1	STATE OF NEW MEXICO
2	ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3	OIL CONSERVATION DIVISION
4	
5	IN THE MATTER OF THE HEARING) CALLED BY THE OIL CONSERVATION)
6	DIVISION FOR THE PURPOSE OF) CONSIDERING:) CASE NO. 10,883
7	APPLICATION OF PG&E RESOURCES)
8	COMPANY)
9	JAN 4 1994
10	ORIGINAL
11	
12	REPORTER'S TRANSCRIPT OF PROCEEDINGS
13	<u>EXAMINER HEARING</u>
14	BEFORE: JIM MORROW, Hearing Examiner
15	
16	December 16, 1993
17	Santa Fe, New Mexico
18	
19	mhir wattan same an fan haaring hafana tha Oil
20	This matter came on for hearing before the Oil
21	Conservation Division on Thursday, December 16, 1993, at
22	Morgan Hall, State Land Office Building, 310 Old Santa Fe
23	Trail, Santa Fe, New Mexico, before Steven T. Brenner,
24	Certified Court Reporter No. 7 for the State of New Mexico.
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WHEREUPON, the following proceedings were had at 1 2 8:20 a.m.: 3 5 7 EXAMINER MORROW: We'll call the hearing to order 9 in Docket Number 36-93 and call Case 10,883. MR. STOVALL: Application of PG&E Resources 10 11 Company for a unit agreement, Sandoval County, New Mexico. 12 EXAMINER MORROW: Call for appearances. MR. KELLAHIN: Mr. Examiner, my name is Tom 13 Kellahin with the Santa Fe law firm of Kellahin and 14 15 Kellahin. I'm appearing on behalf of the Applicant in this 16 case. With your permission, Mr. Examiner, I would like 17 to make a statement with regards to the second case so that 18 Mr. Barton, the executive of that company, might be excused 19 from the hearing. With your permission, I would like to 20 dismiss that case, if I may, sir. 21 May we call that so I can --22 23 MR. STOVALL: Let's -- Do you want to go ahead and call that? Okay. 24 EXAMINER MORROW: Call Case 10,884, and call for 25

appearances.

MR. STOVALL: Application of Gecko, Inc., for an unorthodox oil well location, Lea County, New Mexico.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant in that case.

Mr. Barton, would you stand, sir? Mr. Barton is the chief executive officer -- thank you -- for that company, and he is the Applicant in this case.

Through an inadvertent error, Gecko commenced that well at an unorthodox location.

Prior to having the hearing before you today, Mr. Barton received word this morning about one o'clock that it is dry in the Strawn, and therefore I see no reason to proceed with approval of an unorthodox location for a location in a reservoir that cannot be productive, and therefore we would request your permission to dismiss this case.

EXAMINER MORROW: Robert?

MR. STOVALL: Do you know if they have any intent to use that wellbore for any other formation?

MR. KELLAHIN: Mr. Stovall, my understanding is, there's the possibility to re-enter this well at a later date and sidetrack it.

We believe that if sidetracking occurs in the

wellbore, it will move to the opposite direction of the spacing unit, towards parties that have not been notified in this case.

It would be an intentional sidetracking or deviation that may require different action by you under different rules of the Division, and so I see no advantage to the Applicant in terms of expediting a decision by maintaining this case on the records.

EXAMINER MORROW: Will you plug the well? Is that the plan, is to plug and abandon the well, or partially plug it, or what is it?

MR. KELLAHIN: I think there's a partial plugging process where they can temporarily abandon the well in a temporarily plugged position so that it can be utilized for sidetrack later.

EXAMINER MORROW: Do you know if they contacted the District Office concerning their plugging plans?

MR. KELLAHIN: We have not yet -- Just received notice this morning that the people in the field have been unsuccessful in their effort, and obviously that's the next course of action, is to deal with the District OCD and determine an appropriate plugging procedure for this well.

MR. STOVALL: Mr. Examiner, I think dismissal is probably appropriate in this case, but I think it needs to be understood that this wellbore won't be used for any

purpose until -- without prior approval from the Division. 1 MR. KELLAHIN: That's our understanding and I 2 believe Mr. Barton's intent. 3 EXAMINER MORROW: Would be to get approval before 4 5 conducting any other operations --MR. KELLAHIN: Yes, sir. 6 EXAMINER MORROW: -- except for plugging? 7 MR. KELLAHIN: And Mr. Barton assures me that 8 9 would have been the original position he had been in, but through inadvertence they misunderstood the well-location 10 requirements of the Casey Strawn Pool. It is slightly 11 12 unorthodox. If you remember, Casey Strawn requires wells to be located within 150 feet of the center of a 40. This 13 one is, I think, 470, and so it is slightly unorthodox, by 14 15 about 70 feet, I quess. EXAMINER MORROW: Case 10,884 will be dismissed. 16 And we'll call Case 10,883 again. 17 MR. STOVALL: Mr. Kellahin, you've already 18 entered your appearance in this case, I believe? 19 MR. KELLAHIN: Yes, sir. I have two witnesses to 20 21 be sworn. MR. STOVALL: Is there anybody else appearing 22 here on the PG&E Resources unit-agreement case? 23 24 EXAMINER MORROW: Witnesses please stand to be 25 sworn.

