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4 VIRGINIA OIL AND GAS BOARD
5

6 HEARING OF MAY 16, 1995
7

8 9:15 A.M.
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10 AT THE SOUTHWEST VIRGINIA
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12 4-H CENTER
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14 ABINGDON, VIRGINIA
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May 16, 1995

This matter came on to be heard on this the 16th day of May, 1995 before the Virginia Gas and Oil Board at the Southwest Virginia 4-H Center, Hillman Highway, Abingdon, Virginia pursuant to Section 45.1-351.19.B and 45.1-361.22.B of the Code of Virginia.

MR. CHAIRMAN: Good morning. My name is Benny Wampler and I'm Deputy Director for the Virginia Department of Mines, Minerals and Energy and Chairman of the Gas and Oil Board. I'd ask the Board members to introduce themselves.

(MEMBERS INTRODUCED.)

ITEM I

1
2
3 MR. CHAIRMAN: The first item on today's agenda is a
4 petition from Equitable Resources Exploration for
5 rehearing of docket number VGOB-93/03/16-0345. That's
6 today's docket number VGOB-94/08/16-0461. We would ask
7 the parties that wish to address the Board in this
8 matter to come forward at this time.

9 MR. KAISER: Mr. Chairman, members of the Board, I'm Jim
10 Kaiser on behalf of Equitable Resources Exploration.
11 We'd ask at this time that this matter be continued
12 until June.

13 MR. CHAIRMAN: Do you want to give us any additional
14 information? Have you made attempts to contact Mr.
15 Yeary?

16 MR. KAISER: We are once again -- at least in my belief --
17 very close to finishing this negotiation process. I
18 have kept Ms. Riggs apprized of what's going on and
19 probably at the end of the hearing today we've got a
20 couple of other things to run by her. But I feel
21 confident that we will be hearing or not hearing -- I
22 think we'll have Emmitt's problem taken care of by the
23 third Tuesday in June.

24 MR. CHAIRMAN: Any objection to the continuation? All
25 right. It's continued.

ITEM II

1
2
3 MR. CHAIRMAN: The next item on today's agenda is a petition
4 from Equitable Resources Exploration under Section
5 45.1-361.21 for an order to modify a previous forced
6 pooling of a conventional gas well identified as P-308.
7 today's docket number VGOB-94/10/24-0481-01. We'd ask
8 the parties that wish to address the Board in this
9 matter to come forward at this time.

10 MR. SWARTZ: Mark Swartz representing the applicant,
11 Equitable Resources Exploration.

12 MR. CHAIRMAN: The record will show there are no others.

13 MS. RIGGS: We received a telephone call just a few minutes
14 ago from Henry Tuling Stout who's an attorney in Big
15 Stone Gap representing Harry and Glen Anderson who are
16 residents of California I think he represented. He
17 says that he is faxing in a letter to be put into the
18 record on this matter. My understanding is that
19 there's a quiet title suit pending in the Circuit Court
20 that was amended in February of this year due to some
21 -- the title examiner's disagreement with the Ander-
22 son's title. And his position with regard to that
23 quiet title action is what is being addressed in his
24 letter and it was my understanding from what he said
25 that they don't object to the repooling but they're

1 objecting to the escrowing of the funds on the basis
2 that a lessor cannot question a lessee's title under
3 Virginia law. That was the basis he gave me. And that
4 letter has not come in yet. So when it gets here I
5 guess we can address what he says.

6 MR. SWARTZ: He's faxing it?

7 MS. RIGGS: That's what he said.

8 MR. CHAIRMAN: Tom, would you check, please, and see if the
9 fax is here. It was to be faxed here as we understood
10 it.

11 MR. MASON: There's someone with a fax now.

12 MR. CHAIRMAN: There it is.

13 MR. MASON: What did you say the basis was again?

14 MS. RIGGS: It was a real brief conversation. What he said
15 is under Virginia law that a lessor cannot question a
16 lessee's title and that the question to title was a
17 result of the applicant's examination of title. I
18 don't know. That's just what he -- he didn't give me a
19 cite to that proposition.

20 MR. SWARTZ: Well, it's actually a typical principal in that
21 if you take a lease from somebody it's usually under-
22 stood to be acknowledgement that they have title and
23 you're estop to claim adverse possession during your
24 tenancy or whatever. The problem is it's not -- I'd
25 also point out we don't have a lease with these

1 people. It would be a deemed to have leased situation.
2 But the escrow situation is something that's mandated
3 by statute which is really why we're here today. So
4 once Sandy gets a chance to read that and we look at it
5 we'll --

6 MR. MASON: Well, certainly the lessee's title couldn't rise
7 any higher than the landlord's.

8 MR. SWARTZ: Right. I mean, the problem here is that the
9 Andersons are actually the plaintiffs in this quiet
10 title action which surfaced subsequent to this unit
11 originally being pooled. We're here today to pool the
12 defendants in the quiet title action so regardless of
13 how it turns out we got the right parties. That's the
14 reason --

15 MR. MASON: So you all treated the plaintiff's -- in the
16 original pooling action the plaintiff's were among the
17 group of people pooled. The defendants were not?

18 MR. SWARTZ: Correct.

19 MR. MASON: And you're just expanding the pooling to include
20 the defendants?

21 MR. SWARTZ: Correct. So depending on how the quiet title
22 action turns out we've got the right people before the
23 Board.

24 MR. MASON: They must be concerned that including the
25 defendants gives them some color of title?

1 MR. SWARTZ: No. I think they're just concerned they want
2 their money on an ongoing basis on the assumption that
3 they're going to be victorious which is a problem.

4 MR. CHAIRMAN: I'll ask Tom to make copies to distribute.
5 We'll go ahead with the hearing and we'll just have
6 that as part of the record.

7 MR. SWARTZ: The hearing's probably going to be fairly
8 short. You might ask if there's anybody else here,
9 Benny. If not I'd like to incorporate the prior record
10 and just deal with that's happened subsequent to today.

11 MR. CHAIRMAN: All right. The record will show there are
12 no others here. You may proceed.

13 MR. SWARTZ: I would like to incorporate then into today's
14 record the record that was made when this case was
15 previously heard at the Breaks. It would have been a
16 hearing on October 24th, 1994 in docket number 94/10/-
17 24-0481. There was an order entered after that
18 pooling hearing. Actually that hearing created the
19 unit since it's a conventional unit and also pooled
20 outstanding interest in the unit. An order was entered
21 subsequent to that hearing creating a unit and pooling
22 it on December 12th, 1994. The current application, if
23 you would look at the amended Exhibit #A which is a
24 next to this application there's a Tract 12 down at the
25 bottom of the center of the plat here. That tract was

1 subject to pooling in the October hearing and at that
2 time, if you look at Exhibit #B and go to Page 2 of 4,
3 you'll see that there's Tract 12. At the time of the
4 October hearing Harry K. Anderson and C. Glen Anderson
5 and his wife Phyllis were the respondents with regard
6 to Tract 12 and they were, in fact, named as respond-
7 ents and their interest was pooled. Ultimately,
8 shortly before the October hearing, Equitable Resources
9 and Virginia Gas worked out an arrangement with regard
10 to the acreage that Virginia Gas had in this unit and
11 they had a lease from Harry and Glen Anderson. And
12 those people were pooled but there really wasn't an
13 election right because their interests were already
14 leased. In the prior order entered in December defined
15 that and explained that which I'm sure you're aware of
16 it. Then all of the rest of the people in today's
17 paperwork after Harry K. Anderson and C. Glen Anderson
18 are parties identified in the quiet title action and
19 that's what we're talking about today. I'd like to
20 have George sworn and cover a little bit of information
21 with regard to these people to sort of update you we to
22 where we stand today.

23 COURT REPORTER: (Swears witness.)
24
25

1 GEORGE B. HEFLIN

2 a witness who, after having been duly sworn, was examined
3 and testified as follows:

4
5 DIRECT EXAMINATION

6
7 BY MR. SWARTZ:

8 Q. State your full name for us, please.

9 A. George B. Heflin.

10 Q. George, who do you work for?

11 A. Equitable Resources Exploration, Kingsport, Tennessee.

12 Q. Do you have a title?

13 A. Yes. Landman acquisitions.

14 Q. Are you involved in the course of your responsibilities
15 for Equitable in the title issues involved in develop-
16 ing drilling units and pooling those units?

17 A. Yes, I am.

18 Q. Was an application to modify a prior order entered with
19 regard to unit P-308 filed and is it what we're dealing
20 with this morning?

21 A. Yes.

22 Q. Did you do the updated title information with regard to
23 Tract 12?

24 A. Yes, I did.

25 Q. Could you tell the Board what it is that has occurred

1 since October since the October hearing that required
2 us to come back?
3 A. We discovered that a quiet title action had been filed
4 on Tract 12 where the Andersons are wanting to clear up
5 title to give them 100 percent interest in Tract 12.
6 We reviewed the quiet title action and had named all
7 parties within the quiet title action to include them
8 in our unit pending outcome of the law suit.
9 Q. The respondents that we have named in this application
10 to modify are all of the people including Harry and
11 Glen Anderson listed in Exhibit #B with regard to Tract
12 12. is that correct?
13 A. That's correct.
14 Q. And those are the respondents listed in the notice of
15 hearing?
16 A. That's correct.
17 Q. The notice of hearing and the little Exhibit A-1 map
18 was published, is that correct?
19 A. Yes.
20 Q. In what newspaper?
21 A. That would have been in the Bristol Herald.
22 Q. And proof of publication has been filed with Mr.
23 Fulmer's office, is that correct?
24 A. That's correct.
25 Q. And that newspaper publication occurred on April 23rd,

1 1995, correct?

2 A. That's correct.

3 Q. Also to the extent that we had addresses those address-

4 es are listed in Exhibit #B, is that correct?

5 A. That's correct.

6 Q. And to the extent that addresses were available is it

7 true that the notice of hearing and application and

8 exhibits were mailed to everyone for whom we had

9 addresses?

10 A. That's correct.

11 Q. And the proof of mailing has been filed with Mr.

12 Fulmer's office?

13 A. Yes.

14 Q. Is it true that everyone for whom we had an address

15 with one exception has signed for the mail?

16 A. That's correct.

17 Q. And in one instance we have not received word from the

18 post office either that the mailing has been returned

19 or that it has been signed?

20 A. To my knowledge that's correct.

21 Q. Since the original application and the pooling order

22 resulting from the October hearing were you, in fact,

23 able to lease an additional one percent of the unit

24 pertaining to Tract 11?

25 A. Yes, we did. We leased the Alfred and Henretta Compton

1 estate, leasing their heirs.

2 Q. In October when we were before the Board there was

3 20.60 percent outstanding, correct, and now there is

4 19.60 percent outstanding?

5 A. That's correct.

6 Q. This application, however, seeks simply to pool the

7 balance of the parties to the quiet title action

8 pertaining to Tract 12 and the 2.48 percent interest

9 associated with Tract 12?

10 A. That's correct.

11 Q. Harry K. Anderson and Glen Anderson have already had

12 election options afforded to them, correct? Strike

13 that.

14 A. No.

15 Q. They have not?

16 A. No, they haven't because they were leased.

17 Q. To Virginia Gas. So in terms of this order we would

18 not need to afford them election options?

19 A. That's correct.

20 Q. With regard to the balance of the folks listed as

21 respondents, however, pertaining to the quiet title

22 action in Tract 12 they would be entitled to election

23 options?

24 A. That's right.

25 Q. With regard to one issue on the quiet title action --

1 we have noticed Buddy Wallin, correct?

