STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF BLACK MOUNTAIN OPERATING, LLC FOR A NONSTANDARD OIL SPACING AND PRORATION UNIT, COMPULSORY POOLING AND AN UNORTHODOX WELL LOCATION, LEA COUNTY, NEW MEXICO. CASE NO. 15655

Consolidated with

APPLICATION OF BLACK MOUNTAIN OPERATING, LLC FOR A NONSTANDARD OIL SPACING AND PRORATION UNIT, COMPULSORY POOLING AND AN UNORTHODOX WELL LOCATION, LEA COUNTY, NEW MEXICO. CASE NO. 15656

Consolidated with

APPLICATION OF GMT EXPLORATION COMPANY, LLC FOR A NONSTANDARD OIL SPACING AND PRORATION UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO. CASE NO. 15659

Consolidated with

APPLICATION OF GMT EXPLORATION COMPANY, LCC FOR A NONSTANDARD OIL SPACING AND PRORATION UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO. CASE NO. 15660

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

May 11, 2017

Santa Fe, New Mexico

BEFORE: MICHAEL McMILLAN, CHIEF EXAMINER
WILLIAM V. JONES, TECHNICAL EXAMINER
DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Michael McMillan, Chief Examiner, William V. Jones, Technical Examiner, and David K. Brooks, Legal Examiner, on Thursday, May 11, 2017, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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EXHIBITS OFFERED AND ADMITTED

(1:16 p.m.)

EXAMINER McMILLAN: Now what we're going to do is we're going to be calling Cases 15655, 56, 59 and 60.

So at this time, I'd like to call Case Number 15655, application of Black Mountain Operating, LLC for a nonstandard oil spacing and proration unit, compulsory pooling and an unorthodox well location, Lea County, New Mexico. It will be combined with the next following three cases, Cases Number 15656, application of Black Mountain Operating, LLC for a nonstandard oil spacing and proration unit, compulsory pooling and an unorthodox well location, Lea County, New Mexico; Case Number 15659, application of GMT Exploration Company, LLC for a nonstandard oil spacing and proration unit and compulsory pooling, Lea County, New Mexico; lastly, Case 15660, application of GMT Exploration Company, LLC for a nonstandard oil spacing and proration unit, Lea County, New Mexico.

Call for appearances.

MR. McMILLAN: Seth McMillan, Montgomery & Andrews, on behalf of Black Mountain.

MR. BRUCE: And Jim Bruce of Santa Fe representing GMT Exploration Company. I have three witnesses.

EXAMINER McMILLAN: Okay. If all the witnesses would please stand up and be sworn in.

MR. BRUCE: I'm also representing -- entering appearances for BTA Oil Producers, LLC, and I have one witness for them. And I'm also entering an appearance for Devon Energy Production Company.

EXAMINER McMILLAN: Thank you.

(Mr. Zimmerman, Mr. Moore, Dr. McCracken, Mr. Schuster, Mr. Rand, Mr. Dilli and Mr. Christensen sworn.)

MR. McMILLAN: I just have a scheduling question, Mr. Examiner. If it's all the same, Black Mountain would invite GMT to go first on their application.

It's up to you, Mr. Bruce.

MR. BRUCE: Well, you filed the applications first, so --

MR. McMILLAN: Do you want us to go first?

MR. BRUCE: Yeah.

MR. McMILLAN: Okay. We're here on your continuance and the denial of our continuance. Is it standard procedure for us to go first? Is that --

EXAMINER BROOKS: I don't know that I've been in enough of these hearings to know for sure, but it kind of makes sense, first to file, first --

MR. BRUCE: In the Mewbourne-Black Mountain ones, we filed first, and we went first. So --

EXAMINER BROOKS: Yeah. Okay. Well, you're saying in this case, Black Mountain filed first?

MR. BRUCE: We have the lowercase numbers.

MR. McMILLAN: We do have the lowercase numbers.

EXAMINER BROOKS: Well, that does give us -- you know, if you-all can't agree, that does give us a basis on which to rule. And remember, our current director having said that -- having heard the same parties litigate several times the question of who should be an operator in successful compulsory pooling cases, that he told them if they didn't agree, from now on, he was going to alternate between them. So you may proceed.

MR. McMILLAN: Okay. Thank you, Mr. Examiner.

I'd like to call my first witness Robbie Zimmerman.

ROBERT "ROBBIE" E. ZIMMERMAN,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. McMILLAN:

Q. Good afternoon, Mr. Zimmerman.

A. Good afternoon.

Q. Would you please state your full name and place of residence?

A. Robert E. Zimmerman, and I reside in Fort Worth, Texas.

Q. By whom are you employed?

A. I'm a senior landman at Black Mountain Operating.

Q. Are you authorized to testify today on Black Mountain's behalf?

A. Yes.

Q. Have you previously testified before the Division or one of its examiners and had your credentials accepted and made a matter of record?

A. Yes.

Q. Are you familiar with the applications filed in these cases?

A. Yes.

Q. And are you familiar with the lands at issue in this case?

A. Yes.

MR. McMILLAN: Mr. Examiner, I would move

to qualify Mr. Zimmerman as an expert landman.

MR. BRUCE: I have no objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. McMILLAN) Mr. Zimmerman, would you briefly state, please, what Black Mountain seeks in these applications?

A. In Case Number 15655, Black Mountain seeks an order approving a nonstandard oil spacing unit and proration unit in the Bone Spring Formation comprised of the west half-southwest quarter of Section 35, Township 21 South, Range 34 East, in Lea County, and the west half-west half of Section 2, Township 22 South, Range 34 East, Lea County, and pooling all mineral interests in the Bone Spring Formation underlying the nonstandard unit.

In Case Number 15656, Black Mountain seeks an order approving a nonstandard oil spacing and proration unit in the Bone Spring Formation comprised of the east half-southwest quarter of Section 35, Township 21 South, Range 34 East, Lea County, New Mexico, in the east half-west half of Section 2, Township 22 South, Range 34 East, Lea County, New Mexico, and pooling all mineral interests in the Bone Spring Formation underlying the nonstandard unit.

Q. And have you prepared certain exhibits for

introduction in the cases?

A. Yes.

MR. McMILLAN: If I may approach, I'd like to hand out exhibits in this case.

Q. (BY MR. McMILLAN) Let's please turn now to your Exhibit 1. Is Exhibit 1 a land plat showing each proposed unit with surface- and bottom-hole locations?

A. It is.

Q. What are the surface- and bottom-hole locations for the proposed wells?

A. You can see here the surface-hole location is marked by the blue square.

Q. Are you sure? The blue square, is it blue on your copy?

A. Yes.

Q. And that's -- I'm sure that's your surface-hole location?

A. Yes.

Q. What are the setbacks for the oil wells in this pool?

A. 330 feet.

Q. Are your -- are the take points of the well within these setbacks?

A. Yes.

Q. I guess we didn't cover this already. What are

the names of the wells being proposed?

A. Case Number 15655, we are proposing the Grama Ridge State Com 1H and the Grama Ridge State Com 3H.

Q. And help us out. Which is which on this plat?

A. The 1H is to the west, and the 3H is to the east.

Q. What's the primary objective for these wells?

A. In both cases, the primary objective is to drill to a depth sufficient to test the Bone Spring Formation and complete the well with a 7,500-foot lateral.

Q. And are you requesting 240-acre project areas here?

A. Yes.

Q. Are these standard -- are 240-project areas established for the Bone Spring in this area?

A. That's what we're seeking.

Q. Does Black Mountain own the right to drill in each tract that will be traversed by the wellbore?

A. No.

Q. What does Black Mountain own?

A. Black Mountain has leases under the southwest quarter of Section 35 and the northwest quarter of Section 2. We do not own any interest in the southwest quarter of Section 2.

Q. Okay. Let's take a look at your Exhibit Number 2, please. Is this an ownership breakdown?

A. Yes. This is the Exhibit A to the JOA we sent out to the working interest parties showing their respective interest in the proposed 480-acre unit.

Q. For the record, will you recite for us what the respective working interests are?

A. Black Mountain would have approximately 59.3 percent working interest. GMT's would be approximately 33.3 percent working interest, and Devon's would be approximately 7.35.

Q. When, Mr. Zimmerman, did Black Mountain first commence its geologic evaluation of this area?

A. Back in October of 2015.

Q. And what was done then?

A. Once we acquired these assets, we had originally planned to drill the northwest quarter of Section 2 along -- drill one-mile laterals in the northwest -- northwest quarter of Section 2 and the southwest quarter of Section 35. And then in an effort to -- in an effort to not leave any stranded acreage, we looked into the southwest quarter of Section 2, which we noticed was owned by BF Petroleum. And after just discussing with them and looking into their leasehold, they had already agreed to plug the well with the State

and thus losing their lease, so we nominated that parcel for the state lease sale and came in second, where GMT got their interest at the lease sale.

Q. The nomination, though -- that whole process was intended not to strand acreage; is that correct?

A. Correct.

Q. And just for clarification, that process began in October of 2015, correct?

A. That's correct.

Q. Okay. What experience generally does Black Mountain have in drilling and operating these types of horizontal oil wells?

A. Black Mountain just drilled and is completing, starting Monday, our first well -- first horizontal well in New Mexico. And all of our employees have been well versed in horizontal development, and our C.O., Dr. McCracken, is going to touch on our technical team's experience in depth in his testimony.

Q. These are north-south-oriented wells, correct?

A. Yes.

Q. And is that north-south orientation consistent with the prevailing development pattern in this area?

A. Yes. It's the preferred orientation of operators in the area.

Q. Does Black Mountain's current development plan

potentially strand any acreage? And maybe we should look at Exhibit 3 as you discuss.

A. No. I mean, there are multiple scenarios where any operators to the north don't have to leave stranded acreage with our development plan. And, again, Dr. McCracken is going to touch on different scenarios in his testimony.

Q. Okay. Great.

Is Black Mountain asking the Division to pool the unjoined working interests and mineral interests?

A. Yes.

Q. Does Black Mountain also seek the imposition of a 200 percent risk penalty against those unjoined working interests?

A. Yes.

Q. Does Black Mountain also seek to be designated the operator for the wells?

A. Yes, we do.

Q. Okay. In your opinion, has Black Mountain made a good-faith effort to locate all of the working interest owners and communicate with them in order to obtain their voluntary participation in the wells?

A. Yes.

Q. Would you please discuss the efforts that you

took on behalf of Black Mountain to obtain voluntary participation?

A. On December 23rd, 2016, we sent a well proposal with JOA and pertinent exhibits to GMT. We had no response.

On January 10th, we sent a well proposal with JOA and pertinent exhibits to the other working interest party, Devon, and we had a few discussions with Devon and were later told that they were going to farm out their interest to GMT.

We subsequently offered to discuss alternate plans to drill a two-mile lateral, as they were concerned about the possibility of stranding acreage in the northwest quarter of Section 35.

Q. Is Exhibit 4 -- if you'll turn to Exhibit 4, are these copies of the well-proposal letters that were sent to the working interest owners?

A. Yes.

Q. And is Exhibit 4 -- or when you sent these letters, did you include a complete JOA?

A. Yes.

Q. Did you have any communications with the offset operator, BTA?

A. We were approached by BTA to discuss the possibility of stranded acreage, and we responded three

times and never heard back.

Q. Is Exhibit 5 comprised of the emails Black Mountain sent to BTA but were never responded to?

A. Yes.

Q. Has any other operator or lease owner indicated that there is a dispute over the geologic risk involved in locating or drilling these wells?

A. No.

Q. Has any other lease owner indicated that Black Mountain's estimated well costs are out of line?

A. No.

Q. Would you take a look at your Exhibit 6, please? Are these the AFEs for these two wells?

A. Yes.

Q. Can you, for the record, please tell us what the estimated total for a completed well is here?

A. Approximately $8.2 million.

Q. Have these AFE cost estimates been updated since the time of Black Mountain's original well proposals?

A. They have not.

Q. To your knowledge, are these costs in line with what's being charged by other operators in the area for similar wells?

A. I believe so, yes.

Q. Have you made an estimate of overhead and administrative costs while drilling and producing the well?

A. Yes, $7,000 a month for estimated drilling costs and $700 a month producing.

Q. Are these costs in line with what is being charged by other operators in the area?

A. Yes.

Q. Do you recommend that the drilling and producing overhead rates be incorporated into the order that results from this hearing?

A. Yes.

Q. Does Black Mountain request that the order to be issued in this case provide for an adjustment of the drilling and producing of overhead rates in accordance with the current COPAS bulletin for the area?

A. Yes, we do.

Q. In your opinion, has Black Mountain acted diligently to develop these reserves?

A. Yes.

Q. Has Black Mountain acted in the best interest of the working interest owners in Sections 32 -- 35 and the south half of Section 2?

A. Yes, I believe we have.

Q. Has GMT proposed a well unit that's in conflict

with the unit designated by Black Mountain?

A. Yes.

Q. Did Black Mountain receive anything from GMT with respect to their proposal?

A. Yes. October 14th, 2016, we received a cover letter with no JOA or any details about the well. And then on December 15th, 2016, we received another proposal for the same well that did include a JOA that had many missing exhibits.

Q. In your position as a landman at Black Mountain, do you see a lot of well proposals?

A. Yes.

Q. And I'm going to have an exhibit for this, but I'd like you to -- well, let me start by handing out the exhibit. This one is out of order, and I apologize. This will be Exhibit 14. Do you recognize this document?

A. Yes.

Q. What is it?

A. It's a well proposal from GMT.

Q. This is the December --

A. Yes.

Q. -- 19, 2016?

A. Yes.

Q. Can you just -- when you say that the JOA that

was sent in December was incomplete, can you give us a sense of what specifically was missing?

A. Mostly it would refer to the exhibits that are to be attached to the JOA. Page 2 of the JOA says that there would be an Exhibit C -- Exhibit A, C, D, E, F and H, and the JOA they sent just has an Exhibit A and then a COPAS agreement, which is usually Exhibit C, though it's not labeled, and an Exhibit F.

Q. And in looking at that Exhibit A, what page is Exhibit A on?

A. These pages aren't numbered, but it is the first exhibit after the signature pages in the JOA.

Q. And does this Exhibit A seem incomplete to you?

A. Yes.

Q. How so?

A. There are no leases listed on it, nor is there any breakdown of working interests.

Q. Are these the kind of things you would expect to see on a proper well-proposal JOA?

A. No. Well, yeah, you would expect to see the breakdown of working interests and leases to be included in the operating area.

Q. Is this the only JOA you received -- Black Mountain received from GMT?

A. Yes.

Q. Okay. In your opinion, would the granting of Black Mountain's applications be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. And were Exhibits 1 through 6 and Exhibit 14 prepared by you or at your direction and control?

A. Yes.

MR. McMILLAN: Mr. Examiner, I move to admit Exhibits 1 through 6 and Exhibit 14 at this time.

MR. BRUCE: No objection.

EXAMINER McMILLAN: Exhibits 1 through 6 and Exhibit 14 may now be accepted as part of the record.

(Black Mountain Operating, LLC Exhibit Numbers 1 through 6 and Exhibit Number 14 are offered and admitted into evidence.)

MR. McMILLAN: Thank you. I believe that concludes my direct examination.

EXAMINER McMILLAN: Please proceed.

MR. BRUCE: Just a few questions, Mr. Examiner.

CROSS-EXAMINATION

BY MR. BRUCE:

Q. You were talking about -- I was a little

confused, so I just want a clarification. When you were talking about a quarter section that the lease had expired, that's the southwest quarter of Section 2?

A. Yes, sir.

Q. And then I'm looking at your Exhibit 6. These have the well numbers as 3H. Which is the 1H and which is the 3H?

A. The 1H is the first page, and it's labeled at the top as "Gramma Ridge State Com 1H AFE," and the second page is the "Gramma Ridge State Com 3H." I do see that the well number on there does say "3H." It must have been a typo.

Q. Mr. McMillan asked about Black Mountain's experience. You're talking about completing your first well. That's in Eddy County, isn't it --

A. Yes, sir.

Q. -- 40 or 45 miles away from here?

A. Yes, sir.

Q. Has Black Mountain drilled any wells in Lea County?

A. No, sir. We have not.

Q. And have you ever reviewed Oil Conservation Division Order R-13165?

A. I have not.

Q. Do you know that that order says a proposal

letter needs to contain the name of the well, its location, its depth, its surface location, its end point and an AFE --

MR. McMILLAN: I'm sorry. Mr. Bruce, do you have an exhibit that --

MR. BRUCE: I don't, but we can dig that up if necessary.

Q. (BY MR. BRUCE) -- but it does not say that a JOA is required to be sent with the proposal letter?

A. Is that a question?

Q. Are you aware that that order does not require a JOA to be sent with the well?

A. I'm not aware.

Q. And after you received this proposal, what, four-and-a-half months ago from GMT and you looked at the JOA, did you ever call them and ask them for more data, more exhibits?

A. Not to my knowledge.

Q. And Exhibit A, of course, is the contract area, but the remaining exhibits are pretty much boilerplate, aren't they?

A. For the most part, yes, sir.

Q. Thank you.

MR. BRUCE: That's all I have, Mr. Examiner.

EXAMINER McMILLAN: Okay.

EXAMINER BROOKS: I don't believe I have any questions at this juncture.

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. One of the things that has come up is we need to know your surface location. If the surface location costs are going to change, then everything else would change. So the Oil Conservation Division's going to want to know your surface-hole location and bottom-hole location. You didn't clearly say that, so will you please state that?

A. Yes. Shown on Exhibit 1, in our proposed pad --

Q. That's not my question. What's the surface location for each well?

A. They're stated on the AFE.

Q. So is it safe to say for the number one, it's 144.3 feet from the south and 911 from the west?

A. Yes, sir.

Q. And also for the 3H, it's 144.3 from the south and 971 from the west?

A. Yes.

Q. And I have written down 20 -- for the 1H, 2,371 from the south, 330 from the west?

A. Excuse me. For the --
Q. Bottom hole.
A. Yes, sir, that's correct.
Q. For the 3H is 2,387 and 1,707?
A. I believe that's right.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. Do we have API number for these?
A. We do not.
Q. But --

EXAMINER McMILLAN: It was in their application.

EXAMINER JONES: Oh, it was in the application.

THE WITNESS: Sorry.

