1 2 3 4	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO  22 November 1988				
5	EXAMINER HEARING				
6 7 8	IN THE MATTER OF:  Application of Santa Fe Energy Operat- CASE ing Partners, L. P. for compulsory 9528				
9	pooling, Eddy County, New Mexico.				
11 12 13	BEFORE: Michael E. Stogner, Examiner				
14	TRANSCRIPT OF HEARING				
15	APPEARANCES				
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20 21 22	For Santa Fe Energy James Bruce Operating Partners, L.P.: Attorney at Law HINKLE LAW FIRM 500 Marquette N. W. Albuquerque, New Mexico 87102-2121				
23 24 25	For Bass Enterprises Production Company:  W. Thomas Kellahin Attorney at Law KELLAHIN, KELLAHIN & AUBREY P. O. Box 2265 Santa Fe, New Mexico 87504				

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INDEX	
GARY GREEN	
Direct Examination by Mr. Bruce	4
Cross Examination by Mr. Kellahin	10
Redirect Examination by Mr. Bruce	27
Recross Examination by Mr. Kellahin	30
Cross Examination by Mr. Stogner	31
EXHIBITS	
Santa Fe Energy Exhibit One, Land Plat	6
Santa Fe Energy Exhibit Two, Proposal	7
Santa Fe Energy Exhibit Three A, Notice	8
Santa Fe Energy Exhibit Three B, Response	8
Santa Fe Energy Exhibit Four, Cost Estimate	8
Santa Fe Energy Exhibit Five, Letter Notice	9
Bass Exhibit One, Letter	23
	GARY GREEN  Direct Examination by Mr. Bruce Cross Examination by Mr. Kellahin Redirect Examination by Mr. Bruce Recross Examination by Mr. Kellahin Cross Examination by Mr. Stogner  E X H I B I T S  Santa Fe Energy Exhibit One, Land Plat Santa Fe Energy Exhibit Two, Proposal Santa Fe Energy Exhibit Three A, Notice Santa Fe Energy Exhibit Three B, Response Santa Fe Energy Exhibit Four, Cost Estimate Santa Fe Energy Exhibit Five, Letter Notice

1 MR. STOGNER: Call next Case 2 9528, which is the application of Santa Fe Energy Operating 3 Partners, Limited Partners, for compulsory pooling, Eddy 4 County, New Mexico. 5 At this time we'll call for 6 appearances. 7 MR. BRUCE: Mr. Examiner, my 8 name is Jim Bruce from the Hinkle Law Firm, representing Santa Fe Energy Operating Partners. 10 I have two witnesses or pos-11 sibly three. 12 MR. STOGNER: Are there any 13 other appearances? 14 MR. KELLAHIN: MR. EXAMINER, 15 I'm Tom Kellahin of the Santa Fe law firm of Kellahin, 16 Kellahin & Aubrey. I'm appearing today on behalf of Bass 17 Enterprises Production Company. 18 I have three witnesses. 19 MR. STOGNER: Are there any 20 other appearances? 21 Will all the witnesses please 22 stand and be sworn at this time? 23 24 (Witnesses sworn.) 25

4 1 MR. STOGNER: Before we get 2 started, gentlemen, there was a misadvertisement in the 3 Artesia paper. This case, regardless of the 5 outcome today, will have to be continued and readvertised 6 for December 7th, 1988. 7 MR. BRUCE: That's fine. 8 MR. STOGNER: Mr. Bruce, any 9 time. 10 11 GARY GREEN, 12 being called as a witness and being duly sworn upon his 13 oath, testified as follows, to-wit: 14 15 DIRECT EXAMINATION 16 BY MR. BRUCE: 17 Q Mr. Green, would you please state your 18 full name and city of residence? 19 Α My name is Gary Green. I live in Mid-20 land, Texas. 21 Q And what is your occupation and who are 22 you employed by? 23 I'm employed as a landman for Santa Fe Α 24 Energy Company.

Have you previously testified before the

1 OCD as a petroleum landman and had your credentials as an 2 expert accepted as a matter of record? 3 Yes, I have. Α Q And are you familiar with the land mat-5 ters involved in Case 9528? 6 Α Yes, I am. 7 MR. BRUCE: Mr. Examiner, I 8 tender the witness as an expert. 9 MR. STOGNER: Are there any 10 objections? 11 MR. KELLAHIN: No objections. 12 MR. STOGNER: Mr. Green is so 13 qualified. 14 Mr. Green, would you please state brief-Q 15 ly what Santa Fe seeks in this application? 16 Α Santa Fe Energy Operating Partners, 17 L.P., seeks an order pooling all mineral interests from the 18 surface to the base of the Morrow formation underlying the 19 north half of Section 17, Township 23 South, Range 31 East, 20 in Eddy County, New Mexico. 21 Santa Fe proposes to drill its Pure Gold 22 Federal C-17 Well No. 2 at a standard location and to dedi-23 cate the following acreage to the well: The southwest 24 quarter of the northeast quarter of Section 17 for all

pools or formations spaced on 40 acres; the northeast quar-

ter of Section 17 for all pools or formations spaced on 160 acres; and the north half of Section 17 for all pools or formations spaced on 320 acres.

Santa Fe also requests consideration for the cost of the drilling and completing the well and the allocation of the costs thereof, as well as the actual operating cost and charges for supervision.

Santa Fe asks that it be designated as operator of the well and a charge for the risk involved in the drilling of the well be assessed.

Q Would you please move on to Exhibit Number One and describe its contents for the Examiner?

Exhibit Number One is a land plat showing the proposed spacing unit, being the north half of
Section 17, 22, 31 East. It shows the well location. It
shows the stippled acreage as being the acreage which Santa

Fe has an interest in.

Q Okay, and who are the interest owners which Santa Fe seeks to force pool?

A Bass Enterprises, Incorporated, Pogo Producing Company, Primary Fuels, Inc., Heathery Resources, Inc., Terra Resources, Inc., Terra Resources, Inc., Total Menatome Corporation, P. W. Production Company, CNG Pro-

24 ducing Company.

Q Thank you. Would you please refer to

Exhibit Number Two and describe your efforts to get these interest owners to join in the well?

Exhibit Number Two is a well proposal addressed to all the referenced lease owners, working interest owners in the north half of 17, asking that they join in the drilling of this well with the working interest, or farm out under specific terms and if they join that all operations would be done to a mutually acceptable NMLP Form 610, 1982 Model Form Operating Agreement.

And did you follow this letter up with telephone calls?

Yes. I've had a number of different -a number of telephone calls with the various owners.

And how much of the working interest in Q the north half of Section 17 does Santa Fe own?

Α Santa Fe owns a 37-1/2 percent leasehold interest in the northeast quarter. We, in talking to the other parties involved, we have CNG, Pogo, (unclear) have indicated or recommended to management to farm out to Santa Fe, which would give Santa Fe about 83-1/3 percent of the northeast quarter or about 41 percent (unclear).

Is this well near the potash areas Q defined by OCD Order R-111-P?

Yes, it is, and I made inquiries to the Α BLMand was advised that IMC Fertilizer Company was the

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potash lessee and the only potash lessee within a mile of the lease. Pursuant to Order No. R-111-P, I notified IMC of the location of the well shown on Exhibit Three-A, and by letter shown as Exhibit Three-B IMC waived any objection to this location.

Q And referring to Exhibit Number Four, would you please discuss the cost of the proposed well?

Exhibit Four is a well cost, generalized well cost estimate prepared by Santa Fe engineers that purports to drill a 15,000 foot Morrow test with the dry hole cost being \$1,192,868, completion -- cost for completing the well to \$1,494,058.

Q And is the proposed well cost in line with those normally encountered in drilling wells to this depth in this area of Lea County?

A Yes, they are.

Q And do you have a recommendation as to the amount Santa Fe should be paid for supervision charges?

A Yes. It's my recommendation that \$6000 per month be allowed for a drilling well and \$600 per month be allowed for a producing well.

Q And are these amounts in line with those normally charged by Santa Fe and other operators in this area for wells of this type?

A Yes, they are.

1 Q And briefly, what type of operating 2 agreement are you using or proposing to use? 3 Α Santa Fe would propose to use the AAPL 4 Model 610 1982 model form. 5 And what penalty do you recommend 6 against nonconsenting interest owners? 7 Cost plus 200 percent. Α 8 Q And will the geologist also testify on 9 this? 10 Α Yes, he will. 11 Q And the cost plus 200 percent, is that 12 normally used in operating agreements in this area of New 13 Mexico? 14 Α Yes, it is. 15 Were all interested parties notified of Q 16 this hearing? 17 A Yes, they were, by (unclear) which would 18 be Exhibit -- Exhibit Five. 19 And were Exhibits One through Five pre-20 pared by you or compiled from company records? 21 Yes, they were. Α 22 In your opinion will the granting of Q 23 this application be in the interest of conservation, the 24 prevention of waste, and the protection of correlative 25 rights?

