STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

16 March 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Phillips Petroleum Company for a nonstandard gas proration unit and unorthodox gas well location, Lea County, New Mexico. CASE 9331

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Commission: No attorney appearing.

For the Applicant: W. Thomas Kellahin
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I N D E X

E X H I B I T S

E X H I B I T S CONT'D

MR. CATANACH: Call Case 9331, the application of Phillips Petroleum Company for a non-standard gas proration unit and unorthodox gas well location, Lea County, New Mexico.

Are there appearances in this case?

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin and Aubrey.

I'm appearing on behalf of the applicant, Phillips Petroleum Company, and I have two witnesses to be sworn.

MR. CATANACH: Any other appearancs?

MR. CARR: May it please the Examiner, my name is William F. Carr, with the law firm Campbell and Black, P. A., of Santa Fe.

I represent ARCO Oil and Gas Company and I have one witness.

MR. CATANACH: Any other appearances?

May I get the witnesses to stand and be sworn in?

(Witnesses sworn.)

MR. CATANACH: Mr. Kellahin.

R. E. "RICK" HALLE,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, sir, for the record would you please state your name and occupation?

A My name is Rick Halle. I'm a geologist employed by Phillips Petroleum Company in Odessa, Texas.

Q Mr. Halle, you spell your last name H-A-L-L-E?

A That's correct, sir.

Q Mr. Halle, have you previously testified before the Division as a petroleum geologist?

A Yes, I have.

Q And pursuant to your employment by your company, have you made a geologic study of the area that's the subject of this application?

A Yes, I have. I've been working on this

area since the end of 1986.

MR. KELLAHIN: We tender Mr. Halle as an expert petroleum geologist.

MR. CATANACH: He is so qualified.

Q Mr. Halle, let me direct your attentin to what is marked as Applicant Exhibit Number One. If you'll take a moment and simply identify that exhibit.

A This is a location map that shows the area surrounding the well that we've proposed. The wells only that penetrated the Strawn and deeper formations. The textured areas that are outlined are the Philips acreage in this area and the sections immediately around the proposed location we've also exhibited the other leaseholders of deep rights.

Q When we look at this plat and the proposed application of Phillips, we're looking at what field or pool, Mr. Halle?

A This location in Section 22 will be in the South Shoe Bar Field.

Q That South Shoe Bar Field is a field composed of what producing formations?

A The Atoka-Morrow.

Q When we look at the display, would you identify for us the closest producing Atoka-Morrow well?

A The closest well is in Section 15. This is Township 17 South, Range 35 East. It's a well that was completed by Sun in December of 1987. It had a potential of 9.9-million a day and it is not hooked up to a pipeline yet.

Q What is the spacing unit that has been assigned to the Sun well in Section 15?

A 320 acres, comprising the south half of Section 15.

Q When we look in Section 22, are there any producing wells in this field in that section?

A Yes, sir, there's one well in the southeast of the northeast. It's the T. H. McIlvain New Mexico "AC" State No. 1.

Q Which well was drilled first, the McIlvain well or the Sun well?

A The McIlvain well.

Q In this portion of the field, then, McIlvain was the first well?

A Yes.

Q What spacing unit does Mr. McIlvain have assigned to his well?

A Mr. McIlvain has 240 acres.

Q And what are the 240 acres assigned to his well?

A He has the northeast quarter and the east

half of the northwest quarter.

Q Can you identify, using on that display the other interest owners in Section 22?

A We have 80 acres, which is the west half of the northwest.

Amerada has 80 acres, which is the north half of the southwest.

ARCO has 80 acres, which is the south half of the southwest.

And Mobil has the southeast quarter.

Q As a result of McIlvain's nonstandard spacing unit in this section, what does Phillips propose to do in order to drill its well?

A We need an unorthodox proration unit because we don't have 320 acres to contribute to this well.

Q What acreage do you propose to contribute and assign as a spacing and proratio unit for the well?

A We propose 160 acres. That's what's colored yellow on this map, and it's the west half of the northwest quarter and the north half of the southwest quarter.

Q What is your understanding as to the position of Amerada Hess about contributing their acreage to the nonstandard unit?

A We solicited their joinder in this well

and had no response at the end of last week, so Monday we took all the information that you'll see here today and went and showed it to Amerada to try to convince them to join us.

