

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAY 4, 1961

EXAMINER HEARING

IN THE MATTER OF: :

CASE 2266: Application of Nearburg & Ingram for permission to:
commingle the production from two separate leases, :
and from two separate pools. Applicant, in the :
above-styled cause, seeks permission to commingle, :
after separate measurement, the Southwest Gladi- :
ola-Pennsylvanian Pool production from all wells :
on its Keating lease, comprising the NE/4 of Sec- :
tion 34 with Southwest Gladiola-Pennsylvanian and :
Southwest Gladiola-Devonian production from all :
wells on its Midhurst Lease, comprising the NW/4 :
of Section 35, all in Township 12 South, Range 37 :
East, Lea County, New Mexico. :

BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. NUTTER: The hearing will come to order, please.

We'll take next Case 2266.

MR. MORRIS: Case 2266. Application of Nearburg & In-
gram for permission to commingle the production from two separate
leases, and from two separate pools.

MR. CAMPBELL: Jack M. Campbell, Campbell & Russell,
Roswell, New Mexico, appearing on behalf of the applicant. I have
one witness, Mr. Ingram.

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(Witness sworn)

TOM L. INGRAM,

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

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name, please?

A Tom L. Ingram.

Q Where do you live, Mr. Ingram?

A Roswell, New Mexico.

Q With whom are you associated there in business?

A Nearburg & Ingram.

Q What is your profession?

A Geological engineer.

Q Have you testified previously before this Commission or its Examiners in a professional capacity?

A I have.

MR. CAMPBELL: Are the witness' qualifications acceptable?

MR. NUTTER: Yes.

Q (By Mr. Campbell) Are you acquainted with the application of Nearburg & Ingram in Case 2266?

A I am.

(Whereupon, Applicant's Exhibit No. 1 was marked for identification)

Q Mr. Ingram, I hand you what has been identified as Ap-



plicant's Exhibit No. 1, and ask you to state what that is, please?

A Exhibit No. 1 is composed of three parts. The first sheet is a list of all of the royalty owners; first of all, those that are under solely the Keating Lease, secondly, those that are under the Midhurst Lease, and thirdly, those that are under both Leases. The second sheet is a letter that was sent to each of these royalty owners, requesting their permission to commingle the oil from these two Leases. The third is a plat showing the location of the subject leases and the offset operators.

Q Now, referring to the plat, which is the third sheet of Exhibit 1, will you point out to the Examiner the leases and the wells that are involved in this application?

A The leases concerned, the one that is colored yellow being the northwest quarter of Section 35, 12 South, 37 East, is the Midhurst Lease on which there is one well, a dually completed well, located in the northwest quarter of the northwest quarter of that Section. There is another well that is in the process of being completed now in the southeast of the northwest quarter. In Section 4, the lease colored orange, being the northeast quarter of Section 34, the Keating Lease, and it has one well on it located in the southeast of the northeast, being the No. 1 Keating, which is completed out of the Pennsylvanian zone.

Q Have you previously received permission from the Commission to commingle the production from the Pennsylvanian and the Devonian formations under the Midhurst Lease?



A We have under Order No. 2134.

Q Did that Order also authorize you to install and operate an automatic custody transfer system for measuring and marketing this oil?

A It did.

Q Now, what do you propose to do with regard to the Keating Lease, that is, generally, what do you propose to do?

A Generally, we propose to meter the production from the Keating Lease in a common battery located on the Midhurst Lease, and then to commingle the oil with that from the Midhurst Lease.

(Whereupon, Applicant's Exhibit No. 2 was marked for identification)

Q I hand you what has been identified as Applicant's Exhibit 2, and ask you to state what that is?

A Exhibit No. 2 is a diagrammatic sketch showing, first, the existing battery installation that was approved at the previously mentioned hearing, and, secondly, that with the red border around it being the new installation.

Q Will you explain to the Examiner what you propose to add by way of new equipment and how that will fit into the presently existing operation?

A We propose to bring the production from the wellhead to the battery in 2-inch tubing, and there it will go, first of all, through a manifold that is shown with a small "a" in a circle, which is the pressure shut off valve, that in the event of any

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failure, that the well would be shut-in at this particular point. The production then would proceed on through Item "C", which is a hundred twenty-five pound working pressure separator; then the production through "E," a fifty pound working pressure heater treater, and then from there into "F," being a positive displacement type meter, and from "F", then the production would then be commingled with that from the Midhurst Lease, and on into our sales tank.

Q Let me ask you this: Have you, since the installation of the equipment on the Midhurst Lease, experienced any difficulty with bad oil?

