

I N D E X

BERT H. MURPHY

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MR. STAMETS: We call the next case, Case 5191.

MR. CARR: Case 5191. Application of Murphy Minerals Corporation for a waterflood project, Eddy County, New Mexico.

MR. WATSON: I'm Fred Watson of Watson & Watson, Attorneys, Artesia, New Mexico. I have one witness, Mr. Bert H. Murphy.

(Witness sworn.)

BERT H. MURPHY

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

MR. WATSON: May I have just a moment to stamp these things?

MR. STAMETS: Yes.

DIRECT EXAMINATION

BY MR. WATSON:

Q Mr. Murphy, will you please state you education for the record?

A Yes. I have a Bachelor of Science Degree in Petroleum Engineering from Stanford University, 1950, and did graduate work in Reservoir Engineering, or Oil Property Evaluation, at the University of Southern California.

Q What is your occupation then?

A I'm an oil producer, an independent oil producer.

Q Have you been in the oil business essentially since your graduation from college?

A Yes, I have.

Q Have you ever had occasion to work on any type of waterflood projects?

A Yes. I was project Engineer and Superintendent for a water plug for Signal Oil and Gas Company in Ward County in 1950 and '51, and Chief Engineer and Manager of operations for F. Kirk Johnson on 32 water plugs in four states from 1954 until '57 when I became an independent. After that time I conducted some 12 or 15 water plugs in various parts of the country.

A All right, sir.

MR. WATSON: Are the Witness' qualifications acceptable?

MR. STAMETS: Yes. There are just a couple of things I would like to check that I missed. Mr. Murphy's first name?

MR. MURPHY: Bert, B-E-R-T, middle initial H.

MR. STAMETS: And your date of graduation, BS?

MR. MURPHY: 1950. I'm also a professional

engineer in the State of Texas.

MR. STAMETS: The Witness is qualified.

BY MR. WATSON:

Q You are, of course, President of Murphy Minerals Corporation, which is the Applicant in this Case?

A Yes.

Q I hand you what has been marked as Exhibit No. 1 in this Case and I'll ask you to identify that please for the record.

A This is a map showing the location Square Lake Field of the lease in question and the proposed injection wells are circled in red.

Q In other words, the Application seeks authority to convert the Gissler No. 2 and 4 wells to injection wells?

A That's correct.

Q And the lease itself is the East half of the Northeast quarter of Section 11 and the West half of the Northwest quarter of Section 12, all in Township 17 South, Range 30 East, is that correct?

A Right.

Q This is a Federal lease and Murphy Minerals Corporation is the operator of that lease?

A That is correct.

Q Now then, all right. Referring to what has been marked as Exhibit No. 2, what does that depict?

A This is tabular data showing well completions on the lease, at this time all four producing wells; it shows that the wells were completed in 1946 through 1954 and that they produced from Permian Formations to a maximum depth of 3286 feet. They were completed open hole with 7-inch and 8-inch casing being set to -- in some wells -- to 2400 feet to 2800 feet in other wells.

Q Is that Exhibit keyed so as to show the producing sands?

A Yes, it is.

Q What does it show as to these wells, where they are producing.

A It shows that the wells produce from the Metex, Premier, and Lovington.

Q And those are the zones that the Application requests be flooded?

A That's right.

Q All right, sir. Now, referring to Applicant's Exhibit No. 3, will you please tell the Examiner what that represents?

A Yes, this Exhibit is production data on a monthly basis by well and by lease for the years 1972 and 1973, and also shows a cumulative production from the property of 181,217 barrels. It shows that in December of 1973 that the four wells produced 190 barrels of oil or a little over a barrel and a half per well per day.

Q In other words, the current production is what you would call racing the economic limit?

A Yes, that's right. It's stripper production and ready, in our opinion, for secondary recovery operations.

Q All right, sir. Then referring -- I believe that was No. 3 wasn't it -- referring to Exhibit No. 4, that is what?

