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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 9, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada  
Petroleum Corporation for  
a dual completion, salt  
water disposal and tubing  
exception, Lea County,  
New Mexico.

Case No. 3888

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3888.

MR. HATCH: Case 3888, application of Amerada Petroleum Corporation for a dual completion, salt water disposal and tubing exception, Lea County, New Mexico.

MR. EKLLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the Applicant, and we have one witness which I'd like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers One through Five, inclusive, were marked for identification.)

JOHN H. SWENDIG

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 John H. Swendig, Amerada Petroleum Corporation, Hobbs, New Mexico.

Q How do you spell that, Mr. Swendig?

A S-w-e-n-d-i-g.

Q Have you testified before the Oil Conservation Commission and made your qualifications a matter of record, Mr. Swendig?

A Yes, I have.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. UTZ: Yes, they are.

Q (By Mr. Kellahin) Mr. Swendig, are you familiar with the application of Amerada Petroleum Corporation in Case No. 3888?

A Yes, sir, I am.

Q Briefly, what is proposed by Amerada in this application?

A Amerada proposes to make a dual completion for a dual salt water and Devonian oil producing well, single well bore and asks it be allowed to set the tubing more than 250 feet above the uppermost perforation.

Q Now, referring to what has been marked as Amerada's Exhibit Number One, would you identify that Exhibit?

A This is a location and ownership plat in the north Echols-Devonian Pool showing that Amerada's State "EB" Number 1 was the last producing well in the field, that all other wells in the area have been abandoned, all of them have been plugged and abandoned.

Q Now, it's my understanding that you propose to dispose of salt water in this well. Is that salt water produced

from the Devonian formation in the same well before?

A Yes, the produced water will be produced from the Number One Well and will be disposed in the Number One Well.

Q Referring to what has been marked as Exhibit Number Two, would you identify and discuss that Exhibit?

A Exhibit Number Two is the schematic diagram of the State "EB" Number 1, the installation as proposed, and the Exhibit shows thirteen and three-eighths inch casing set at 340 feet. This casing had cement circulated. The fresh water in the area is at a maximum depth of about 220 feet, so this casing string does protect the fresh water.

There's eight and five-eighths inch casing set at 4270, top of cement of 2444, five and a half inch casing set at 11,930 with the top of the cement being at 11,100.

The proposed disposal interval will be through perforations with five and a half inch casing from 5220 to 5250. The Devonian producing perforations are 11,755 to 11,834.

The installation would consist of a tapered tubing string. It would be two and seven-eighths inch tubing to a depth of 3224, which is the approximate pumping depth of the well at present, two and three-eighths inch tubing set at

approximately 5300 in a permanent type packer. This packer will be equipped with a seeding nipple. It's such that a standing valve can be run prior to pulling the tubing to prevent any cross flow from the disposal perforations to the producing perforations.

Q Now, do you propose to load the annulus with an inert fluid?

A When the well was completed, the drilling mud was left in the annulus and we intend to attempt to break circulation from surface through the perforations and, if possible, we'll leave an inert fluid behind the pipe in a hydrostatically balanced system.

Q Do you anticipate you'll have some trouble in the breaking of the --

A It's doubtful that we will be able to circulate down this annulus.

Q As I understand it, there is mud behind the pipe in the interval where there is no cement, is this correct?

A Yes, sir, this is correct.

Q Have you had any experience with that particular mud in this area?

A Some of the other wells were completed about the same time with the same type of mud system. We found that even though we did not have cement behind the five and a half, we were unable to recover the five and a half inch casing more than 100 to 200 feet below the intermediate string. The mud that was left there made a reasonably good cement. We were unable to recover it.

Q In other words, it's a fairly effective cement, in your opinion, is this correct?

A Yes.

Q In your opinion, will the well, as completed, adequately protect all the fresh water zones?

A Yes, sir, it will.

Q And will it adequately protect any possible producing zones encountered in that well bore from contamination from the salt water you are injecting?

A Yes, sir. There are no productive formations in the interval we're talking about. It will be open to potential disposal.

Q Now, you are going to dispose in the San Andres formation, are you not?

A Yes, sir. The interval that we plan to dispose in, the intervals from 5220 to 5250, was a lost circulation zone in the Number 2 Well.

Number 1 was drilled with mud. The Number 2 Well was drilled with water, and we expect this zone to take the water on vacuum.

Q Is the San Andres productive within a two-mile radius of this well?

A No, sir, it is not, to my knowledge.

Q Now, referring to what has been marked as Exhibit Number Three, would you identify that Exhibit?

A Exhibit Number Three is a water analysis. It was run by Baroid. It shows this to be a sour water, the chlorides, 37,000. With particular interest, the hydrosulfide is 17.3 parts per million. This is a very corrosive water. It is sour. We will have to treat this water for corrosion and for scale.