10 ì Α Yes. 2 MR. BRUCE: Mr. Examiner, at 3 this time I'd move the admission of Exhibits One through Five. 5 MR. STOGNER: Are there any 6 objections? 7 No objections, MR. KELLAHIN: 8 Mr. Stogner. 9 MR. STOGNER: Exhibits One 10 through Five will be admitted into evidence. 11 Mr. Kellahin, your witness. 12 MR . KELLAHIN: Thank you, Mr. 13 Examiner. 14 15 CROSS EXAMINATION 16 BY MR. KELLAHIN: 17 Mr. Green, is the only basis upon which Q 18 you have recommended a 200 percent risk factor against the 19 nonconsenting owners the fact that you find that number 20 utilized by your company in operating agreements? 21 No, it is not. Probably our engineer, Α 22 geologist should testify to that. They plan to drill a 23 15,000 foot well and prepared a lot of this. 24 That's a geologic and engineering risk Q

25

you're discussing now.

11 1 Yes. Α 2 The operating agreements that you pre-Q 3 and prepared by other companies for your approval, have a risk factor penalty in them but only for subsequent 5 wells, is that not true? 6 Subsequent wells, subsequent operations. Α 7 It has nothing to do with the risk fac-Q 8 tor penalty on the initial well to be drilled. 9 Α That's because all the parties are 10 sharing the risk. 11 Let's talk about Santa Fe Energy Operat-12 ing Partners, Limited. For whom do you work? 13 I work for Santa Fe Energy Company. Α 14 And Santa Fe Energy Company, then, is Q 15 the general partner for this limited partnership? 16 Α Yes, sir. 17 How does one become a limited partner in Q 18 the Santa Fe Energy Operating partnership? 19 They can purchase limited partnerships Α 20 through the stock market. 21 Do you currently know what the limited Q 22 stock purchase price is for a share, a limited partner's 23 share in this transaction? 24 MR. BRUCE: I would ask at 25 time, and object as to the relevancy of this line of

12 questioning. 2 MR. KELLAHIN: Bear with me 3 a few minutes and let me ask him about his company. I intend to show relevance, Mr. Examiner. 5 MR. STOGNER: He may continue. 6 Α last look at the paper I believe it Mv7 was around \$16.00 per share. 8 Q \$16.00 a share for a partnership. Do 9 you know how many limited partners there are in the Santa 10 Fe Energy Operating Partnership? 11 I do not. I know that they own ap-No. 12 proximately 20 percent and Santa Fe Energy Company, or not 13 the energy company, but the parent owns about 80 percent. 14 Are there thousands of limited partners Q 15 in this operating company? 16 I would assume so. Α 17 When we look at the spacing unit for the 18 well, you're proposing to include the north half of Section 19 17? 20 Α Yes, sir. 21 Those are both portions of Q separate 22 Federal leases, are they not? 23 Yes, sir. Α 24 The portion in the northwest quarter of Q 25 17 is part of the Bass-operated James Ranch Unit, isn't it?

1 A Yes, sir. 2 The Federal lease that includes the Q 3 northeast quarter of 17 also includes the producing well in 4 the south half of 17. 5 Yes, sir. Α 6 So that entire Federal lease, including 0 7 this 160-acre tract, is held by production, is it not? 8 Α Yes, sir. 9 Q With regards to the northeast quarter, 10 what portion of that interest is owned by Santa Fe 11 Energy Operating Partners? 12 Α 37-1/2 percent. 13 Does Santa Fe Energy Company have any Q 14 interest in that acreage? 15 No, sir. Α 16 So the company you work for is simply Q 17 the managing partner for the operating partnership. Santa 18 Fe Energy Operating Partners. 19 Α That is correct. 20 Q And Santa Fe Energy Company, who you 21 work for, then, does not realize any share of the produc-22 tion from the well, does it? 23 That's correct. Α 24 Santa Fe Energy Company, as a general Q 25 managing partner, receives a fee out of the partnership

funds for the management of the properties, does it not?

A I cannot answer that.

Q There is no money being contributed by Santa Fe Energy Company into the drilling of this well, is there?

A I would assume not.

Q So it doesn't matter to your company whether or not you drill a dry hole or a commercial producing well, you're still going to get a fee for being the managing partner.

A I don't believe we get a fee, just get a fee for being the managing partner.

Q What is the economic incentive for Santa Fe Energy Company as a general partner to want to have a commercial well?

A Would you ask your question again?

Q Sure. What is the economic incentive for someone like Santa Fe Energy Company, who is simply the general partner for a partnership, and providing none of the funds for the drilling of this well, what is the economic incentive for your company to drill a commercial well?

A I'm not sure I know how to answer that.

Let me say that the partnership was assigned the majority

of Energy Company properties before it was put on the mar
ket for sale to the public.

1 Santa Fe Energy Company or Santa Fe 2 Energy Operating Partners, L.P., certainly has incentive to 3 make economical wells. We're not in the business to drill dry holes for a fee. The majority of our properties Santa 5 Fe Energy once owned were put into this partnership. 6 So there's a great deal of incentive to 7 drill commercial wells. 8 Santa Fe Energy Company took properties Q 9 that they no longer desired to keep within the company and 10 transferred it over to this limited partnership? 11 No, sir, they transferred everything 12 with the exception of two properties, basically two, two 13 big -- two large properties and properties, heavy oil pro-14 perties in California and some properties in Wasson Field 15 in Texas; everything else in southeast New Mexico, Gulf 16 Coast, were transferred into the (unclear). 17 Your projection for drilling this well, Q 18 is based upon what anticipated price for the Mr. Green, 19 sale of the gas? 20 I can't answer that question. Α 21 You do not know or you cannot tell me? Q 22 I do know. I'm not going to tell you. Α 23 You're not going to tell me what the Q 24 price is? 25

You can just -- no, I don't know what

			16
1	the pric	ce is.	You'll have to address that to the person
2	who did	the econom	ics on it.
3		Q	Have you seen those economics?
4		A	No.
5		Q	Is the person here that ran those econo-
6	mics?		
7		A	Yes, he is.
8		Q	Is he going to be a witness?
9		A	He's here and been sworn in, I assume he
10	will.		
11		Q	Let me look at some of your correspon-
12	dence with you, Mr. Green.		
13			Correspondence issuing out of your of-
14	fice, I think, is all signed by you, is it? There's no one		
15	else that was working on this.		
16		A	That's correct.
17		Q	This was your your prospect, was it
18	not, sir	?	
19		A	Yes, sir.
20		Q	Am I correct in understanding that the
21	footage	location	shown on the October 25th letter, Exhibit
22	Number T	wo, is to	be 1980 from the north line and 2310 from
23	the east	line of 1	7?
24		A	That is correct.
25		Q	That is an unorthodox location, is it

17 1 not, Mr. Green? 2 I don't believe that to be an unorthodox Α 3 location for 320-acre spacing. Well, but you've asked for more than 5 320-acre spacing, haven't you? Have you seen the docket 6 for today's hearing, Mr. Green? 7 Yes, I have. Α 8 Q You have advertised and requested that a 9 spacing unit of 160 acres be formed for the northeast quar-10 ter provided you obtain production from gas formations that 11 are spaced upon 160 acres. Is that still your request? 12 Α Yes, it is. 13 A well located on 160 acres, then, would 14 be too close to the Bass properties in the James Ranch 15 Unit, wouldn't it? 16 That's correct. Α 17 It would only be 330 from the line. Q 18 That's correct. Α 19 This case is not advertised that way, is Q 20 it, sir? 21 Apparently not. Α 22 When we talk about the location for this 0 23 well you have shown me that you have corresponded with IMC? 24 Α Yes, sir. 25 They're the potash lessee. Q

18 1 Lessee. That's right. Α 2 Okay. In exchange for getting IMC's 0 3 concurrence in your location, have you agreed to give IMC anything? 5 Α No, sir. 6 Are you going to provide them with core Q 7 information through the potash interval when you drill the 8 well? Not to my knowledge. Α 10 Is that an item indicated in your AFE as 0 11 part of your costs of drilling and completing this well? 12 I do not believe so. Α 13 You have an item here, Number 36, says Q 14 "Coring and core analysis". Do you find that on your 15 Exhibit Number Four? 16 Α Yes. 17 MR. STOGNER: What item is 18 that, Mr. Kellahin? 19 MR. KELLAHIN: Yes, sir, it's 20 under intangibles, down at 36. 21 MR. STOGNER: Thank you, sir. 22 It says \$10,000 for coring and core ana-Q 23 lysis? Do you know what the coring program is for the 24 we11? 25 No, sir, I don't but our geologist will. Α

