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:

APPLICATION OF MARALO, INC.

CASE NO. 11,040

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: JIM MORROW, Hearing Examiner

July 21, 1994

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on Thursday, July 21, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

July 21, 1994
Examiner Hearing
CASE NO. 11,040

* * *

E X H I B I T S

* * *

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
Attorney at Law
Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 10:16 a.m.:

EXAMINER MORROW: At this time we'll call Case 11,040.

MR. CARROLL: Application of Maralo, Inc., for the creation of a new pool in the Bone Spring formation, classification of this pool as an associated oil and gas pool and for the promulgation of special pool rules therefor, Eddy County, New Mexico.

EXAMINER MORROW: Call for appearances at this time.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant, and I have two witnesses to be sworn.

EXAMINER MORROW: All right, will the witnesses please stand?

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, our first witness is Mr. John Thoma. Mr. Thoma is a geologist for Maralo.

We're here this morning to present technical data to support our Application to have this Strawn -- I'm sorry, this Bone Springs pool dedicated as an associated oil and gas pool.

We are requesting that the wells in the pool be

spaced on 80-acre oil spacing, with any gas wells spaced upon 160 acres, and correspondingly we are requesting an initial temporary gas-oil ratio of 8000 to 1.

Mr. Thoma is a geologic expert with his company, and this is his geologic prospect.

JOHN THOMA,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, sir, would you please state your name and occupation?

A. My name is John Thoma, and I'm a geologist.

Q. Mr. Thoma, on prior occasions have you testified and qualified as an expert geologist before the Division?

A. Yes, I have.

Q. Do the geologic displays that we're about to look at represent your work product?

A. Yes.

Q. And based upon those displays, do you have recommendations and conclusions for the Examiner concerning this Application?

A. Yes, I do.

Q. Let's turn to your first display, and before we discuss the details identify that for us.

A. Exhibit 1 is a structure map which was drawn on the top of the first Bone Springs sand, which is the producing reservoir at Burton Flat Prospect, which is where our Keystone Number 1 well is located, and that is positioned in Section 32.

Q. Give us a moment, let us unfold these displays.

A. Our leasehold is indicated by the stipple in Section 32, just below the Burton Flat Prospect label.

The contour interval is a 50-foot contour interval.

Q. We're requesting an initial pool boundary to consist of the northeast quarter of Section 32. Do you see that?

A. Yes.

Q. Within that 160 acres, is there a well in this formation?

A. Yes, there is. The well is positioned in the southwest quarter of the northeast quarter of Section 32. It is the Maralo Keystone Number 1.

Q. Have you been successful in producing this well out of the Bone Springs Pool?

A. Yes, we have.

Q. Describe for us geologically the kind of reservoir that you think you're seeing.

A. It is a laminated sandstone reservoir which

develops a maximum gross thickness of approximately 300 feet.

Q. Are you familiar with the geology in the Old Millman Ranch Pool, which is located some -- I guess six miles to the north?

A. Yes, I am.

Q. What has the Division done with regards to organizing rules for the production of Strawn hydrocarbons out of the Old Millman Ranch Pool?

A. Current field rules -- temporary field rules at Old Millman Ranch provide for associated -- Well, they are the associated gas pool rules with a 5000-to-1 GOR. Development of gas wells is 160-acre spacing. Oil wells is 80-acre spacing.

Q. Do you see any geologic similarity between your proposed pool to the south and what has been discovered and developed in the Old Millman Ranch area?

A. Yes, we believe our discovery to be analogous to Old Millman Ranch field.

Q. Describe for us the reasons that support that conclusion.

A. The primary reasons are that we are producing from the same reservoir section as the first Bone Spring sand.

Looking at the two fields in further depth, the

log analysis of our discovery well, the Keystone Number 1, compares very closely with the log parameters from the Remington Federal Number 1, which is located in the southwest-southwest of Section 3 in Old Millman Ranch field. Both reservoirs appear to have a gas and an oil leg present in the reservoir.

I would call your attention to Exhibit Number 2.

Q. Let's look at that, and before you describe it let us have a chance to unfold it.

A. The --

Q. Just a minute, John.

A. Okay.

EXAMINER MORROW: All right.