2 A. That's correct.

3 Q. And why have we noticed him?

4 A. He was named in the suit as guardian ad litem and we
5 actually notified him sort of as a curtesy matter to
6 let him know what is going on.

7 Q. But to the extent that there would be children involved
8 in this quiet title action either born or unborn Mr.
9 Wallin is their guardian and has been appointed by the
10 Court?

11 A. That's correct.

12 Q. And to the extent that ultimately there would be
13 election options to be exercised by children he would
14 be the person we would be dealing with?

15 A. That's correct.

16 Q. And that's why we've noticed him?

17 A. Yes.

18 (Witness stand aside.)

19 COURT REPORTER: (Swears witness.)

20

21 ROBERT A. DAHLIN, II

22 a witness who, after having been duly sworn, was examined
23 and testified as follows:

24

25

DIRECT EXAMINATION

BY MR. SWARTZ:

Q. State your full name for us.

A. My name is Robert A. Dahlin, II.

Q. And who do you work for?

A. I work for Equitable Resources as a production specialist.

Q. As part of your duties, Bob, do you review authorizations for expenditures concerning wells and the costs associated with those proposed wells and authorizations?

A. Yes, I do.

Q. With regard to unit P-308 did you, in fact, participate in and review the AFE that was used in October?

A. Yes.

Q. And is that attached to the application today?

A. It is.

Q. Did you then proceed to further review that again this spring to make sure that it still was a reasonable estimate with regard to the costs associated with this planned development?

A. Yes, I did.

Q. And you have signed it indicating that you reviewed and approved it again on April 6th, 1995, is that correct?

1 A. That's correct.

2 MR. SWARTZ: I think that's all I need to do to sort of
3 bring us up to date here on this repooling in terms of
4 additional testimony.

5 (Witness stands aside.)

6 MR. SWARTZ: I would kind of recap, though, in terms of the
7 order, the things that we need to address. First of
8 all we would need to afford election options to all of
9 the respondents with the exception of Harry and Glen
10 who have leased to Virginia Gas and were previously
11 pooled. So there would need to be an election option
12 extended to those respondents. With regard to escrow,
13 I have yet to see Henry's fax but Section 45.1-361.21.D
14 talks about a situation where any gas or oil owner
15 whose identity and location remain unknown at the
16 conclusion of a hearing concerning the establishment of
17 a pooling order -- basically what we have here is we've
18 got a collection of people who may be the owner but we
19 do not know who the actual owner is pending the outcome
20 of this litigation. So we need an escrow. It can be
21 done two ways. It can be an internal escrow which we
22 have occasionally used in the past or perhaps you
23 could use your escrow agent at Premiere Bank now or
24 Tazewell National. I don't know how you feel about
25 that, but the order coming from the Board needs to

1 address escrow and either needs to authorize Equitable
2 Resources to establish an internal suspense-escrow
3 account or it needs to direct them to escrow these
4 funds with the Board's escrow agent that in the past
5 you've used for coalbed methane. Either one would be
6 fine with us but you need to do that. With regard to
7 escrow there's also another wrinkle. There is 2.48
8 percent involved in this unit total. At this point
9 it's an undivided interest -- not in this unit. In
10 Tract 12 there's 2.48 percent interest in the unit.
11 It's an undivided interest. At this point it's subject
12 to litigation. We have been unable to break that
13 interest down further between the competing claimants.
14 And you'll notice with regard to Exhibit #B today that
15 each of the potential claimants -- defendants in the
16 quiet title action do not have a percentage of interest
17 associated with them because we frankly don't know what
18 it would be. So in terms of escrow we would recommend
19 to the Board that the entire one-eighth royalty
20 interest associated with this 2.48 percent on Tract 12
21 be escrowed. In addition, as we have seen in the past,
22 when ever you have minor children involved you need to
23 anticipate the possibility when an election occurs that
24 the child or the guardian might elect to participate.
25 Sandra Riggs and I have used some pretty standard

1 language to anticipate that problem to deal with escrow
2 and essentially what you wind up doing is escrowing the
3 royalty interests plus a working interest after
4 deduction for operating expenses that would be the
5 equivalent of your participation interest in the event
6 that some of these people would elect to participate
7 ultimately. So I would recommend that Sandra employ
8 the language that we have used in the past when we have
9 minors.

10 MS. RIGGS: Was that the Deaton case?

11 MR. SWARTZ: Deskins. And we've used it in some other
12 instances and I can find that language. I mean, here
13 we've already got a guardian appointed. A lot of time
14 we don't have. Normally we have solved those guardian
15 issues by leasing, going out and getting a lease and
16 getting the Court to approve it. We need to wait and
17 see who wins this really before we get into that. But
18 that is a possible resolution. So those are the
19 special considerations that you need to take into
20 account here with regard to Tract 12. That's all I
21 have.

22 MS. RIGGS: Did you say that both Harry and Glen and Phyllis
23 have voluntary leases with Virginia Gas who then
24 entered into agreements with EREX?

25 MR. SWARTZ: Right.

1 MR. CHAIRMAN: Questions, members of the Board? I think we
2 need to wait till we get these copies and just let the
3 Board members and let counsel read those. So if there
4 are no questions we'll just recess for five minutes.

5 (AFTER A BRIEF RECESS, THE HEARING CONTINUED AS
6 FOLLOWS:)

7 MR. CHAIRMAN: As I read this we have an objection to the
8 escrow portion and to adding additional whatever that
9 says. I can't read that.

10 MS. RIGGS: Owners.

11 MR. CHAIRMAN: Owners. It appears to me in reading this
12 what we have is a conflicting claim that's a private
13 matter, not a matter actually before this Board; that
14 any escrowing that were done would be something that
15 you volunteered to escrow internally.

16 MR. SWARTZ: Right.

17 MR. CHAIRMAN: I don't think that the Board would order
18 escrowing to its escrow agent on a conventional unit
19 where you had a conflicting claim of interest.

20 MR. SWARTZ: We have volunteered to escrow internally but we
21 need an order that says we can do that.

22 MR. CHAIRMAN: I understand. I understand what you're
23 asking.

24 MR. SWARTZ: I mean, to react to this objection I'll sort of
25 take a comment that -- it seems to me that the plaint-

1 iffs in a quiet title action have some difficulty
2 coming before this Board and saying that there is not
3 some problem that needs to be resolved. They may be
4 very confident that they're ultimately going to
5 prevail, but we are confronted here and we are all
6 aware of a piece of litigation, the quiet title at
7 Tract 12. And pending the outcome of that litigation I
8 think we have an unknown owner situation even though
9 this is a conventional well that needs to be addressed
10 by an escrow. The statute's pretty clear.

11 MR. CHAIRMAN: We have two parties also not represented here
12 at the table today. Do we want to consider continuing
13 this till next time and give them an opportunity to
14 come here and present their case to the Board or be
15 present? What's your pleasure?

16 MR. SWARTZ: Well, I talked to one of these gentlemen on the
17 telephone last week. We had a very pleasant conversa-
18 tion. He had some questions which I answered. They
19 both had notice, signed for their mail. Harry Anderson
20 signed on the 21st of April and it's now May 16th.
21 Glen Anderson signed on April 18th. I mean, they've
22 had a month. My preference would be, so that we don't
23 have to keep coming back, to react to our request for a
24 modification. If they want to modify they can file an
25 application. But I think it's clear they've had

1 notice. I don't know why Henry Stout couldn't get in
2 his car and drive over here this morning. I mean, some
3 of you came from Big Stone Gap. I would resist an
4 adjournment for continuance.

5 MR. MASON: It seems to me the whole crux of this is that
6 subsequent to the original order for whatever reason
7 that started this, being sort of irrelevant to this,
8 that there is a pending legal matter that raises the
9 issue that there are other potential claimants to this
10 unit that were unknown or unaware of at the time the
11 original pooling order was entered. The crux of this
12 matter is to add those people to the pooling order. It
13 certainly would not be adverse to their interest to do
14 so. It, in fact, extends the protection of this
15 pooling order to their interests. And it seems to me
16 the only part of this -- what this objection is really
17 saying is they object to the addition of these parties
18 because as a result of that it will cause an escrow to
19 occur. It seems to me that it's impossible to be a
20 plaintiff in a suit claiming there's a conflict or
21 alleging this conflict of title that they asked the
22 Court to resolve and at the same time denying that
23 there's any conflict of interest as far as claimants
24 are concerned. I just don't see how those things can
25 exist together. What is the -- the people that are

1 saying that they are opposed to this are the people who
2 otherwise would not have a conflicting claim, correct?
3 The plaintiffs are saying but for the addition of these
4 parties, but for the Board including them in the
5 pooling order there would be no conflicting claims as
6 to their interests and therefore there would be no
7 escrow. By the addition of these parties there is a
8 conflicting claim and even though it's a conventional
9 well what we do with that is up to us. They object to
10 it on the basis that they don't want this escrow to be
11 done, but on what basis could we possibly deny that
12 there are conflicting claims? There's a pending action
13 in which they are the plaintiffs.

14 MR. CHAIRMAN: You aren't saying that the Andersons were
15 unknown originally?

16 MR. MASON: Not the plaintiffs, no, sir. The defendants are
17 the ones that we were unaware of as I understand it.

18 MS. RIGGS: This is the provision that Mark referred to
19 which is 45.1-361.21.D?

20 MR. SWARTZ: Right.

21 MR. MASON: So that you don't see these people as being
22 conflicting claims?

23 MS. RIGGS: I think they are conflicting claims. I think
24 there's a title dispute. The question is under a
25 conventional pooling whether the statute provides for

1 escrowing of conflicting claims by the Board.

2 MR. MASON: Okay. For some reason I thought that was more

3 of a discretionary matter whereas in the coalbed matter

4 it was mandatory.

5 MR. CHAIRMAN: We're being asked to exercise a discretion

6 here, too.

7 MR. MASON: Is that sort of the way you all see it? I

8 don't know. I don't remember exactly why I thought

9 that.

10 MS. RIGGS: This a modification to an existing pooling

11 order. Is this well in production already?

12 MR. DAHLIN: No. It's not drilled.

13 MS. RIGGS: It's not drilled. Okay.

14 MR. SWARTZ: That's why we still have an estimate with

15 regard to the costs. Looking at D also maybe this is

16 different than the CBM. It looks like when you read D

17 that all we need to escrow is the royalty regardless of

18 who they are. That simplifies this. This is something

19 we need to look at depending on whether or not you go

20 this route. It looks like it's a lot easier to escrow

21 here than in the CBM situation.

22 MR. CHAIRMAN: Right.

23 MR. MASON: It also seems to indicate that it's immediately

24 unclaimed property.

25 MR. SWARTZ: Well, I think you've got to wait -- the way

1 I've always read this is you've got to wait the time.
2 The time starts to run out.
3 MR. CHAIRMAN: Right.
4 MR. SWARTZ: Because I think that reference to 55210.1 just
5 triggers the time.
6 MR. MASON: Thank you.
7 MR. CHAIRMAN: Other questions, members of the Board? Do
8 you have anything further?
9 MR. SWARTZ: No.
10 MR. CHAIRMAN: What's your pleasure?
11 MR. MASON: Mr. Chairman, I'd like to just say the only
12 detriment to anybody here by our action would be the
13 postponement of the enjoying of these funds until such
14 time as the outcome is known. Isn't that correct?
15 MR. CHAIRMAN: I believe that to be correct.
16 MR. MASON: My experience has been to take actions -- that
17 type of action is not detrimental. You know, to do
18 something which requires you -- if we went ahead and
19 didn't do this and then this suit turned out adversely
20 to the plaintiffs we would be in a worse position than
21 we are if we escrow, isn't that correct, because we
22 would have a pooling order that did not include
23 everybody that had an interest in it?
24 MS. RIGGS: We hadn't afforded a right of election to
25 potential claimants.

