

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 28, 1959

EXAMINER HEARING

IN THE MATTER OF:)

Application of Magnolia Petroleum Company for)
permission to commingle the production from)
six separate pools. Applicant, in the above-)
styled cause, seeks authority to commingle)
the production from the Brunson Pool, Drinkard)
Pool, Hare Pool, Wantz-Abo Pool, Blinebry Gas)
Pool and Tubb Gas Pool underlying its E. O.)
Carson Lease comprising the W/2 SW/4 and SE/4)
SW/4 of Section 28 and the SW/4 NE/4 and the)
NW/4 of Section 33, all in Township 21 South,)
Range 37 East, Lea County, New Mexico. Appli-)
cant proposes to separately meter the produc-)
tion from each pool prior to commingling.)

Case 1799

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We'll take now Case No. 1799.

MR. ERREBO: Burns Errebo, Soconny Mobil Oil Company,
Inc., Albuquerque, New Mexico, appearing on behalf of the Magnolia
Petroleum Company. At the outset I would like to state that
subsequent to filing this application, Magnolia Petroleum was
merged into Soconny Mobil Oil Company, Incorporated. Soconny
Mobil is the surviving company. We would therefore at this time
like to amend our application to show Soconny Mobil as the
Applicant.

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MR. NUTTER: The application will be amended to show the applicant to be amended to Soconny Mobil.

MR. ERREBO: We will have one witness, Mr. James McGee, and ask that he be sworn.

(Witness sworn.)

JAMES McGEE

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

DIRECT EXAMINATION

BY MR. ERREBO:

Q Will you state your name and place of residence, please?

A James M. McGee, Hobbs, New Mexico.

Q By whom are you employed and what capacity?

A I'm employed by the Soconny Mobil Oil Company as a petroleum engineer.

Q Have you ever testified before the Commission?

A No, I have not.

Q Will you please give a brief resume of your educational experience and background?

A I graduated from the University of Oklahoma with a Bachelor of Science degree in petroleum engineering and have worked for the Magnolia, now Soconny Mobil, for five years in a capacity as petroleum engineer.

Q Are you familiar with the application which is being



heard at this time?

A I am.

Q Are you familiar with the E. O. Carson Lease?

A I am.

Q ~~With~~ the wells drilled thereon and the production therefrom?

A Yes.

Q And the surface equipment that is now installed on the lease and the surface equipment which Soconny Mobil proposes to install?

A I am.

MR. ERREBO: Are his qualifications acceptable?

MR. NUTTER: Yes, sir. Please proceed.

Q Mr. McGee, I'll refer you to what has been marked as the Applicant's Exhibit No. 1 and ask you to briefly state what it shows.

A Exhibit No. 1 is a general map of the area showing Magnolia's properties in yellow and offset properties and the lease in question, the E. O. Carson is outlined in red. There is a color legend to the map which shows what zones the well is producing from.

Q Mr. McGee, at this point, for the record, would you please state the acreage covered by the E. O. Carson Lease?

A The acreage covered is 120 acres in Section 28 which

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consists of the West Half of the Southwest Quarter of Section 28, Range 37 East, 21 South in the Southeast Quarter of the Southwest Quarter of Range 37 East, Township 21 South. It also consists of 200 acres in Section 33, which is the Northwest Quarter of Section 33, Range 37 East, Township 21 South in the Southwest Quarter of the Northeast Quarter of Section 33, Range 37 East, Township 21 South.

MR. ERREBO: Will you proceed, please?

A It's to be noted that this is one continuous lease, and another thing is that the lease is split by a highway between Section 28 and Section 33 that runs east-west. It's State Highway No. 176.

The lease is located just outside the western city limits of Eunice, New Mexico. It is a multiple pay area, as you can see. We have groups of wells drilled to the different pays in the area, and we produce from eight pays in the area. The only one we do not produce from is the Paddock on this lease. We have two dual completion gas wells on the lease which are in the Blinbry Gas and the Tubb Gas. Carson 19 in Section 28 is a dual completion, and Carson 8 in Section 33 is a dual completion. The rest of the wells are single completions.

Q Are any of these zones which are shown in color on your well identification, are any of those zones productive of sour hydrocarbons?



A Yes, sir, they are. We have what would be called sweet production and sour production. The Penrose Skelly, which is marked in a light green, the Paddock which is marked in gray, and the McCormick which is marked in a light brown are what we consider sour production.

Q Is there any production from the Paddock - E. O. Carson Lease?

