STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF:	
APPLICATION OF McKAY OIL CORPORATION FOR A HORIZONTAL DIRECTIONAL DRILLING PILOT PROJECT AND SPECIAL OPERATING RULES THEREFOR, CHAVES COUNTY, NEW MEXICO.	CASE NO. 10190, ~~10205~~, 10206, 10207, 10208

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

January 10, 1991
2:21 p.m.
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on January 10, 1991, at 2:21 p.m. at Oil Conservation Division Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah F. LaVine, RPR, Certified Court Reporter No. 252, in and for the County of Santa Fe, State of New Mexico.

FOR: OIL CONSERVATION DIVISION

BY: DEBORAH F. LAVINE, RPR
Certified Court Reporter
CCR No. 252

I N D E X

January 10, 1991
Examiner Hearing
Case Nos. 10190, 10205, 10206, 10207, 10208

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A P P E A R A N C E S

BEFORE: DAVID R. CATANACH, Hearing Examiner

FOR THE DIVISION:
ROBERT G. STOVALL, ESQ.
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310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

FOR THE APPLICANT:
SANDERS, BRUIN, COLL & WORLEY, P.A.
Attorneys at Law
BY: DAMON C. RICHARDS, ESQ.
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Roswell, New Mexico 88202

EXAMINER CATANACH: At this time, we'll call case 10190.

MR. STOVALL: Application of McKay Oil Corporation for a horizontal directional drilling pilot project and special operating rules therefor, Chaves County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

MR. RICHARDS: Yes. Damon Richards with Sanders, Bruin, Coll & Worley, P.A., Roswell, New Mexico. I'm here on behalf of McKay Oil Corporation, and I have two witnesses to be sworn.

EXAMINER CATANACH: Are there any other appearances? Will the two witnesses please stand and be sworn in.

(Witnesses sworn.)

(Applicant's Exhibits Nos. 1 through 4 were marked for identification.)

MR. RICHARDS: As a preliminary matter, we're dealing with five cases. You've called 10190, but there's also 10205, 10206, 10207, and 10208, all of which are horizontal drilling. All of them are almost identical. They should probably be consolidated. We've already marked the exhibits for all five cases. The exhibits are set up so that the Exhibit Number 1 is a plat. Exhibit Number 2 on each one is the same, which is a picture of the vertical hole. Exhibit Number 3 is another plat. Exhibit Number 4 is the C-101s for each one. So if we can consolidate those or consider them all as one unit, we'd appreciate doing that.

EXAMINER CATANACH: Okay. At this time, we'll go ahead and call cases 10205, 10206, 10207 and 10208.

MR. STOVALL: Each of those cases is a penalty application of McKay Oil Corporation for a horizontal directional drilling project and special operating rules therefor in Chavez County, New Mexico.

EXAMINER CATANACH: Are there any additional appearances in any of these other cases? You may proceed, Mr. Richards.

JIM SCHULTZ

the Witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RICHARDS:

Q. State your name, please.

A. Jim Schultz.

Q. And where are you from?

A. Roswell.

Q. What's your employment?

A. I'm a landman for the McKay Oil Corporation.

Q. Have you testified before the commission before?

A. Yes, I have.

Q. Have your credentials been accepted?

A. Yes.

Q. Have you reviewed the five applications and actually submitted Exhibit 4 on each one of these plats that

has been submitted to the Oil Conservation Division?

A. Yes.

Q. Are you intimately familiar with the facts leading to these applications?

A. Yes.

MR. RICHARDS: We submit Mr. Schultz as being qualified.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Richards:) Mr. Schultz, look at Exhibit Number 1 on each of the plats that are set out before you. And you've marked on these plats in pink a designated 160-acre proration unit. Can you explain those designations?

A. Yes, these are the legal proration units for an Abo well.

Q. The first one in case 10190 is the West Fork Unit Number 10. The second one, 10205, is the West Fork Unit Number 3. The third one, West Fork Unit Number 5, is the case number 10208. The fourth one, case number 10206, which is the West Fork Unit Number 6. And the last one is the West Fork Unit Number 4 in case 10207. Each of these will be Abo wells; is that correct?

