

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

CASE 555: In the matter of the application of Lowry et al Operating Account for the approval of a pilot pressure maintenance program by water injection in one or both of two wells, said injection wells located in SW/4 SW/4 Section 3 and NE/4 NW/4 Section 10, Township 26 North, Range 6 West, NMPM, in the South Blanco-Tocito Pool, Rio Arriba County, New Mexico.

TRANSCRIPT OF HEARING

July 16, 1953

Date

BEFORE: Honorable Ed. L. Mechem, Governor
Honorable E. S. Walker, Land Commissioner
Honorable R. R. Spurrier, Director, OCC

STATE OF NEW MEXICO)

ss

COUNTY OF BERNALILLO)

I HEREBY CERTIFY That the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill, and ability.

DONE at Albuquerque, N. M., this 28th day of
July 1953.



My Comm. Ex.:
August 4, 1956

E. E. Greeson
Notary - Reporter

MR. SPURRIER: The next case would be 555.

MR. KELLAHIN: If the Commission please, Jason Kellahin, on behalf of Lowry et al Operating Account.

If the Commission please, this is an application for approval of pressure maintenance procedures by instituting water flooding on a test basis in the South Blanco-Tocito Pool. As the Commission will recall, we presented rather extensive geological and engineering information in connection with the application in Case 537. And it is with the thought that we would not care to burden the Commission with the repetition of a considerable amount of that testimony, we would like to ask the Commission to take notice of the geological and engineering testimony and exhibits that were offered in that case in connection with the application in this case, and particularly to those exhibits which reflect data on permeability and porosity and other engineering information which is pertinent to this case, including core analyses and well logs and surveys that have already been made and presented to the Commission.

MR. PURRIER: Very well.

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A. F. HOLLAND,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A My name is A. F. Holland.

Q By whom are you employed, Mr. Holland?

A By Lowry Oil Company.

Q What is your position with Lowry Oil Company?

A I am an engineer.

Q Have you testified before the Commission in previous cases?

A Yes, sir, I have.

MR. KELLAHIN: Are the qualifications of the witness acceptable to the Commission?

MR. SPURRIER: They are.

Q Mr. Holland, could you describe briefly to the Commission what is proposed in connection with your pilot pressure maintenance program in the South Blanco-Tocito Pool?

A I have an exhibit prepared more or less outlining the plans for an experimental pressure maintenance program for the South Blanco field. (Marked Exhibit A.)

What we can propose to do is to initiate a pilot program for the injection of water into the South Blanco-Tocito Field or Pool to evaluate the feasibility of a field-wide pressure maintenance program.

We propose to select one well, our T-134, and inject approximately 1500 barrels a day of water into this well.

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There is some chance that the one well will not accept that much water. And in view of that we are requesting permission to also use our Federal T-109, if it is necessary to have an additional well to meet the required amount of water.

Q The designations you are giving those wells -- are they the same as reflected in the application, Mr. Holland?

A They are not. We have requested permission and received approval from the Commission to revise our well-numbering procedure. And we have retained only the last number of the former number system we used, preceded by the designation "T." In the application the well was designated as Federal 1-134.

Q What formation do you propose to inject water into?

A Into the Tocito formation.

Q Is water available for that purpose?

A We are at the present time converting an uneconomic gas well into a water supply well, and plan to test the well to determine what the water potential is.

Q Under whose control are the leases in the South Blanco-Tocito Pool, Mr. Holland?

A At the present time, Lowry Operating Account has the

only production from that pool.

Q They are the only producer?

A We are the only producer.

Q Have you prepared a plat showing the location of the input wells and the water source?

A We have a plat showing all of the producing wells and drilling wells of the South Blanco Pool. We would like to introduce it as an exhibit. (Marked Exhibit B.)

Q Does this plat, Mr. Holland, reflect the lease ownership as well as the location of the wells?

A Yes, sir, it does; it shows all producing wells from the pool and all drilling wells.

Q How are the proposed input wells designated on the plat?

A As T-109 and T-134.

Q Are those the wells that have the red circles?

A They are circled in red.

Q Where is the water source? Is that shown on the plat?

A It is the gas well just north of T-109. It isn't designated on this plat but it was our PC-89 well.

Q That would be in the southwest quarter of Section 3?

A In the southwest quarter of Section 3, Township 26 North, Range 6 West.

Q And does that plat show the ownership of the ad-

joining lease?

A Yes, sir.

