STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 12,404
APPLICATION OF HOME-STAKE OIL AND GAS COMPANY FOR AN UNORTHODOX OIL WELL LOCATION, LEA COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

May 4th, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, May 4th, 2000, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

May 4th, 2000
Examiner Hearing
CASE NO. 12,404

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E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	7	8
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* * *

Additional Submissions by Ms. Kaplan, not identified, offered or admitted:

	Identified
Statement	39
Questions	42

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

JAMES G. BRUCE, Attorney at Law
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ALSO PRESENT:

NATALIE KAPLAN, minority shareholder

* * *

WHEREUPON, the following proceedings were had at 3:43 p.m.:

EXAMINER CATANACH: At this time I will call Case 12,404, the Application of Home-Stake Oil and Gas Company for an unorthodox oil well location, Lea County, New Mexico.

I will call for appearances in this case.

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe, representing the Applicant, and I have three witnesses.

MS. KAPLAN: I'm Natalie Kaplan, a minority shareholder.

EXAMINER CATANACH: I'm sorry?

MS. KAPLAN: Natalie Kaplan.

EXAMINER CATANACH: Can you spell that for me, please?

MS. KAPLAN: K-a-p-l-a-n.

EXAMINER CATANACH: And you are an interest owner in --

MS. KAPLAN: -- in the Sarah Johnston 1 and HSOG 2, to the -- southeast quarter of --

MR. BRUCE: We'll identify those wells on the record, Mr. Examiner.

EXAMINER CATANACH: Thank you.

Okay, will the witness please --

MR. BRUCE: Two of them are the same. There is

one new witness.

EXAMINER CATANACH: Okay. If you've previously been sworn, that's okay.

(Thereupon, the witnesses were sworn.)

MR. BRUCE: Mr. Examiner, our first witness is Barbara Courtney Long, and if we could have the record reflect that she was previously sworn and qualified as an expert petroleum landman.

EXAMINER CATANACH: The record shall so reflect.

BARBARA COURTNEY LONG,

the witness herein, after having been first duly sworn upon her oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Ms. Long, what -- Skip over your first Exhibit 1 and move to Exhibit 2. Could you refer to that and tell the Examiner what Home-Stake seeks in this Application?

A. We seek to drill an unorthodox location at -- The surface location is 365 feet from the north line, 1593 feet from the east line. The bottomhole location is 150 feet from the north line, 1470 feet from the east line.

Q. Again, this would be a Fusselman test well?

A. Yes.

Q. And the northwest quarter of the northeast quarter would be dedicated to the well?

A. Yes.

Q. Looking at this Exhibit 2, first of all, Mrs. Kaplan is here. She has an interest in the -- what, the Sarah Johnston Number 1 and the HSOG Number 2 wells?

A. That's right, they're in the south half of the southeast quarter of Section 22.

Q. Okay. Now, for purposes of this hearing, is the interest ownership, mineral, royalty, working interest, common throughout the south half of the southeast quarter of Section 22?

A. Yes, it is.

Q. Then in the north half of the northeast quarter of Section 27, is mineral ownership common?

A. Yes, it is.

Q. Okay. So this well is encroaching to the east and the north of an orthodox location, but the interest owners in the northeast northeast of Section 27 are the same as those in the proposed well?

A. That's correct.

Q. Okay. Now, looking at this map, there's three Fusselman wells on here. Are they all Home-Stake wells?

A. Yes, they are.

Q. When were these wells drilled, roughly?

A. The Sarah Johnston Number 1 was drilled in 1998. The HSOG Number 2 was drilled in 1999. Shirley Boyd was

drilled this year, it's just gone on line.

Q. Okay. Prior to these wells being drilled, when were the last wells drilled in the McCormack-Silurian Pool?

A. In the Fusselman?

Q. In the Fusselman.

A. I believe that was around 1982.

Q. Okay. So for about 16 years nobody drilled, until Home-Stake came along?

A. That's right.

Q. Okay. Obviously, Home-Stake went into an older area and assumed the risk of drilling these wells?

A. Yes, we did.

Q. Have the interest owners benefitted from Home-Stake drilling these wells?

A. Yes, they have.

Q. Okay. Were all interest owners in the south half of the southeast quarter of Section 22 notified of this hearing?

A. Yes, they were.

Q. And is Exhibit 1 my affidavit of notice?

A. Yes, it is.

Q. Going through this just briefly, Ms. Long, Exhibit A lists working interest owners, and then Exxon and Texaco gave out term assignments, I believe, to the working interest owners?

A. Right, the Exxon term assignment was on the southeast quarter of 22, and we got a term assignment from Texaco for the northwest of 27.