A. That's correct.

Q. Who owns the proration unit that's marked in pink on each of these exhibits?

A. McKay Oil Corporation owns 100 percent of the title.

Q. Have you examined the land records in order to determine that information?

A. Yes, I have.

Q. Have you also examined the land records for the offset operations for 160 acres surrounding the pink locations?

A. Yes.

Q. Who is the owner of record of those, on each one of these plats?

A. McKay Oil Corporation is the record owner.

Q. I notice on some of these that it has Inexco is written on the map. Why is that?

A. We obtained a farmout agreement from Inexco which we've, since the time of the farmout, we've earned the rights of each lease.

Q. So McKay Oil is now the record title owner of those also?

A. Yes.

Q. Were any notices sent out to any other operators in this case?

A. No. Since we were the only offset operator, we did not send out any notices.

Q. Were you responsible for preparing and filing the C-101 which is marked as Exhibit Number 4 in all five of these cases?

A. I either prepared them or oversaw the preparation of them.

Q. Did you prepare Exhibit Number 1?

A. Yes, I did.

Q. Is it in your opinion in the best interests of conservation and prevention of waste and protection of correlative rights that these applications be approved?

A. Yes.

MR. RICHARDS: We move admission of Exhibits 1 and 4 on each one of these five cases.

EXAMINER CATANACH: Exhibits 1 through 4 in each of the five cases will be admitted as evidence.

(Applicant's Exhibits Nos. 1 through 4 were admitted into evidence.)

MR. RICHARDS: I have no further direct examination for this witness at this time.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Schultz, the pink outline on each of your Exhibits, that indicates the proposed proration unit for each of these wells?

A. Yes.

Q. Green represents acreage controlled by McKay?

A. Yes.

Q. And let's see. Did you say that the Inexco acreage

had been purchased by McKay?

A. We earned it under a farmout agreement.

Q. So they retain a overriding royalty interest?

A. Yes.

EXAMINER CATANACH: I believe that's all I have of the witness.

MR. STOVALL: Let me ask one question just to make sure.

EXAMINATION

BY MR. STOVALL:

Q. Is each of the wells going to be completely within the orthodox drilling window for the prospective proration units?

A. Yes, they will. We'll not have a well come any closer than 660 feet to any outside boundary line.

MR. STOVALL: Okay.

MR. RICHARDS: Well, that would be the legal location.

A. With the exception of the West Fork Unit Number 5. It was originally surveyed in as an unorthodox location being 660 from the north, 460 from the east. So the closest that well will come to an outside boundary line will be 460 feet.

MR. STOVALL: And that's case 10208?

MR. RICHARDS: Correct.

Q. (By Mr. Stovall:) Now do the rules for this pool require 660 foot?

A. Yes.

Q. Will the producing interval of the wellbore be more than 660 feet from the -- I haven't read the application for that. I'm just asking you at this point so that I can confirm it. Is the producing section of that well going to be inside the 660-foot window, more than 660 feet from the --

A. Let me make sure I'm understanding. When we take the hole vertical, we will kick off and probably penetrate into the Abo formation within 40 to 60 feet from that location which would still make it an unorthodox location where it was producing even if we hit it in the southwest direction.

MR. STOVALL: That answers my question. I have nothing further.

EXAMINER CATANACH: The witness may be excused.

DALE KELTON

the Witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. RICHARDS:

Q. Will you state your name and address.

A. Dale Kelton, 21 Western Briar, Roswell, New Mexico.

Q. For whom do you work, Mr. Kelton?

A. McKay Oil Corporation.

Q. What do you do for McKay Oil Corporation?

A. I'm operations manager.

Q. What type of engineering experience, training, or

education have you had?

A. I went two years at New Mexico State and at the end of this year should fill the requirements to have a mechanical engineering degree. My experience has been in the field. I've drilled and completed in excess of 100 wells and two horizontal wells.