A No, there is none.

Q Will you refer now to what has been marked as Applicant's Exhibit No. 2 and identify and briefly explain it?

A This is a map of the same lease, E. O. Carson. It shows our flow lines and battery setup on the lease. Right now each, although there are indicated here two batteries in Section 28, the tanks are located inside the squares and the batteries are separate. We also have on the lease a salt water disposal line which is indicated by the heavy dashed line. This is a four inch transit line. We are now using that for salt water disposal, the light lines are present flow lines.

Q Do you have anything further with regard to that exhibit?

A One thing that I might say about the lease in general, it is split by this highway and we intend to at present, although in the future we may want to put the batteries on one side of the road, but right now we're going to keep it split and have a battery on each side of the road.



Q In other words, you are saying that in the proposal for consolidation which you will lay before the Examiner today you will have one battery to the north of the highway and one to the south of the highway?

A Right. One in Section 28 and one in 33.

Q That is your present intent, however it's possible that it might be that you would have only one battery for the entire lease, is that correct?

A That is correct.

Q Will you refer now to Applicant's Exhibit No. 3 and identify and explain what it shows?

A Exhibit No. 3 is a battery summary of the E. O. Carson Lease. It shows the zone under the first column, and this is split into two sections, Section 28 and Section 33 batteries. It shows the batteries and the wells in the battery, which you'll notice the Drinkard battery under Section 28 has numbers 1, 3 and 12 wells into it. It shows the company that runs the oil from the battery, in the case of the sweet production which we are making application to commingle, it is run in every case by Magnolia Pipeline Company.

Next shows the type of crude, whether it is distillate, sweet or sour crude. The next column shows the API gravity as 60 degrees Fahrenheit. The last column shows the daily oil and water production as reported to the Commission for the month of



September.

Q What is the total number of wells producing sweet hydrocarbons?

A There are eighteen wells, eight on the north side of the road in Section 28 and ten on the south side of the road in Section 33.

Q How many wells are productive of sour hydrocarbons?

A There are three wells.

Q As I understand it from your testimony, you do not propose to tank the production from the sour wells with the sweet production, is that correct?

A No. We lose too much money on it, the sour crude is of less value and the pipelines won't accept it that way. Shell Oil Company, Shell Pipeline runs the sour crude and it's run separate lines.

Q The far right-hand column on Exhibit No. 3 shows daily production of oil and water. For what month or months is that production shown?

A This is September's daily average, the month of September, 1959. I might say at the bottom of the table is indicated the amount of sweet crude production in Section 28 which is 122 barrels, and sweet crude production in Section 33 is 207 barrels, or a total of 329 barrels for the total lease, eighteen wells producing.

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MR. NUTTER: What have you done there, just taken the total average and subtracted the sour from it to get that figure?

A Right.

Q How much of the production comes from the Hare Zone?

A The Hare Zone produces 209 barrels per day of this production from five wells. This leaves 120 barrels of oil per day from the remaining thirteen wells, which is an average of 9 barrels. One thing is to be noted, there are no top allowable wells on this lease.

Q Will you please refer to your next exhibit, which I believe is Applicant's Exhibit No. 4-A and identify and explain it?

A Exhibit 4-A is our present battery setup in Section 28, the north side of the road. It is color coated to show the Brunson, which is in red, the Drinkard in green, the Hare in brown, the Blinebry-Tubb production, which is presently commingled together, in blue, the Penrose-Skelly in a light green. The salt water disposal line running through the battery is shown in black.

We have here ten tanks total with four sweet zones and one sour zone producing. We have heater treater for the Brunson Zone with a test separator, a separator for the Drinkard Zone and a test separator. We have a separator for the Blinebry Zone and a heater treater and a test separator for the Hare Zone, and a separator for the Penrose-Skelly Zone.



Q Will you please refer to Exhibit No. 4-B and explain what that exhibit reflects?

A This exhibit shows what might be a typical setup, what we might incorporate, although lines may be run, different test facilities may be different. We intend to use the first three tanks in the battery as shown on Exhibit 4-A as our commingling tanks. They will hold the production.

Q By the first three tanks, which do you mean actually?

