BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 15, 1971

EXAMINER HEARING

IN THE MATTER OF:

Application of V. H. Westbrook for a pressure maintenance project, Eddy County, New Mexico

Case No. 4588

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

I N D E X

E X H I B I T S

	Marked	Offered and Admitted
Applicant's Exhibits 1, 2 & 3	3	11

MR. NUTTER: Case No. 4588

MR. HATCH: Case No. 4588. Application of V. H. Westbrook for a pressure maintenance project, Eddy County, New Mexico.

(Whereupon, Applicant's Exhibit Nos. 1, 2 and 3 were marked for identification.)

MR. STEVENS: Mr. Examiner, I am Don Stevens with McDermott, Connelly and Stevens, Santa Fe, representing the Applicant in this case and we have one witness.

(Witness sworn.)

VIRGIL H. WESTBROOK

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

DIRECT EXAMINATION

BY MR. STEVENS:

Q Would you state your name for the record, your residence and your capacity in this case?

A My name is Virgil H. Westbrook, Hobbs, New Mexico. I am the owner of the lease -- operator.

Q And you are the Applicant?

A I am the Applicant in this case.

Q Have you ever testified before the New Mexico Oil Conservation Commission?

A No, sir, I haven't.

Q Could you give us a brief summary of your experience in the oil business and your qualifications?

A Yes. I was employed by Continental Oil Company in field operations for five years, for Tret-o-Lite Chemical Company as chemical sales engineer for three years. For the past 11 years, I have been employed as chemical sales engineer and consultant for United Chemical Company of Hobbs, and for the past four years I have been an independent oil operator in all phases of the operation.

Q Does your operation include the operation and production of oil and gas wells?

A Yes, sir, they do, in both Texas and New Mexico.

Q In that capacity you handle all of the operations, facilities and operations for your --

A (Interrupting) Yes, I do.

MR. STEVENS: Are the witness' qualifications acceptable to the Commission?

MR. NUTTER: Yes, they are.

BY MR. STEVENS:

Q Would you briefly state what you seek in this Application before we get into our exhibits?

A I seek authorization to institute a pressure

maintenance project on the Guy A. Reed Lease, Well No. 2. I seek authority to inject the water from the Guy Reed No. 1 into the Guy Reed No. 2.

Q Referring to what has been marked as Exhibit No. 1, could you explain its significance to the Commission?

A Exhibit No. 1 is a plat of the Malaga-Delaware area. The proposed injection well is circled in red. The small circles of this plat is -- the well is located in Section 24, Township 24 South, Range 28 East. The proposed pressure maintenance well is in the south of the NW/4 of the SW/4 of Section 24. The water would be coming from the NW -- the SW/4 of the NW/4 located in Reed No. 1. The small circle is a half-mile circle showing the off-set operators in all directions. The large red circle is a two-mile circle showing all operators within this two-mile area. The only producing wells in this large circle is in Antweil's Malaga-Delaware plug, and I understand that Mr. Antweil has no objection to this.

Q What is the producing formation under which you propose to inject?

A Into the whole -- Delaware.

Q Of the Delaware formation?

A Yes, sir.

Q What is the formation from which this water will come?

A From the oil sand.

Q In other words, it is the same. You will be taking water out of it and putting it back in a dry hole offsetting your one producing well, is that correct?

A That is correct.

Q Could you give us your understanding of the geology of the area?

A Well, I am not a geologist, but my understanding of the Malaga-Delaware is just a stratographic trap with no relation to structure with possible exception of minor nosing.

Q The wells in the one-half mile area within your circle I note two dry holes -- three counting your injection well -- can you tell us what they recovered?

A My best information was water was all that they recovered.

Q And that is the well in the NW/4 -- NW-NW of Section 24, is that correct?

A Yes, sir.

Q And the SE and NE of Section 23?

A Yes.

Q Township 24 South, Range 28 East. Could you give us the completion and the production history of your Well No. 1?

A Well No. 1 was drilled with a rotary rig to the depth of 2650. Of course, at that time, they moved the rotary off and the moved the cable to the rig again and continued drilling on down to the depth of 2700 feet. It was completed in open-hole from 2650 down to 2700. This Well No. 1 was fraced a couple of months ago -- I guess back in June -- let's see -- July-- a hydromat plug was set in the bottom 15-foot of the hole and 2000 gallons of kerosene in sand track was done on it. The production of this well is now 70 barrels of oil and 60 barrels of water approximately.

Q What is your present disposition of that water?

A Well, we are hauling the water as of now.

Q What is your cost for the hauling of that water?

A The cost of hauling water is 41¢ a barrel and this cost will be reduced.

Q When you start injecting this water into your Well No. 2, is that correct?

A. That is correct.

Q Referring to what has been marked as Exhibit No. 2,

could you explain it to the Commissioner?