THE WITNESS: Exhibit Number 2 is an isoporosity map of the first Bone Springs sand reservoir. The cutoff we're using is a 14-percent density porosity cutoff, and that's a cutoff which is an empirically based cutoff. That is, wells with no porosity developed greater than 14 percent are at this point noncommercial or nonproductive, one of the two.

You can see that the map fairly accurately describes the producing area at Old Millman Ranch, as it has presently been developed.

Our pool to the south is largely defined by existing subsurface penetrations. This is an old Morrow

producing area which was developed for the Morrow in the late Sixties, Seventies, and very early 1980s.

This reservoir was discovered -- We discovered the reservoir, that is, through re-entry of the Keystone Number 1 wellbore, which was originally drilled in the late 1970s.

The characteristics of the reservoir and the distribution of the reservoir match very closely with those that we're seeing in Old Millman Ranch, and our early production rates indicate very similar fluid types and bottomhole pressures, and our engineer will give further testimony to that.

Q. (By Mr. Kellahin) When we look at the structure map, is there a structural component to the reservoir that's of significance to you as a geologist?

A. Yes, there is, from both a geological and an engineering standpoint.

There appears to be -- Well, first you'll notice that there is a southeast-plunging structural nose present at both Old Millman Ranch and at Burton Flat -- Burton Flat Prospect, that is. We feel that this structure is probably generated by the development of the thick reservoir section in the Bone Springs.

So those two elements are common in both field areas. That is, development of reservoir-quality sand and

structural nosing.

The second element of significance is that in Old Millman Ranch field there appears to be a gas-oil contact or transition, as near as we can tell, at approximately the 2900-foot contour level.

Three wells in Old Millman Ranch are currently classified as gas wells: two wells in the east half of Section 4 and one well in the northwest quarter of Section 3. The balance of the wells to the south and east of those three wells are classified as oil wells under the associated pool rules.

Our well, from a GOR standpoint and from a structural standpoint, appears to fall within the reservoir at about the same position from a liquid standpoint as the Remington Federal Number 1 Well, which is again located in the southwest-southwest of Section 3. The Remington Number 1 well has a producing gas-oil ratio, an actual producing gas-oil ratio, of approximately 10,000 to 1.

As you move updip from that well, you move into much higher GOR wells, from 30,000 to 60,000 to 1. As you move downdip from that well, the GORS decrease.

Based on the fluid recoveries that we're seeing and the PVT data which will be presented a little bit later, we feel that our well is probably right in the transition zone, between the oil leg and the gas leg in the

reservoir.

There is one other well currently producing from the reservoir, and I believe that well is in our pool, and that well is the Yates Number 2 DS Stonewall, located in the northwest of the southeast of Section 29. That well, again, was a deep Morrow well, which Yates recompleted to the first sand early this year, in March, I believe.

And that well has bounced around -- the GOR in that well has bounced around a little bit. But generally speaking, it has produced at no lower GOR than 20,000 to 1 and as high as 30,000 to 1.

That well, you can see from the structure map, is positioned slightly updip from our well. The subsurface elevation of the Yates well is 3056; the subsurface elevation of the Keystone well is 3083. So we are seeing increasing GOR moving updip from our well, and we feel that this is confirmation of our belief that there is a gas cap along with the PVT data and along with the analogy that we have at Old Millman Ranch.

Q. Summarize for us, Mr. Thoma, your geologic reasons for asking the Division to apply the associated rules to what we've described as this new pool for the Keystone well.

A. Well, we feel that -- Maralo, that is, feels that the pool can be best developed, at least in its early

stages, under these rules, because it will allow us to protect the gas leg and develop the oil leg, and not at this point over-drill the field.

We really don't have a good understanding of what the actual drainage radius of these wells is going to be. I think in another year we will probably have significant additional data, both on the Millman Ranch field and on the Burton Flat Prospect.

We will probably drill a minimum of two to three additional wells, provided the next well is successful in our program and we confirm the reservoir as we've interpreted it.

Q. To avoid the unnecessary drilling of unnecessary oil wells, do you have a recommendation as to an initial oil spacing for the pool?