8 JERRY R. ANDERSON, 1 2 the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows: 3 DIRECT EXAMINATION 4 BY MR. KELLAHIN: 5 Would you please state your name and occupation? 0. My name is Jerry R. Anderson. I'm a district 7 A. landman for PG&E Resources in Dallas, Texas. 8 9 Mr. Anderson, on prior occasions have you Q. testified as a petroleum landman before the Oil 10 Conservation Division? 11 12 Α. Not this one, no. All right, sir. Summarize for us your experience 13 Q. 14 as a petroleum landman. 15 I graduated from West Texas State University in Α. 16 1964 with a BBA degree. 17 I went to work for J.M. Huber Corporation in Amarillo, Texas, and later moved to Denver. I stayed with 18 them for approximately ten years, and then I have worked 19 for other companies in the land department, and my 20 experience covers 29 years in --21 What is your current position with PG&E? 22 Q. I'm a district landman for Utah and New Mexico. 23 Α.

Do your current responsibilities include the land

24

25

Q.

1 Hatch Lake Unit area of Sandoval County, New Mexico? 2 Yes, it does. Α. Are you familiar with the agreements that have 3 Q. been proposed to the various interest owners for the 4 5 formation of this unit? Yes, I am. 6 A. 7 And do you have available to you the tabulation Q. of the interest owners by tract that in your opinion would 8 participate in that production? 9 Yes, I do. 10 Α. And have you caused, or individuals under your 11 Q. 12 control with your company, caused the appropriate documents to be filed with the various regulatory agencies for which 13 this unit is subject to approval? 14 15 Α. Yes, I have. MR. KELLAHIN: We tender Mr. Anderson as an 16 expert petroleum landman. 17 EXAMINER MORROW: We accept his qualifications. 18 (By Mr. Kellahin) Mr. Anderson, to orient the 19 Q. Examiner, let me ask you, sir, to unfold Exhibit Number 1. 20 21 Describe for us what is shown on Exhibit Number 1. These are the tracts in the proposed Hatch Lake 22 Α. 23 They're broken out and numbered, and the Unit area. Exhibit B that's attached with this identifies the owners 24 of those tracts, and it stipulates whether they're fee, 25

federal or state lands.

- Q. Approximate for us the total number of acres that is to be included in the unit.
 - A. Approximately 24,852.84 acres.
- Q. Is there a legend on Exhibit Number 1 that shows the percentage of allocation of that acreage between federal, state and patented or fee lands?
 - A. Yes, over on the right-hand side.
- Q. The tract numbers for the tracts within the unit area are identified by those numbers contained within the circles?
- A. Yes.
- Q. And each tract number, then, identifies a different and separate lease?
 - A. Yes, it does.
- Q. And when we look at Exhibit Number 2, sir, would you identify and describe that for us?
- A. This is the schedule that sets out the ownership of those tracts and their approximate location.
 - Q. To the best of your knowledge, information and belief, is that Exhibit B -- as well as it's marked as Exhibit 2 for the purposes of this hearing -- is it true and accurate?
 - A. Yes, it is.
 - Q. Describe for us what the current status is of

your efforts and efforts of others on behalf of your 1 company to consolidate the interest owners on a voluntary 2 basis for this exploratory unit. 3 We currently got approximately 80 percent 4 approval of the unit. The other 20 percent is basically 5 the unleased fee. Everyone in the unit has been sent 6 joiners, with the opportunity to join, and we've attempted 7 to lease all of the unopen fee, and we're still attempting 8 to lease that property as of this date. 9 Give us a short chronology of events. 10 Q. The proposed operator is PG&E -- is it Resources Company? 11 12 Α. Yes, it is. That is the proposed operator for the unit? 13 Q. Yes. A. 14 What is your position within the unit in terms of 15 Q. Do you have an approximation of what your 16 acreage? 17 percentage control is? I'm not sure exactly because we've been leasing Α. 18 some additional property out there, but it's greater than 19 50 percent, I'm sure, of the other working interest owners. 20 Are there any other major percentage working 21 Q. interest owners within the unit area? 22 MW Petroleum Corporation is the second largest 23 A. 24 working interest owners.

25

Q.

MW --

-- being Apache. 1 Α. That's Apache? 2 Q. 3 A. Yes. We would know it by Apache, I think? 4 Q. It is Apache. 5 A. All right. What is the status of your efforts to 6 Q. 7 get Apache to participate within the unit concept on a 8 voluntary basis? 9 A. They have signed the unit agreement and have 10 agreed to participate, with PG&E as operator. 11 All right. Do you have an opinion as a petroleum Q. landman at this point in time whether or not you believe 12 that you as operator will have effective and efficient 13 control over the unit area pursuant to a voluntary unit 14 agreement? 15 A. Yes. 16 Let's turn now to the regulatory aspects of the 17 Q. Let me ask you to identify and describe for us 18 what is marked as Exhibit Number 3. 19 This is a letter from the BLM approving our unit 20 as to form. And this was presented, the Application, on 21 November 4th. 22 As part of that approval process, has your 23 Q. company submitted to the Bureau of Land Management the 24

appropriate documentation, including the technical

25

1 information by which they could make a depth and area 2 review for purposes of this unit? A. Yes, we have. 3 And that has been accomplished, and you now have 4 0. their letter of approval? 5 Α. Yes, we do. 6 What is the status of your efforts to get the fee 7 Q. owners committed to the unit in some fashion on a voluntary 8 basis? 9 I don't know the answer to that. All I know is 10 -- right now, as to the leasing of those property -- those 11 12 fee owners, then we have approximately 61 percent of the fee owners under lease. 13 All right. And you're continuing, then, to Q. 14 attempt to obtain leases or other agreements from any 15 unleased fee mineral owner? 16 Yes, we are. 17 A. For those fee tracts upon which there is a lease, Q. 18 do those leases contain sufficient provisions that the 19 lessee may commit that lease interest to a unit? 20 21 Α. Yes. Let's turn now to Exhibit number 4. Would you 22 Q. identify Exhibit Number 4 for us? 23 Exhibit Number 4 is the Rocky Mountain Unit 24 Α. 25 Agreement that was submitted to the BLM.

