BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 9, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Charles B. Read for salt water disposal, Lea County, New Mexico.

Case No. 4168

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please.

The first case this afternoon will be Case Number 4168.

MR. HATCH: Case 4168, application of Charles B. Read for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: If the Commission please, Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant. We have one witness I'd like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits "A" through "E" were marked for identification.)

WILLIAM J. LeMAY

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A William J. LeMay.

Q What business are you engaged in, Mr. LeMay?

A Consulting geologist, Santa Fe, New Mexico.

Q And have you testified before the Oil Conservation Commission and made your qualifications a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q (By Mr. Kellahin) Mr. LeMay, in connection with your work as a consulting geologist, have you done any work for Charles B. Read in Case 4168?

A Yes, I have. I have made an analysis of the Lynch pool, and the possibility of injecting water into the Yates, Seven Rivers -- the three formations in that area.

Q Now, referring to what has been marked as Applicant's Exhibit "A," would you identify that exhibit, please?

A Yes, Exhibit "A" is a land map of the

Lynch field area, showing the location of the proposed water injection well, indicated by the red arrow, and also the outline of the Yates, Seven Rivers reef production in the Lunch pool. The well is located approximately on the southwest end of the Lynch pool.

Q And what is the closest production from the Seven Rivers in that location?

A There is a -- one offset well, a diagonal, south with a slight diagonal southeast of the proposed injection well. Most of the wells in the southern part of the Lynch field are very marginal at the present time.

The Exhibit One also shows the land ownership for a radius of two plus miles surrounding the injection well.

Q Now, referring to what has been marked as Exhibit "B," would you identify that exhibit?

A Yes, Exhibit B is a log of the proposed injection well, which is the Charles B. Read Number One Sinclair State, located twenty-three hundred ten feet from the south and west lines of Section 2, Township 21 South, Range 33 East, in

Lea County.

It's a sonic-gammaray log, and it shows the top of the Yates formation at 3586, plus data to 216. A subsequent exhibit will have a structure map using that data and other datum.

It also shows the top of the Seven Rivers reef, and it gives the -- the subsequent workover typed in at the bottom. This well was drilled just on top of the reef and then a pipe was set and drilled a few inches into the reef to get production at a later date.

However, in 1968 the well was deepened with cable tools from 3783 to 3797 to increase the fluid recovery.

Q You now have an open hole interval from 3783 to 3797?

A That's correct.

Q And that's the disposal interval if this application is approved?

A That is correct.

Q And now referring to what has been marked as Exhibit "C," would you identify that exhibit?

A Yes, Exhibit "C" is a diagrammatic sketch

of the proposed installation of water injection equipment for the Read Sinclair State.

Going over the exhibit, there's twelve and three-quarter inch surface casing, forty-two pound casing set at 357 feet with 350 sacks of cement circulated to the surface.

A production string, four and a half inch, 9.5 pound casing was set at 3782 with a hundred sacks, and that brings up the top of the cement on that string to 2825, which is a calculated top. A temperature survey was not run.

Mr. Read proposes to plastic coat two and three-eighths inch tubing and hang it on a Baker Model "R" packer at 3682 and inject water through this tubing, in which case the annulus will be monitored at the surface with a pressure gauge and the annulus will be filled with an inert fluid.

The disposal zone on the Seven Rivers reef, as mentioned previously, the open hole interval is from 3783 to 3797.

Q Do you anticipate that this will take the water on a vacuum or what, pressure --

A Yes, with the quantities they propose to

inject, it should take it on a vacuum. They anticipate the volume would be approximately seven thousand barrels to start with, going as high as possibly fifteen thousand barrels per month, and the reef is a very porous zone and it should take those quantities on a vacuum.

Q What is the source of the water?

A The source is Mr. Read's production in the -- in Section 2 of the Lynch field.

Q Now, referring to what has been marked as Applicant's Exhibit "D," would you identify that exhibit?

A Exhibit "D" is a structure map drawn on top of the Yates formation of the southern end of the Lynch field. It shows the proposed injection well in red and the surrounding producing wells and dry holes.

