

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 8, 1969

EXAMINER HEARING

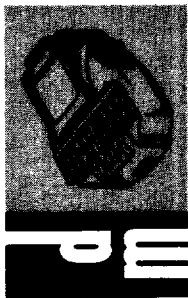
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IN THE MATTER OF: )  
)  
)

Application of S. P. Yates for a )  
pressure maintenance project, Eddy )  
County, New Mexico. )  
)  
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Case No.  
4225

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



MR. UTZ: Case 4225.

MR. HATCH: Case 4225. Application of S. P. Yates for a pressure maintenance project, Eddy County, New Mexico.

MR. LOSEE: A. J. Losee, of Artesia, New Mexico, representing the Applicant. I have one witness, Mr. Mahfood, to be sworn.

(Witness sworn.)

EDDIE MAHFOOD

the witness, called by Mr. Losee, having first been duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q State your name, residence and occupation, please.

A Eddie Mahfood, Artesia, New Mexico, consulting engineer, working for the Yates'.

Q Have you previously testified before this Commission as a petroleum engineer and had your qualifications made a part of this record?

A Yes, sir.

Q. Would you briefly explain the purposes of S. P. Yates' application in this case?

A. We are seeking permission to inject water in the Queen formation at the West Pool -- it's a pressure maintenance project.

Q. Please refer to what's been marked as Exhibit One and explain what is portrayed in that exhibit?

A. Exhibit One is a lease map of the McMillan area. It shows the Anderson lease, circled in red.

The triangles -- there is one triangle, representing the input well, the proposed input well, and the circle -- the circles will be producing wells.

At the current time, only one well is producing, and that is the Anderson Number One. That would be northeast of the northwest of the southeast.

Q. Of Section 11?

A. Of Section 11.

Q. Now that same circle also has a four above it, with a PR --

A. Yes.

Q. Would you explain that?

A. Yes -- that was a deep well picture of a deep well unit -- that has been plugged and abandoned.

Q. So actually, the Anderson Number One and the Pecos River, with the Anderson Number One being the shallow well, and the Pecos River, deep unit Number Four, being a deep plugged well, are located within that one circle; are they not?

A. Approximately, yes.

Q. They are about fifty feet apart --

A. Yes, sir, on the surface.

Q. Now in addition to the wells shown on this -- I guess, really you actually show the Number Three well; do you not?

A. Yes -- I have added a Number Three well, which is being completed at the present time. It is not completed yet -- it is in the process of being completed. And it is located in the northeast of the southwest of the southeast of Section 11.

Q. What formations are producing in this pool?

A. Only the Queen -- the second Queen -- in this immediate area.

Over in Section 12, the Galvan lease was completed or was completed in the Seven Rivers, but it is temporarily abandoned.

Q. Would you explain briefly the geology of this pool,

the producing intervals?

A. The Queen appears to be in the particular tracts -- it's awfully tight -- it's carried along on an anticline -- on the nose. It is on the eastward plunging Artesia vacuum trend, of the Guadalupian series.

The performance suggests permeability pinch-outs, between lenses.

The formation is generally tight and is sandstoned. It's so tight that it has given very little oil -- approximately, one percent of the oil in place.

Q. Does this Exhibit One also show the offset operators and the producing formations in the area?

A. That is correct.

Q. Please refer to what has been marked as Exhibit Two.

A. Exhibit Two is a well completion data, showing all pertinent information on these wells; the Anderson One, Two and Three; and the Pecos River Number Four; the Riggs Number Three, in Section 12; and the Pecos River Number Two, in Section 12, also.

The purpose of this to show that the -- to show the continuity of the lense into Section 12.

Q. When was the first well completed in this area?

A. In 1961 -- the Hondo Number One was completed and the second Queen, and it's produced -- oh, I don't know how long it produced, but it only gave up eight hundred and ninety-four barrels of oil before it had to be abandoned, because of economics -- potentially, forty-two barrels of oil per day.

Q. Please refer to what has been marked as Exhibit Three, being the electric log of the Anderson Number Two, and point out the pertinent information on this log?

A. Exhibit Three is a log of the Queen section of the Anderson Number Two.

It shows the original perforations at six hundred and sixty to six hundred and sixty-two feet, which was a poor Stoolomite section.

It was acidized and tested salt water and a trace of oil.

It was plugged back to six twenty-eight and the second Queen was perforated at five fifty to five sixty and sand fracked, also acidized -- this well was swabbed backed with frack water and a trace of oil. And it was decided at that time to proceed with application to conduct a waterflooding in this area.

I should say a pressure maintenance project.

Q. Please refer to what has been marked as Exhibit Four, being the diagrammatic sketch of the injection well and point out the important information on this sketch?