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1
                       All right, you said you were familiar,
2
    in response to Mr. Bruce's question, with the potash Order
3
    R-111-P?
               That's the new order that was issued by the Com-
    mission --
5
                       Yes, sir.
             Α
                       -- back on April of '88?
             Q
7
                       I'm sorry, I did not say I was familiar
             Α
8
    with it. I said I gave them notice pursuant to the --
9
                       You gave IMC notice pursuant to Order
10
    R-111-P.
11
                       Yes, sir, that's right.
             Α
12
                       Have you been informed or are you aware
             Q
13
           IMC determines their life of the mine reserves to be
14
    within Section 17?
15
             Α
                       No, I'm not.
16
                       Have they plotted that for you and given
             Q
17
    that to you?
18
                       No, they have not.
             Α
19
             Q
                       Do you know that the northwest quarter
20
    is precluded from drilling as a result of being within the
21
    confines of the potash life of the mine reserves for IMC?
22
             Α
                       Yes, I do.
23
                       You're aware of that.
             Q
24
                       Yes, I am.
             Α
25
             Q
                       You're aware that no portion of the
```

y

northwest quarter in the James Ranch Unit can be drilled from a surface location and comply with the R-111-P order, is that not true?

A Yes, I am.

Q So if the reserves in the northwest quarter are going to participate, whether they're from the surface to the basement, they're going to have to participate by a well drilled outside of that 160-acre tract.

A That's correct.

Q Mr. Green, let me show you on page eight of Exhibit B to the Commission Order R-111-P, on page eight I'm looking at Roman Numeral IV and its subparagraph A. I'll let you read this for yourself but it says, the BLM upon request will advise oil and gas lessees of the surface locations where wells will be allowed to develop the leases. Oil or gas leases covering areas designated a LMR by a potash lessee will be unitized to the extent possible with other areas where drilling is allowed.

Are you familiar with that provision?

A No, I am not.

Q Have you made an effort on behalf of your company to work out with Bass an arrangement whereby shallower production above the top of the Wolfcamp can be unitized with your acreage so that it can contribute?

A No, I have not, other than proposing to

21 1 join in an operating agreement to develop the south half of 2 Section 17. 3 Q When did you first make your proposal to Bass Enterprises, Mr. Green? 5 We made the proposal by letter dated Α 6 October 25th, I believe. 7 And that is the first contact you've had 8 with Bass Enterprises about participating in the well, is that not true? 10 Α No, sir, this well has been proposed, I 11 believe this is the third time this well has been proposed. 12 Bass proposed the well; Santa Fe proposed the well. It is 13 a prospect that Bass and Santa Fe have had over the years, 14 so it's not -- it's not a new idea. 15 The first proposal you've given me, Mr. 16 Green, the only one I have is your letter of October 25th. 17 Α That's correct. This is the latest pro-18 posal. 19 Q When we look at that latest proposal, 20 you sent it certified mail, did you not, sir? 21 Yes, I did. 22 When you turn to the third page of that 23 exhibit and you see the return receipt card to Bass Enter-24 prises, do you see that? 25 Yes, sir. Α

		22
1	Q	What is the date of delivery that Bass
2	got your letter?	
3	A	I believe it's November 1st.
4	Q	Let's turn to exhibit Number Five now,
5	Mr. Green. Exhi	bit Five is a copy of the application
6	you're sending B	ass for compulsory pooling for this pro-
7	ject?	
8	A	Yes.
9	Q	And it's under a letter dated October
10	31st, the day befo	re Bass gets your offer to participate in
11	the very well you'	re seeking to pool them?
12	A	That's correct.
13	Q	What period of time does your company
14	have for turning	around on proposed offers by others to
15	participate in wells that they might drill? How long does	
16	it take you to mak	e that decision?
17	A	I think it takes us a very short time to
18	make a decision.	
19	Q	Can you do it in one day?
20	A	Well, I can't answer that question.
21	Q	Have you provided Bass with an operating
22	agreement?	
23	A	No, I have not.
24	Q	Have you provided Bass with a proposed
25	gas balancing agre	ement?

A No, I have not.

2

Have you provided them with a drilling Q and completion program?

3

Α No, I have not.

5

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0 Mr. Green, let me show you what I'm going to mark as Bass Exhibit Number One and ask you, sir, did you receive this letter that Mr. Hanson wrote to you on November 9th?

8

Yes, I have.

9 10

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Mr. Hanson acknowledges, Mr. Green, in letter that he received your application to pool their interest, and he says in the last sentence of that paragraph, the first paragraph, he says, we want you to be aware that Santa Fe failed to either contact or consult Bass regarding the proposed well prior to filing the pooling application.

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I believe that would probably be incorrect because he noted receipt of my well proposal on Novem-

17 18

ber 1st. He wrote his letter on November 9th.

19 20

Q Well, that's consistent with receiving the certified letter notice on November 1st, is it not?

21 22

Α Yes, it is.

23

Okay. In his letter he also asks you to give him some information so he can make a decision, doesn't he?

24

1 Yes, he does. Α 2 He says, in this regard an operating 3 agreement -- you've talked to Jens on the phone about this, 4 haven't you, Mr. Green? 5 Yes. I have. 6 Hasn't -- hasn't Mr. Hanson asked you Q 7 for information about the well? 8 About the well? Yes, sir. Q 10 Yes, he has. Α 11 Q Sure, he has, and you haven't provided 12 it, have you? 13 Α Yes, he's been provided with everything 14 except the operating agreement. Santa Fe and Bass have 15 just drilled a well under an operating agreement and I 16 would think he'd have to make an assumption that we would 17 work out a mutually acceptable agreement under the same 18 terms that we just drilled a well under, and it's not going 19 to be a foreign item to Mr. Hanson when he sees our operat-20 ing agreement. 21 Well, if the assumption is that you and 22

Bass have worked out voluntary agreements before, can't we expect that you'll do so in this case rather than leveraging them with a forced pooling application?

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24

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No, sir. Our voluntary agreement was

25 done after a forced pooling was issued; not before. 2 Q Do you have a market for your gas, Mr. 3 Green? Yes, sir. Α 5 Q Who's going to take the gas? 6 Α I believe it's TransAmerica of Califor-7 nia? I could be --8 Are they a transporter or a purchaser? Q 9 A purchaser. Α 10 Q All right. 11 A I've been -- that's (not clearly under-12 stood) but I know we have a purchaser for our gas. I'm not 13 sure of the company. 14 With regards to these other working in-Q 15 terest owners within your own Federal lease in the north-16 east quarter --17 Uh-huh. Α 18 Q -- at the time you filed the pooling ap-19 plication on October 31st, what percentage interest did 20 Santa Fe Energy Operating Partnership have in that 160-acre 21 tract? 22 37-1/2 percent. Α 23 Has your Drilling Department or your 24 technical people provided you with a way by which you could 25 allocate the cost among the various potential formations

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26
1
    for this well?
2
                       I can't answer that question.
3
                       You don't know?
             Q
                       They haven't provided me. I don't know.
             Α
5
                       You haven't attempted to allocate or
             Q
6
    split the risk among the various formations and the working
7
    interest owners for your request?
8
                       I have not.
             Α
9
             Q
                       When do you propose to commence the
10
    well, Mr. Green?
11
             Α
                       This well is scheduled for a first
12
    quarter well next year; hopefully, sometime in January.
13
             Q
                       There are no expiring leases for the
14
    northeast quarter, are there?
15
                       No, sir.
             Α
16
                       That Federal lease is being held by
             Q
17
    Coquina Production or --
18
             Α
                       (Unclear) production.
19
                       (Unclear).
             Q
20
             Α
                       Santa Fe Energy Operating Partners, L.
21
    P. production.
22
                                 MR.
                                      KELLAHIN:
                                                 Thank you, Mr.
23
    Examiner.
24
                                 MR.
                                      STOGNER:
                                                 Mr.
                                                      Bruce, do
25
    you have any follow-up?
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MR. BRUCE: Yes.

## REDIRECT EXAMINATION

BY MR. BRUCE:

Q Looking at Exhibit Number One, Mr. Green, the northeast quarter of Section 17 is not within the James Rance Unit, is it?

A No, it is not.

Q And I believe you have, pursuant to Mr. Kellahin's questioning, you've acknowledged that Bass acreage in the northwest quarter of Section 17 is in a potash area or an LMR area.

A Yes, sir.

Q Because of that Bass really is under no obligation to drill, are they?

A No, they are not.

Q However, Santa Fe's leasehold in Section 17, you are under an obligation to develop that lease under the terms of your lease with the Federal government, are you not?

A And as a prudent operator you would normally develop that lease, and Santa Fe, to develop Santa Fe's leasehold to the north, with a well offsetting the well down in the south half. We, Santa Fe, has to drill its leasehold. It does not hold large acreage based Feder-

\_ .

28 1 units. Our acreage will disappear if we do not develop 2 it. 3 And isn't it correct that the only unit 0 available in the -- for a Morrow or Atoka well in Section 5 is the north half because of the Morrow Atoka Well in 6 the south half? 7 That's correct. Α 8 Now regarding Santa Fe Energy Operating Q 9 Partners, are you aware that Santa Fe Energy Company as a 10 general partner would have certain obligations to the lim-11 ited partnership to use its best efforts to drill wells? 12 Yes, I am. Α 13 Q And not drill dry holes, hopefully. 14 That's correct. Α 15 And regarding economic incentive, Santa Q 16 Energy Company is owned by Santa Fe Southern Pacific 17 Corporation, is it not? 18 Α That's correct. 19 And Santa Fe Southern Pacific Corpora-0 20 tion owns part of Santa Fe Energy Operating Partners. 21 Α That's correct. 22 So you do -- the company does have an Q 23 economic incentive, doesn't it? 24 Most certainly. Α 25 Regarding the potential unorthodox loca-Q

tion on a 160-acre spacing (unclear), Santa Fe may, either 2 through the hearing process or administratively, obtain 3 approval for administrative -- for an unorthodox well location if -- if there is a potential of 160-acre spacing 5 unit? Yes, it will. Α 7 Q And are you aware, Mr. Green, that Rule 8 R-111-P, which Mr. Kellahin relies on so much has not been adopted by the BLM? 10 Yes, I am. Α 11 And therefore all this talk about unit-12 ization and the unitization provision of that order is in-13 applicable? 14 Α Yes. 15 And looking at Exhibit Number Two in the 16 first or second paragraph, does that letter to Bass set 17 forth what type of operating agreement you would working 18 under? 19 Yes, it does. Α 20 And what does it say? 21 Α It says that we would propose they join 22

in the drilling of the well; we propose a mutually acceptable AAPL Form 610 1982 Model Form Operating Agreement.

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Q And finally, Mr. Green, you referenced a previous case with Bass that involved the Big Eddy Unit, I

believe, did you not? 2 Α Yes, I did. 3 And what was your history of dealing Q with Bass in that case? 5 After a number of months of negotiating Α 6 and during the negotiations Bass staked a location and 7 applied for a permit and then filed for a pooling order 8 during the negotiations and Santa Fe was not aware of it 9 until the forced pooling order showed up on our doorstep. 10 Q Thank you, Mr. Green. 11 MR. STOGNER: Mr. Kellahin --12 MR. BRUCE: That's all the 13 questions. 14 MR. STOGNER: -- any redirect? 15 MR. KELLAHIN: Yes, sir. 16 17 RECROSS EXAMINATION 18 BY MR. KELLAHIN: 19 Exhibit Number Two simply says a mutu-Q 20 ally acceptable model form operating agreement, doesn't it, 21 Mr. Green? 22 Yes, it does. Α 23 And is there a mutually acceptable model Q 24 form operating agreement that you've tendered to Bass for 25 this well?

31 1 Α No, I have not but we have just entered 2 mutually acceptable operating agreement within the 3 past two months. Q And those agreements vary from well to 5 well. 6 Α That's correct. This would be a similar 7 test. 8 Q A follow-up question to one that Mr. 9 was discussing with you and that is the relationship 10 between the James Ranch Unit and the Santa Fe properties in 11 the northeast of 17. 12 I correct in understanding that what 13 you're seeking to accomplish is the pooling of the interest 14 in the northwest quarter only for that spacing unit and 15 that particular well? 16 Α Yes, sir. 17 You would not use the forced pooling Q 18 mechanism by which then you would acquire an interest in 19 the unit in subsequent wells to be drilled in the unit. 20 Α No, sir. 21 MR. KELLAHIN: Nothing fur-22 ther. 23 24 CROSS EXAMINATION 25

BY MR. STOGNER:

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1
             Q
                       Do you have a copy of the application
2
    that you sent us, the OCD?
3
                       Yes, sir.
             Α
                       Am I missing something? Does it say
5
    anything about the well location?
6
                       No, sir, I believe that it just says at
             Α
7
    a legal location.
8
             Q
                       And in fact this is not a legal location
9
    for all proration units, so the advertisement is wrong.
10
                       No, sir, it is not. It's a legal loca-
11
    tion for a 320-acre spacing unit, which is our prime ob-
12
    jective, and hopefully, we'll be successful with a 320-acre
13
    spacing unit well.
14
             Q
                       Do you wish at this time to just limit
15
    your application to 320-acre proration units or do you want
16
    to go ahead and seek --
17
                       We'd
                             like to seek from the surface to
18
    the base of the Morrow.
19
                       Okay.
                               This case will have to be read-
             Q
20
    vertised for the December 21st hearing on that issue alone.
21
                                 MR.
                                      STOGNER:
                                                 Mr.
                                                       Kellahin,
22
    Mr. Bruce, can I see you in my office (unclear)?
23
24
                  (Thereupon a recess was taken.)
```