Q. Okay. Northeast?

A. I'm sorry, northeast of 27.

Q. And then going a few pages further, Exhibit B, that lists all of the royalty and overriding royalty owners in the south half, southeast, of 22?

A. That's correct, it's a run sheet from the oil purchaser.

Q. Okay. Was Exhibit 1 compiled from company records, Ms. Long?

A. Yes, it was.

Q. In your opinion, is the granting of Home-Stake's Application in the interests of conservation and the prevention of waste?

A. Yes, I believe it is.

MR. BRUCE: Mr. Examiner, we'd move the admission of Home-Stake's Exhibit 1 at this time.

EXAMINER CATANACH: Exhibit 1 will be admitted as evidence.

Are you done with this witness?

MR. BRUCE: I am done with this witness unless Ms. Kaplan has any questions.

EXAMINER CATANACH: Ms. Kaplan, do you have any

questions of this witness?

MS. KAPLAN: Can I read a statement that I've prepared?

EXAMINER CATANACH: You certainly may, although you may want to wait till the end of the case.

MS. KAPLAN: Okay, sure.

EXAMINER CATANACH: If you have any questions of this witness, you can ask them at this time.

MS. KAPLAN: Yes, I'd like to ask, this Mozingo well that you all are preparing to drill, it will drain oil off of the two wells that I do have an interest in; is that correct?

THE WITNESS: I don't think I should -- I'm not qualified to answer that question. I think our engineer will address that.

MS. KAPLAN: That's all the questions I have.

EXAMINATION

BY EXAMINER CATANACH:

Q. I just want to make sure I understand. The interest ownership in the Johnston Number 1 and the HSOG Number 2, you testified that that is the same --

A. Yes.

Q. -- interest as the proposed well?

A. No, those two are the same owners. But the people who own in our proposed location are also the same

owners as in the northeast northeast of 27. The north half of the northeast of 27 is common, the south half of the southeast of 22 is common.

Q. So the interest is different between the proposed well and the two wells in Section 22?

A. Yes.

Q. Okay, let's see --

MR. BRUCE: We did not notify anyone in the northeast of the northeast of 27, because that is the same as in the proposed well.

Q. (By Examiner Catanach) Okay. Ms. Kaplan does not have an interest in the proposed well?

A. No, sir.

EXAMINER CATANACH: Okay, that's all I have.

MR. BRUCE: Again, Mr. Examiner, Mr. Evans was sworn and qualified as an expert petroleum geologist in the prior case, and I'd like the record to reflect that.

EXAMINER CATANACH: The record shall so reflect.

MICHAEL C. EVANS,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Mr. Evans, let's discuss the Fusselman geology in this area, but for purposes of orienting the Hearing

Examiner from the last case, approximately where is the well in the prior case on this map?

A. It's in the northwest northwest of Section 26, labeled the Shirley Boyd Number 1.

Q. Okay, you mentioned that well. And then the other --

A. The well I mentioned --

Q. The proposed well is further to the southeast?

A. In the previous case?

Q. The previous case.

A. Yes.

Q. The proposed is just off of this map --

A. Yes.

Q. -- to the southeast? Okay.

Okay, let's go into this map. Could you describe the geology in this area and why you desire an unorthodox location for your proposed well?

A. Yes, the Fusselman formation is truncated up against the side of a large dome located underneath the town of Eunice, and we're playing a terminus of the Fusselman and trying to rely on the faults as various seals and barriers as they provide, and the only way to accurately identify where all the faults were and where we hope the precise location of the terminus is, was by 3-D.

This map is exactly reflectant of a portion of

that 3-D survey we ran over seven sections in this area. And in the southeast quarter of Section 22, Home-Stake drilled two wells, the Sarah Johnston Number 1 and the HSOG Number 2, based on that 3-D survey. And they came in very close to the 3-D survey as was picked.

And now we're proposing to drill a well in the same fault block as the HSOG Number 2. That well being proposed is the Mozingo Number 1-27.

Q. Okay. Now, looking at this map, just from a geologic standpoint, will the proposed well have any effect on the Sarah Johnston Number 1 well?

A. None.

Q. Because of the faulting?

A. Correct.

Q. Okay. But at this point, it is in the same fault block as the HSOG Number 2 well?

A. That's correct.

Q. Why do you desire to move north or north and east of an orthodox location in the proposed Mozingo Number 1 well?

A. There are multiple reasons. The first and most outstanding reason is that the orthodox location would put the Mozingo down further into the water leg of the formation.

Now, when I say a water leg, I'm not saying 100

percent water. As with any formation that has the water drive as one of the mechanisms of pushing the oil up into the wellbore, you have varying degrees of saturation of water.