A The two tanks on the Exhibit 4-A that are indicated in red which are the Brunson Zone, and the one tank in the Drinkard battery which is in green. Actually we will salvage the best three tanks out of the full battery and place them in this position. We will take the heater treater from the Brunson Zone, which is shown in red, and install a metering device on the dump line and leave it intact. We will take the separator, the production separator from the Drinkard Zone, and install a metering device on the dump line and leave it in place. We will use the heater treater from the Hare Zone at the top in brown and install a metering device on the dump line and leave it in place. The same for the Blinbry-Tubb gas separator. We will install a metering device and leave it in place. We will use for the metering device, we will either use positive displacement meters, dump meters, or if we find that some of the equipment is in poor shape or is not fit for use, we intend to install metering separators or

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heater treaters. Downstream from the meters we intend to install checks to prevent back flow into the treating facilities.

We also intend to use the Drinkard separator, test separator, shown in Exhibit 4-A as a common test facility for the Brunson and Drinkard wells in the south end of the battery. We're also going to use the present Hare test separator as a test facility for the Hare and the Blinebry-Tubb gas production in the north end of the battery. We would normally use only one common test separator, but the distance they are separated, the two separators can be used with less expense than the one.

Also we have the test lines indicated by the dashed lines tied back into the production facilities so that the meters can be proved to the tanks. The two common test facilities will not be metered, but will be flown to the tanks, one well at a time, and measured before they are commingled with the other production.

Q Will you please refer to your next exhibit, which I believe is No. 5-A? That exhibit is schematically quite similar, is it not, to Exhibit 4-A?

A It is, with the exception that the batteries are more separated and not in line as they are on the north side. This is Section 33, sweet batteries. We have not shown any sour crude batteries here because they are removed from these three batteries. The only thing we have here, we have the Wantz-Abo Zone which is producing on the south side of the road, and we did not have it



on north side.

Q Referring to your Exhibit 5-B, is that schematically similar to your Exhibit 4-B?

A It is. Here we intend to leave the two separators shown on 5, on Exhibit 5-A as the Brunson in red, I mean the two heater treaters shown is the Brunson in red and the Hare in brown in place of installing metering devices on the dump lines. Then we will move the Drinkard heater treater shown in green on 5-A down due east of the Hare heater treater and install a metering device on the dump line. Then we will move the Wantz-Abo heater treater due east of the Brunson heater treater and install a metering device.

We shall also use here a separator for the Blinebry-Tubb gas production and install a metering device there. All of these will then dump into a common production line and be commingled and stored in three 500 barrel tanks.

Again we have a common test facility for all five zones. Each zone, each well will be turned into the test facility one at a time, flowed to the tanks, measured as before it is commingled. Also the test line is tied back into the production lines so that the meters can be proved to the tanks.

Q Now, with regard to the metering facilities, would it be your recommendation to the Commission that they approve the installation of either positive displacement dump type meters or a

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metering separator?

A Yes.

Q For the measurement of the production?

A I think either one of the three should be permissible to use. We don't know what we're going to use because we don't know what condition the equipment is until we get it torn down, and there's a possibility that we will install different equipment on different types of separators and heater treaters.

Q Mr. McGee, would you, at this point, explain to the Examiner the general situation with regard to surface equipment which Soconny Mobil now finds itself and how that relates to your plans for consolidation of these batteries?

A Most of this equipment was installed in 1944, '45, 1946. The life of the tanks was estimated at about ten years if they're not treated with some kind of plastic coating or some corrosion resistant material. We find that most of the tanks, since they are flat bottom and put directly on the ground, have developed leaks and holes and they are in very poor condition. If we do not commingle the production and thereby prevent purchasing new equipment, then it is possible and probable that we will have to prematurely have to abandon some of the wells.

Q Now, this conversion and consolidation program, do you expect that will be carried out over a future period of time that will consist of several months or maybe even a year or two?

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A Yes, right now we have very poor tanks in the Blin-bry-Tubb battery in Section 28. We intend to, if this application is approved, to immediately commingle that production with the Drinkard, and we also have very poor tankage in the Hare battery in Section 33 and we intend to commingle that production with the Brunson immediately if this application is approved.

The rest of the production will be commingled as the need for the equipment arises, as the equipment wears out or as we have increased production where we will have to have better storage facilities.

Q Now, what general savings does Soconny Mobil expect to experience as a result of this consolidation which you are proposing here today?

A In general we intend to increase our operating efficiency, which in two instances, in the first instance will result in less weathering of the oil. This will enable us to run the oil more often to the pipeline, therefore losing fewer vapor and having the oil settle less time and having fewer bubbles. Also we can make savings on operating labor, fewer tanks to gauge and keep records on, fewer tanks to treat. Less treating chemical will have to be used and equipment repairs will be fewer. This all will result in lowering the economic limit.