Q Now, have you obtained any additional core information on the proposed input wells, Mr. Holland?

A Since the hearing for statewide field rules, we have cored and have had core analyses made of one additional well. That is our well T-85.

Q And do you have that with you?

A Yes, sir, I have.

(Marked Exhibit C.)

Q Have you any statement to make in regard to this core analysis?

A The only statement I wish to make is that tests-water injection tests - were conducted on the cores, and additional oil recovery from the formation was predicated on the basis of that.

Q Does this analysis reflect the possible success of the proposed program?

A It does. It predicts additional oil recovery by water injection.

Q Do you have logs of the proposed injection wells, T-134 and T-109?

A I have the written record of the oil log on both T-134 and T-109 that we would like to introduce.

(Marked Exhibits D and E.)

Q Do you have an electric well log on one of the wells?

A I have a Lane-Wells radioactive log on T-134 and a Schlumberger electrical log on T-109, that we would like to introduce. And in addition to those, I have the enlarged Schlumberger electrical log of the Tocito producing section from these wells.

Q Have you any statement you care to make in connection with these well logs?

A Just that they are surveys of the wells taken on completion, and do indicate the nature of the different formations in the South Blanco area.

(Marked Exhibits F, G and H.)

Q Now, have you made a temperature survey on these wells, Mr. Holland?

A At the time of completion, after setting the casing on top of -- or through -- the producing zones, we did conduct temperature surveys on the proposed water injection wells to assure that a good cementing operation was performed.

Q What would those surveys reflect in connection with the cementing job?

A They reflect that for Federal T-134 ~~that~~ the top of the cement was approximately 1900 feet above the Tocito formation, and for the well T-109, the top of the cement was ap-

proximately 1200 feet above the Tocito zone.

Q Do they reflect a good cementing program?

A They are an indication there was a successful cementing program, and during the production history of the wells no difficulty was encountered in production.

(Marked Exhibits I and J.)

Q Have you made any surveys of your proposed water well as the source of your water?

A We have a Schlumberger electrical log on the well we propose to convert to a water supply well. I would like to introduce that as an exhibit. And there are a series of water sands from 1700 feet to approximately 2400 feet that are considered good potential supply for injection water. This well was formerly the Lowry Operating Account Federal PC-89. And it is located in the southwest quarter of Section 3, Township 26 North, Range 6 West.

And I would like to state that we are testing the well. And if those tests prove successful, that will be the water source. If not, there are other water sands in the area we might test, to be tested.

(Marked Exhibit K.)

Q Is the ownership of the lands in the South Blanco-Tocito Pool - is that largely federal acreage?

A All producing wells at the present time are on Federal lease.

Q Have you presented this proposed water flooding program to the United States Geological survey?

A We have. We have outlined our program to them and requested and received their approval to conduct the program.

Q Do you have a letter to that effect?

A I have copies of the letter we received from the United States Geological Survey authorizing the program.

(Marked Exhibit L.)

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Q In the event the Commission sees fit to grant permission for this pressure maintenance program as now proposed, would there be any need for special consideration to take care of any special conditions which might arise?

A We believe the occasion will arise where, because of water injection, the field will need special treatment.

Q As a result of utilizing these two wells for water injection, will that reduce your production of oil from those wells?

A Those wells will no longer be oil producers. And at such time as the field is prorated, we would like to have the right to transfer the allowables from those wells to other wells of the pool.

Q Is there anything you care to add to your testimony, Mr. Holland.

A No, except as such time as the program has been in

effect for a period of time, and if it does prove successful, we will probably want to expand the program and attempt to maintain reservoir pressure on a fieldwide basis. And at such time we will request, need to request, additional injection wells, and other features.

Q In the event the Commission sees fit to grant this application, would you be willing to make periodic reports on the work that is done and the results thereof to the Commission?

A We are willing to furnish whatever reports the Commission desires.

MR. KELLAHIN: I believe that's all.

MR. SPURRIER: Are there any questions of this witness?

MR. KELLAHIN: I would like to offer at this time in evidence the exhibits which have been marked, Exhibits A through L.

MR. SPURRIER: Is there objection to these exhibits? Without objection, they will be admitted.

MR. KELLAHIN: That completes our case, if the Commission please.

MR. SPURRIER: If there is no question of the witness, the witness may be excused.

(Witness excused.)

MR. SPURRIER: We will take a five-minute recess
and take the case under advisement.

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