1	Q. As part of the approval process, has the Bureau
2	of Land Management given approval for this unit form, plus
3	whatever amendments you have proposed to the BLM?
4	A. Yes, they have.
5	Q. Let's turn now to Exhibit Number 5, Mr. Anderson.
6	Identify and describe for us what Unit 5 $[sic]$ is.
7	A. That's the unit operating agreement that was a
8	part of the unit agreement.
9	Q. What kind of form was utilized by your company
10	for purposes of a unit operating agreement?
11	A. It's the Rocky Mountain Unit Operating Agreement.
12	It's been approved by the BLM. It's been submitted so
13	Q. In order to participate in the unit, if
14	production is obtained, will that production be shared
15	within the unit on a divided or on an undivided basis?
16	A. It will be on an undivided unit basis.
17	Q. I may not have made my question clear to you.
18	Will there be participating areas within the
19	unit?
20	A. Yes, within the unit there will be participating
21	areas, but the unit itself will be an undivided-type
22	federal unit.
23	Q. Okay. There's a mechanism within the unit
24	agreement, though, that once discovery is obtained and you
25	go through the necessary justifications, the BLM can

certify or approve participating areas for sharing production on that basis?

- A. Yes, they can.
- Q. Do you have an opinion, sir, as to whether the unit operation as proposed by your company, will provide an opportunity for the parties to receive their fair and equitable share of the recoverable oil and gas underlying the lands that are proposed for the unit area?
 - A. Yes.

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- Q. And what is that opinion?
- A. That they will get their fair share.
- Q. At this point, do you believe that you have now, or will before you commence your unit well, have sufficient control of percentages of interest owners that you will provide for the orderly and uniform development of the area, and thereby avoid wasteful drilling and competitive practices?
 - A. Yes, I believe we will.
- Q. What is your recommendation to the Examiner with regards to the unit?
 - A. That it be approved.
- MR. KELLAHIN: That concludes my examination of Mr. Anderson.
- We would move the introduction of his Exhibits 1 through 5.

EXAMINER MORROW: Exhibits 1 through 5 are 1 admitted. 2 3 EXAMINATION BY EXAMINER MORROW: 4 Mr. Anderson, what approximate percentage is the 5 0. working interest that you said could be called Apache, or 6 7 some other name, I believe? Do you know what their percent of the working interest is? 8 I don't know exactly, but I'm saying it's 9 Α. somewhere between 35 and 40 percent, if I just quess. 10 Is this Exhibit Number 4 the same unit agreement Q. 11 12 form which was submitted prior to the hearing? 13 MR. KELLAHIN: Yes, sir. Q. (By Examiner Morrow) The BLM, you said, would 14 15 approve participating areas. Would any other interest owners have input into 16 the approval of participating areas? I'm sure they would, 17 but what would their --18 Yes, they would. 19 Α. -- what would their input be? 20 Q. Well, if you have the people that signed the unit 21 Α. agreement and unit operating agreements and you designate a 22 participating area, they have the right to join into the 23 drilling of that well, or you could go nonconsent under the 24 25 operating agreement.

If they are in the participating --1 Q. Okay. 2 Yes. Α. -- what you've designated as the participating 3 Q. 4 area; is that correct? --5 Α. Yes, correct. -- and if they're outside it, they wouldn't have 6 Q. 7 any --No. 8 Α. -- vote on that; is that correct? 9 Q. MR. STOVALL: Mr. Examiner, I'd like to follow up 10 11 on that. MR. KELLAHIN: I think you got an answer to a 12 13 different question. EXAMINER MORROW: Oh, I did? 14 MR. KELLAHIN: Yes, sir. My understanding is, 15 there will be a process for discussing the participating 16 17 In other words, the operator will -area. MR. STOVALL: Mr. Kellahin --18 MR. KELLAHIN: -- nominate a participating area. 19 MR. STOVALL: -- I'd like to ask you a favor. 20 MR. KELLAHIN: Okay. 21 MR. STOVALL: I'd like to make sure the witness 22 understands and can explain the process to us. 23 He will probably be the person responsible for --24 THE WITNESS: We need --25

1	MR. STOVALL: I think you and I know what you're
2	about to say, but can you explain
3	THE WITNESS: Are you talking
4	MR. STOVALL: I think we're going the drill
5	block to
6	THE WITNESS: Yes.
7	MR. STOVALL: If you'd like to take him through
8	that, that would probably be helpful.
9	MR. KELLAHIN: All right, sir.
10	THE WITNESS: Are you talking about the
11	operators' meeting prior to any drilling operations?
12	MR. STOVALL: Well, I think what the Examiner is
13	concerned about is, you have drill blocks that share costs,
14	then you set up participating areas on a commercial well.
15	And I think if we
16	THE WITNESS: Correct.
17	MR. STOVALL: if Mr. Kellahin, maybe if you
18	would walk him through the questions
19	MR. KELLAHIN: Sure.
20	MR. STOVALL: I would just as soon have you do
21	it as me.
22	FURTHER EXAMINATION
23	BY MR. KELLAHIN:
24	Q. All right. Let's go to the participating area
25	concept.