1 MR. MASON: Exactly.

2 MS. RIGGS: I think clearly the order needs to extend the
3 right of election to those parties and it needs to be
4 modified to include those parties.

5 MR. MASON: Exactly. So I think as to that part I don't see
6 that we have any discretion really at all once that
7 becomes known. The only thing it seems to me is do we
8 have an obligation to establish an escrow, is it
9 discretionary, and if so -- if it's discretionary as
10 opposed to mandatory do we elect to exercise. It seems
11 to me that's the issue.

12 MR. CHAIRMAN: I would agree with that.

13 MR. MASON: I mean, I think we have to add the parties
14 period. Sandra, do you think it's a discretionary
15 matter or do you think once we have this situation that
16 that Section D requires the escrow? It says, "Shall
17 cause."

18 MR. EVANS: The Board shall cause to establish --

19 MS. RIGGS: It says for gas owners whose identity is unknown
20 or location is unknown. What we have here are potent-
21 ial owners whose interests are unknown.

22 MR. EVANS: You really don't know who the owner is.

23 MS. RIGGS: You know the identity of the parties but you
24 don't know who the ultimate owner is.

25 MR. SWARTZ: No, no. You don't know who the owner is. This

1 is oil and gas jargon. When you've got a title defect
2 you don't know who the owner is in spite of the fact
3 you've got a collection of names.
4 MR. CHAIRMAN: Right.
5 MS. RIGGS: That is one interpretation.
6 MR. CHAIRMAN: I think he's right.
7 MR. MASON: Mr. Chairman, I move we allow the modification
8 to include the parties and establish the escrow of the
9 unknown owners.
10 MR. LEWIS: I second it.
11 MR. CHAIRMAN: Motion and a second. Further discussion?
12 I would ask, in your motion are you moving that we
13 approve the internal escrow or the one the Board
14 already has established?
15 MR. EVANS: Section D says, "Shall cause to be established."
16 And BREN should establish that internal escrow account
17 as opposed to Tazewell National Bank.
18 MR. MASON: Yes, sir. I would add that as an amendment to
19 my motion.
20 MR. LEWIS: I second that.
21 MR. CHAIRMAN: Further discussion? All in favor signify by
22 saying yes. (ALL AFFIRM.) Opposed say no. (NONE.)
23 It's a unanimous approval. Thank you.
24 MR. FULMER: Mr. Chairman, can I just mention something
25 here? As far as an internal escrow that we've done

1 since 1983 on any conventional well we've had the
2 operator of the internal escrow report to the Division
3 so that information can be afforded on to the Board.
4 And it was always included in an order on a quarterly
5 basis or whatever. I'm just throwing that out.

6 MR. MASON: I think that's a good idea.

7 MR. CHAIRMAN: Do you have any problem with a quarterly
8 report on that escrow?

9 MR. SWARTZ: It might even be easier to just put in the
10 royalty print out and maybe we can give you a report on
11 what the royalty basis is. That would be fine. We can
12 do at least quarterly. We may just put you in the
13 accounting system and you might get it monthly.

14 MR. CHAIRMAN: Then we'll incorporate that in the Board
15 order.

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3 ITEM III

4 MR. CHAIRMAN: The next item on the agenda is a petition
5 from Equitable Resources Exploration under Section
6 45.1-361.21 for an order to modify a previous forced
7 pooling of a conventional gas well identified as V-
8 2460. This is docket number VGOB-92/10/20-0281-01.
9 We'd ask the parties that wish to address the Board in
10 this matter to come forward at this time and identify
11 yourselves for the record, please.

12 MR. KAISER: Mr. Chairman and members of the Board, Jim
13 Kaiser on behalf of Equitable Resources Exploration.
14 Our witnesses in this matter will be Mr. George Heflin
15 and Mr. Bob Dahlin who have been previously sworn.

16 MR. CHAIRMAN: Any others? The record will show there are
17 no others. You may proceed.

18 MR. KAISER: By way of introduction, Mr. Chairman, this is a
19 modification of a prior pooling order necessary due to
20 a survey error that changed interests within the unit.

21 GEORGE B. HEFLIN

22 a witness who, after having been previously sworn, was
23 examined and testified as follows:
24
25

DIRECT EXAMINATION

BY MR. KAISER:

Q. Mr. Heflin, could you please state your name, who you're employed by and in what capacity?

A. George B. Heflin. I'm a land man acquisitions for Equitable Resources Exploration, Kingsport, Tennessee.

Q. Do your responsibilities include the lands involved here and in the surrounding area?

A. Yes, they do.

Q. Are you familiar with Equitable's application for the modification of a prior order that was filed on April 12th, 1995?

A. Yes, I am.

Q. Is Equitable seeking to force pool the drilling rights underlying the drilling and spacing unit depicted at Exhibit #A to the application?

A. That's correct.

Q. Has notification been made of all persons required by Virginia Code, annotated, Section 45.1-361.19 and has a copy of the returned receipts been provided to the Board?

A. Yes, they have.

Q. Does Equitable own drilling rights in the unit involved here?

1 A. Yes, we do.

2 Q. Does proposed unit depicted at Exhibit #A include all
3 acreage within 2,640 feet, that is a 1,320 foot radius
4 of well V-2460?

5 A. Correct.

6 Q. What's the interest of Equitable in the unit?

7 A. We have 90.09 percent leased.

8 Q. Are you familiar with the ownership of drilling rights
9 of parties other than Equitable underlying this unit?

10 A. Yes, I am.

11 Q. And what is that interest?

12 A. 9.91 percent.

13 Q. Are all unleased parties set out at Exhibit #B attached
14 to the application?

15 A. Yes, they are.

16 Q. Prior to filing this application have efforts been made
17 to contact each of the respondents and an attempt made
18 to work out an agreement regarding the development of
19 the unit?

20 A. Yes, they have.

21 Q. Subsequent to the filing of the application have you
22 continued to attempt to reach an agreement with the
23 respondents?

24 A. That's correct.

25 Q. As a result of these efforts have you acquired any

1 other leases from the respondents listed at Exhibit #B
2 as unleased owners?
3 A. No, we haven't.
4 Q. Were efforts made to determine if individual respond-
5 ents were living or deceased or their whereabouts and
6 if deceased were efforts made to determine the names
7 and addresses and whereabouts of the successors to any
8 deceased individual respondents?
9 A. Yes.
10 Q. Were reasonable and diligent efforts made and sources
11 checked to identify and locate unknown heirs to include
12 primary sources such as deed records, probate records,
13 assessors records, treasurers records and secondary
14 sources such as telephone directories, city directori-
15 es, family and friends?
16 A. That's correct.
17 Q. In your professional opinion was due diligence exercis-
18 ed to locate each of the respondents named herein?
19 A. Yes, it was.
20 Q. Are the addresses set out in Exhibit #B to the applica-
21 tion the last know addresses for the respondents?
22 A. That's correct.
23 Q. With the exception of those parties which you are
24 hereby dismissing from this proceeding are you request-
25 ing the Board to force pool all other unleased inter-

1 ests listed in Exhibit #B?

2 A. Yes, we are.

3 Q. Does Equitable seek to force pool the drilling rights

4 of each individual respondent if living and if deceased

5 the unknown successor or successors to any deceased

6 individual respondent?

7 A. Yes.

8 Q. Is Equitable seeking to force pool the drilling rights

9 of the person designated as trustee if acting in

10 capacity of trustee and if not acting in such capacity

11 is Equitable seeking to force pool the drilling rights

12 of the successor of such trustee?

13 A. That's correct.

14 Q. Are you familiar with the fair market value of drilling

15 rights in the unit here and in the surrounding area?

16 A. Yes, I am.

17 Q. Could you advise the Board as to what those are?

18 A. A five dollar cash consideration, five year term, one-

19 eighth royalty.

20 Q. Did you gain your familiarity by acquiring oil and gas

21 leases and other agreements involving the transfer of

22 drilling rights in the unit involved here and in the

23 surrounding area?

24 A. Yes.

25 Q. In your opinion do the terms you have testified to

1 represent the fair market value of and the fair and
2 reasonable compensation to be paid for drilling rights
3 within this unit?

4 A. Yes, they do.

5 Q. Based on your testimony and as to respondents who have
6 not voluntarily agreed to pool do you recommend that
7 the respondents listed at Exhibit #B who remain
8 unleased by allowed the following options with respect
9 to their ownership interest within the unit: 1)
10 Participation. 2) A cash consideration of five
11 dollars per net mineral acre plus a one-eighth of
12 eight-eighths royalty. 3) In lieu of the cash bonus
13 and one-eighth of eight-eighths royalty share in the
14 operation of the well on a carried basis as a carried
15 operator under the following conditions: Such carried
16 operator shall be entitled to the share of production
17 from tracts pooled accruing to his interest exclusive
18 of any royalty or overriding royalty reserved in any
19 leases, assignments thereof or agreements relating
20 thereto of such tracts but only after the proceeds
21 allocable to his share equal A) 300 percent of the
22 share of such costs allocable to interest of the
23 carried operator of a leased tract or portion thereof,
24 or B) 200 percent of the share of the costs allocable
25 to the interest of the carried operator of an unleased

1 tract or portion thereof?

2 A. That's correct.

3 Q. Do you recommend the order provide that elections by

4 respondent be in writing and sent to the applicant at

5 Equitable Resources Exploration, PO Box 1983, King-

6 sport, Tennessee, attention George Heflin, Regulatory?

7 A. Yes.

8 Q. Should this be the address for all communications with

9 the applicant concerning the force pooling order?

10 A. Yes, it should.

11 Q. Do you recommend that the force pooling order provide

12 that if no written election is properly made by a

13 respondent then such respondent shall be deemed to have

14 elected to cash royalty option in lieu of participa-

15 tion?

16 A. That's correct.

17 Q. And should the unleased respondent be given 30 days

18 from the date of the order to file written elections?

19 A. Yes.

20 Q. If an unleased respondent elects to participate should

21 that respondent be given 45 days to pay applicant for

22 respondent's proportionate share of well costs?

23 A. Yes.

24 Q. Does the applicant expect the party electing to

25 participate to pay in advance that party's share of

1 completed well costs?

2 A. Correct.

3 Q. Should the applicant be allowed 60 days following the
4 recordation date of the order and thereafter annually
5 on that date until production is achieved to pay or
6 tender any cash bonus becoming due under the force
7 pooling order?

8 A. Yes.

9 Q. Do you recommend the force pooling order provide that
10 if a respondent elects to participate but fails to pay
11 respondent's proportionate share of well costs satis-
12 factory to applicant for the payment of well costs the
13 respondent's election to participate shall be treated
14 as having been withdrawn and void and such respondent
15 shall be treated just as if no initial election had
16 been filed under the force pooling order?

17 A. That's correct.

18 Q. Do you recommend the force pooling order provide that
19 where a respondent elects to participate but defaults
20 in regard to the payment of well costs any cash sum
21 becoming payable to such respondent be paid within 60
22 days after the last day on which such respondent could
23 have paid or made satisfactory arrangements for the
24 payment of well costs?