Q. (BY EXAMINER JONES) So is it clear that it's possible that there is a typo on the location -- the surface locations of these wells? Is the pad supposed to be in the middle?
A. Yes, sir. Yes, sir.
Q. So it would be around 1,300 feet from the west; is that right? Somewhere around there anyway?

EXAMINER McMILLAN: Yeah.

THE WITNESS: Yeah.

Q. (BY EXAMINER JONES) So the section -- Section 2

and the north half of Section -- actually Section -- north half of 2 and all of the southwest of 35 are old state leases?

A. Yes, sir.

Q. So what burdens are those? Those are old --

A. 12 and a half.

Q. 12 and a half --

A. Yes, sir.

Q. -- ten-year leases?

A. Yes, sir.

Q. They're held by production from other --

A. Yes, sir.

Q. And so the lessee is Aztec Oil & Gas, and it's still under the name of Ganey [sic;phonetic] Oil Company, the lease?

A. That sounds right.

Q. Okay. So Chevron is still paying the -- somebody's paying the pay zone to the State anyway. That's interesting it would be under the oil company name.

So what was the -- can't quite make an agreement here. Is that what I'm hearing?

A. Yes, sir.

Q. Somebody needs to drill these wells, but you can't quite decide who is going to do it?

A. Well, GMT's proposal is for 5,000-foot laterals, and ours are for 7,500-foot laterals.

Q. Okay. So is it your understanding that's the main problem Black Mountain has, is they want to build mile-and-a-half laterals?

A. Yes, sir. Yes, sir.

Q. And in the Bone Spring?

A. That's correct.

Q. Okay. And we've got to do an NSL here because -- do you know why we have to -- these are both proposed as nonstandard locations, is that correct, both of these?

MR. McMILLAN: That may be an error. I believe, upon further investigation, that this is a standard location.

EXAMINER JONES: Okay. So the completed interval will be standard?

MR. McMILLAN: That's correct.

Q. (BY EXAMINER JONES) Okay. Is this 22 -- South, 34 East, is that near Buckeye? Is that correct or --

A. The town?

Q. What layman's location would this be? Like, outside of Lovington to the north?

A. Yeah. That sounds right. I've been out there once.

MR. McMILLAN: For what it's worth, their application -- advertising --

THE WITNESS: Eunice.

MR. McMILLAN: -- 17 miles west of beautiful downtown Eunice.

DR. McCRACKEN: The Allen Ridge area.

EXAMINER JONES: Okay. Thank you.

EXAMINER McMILLAN: I don't have any questions.

EXAMINER BROOKS: Did either of you have any further questions?

MR. McMILLAN: Nothing further. That's it. Nothing further.

EXAMINER BROOKS: Very good. The witness may be excused.

MR. McMILLAN: Black Mountain would call its next witness.

JARVIS "JAY" MOORE,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. McMILLAN:

Q. Good afternoon, Mr. Moore.

A. Good afternoon.

Q. Please state your full name and place of the

residence.

A. Jarvis Moore. Place of residence is Arlington, Texas.

Q. By whom are you employed and in what capacity?

A. I am vice president of geoscience for Black Mountain Oil & Gas.

Q. Are you authorized today to testify on Black Mountain's behalf?

A. I am, yes.

Q. Have you previously testified before the Division or one of its examiners?

A. I have not.

Q. Can you please go ahead and give the Examiners a brief summary of your education and work experience?

A. Happily. I hold a Bachelor of Science degree in geology from Georgia Southern University, a Master of Science degree in geology from Texas Christian University.

I have approximately 20 years of direct industry experience, including work with companies such as Denbury Resources, Merit Energy, XTO Energy. I helped co-found Black Mountain in 2015. In addition to that, I'm a licensed professional geoscientist in the state of Texas.

Q. Are you familiar with the applications filed in

these cases?

A. I am, yes.

Q. Are you familiar with the subject areas and the proposed wells?

A. I am, yes.

MR. McMILLAN: Mr. Examiner, I would tender Mr. Moore as an expert petroleum geologist.

MR. BRUCE: No objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. McMILLAN) Congratulations.

A. All right. Thank you.

Q. Have you prepared certain exhibits for introduction in this case?

A. Yes, I have.

Q. Good. We have a geologist, so we have nice, big colorful pictures. Let's take a look at your Exhibit 7.

A. Yes. Exhibit 7 --

Q. Would you explain to us what we're seeing here?

A. Yes. This is -- this is a structure map on top of the Wolfcamp horizon in what we call our Grama Ridge area. This is our -- our operating area is outlined in red on the map. You can see the subsurface values on the top of the Wolfcamp pick there in blue below the well spots. This is all well spots in the area. I have

not culled them out by depth or anything of that nature. And that's really -- that's pretty well it.

Q. Okay. In your investigation, is the Bone Spring continuous across Sections 2 and 35?

A. Yes, it is. That would be referenced better with the next exhibit.

Q. Okay. Let's go there. Let's take a look at your Exhibit 8.

A. So Exhibit 8 is a cross section labeled A to A prime. As you can see on the exhibit --

EXAMINER McMILLAN: Okay. Give me a second.

THE WITNESS: Okay. Exhibit 8 is a cross section, which is referenced on Exhibit 7, is A to A prime. It's the black line. The cross section runs -- from the well on the left is your northern well, and the well on the far right of the cross section is far south, crossing into GMT's acreage. The map is a structural -- or sorry -- the cross section is structural.

EXAMINER McMILLAN: What's the reference map?

THE WITNESS: It's the previous exhibit, sir. It's map seven -- or Exhibit 7. Sorry.

Just to repeat there, the cross section, which is Exhibit 8, is referenced on the map, which is

Exhibit 7, as section A to A prime. It is a north-south section with the well on the left and the cross section being furthest to the north. It's a structural section on subsea depth. You see the top of the 3rd Bone Spring line marker. Coming further down the section, you see the top of our correlated 3rd Bone Spring Sand section, and you see the Wolfcamp top which we have, and that's the structural top that Exhibit 7, the Wolfcamp structure map, is contoured upon.

The primary takeaway from this cross section is the continuity of the 3rd Bone Spring Sand section from north to south across the area of interest. You do see a bit of thickening as you move off to the south, and I'll get to that in a minute when we get to the pay maps. But, in general, you have a nice thick reservoir that's continuous across the area of interest with 200 feet or greater of gross thickness.

Q. (BY MR. McMILLAN) Let's take a look at Exhibit 9.

A. Uh-huh.

Q. Let's hold on a minute and give the Examiners --

A. I'll give them all the time they want.

Q. Okay. Can you explain to us what we're looking at in Exhibit 9?

A. Yes. Exhibit 9 is a net pay map. It is contoured -- or net pay isopach contoured on the 3rd Bone Spring Sand. The cutoffs used for this map were a root mean square-derived cross plot porosity --

(The court reporter requested a repeat of the terminology.)

A. Root mean square. It's a method for determining average porosity between a density porosity and a neutron porosity curve. It's an accurate cross-plot porosity independent of lithology. But just to simplify that, it's a net pay map based on a 6 percent porosity cutoff within the basal 3rd Bone Spring Sand member. And that would be the top reference on the previous section as the 3rd Bone Spring Sand to the interval at the top labeled "Wolfcamp."

You can see I posted the net pay values derived on the map in blue for each individual well spot. The cross section previously referenced is also posted on here again as A to A prime. The major takeaway here is there is very good continuity of over 200 feet of net pay across the entire interval being discussed in the issue today. We see no concerns with continuity of pay across Sections 35 or 2.

Q. In light of your investigation, do you believe that all of the 40-acre tracts involved here contribute

reserves to the wells?

A. Yes, I do.

Q. Are you seeing any geologic or structural discontinuities across the project areas for the wells that would -- that adversely -- that could adversely affect development by the use of horizontal wells?

A. No. There is some structural relief, but I don't think it will negatively affect the wells or cause any impediments to drilling.

Q. Okay. In your investigation, in your opinion, is the horizontal well the most economical method for producing each of the 40-acre units comprising the project area?

A. Yes, it is.

Q. In your opinion, can the completed interval of the well be produced in conformity with the setbacks for the project area?

A. Yes.

Q. Let's take a look at that northwest border of Section 35.

A. Is there a specific map I should reference?

Q. I don't know. Of your --

A. Exhibit 9, the pay map, probably does the best job.

Q. In your opinion, is there anything geologically

speaking that would preclude whoever's drilling up there from drilling near the south line of that northwest quarter and drilling northward?

A. No, not at all. I think both structurally and from a pay reservoir continuity standpoint, you could easily put surface locations at the midpoint of the west half of Section 35 and drill 7,500-foot laterals to the north if you chose to.

Q. Okay. Okay. In your opinion, would granting Black Mountain's applications be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. And were Exhibits 7 through 9 prepared by you or at your direction and control?

A. They were prepared by me.

MR. McMILLAN: Mr. Examiner, I move the admission of Exhibits 7 through 9 at this time.

MR. BRUCE: No objection.

EXAMINER McMILLAN: Exhibits 7 through 9 may now be accepted as part of the record.

(Black Mountain Operating, LLC Exhibit Numbers 7 through 9 are offered and admitted into evidence.)

MR. BRUCE: I have no questions.

EXAMINER McMILLAN: Okay.

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. My question is going back to your cross section.

A. Yes, sir.

Q. Where is the target?

A. The target? That's a good question, sir. And I apologize. We had a little printing error. But if you look at the well on the far right-hand side, over towards A prime, and you look down just above 7,650, subsea, above what's labeled as the Wolfcamp top, it got grayed out, but it says "Offset Horizontal Target." I'm happy to come point it out.

Q. Yeah. I see where you are.

A. So essentially the target interval is the basal -- at the base of the basal 3rd Bone Spring Sand. I would say we're generally targeting 40 to 50 feet above the Wolfcamp top on average when we do the planning for these wells.

EXAMINER BROOKS: Is this on Exhibit 8 or Exhibit 10?

THE WITNESS: That would be Exhibit 8, sir.

Q. (BY EXAMINER McMILLAN) Is Mitchell Energy kind of the closest well?

A. Let me reference that.
Q. Second well on the right.
A. Well, no, sir. I think the Great Western Onshor State #1 in Section 11 -- the northern part of Section 11, it and the Mitchell Energy Corporation Two State #1 both I think are very germane to what you're asking there.
Q. For a more visual reference, if you're looking at the Mitchell Energy Corporation State Two #1, the second well in from the right-hand side on that cross section, just above 11,200 feet measured depth, you see where you have a resistivity decrease? That's usually indicative of the reservoir interval in that basal 3rd Bone Spring Sand, and that's -- right at the base or that gamma ray marker that you see on the left-hand track is generally where we target those.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. It's the kick-over to the right of the gamma ray?
A. May I come show you?
Q. Yes. You'll have to talk out loud for the court reporter.
A. Yes.
So on the Mitchell Energy Corporation Two

State #1 well, here just above 11,200 feet measured depth, you see a resistivity decrease (indicating)? There is a correlative gamma ray decrease -- or sorry -- increase on the gamma ray in Tract 1.

Q. An increase?

A. We generally target right there. It serves as a good marker for geosteering.

Q. So you're only, what, 20 feet or less above the top of the Wolfcamp?

A. Yes, sir.

EXAMINER JONES: Did you ask if there were any --

EXAMINER McMILLAN: Depth severances?

EXAMINER JONES: -- depth severances in the top of the Wolfcamp? We would have to ask that.

EXAMINER McMILLAN: Yeah. The landman will have to come back.

EXAMINER JONES: We'd have to ask the geologist, and he'd say, That's not my responsibility.

MR. McMILLAN: Would you like us to bring --

EXAMINER JONES: So let's keep on going here, and we can do that later.

Q. (BY EXAMINER JONES) So why this zone?

A. It's been targeted by operators throughout this

area. Yeah. It's commonly completed and drilled, targeted. GMT actually produces it from their wells immediately to the south and had great results. So --

Q. Your net pay amount really pinches -- you've got it really pinching off to the northeast. Is that -- so you've got some pretty good control, that the 6 percent doesn't exist?

A. That's correct. The correlative interval does persist, but it does get tighter. It gets more carbonate in the interval, and you lose your porosity as you go further to the northeast up onto the Antelope Ridge structure.

Q. So it's carbonate, but it's not dolomite?

A. It's not been dolomitized. There is no secondary porosity that I'm aware of.

Q. So just looking at this net pay map, are you still interested in the southwest quarter of 2, even though it looks like you've got a map that -- 35 and the northwest of 2 might be the best; is that correct?

A. I'm sorry. Could you restate the question? I'm not quite following.

Q. It looks like there is -- your -- it actually -- does that get thicker?

A. The pay is getting thicker as you move south. Yes.

Q. Okay. Okay. So you're very interested in the southwest of 2 --

A. Yes.

Q. -- in your well?

A. Yes.

Q. Of course, this is -- this is the thickness in the whole 3rd Bone Spring, correct?

A. That's correct.

Q. Okay. Does that correlate with productivity of a well, you think?

A. I'm not sure I understand the question.

Q. I mean, the 3rd Bone Spring is -- what's the gross thickness of it?

A. We believe the entire interval, through proper completion of fracing techniques, you do see a contribution from the entire 3rd Bone Spring Sand system, if that's what you're asking.

Q. That's a good answer. Good answer.

So basically you get more and more net pay as you go southwest, and if you go too far to the northeast, you're pinching out. At least in your target interval, you're not getting much, but -- but that would be over in Sections 25, anyway -- 26, 25?

A. That's correct.

Q. So there was a debate earlier about whether you

could -- you could propose and drill a well from the midpoint of 35 North. You would do that?

A. If I owned the acreage in Section 26 and northwest of 35, absolutely; I would have no objection to doing that. I think my colleague will speak to that a little more on follow-up.

Q. Okay. So basically -- but you would still possibly target more Bone Spring intervals uphole?

A. Yes. I did not bring exhibits to reflect that fact, but I do think the 2nd Bone Spring Sand is also productive across this interval.

Q. Are you familiar with Paul Kautz, our geologist in Hobbs? He's got a thing called the Wolfbone he's talking about.

A. Uh-huh.

Q. And, you know, it could have been called something else --

A. Right.

Q. -- but it kind of includes the 3rd Bone Spring and the top.

A. Yeah. I'm well familiar with that term.

Q. But it's not applicable here?

A. No -- I mean, in my personal experience, generally those terms are applied when we are just doing vertical wells, and we would stimulate and commingle

multiple zones 3,000 feet. So you -- and that term first came about in the Midland Basin, where we had Wolfcamp and Spraberry, so you heard the term "Wolfberry." So you had 3,000 feet of vertical open hole with ten stages, and you're fracing and commingling. So you weren't producing any one single interval. You were commingling them all. So it began to be known as Wolfberry.

And you know how the industry likes to grab jargon and run with it. So they came over here to the Delaware Basin and said, Well, over here, you don't have Spraberry. You've got Bone Spring. So it's Wolfbone over here.

Q. So your well is called Grama Ridge?

A. Yes.

Q. And the other competing well is called Squeeze?

A. Somebody else could speak to that better than I could.

Q. Yeah. Okay.

EXAMINER McMILLAN: We want -- OCD requests --

I don't have any more questions.

EXAMINER JONES: Well, David might.

EXAMINER BROOKS: I just wanted to facetiously suggest that the Wolfberry or the Wolfbone

makes it kind of a rough go for the wolf.

(Laughter.)

EXAMINER JONES: The wolf had a hard time.

EXAMINER BROOKS: I have no questions (laughter).

EXAMINER JONES: Before we release the geologist, Mr. Bruce, do you have any questions?

MR. BRUCE: I don't have any questions for the geologist.

EXAMINER JONES: Mr. McMillan, do you have any follow-up?

MR. McMILLAN: I don't have any follow-up.

EXAMINER McMILLAN: The landman has to come back.

MR. McMILLAN: Bring back Robbie Zimmerly.

ROBERT "ROBBIE" E. ZIMMERMAN,

after having been previously sworn under oath, was recalled, questioned and testified as follows:

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. Are there any depth severances in the Bone Spring?

A. No, sir. The Bone Spring --

Q. Are there any depth severances in the Wolfcamp?

A. There is a depth severance in the southwest

quarter of Section 35, and there is from the surface to the Morrow. And geologically, I'm not sure if the Morrow is above or below --

Q. Morrow is deeper?

A. Yeah.

Q. So within the Bone Spring and Wolfcamp?

A. All interests would be the same.

Q. Identical interests?

A. Yes.

EXAMINER JONES: In the vertical well but not a compulsory pooled well.

We don't have a vertical setback, if anybody wants to talk about that.

EXAMINER BROOKS: It doesn't seem like they were going to from the overwhelming enthusiasm.

MR. BRUCE: No matter what we do, you're still not --

EXAMINER JONES: Thank you very much.

EXAMINER McMILLAN: Thank you.

MR. McMILLAN: Thanks, Robbie.

Okay. Black Mountain calls its third witness, Dr. Michael McCracken.

MICHAEL E. McCRACKEN, Ph.D.,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. McMILLAN:

Q. Dr. McCracken, would you please state your full name for the record?

A. Michael Edward McCracken.

Q. And where do you reside?

A. I reside in Flower Mound, Texas.

Q. By whom are you employed and in what capacity?

A. I'm employed by Black Mountain Oil & Gas as a chief operating officer.

Q. Have you previously testified before the New Mexico Oil Conservation Division and had your credentials as an expert in petroleum engineering accepted and made matter of record?

A. Yes, I have.

Q. Are you familiar with the applications filed in these cases?

A. Yes, I am.

Q. And are you familiar with the status of the lands in the subject area?

A. I am.

MR. McMILLAN: At this time, Mr. Examiners, I tender Dr. McCracken as an expert in petroleum engineering.

MR. BRUCE: No objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. McMILLAN) Dr. McCracken, could you please give the Hearing Examiners a brief overview of the drilling and completion plans of these wells?

A. Yes, I can. So our completion plans for these wells are to drill wells in a north-south orientation starting at the southern end of Section 2 and drilling to the north, halfway through Section 35, pulling long laterals, what we'll call nominally 7,500-foot laterals.

Q. Have you developed an exhibit, Exhibit 10, for our reference during this hearing?

A. Yes, I have.

Q. Okay. Let's take a look at Exhibit 10. Turning to page 1, this appears to be an Executive Summary of your testimony. Can you please summarize what you see here for us?

