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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 J. M.
Huber Corporation for the
creation of a new oil
pool and for special
pool rules, Roosevelt
County, New Mexico.

Case No. 3881

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3881.

MR. HATCH: Case 3881, application of J. M. Huber Corporation for the creation of a new oil pool and for special pool rules, Roosevelt County, New Mexico.

MR. KELLAHIN: If the the Examiner please, Jason Kellahin of Kellahin and Fox appearing for the applicant, and I have two witnesses I'd like to have sworn, please.

(Witnesses sworn.)

MR. UTZ: Are there other appearances? You may proceed.

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

RICHARD W. SCHULTZ

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 Richard W. Schultz.

Q By whom are you employed and in what position, Mr. Schultz?

A I'm employed by the J. M. Huber Corporation as a Geologist in their Midland district office.

Q Is that S-c-h-u-l-t-z?

A Right.

Q Have you ever testified before the Oil Conservation Commission?

A No, sir.

Q For the benefit of the Examiner, would you briefly outline your education and experience as a Geologist?

A I graduated from the University of Nebraska in February of '67, worked eight years for Pan American in the Roswell and Lubbock districts, and the last three and a half years, I worked as a Geologist with J. M. Huber.

Q And you are located in Midland, Texas?

A Right, in Midland.

Q Do you handle the geological work in the area involved in the application before the Commission at this time?

A Yes, sir.

Q And have you made an investigation of the area involved in this application?

A Yes, sir.

Q Briefly, what is proposed by the Applicant in Case 3881, Mr. Schultz?

A We'd like to have eighty acre spacing, the wells to be located anywhere within the proration unit within 330 feet of the governmental quarter quarter section

line, briefly.

Q And this is in what area?

A This is in the South Prairie area of Roosevelt County.

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

A This is a structural contour map, contoured on top of the Devonian Formation, showing the discovery well and another Devonian dry hole.

Q What is the significance of the area outlined in red?

A This is the acreage that Huber has either under lease or under option or by drilling.

Q In preparing this structural picture, you had the information from the Lone Star Well located in Section 20, the discovery well, is that correct?

A Yes, sir.

Q Now, what other information did you have available to you?

A The dry hole located in the southwest southwest of 21.

Q Those are the only two wells in the area?

A Right.

Q Now, as I understand it, the acreage circled in

red is held by J. M. Huber either directly or under farmout agreements, is this correct?

A Right, this is true.

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

A Exhibit Number Two is a cross section between the two deep wells in the area called AA Prime on the previous map, and it shows how the Devonian Formation can be identified simply with electric log in this area. It shows the structural configuration of the two wells, drillstem tests, pressures, potentials.

Q In your opinion, are the two wells completed in what would be the same common reservoir?

A Of course, it's a recent completion. We don't have concrete evidence, but the correlations are good and pressures on drillstem tests on both wells are essentially the same.

Q Now, have you made any comparison of the pressures in this reservoir with other reservoirs, or will another witness testify to that?

A The other witness.

Q The other witness will cover that. How about the porosity of the reservoir, Mr. Schultz?

A Well, it's a dolomite, a white coarse crystal and

dolomite, buggy porosity and evidence of fracturing. This is very similar to the Devonian up in this area in other producing fields.

Q What specific fields would you say it is similar to as to the lithology?

A Very similar to the Bough-Devonian which is located about five miles southwest and similar also to the Cross Road-Devonian which is seven miles south southeast. Not only is it similar in lithological respects, but depth and thickness of formation. The structural configurations are the Cross Roads and Bough fields and, as far as we know right now, are generally north and south trending anticlines which we think what we have here.

Q Now, did you make an examination of the logs to determine the porosity in the well that was completed?

A Yes, sir. There's approximately fifty to sixty feet of net porosity in the well off the sonic log.

Q When was the well completed?

A The first of September.

Q Was it cored?

A No, it wasn't.

Q Are any cores available to you in this area?

A Not presently. We plan to core our next well and get additional information.

Q Since the completion of the well in early September, has it been possible for you to obtain any pressure performance on the well?

A No, it hasn't.

Q Have you had trouble with producing it, or --

A We have had. It was completed flowing and we put a pump on it. The GOR is approximately fifty which also compares to Bough-Devonian and Cross Roads, and it just doesn't have enough gas to flow and we've had some pump problems, so our production history isn't real good at this time.