25 A. Yes.

1 Q. Do you recommend the force pooling order provide that
2 if a respondent refuses to accept any payment due
3 including any payment due under said order or any
4 payment of royalty or cash bonus or said payment cannot
5 be paid to a party for any reason where there is a
6 title defect in the respondent's interest that the
7 operator create an escrow account for the respondent's
8 benefit until the money can be paid to the party or
9 until the title defect is cured to the operator's
10 satisfaction?

11 A. That's correct.

12 Q. Mr. Heflin, who should be named the operator under this
13 modified force pooling order?

14 A. Equitable Resources Exploration.

15 MR. KAISER: As a matter of clarification for Ms. Riggs at
16 this point, we will be offering an election to all
17 unleased parties in Exhibit "B". I have no further
18 questions of this witness at this time, Mr. Chairman.

19 MR. CHAIRMAN: Questions, members of the Board?

20 MR. EVANS: The parties that were originally subject to the
21 pooling order, have those changed or is just the
22 percentages of interest?

23 MR. KAISER: Just the percentages of interests. There are
24 no new parties that were not included in the first
25 order.

1 MR. EVANS: Did you have any drop out?
2 MR. HEFLIN: Yes.
3 MR. EVANS: So some basically went out of the unit that were
4 named in the original --
5 MR. HEFLIN: That's correct. They dropped out and people
6 that were already in the unit -- their acreage was
7 shown corrected in it.
8 MR. KAISER: As you have probably noticed in looking over
9 the application, this is a unit that's got 67 tracts in
10 it.
11 MR. EVANS: I just noticed from the original application to
12 this one there's quite a number of changes in property
13 lines, where acreage is located.
14 MR. HEFLIN: That's a real tough area. We've had some help
15 with getting further information that's helped us
16 correct our unit.
17 MR. KAISER: We've actually had some interest owners within
18 the unit come forward with surveys of their own to --
19 MR. MASON: Just as a matter of interest, the people that
20 were in it originally and got notice, do you all notify
21 them that they're no longer participants?
22 MR. KAISER: If this modification takes place and they drop
23 out will we notify them of that?
24 MR. MASON: Yes.
25 MR. KAISER: Yes.

1 MR. MASON: I mean, they obviously might at some expect to
2 get something and wonder why not. I think it would be
3 appropriate to tell them that.

4 MR. KAISER: I know.

5 MS. RIGGS: Were all parties to the original application
6 noticed of the modification or only those parties that
7 remained in noticed?

8 MR. KAISER: We notified everybody because all the interest
9 changed.

10 MS. RIGGS: Including those who would not longer be in the
11 unit -- were in the original pooling order but are not
12 parties to the modification? Do they have notice that
13 they're being dropped out?

14 MR. KAISER: No.

15 MR. MASON: Do you think that's a problem?

16 MR. KAISER: Well, they're not being dropped out until
17 this --

18 MR. CHAIRMAN: In other words, are we being asked to take
19 action without the parties who are affected being
20 notified?

21 MR. MASON: Yeah. In other words, there's an order in
22 effect and they're in it. We're going to modify that
23 order. Do we have an obligation to notice all persons
24 under that order?

25 MR. CHAIRMAN: Right.

1 MS. RIGGS: The notice goes to all gas, oil, coal or mineral
2 owners who have an interest underlying the tract which
3 is the subject of the hearing. The tract that is the
4 subject of the hearing is the original unit which is
5 now being modified.

6 MR. KAISER: The only two parties that will drop out subject
7 to the modification of the prior order were both under
8 voluntary lease.

9 MS. RIGGS: Okay.

10 MR. CHAIRMAN: So there are no others --

11 MR. MASON: Just as a matter of interest, I think that if
12 you really look at that strictly both the old and the
13 new owners are all subjects of this hearing.

14 MR. CHAIRMAN: That's right, because we have an order out
15 there that impacted the other parties.

16 MR. MASON: Right. And I think the new ones would be also
17 as a result of the potential outcome.

18 MR. CHAIRMAN: That's right.

19 MR. MASON: Good point.

20 MR. CHAIRMAN: Other questions, members of the Board, of
21 this witness?

22 (Witness stands aside.)

23 MR. CHAIRMAN: You may call your next witness.
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1 ROBERT A. DAHLIN, II

2 a witness who, after having been previously sworn, was
3 examined and testified as follows:

4
5 DIRECT EXAMINATION
6

7 BY MR. KAISER:

8 Q. Mr. Dahlin, I'll remind you that you've been sworn.
9 Would you please state your name, who you're employed
10 by and in what capacity?

11 A. My name is Robert A. Dahlin, II and I'm employed by
12 EREX as a production specialist.

13 Q. Have you previously testified before the Virginia Gas
14 and Oil Board and have your qualifications as an expert
15 witness previously been accepted by the Board?

16 A. Yes, I have.

17 Q. Do your responsibilities include the land involved here
18 and in the surrounding area?

19 A. It does.

20 Q. Are you familiar with the development of this unit
21 involved here?

22 A. Yes, I am.

23 Q. What is the total depth of the well drilled under
24 applicant's plan of development?

25 A. This well is a completed well. It in production. It

1 was completed in the same formations as we had design-
2 ated before.

3 Q. Consistent with the well work permit?

4 A. Consistent with the permit. The original estimation
5 was 4,630 and I did not verify that that was the actual
6 depth of this well but it was the same zones.

7 Q. Is the applicant requesting the force pooling of
8 conventional gas reserves not only to include the
9 designated formations but any other formations exclud-
10 ing coal formations which may be between those forma-
11 tions designated from the surface to the total depth
12 drilled?

13 A. We are.

14 Q. What are the estimated reserves of this unit?

15 A. The most current revision to our reserves currently
16 stand at 617 million cubic feet.

17 Q. Are you familiar with the well costs for this well?

18 A. Yes, I am.

19 Q. Has an AFE been reviewed, signed and submitted to the
20 Board prepared particularly for this hearing?

21 A. Yes, it has.

22 Q. Was the AFE prepared by an engineering department
23 knowledgeable in the preparation of AFEs and knowledge-
24 able in regard to well costs in this area?

25 A. Yes.

1 Q. Does this AFE represent the completed well costs for
2 the well under the applicant's plan of development?
3 A. That includes all captured costs up until April 7th,
4 1995 which we feel are most of the costs. There are
5 some litigations costs and survey information that has
6 not been captured.
7 Q. What are the costs as of this date?
8 A. The costs are \$356,300.
9 Q. Do these costs include a multiple completion?
10 A. Yes, it does.
11 Q. Do these costs include a reasonable charge for super-
12 vision?
13 A. Yes.
14 Q. In your professional opinion will the granting of this
15 modification be in the best interest of conservation,
16 prevention of waste and the protection of correlative
17 rights?
18 A. Yes, sir.
19 MR. KAISER: I have nothing further of this witness at this
20 time, Mr. Chairman.
21 MR. CHAIRMAN: The estimate that you had was \$279,150 and
22 your actual costs now are \$356,300. What occurred that
23 drove your estimate?
24 THE WITNESS: Two major areas. One, the biggest area was
25 the land costs acquisition and surface damages. That

1 accounts for roughly \$46,515 of that amount which is
2 about 60 percent of the override. The balance is
3 mostly in completion costs. The original anticipated a
4 two stage completion which was done to this well. We
5 found two sections of lime rather than the normal one
6 we had anticipated and the second stage job was a very
7 much increased chilled acid job and that overran that
8 one by approximately \$18,000.

9 MR. KAISER: If I may further elaborate for you, Mr.
10 Chairman and members of the Board, the original
11 estimate in the AFE when this well was originally force
12 pooled for title was \$3,500. The actual costs on that
13 are \$24,800 due to the number of tracts. Contract
14 labor costs, land man costs were \$12,750 because of
15 continuing due diligence in attempt to lease this large
16 number of interest owners within this unit and we also
17 had extremely high surface damages of \$16,450 due to
18 the fact that in order to get the access road where we
19 wanted it we had to pave it and we had to rebuild a
20 guy's flower garden and retile some things for him. So
21 I think that along with the fracture as Mr. Dahlin
22 explained takes care of that \$70,000 difference.

23 MR. CHAIRMAN: Did you have anyone to participate?

24 MR. KAISER: No.

25 THE WITNESS: I might also add that the original estimate

1 for the reserves were 500 million. Our 1994 year end
2 were 542 million and the most recent engineering
3 revision is 617 million which is approximately 23
4 percent increase in reserves we anticipate to produce
5 as concurred the 27 percent increase in the cost it
6 took to arrive at that point.

7 MR. CHAIRMAN: Other questions, members of the Board?

8 MR. HARRIS: Just a quick question on your well location
9 plat. There's a note at the upper right. There are no
10 blue line streams within 500 feet of this well location
11 and I just wonder what the significance of that is? I
12 don't recall seeing a note about streams near --

13 MR. HEFLIN: That's on there because of -- letting you know
14 that there's no navigable streams within the area that
15 could be affected by our operation.

16 MR. HARRIS: And the blue line, is there something --

17 MR. EVANS: The blue line is a USGS designation on a
18 perineal stream.

19 MR. HARRIS: So when they say blue line they mean literally
20 the blue line.

21 MR. EVANS: If it's a solid blue line on the USGS map it's a
22 perineal stream.

23 MR. HARRIS: I understand. Thank you.

24 MR. CHAIRMAN: Other questions, members of the Board, of
25 this witness?

1 (Witness stands aside.)
2 MR. CHAIRMAN: Going back before, who were the two parties
3 that dropped out?
4 MR. HEFLIN: Curtis and Rita Wampner, Tract 5 in the old
5 exhibit and Allen Jill, Jr. and Betty Deel in Tract 6.
6 MS. RIGGS: The Wampners were in what, 5?
7 MR. HEFLIN: That was old Tract 5.
8 MR. CHAIRMAN: No relation. Those were the only two?
9 MR. HEFLIN: Those were the only two.
10 MR. CHAIRMAN: That's four people. Other questions? Do you
11 have anything further?
12 MR. KAISER: Nothing further, Mr. Chairman.
13 MR. EVANS: Mr. Chairman, I move that we grant the petition.
14 MR. CHAIRMAN: A motion to grant the petition.
15 MR. HARRIS: Second.
16 MR. CHAIRMAN: A motion and a second. Further discussion?
17 All in favor signify by saying yes. (ALL AFFIRM.)
18 Opposed say no. (NONE.) It's a unanimous approval.
19 Thank you.
20 MR. CHAIRMAN: We'll take a five minute recess and then
21 we'll hear from the Virginia Gas Company.
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2 MR. CHAIRMAN: I'd like to introduce to the Board Katherine
3 Lacy with the State Corporation Commission. If you'd
4 just stand and be recognized. (Pause.) Thank you for
5 coming today. We appreciate that very much. I set the
6 next item on the agenda today basically to have the
7 Board get a briefing on the update on the Virginia Gas
8 Storage Company's petition before the State Corporation
9 Commission for certification of public need for a
10 storage field and, of course, to update us on the
11 results of the tests that have been conducted by
12 Virginia Gas Company in the Early Grove and adjacent
13 field. Also I want to give the Board an update on the
14 Department of Mines, Minerals and Energy's efforts to
15 coordinate with the State Corporation Commission in
16 discussions that we've had just really to facilitate
17 and coordinate jurisdictional issues to make sure that
18 we have smooth transitional processes on whatever
19 transitions are necessary to facilitate utilization of
20 this field. And in that light I've asked Steve Walls,
21 policy manager with the Department of Mines, Minerals
22 and Energy, to brief the Board on meeting with the SCC.
23 MR. WALLS: Thank you very much, Benny. My name is Steve
24 Walls. I'm the policy and planning manager for the
25 Department of Mines, Minerals and Energy. As Benny