1 Α. Yes. 2 Let's assume you have your discovery well and now Q. have information from your geologists and engineers that 3 the operator of the unit wants to designate a participating 4 5 area, okay? Α. Yes. 6 You do that, you notify the other working 7 Q. interest owners within the unit, you submit that to the 8 9 Bureau of Land Management for approval. The question is, will those other interest owners 10 have an opportunity to affect or have input into what the 11 configuration is for that participating area? 12 Yes. 13 Α. The -- Once the participating area is designated, Q. 14 if an individual well is drilled within the participating 15 area to expand it or to further develop it, there will be a 16 drill block on a spacing unit basis, 320, 640, whatever it 17 is. 18 Within that spacing unit or drill block, is there 19 a mechanism in the agreements whereby parties can elect to 20 participate or not on an individual well to be drilled? 21 Yes, there is. Α. 22 **EXAMINATION** 23

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Follow up on that, that a drill block, as Mr.

24

25

BY MR. STOVALL:

Q.

Kellahin has described it, being a spacing unit of such, is 1 not necessarily what will ultimately be the participating 2 3 area; is that correct? That's correct. A. The participating area could be enlarged or 5 Q. reduced? 6 7 A. Yes. 8 EXAMINATION 9 BY EXAMINER MORROW: Well, when you designate a drill block and decide Q. 10 to propose a well there, do those owners then elect whether 11 or not they will participate in that well, or do they wait 12 until you have completed the well and designated a 13 participating --14 No, it's prior. 15 Α. Prior? 16 Q. 17 Α. Prior. Prior, and possibly after too, I guess, if you 18 Q. change? 19 Possibly. 20 Α. FURTHER EXAMINATION 21 BY MR. STOVALL: 22 In other words, you'd readjust the costs Yeah. 23 0. if you establish a participating area, and it's not a drill 24 25 block?

1	A. If the drill block changes, yes.
2	Q. How will you treat non unleased interests in
3	that? What is your intent as far as
4	A. I don't think you can force them to do anything
5	out there. They're an unleased nonparticipating party.
6	Q. So if you drill on a drill block that would
7	include some unleased acreage within it, I assume you'd
8	treat that on a spacing-unit basis?
9	A. Well, I would try not to include any unleased
LO	acreage in my drill blocks.
L 1	FURTHER EXAMINATION
L2	BY EXAMINER MORROW:
L3	Q. Would unleased acreage Would the unit
L 4	agreement and the unit operating agreement affect the
L5	rights of any unleased acreage within the unit area? Would
L6	they still have the right to drill a well on their acreage,
.7	should they want to
L8	A. Yes, they can.
L9	Q develop it?
20	Okay.
21	FURTHER EXAMINATION
22	BY MR. STOVALL:
23	Q. Let me follow up on mine a little bit.
24	It looks like particularly in the southern
25	portion of your unit, you've got some pretty carved-up

pieces there; is that correct?

A. Yes, sir.

1.8

- Q. Now, this is -- is this in the -- What is it?

 Regina area? Is that where the unit is, as far as

 communities?
 - A. I think it's between Cuba and Regina.
- Q. Okay. Recognize that if you're going to do some development down there in the south half, you may -- southern portion of the unit, you may have trouble avoiding unleased areas; is that correct?

As I look at this map and kind of look at the unleased tracts mixed in with leased tracts, that is a potential problem, is it not?

- A. Possibly.
- Q. Are you aware that you could conceivably form a spacing unit and use the force-pooling statutes to incorporate them into a spacing unit drill block, which could not be further -- Yeah, then you'd have to deal with how to deal with the unit participation.
- A. Yes, I'm aware of that. I just really don't want to do that if I don't have to.
- Q. Well, I don't blame you. I don't know if you can avoid it, is my only concern, in this part of the unit, as chopped up as it is.
 - A. But I am aware of the force pooling.

MR. STOVALL: Okay. 1 Mr. Kellahin, just for your information, we have 2 received a letter here -- I don't know if you've seen it or 3 not -- from a Mr. Herndon. 4 MR. KELLAHIN: I have not seen the letter. 5 MR. STOVALL: I'll provide you with copies of it. 6 For what it's worth, it expresses opposition to 7 the unit. 8 Of course -- Is Mr. Herndon here, by any chance? 9 Inasmuch as he's not here, I don't know that this 10 constitutes an entry of appearances or just a statement of 11 objection. I think my inclination is a statement of 12 objection to the unit. 13 I'm only giving it to you for your information, 14 not for any response of any kind. 15 MR. KELLAHIN: Thank you. 16 FURTHER EXAMINATION 17 BY EXAMINER MORROW: 18 I might ask if you've received any other 19 correspondence of a similar nature. This all we've gotten, 20 but have you had opposition from other fee owners in the 21 unit area? 22 I have not received anything --23 A. 24 Q. Okay. 25 -- myself. This is the first thing I've Α.