At around 3740 you have a saturation of water, produced water, nearly 50 percent, and the economics of the well severely decline at that point. By 3760, it is almost a toss which way you should go, whether you should try to make a completion or not.

So far, we have made completions on two wells that have barely placed above 3760:

Sarah Johnston Number 1, 3756. And it's a fair producer, it's not a wonderful well. It's a pumper that makes high volume of water.

The Shirley Boyd, our most recent completion at 3758, just a little bit lower, is a low volume of oil, actually makes more water than oil.

So the farther down you move structurally, the more water you make initially and cumulatively.

Now, the legal location for the Mozingo at a 330 location would put the well either on top of a fault or below 3740, where the economics are severely placed upon the well.

Q. Well, let's look at that Shirley Boyd Number 1, as compared to the HSOG Number 2. What did the HSOG Number

2 come in at, at a producing rate?

A. Over 200 barrels a day.

Q. And that is quite a bit above the 3740 line?

A. Yes.

Q. What about the Shirley Boyd Number 1?

A. Thirty barrels of oil with 30 to 40 barrels of water a day. It is a pumping well.

Q. Okay. Do you anticipate that the water production will continue to be at that rate or even higher than that rate?

A. It will make a climb.

Q. Okay. Is the location you propose for the Mozingo Number 1 the best way to capture reserves in place?

A. Yes, there's a lot of oil in place, even though there is water mixed with it. But if you're forced to capture the oil in a location where there's a high water cut, the economics decline because the amount of time required to recover that oil almost makes it prohibitive to drill for it.

And your cumulative will be dampened severely, because most of that oil could be recovered at maybe an uneconomic rate. Two barrels of oil and 80 barrels of water, you're still recovering the oil, but it's not economic to produce.

Q. And operating costs are higher too, are they not?

A. Yes. So the way to do that would be to get as high structurally as you can above that ever-increasing water cut as you move downdip, and produce it from above where the water percentage is less, rather than at the 330 location where it is high.

Now, the second reason we moved the location is surface reasons. This location where we have it picked is just about the only location left to drill. We had to avoid a highway, a pipeline, power lines and an open stone quarry, a caliche pit.

Q. Could you move on to your Exhibit 2 -- or 3, I don't know if you have one of those in front of you, and describe -- You actually went out and picked the well location, did you not?

A. Yes, I did. Well, it picked itself. It was the only one available.

Q. Could you just briefly go over Exhibit 3 and describe on those two pages the obstacles that are shown for this location?

A. Yes. First of all, is the major northeast-to-southwest highway, which shows up as the fine line, color -- black-and-white print does not do much for description, but I think it's easily seen as a straight line going northeast-southwest across the location.

There's a little open circle and a little dark

circle, which is a water disposal well and an abandoned well that has various pipelines stretching out from that.

There is an area defined -- It's a black spot, I don't know how to describe it, outside or just to the right of the white area that's in the north half of the north half of Section 26, just east of the highway. That is an open caliche pit.

And of course, the various power lines and pipelines don't show up, but they're criss-crossing the area heavily also.

Q. And then page 2 of that, without going into too much detail, just shows the number of existing wells around there that you have to avoid; is that correct?

A. Yes, and they're all powered by electricity, and they all have their own private water disposal line and they all have their power line.

Q. Okay.

A. And they all have their own gas lines.

Q. Okay. So it wasn't easy locating this well?

A. It was not.

Q. Why don't you move on to your final Exhibit Number 4 and describe what that shows in kind of a --

A. Exhibit 4 is a northeast-southwest cross-section extending across the HSOG Number 2, which we drilled, and the proposed Mozingo Number 1, we have proposed. The fine

line in between the two wells is the section line, and it shows the relative drift as the HSOG Number 2.

The Fusselman formation that we're shooting for is shown in dark purple, and you can see the approximate structural attitude that we entered into the Fusselman by the use of the 3-D.

Downdip you'll see where the Mozingo well encounters the Fusselman formation. And directly below the wellbore, when you reflect back to the 3-D structural exhibit, you notice the star which indicates the location of the Mozingo well is sitting right on the minus 3740 contour line, and that is the point where the water cut greatly begins to inhibit the economics of the well.

On the cross-section, if you continued straight below that wellbore, you would see what a legal location would do to the Mozingo Number 1. It would be able to produce at low volumes but not economic volumes.

And then of course the fault that's southwest of the Mozingo Number 1 is shown up on the exhibit also.

Q. Okay. Just one final thing. I mean, you mentioned there is drift. Home-Stake does intend to directionally control the well so it gets to your proposed bottomhole location?

A. Yes, the little yellow square on the structural orientation exhibit indicates the approximate location of

the bottomhole.