A. Yes, I can. So Black Mountain's development plans, we basically propose deploying long laterals to enhance hydrocarbon recovery and maximize economic benefit. And I mentioned earlier, we want to drill mile-and-a-half laterals versus the standard one-mile lateral because of the many benefits that provides. And it's kind of well-known in the industry about those benefits, and I've highlighted a few here.

One -- and I'll show this in further

testimony -- there is a nearly linear increase in EUR versus completed lateral length, but the costs are lower, typically, for drilling long laterals because you're not drilling the overburden multiple times as you're doing that development. There is enhanced hydrocarbon recovery because you have less leaseline setbacks, and so you're able to delete and produce the reserves that sit inside those setback areas.

Additionally, there are benefits for reducing your surface footprint and also having less surface facilities. You kind of look at a larger aggregate plan, so less rights-of-way, less lease roads, less disturbance for ranchers and so forth.

We'll talk a little bit that GMT's plans call for drilling nominally one-mile laterals or what we'll call 5,000-foot laterals, and compared to the longer laterals, this is less economically efficient and will lead to the loss of hydrocarbon recovery.

There's also been, I guess, for matters of this hearing some concerns expressed by BTA on the ability to develop their acreage, and we'll show here that the Bone Spring section is continuous. Mr. Moore showed that earlier. And we'll show that there are development options for them in their northern acreage.

Q. Great.

Let's take a look at page 2. Is this an area locator map?

A. Yes, it is.

Q. Can you orient us using this exhibit?

A. I can. This is an area locator map. On the left side is a zoomed-out map that's largely in Lea County. The potash outline is there in red. I've put a square black box around the area of land that we are interested here, and there is a zoom-out of that on the right-hand side of that exhibit.

I've circled three comparison areas that I'm going to go through, as I did similarly in previous testimony that I know Mr. Jones, at least, sat in on. The other Examiner may not have participated in that one. And I'll reference back to those areas in the rest of the testimony.

In the zoom-out, on the right, that shows Black Mountain's acreage position in this area. We have a pretty consolidated block of acreage. We have already been permitting wells where we own lands that underlie the full length of those laterals, and those are the laterals that you're seeing in the east half of Section 2 and the east half of Section 35, where we own enough acreage that we could go two-mile laterals, and then in Section 36 and the south half of 25, where we plan to

drill mile-and-a-half laterals.

The lands that we're talking about today are in the west half of Section 2 and Section 35, and I've drawn in here the sticks representing our proposed 7,500-foot laterals.

Q. Those are kind of a darker stick?

A. Yes. Those are the darker ones.

Q. Since you're talking about Sections 2 and 35, can you describe Black Mountain's acreage position in these two sections?

A. Yes. We own approximately 153 acres in the northwest quarter of Section 2 and approximately 135 acres in the southwest quarter of Section 35. So that would be about 288 acres out of the two times 240-acre spacing units that we're proposing. So basically 288 out of 480 acres.

Q. Let's take a look at page 3, which appears to be Black Mountain's development plan. Can you describe what we're looking at here?

A. Yes. This diagram shows both an aerial view to the left, and then some people call it a gun-barrel or wine-rack view on the right. So from an aerial sense, since we're talking about Bone Spring development here, we have our proposed development plans in the 2nd and 3rd Bone Spring. You can see our proposed surface-hole

locations, and then we plan to deploy pad drilling to reduce surface footprint and to develop both the 2nd and 3rd Bone Spring. In doing that, kind of the gun-barrel view, with four wells per section, coming across four in the 2nd Bone, four in the 3rd Bone.

Additionally, we think that there is Wolfcamp potential on this acreage, but we haven't gone into detail for purposes of this hearing.

Q. You mentioned potential development of the Wolfcamp. Any other potential targets for development in these sections?

A. I mean, the area has been rapidly growing and potential through time, so I wouldn't want to speculate. But those are the targets that we like right now.

Q. Great.

And just to be clear, what length of laterals are you proposing to use in Sections 2 and 35?

A. Mile-and-a-half laterals.

Q. What are the unit configurations to be designated for the wells?

A. 240 acres.

Q. And the take points are situated in orthodox locations?

A. Yes.

Q. Have you conducted any sort of engineering

investigation to determine whether the drilling of these proposed 7,500-foot laterals is a more efficient way to develop the oil in this area than perhaps a shorter lateral would be?

A. Yes, I have.

Q. Can you summarize for the Examiners the conclusions you've reached with respect to whether drilling these 7,500-foot laterals on 240-acre units will result in recoveries exceeding those you would anticipate from shorter laterals?

A. Yes. We believe that there is evidence -- and I'll go and present that evidence as we proceed here -- that the longer laterals allow for more completed lateral length per acre mostly due to the reduction of how many setbacks exist, and that leads to enhanced hydrocarbon recovery versus short laterals.

Q. And have you put together exhibits to demonstrate these benefits?

A. I have.

Q. Okay. Can you walk us through those, please?

A. Yes. So if everyone will turn to page 4, this will show an example where there are both short and long laterals and what I call Comparison Area 1. So if you look at that locator map, this is the closest comparison area to the acreage in question, and it's also wells

that are completed in the exact same target interval. This is probably the most apples-to-apples comparison we can get using empirical data.

What we have here is Concho has drilled the Corazon State unit wells 1H through 9H, four of them being 5,000-foot laterals in Section 10, and then four of them being longer laterals, nominally 7,500 feet, in Section 3. So you have a locator map on the top center page, and at the bottom, there is a table. And all of the cells there that are colored in a light yellow refer to the one-mile-long laterals, and the ones in the green refer to the mile-and-a-half-long laterals.

And this is a summary table of looking at, you know, how the completed lateral length was, how much proppant was deployed, how much oil had been produced to date, how much reserves remaining and then from that, calculating a gross EUR.

So when you add up the fully developed sections for both of these, you can compare the EUR, you know, barrel oil equivalent basis, and you get a ratio of 1.73. If you compare the lateral lengths, you get a ratio of 1.61. Take the ratio of two of those, you actually see, in this case, that you get a slightly greater than linear scaling, where you're getting a little bit more recovery than even what you would get,

you know, on a foot-by-foot basis per completed lateral length. But basically it's very close to being linear.

This is a good example because the proppant loading on these wells is also very close, and that's something very important to consider when making these comparisons. And the average pounds per foot for proppant on the one-mile laterals is about 984 pounds per foot. A mile-and-a-half lateral is at 995 pounds per foot. It ends up being a ratio of 1.01.

If you go to slide five, this again shows the second comparison area. This is the 2nd Bone Spring. And here we show long laterals that were drilled by Concho, the Gettysburg State, and then there are offset wells that were drilled in the 2nd Bone Spring by Mewbourne and Endurance, Stratocaster and Antelope wells.

Similarly, again, you have a summary table at the bottom, and if you look at the BOE, EUR of 420,000 barrels versus the long lateral average being 592, you get a ratio of 1.41.

On the proppant loading, it's not quite linear, so it's a little bit more difficult to make this comparison directly, and the shorter laterals in this instance actually had the higher proppant loading. Your ratio for completed lateral lengths are at 1.72. So in

this case, we get a slightly less than linear scaling, but we also don't have equivalent proppant loading. If you additionally adjust it for proppant loading, you would be at about a linear scale.

Q. Okay. Moving on to slide six?

A. Okay. Slide six is a last -- here we show Avalon wells that were drilled in our Comparison Area 3 by EOG. And, again, at the bottom, we have a summary table, where we looked at the one-mile long laterals versus the mile-and-a-half long laterals.

And on a BOE basis, we're getting a ratio of 1.99. On the completed lateral length, it's a 1.55. So, again, it's kind of a super linear scaling.

The proppant loading in this case is pretty close to being one to one.

In general, from a technical standpoint, I wouldn't expect the scaling to be super linear, but the math kind of worked out that way here. But I think the larger thing to take away here is that the EUR is generally scaling linear with the completed lateral length, so you want to get more lateral length to improve your hydrocarbon recovery.

Q. Great.

Can you -- just jumping ahead --

MR. McMILLAN: So everybody knows, we're

not going through all 30 pages of these in detail.

Q. (BY MR. McMILLAN) Can you just let us know what pages 11 through 33 of your exhibit -- how those relate to what we just went over.

A. Yeah. Slides 11 through 33 are basically backup slides that show all the details for how we did our decline curve work for calculating those EURs, and basically just submitting that as kind of evidence that these were all reasonably done and that we didn't play around with these forecasts just to make this fit with what we wanted to say.

Q. In the interest of transparency, you might say?

A. Yes, sir.

Q. Let's look at your slide seven here. Can you tell us what we're seeing here?

A. Slide seven is a comparison of what happens in different development plan scenarios. So on the left, we have nominally mile-long lateral development with our standard 330-foot setbacks and then compared to it, kind of in the center of the document, is how development looks with mile-and-a-half-long laterals. And if you notice, between the two, there are less setbacks in a 7,500-foot lateral development, which that allows for more completed lateral length, which, as I showed earlier, means also more reserves, which means more

money for the State. And we'll go through that math here in a minute.

So if you kind of compare the undeveloped acres due to the setbacks for these kind of three miles, in the 5,000-foot laterals, you're looking at about 240-acre that get undeveloped, and in the 7,500-foot lateral, you're looking at about 160 acres that are undeveloped. The table to the right makes a comparison of those two. So if you take the 240 acres and subtract the 160, you end up with 80 acres of waste when comparing the two plans, which is about 4.2 percent of the acreage that gets underdeveloped.

Using the EURs from the 2nd Bone Spring work that I showed there (indicating), you have about 310,000 barrels of oil and about 661 million cubic feet of gas. So if you multiply that 4.2 percent, you end up with 12.9 thousand barrels of oil that are lost -- for a loss and about 28 million cubic feet of gas. Using kind of standard state revenues per severance taxes, 8.13 percent on oil and 8.92 on gas, you end up having about $60,000 of lost revenue per well per zone.

And then just for hypothetical reasons here or case, we're looking at up to four prospective intervals. In this case we're talking about two 2nd and 3rd Bone and four wells per section. So if you took the

difference of these development plans over an entire section, you'd be looking at a million dollar difference for four zones if we just compared the Bone Spring, we cut that in half, we'd be talking about a million dollars difference. And that's just in state revenue alone, let alone what the other working owners are giving up.

And I guess the other reason why I think that you can have strong conviction that the acreage is undeveloped in the setbacks is that the industry standard is going to tighter and tighter cluster spacing, and they're seeing better and better results from that. And, you know, everyone is doing probably 35 foot less now. I'll stretch and say 50 feet, and 35 feet is a lot less than 660 feet. So by not creating fractures in those setbacks, we're not optimally developing it or recovering those reserves.

Q. Great. Thank you for that.

Let's take a look at the two slides left. Let's look at slide number eight, and tell us what we're looking at.

A. Okay. Slide number eight illustrates another way that long laterals help you with increasing your recovery, and this has to do with the economic life of a well. As a well produces, over time, obviously the

production declines, and the revenue declines. The biggest obstacle for an operator becomes their fixed cost. They have to pay a pumper. They have to pay a meter fee. And, you know, there are a set number of workovers that kind of end up coming up, and they don't have nothing to do with the production level in the life of a well. So those fixed fees are kind of where you'll break over your cash-flow limit, and you won't, you know, economically produce the well.

And so I've put here for illustration purposes two different cash-flow profiles, one for a 5,000-foot lateral, another for a 7,500-foot lateral using the -- using type curves that are based upon offset wells. And in the last -- in the last hearing, Mr. Bruce pointed out that we haven't necessarily seen a well that's produced for 50 years yet. And while that may be true, this concept is true no matter if the well ends up being 30 years. But as it declines, eventually you're going to cross over to this point, and the longer lateral is going to -- as developed over more acreage, the type curve sits higher, it will stay cash-flow positive for longer. And when you do that, you basically look at the math. And in this scenario, that 7,500-foot lateral produces for six years longer, yields an additional approximately $22,000 in severance taxes

per well.

I have to kind of normalize this for the 5,000-foot lateral, so I multiply it by two-thirds. So that's about $1,500 in lost severance tax per well. And if we had -- in this case it was a hypothetical case of 21 wells. If you multiply by that, you get $306,000. In our case, we're looking at four wells, so you're probably looking at about $60,000 of lost severance tax revenue.

Q. Very good.

And let's take a look at slide nine and the development plan options and the evolution of Black Mountain's development plan.

A. Okay. So slide nine basically kind of shows how our development plans evolved over time and our logic behind what we want to do, as well as the options that would exist for someone in the future. When we originally purchased our acreage, we planned to drill mile-long laterals over the acreage that we own the majority of interest in, and we would have had 90 percent working interest. And that would be in that northwest section, Section 2, and the southwest of 35. And that was what was presented to our board at the time of our acquisition when they approved our funding.

The wells that are sitting on the west half

of Section 11, those two -- well, one is a permit, and one is a well that GMT has actually drilled now. Neither one of those wells existed. We saw that the acreage in the southwest quarter of Section 2 was owned by BF Petroleum. We approached them and met with them in their offices. And they were initially open to doing a deal on that acreage, but it turned out they had already made an agreement with the State for how they were going to plug the well that HPB'd [sic] that and that they said they didn't want to cause any issues with the State and they were just going to plug the well and release the lease back to the State.

So that happened. And then we went and nominated it because we saw that, one, we liked the lateral development because it's better for everyone, and, two, we didn't want to leave any acreage stranded. So we nominated that for the state lease sale. We participated in the state lease sale, as Mr. Zimmerman testified. And I guess unfortunately for us, we came in second place, and GMT wound up winning that lease.

But our development plan, ever since we were talking with BF Petroleum, was to go ahead and go mile-and-a-half-long laterals because, one, it doesn't strand acreage, and, two, it would -- it's to the economic benefit of everyone just because of the

enhanced recovery. And that's our current plan right now.

As we mentioned earlier, this leaves options open for BTA and whoever else owns in Section 26 to develop their acreage, and they can go ahead and drill mile-and-a-half laterals to the north, and there are no existing horizontal wells or anything that would preclude them from developing that. And as Mr. Moore testified, the 3rd Bone Spring section is contiguous up there and as thick, and so we see no geologic reason for why that development could not go forward.

We are willing to and we have always been proponents of long-lateral development, and we would definitely be open to drilling two-mile laterals if someone wanted to do that. I guess just in comparing working interest over these different scenarios, we would have been about 90 percent the original one and about 60 percent in the next one. In the two-mile lateral, we'd be 45 percent, but we would still have the majority interest over any other party, and we think that would make a strong case for us to be the operator.

The current plan that's being pushed by GMT and BTA is the only scenario where we would not be operator out here, and in Section -- well, not operator but where our working interest would be less than the

other proposed operator. Where they're proposing mile-long laterals in Section 2, our working interest would be 47 percent, and mile-long laterals in 35, where our interest would be 42 percent.

So I don't think it's that hard to see what's going on, that basically GMT and BTA are teaming up against us to try to force us out of operatorship, in my opinion.

Q. Okay. In light of your very thorough investigation, would developments with 7,500-foot laterals enable Black Mountain to be able to efficiently and economically recover additional incremental reserves that would otherwise go unproduced?

A. Yes.

Q. And would this result in improved project economics so that premature abandonment could be avoided?

A. Yes.

Q. What's your understanding of how much reservoir thickness can effectively be stimulated here?

A. So there is a lot of discussion in the industry as far as, you know, how much reservoir fracture can effectively stimulate and prop -- and prop, and that gets a little bit to the question that I was asked by the Examiners today about what is the benefit of -- how

much benefit is there; how much more valuable is the acreage to the south versus acreage that's to the north? And I don't know if anyone knows the exact number, but, in general, most people in the industry are going to use a rule of thumb of about 200 feet of thickness is what you can kind of count on being stimulated.

Q. And is there a typical industry practice for drilling and completing wells where there is a reservoir thickness greater than, say, 250 feet?

A. Yes. So, you know, you can see in the Midland Basin and a lot of other plays that when you start to get to very thick sections of rock, that people actually stagger and create two rows of laterals when they get very thick sections of rock, and a lot of times, that break-over point may be about 250 feet.

Q. Let's talk about surface disturbance. Will the development of horizontal wells allow Black Mountain to minimize surface disturbance?

A. Yes, absolutely. A 7,500-foot lateral will obviously lead to less surface locations, less facilities being built, less rights-of-way, less lease roads, so on, so forth.

Q. And you're using pad locations here to further minimize surface disturbance, correct?

A. That's correct.

Q. And is Black Mountain development's plan disruptive of the predominant development in the area?
A. No, it is not.
Q. On what date -- are you familiar with the GMT applications filed?
A. I am.
Q. And have you looked at GMT's well-permitting papers?
A. I have.
Q. On what date were GMT's wells permitted?
A. Let me get my notes out here.
So the original permits were October 5th of 2016.
Q. Were those permits canceled at some point?
A. Yes, sir. Canceled on December 9th, 2016.
Q. And were those permits -- were those wells re-permitted with new API numbers?
A. Yes, they were.
Q. On what date?
A. April 7th, 2017.
Q. And when was the original hearing date in this matter prior to continuance?
A. Our originally hearing date was -- let's see.
Q. Was it March 30th?
A. Yeah, March 30th.

Q. And so were these wells -- did GMT re-permit these wells during the pendency of a continuance requested by GMT of these matters?

A. It appears so.

Q. Also, with respect to those permitting documents --

Oh, let's talk about the pool. In what pool is Black Mountain's target interval located?

A. We're in the Grama Ridge; Bone Spring, Northeast interval.

Q. Does that have an associated pool number?

A. It does.

Q. What is that?

A. 28435.

Q. And this is the pool in which Black Mountain permitted its wells?

A. Yes.

Q. Did Black Mountain contact the OCD Hobbs District Office yesterday to confirm that it had properly permitted its wells in the correct pool?

A. Yes, we did.

Q. And what were you told?

A. We were told that we were in the correct pool.

Q. Do you happen to know what pool GMT permitted their wells in Section 2?

A. According to the paperwork on the State site, it's the Ojo Chiso; Bone Spring, Number 96553.

Q. To your understanding, is that the correct pool designation?

A. It's my understanding that is not the correct pool designation.

Q. So in your opinion and in your best understanding, are the GMT wells properly permitted?

A. It's my understanding they are not properly permitted.

Q. Have you examined GMT's development plan for this acreage?

A. Yes, I have.

Q. And do you have any conclusions in comparing GMT's development plans with Black Mountain's?

A. Yes. What we've been talking about here, they're proposing mile-long laterals, which compared to mile-and-a-half-long laterals, two-mile-long laterals, lease to loss reserves due to setbacks.