Q. And most of those wells have been in the Abo formation?

A. Yes, they have.

Q. Is the objective formation for these five cases in the Abo formation?

A. Yes, they are.

MR. RICHARDS: We request qualification of Mr. Kelton as an expert in this area.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Richards:) Mr. Kelton, you have before you five different proposals. Rather than go through each one of these separately, let's try to go through just one of them. Take your choice, and we'll go through it. And the rest of them -- whichever one you want. Which one did you pick?

A. 190, the one you have.

Q. That's West Fork Unit Number 10, case number 10190. Please look at Exhibit Number 2, I think. First of all, the objective depth of the proposed horizontal well is in the Abo formation. Can you give me the depth of the Abo formation

that you plan to encounter in these wells?

A. In these wells, we'll be looking at working 2950 to 3050. This particular well, according to the offset well that I examined, will be at 2857 to 2877 approximately.

Q. Look at Exhibit Number 2 and explain to us the diagrams that you have drawn.

A. Okay. The technique that will be used, we'll drill a vertical hole, run a compensated neutron density and a dual lateral log to determine produceable zones. And from that point, we'll set a cement plug approximately 60 foot above the zone selected to horizontal drill. And at that time, we have proposed to run our four and a half casing down to that point, cement it in, and drill out the bottom of the casing, kicking off at 2807 and 2827, drilling to 90 degrees and proposing to drill 500 foot on the horizontal through the sand.

Q. Are you aware of Rule 111?

A. Yes, I am.

Q. Are you aware that deviational surveys will need to be conducted?

A. Yes.

Q. Do you plan to conduct those surveys?

A. Yes, I will. The first 30 feet, we'll run surveys every ten feet to ensure what direction we're going and that we're not deviating from one direction to the other. And then from there on, it'll be every 20 feet till the curve is

finished and then every 100 feet on the horizontal hole.

Q. Mr. Kelton, look at Exhibit Number 3 with me also. Did you prepare this exhibit?

A. Yes, I did.

Q. What is the purpose of this exhibit?

A. It's to show, number one, the well, where the proposed well is going to be located. And then we're proposing to drill. With a mechanical tool, it's hard to tell from the beginning which direction you're going to kick off. And we want to propose to have a 360-degree radius that we can drill in. And we'll stay within the 660-foot limitations of the outer section line, except for the West Fork Number 5, I believe. That's a little different.

Q. The West Fork Number 5, you may come closer than 660 foot; is that correct?

A. The way I have it proposed, drawn up here, we're going to try to drill in the southwest quarter or quadrant. That will keep us within the -- we can end up no closer than 460 --

Q. No closer than 460?

A. -- from the west outer boundary.

Q. What is the reason you propose to drill these wells horizontally?

A. The studies that we've had after the hydraulic fracturing of these zones, we're not getting the adequate

penetration that we designed the well or designed the job to get. So we're planning on the horizontal will give us a 500-foot horizontal bore hole that ensures us that we have that much open sand to produce out of.

Q. You're not requesting an increased allowable as a result of this horizontal drilling at this time; is that correct?

A. That's correct.

Q. Mr. Kelton, do you believe it to be in the best interests of conservation, prevention of waste, and protection of correlative rights to approve all five of these applications?

A. Yes, I do.

Q. Did you prepare or were Exhibits 2 and 3 on all five of these cases prepared under your direction or supervision?

A. Yes, sir.

MR. RICHARDS: We move admission of Exhibits 2 and 3 in all five cases.

EXAMINER CATANACH: Exhibits 2 and 3 in all five cases will be admitted as evidence.

(Applicant's Exhibits Nos. 2 and 3 were admitted into evidence.)

MR. RICHARDS: I have no further direct questioning of this witness.

EXAMINATION

BY MR. STOVALL:

Q. Let me ask you a question in general about, with the exception of 10208, putting the advertisement in the application, you've indicated that no portion of the wellbore will be closer than 660 feet to the outer boundary of the assigned spacing and proration unit. Are you changing that?

A. No. Other than the 208, all wells should remain within 660 of the outer boundaries.

Q. Now let's look at 190 then for a moment in looking at your Exhibit Number 3 --

A. Uh-huh.

Q. -- your surface location is 1980 from the south and west. And that is 660 from the north and east boundaries of the proration unit; correct?