will come to order.

MR. STOGNER: This hearing

MR. KELLAHIN; Mr. Stogner, on

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Mr. Kellahin?

behalf of Bass Enterprises Production Company, we would request that you direct this case continued to the December 21st hearing before the same examiner a month from now so that we can proceed on with the case, if necessary, and by that time it will be readvertised and we will come again

MR. STOGNER: Mr. Bruce?

MR. BRUCE: That's acceptable,

Mr. Examiner.

and complete the case.

MR. STOGNER: In that case, Case Number 9528 will be continued to the Examiner's Hear-

ing scheduled for December 21st, 1988.

(Hearing concluded.)

## CERTIFICATE

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Salley W. Boyd Cor

I do hereby conity that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1988.

Heard by me on 22 Mov. 1988.

Examiner

Oil Conservation Division

1 2 3	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO  7 December 1988
5	EXAMINER HEARING
8	IN THE MATTER OF:
9	Application of Santa Fe Energy Operat- CASE ing Partners, L.P. for compulsory pool- 9528 ingEddy County, New Mexicco.
11 12 13 14	BEFORE: David R. Catanach, Examiner
15 16	TRANSCRIPT OF HEARING
17 18	APPEARANCES
19 20 21	For the Division:  Robert G. Stovall Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico
22 23	For the Applicant:
25	

MR. CATANACH: Call next Case 9528. Application of MR. STOVALL: Santa Fe Energy Operating Partners, L.P. for compulsory pooling, Eddy County, New Mexico. This case needs to be readver-tised and continued to December 21st, 1988. MR. CATANACH: Case 9528 will be continued and readvertised for December 21st. (Hearing concluded.) 

#### CERTIFICATE

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSP

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9508 heard by me on secondary 1988

Oil Conservation Division, Examiner

1 2 3 4	STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO  21 December 1988		
5	EXAMINER HEARING		
6			
7	IN THE MATTER OF:		
8	Application of Santa Fe Energy Operat- CASE ing Partners, L. P. for compulsory 9528 pooling and an unorthodox gas well		
9	location, Eddy County, New Mexico.		
10			
11	BEFORE: Michael E. Stogner, Examiner		
12	Birona. Hiomaci I. Scognor, Imaminor		
13			
14	TRANSCRIPT OF HEARING		
15			
16	APPEARANCES		
17			
18	For the Division: Robert G. Stovall Attorney at Law		
19	Legal Counsel to the Division State Land Office Bldg.		
20	Santa Fe, New Mexico		
21	For Santa Fe Energy Owen M. Lopez Operating Partners, L.P.: Attorney at Law		
22	HINKLE LAW FIRM P. O. Box 2068		
23	Santa Fe, New Mexico 87501		
24			
25			

		2
1	INDEX	
2		
3	GARY GREEN RECALLED	
4	Redirect Examination by Mr. Lopez	6
5		
6	CURTIS ANDERSON	
7	Direct Examination by Mr. Lopez	9
8	Cross Examination by Mr. Stovall	16
9		
10	MICHAEL R. BURTON	
11	Direct Examination by Mr. Lopez	20
12	Cross Examination by Mr. Stovall	27
13		
14	GARY GREEN RECALLED	
15	Redirect Examination by Mr. Lopez	34
16	Cross Examination by Mr. Stovall	34
17		
18	MICHAEL R. BURTON RECALLED	
19	Recross Examination by Mr. Stovall	37
20		
21	GARY GREEN RECALLED	
22	Redirect Examination by Mr. Lopez	41
23		
24		
25		

MR. STOGNER: Call next Case Number 9528, which is the application of Santa Fe Energy Operating Partners, Limited Partnership, for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico.

This case was heard on the Novembr 21st, 1988, hearing. At that time it was continued and readvertised for today.

We'll call for appearances.

MR. LOPEZ: If it please the Examiner, my name is Owen Lopez with the Hinkle Law Firm of Santa Fe, and I am taking the place of Jim Bruce, who was present at the hearing that was continued and he's unavailable today, and I think at the time the case was continued Mr. Gary Green was on the stand and I trust he will continue under oath and I believe Curt Anderson was also sworn at the time and he will continue under oath, and we have a third witness who was not present at the time the hearing was originally called and I would ask that he be sworn, Mr. Michael Burton.