Q. Okay. And have you examined GMT's AFEs?

A. Yes, we have.

Q. Do you have any conclusions or opinions in comparing GMT's AFEs with Black Mountain's?

A. When comparing the two AFEs, if you scale for lateral length, they would be roughly similar but not be

slightly cheaper. In general, we would expect the longer lateral to be even at a lower-cost ratio than that. When digging down into the details and scaling up the cost, the scaled-up GMT's costs to our 7,500-foot lateral cost, their completion runs about $1.7 million less expensive than ours would.

Q. Okay. Did you see -- in drilling down to the details, so to speak, of the two AFEs, did you see where that cost difference is reflected? Are there particular line items that seemed grossly disproportionate between the two AFEs?

A. Yes. As I mentioned, the biggest difference being in the completion costs. There are some other minor costs in the battery, differences where they may be using less expensive containment systems or something like that that gets them to a slightly lower cost.

Q. Okay. And did you find GMT's completion estimates to be realistic?

A. We do not believe they're realistic with the current market environments. We've bid out to multiple vendors and all vendors come in a very tight range, and GMT's costs are -- their estimate of completion costs are almost 60 percent of ours, so substantially less.

Q. Is it true that Marathon is on the verge of acquiring Black Mountain's interests here?

A. Yes, it is.
Q. That's public information?
A. That is public information.
Q. Are you aware of Marathon's drilling plans at this point?
A. Yes, I am.
Q. Do you have any idea what they're anticipating?
A. Yes.
MR. BRUCE: I would object. I would object.
This is -- Marathon's plans are -- I would first ask the question, in Exhibit 11, Mr. McCracken, is that from Marathon Oil to you?
THE WITNESS: Exhibit 11 is Marathon Oil to the public record. This is a slide from their most recent investor release.
MR. BRUCE: Okay.
Q. (BY MR. McMILLAN) So this Exhibit 11 is public, to be clear?
A. Yes.
Q. And what does Exhibit 11 reflect?
A. Exhibit 11 reflects a slide from Marathon Oil's most recent investor release. And notable here is that they anticipate ramping up their rig count from one rig right now to three rigs by middle of this year.

Q. Are there any challenges you can think of to ramping up to that amount of activity so quickly?

A. Yes. Locations that are immediately drillable are a concern to Marathon Oil and their ability to ramp up their rig count.

Q. And the wells being discussed today would be immediately drillable, essentially, upon appropriate approval?

A. Yeah. Upon approval of the compulsory pooling, these locations are immediately drillable.

Q. Mr. Zimmerman gave a little preview and talked a little bit about Black Mountain's experience drilling horizontal wells. Just in case something goes sideways with respect to Marathon, let's hear a little bit more about Black Mountain's direct experience drilling horizontal wells.

A. Yes. It was testified in the previous hearing on this, even though Black Mountain Oil & Gas is relatively new to New Mexico -- we've just drilled our first well; we're completing it on Monday -- all of our staff are highly versed in horizontal development.

Mr. Moore has been involved in hundreds of horizontal well drilling. I worked with Pioneer Natural Resources in developing Eagle Ford assets, and we were running up to 14 rigs at the time. Additionally, I was

involved in horizontal drilling with a small company where you have to be fully involved from beginning to end, and we drilled about 30 horizontal wells.

And we have staff that's experienced in geosteering, et cetera. So if something happened that Marathon Oil did not close on these assets, we are more than capable to develop them.

Q. Great.

In your opinion, would granting Black Mountain's applications be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. And were Exhibits 10 and 11 prepared either by you or at your direction?

A. 10 was prepared at my direction. 11 is a copy of the public record of Marathon.

MR. McMILLAN: Move at this time for admission of Exhibits 10 and 11.

MR. BRUCE: No objection.

EXAMINER McMILLAN: Exhibits 10 and 11 may now be accepted as part of the record.

(Black Mountain Operating, LLC Exhibit Numbers 10 and 11 are offered and admitted into evidence.)

MR. McMILLAN: I would also move the admission of Exhibit 12, which is my Notice of Affidavit. Attached to the affidavit are a list of working interest owners and offset operators who were sent actual notice of the applications and the hearing. I regret to inform you that we're still waiting for a green slip back from EOG Resources, whom you can see on the second page of the exhibit was served.

MR. BRUCE: Welcome to my world, Mr. McMillan.

MR. McMILLAN: We sent this to them at two addresses, a P.O. Box and a physical address. As a result, I have to ask this case be continued just for purposes of collecting that green slip and submitting it to the Division.

MR. BRUCE: I have no objection to that.

EXAMINER McMILLAN: Okay. Cases 15655 and 15656 shall be continued.

(Black Mountain Operating, LLC Exhibit Number 12 was offered into evidence.)

MR. McMILLAN: Thank you. That's everything that I had for this witness and with respect to the exhibits.

EXAMINER McMILLAN: Let's take a ten-minute break.

EXAMINER BROOKS: Remember that Jim hasn't had a chance to cross-examine this witness.

Right?

MR. BRUCE: That's fine.

EXAMINER BROOKS: Jim will be at bat when we come back.

EXAMINER McMILLAN: Yes.

(Recess, 2:44 p.m. to 3:05 p.m.)

EXAMINER McMILLAN: I'll call back to order Case 15655 and Case Number 15656.

And I believe Mr. Bruce has questions.

MR. BRUCE: Yeah. Not too many, actually.

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Mr. McCracken, you did a decline curve analysis for this, right?

A. Yes, we did.

Q. And I think you'll agree that -- the prior hearing that's been referred to, you'd agree that decline curves -- that's really not an exact science. There is a little --

A. Yes. If you gave five engineers the same set of data, you would get -- you would get a range of answers. But I think in the last -- I testified they wouldn't change wildly, but they're not going to be

exact.

Q. And look at page 5 of your Exhibit 10. And this goes for the other comments that, you know -- on page 8, you project the wells out 50 years, and you recognize there is no horizontal 50-year well in New Mexico yet; and I hope I don't live to see one (laughter). But looking at your page 5, one of the wells you pull out for a mile lateral is -- I think that's the Mewbourne Antelope well?

A. Yes, sir.

Q. And that's not quite two years old. And with gross remaining reserves, for instance, it looks like, from what you're projecting there, that well is only going to last maybe six years?

A. Right. Yeah. I believe we talked about this one at the last hearing also, and it has a fairly steep decline, which is why the forecast ended up --

Q. So depending on the location of the wells, there could be quite a variance in productivity?

A. Yeah. There is a wide range of reasons why productivity can vary: Operational, mechanical, reserves, artificial lift.

MR. BRUCE: I think that's all I have, Mr. Examiner.

EXAMINER BROOKS: We should have done that

before the break.

(Laughter.)

EXAMINER JONES: Do you want me to start?

EXAMINER McMILLAN: Uh-huh.

EXAMINER JONES: I don't have a lot.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. First of all -- I probably asked this before -- how do you -- how would you predict the workout [sic] here without -- I know you can do the escalating costs versus declining revenue, but what usually results in the end of these wells? Is it water loading or -- or --

A. Yeah. I mean, if you really -- I mean, it's quite varied. I mean -- so if you have a dry gas well, you're not going to have a water-loading issue.

You know, on a conventional formation, sometimes you might get water encroachment, which, you know, would just be -- well the water out, unless your artificial lift mechanism wasn't sufficient for it, then you won't pay for the next artificial lift mechanism because it's too expensive. In these conventional wells, what we have seen is -- we haven't seen water-oil ratios kind of increasing over time, so it's going to be more about can you -- how long are you willing to tolerate the cost of the artificial lift mechanism that

you have in place.

Q. Okay. That was just a critical question, actually.

But I see your argument on the setbacks. And are you saying they're putting some of these fracs as close as 50 feet?

A. Oh, yeah, even closer, down to 20 feet, what we'll call cluster spacing, which is the distance between the sets of perfs. And no one has a video camera to tell exactly how many fractures are made, but the idea is that one -- one fracture is initiated for every cluster, is the conceptual idea.

Q. Yeah. Okay. So when you start getting them so close together, do you see some drop-off on your net pressure plots? In other words, you start seeing some --

A. Yeah. Some call it stress shadowing. I'm not an expert in it, but if you get too close together, you can start to have those problems. Everything I've heard would just be hearsay to you guys, but I can tell you what I've heard. But, in general, people have not complained [sic] about all the way down to 20 feet.

Q. Okay. But the bottom line is it seems like the 330-foot setbacks is a bit -- well, almost just a land issue, where one person drills 330 from the line, the

other person drills 330 from the line, but you both end up leaving reserves in the ground.

A. I agree. I mean -- yeah. Several of these hearings -- I mean, if the NMOCD ever, at some point in time, were to consider reducing the setbacks, you'd see me here, you know, being a proponent for that.

Q. Okay. Then the State Land Office, they -- they -- obviously, they're the ones that make the money for the schoolkids, you know, and so -- but they're -- you didn't make a case to them for this? They didn't show up here, obviously.

A. Oh, for this one? No. I mean, we participate in NMOGA, and NMOGA's been involved in trying to get some rules set where the setbacks could get reduced. And I think right now there is a proposal to get it down to 100-foot setback, if I'm remembering correctly.

Q. 100 feet from the toe -- the toe and the heel?

A. Yeah. Yeah, which would be correct. You still would need the -- you still need the 330 setback from the -- you know, parallel with the wellbore, but your fracs are going outward.

Q. Okay. Okay. I believe that -- so -- but you don't want to join their well, and they don't want to join your well. And if you joined a well that they proposed for a mile and a half, would that be a

preferable situation, or you would rather operate the well?

A. Yeah. Obviously, we would rather operate and be able to control -- control and fracture how we see fit. But yeah. I mean, I think the worst-case scenario is that we all live in a world of 5,000-foot laterals. I mean, that just doesn't benefit anyone. So yeah. I mean, I guess it would be a scenario where we'd have a mile-and-a-half lateral and we had the majority working interest and we're not the operator. That doesn't really quite seem right, but we would prefer that than not being the operator of a 5,000-foot lateral.

Q. Okay. Thank you very much.

EXAMINER JONES: Mr. Brooks?

EXAMINER BROOKS: Yeah.

CROSS-EXAMINATION

BY EXAMINER BROOKS:

Q. You're proposing -- right now we're dealing only with the wells in -- in the west half of Section 2 and the southwest quarter of Section 35; is that correct?

A. That's correct.

Q. But you're also proposing mile-and-a-half laterals in the -- in the east half of 2 and the --

A. Those are two-mile laterals.

Q. Two-mile laterals.
A. So we own interest in the full set.
Q. You own interest in the entire project area over there?
A. Right. Yes.
Q. Okay. Now, the problem you've got -- wait. Which -- which section is it where BHP [sic] owns? Is that the southwest quarter of 2?
A. Northwest of 35.
Q. Northwest of 35.
Okay. So they don't own -- they don't own anything in --
EXAMINER JONES: Is that BTA or is it --
THE WITNESS: Yeah. BTA owns -- yeah. My understanding is that BTA owns in the northwest of 35 and GMT owns in the southwest of Section 2.
EXAMINER BROOKS: And who is the other party here? BTA, I know about. But I was thinking --
MR. McMILLAN: Devon is here as well.
EXAMINER BROOKS: Yeah, but there is -- who is the person who is proposing the alternative proposal?
THE WITNESS: GMT.
EXAMINER BROOKS: I'm sorry?
EXAMINER JONES: GMT.
THE WITNESS: GMT.

EXAMINER BROOKS: GMT?

THE WITNESS: T, as in Tom.

Q. (BY EXAMINER BROOKS) Okay. So GMT owns the -- owns what? Where is their acreage?

A. They're in the southwest quarter of Section 2.

Q. They're in the southwest quarter of Section 2. Okay. You're on both sides of them? You're in the north -- you're in the -- they're -- no, wait. They're in the southwest quarter of Section 2, so you propose -- you own the northwest -- in the northwest quarter of 2 and the southwest quarter of 35?

A. Northwest of 2, yes.

Q. And what you want to do is drill the west half of 2 and the northwest of -- and the southwest of 35?

A. Yes, sir.

Q. And GMT, what they want to do is drill the northwest -- wait. You said they own the northwest quarter of 2, right?

A. Southwest.

Q. Southwest quarter of 2.

I'm trying to get this -- I'm getting confused here because -- it might help if I had my glasses on and I could see the section numbers.

Okay. There are existing wells owned by other parties down in Section 11, right?

A. Yes, by GMT.
Q. Okay. And BTA owns in the northwest quarter of 35?
A. Yes.
MR. McMILLAN: Uh-huh.
Q. (BY EXAMINER BROOKS) Okay. So the reason you want to drill there is that you want to get a three-quarter mile -- or a mile-and-a-half lateral rather than a one-mile lateral because you could drill a one-mile lateral entirely on your own land?
A. Well, we could have drilled a one-mile lateral on our own land and proposed that, but that makes no sense because it leaves stranded acreage to the south. Plus, it's a short lateral development, so --
Q. Yeah. And even if somebody else gets all the additional -- has all the additional interest, it's still to your interest to drill mile-and-a-half laterals because you can get greater efficiency; is that correct?
A. That's correct.
Q. And that's the argument that I heard day before yesterday, and I hadn't really thought it through that way. So that's -- that's the reason you want to drill the mile-and-a-half. I understand that we don't like stranded acreage, but at the same time, the acreage you'd be stranding wouldn't be -- wouldn't be yours. So

your loss would be not the stranded acreage, but the fact that you would be drilling a shorter lateral and, therefore, your recovery per foot would be less. Is that --

A. Right. Recovery -- yeah. And then also think about your cost per completed lateral foot because --

Q. Yeah, that's it.

A. -- you're -- multiple times --

Q. Your net -- your recovery --

A. Yeah.

Q. -- per foot. Probably not your gross. Your gross would probably be the same, but your net would be -- your net would be greater because your cost would be less. I mean, you're the engineer. You tell me. But I don't see why your gross per foot would be any more -- would be any more.

A. No, no. Wait. What I'm saying is that because of the offset's issue, you get more completed lateral length, so you get more reserves, so you recover more. But at the same time, because you're only drilling the vertical section --

Q. Yes.

A. -- like, if you think about developing a large area, right, many, many sections together --

Q. Yeah.

A. -- the number of times I'm drilling the vertical section is much less. So the well cost -- the cost of the well -- so you have two components.

Q. Yes.

A. You have the recovery of the well and the cost of the well. There are benefits on both sides.

Q. So you're better off to have two-thirds of a mile-and-a-half well than you are to have all of a one-mile?

A. Absolutely. Yes. Yeah, not just us, but any working interest party, in our opinion.

Q. That's what I wanted to understand. Thank you.

EXAMINER BROOKS: I'm through.

MR. BRUCE: No questions.

EXAMINER BROOKS: The witness may be excused.

EXAMINER JONES: We've got the whole other two parties.

Is that it.

MR. McMILLAN: That's all for our case.

EXAMINER BROOKS: Now, are we going to -- are we going to --

Mr. Bruce, are you going to --

MR. BRUCE: Yes. I've got three witnesses.

EXAMINER BROOKS: Do you want to present a

defense in their cases and then present your own cases --

MR. BRUCE: No. I think it's just --

EXAMINER BROOKS: -- or do you want to present that at the same time?

MR. BRUCE: At the same time.

EXAMINER BROOKS: We did not say at the beginning of this that all four cases were consolidated for purpose of hearing. It sounds to me like that would be the most efficient way to do it.

MR. BRUCE: That's fine. I doubt an order is coming out in the next two weeks.

(Laughter.)

EXAMINER McMILLAN: I'm doing this one. I've got to have all the --

EXAMINER JONES: You only need two weeks to get that?

MR. McMILLAN: I would hope so.

EXAMINER JONES: They were here this morning.

MR. McMILLAN: Yeah. I should have mentioned something to them.

We mailed those out a while ago. I expected to see those by now, to see the green cards by now.

EXAMINER BROOKS: Okay. Mr. Chairman, is that consistent with what you think appropriate to do? Go ahead and let Mr. Bruce present responsive testimony on the --

MR. BRUCE: It's all part and parcel of the same thing.

EXAMINER BROOKS: That was my understanding. Let's go ahead and treat all four cases as consolidated for purposes of hearing, and we'll let Mr. Bruce proceed with his case. That will prevent waste and protect correlative rights.

EXAMINER McMILLAN: The only comment I want to make is that the field -- field rules will be determined by the Hobbs District Office with a formal email to all affected parties.

EXAMINER BROOKS: You mean the pool assignment?

EXAMINER McMILLAN: Yeah, the pool assignment, because it's overlapping pools. And that will be determined -- the Hobbs District Office will determine the pool designation, and he will supply an email to all affected parties. And once that email is received, that will be -- that will determine the pool designation. That's the only thing that will determine the pool designation at this point.

EXAMINER BROOKS: Paul Kautz rules.

EXAMINER McMILLAN: Yes.

HANS SCHUSTER,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and city of residence for the record?

A. My name is Hans Schuster, and I live in Denver, Colorado.

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

A. I work with GMT Exploration Company, LLC as a landman.

Q. Have you previously testified before the Division?

A. No, I have not.

Q. Could you summarize your educational and employment background for the Examiner?

A. I received my bachelor's degree in business administration from Western State College in Colorado in 2007. I then left and returned to Western State in January 2009, received a second degree in professional land and resource management.

I've been employed by GMT Exploration

Company as a petroleum landman for two-and-a-half years. Prior to my employment with GMT, I worked with Noble Energy, Inc. for five years, and prior to Noble Energy, I worked as an independent landman for two years. And I'm also a certified professional landman through the American Association of Petroleum Landmen.

Q. And at GMT, does your area of responsibility include this portion of southeastern New Mexico?

A. It does.

Q. And are you familiar with the land matters involved in the applications?

A. I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Schuster as an expert petroleum landman.

MR. McMILLAN: No objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. BRUCE) Mr. Schuster, could you identify Exhibit 1 for the Examiner and describe the well units that GMT proposes?

