NEW MEXICO OIL CONSERVATION DIVISION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date JULY 16, 1998 Time 9:00 A.M.

NAME	REPRESENTING	LOCATION
JAMES BLOUNT	SOUTHWEST ROYALTIES	MIDLAND, TX
Earl Cooter	[illegible]	[illegible]
Tom Beauchamp	KCS MEDALLION	TULSA, OK
Bill Sinclair	KCS Medallion	Midland, TX
Dave Alderbs	Southwest Royalties	Midland TX
James Bruce	—	SF

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:	CASE NO. 11,925
APPLICATION OF KCS MEDALLION RESOURCES, INC., FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

BEFORE: LORI WROTENBERY, CHAIRMAN
WILLIAM J. LEMAY, COMMISSIONER
JAMI BAILEY, COMMISSIONER

July 16th, 1998

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Thursday, July 16th, 1998, 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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* * *

WHEREUPON, the following proceedings were had at 9:00 a.m.:

CHAIRMAN WROTENBERY: Good morning, everybody, we'll call this meeting to order.

My name is Lori Wrotenbery, I'm Chairman of the Oil Conservation Commission.

To my left is Commissioner Bill LeMay and to my right is Commissioner Jami Bailey.

We also have Steven Brenner -- Brennan?

COURT REPORTER: Brenner.

CHAIRMAN WROTENBERY: Bren- -- Pardon me?

COURT REPORTER: Brenner.

CHAIRMAN WROTENBERY: Brenner. I had it right the first time. Steven Brenner acting as our court reporter today.

Lyn Hebert, our counsel for the Commission.

And Florene Davidson to my right, Commission secretary.

And with those introductions I guess we'll get started here.

I think we really only have one main item on the agenda for today, but let's take care of a few preliminary matters before we get to that.

First of all, we have minutes of the Commission's meeting. This was the last meeting, on May 7th, 1998.

There's a copy of the draft minutes in your notebooks, Commissioners. Do you have any corrections or comments that you'd like to make?

COMMISSIONER BAILEY: No corrections.

COMMISSIONER LEMAY: I move acceptance of the minutes, Madame Chair.

CHAIRMAN WROTENBERY: Any objection? I hear none, so I will go ahead and sign the minutes here.

We had a couple of other cases that were originally scheduled to be heard today. One of those was Case 11,839, the Application of Odessa Oil Investments, Inc., for saltwater disposal in Eddy County, New Mexico.

At the request of the *de novo* Applicant, this case has been continued to the Commission's hearing on September 10th.

And then another matter was Case Number 11,807, the Application of Stevens and Tull, Inc., for saltwater disposal, Lea County, New Mexico. This particular case has been dismissed at the request of the *de novo* Applicant, and, Commissioners, there is a copy of the dismissal letter in your notebook.

And then finally Case 11,809, the Application of Burlington Resources Oil and Gas Company for compulsory pooling, an unorthodox gas well location and a nonstandard proration unit in San Juan County, New Mexico.

It's my understanding that this case will be dismissed by agreement of all of the parties to the case, but we haven't received the final request on that matter, so at any rate we won't be taking it up today. We anticipate it will be dismissed.

And that takes us to, I guess, the one case that's pending before us today, unless there are any other items of business that we need to discuss before we get started? Commissioners, do you have anything?

COMMISSIONER BAILEY: I don't have anything.

COMMISSIONER LEMAY: No.

CHAIRMAN WROTENBERY: Okay, then we'll get started. We'll call Case Number 11,925, the Application of KCS Medallion Resources, Inc., for an unorthodox gas well location, Eddy County, New Mexico. This is a *de novo* application being heard at the request of KCS Medallion Resources.

What appearances do we have today in this matter?

MR. BRUCE: Madame Chair, Jim Bruce of Santa Fe, representing the Applicant. I have two witnesses to be sworn.

MR. COOTER: Paul Cooter with the law firm of Eastham Johnson in Albuquerque, appearing for Southwest Royalties, who opposes the Application of Medallion Resources. We have two witnesses, who are Dave Alderks and

Jim Blount.

CHAIRMAN WROTENBERY: Any other witnesses -- Any other appearances in this matter today?

Okay, if the witnesses would be -- please stand, we can go ahead and swear them in.

(Thereupon, the witnesses were sworn.)

CHAIRMAN WROTENBERY: Do the parties have opening statements that they would like to make?

MR. BRUCE: I don't have an opening statement, Madame Chair.

I would simply state so that we can get on with it that this case was heard by the Division, the unorthodox location was approved, and a 60-percent penalty was assessed against the well, and my client believes that is too high and they can't drill the well with that penalty, and that's why we're here today.

CHAIRMAN WROTENBERY: Mr. Cooter?

MR. COOTER: I might add that Mr. Bruce and I have exchanged exhibits, and I have placed a set of exhibits in front of each of you.

CHAIRMAN WROTENBERY: Anything further in the way of opening remarks?

Then Mr. Bruce, would you get started?

MR. BRUCE: We first call Bill Siruta, S-i-r-u-t-a, to the stand.

WILLIAM A. SIRUTA,

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 full name and your city of residence?

A. William Siruta, Midland, Texas.

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

A. I'm a senior geologist with KCS Medallion.

Q. Have you previously testified before the Division or the Commission?

A. Yes, I have.

Q. And were your credentials as an expert geologist accepted as a matter of record?

A. Yes.

Q. And are you familiar with geologic matters involved in this Application?

A. Yes.

MR. BRUCE: Madame Chair, I tender Mr. Siruta as an expert petroleum geologist.

CHAIRMAN WROTENBERY: Any objection?

MR. COOTER: No objections.

CHAIRMAN WROTENBERY: He is so qualified.

Q. (By Mr. Bruce) Briefly, Mr. Siruta, what is it

that KCS Medallion seeks in this case?

A. We seek approval of an unorthodox location for a well located 860 feet from the south line, 660 feet from the west line, Section 16, Township 19 South, Range 29 East, with the south half of Section 16 being dedicated to the well.

Q. What is the primary target of this well?

A. The primary zone is the middle Morrow.

Q. What is Exhibit 1?

A. It's a production map illustrating the Morrow production. All of these wells in this map are Morrow penetrations except the two uncircled wells in Section 15. The Morrow producers are the circles shaded in green.

The little tabs located next to the wells, the date at the top of the tab illustrates the date the well was first produced. The second number is the gas cum, the third number is the oil cum, and the fourth number is the daily production.

Q. Looking at this map, are there certain wells that the Commission should concentrate on in your Application?

A. Yeah, there are several key wells in here:

the Southwest Royalties Hondo well, which is in the southwest of 17, which has produced 5.2 BCF over a period of about 24 to 25 years;

the Burlington Parkway State well up in the

northeast corner of 17, which has produced 2 BCF in approximately 14 years;

the well in the northwest of Section 16, the Burlington State Com well, which has produced 1.5 BCF;

and the well located in the southeast of Section 16, the Burlington well, which has produced 325 million from the Morrow.

Q. That box to the left of the well in the southeast quarter of 16, that pertains to the Burlington well and not to your proposed location?

A. That's correct.

Q. What about the two wells that are immediately to the south down there in Section 20 and Section 21?

A. The well located in the northwest quarter of Section 20 was a Morrow test but was dry and encountered no productive sands.

The well in the northeast of Section 21 also drilled the Morrow. It encountered some very thick, porous sands, which were not productive after they were perforated. So I think you probably have to assume they probably didn't have any permeability.

Q. Now, your engineer will get to this, Mr. Siruta, but KCS hopes to recover what? A little more than a BCF from this well?

A. Yes.

Q. Okay. Could it potentially have recovered a little more, had it been drilled earlier?

A. Yes, this well will obviously be partially drained, and if it had been drilled in earlier years would probably have recovered more reserves.

Q. Okay. What is Exhibit 2, Mr. Siruta?

A. Exhibit 2 is a structure map on the base of the Morrow Massive shale, which is a very distinctive marker out here.

Q. Does structure play a big part out here in the Morrow?

A. No, not really. There's a regional dip here to the southeast, and it really doesn't play that big a role.

Q. Okay. Now, there's a line of cross-section. Is that your next exhibit?

A. Yes.

Q. Okay, why don't we move on to Exhibit 3 and identify that and perhaps discuss what you're going for in a little more detail.

A. This cross-section is the cross-section that's indicated on the structure map, and it will also be indicated on the isopach maps.

This illustrates the divisions that I have placed on the middle Morrow sands out here. All of the sands above the massive shale are basically middle Morrow sands.

And just an internal designation, I call the lowest one "A", the second one up "B", and the next one up "C".

And I think what it illustrates here is that the well that's on the -- first one on the cross-section, shows that the sands in that well are -- There's one really thick sand. The other sands are fairly thin.

The next well is the Burlington well in the northern part of Section 17, and it illustrates again the thickness of these sands.

And I think, you know, rather than go into detail on all the individual wells, you can see that it just clearly indicates the sands that are present in these wells and how they're very lenticular: They come and go fairly easily out here.

Q. Now, the well on the far right of the exhibit -- which is the one in the southeast quarter of Section 16; is that correct? --

A. Yes.

Q. -- and that was a noncommercial well?

A. That's correct. The sands in the main pay were very thin and tight, and that well was completed in a stray sand above these sands and also perforated in the lower Morrow out here.

Q. Okay. So as you move to the east from your proposed location, these "A", "B" and "C" sands disappear

to a certain extent?

A. That's correct.

Q. Is that one of the reasons for moving away from that well?

A. Yes.

Q. If you move toward an orthodox location, further to the east, in your opinion would that be too close to a noncommercial well to justify drilling?

A. That's correct.

Q. Now, your next three exhibits, Mr. Siruta, why don't you -- They are all isopachs, I believe?

A. Yes, that's correct.

Q. Why don't you just take those and go through those together and identify them for the Commission?

A. These are the isopachs that I've drawn based on the wells out here. I've used an eight-percent cutoff as my porosity cutoff. They illustrate basically the sand trends in this area.

The large numbers that are written beside them are the thicknesses for each of those wells. For example, on the isopach on the "B" sand, the well in the northeast corner of Section 17 has 16 feet of net pay.

It illustrates that the sand trends in here are from a northwest-to-northerly, to a south-to-southeast direction.

Q. Do you -- When you're drilling a well in this area, can you look or can you aim for just one sand, or do you need to stack the zones in order to get a successful well?

A. We've discovered in here, really, to have a commercial well, you have to have at least two of these zones, and we'd really prefer to stack all three of the pays.

Q. Okay. Now, in these successful offsets, the well in the northwest quarter of Section 16 and the two in Section 17, were at least two of these zones present, "A", "B" and "C" zones present in those wells?

A. Yes.

Q. It also appears, Mr. Siruta, that -- Now, the best well is the Southwest Royalties well, is it not?

A. That's correct.

Q. Virtually all of the development of the Morrow is to the east of that well, is it not?

A. That's correct.

Q. Now, you mentioned this well earlier. In the northeast quarter of Section 21, there's a well that you briefly mentioned. It looks like it has pretty good thicknesses in almost all of these three zones. Did it produce in the Morrow?

A. No, that well was perforated in these zones, and

no results were really reported on the scout ticket information. But the well never made a commercial well, and when you look at the resistivity on this well you can see pretty clearly that there was a lack of permeability.