And they took it to their management Tuesday and we had verbal indication Tuesday afternoon that their Vice President of Exploration told them to farm it out to us.

Q Have you notified all offset operators that adjoin this spacing unit of your proposed nonstandard unit?

A By the notification of this hearing, we have.

Q And have you notified all the other owners within Section 22 of your request?

A Yes, we have.

Q And to the best of your knowledge, has anyone objected to what you propose to do?

A Only ARCO this morning has indicated any objection.

Q Prior to this morning had you received any objection from ARCO?

A No.

Q In evaluating the geology, Mr. Halle, what is your ultimate opinion with regards to the suitability of the nonstandard unit as an acceptable unit to dedi-

cate to the well as it's proposed?

A I think it will be an adequate proposal.

Q All right, let's turn to your geologic reasons that support that opinion.

A Okay. Exhibit Number Two is a structure map that was mapped on top of the Morrow limestone.

Q This also represents your work, Mr. Halle?

A Yes, I made this map.

Q Okay.

A The proposed location is on structure with other wells completed in the same zone in this field and also in the North Vacuum Atoka Field.

Q What is your conclusion about the structure with regards to the spacing unit in Section 22?

A There is no great benefit or loss of structure. Structure has no affect on it.

Q Do you see any structural reason to preclude the well as proposed from developing the nonstandard proration unit?

A No, sir.

Q Mr. Halle, if you'll turn to Exhibit Number Three.

A Exhibit Number Three is a stratigraphic cross section through the Strawn, Atoka and Morrow forma-

tions through the -- it's an east/west cross section through the North Vacuum Atoka Field and the South Shoe Bar Field, and it shows that the primary pay in these fields is a sand developed in the basal part of the Atoka formation within about 100 feet of the top of the Morrow limestone, and shows that this reservoir is continuous through this area.

Q When you describe this area, Mr. Halle, can you identify for us on the cross section, going from east to west, what causes you to believe that there is sufficient continuity of this sand interval that gives you a continuous reservoir across Section 22 and 15 and 16?

A Correlation of the bounding units and the sand itself.

Q Leads you to what conclusion?

A That the sand is continuous through this area.

Q Demonstrate that for us on the cross section.

A The sand that's developed in the -- and is perforated in the McIlvain well is at the same position as the sand in the Sun well and is the same position as the Trainer No. 1 Betty State Well that was recently drilled.

Q You've identified where your proposed location will intersect on the stratigraphic cross section?

A Yes, sir.

Q And you anticipate that the location you had picked will intersect the same reservoir being produced by the McIlvain well and the Sun well?

A Yes, sir.

Q If you'll turn to Exhibit Number Four and identify that exhibit.

A Exhibit Number Four is an Isopach of that sand that is the primary pay in the South Shoe Bar Field, and it shows that our proposed location should intersect a similar thickness of sand as the Sun well.

It shows that the sand is continuous east to west through the South Shoe Bar and North Vacuum Fields, North Vacuum Atoka-Morrow.

Q Describe for us, Mr. Halle, the methodology you have employed to construct the Isopach. What subsurface control did you use and how did you prepare your contours?

A We used logs. I used logs on file at Phillips Petroleum's office and we used a gamma ray cutoff to pick a thickness of sand.

Q What was your gamma ray cutoff, what percent?

A 60; 60 API units, consistently through the whole area and mapped these sands that correlate through the whole area and isopached those values.

Q When we look at your interpretation of the Isopach within Section 22 and identifying the nonstandard proration unit that you propose, consisting of the west half of the northwest quarter and the north half of the southwest quarter, that configuration, what geologic opinion do you have about the existence of that reservoir underlying that spacing unit?

A It appears to me that the sand is limited to the north half of the section and the north half of the south half of the section.

Q Are Phillips Petroleum Company's share of the reserves in this reservoir currently participating in any of the producing wells?

A No, sir, they are not dedicated to any well.

Q Do you see any geologic reason to believe that those two wells, the McIlvain well and the Sun well, are not producing the Sun acreage -- I mean the -- the Phillips acreage?

A I indeed do believe that they are producing gas from under our acreage and that we have a right to obtain our proportionate share.

Q Within that proposed nonstandard spacing unit, what, in your opinion, is the optimum location in which to locate the well to develop your share of the reser

ves?