received. 1 Any other questions or anything else you would 2 Q. like to say? 3 4 A. No, sir. Mr. Anderson may be excused. 5 EXAMINER MORROW: THE WITNESS: Thank you. 6 MR. KELLAHIN: Call at this time Mr. John 7 Wingert, petroleum geologist. 8 9 JOHN R. WINGERT, the witness herein, after having been first duly sworn upon 10 his oath, was examined and testified as follows: 11 DIRECT EXAMINATION 12 BY MR. KELLAHIN: 13 Mr. Wingert, would you please state your name and 14 Q. 15 occupation? My name is John Wingert and I'm a geologist. 16 Α. Mr. Wingert, on prior occasions have you 17 Q. testified before this Division as a geologist? 18 Not in front of this Division, no. 19 Α. 20 0. Summarize for us your education. I have a bachelor's and master's degree from the 21 Α. University of Iowa, 1956 and 1958, a total of 35 years of 22 industry experience, 19 of that with Chevron, the balance 23 24 either consulting or with small independents, most recently five years with PG&E Resources. 25

You'll have to keep your voice up for me. 1 Q. The 2 microphone doesn't amplify your voice; it just assists the court reporter, so it doesn't amplify. 3 4 Α. Sorry. Is this Hatch Lake prospect one that you have 5 Q. been personally involved in? 6 7 Α. Yes, it is. How long and how much effort have you spent on 8 Q. 9 this project, sir? -- that's been generated over the past couple of 10 Α. 11 years. 12 Q. And at this point, have you reached conclusions and formed opinions with regards to the feasibility 13 geologically of this unit idea? 14 Yes, I have. 15 Α. MR. KELLAHIN: We tender Mr. Wingert as an expert 16 petroleum geologist. 17 EXAMINER MORROW: We accept Mr. Wingert's 18 qualifications. 19 (By Mr. Kellahin) Let me ask you, sir, to unfold 20 Q. what is marked as Exhibit Number 6. 21 Some of Mr. Wingert's displays are rather large. 22 This first one is, I think, manageable. We have some 23 cross-sections that are pretty good size. 24 MR. STOVALL: Unmanageable? Is that the 25

implication? 1 MR. KELLAHIN: Well, they'll take some effort. 2 EXAMINER MORROW: If you like, we could hold one 3 4 up here and --5 MR. STOVALL: Yeah, just -- Off the record. 6 (Off the record) 7 Q. (By Mr. Kellahin) Help us understand where we are. Let's use Exhibit Number 6 for that purpose, Mr. 8 9 Wingert. Exhibit Number 6 is a 1-to-4000 scale map showing Α. 10 the -- index map, showing the approximate location of the 11 proposed Hatch Lake Unit area and its relationship to other 12 fields in the area. 13 The project involves -- The main objective in 14 this project is to drill for a fractured Niobrara member of 15 the Mancos shale. And as you know, the -- The unit outline 16 17 here is shown with the red outline. It's on trend with the Rio Puerco field which produces out of fractured Mancos. 18 MR. STOVALL: Let me just do one thing for the 19 20 record here. The copy you're using does have a red, but ours is a photocopy which is not red, but it's a dashed 21 22 line? THE WITNESS: Uh-huh. 23 24 MR. STOVALL: Okay. Rio Puerco field now produces out 25 THE WITNESS:

of the fractured Mancos. Wells there, cumulative production ranges from a few thousand to over 100,000 barrels per well.

It currently is being developed in horizontal drilling. The three principal operators, Bright, Energy Development and Sam Gary, Jr., is currently drilling in a similar -- roughly a 25,000-acre unit as well.

This is along trend with the west Puerto Chiquito field, which has a long production history. It likewise produces out of the fractured Niobrara member of the Mancos.

And there are a number of wells. It covers a very large area, and there are a number of wells in that vicinity. I'll show you examples of the zone that we would be drilling for in both these field areas, and I'll start with Exhibit A-A'.

EXAMINER MORROW: Before you go on to that, I am not oriented as to where your unit area is in relation to your cross-section here.

THE WITNESS: All right, the unit area is -falls between the towns of Cuba and Regina, as pointed out
earlier.

Cross-section A-A' will be in the Rio Puerco field area.

Cross-Section B-B' will start north of the unit

area and extend up into the main portion of Rio -- Puerto Chiquito West field. There are no Niobrara tests within the proposed Hatch Lake unit area.

There are only two wells that have been drilled. They're both in Section 10, essentially side by side, one roughly 2350 feet and the other one 3109 feet. So they do not penetrate the objective. There are no tests, therefore the cross-section is not in the Lindrith proposed unit area.

EXAMINER MORROW: All right, I just saw your label there. That is the unit area. I hadn't seen that before. So go ahead.

THE WITNESS: The cross-section A-A' --

MR. STOVALL: Can you hold on just a second and let us get unfolded here?

THE WITNESS: -- shows the zone that has been completed in the Rio Puerco field area, and it consists of a sandy dolomite member of the Mancos, and in that area the section is a few hundred feet thick, 500 to 700 feet thick, and this cross-section is intended to show the productive interval.

We would anticipate drilling through the same member of the Mancos, looking for similar fracture production.