Q. Based on that, would you like to stay away from that well also?

A. Yes, that's correct.

Q. Okay. Now, when Southwest Royalties -- and our next engineer will discuss drainage a little bit. Because of the dry hole in the north half of Section 20 and the low-permeability well in the north half of Section 21, does that limit drainage from that area of the reservoir?

A. Yes.

Q. And so it's -- Geologically speaking, the way you look at it, the Southwest Royalties well would not be draining much from that area of the reservoir?

A. That's correct.

Q. It would be more to the north and east?

A. That's correct.

Q. Okay. Based on your maps, Mr. Siruta, is your opinion that your location is necessary in order to adequately test the Morrow in Section 16 and ensure a reasonable chance of success?

A. That's correct.

Q. Looking at it from a geologic standpoint, will

the proposed location adversely affect Southwest Royalties?

A. No, I don't believe so. They've produced over 5.2 BCF in about 25 years. They've had an opportunity to recover their fair share of the reserves out here.

Q. Now, when did KCS acquire its interest in Section 16?

A. In -- Roughly in January of 1998.

Q. So you haven't been sitting on your rights waiting to develop this acreage?

A. No, we have not.

Q. Okay. In your opinion, is the granting of your Application in the interests of conservation and the prevention of waste?

A. Yes.

Q. And, maybe just looking at one of the maps, who are the offset operators who we have to give notice to in this case?

A. Southwest Royalties operates the south half of Section 17, who we gave notice to. And UMC Petroleum operates all of Section 20, 21 and 22; it's the Parkway West Unit.

Q. Okay. Notice of the original Application was given to those parties?

A. Yes.

Q. And that's reflected in my affidavit of notice,

Exhibit 7?

A. Yes.

Q. Has UMC, now Ocean Energy, waived objection to your location?

A. Yes.

Q. Were Exhibits 1 through 7 prepared by you or compiled from company business records, Mr. Siruta?

A. Yes.

Q. One final thing, to the extent the Commission can do so, would you request a prompt decision in this matter?

A. Yes, we have some deadlines that we need to meet.

Q. What are those deadlines?

A. We had a time element on some farmouts that are about ready to expire, and also rig availability out here is just excellent right now, and we'd like to take advantage of that.

Q. It hasn't always been excellent?

A. That's right.

MR. BRUCE: Madame Chair, at this point I'd move the admission of KCS Exhibits 1 through 7.

CHAIRMAN WROTENBERY: Any objection?

KCS Exhibits 1 through 7 are admitted into evidence.

MR. BRUCE: And I'd pass the witness for Mr. Cooter.

MR. COOTER: What was 7?

MR. BRUCE: Paul, it was just an affidavit of notice.

MR. COOTER: An affidavit? Thank you, Jim.

CROSS-EXAMINATION

BY MR. COOTER:

Q. Mr. Siruta, just a couple of questions. I think Mr. Bruce asked a question of what your anticipated recovery would be from a well drilled at your proposed unorthodox location.

A. Uh-huh.

Q. And you said that was what?

A. In excess of 1 BCF.

Q. In your original testimony some months ago you gave a figure of 1.5 BCF --

A. Yes.

Q. -- I believe. Are you changing that?

A. No, I think somewhere between 1 and 1.5 BCF is what we would anticipate.

Q. And that would be at the unorthodox location?

A. That's correct.

Q. At that same time you were asked about the amount -- the footage of the three zones when they were stacked together. Do you recall that testimony?

A. I don't remember the exact number, but yeah, I

remember being asked that, yes.

Q. At that time -- and I refer to page 21, Mr. Bruce -- you were asked what that amount would be for a well at a standard location, which would be 1650 feet from your west line.

A. Yes.

Q. Do you recall that?

A. Yes.

Q. If you gave the response in answer to that question that you would anticipate eight of sand in the Morrow "A" at a standard location, ten feet of pay in the Morrow "B", again at a standard location, and eight feet of pay in the Morrow "C", again at a standard location, if you stacked all three of those, you would have, I believe, 26 feet of pay at a standard location; is that correct?

A. That's correct, if you stacked all three sands.

Q. And that's what you would like to do?

A. Is stack all three sands.

Q. Yes.

A. Yes, that's correct.

Q. You -- Yeah, before leaving that, how many feet do you believe that Medallion Resources would need to drill a well at a standard location?

A. I think in -- It's difficult to answer that question in terms of all three sands being stacked, because

typically out here individual sands that have less than ten feet of pay are usually not productive in most cases. Sometimes they are, sometimes they're not.

But we would like to see at least ten-feet-plus in each zone, because we feel like in individual zones that's what it takes to be productive out here.

And keep in mind that these really are one single zones. Like my "A" sand is not a single zone, it's an interval that I have mapped that consists of several different zones within that interval.

I'm not trying to say that like the net isopach on the Morrow "A" sand is just one single reservoir. It really consists of several different sands in that interval between two shales, and we like to see at least ten-feet-plus.

Q. How many more feet would you have if the Commission granted Medallion Resources the right to drill at its proposed unorthodox location?

A. Well, let me look at that.

I would anticipate, just based on my maps, probably around 39 to 40 feet total, in all three sands, stacked.

Q. Do you know what the thickness is of the Morrow sands in the Southwest Royalty well to the west?

A. Yes.

Q. What are they?

A. Let's see, 34, six -- About 40 feet.

Q. Can you break that down for me into --

A. Yes.

Q. -- the zones?

A. The "A" sand has six feet of net pay, the "B" sand has 22, and the "C" sand has 12 feet.

Q. Let me direct your attention to the Parkway West Number 9 well, down in Section 21.

A. Yes.

Q. You said that was not productive?

A. That's correct.

Q. And you assume because of that, that it had poor porosity?

A. No.

Q. Permeability?

A. That's an assumption that I made, that it had poor permeability, because it did appear to have good porosity in the sands.

Q. Can you rule out the possibility of bad completion?

A. No. I mean, I have no idea what they did to the well exactly, and they really didn't report any results, so the answer is, I don't know. I don't know if they did a bad completion or it was just tight.

Q. How did you determine the poor permeability?

A. It's not always the case, but in a lot of cases out here in the Morrow, if they're drilled with the correct muds, you could see separation on the resistivity logs, on the deep-reading curve and the medium- and shallow-reading curves.

In this well, if you look at it, it did make an Atoka well. I don't recall what it produced. I think .3 or .4 of a BCF.

If you look at that well you'll see that in the Morrow the separation is very small, but if you look at the Atoka zone in this well the separation is very great. So it's kind of a relative thing. You can't really go by a general rule out here. You have to look at each individual well and base it on a relative look.

And when I look at the Atoka, it has good separation, it produced. I look at the Morrow, it had very small separation and it did not produce. So --

Q. On your resistivity log, how much crossover do you need to have good permeability -- separation?

A. That's kind of a relative thing. It depends on the individual logs.

MR. COOTER: That's all, thank you.

CHAIRMAN WROTENBERY: Commissioners, do you have any questions for Mr. Siruta?

COMMISSIONER BAILEY: I have some land questions.

THE WITNESS: Well, I'll struggle with those the best I can.

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Is there an active communitization on the south half of the 16 that covers them all?

A. I believe so.

MR. BRUCE: On the --

THE WITNESS: -- south half.

MR. BRUCE: Yeah, I think Mr. Siruta is right. It doesn't cover the Morrow, though, I don't think. The south half is no longer productive in the Morrow.

THE WITNESS: Yeah, it just covers the Atoka.

Q. (By Commissioner Bailey) This would obviously be a communitized well if it were drilled and productive. Would you consider changing the name to reflect that it's a State com well?

A. Sure.

Q. Naming conventions get important at times.

You mentioned that you expect 1 BCF from this well, but it's -- the area has been partially drained. Where would you expect that that drainage would have come from? Which well?

A. Oh, obviously the Southwest Royalties well in the

southwest of Section 17.

Q. Okay. Have you put a number as to how much you would have expected that that Southwest Royalties well would have drained your well, your area?

A. I would like to defer that question to our engineer. I think he's more qualified to answer that than me.

COMMISSIONER BAILEY: That's all.

CHAIRMAN WROTENBERY: Commissioner LeMay?

EXAMINATION

BY COMMISSIONER LEMAY:

Q. Yes, Mr. Siruta. What kind of -- First of all, is there any downdip water at all that you know of in the middle Morrow here, in these water legs?

A. Not that I know of. It's kind of unusual to see water in the middle Morrow out here.

Q. Do you have your own estimate on what's commercial in terms of -- Obviously you made the recommendation to drill the well?

A. Yes.

Q. The 1 to 1.5 BCF would be a target for reserves.

How about deliverability? It looks like most of the wells are in the neighborhood right now of a third of a million a day or something, ten-million-a-month range?

A. Yes.

Q. Would you expect that kind of deliverability or better?

A. I would think better.

Q. Why?

A. I think we should have a little better bottomhole pressure than what these wells have at present. We will experience some drainage, but our bottomhole pressure should be fairly good yet, because we're not in a totally drained area.

Q. That's been your experience, that there's been poor pressure communication through here, you can't correlate the pressures very well from all the wells when they're drilled?

A. Not when they're drilled, but over time you can begin to see the interference with each other. The well in the northeast of 17, as our engineer will point out, showed depletion when it was drilled in 1985, so it was drilled 11 years after the initial well.

But keep in mind that the heart of the reservoir is in a northwest-southeast direction. So that well in the southwest of 17 probably had a tendency to drain quicker up to the north.

Q. What's the commercial limit, do you think, in this area, just ballpark commercial limit as to when a well becomes marginal and it needs to be plugged? Can you

produce them down to pretty low ranges, or is there a cutoff, do you have operating problems?

A. Well, of course that depends on your line pressure and it depends on how much you can compress it, and there are a lot factors, you know, that come into play.

Q. But a third of a million a day, it looks like they're producing commercially through here now?

A. Oh, yes, certainly, yeah.

COMMISSIONER LEMAY: That's all the questions I have. Thank you.

EXAMINATION

BY CHAIRMAN WROTENBERY:

Q. I just had one question on notice. It appears that Burlington operates wells in the north half of 17 and 16. Were they notified -- Or were they required to be notified? Let me ask it that way.

MR. BRUCE: Madame Chair, if I could answer this instead of Mr. Siruta, the way I read the rule, you go to the -- if there's a south-half unit, you notify them. I understood if you notify the people to the immediate west and southwest, is how I interpreted the rule.

CHAIRMAN WROTENBERY: I don't have any further questions.

Anything else for this witness?

MR. BRUCE: I would just -- I'd like a follow-up.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Siruta, this is getting to something that Mr. Cooter asked you about thickness you'd expect.

When you look -- When you compare your production map against your isopachs, the two best wells in the pool, the Southwest Royalties and the Burlington well in the northeast quarter of Section 17, which is still producing, had the greatest thicknesses in the "A", "B" and "C" zones, did they not?

A. That's correct.

Q. And then you have the Burlington well in the north half of Section 16. It was commercial, but it produced the least and had the thinnest sands, didn't it?

A. That's correct.

Q. And then the noncommercial Burlington well in the southeast quarter of Section 16 had very little of these sands?

A. That's correct.

Q. So it's not a direct correlation, but it does give some -- I don't know what the right word is -- some basis for you say, is, you need to stack these sands and increase the thickness of them.

A. That's correct.

MR. BRUCE: That's all I have.

CHAIRMAN WROTENBERY: Mr. Cooter, do you have anything?

MR. COOTER: I have no questions, thank you.

CHAIRMAN WROTENBERY: Thank you, Mr. Siruta.