A. I was looking at the outer of the whole section, of the quarter section lines.

Q. Of the quarter section lines, yeah.

A. Yes, it would come within 140 feet, I believe, at that distance of the outer line.

Q. A proration unit is 160 acres; correct?

A. Uh-huh.

Q. And pool rules require that the well be at least 660 from the outer boundaries of the proration unit and 330 from quarter section lines?

A. I believe that's correct, yes.

Q. So in other words, using 190 as the example case and looking at Exhibit 3 in that, you start with your legal -- you start the well at a legal surface location of 1980 from the south and west --

A. Uh-huh.

Q. -- only by going, assuming correct coordinates from 180 to 270 degrees, in other words, going southwesterly direction, can you keep it in a legal orthodox well location?

A. If we kick off -- if our initial kickoff is in the southwest quadrant direction, yes, we can keep it within that. It shouldn't stray from that quadrant.

Q. But if you should end up going to the north or east, you will immediately become unorthodox within that proration unit --

A. That would be correct.

Q. -- towards the outer boundary of the proration unit; is that correct?

A. I believe so.

Q. That being the case, one of two things has to happen. Either you have to amend the application and would have to readvertise to authorize what you seek; that is, to get how far you can encroach towards the outer boundary of the proration unit. We need that, or the order will have to be written in such a way as to direct that you go no closer to

the outer boundary than the 660 feet.

So I don't know if you need to discuss that or what, but one or the other has got to happen. You've either got to revise your testimony here and keep your wellbore within the legal windows --

A. Well, our initial intent would be to kick off in the southwest quadrant. But what we were thinking of doing, if we did get off, we were wanting, I guess, permission to go ahead and drill a horizontal hole. As far as the legalities of the orthodox, I guess you'd have to talk to Jimmy. I'm not too much on the --

Q. Did I understand your testimony correctly that you can't really say for sure which direction that will kick off and the tools you're going to use?

A. When you're at zero degrees, you have no idea which way your tool is facing with a mechanical tool, which way the initial kick off is going to be, to the best of my knowledge with what the engineers tell me that I've talked to. The tool that we drilled the two holes with previously was that way.

MR. RICHARDS: Do you mind if you direct some questions towards Mr. Schultz. He might be better able to answer some of those.

MR. STOVALL: Let's make sure we've got no more.

MR. RICHARDS: You go ahead and ask him all you want, and then we'll skip to Mr. Schultz.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Kelton, your Exhibit Number 2 shows not one but multiple horizontal sections. Do you propose to drill more than one horizontal section per well?

A. I think our greatest intent was to drill one leg in the horizontal hole. If the zones we encounter are multiple, we would, you know, we'd like to have permission to go ahead and kick off. But I would say at this time the single leg would probably be all we would do.

EXAMINER CATANACH: Well, if in fact we have to readvertise, we might as well throw that in too.

Q. (By Mr. Stovall:) Let me just ask you, again, a lawyer venturing into engineering here, if you did a multiple leg horizontal program and you're telling me you don't have any control over which way you start out because of the tools you're using, what's to say that you wouldn't get two horizontal wells going the same direction?

A. Well, basically we'd look at this -- see, the Abo is laid in in fingers a lot of times. We may get two or three different zones that are productive in one area. And we can go in and hit one zone and then go down and kick off again in either the same direction or a different direction, be in a different --

Q. So you could conceivably have two horizontal holes

going out in the same direction parallel to each other?

A. Possibly.

Q. Does that do anything to the rock like weaken, create a problem as far as interaction between them?

A. Well, there will be a liner. It'll be gravel packed in there once you get the horizontal hole drilled.

MR. RICHARDS: Let another lawyer venture into the engineering field. They can tell as soon as they kick off. They can run the deviation tool down. They can tell which way it's going. If they don't like the way it's going, they can plug it back and then --

MR. STOVALL: And try again?

MR. RICHARDS: -- try again and kick off in another direction; is that correct?