Q. Were Exhibits 2, 3 and 4 prepared by you or compiled from company records?

A. They were compiled by me.

MR. BRUCE: Okay. Mr. Examiner, I move the admission of Exhibits 2, 3 and 4.

EXAMINER CATANACH: Exhibits 2, 3 and 4 will be admitted as evidence.

Mr. Bruce, is your third witness an engineer?

MR. BRUCE: Yes, sir.

EXAMINER CATANACH: Okay.

Ms. Kaplan, do you have any questions of this witness?

EXAMINATION

BY MS. KAPLAN:

Q. Is it not true that your own data show that the Mozingo Well Number 1 will draw oil from the same pool that the two oil wells I have an interest in do?

A. It will draw oil from the same fault block as the HSOG Number 2.

Q. Yeah. And this new well, how many years do you expect the new well to be productive?

A. That will call for me to speculate, but on a trend for the whole South McCormack Pool, Silurian Pool, maybe twenty years.

Q. And do you have engineering calculations to determine how much oil from the -- that would ordinarily come to my wells, that you will draw out of that pocket?

A. I'll defer that to the engineer. I think he has some calculations.

Q. I'm not sure who to direct them to, my questions, the engineer or -- I guess I'll wait until the engineer.

EXAMINER CATANACH: Yeah, probably with regards to drainage and such, that would be the engineer.

EXAMINATION

BY EXAMINER CATANACH:

Q. Okay now, the necessity for -- You are going to directionally drill this well?

A. Minimally. The normal drift that -- This will our fourth well we've attempted to drill, and the normal drift on these wells is about anywhere from 75 to 120 feet. This well will have to be directionally drilled 215 feet, so an extra 100 feet or about the length of this room, which is very minimal. It's just to ensure the wellbore does encounter the Fusselman at the most beneficial structural point.

Q. But you will control it to where it ends up at that bottomhole location you proposed?

A. No closer than 150 feet from the north line and the east line of the quarter-quarter.

MS. KAPLAN: May I ask another question?

EXAMINER CATANACH: Yes, ma'am.

FURTHER EXAMINATION

BY MS. KAPLAN:

Q. Is there any reason you can't horizontally drill from the HGO [*sic*] 2 well, the capture the oil?

A. That would be capturing oil on the lease that the HSOG Number 2 is already capturing. The porosity is high enough in the HSOG Number 2 that, frankly, with this structural position it would be very unnecessary. It's doing its job very well where it is. I don't think that would be a venture you'd want to attempt. The vertical hole is already doing a very good job collecting the oil off of that lease.

Q. Could you inject steam or water? Would that bring up additional oil?

A. Not at this point. It's still in its primary phase of production. It doesn't need any help coming out; it's coming out very well.

A steam drive, you would see that enacted once the reservoir was mostly inactive.

Q. But would it bring it up at a later date?

A. I'm not sure if a steam drive would be appropriate for this reservoir. That would require an engineering study.

EXAMINATION (Continued)

BY EXAMINER CATANACH:

Q. Your minus 3740 contour line, that's where you've defined to be -- Did you say about 50-percent water saturation?

A. Yes.

Q. And you believe that would be uneconomic at that point?

A. At that point we would rather not drill a well that was that low. 7000 feet and over $600,000 for 30 barrels a day, we'll go broke.

Q. And that structural point was just determined based on well control; is that correct?

A. Well, I've mapped the whole South McCormack-Silurian field all the way up north past the Gulf well, which is several miles to the north, and that is an observation made from drill stem tests from wells from the 1940s, all the way up to current.

Start -- In between 3740 and 3760, the amount of water produced greatly increases, and below 3760 it's wise not even to attempt a completion.

Q. At what point do you anticipate your well to be structurally --

A. Minus 3730. That fault block, it's structurally plunging to the southwest. You could see it on the cross-

section; it's plunging to the left.

Depending upon at what point you measure it, anywhere from 12 degrees up to 18 degrees of dip. It's rapidly dipping.

Q. Okay, are you saying that that would be a standard location?

A. I'm sorry, a standard location?

Q. I was asking you at what structural position would you anticipate your well to come in at?

A. Oh, minus 3730.

Q. Minus 3730.

A. The bottom of the hole will be -- We should encounter the Fusselman at minus 3730, where that little yellow square is.

Q. Okay. So that will give you about ten feet?

A. Ten feet.

Q. Not a whole lot to play with?

A. But very beneficial.

Q. At that point structurally, what would you anticipate the producing capability of the well to be?

A. Probably -- I'm hoping for 150 barrels a day, hopefully with no water. Ideally, we'll keep that on as small a choke as possible, because the more you tend to draw on it, of course, you encourage the water, and we do not want to encourage the water.

