

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
March 20, 1963

Examiner Hearing

IN THE MATTER OF:

Application of International Oil & Gas Corporation for a waterflood project, Eddy County, New Mexico. Applicant in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation, High Lonesome Pool, Eddy County, New Mexico, through one injection well located in Section 15, Township 16 South, Range 29 East.

Case No. 2776

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order. Case 2776.

MR. DURRETT: Application of International Oil & Gas Corporation for a waterflood project, Eddy County, New Mexico.

MR. LOSEE: A. J. Losee, appearing for the Applicant.  
I have one witness, Mr. Dick Davenport.

MR. UTZ: Are there any other appearances in this case?  
You may proceed, Mr. Losee.

(Witness sworn)

DICK DAVENPORT

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

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



DIRECT EXAMINATION

BY MR. LOSEE:

Q Will you state your name, residence and occupation?

A Dick Davenport, Artesia, New Mexico, District Superintendent for International Oil & Gas Corporation.

Q Have you previously testified before this Commission?

A Yes, sir.

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

MR. UTZ: Yes.

Q (By Mr. Losee) Would you please tell us what this application is about?

A It is an application of International Oil & Gas Corporation to seek authority to institute a waterflood project by the injection of water into the Queen formation known as the <sup>A</sup>McCollister Federal #4 Well. After that time, development through Sections 12, 13, 14, 15 and 16, concerned in this application. <sup>A</sup>McCollister Federal Wells Number 1 and 4 were completed in June, 1960 and were developed respectively. The waterflood project which had begun initially in 1957 in this area has since been sold and is now operated by General Western Company. This particular waterflood has not been what most people would describe as highly successful. It consisted of injection of 200 barrels of salt water into eight wells and their production is approximately 100 barrels of oil per day from some 12 or 13 producing wells.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-6691

Q I will hand you what has been marked for identification as Exhibit No. 1 and ask you to state for the record what that portrays?

A Exhibit No. 1 is a Lease Plat showing the acreage owned and operated by International Oil & Gas Corporation as being the east half of the southeast one-half of Section 15, T16S, R29E. It shows our acreage, as well as a two mile radius around our acreage. The proposed injection well by International Oil & Gas Corporation is the Number 4 well. It offsets the Well No. 7, operated by General American Oil Company and approval to initiate oil injectivity to this Well No. 7 has been granted by the Commission and a Lease-Line Agreement will be completed between International Oil & Gas and General American Oil Company, prior to injection. If injection proves satisfactory, at a later date we will request approval to inject water into our No. 5, 6 and 3 wells, forming a peripheral pattern on the east half of Section 15.

Q That map also shows the location of the injection wells of General Western offsetting your acreage to the west in Sections 15 and 16?

A Yes, sir, it shows them in round circles, the blue colored circles.

Q This present application only covers, I believe you stated, the east half, southeast quarter of Section 15 and the two wells located thereon?



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-6691

A Yes, sir.

Q Well No. 4 in the southeast, southeast half of section is the proposed injection well location?

A Yes, sir, that is correct.

Q Please refer to what has been marked as Exhibit No. 2 and state what that portrays?

A Exhibit No. 2 is a tabulation of the production from the Mc<sup>A</sup>Collister Federal No. 1, 2, 3 and 4 Wells, since they were drilled in 1959, up until March the 1st, 1963.

Q Why did you tabulate these four wells, two of which are not in this application?

A These four wells are in common storage to one central battery and the taking out of two of the wells would not depict what the actual production has been.

Q Referring now to the two wells covered by your application, that is the two wells, 1 and 4, do you know what it makes--what production per day is presently averaging on these two wells?

A No. 4 Well averages 4 barrels of oil per day and the No. 1 Well averages 5 barrels of oil per day.

Q Have you formed an opinion as to what stage of depletion these two wells are in?

A I would say they were in the stripper stage and approaching the economic limit.