A. Eighty acres.

Q. Do you see sufficient reservoir continuity within the reservoir that that spacing pattern can be initially established for the pool?

A. Yes, we do.

Q. We're not in a pool where we have discontinuous pay zones that separate from 40-acre tracts?

A. I do not believe so.

Q. Okay. With regards to gas spacing, what is your recommendation?

A. 160 acres.

Q. You gave us an analogy of the Remington well up in Old Millman Ranch as being in a similar geologic and structural position as your Keystone well. How is that of significance to you as a geologist, when the Division addresses the gas-oil ratio request?

A. I'm not quite sure what your question is.

Q. When we go back and look at the Remington well and the Old Millman Ranch, it is at a point in the structure of the Old Millman Ranch-Bone Springs reservoir that caused you a while ago to draw certain comparisons to where that well is in relation to the Keystone well within its own reservoir.

A. Right. Well, our early intent in this -- in the development program, would be to remain in the oil leg and develop the oil leg first, leaving the gas leg intact for development later on in the project.

The 80-acre spacing at this point, we feel, will allow us to most prudently develop the reservoir, given the information we have right now.

Q. Does the fact that the Keystone well is the re-entry of an old well give you some limitations of data that you may be able to overcome with subsequent newly drilled wells in the reservoir?

A. Yes, sir, it has indeed created some problems for

us.

While we have been successful in establishing hydrocarbons, production of hydrocarbons from this sand, we did have significant problems in recompleting this well because the original cement -- the primary cement job did not cover the Bone Springs. The top of the primary cement was at approximately 8000 feet. The Bone Springs reservoir in this well developed between approximately 6300 and 6500 feet.

So we had to do several squeeze jobs, which we had mixed success with. We really had to perforate and squeeze on two different occasions, and our bond log that we ran indicated that we probably didn't have a complete squeeze, but we had as good a squeeze as we were going to get.

We also had significant problems with the frac treatment. These sands require significant frac treatments to be commercially productive. The problem -- The main problem we had was that the gel did not break. It took us approximately a week and a half to clear the gel from the wellbore and clear unbroken gel from the formation to the point -- back into the formation where the gel was broken.

So we produced a significant portion of our frac back, and consequently we feel that an offset well has a chance of seeing much better production, given the

analogous log characteristics that we're seeing in the Keystone to Old Millman Ranch.

Our first well is not quite as good as the Remington from a production standpoint. It's similar from a structural, from a fluid, from a GOR standpoint.

But from our other perspective, we feel that our ultimate production rates from new wellbores, where we have primary cement jobs and where we have better frac treatments, successful frac treatments, will be more along the lines of the kinds of rates that are being produced from the first sand at Old Millman Ranch.

Q. What are your plans for further development of the pool, Mr. Thoma?

A. We will continue to develop the reservoir on hopefully 80-acre spacing, as I said, in the oil leg, which will predominantly be in the east half of Section 32.

Q. Do you have a recommendation to the Examiner as to what period of time should be established for the temporary rules to give you a sufficient opportunity to gather additional reservoir data and come back and make these rules permanent or to modify these rules?

A. We would request 12 to 18 months.

Q. Within Section 32, is that all one single lease, as best you know it to be?

A. No, it is comprised of two leases, the east half

of Section 32, and I'll call your attention --

Q. I believe it's marked, Mr. Thoma, as Exhibit Number 8 in the exhibit package, if you'll move past the engineering exhibits.

A. Exhibit 8 is a land plat which shows ownership.

We currently own all of Section 32. The east half is a separate lease from the west half, but we operate Section 32 presently, the entire section.

Q. Within the half section, then, of a single lease, you'll have the flexibility of ownership to dedicate an 80-acre tract or, conversely, a 160 for a gas well, and that in the event these rules are changed and reduced back to 40 acres, we've not disrupted the equity between owners?

A. That's correct.

MR. KELLAHIN: That concludes my examination of Mr. Thoma, Mr. Examiner.

We move the introduction of his geologic displays, which are Exhibits 1 and 2.

EXAMINER MORROW: Exhibits 1 and 2 are admitted into the record.