A. Exhibit Four shows casings set to a total depth of seven oh two, cemented to the surface. And shows both sets of perforations, the Dolomite and the sand, with the bridge plugged, at six twenty-eight --

We propose to run cement -- two and three-eighths cement-lined tubing and the tension packer to about four hundred and eighty feet.

The top of the Queen is at four fifty-six --

Q. Will you do anything in the annulus?

A. We will load the annulus with inhibited fresh water and put the pressure gauge on the casing head.

Q. Now, the only producer in this field at this time is the Anderson Number One?

A. That is correct.

Q. What is its present rate of production?

A. In August, it produced up to five barrels a day -- the average is four barrels a day.

Q. Now, you referred to the M-1 as having completed initially at forty-two barrels and accumulative of how much?

A. Eight hundred and ninety-four barrels.

Q Do you have the accumulative of the A-1?

A On the Anderson One, it's -- no, it's pretty close to sixteen hundred right now, I believe -- I don't have the exact figure.

Q Do you have an opinion as to how much oil could be recovered out of the Anderson One under the proposed pressure maintenance program?

A Yes, sir. I would estimate some thirty-eight thousand barrels, by pressure maintenance.

Q What is your proposed pressure at which you will inject this water?

A Not more than four hundred pounds -- probably in the area of three hundred and fifty pounds.

Q What volume of water?

A About twenty barrels a day, after it's pressured out.

Q Do you have an opinion as to whether the institution of this pressure maintenance program will recover oil that would otherwise not be recovered?

A Yes, sir. I'm very confident that it will increase the production from maybe two thousand to thirty-eight thousand barrels -- per well.

Q Do you anticipate putting any other wells on



production?

A. Yes, sir. This Number Three well doesn't look like it will make a very good producer, and it's ideally located for an input well, so we might want to make this an input well in the very future.

Q. And you would ask the Commission that you be given administrative authority in the future to convert the Number Three to an injector?

A. Yes, sir.

Q. Were Exhibits One through Four prepared by you?

A. Yes, sir.

MR. LOSEE: We move the introduction of Exhibits One through Four.

MR. UTZ: Without objection, Exhibits One through Four will be entered in the record in this case.

(WHEREUPON, Applicant's Exhibits One through Four, inclusive, were duly admitted into evidence.)

MR. LOSEE: That's all of the direct evidence.

CROSS EXAMINATION

BY MR. UTZ:

Q. Mr. Mahfood, does the southeast quarter of Section 11 all consist of one lease?

A. Yes, sir. That has been changed just recently.  
It's all the Anderson lease now.

Q. That is the Anderson lease, you say?

A. That is correct, sir.

The Hondo M-1 will be put in production shortly.

Q. I beg your pardon?

A. The Hondo M-1 -- that will be put in production shortly.

Q. So, you are going to set the packer about sixty-two feet above the injection zone?

A. Approximately, yes, sir.

MR. UTZ: Any questions of the witness?

CROSS EXAMINATION

BY MR. HATCH:

Q. Is there any need for a project allowable?

A. I don't believe so. This thing is so tight, we don't anticipate more than twelve barrels per day per well.

Q. You wouldn't need a complete pressure maintenance for transferring allowables?

MR. LOSEE: No -- we tried it as a waterflood, but in view of the production rates, I don't think they need any allowables.

Q. (By Mr. Hatch) There is one other problem here -- you have asked for administrative procedure for the Number Three, and we did not advertise it and there has been a number of these that have been refused that were not advertised before --

THE WITNESS: Sir, we are not positive yet, but we will make this an input well -- perhaps we should write to you for administrative approval --

MR. LOSEE: I'm just trying to get them to set up the mechanism --

MR. HATCH: What I am saying here is that we have failed to put it in an order to allow for administrative approval -- before, we did not advertise it -- what we will do here, I don't know.

THE WITNESS: There will be additional drilling, too.

MR. UTZ: Any other questions? The witness may be excused.

Statements in this case? The case will be taken under advisement.

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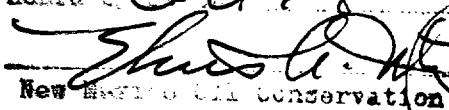
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STATE OF NEW MEXICO )  
 ) ss  
 COUNTY OF BERNALILLO )

I, CA FENLEY, Court Reporter in and for the County of Bernalillo, 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.

Witness my Hand this 20th day of November, 1969.

  
 CA FENLEY - COURT REPORTER

I do hereby certify that the foregoing is a complete and correct transcript of the proceedings in the case of 4225 heard on Oct. 8, 1969.  
  
 Examiner  
 New Mexico Oil Conservation Commission

dearnley-meier

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