MR. BRUCE: Next witness is Tom Beauchamp, whose name is spelled B-e-a-u-c-h-a-m-p for those of you whose French isn't up to par.

TOM BEAUCHAMP,

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 full name and city of residence?

A. Tom Beauchamp, Tulsa, Oklahoma.

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

A. I'm a senior reservoir engineer with KCS Medallion in Tulsa.

Q. Have you previously testified before the Division or the Commission?

A. No, I haven't.

Q. Would you please briefly describe your educational and work background?

A. I graduated from the University of Oklahoma in 1989 with a bachelor's in petroleum engineering. I worked

for five years with Amoco Production Company, three years with Samson Resources, and I've been with KCS Medallion for approximately four months. In that time I've worked reservoir, production and completion engineering.

Q. Does your area of responsibility include southeast New Mexico?

A. Yes, it does.

Q. And are you familiar with the engineering matters relating to this Application?

A. Yes, I do.

MR. BRUCE: Madame Chair, I tender Mr. Beauchamp as an expert petroleum engineer.

CHAIRMAN WROTENBERY: Any objection?

MR. COOTER: No objection. I didn't hear your answer, that part of your answer, how long have you been with Medallion Resources?

THE WITNESS: Four months.

MR. COOTER: Thank you. We have no objection.

CHAIRMAN WROTENBERY: Mr. Beauchamp is so qualified.

Q. (By Mr. Bruce) Could you please summarize your findings and your proposals to the Commission?

A. First, I believe that there are still remaining reserves in the southwest quarter of Section 16, and I feel like if a well is drilled in the southwest quarter it will

only have a small effect on the offsetting wells. And third, KCS Medallion needs a minimum rate to be able to economically drill a well in the southwest quarter.

Q. Okay, thank you.

Would you identify Exhibit 8 for the Examiner -- excuse me, for the Commission?

A. Exhibit 8 is three pages which contain -- The first page is reservoir properties from some offsetting wells. I use this page to move to the second page, which allows me to calculate drainage circles on the map that I'm going to show. And the third page allows me to take those drainage volumes and use a decline curve to determine the dates that those drainage circles will hit those volumes.

These are similar to the Southwest Royalty exhibits that were presented in the last Commission hearing.

Three things that I would like to point out are, on page number 1, the KCS Medallion well for the reservoir properties, there's a column which is labeled "Phi", which is porosity. I used an average porosity of five offset wells to determine 9.2 percent. Those five offset wells are listed at the bottom of the page.

Now, that number is going to be higher than the Union Texas well, and the reason is because we're moving more up on structure, and we think that we -- We hope to

get some better porosity.

Second, my water saturation was also -- which is under "Sw", and I had 20 percent water saturation. That's also based off of five offset wells.

Third, my initial pressure is 4000 pounds, and I do not believe that southwest quarter has been drained from the offset wells. We probably will see some depletion from the original pressure, which was 4300 pounds, but it shouldn't be significant. I'm estimating 4000 pounds, and maybe a little bit lower than that.

But typically, what you'll see out in channel sands is, you'll get a lot of depletion along strike. So in this case strike is north-south, so you should get more depletion in the north-south range, and that's why the Parkway 17 well experienced some depletion when it was drilled ten years after the Union Texas well came on.

As you move laterally in a dip fashion, you shouldn't expect to see as much drainage as you would along strike. So we hope that we'll be able to see an initial pressure of 400.

What this does is, this allows me to calculate a cum per acre-foot, which is in the bottom right-hand corner, MMCF per acre-foot of .632.

Q. Okay. What was the figure used by Southwest Royalties in the Examiner hearing?

A. The cum per acre-foot was .271, and the major difference that I was able to see was that they're estimating a drainage from initial pressure of 4300 down to approximately 2200 pounds, and what they base that off was the Parkway 17 well, up in the north half of 17, had an initial shut-in pressure at the surface of 2200 pounds.

What I did is, I used that initial pressure and some correlations, the Standing and Katz correlations, to estimate what the bottomhole initial pressure was. And you'll see that on my first page here of 2930. So the original pressure in that parkway well, that was actually higher than 2200 pounds.

Q. Let's pull out your Exhibit 9, and before we get into the drainage circles, let's orient them a little bit and maybe discuss those pressures a little bit, Mr. Beauchamp.

The Southwest Royalties is labeled the 1-TX, right?

A. That's correct.

Q. And then that was the initial well in the reservoir, and that had a pressure of 4319?

A. That's correct.

Q. Okay. And then the well to the north, labeled 1-17, that is the well that when it was drilled had a pressure of about 2200?

A. That was the initial surface pressure, not the --

Q. The initial surface pressure.

A. -- initial bottomhole pressure.

Q. Okay. So that showed depletion, but once again that is along the strike of the reservoir?

A. That's correct.

Q. Now, moving over to the east, the well labeled 1-16, that well, you calculate, had a higher pressure when it was drilled --

A. It had a bottomhole pressure of 4196.

Q. Okay. And that well is not along the same strike of the reservoir as are the other two wells?

A. That's correct.

Q. So you would anticipate its pressure to be higher?

A. That's correct.

Q. And based on that, you would expect the pressure over at your proposed location would be higher than theorized by Southwest Royalties?

A. That's correct.

Q. Okay.

A. And if the pressure is lower, like 2200 pounds, you get into two problems.

Number one, the problem is, you have a lot less gas under your acreage to produce.

Number two, based on a radial flow equation, instead of getting 1.3 million a day initial rate -- which is what the well in Section 16 had, approximately, 1.3 to 1.5 -- by going down to 2200 pounds we calculate that initial rate would be more in the 600-MCF-a-day range without penalty.

Based on those two situations, we wouldn't be able to drill an economic well at 2200 pounds.

Q. So if Southwest Royalties is right, you shouldn't even drill the well, number one?

A. That's correct.

Q. And number two, they are essentially draining your acreage?

A. That's correct.

Q. Okay. Now, why don't you get back to Exhibit 9 and go through Exhibits 8 and 9 together, and tell them what this shows as far as any effect of your proposed well on the offsetting acreage.

A. Okay. From the first page I took the MMCF per acre-foot and put it on the second page which I've listed as the gas volume factor. And what I've done here is, I've listed my circles around each well on the map. Underneath these circles is an acre-foot, which is calculated based on the isopach maps that Mr. Siruta had shown earlier.

For example, the KCS well, with a gas-volume

factor of .632, if you look under Circle 3, it has 1601 acre-feet, and that calculates to 1.012 BCF. And if you look on the map, that is the outermost circle on the KCS well.

Now, if you take these volumes from the second page and put them on the third page, you go through the decline curves from each of the wells and you're able to determine at what date each of these cums is going to occur for the surface.

And so, for example, the KCS well, circle number 3, 1 BCF, we will hit that in October of 2007.

Q. So until about the year 2007, assuming you drill the well this year, your proposed well won't have any effect on the Southwest Royalties well?

A. That's correct.

Q. Or on its acreage, I should say?

A. That's correct.

Q. Okay. Now, looking at page 3 of your Exhibit 8, it talks about an initial potential of 1.5 MCF per day. Is that optimistic?

A. No, I think it's reasonable. If you look at the Southwest Royalties well, they had an IP of 2 million a day. If you look at the well in the north half of 17, the 1-17 well, it had an IP of approximately 1 million a day. And actually it was a little lower than that. If you look

at the cums over the first two years, it was more in the 900-a-day range.

The well on the north half of Section 16 had an IP of 1.5 million a day, so I think it's reasonable.

Q. Okay. Now, you used a decline rate of 41 percent. Is that a reasonable rate?

A. I believe so. If you look at the well on the north half of 16, the State 16 well, when it IP'd back in 1979, it IP'd for 1.5 million a day, and it declined at a 34-percent rate down -- during the first six years, down to approximately 100 MCF a day. In that time, they cum'd 1.15 BCF.

After that it appears that they put the well on some type of compression, because they're able to maintain 100 MCF a day and produce an additional .3 BCF.

Second, the well on the southeast quarter of Section 16, the 1-16A well, it produced from the lower Morrow sands, which are not the Morrow that we're going for here, but it is a Morrow sand, and that well had an initial rate of approximately 300 MCF a day and declined at a 45-percent rate.

So I think it's reasonable to assume 41 percent.

Q. Now, what reserves do you hope to recover from this well?

A. A little over a BCF.

Q. So based on your Exhibit 8, by the year 2007 you hope to have recovered that amount?

A. At that point, yes.

Q. Okay. What about after the year 2007? What effect will you have on the south half of Section 17 after that year?

A. If you look at my third page and look at the Union Texas well, in February of 2004 they've hit the end of their drainage circle 3. Three years after that, we hit our lease line. So after we hit our lease line, we're probably going to be sharing some reserves in Section 17 with the Union Texas well between their third circle and their fourth circle. I believe that's going to be a very small amount, though.

Q. Have you calculated that amount?

A. Yes, I drew another radius which was tangent to their number 3 circle, and between that tangent line and their number 4 circle I calculated approximately .35 BCF. So we could, in the best case, share .35 BCF.

But I want to point out that their 3 circle is in 2004, and we won't cross the lease line until after -- or around 2007. So that may be a little optimistic.

Q. So you're talking about something, number one, that's ten years out in the future?

A. That's correct.

Q. And as far as affected acreage, have you calculated that?

A. Yes, that acreage is approximately 20 acres.

Q. But in that area, of course, you won't get all that, you'll both be competing for that?

A. That's correct.

Q. So in short, you -- In your opinion, you're going to have a very small effect, if any, on Southwest Royalties?

A. Yeah, it will probably be less than 10 percent of their acreage.

Q. Okay. As a result, if a penalty is assessed on this location, do you urge that it be a relatively modest penalty?

A. Yes, I do. And I've done some economic calculations to try to determine what a minimum rate is that we can sustain and still drill an economic well.

Q. Has that been marked Exhibit 10, some of the economics?

A. Yes, it has.

Q. Would you go into that and identify that for the Commission?

A. The first page is the output page, which is the important one. The second page is the input page. And it's -- At the very top it has 1 million a day, 1 BCF.

And the thing that we key on at KCS is what's called risk capacity. And what that is is, that's your present value at 25 percent, divided by your dryhole cost. We need to have a risk capacity below 70 percent to drill an economic well.

What that means is that you have a 30-percent chance of getting the economics that you want, and you have a 70-percent chance of getting less than what you want.

So there's a fairly high risk involved in drilling this. That risk is sand risk, we may drill not as much pay as we think, it's pressure. We may actually drill and maybe it is 2000 pounds; in that case it as an uneconomic well.

So this risk capacity tries to take that into effect.

And I've calculated our risk capacity is 71 percent, and that is the minimum that we'd be able to use.

Q. Okay. So what you're urging is that you be allowed at least a minimum 1-million-per-day initial rate?

A. That's correct.

Q. Okay. And I think you mentioned that you really can't tell what you have until you drill?

A. That's correct.

Q. Now, even if the well is approved as you hope it is, will Southwest Royalties have an advantage for a number

of months?

A. Yes, because we feel that it will take two or three months to get the permitting done and then probably two or three months to drill the well, get it hooked up to production.

So it will probably be early next year before we actually get it on production. And all of these economics were run based on getting production in September of this year, so there will be some lag time in there.

Q. Mr. Beauchamp, is the granting of this Application in the interests of conservation and the prevention of waste?

A. Yes, I believe if a well is not drilled in the southwest quarter that there's going to be reserves that will be left in the ground that will not be produced.