1 said, when we received notice that this application had
2 been filed in front of the Corporation Commission for
3 certification of the Early Grove Field for gas storage
4 we realize that there may be issues of jurisdiction
5 between the actions in front of the Commission and the
6 Department in our permitting of wells and pipeline
7 facilities and also between the filing and with the
8 Board orders that existed. We feel like we wanted to
9 set up a sense of cooperation between the agencies to
10 help insure that the company isn't caught and can meet
11 all the requirements of all the State laws and regula-
12 tions that may be governing these things and also help
13 to insure that there's no overlap of jurisdiction
14 where ever possible between us and any of the other
15 agencies to make sure that we're efficient as we can be
16 in approaching this. We had some discussions with the
17 Commission's staff over the purview of their regulation
18 of public health, safety and welfare of the wells, the
19 pipelines and the associated facilities and also over
20 the territory to be used for gas storage and the
21 operation of that facility. We've been reviewing the
22 Gas and Oil Act for the Department to see what the
23 extent of our jurisdiction over storage is and in the
24 permitting section it talks about that we would be
25 permitting storage wells. So we believe that the Gas

1 and Oil Act gives us some jurisdiction over that.
2 But, again, we're trying to work to make sure that
3 there isn't an overlap of that jurisdiction. We're
4 also working to provide assistance to the Commission
5 and the Commission's staff to assure that in the
6 proceeding the Commission knows what DMME has been
7 doing and what the Board has done with regard to the
8 field and how we expect the agency's jurisdiction to
9 be affected by any Commission action so that each party
10 knows what the other one -- where the other one has
11 been and where it expects it will probably go and can
12 make the decision fully informed and not have the
13 process held up for lack of information. That's really
14 been the extent of our discussions so far and nothing's
15 really been set. We think we'll probably have, if
16 needed, jurisdiction over the well itself and possibly
17 the pipelines and the pressure stations. We don't
18 believe we will have any jurisdiction over the opera-
19 tion of the facility at all. But, again, we're
20 looking to see if other parties are taking jurisdiction
21 over the wells or the pipelines or the associated
22 facilities whether we would even need to keep that.
23 And then again we'll want to be able to report on
24 behalf of the Board to the Commission anything that the
25 Board has done in the past or may do in the future with

1 regard to the field.

2 MR. CHAIRMAN: Thank you, Steve. Ms. Lacy, at any point in
3 time that you wish to address the Board in any manner
4 we want to keep this open. Where ever you feel
5 appropriate to interject please come forward and do
6 that.

7 MS. LACY: I might note that the Commission's hearing on
8 this proceeding is scheduled for July 26th and the
9 staff testimony is due June 23rd. Steve has offered
10 to provide testimony from the Department of Mines,
11 Minerals and Energy as to these topics. (Inaudible.)
12 As of this date no one has filed a protest of this
13 application which means right now the parties to that
14 staff (Inaudible.)

15 MR. CHAIRMAN: Thank you very much. Mike, do you want to
16 give us an update on the field?

17 MR. EDWARDS: Good morning, Mr. Chairman and Board members.
18 My name is Michael L. Edwards. I'm the president of
19 Virginia Gas Company and also president of Virginia Gas
20 Storage Company. Over the last two years we've been,
21 as you all know, testing the Early Grove Field in Scott
22 and Washington Counties for an evaluation to see if
23 it's appropriate to be converted into a gas storage
24 facility. We are currently of the opinion that the
25 field is a viable storage candidate. We have filed an

1 application for a certificate of public convenience and
2 necessity with the State Corporation Commission for the
3 field itself and for a pipeline corridor. The total
4 area that we're requesting as a gas storage field and
5 pipeline certificated area is approximately 2,900
6 acres of which approximately 2,500 acres makes up the
7 storage field itself and approximately 400 acres makes
8 up the pipeline corridor. You have the materials I've
9 handed out and -- well, the exhibits are on the wall.
10 There's a map showing on a scale of one inch equals
11 4,000 feet. This exhibit right here depicts the
12 proposed certificated area of the storage field, the
13 proposed pipeline corridor and it also shows the gas
14 production units. There is a total of 22 gas produc-
15 tion units in the field. They cover an area of
16 approximately 1,700 acres. The proposed area of the
17 storage field of 2,500 acres basically encompasses all
18 of the formally productive area of the field plus what
19 we consider to be an appropriate buffer area or
20 protection zone. There's a modest amount of acreage in
21 the old gas production units that are outside of the
22 field and we don't -- there's approximately 45 acres.
23 I can show you up here on the large map where that
24 lies which we're not concerned by the fact that that
25 modest amount of acreage is not included in the gas

1 storage field. I'll just point those out right now if
2 I could.

3 MR. CHAIRMAN: Sure.

4 MR. EDWARDS: There's a modest amount of this unit here
5 that's outside of the proposed storage area. A modest
6 amount of this unit here is outside of the gas storage
7 area and a modest amount of this unit, a modest amount
8 of this unit. As you can see it's a reduced scale. We
9 have currently -- there's a current total of 25 wells
10 that have been drilled in the field. There were 21
11 wells in existence when we purchased the property in
12 late 1991. We've drilled an additional four wells.
13 The work that's been done under permits from the
14 Division of Gas and Oil have included the drilling of
15 the four new wells. The upgrading of the existing
16 pipelines -- we've gone in and upgraded the former gas
17 production pipelines to utility standards as prescribed
18 in US Department of Transportation Regulations. We've
19 constructed a new compressor site with a total of 640
20 horsepower of compression. We've also injected a total
21 of approximately 600,000 cubic feet of additional base
22 gas. The deliverability of the field which is one of
23 the key parameters for determination of commerciality
24 has been increased by all the efforts that we've
25 undertaken to peak rate in this last winter of approxi-

1 mately nine million cubic feet per day. The last time
2 the field produced strictly as a gas production field
3 was in May of 1993 and at that time the field was
4 producing at a rate of approximately 700,00 cubic feet
5 a day. So we've seen more than a ten fold -- in the
6 duteously efforts that we've undertaken we've accomp-
7 lished a more than ten fold increase in the daily
8 productivity of the field. In the application that
9 we've made to the State Corporation Commission we've
10 specified a design capacity for the field of approxi-
11 mately 2.6 BCF of total -- that's billion cubic feet of
12 total gas capacity of which an estimated 1.6 BCF is
13 base gas or cushion gas which will essentially remain
14 in the field and roughly one BCF will be working gas
15 which will be cycled in and out of the field as
16 customers need it. The proposed boundaries of the
17 storage field were determined by several factors. One
18 was the geological constraints that we believe have
19 controlled the accumulation of gas in the field. Most
20 -- virtually all of the permeability and porosity in
21 the field is a result of fracturing. There is very
22 little interstitial or primary porosity and perme-
23 ability in the field. As part of our program last
24 year in drilling the four new wells we did an extensive
25 oriented coring project in which we took hole core of

1 several hundred feet of the rocks in the new wells.
2 I'd like to show those to the Board members. They're
3 labeled on the diagram on the far right. Basically
4 samples E and F have been taken from the main producing
5 part of the sandstone itself. The producing mechanisms
6 are vertical fractures -- open vertical fractures which
7 you can see in this sample and you can see it from a
8 top view and a side view what it looked like when it
9 came out of the hole. We've taken plugs of the non-
10 fractured parts of the rock to determine their porosity
11 and permeability. In the non-fractured parts of the
12 rock we're averaging roughly three to four percent
13 porosity which is extremely low. And the permeability
14 in the unfractured parts of the reservoir are on the
15 order, as you can see on this particular measurement,
16 .002 millidarcies which again is extremely low. The
17 fractured parts of the reservoir have porosities on the
18 order of 100 millidarcies. So there's a four or five
19 order of magnitude difference between the fractured and
20 the unfractured parts of the reservoir. You can pass
21 these around and play with them. They're kind of neat
22 geo toys. This was one particularly interesting
23 sample. This was as it came out of the hole. Then you
24 can see the open vertical fracture like that and on the
25 inside you've got beryte and quartz crystals that have

1 formed in the open fractures. A fascinating process.
2 There's another sample there where you can see the
3 fracture cutting across like that in the actual
4 fracture phase and slab portion. We also intentionally
5 cored parts of the roof rock -- or the cap rock to use
6 gas terminology -- to determine the nature of the
7 overlying strata. And you can see here in samples A,
8 B, C and D, these are extremely tight impermeable
9 anhydrites, dolomites, shells which are some of the
10 best cap rocks that you can find, very superior in
11 confinement and containment properties. These were
12 taken A, B, C and D where you can see on the diagram
13 above. One interesting characteristic here, these
14 symbols here are to indicate where the open fractures
15 were located. As you can see in the upper part -- this
16 is the upper part of the Price sandstone. It actually
17 extends for several hundred feet below this, but as you
18 can see there are swarms of open vertical fractures in
19 the Price sandstone itself. a modest amount in the
20 overlying silty portions and then absolutely no
21 fractures at all in the overlying cap rocks. Now, this
22 is only one sample but we believe that those character-
23 istics are typical of the rocks in the field. The
24 occurrence of fractures appears to be localized along
25 the crest of the Early Grove anticline. It's a

1 combination -- it's primarily a stratigraphic accumula-
2 tion of gas in the fractures. Now, where the fractures
3 occur and where they don't occur is controlled by the
4 structural conditions. This is not a structural trap
5 in the sense that you have a region aquifer below in
6 which -- with a gas cap or an oil cap floating on top.
7 There's extremely low quantities of water production
8 that were measured in the field basically at all
9 structural levels. That was one question early on we
10 had as to what was the producing mechanism in the
11 field. As you can see in this cross section, which
12 again a copy is included in your package, the anticline
13 which is mappable at the surface and which was first
14 mapped by Dr. Charles Butts in 1927 when he was working
15 for the Commonwealth. The fold here at the Little
16 Valley level is very pronounced. You've got as much as
17 1,000 feet of closure -- four way closure on this
18 anticline. Again, very favorable characteristics.
19 There's two producing zones, the shallower Little
20 Valley and the deeper Price sandstone formation. In
21 this figure here you can see the outer perimeter of the
22 proposed storage field overlaying on a structure map on
23 the top of the Price sandstone. Basically the -- there
24 is no classically defined dry hole perimeter around the
25 field as you sometimes see in other producing areas --

1 more densely drilled areas, for example, of West
2 Virginia or Pennsylvania where a dry hole perimeter can
3 be well defined. There's three dry holes in this area
4 that, as you can see, really don't fully combine the
5 area. However, the results of our geological and
6 engineering studies all of the fracturing appears to be
7 concentrated along the crest of the anticline here.
8 Basically there's no recorded commercial production
9 below the minus 2,700 contour on the Price formation.
10 Our proposed storage area doesn't exactly match that
11 but it's a close approximation. Several other factors
12 went into the determination of the storage zone. One
13 was the ease of legal description. Our first attempt
14 to describing this was an elliptical type figure that
15 more or less coincides with the structure contours.
16 The staff of the Corporation Commission requested a
17 legal meets and bounds description. We tried. We just
18 couldn't figure out how to provide a meets and bounds
19 description. So we basically took easily identifiable
20 and describable property corners to end up with a
21 polygon that roughly approximated the geologic area
22 that we feel describes the area that's appropriate for
23 use for gas storage. On property issues there's two
24 questions here. One is what's the ownership within the
25 old gas production units of approximately 1,700 acres

1 and then another question is what's the property
2 ownership within the somewhat larger 2,500 acre
3 proposed gas storage field. In both cases we own or
4 have under lease approximately 99 -- or in excess of 99
5 percent of the oil, gas rights and the rights to store
6 natural gas in that area. When we began this process
7 there was one property which is covered by a pooling
8 order in the Miller #3 unit which was a unit that was
9 pooled by Penn-Virginia Resources Corporation, one of
10 the prior owners of the field. At that time they had
11 listed a number of unlocatable heirs. Through a major
12 land research effort we have located and identified all
13 of the heirs and we are currently -- we believe that we
14 own 100 percent of the gas production units. I'd like
15 at this time to introduce Bradley L. Swanson as
16 director of land of Virginia Gas Company. Both Brad
17 and I have previously testified before the Gas and Oil
18 Board and I'd like to request that we be recognized as
19 expert witnesses. Brad, can you describe -- do we need
20 to be sworn?