So even though there's a lot of oil in place, you can really hurt yourself by drawing water from around your wellbore.

EXAMINER CATANACH: Okay, I have no further questions of the witness.

Mr. Bruce?

MR. BRUCE: I have nothing further of this witness.

EXAMINER CATANACH: This witness may be excused.

LARRY TARWATER,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name for the record?

A. Yes, my name is Larry Tarwater.

Q. Where do you reside?

A. In Tulsa, Oklahoma.

Q. Who do you work for and in what capacity?

A. I am employed by Home-Stake Oil and Gas Company as a production engineer.

Q. Have you previously testified before the Division?

A. Yes, I have.

Q. And were your credentials as an expert engineer

accepted as a matter of record?

A. Yes, they were.

Q. And are you familiar with the engineering matters related to the proposed well?

A. Yes.

MR. BRUCE: Mr. Examiner, I'd tender Mr. Tarwater as an expert petroleum engineer.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Bruce) Mr. Tarwater, let's go on to your Exhibit 5. Could you identify that, and I'll ask you a few questions off of it?

A. Yes, Exhibit 5 is just a very simple -- a calculation of the oil in place and my estimate of recoverable oil in the Section 27 that we're addressing with our Application, as well as the section to the north, currently completed by the HSOG Number 2.

Q. So what you're looking at is that fault block that contains the HSOG Number 2 and your proposed well?

A. That's correct.

Q. Okay, and you're not looking at the Sarah Johnston Number 1, because that's in another fault block?

A. That is correct.

Q. Okay, go ahead.

A. Okay, I simply used numbers based on data in the field and our recent data from the wells that we drilled to

estimate the oil in place and using, as you can see, a 20-percent recovery factor, the recoverable oil from both the HSOG 2, which is the Section 22 well, and the proposed well in Section 27.

Q. Okay. Looking at that, what do you hope to recover from each of these wells?

A. Well, the line labeled "Section 22 - 20 acres" is the HSOG 2 well, which we estimate recovery at 170,000 barrels. The next line, identified as Section 27, 10 acres, was the Mozingo Number 1 proposed well, which we estimate a recovery of 85,000 barrels.

Q. Now, would Home-Stake be drilling the Mozingo Number 1 in Section 27 if it were simply going to take away reserves from the HSOG Number 2?

A. No, it would not be economic to share those reserves.

Q. Okay. So you believe that the proposed well will recover only about half of what the HSOG Number 2 does?

A. That's right.

Q. Okay. Now, there could be some interference between the wells, could there not, or competition?

A. There could be, being that they're in that same described reservoir there on my next map.

Q. Okay. If you can't drill at the proposed unorthodox location, can you justify this well to

management, drilling this well?

A. No, we can't. And referring back to Mike's testimony of the critical subsea depth of 3740, we just got through drilling a well that came in a little bit below that and it is a very marginal well. We don't want to repeat that.

Q. That's the Shirley Boyd Number 1 in the northwest quarter of 26?

A. That's it.

Q. And if you do drill at an orthodox location, in the -- or if you have to drill at an orthodox location in the northwest of the northeast, you'd probably match the results of the Shirley Boyd?

A. Pretty similar, which is 30 barrels of oil a day and 40 water a day.

Q. What is Exhibit 6?

A. Exhibit 6 is my AFE for the proposed Mozingo Number 1.

Q. What's the anticipated completed well cost?

A. Completed well cost is $610,000.

Q. Okay. And again, if you have to drill at an orthodox location can you justify this cost to management?

A. No, we could not.

Q. And at that point no well would be drilled in Section 27?

A. That's right.

Q. And the interest owners in the north half of the northeast of 27 would receive no income from this prospect at all?

A. That's correct.

Q. One final thing. You were here for a pool rules hearing for the South McCormack-Silurian Pool, were you not, Mr. Tarwater?

A. Yes, I was.

Q. And the purpose of that rule was to get an increased depth bracket allowable?

A. Yes.

Q. Based primarily on the HSOG Well Number 2?

A. That is correct, yes.

Q. And the main reason was, it was producing at what? About 230 barrels a day?

A. Exactly, 230 barrels of oil a day.

Q. Which was higher than the statewide 187 barrels a day?

A. Yes.

Q. Why did you seek that? What was the basic cause of seeking that increased allowable?

A. That flowing well was, here again, very stable at that rate. We had tested at other rates, and based on our prior experience, when choked back below that, in fact, the

GOR would increase and you'd get yourself into a situation where you're continuing to try to choke back more.