A I believe the proposed location in the 660 from the north and 660 from the west location will penetrate the most sand and give us the best producing well, and thus drain (unclear).

Q This morning, Mr. Halle, what were you advised that Mr. Campbell with ARCO's position was concerning the 80-acre ARCO tract within Section 22?

What was your undertanding of their position?

A They would like to split their 80 acres and contribute 40 of it to our well and hold 40 of it to contribute to a well that Mobil might drill in the southeast of them.

Q What is your geologic opinion about the suitability of adding 40 acres out of the ARCO tract and into your spacing unit?

A Yes, I have isopached it. We show no pay in ARCO's acreage and it would not be suitable.

Q For what reason?

A Because it would disproportionately allow us a higher allowable, even though we have no actual sand which would contribute gas from that acreage.

Q Do you have an opinion as to whether ARCO's proposal will add productive acreage to your spacing

unit?

A According to this Isopach it will not.

Q Were Exhibits One through Four prepared or compiled under your direction and supervision?

A Yes, they were.

MR. KELLAHIN: We move the introduction of Phillips Exhibits One through Four.

MR. CATANACH: Exhibits One through Four will be admitted as evidence.

MR. KELLAHIN: That concludes my examination of Mr. Halle.

MR. CATANACH: Mr. Carr?

CROSS EXAMINATION

BY MR. CARR:

Q Mr. Halle, as I see your application, you're seeking a nonstandard 160-acre unit but you're also in the alternative seeking an 80-acre nonstandard unit. Is that not correct?

A Not at this time, we're not. We have -- we have Amerada's commitment on their 80 acres and would prefer to go 160 acres.

Q So you're dismissing your portion of the application that relates to a nonstandard 80-acre unit, is that correct?

MR. KELLAHIN: That would be our desire, Mr. Catanach.

Q So am I correct in understanding that has been dismissed?

A MR. KELLAHIN: We do so now, Mr. Carr.

Q All right, and that has been dismissed?

MR. CATANACH: That portion of the case is dismissed.

Q All right, so we're not looking at an 80-acre unit which would develop the north half of Section 22 leaving a standard unit in the south half of 22 for development, is that right?

A Yes, sir.

Q All right. Now, you are indicating that the real reason for the unit as you are proposing it today is really your Isopach map, is that correct?

A That is correct.

Q You've been working on this unit for over a year, or development of this acreage for over a year.

A That's correct.

Q You originally proposed that the entire southwest quarter of Section 22 also be included in the spacing unit for this well, did you not?

A Yes.

Q Has there been additional data that has come into your possession since that time that would have changed this isopachous map?

A The Trainer No. 1 Betty State Well in the northwest of the southwest in Section 16 has been completed since our original proposal for 240 acres and that well's -- the sand was considerably thinner than I had originally isopached it.

Q And so data from the well in the southwest of 16 is what you're relying on to -- in part, to draw your isopachous zero net pay line across the south half of 22?

A Yes, sir.

Q You're not using any seismic work or anything of that nature to establish these lines?

A No, sir.

Q So you're looking at the well in the southwest of 16, the No. 12 Well in 22 and the dry hole in 23, that would be your control for that isopach line, is that right?

A Yes, sir.

Q It is your opinion that a well at the proposed location would -- would drain the entire 160-acre unit?

A Yes, sir.

Q Would it drain additional reserves outside the boundaries of that unit in the north half of the south half of 22?

A I don't know.

Q It's possible, is it not?

A (Inaudible.)

Q But you do -- it is your opinion that it would drain all of that 160-acre L-shaped unit?

A Yes.

Q But you don't know if it would drain beyond that.

A I'm not a reservoir engineer.

Q The well in the south half of 15 is the Sun well which it's fair to characterize as a good well, is it not, or do you have an opinion?

A The potential was for a very good well.

Q And how did the McIlvain well in 22 potential? Is it a good well?

A Yes, sir.

Q You'd anticipate that those wells would have the capability of draining a standard spacing unit, 320 acres, would you not?

A That's what's assigned to them.

Q And you would also anticipate that the proposed wells, the three wells, if we look at the well in

the south half of 15, the McIlvain well in 22, and your proposed well, do you have an opinion as ot whether or not that would drain the acreage within your zero net pay isopachous line?

A The three wells including our well?

Q Including your proposed well.

A As far as I know, it would.