Q Have you made any general estimation of the dollar value of the savings which would result from this consolidation?



A Since the equipment is old and is going to have to be replaced in the immediate future, the replacement of five tanks in Section 28 and seven tanks in Section 33 would cost Mobil Oil Company, Soconny Mobil Oil Company approximately \$25,000, by consolidating tank batteries and commingling the production \$15,000 can be saved.

A_s I said before, you take Wantz-Abo well on the south side of the road makes two barrels a day. Stimulation should increase the production some, but it cannot justify new equipment in the stage it is in now. It will have to be commingled or have to be abandoned.

Q In other words, then, are you stating to the Examiner here today that unless this application is granted that certain wells on this lease will have to be prematurely abandoned?

A That is true.

Q Have you made any estimate of the amount of oil which will be saved as a result of preventing vapor loss?

A Yes, we have installed vapor loss equipment on the Tubb, Blinebry-Tubb battery, which is the battery for the E. O. Carson No. 19. Tests run there by us indicate that 2.27 barrels of oil can be conserved daily by installing vapor loss equipment. We also expect to save $2\frac{1}{2}$ barrels of oil in Section 33 from the other gas well, the E. O. Carson No. 8. This will result in a savings of \$5,000 a year to us, to Soconny Mobil Oil Company, or



approximately 1,700 barrels of oil per year, or distillate per year.

Although if this application is not approved we intend to install vapor loss control equipment on our Blinebry-Tubb battery in Section 33, but when we consolidate the battery we will have vapor loss control equipment on all of the sweet production.

Q Is it your opinion then that the life of this lease will be extended and that waste will be prevented not only from recovering the vapors which are now being lost, but also by avoiding premature abandonment of this lease, and as a result waste will be prevented?

A Yes, it is. Although most of these savings have been indicated to be directly to Soconny Mobil Oil Company, they do lower our operating costs, thereby we can operate the lease longer, recovering more oil.

Q Do you foresee that it may be that Soconny Mobil will desire to drill additional wells or complete in any of the other zones covered by this application in the future?

A We do not have any other wells intended to drill, although we may drill one or two. What we intend to do is maybe make some dual completions opening Drinkard, Wantz-Abo, Hare Zones in locations that are not now open, and we desire to commingle this production also.

Q And it would be your general recommendation that general authority be given by this Commission, if it sees fit to approve

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the application, for the commingling of all production from the six zones which are covered by the application?

A That is correct.

Q At such time as that may be desirable, is that correct?

A That is correct.

Q Do you know whether or not the ownership of minerals is common throughout this lease?

A It is common, the royalty ownership.

Q Now, the battery locations which you have specified in your testimony, I believe would be generally in Sections 28 and Sections 33, is that correct?

A That's right, although we have shown specific locations on our exhibits, there is a possibility that we would want to locate these batteries somewhere else on the lease or even make one battery on one side of the lease or other.

Q And it would be your recommendation that the Commission not limit the location or number of batteries on the lease, is that correct?

A That's right.

Q Do you have anything further that you desire to offer at this time?

A No.

Q Were the Exhibits 1 through 5-B prepared by you or under your supervision?

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A They were.

MR. ERREBO: I believe that's all we have at this time, Mr. Examiner.

MR. NUTTER: Any questions of Mr. McGee? Is that correct, Mr. McGee?

A Right.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Will the gravity of the commingled oil be such that the price paid per barrel of oil is less than the price paid for a barrel of oil from any of the particular pools at present?

A It will up the price for the Blinebry-Tubb distillate because we will lower the gravity there. Although I think that 44 gravity with Magnolia is where you start taking penalized price. We will raise the gravity of the 37, 40 and 42 gravities, but I do not believe it will raise them over 44, so we should result in getting more money for our oil than we are now.

Q I want to ask you this, if you take the price paid in each of the six zones when they're placed in separate batteries and average that price, will that price be more, less or the same than the price paid per barrel of commingled oil? Do you follow me?

A Yes, sir. It should be approximately the same, since



your price is higher for higher gravities, we start out here with 37 gravity, Brunson, so 40 gravity Drinkard will draw more price and 42 gravity Hare will draw more price. But the 68 gravity Blinebry-Tubb draws less price. Now, when you commingle them they should average out to about what we're getting now, or it may be slightly in excess.

MR. NUTTER: Have you made any actual calculation or determination of that?

A No, I have not.