Q. So you had trouble controlling the oil rate and the gas rate?

A. We did, yeah.

Q. And so it was best just to leave it flowing?

A. We felt like that, yes.

Q. Okay. So as a result, you did go get the 230-barrel-a-day allowable limit in the South McCormack-Silurian?

A. Yes.

Q. And that, of course, benefitted the interest owners in that pool also, did it not?

A. Yes, it certainly did. To date, that HSOG 2 has already -- in a little over five months it's already produced 28,000 barrels of oil.

Q. Pretty good well?

A. Yes, we'd love to duplicate it, yes.

Q. Were Exhibits 5 and 6 prepared by you or under your supervision?

A. Prepared by me.

Q. In your opinion, is the granting of Home-Stake's unorthodox location in the interests of conservation and the prevention of waste?

A. Yes, it is.

MR. BRUCE: Mr. Examiner, I'd move the admission of Exhibits 5 and 6.

EXAMINER CATANACH: Exhibits 5 and 6 will be admitted as evidence.

Ms. Kaplan, do you have questions of this witness?

EXAMINATION

BY MS. KAPLAN:

Q. Yes, do you have engineering calculations to determine how much oil from HGO [*sic*] 2 will be drawn off by the Mozingo Number 1?

A. Well, it's my testimony that nothing from the HSOG 2 would -- in that portion of the reservoir would be drained by our proposed well. It started out at 230 barrels of oil a day. It's already cum'd 28,000 barrels of oil. It would be two to three months before this Mozingo would be even on line, and it's not as advantageous structurally as the HSOG 2. In fact, you might say we're kind of flirting with the magic 3740 line there.

So no, it's not my testimony that the proposed well would drain anything off of that section.

Q. Is it not true that what brings the oil up is gas pressure?

A. Well, there is some evidence of a depletion gas reservoir drive, yes, but --

Q. And if the gas pressure is more on the Mozingo 1 well than the Sarah Johnston well, then it would seem to me that the gas pressure from the new well would draw more oil out of that pocket. You don't think so?

A. Well, I'm not assuming that the gas pressure would be more. Structurally, based on our experience, the proposed well will not begin producing at a rate as high as the HSOG Number 2, so that even though there may be a smaller area of reservoir underlying that section with a smaller initial rate and smaller amount of reserves there, no, I don't see that recovering any reserves from Section 22, from the section that she has an interest in.

Q. Is the amount of oil recovered from the unorthodox well plus the produced oil recovered from the Sarah Johnston 1 and the HGO [*sic*] 2 larger than the amount of oil that would be recovered from a well 330 feet from the section line plus the oil that would be recovered from the Sarah Johnston 1 and HO [*sic*] 2, and if so, by how much?

MR. BRUCE: If you don't understand the question, Mr. Tarwater --

THE WITNESS: I really don't understand the question.

Q. (By Ms. Kaplan) Do you want me to read it again?

A. Yeah.

Q. Is the amount of oil recovered from the unorthodox well plus the produced oil recovered from the Sarah Johnston 1 -- You have to assume that the new well will reduce the oil recovered from the HGO [*sic*] 2, do you not?

A. Well, it was just my testimony that it would not. And furthermore, it most certainly wouldn't impact the Sarah Johnston Number 1, as there's a major fault block that we feel certain is there and is -- the two wells aren't in communication, would not be in communication, wherever the Mozingo 1 was drilled.

Q. So is it your testimony that you could not bring up the oil you're trying to bring up from the new well by steam or any other means?

A. Well, no, we would bring it up or produce the oil -- If the well was flowing, we would flow the well. If it required artificial lift, we would put it on beam pump. But it's not a consideration to use any kind of secondary recovery, be it waterflood or steam injection or any other type of secondary recovery there. That wouldn't be, really, an option.

Q. I'm at a disadvantage. I don't know much about this stuff.

A. Well, I'm not trying to -- I'm trying to explain our point of view.

EXAMINER CATANACH: Okay, Ms. Kaplan, do you have any further questions?

MS. KAPLAN: I think that's it.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Tarwater, how did you determine the drainage radius of these wells?

A. We approximated just by the outline, the heavy dark outline you see on Mike's -- whatever that is, Exhibit 2. We just approximated it off the map.

Q. Okay, what you're saying is, the area that's bounded by the faults --

A. Yes.

Q. -- is the area that you've assumed to be the total drainage area?

A. Yes.

Q. And you assume 20 acres to be the drainage area for the HSOG?

A. Yes.

Q. And 10 to be the drainage area for the new well?

A. Yes.

Q. Has the HSOG declined enough to where you could do any decline-curve analysis on this well?

A. Yes, it has started to decline. Well, we don't -- It just went on line in November, so it's -- I

mean, it's declining over like a five-, six-month period. That's a little bit hard to project. And normally these things decline and then flatten out.