Q Are you going to have a witness who will testify as to a penalty to be imposed on the production from that well?

MR. KELLAHIN: We will, Mr. Carr.

Q You have testified that you had found out yesterday that ARCO was going to opposed the 160-acre unit, is that correct?

A No, this morning.

Q This morning? You were not advised on Monday that ARCO would oppose that?

A No.

Q It wasn't until yesterday that Amerada made the decision, is that right?

A That is true.

Q If Amerada had decided not to farm out we would be looking at an 80-acre unit, isn't that correct?

A If they had not elected to farm or to

join, that's correct.

Q And we would then have a standard unit being the south half of Section 22 to dedicate to a well if Mobil and ARCO decided to do that, isn't that correct?

A If Amerada decided to do that.

Q Or if they were pooled into a well, but we would have 320 acres available to be pooled into a well, would we not?

A Yes, you would.

MR. CARR: That's all I have.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Halle, you do have verbal agreement from Amerada but not anything (unclear.)

A No, we don't sir. We -- we will provide that to you as soon as we get it. We had the word from Henry Hanson, who's a landman in Houston, Texas, that they had shown this prospect to their management, a VP, and these very maps that you're looking at, and that he told them to farm out. We don't have the terms worked out yet. You can realize it's only been 48 hours since we talked to him, but that -- that is our intention, to work out something with them.

Q Mr. Halle, has Mobil, Trainer, or Sun

voiced any opposition to your -- to your location, that you know of?

MR. KELLAHIN: We have a witness that will testify about that.

Q Mr. Halle, why is it so important that you be 660 from the north line? Couldn't you go further south and still be -- still be within the structure?

A We would still be in the sand. We would hope to get into the most sand possible in case there are lenticular zones in the sand. We would penetrate as many as possible, and that was our reasoning behind the 660/660 location. We believe we'll be in more of the sand.

MR. CATANACH: That's all I have of the witness. He may be excused.

MR. KELLAHIN: Mr. Catanach, before we begin the testimony of the engineering witness, I would like to introduce or submit to you for introduction the certificates of mailing of notices to the affected parties.

The first notice is marked as Exhibit Number Eleven, and it represents the certified mailing of the original application to all the affected parties.

Exhibit Number Twelve is a similar certified mailing of a correction letter to the amended -- to the original application, whereby we corrected an

error in the description of the township. The original application showed Township 27 and in fact it's 17, and that was amended by Exhibit Number Twelve.

MR. CATANACH: Exhibits Numbers Eleven and Twelve will be admitted into evidence.

MR. KELLAHIN; We're ready to proceed with our engineering witness, Mr. Catanach.

MR. CATANACH: Okay.

JOHN C. CURRIE,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name and occupation?

A My name is John C. Currie. I'm a reservoir engineer with Phillips Petroleum Company in Odessa, Texas.

Q And your last name is spelled C-U-R-R-I-E?

A That's correct.

Q Mr. Currie, have you testified before the Division on previous occasions as a petroleum engineer?

A Yes, I have.

Q And pursuant to your employment by Phillips Petroleum Company have you made an engineerng evaluation of this particular well and the application before the Division?

A Yes, I have.

Q Have you been in communication with other interest owners that may be affected by Phillips' application in this case?

A Yes, I, or people working with me, have been in communication with those offset operators.

Q How long have you personally been involved in attempting to get this well drilled?

A I would guess approximately ten months.

MR. KELLAHIN: We tender Mr. Currie as an expert petroleum engineer.

MR. CATANACH: He is so qualified.

Q Mr. Currie, let me direct your attention to Phillips' Exhibit Number Five and let's use this as a display by which to lay a basis for some of your opinions.

First of all, is this a display that you're familiar with?

A Yes. This is basically a small section of that first Exhibit Number One. We've just taken four

sections out of it for ease of referring to.

It shows the ownership of the deep rights and the wells which penetrate the deep formations.

Q The proposed Phillips location is 660 out of the north and west corner of Section 22?

A That is correct.

Q What is the location on the McIlvain well in Section 22? What -- where is it, approximately.

A Okay, the McIlvain well is located more or less 1980 feet from the north line and 660 feet from the east line of Section 22.

Q That should place it 660 out of the corner of its spacing unit?

A That's correct.

Q When we look at the Sun well in Section 15, approximately how far is it from the common section line between 15 and 22?