A. Exhibit 1 is a Midland Map with two proposed project areas, one being for the Pucker Rapid State Com 1H project area, which covers the west half of the west half of Section 2. The second is for the Squeeze State Com 1H project area, which covers the east half of the west half of Section 2, both in 22 South, 34 East, Lea

County, New Mexico.

Q. And just to clarify what Mr. Brooks was asking, Black Mountain's well proposals go from the south up into the southwest quarter of Section 35?

A. Correct.

Q. Okay. And in the wells, you are seeking to force pool the Bone Spring Formation?

A. That's correct.

Q. And what will be the target zone for GMT's wells?

A. 2nd Bone Spring.

Q. Okay. Could you identify -- before we move on, is there only one entity seeking to force pool in both cases?

A. No. Just Black Mountain.

Q. That's what I mean. There is just one entity, Black Mountain?

A. Correct.

Q. Okay. Could you identify Exhibit 2 for the Examiners?

A. Exhibit 2 is the well proposal delivered to Black Mountain. It's dated December 19th, 2016 for the Pucker Rapid State in the west half-west half of Section 2.

Q. And if you run through that after the well

proposal -- and it does have the -- well, we'll get through this in a minute.

It does have the AFE for the Pucker Rapid State well. What is the completed well costs on that?

A. The total costs or the completion costs?

Q. Just the total cost of the proposed well.

A. It's 5.943 million.

Q. And does the well proposal also contain a drilling prognosis and a C-102 for the Pucker Rapid well?

A. It does. Yes, it does.

Q. Okay. And looking at it, will the producing interval of the well be orthodox?

A. It will.

Q. And what is Exhibit 3?

A. It's a Form C-102 for the Pucker Rapid State Com 1H.

Q. And that is an approved APD?

A. Correct.

Q. Now, looking at the additional well formation, it says "3rd Bone Spring Sand," but you're actually going after the 2nd?

A. Correct.

Q. And has an amendment been filed with the Division?

A. It has. We filed a sundry a few days ago.
Q. What is Exhibit 4?
A. Exhibit 4 is the well proposal we delivered to Black Mountain, dated December 19th, 2016. It's for the Squeeze.
Q. Yeah. Number 4, do you have --
A. Squeeze State, correct, in the east half of the west half of Section 2.
Q. And similarly, there is an AFE for the well, and what is the estimated total cost of that well?
A. It's also 5.943 million.
Q. And, again, it contains the drilling prognosis, as well as the C-102 for the well?
A. It does.
Q. And will the producing interval of the proposed well have orthodox setbacks?
A. It will.
Q. What is Exhibit 5?
A. Exhibit 5 is an approved Form C-101 for the Squeeze State Com 1H.
Q. And, again, that says "3rd Bone Spring," but it's going to be a 2nd Bone Spring well?
A. Correct. It's the same circumstance as the Pucker.
Q. And so a sundry notice has been filed?

A. Correct.
Q. Before we move on to the next exhibits, in your opinion, is the estimated cost of the proposed wells fair and reasonable and in line with the cost of other similar wells drilled in this area of Lea County?
A. I believe so.
Q. When you -- and we'll get to this, the notice, later on in the hearing.
But I originally notified Devon Energy Production Company of this pooling hearing. You are not seeking to force pool Devon, are you?
A. No, sir.
Q. Has GMT acquired Devon's interest?
A. We have.
Q. And their interest is located solely in the northwest quarter of Section 2?
A. As it pertains to our deal, yes.
Q. Now, even though it's not attached, did you submit a JOA -- two separate JOAs for each well with your proposal letters in December of 2016?
A. I did.
Q. Did you hear Black Mountain's testimony that some of the exhibits to the JOA were missing?
A. I did.
Q. Were most of those submitted to Black Mountain?

A. They were. I have a copy with me if we need it.

Q. And do you agree with Black Mountain's landman that there is no depth severance in the Bone Spring Formation?

A. I do.

Q. And the land is all the State of New Mexico land --

A. It is.

Q. -- State of New Mexico minerals?

A. Correct.

Q. When did GMT acquire its interest in the southwest quarter?

A. September of 2016.

Q. Did -- promptly after that, did GMT begin looking at getting out well proposals --

A. As soon as possible.

Q. -- for these wells?

And GMT is already in this general area; is it not?

A. Correct. Yes.

Q. So it had already been studying the geology in this area?

A. Yeah, for ten years.

Q. And our next witness can verify that?

A. Correct.
Q. Now, although the proposal letters are dated mid-December 2016 -- we didn't include them as an exhibit -- but did GMT send out an earlier letter to Black Mountain regarding the drilling of these two wells?
A. We did. It was regarding a notice of intent to drill.
Q. And it wasn't strictly a well proposal?
A. No. It was -- we considered it a courtesy letter of, you know: Hey, we're here; we plan on drilling a well; we'll contact you with further notice.
Q. And after they received that well -- that notice of intent, did you get a letter back from them?
A. Yes. We received a letter from their attorney requesting that we pull the permits that we had filed and included in the notice letter, which we did.
Q. And GMT did cancel those permits because at that point you did not own an interest in the northwest quarter of Section 2?
A. That's correct, as soon as reasonably possible.
Q. Now you do, and so you refiled the permits?
A. Correct.
Q. Looking at Exhibit 16 -- Exhibit 6 and -- really Exhibits 6 and 8. After you sent out your

notice -- not notice letters, but your letters of intent to Black Mountain, did you receive from them Exhibits 6 and 8.

A. We did, about a month later.

Q. And are these letters virtually identical, other than the well names, to the letters that you sent them?

A. They are.

Q. And then you sent out your proposal letters in mid-December to them. Did you then receive Exhibits 7 and 9 from them?

A. We did.

Q. So when you sent out a letter, they reacted and sent you a letter?

A. So I believe the signed green cards for the well proposals that we delivered to Black Mountain dated December 19th were received by Black Mountain on the 22nd of December, and we received these when we got back from Christmas break.

Q. And do you agree that the interest you're seeking to pool with Black Mountain would be just roughly 47 percent or so of the proposed well unit?

A. I do.

Q. And Black Mountain has not signed your JOA or AFE -- JOAs or AFEs, correct?

A. No, sir.
Q. In your opinion, do you believe you made a good-faith effort to obtain the voluntary joinder of Black Mountain in this well -- in these wells?
A. In my opinion, I do.
Q. But operations are a sticking point, are they not, for both companies?
A. Correct.
Q. And you do request that the Division appoint GMT Exploration Company as operator of the wells?
A. We do.
Q. Now, what overhead rates did you propose in your JOA?
A. 8,000 for drilling and 800 for producing.
Q. And is that what you request in this hearing?
A. I do.
Q. And can our engineer discuss that also?
A. Yes.
Q. But if the Division decided on another rate, would that be acceptable to GMT?
A. It will be.
Q. Was Black Mountain notified of these applications?
A. They were.
Q. And is that reflected in my Notice of Affidavit

marked as Exhibit 10?

A. It is.

MR. BRUCE: Mr. Examiner, if you look at this, just as you're going through it, there are several letters, two letters to Black Mountain. They also went to Devon Energy, but Devon Energy is not being force pooled. Also, from a case last year, the Commissioners requested Public Lands -- they have requested they be notified of pooling hearings affecting their state lands, so I did send notice to Ed Martin at the Commissioner of Public Lands, and that is reflected in here, too.

EXAMINER JONES: Do you know that order number they gave that?

MR. BRUCE: I will email it to you and to Mr. McMillan. It was actually a Commission order, Commission hearing.

Q. (BY MR. BRUCE) Let's move to the offsets. Did you cause records to be searched regarding offsets, your proposed wells?

A. We did.

Q. And for the most part -- and is that reflected -- the plan plats and the persons notified reflected in Exhibit 11?

A. It is.

Q. Now, there are several operated properties around there, so you didn't notify the working interest owners. You just notified the operators; is that correct?

A. Correct.

Q. Just like Burgundy in the east half of Section 2, et cetera?

A. Correct.

Q. And was notice given to those parties?

A. It was.

MR. BRUCE: And, Mr. Examiner, Exhibit 12 is my Affidavit of Notice. Two letters were returned. And one letter I sent, I just never got anything back.

But Exhibit 13 is an Affidavit of Publication in the Carlsbad newspaper to offsets only. And each of the three offsets who did not get actual notice have been notified by publication.

EXAMINER JONES: You meant to say "Hobbs News-Sun," didn't you, for the notice? You said Carlsbad, but it looks like you sent it to Hobbs.

MR. BRUCE: Yeah. This is the "Hobbs News-Sun," yeah. I have made that mistake before, however.

Q. (BY MR. BRUCE) Final question on these exhibits, Mr. Schuster. Before today, had you ever

spoken with BTA about GMT's well proposals and the well proposals for the proposed wells that BTA has?

A. No, sir.

Q. So you haven't been colluding with them?

A. No. I actually met him for the first time today.

Q. Just very briefly, Mr. Schuster, two final exhibits. What is Exhibit 14?

A. It's a plat of a proposed gas processing facility site.

Q. Does this also show the drilling pads two GMT wells?

A. It does.

Q. And from what you've looked at, would the drill sites for the two Black Mountain wells be located between them?

A. It would be.

Q. And what is that crosshatched blue area between GMT's well sites?

A. It's the 3Bear Energy proposed gas processing facility site.

Q. And 3Bears plans on building a gas processing facility there?

A. That's what they've explained to us.

Q. And if that's the case, that surface might not

be available for drilling wells?

A. They have expressed they have a deal with the landowner to move forward, but I'm not expressly aware of any agreement.

Q. Does GMT have a surface-use agreement under the Surface Owners Protection Act with the landowner of its two drill sites?

A. We do.

Q. And is that reflected in Exhibit 15?

A. It is.

Q. And is Merchant Livestock Company the owner of the surface in the west half of Section 2?

A. They are.

Q. Were Exhibits -- let me get the right exhibit numbers. Were Exhibits 1 through 9 and 14 and 15 prepared by you or under your supervision or compiled from company business records?

A. They were.

Q. As was Exhibit 11, I believe, the buffer plat?

A. Correct.

MR. BRUCE: And, Mr. Examiner, of course, Exhibits 10 and 12 are my Affidavit of Notice, and Exhibit 13 is the Affidavit of Publication. And I would move the admission of Exhibits 1 through 15.

MR. McMILLAN: No objection.

EXAMINER McMILLAN: Exhibits 1 through 15 may now be accepted as part of the record.

(GMT Exploration Company, LLC Exhibit Numbers 1 through 15 are offered and admitted into evidence.)

Q. (BY MR. BRUCE) One final question, Mr. Schuster. Is the granting of GMT's application and the denial of Black Mountain's applications in the interest of conservation and the prevention of waste?

A. Yes.

MR. BRUCE: Pass the witness.

EXAMINER McMILLAN: You may proceed.

MR. McMILLAN: Couple of questions.

CROSS-EXAMINATION

BY MR. McMILLAN:

Q. With respect to the permitting of these wells, I think you testified that prior to canceling the permits, you did not have ownership in the northwest quarter of Section 2; is that correct?

A. Correct.

Q. Can you clarify for me how you acquired interests in the northwest quarter of Section 2 and when that happened?

A. We have an agreement with Devon for a farm-out in the northwest quarter.

Q. What was the date of that farm-out?
A. It's routed for approval right now.
Q. It's out for approval?
A. I mean, it's -- yes. It's in their approval process right now.
Q. But it hasn't been fully approved? You don't have a signed copy of a farm-out agreement?
A. Not with me, no.
Q. Does one exist?
A. I think so, yes.
Q. Even though it's still in the approval process?
A. Correct.
Q. Okay. So initially, were these -- these wells were permitted for the 3rd Bone Spring, correct?
A. Correct.
Q. Why the change to the 2nd Bone Spring?
A. I'm not sure. That's from our geologist.
Q. Okay. We'll save that for him.

I'm recalling some testimony as to Burgundy's ownership in Section 2. Did your research indicate that Burgundy has some ownership in Section 2?
A. No.
Q. No? Okay.
A. I believe Black Mountain acquired Burgundy, and that's where their interest went.

MR. McMILLAN: That's all I have for this witness.

EXAMINER McMILLAN: Go ahead and start.

CROSS-EXAMINATION

BY EXAMINER BROOKS:

Q. Well, my understanding is, from a land perspective, your testimony did not conflict with any of the evidence that was presented by Black Mountain, is that correct, in terms of the ownership?

A. Correct.

Q. In other words, GMT owns the -- owns the northwest quarter of Section 2?

A. Southwest.

Q. Southwest quarter of Section 2. I keep getting that mixed up. Owns the southwest quarter of Section 2. Owns no interest in the northwest of Section 2?

A. Correct. Actually, we own the Devon piece.

Q. You own an interest you acquired from Devon?

A. A farm-out with Devon, yes.

Q. And how much is that?

A. It's about 3 percent in the project area.

Q. Okay. So you would own, then, about 48 percent in your proposed project area?

A. About 53 percent.

Q. 53 percent. I'm sorry. You'd own about 53

percent in your proposed project area, and you would own maybe 30-something -- 36 percent or something in Black Mountain's proposed project area?

A. That sounds correct.

Q. Okay. Now, you didn't testify concerning operating experience, right?

A. No, sir.

Q. And you didn't offer any testimony concerning -- concerning generation of this prospect, right?

A. I'm not sure I understand your question.

Q. Well, one of the issues that we've been directed by past Commission orders to consider is which party, if either one of them, generated this prospect for development. And you didn't offer any testimony on that?

A. We've owned a leasehold in and throughout this area for -- I think since 2007, so the whole area is our prospect.

Q. Okay. But I assume there is probably going to be some other witness that's going to offer more testimony on that subject?

EXAMINER BROOKS: Would that be correct, Mr. Bruce?

MR. BRUCE: Correct.

EXAMINER BROOKS: I think that's all I have at the moment.

Q. (BY EXAMINER BROOKS) Oh, well, there aren't any other -- there aren't any other working interest owners that are not parties here other than -- other than Devon, whose interest you've acquired, right?

A. Correct.

EXAMINER BROOKS: Now, you said you appeared on behalf of Devon?

MR. BRUCE: That is correct.

EXAMINER BROOKS: Do you disagree with the proposition that they have --

MR. BRUCE: No. Devon requested me to enter an appearance in this case and support GMT.

EXAMINER BROOKS: Okay. Very good. I have nothing further.

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. There are no unlocatable interests?

A. No, sir.

EXAMINER McMILLAN: Do you have anything?

EXAMINER JONES: Yeah.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. So that lease was -- just in the southwest of 2

was -- that was a closed-bid lease?

A. It was -- yes. It was a closed-bid lease.

Q. They opened the envelope and --

A. Yup.

Q. -- you got it, and they didn't get it?

A. We were actually surprised we did get it.

Q. That 3Bear site -- so you basically have that state lease. It's a brand-new state lease. And if Black Mountain wants to drill -- put a well on there -- a well site on there to drill, I guess if they have you compulsory pooled, the State Land Office would let them go ahead and do a lease without a commercial --

MR. BRUCE: It's a fee surface.

THE WITNESS: Fee surface.

EXAMINER JONES: Oh, there we go. I didn't know that. It's fee surface.

Q. (BY EXAMINER JONES) So this proposed 3Bear site, is that correct I'm seeing this -- that's right between? Is that a for-sure thing or --

A. Like I said, we've had conversations between GMT and 3Bears regarding the location of their facility. I think they saw the permits that we had filed and pulled back and made a phone call to us. So they have expressed that they've been working with the Merchant Livestock Company, who owns the surface, to get this

moving forward.

Q. Okay. That well that's proposed -- the two wells proposed by Black Mountain would be located pretty close to that site; is that correct?

A. I believe they'd located right in the middle of that site.

Q. So there might be an issue there?

A. Correct.

Q. Or there might not?

A. Well, the 3Bears is aware of our proposed pad sites, and that's why you see the way that that thing is drawn. I'm not sure if they're aware of Black Mountain's proposed pad sites.

Q. Okay. Do you look at this as an either/or situation here, or could both -- both parties' compulsory pooling be approved in this situation?

MR. BRUCE: Mr. Examiner, I guess that's up to the Division. I've always been told the Division doesn't like divvying up the Bone Spring.

EXAMINER JONES: Well, the mile-and-a-half versus the mile and one of them in the 2nd Bone Spring and one in the 3rd Bone Spring -- well, actually, the other one is 2nd and -- the first well would be in the 3rd Bone Spring.

MR. BRUCE: Their well, Black Mountain's,

is in the 3rd.

MR. McMILLAN: Correct.

EXAMINER JONES: Yours in the 2nd.

MR. BRUCE: GMT's in the 2nd.

EXAMINER JONES: GMT's in the 2nd.

MR. BRUCE: That's not my call, Mr. Examiner. It's the man upstairs (laughter).

EXAMINER BROOKS: Not all the way up.

MR. BRUCE: No.

(Laughter.)

EXAMINER McMILLAN: Near the top of the building.

MR. BRUCE: About 20 feet.

EXAMINER JONES: Well, I guess we're going to talk to the engineer about how far the fracture is going to go. We already talked to the other engineer. Okay. I don't have anything else.

EXAMINER McMILLAN: I don't have anything else.

MR. McMILLAN: I'm not sure if the time is right to put our landman up for one rebuttal question. Is that something to do later?

MR. BRUCE: I would rather put my witnesses on, and he can come back.

MR. McMILLAN: Okay. Mike Dilli.

MIKE DILLI,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name and city of residence?

A. Mike Dilli, Littleton, Colorado.

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

A. GMT Exploration, vice president of explorations.

Q. How long have you been with GMT?

A. About eight years.

Q. Have you previously testified before the Division?

A. I have.

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

A. They were.

Q. Even though they were, could you expand a little bit upon your experience in southeast New Mexico?

A. Okay. Specifically, in southeast New Mexico, I worked for Santa Fe Energy in Midland, Texas and was drilling wells in Lea County in the -- I guess it was like the late '90s, when all the vertical wells were

being drilled out here. So I'm very, very familiar with the hydrocarbon system and the geology out here. In fact, that's why we came back to Lea County when I was in charge at geology at GMT. I liked it, so we came back to southeast New Mexico in about 2006 or '7 and started our program back there, right when the horizontal stuff was just starting to kick off.