A We have not. The Devonian production, well the Devonian has been producing for some six months, and we have had no bad oil out of it. The Pennsylvanian has been producing for three months, and we have had no bad oil out of it.

Q In the event there is any bad oil encountered, what arrangements are you making for the handling of that bad oil?

A We propose, on the bad oil, that the bad oil would be stored in the bad oil tank, and that, in the event that bad oil was obtained, then it would be manually sampled and manually gauged, and then we would manually process it either back into the sales tank or through the treater on the Pennsylvanian side, and the reason for doing this, that with the equipment that we have set or propose to set in the case of the Keating Lease, we feel that if there is bad oil, it will be a malfunction of one of



the heater treaters, and we would be able to determine, then, from the bad oil that we had, if it was a malfunction at one of these so that any remetering, in other words, going back through a meter again, we would be able to actually tie it down to one of the particular zones.

Q Do you believe that by using this method you will be able to accurately measure and maintain constant track of the bad oil as to the zone from which it came and to which it should be charged for production purposes?

A I do.

Q What safety features are involved in the new portion of the installation here?

A Well, in the new portion we, as I previously mentioned, we have established the item marked "A" at the Keating header, which would shut the well in in the event of malfunction of a heater from the standpoint of a break in the line or if the sales tank should become full, it would shut the well in, and if the bad oil tank becomes full, it will shut it in. The dotted line that you notice on the diagram is the flow that actuates the valves. Also, we have made one additional installation, and that is a high level shut off on the bad oil tank. Because the Devonian is the top allowable, and we feel will be the top allowable zone for many months to come, while the Pennsylvanian is the top allowable now, but we feel it is much weaker, we have proposed to change the bad oil line from the Devonian, as we had the set-up before, to go into



the Pennsylvanian side. There is no commingling of any oil until after it has been metered.

Q Is the working interest ownership the same under both these leases?

A The working interest ownership is the same with the exception of the Lowe interest, the Lowe's own mineral interest, and they have joined as the working interest owner. Theirs is slightly different than one from the other.

Q Have all the working interest owners approved the plan you are suggesting here?

A They have.

Q I'll refer again to Exhibit No. 1, the first page of which contains a list of royalty owners under the separate leases, and the royalty owners under both leases. Have you circularized those royalty owners with regard to the plans you are suggesting here?

A We have.

Q Is the second sheet of Exhibit No. 1 a letter which you sent to each of the people or companies that are identified on the first sheet of Exhibit 1?

A It is.

Q Have all of those people signified their approval in writing to you of the plans which you are presenting to the Commission at this time?

A They have, and also the offset operators.



MR. CAMPBELL: That's all the questions I have. I would like to offer in evidence Applicant's Exhibits 1 and 2.

MR. NUTTER: Applicant's Exhibits 1 and 2 will be entered in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 and 2 were received in evidence)

MR. NUTTER: Does anyone have any questions of Mr. Ingram?

MR. MORRIS: Just one, I believe.

MR. NUTTER: Mr. Morris.

CROSS-EXAMINATION

BY MR. MORRIS:

Q Referring to Exhibit No. 2, Mr. Ingram, the portion of that new installation on the Keating Lease, Item No. "F" is an A. O. Smith PD meter. Is that meter equipped with a non-reset totalizer?

A It is, and it's also temperature compensated.

Q Are the other two meters on the Midhurst-Devonian and Midhurst-Pennsylvanian, they're the same type?

A Right. And the sales meter is also the non-reset type.

Q I think you testified to this, but I missed it. Where is this measurement going to take place of the Keating-Pennsylvanian production? Is it going to take place on the Keating Lease itself?

A It will actually take place at the meter marked "F,"



which is located on the Midhurst Lease.

Q That's on the Midhurst Lease?

A Yes. They are adjacent to each other.

Q Yes, sir. But all of your facilities shown here within the red enclosure, how much of that facility is on the Keating Lease, and how much is on the Midhurst Lease?

A You mean the actual location?

Q Yes, sir, in other words, the separator, is it on the Keating Lease?

A No, sir. The entire installation is on the Midhurst Lease, physically.

MR. MORRIS: Yes, sir. Thank you. That's all I have.

BY MR. NUTTER:

Q As I understand it, you have Pennsylvanian on both the Midhurst and Keating?

A Yes.

Q And Devonian on the Midhurst only?

A Yes, sir.

Q On each of the Pennsylvanian wells you have a separator and a heater treater?

A Yes, sir.

Q On the Devonian you only need the heater treater?

A Yes, sir.

Q Now, the commingled oil, or the oil passes from the heater treater, in each instance, through a positive displacement meter, and



then commingled and flowed into the five hundred barrels sales tank, is that correct?

A Yes, sir.

