

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

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

For Kerr McGee: Karen Aubrey
Attorney at Law
KELLAHIN & KELLAHIN
P. O. Box 2265
Santa Fe, New Mexico 87501

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I N D E X

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STATEMENT BY MR. CARR

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EDDIE MAHFOOD

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Direct Examination by Mr. Carr

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Cross Examination by Mr. Stogner

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E X H I B I T S

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Yates Exhibit One, C-108

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Yates Exhibit Two, Return Receipts

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Yates Exhibit Three, Opinion

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Kerr-McGee Letter

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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 be-
lieve 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 in-
formation 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 EDDIE MAHFOOD,
2 being called as a witness and being duly sworn upon his
3 oath, testified as follows, to-wit:

4
5 DIRECT EXAMINATION

6 BY MR. CARR:

7 Q Will you state your full name and place
8 of residence?

9 A Eddie Mahfood, Yates Petroleum, Artesia,
10 New Mexico.

11 Q Mr. Mahfood, by whom are you employed and
12 in what capacity?

13 A Yates Petroleum is my employer. I'm a
14 Senior Engineer.

15 Q Have you previously testified before this
16 Division and had your credentials as an engineer accepted
17 and made a matter of record?

18 A Yes, sir.

19 Q Are you familiar with the application
20 filed in this case on behalf of Yates?

21 A Yes, sir.

22 Q Are you familiar with the subject area
23 and the proposed disposal well?

24 A Yes, sir.

25 MR. CARR: Are Mr. Mahfood's

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 injection well?
7

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 application provided to the offsetting property owners and to the
16 surface owner in this area?
17

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 certification where these people were notified by certified mail.
23

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

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.)

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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 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. Stogner, Examiner
Oil Conservation Division