A. Within the first ten feet, you know, you can pretty much. In this case, we may be able to tell even before then for the fact there's no casing around. So you don't have any magnetism for your azimuth reading that you have in a reentry. You know, we can drill three to four feet and be three or four degrees and figure out which way we were going.

Q. (By Examiner Catanach:) These wells are already drilled; is that correct?

A. No, they're not.

Q. None of them have been drilled at all?

A. (Witness shakes head.)

Q. I just want to make sure I understand the procedure. You go down, drill, and set your surface casing?

A. Well, we'll set our production casing down to approximately 60 feet above the top zone that we would have interest in drilling the horizontal hole. And you just drill out the bottom of it. There would be a cement plug set before the casings are in, and it would be given an allowable time to set up.

Q. Hold on a second. You're getting way past me. Initially when you spud the well, you go down and you drill to the surface depth and set surface casing?

A. Right.

Q. And then you drill down to what depth after that?

A. For your proposed total depth, which would be 3400 feet.

Q. Is that the same depth in all the wells?

A. On all these, I believe that's correct. And at that point, we'll run electric logs to determine what zones will be producible. And we can choose from there which depth we want to try to kick out in.

Q. Then you go back and you run your production casing to 60 feet above the zone of interest?

A. Well, first, we'll set a cement plug through the zone, back through the zone, up to 60 foot above the zone of interest. And then we'll run production casing, which in this

case will be four and a half casing, down to that point. And then it would be cemented in.

Q. You set the production casing just above the zone of interest?

A. Uh-huh, 60 foot.

Q. (By Mr. Stovall:) Is that 60 feet in all cases?

A. Well, being a short radius, we want to try to eliminate going through as much of the red shale that we can, and so that's about as high as we want to get above it.

Q. I went to one application that said --

A. On all these, yes, sir, that's right, 60, 60 foot.

Q. The one application I'm looking at says 40 feet above. I'm not sure that makes a whole lot of difference.

A. Probably a typo, I guess. Which one is it?

Q. 10207 is the one I'm looking at. I'm looking at the actual application, not an exhibit.

MR. RICHARDS: I believe that 40 foot is showing the difference in where they start to kick off and where they actually achieve horizontal.

(A discussion was held off the record.)

MR. STOVALL: It says, Cement back to approximately 40 feet above the zone and wait 24 hours. I don't know if that makes any difference or not.

(A discussion was held off the record.)

A. With two different radiuses, see, you can't kick

off at one point and then go back to the same point and kick off in another direction. You have to drill down and get a new pilot hole started.

MR. STOVALL: I understand that. I just want to make sure that if we write an order, we don't do something that places you under greater restriction than you really want to be. We want to make sure it's fair.

MR. RICHARDS: On the right-hand side, you'll see it says 60 foot over here and this says 40 foot.

THE WITNESS: I believe he was looking at the letter of application.

Q. (By Examiner Catanach:) So anyway once you set your production casing, then you go down and kick off?

A. Uh-huh.

Q. What angle of build do you guys anticipate?

A. Probably about a degree and a half per foot is what we'll be looking at, 1.5, 1.7 degrees a foot.

Q. So it's a very short radius?

A. Uh-huh. We'll try to end up at 90 degrees and be in somewhat the middle of the sand plus or minus a foot or so.

Q. And you would try and finish off your horizontal section just as you came into the zone of interest?

A. At 90 degrees?

Q. Yes.

A. Yes, sir.

Q. And continue drilling about 500 feet from there?

A. Uh-huh.

Q. So the kickoff point is likely to be varied in each of the wells?

A. Are you talking about 60 and 40 or different in depth?

Q. No, in the different wells, the kickoff point's likely to be different?

A. Yes. In an undrilled well, it's kind of hard to tell where we're at.

Q. McKay has attempted this before?

A. Right.

Q. What kind of success has he had?

A. We didn't have a lot of success with it. The tool we were using, we feel, was still in the developmental stages. We had problems with what they call flex pipe in the tool itself of actually having a continuous build rate. And at one point, you may be building it two degrees per foot. And the next point, you may be drilling at three and a half degrees per foot, depending on how soft the formation is. I think that can happen to you with any of them. But we were 170 feet into LLME 3 when the flex collars parted on us, and we couldn't fish it out of the hole.