MR. KELLAHIN: Jerry, give me a hand with this

1 other one, would you, please? 2 MR. STOVALL: Mr. Kellahin, would it be useful for us to have the colored copy when you're through? 3 4 MR. KELLAHIN: Yes, we'll trade you. 5 MR. STOVALL: Okay. MR. KELLAHIN: Grab the end of this cross-section 6 so that John can walk down. 7 (By Mr. Kellahin) All right, sir. Let me direct 8 Q. 9 your attention, now, sir, to what has been marked as Exhibit Number --10 A. -- 7. 11 12 Q. **--** 7. This is cross-section B-B', and it shows the same 13 Α. Niobrara member --14 No, this should be Exhibit 8. 15 Q. EXAMINER MORROW: 8? 16 MR. KELLAHIN: 8. B-B' is 8. 17 18 MR. STOVALL: Just a second, we'll -- You may have to speak real loud when we go to the other end of the 19 exhibits now. 20 21 THE WITNESS: This, likewise, is highlighted in the productive interval. It also is a fractured Mancos 22 section, and in this area, the principal productive zone 23 24 tends to be a little more dolomitic, less sandy, as in Rio 25 Puerco field.

1 The total interval is generally 350 to 400 feet 2 thick, and this represents the principal objective in Puerto Chiquito West field and likewise is the objective 3 4 zone in the proposed Hatch Lake Unit. The better productive interval in the main part 5 of Puerto Chiquito West is exhibited on a few of the wells 6 on the north end of the cross-section or the right-side. 7 And you'll note that the productive interval is in a very 8 small third zone, sometimes referred to as the C zone. 9 And there are some extremely high cumulative 10 production rates, an example being in the Benson-Greer 11 11-E-10, which has a cumulative production of 2.5 million 12 barrels of oil and 4.4 BCF of gas. 13 We anticipate that in our area, we would see a 14

section similar to but somewhat intermediate between what you saw in the Rio Puerco field area and in the west Puerto Chiquito field area.

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EXAMINER MORROW: Did you say that single well produced that?

THE WITNESS: Yes, that's cumulative production on that well.

There are several wells in that area that have produced in the hundreds of thousands of barrels, and of course there's a whole range below that.

> MR. STOVALL: Is the red the perforated interval?

Is that what the --

THE WITNESS: Yes, in each one of these where it was perforated it is shown in red.

- Q. (By Mr. Kellahin) If you'll return to the stand, we'll put this one down and display the last exhibit there.
- A. The final Exhibit is Exhibit Number 9, which is a time structure map on the Niobrara. It's on a 1-to-2000 scale, and the contours on here are in 10-millisecond contour intervals. It's mapped on seismic data control. It's showing what the seismic lines represent on this map.

This is in a very unique geologic setting in that we are on the south -- or the eastern flank of the San Juan Basin, and as you know, the basin began to develop with the Laramide deformation in the late Cretaceous, and the flanks of the basin are characterized by the development of monoclines and cross-plunging folds in the early Tertiary.

Following that, the east side of the basin and on the eastern edge of this prospect area, the Nacimiento uplift developed in conjunction with the development of the Rio Grande Rift.

That deformation continued into the late Tertiary time, resulting in the development of the Nacimiento fault, which is a key parameter in this prospect area in that the eastern margin of the proposed unit outline is the surface trace of the Nacimiento fault where we see maximum

displacement of the fault and latest deformation which should enhance the fracturing in the areas.

Likewise, the northern boundary of the area is approximately adjacent to the point where the Nacimiento fault turns off to the northeast and passes into the northplunging folds and into other individual faults.

The west margin of the proposed unit area is defined by a subtler basinward monoclinal feature that likewise is prospective and is also -- coincides with the boundary of the Jicarilla Apache Indian Reservation. There is no drilling in the reservation in the adjacent area to the west.

The southern boundary of the unit is at the -- is represented by the monoclinal feature that is represented here with the closest-spaced contours, which with increased time indicate increased depth.

And in this case, in addition to the monoclinal feature, which was overridden by this much later faulting, there is a well-defined surface expression of a crossplunging fold.

So what we've got here is a continuous development of structure, the development of fractures with the earliest monoclinal flank position, the development of the cross-plunging folds, and subsequently the latest faulting, which we think has given it a unique combination of early structural development, early fracture development, continuity through time, with the development of open fractures.

The proximity to the rift is where there is a higher temperature gradient that should enhance any generation of oil in the general region.

And in addition to this, this has always been a structurally high area, so any migration out of the basin would have been enhanced and continued through time in this area.

The mapping in here shows a series of flexures and potential closures, but this is not a play based on closures. There is not an accumulation that will be related just to a trap by an anticlinal feature; it's the development of the fractures that specifically are related to this various sequence of folding that was just described, and they will probably result in long linear trends as opposed to circular trends in any kind of a closure.

- Q. Let me ask you this, sir: What is your geologic plan for the location and exploration, then, for the initial well and any alternative location for that initial well?
- A. The initial well is proposed to be in the Section

 4, near the southern end of the unit outline, which would

be drilled on the -- in a position to evaluate both the fracture and associated monoclinal folding in the cross-plunging fold and any assistance gotten from the latest thrust-faulting.

In the event we can't put together a satisfactory leasehold blocking area because of minor interests, we do have an alternate location, which we consider to be equally prospective.

In this case, we're looking at about a 5000-foot depth here, and it would be roughly a 7000-foot depth, and it's because the -- these fracture trends that we're looking for, and not individual features that we're prospecting for. We're just trying to maximize the initial locations on those so that we can identify them next time.