A It is 660 feet north of that section line.

Q When we look at the McIlvain nonstandard unit, what is the relationship of that well to its farthest end of its spacing unit; in other words, from the northwest corner of that spacing unit to the well is a distance that compares in what regard to the other wells in this reser-

voir?

A Okay. The McIlvain spacing unit, which we've outlined in red here, that well, the distance from that well to the farthest point in that spacing unit, which would be the northwest corner, is the same as the distance of a well located at an orthodox location in a 320-acre standard unit to its farthest corner.

For example, the Sun well in Section 15, the distance between that well and the farthest point of that proration unit, which would be the northeast corner of that proration unit, is the same distance as the distance in the McIlvain well.

Q When we look at the Phillips location, how does it compare in terms of distance to its farthest point on its spacing unit to the other two wells?

A Okay, if you -- the Phillips proposed spacing unit is outlined in green and if you'll look at that -- that distance to the farthest point of its spacing unit, which would be the southeast corner, is again the identical distance as in those other two cases, so that no point is any farther than in those other two cases.

Q We will discuss in detail later the pressure analysis that you have made, but what is your opinion and conclusion at this point, Mr. Currie, about the communication of these wells one to another within this reservoir?

A I believe we are seeing some pressure communication between those wells.

Q Let's go back now and talk about how we got into this situation.

Let me direct your attention to Exhibit Number Six.

A Okay, Exhibit Number Six is a copy of the notice of application by T. H. McIlvain for approval of a nonstandard proration unit and an unorthodox location referring specifically to the McIlvain New Mexico "AC" State No. 1 Well, and we have this included to show how the nonstandard location -- or unorthodox location and nonstandard proration unit was approved.

This well was originally drilled by Humble in 1953 as a Devonian test and as such, as an oil well, it was drilled at an orthodox location 660 feet from the spacing unit boundaries, and T. H. McIlvain re-entered this well and plugged back to a shallower zone, the Atoka, and as a shallow plug back on an existing well they're allowed administrative approval of the unorthodox location and the nonstandard proration unit.

Q Go ahead.

A The rest of this exhibit, the second page shows essentially the same as our Exhibit Number Five.

The third page is a copy of Phillips' re-

ceipt of this notification as an offset operator.

And the fourth page is a notice -- a listing of all the operators that were notified.

Q Have you examined the production in the Atoka formation from this well?

A Yes, I have.

Q And has that been depicted in a display?

A Yes, that's in what we have labeled Exhibit Number Seven.

Q Does this represent your work, Mr. Currie?

A Yes, it does.

Q Would you identify and describe the exhibit for us?

A Okay. This is my work and it's based on State of New Mexico records on the production from the T. H. McIlvain well.

Let's see, it's shown in terms of daily production rates and then we have noted on there the total production for 1986, total production for 1987 through November, and then we have the cumulative production of that well to the first of December, 1987, which is 3.33-billion cubic feet, and 43,400 barrels of oil.

Q What is this well's approximate current producing rate?

A It's been producing between 5-and-6-million cubic feet of gas per day.

Q In addiition to the graphical display of this data have you made a tabulation of similar information on Exhibit Number Eight?

A That's correct. Exhibit Number Eight is simply a tabulation of the monthly production data from the New Mexico "AC" State No. 1 Well.

Q Have you made a calculation or analysis of what you conclude to be the approximate, ultimate recovery from this well?

A Yes, I have.

Q And is that shown on Exhibit Nine?

A That's correct. On Exhibit Exhibit Number Nine I've attempted to quantify roughly the size of the reserves on the well out there, the T. H. McIlvain well. This is calculated using a fairly standard practice for gas wells. I've plotted cumulative production versus bottom hole pressure divided by the gas deviation factor.

Let's see, I guess the three points that are shown on this plot, the first point was based on the initial completion -- the bottom hole pressure they measured upon initial completion of the well.

The second point is based on a test which was run on the McIlvain well, I believe in December, 1986,

and that that test data was provided to us by McIlvain.

And the third point is based on the 1987 annual shut-in pressure reported by the McIlvain well. I think that pressure was taken in August, 1987.

Q Do you have an opinion, Mr. Currie, as to whether or not the McIlvain well demonstrates sufficient producing characteristics that the Phillips acreage in the north half of 22 could have been added to that spacing unit?