EXAMINATION

BY EXAMINER MORROW:

Q. Mr. Thoma, what pool is the Yates well in now, in Section 29? I believe it's called the Number 2 DS Stonewall?

A. I believe it's Undesignated Bone Springs.

Q. And it is producing?

A. It is producing.

Q. Have you and Yates talked to anybody about these proposed rules?

A. Yes, we did early on. Their well is a marginal producer. I spoke with Yates as late as seven days ago, with their engineer, and their well is currently producing, I think, three barrels of oil and about 150 MCF of gas. And the reason that it is marginal is because it is on the edge of the reservoir.

But they have indicated no objection to the requests that we're making of the Commission for associated pool rules.

Q. But you're not proposing that their well be included in the pool boundaries; is that correct?

MR. KELLAHIN: Mr. Examiner, we would -- How that takes place is, the initial pool boundary would be the northeast quarter of the section, and then if you apply the one-mile rule it will pick up that well, and by nomenclature, then, it would expand the pool, and the Yates well would be included and subject to the pool.

EXAMINER MORROW: Well, it would if he's correct in his assumption that that well is in an undesignated pool. If he's been producing the well, I really believe

it's probably been assigned to a pool.

MR. KELLAHIN: We couldn't find any record that it had been, and perhaps we're not current but we did --

EXAMINER MORROW: But you did look for that?

MR. KELLAHIN: Yes, sir. I couldn't find any indication that it had been assigned to a specific pool.

EXAMINER MORROW: Okay. Well, if there's a well there, if Yates is here, it wouldn't have any objection to that being included, it might as well be included initially, it would seem to me.

MR. KELLAHIN: And I assume that's a discussion we can have with them after the hearing. We did provide them with the detailed Application, which included the request that anything within a mile be subject to the rules that we're proposing.

THE WITNESS: One other point: They are a working-interest owner in the Keystone. They have a 10-percent, plus or minus, working interest in the Keystone. So they are very familiar with our plans and the Application that we're making.

EXAMINER MORROW: All right. If you would do that and let me know what their decision is, you know -- It would seem to me that while we're describing the area included in the pool, we may as well include their well --

MR. KELLAHIN: Be happy to do that.

EXAMINER MORROW: -- if they don't have any problem with it.

Q. (By Examiner Morrow) Are the Old Millman Ranch rules the same rules that you're requesting here?

A. In all but one respect. We're requesting an 8000-to-1 gas-oil ratio; they have a 5000-to-1 gas-oil ratio.

Q. And this -- assume your proposal to the associated gas rule order be applicable here in any respect that's not specifically covered in your order that you seek here, Order R-5353, I believe it is --

A. That's correct.

Q. -- the associated gas rule.

EXAMINER MORROW: Okay. Do you have anything, Rand?

MR. CARROLL: (Shakes head)

Q. (By Examiner Morrow) Oh, I did want to ask you -- You may have covered it but I missed it.

What is your well currently producing? You said it was not as good as you expected later.

A. Right.

Q. I didn't pick up on how much -- how good it is now.

A. Well, our engineer will --

Q. Okay.

A. -- give you further data on that, I think, that will be very specific.

EXAMINER MORROW: Thank you, Mr. Thoma.

MR. KELLAHIN: Mr. Examiner, at this time we would call Mr. Richard Gill. Mr. Gill is a petroleum engineer with Maralo.

RICHARD GILL,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Gill, for the record would you please state your name and occupation?

A. My name is Richard Gill. I'm a petroleum engineer for Maralo, Incorporated.

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

A. Yes, I have.

Q. And have you made an engineering study of the engineering details and facts surrounding the Keystone Number 1 Well?

A. Yes, I have.

Q. And based upon that study, do you now have recommendations and conclusions for the Examiner with regards to the classification of this pool and the type of

special pool rules you're desiring the Division adopt?

A. Yes, I do.

MR. KELLAHIN: We tender Mr. Gill as an expert witness.

EXAMINER MORROW: We'll accept Mr. Gill.

Q. (By Mr. Kellahin) Let's talk about the production history of your discovery well, Mr. Gill, if you'll turn to Exhibit Number 3.