A Exhibit 4 is a schematic view of our planned conversion of the Gissler "B" No. 2 to injection status; it shows that we plan to set 4½ inch liners from up in the 8-5/8ths inch long-string to the total depth and cement the liner in place and then perforate and stimulate the Metex, Premiere and Lubbington sands for injection into them.

Q All right, sir. Exhibit 5 is a similar schematic, is it not?

A Yes, the same for the Well No. 4.

Q Is there down-dip in the formation of some kind?

A As a structure --

Q (Interrupting) Yes.

A We don't feel that structure is particularly significant. These are actually stratigraphic tracts for the most part and there is structure that dips off the east and south.

Q Let me ask you this, now, are these schematics, do they show a conversion similar to the other injection wells in this field?

A Yes. Many of the operators are using a similar type of conversion, notably Anadarko, which off-sets us to the north.

Q I see. They off-set you to the north and that's the same kind of conversion that they're using?

A That's right.

Q What's going to be the source of water for the flood if the Application is granted?

A We have a Lease-Line Cooperative Agreement in effect with Anadarko to the north and with Windfar to the west. Anadarko has agreed to furnish us water from their injection system; it will be a mixture of fresh water and produced saline water. They have agreed also to take our

produced water and dispose of it.

Q I see. In other words you have no problem on obtaining the water?

A No problem.

Q The Application, of course, says that the anticipated volume and pressure will be approximately 400 barrels per well per day at 1800 PSI?

A That is correct.

Q All right, sir. Now, Mr. Murphy, if this Application is granted, what, in your opinion, will be the effect on correlative rights?

A The correlative rights will be fully protected. It's an accepted lease-line cooperative plan wherein off-set operators are converting injection wells on a five-spot pattern with our injection wells so as to protect correlative rights.

Q I see. Well, if this Application is granted will it, in your opinion, result in the recovery of oil which might not otherwise be recovered?

A Yes, it will. We expect to recover a new amount of oil approximately equal to the amount that has been produced on primary and even in excess of that.

Q I see. These Exhibits, Nos. 1 through 5, were

these prepared by you or under your supervision?

A They were prepared under my supervision.

Q You are fully familiar with them?

A Yes.

MR. WATSON: We move the introduction of Exhibits
1 through 5.

MR. STAMETS: They will be so admitted.

(Whereupon, Applicant's Exhibits
Nos. 1 through 5 were admitted into
evidence.)

MR. WATSON: That is the Applicant's direct case.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Murphy, I take it from what you've said that
there are actual waterfloods adjacent to the lease here
in question?

A Yes, that's correct. The Anadarko has had flood
in there for several years and Windfohr has agreed to
commencing floods at the time that we commence, so the
institute from these two floods will simply complete the
waterflood pattern in this area.

Q Yes, that's correct. As to your injection wells,
how do you propose to check for leaks in the injection

your wish.

Q And would he also report the leakage of any water from around any producing well or oil from around any producing well or from any plugs from any abandoned wells in the area?

A He would normally, of course, report it to our Field Engineer or me and I in turn can report it or we can have it reported directly as you would like.

Q Either event, I think that would be fine.

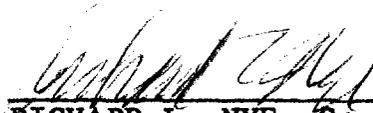
MR. STAMETS: Any other questions of this Witness? He may be excused. Anything further in this Case? We will take the case under advisement.

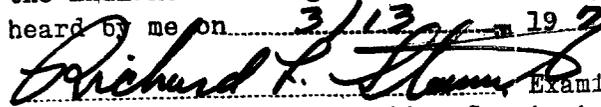
MR. WATSON: May I ask one questions?

(Whereupon, a discussion was held off the record.)

STATE OF NEW MEXICO)
) SS.
COUNTY OF SANTA FE)

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.


RICHARD L. NYE, Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No 5191 heard by me on 3/13/24 1924
 Examiner
New Mexico Oil Conservation Commission

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