But yes, it's possible that it would do a decline analysis. I really -- I don't have one right now.

Q. If there is not a well drilled in Section 27, according to your evidence, there is oil within that 40-acre tract that can be recovered by a well. If there's no well drilled there, will that oil be recovered by the HSOG?

A. I think it's very possible, yes, that some of it could be recovered by the HSOG 2.

Q. So the interest owners in the 40-acre tract where you're drilling the well would suffer if there's not a well drilled to recover the oil --

A. Yes, I --

Q. -- underlying that tract?

A. Yes, I certainly believe that's true.

Q. Now, that well that you're going to drill is going to be located 150 feet from that common boundary with the HSOG. Is it your testimony that you believe that well is not going to drain any portion of that quarter section, quarter-quarter section?

A. Drain any portion of --

Q. -- of that 40-acre tract that the HSOG well is on?

A. It would be -- At that structural position, starting out at a much lower cum, I don't think it would drain -- I think it's unlikely that it would drain any of that 40, that the HSOG 2 is on.

Q. And that's based on the structural position?

A. Primarily the structural position, yeah.

And I might add, and Mike stated this also, this bottomhole location that's identified on Exhibit 2 is -- 150 feet from the north line would be the closest -- I mean, I know you guys understand this, but you have a target area which we would not, obviously, get any closer than that 150 feet from the north line. And you can't hit it exactly, so it would be obvious that we're going to stay away from that 150 foot. It would be less than that. We would use that as a, quote, hard line in the directional terminology.

It could, in fact, be 200 or more, because Mother Nature -- you know, it's difficult to pinpoint it exactly.

Q. Do you believe that a production penalty of some sort would be appropriate for the Mozingo well?

A. Yes, I guess so.

Q. Do you believe that that would be in the best interest of protecting the rights of the interest owners in the southeast quarter of Section 22?

A. Yes. Yes, I do.

Q. Would you have any suggestions as to what that might be, Mr. Tarwater?

A. Oh, boy. I don't know, is 25 percent reasonable? I'm just throwing that out, I really don't --

Q. I understand. Twenty-five percent, of the well's ability to produce? Is that what you're saying?

A. I had more -- I was more thinking about 25 percent of the depth bracket allowable, but --

Q. Which would, in effect, be no penalty at all if the well produces 150 barrels a day?

A. If the -- Well, yeah, if the pool allowable is now 230, that's right, you're right.

Q. Let me ask you --

A. Could I ask a question?

Q. Sure.

A. Is the penalties in New Mexico normally a percentage of the potential -- initial potential, or --

Q. Normally, the way we institute penalties, it's based on the ability of the well to produce.

A. I see, okay. Well, if it came in at 150 a day and -- yeah, I guess -- you know, based on our numbers, assuming 150 a day potential, 25 percent off of that, it would be an economic well. I guess we could live with that. I mean, I guess if you accept a penalty, it's of whatever the well potential is at, right?

Q. I know you're not voluntarily saying that we should give you a 25-percent penalty, but if we decide -- if we choose that that's the most appropriate action --

A. Yes.

Q. -- that's what you would recommend --

A. Yes.

Q. -- to be fair?

A. Yes.

Q. And that would still allow you to produce the well at a -- certainly an economic rate?

A. Yes.

MR. BRUCE: I just have one follow-up question on that, Mr. Examiner.

EXAMINATION

BY MR. BRUCE:

Q. Mr. Tarwater, on the other hand if the well came in at like 50 barrels a day, you wouldn't want a penalty on that well, would you?

A. No. No, I mean --

Q. Since it's only an estimate at this point?

A. Yeah. I mean, do they put some floor in there --

Q. Well, that's what I'm suggesting --

A. -- below which there would not be a penalty or --

Q. -- to the Hearing Examiner.

A. I mean, I don't know how to do these things, you

know.

Q. I mean, obviously 30 barrels a day is right at the edge, based on the Sally Voigt?

A. Oh, yes. I mean, at 30 barrels a day, we'll be lucky to recover our investment at all.

Q. And that's not why you drill wells?

A. Oh, no.

FURTHER EXAMINATION

BY EXAMINER CATANACH:

Q. Well, let me ask you, what would you recommend that we -- that the minimum amount be?

A. The minimum amount. The minimum amount below which a penalty would not be assessed?

Q. Yes, sir.

A. I'd recommend a hundred barrels a day.

EXAMINER CATANACH: Mr. Bruce, do you have anything further?

MR. BRUCE: I have nothing further.

EXAMINER CATANACH: Ms. Kaplan, do you have anything further?

MS. KAPLAN: Well, I don't know what this is talking about. Can you explain what that's about?