Q. I also understand you had some trouble with determining the direction of the kickoff of the horizontal

section. Do you think that that problem is going to be solved?

A. Are you talking about the initial kickoff direction?

Q. Right, right.

A. No. When you're at zero inclination, it's just hard to -- you can't tell which way you're -- I know they've done a well out east of Roswell where they run a, it's just a sub that they have, an orientation sub is what it is. They have a tool that they run in that'll supposedly orientate it. But they were off 100 degrees on that even.

Q. So the only way you can get around that is to go ahead and start drilling the horizontal and then survey it to see what direction you're going in?

A. That's correct.

Q. (By Mr. Stovall:) Who selected the surface location? Are you knowledgeable about that, or should we bring Mr. Schultz back on that too?

THE WITNESS: I think Jimmy would be the one on that.

MR. STOVALL: Nothing further.

EXAMINER CATANACH: I think that's all we have for this witness.

MR. RICHARDS: Let me recall Jim Schultz. Mr. Schultz, let me remind you that you're still under oath.

MR. STOVALL: Mr. Richards, do you want to do it, or

would you like us to just go ahead and get our concerns out of the way?

MR. RICHARDS: Yeah, go ahead. Yeah, maybe you'll be quicker.

JIM SCHULTZ

the Witness herein, having been previously sworn, was examined and testified as follows:

FURTHER EXAMINATION

BY MR. STOVALL:

Q. Mr. Schultz, you heard the previous examination regarding questions about orthodox locations, did you not?

A. Yes.

Q. Do you remember them well enough to address that question without me going back through the whole series of questions?

A. I believe so. Your main concern is the locations that are already beginning at a point 660 from the outside boundary line of the proration unit. And the reason I believe that we leave it open to drilling somewhat, we will attempt not to, but leave the option open of drilling in an unorthodox location is because since these wells have not been drilled yet as other wells that may have, you know, you've got to look at the log. And you can correlate these particular sands. The Abo sands are meandering stream channel sands that get stacked on top of each other. And you may not hit one. With

about, I think there's like 14 of them that we've at least been charting through this area. You're going to hit one or the other somewhere.

And what you try to do is after we get the hole down vertically, we'll compare that with other logs on offset wells to determine if the sand seems to turn that direction or away from that direction. And that's the reason why once we get down there and see what we have, we may decide to attempt to take it in the southwest direction, northwest direction, whichever most benefits us at the time, trying to chase that sand channel.

Of course, our basic concern is to try to stay in an orthodox location. And basically that's the way we see it right now, but I may have to come back to you after we kick off and we see where we're at. Or if I see where the sand channel is going in a different direction that would take me unorthodox, to come back to you and ask for an unorthodox location at that particular point in time.

I didn't feel it was appropriate to do that prior to actually drilling the well and knowing what we have down hole, so that's why we didn't file for any sort of unorthodox location approvals on any of these wells at this particular time.

Q. That being the case -- well, let me ask you one quick question first. A couple of these wells are like 1650

from the outer boundary of the proration unit.

A. Uh-huh.

Q. And those give you that full 360-degree latitude. Is there any reason the others couldn't be moved to a more central location within the proration unit?

A. The other wells were staked prior to that. The West Fork Unit Number 3 well, and I'm sorry, I don't know which case that is.

MR. RICHARDS: 10205.

MR. STOVALL: Okay.

A. That was originally proposed just to be a vertical well. And right now after it's been, I think we're down about 1,000 feet or so, we've deemed that we may -- our investors may wish to take it horizontal.

Q. (By Mr. Stovall:) That well is already being drilled then?

A. It is being drilled.

Q. Under a permit for a vertical well?

A. For a vertical well, that's correct. So the other two wells that are in that same section, being the West Fork Number 4 and the West Fork Unit Number 6, were staked at the 650/650 for that particular reason of we may wish to take the thing horizontal. The West Fork Number 10 well which was staked 1980/1980 was permited as federal minerals. And that was a location chosen due to geology and topographical

problems that we have. The same thing with the West Fork Unit Number 5. It borders right along what's called the Macho Arroyo, and it was basically the only place that the Bureau of Land Management would allow us to have a location at all in that quarter section.