A. Okay.

Q. Identify that display for us and summarize the production history on the Keystone well.

A. Exhibit 3 is just a production curve on the Keystone Number 1 Well since initial production. It's on a daily producing rate, initial production being May 20th.

The curve shows in purple the producing GOR, in green the oil, and in red the gas.

It's been notated above that, in pretty small letters up there, are the different size chokes that we tried producing the well on to see how it's going to respond to different choke sizes.

Currently, in answer to your question before, the well is producing about 45 barrels a per day and 720 MCF gas per day.

Q. Before we leave Exhibit 3 -- We're going to come back to that, but let's identify Exhibit 4. It may be

helpful to plot the production history on the table as we look at the graph which is Exhibit 3.

A. Right.

Q. Identify for the record what is Exhibit 4.

A. Exhibit 4 is just the tabulated numbers used to generate Exhibit 3. They include the dates, choke sizes, flowing tubing pressures, the production and GORs, as well as all the cumulative production from the well.

Q. When we start back with 5 of 20, that's 5-20-94, the first date on Exhibit 4, the production history --

A. Right.

Q. -- is May 20th your first day of production?

A. That was the first day of production.

Q. All right. Then the initial producing rate is about 162 barrels of oil a day?

A. Right, and 576 MCF of gas.

Q. Okay. And you're using a 16/64 choke for that setting?

A. That's right, that's right.

Q. All right. Then as you fluctuate the choke settings over the initial production history of the well, what has occurred?

A. Initially, as we fluctuated the choke sizes, we didn't see too big a difference in the GORs, producing GORs, until we tried to get it down to -- what would be an

allowable producing rate on a 40-acre spacing, a 40-acre-spaced well at 2000 GOR, which would allow us to produce about, I think it's 250 MCF, 240 --

Q. 284?

A. 284, okay.

Q. All right. Let's make sure we've got this point right. If you're on 40-acre oil spacing and you've got a 142-barrel-oil-a-day depth bracket allowable --

A. Right, and a 284 --

Q. Pardon?

A. And a 284 MCF of gas.

Q. And that results because you're using a 2000-to-1 GOR?

A. Right.

Q. All right. If you use that allowable for your well and try to choke it back so that the gas withdrawals meet the gas allowable of 284, what happened to the well?

A. The well -- When we choked it back, we had to choke it back to a 4/64-inch choke, which we did on June the 15th, to get to that kind of a rate, and the GOR jumped up significantly.

Q. What does that tell you?

A. It's not a very prudent way to produce the well.

Q. All right. This well does not like to produce --

A. Right.

Q. -- if the statewide rule, the 2000 to 1, is applied to the pool?

A. Right.

Q. What, in your opinion as an engineer, is the preferable choke setting that maximizes the recovery by this well?

A. Right now, it appears to be responding pretty will in the 16/64-inch choke. It seems to like that. It's pretty well stabilized out at this point, I think, at that choke size.

Q. Okay. And when we set it at that choke setting, what type of oil rate and gas rate do you need in order to give you the flexibility to produce at those rates?

A. On this particular well we're producing below the oil allowable rate of either 80 acres or 40 acres, but for the gas rate, we would have to get up to the 80-acre allowable rates.

Q. Okay. Let's do the numbers so we have the numbers. If we use 80-acre oil spacing, it's 222 barrels of oil a day. Is that the right number?

A. That's right.

Q. And if we use your requested 8000-to-1 GOR, the gas allowable is 1.7 million a day, thereabouts?

A. Right.

Q. Okay. And if those are the rules established,

then this well still has a small allowable cushion in which to give you some operational flexibility to produce the well?

A. That's correct, yes.

Q. Have you done any fluid analysis on the well to see what kind of reservoir characteristics that you find?

A. Yes, we have. If you look at Exhibit 5, it is a PVT study we had Core Laboratories do for us on the reservoir fluid.

Q. Have you examined the PVT analysis?

A. Yes, I have.

Q. Are you satisfied that the samples taken from the analysis were done with appropriate engineering protocol to give you accurate samples?

A. Yes, I am.

Q. As a result of sampling the -- analyzing the samples, the laboratory came up with certain reservoir parameters for you?