Q. And were Exhibits 8 through 10 prepared by you or under your direction?

A. Yes, they were.

MR. BRUCE: Madame Chair, I'd move the admission of KCS Exhibits 8 through 10.

CHAIRMAN WROTENBERY: Any objection?

MR. COOTER: We have no objection.

CHAIRMAN WROTENBERY: KCS Exhibits Number 8 through 10 are admitted into evidence.

MR. BRUCE: Pass the witness to Mr. Cooter.

CROSS-EXAMINATION

BY MR. COOTER:

Q. Mr. Beauchamp, your Exhibit Number 9 was prepared by you after you had reviewed the similar exhibits prepared and offered by Southwest Royalties at the other hearing?

A. That's correct.

Q. The information, however, varies a little bit?

A. Yes, it does vary.

Q. I think you indicated that the proposed well would drain the southwest quarter of Section 16. You do not believe that the southeast quarter of 16 is productive, even though this is a 320-acre proration unit?

A. No, based on the well on the southeast quarter that was drilled and did not produce, I don't believe that that will be productive.

Q. In your opinion, would the State 16-1 well in the southeast corner of the northwest quarter of 16 drain your proposed acreage in the southwest quarter of that section?

A. I don't believe so. If these drainage circle were more elongated instead of circular, there is a possibility that that could put a drainage down there.

Q. You talked about the Southwest Royalty well in the adjoining Section 17 as draining the Medallion land, the southwest quarter of 16, did you not?

A. No, what I talked about was having an initial

pressure of 4000 pounds, so it may be depleted maybe 400 pounds, but we don't anticipate it to be significantly depleted.

Q. You do not believe that the Southwest Royalty well in Section 16 has drained any production from under the Medallion Resources land in the adjoining Section 16?

A. Based on these maps, I do not believe that.

Q. And you do not believe that there would be any drainage from under your lands from that Southwest Royalty well until sometime -- Well, it wouldn't occur, period?

A. That's correct.

Q. Although your well at the proposed location, you admit, would drain from under the Southwest Royalty land in 17?

A. That's correct, we would share minimal reserves after about ten years.

Q. I like your adjectives, or your use of the adjectives.

But in 2007, sometime before 2007, it's going to -- if you're granted permission to drill, it would start draining the Southwest Royalty land?

A. That's correct.

Q. And have you calculated what that drainage would have amounted to in 2007?

A. To the Southwest Royalties land?

Q. Yes.

A. It should be zero at 2007.

Q. Your map shows it over, but you don't believe that that is correct?

A. Well, it will probably be more than zero, but I would imagine -- That acreage is maybe only three acres, so --

Q. How did you calculate that, Mr. Beauchamp?

A. Just by looking at the map. So that may be 50 MCF, 50 million --

Q. That's a subjective determination --

A. Exactly.

Q. -- by you?

A. That's correct.

Q. It may or may not be found to be correct?

A. That's correct.

Q. I think you and Mr. Blount are in accord, however, that the Southwest Royalty well does not drain, will not drain from the Medallion Resources land?

A. That's correct.

Q. And as I understand from -- Or if I understand correctly, from what Mr. Bruce said in his summary or his closing questions, you seek a -- even though a penalty may be imposed, a minimum rate of production from your well?

A. That's correct. If we --

Q. And that minimum rate may or may not be the potential from that well, then -- or deliverability of that well, subject to a penalty?

A. That's correct. If there is drainage onto our acreage, which we don't expect, then we may be producing at an initial rate below a million a day, and so at that point it's an uneconomic well without a penalty. But we request one million a day, minimum.

Q. And if your deliverability should be a million a day, then what you seek is full deliverability without penalty so that it can be economic to Medallion Resources?

A. That's correct.

MR. COOTER: May I have just a couple seconds?

CHAIRMAN WROTENBERY: Sure.

Q. (By Mr. Cooter) Thank you. For just a minute, because -- I didn't make a note and I don't know. Did you calculate what your deliverability would be if the Medallion well were located at a standard location, 1650 feet from the west line?

A. No, I did not.

Q. You cannot, then, tell the Commission today that a well located at a standard location, 1650 feet from the west line, may well encounter similar bottomhole pressure, similar deliverability as the well you propose at the unorthodox location? Have I rambled enough in that

question? It's confusing.

A. No, no, I believe that the bottomhole pressure would be similar to an unorthodox location. But as you get further away from the struc- -- downdip, you get less pay, and based on the radial-flow equation that equates to a lower initial rate than what you'd expect in an unorthodox location.

Q. Okay, let me go back to your Exhibit 9 for just one more question.

The Southwest Royalty well in Section 17 affected the bottomhole pressure -- It was over 4000 pounds when it was completed?

A. That's correct.

Q. And it affected the bottomhole pressure of the well up to the northeast, the -- what is marked as Well 1-17?

A. That's correct.

Q. And that, the bottomhole pressure was a little over 2000 pounds?

A. No, I calculated it to be almost 3000 pounds.

Q. 2930?

A. 2930.

Q. That's the Parkway 17 Number 1 well.

But it's your considered opinion that the Union Texas well did have an effect on the bottomhole pressure of

that well to the northeast?

A. That's correct.

Q. Tell me, then, why the State 16-1 well, in Section 16, up in the northwest quarter, would not, in all probability, have had a similar effect on the well you proposed -- you now propose, in the southwest quarter of that section. They're both on strike?

A. That's correct.

The well on the north half of Section 16 does have considerably less pay than the Southwest Royalties well had in the bottom of 17. So you would expect -- or I would expect that the drainage would be more considerable in Section 17 than in Section 16.

But it doesn't mean that the Section 16 well has not drained this location. We anticipate that it hasn't, but there is that possibility.

Q. Why do you anticipate 4000-pound bottomhole pressure in your well? On what is that based?

A. It's based on the average of the initial pressures in the five offset wells, and since we don't believe that the well is going to be depleted, we think that that's a good number.

Q. Would you plug your well, if you were granted the right to drill it at that location, if you found the bottomhole pressure to be 2000, 2500 pounds?

A. Well, at that point you need to look at cost-forward economics, so you would do the exact same analysis, but you would be using your completion costs instead of your drilling costs.

And if you were able to get a risk capacity less than 70 percent, you would complete the well. But if it was more than 70 percent, then you wouldn't.

MR. COOTER: That's all, thank you.

CHAIRMAN WROTENBERY: Commissioners, do you have any questions of Mr. Beauchamp?

EXAMINATION

BY COMMISSIONER LEMAY:

Q. Okay. I'm interested Mr. Beauchamp -- Beauchamp, right? --

A. Yes.

Q. -- in your cost-forward economics, and also on your requested minimum allowable of a million a day.

Obviously if you're going to take a point in time, you're going to take a point after you -- Say you drill the well, and then you're faced with completion costs, and you have a bottomhole pressure. Given a bottomhole pressure scenario of 2000 and 2500 pounds, you would look at what you could produce at that bottomhole pressure?

A. That's correct.

Q. What would that be, in your estimation, if you have 2500 pounds bottomhole pressure?

A. Probably 600 MCF a day.

Q. And would that be economic?

A. For the cost-forward of $317,000, I believe it would.

Q. So in terms of granting you an allowable, the assumption would be that -- going into the well, that you would get something in the neighborhood of a million and a half pounds [*sic*], based on 4000 bottomhole pressure. You would recommend to your management you drill it, if you could get a million a day, going in, because you anticipate 4000 pounds bottomhole pressure.

After you drill the well and test it and get 2500, if you assume you do get 2500 bottomhole pressure, then you've got a sunken investment. Then you're looking at a minimum allowable from that point on, risk capital being the $300,000 completion cost --

A. That's correct.

Q. -- and at that point 600,000 would be a minimum level of allowable to continue, right?

A. I believe it's 600,000. I actually did not run any numbers, but it should be in that ballpark.

COMMISSIONER LEMAY: That's all I have, thank you

CHAIRMAN WROTENBERY: Commissioner Bailey?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Drainage circles are based on an idealized homogenous-type situation. Obviously, drainage is going to follow the strike of the formations?

A. To an extent, yes.

Q. Would you, based on that premise that drainage is primarily going to following along strike, change that drainage circle for the southwest of 16?

A. Yes, if I could. But it would be a large assumption to be able to model that, because our -- at least the programs we have, we're not able to model elliptical.

And so in an idealized world you would like to be able to do that, but we're not able to.

What that would do, though, is, that would move the Southwest Royalties lines more closer, away from the lease line, and put it further up north and further down south, and that would also minimize the amount of drainage that we're going to compete with them for in their current well.

Q. So the figure that you give for the drainage that you would expect after 2007 is probably a high number, compared to what reality may be at -- in ten years?

A. I believe so, yes.

Plus at a million a day, instead of 1.5 million a day, we don't reach the edge in 2007; we'll reach it at a later time period. So their circle 3 will be even further over at that point.

CHAIRMAN WROTENBERY: Mr. LeMay?

FURTHER EXAMINATION

BY COMMISSIONER LEMAY:

Q. I had another follow-up, because you're -- Unfortunately, you're dealing with three geologists here; you don't have an engineer on this particular Commission. So bear --

MR. BRUCE: I warned them.

Q. (By Commissioner LeMay) So bear with us here, with some of our dumb questions -- Or I should speak for myself in that matter.

Now, given 4000-pound versus 2500-pound bottomhole scenarios here, which number would encroach more in terms of drainage in Section 17?

A. You know, I believe it's going to be very similar, because what you have is, you have less gas under the southwest quarter, and you have lower rate. So from a time standpoint you're probably still going to be looking at 2007 before you reach the section line.

So from that standpoint, you know, the drainage should be similar.

Q. What's the variable affecting drainage?

A. The variables are going to be pressure, and then rate that you're able to produce the well at.

Q. But I thought you just said pressure wouldn't be a variable; you would drain equally, given two different pressure scenarios.

A. No, what you had asked was at 2500 pounds, what the situation would be there.

Q. Well, I'm trying to figure out in my own mind which would cause the greatest drainage. I mean, I think you've agreed there would be some drainage. We're trying to figure out, maybe, how much drainage in Section 17.

A. Yeah.

Q. Would a bottomhole pressure of 4000 pound subject Section 17 to more drainage or less drainage than a bottomhole pressure of 2500 pounds? I thought you said it would be equal.

A. Well, the time that you're going to get to the section line is going to be equal. So at that point you're not going to be draining out of their acreage.

After that time, there's going to be less gas between circle 3 and the section line, so that number will also go down.

Q. I guess I'm still confused. You're saying because of the time difference here, we're not talking

about any additional drainage in Section 17, given two different pressure scenarios?

A. That's correct. What you're looking at is, when we start producing our well -- let's say it's at 2500 pounds -- we start producing our well. It still takes us to 2007 to get to the lease line.

After that point we're going to be competing with Southwest Royalties, and we should be competing at the same as it was at 4000 pounds, because the time frame is the same. But what happens is that your pressure between circle 3 and the edge of the -- or the section line, is probably going to be more reduced than I had anticipated it would be at 4000 pounds.

So that means in the southeast quarter of Section 17, there's less gas to compete with Southwest.

So I guess your first question is, Will you be draining less gas? And the answer is yes.

Q. With 2500 pounds?

A. With 2500 pounds.

Q. You're draining less gas?

A. Yes.

Q. So the lower the bottomhole pressure, the less drainage there would be. Is that also a function of -- of course deliverability, against the --

A. Exactly, that's right.

Q. That is the main ingredient in drainage?

A. That's one of them, yes. Acre-feet is also, pressure is also a factor.

COMMISSIONER LEMAY: Those are all factors in the drainage. Okay.