21 MR. CHAIRMAN: If we're going to use him as an expert we
22 should just for the record.

23 COURT REPORTER: (Swears witnesses.)
24
25

1 BRADLEY L. SWANSON

2 a witness who, after having been duly sworn, was examined
3 and testified as follows:

4
5 DIRECT EXAMINATION

6
7 BY MR. EDWARDS:

8 Q. Brad, are you familiar with the property issues and the
9 ownership questions in the vicinity of the Early Grove
10 Field?

11 A. I am.

12 Q. At this time can you describe the efforts that have
13 been undertaken in locating the previously unidentifi-
14 able Miller heirs?

15 A. When we bought the field there were five groups of
16 Miller heirs that were listed as unidentified and
17 unlocatable. We have -- through our efforts in
18 contacting different other relatives were identified
19 and able to come up with in one case a funeral notice
20 where we were able to get a hold of the mortuary who
21 has actually done the burial and through them traced
22 the next of kin and found these folks in Washington
23 State and were able to negotiate leases with them. In
24 another case we found missing heirs in Texas. We found
25 missing heirs now living in Pennsylvania, a lady who

1 we couldn't account for living in Maryland. But I
2 guess the bottom line is that we have located all of
3 them. We have reached agreements with all but -- well,
4 we've reached agreements with all of them. We don't
5 have documents back from two of them. The outstanding
6 amount of acreage that we have left is 1.36 acres and
7 we have reached agreements. The documents hopefully
8 will here this week.

9 Q. Brad, can you tell the Board how many heirs there
10 originally were in the unlocatable category?

11 A. There were five groups. Eight heirs were listed and
12 ultimately found to be in this group. Two of the five
13 have living widows. The balance fortunately for us had
14 a small number of children so that we were able to
15 identify and locate all of them.

16 Q. Were there not a total of approximately 28?

17 A. 28 heirs in the Miller estate, all of which these five
18 groups had been previously unidentified.

19 Q. Can you describe for the Board where all you've been on
20 your journeys to try to reach agreements with all these
21 property owners?

22 A. I've been to Maryland, Pennsylvania, California and
23 Texas.

24 Q. As well as the various locations in the Commonwealth of
25 Virginia?

1 A. That's correct.

2 Q. Do you feel in your opinion as an expert in oil and gas
3 property matters that you've located all of the
4 outstanding owners and have reached agreements with all
5 of them?

6 A. That is correct.

7 MR. EDWARDS: The other similar but slightly different
8 question is regarding the ownership of storage rights
9 and oil and gas production rights within the proposed
10 2,500 acre storage field. Again, our calculations
11 indicate that we have approximately 99 percent of the
12 area under lease including full storage rights in the
13 area of the storage field itself.

14 Q. (Mr. Edwards continues.) Brad, can you describe the
15 location status of any outstanding property owners that
16 we do not have under lease at this time -- the approxi-
17 mate geographic location?

18 A. It's in the southeast corner and it's approximately 40
19 -- within the certificated area we're talking about
20 approximately 35 acres of one property.

21 Q. And you have made good faith efforts to reach agree-
22 ments with this particular property owner?

23 A. We've made numerous contacts and are still talking to
24 them.

25 Q. Is it fair to say that this particular property is on

1 the very outer edge of the --
2 A. That's correct.
3 Q. Do you feel from a property point of view that this is
4 a critical or important piece of property for the
5 operation of the storage field?
6 A. No, I do not.
7 MR. EDWARDS: Thank you. Do any members of the Board have
8 any questions for Mr. Swanson?
9 MR. CHAIRMAN: Any questions, members of the Board?
10 MR. EVANS: Mr. Chairman, I've got one for Mike. I notice
11 you've got a lot of vertical fractures. Is there much
12 inner connection horizontally in that section?
13 MR. EDWARDS: Yes. We have seen strong evidence of communi-
14 cation -- of horizontal communication between several
15 sets of wells. We've seen direct evidence of communic-
16 ation out to approximately 2,300 feet along strike of
17 the fractures and it may extend further than that. We
18 have indirect evidence that in the Sweets Bottle field
19 that you may have effective drainage out as much as a
20 mile. We also do not think that that extends very far
21 beyond the Sweets Bottle field.
22 MR. EVANS: That was my -- I just wondered what the inner
23 well communication would be on a horizontal --
24 MR. EDWARDS: In retrospect with perfect 20/20 hindsight the
25 approximately 90 acre production units that were

1 established in the field were almost certainly too
2 small for gas drainage purposes, perhaps by a factor of
3 two. But, again, that's something you don't know until
4 you do the kind of operation -- until the field's been
5 depleted and until you do the kind of operation we've
6 done.

7 MR. EVANS: Is the horizontal fracturing pretty much confined
8 to the same horizons?

9 MR. EDWARDS: We believe that is true in the Price Forma-
10 tion. Now, we have not cored any wells in the Little
11 Valley Formation at this time. We plan to do that
12 either later this year or next year. But I would
13 anticipate that that same mechanism also applies to
14 Little Valley. No other questions for Mr. Swanson?

15 MR. CHAIRMAN: No.

16 (Witness stands aside.)

17 MR. EDWARDS: In the package I provided you there is copies
18 of all the figures on a somewhat reduced scale.
19 There's also a chronology of the development of the
20 field. We would like to make available for members of
21 the Board a field trip to the field when we're done
22 here. If there's any interested parties we've got a
23 log for a proposed field trip in the back. I'd like to
24 introduce Ms. Laura Langer as a second expert witness.
25 As I think you'll recall, Ms. Langer testified as an

1 expert witness in the original hearing in 1992 regard-
2 ing the establishment of the first testing order.

3 MR. CHAIRMAN: Are you going to use her as an expert
4 witness?

5 COURT REPORTER: (Swears witness.)
6

7 LAURA L. LANGER

8 a witness who, after having been duly sworn, was examined
9 and testified as follows:
10

11 DIRECT EXAMINATION
12

13 BY MR. EDWARDS:

14 Q. Could you state your full name?

15 A. Laura L. Langer.

16 Q. And by whom are you employed?

17 A. I'm currently employed by EqtTrans, Inc. It's a
18 pipeline subsidiary of Equitable Resources, Incorporated.
19

20 Q. Could you provide a brief summary of your qualifica-
21 tions as an expert in the natural gas storage business?

22 A. I have a masters degree in petroleum engineering from
23 Stanford University and fifteen years of experience in
24 the industry, five years with Southern California Gas
25 Company in Los Angeles and ten years with Equitable

1 Resources.

2 Q. What is your current position with EgiTrans?

3 A. My current position with EgiTrans is vice-president of
4 reservoir engineering.

5 Q. How many gas storage facilities does your company
6 currently own and operate?

7 A. EgiTrans currently owns and operates fifteen gas
8 storage reservoirs in the states of Pennsylvania and
9 West Virginia and through another affiliate ET Storage
10 we are involved in the development of two additional
11 fields, a salt cavern in New York State and a depleted
12 gas field in Pennsylvania.

13 Q. Are you familiar with the Early Grove Field?

14 A. Yes, I am.

15 Q. When were you first aware of the field's existence and
16 general properties?

17 A. When was I here last? It's been a couple of years.
18 But actually, as Mike well knows, we had evaluated the
19 field for purchase prior to his own evaluation of the
20 field. And because of the fact that it is fairly
21 distant from our own facilities and our own operations
22 and fairly small in size we had not considered it an
23 opportunity that we wished to get involved in at that
24 time. Although, as I later told Mike, we did think it
25 looked like a good potential candidate for storage

1 development. Then since that time I have worked with
2 Virginia Gas on their implementation of a testing and
3 development program for the field.

4 Q. Ms. Langer, have you reviewed the engineering and
5 geological information that's been prepared by Virginia
6 Gas Company for this field?

7 A. Yes, I have.

8 Q. In your expert opinion is this field a suitable
9 candidate for conversion to a commercial storage
10 facility?

11 A. Yes, it is.

12 Q. Could you briefly describe what critical conditions
13 must be met by a storage field and how this field has
14 performed in those regards?

15 A. Well, the most important things from a storage develop-
16 ment standpoint -- in terms of being able to meet the
17 needs of customers the single most important thing is
18 the ability to cycle a sufficient volume of gas to meet
19 the needs of customers over a winter period of time or
20 even a shorter period of time. The second most
21 important thing after that in identifying a candidate
22 storage reservoir, once you have identified that it has
23 the deliverability and the capacity to meet the needs
24 of potential customers is to make sure that you have
25 some containment mechanism, that once you put the gas

1 in the ground it's going to stay where you put it.
2 Those are the two most important things in the selec-
3 tion of a storage candidate and this field fulfills
4 both of those.

5 Q. Ms. Langer, do you feel that the proposed boundary of
6 the storage facility given the available geological and
7 engineering data is a reasonable approximation of the
8 area that's appropriate for use for gas storage?

9 A. Yes, it is. Given the geologic mechanism that created
10 the environment that allows oil and gas to be present
11 in the rock there I think you've got a sufficient
12 quantity of acreage under control to protect your
13 operation.

14 Q. Ms. Langer, could you review for the Board and for the
15 record the current thinking in the natural gas industry
16 as to the maximum appropriate pressures that are safe
17 and prudent to be used in underground gas storage?

