with him, on this particular well or some other well?

15 A No, on this particular disposal well.

16 Q Why were Yates approaching him on this ?

17 A There is some -- something about -- well,  
18 when we first approached him we were thinking of making a  
19 regular disposal well here, and they tell me that whoever  
20 has grazing or surface rights also has the disposal rights.

21 Now, I'm not -- I'm not all up on this  
22 arrangement.

23 MR. CARR: Mr. Stogner?

24 MR. STOGNER: Mr. Carr?

25 MR. CARR: Mr. Stogner, when we

1 initially looked into this prospect we were considering a  
2 commercial salt water disposal well.

3           The pressing need for the dis-  
4 posal well is to service this particular lease. We had the  
5 question researched by the law firm of Losee and Carson and  
6 it appears that we have a legal right to use the leasehold  
7 for the purposes of disposal if we confine it to production  
8 from the lease. It would be using whatever is reasonably  
9 necessary to produce the oil from that property, and we  
10 would have those rights under the lease. We would not for a  
11 commercial well, and that was the reason that at the begin-  
12 ning of the case we stipulated we were limiting it to use  
13 from the lease.

14           I have a copy of a memorandum  
15 to Yates from the Losee law firm which sets out some recent  
16 case decisions. I don't think it's necessary to read that  
17 into the record but I would be glad to provide it to you  
18 just because I think it is useful in briefing the legal  
19 principal involved in this matter.

20           MR. STOGNER: I would like a  
21 copy submtted with this, if you don't mind.

22           MR. CARR: Do you want it mar-  
23 ked as an exhibit, Mr. Stogner?

24           MR. STOGNER: Let's go ahead  
25 and mark it as an exhibit.

1 MR. CARR: Okay. This will be

2 --

3 MR. STOGNER: That will be  
4 Exhibit Three, right?

5 MR. CARR: -- Yates Exhibit  
6 Number Three.

7 Q Mr. Mahfood.

8 A Yes, sir.

9 Q Also, well, I'll go ahead and take care  
10 of this.

11 MR. STOGNER: Exhibit Number  
12 Three will be admitted into evidence at this time. This is  
13 a letter dated January 24th, 1986, from the Losee-Carson  
14 firm to Randy Patterson concerning the matter of Federal oil  
15 and gas leases and disposal of waters on them.

16 Q Mr. Mahfood, would you please check after  
17 this hearing and get back to me on his claim of any fresh  
18 water wells in Section 11, especially those within a half  
19 mile radius?

20 A That I will.

21 Q Okay. I will hold this record open pen-  
22 ding that information from you.

23 A Very good, sir.

24 Q Mr. Mahfood, do you have a water analysis  
25 of the water in this pool?

1           A           I did not bring one, sir. I believe a  
2 previous Order 3406 that was submitted at that time but  
3 since we're injecting water from this -- from the same in-  
4 terval, or similar interval, it will be -- it would not be  
5 necessary.

6           Q           Did you refer back to an order 3406?  
7 That's R-3406?

8           A           R-3406.

9           Q           And recap for me what that order is  
10 about.

11          A           It permitted injection of produced water  
12 -- of water into the San Andres in the Sun "NM" Federal X  
13 No. 5, which is found in Unit G of Section 10; Unit G of  
14 Section 10 within that circle, half mile circle.

15                      This water is supersaturated, showing  
16 170,000 chlorides or better.

17          Q           If the water that you will be injecting  
18 into this zone is from your own lease and your lease is  
19 marked in yellow --

20          A           Yes, that is correct.

21          Q           -- on Exhibit Number One, page two, what  
22 formation are these wells producing from?

23          A           It's the San Andres formation.

24          Q           So this will be the same water going back  
25 into the same formation.

1           A           Yes, sir.

2           Q           Okay.

3                           MR. STOGNER: I have no further  
4 questions of Mr. Mahfood.

5                           Are there any other questions  
6 of this witness?

7                           MR. CARR: No further  
8 questions.

9                           MR. STOGNER: For the record  
10 I'll take administrative notice of the case that involved  
11 Order No. R-3406.

12                           Also I will hold this record  
13 open pending your report on any water wells in Section 11.

14                           If there is nothing further in  
15 Case Number 8883 at this time, Mr. Mahfood, you may step  
16 down.

17                           This case will remain open.

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. 8883,  
heard by me on 30 April 1986.

Michael S. Stegner, Examiner  
Oil Conservation Division