CHAIRMAN WROTENBERY: Any further questions from Mr. Beauchamp?

MR. BRUCE: I don't have anything further.

MR. COOTER: May I ask one more question?

CHAIRMAN WROTENBERY: Sure.

FURTHER EXAMINATION

BY MR. COOTER:

Q. You used the word "competing" with Southwest Royalty for production under land -- the land of Southwest Royalty.

A. That's correct.

Q. The Southwest Royalty well has the right, do you agree, to drain the southeast quarter as well as the southwest quarter of 17?

A. Well, I believe that it's difficult to stay off of section lines, and on my map it shows the Southwest Royalty well drained significantly down into Section 20 --

Q. That wasn't my question, Mr. Beauchamp.

Does the Southwest Royalty -- Do you recognize that the Southwest Royalty well has the right to drain the

full proration unit, which in this case includes the southeast quarter of 17?

A. If it had the ability to do so in a reasonable time frame, yes.

Q. Aren't those decisions which Southwest Royalty has the right to make?

A. Yes.

Q. And their idea of a reasonable time might not agree with that of Medallion Resources, but still they have the right, and they only, have the right to drain the southeast quarter of Section 17?

A. In an ideal world where you don't cross-section lines, yes, I believe so.

Q. Right, right. We recognize the good Lord didn't extend the fence lines down underground. But be that as it may, we're human and we treat the south half of 17 as a proration unit?

A. That's correct.

Q. And that's through the rules and regulations of this Commission?

A. That's correct.

Q. And would you recognize that Southwest Royalties, then -- I'm repeating myself, but I'm trying to get an answer. And maybe you're answering it and I don't understand your answer. But they have the sole right to

production from the south half of 17?

A. That's correct.

Q. And so when you say you're competing for production from under a portion of the southeast quarter of 17, you're talking about competing for the right to drain a part of Southwest Royalties' lease?

A. That's correct.

Q. On your Exhibit 9 -- and if I'm repeating here, I apologize -- did you do one of these for a possible Medallion well at a standard location?

A. No, I did not, because we don't believe that we'll be able to drill an economic well in a standard location because of the loss of net pay that we would get, first, and the increased possibility of getting a dry hole by going away from the heart of the reservoir.

Q. But you show on this map that the Southwest Royalty well is draining part of the land in Section 20 --

A. That's correct.

Q. -- on which there was a dry hole?

A. That's correct. That's one of the difficulties in these maps, is, we have to assume that the geologic isopach maps are exact, and there is some -- Sometimes you'll get a dry hole. The zero line is right next to it, so I think the amount drained from up against that zero line is obviously zero, and there is potential that it

drain down into Section 20 based on the isopachs that we have.

Q. One final question, and I appreciate the Commission granting the right to ask it.

Was the State 16-1 well in the north half of your Section 16 an economic well?

A. Yes, it was.

Q. What was the thickness of the Morrow zones there?

A. I believe it was 20 to 25 foot.

Q. And that is somewhat less or maybe equal to the anticipated thickness of the Morrow sands, were Medallion to drill a well on its land at an orthodox location?

A. That's correct, it would be approximately 25 to 30 foot.

MR. COOTER: Thank you, sir.

CHAIRMAN WROTENBERY: Mr. Bruce?

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Just one question. Mr. Cooter asked you that your map showed the Southwest Royalties well draining part of Section 20, and you do show that?

A. That's correct.

Q. And in fact, that's what Southwest Royalties' maps show also, do they not?

A. That's correct.

Q. You can't always stop drainage at a lease line, can you, Mr. Beauchamp?

A. No, sir.

MR. BRUCE: Thank you.

CHAIRMAN WROTENBERY: Thank you very much, Mr. Beauchamp.

May we go off the record for a minute?

(Thereupon, a recess was taken at 10:16 a.m.)

(The following proceedings had at 10:30 a.m.)

CHAIRMAN WROTENBERY: Okay, we'll go back on the record now.

Mr. Bruce, I believe you said you had rested your case?

MR. BRUCE: Yes, ma'am.

CHAIRMAN WROTENBERY: Mr. Cooter?

MR. COOTER: Representing Southwest Royalties, we have two witnesses. The first is Dave Alderks,

A-l-d-e-r-k-s.

DAVID F. ALDERKS,

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

DIRECT EXAMINATION

BY MR. COOTER:

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

A. David F. Alderks.

Q. And are you the same David F. Alderks that testified before the Examiner back on February 19th?

A. Yes, I am.

Q. For this Commission, would you briefly relate your education and professional experience? Just be brief.

A. I have a bachelor's and master's degree in geology, 19 years of experience and am currently registered in the states of Illinois and Wyoming.

Q. How long have you been with Southwest Royalties?

A. I've been with Southwest about a year and a half or so.

Q. What -- For whom were you employed before Southwest Royalties?

A. I was a consulting geologist and was working for Santa Fe Energy Resources.

Q. Are you acquainted with the area in question here?

A. Yes, sir, I am.

MR. COOTER: We tender Mr. Alderks as an expert geologist.

CHAIRMAN WROTENBERY: Any objection?

MR. BRUCE: No, ma'am.

CHAIRMAN WROTENBERY: He is qualified.

Q. (By Mr. Cooter) You have a pile of exhibits in front of you that have been prepared by Southwest

Royalties' people. Let me direct your attention first to Exhibit 1. Identify that and explain what it shows.

A. Exhibit 1 is a structure map on the top of my Morrow C, which is not the same Morrow C as Mr. Siruta's. It is essentially the same as his structure map on the massive shale, I just call it a little different. It shows much the same thing. I don't think we have any arguments about how the structure appears in the area.

Also on here is a cross-section labeled A-A', which goes through the same wells that Mr. Siruta's cross-section does. And it also shows a green block, which represents Southwest Royalties' acreage.

Q. Next turn to Exhibit 2, if you would, and identify that for us.

A. Exhibit 2 is cross-section A-A'. On this cross-section you can see where my Morrow C is, and that's the datum that I have used here. That is also the mapping horizon for the structure map in Exhibit 1.

You can also see Morrow B sands, which equate to Mr. Siruta's "A", "B" and "C" designations, as well as his stray sands that he talks about.

You can see the cross-section goes from the Southwest Royalties Union Texas State Com in Section -- it should be in 17. It says 19, but it's 17.

And then we go up to the Parkway State 17 Number

1, the State Com 16 Number 1, and then the State Com 1-16 A, running through that cross-section.

Q. While we have this out, Mr. Alderks, let me direct your attention to the State Com 16-1 well. That is the well in the proration unit north of that of Medallion Resources.

A. Yes, sir.

Q. Let me ask you to turn to one of the Medallion exhibits that show how many feet, productive feet, are in that 16-1 well in the Morrow. I don't -- You have our copy, so I don't know which number it is. If you would find it and then identify it. There are three of them, are there not?

A. Yes, KCS Medallion's Exhibits 4, 5 and 6.

Q. What do they show on the amount of -- and stack the -- they used the term, "stack the footage" -- from those three zones.

A. From those three zones they are showing 15 feet of pay, 10 feet from the Morrow "A" sand, five feet from the Morrow "B" sand, zero feet from the Morrow "C". And when you add those together, you have 15 feet.

Q. Would you concur with Mr. Beauchamp's conclusion that that Number 16 well was a commercially productive well?

A. Yes, sir, it was.

Q. All right. Continue back on your Exhibit 2, cross-section -- anything else you want to --

A. I don't think there's anything additional we need to talk about in this cross-section. It shows the same thing we've discussed already.

Q. Will you fold that up, and we'll go on to Exhibit Number 3, Southwest Exhibit Number 3. Identify that and explain what it is.

A. This is a net sand map using a porosity cutoff of eight percent, as well as a gamma-ray cutoff of 50 API units, combined to give me a net sand map.

I have stacked all the pays in the Morrow B, and this is a compilation of all the sands in the Morrow B section, which is on my cross-section the interval from the oolitic lime down to that big shale marker.

And this map shows a similar sand trend from the north northwest down to the south southeast, with the major portion of the channel resting on the east side of Section 17.

And these values in here represent the net sands as I calculate them and show where the position of that channel is.

Q. Let's go next to Exhibit Number 4. Did you have anything else on Exhibit 3 that you --

A. No, but if I need to I can refer back to it.

Q. Let's go to Exhibit Number 4, and identify that, if you would.

A. Exhibit Number 4 is a map showing the -- or is a log section showing the Petroleum Corporation Delaware Parkway West Unit Number 9, located in the northeast quarter of Section 21, just to the south of KCS Medallion's acreage.

This log section shows both the neutron density log, as well as the resistivity log, and shows where I would pick my Morrow B and where I would pick my Morrow C, at the base of that big shale marker. The Morrow B sand is right between them. In there we can see sands that have some good neutron crossover. They look to be good clean, thick sands.

And as we look over on the resistivity, we can see colored in the orange the separation that one can see, showing that there is apparent permeability in the Morrow sands in the B section in question, in this well.

We can also note, up the hole, the big yellow sand, which is an Atoka sand, also has some good permeability indications. And while the Atoka is not of question in this case, it does show that there is permeability there.

This well was completed in the Atoka, flowing for 5.6, just under 5.7 million a day. And the well produced

about 400,000 -- or 400 million cubic feet of gas. We do not know the areal extent of the Atoka because we're not mapping and talking about it particularly in this case.

All we want to show here is that there does appear to be some separation that is occurring in the Morrow B section, which is indicating that there is some permeability to the south of KCS Medallion's acreage, which seems to indicate, at least to me, that there is no permeability barrier to the south.

Q. You were here when Mr. Siruta testified.

A. Yes, sir.

Q. Would you concur with his assumption that because the Parkway Number -- Parkway West Number 9 well in Section 21, to the south of Medallion Resources, was not a commercially productive well, that the reason for that is the poor permeability?

A. I question whether there was poor permeability. I would suggest perhaps there was a poor completion or an insufficient completion.

The well was noncommercial in the Morrow because it couldn't produce from the Morrow. We don't know the reasons.

Q. Let's go to Exhibit Number 5, and identify that if you would.

A. Exhibit Number 5 is a density neutron log of the

Hondo Drilling Wright Federal Number 1. Southwest Royalties operates this well at the present time. This well is in the Turkey Track field, approximately four miles to the north.

We wanted to know just what would happen -- you know, what kind of thicknesses of sands one needs. We did not do an exhaustive study, we just pulled the well that we happened to happen to have in the area.

The lower portion there, at 11,080 feet, approximately, is in the Morrow C. That's below the sands of interest. But this well was perforated there out of a 10-foot zone, utilizing just the crossover. The well has produced 3.5 BCF out of one 10-foot zone. This well was economic there.

This well was then completed -- recompleted up the hole. The bottom section was cemented off, plugged off. Out of an eight-foot sand, separately, the well has currently made 1 BCF of gas and is going to probably make 1.5 BCF. This is economic.

So thickness is important, but all we need is eight feet to make a commercial well in the Turkey Track area.

Q. That eight-foot interval, as shown on Exhibit 5, that's one sand?

A. That is -- That's one sand. That's in the B

interval, or my B interval.