Of particular note is the -- this well which never did make very much oil, but it's on a kind of an isolated pimple in there, and there are three dry holes around the one diagonal southeast from ours, which is a pull well, and it shows that the injection into this reef formation would

not affect the surrounding production.

Q Is it your testimony that it would not damage the producing wells in the area --

A No.

Q -- in your opinion?

A In my opinion, it would not.

Q Now, referring to what has been marked as Exhibit "E," would you identify that exhibit?

A Exhibit "E" is a water analysis of the Seven Rivers reef fluid which was taken from the Sinclair State Number One, which is our proposed injection well, and is very similar to the water that's going to be injected into the Sinclair State, same formation, same field. It shows what probably can be considered average, very average Seven Rivers Reef. The chemical analysis is not particularly high in chlorides. However, the sulfates are fairly high, and a fairly high concentration of sodium.

Q Were Exhibits "A" through "E" inclusive prepared by you and under your supervision?

A Yes, they were.

MR. KELLAHIN: At this time, I offer in

evidence Exhibits "A" through "E" inclusive.

MR. NUTTER: Applicant's Exhibits "A" through "E" will be admitted in evidence.

(Whereupon, Applicant's Exhibits "A" through "E" were offered and admitted in evidence.)

MR. KELLAHIN: That's all I have on direct examination.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. LeMay, who operates these two wells in the southeast quarter of Section 2?

A Mr. Read operates the Humble State which -- no, I'm sorry. Now, that's in -- it's one of those screwey sections. The Humble State water will be north, slightly northeast of the proposed injection well. Plummer and McKinley operate the wells in the south half of Section 2. That's the diagonal from the --

Q Now, I notice that the Number One there, which is the direct east offset which -- with that circle around it, what is the significance of that?

A That was supposedly a discovery well for an extension in the field. That's why in my land map it's encircled, indicating a discovery. It really was just a step-out extension.

Q Well, now, these Number One and Two wells still both are producing, are they not?

A If my memory serves me correctly, they are low volume wells. They are not particularly good wells. I don't know if Mr. Read plans to dispose of the water from those wells or not. I know he's going to from the Humble State wells.

Q He does operate this Number One and Two wells to the southeast?

A No, no, he operates the wells slightly northeast of there.

Q The Humble State?

A The Humble State, yes sir.

Q I just wondered about those two wells, because according to your Exhibit Number "D," they are structurally lower.

A Correct.

Q Than the disposal well.

A Correct, probably, although I did not

show that in the Exhibit "D," this is an isolated pimple of water. In other words, you could probably close that if you wanted to. Those wells are lower structurally there and yet they make more oil than Mr. Read's well. Mr. Read's well could be separated entirely from the field. That's more logical.

Q It would be more logical to swing that little arm around there on Exhibit "D"?

A Yes.

Q It would just be a little --

A It never did make much --

Q How much oil did this well make?

A I've got the cumulative on that. It was completed I think in '67 and the production went down and they deepened it in '68. It was a five-barrel a day well, and I'd say that it made less than twenty thousand barrels.

Q I see; do you know how much pay is open up in these Plummer and McKinley wells?

A No, I don't. All I have again is a memory. The top pay data cut as much as Mr. Read cut, which is normal procedure. However, when the

fluid goes down, and it tends to go down in time in all these wells. They have to deepen them sometimes, and they go clear down to --

Q And the water --

A And occasionally you will hit oil zones below. I know that was done in the Wilson field, and it's very hard to predict it, but you get stringers of oil throughout the reef section.

MR. NUTTER: Are there any other questions of Mr. LeMay?

You may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That's all, Mr. Nutter, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case 4168?

We'll take the case under advisement, and the hearing is adjourned.

I N D E X

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

I, JERRY MARTINEZ, Notary Public in and for the County of McKinley, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Notary Public

My Commission Expires:
January 24. 1970.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4168, heard by me on 2/9, 1963.

Examiner
New Mexico Oil Conservation Commission