We are proposing drilling vertical straight holes initially. Subsequently, we may get into horizontal drilling with the development once we determine the productive potential.

Because of the linear trends that we've anticipated, as are indicated in both the Rio Puerco and West Puerto Chiquito fields, we would anticipate that any productive, hence participating, areas would overlap a number of leases.

Therefore, we feel that a unit is necessary to properly exploit this in development, as opposed to an

1 individual lease drilling situation. 2 Q. Are you satisfied, Mr. Wingert, that there's a logical geologic or geophysical basis to justify the 3 boundaries of the unit? 4 Α. Yes, I am. 5 And in your opinion, will unit operations provide 6 Q. 7 the most effective and efficient means by which to explore for and then further develop any hydrocarbons within that 8 unit area? 9 Yes, I do. 10 Α. Is that method of operation preferable to 11 Q. competitive leasehold development in the Niobrara? 12 1.3 Α. Absolutely, because of the nature of the play. MR. KELLAHIN: That concludes my examination of 14 Mr. Wingert. 15 We move the introduction of his exhibits -- I've 16 17 lost track of the numbers. MR. STOVALL: Through 9. 18 MR. KELLAHIN: I'm sorry? 19 MR. STOVALL: I think it's through 9, I believe. 20 MR. KELLAHIN: I believe so. 21 **EXAMINER MORROW:** 22 Okay. Through 9. 23 MR. STOVALL: Exhibits through 9 are admitted EXAMINER MORROW: 24 into the record. 25

EXAMINATION

BY EXAMINER MORROW:

- Q. Explain for me again, sir, what the contour lines represent and help me relate that to something that I'm more familiar with, like depth.
- A. Okay, the contour lines are structure-mapped on time data derived from the seismic lines that are shown on this map.

This is all the seismic data we had available, so the mapping is based on that available data. And they represent picked time, with the shallowest time being the shallowest depth, and generally an increase in depth from south to north.

EXAMINATION

BY MR. STOVALL:

- Q. Let me ask -- Perhaps it might help. You referred earlier to the Gary-Williams and -- the other -- or Sam Gary and Veteran Energy Development prospect down -- It looks like it's -- what? About eight or ten miles to the southwest; is that correct?
 - A. That's correct.
- Q. Now, are you familiar with -- I assume you are familiar with that project?
 - A. Yes, I am.
 - Q. My recollection -- and I think the Examiner was

actually involved in the early days of the development of that unit, and a lot of their effort, particularly the horizontal wells, was to come across the fold down there where they saw the maximum fracture; is that correct? Is that your understanding?

- A. That's correct. It's -- Their play is mainly based on fracturing in the monoclinal flexure, yes, on the margin of the basin.
- Q. Is -- Now, it appears to me that kind of the structure you've identified is similar and, because of the geographic location, it appears to me that you might have that steep monocline and then the flattening out going down into their area; is that correct? I mean, are we looking at a similar structure?
- A. It's a similar situation, but not going down into their area. It wouldn't be -- We're quite a ways north.

The monoclinal feature that rims the basin -- but not with continuous connected fracturing, mind you -- but rimming the basin is approximately an extension over towards our area, but this is different in that it's overridden by this thrust fault on the east side.

So we've got a situation where we had that kind of fracturing developed earlier, and that's certainly prospective.

In addition, we have this well-defined surface

nose that crosses that.

And in addition to that, we have this latest structure faulting that overrode the monocline and, we feel, is going to enhance the fracture potential in this entire area.

- Q. And you go further north, you get up into the West Puerto Chiquito and East Puerto Chiquito, you kind of have another similar thing where you have the steep monocline, and then it kind of folds and flattens out; is that correct?
- A. It does. However, the principal production in West Puerto Chiquito field is characterized by fractures in both the anticlinal highs as well as the synclinal lows, so it's the folding that makes the -- that results in fracture potential.

And as you know, West Puerto Chiquito field and East Puerto Chiquito field are separated, even though they're on similar type folds.

So we don't anticipate that there's continuity throughout the entire region, but a similar type prospect.

But we have a unique situation here of being in greater proximity to this maximum overthrust in the Nacimiento uplift area.

Q. The Nacimiento is how far above the Mancos Niobrara? Is that --

1 Α. The Nacimiento? On the handout there you'll see some estimated tops. Nacimiento is very near the surface 2 in the southern part of the field. San Jose is at the 3 surface. I think roughly 500 feet you get into the 4 Nacimiento formation. 5 MR. KELLAHIN: Mr. Examiner, we didn't mark this 6 7 as an exhibit. It's simply a reference handout. You're certainly welcome to have that. 8 MR. STOVALL: Why don't we go ahead and mark it, 9 if you don't mind, Tom, just because it's easier to refer 10 to? 11 MR. KELLAHIN: I will mark for the record, Mr. 12 Examiner, as Exhibit 10, Mr. Wingert's written geologic 13 summary of his exhibits. 14 15 EXAMINER MORROW: Okay, we accept Exhibit 10 for the record. 16 17 Q. (By Mr. Stovall) I guess -- I mean, the reason why I question -- I'm not a geologist, but I like to 18 pretend once in a while. 19 When you're looking at the Nacimiento surface 20 activity there, I mean, that's basically what you've used, 21 is surface features to identify that faulting and thrust; 22 is that correct? 23 In part of the surface -- Oh, yes, for the --24 Α. 25 Over on the east side? Q.