Q In the event the oil turns bad when no one is there, and the pumper is not on duty, the bad oil goes into the sales tank, is that correct?

A No, sir. There is a valve on top of the sales tank that closes the valve, opens on the bad oil tank, and the oil goes into the bad oil tank.

Q You have a monitor, then, on this flow line into the sales tank, is that correct?

A Yes. The monitor is indicated by the letter "L."

Q So the oil, if monitor "L" detects bad oil, it automatically diverts the oil from the sales tank into the bad oil tank?

A Yes, sir.

Q But at this time there's no way of knowing which lease that bad oil came from, is there?

A That is true. In other words, we feel that with the installation that we have, that the only time that we will have any bad oil will be if maybe the wind will blow a fire out in one of the heater treaters or something like that, and if it did, and it filled the bad oil tank up to this height, it would shut all of the wells in, and then at that time the pumper would be able to tell whether or not there was a fire out in one of the heater treaters, or if we had some malfunction.

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Q Well, a malfunction could occur or else the treater just fail to properly treat the oil even though the fire hadn't gone out and some bad oil slipped through the treater, and it would be evident to the pumper?

A Well, that is a possibility.

Q And you don't contemplate the use of samplers in conjunction with the PD meters downstream from the heater treaters?

A No, sir. In other words, we were going to manually sample the oil. In other words, we could take a sample out of the bad oil tank.

Q You would know you had a certain percentage of bad oil or a certain percentage of BS&W in that oil, but you still wouldn't know which lease to attribute it to?

A We feel that we would be able to tell as near as we would if we put a sampler on the bad oil line. In other words, it would also be the same thing that we would have in our bad oil tank.

Q If you had a sampler installed in conjunction with each of the PD meters, Item "F," you would know which of the three heater treaters had malfunctioned, wouldn't you?

A No, sir. In other words, as long as we have Pennsylvanian oil coming out of two different wells, I don't believe that from the standpoint of having a sampler there, that we would be able to tell whether or not it was from that one as opposed to the other one any more than we would be able to tell from the bad oil

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tank.

Q Mr. Ingram, what I'm talking about is if you had a sampler, say, for instance, you had a sampler downstream from the meter on the Midhurst Lease, the Pennsylvanian, and you had a sampler downstream from the meter on the Pennsylvanian side of the Keating Lease, then you got bad oil over here, and your sampler indicated that one of the two zones had passed water into the line, you'd know which of the two leases had produced the BS&W, wouldn't you, by the sampler?

A Well, yes, sir.

Q By a grind out of the sample in the sampler for that lease?

A Right.

Q Mr. Ingram, you are aware of the existence of a committee which was appointed by the Commission to study all phases of commingling --

A I am, yes, sir.

Q -- and make recommendations to the Commission for minimum standards for commingling installations?

A Yes.

Q If, upon adoption by the Commission of certain standards recommended by that committee, I presume that you would be willing to modify the installation as proposed here today to conform with those standards or forego the commingling?

A Yes, sir, after studying the economics to see if we could



afford to go this way or back.

Q Yes. When you do have bad oil in the bad oil tank, you propose to gauge the bad oil in the tank, take a sample, and take a grind out to determine how much BS&W is in that oil, and then pass it back through the treater on each lease, the Pennsylvanian treater on the Midhurst Lease, is that correct?

A Yes, sir, that is correct.

Q Will that oil be a circulating proposition, or will you run it by batches, that is, one measured tankful and that's all?

A In other words, first of all, assuming that the oil is bad merely because water has gotten through?

Q Yes.

A Why, we will bleed the water off the tank and then merely process it through our pump and back into the sales tank without having been remetered --

Q Yes.

A -- or if it is something that we are unable to merely bleed off and we have to process it, why, then, we will run it back through the meter on the Pennsylvanian side.

Q You would bleed off the free water and then if there was any emulsion in the oil, run it back through the Midhurst treater on the Pennsylvanian?

A Right. And that will be done manually.

Q That will be a batch operation. Say you have four hundred barrels of oil in that tank, then you would run four hundred barrels

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through that treater, and then the meter on the Midhurst Pennsylvanian side of the header would be allowed to produce the allowable from the Pennsylvanian there plus the four hundred barrels that you would run from the tank?

A Right. Yes, sir.

Q The three lines that come straight down from the bottom of the installation here --

A Are the gas sales lines.

Q Those are gas sales lines?

A Yes, so that it would actually be separately metered before any commingling of it.

MR. NUTTER: Any further questions of Mr. Ingram? He may be excused.

(Witness excused)

MR. CAMPBELL: That's all I have, Mr. Examiner.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 2266? We'll take the case under advisement.

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