Q. And are you familiar with the geological matters involved in these cases?

A. I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Dilli as an expert petroleum geologist.

MR. McMILLAN: No objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. BRUCE) Mr. Dilli, we have put all of your exhibits together and just marked them as Exhibit 16 and numbered the pages. Could you start off with page 2 and discuss the contents of that exhibit?

A. Page 2 is just a simple structure map drawn on the top of the 3rd Bone Spring. It's basically showing a very, very gentle dip off to the southwest of our leasehold there in the west half of Section 2. Well spots are spotted and in the Mewbourne wells in the purple ones to the south where we've got the little red tail -- red tail on the horizontal wells already drilled

out there.

Q. Now, there's already been testimony that what you are going after in your wells is the 2nd Bone Spring, correct?

A. Yes.

Q. And besides -- and you have exhibits and you're discussing the 2nd Bone Spring?

A. I do.

Q. Do you also have exhibits discussing the 3rd Bone Spring in the Wolfcamp?

A. I do.

Q. And why are you discussing all three of those zones?

A. Well, we're pretty specific when we pick up leases. We've mapped all these prospective horizons in Lea County. So when a lease pops up on a sale, we usually are very familiar and we know what we want to do with it. And when we look at a lease, we look at it in the 2nd, 3rd, X-Y, the Wolfcamp A. So that's how we valuate our leases. And so we think it's very important to look at the full development of the prospect or lease when we get it and what would be the best formation to drill in there and then what would be follow-up, subsequent locations that might be drillable in there.

In this particular case, the 2nd Bone

Spring is one of our -- we've got operations like three miles to the northwest. Our Vitalizer well is one of the best 2nd Bone Spring wells we've drilled. Approximately five miles to the east, we have our Sauer Soft [phonetic] well, which is another very good 2nd Bone Spring well. And then approximately six miles or so to the south and slightly east is our big chunk of operated lands. We've got the 2nd Bone Spring, 3rd Bone Spring and X-Y wells drilled. So we're intimately familiar with this area.

And the two really good 2nd Bone Spring wells that we have, you know, real close to here is why we picked the 2nd Bone Spring as our initial target. However, you'll see through the geology, we think the 3rd -- on our lease, the 3rd will work, the Wolfcamp X-Y, which might be what you're calling the Wolfbone. They have different terms for all that. But we're going Wolfcamp X-Y and then Wolfcamp A. We think they really look good on our wells on our section.

We think, as you move north, some of the wells don't look nearly as good geologically. The Delaware Basin in southeast New Mexico, yes, it's a big horizontal play, tremendous oil column, got tremendous reserves, one big oilfield out there, but unlike plays like the Baca or the Eagle Ford or the Barnett and such,

there are discrete sand bodies that you will be chasing or discrete targets for your wells. And so we have internal cutoffs that we like to see on those. We target those specific ones, either turbidites coming off the platform. And because it's in this lease doesn't mean it's going to be in that specific scene. However, a different one might. So that's how we approach exploration out here.

Q. Okay. And before we get to your next exhibits, what would be the only zone, in your opinion, that has decent amount of reservoir rock for a 1.5-mile lateral?

A. From my mapping, if we had all these leases out here, the 2nd Bone Spring would be the only one that I would drill a mile-and-a-half. You would be -- in my opinion, you'd be pooling us into less -- the lesser reservoir rock. That's what the other maps are showing.

Q. And so that's why you're looking at full development of the west half of Section 35 alone?

A. Correct. Yes.

Q. And kind of offhandedly, does better-quality reservoir rock make better wells?

A. Yeah. Amazingly, it does.

Q. Let's move on. What is page 3?

A. Page 3 is our isopach of the 2nd Bone Spring, what we call the number 2 sand, which is the lower sand

in the 2nd Bone Spring section. And you can see I'm using an 8 percent porosity cutoff for these maps. And I would -- that's what we use to high grade where we buy leases. You know, if you use -- we've mapped with all different kinds of criteria. Back in the '90s and even today, what's the best one?

We have found that if I use 8 percent porosity cutoff, that you are in a good, hard -- good reservoir play. And if you use less than that, we found that you sometimes don't get -- I'm not saying you don't get a well. I'm just saying it won't be nearly as good. And I can point to examples where we've drilled. We kind of drilled a step-out a few years ago, had a big, thick Number 2 sand. Did not have but about 8 or 9 feet of porosity over 8 percent. We went ahead and, you know, drilled a horizontal and completed it and made a well, but it's not near the wells we found with 8 percent porosity. Throughout the years we've been out here, we've had more than one opportunity to -- you know, people selling down deals or whatever, and in a couple instances, they didn't have this cutoff that we use, and so we declined it, and the wells didn't make very good wells. Again, you'll make a well. There is oil in the whole -- the whole rock's got oil in it, anywhere there is any porosity. But we found, at least

for us, that the 8 percent cutoff works.

And so this map here is an 8 percent cutoff of the lower sand. And we like to say, you know, roughly, if we have 20 feet of this, we think it's worth going for. So if you have 20 feet in a big section, you've got a good shot for a reservoir. And you can see by this map that we have well over 20 feet throughout basically the whole thing in the 2nd Bone Spring Lower.

Q. And you're talking about the wells that GMT is in. Do you have a rough number of wells in Lea County that GMT operates?

A. I think we operate like 23, and we're in about 48 or 49 ones with other people, horizontal.

Q. And, again, looking at this, this is the 2nd Bone Spring, Number 2 Sand, that's the only one that seems reasonable to you as a geologist to drill a longer lateral?

A. Correct.

Q. But looking down the road for development that you intend to do somewhere down the road, you'd only want mile laterals?

A. Correct.

Q. What is Exhibit 4?

A. Exhibit 4 is -- if you look on page 3, you see the cross section, A to A prime, just a north-south

well, two wells that go along our mile lateral there. And they're hung on the stratigraphic cross section, hung on the top of the 2nd Bone Spring. The tracks are labeled "Gamma Ray" on the left, "Resistivity" on the right and "Density Neutron" on the left -- excuse me -- on the right, RT in the middle, resistivity. And then that's the entire section. And you see highlighted in red the porosity over 8 percent, which is kind of what we're using for a cutoff.

Now, down at the bottom there, you see where it says "Horizontal Isopach Interval." That would be the target sand that we would target next. That would be like our anchor sand. Obviously, you're going to frac probably out of that a little bit, but we like to see good reservoir rock at our target sand. And this shows that that target sand is present, you know, by the length of the cross section, along the whole length of Section 2 there, so we're very comfortable. And this is the same zone that we drilled our Vitalizer well that I referenced earlier and our Sauer Soft and the stuff we're going down to the south in our prior area, in that exact same zone.

Q. And based on your isopach in the cross section, is the 2nd Bone Spring continuous across the well unit?

A. It is.

Q. And from a geologic standpoint, will each quarter-quarter section in the well unit contribute more or less equally to production?

A. Yes.

Q. Is there any faulting or other problem out here that would prevent the successful drilling of a horizontal --

A. None that we've seen in this specific area, and we always buy a 2D seismic to check that out. Sometimes you can see it in the wells, and right now we have seen nothing right here. There is stuff further to the east, but nothing right here.

Q. And are people predominantly drilling stand-ups in this area?

A. Yes.

Q. That seems to be the preferred direction?

A. Yes. The principal stress direction tells you that. We learned that lesson the hard way.

Q. Let's go on to the 3rd Bone Spring and the Wolfcamp. Could you run through the remaining pages of your exhibit?

A. I will. I have got three isopach maps, and then I have them all in one cross section. These are the intervals today we think are the most prospective in this area, and these are taken right off of my regional

map. So like on page 5, you see that kind of gray line that streaks through the map? I probably should have taken that off. To me that's a major depositional fairway that I just highlighted with a big arrow. If you had my regional map, you'd see this big depositional arrow.

So on the 3rd Bone Spring Lower, you have an 8 percent porosity cutoff. You see that you go from A -- the next cross section is going to be a three-well cross section, A to A prime, but it's after all the maps. But, again, you can see, according to my mapping, that as you move north of Section 2, you're getting less than 20 feet of that porosity that we like to see in the 3rd Bone Spring. The gross interval is still there, but we like to see porosity in that lower bench. And so we, GMT, would not drill a well in Section 35 right now for this section.

And I'm not sure if you want to look at the cross section first or if you want to go through all the formations, but --

Q. Go through all the formations first.

A. Okay. Very similar, X-Y Sand is the lower -- the lowest -- the Wolfcamp X-Y Sand is the upper part of the Wolfcamp. There are usually two sands up there that people are finding very, very productive here lately.

Those Mewbourne wells in Section 11 you see on that map, those are all in the X-Y sand zone as we plot them.

Again, you can see, when you isopach the X-Y sands, Section 2 has got the porosity, but we're losing it a little bit on the east half of the west half. But certainly up in Section 35, where we would be pooled into, again, we wouldn't drill a well for that formation.

The Wolfcamp A is a little bit different animal in that there is not a specific sand or shale that people generally target there. You know, you've heard testimony that that's overpressured. It's a little bit different geologically. But what we like to do in that Upper Wolfcamp A -- what we call the Upper Wolfcamp A is, again, we map porosity, because if you have good porosity, then we think you'll make better wells. And we've drilled -- we've been in a couple Wolfcamp wells ourselves, and this mapping so far has panned out pretty well.

Again, what you see in the cross section, you're seeing up there, in the south part of 35, where we think the Wolfcamp A gets tight. As you get on the eastern -- as you start to get on the east flank of this base, it starts getting more carbonate in here, and it just gets tighter, in our opinion. So that's the

three -- well, actually, that's the four main formations that we mapped when we mapped this prospect out. You know, we've had -- well, we've had this regionally mapped for years.

So then if I direct your --

Jim, is it okay to go on?

Q. Yes.

A. If I direct your attention to the three-well cross section, we go from the well in Section 11 on the left to the well up in Section 35 on the right side of the cross section. This cross section is hung on the top of the 3rd Bone Spring Sand. So on the left side of the cross section and on the right, you see the isopach intervals that I've isopached for each of the maps. And the Lower 3rd Bone Spring Sand -- you see that block? It's got the top of that orange, what we call the top of the lower 3rd. And boy, virtually 89 percent of the wells I see drilled the 3rd Bone Spring are in this zone. The wells we've drilled ourselves are in this same, exact equivalent. And you can see the well on the right -- again, looking at the porosity, you can see there in the Lower 3rd Bone Spring, you have 8 percent porosity. And as you move to the north and by the time you get to the well in 35, we think that that zone is not porous. It's present, but it's not porous enough to

make our cutoffs when we drill a new well.

Then if you look down one notch, there is the Wolfcamp X-Y zone so that we've got -- the top of the Wolfcamp is that dashed line. We have the Wolfcamp X-Y zone, again, you see the well in Section 11 to the -- has a big, thick X-Y. And, again, these are what Mewbourne's drilling in. You get to Section 2. You still have the zone. By the time you get over to Section 3, that zone is virtually gone.

Similar story with the Wolfcamp A. You can see the Wolfcamp A. You can see the purple top of the Wolfcamp A. You can see the Wolfcamp B top listed. If you go from Section 11 to Section 2, you can see the porosity -- the green streak, the porosity. And by the time you get to Section 35, the Wolfcamp A zone, in my opinion, would be too tight for us, with what we know today, that we would want to put a well in there.

Q. So what you're looking at is if you were drilling 3rd Bone Spring, you'd only want a mile lateral?

A. Correct.

Q. And along that line, if Black Mountain's proposal was granted, would you want to be in BTA's shoes drilling up into Section 26?

A. No, in my opinion.

Q. Are you rapidly losing -- in the 3rd Bone Spring, are you rapidly losing, you know, effective porosity?

A. In my opinion, yes.

Q. And similarly with the Wolfcamp, you wouldn't want to go into the south half of Section 35?

A. Neither in the X-Y, nor what I understand about the Wolfcamp A either right now.

Q. How long has GMT been looking at the Bone Spring and Wolfcamp geology in this general area in Lea County for --

A. Well, GMT, when we went back in about 2006 and we picked Lea County, we didn't even -- we didn't map in Eddy County because it's a lot higher gas content. We wanted to stay in the oil area. Lea County is, by far, much oilier than Eddy County or even the east part of the -- when you get into Texas. So we've been, in 2006, mapping all these formations, and we've got all over the -- all Lea County mapped. Like I said, when a lease pops up, we've already got it mapped.

Q. And that's why you acquired the lease --

A. Yeah, plus the great success we've had northeast and south of here with our own wells that we've drilled in these formations. Yeah.

Q. Okay. Was Exhibit 16 prepared by you or under

your direction?

A. Yes, it was.

Q. In your opinion, is the granting of GMT's applications and the denial of Black Mountain's applications in the interest of conservation and the prevention of waste?

A. Yes.

MR. BRUCE: Move the admission of Exhibit 16.

MR. McMILLAN: No objection.

EXAMINER McMILLAN: Exhibit 16 may now be accepted as part of the record.

(GMT Exploration Company, LLC Exhibit Number 16 is offered and admitted into evidence.)

MR. BRUCE: And I pass the witness.

CROSS-EXAMINATION

BY MR. McMILLAN:

Q. First of all, if you look at page 3 of your exhibit, where you've done an isopach map of the 2nd Bone Spring Number 2 Sand --

A. Yes, sir.

Q. -- what's the reason for putting your cross section in -- or outside of the subject acreage here today? You've got your cross section, looks to me, in

Sections 3 and 10.

A. The well in Section 2 that I used in my other cross sections did not have a log across the 2nd Bone Spring. Or I couldn't find one. I tried all the sources I could find. So I used the two wells closest to our well path there in the west half-west half of Section 2.

Q. Okay. How confident are you that we're looking at roughly a comparable cross section in the subject acreage actually being discussed today?

A. I'm very confident.

Q. Likewise, with respect to the cross section you used for -- let's look at page 5.

A. The cross section?

Q. Yes. Sorry.

A. 4?

Q. Page 5. I'm looking at the isopach map for the 3rd Bone Spring, as well as page 6 and page 7 for the Wolfcamp X-Y and the Wolfcamp A. Do you not have data all the way up -- what's the reason for not running a cross section all the way up Section 35, where that is acreage that's subject to today's hearing?

A. Well, it is in 35.

Q. Right. It looks like you're not getting -- how far up 35, are you?

A. Right in the middle of the section, the north part of the south section --

Q. You're right. Okay.

Let's see. You mentioned, in running your analysis, you used a 20-foot thickness and 8 percent porosity; is that correct?

A. Yes.

Q. Using those numbers, do you know how much oil would be in place?

A. Well, if you're doing an in-place number, you should not use 8 percent porosity, because obviously when we do our oil-in-place, I think we would have like a 5 percent cutoff for oil-in-place numbers. Because, like I said, this is what we used to hydrate where we would drill, and we have drilled wells that don't have this kind of porosity. They make well -- they make oil. There's oil in them. It's just that the wells we have seen are not economic for us.

Q. So to put a fine point on it, where you're doing in-place, you're looking more like 5 percent porosity --

A. Yes.

Q. -- not up to 8 percent?

Okay. Along the same lines, if you used a 6 percent cutoff, would that still include productive

rock, 6 percent for --

A. Yes. Yes. I mean, I think I just said you're going to get contribution probably down to 4 percent. And obviously if you use the 6 percent, you're going to count the 8 percent.

Q. So would you take issue with Black Mountain having used a 6 percent cutoff in its analysis?

A. No. For GMT, I wouldn't use that cutoff because I want to drill where I think the best rock is.

Q. Right. But aren't you telling me that you go down --

A. Oil in place. We're talking about drilling an economic well with the best reservoir properties, yes. Because we -- I have drilled wells with less than that, and they haven't made economic wells.

Q. Okay. That's all we have.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. Just continuing on with the cutoffs, are you talking log -- long matrix that you cross-plot porosity?

A. I don't cross-plot. I found through -- we did this in the '90s with all these experts, and even today, we hired a bunch of experts. What I found was if I -- because every -- remember, you've got all these old Morrow wells out there, tons of them, which gives you

tons of data control. Every one of those wells was virtually logged on 2.71 density-porosity matrix. So I now run a 2.71 density-porosity matrix, so I don't have to buy all those wells and convert them to a 265 [sic] or 267 [sic]. I'm comparing apples to apples. So I'm -- I'm looking at the same matrix. That's what I'm mapping.

And the neutron, I don't -- well, I mean, I've done -- you know, I'm not saying that's wrong. Everybody can do that. It's just sometimes you get more gas, and there is a stronger effect. I've just found, historically, when we did it vertically, that doing horizontally that you're mapping density-porosity 2.71. I mean, you can change everything to a different matrix and map the same thing.

Q. So basically -- density porosity and use 8 percent --

A. Yes.

Q. -- and then you do your net pay --

A. Yes.

Q. -- and hydrate your acreage --

A. Right.

Q. -- pretty much?

Did you digitize a lot of logs all over Chaves and Lea Counties?

A. We have a ton of -- when we started, we didn't. We were using rasters. So that's why I started this 2.71. But we've got tons of, you know -- we've drilled a bunch of wells now and we've got a bunch -- we've got LASes over everything that's right around where we're doing it. And now if we've got a prospect, you know, a lease comes up, we'll buy the LAS file to that as well.

Q. Does anybody get any sidewalls or cores from where you plot your core porosity versus oil porosity and come up with a relationship --

A. There's a --

Q. -- in the sandstone?

A. We -- we -- we did it -- we've done it in the Avalon. We haven't done it in the 2nd Bone Spring or the 3rd, for that matter. We've taken -- our guys didn't want to do that. There is a core study out there by Core Lab that was done in the '90s that some people have and they do that.

But to answer your question, what we do do a lot is cross plots, cross-plot porosities versus resistivity, and we'll come up with a resistivity cutoff. Not that there will be oil in it, but we think -- it doesn't apply to here, but there are places where if you get resistivity below a certain ohmmeter, you produce a lot more water. And that's another reason

we've stayed in Lea County. It's less wet and less gas.

Q. Okay. When you do your -- you let the machine do your contouring?

A. No. I contour. No. But stuff like this that's specific -- I'll do gross regional compact, but let the machine do it. But I'll do -- we're doing some in here. Anything we're going to drill, we're going to do it ourselves, hand contour.