A Exhibit No. 2 is the schematics of what is proposed to be done on the Guy Reed Well No. 2; 8 and 5/8 casings was set at a depth of 353 and cement was circulating. 4 and 1/2 casing was rammed to the depth of 2730 and by temperature survey on the top of the cement was 2062 feet. We propose to run two-inch tubing to a depth of 2669 with a model A.D. Baker packer and set at that depth and in annular space, inert fluid would be placed with corrosion resistant additives which would be -- the fluid itself would be treated water.

Q Where do you plan to inject this water, into what part of the formation?

A We plan to inject the water into where it is mainly perforated at 2681, 2682 and 2683 with one jet shot to the foot.

Q Is this water you propose to inject very corrosive?

A It is not corrosive to my knowledge.

Q Do you know its salt content?

A The chlorides run around 80 to 90,000 parts per million.

Q Do you plan any treatment for injected water prior to injection?

motor by injection?

C Do you also use brazing for joining engine
per driver.

A Use an aqueous urea solution to NO, to form
D Do you have any soft copper?
A It is not customary to do soldering.
B The only water-cooled engine we manufacture
or the head.

Y We also do joining by copper brazing in the
mainly pearlitic or ferritic, 2½% and 25%) also are for used
of the furnace.

Y Where do you get the information, how what
would be -- you
filled through would be ground to pieces.
corrosion resistance difficult would be placed with
and is another power, there would be placed with
ride pearlite. Since we are not see as what down
fuse. We produce on our pre-heating to a degree of
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A Yes, I do. I do intend to inject continuously corrosion inhibitors to protect the tubing in the injection well.

Q What pressure do you propose for this injection well?

A I anticipate 450 to 500 pounds of pressure.

Q Is this on the basis of the Malaga field?

A This is on the basis of the Malaga field where Antweil is now flooding.

Q Referring to Exhibit No. 3, can you explain that for the Commission?

A Exhibit No. 3 is bore-hole compensated sonic gamma ray log in the Guy Reed Well, No. 2. This log indicates the top of the range of sand, forward shale and old sand. The sand which we seek authority to inject into the top is 2673. The best porosity and permeability is at 2681 and 2682 and 2683 where it is now perforated. This well never produced any oil. It produced for around, I think, 19 days of water.

Q This was when?

A This was back in 1967 when --

Q (Interrupting) When the well was originally completed?

A When the well was originally completed.

Q What was the recovery on the completion attempt?

A There was no oil recovery on the completion attempt. Only water, salt water.

Q Do you have an estimate of the volume that was recovered?

A No. I think it was approximately 40 barrels a day of water, by pumping.

Q By pumping. And on the basis of this, it is your opinion that you would be able to inject into this formation some 60 barrels of water a day from your No. 1 well?

A It is my opinion that I would be, yes, sir.

Q Were Exhibits 1, 2 and 3 prepared by you or under your direction?

A Yes, they were.

Q In your opinion in this case, will the granting of the Application protect correlative rights and help to prevent waste?

A Yes, it would.

MR. STEVENS: At this time, Mr. Examiner, we would like to introduce into evidence, Exhibits 1, 2 and 3.

MR. NUTTER: Applicant's Exhibits 1 through 3

will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1, 2 and 3 were offered and admitted in evidence.)

MR. STEVENS: We have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Westbrook, as I understand it, you won't run a plastic line tubing, but you will continuously treat the water?

A Yes, sir.

Q To protect the tubing?

A Yes, sir.

Q And the tubing will be installed in a packer?

A Yes, sir.

Q And the annulus between the tubing and the casing will be loaded with a corrosion-inhibited fluid?

A Yes, sir.

Q Will you equip that with a pressure guage to determine leakage in the tubing or packing?

A Yes, sir, I certainly will.

Q And at the present time your No. 1 well is making 70 barrels of oil per day and 60 barrels of water. Is it anticipated that the water production will

go up or down or is it fairly stable at this point?

A Well, it is fairly stable at this time.

Q At the present time you are having to haul water so this not only gives you a means of disposing of it, but you may enhance your production as well?

A Yes, sir, that is what I hope for.

MR. NUTTER: Are there further questions of Mr. Westbrook?

You may be excused.

(Witness dismissed.)

MR. NUTTER: Does anyone have anything further to offer in Case No. 4588.

MR. HATCH: Mr. Examiner, the Commission has received a telegram from Morris Antweil offering no objections to the Application.

MR. NUTTER: If there is nothing further in Case No. 4588, we will take the case under advisement.

[illegible]

[illegible]

[illegible]

STATE OF NEW MEXICO)
) SS.
COUNTY OF SANTA FE)

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Richard L. Nye
COURT REPORTER

My commission expires March 25, 1975.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4588, heard by me on 9/15, 1971.

Examiner
New Mexico Oil Conservation Commission