A As it appears now, yes, I would say the Phillips acreage could have been added to that acreage.

Q Having excluded the Phillips acreage in the west half of the northwest quarter from participation in the McIlvain well, what is your opinion as a petroleum engineer as to how that acreage may now best be developed?

A Based on the mapping done by Mr. Halle, it would be my opinion that the proposed location represents the least risk and would be the best way for us to recover our share of reserves.

Q Do you have an opinion as to whether your acreage is being subject to drainage by either the Sun well or the McIlvain well?

A Yes, I do.

Q And what is that opinion?

A It appears -- I guess we should turn to the next exhibit -- it would appear from pressure data that

it looks like we may be drained --

Q Let's look at the pressure data that you have tabulated on Exhibit Ten.

A Okay, on Exhibit Ten, I've tabulated pressure data, which except where noted, this comes from the annual shut-in pressures reported to the Oil -- OCD.

These five wells represent the five wells on the cross section presented by Mr. Halle with the exception of the Texaco well.

The Texaco well that was on that cross section had very little pay and it's been plugged back. This Texaco well is located, oh, approximately a quarter mile northwest, and it does penetrate the North Vacuum Atoka-Morrow reservoir, so it's representative of production out there.

I guess continuing on in this we can see the approximate pressures from the Texaco well, which would be the approximate pressures in the -- or surface pressures seen from the North Vacuum Atoka-Morrow well, or field.

Q What is the -- your opinion of the original reservoir pressure?

A Okay. The original reservoir pressure was probably much more than those pressures we see in the Texaco well.

If you go down to the bottom of the list,

the T. H. McIlvain well, the pressure listed for 1986 is 4,443 psi. That's a surface pressure upon initial completion of the well, and that's about the surface pressure I would expect to see from the original reservoir pressure based on a completion in the Atoka sand at 12,000 feet.

Q When the Sun well was completed, did it encounter original reservoir pressure or did it drill into a depleted reservoir?

A If you'll notice on the fourth line down, its approximate pressure on completion is 1900 psi, which is much lower than I'd expect for an undepleted reservoir.

It appears the McIlvain well, because it was -- when it was originally completed, was separated by a great distance from the North Vacuum Field, and pressure communication had not reached that well, so it was essentially a virgin pressure.

By the time Sun completed their well, after approximately two years of McIlvain's production, it appears that that reservoir has lost quite a bit. In addition, those other two wells, the Marathon well and the Trainer well, became depleted in the same zone within the last six to nine months. I've also seen much lower reservoir pressures, pressures very similar to the Texaco well and the Sun well.

Q In addition to concluding that the

Phillips acreage is being subject to drainage, can you reach any conclusion about the ability of the well as you propose it to develop and drain the 160 acres you propose to assign to it?

A Yes. Even given the lower reservoir pressure, we feel that the well in the position located, it shows -- well, the position gives us the least risk that the well is not located at a distance so great from any point in the spacing unit that it shouldn't be able to drain the reserves from that spacing unit.

Q Have you examined how the producing rate or allowable for the Phillips well might be adjusted in order to balance the correlative rights of any offsetting operator or interest owner to this well?

A Yes, I have.

Q In making that investigation have you obtained approval from offset operators as to a proposed penalty to apply to the Phillips well?

A Somewhat. In the application we made we proposed a penalty based on the acreage in the resulting unit and we've had -- well, we were able to obtain waivers from T. H. McIlvain and Trainer. They agreed to our proposal and our conversations with the other operators were that they would have no objection to having our -- as long as our production was prorated based on the acreage in the

spacing unit.

Q What is in fact your proposal for balancing the correlative rights of all the interest owners in here in terms of an allowable for this well?

A Okay. Our proposal would be that where this well is dedicated 160 acres we would get one-half of the full allowable, 160 over 320 acres.

Q Is this a prorated gas pool?

A Not at this time.

Q How would we actually handle the balancing of allowables between the Sun well, the McIlvain well, which also has short acreage, and the Phillips well?

A Okay. We would attempt initially to have it covered under the, let's see, the Oil and Gas Act, I guess it's Section 70-2-19, and --

Q That's the ratable take section, is it not?

A Correct, the ratable take section, Paragraph E under that the common purchaser shall take ratably under such rules, regulations, orders concerning quantity, as may be promulgated by the Division consistent with the Oil and Gas Act.