A. Yes.

Q. Summarize for us what the report shows.

A. The main significance of the report shows that the reservoir fluid behaves like a gas. It has a dew point of 4847 p.s.i. Above that point the fluid is a gas; below that point your oil starts dropping out.

Our current reservoir bottomhole pressure is

about 2200 pounds, which would indicate that we are below dew point. And based on that, we feel certain that you will have gas with an oil leg below.

And as Mr. Thoma mentioned earlier, these parameters are just almost identical to what Chi found up in the Old Millman Ranch, based on their PVT data.

Q. Let's complete that comparison. From a reservoir engineering aspect, have you compared the reservoir engineering data from Old Millman Ranch to what you now have available to you in the Keystone Pool?

A. Yes, I have.

Q. With what conclusion?

A. The conclusion, we're looking at the same reservoir fluids, as Mr. Thoma mentioned earlier, basically same type of reservoir with the same reservoir parameters.

Q. As a reservoir engineer, what's your recommendation to the Examiner concerning whether or not you classify this pool as an associated pool or as an oil pool or a gas pool?

A. I think it should be classified as an associated pool, again, due to similarities with the Old Millman Ranch and due to the reservoir fluid studies indicating that there will be a gas cap on top of this oil leg. And our current well is, again, somewhere in the transition zone right now.

Q. Do you have a recommendation for the initial GOR to establish for the pool?

A. Yes, I do.

Q. And what is that recommendation?

A. We recommend an 8000-to-1 GOR.

Q. Have you prepared any economic analysis to show us what that would allow you to do?

A. I have prepared some economic analysis to indicate that we do need a GOR exception.

Q. Okay. Do you have an economic analysis based upon the current productivity of the Keystone well?

A. Yes, I do.

Q. Let's look at that.

A. Okay, Exhibit Number 6 is the economics generated by drilling a new well.

Q. Describe for us the parameters, and then we'll see the result.

A. Okay. A new well, assuming production similar to what we're getting from the Keystone Number 1, with all of our current conditions as far as net revenues and working interests and our estimated cost to drill the well and what we estimate the ultimate recovery to be -- The results from that study show that a well producing this way would pay out in about one and a quarter years and bring about a 2.8 return on investment.

Q. Your summary is found in the lower left portion of the display?

A. Right, that's correct.

Q. And you get a rate of return of 94 percent?

A. That's right.

Q. Payout in years is 1.25?

A. Right.

Q. Have you run an economic analysis to show us what would be the effect if we stayed on 80-acre oil spacing but the Division should deny your request for 8000-to-1 GOR and make you abide by the 2000-to-1 GOR?

A. Yes, I have. That would be Exhibit Number 7.

Q. Okay. What variable is changed in order to make this economic analysis shown on Exhibit 7?

A. The only thing we did here was to decrease the gas rate to 444 MCF a day, which would be the maximum allowable, based on the 2000 GOR.

Based on the current producing GOR of about 16,000 to 1, our oil rate would correspondingly decrease from -- what's current at 45 barrels a day, would decrease down to about 28 barrels a day. All other parameters are the same.

Q. What's the result when you have to run the economics based upon a limiting GOR of 2000 to 1?

A. The result is that our rate of return drops to 44

percent, our payout increases to 2.14 years, and our return on investment drops to 2.3.

Q. Can you drill further wells in this pool under that economic standard?

A. Based on Maralo's parameters, we would not drill a well for that.

Q. Do you see any opportunity as a reservoir engineer to impair correlative rights if the Division grants your requested special rules for this pool?

A. You need to --

Q. Yes, sir. In terms of adopting these rules, is there any opportunity for the impairment of the correlative rights of any owner? Is anybody adversely affected by these rules?

A. I don't believe so, no.

Q. If the rules are adopted, would this give us an opportunity to produce hydrocarbons that we might not otherwise be able to produce?

A. Yes, I think so.

Q. We would prevent waste by doing that, would we not?

A. Yes, sir.

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

We move the introduction of his Exhibits 3

through 7.

EXAMINER MORROW: 3 through 7 are admitted.