Q What is the total accumulative production from



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-6691

these four wells that have been run into the common tank battery?

A It is approximately 132,000 barrels.

Q Which would result in an average production from each of the wells of what figure?

A Approximately 32,500 barrels.

Q Have you formed an opinion as to the amount of oil you would recover under this application by secondary recovery methods, which would not otherwise be recovered by primary recovery?

A Yes, I have. Secondary recovery would recover an amount equal to that of primary or an additional 132,000 barrels of oil.

Q I now hand you what has been marked for identification as Exhibit No. 3 and ask you to state what that portrays?

A Exhibit No. 3 is a graphic form of the tabulated data of Exhibit No. 2, which shows the four wells in relation to production versus time.

Q This graph also shows that those wells are in an advanced or stripper state of depletion at this time?

A That is correct.

Q Please refer to what has been marked as Exhibit No. 4 and state what that reflects?

A Exhibit No. 4 is a Gamma Ray Neutron Log of the proposed injection wells of the McCollister Well No. 4 and 1.



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182SANTA FE, N. M.  
PHONE 983-3971ALBUQUERQUE, N. M.  
PHONE 243-6691

As noted, we entered this well with 100 sacks of cement. The well is a completed open hole from 1969 to 1999. Injectivity would be through the open hole into the Penrose section of the Queen formation.

Q And the Penrose section is between 1969 and 1999?

A That is correct.

Q Please refer to what has been marked as Exhibit No. 5 and state what that portrays?

A It is a sketch of the existing casing which is also in the proposed program for injection. Water would be injected through the 5½" casing set at 1969 and would be cemented with 100 sacks of cement. And, 8-5/8" casing would be set at 436' and would be cemented with 100 sacks of cement. This well was drilled with cam tools and during drilling we encountered small volumes of water from 300 to 307 feet. At 400 to 410 feet, we encountered water at the rate of approximately 2 barrels per hour. So from 400 to 410 feet from the surface, we cemented in order to isolate this water. Also there was a volume of salt water from 1735 to 1755, estimated to be about 18 barrels per hour, the calculated fill-up for the 100 sacks around the 5½' casing. Therefore, this salt water zone is also isolated.

Q How far, if any, is this salt stringer set into the salt section?

A We had our first salt stringer from 385 to 395 and a high dry stringer from 395 to 415, so it would be 21 feet



into the top of the salt.

Q Do you feel like this casing program will adequately protect the small volumes of both fresh and salt water in the area?

A Yes, I do.

Q I will hand you what has been marked Exhibit 6 and ask you if that is the letter from Caprock Water Company in which they offer to furnish water for this McCollister Federal Number 6?

A Yes, Exhibit Number 6 is a letter from Caprock Water Company stating that they will sell us water for production injectivity.

Q What is the source of that water?

A It's from the Red Lake source.

Q Do you know what kind of water that is?

A It's a semi-fresh water. It's rather brackish. They have some fresh water zones and some that have a small volume of salt in them. The brackish, I don't know the amount of uranium chloride but it's low.

Q You earlier mentioned the General Western flood to the west, is not what most people would say was a highly successful flood. For what reasons do you believe it is possible to conduct a successful flood in this area?

A They are injecting such low volumes of water that they are not going to get a satisfactory increase in production

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

and the reason for this is that they are injecting a saturated salt water and they are not able to get the water in the ground that is necessary.

Q And you feel that the fresh water from Caprock will allow you to put more water in?

A In their best well, they are injecting 50 barrels per day and we are planning to get 175 to 200 barrels per day into the ground initially.

Q If the Commission sees fit to grant this application, do you feel that you can get oil that would not otherwise be recovered by primary methods?

A Yes, sir.

Q Do you feel that correlative rights would be protected under your proposed application?

A Yes, sir.

Q Were these exhibits prepared by you or under your direction?

A Yes, sir.

MR. LOSEE: Applicant moves introduction of Exhibits 1 through 6.