18 A. I'll change one word in your question, Mike, and I
19 wouldn't -- this is certainly current thinking but it's
20 also thinking that's been around for quite some time.
21 Frequently when I give presentations on underground
22 storage at conferences and what not I like to start out
23 by saying there really isn't anything new under the
24 sun. This is a business that's been around. Under-
25 ground storage has been in operation in the United

1 States since the teens and the concepts that we're
2 talking about or that Virginia Gas is looking at here
3 in terms of the operating pressures that they want to
4 use have been in operation and in use by companies for
5 at least 50 years. The current thinking and the
6 thinking that has evolved over time with the operation
7 of storage fields is that you want to operate fields at
8 the absolute maximum safe pressure possible from the
9 standpoint that the more gas you can put into this one
10 known container and keep there and use there the less
11 surface facilities you need, the less money you need to
12 put into compression, pipelines and all the other
13 facilities related to the delivery of the gas and the
14 best use you're making then of this natural container
15 in the earth. So the thinking that's gone into how you
16 define what that safe pressure is -- and we won't talk
17 about the safe pressure of surface facilities. That's
18 easy, a kind of no brainer type thing in terms of the
19 standards that have been around, the standards that
20 have been developed for how you determine maximum
21 operating pressures for those facilities. What we want
22 to look at is how you determine what the maximum
23 operating pressure is for the container itself for the
24 reservoir rock. Here you really have to look at what
25 your containment mechanism is and what kind of cap rock

1 you have on the reservoir. Operators in Michigan where
2 the technology for underground storage really evolved
3 in an academic sense from the standpoint of people at
4 the University of Michigan being involved in the
5 storage industry and the development of the industry
6 and what we know about the industry today have had
7 experience with going to pressure gradients as high as
8 .7 and even a little bit above. And when I say .7
9 that's PSI per foot. How they develop these pressures
10 over time is by looking at the cap rock and the
11 containment mechanism for the reservoir. You can have
12 basically two types of cap rocks. You can have an
13 overlying shell sandstone sequence in which the
14 containment mechanism may be capillary pressure
15 relationship in the rocks. All rocks have some fluid
16 containment in them to begin with. And to the extent
17 that the fluid in that rock might be displaced by gas
18 then you have a capillary pressure containment mechanism
19 to be concerned about. Here we're in even better
20 shape. The other kind of cap rock you can have are the
21 sequences we have here, the anhydrite, dolomite. These
22 are termed in the industry as super cap rocks which
23 means you don't have issue of displacement of fluids by
24 the gas. Here you've got impermeable non-coarse rock
25 above you and you're not going to have to worry about

1 moving any kind of fluid through it. In this case what
2 you have to worry about is how strong is that rock
3 itself and how do you determine the strength of the
4 rock. And you do that by looking at the fracture
5 gradient of the rock which typically in the Appalachian
6 Basin for rocks like the kind that we're talking about
7 can be as high as 1 PSI per foot. So certainly the
8 operating pressures that Virginia Gas Company is
9 contemplating for this field are well within a margin
10 of error even on a safety factor. I believe, Mike,
11 you're looking at .6 PSI per foot as your top pressure?

12 Q. Yes. That's correct. Ms. Langer, what types of
13 pressure gradients are typically encountered in this
14 part of the Appalachian Basin when fields are original-
15 ly developed?

16 A. You can run into everything from fields that are what
17 you would call under pressured where the reservoir
18 discovery pressure is slightly below what you would
19 find from the overlying water column in the rock or a
20 hydro-static gradient as it's referred to to reservoirs
21 that are naturally geo-pressured which means that
22 there's a higher than hydro-static gradient in the
23 rock formation at the time of discovery as a result of
24 fault rock displacement or some other mechanism that
25 allowed the gas to be trapped at a higher pressure than

1 the pressure of the overlying column of water.

2 Q. In this case the recorded discovery pressure of the
3 field in 1931 was approximately 1,450 pounds at a depth
4 of 3,200 feet. That results in a gradient of approxi-
5 mately .45 PSI per foot.

6 A. Which is very close to what you would encounter with a
7 hydro-static gradient. Yes.

8 Q. Based on experience of your company and of other
9 operators in the industry is it safe and prudent to
10 operate a gas storage field at a pressure higher -- at
11 a pressor gradient higher than the original discovery
12 pressure gradient?

13 A. With the type of cap rock that you have on this
14 reservoir absolutely. I mean, there is operating
15 experience and years of it from similar types of
16 reservoirs with pressure gradients in the .6 to .7
17 range.

18 Q. Can you perhaps elaborate as to which companies and how
19 many years of operating experience?

20 A. I believe some of the ANR -- well, all of the ANR
21 fields in Michigan are operated at above hydro-static
22 gradient. Most of the fields operated by the Canadian
23 companies, Union Gas, Canada Consumers Gas are operated
24 at these kinds of pressures. There are companies in
25 Colorado. We have several fields in Pennsylvania and

- 1 West Virginia and an interesting thing as well, almost
2 all of your aquifer storage fields in the mid-west are
3 operated above hydro-static gradients because that's
4 the very nature of the beast. You're displacing water
5 to create the space that you're putting the gas in. So
6 if you don't go to a higher pressure gradient than the
7 hydro-static gradient you can't move the water and
8 create the space. So there's considerable experience
9 in aquifer storage going back to the twenties with
10 operating at above hydro-static pressures.
- 11 Q. Are you aware of any significant operational problems
12 that have resulted from this practice in other areas?
- 13 A. No.
- 14 Q. And you and your company have extensively researched
15 this issue?
- 16 A. Yes, we have.
- 17 Q. Ms. Langer, could you describe for the Board any
18 involvement you've had with the development of storage
19 regulations in other states or commonwealths?
- 20 A. I was part of the sub-committee to the Technical
21 Advisory Board in the State of Pennsylvania that helped
22 develop the current regulations that have just been
23 passed in the State of Pennsylvania for storage
24 regulation.
- 25 Q. And these regulations were passed in 1994?

1 A. Yes. Correct.

2 Q. So you feel that they represent a reasonable state of

3 the art thinking in the gas storage industry and the

4 regulatory community at this time?

5 A. Yes, I do.

6 Q. Do the recently passed regulations in Pennsylvania

7 allow for storage operators to operate reservoirs at

8 pressures and pressure gradients higher than those

9 present when the fields were originally discovered?

10 A. Yes, they do. They have a mechanism in place for

11 several reasons, partly because for most of the

12 depleted reservoirs, the older ones, the discovery

13 pressures are rather meaningless numbers to begin with,

14 that at the time when somebody finally decided to put

15 a pressure gauge on one of the wells you may produced

16 the field for ten years. So your discovery pressure.

17 isn't really telling you anything anyway. As well as

18 the fact that we have a lot of risk in producing fields

19 that were naturally field pressured or over hydro-

20 static gradient to begin with. So you can't really use

21 the discovery pressure as a determination. And in

22 reflection of that the Pennsylvania regs have been

23 written to allow the operators to provide the appropri-

24 ate geophysical evidence to establish an appropriate

25 operating pressure on a field by field basis.

- 1 Q. In your opinion are the data regarding the original
2 pressures of the field here necessarily accurate or
3 meaningful given the age of the field?
- 4 A. They're probably more accurate than some that I've
5 seen, but given both the age and the production nature
6 of the field and in particular given the production
7 mechanism of the field and the fracture systems they're
8 not necessarily as relevant as other data that you've
9 accumulated.
- 10 Q. Virginia Gas Company as operator of this field for the
11 owner of the field, Virginia Gas Storage Company, has
12 as a result of extensive study of engineering and
13 geological conditions both here in the field and of
14 other practices that are prevalent in the industry is
15 proposing to operate the field up to a maximum gradient
16 of approximately .6 PSI per foot. At the level of the
17 Price Formation that would result in surface pressures
18 of approximately 2,250 pounds. At the level of the
19 Little Valley Formation that would result in pressures
20 of approximately 1,950 pounds. In your opinion is this
21 a safe and prudent and reasonable maximum storage
22 pressure for this particular facility to be operated
23 at?
- 24 A. Yes, it is.
- 25 Q. Ms. Langer, one final question from me. Do you

1 consider the use of pressure data recorded during
2 artificial stimulation of gas wells in this field to be
3 significant in making a determination of what maximum
4 operating pressures should be?

5 A. Yes. I think that's very important as it goes to the
6 strength and containment of the overlying cap rock.

7 Q. For example, if data existed which showed from fracture
8 treatments that the fracture gradients in the field
9 were above the .6 PSI per foot gradient that Virginia
10 Gas Company is proposing would you feel that that was
11 strong supporting evidence for that being a reasonable
12 upper limit?

13 A. Yes.

14 MR. EDWARDS: Thank you. That was all I had. If there are
15 any questions from the Board for Ms. Langer.

16 MR. CHAIRMAN: Any questions, members of the Board?

17 (Witness stands aside.)

18 MR. EDWARDS: At this time I'd like to call Jerry Norton.

19 COURT REPORTER: (Swears witness.)

20
21 JERRY NORTON

22 a witness who, after having been duly sworn, was examined
23 and testified as follows:
24
25

DIRECT EXAMINATION

BY MR. EDWARDS:

Q. Jerry, could you state your full name for the record?

A. Jerry Lee Norton.

Q. Could you give a brief summary of your educational and professional qualifications?

A. I completed my undergraduate and graduate at University of Southern Illinois in 1964 and I've worked with Dowell Well ever since in various capacities, as sales management and presently an area engineer. My degree is in geology.

Q. I won't ask you review your thesis. Ha, ha. Jerry, are you familiar with the fracturing and cementing technology here in the Appalachian Basin?

A. Yes.

Q. And you've been approximately -- how many wells have you been involved in the completion engineering either in the field or in the design in your 31 years of experience at Dowell Well?

A. In excess of 2,000 or 3,000.

Q. Would you consider yourself to be an expert in the field of artificial stimulation of natural gas wells?

A. Yes.

Q. Have you reviewed the data that Virginia Gas Company

1 has prepared on the stimulation of wells here in the
2 Early Grove Field?

3 A. Yes, I have.

4 Q. Could you briefly for the Board go over the conclusions
5 that have been derived at from those studies?

6 A. I have nine fracture stimulations on nine different
7 wells. Normally our business, like I said, is stimula-
8 tion or fracturing. We enhance production. We don't
9 put any gas in place. We just allow it to be removed
10 in a quicker, shorter time period to get the same
11 amount of gas -- in five years instead of 50 years to
12 get the same amount of gas out. Normally what you do
13 in a fracture stimulation is nonreactive formation
14 like sandstone or shell or dolomite you apply hydraulic
15 pressure from the surface, either of water, foams or
16 nitrogen, to the point where the rock actually rupt-
17 ures. This is called a fracturing gradient. Then you
18 go ahead and perform the stimulation treatment. At
19 the end of it as you shut down you get an instantaneous
20 shut up pressure and at this point you can calculate
21 the actual bottom hole fracturing pressure for that
22 particular reservoir. In the wells that they have
23 done the lowest frack gradient is .65 ranging up to
24 .956. So considering this the one well at .65 gradient
25 would be the lowest possible pressure to fracture that

1 reservoir.

2 Q. In your experience given a reservoir of this type what
3 pressure gradient might be required to actually break
4 the overlying strata and to circulate gas up to higher
5 stratigraphic levels or even to the surface?

6 A. At least -- normally it's .75 to .8 or above.

7 Q. Do you consider after reviewing the data for this field
8 and given your extensive experience in fracturing
9 treatments throughout the Appalachian Basin that a
10 proposed upper limit for an operating pressure gradient
11 in this field of .6 is safe and reasonable?

12 A. Yes.

13 Q. Mr. Norton, do you have experience with fracture
14 treatments on wells in which significant safety
15 problems have occurred?

16 A. Safety problems being?

17 Q. In terms of parted casing or --

18 A. Oh, yes, very much.

19 Q. Is it safe to say that you're an expert on what would
20 constitute safe practice regarding maximum pressures in
21 gas wells?

22 A. Yes.

23 MR. EDWARDS: I have no further questions for Mr. Norton.

24 MR. CHAIRMAN: Questions, members of the Board, of this
25 witness?

1 MR. EVANS: I've got one question. As far as the cap rock
2 goes you gave some -- I believe someone gave some
3 testimony as to the capability as far as engineering
4 numbers on what the strength of what the cap rock was.
5 Do you plan to do any other -- did that come from nine
6 holes or just from one -- one of the core holes that
7 you did or what? That data was derived from how many,
8 just one core?

9 MR. EDWARDS: Basically. Yes, that's true. The more
10 extensive data that's available throughout the field is
11 that that's available from the artificial stimulation
12 treatments.

13 Q. (Mr. Edwards continues.) Jerry, you training at both
14 the undergraduate level and from a masters degree level
15 is in geology, is that not true?