Q. How long has that well produced from the upper zone for that production to total 1 BCF?

A. I don't remember when the well was recompleted. It was before I was there at Southwest Royalties.

Q. Look on Exhibit 5, and on that upper zone, over to the left, the figure --

A. Oh, 3 of 85.

Q. -- 3 slash mark 85.

A. Okay, 3/85. So that well was drilled in March of -- or completed in March of 1985.

Q. That zone?

A. That zone. That zone is March of 1985, flowing at a rate of 1 -- just a little over 1 million cubic feet of gas a day.

Q. While this well -- Your Wright Federal Number 1 well is some four miles to the north. Is there anything in the zone or the formation that would distinguish that from down where you're -- the area that we're talking about in this Application, the south half of 17 and the south half of 16?

A. I do not believe so. I believe these reservoirs are similar.

Q. Were Exhibits Numbers 1 through 5 prepared by you or under your direction and supervision from knowledge

either of Southwest Royalties or the public records, like the cross-section or --

A. Yes, they were.

Q. -- logs?

A. Yes, they were.

MR. COOTER: We offer Exhibits Numbers 1 through 5.

CHAIRMAN WROTENBERY: Any objection?

MR. BRUCE: No objection.

CHAIRMAN WROTENBERY: Southwest Royalties Exhibits Number 1 through 5 are entered into evidence.

MR. COOTER: That concludes our direct examination of this witness.

MR. BRUCE: I just have a couple of questions, Madame Chairman.

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Mr. Alderks, could you turn to your log marked Exhibit 4?

A. Yes.

Q. Based on the neutron density log, how thick are the sands in this --

A. On my classification? The way I look at it?

Q. The way you look at it.

A. Okay, I would -- Take my glasses off so I can see

better.

Q. I understand.

A. I would give that about 30 feet.

Q. Thirty feet. And yet that was a noncommercial well?

A. The well was not completed in the Morrow, that is correct.

Q. Okay. You theorized or guessed at a bad completion. If that was the case, why not -- why didn't the operator just redrill?

A. You know, I don't know. Maybe it's because they saw that good Atoka sand and they wanted to complete in the Atoka.

Q. And maybe it didn't have any permeability?

A. Well, we don't know that, do we?

Q. And you don't know --

A. But we do know --

Q. -- that it has a good Morrow?

A. But we do know that they only shot 18 shots over that whole interval --

Q. Okay.

A. -- which probably is not sufficient to adequately test the Morrow.

MR. BRUCE: That's all I have, Madame Chairman.

CHAIRMAN WROTENBERY: Commissioners, questions?

COMMISSIONER BAILEY: No.

COMMISSIONER LEMAY: No.

CHAIRMAN WROTENBERY: Thank you.

MR. COOTER: Our next witness is Jim Blount.

JAMES BLOUNT,

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

DIRECT EXAMINATION

BY MR. COOTER:

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

A. James Blount.

Q. Mr. Blount, are you the same James Blount who testified back on February 19 in the Examiner Hearing?

A. Yes, I am.

Q. Would you briefly state your education and professional experience for the Commission?

A. Yes, I've got a petroleum-engineering degree from Texas A&M University, graduated in 1984. I've worked 11 years as a petroleum engineer in the Permian Basin area.

Q. By whom are you now employed?

A. By Southwest Royalties.

Q. How long have you been so employed by Southwest Royalties?

A. A year and a half.

Q. In front of you are a pile of exhibits, Mr. Blount. Let me first direct your attention to what I have marked as Southwest Royalty Exhibits 6, 7 and 8. Perhaps we might discuss all of those in order, but at the same time. Identify what those exhibits are.

A. These exhibits are volumetric calculations based on an isopach map that was given to me by my geologist Dave Alderks.

What I tried to show here was the -- I tried to calculate an acre-foot area under each of these circles and determine the gas in place that would be drained by each of these circles and -- or that has already been drained.

The first exhibit, Exhibit Number 6, are the current wells that are currently producing out there in the Morrow B.

There's the Union TX Number 1 in the south part of Section 17, the Parkway 17 Number 1 in the north half of 17, the Parkway 16 Number 1 in the north half of 16.

And what I tried to show there was what their effective drainage radiuses would be in the future or, as in the case of the Parkway 16 Number 1, it's already been depleted, and so it's already had its final circle.

Q. You heard Mr. Beauchamp's testimony that after viewing these exhibits which were offered at the Examiner Hearing, that he prepared what I think has been marked as

Exhibit 9 by Medallion?

A. Right.

Q. When we talk about these, do you also want to refer to the summaries which I believe are marked as Exhibits 9 and 10?

A. Yes.

Q. Okay. Using all of those, first, on Exhibit 6, under the Southwest Royalty well in 17, what are the -- what is represented by those figures, 1, 2, 3, 4, 5, 6, 7?

A. Those numbers are volumetric calculations based on how much drainage, just on a volumetric basis, this well has achieved.

For example, if you'll look at the map circle volume page, you can see the total BCF of gas that was produced inside of each one of those circles.

For example, the Number 4 circle in the Union TX was -- encompasses 4.1 BCF, and that well had made that amount of gas by October of 1990.

The Number 5 circle has 5.2 BCF, and that was achieved by September of 1997.

The Number 6 and Number 7 circles indicate the future production, out to 7.3 BCF by December of -- 30 of 2039.

The total volumes of this well was calculated using decline curve analysis, and it projected out almost

7.5 BCF of reserves.

Current production is 5.3, I believe.

Q. Are you ready to go to Exhibit 7? Or do you want to --

A. Well, one thing I'd like to mention on Exhibit 6 is, the Union TX well was drilled in 1974, I believe, and as it goes to the north on this drainage area, you can see there's a line drawn in there between the Parkway 17-1 and the Union TX Number 1, and I believe that's when those two reservoirs were in competition with each other. And that's why none of the circles cross that line.

The primary drainage is to the east, due to the fact that that's where the thickest part of the reservoir is.

Q. But the Southwest Royalty property encompasses the whole south half of Section 17?

A. That's correct, it's a laydown.

Q. And now are you ready to go to Number 7?

A. Yes.

Q. All right, turn to 7 if you would and --

A. On Number 7 what I've attempted to display is what the drainage radius of the proposed KCS Medallion well would be if the unorthodox location was granted. And within the first circle of their well it encompasses .37 BCF. So 374 million cubic feet of gas.

Assuming that the production would be similar to the Parkway 17 Number 1, which, based on the fact that it's the same kind of thickness and what I believe is the same sort of bottomhole pressure -- I didn't think that that was a very far stretch to expect that that was the kind of production that well could possibly make -- that first circle would be reached by January of 1999. And that assumes a 6-98 start date, which now has been moved back, so more than likely it would be mid-year of 1999. Still, within one year they would produce to the section line.

The second circle, they'd already be crossed over our section line and be producing reserves that we wouldn't be -- or that would be coming out of our acreage.

The second circle encompasses 1 BCF of reserves, of which they state that, you know, that's what they're anticipating they're going to be making, in excess of 1 BCF. That number 2 circle would reach the Union TX's number 6 circle before it did, so in reality that number 2 circle would extend on over onto Union TX's circles even further.

Q. On Exhibit 9, the compilation of the map circle volumes, it appears that for these calculations -- this was prepared for the February hearing and remains the same -- that assumed the start of the Medallion well, as shown thereon, in June of 1998.

A. That's correct.

Q. But now we know that it's not going to make that date.

A. That's right.

Q. But the length of time before those circles are reached would remain the same?

A. That's correct.

Q. All right. Now, let's go to Exhibit Number 7, if you would.

A. Or -- That was 7, we just did.

Q. Or Number 8. Number 8, I'm sorry.

A. Okay. Well, Number 8 what I tried to show was what would happen if you had an orthodox location and the drainage, volumetric drainage of that particular well. That would be the 1650-foot well.

And within the first circle you had reserves of 200 million cubic feet of gas. Within the second circle you had 650 million, and within the third circle you had 1.3 -- almost 1.3 BCF.

Q. And when would that -- at that point the 3 -- number 3 circle around the Medallion well at an orthodox location and your continued production from the Southwest Royalty well in Section 17 would effectively drain those two proration units, the south half of 17 and the south half of 16?

A. That's correct. The third circle, assuming a 13-percent decline, could be reached as early as the year 2003. If you had a 30-percent decline, that figure would be moved back to 2006.

And the Southwest Royalties Union TX well wouldn't reach the number 6 line until 2008, at which time, you know, their well would already be on the section line, already coming across into Section 17, but at a legal location. You know, that's just the way it rolls.

Q. All right, we've talked about that. How about Exhibit Number 10?

A. Number 10 is a compilation of the calculations.

And basically what this shows is, there is a -- I used a volumetric program to calculate all these volumes.

I achieved a gas volume factor, entering the initial bottomhole pressure along with the initial porosity and the water saturations and the gas compressibility, and I came up with the gas volume factors that would -- for each well, that would be able to be calculated times -- or multiplied times the actual area to get acre-feet. Area times footage, to get acre-feet.

And that determined the actual gas volume in each one of those circles. The area was determined using a planimeter on the map.

Q. Mr. Blount, you heard the testimony presented by

Medallion that they would anticipate a bottomhole pressure of some 4000 pounds --

A. Yes.

Q. -- were they authorized or granted the permission to drill at the unorthodox location?

A. Yes.

Q. Do you concur with that?

A. No, I do not. I believe the pressure will be significantly lower than that. And the basis of my belief in that is, the Union TX and the Parkway 17 Number 1, that well is approximately a half mile away, and within ten years they had an over-1500-pound bottomhole pressure depletion on the Union TX.

I looked at wells to the north; there were no other wells that could have possibly affected that well that much. The 16 Number 1 was drilled in 1979. I think it would have some pressure-depletion effect onto the 16 A Number 1. I believe the Union TX Number 1 would have some pressure-depletion effect onto the 16 -- onto the well in the south half of 16, A 1.

So I think realistically the bottomhole pressure should be anticipated at somewhere between 2000 and 2500 pounds.

Q. Let me ask you to turn back to Exhibit Number 5, which Mr. Alderks testified about.

A. I'm sorry, which one?

Q. Exhibit 5.

A. Okay.

Q. When Southwest Royalty reworked that upper -- or completed its well in the upper zone, March, 1985, do you know what the bottomhole pressure was then?

A. Well, actually, that wasn't Southwest Royalties that recompleted that well, it was Hondo. But yes, the bottomhole pressure of that zone was about 2500 pounds.

Q. How much did it make at --

A. How much did it make initially?

Q. Yeah.

A. The well came in at a rate of 1 million a day.

Q. How much will it make potentially?

A. I've got it projected to make 1.5 BCF. The current production of the well is a little over 200 MCF a day.

COMMISSIONER LEMAY: Which one is that you're talking about?

THE WITNESS: The -- Exhibit Number 5, the Wright Federal Number 1. It's the well located four miles to the north.

Q. (By Mr. Cooter) Anything else you want to cover in those exhibits before we go to the next one?

A. I don't believe so.

Q. Let's turn, then, to Exhibit Number 11, have you identify that.

A. Yes, sir, I have.

Q. What is it?

A. Exhibit Number 11 is a decline curve of the Union TX well, and the curve fit through that to determine the current decline rate of that well. The current decline is approximately a 13-percent decline per year. This is plot here was used to determine the projected reserves.

The following exhibit, Exhibit 12, correlate with this plot, to calculate what the ultimate potential of this well is, which was calculated out to be almost 7.3 BCF of gas.

Q. Does Exhibit 11 and the information shown on that conform to what you used for preparation of your Exhibits 6, 7 and 8?