The Division in promulgating such rules may consider, among other things listed here, the acreage attributable to the well.

So we would -- we would be proposing that the gas purchaser would insure that takes were ratable from -- from each of these wells.

Q And Phillips would notify its gas purchaser so that we don't take more than 50 percent of our share of production based upon this formula.

A That -- that is correct. We would notify them that we were entitled to 50 percent of the full allowable.

Q Okay. So in effect you would use the mechanism of the pipeline prorationing for a pool that is not prorated.

A That's correct.

Q All right, and are you aware of this occurring in other pools?

A Yes, I have heard of this occurring in other pools.

Q Can you now recall and give us a specific example where the Division has utilized this mechanism to balance the correlative rights?

A I believe the pool was the West Ranger Lake Penn Pool.

MR. KELLAHIN: We'll be happy to provide you with a specific reference to that prior handling of a similar matter, Mr. Catanach. I regret that I

don't have it with me today.

Q When do you propose to commence the well, Mr. Currie?

A I would -- we would propose to commence the well as soon as we can work out the details of the farm-out with Amerada, get it approved by our management.

Based on what I've seen here, we are currently being drained by offset wells. To protect our rights we would with all due haste get it -- drill this well.

Q Have you discussed with Mobil how the south half of Section 22 might be developed?

A We've had some discussions with Mobil. They are considering drilling a well in the south half, which presumably would include all the acreage which has not been included so far in a -- or dedicated to a well in the section.

Q Did you have discussions or were discussions held between Phillips and Mobil with regards to which spacing unit ought to have the Amerada Hess acreage dedicated to it?

A I'm not entirely sure on that point.

Q But at this point your understanding is that Amerada Hess is willing to have their acreage contributed to the Phillips acreage to form a 160-acre nonstandard unit?

A That's correct, yes.

Q Do you see any engineering reason that would cause the -- cause you to recommend that that not occur?

A No. Based on the geological interpretation it appears that that would be including all the productive acreage that we could in our spacing unit for our well.

Q When we look at ARCO's proposal whereby the southwest of the southwest would be added into your spacing unit, do you have an engineering opinion as to whether or not that is acceptable?

A Again based on the geological interpretation, that acreage is -- doesn't have any pay sand in it and as such, it is essentially nonproductive.

From the discussions we have had with some of the other offset operators, I feel that they would probably have an objection to that in that we would be adding additional acreage to our unit and under our proposal getting a -- subsequently getting a higher allowable for essentially nonproductive acreage. I think the offset operators would feel that was giving us, perhaps, an unfair advantage.

Q In addition, would the inclusion of the ARCO acreage significantly alter the distance between the well and the end of its spacing unit in relation to the dis-

tances of the other wells to the ends of their spacing units?

A Yes, it would. Part of that ARCO acreage would be further from the proposed location than any acreage in a standard -- yeah, in a standard spacing unit orthodox location.

Q And would be farther away than any of the previously approved nonstandard units, such as the one (unclear).

A Yes, it would be farther away than any other ones in the field.

MR. KELLAHIN: That concludes my examination of Mr. Currie.

We would move the introduction of his Exhibits Five through Ten.

MR. CATANACH: Exhibits Five through Ten will be admitted as evidence.

CROSS EXAMINATION

BY MR. CARR:

Q Mr. Currie, I'd like to direct your attention to Phillips Exhibit Number Six and maybe I didn't undertand the purpose of this exhibit.

You did receive this letter, Phillips did, did it not?

A That's correct. We were just entering this to show the mechanism by which McIlvain was granted their well.

Q And at that time, at the time of this letter, you had at that time the west half of the northwest quarter of the section, did you not?

A Right.

Q And you didn't oppose this application.

A No, we did not.

Q If I understand your Exhibit Ten and the testimony that you made while testifying to Exhibit Five, I think you testified there was communication between the existing wells in the reservoir that are producing from the reservoir.

A That is correct.

Q And looking at Exhibit Number Ten, isn't it fair to conclude that the wells that are there drain over a fairly wide area?

A Yes.

Q And that there's nothing in your testimony that's intended to suggest that 320 acres isn't an appropriate spacing pattern for this pool.

A No.

Q That you could normally expect a well to drain the 320 acres.

A That is correct.