Q. Back in these cases which are now before us then, you are saying that at this time you are not requesting an unorthodox location. And therefore --

A. No.

Q. -- an order issued would then in fact limit your direction particularly on the 1980 well --

A. Yes.

Q. -- would limit you from being any closer than 660; is that correct?

A. Yes. I didn't know of another way. I think I had briefly talked with Mr. Catanach about some of these problems, and he told me that new rules and regulations dealing with horizontal drilling are being formulated. And there are certain areas that have not and probably cannot be addressed at this particular point in time of which I assumed this problem would fit into it.

You just don't know what you have until you get down there, and you don't know which direction you want to go initially. And it's kind of tough to apply for an unorthodox location when your intent when you originally drilled the well

was not to have it unorthodox, due to drainage. We own the offset acreage and we don't want to drain ourselves. We want to drain the full 160 acres which basically means we have to drill somewhere towards the middle of the proration unit in order to effectively do that. So that's our intent. It just doesn't work in practicality when you get down there.

Q. Is there an engineering method, a drilling method, or hardware available with which you could control your direction of kickoff?

A. Yes, there is. You go into a medium range or long radius drilling. We've looked into Barkley, Yaves Smith International, a slim drill, and looked at doing that. However, when you're dealing with such a small thin pay zone such as the Abo, most of these little stream channels or stringers, or whatever you want to call them, you know, if you have one 20 to 30 feet, you have a pretty good size pay zone. But that's pretty hard to hit when you start 300 feet above your zone to come out actually into that area. And that's why in this particular area we feel that a short radius is needed. And that's a little tougher to guide your directional when you drill.

MR. STOVALL: I will say, yes, we are looking at horizontal rules. And each time a case comes before us, it helps us get a little closer to getting something that's workable.

FURTHER EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Schultz, is it my understanding then that you wish to proceed with the cases, not readvertise them, and any orders that will be issued by us will in fact limit the horizontal section of the wellbore to no closer than 660 feet?

A. Yes.

Q. And it will not contain approval for multiple drain pools?

A. Can I back up on that last question?

Q. Sure.

A. I assume there's no way of requesting an unorthodox location, maybe, because we don't know.

Q. What I'm saying is other than readvertising these cases and waiting four more weeks, I don't think that there's anything we can do at this point because they were advertised as such.

MR. STOVALL: Let me clarify and make sure the understanding which you have is correct, and I don't think it is. I think that if you would like to readvertise these cases, we can word a notice in such a way to authorize or to advertise it as seeking approval for an unorthodox location within certain limitations, depending on the drilling. I mean, the fact that you don't know exactly where the wellbore is going to be does not prevent us from giving you some

flexibility to deal with the problem you've got, which is why I've gotten you into this line of questioning in the first place.

So I would say that, you know, it may be possible for us to renotice this case, for you to perhaps amend your application. And we can come up with some language which will give you that flexibility because I think one of the things that you need to be aware of is that, particularly with those 1980 wells, we may set a limit as to how close you can get. If you head west, if you're at 660 from the west line and you head west, we may not let you go 500 feet. And it would be nice for you to know that before you start drilling, I would think. So would you like to adjourn this for the time being, come back, and discuss it with counsel and make a request to us to address that problem at this time so that you don't have to refile after you've drilled a well and seek approval for something that you're stuck with, if you will?

MR. RICHARDS: Do you want to talk about it and then let him know?

MR. STOVALL: I'd recommend that at this point. I'd say go figure out what you want to do and try to save yourselves some time.

THE WITNESS: I'll ask the commission for this. Could I leave the approval and leave it for your advisement on the two wells that are staked 1650 1650 for right now so that we may

have approval as soon as possible on that and then maybe refile on the other three?

MR. STOVALL: I think we can do that, with the understanding that if those 1650s go towards the outer boundary of the proration unit, you're limited to 330 feet on the arm; is that --

THE WITNESS: Yeah.