MR. STOGNER: Let the record show that Mr. Green and Mr. Anderson have previously been sworn. If I might remind you, sirs, you all are both still under oath.

Mr. Burton, if you'd please

Examiner, as you will re-

stand and raise your right hand.

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(Mr. Burton sworn.)

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MR. STOGNER: You may be seated. Thank you. Mr. Lopez?

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MR. LOPEZ: Mr. Green.

Mr.

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call, when the case was originally heard, it was a contested case and Bass and Mr. Kellahin were opposing the

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application. I'm happy to report that today we were able to reach agreement with Bass and therefore they have with-

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drawn their opposition to our case and yet it's necessary

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for us to continue with our evidence because of other in-

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terest owners who have not yet signed up, and then we do

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not have a formal agreement with Bass, but we do have a

MR.

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letter of intent to enter into a formal agreement.

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Lopez, Bass Enterprises has withdrawn their objection.

19 20

MR. LOPEZ: Correct.

STOGNER:

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MR. STOGNER: Today, is that

Okay.

Mr.

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correct?

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MR. LOPEZ: That is a correct

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assessment based on its letter of intent that was reached this morning.

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MR. STOGNER: Mr. Lopez,

wasn't there another change made in this application today concerning a --

> MR. LOPEZ: Oh, yes, pardon

would also drop from our We

application the request to force pool the northeast quarter to form a standard 160-acre spacing unit. We are continuing with our request for the north half to form a standard 320-acre spacing and proration unit and with our request to form a standard 40-acre oil spacing and proration unit comprised of the southwest quarter of the northeast quarter.

Thank you, Mr. Examiner.

MR. STOGNER: Thank you, Mr.

I'll make note of that changes and at this time you Lopez. may continue.

## GARY GREEN,

being recalled to the witness stand and remaining under oath, testified as follows, to-wit:

## REDIRECT EXAMINATION

BY MR. LOPEZ:

Green, I think I would now ask you Mr. Q refer to what's been marked for identification as Exhi-

bit Five-A and ask you explain who the record title owners of the leases are and the ownership of the area in question.

Exhibit Five-A is a second page of the title opinion that sets out the record title owner to the leases that we're (unclear) force pool, shown in two tracts, Tract 1 being the northwest quarter of Section 17, 23 South, 31 East, Eddy County, New Mexico, the owners being Perry R. Barr, Incorporated, 1/4; Sam R. Bass, Incorporated, 3/16th; Thru Line, Inc., 3/16ths; Robert M. Bass Group, Inc., 3/16ths; Lee M. Bass, Inc., 3/16ths.

Tract 2 being the northeast quarter of Section 17, 23 South, 31 East, Eddy County, New Mexico, with Pogo Producing Company, 37 -- my title opinion is -- does not show a change of ownership but I'm aware of Pogo Producing Company has assigned 50 percent of their interest to CNG Producing Company, who we also seek today.

Terra Resources, Inc., Primary Fuels, Inc., PW Production Company, Inc., Chessie Exploration Company, whose correct name or current name, change of ownership there also, is (not clearly understood), 25 percent.

Q Why does Santa Fe wish to drill this well at this time?

A Santa Fe feels that as a prudent operator this is the next logical step in developing and evalu-

1 ating Santa Fe's leasehold in the area. It is one offset 2 from a producing well, which we feel will help us evaluate 3 acreage Santa Fe owns to the north in the east half of Section 8 and Section 9 and in Section 10. 5 In your opinion will the granting of Q 6 this application be in the interest of prevention of waste 7 and protection of correlative rights? 8 Α Yes. 9 Were Exhibits One through Q Five-A 10 prepared by you or under your supervision? 11 Α Yes, they were. 12 I would offer MR. LOPEZ: 13 Applicant's Exhibits One through Five-A. 14 STOGNER: MR. If we haven't 15 done so, Exhibit One through Five-A will be admitted into 16 evidence at this time. 17 MR. LOPEZ: And that concludes 18 our testimony from this witness. 19 20 (Thereupon a discussion was had off the record.) 21 22 CURTIS ANDERSON, 23 a witness and being duly sworn upon his being called as 24 oath, testified as follows, to-wit: 25

# DIRECT EXAMINATION BY MR. LOPEZ:

Will you state your name and occupation,
please?

A My name is Curtis Anderson, employed by Santa Fe Energy Limited Partners, and I'm District Geologist.

Q Have you previously testified before the Commission had your qualifications accepted as a matter of record?

A Yes.

Q Are you familiar with the application of Santa Fe in Case Number 0528?

A Yes, I am.

MR. LOPEZ: Mr. Examiner, do you consider the witness qualified?

MR. STOGNER: His qualifications are so qualified.

Q Mr. Anderson, I would now ask you to refer to what's been marked Exhibit Six and ask you to identify and explain it, please.

A Exhibit Number Six is a production map of the area of this -- this prospect. On it we have the various gas wells that produce in the area, the producing formations from those gas wells are indicated in color on

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the legend at the bottom of the map. Santa Fe acreage is in stippled, and the cumulative production to a date of 7-1-88 is written alongside each well.

Over the last three or four years Santa Fe has been in a continuous drilling program within this area and developing our leasehold primarily to the south off of this mapped area.

with that phase of this operation at a stage where it -- it would make more sense now to develop our leasehold to the north, the wells basically in the south, southeast two-thirds of this map are producing wells that you can see that some of them are Morrow, some of them are Atoka, some of them produce from both intervals. Those are primary and secondary objectives that we have within this area and in developing our leasehold now to the north, you can see our proposed location of this case in the southwest quarter of the northeast quarter of Section 17.

So the purpose of this map is to show the producing wells, the formations they're producing from and the cumulative production for the area.

Q All right. I now refer you to what's been marked Exhibit Number Seven and ask you to explain what it shows.

A Exhibit Number Seven is a structure map

contoured on the top of the Lower Morrow formation and as it concerns the proposed location for this case, you'll note that the proposed location is on structural strike with the Atoka and Morrow producer in the south half of Section 17, and on the east flank of a structural nose which trends northwest/southeast across the prospect area.

Q All right. Now please refer to what's been marked Exhibit Eight and explain what this shows.

A In looking at Exhibit Number Eight, you'll have to refer to Exhibit Number Seven.

Exhibit Number Eight is a stratigraphic cross section A-A', which expands across the proposed location from northwest to the southeast. It begins up at A in the south half of Section 7, goes through the proposed location in the north half of Section 17, through the producing gas well in the south half of Section 17, down to the south half of Section 20, and finally to the south half of Section 21.

And the purpose of this is to delineate the primary objectives that we're drilling for at the proposed location, and also to highlight some secondary objectives that could possibly be present there.

Going through the cross section in this case, now, from the bottom up, you'll see the first objective, what I have labeled Paducah Sand Interval, and in

looking at the third well from the right on the cross section, you can see that's the well located in the south half of Section 17, the well that we're going to offset.

This well did produce from the Paducah Sand interval. It produced approximately half a BCF, or 500-million cubic feet of gas. It depleted, was -- the well was plugged back and perforated in -- in the Atoka in what I have labeled the Pure Gold Sand, and that well is currently producing from that zone. It has produced 304-million and is currently producing at a rate between 200 and 400 MCF per day.

This sand will be the subject of an isopach map that will be introduced later.

Moving up the hole or up the cross section, we see a blue interval which is labeled Atoka Limestone Bank, and we're way up above the Lower Atoka on the top one-third of the cross section.

The Atoka Limestone Bank is a secondary objective in the area, as is the overlying James Ranch Sand.

Both of these units are within the Atoka Clastics interval, as labeled in the cross section.

Other sands, for instance, on the far right log on the cross section, you can see other sands that are colored yellow, are also secondary objectives that

 are not named on this cross section. We feel these are pretty remote as far as productive objectives at our proposed location but they are also objectives that produced within the area.

Q Now I'd like you to refer to what's been marked Exhibit Number Nine and ask you to explain what this shows.

A Exhibit Number Nine is an isopach map of net clean sand from which I had labeled the Pure Gold Sand on the -- on the cross section. You can see that the orientation of this sand body is northeast/southwest across the proposed location. It is interpreted to be a marine bar sand, which would typically be oriented as it is in this interpretation on strike, structural strike.

You can see that the two purple colored gas wells are wells that produced from this particular horizon, and you can see that our proposed location in the north half of Section 17 should encounter this particular sand.

Q Okay. Do you have an opinion as to what the recommended penalty should be for any interest owners that elect to go nonconsent?

A Well, I realize that what I presented is a good case for drilling this particular location. It has our objectives and carries reserves that we intend to deve-

1 lop. Of course, when you deal with the sinuous and -- and 2 narrow nature of both Morrow and Atoka objectives in this 3 region, they do carry considerable risk as far as development from existing wells. I think that with this inherent 5 geological risk and the depth of the well, which is anti-6 cipated being drilled to 15,250 feet, and some later testi-7 mony which will explain the mechanical risks in drilling in 8 this particular area, that I think the risk we should ask for here is the cost plus 200 percent.