Q. Will you point out one more time the control you have around Section 2 and Section 35?

A. You know, should I -- I think what I should give you, sir -- I made these, and then I thought, you know --

MR. BRUCE: Well, I need copies for Seth.

THE WITNESS: I've got four copies. I prepared these to give to Jim, and then I thought, you know, somebody may ask me that question. So we quickly made some.

EXAMINER JONES: The cases are going to get continued, so --

THE WITNESS: So except for the -- I don't think I put the numbers on the structure map, but I did on all the isopach maps, so then you'll see the control for all the isopach.

REDIRECT EXAMINATION

BY MR. BRUCE:

Q. Mr. Dilli, I've handed you Exhibit 18. Would you please identify that and tell the Examiner what it is? And they may ask you questions.

A. Yeah. It's the exact same -- exact same Exhibit as 16, only it has the data points for the isopach maps.

EXAMINER JONES: Okay.

THE WITNESS: Everything else is exactly the same.

RECROSS EXAMINATION

BY EXAMINER JONES:

Q. And so do you guys drill pilot wells out here or --

A. We do -- well, we haven't lately because there's -- like I said, there's all those Morrow control wells, so we haven't needed to. Now, we have -- in the past, if we're like more than a mile, mile and a half from a good control point -- you know, we're picking these specific sands, so we want to be in that sand. So if we're a mile and a half away, we may not be there. So we have in the past, but we haven't in the last couple of years.

Q. Those Morrow wells, were they -- did they set

intermediate -- can you explain the --

A. Well, typically --

Q. Yeah.

A. -- they would drill down to somewhere in the top of the Wolfcamp, so you'd have two logging runs.

Q. Okay. You were worried about the pressure in the Wolfcamp --

A. Right. Right.

Q. -- and the Delaware?

Is it the Delaware here, or is it the San Andres?

A. Delaware above the Bone Spring.

Q. Okay. Okay. So what I hear you saying is that except for the 2nd Bone Spring, you don't think Section 35 is worth spending money on?

A. I'm saying GMT feels like we would be being pooled into lesser reservoir rock, therefore making our investment less. I'm not saying -- I'm saying we wouldn't drill it. With the information I have today, we would not drill those -- those wells. You know, somebody else could, so I'm not going to make a decision for them. But --

Q. Okay. And then -- okay. That's -- thank you.

MR. BRUCE: Mr. Examiner, I'd also move the admission of Exhibit 18.

MR. McMILLAN: I have no objection.
EXAMINER McMILLAN: Exhibit 18 may now be accepted as part of the record.
(GMT Exploration Company, LLC Exhibit Number 18 is offered and admitted into evidence.)
MR. McMILLAN: Can I have one more question?

RECROSS EXAMINATION

BY MR. McMILLAN:

Q. I believe we heard you testify that the reservoir changes rapidly? Is that a phrase you used? Is that fair to say?

A. In some places. In places, it can.

Q. But you previously told me that you can use your cross section in the offset section as a -- that you were confident that there wouldn't be any changes as you move into Section 2. Without looking at actual Section 2 data, given the reservoir changes rapidly in certain places, can you be fully confident that your cross section is representative of the subject sections here in these cases?

A. Well, I -- excuse me. I thought you asked me about the well in 35 earlier. That's the one we don't have a data point in the 2nd Bone Spring.

In Section 2, if you're talking about the 2nd -- or I'm sorry. I might have misunderstood.

Q. Let me slow down. Yeah. I'm looking at your Exhibit 18 and/or page 3 of your Exhibit 16 --

A. Right.

Q. -- at your cross section, which as I noted earlier is in Sections 3 and 10. Go ahead.

A. The reason I chose that is because the first well we want to drill was in the west half-west half of 2, and that's where the two closest wells are located. And those would be the two wells that we would use when we directionally drill this well. That's our go-bys [sic;phonetic]. You can see in Section 2, I have a data point, and also in 11, you have a data point with pre -- over my 20-foot cutoffs. I just used that cross section because that's the closest to the wellbore that we're going to be drilling.

Q. Okay. That's everything from me.

MR. BRUCE: No further questions from me.

EXAMINER McMILLAN: We're going to take a five-minute break.

(Recess, 4:22 p.m. to 4:32 p.m.)

EXAMINER McMILLAN: At this time I'd like to call Case Numbers 15659 and 15660 back.

Please proceed.

THOMAS W. RAND,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

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

A. My name is Thomas Walter Rand.

Q. And where do you reside, Mr. Rand?

A. Denver, Colorado.

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

A. I work for GMT Exploration, LLC as a staff operations engineer.

Q. Have you previously testified before the Division?

A. No, I have not.

Q. Could you summarize your educational and employment background for the Examiners?

A. I have a BS in chemical engineering, and I've worked in the oil and gas business for 37 years in various capacities, most recently with Texaco -- excuse me -- Chevron internationally as a reservoir engineer putting together development plans, so on and so forth. I went to work for GMT in October of 2013.

Q. Okay. And are you familiar -- does your area

of responsibility at GMT cover this portion of southeastern New Mexico?

A. Yes, it does.

Q. And are you familiar with the engineering matters in these applications?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Rand as an expert engineer.

MR. McMILLAN: No objection.

EXAMINER McMILLAN: So qualified.

Q. (BY MR. BRUCE) Mr. Rand, before we move on to your exhibit, GMT asked for overhead rates of 8,000 and $800 a month. Are those the rates that GMT typically uses nowadays in its JOAs as an operator?

A. Yes, it is.

Q. And is that an equivalent to the amounts usually charged to GMT in its nonoperated wells?

A. Yes, it is.

Q. One other question: There's been talk about the AFEs. The AFEs for these wells are about $5.94 million for each of GMT's wells. Do you believe that's a reasonable estimate?

A. It is. We've drilled several wells over the last six months at that price. So we're very comfortable with that price. We know that there is some

price pressure upwards, and so, you know, we're always looking at revising our AFEs, especially when we're making well proposals.

Q. And if GMT's applications were granted, would you send out to the pooled party an updated AFE?

A. Yes, we would.

Q. Okay. Let's move on to your Exhibit 17, and the pages are numbered. Without too much interference, why don't you run through it and discuss what it shows.

A. Okay. The first pie chart that we're looking at is just a count of the lateral wells that have been drilled in Lea County since 2012. We've classified these as the standard lateral, which is 4,620 feet or less, a medium length lateral -- and I'll have to apologize. There is a typo on the label underneath the pie chart. The medium length should be greater than 4,620, but less than the 7,950. And then there are a few wells that we're calling the long laterals, and those are 7,590 or greater.

So when you look at that, that's 750 wells total that have been drilled and completed in Lea County since 2012. Of those wells, the long -- what we're calling long laterals, 2.9 percent; medium laterals, 13.1 percent. So the vast majority have been the standard length horizontal laterals.

Q. One-mile laterals?
A. Right.
Q. And what does page 2 reflect?
A. Page 2 is taking a more narrow time frame. This is for 2015 and '16. Again, I have to apologize for the labeling under the pie chart. That's not correct on this one either. But, again, the percentages have gone up slightly for the long laterals and the medium laterals but not appreciably.
Q. The overwhelming majority of the wells these days are still drilled as mile laterals?
A. Yes.
Q. Okay. Let's move on to pages 3 and 4.
A. Page 3 is looking at -- again, this is not distinguishing lateral wells in any particular geographical area in Lea County. These are just plotting up wells that are completed in the 2nd Bone Spring and comparing them -- the lateral lengths and comparing the actual production for the first 12 months -- well, the first six months, first 12 months and then two years.

So as you look at this, you can see that -- if you look under the "Perforated Interval Length," the standard average -- of 315 wells that have been drilled in Lea County, the average lateral length is 4,220 feet.

For a medium lateral, there have been 25 drilled, and the length is 5,922. Now, that works out to be a ratio in just lateral length of 1.4.

So as you go across this table -- it might be easier to look at the graphs. We have gas on the left and oil recovery on the right. The very top orange curve on the gas is what a longer lateral should produce based on the additional perforated interval. The bottom red perf is the standard one-mile lateral. What's in between is what the extended laterals have actually recovered. So you've got 40 percent additional length, but you're only getting 20 percent additional gas.

Q. Is the difference more striking in the oil?

A. It certainly is. In that particular case, they're one-to-one. No difference at all.

Q. And these numbers on pages 3 and 4, it's not decline curve analysis?

A. No, it's not. It's actual production numbers off of the State Web site.

Q. And page 4 is similar data for the --

A. Similar data for the 3rd Bone Spring. So we're looking at 1.47 additional perforated -- or lateral length. So you should be getting 1.47 additional oil and gas. In both gas and oil, you're getting 1.22 and 1.27, so, again, less than 30 percent.

Q. And could this be attributed to different reasons, for instance, inconsistent geology?

A. Geology, completion technique, a lot of variables, yes.

Q. But you're looking at hundreds of wells?

A. Right. So the distribution, it's a significant sampling.

Q. So is it fair to say that you really -- for medium laterals, you're really not getting the bang for the buck that people have anticipated?

A. Not at this point in time.

Q. And is it more likely that as you drill longer laterals, there could be operational difficulties?

A. Absolutely. Drilling and completion is a risky business, and so expertise, experience plays a significant role, especially drilling long-lateral wells.

Q. And pages 5 and 6 is simply an AFE from the Squeeze State well?

A. Right.

Q. And, again, that cost is -- estimated well cost is fair and reasonable at this time?

A. As I said earlier, these are the costs that we experienced in the three wells that we've drilled in the last six months.

Q. And was Exhibit 17 prepared under your supervision?
A. Yes.
Q. And in your opinion, is the granting of GMT's application and the denial of Black Mountain's applications in the interest of conservation and the prevention of waste?
A. Yes.
MR. BRUCE: Mr. Examiner, I'd move the admission of Exhibit 17.
MR. McMILLAN: No objection.
EXAMINER McMILLAN: Exhibit 17 may now be accepted as part of the record.
(GMT Exploration Company, LLC Exhibit Number 17 is offered and admitted into evidence.)
MR. BRUCE: I pass the witness.

CROSS-EXAMINATION

BY MR. McMILLAN:
Q. With respect to your first two exhibits here, it looks like you've got length counts since 2012 --
A. Right.
Q. -- and counts in 2015 and 2016.
I know it's only May, but do you have any 2017 data?

A. No, do not.
Q. With respect to page -- pages 3 and 4, it looks like page 3 is well performance in the 2nd Bone Spring, while page 4 is well performance in the 3rd?
A. That's correct.
Q. And while -- however it is you work this data, you seem to have come up with a one-to-one correspondence between standard laterals and medium laterals in the 2nd Bone Spring. Is it not true that in the 3rd Bone -- well, first of all, is it not true that Black Mountain's proposal is for a 3rd Bone Spring well? Is that correct?
A. Yes.
Q. And is it not true that there is actually -- there is hardly a one-to-one correspondence between the standing lateral and the medium lateral in the 3rd Bone Spring, correct?
A. Correct.
Q. And so what do you attribute that difference between the one-to-one correspondence you're seeing in the 2nd Bone Spring and the very different correspondence in the 3rd Bone Spring?
A. A combination of things: a reservoir rock, completion techniques, methodology of lifting, a number of things. I don't know. I have not gone through each

well.

Q. Okay. So you agree that there are many variables involved here --

A. Absolutely.

Q. -- with respect to both of these analyses here?

Based on your review of the data, what is the general industry trend with respect to drilling longer laterals?

A. My opinion, in areas where it's necessary, the industry is going that direction, whether it be surface use and/or conflicts with other mineral interests, for instance, potash mining, and -- well, that's essentially it.

Q. In developing your plans for these wells, how much oil do you anticipate recovering from your proposed wells?

A. Unfortunately, I can't answer that question. I'm not the reservoir engineer directly involved with putting together --

Q. Yeah.

A. -- the economics for these projects.

Q. And you haven't communicated with that reservoir engineer enough to have a sense of how much --

A. Unfortunately, he's been out for a family funeral. I didn't know I was coming to this hearing

until Monday --

Q. All right.

A. -- so --

Q. Do you know what the typical recovery factor is for a Bone Spring well?

A. Not off the top of my head, no.

MR. McMILLAN: That's all we have for this witness.

EXAMINER BROOKS: Very good.

EXAMINER McMILLAN: Start.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. Mr. Rand, did you also -- you did a cumulative normalized plot, it looks like, but did you also look at these from a standpoint of actually just the --

A. The decline curve?

Q. Yeah.

A. No, I did not. No. With 750 wells, it's difficult to do in the time frame I was given.

Q. Well, no storms going on in Denver now, right (laughter)?

A. Yeah.

Q. Okay. These costs -- but isn't it true also what Mr. McCracken said, that if you drill two wells in a -- in a total distance of three miles versus three

wells in a total distance of three miles, you don't have to pay for drilling through the -- all the overburden?

A. Absolutely correct. Absolutely. But then you're spending a lot more for fracture-stimulation work, completion costs, the hydraulic horsepower that you're using to try to get proppant out to the toe of the well.

Q. Do you have to use any higher-grade casing or anything for the mile-and-a-half wells versus the one-mile wells?

A. No. No.

Q. Do you have trouble getting casing down on these longer wells versus --

A. It just would be an opinion on my part. I've not had any experience. I do know that we've had some issues with some offset operators drilling longer laterals and having difficulty getting pipe to bottom. Yes.

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. My question relates back to the 660 feet. Do you feel -- are you getting more reserves in the 660 feet with the additional costs versus drilling the one-mile well?

A. I don't know. Offsets are set in place to

separate mineral interests and to make sure that drainage across section lines aren't -- or leaselines -- you know, whether that's happening with a 330-foot setback or a 10-foot setback, I don't know.

Q. Because you have com agreements take care of that issue?

A. (Indicating.)

Q. So in other words -- you didn't answer the question.

A. Oh, I'm sorry. I misunderstood.

Q. So are you getting more reserve? You're going to get more reserves because you're exposing more borehole to the formation, right?

A. I think with the proper drilling and completion technique, that may be true, but the data so far doesn't show that.

Q. But then going back to your data, you didn't really take into account different completion --

A. No.

Q. -- stages or anything like that, did you?

A. No. That's correct. But it gets averaged out because there are different completion techniques being used on standard lateral wells than there were two years ago.

Q. Okay.

RECROSS EXAMINATION

BY EXAMINER JONES:

Q. Have you looked at any differences in your well design versus the well design that Black Mountain used? In other words, the surface pipe to setting, the size of the intermediate pipe. Where are you setting intermediate pipe?

A. Intermediate is typically set down through -- Mike, help me out.

MR. DILLI: Top of the Delaware.

THE WITNESS: Where are we setting intermediate through?

MR. DILLI: If we're drilling the Bone Spring?

THE WITNESS: Yes.

MR. DILLI: Drill it all at --

THE WITNESS: Yeah. But are we setting intermediate pipe --

MR. DILLI: Top of the Delaware --

THE WITNESS: Top of the Delaware.

MR. DILLI: -- and then it's all one --

THE WITNESS: And then it's all one continuous operation --

MR. DILLI: The Wolfcamp is different.

THE WITNESS: Yeah. Wolfcamp is different

because of the overpressure.

EXAMINER JONES: Because of the overpressure.

THE WITNESS: Right.

EXAMINER JONES: Yeah. I've seen Devon drill wells that way, top of the Delaware.

THE WITNESS: Uh-huh.

CROSS-EXAMINATION

BY EXAMINER BROOKS:

Q. To the extent I understand your data, they seem to indicate that the increased production from a longer lateral is less -- the proportion of actual -- of production to length is actually less if you -- in a longer lateral than it is in a shorter lateral --

A. That's what the data --

Q. -- within this range, that is from one mile to a mile and a half?

A. That's what the data is showing.

Q. In your opinion, is there some general reason or is that a general trend, or do you think that this data is just -- or are you presenting this data as just this data?

A. I'm just presenting it as this data to draw conclusions from it at this point.

Q. You're not giving an opinion that that is a

general trend?

A. No, not one way or the other.

EXAMINER BROOKS: Thank you.

RECROSS EXAMINATION

BY EXAMINER JONES:

Q. It's true you're only looking two years out?

A. Exactly. Exactly. And current information may show something different. I don't know.

Q. What is the expected well life of a Bone Spring well?

A. We typically use a cutoff of somewhere around 25 to 30 years.

Q. But in the first five, they're pretty much done there, aren't they?

A. Uh-huh. Uh-huh. I mean, a lot of -- the initial costs, you've still got -- again, every operator does it a little bit differently, how they account for flowback water from, you know, stimulation work, whether that's considered lease operating expense or if that's capitalized and included in the AFE. It gets to be somewhat arbitrary. But a lot of it, those fixed monthly operating costs in the life of a well, as you get towards the end of its use of life, water disposal is a difficult issue to deal with, and that's what really drives the economics.

Q. We've heard about those.

EXAMINER McMILLAN: I don't have any more. Do you want rebuttal?

MR. McMILLAN: Oh, do we? I'd love to put up one more witness.

MR. BRUCE: Mr. Examiner, I do have a witness from BTA that will be extremely brief, and he's a landman. We'll put him up as a landman. Maybe you'd like to hear his testimony first.

MR. McMILLAN: You can do it first. Sure.

EXAMINER BROOKS: Well, I'm glad he's extremely short because --

MR. BRUCE: That's Bill's job.

KENT CHRISTENSEN,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Will you please state your name and city of residence?

A. Kent Christensen, Midland, Texas.

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

A. BTA Oil Producers, LLC.

Q. Have you previously testified before the Division?

A. No, sir.
Q. Could you summarize your educational and employment background for the Examiner?
A. Graduated Texas Christian University, received my designation as a petroleum landman through their Land Management Program through the Neeley School of Business, and I've been a landman for the past ten years.
Q. And how long have you been working for BTA?
A. A little over four years.
Q. Okay. Does your area of responsibility with BTA include this area of southeast New Mexico?
A. Yes, it does.
Q. Are you familiar with BTA's ownership in the area involved in these applications?
A. Yes.
MR. BRUCE: Mr. Examiner, I tender Mr. Christensen as an expert petroleum landman.
MR. McMILLAN: No objection.
EXAMINER McMILLAN: So qualified.
Q. (BY MR. BRUCE) Could you identify Exhibit 1 for the Examiner and describe what it shows?
A. Yes. In front of you is Exhibit 1. It's basically just a land representation of BTA's ownership throughout Sections 26, 35 and Section 2, specifically,

and it represents the two wells that we have permitted as well in the west half of 35.