EXAMINATION

BY EXAMINER MORROW:

Q. Mr. Gill, in the Core Lab study, I looked through there a little bit, but would you point out to me where the solution gas-oil ratio is reported, the original solution gas-oil ratio of the fluids?

A. I think on page 6 of that study you have the field-measured separator gas-liquid ratio of 11- --

Q. We're missing page 6.

MR. CARROLL: It's after page 7.

THE WITNESS: Oh, it's not in order? Yeah, I'm sorry. It looks like they didn't staple it.

Q. (By Examiner Morrow) Go ahead, sir.

A. It has a field-measured gas-liquid ratio of 11,277 standard cubic feet per barrel, or a lab-corrected of 9950 standard cubic feet per barrel.

Q. Is that at -- What pressure is that?

A. The sample of this that -- they actually took -- We have this high-pressure stack and a low-pressure separator. They take gas off of both and recombine them, but the bulk of it would be at 480 pounds.

Q. That's where they sample it, but I assume they took it back to the reservoir conditions to get to --

A. Right, reservoir pressure was -- I believe, was a little over 2200 pounds. I thought that number was in this deal, and I didn't bring it, but I haven't found it in this report.

We did run a bottomhole pressure in the well, and the 72-hour shut-in pressure was -- I believe it was 2208, if I'm not mistaken.

Q. Okay. Well, this is presented in a little different form than I have seen them in the past. If you would supply me with that information later, I would appreciate it, if Tom hasn't found it already.

A. Okay. Mr. Kellahin found on page one, it shows reservoir pressure of 2130, down at the bottom under the Data Sample Collection.

Q. And you're saying the gas in solution with the oil at that pressure is 9000 --

A. Right.

Q. -- or --

A. -- 10,000 or --

Q. -- close to 10,000?

A. Right.

Q. All right. Well, still that says -- On page 6, that says, lab-corrected separator -- gas-separator/liquid ratios, which would indicate to me that it would be at separator pressure and might not --

A. Okay.

Q. -- indicate what it would be -- what the bottomhole would be.

A. That's correct.

Q. Okay. Let me ask you about Exhibits 6 and 7. The oil producing rate on 6 is your current oil producing rate; is that what you --

A. That's right.

Q. You assumed -- You drilled a well --

A. We assumed a well --

Q. -- the same as what the current one --

A. Right.

Q. -- produces if this would be your payout, and that would be economics enough for you to drill one?

A. Yes, sir, I think we could drill that.

Q. So you're starting off there at --

A. -- 45 barrels a day, 720 MCF gas.

Q. Okay. And you apply some sort of a decline there?

A. Right, right.

Q. So actually that would -- You wouldn't be producing, then, at the allowed rate?

A. That's right, that's right.

Q. Cut both of them back, both your gas and your oil back?

A. That's right. We think -- Like Mr. Thoma mentioned before, we had quite a bit of mechanical problems in completing this well. We think subsequent wells will be significantly better. Plus -- that you did mention. We're also producing into a high-pressure line right now, so we think the rates are probably artificially low.

We'll have to put it on compressor pretty soon. Line pressure fluctuates between 500 and 600 pounds, and our flowing tubing pressure, I believe, is about 650 pounds right now, so this well may be significantly better, too, on compression.

Old Millman Ranch, those wells are going to a low-pressure line. So we think this well has a chance to be better, and we certainly think subsequent wells will be.

EXAMINER MORROW: Okay, thank you.

Do you have anything?

MR. CARROLL: (Shakes head)

EXAMINER MORROW: Thank you, Mr. Gill.

MR. KELLAHIN: Mr. Examiner, Exhibit 8 is the ownership map.

Exhibit 9 is my certificate of notice to all the offsetting operators, which complies with your Rule 1207.

We would move the introduction of Exhibits 8 and 9.

EXAMINER MORROW: 8 and 9 are admitted.

MR. KELLAHIN: And that concludes our presentation in this case.

EXAMINER MORROW: Thank you.

Case 11,040 will be taken under advisement.

(Thereupon, these proceedings were concluded at 11:03 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case 11040. heard by me on July 21 1994

Examiner
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 July 24, 1994.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1994