Q Will treating the water, in your opinion, adequately protect the casing string from corrosion?

A Yes, sir. With our treatment, we will have corrosion coupons at the surface where we can monitor the effectiveness of our treatment and we will maintain an effective treatment as possible.

Q Now, this is Devonian water you are reinjecting. What volumes are you talking about?

A Approximately 500 barrels per day.

Q Has that been a fairly stable production of

water from this well?

A Yes, sir. For about the last year and a half, it has been about 500 barrels per day.

Q Where is the water now?

A It's being disposed of in surface pits.

Q And in order to comply with the Commission order, you must put this water underground not later than January first, is this correct?

A This is true.

Q Now, referring to what has been marked as Exhibit Number Four, will you identify that Exhibit?

A This is a portion of the electric log that was run on the well. There's no top zone here. This is within the San Andres interval. It shows the proposed perforations at 5220 to 5250, and the approximate location of 5300 to the permanent packer that will be set.

Q Referring to what has been marked as Exhibit Number Five, will you identify that Exhibit?

A Exhibit Number Five is a tabulation of all the drillstem tests and the production tests of zones other than the Devonian within the area shown on Exhibit One, the plat of the field, showing there were no shows of oil and gas from the San Andres to the Mississippian Formation.

Q Then, the only production in the area at the present time is the Devonian production, is this correct?

A The only production is the one well, the State "EB" Number 1 Well.

Q Were Exhibits One through Five prepared by you or under your supervision?

A Yes, sir, they were.

MR. KELLAHIN: At this time I'd like to offer into evidence Exhibits One through Five, inclusive.

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

(Whereupon, Applicant's Exhibits One through Five, inclusive, were admitted in evidence.)

MR. KELLAHIN: Do you have anything further, Mr. Swendig?

THE WITNESS: No, sir, that's all.

MR. KELLAHIN: That completes our direct examination, Mr. Utz.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Swendig, what is the purpose of the two sizes of tubing?

A This is, since we do have a corrosion or

potential scaling problem, to run two and seven-eighths all the way to bottom if we do run into a scale or corrosion problem in and around the perforation, this would limit our working space. We just tapered it so it can give us more working space in case we do run into a problem.

Q Now, what is your reason for requesting the tubing to be set as high as you have it?

A We'd like to have that permanent packer as close as possible underneath the disposal perforation so as not to leave a dead fluid immediately around our production tubing.

Q Where did you say the oil was standing at the present time?

A The static fluid level will stand at approximately 1200 feet and we are presently at about 3200 feet.

Q Now, this mud you were speaking of, that's behind the five and a half?

A Yes, sir, it's outside the five and a half.

Q And it's from 1101 to the surface?

A Yes, sir. We have pressured up on this, the last, about two years ago on the surface to see, and we were unable to pump into it, and the annulus is full with this mud.

Q Now, what do you intend to do, perforate through the mud?

A Yes, sir, perforate, and then acidize. Perforate the casing and then acidize, hopefully, into the San Andres interval we want to dispose into.

Q In other words, you've not at all sure this is going to take water?

A No, sir. The only indication we have that it will take water is that it was a lost circulation zone in the Number 2 Well which is offset.

Q In the event you're not able to dispose of in this well, then what?

A We would squeeze these perforations off, and on the tabulations, there were some other zones down, deeper zones that we would test at the time we were doing this work. The Pennsylvanian shows to have given up large amounts of water on drillstem test and the Wolfcamp gave up quite a bit of water on drillstem test, and while we were working, we would go in and test these intervals and then ask to have the order amended.

Q Have you had quite a lot of experience with this Baker on-off sealing connector --

A No, sir, not for this.

Q -- for separating formations?

A To my knowledge, we don't have any of these particular installations as we were talking about here, but

we do have a number of dual completions where we have a Model "D" Packer where we've used a sealing device to separate the zones and have had good success with them.

Q In the event this frame should fail and you didn't have your tubing pulled, you're going to have trouble with the producing formation, aren't you?

A Probably no more than what we are now when we shut the well in, with the water production that the well makes from the very high bottom hole pressure, it takes quite awhile to pump the water off so this would have the effect of killing the well, but I don't believe we'd put any water into the formation with the pressure we have available in the Devonian.

Q I see.

MR. UTZ: Are there other questions? The witness may be excused. Are there any statements in this case?

MR. KELLAHIN: That's all.

MR. UTZ: We'll take the case under advisement.

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STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

I, Charlotte J. Macias, 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.

Charlotte Macias  
Court Reporter

I do hereby certify that the foregoing is a complete record of the hearing held at the Executive Hearing of Case No. 3878 heard by me on Oct. 9, 1968.  
Thos. P. [Signature], Secretary  
New Mexico Oil Conservation Commission