Q. Okay. Is there a JOA covering the west half of 35?

A. Yes, there is.

Q. How old is it, approximately?

A. I believe mid-August of 1977.

Q. Okay. Has it been kept in effect by production in Section 35?

A. Yes.

Q. And from what you know of the land out here, is Black Mountain subject to the JOA?

A. Yes, they are.

Q. There is also some crosshatching in Section 26 to the north. What does BTA own in the north half of Section 26?

A. We own a small override only.

Q. What did -- how does BTA propose to develop the acreage in the west half of Section 35?

A. Your traditional one-mile Bone Spring wells.

Q. And has BTA filed the APDs in the west half of Section 35?

A. Yes, we have.

Q. Are those marked Exhibits 2 -- BTA Exhibits 2 and 3?

A. Yes.
Q. What problem does BTA see if Black Mountain's applications are granted for mile-and-a-half laterals?
A. Basically, the majority of our ownership is in the northwest quarter of 35, and that gets stranded out through Black Mountain's proposed mile-and-a-half below us. We lack ownership in any operational capacity in Section 26 above us, and that is our argument, that we would actually be stranded.
Q. And since there is a JOA in place in the west half of 35, it's pretty simple to propose wells and get them drilled?
A. Correct.
Q. Were Exhibits 1 through 3 either prepared by you or compiled from company business records?
A. Yes, they were.
Q. And in your opinion, should GMT's applications be granted and Black Mountain's applications be denied?
A. Yes.
MR. BRUCE: Mr. Examiner, I move the admission of BTA Exhibits 1 through 3.
MR. McMILLAN: I have no objection.
EXAMINER McMILLAN: BTA Exhibits 1, 2 and 3 may now be accepted as part of the record.
(BTA Oil Producers, LLC Exhibit Numbers 1

through 3 are offered and admitted into evidence.)

MR. BRUCE: And I pass the witness.

CROSS-EXAMINATION

BY MR. McMILLAN:

Q. Sir, you testified to a JOA in place for the west half of 35, I believe, from 1977. Do you happen to have a copy of that with you today?

MR. BRUCE: We did not bring one, but we can provide one to you after the hearing.

MR. McMILLAN: Okay. I'd appreciate that.

Q. (BY MR. McMILLAN) You testified that you're concerned about being stranded in the northwest quarter of 35. Have you made any inquiries into acquiring any ownership in Section 26?

A. No, we have not.

Q. And why not?

A. We farmed out our interest in the north half of Section 26 a while back to OXY, I believe, and we are unaware of the ownership in the south half of 26.

Q. Okay. Hypothetically speaking, were you to investigate the south half of 26, could you not make an attempt to gain ownership and run a well that wouldn't leave you stranded in the northwest quarter of 35?

A. Technically, yes. That's correct. Within the

west half of 35, where we have an existing JOA, we already have -- we have no administrative issues in just proposing the well and doing it ourselves under that JOA. We'd have to amend and go outside.

Q. I see. But it's technically possible?

A. Correct, technically.

Q. Okay. That's it. Thanks.

EXAMINER BROOKS: Do you want me to go, or you go ahead?

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. So basically you're saying the west half of 35, you have a current JOA?

A. Correct.

Q. And to the best of your knowledge, it's still active?

A. Yes.

Q. And you said you would be willing to share the JOA?

A. Yes.

Q. So I think -- I think that's -- to me it's a big part. I believe that we should require that all affected parties receive a copy of the JOA.

MR. BRUCE: That's fine, Mr. Examiner. I had it on my desktop when I left the office this

morning.

EXAMINER McMILLAN: Okay. But I think we should make it subject to every one -- all of the affected parties, and we should set a hard date from Thursday that they all receive it, so you can have a chance to look at it before the hearing.

MR. BRUCE: I'll get it to them today or tomorrow.

EXAMINER McMILLAN: Because I think that --

Q. (BY EXAMINER McMILLAN) So without looking at it, you're saying that technically Black Mountain can't drill into 35, with the JOA?

A. Yeah. They would need to follow the procedures that are governed under the JOA.

Q. Is that a safe statement to make?

A. Correct.

Q. Okay.

EXAMINER McMILLAN: So that would -- you will have to supply that.

MR. BRUCE: No problem.

EXAMINER McMILLAN: Go ahead.

CROSS-EXAMINATION

BY EXAMINER BROOKS:

Q. What is Black Mountain's ownership in the west half of 35?

A. I believe -- and I might need help with that -- it would be -- let's see. We own 93, give or take, percent working interest in the northwest quarter of 35, and we own roughly around 9 percent in the southwest quarter. I would assume that they own the complete balance of that through recent purchases.

Q. And the entire west half of Section 35 is subject to a joint operating agreement?

A. Yes.

Q. And that joint operating agreement, at the time it was negotiated, had 100 percent -- was 100 percent of the working interest?

A. I believe so, yes.

Q. Okay. Now -- let's see. What else was I going to ask?

BTA doesn't own any interest in Section 2, right?

A. Correct.

Q. And has BTA proposed -- has BTA proposed these wells shown on this -- well, these are proposed wells. They're not wells that have actually been drilled, right?

A. These are -- we have not proposed them, specifically.

Q. You haven't proposed them under the JOA?

A. Correct. We have just gotten the permits, the APDs approved with the State.

Q. Okay. And let's see. When were these permits issued? 5/1, looks like.

A. Do you have the approved date for the -- I mean, we surveyed it April 4th.

Q. 5/1 on each of them.

A. Okay. That's the approved date?

Q. Yeah.

A. Okay.

Q. Okay. I think that's all I have. Thank you.

RECROSS EXAMINATION

BY MR. McMILLAN:

Q. With respect to this joint operating agreement, does it cover the Bone Spring?

A. It was basically one of those old gas unit agreements.

Q. Uh-huh.

A. We think it's still in existence from the surface down to the Morrow area. That's what they're targeting, 13,000 feet, roughly, if I remember correctly.

Q. So is it correct that the agreement you're thinking of is in the west half of Section 35 so far as it covers the Morrow Formation?

A. No. It's one of those old JOAs that isn't specific as to horizontal severances. It just has a bottom cap. So it governs the actual depths that are outlined, surfaced to the deepest producing formation that you're targeting.

Q. Okay. Well, we have contrary information from a title report, so we'll be very interested to see what this JOA actually says, since nobody bothered to bring a copy today.

Who operates in the northwest of Section 35?

A. BTA. That's us.

Q. Who operates in the southwest of Section 35?

A. I'm not sure specifically right now.

Q. How do the mechanics of this JOA work with respect to the west half of Section 35 if you've got different operators?

A. Are you aware of who operates the well in the southwest quarter of 35?

Q. That's what I'm asking you.

A. I am not.

Q. You're not aware?

A. Correct. I would have 19, 20 minutes ago before I got tired.

Q. Before you got tired? Understood.

Well, if it's not BTA, then we've got different operators operating under a joint operating agreement?

A. I'm not sure right now.

Q. Okay. Do you folks, BTA, own in the southwest of Section 35?

A. Yes.

Q. You do?

A. Our records show around 9 percent contractual working interest.

Q. Do you own -- does BTA own in each of the 450-acre parcels for which these permits were acquired?

A. Specifically in the west half of Section 35?

Q. Sure.

A. No. On the northwest quarter, I cannot be 100 percent certain as to the southwest quarter where that 9 percent lies. I mean, we haven't done that research yet specifically.

Q. Okay. Would you agree with me that if BTA doesn't have ownership in each of these parcels, that this permit isn't appropriate?

A. I wouldn't say that, no.

Q. Okay. Were you listening to the testimony concerning GMT's cancellation of their permits for failure to have ownership in all of the appropriate

parcels?

A. Vaguely, yes.

Q. Vaguely?

A. Yes.

Q. Well, I'll just refresh your recollection that GMT agreed that because they didn't have ownership where appropriate, they had to cancel their permits and go back and acquire ownership in order to have proper permits. Do you recall that?

A. Yes.

Q. Okay. So you would agree with me that that's probably the procedure you would have to follow if it turned out that BTA didn't, in fact, have ownership throughout here?

A. Yes.

Q. And just to be clear, you're not sure as you sit here now what BTA's ownership is in the southwest of Section 35?

A. On a 40-acre, as you asked previously?

Q. Yeah.

A. As to each, individual 40 acres, no, not -- I can't give you that for certain.

RECROSS EXAMINATION

BY EXAMINER BROOKS:

Q. Well, let me clarify here just a minute. When

you said you owned a 9. -- what was it? A 9.something?

A. It's roughly 9.3, I believe.

Q. And there you're talking about the interest -- you said contractual interest, in response to cross-examination?

A. Yes.

Q. And by contractual interest, do you mean an interest in the contract area under the terms of this joint operating agreement you referred to?

A. I believe so, yes.

Q. And are you testifying that all of Section -- all of the west half of Section 35 is included in this joint operating agreement?

A. Yes. That's correct.

Q. But as far as your testimony is concerned, you can't testify that BTA owns any interest in the southwest quarter other than pursuant to the joint operating agreement?

A. That is correct. And I would have to double-check that to be 100 percent sure.

Q. Very good.

Now, do you know if any memorandum of this joint operating agreement has been filed of record with the Office of the County Clerk of Lea County, New Mexico?

A. I can't speak to that. I'm not certain.
Q. Okay. Thank you. That's all I have.
EXAMINER McMILLAN: Well, it appears to me that we'll know a lot more by next Thursday because everyone will have access to it. Since the case is going to be continued, I'm sure everyone will come back.
MR. BRUCE: God, I hope not.
EXAMINER McMILLAN: Well, the landmen are going to be coming back for sure.
EXAMINER BROOKS: We're going to have to clarify this joint operating agreement.
EXAMINER McMILLAN: Yeah. That's where we are on this.
EXAMINER BROOKS: Because that does make a difference.
EXAMINER McMILLAN: Okay.
EXAMINER BROOKS: I don't have any other questions for the witness.
I want to say something to the attorneys before they leave.
MR. BRUCE: I believe Mr. McMillan wants to put his landman up.
MR. McMILLAN: Actually, it's my engineer, just for a quick rebuttal question.
EXAMINER BROOKS: Okay.

MR. McMILLAN: I just wanted Dr. McCracken to give a little bit rebuttal testimony based on what we've heard from GMT today.

MICHAEL E. McCRACKEN, Ph.D.,

after having been previously sworn under oath, was recalled and questioned and testified as follows:

DIRECT EXAMINATION

BY MR. McMILLAN:

Q. There was an issue brought forth concerning a potential gas processing facility, I believe, in Section 2; am I correct?

A. Yes.

Q. If it became necessary for Black Mountain to move its surface-hole locations because this gas processing facility was going to be plunked down in Section 2, is that -- is that technically feasible?

A. Yes. That would not be a problem to move the surface locations. We could drill from the north-south, or we could alter our locations in the southern part.

Q. With respect to the development plan that you testified to earlier, I think that there was at least an implication that Black Mountain wasn't looking at -- wasn't fully looking at development here, that you had somehow honed in just on the 3rd Bone Spring and that you kind of took a myopic view here. Is that, in fact,

true?

A. No. We're interested in developing multiple horizons, as GMT has, in the 2nd, 3rd Bone, specifically in the development plan. We're also interested in the Wolfcamp, and we have no issues with long laterals over any of those horizons.

Q. And your geologist, Jay Moore, testified similarly, correct, that although you didn't have exhibits here, you have looked into the 2nd Bone Spring and Wolfcamp with respect to the development plan?

A. That's correct.

Q. Okay. I've just got a few questions here. Going back to discussions about porosity and thickness, using a 20-foot thickness and an 8 percent porosity, to your mind, how much oil are we looking at in place?

A. On a 160-acre unit, we have approximately 1.8 million barrels of oil.

Q. And how much oil recovery would one expect to recover there?

A. For the Bone Spring, you'd typically be less than 10 percent, so you'd have an estimated recovery of less than 180,000 barrels of oil in place --

Q. And what --

A. -- switch line.

Q. What specific oil recovery factor for the Bone

Spring well for any unconventional play is it?

A. I was saying 10 percent or less.

Q. And what would the recovery factor be if you used a 400 million [sic] barrels of oil for the lands and an 8 percent cutoff for the porosities?

A. Right. So if we took a typical recovery that we're seeing in this area, about 400,000 barrels of oil, and we only attributed this 1.8 million barrels in place, we'd be looking at over 20 percent recovery, about a 22 percent recovery.

Q. 22 percent recovery.

And what does that say about the contribution of pay at a less than 8 percent porosity?

A. It says that you're getting well over half of your contribution over pay less than the 8 percent porosity. So, therefore, we think that a porosity cutoff of less than 8 percent is fully reasonable. The math doesn't work out if you don't attribute substantial recovery for a porosity less than that. So we would not discount lands that have significant thickness at a lower cutoff than 8 percent.

Q. Okay. That's everything.

EXAMINER BROOKS: Cross-examination?

CROSS-EXAMINATION

BY MR. BRUCE:

Q. You listened to Mr. Dilli, the geologist, testify; did you not?

A. I did.

Q. He didn't say he was discounting any oil recovery lower than 8 percent. As a matter of fact, did he say he expected some oil recovery down to 4 percent?

A. He did, but at the same time, he also said that he would not drill a rock that had -- that had less than 8 percent -- than had less than 20 feet of 8 percent porosity, and the math works out that well over half the recovery would have to come from rock that's less than that. So just logically, it doesn't -- the math doesn't work out.

Q. Well, I think that you're comparing apples to oranges. He says you're looking at getting the best wells and looking at 8 percent cutoff, but you're still producing oil at 4 and 5 and 6 and 7 percent.

A. That's correct.

MR. BRUCE: Thank you.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. What -- is that formation volume detector [sic]?

A. Using a 1.2 on that calculation.
Q. And water saturation? Reusable?
A. Yeah. Actually, I used -- it's very low there, so I do that -- ratio way higher, so -- yeah. But I use like a 35 percent, let's say.
Q. Thanks.

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. I got confused when you -- okay. So how much oil do you think you're going to get out of a mile lateral?
A. 400,000 barrels of oil would not be unreasonable based upon all the offset well production for a Bone Spring.
Q. For a 160?
A. For a 160.
Q. So you think you could get six for 240?
A. Six for 240? Yes.
Q. Okay. All right. I think I'm understanding that concept.

EXAMINER BROOKS: I have no more questions for the witness.

EXAMINER McMILLAN: Okay. I want the GMT landman to come back up. I've got questions for him.

HANS SCHUSTER,

after having been previously sworn under oath, was recalled, questioned and testified as follows:

CROSS-EXAMINATION

BY EXAMINER McMILLAN:

Q. Okay. My question, going back to your Exhibit Number 1, is it safe to say in the northwest quarter, when you submitted those wells, none of your -- the deal you had with Devon was not of record, right? So technically, you didn't have a deal, right?

A. Correct.

Q. Okay. And as of hearing, you don't have any representation in the northwest quarter as of record, right?

A. Correct.

Q. Okay. Well, that was my question. I wanted clarity on that point.

A. Sure.

Q. Okay.

EXAMINER BROOKS: I have no questions.

MR. BRUCE: Are we all excused, Mr. Examiner?

EXAMINER McMILLAN: You're excused.

EXAMINER BROOKS: I would like to talk to the attorneys.

EXAMINER McMILLAN: Remember, Thursday is the hard date.

EXAMINER JONES: No closings?

MR. McMILLAN: Well, do we want to save that? We're going to come back.

MR. BRUCE: I think I'll save that.

EXAMINER BROOKS: Maybe we'll get through a little earlier --

MR. BRUCE: Yeah. Thank you.

EXAMINER BROOKS: -- two weeks from now.

(Laughter.)

EXAMINER BROOKS: Gentlemen, I keep a notebook, like many people do. This one is entitled -- of course, you probably can't see it from there -- "Preservation of Orders, Oil Conservation Division, Oil Conservation Commission." You can see the thickness of the notebook, so you know they're not all in here. The reason the notebook isn't any thicker or it isn't multivolume is because they're hard to find, not because there aren't more of them.

I have two listed under the topic "Compulsory Pooling, Selection of Operator." And those two that I have listed are R-10731-B, as in Bravo.

MR. BRUCE: 17 -- excuse me.

EXAMINER BROOKS: 10731-B, and R-10922.

I'm sure those are not the only times that the Commission has spoken to that subject, but they were cited to me by eminent counsel for Concho in a case we heard.

MR. BRUCE: Did you say eminent or ancient?

(Laughter.)

EXAMINER BROOKS: Eminent.

So I will ask that those of you who feel, after looking at those, that I should consider others, be so kind as to provide them to us. I say I because I don't have any intention of writing this order, but I will do legal review for it. I mean, this one is too difficult for me, but I will do a legal review on it.

MR. BRUCE: I know I've read one of those. I just don't remember.

EXAMINER BROOKS: Thank you.

Now, Mr. McMillan has something.

EXAMINER McMILLAN: This goes back to the gas treatment plant. There has been a hearing order where an operator changed the location, and he made them come back to hearing, and that has been since Director Catanach has been the OCD director. So keep that in mind. If you -- I believe there is -- like I said, there is a case where they changed the surface location. They had to come back to hearing.

EXAMINER BROOKS: Well, the order has to be amended.

EXAMINER McMILLAN: Yeah. That's where I am.

EXAMINER BROOKS: The orders always say what surface location is. It's not a vital term, but it's usually in there.

And I guess that's all I have.

EXAMINER McMILLAN: I want that point clearly made.

All right. Looks like we're done today, and, unfortunately, I can't run out the door.

Hearing is adjourned.

(Case Numbers 15655, 15656, 15659 and 15660 conclude, 5:22 p.m.)

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

CERTIFICATE OF COURT REPORTER

I, MARY C. HANKINS, Certified Court Reporter, New Mexico Certified Court Reporter No. 20, and Registered Professional Reporter, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings that were reduced to printed form by me to the best of my ability.

I FURTHER CERTIFY that the Reporter's Record of the proceedings truly and accurately reflects the exhibits, if any, offered by the respective parties.

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this case and that I have no interest in the final disposition of this case.

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