MR. UTZ: Without objection, Exhibits 1 through 6 will be entered into the record.

MR. LOSEE: I think I'd like to make a short statement at this time.

MR. UTZ: Go ahead.





DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

MR. LOSEE: Thank you. This application for approval to inject into this one well is made for the purpose of allowing the applicant to obtain injectivity data on the well. At such time as this data has been completed, it is intended by the applicant to make application to enlarge the flood and also probably to unitize the east half of Section 15 because one tract is a state owned tract and the remainder is federally owned and there is only one well on the state lease. To protect the equities between the parties, this flood, as to this 60 acre tract, we propose would be controlled by Rule 701. Actually, this General Western flood is operating under a capacity order. Although it is surely not producing as such at the time, the application is made to enlarge the flood to cover the east half of 15. It is probably proposed that we would ask for buffer zone treatment. I think that is the applicant's case.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Davenport, how far up the hole will the 100 sacks of cement come on the 5½" casing?

A Approximately 540'. The top of the cement is around 1400'.

Q Approximately 540'?

A Yes, sir.

Q The top of your pay is around 1970, isn't it?

A Yes, sir.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

Q Do you intend to inject through the casing or tubing?

A Through the casing.

Q Is this new casing, this 5½?

A It was new when we ran it. The well was completed in 1960.

Q 1960?

A Yes, sir, in May of 1960.

Q What formations are--let me ask you this. Your 8-5/8 comes to 486 and that is circulated?

A No, sir, it is with 100 sacks of cement and it will come back to at least 200'.

Q So from 485 to 1500 you will have no cement?

A That is right.

Q What formations are in that zone?

A There are several. Sand--

Q Oil sand?

A No, sir.

Q This is the circulation zone?

A There is no law circulation zone in the area to my knowledge.

Q It would take approximately 200 sacks to fill that zone up, wouldn't it, if you wanted to circulate it?

A Yes, sir.

MR. UTZ: Are there any other questions of this witness?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

MR. IRBY: I have one question.

MR. UTZ: Mr. Irby.

MR IRBY: Is the source of your water that you are getting from Caprock Company, is that the same as to be taken by Cima Capitan spoken of in their Case 2775?

A Yes, it would be. I can't state for sure that it would be the exact same source but it would be similar water.

MR.IRBY: Do you have an analisis available of this water?

A Not with me, no, sir.

MR. IRBY: Can you obtain one.

A Yes, sir.

MR. IRBY: Will you send me one?

A Yes, sir.

MR. IRBY: Tahnk you.

MR.UTZ: Are there any other questions of this witness? the witness may be excused. The case is to be taken under advisement.

MR.DURRETT: I will like to state for the purpose of the record that the Commission has received a letter from Mr. Frank E. Irby, Chief Water Rights Division, State Engineering Office, which reads in part as follows: "This office offers no objection to the conversion of this well to an injection well provided the surface casing is set 10 feet below the base of



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

ALBUQUERQUE, N. M.  
PHONE 243 6691

SANTA FE, N. M.  
PHONE 983-3971

FARMINGTON, N. M.  
PHONE 325-1182

Rustler and sufficient cement to circulate behind the casing is in place."

This letter will be placed in the file if anyone would like to read it in its entirety.

\* \* \* \* \*



STATE OF NEW MEXICO )  
 ) ss  
 COUNTY OF BERNALILLO )

I, STEVEN McCRYSTAL, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, I have affixed my hand and notarial seal this 6th day of May, 1963.

Stephen McCrystal  
 NOTARY PUBLIC  
 COURT REPORTER

My Commission Expires:

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner's hearing of Case No. 2776, heard by me on May 21, 1963.  
Thurston, Examiner  
 New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
 PHONE 325-1182

SANTA FE, N. M.  
 PHONE 983-3971

ALBUQUERQUE, N. M.  
 PHONE 243-6691