EXAMINER CATANACH: Yes, ma'am. In certain cases where we determine that due to the well's unorthodox location that it is gaining an advantage on an offsetting

tract, if we determine that, sometimes we penalize the well.

MS. KAPLAN: Uh-huh.

EXAMINER CATANACH: Say if it's capable of producing 150 barrels a day, we would reduce that by 25 percent and say you can only produce 75 percent of 150 barrels a day. We would restrict its production to compensate for the advantage it gains by drilling closer to an offset tract.

MS. KAPLAN: So it wouldn't do anything for me?

EXAMINER CATANACH: Well, certainly it would. It would not allow the well to produce at its maximum rate. We would restrict its production so that it couldn't produce at its maximum rate. That protects the offset acreage, because it's not producing as much as it normally could. I don't know if that's -- Is that clear?

I mean, that's the only way the Division has found to protect some of the offset tracts over the years, because a lot of times you can't deny the Applicant the right to drill on this acreage, because there is oil underneath this tract to be recovered. If we tell him he can't drill the well, then the interest owners within that quarter-quarter section are being harmed because they can't recover their oil. So I'm just --

MS. KAPLAN: Is it fair for the larger oil

companies to be able to drill and siphon off oil at the expense of very small shareholders?

EXAMINER CATANACH: No.

MS. KAPLAN: I don't think so either.

EXAMINER CATANACH: Well, would you like to read your statement at this time, Ms. Kaplan?

MS. KAPLAN: Yeah, I would.

EXAMINER CATANACH: Okay.

MS. KAPLAN: My sister Fern Trevino and I protest the application of Home-Stake Oil and Gas Company for an unorthodox well location for Mozingo Well Number 1 for the following reasons:

We have an interest in the Sarah Johnston Number 1 and the HSOG 2 wells and receive royalty income from these wells. These wells are located just north of the proposed Mozingo well and are new wells since 1998 and should have a long life.

State rules specify that wells should not be relocated closer than 330 feet to a quarter-quarter section line.

The proposed unorthodox well location for Mozingo Well Number 1 is less than 330 feet to a quarter-quarter section line and will draw oil from the same Silurian Pool that Sarah Johnston Number 1 -- I'm corrected on that. HSOG 2, at least, will draw from.

Home-Stake's attorney, Mr. James Bruce, acknowledges that Mozingo Well Number 1 will draw from the same pool of oil reserves that Sarah Johnston Number 1 and HSOG 2 draw from.

Home-Stake Oil and Gas Company is free to drill their well anywhere greater than 330 feet to a quarter-quarter section line. That they may draw more oil by their unorthodox oil well location is at our expense. State rules should not be changed at the expense of minority royalty holders to benefit multi-million dollar oil companies.

While we have no geologists to testify for us, we know that there are alternatives to increase the productive lives of the Sarah Johnston 1 and HSOG 2 wells, which could include horizontal drilling, pumping, steam injection, etc. There are alternative means to capture the oil located in the Silurian Pool, other than allowing an unorthodox well location for Mozingo Well Number 1.

EXAMINER CATANACH: Thank you, ma'am.

Mr. Bruce, do you have anything?

MR. BRUCE: Just briefly, Mr. Examiner. I would just reiterate that no one drilled in this area since 1982 until Home-Stake, not a large oil company, began drilling. Its drilling activity and its production practices have benefitted Mrs. Kaplan by bringing onto production the

acreage that had been dormant for two decades.

What Mrs. Kaplan requests will prevent different royalty interest owners in the north half, northeast quarter of Section 27 from receiving any benefit from the oil under their land, and as a result we request that the Application be approved.

EXAMINER CATANACH: Thank you, Mr. Bruce.

Is there anything further in this case?

There being nothing further, Case 12,404 will be taken under advisement.

We will issue a decision, Ms. Kaplan, and send you a --

MS. KAPLAN: Well, I'll just leave you with a copy of my --

EXAMINER CATANACH: Okay.

MS. KAPLAN: -- questions that I have.

EXAMINER CATANACH: Appreciate that.

MS. KAPLAN: Is that okay?

EXAMINER CATANACH: Yes, ma'am.

(Thereupon, these proceedings were concluded at 4:37 p.m.)

* * *

I hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12404, heard by me on Jan 7 -00.

David R. Catanach
Oil Conservation Division

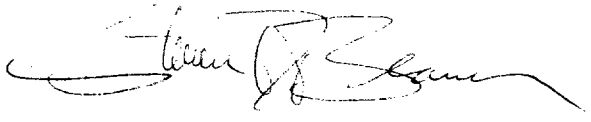
CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL May 18th, 2000.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002