1 Yes, because it's a very -- It's eroded down deep 2 enough to expose the fault and the Paleozoics overriding -and Precambrian -- overriding the younger sediments. 3 And I guess what I'm saying is that they are Q. 5 close enough that you can relate that down to the Niobrara, then, is what I'm hearing you say? 6 7 Α. Yes, yes. EXAMINATION 8 9 BY EXAMINER MORROW: What about the Mancos east of there? Is it just 10 Q. 11 gone or --Well, there's a very large area in the Nacimiento 12 uplift area where all of the younger sediments have been 13 eroded off and Paleozoics and Precambrian are exposed, and 14 volcanics as well. 15 If you go far enough to the east, you do get back 16 17 into that situation where --But immediately to the east it doesn't exist; is 18 0. that correct? 19 20 Α. I'm sorry? Immediately to the east, the Mancos formation is 21 Q. not present? 22 23 Α. No, it's not. Okay. 24 Q. It's not. 25 Α.

1	FURTHER EXAMINATION
2	BY MR. STOVALL:
3	Q. You don't have the have it coming to the
4	surface, as you do further north?
5	A. There are some erosional remnants that are very
6	high topographically. But basically, the eastern margin
7	here is demarcation is by the presence of the
8	Precambrian rocks.
9	FURTHER EXAMINATION
10	BY EXAMINER MORROW:
11	Q. What is the attractiveness of alternate location
12	number 2 up there? Is it
13	A. Well
14	Q. It doesn't look like the same things occur there
15	which would cause the faulting as do down here on the
16	south.
17	A. Well, there is a On the north side, this is an
18	area where we also see some enhancement with another
19	surface expression of folding in that area, and we think it
20	has similar characteristics, and it's an area where the
21	lease situation is a little less difficult to put together.
22	FURTHER EXAMINATION
23	BY MR. STOVALL:
24	Q. Assume you were able to put together a block for
25	location your primary location, location number 1. What

would be your development plan?

A. At this time we would anticipate that we'd be drilling a straight hole here, and if productive we would at that time have to determine whether we wanted to develop it based on horizontal drilling or continue with straighthole drilling, which would result in the size of the drill blocks and participating area that we might include at that time.

So that's not determined at this point, but we would anticipate development around that area, the immediate area, initially.

But because we feel that the play is continuous throughout the area, we would anticipate additional exploratory wells within the unit to further define the potential throughout the area at an early stage.

- Q. If you develop that southern location number 1 in that area, would you proceed in -- how long would it be before you would proceed, say, to the north and go to your location number 2 and go ahead and drill that as a block?
- A. I don't have a precise time, but I would imagine it would be within the first year of drilling.
 - Q. Because my concern is --
- A. First one or two years we would be drilling the north end as well.
 - Q. Okay. So you would anticipate exploring

throughout the unit fairly rapidly to determine the 1 productive potential of various parts of it? 2 Yes, we have a very large block of acreage here 3 Α. that we want to see evaluated. We don't feel that we 4 totally evaluated with the initial tests, but anticipate 5 that we would be doing additional drilling to expedite the 6 evaluation of the entire unit area. 7 MR. KELLAHIN: Mr. Stovall, as an aside, unless 8 9 modified by the Bureau of Land Management, the obligation on the operator is to drill a well every six months. 10 (By Mr. Stovall) I was going to ask that 11 Q. question. And then the next question was going to be, have 12 they put any obligation as far as drilling in different 13 parts of the -- I mean, are they asking you to do what I've 14 15 asked you if you're going to do? Not specifically. That would be up to our 16 discretion to make that determination. We haven't made 17 that at this time. 18 EXAMINER MORROW: Anything else? 19 That's all I've got. MR. STOVALL: 20 FURTHER EXAMINATION 21 BY EXAMINER MORROW: 22 Let's see, you show the two -- the primary 23 Q. location and the alternate location, I believe, as to 24 25 quarter sections.

Have you staked them yet or defined exactly where they're going to be, or --No, we have not, and it's a good possibility that Α. the southern location will have to be moved into the southwest quarter because of the leasing situation. EXAMINER MORROW: Okay. I don't have any other questions. Mr. Wingert, you may be excused. MR. KELLAHIN: That's our presentation, Mr. Examiner. EXAMINER MORROW: If there's nothing further, Case 10,883 will be taken under advisement. (Thereupon, these proceedings were concluded at 9:13 a.m.)

1	CERTIFICATE OF REPORTER
2	
3	STATE OF NEW MEXICO)
4) ss. COUNTY OF SANTA FE)
5	
6	I, Steven T. Brenner, Certified Court Reporter
7	and Notary Public, HEREBY CERTIFY that the foregoing
8	transcript of proceedings before the Oil Conservation
9	Division was reported by me; that I transcribed my notes;
10	and that the foregoing is a true and accurate record of the
11	proceedings.
12	I FURTHER CERTIFY that I am not a relative or
13	employee of any of the parties or attorneys involved in
14	this matter and that I have no personal interest in the
15	final disposition of this matter.
16	WITNESS MY HAND AND SEAL December 31, 1993.
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18	- Pilun -
19	STEVEN T. BRENNER CCR No. 7
20	
21	My commission expires: October 14, 1994
22	I do hereby certify that the foregoing is
23	a complete record of the proceedings in the Examiner hearing of Case No. 10883.
24	heard by me on Dec 16 1993.
25	Oil Conservation Division