Q Do you have any opinion as to the producing mechanism in this reservoir?

A Right now, there's no reason to believe it isn't similar to these other two fields which would be active water drives.

Q But in your opinion, will it take further experience in producing this well and perhaps other wells to determine just what a well in the reservoir will do?

A This is true. All we can do right now is compare it with other known areas of similar production.

Q Well, do you find that they are comparable?

A Right, in most every respect.

Q For that reason, are you asking for a temporary one year, eighty acre spacing order for one year?

A Temporary, right.

Q Do you have another well location in the area that will be drilled?

A Our next location will be the south offset to the discovery well which, as mentioned before, we'll core for additional data and pressure data, et cetera.

Q And then you could come back at the end of the temporary period and present additional information at that time, is that what you propose to do?

A Yes, sir.

Q As I understand, your recommendation was to have your well locations not closer than 330 feet to the quarter quarter section line.

A Yes, sir.

Q What is the reason for that location?

A Well, we feel that, being this is an old producing field, producing from the San Andres and the Bough "C" and most of these well locations in the field are normal and some of these locations would end up drilling right next to a producing well, and we feel, rather than try to get exceptions on each location -- the first location, we won't have any problem with, but thereafter, we will. I think, rather than get exceptions on each location, it would be better to get a ruling on this spacing right away. We're afraid, mainly, that we

might disrupt production of the other wells or possibly even drill into the other wells.

Q Are the other wells deep wells or --

A Yes, sir. Most of them are all 10,000 feet which we know we can get off pretty far at that depth.

Q Will a 330 location for the Devonian production give you sufficient flexibility to avoid that danger?

A We think so, sir.

Q Were Exhibits One and Two prepared by you or under your supervision?

A They were.

MR. KELLAHIN: At this time I offer in evidence Exhibits One and Two.

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

(Whereupon, Applicant's Exhibits Numbers One and Two were admitted in evidence.)

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

THE WITNESS: No, I don't

MR. KELLAHIN: That completes the direct examination of the witness.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Schultz, you did state that within the red outline on Exhibit One that Huber controlled or had under option the entire acreage --

A Yes, sir.

Q -- which would virtually cover the structure as you show it here?

A Right.

Q And particularly, it would cover inside your estimated oil-water contact, is that correct?

A Yes, sir.

Q How did you estimate the water-oil contact?

A Well, it's guesswork, but the minus datum at the base, at the bottom of our well, is a -8885 and it's water-free, so therefore, we estimated the oil-water contact to be in that neighborhood.

Now, the dry hole had water, so we know that it will be between the minus datum of 8885 and the datum on the Devonian well of -8973. It's, at this time, just an estimation.

Q Now, you do know you have the operating rights on this acreage and the other interests would vary within the area outlined on this Exhibit One?

A Yes, they would.

Q Do they vary substantially?

A No. It's mainly with four other companies, and agreement with each company is essentially the same. It's a drill-earn-type farmout agreement.

Q How much oil have you produced in this well?

A Oh, probably in neighborhood of 3,000 barrels, possibly more than that.

Q Do you have any pressure information on the log?

A None other than the drillstem test data which Mr. Neede will discuss.

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

MR. KELLAHIN: I'll call Mr. Neede, please, N-e-e-d-e.

FLOYD L. NEEDE

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 Floyd L. Neede.

Q By whom are you employed and in what position, Mr. Neede?

A J. M. Huber Corporation, Petroleum Engineer.

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

A No, sir.

Q For the benefit of the Examiner, would you outline briefly your education and experience as a Petroleum Engineer?

A I graduated from the University of Kansas in June of '59 with a degree of Bachelor in Science in Petroleum Engineering. I've worked for J. M. Huber Corporation since March of '60 as a Petroleum Engineer.

Q In connection with your work for J. M. Huber Corporation, do you handle the Petroleum Engineering work in the area involved in the application before the Commission at this time?

A Yes, sir.

Q And have you made any study of this area --

A Yes, sir.

Q -- on the basis of the information presently available to you?

A Yes.

Q Referring to Exhibits marked Three and Four, would you identify those exhibits, Mr. Neede?

A Exhibit Three is the result of the drillstem test on our Lone Star Federal Number 1.