A. Yes, it does. The decline curve that was calculated using this plot was used to determine the future dates those circles would be reached.

COMMISSIONER LEMAY: Excuse me, point of clarification. Both these exhibits have Section 19 located. Are those typos? Should we be talking about Section 17?

MR. COOTER: Sure should.

THE WITNESS: Where do you see that?

MR. ALDERKS: It's 19 South, 29 East, Section 17.

COMMISSIONER LEMAY: Oh, yeah, you're reversing it, yeah. Okay, I'm sorry. We are -- Yeah, you're right, reverse the order of the sections. Excuse me.

Q. (By Mr. Cooter) Are you ready, then, to go to Exhibit 12?

A. Yes.

Q. Identify that. What do you show?

A. Exhibit 12 is the calculated economics based on the plot on Exhibit Number 11. And like I said, what it shows is the ultimate cum, based on the decline curve that fits through those -- the production.

And one thing of note is that at a ten-percent discounted value, this well -- the value of the future production of this well is $1.1 million.

Q. All right. Now, Exhibits Numbers 13 and 14, what are they?

A. Exhibit Number 13 and 14 are two wells that are located directly to the south of the wells in question. If you'll refer back to Exhibit Number 1, the Parkway West Unit Number 5 well is located in Section 20, in the south half, and the -- Well, actually, if you'll look at Exhibit Number 3 it would be a little clearer.

Q. Okay.

A. On Exhibit Number 3, the Parkway West Unit Number

5 is a well located in the south half of Section 20 with the number "4" next to it.

Q. All right.

A. And the Parkway Number 6, which is Exhibit 14, is the well located in the south half of Section 21, with the number "35" beside it.

Now, what I attempted to show here was the possible effects of this new well drilled that -- the effects I believe are going to happen to the Southwest Royalties well.

The Number 5 well had been perforated in the middle Morrow, and had produced for -- since 1978 till 1995, and all of a sudden it took a drastic drop in production.

And at that exact same time the Parkway Number 6 had a jump in production from 120 MCF a day, all the way up to nearly 800 MCF a day.

And so I was curious as to what might have happened there, and I called UMC to find out what they had done on those wells. And they indicated that they had recompleted the Number 6 well from the Morrow C sand into the Morrow B at that particular time. And as you can see, it effectively killed the production in the Parkway West Unit Number 5.

And the reason I believe this happened was, if

you'll note, the well in Section 21 is in the thick of this reservoir, and I believe that the production coming from that well was primarily out of the south half, in the yellow, and even partially in the orange portion of the reservoir, whereas the well in Section 20 is an edge well, a very thin well, four feet of thickness. It was producing primarily from the east half of Section 20, similar to what our Union TX well is doing.

And as it was getting into the better perm, higher porosity or higher thickness areas in the east half, when the well in 21 was recompleted it effectively changed the flow channel of that well, and all the gas started going this direction.

So -- And I think that's exactly what's going to happen when KCS Medallion offsets our well.

Q. In your opinion, Mr. Blount, would a legal location for the Medallion well produce as much gas as it's proposed -- as a well at the proposed unorthodox location?

A. Yes, possibly it could.

Q. Which would have more effect on the Southwest Royalty property, the Medallion well at an orthodox or an unorthodox location?

A. The unorthodox location.

Q. Do you believe that the proposed unorthodox location for the Medallion well would substantially impact

the Southwest Royalty acreage?

A. Yes, I do.

Q. And do you believe that drainage from the Southwest Royalty acreage would occur prior to -- I don't have their Exhibit 9. I think it was 2007 --

A. Yes --

Q. -- before it would drain Southwest -- Are you in accord with that it wouldn't drain until 2007?

A. No, I think it would -- an unorthodox location would drain Section 17 a lot sooner than that.

Q. How soon? Do you have any idea?

A. Well, my calculations, I came up with as early as one year.

Q. That's back to the -- I'm sorry, the Exhibit 7?

A. Or 7 and 9.

Q. Our 7. So my question was repetitious.

That's all -- Well, one obvious question.

Were Exhibits Number 6 through 14 either prepared by you or under your direction and supervision from information either in the Southwest Royalty files or the public files?

A. Yes, they were.

MR. COOTER: We offer Exhibits 6 through 14. I think I've covered them all.

CHAIRMAN WROTENBERY: Any objection?

MR. BRUCE: No objection.

CHAIRMAN WROTENBERY: Okay, Southwest Royalty Exhibits Numbers 6 through 14 are admitted into evidence.

MR. COOTER: We had 14 proposed exhibits when we came in, so if I've offered all of them I've at least done that part of my job.

That concludes our testimony of Mr. Blount.

CHAIRMAN WROTENBERY: Mr. Bruce?

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Okay, let's start with the last testimony first. Mr. Blount, could you pull out Exhibit -- Southwest Royalties Exhibit 1?

A. Yes.

Q. Now, you were talking about the two wells in the south half of Section 20 and in the south half of Section 21 having an effect on each other. What about that well in the northeast quarter of Section 29? Hasn't that produced almost 5 BCF?

A. Yes, it has. Actually, I don't know if it's 5 BCF. I know it's produced substantially. I have the totals here.

Q. Couldn't that well in the northeast quarter of Section 29 also have had an effect of the producing capabilities of those two wells?

A. Yes, it definitely did. As a matter of fact, the well in Section 20 is probably producing to the northeast due to the competition from the well in Section 29. Those wells were drilled relatively the same period of time.

Q. And you talked about this effect between the wells in Section 20 and 21. Have you seen that effect between the well in the northeast quarter of Section 17 and the northwest quarter of Section 16?

A. I'm sorry, can you repeat that?

Q. Have you -- The effect that you talked about in Sections 20 and 21, have you seen that same effect on production between the wells in the northeast quarter of Section 17, the Burlington well --

A. Right.

Q. -- and the Burlington well in the northwest quarter of Section 16?

A. No, I haven't, because the --

Q. And those wells are much closer to the area we're talking about, aren't they?

A. Yes, they are.

Q. So if you saw no effect between the two Burlington wells, there's a chance you won't see any effect between the Southwest Royalties well and KCS's proposed location?

A. That's possible.

Q. Now, for the -- let's pull out, maybe for the -- most of the rest of the testimony, let's just use your Exhibit 8.

A. Okay.

Q. Now, you use for the Burlington well the 17 Number 1 in the northeast quarter of Section 17.

A. Could I refer back to that last question you just -- or wait a minute, that's not even the same -- Never mind.

I'm sorry, go ahead.

Q. Okay. Once again, looking at your Exhibit 8, and looking at the Burlington 17 Number 1 in the northeast quarter of Section 17 --

A. Right.

Q. -- now, you used a bottomhole pressure of 2200 on that?

A. That's correct. That's what was reported in *Dwight's* production data.

Q. Was that a shut-in surface pressure?

A. That's what they reported as bottomhole pressure, according to the report I saw in *Dwight's*.

Q. What -- Now, in making your calculations, what initial potential did you assume for the KCS well in calculating your drainage?

A. I believe it was 1 million a day --

Q. One --

A. -- initial rate.

Q. That's what you used, 1 million a day?

A. Let me verify that, just...

Yes, sir, that's correct.

Q. Okay. Now, if the initial rate is lower, would that slow down the time to get to the section line?

A. Yes, it would.

Q. And if the southwest quarter of Section 16, the KCS well area, if that is depleted at 2200 p.s.i., is it possible that that depletion occurred, at least in part, as a result of the Southwest Royalties well in Section 17?

A. Yes, sir, it is.

Q. Okay. Now, once again, on Exhibit 8, you have your drainage circle for the Southwest -- excuse me, for the KCS well, going all the way out to the 16 A Number 1 to the east.

A. That's correct.

Q. Why would it drain a well that's already been depleted or was noncommercial?

A. It was not completed in the Morrow B. It was completed in the stray sands, according to Mr. Siruta.

Q. Okay.

A. And there is evidence that there is sands there, although they're very thin. The production from that

particular circle between the ten-foot and the zero-foot line is a very small amount.

Q. And you show that the southwest quarter of Section 16 has been affected by drainage from the 16 Number 1 well in the north half of Section 16?

A. That's correct.

Q. If drainage is along the trend of this reservoir, would the effect of the 16 Number 1 well be greater at a standard location?

A. That's possible.

Q. So if it's elliptical --

A. Although, now, the trend would be from down the 10-foot line, so it would be draining the 16 A Number 1, as opposed to an area that's 25-foot thick. It's not due north-south.

Q. So there wouldn't be much area to drain to the east of the well at a standard location?

A. There's not much now. That's an area that's ten foot of thickness on the east half of Section 16, ten to zero.

Q. Would Southwest Royalties drill a well with 2200 p.s.i. in the southwest quarter of Section 16?

A. I couldn't tell you that.

Q. Would you drill a well with a 60-percent penalty on it?

A. No, we would not.

I'd like to refer back, if I could, to the comments you made about the Parkway 17 and the State 16 Number 1, the effects they had on each other. I've pulled up the plots on that.

It looks like the 16 Number 1 dropped a hundred MCF a day, from 200 to 100, when the 17-1 came on line in 1986.

Q. What equation did you use at a rate of 1 million a day to get 1.28 BCF at a 30-percent decline?

A. What equation did I use to calculate that?

Q. What are the factors that you used?

A. I used a 2000-pound bottomhole pressure, and I used a porosity of 12 percent, and the thicknesses were calculated based on this isopach map, acre-feet of thickness. The water saturation I used, that was identical to the 17-1. I believe it was 25 percent. It could have been as low as 20 percent.

Let me see what the rest of my parameters were.

I used a bottomhole temperature of 190 degrees, abandonment pressure of 800, a net pay of 25 feet, water saturation 25 percent, porosity 12 percent.

Q. Now, looking at your Exhibit 8 again, you show the Southwest Royalties well as draining a portion of the north half of Section 17, correct?

A. That's correct, a portion in the southwest of Section 17 -- of the north half of 17.

Q. And it will be draining a substantial portion of Section 20?

A. That's correct.

Q. Now, you were here and you heard Mr. Cooter's questioning of Mr. Beauchamp, did you not?

A. Yes, I did.

Q. Based on Mr. Cooter's questioning, don't the owners to the south have an absolute right to that gas in Section 20?

A. If they were to drill a well there, there's not a thing we could do about it.

Q. And in fact if, for instance, KCS formed a standup unit in Section 16, the west half of Section 16, they could be 660 feet off your lease line, could they not?

A. That is correct.

Q. And there wouldn't be anything you could do about it?

A. That is correct.

Q. Because of well placement, drainage of offsetting sections often occurs, does it not?

A. That's correct.

Q. It's perfectly legal?

A. If it's a standard location.

MR. BRUCE: That's all the questions I have, Madame Chair.

CHAIRMAN WROTENBERY: Commissioners, any questions?

COMMISSIONER LEMAY: I have a couple.

EXAMINATION

BY COMMISSIONER LEMAY:

Q. Just in relationship to commercial rates in the Morrow, Mr. Blount, have you had occasion to recommend wells for Southwest Royalties in the Morrow based on economic criteria?