MR. NUTTER: It appears that the bulk of the production, as you stated, is from the Hare?

A Right.

MR. NUTTER: That's the highest gravity that you have on there with the exception of the distillates, isn't it?

A Right, sir.

MR. NUTTER: Do you think that the distillates being 65 and 86.5 but only 8 barrels and 6 barrels average production, do you think there's enough distillates there to raise the Hare gravity above the penalizing point, the 44 degrees I think you said?

A No, sir, I do not.

BY MR. PAYNE:

Q Mr. McGee, I took it from your answer to a question to Mr. Errebo, there are perhaps corrosion problems in this area?



A No, sir, what we have, usually your tank bottoms will make a little water into them. Any time you have water in the bottom of the tank you are going to have corrosion. General tubing flow lines, we don't have any trouble with them.

Q So you don't anticipate installing corrosion type meters?

A Yes, we intend to plastic line them to prevent paraffin deposition and scale deposition.

Q As I understand it, on one of the batteries you intend to produce more than sixteen wells?

A No, we do not.

Q I thought you were going to produce eighteen wells into one battery.

A No, ten in one battery and eight into the other. However if we did decide to produce all eighteen wells into one battery we would naturally have to come back for exception to 309 I think it is, sir.

MR. PAYNE: Thank you.

REDIRECT EXAMINATION

BY MR. ERREBO:

Q With regard to the corrosive nature of the sour hydrocarbons, would you say it is very corrosive, medium or slightly corrosive?

A The Penrose-Skelly is slightly corrosive, although tank bottoms are what I would call medium. The McCormick is what I

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would call medium corrosion. It is not severe, but it is medium corrosion in E. O. Carson No. 16 which is sour crude.

Q Insofar as the number of wells which would be produced into a battery is concerned, you stated that in the event that Soconny decided to produce more than 18, 16, they would come in for a special hearing, is that correct?

A Right.

Q Now, that being the case, there would be no need for the order issued by the Commission to specify that two or more tank batteries should be used?

A Well, I don't know about that. At the present time we intend to use two batteries definitely. It may be that, I don't believe it would be, the rule is standing and we know about it, so if we start to put more than sixteen wells into a battery we will come back.

MR. ERREBO: I think that's all I have.

MR. PAYNE: Where's the dividing line between sweet crude and sour crude?

A I don't know. That's the way it's run to the pipeline.

MR. NUTTER: Intermediate crude divides them.

MR. PAYNE: Is that generally a pipeline determination and it may vary from one pipeline to another?

A Yes, actually we list these as sweet crude, although

~~I don't know whether Magnolia pays sweet crude price in New Mexico.~~

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I think they only pay intermediate crude price because they have to mix the intermediate crude with the sweet. The main thing is the sour crude is generally corrosive and the sweet crude is not.

MR. PAYNE: Thank you.

MR. NUTTER: Any further questions of Mr. McGee?

BY MR. NUTTER:

Q Mr. McGee, I notice on your Exhibit 4-B that you are going to pass the Drinkard production through a separator and into the commingled facilities. On Exhibit 5-B the Drinkard appears to be going through a heater treater. What is the reason for having the heater treater on one portion of the lease and not on the other?

A Neither one of them make water. Generally the heater treater is used where you make water. I say they produced no water, any well will produce a certain amount of moisture.

Q You have had occasion to put a heater treater on existing facilities in Section 33 for the Drinkard but not in Section 28?

A That's right.

Q Maybe the wells are making a little more moisture up there?

A These Drinkard wells in Section 33 may have made water at one time.

Q I also notice that the Blinebry-Tubb distillate is



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coming through a common separator. Have you received authority for commingling the liquids from the Blinebry and Tubb?

A Yes, they're commingled at the well head.

Q Is this a two stage separation they are passing through?

A No, this is actually three stage. They are two stage at the well head and this is strictly for metering purposes.

Q This is the third separator on the Blinebry-Tubb system, then?

A Right.

MR. NUTTER: Does anyone have any further questions of Mr. McGee? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Errebo?

MR. ERREBO: No, I have nothing further.

MR. NUTTER: Does anyone have anything further in 1799? We will take the case under advisement and take Case 1800.



STATE OF NEW MEXICO)
 : ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, 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 16th day of November, 1959.

Notary Public - Court Reporter

My commission expires:

June 19, 1963.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the hearing of Case No. 1799
heard by me on 10-28, 1959.
[Signature], Examiner
New Mexico Oil Conservation Commission

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