MR. UTZ: Excuse me. Do you have marked copies of those?

MR. KELLAHIN: Oh, yes. I thought we gave them to you.

MR. UTZ: All right.

A This pertains to the pressure breakdown and also a plot of the extrapolated pressures which show the reservoir pressures to be 4925 at 12,981 feet.

Exhibit Number Four is the drillstem test data on the Lone Star dry hole approximately a mile to the south, and it shows a bottom hole pressure of 5,024 at a depth of 13,105, approximately the same reservoir pressure gradient in both wells.

Q The difference being because of the difference in depths, is that correct?

A Yes.

Q Have you made a comparison of these pressures with any other Devonian Pools in this area?

A The Bough Pool, as mentioned previously, has approximately the same reservoir pressure gradient as both of these wells have.

Q What spacing is the Bough Pool?

A It's on 80 acre spacing.

Q Have you made any other comparisons with the Bough Pool other than pressures?

A It's a similar type flood around forty-nine degrees gravity oil with a low gas-oil ration, fifty to one or less.

Q Essentially, in your opinion, is the South Prairie pool, as depicted on our Exhibit Number One, substantially the same as the Bough Pool from an engineering point of view?

A Yes.

Q In your opinion, would one well efficiently and economically drain and develop eighty acres based on the information presently available to you?

A Yes, sir.

Q Is it your recommendation that this Commission adopt a temporary one-year eighty acre spacing order for this pool?

A Yes, sir, that's right.

Q And you do ask the creation of a new oil pool for the discovery well, is this correct?

A Yes.

Q Do you have any other suggestions as to the rules for the new pool, other than spacing?

A Nothing other than what you covered before.

Q And the well location of 330 feet?

A Right.

Q From an engineering point of view, do you feel that it is necessary and advisable that a 330 foot location be approved for this pool?

A I believe we should have it because of the existing wells in the field. We're going to have to kind of move our locations around to keep from getting in the way of tank batteries and this type of thing.

Q Now, assuming that the Commission should adopt an eighty acre spacing order for a period of one year, at the end of one year, do you feel that there will be additional information available which will either support or refute the conclusion that one well will drain eighty acres?

A Yes. Like I pointed out before earlier, we plan to drill the south offset within two months, commence it, and we plan on coring it and getting reservoir data at that time.

Q Exhibits Three and Four are the official drill-stem tests that were made on the wells when they were drilled, is that correct?

A That's correct.

MR. KELLAHIN: At this time, I offer Exhibits Three and Four.

MR. UTZ: Without objection, Exhibits Three and Four will be entered into the record in this case.

(Whereupon, Applicant's Exhibits Three and Four were admitted in evidence.)

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

THE WITNESS: Do you want me to tell them about this (indicating)?

Q (By Mr. Kellahin) In connection with the drilling of the Devonian wells, does the cost of these wells enter as a factor on spacing that should be approved by the Commission?

A Yes. This Lone Star Federal Number One well was deepened from approximately 9800 to 13,000 at an expense of approximately \$190,000.00. We anticipate future wells from grassroots down, dry holes, will cost \$165,000.00 and a completed well, about \$246,000.00.

Q Now, do you have any estimate on the possible return from these wells? Do you have a payout figure on your recovery, or do you have enough information presently that you can reach that conclusion?

A Well, it would just be kind of a ballpark figure. We'd estimate fifteen to twenty per cent.

Q Fifteen to twenty per cent?

A Greater return on eighty acre spacing.

Q And on forty acre spacing, would the return --

A It would be lower than that.

Q It would be lower than that?

A Yes.

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

CROSS EXAMINATION

BY MR. UTZ:

Q For the record, your estimate is fifteen or twenty per cent above cost, operating cost?

A Cash flow rate of return, yes, discount of cash flow rate.

Q To boil it down, you just don't have much information available. You'd just like to have wider spacing to protect yourself for a temporary period of time?

A Yes, sir, that's correct.

MR. UTZ: Any questions of the witness? He may be excused. Any statements?

MR. KELLAHIN: If the Examiner please, I think you've already summed up our case.

MR. UTZ: I was just trying to make it easier. The case will be taken 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 proceedings in the Bernalillo hearing of Case No. 3887 heard by me on 9.2.9.1938.

Thos. J. Macias
 New Mexico Oil Conservation Commission