Q Is it your opinion that the granting of this application is in the interest of prevention of waste and protection of correlative rights?

A Yes.

Q Were Exhibits Six through Nine prepared by you or under your supervision?

A Yes, they were.

 $$\operatorname{MR.}$$  LOPEZ: Mr. Examiner, at this time I would offer Applicant's Exhibits Six through Nine.

MR. STOGNER: Exhibits Six through Nine will be admitted into evidence.

MR. STOVALL: Excuse me, Mr. Lopez, I'm jumping in here late, I realize, and I want to make sure if there's anything we need to address.

If I understand this applica-

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1 tion correctly, we're looking at forming a 320-acre stand-2 ard unit for the --3 MR. LOPEZ: For the gas wells 4 5 MR. STOVALL: designated 6 for the gas wells or the deeper gas formations, but you're 7 also looking at forming a 40-acre for your James Ranch Bone 8 Spring Pool, is that correct? 9 MR. LOPEZ: Correct. 10 MR. STOVALL: And are you 11 asking for the 200 percent penalty with respect to both 12 formations and depths? 13 MR. LOPEZ: Correct. 14 MR. STOVALL: Do you have --15 do you have additional witnesses or testimony with respect 16 to particularly the oil (unclear) and a risk factor asso-17 ciated with oil production? 18 I can comment on that. Α 19 MR. LOPEZ: I think we should 20 comment with this witness. This is our geologist. 21 MR. STOVALL: Well, let me 22 redirect the question, then, to the witness. 23 MR. LOPEZ: Right. 24 If this is the MR. STOVALL: 25 appropriate witness.

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#### CROSS EXAMINATION

# BY MR. STOVALL:

I'm going from what the Examiner has told me and what I've heard of your testimony, so if I, again, if I overlap with stuff you testified to when I wasn't here, please excuse me.

On what basis do you request the 200 percent risk factor penalty for the oil -- oil portion of the well, if you know?

A On this mapped area there are two wells that produce and have a 40-acre designation. The well in Section 16 of 23 South, 31 East, produced 157 barrels of oil from the Bone Spring formation.

The other well that I referred to is up in the northeast quarter of Section 6. It's also Bone Springs and it has produced 53,000 barrels of oil.

Other than that, there isn't any other oil production within this mapped area. We know of oil production in this township within approximately 4 miles and it's located to the east of our proposed location.

We also are aware of the potential of both the Bone Springs and Delaware formation in this area for producing oil. We have seen some shows in a number of the wells that we've drilled but we have not as yet tested

the -- whether these zones would be commercial or not.

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So we anticipate in this case evaluating these zones as we drill to the total depth and we would anticipate if we had -- had reasonable shows that would justify the additional expense after we deplete our deep zones we would perforate the oil zones on the way out of the hole.

And otherwise, the particular risk in finding -- finding an oil zone under 40-acre spacing in this area is very high.

MR. LOPEZ: Would you characterize this as a rank wildcat oil well?

A This would -- at this location or essentially anywhere on this -- this mapped area, outside of maybe a direct offset to a producing well up in Section 6, it would be considered a rank wildcat, yes.

Q When you're saying -- when you're saying this is a wildcat, what -- when you say it's a rank wildcat, what does that mean? Do you have a definition term or is that a judgment call, or do you --

A Well, in my case it's a judgment call.

Q You're not using, for example, the definition, the OCD definition of a wildcat well when you say that?

A No, sir, and I'm not even familiar with

that definition.

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Q So with respect to the Bone Spring well, if you will, would you attribute substantial or virtually all or what percentage of the penalty you're requesting would you attribute to geological risk?

A Geological, all of it.

Q That would be the risk of finding the --

A Risk of finding that zone.

Q As opposed to the mechanical risk, the difficulties to be encountered in the drilling, is that --

A I wouldn't experience much mechanical risk at all in drilling to a depth to where these zones would produce from. The --

Q Okay, go ahead.

A The mechanical risk involved in this area are the deeper, high pressured gas zones.

We did, in fact, drill in Section 33, Township 23 South, 31 East, a twin to a deep well. The deep well was productive in the Morrow formation, we had a good show, drill stem test in the Bone Springs. We twinned the well and I'm now in the process of plugging this well. It was a -- what appeared to us to be a good producing zone actually turned out to be a noncommercial reservoir.

Q With respect to the Morrow or deep gas wells, what percentage or portion of the risk would you at-

tribute to the geological?

A A smaller portion of the portion of the risk that you would attach to the deeper formations here. As you can see by the exhibits that I've shown, we're fairly confident we're going to find a producing zone. Of course the risk there is finding a zone that's commercial, and do you want a percentage?

Q If you could put a number on it, that would be helpful, yes.

A 40 percent.

Q Okay, 40 -- 40 percent of the 200 or a 40 percent risk factor attributable to the --

A 40 percent of the risk involved in -- in making a commercial producer out of either the Atoka or Morrow formations in this area. We feel that we have substantial geological experience and are fairly certain that we'll find our objective; however, as I mentioned before, there is considerable risk when drilling for these particular objectives. We've experienced in this area and other areas that -- that they can disappear, essentially.

MR. STOVALL: I have -- we have nothing further of this witness at this time.

MR. LOPEZ: Okay. I'd call my next witness, Mr. Burton.

20 1 MICHAEL R. BURTON, 2 being called as a witness and being duly sworn upon his 3 oath, testified as follows, to-wit: 5 DIRECT EXAMINATION 6 BY MR. LOPEZ: 7 Would you please state your name and Q 8 where you reside? 9 My name is Mike Burton and I live in A 10 Midland, Texas. 11 whom are you employed and in what Q Ву 12 capacity? 13 I'm employed by Santa Fe Energy Company Α 14 as their District Drilling Engineer. 15 Q Have you previously testified before 16 this Commission and had your qualifications accepted as a 17 matter of record? 18 Α No, sir. 19 Q Would you therefore briefly describe 20 your educational experience and employment background? 21 Yes, sir. I graduated from the Univer-Α 22 sity of Texas at Austin in August of 1978 with a Bachelor 23 of Science in petroleum engineering. 24 Also in August of 1978 I was employed by

Paso Natural Gas Company as an associate engineer and

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El

assigned to the Farmington office of that company.

For the next approximately 2-1/2 years I was in the Drilling Department with El Paso Natural Gas, supervising the drilling and completion of gas wells in the San Juan Basin.

In January of 1981 I was employed by Santa Fe Energy Company as a Drilling Engineer and assigned to the Amarillo, Texas, office, where I was involved in planning and drilling gas well in the Anadarko Basin of Oklahoma and the Gulf Coast of Texas.

In October of 1982 I was assigned to the Permian Basin District as a Senior Drilling Engineer and became involved in the drilling of gas wells in the Permian Basin District, which involves southeastern New Mexico.

And in January of 1987 I was promoted to District Drilling Engineer for Santa Fe Energy Company, a job which I presently hold, and I'm involved with the planning and supervision of all of our drilling activities in the Permian Basin District.

Q Are you familiar with the application of Santa Fe in Case Number 9528?

A Yes, sir, I am.

MR. LOPEZ: Mr. Examiner, I tender the witness as a qualified drilling engineer.

MR. STOGNER: Mr. Burton is so

qualified.

Q Mr. Burton, before we begin to discuss your experience in the are in question, I would ask you to refer to what's been identified as Exhibit Ten and ask you to explain what this exhibit shows.

A Yes, sir. Exhibit Ten is a copy of our approved application to drill the No. 2 Pure Gold "C" 17 Federal Well in Section 17 of 23 South and 31 East. The reason that we are submitting it at this hearing is to show to the Commission the extensive preparation that goes into the planning of the drilling of these deep, high pressure gas wells in Eddy County, New Mexico, on Federal acreage.

There are numerous exhibits attached to this application which indicate the top of blowout preventer equipment that we need to employ in these wells in order to contain the high pressures that we may encounter.

There's numerous references to the casing strings that we need to set to protect the fresh water sands that may be encountered and to case off the lost circulation zones which we may drill through and also to allow a well to be produced from the high pressure reservoirs should be encounter them at the bottom of the well.

Q Would you now describe the kinds of problems that you've encountered in the drilling of wells

such as the proposed well in the area in question?

A Yes, sir. We've drilled five wells in this township, the first one being drilled in July of 1986. That well took 58 days to drill to a depth of 15,050 feet.

We encountered a high pressure zone at 13,800 feet, where we were required to raise the mud rate to 12.7 pounds per gallon.

In December of '86 we drilled an offset to that well, taking 75 days to drill it; encountered high pressure zones at 14,285, which required mud weights of 13 pounds per gallon.