A. Based on -- Actually, no, sir, we haven't drilled a Morrow well; we bought these.

Q. Do you have any yardstick for commercial Morrow wells in terms of deliverability and reserves?

A. Oh, yeah, you'd have to have in the range of at least a million a day and reserves of a BCF.

Q. So you're not that far off in terms of your yardsticks and also Mr. Beauchamp's yardsticks --

A. That's correct.

Q. -- in terms of commerciality of the Morrow? You would not drill a well for 600 MCF a day?

A. No, I would not.

Q. But you would for a million?

A. Probably.

Q. In terms of interference in here, I know we're seeing circular interference. In nature is that truly what happens, or do you have elliptical drainage patterns based on maybe preferential paths of permeability, that type of thing?

A. That's entirely possible, that you could have elliptical.

One thing that this thing in particular shows, even though your drainage radius is circular, the majority of your gas is coming from your thick sand, because you just have a lot more gas in the thick sands.

So realitywise, I mean, you'd have most of your volume actually coming from, you know, an elliptical pattern, but it may not be your drainage radius coming from an elliptical pattern. That could be affected by factors of permeability, directional perm, that type of thing.

Q. Well, I notice the fact that everyone shows -- Take Section 17 for an example. The Burlington -- The Parkway 17-1 looks like a higher-quality well in terms of porosity and permeability --

A. That's correct.

Q. -- than either Texas well --

A. Yes, sir, it was.

Q. -- but it was drilled, I guess, ten years later. Is that the reason why it has not recovered the volume? I

mean, it's strictly a function of time?

A. That's what I believe. You basically have a pressure sink. You're -- even -- These volumetric calculations are based on an absolute, you know, 800 pounds of bottomhole pressure at every place in the reservoir, when it gets to those.

In reality, you'll have a pressure sink in more of a funnel pattern, where you'll have a pressure effect further out than your total drainage. You'll have complete pressure depletion right at your wellbore, and as you go out, you know, half a mile, you may only have 2000 of bottomhole pressure, whereas the original -- And if you go out in an undrilled reservoir another five miles, maybe, you might get back to the virgin pressure of 4000.

Q. So the drainage factor, would you agree that -- I guess the drainage would be a factor of both pressure, deliverability, net feet of pay --

A. Yes, in part.

Q. -- in the proposed location? The higher the net feet of pay, the higher the pressure, I guess the higher the deliverability --

A. No, actually --

Q. -- the greater the drainage would be --

A. -- I'm not sure how much the thick- -- net feet of pay is a factor. I think permeability and pressure are

the two biggest factors of deliverability.

Q. And that, in turn, is the biggest factor in constituting the greater drainage in offset acreage?

A. That's what I believe.

COMMISSIONER LEMAY: Thank you, that's all I have.

CHAIRMAN WROTENBERY: Mr. Cooter, did you have any other questions?

MR. COOTER: Help me. Should I ask you something else?

MR. BRUCE: I had one question I just -- I forgot to ask.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Blount, at the Examiner Hearing you testified that if KCS drilled its well, that one month after they started producing their well, your well would die. Do you still believe that?

A. Yes, I do.

Q. How much gas would KCS produce in one month?

A. It does matter. They'd produce 300 million, according to my assumptions, but the fact is, it would change the whole flow pattern of that -- going into that reservoir, into the meat of the reservoir.

Q. So if they don't drill, you're going to recover

what? Another 2, 2.5 BCF?

A. That's correct. I would assume that, based on the decline curve.

MR. BRUCE: That's all I have.

CHAIRMAN WROTENBERY: Any other questions for Mr. Blount?

Thank you, Mr. Blount.

Anything more, Mr. Cooter?

MR. COOTER: That concludes our case.

COMMISSIONER BAILEY: Any desire to make a closing statement?

MR. BRUCE: I would like to make a short closing, if Mr. Cooter would prefer to go ahead first.

MR. COOTER: I'll follow you.

MR. BRUCE: Well, the tradition is that the Applicant gets to go last.

MR. COOTER: Oh, okay, if that's the tradition. I might make some statements that you would take offense with.

I think that the Southwest Exhibits 7 and 8 are most important, and I would refer briefly to those in my closing comments. The rest of the exhibits, I think, support the -- our exhibits as well as the Medallion exhibits support that.

I don't think there's any dispute that the zone

or the formation runs from northwest to southeast.

I don't think there's any dispute but that most of that desirable portion of the formation is on the Southwest Royalty lands which are in Section 17.

And I don't think there's any dispute but that under the terms of the rules and regulations of this Commission, Southwest Royalties has a right to produce that. Now, it may take some time, but so far, in everything I've said, they haven't done anything that they shouldn't have or are not entitled to.

What Medallion Resources seeks is to encroach upon that as close as they can by moving to an unorthodox location, almost back to the days of the east Texas field, where you drill where you think is the best chance to get a well. And the fact that it's contrary to the rules and regulations of this Commission is explained away, or so they say.

Rather than that, I think they're opening the proverbial box of Pandora's.

They admit in this hearing that a well at an unorthodox location will drain the Southwest Royalty land. They don't use the word "drain", they say "compete". Well, the rules and regulations of this Commission are made for one and all, to put them on an even starting line, and that's where the competition begins, not at this stage.

Questions that will then flow is, from that, were the Commission to grant their Application, what happens -- what is Southwest's obligation to its royalty owners, knowing that an offsetting well will drain their land? Obviously, they have got to drill an offsetting well to that to protect against drainage.

And so rather than just the economics of getting their well and producing to the best format that they hope for, economic waste occurs because that then forces Southwest Royalties to protect its acreage. And we're off to the horse races, once again, back to east Texas. You drill a well 660 feet from your lease line, we've got to drill one 660 feet from our lease line. That isn't the purpose of the rules and regulations.

They say that -- and they admit that they project a million -- daily production of a million MCF and really question whether or not 600 would be permissible. But what they then seek is that -- don't assess any penalty to their deliverability possibility because they need a million or they need 600,000 to make their effort commercially feasible, drainage be darned.

Now, we admit that there are some reserves on their land, strictly limited to the southwest quarter. They admit that the southeast quarter of the east half of their unit is nonproductive.

But the want to obtain from -- move their well as close as they can and encroach upon the production from Southwest Royalty to make their well economically feasible. And we submit that that's a far deviation from the rules and regulations, what is the duty of this Commission.

I think Exhibits 7 and 8 speak for themselves, and really that is the crux of their case.

Thank you.

CHAIRMAN WROTENBERY: Thank you, Mr. Cooter.

Mr. Bruce?

MR. BRUCE: I probably shouldn't say that, but with all due respect to the Chair, we're not in east Texas right now.

A lessee is entitled to seek approval of an unorthodox well location. That's in the Division's rules, 104.F. In fact, in order to protect all of the interest owners in a well unit, an operator may be compelled to seek approval of an unorthodox location to recover the reserves under its acreage.

In considering an application for an unorthodox well location, the Commission must, of course, prevent waste and protect correlative rights. However, you must consider the correlative rights not only of the protestant but also of the Applicant. Correlative rights is the opportunity of an owner to produce without waste its

equitable share of gas in the pool.

Now, in reviewing this case, first you must look at whether an unorthodox location is necessary. To me it's clear that it is.

KCS must move away, number one, from a well in the northwest quarter of Section 16, which has produced 1.5 BCF; number two, a tight well in the north half of Section 21, which hasn't produced a thing; and, I think most importantly, a noncommercial well in the southeast quarter of Section 16.

It really has little latitude in the placement of the well. It's not seeking to encroach on anyone; it simply has to move to a better location, which unfortunately is unorthodox, in order to assure a reasonable chance of success in the Morrow.

Southwest Royalties wants us to move further east to an orthodox location. That completely ignores the noncommercial well in the southeast quarter of Section 16. We think the location is necessary.

Next, you must look at -- again at Rule 104, which states that in approving an unorthodox location the Commission may take such action as will offset any advantage gained by the unorthodox location.

The question is, will the KCS location give it an advantage over Southwest Royalties? The answer is

essentially no.

If you accept KCS's engineering, the location will allow it to recover approximately 1 BCF, which it calculates is under its acreage.

And yes, there will be some competition a decade down the road. It might affect five, ten percent of the Southwest Royalties well unit. Thus, any effect on Southwest Royalties is minimal, and a modest penalty at most is necessary.

Now, if you accept Southwest Royalties' engineering, well, then, Southwest Royalties is already substantially pressure-depleting the southwest quarter of Section 16, it will drain KCS's reserves, and the location is needed to prevent further drainage.

Southwest Royalties' engineer could only say that a well at a standard location would possibly produce the same amount of gas as a well at an unorthodox location. That's not good enough.

Whichever engineering you accept, either way the location should be approved and KCS request of 1 million a day initial allowable on the well to ensure that it's economic.

Again, because of time deadlines, we would request that any decision by the Commission be made as quickly as possible, and further because, frankly, every

day gives Southwest Royalties more of an advantage over my client.

Thank you.

CHAIRMAN WROTENBERY: Mr. Bruce, could you elaborate on the time deadlines that KCS is facing?

MR. BRUCE: They -- what KCS did was -- This is a relatively older area. They went out and got farmouts from people that will be expiring, I believe, within the next -- I'm not sure exactly.

MR. SIRUTA: I don't know, probably the next several months.

MR. BRUCE: The next several months. I know for a fact that, although we didn't have land testimony, that some of them were set to expire in June, and I know three- or four-month extensions were gotten on certain of them.

CHAIRMAN WROTENBERY: Thank you.

With that, I think at this point the Commission will go into executive session to deliberate on this case.

I need a motion for that purpose.

COMMISSIONER LEMAY: So move.

COMMISSIONER BAILEY: Second.

CHAIRMAN WROTENBERY: Okay. We'll close this meeting for the purpose of deliberating on the testimony that we've heard today. We will come back into open session to report on our plans, how we're going to proceed

to address this case.

But for the moment we would ask the parties and their representatives to step out of the room.

Thank you very much.

(Off the record at 11:40 a.m.)

(The following proceedings had at 12:03 p.m.)

CHAIRMAN WROTENBERY: We'll go back on the record now.

The Commission has met in executive session to deliberate on the case pending before us. That's Case 11,925, the Application of KCS Medallion Resources, Inc., for an unorthodox gas well location, Eddy County, New Mexico.

We have not made our final decision in this matter, but in the interest of trying to bring the matter to a conclusion as quickly as possible, we have decided to call a special meeting of the Commission two weeks from today. That will be at nine o'clock on July 30th, 1998. We'll meet here in the OCD conference room. And the sole item, that I know of at this point anyway, that will be on the agenda will be this case, and we will plan to issue a final order in the matter at that time.

Is there anything else that we need to cover today, then?

Okay, Commission's meeting is adjourned.

COMMISSIONER LEMAY: Paul's got --

CHAIRMAN WROTENBERY: Oh, I'm sorry, Paul?

MR. COOTER: Question. This meeting on the 30th is just among the --

COMMISSIONER LEMAY: It will be an open meeting.

MR. COOTER: Beg pardon?

COMMISSIONER LEMAY: It will be an open meeting.

MR. COOTER: Okay.

COMMISSIONER LEMAY: You all can come.

CHAIRMAN WROTENBERY: It will be an open meeting, but it will be for the purpose of entering an order.

MR. COOTER: But not to receive additional testimony or anything like that?

CHAIRMAN WROTENBERY: Not to receive testimony.

MR. COOTER: Or listen to long-winded attorneys speak --

COMMISSIONER LEMAY: You had your chance, Paul.

CHAIRMAN WROTENBERY: Okay, thank you.

The meeting is adjourned.

(Thereupon, these proceedings were concluded at 12:05 p.m.)

* * *

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 Commission 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 20th, 1998.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998