16 A. Correct.

17 Q. In your opinion is the data available from the stimula-
18 tion of the gas wells the best available to be used in
19 determining the maximum operating pressures of this
20 field?

21 A. Yes. In the past cores being fine. But once you
22 remove a core from the natural surrounding and pressure
23 and temperature it changes. So when you get it on the
24 surface the data is good back-up data, but real time
25 data on location in a pump job is the best way to get

1 it. The stresses change from well to well and from
2 area to area and a rock will react differently in a
3 different environment.

4 Q. How high has the surface pressures reached during
5 treatments using nitrogen fracks in the Early Grove
6 Field? Is it not true that several of these treatments
7 have been carried out at pressures significantly higher
8 than the proposed maximum operating pressure?

9 A. Yes. In excess of 4,000.

10 Q. So the wells have been fracked at pressures over 4,000
11 pounds and the company is requesting a maximum operat-
12 ing pressure of slightly over 2,000 pounds?

13 A. Right.

14 Q. And you consider that also to be direct empirical
15 evidence that a maximum operating pressure of approxi-
16 mately 2,000 or 2,200 pounds is reasonable?

17 A. Yes. It should be well within the bounds.

18 MR. EDWARDS: Thank you, sir.

19 (Witness stands aside.)

20 MR. MASON: Mr. Chairman, this question's probably not that
21 directly related to his testimony. It may have been
22 covered in earlier testimony, but has each of the wells
23 in this field been individually tested for the cement
24 and the casing integrity?

25 MR. EDWARDS: Yes. Well, let me answer that question.

1 Every well in which we have injected gas for storage
2 purposes has been logged and tested for casing integr-
3 ity and for cement integrity.

4 MR. MASON: What about -- are there cap wells still in this
5 storage area that are not being used?

6 MR. EDWARDS: Yes. At this time we have five of the 25
7 wells that are being used as storage observation wells
8 and are not actively being used for injection and
9 withdrawal purposes. They're mainly being used to
10 monitor pressures at the outer edge of the field to
11 check for gas migration and things like that.

12 MR. CHAIRMAN: Are any of those the four new wells you've
13 drilled?

14 MR. EDWARDS: No. Those are all 1980 vintage wells drilled
15 either by United Coal or by Penn-Virginia Resources.

16 MR. MASON: The wells that were drilled back in the
17 thirties, are any of those in this area?

18 MR. EDWARDS: Yes, sir. I can point them out for you.

19 MR. MASON: That's okay. But are those wells being used by
20 you as the injection wells?

21 MR. EDWARDS: One of the old 1930 wells, the Miller #1 well
22 or our number is EH-96, was not plugged and abandoned
23 when the rest of the wells in the field were plugged
24 and abandoned in the 1950s -- when most of the wells
25 were plugged in the 1950s. Penn-Virginia subsequently

1 plugged two of the wells, I believe. The Miller #1
2 well which coincidentally was one of the deepest wells
3 drilled in the field down to a total depth of about
4 6,800 feet which tested both the Burea sand and the
5 Clinch sand was reworked, new casing and new cement was
6 run in the well by Penn-Virginia. The well was
7 completed in 1990.

8 MR. MASON: As to the wells that might be in this area that
9 have been plugged and capped from the earlier thing,
10 have you all done anything or monitored them to make
11 sure that none of those wells are leaking or producing
12 any gas to the surface through the old plugs?

13 MR. EDWARDS: Yes, sir. We have done an extensive amount of
14 literature and field research on locating all of the
15 old wells on ascertaining through literature search as
16 to what methods had been used in the plugging of the
17 wells. We've located all of them. The existing
18 Department of Mines records indicate that all of the
19 wells were plugged in a confident and workman like
20 fashion. We have using surface gas detection equipment
21 checked the areas surrounding the wells that are
22 closest to active storage wells and have not seen any
23 indication of surface leak off of gas. We've also
24 very closely monitored the shut in pressures of the
25 wells closest to the old plugged wells and have seen no

1 evidence of a pressure drop or lost gas from those
2 wells.

3 MR. MASON: So it would be safe to characterize or state
4 that you all have sort of an ongoing safety monitoring
5 program to deal with this issue?

6 MR. EDWARDS: Yes, sir. That's correct. That's also --
7 besides being a significant safety and environmental
8 issue both of which are a great concern to my company
9 we -- the issue of lost gas is also an extremely
10 economic issue.

11 MR. MASON: Sure. I understand.

12 MR. EDWARDS: So we have multiple motivations for monitoring
13 that.

14 MR. MASON: I just think from the standpoint of the public
15 concern that that's a major area.

16 MR. EDWARDS: That's a very valid concern. Our current
17 plans are to increase the pressures first on the deeper
18 Price Formation wells. The old wells did not penetrate
19 the Price Formation. When they were originally drilled
20 in the 1930s and early 1940s they were just drilled
21 into the Little Valley. So in our opinion there's
22 virtually no exposure to the loss of gas into the old
23 plugged wells from operations in the Price reservoir.
24 Before pressures in the Little Valley Formation are
25 significantly increased I would recommend that certain-

1 ly those old wells closest to active storage wells and
2 perhaps all of the old wells be re-entered and replugg-
3 ed if there's any indications of pressure rise.

4 MR. CHAIRMAN: When you tested this past year did you
5 pressure up the field with the pressures that you've
6 talked about here today, the .6?

7 MR. EDWARDS: No, sir. In our original testimony to the
8 Board in 1992, 1993 and 1994 we have several times said
9 that our operating procedure would be to only operate
10 up to the original discovery pressures which --
11 actually some of the wells in the field had discovery
12 of over 1,500 pounds. We've kept our operations under
13 about 1,400 PSI at the surface. There are several
14 steps that will have to be taken to upgrade the surface
15 facilities to where they can be safely operated at
16 higher pressures.

17 MR. MASON: You don't have a compressor there now to raise
18 it to .6 anyway, do you?

19 MR. EDWARDS: Only on a limited basis. We can use the --
20 no. The answer to that question is no because we have
21 two compressors. One is a 280 horsepower. The other
22 is a 360. The pressure limit on the cylinders and the
23 coolers and the fittings for the 280 is currently is
24 1,500. The pressure limit on the 360 which by the way
25 is a new unit manufactured by Ajax for our specific-

1 ations in the field, that's rated to 1,800 PSI. By
2 using the two compressors in series using the 280 to
3 boost the pressures up to 1,500 pounds and then using
4 the 360 to go from 1,500 to 1,800 we can operate at a
5 modest volume up to about 1,800. To go above 1,800 we
6 will have to install a third compressor which will
7 basically be a high pressure unit with small cylinder
8 size to go from 1,800 to over 2,000. The current
9 valves and the fittings in the field are generally 600
10 MC series which have about a 1,440 or 1,450 maximum.
11 One of the things we'll have to do is change out valves
12 and fitting up to a NC-1500 series which is over --
13 it's over 3,000 pounds. The pipelines themselves are
14 made of .188 inch wall, four inch steel, it's X-42
15 grade. The maximum test on those is about 2,100
16 pounds. We've tested the main line which goes from the
17 compressor station to the East Tennessee interconnect
18 up to 1,500 PSI and we would not envision -- we don't
19 currently operate that line at that pressure and we
20 would envision the lines on the suction side of the
21 compressor -- well, it's the suction side when we're
22 withdrawing gas. It's the discharge side when we're
23 injecting gas. The field lines have been tested up to
24 1,800 pounds and that's a hydro test. You test it with
25 water rather than with gas. It's safer. But we will

1 have to increase the test on the pipelines before doing
2 that. Also the well heads are good to about 2,000
3 pounds. So to go above 2,000 pounds all the well heads
4 would have to be changed out. It's step by step. As
5 with everything we've done in this field we want to
6 walk before we run and before we walk we want to make
7 sure we've looked very closely.

8 MR. MASON: So what you're really saying is that going from
9 where you are with the pressures you're operating under
10 as to where what you're talking about is really going
11 to be a gradual process that's staged in as you upgrade
12 various components of --

13 MR. EDWARDS: Yes, sir, probably over a two to three year
14 period. It's a --

15 MR. MASON: Expensive.

16 MR. EDWARDS: Yes. It's an expensive process but compared
17 to the alternatives it's far and away the most cost
18 effective technique for increasing capacity and
19 deliverability. It's much -- as long as you stay
20 within reasonable limits there's a lot less environ-
21 mental impact to that than, for example, to drilling
22 ten new wells which is the main alternative.

23 MR. MASON: As the pressures go up you get a greater than
24 proportion in increase and withdrawal, do you not?

25 MR. EDWARDS: We believe that that will be the case but we

1 don't have empirical data to support that.

2 MR. MASON: Thank you very much.

3 MR. CHAIRMAN: Any other questions, members of the Board,
4 for Mr. Norton? Thank you.

5 (Witness stands aside.)

6 MR. EDWARDS: That concludes my prepared statements. As I
7 earlier said, we have a vehicle available if anyone is
8 interested in a tour of the field. You've been there,
9 Ken?

10 MR. EVANS: Been there, done that.

11 MR. CHAIRMAN: We appreciate very much the briefing for the
12 Board. Ms. Lacy, we appreciate you coming today. Is
13 there anything further that you'd like to say?

14 MS. LACY: No, sir.

15 MR. CHAIRMAN: Does anyone have any other questions? If not
16 that concludes our business. Thank you very much.

17 MR. MASON: Do we have any action to take in this regard?

18 MR. CHAIRMAN: It's up to the Board. I'm not proposing any
19 action. I thought that today would be appropriate for
20 the Board to be briefed, updated on what's going on in
21 the field. As the SCC makes their decisions on
22 jurisdictional issues the Board and the SCC through
23 its coordinations will make sure that we are hand and
24 baton, if that's what we're doing. And the decisions
25 on the Board orders and everything are probably more

1 appropriate at a later date unless you folks feel
2 differently. That was the intent here.

3 MR. MASON: No. I was just inquiring. The lady from the
4 SCC, is there anything that you would deem appropriate
5 for us to do at this time to further this process?

6 MS. LACY: No. What we don't want is a gap.

7 MR. CHAIRMAN: Right.

8 MR. MASON: Thank you.

9 MR. FULMER: Mr. Chairman, there's two agenda items for next
10 month. One is a continuance that we had today and the
11 other one is a location exception. That's all the
12 Board has.

13 MR. CHAIRMAN: Why don't you talk to them and see if there's
14 any problem in moving that to July. If there isn't we
15 could have a break.

16 MR. FULMER: It's CNR issue which we can talk to them.

17 MR. CHAIRMAN: Okay. That concludes our business. Thank
18 you very much.

19

20 (End of Proceedings for
21 May 16, 1995.)

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1
2 CERTIFICATE
3

4 COMMONWEALTH OF VIRGINIA

5 COUNTY OF WASHINGTON
6

7 I, Deborah J. Bise, Notary Public in and for the
8 Commonwealth of Virginia, at Large, do hereby certify that the
9 foregoing proceedings of the Virginia Gas and Oil Board
10 meeting held on May 16, 1995 at the Southwest Virginia
11 4-H Center, Abingdon, Virginia, were taken by me and that the
12 foregoing is a true and correct transcript of the proceedings
13 had as aforesaid to the best of my ability.

14 I further certify that I am not a relative, counsel, or
15 attorney for either party, or otherwise interested in the
16 outcome of this action.
17

18 GIVEN under my hand this 8th day of May, 1995.
19

20 Deborah J. Bise
21 DEBORAH J. BISE
22 NOTARY PUBLIC
23

24 My commission expires September 30, 1996.
25