Our next well was drilled in August of 1987 and took 56 days to drill, again high pressure zones.

The fourth well took 74 days, again another high pressure gas well.

The fifth well took 50 days to drill, and I might take time to point out that this well was a dry hole. It was an immediate west offset to our first well, which was a commercial gas well. We had offset it to the east and to the south and made good producing gas wells, and offset it immediately to the west and had a dry hole.

Also in this area I'm familiar with wells drilled by Skelly Oil Company in 1974, which blew out at a depth of 14,595 feet. That's also in this township. It appeared to be, from the records, that this was a case

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of high pressure, low volume, because after the blowout was contained, the well was plugged.

The south offset to the well in question the Pure Gold "C Fed No. 1 was drilled in 1982. It required 172 days to drill and complete. They encountered high pressure zones in the Wolfcamp and Atoka formations and had to have mud weights of 13 pounds per gallon to drill them.

The area is extremely difficult to drill in because we go from drilling through zones that -- that are so weak that we may lose circulation, and then proceed on to zones that are abnormally high pressures, which may cause the well to blow out if proper drilling techniques aren't employed.

Q I'd now ask you to refer to what's been marked as Exhibit Eleven and ask you to explain what this is intended to show.

A Yes, sir, Exhibit Eleven is the drilling schedule that I prepared that shows the formation tops for the Pure Gold "C" Federal No. 2, and general instructions that relate to the reporting to our office about the drilling progress of this well.

On page two is the drilling procedure that we would employ that itemizes the size of hole that we will drill, where we will be setting casing, the pressure

testing of the various BOP equipment involved, and the type of cement to be used in cementing the casing; type logs to be run, and the various depths that these logs would be run.

On page three is the casing program and it indicates the size of the casing that we would run in the wells, as well as the extremely high strength casing that is necessary to be employed in order to contain the high pressures that we expect to encounter.

The fourth and final -- the fourth page indicates the wellhead equipment, the cement program, the drilling fluid program, and the logging program, in a little more detail than previously reported.

And we offer this into evidence as further indications of the extremely difficult task that we face in drilling wells of this type.

Q Are these expensive wells?

A Yes, sir, they are. I believe the cost estimate that we've previously submitted into evidence indicates that in order to complete this well we will have invested almost \$1-1/2 million.

Q What is your opinion as to the risk factor that should be applied against nonconsenting interest owners in the well?

A Based on my experience having drilled

1 wells from the northwest portion of this state to the 2 southeast portion of the state, there are no more diffi-3 cult wells to be drilled and I believe that the maximum penalty should be assessed. 5 Q Ιs it your opinion that the granting of 6 application is in the interest of prevention of waste 7 and protection of correlative rights? 8 Yes, sir. Α 9 Q Were Exhibits Ten and Eleven prepared by 10 you or obtained by you from company records? 11 Yes, sir. Α 12 MR. LOPEZ: Mr. Examiner, at 13 this time I would offer Exhibits Ten and Eleven. 14 MR. STOGNER: Exhibits Ten and 15 Eleven will be admitted into evidence at this time. 16 LOPEZ: I have no further MR. 17 questions of this witness. 18 MR. STOVALL: Mr. Lopez, have 19 you discussed or presented evidence with respect to dril-20 ling and operating (inaudible)? 21 MR. LOPEZ: Yes, Mr. Green did 22 at the first hearing, as I understand it. 23

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#### CROSS EXAMINATION

2 BY MR. STOVALL:

Q Have you lost a well out here that was going to these depths?

A I prefer to use the term that we've to start over drilling after we've initially drilled the -- initially started drilling the well, yes, sir.

Q When -- when you say "start over", what do you -- what do you mean?

A We encountered drilling problems and in a particular case that I'm -- I'm -- that I recall, further to the northwest here, we lost circulation in the Capitan Reef formation and our drill string became stuck, and we were in the process of becoming unstuck, the drill string parted, and we were unable to recover the -- the portion that we had left in the well, and because of that it was more economic for us to plug that well and move the rig 100 feet over and commence drilling operations once again.

Q Now the difficulties, drilling difficulties you have described in either 10 or 11, I believe, --

A Yes, sir.

Q -- those -- all those costs would be part of the costs that you would recover, is that correct?

A Yes, sir.

Q From -- from the nonconsenting -- or

1 consenting parties, for that matter, they would be -- all 2 of those costs of heavy mud or additional preventive 3 measures for pressure control, would be part of the cost to be paid. Yes, sir, and those were anticipated in 6 the cost estimate. 7 And you heard, I believe, the testimony Q 8 of I believe your geologist with respect to the geological 9 risk regarding the Morrow and Atoka prospects as being --10 well, roughly 40 percent of the risk factor involved in 11 drilling of the well? 12 Yes, sir I heard those, yes, sir. Α 13 And you also heard his testimony that Q 14 there's a great likelihood of hitting productive zones. 15 Α Yes, sir. 16 Q And it sounded to me as if his question 17 question of whether or not it would be a commercial 18 It probably would discover some gas but the question 19 would be whether it would be commercial, is that -- is that 20 your understanding of what he said? 21 Yes, sir. Α 22 Do you have any concerns in that area? Q 23 Yes, sir. A 24 Now you're saying "commercial", what do Q

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you mean by a commercial well?

A That would -- that it would pay out the cost involved in drilling the well.

Q So to I understand, then, that you feel that -- let me ask you first, do you concur in his analysis or assessment that approximately 40 percent of the risk, if you will, is geological and presumably the balance of whatever risk there is would be mechanical?

A Well, sir, Curt is the geological expert and I would -- and I've worked with him for five years and so I would go with his judgment on the geological risk.

I don't feel qualified to -- to answer the geological questions.

Q I understand that. I guess what I'm asking you is if the -- assume that the total risk of drilling a well is 100 percent, to get to the maximum risk factor, do you agree that there's roughly 60 percent mechanical risk in drilling a well, based on your perspective?

A I'm a little --

Q I have some more questions that will follow that will perhaps help you, but --

A Okay.

Q Why don't you give me an assessment of what the mechanical risk is in justifying a maximum risk factor. We've got the two elements, the geological and the

mechanical.

A Well, sir, I believe that -- that these risks in my mind, the most difficult wells should be awarded the highest risk and therefore the highest penalty involved in (unclear) the working interest owners that choose to join the well.

Det me use some hypotheticals here for a moment. If you've got a difficult and expensive well to drill, but it is drilling to a formation that is virtually guaranteed to produce a commercial well, that is, a well by your definition that will pay out, would that in your opinion be entitled to a maximum risk factor?

A Yes, sir.

Q Why is that?

A Because with any difficult drilling operation, even though the engineer may have used the -- the -- his best efforts in preparing the cost estimate, the actual cost of drilling the well might be considerably more than -- than was anticipated.

Q But if that were, in fact, going to -going to pay out, assuming that we're not completely astronomical in the cost, there's actually not a great deal of
risk involved in that, is there? There may be a great deal
of expense but there may not be a great deal of risk.

A I think there's a great deal of risk in-

volved in the drilling of these wells in southeastern New Mexico.

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Q I'm not sure we're communicating exactly clearly. Is the risk that you won't achieve pay out or is it the risk that you will spend a lot of money?

5

A Both.

6 7

Q Both?

Q

8

A Yes, sir.

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105, 511.

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that there is a -- because of the potential cost as com-

So you feel that in this area, then,

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pared with the probability of making a commercial recovery,

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that there is substantial risk that your well will not in

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fact be commercial as you've described it because it won't

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pay out those substantial costs, is that what you're

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saying?

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A Mr. Examiner, I believe that it is impossible to predict with certainty the amount of gas that is in these formations three miles below the ground. My previous testimony indicated producing gas wells that were immediately offset, that a prudent geologist recommended drilling a well immediately offsetting a commercial gas well, which was eventually plugged and abandoned because the producing formations were not there.

So, that -- this is a very high risk

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venture.

Q I think that answered my question.

record.

MR. STOVALL: Mr. Lopez, and I don't believe you were here for the original portion of (unclear) I quite -- I'm sorry, I'm going to mess the record up and I hate to do that, I don't have any further questions of this witness.

I do have some questions for you, Mr. Lopez, -- some discussion with Mr. Lopez I guess I should say, it's not examination concerning some other matters with -- that are at issue in this matter.

MR. STOGNER: Are there any other questions for Mr. Burton from anybody?

If not, he may be excused.

MR. STOVALL: Let's go off the

(Thereupon a discussion was had off the record.)