Q Now if the -- your work is based on the geological work that Mr. Halle presented.

A That's correct.

Q And if that zero line on the isopachous map was further to the south, isn't it fair to assume that a well at your proposed location could drain that acreage in the south half of Section 22?

A It would be a fair assumption, yes.

Q Now, have you been involved with the development of this acreage during the last two or three years?

A During approximately the last year.

Q Were you aware of any offer ever made by Marathon to develop a standard west half unit?

A A standard west half unit in Section 22?

Q Yes.

A I don't think that would be possible.

Q Okay, do you know if a proposal like that was ever made?

A No.

Q What about a south half development plan? In discussing with Mobil and others what Amerada might do has the question of a south half unit ever come up?

A Yeah, I assume we've discussed that.

Q Do you have any opinion on whether or not a well in the south half would drain the south half of the section?

A If there was pay sand there, yes.

Q And if we assume that there's pay sand, it could probably be drained, right?

A Yes.

Q Now, I get the impression you don't like ARCO's proposal very well.

A It doesn't -- doesn't really add anything to our --

Q At the present time there are 400 acres in Section 22 that are not dedicated to a well, isn't that correct?

A That is correct.

Q And ARCO's proposal would split that 200 to one well, 200 to another, if it's drilled.

A Yes. That is correct.

Q And didn't you originally propose, or early propose to ARCO, that the entire southwest quarter of 22 also be included in a proration unit to be dedicated to your -- the well that we're now here discussing?

A I believe our land people had some informal discussions on it.

Q And the southwest quarter was originally considered for dedication --

A Yes, the entire southwest quarter.

Q And if that had been included it would have increased the allowable for the proposed well, isn't that true?

A Yes, based on the formula we're proposing here.

Q Is there a penalty on the production from the McIlvain well?

A There is none now, as it's the only well producing out there.

Q And if your recommended penalty was approved and pipeline prorationing was in effect, that would in effect penalize production from the McIlvain well also, would it not?

A It may. The calculated absolute open flow on the Sun well, the other well up there, is around 9-million cubic feet a day. That would indicate it would be possible for the Sun well, if it was producing 8-million a day, and you said the McIlvain acreage would only have 75 percent of that, that would be 6-million a day, which is what it's producing now.

Q So what you're really proposing is that the penalty be keyed off of the best well in the area; i.e. the Sun well due north.

A Well, I believe that is the way that the

ratable take --

Q And so if your well had a deliverability that didn't compare in any way to the Sun well, you still would have a penalty based on a better well on adjoining acreage, isn't that right?

A That's my understanding of how the ratable take works.

Q And if you tested the well and looked at its deliverability, wouldn't that give you an indication of how this well would actually produce?

A Yes.

Q And wouldn't it be wiser or fairer to -- to penalize a well based on what it can do as opposed to what an offsetting well might do?

A (Unclear.)

Q You could do that, though, couldn't you? You could look at the deliverability and set an allowable based on half of the well's deliverability, since you have half the acreage.

A I"m not entirely sure whether that would be fair or not. You can do anything.

Q You think that getting only half of the deliverability, since you only have half the acreage, woudn't be fair?

A Well, I really hadn't thought about that.

Q If in fact you had a penalty that was based on the best well in the pool and your well wasn't as good as that, in fact that penalty could be no penalty at all, couldn't it?

A I could work out that way.

MR. CARR: I have no further questions.

MR. CATANACH: I have no questions of the witness. He may be excused.

MR. KELLAHIN: That concludes our presentation, Mr. Catanach.

MR. CARR: Mr. Catanach, at this time ARCO requests that the application be denied, and if it's granted we would request that you impose an effective penalty based upon the deliverability of the well, not keyed to the best well in the pool.

We would request that the order provide a penalty that would in fact restrict production.

More than that, we request the application be denied because we think if it's denied we could develop the south half of the section at a standard unit, which is consistent with the pool rules.

We do not intend to call a witness.

MR. CATANACH: Is there any-

thing further in this case?

I'd like to read a letter in Case Number 9331 that was received by the Division on March 14th from Montgomery -- Montgomery & Andrews. They request an entry of appearance in this case by Mobil Exploration and Producing U. S. Corporation.

That's all I have.

This case will now be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9331, heard by me on March 16, 1988.

David R. Catanach, Examiner
Oil Conservation Division