MR. STOVALL: Is that acceptable?

(A discussion was held off the record.).

Q. (By Mr. Stovall:) Let me go back here. I think I understand what you're saying, and I think, yeah, if we can do that. Let me ask you about the one that you have already got drilled. I think it's 205. Is it the Number 3 well that's currently drilling?

A. Yes.

Q. And that well is 1980/1980; correct?

A. Yes.

Q. What do you want to do about that one?

A. That one, I can wait on.

MR. RICHARDS: I'd like to suggest this, that you'd allow him to go ahead and go horizontal as long as they don't infringe on the 660/660. But if they want to go within the 660, then we have to come back and readvertise or reopen the cases.

MR. STOVALL: For all cases or just for the 2005? (sic)

MR. RICHARDS: For the 2005.

MR. STOVALL: Okay.

EXAMINER CATANACH: Well --

MR. STOVALL: Let me see if I can summarize what you would like to do at this point. For case 10205, the well is currently drilling. And you would like an order authorizing you to go to a short radius horizontal well that would come no closer than 660 feet to the outer boundary of the proration unit. In other words, that limits the direction that that well can kick off. If it kicks off in a different direction, you're going to have to come back for a new hearing.

MR. RICHARDS: That's correct.

MR. STOVALL: In cases -- let me look and see. Case 10208, you have already requested that that well be allowed to go as close as 330 feet to the outer boundary of the proration unit. So it may be that we don't have to readvertise that one. You start unorthodox, and you've requested to go in as close as 330.

Q. (By Mr. Stovall:) Let's start at the top then. In case 10190, you would like to readvertise that to provide for going unorthodox to a specified distance and continue it for four weeks to allow that to be readvertised?

A. Which one is that?

Q. That's the Number 10 well.

A. Yes, that's fine.

Q. Case 10206 is 1650 from the north and east, and you'd like to go ahead and enter an order which would allow you to go horizontally and get no closer than 660 from the outer boundary of the proration unit?

A. Yes.

Q. 207, that's the well number 4. 10207 is the same. You're 1650, so take it under advisement. And if we grant it, give an order authorizing no closer than 660?

A. That's correct.

MR. STOVALL: I think that takes care of all the cases, does it not?

EXAMINER CATANACH: Yes.

MR. RICHARDS: Yes.

MR. STOVALL: I don't have anymore questions.

(A discussion was held off the record.)

EXAMINER CATANACH: The four that we're going to take under advisement, also understand that those will not approve multiple drain holes. If you do want multiple, you're going to have to come back in.

THE WITNESS: That's fine.

MR. STOVALL: And the one we are taking under advisement is no closer than 330; is that acceptable?

THE WITNESS: Yes.

MR. STOVALL: The one that we're going to readvertise.

EXAMINER CATANACH: Okay. That's for 330?

MR. STOVALL: Yes, to go no closer than 330.

EXAMINER CATANACH: I think we have it straightened out. Is there anything else?

MR. RICHARDS: No, I hope not.

EXAMINER CATANACH: There being nothing else, case 10205, 10206, 10207, and 10208 will be taken under advisement at this time. And case 10190 will be readvertised for the February 7th hearing.

(The foregoing hearing was adjourned at the approximate hour of 3:07 p.m.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10190, 10205, 10206, 10207, 10208 heard by me on January 10 1991.

David R. Catanach, Examiner
Oil Conservation Division

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

REPORTER'S CERTIFICATE

I, DEBORAH F. LAVINE, RPR, a Certified Court Reporter and Notary Public, DO HEREBY CERTIFY that I stenographically reported these proceedings before the Oil Conservation Division; and that the foregoing is a true, complete and accurate transcript of the proceedings of said hearing as appears from my stenographic notes so taken and transcribed under my personal supervision.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto and have no interest in the outcome hereof.

DATED at Santa Fe, New Mexico, this 11th of February, 1991.

DEBORAH F. LAVINE, RPR
Certified Court Reporter
CCR No. 252, Notary Public

My Commission Expires:
August 6th, 1993