MR. LOPEZ: Mr. Examiner, it's -- of the record we felt it would be helpful to refresh the parties' memories with respect to the request of Santa Fe Energy regarding its recommendation as to the amount that should be paid for the supervision and administrative expenses associated with the proposed well and the justification therefore, and so in this respect, I would ask we

1 recall Mr. Green to the stand and for the purpose of in-2 quiring into these matters, and I would ask that he re-3 peat for the record what he recommended when the case was first heard in November and the basis for his recommenda-5 tion at the time. 6 MR. STOVALL: For the record, 7 let's just clarify that Mr. Green -- you were not sworn 8 today, were you? 9 MR. GREEN: No, I was not 10 sworn. 11 MR. STOVALL: But you were 12 sworn in the original proceeding and this is a continua-13 tion, Mr. Examiner, of that hearing, so you are still under 14 oath. 15 MR. LOPEZ: Yes, and that's no 16 (unclear) because he has testified today, also, and intro-17 duced a couple of new exhibits while you were not present. 18 MR. STOVALL: Okay, I'm sorry. 19 MR. LOPEZ: We're clear on 20 that. 21 22 GARY GREEN, 23 being recalled as a witness and remaining under oath, 24 testified as follows, to-wit: 25

# REDIRECT EXAMINATION

BY MR. LOPEZ:

A Santa Fe recommends that the drilling overhead rates be \$6000 per month for a producing well. We would recommend \$600 per month be allowed.

As my company, as a rule, to these deep gas wells and deeper, we use 40 cents per foot. This is a 15,000 foot well, computes to \$6000. We've also drilled several wells in the area that we talked about earlier. These rates have been agreeable to the parties that joined and participated in those wells, on four or five other wells in the same township and range. We feel that they are acceptable to our industry partners who participate.

MR. STOVALL: Do you have any further questions of the witness on that?

I do, if you do not.

MR. LOPEZ: No, I don't.

BY MR. STOVALL:

Q Mr. Green, are you familiar with the Ernst and Whinney surveys of the average overhead drilling and operating costs?

CROSS EXAMINATION

A Yes, I am.

Q What would those costs be in this area

for wells of this depth?

A I believe 15,000 to 20,000 feet wells in Ernst and Whinney the 1988 median is somewhere around 5600 for a drilling well and 560, 530, something like that, for a producing well.

Q Now, you've indicated that your sort of rule of thumb, if you will is 40 cents a foot?

A Yes, sir.

Q That's for any well?

A No, sir, that's -- that's limited -- we don't drill very many shallow wells, so if it were a shallow well that would not be our rule of thumb. We'd back up to see what would be reasonable in the area, and we feel these are reasonable and have been -- and are acceptable.

Q It appears that those, those numbers maybe a little bit high, somewhat higher than the Ernst and Whinney averages you testified and somewhat higher than other costs that we've seen.

What is there in the nature of the operating of the overhead charges, charges that would be recovered by these costs that increases with respect to depth or difficulty of drilling?

A I don't think I'm qualified to answer that. I'm not that familiar with these -- these costs

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other than they are -- you might could get Mr. Burton to address those -- that item.

Q Do you know what these costs cover? Could you just briefly describe that?

A I need to look at an operating agreement; not off the top of my head, no, I don't.

MR. LOPEZ: I would suggest we have Mr. Burton address that. I think our position, Mr. Stovall, is that there are no higher risk, more difficult wells to drill in the State of New Mexico, than the subject wells.

MR. STOVALL: I don't think I -- I don't think I disagree with that, Mr. Lopez. I guess my question is to what extent -- what basis is there in that fact that creates additional overhead and supervision costs that are covered by this, and I'm -- would just like you to put that on the record, if you can, and I can do it in the form of cross or would you like to --

MR. LOPEZ: No, I think that would be excellent and I think Mr. Burton, could you respond to that, and would you at this point?

 $$\operatorname{MR.}$$  STOVALL: I have no further questions of Mr. Green, then, at this time.

MR. LOPEZ: Okay.

MR. STOVALL: I guess he can

be excused.

MICHAEL R. BURTON,

being recalled as a witness and remaining under oath, testified as follows, to-wit:

#### RECROSS EXAMINATION

BY MR. STOVALL:

A Mr. Stovall, I'm --

Q I'm sorry, Mr. Burton, let's do this again for the record. Let me ask you the question rather than have you answer a question that I've asked Mr. Green.

A Okay.

Q You heard Mr. Green testify as to the reasons for requesting the 6000 and 600 overhead costs and you've heard my comment to him with respect to why those costs -- having some concern that those costs would be increased with difficulty.

Are you prepared to explain why a deeper, more difficult well would incur greater overhead supervision cost than, say, a shallower of less difficult well?

- A Yes, sir, I am.
- Q And what are those reasons?
- A Well, the -- the deeper, more difficult

wells require more close supervision by more people from the operator than the shallower, more simple wells.

Also, if -- if I could, I would like to emphasis the word "average" in those Ernst and Whinney numbers, that even though that \$5600 is an average, it is arrived at by -- by some wells requiring higher operating rates and some wells requiring lower operating rates, and that this -- this very deep, difficult well is within 10 percent of that average.

Q So if you'd say your 40 cents per foot rate, would you need to adjust that rate, say, if you were to drill a shallower well or would the fact that you were at a lower depth, would you automatically reduce the product of 40 cents times the depth to take care of reducing that rate for a shallower, less difficult well?

A I'm not familiar with the exact history of how that 40 cent figure was arrived at; however, I do believe Mr. Green testified that it's -- that it has been previously accepted and is common to the area.

Q Do you know specifically other wells in which that's been accepted as an operating rate?

A If -- if my memory serves me correctly, it's been accepted in all five of the deep, high pressure, Morrow-Atoka wells that we've drilled in this -- in this section -- in this township and range.

Q Were any of those, did any of those involved a forced pooling? Has it been approved in any other forced pooling cases?

A I'm no -- I'm not familiar with the -- with that.

Q Do you know of any other operators in the area that are drilling comparable wells and what their rates might be, getting very specific in there, of your own personal knowledge other than (not clearly audible)?

A No, sir, I don't.

Q You haven't participated as a working interest owner under other operators in these depths?

A Yes, sir, Santa Fe Energy Company has.

My responsibility as the District Drilling Engineer requires that virtually all of my time be spent on the wells that we ourselves operate.

MR. STOVALL: I have no further questions of this witness.

MR. LOPEZ: Mr. Stovall, I think Mr. Green does have the answer to the question you have.

MR. STOVALL: I just love bouncing back and forth between witnesses. I would leave it to your discretion if you wish to recall him to do that, Mr. Lopez.

1 LOPEZ: Well, I think in MR. 2 to -- if there is a question about justifying this order 3 charge that we're recommending, I think it is helpful to for the record that not only the five previous wells 5 that were drilled in this area, that where voluntary oper-6 ating agreements were entered into, contained the numbers 7 recommended, but that, I believe Mr. Green can testify that 8 in cases of forced pooling this was a charge that was also 9 applied. 10 MR. STOVALL: So you would 11 like to recall Mr. Green? 12 MR. LOPEZ: So I would like to 13 recall Mr. Green just for the purpose to ask him, if you 14 don't mind, if he is aware of any forced pooling cases in 15 the area in question as to what the charges were applied. 16 MR. STOVALL: Let's get the 17 Examiner's permission to recall him. 18 MR. LOPEZ: Ι quess it was 19 yes. 20 21 GARY GREEN, 22 being recalled as a witness and remaining under oath, 23 testified as follows, to-wit:

REDIRECT EXAMINATION

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BY MR. LOPEZ:

Q Go ahead.

A The Sterling Silver Federal 34 No. 1 was under forced pooling, was force pooled, and these rates were acceptable at that time.

MR. STOVALL: By this Division?

A Yes, sir. As a matter of fact, there was some question involved that and I delivered an operating agreement that we had previously used out there showing that the operators had -- that the other operators had agreed to these rates.

MR. STOVALL: I think that -I think perhaps if you could, after we conclude this, find
that order and identify that, unless you know the number
off the top of your head. Do you know the number, the
order number off the top of your head?

A No, sir, I do not.

MR. STOVALL: If you could do that after the conclusion of the hearing, identify the order and -- is that the only one that you're aware of?

A That's the only one in this area that I'm aware of that we force pooled.

MR. STOVALL: Are you aware of any other operators that have similar overhead costs for

I

have no

Does anybody

1 similar wells? 2 Α We just recently drilled a well with 3 and Bass the operator, Big Eddy 102, I believe their rates for an 11,000 foot well, I believe theirs was 40 5 cents a foot and it was 450 and \$400 and it computed back 6 to about 40 cents a foot. 7 MR. STOVALL: 8 further questions, Mr. Examiner. 9 MR. STOGNER: Anything further 10 of any of these witnesses? 11 You may be excused. 12 Mr. Lopez, do you have any-13 thing further in this case? 14 MR. LOPEZ: No, Mr. Examiner. 15 MR. STOGNER: 16 else have anything further in Case Number 9528? 17 This case will be taken under 18 advisement. Hearing adjourned. 19 20 (Hearing concluded.) 21 22 23 24

#### CERTIFICATE

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Saly W. Boyd COR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9578. heard by me on 21 December 1988.

Oil Conservation Division