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VIRGINIA OIL AND GAS CONSERVATION BOARD

HEARING OF JULY 17, 1992

9:00 A. M.

AT THE SOUTHWEST VIRGINIA 4-H CENTER

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July 21, 1992

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2 This matter came on to be heard on this the 21st day of
3 July, 1992 before the Virginia Gas and Oil Board at the
4 Southwest Virginia 4-H Center, Abingdon, Virginia pursuant to
5 Section 45.1-361.19.B and 45.1-361.22 B of the Code of
6 Virginia.

7
8 MR. CHAIRMAN: Good morning. My name is Benny Wampler. I'm
9 Assistant Director of Mining for the Virginia Department
10 of Mines, Minerals and Energy. If you folks in back have
11 difficulty hearing, feel free to move forward to where
12 you can hear. You can move your chairs even, if you need
13 to. I'll ask our Board members to introduce themselves
14 starting with Kevin.

15 (MEMBERS INTRODUCED.)
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ITEM I, II

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MR. CHAIRMAN: The first two items on the Board's agenda today have -- we have requests for continuances. That's been granted. And that's Docket Number VGOB-92/07/21-0232 and 0245.

ITEM III

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2
3 MR. CHAIRMAN: The third item on the agenda is a request by
4 Virginia Gas Company for a temporary order to test the
5 Price Formation in the Early Grove Gas Field. This is
6 VGOB-92/07/21-0233. We would ask the parties that wish
7 to address in this matter to identify themselves now,
8 please.

9 MR. STREET: Good morning. My name is David Street with
10 Street, Street, Street, Scott & Bowman. And along with
11 other members, Elizabeth McClannahan with Penn, Stuart,
12 Eskridge & Jones and Attorney Ford Quillen, I represent
13 Virginia Gas Company in its application to establish a
14 temporary order for the testing of the Price Formation as
15 a gas storage reservoir in the Early Grove Gas and Oil
16 Field. The units proposed for testing are the EH-88, the
17 Baker #2, the EH-89, the Dure #1, the EH-103, the Hensley
18 #1, and the EH-105, the Gardner #1 in Scott County,
19 Virginia. The units contain 81 acres, 75.5 acres, 75
20 acres and 80 acres respectively. Virginia Gas Company
21 controls 100 percent of the oil and gas estate underlying
22 these units. The purpose of the testing proposed by
23 Virginia Gas Company is to determine whether Early Grove
24 Gas and Oil Field is suitable for use as a commercial
25 storage field. If the testing proves successful Virginia

1 Gas Company will be able to better serve industrial
2 customers in Castlewood, St. Paul, Lebanon, Wise, and
3 surrounding areas. Virginia Gas Company has already
4 secured contracts with a number of industrial customers
5 in these areas in anticipation of this project. The
6 project entails the Early Grove Gas Field which is here
7 just off the East Tennessee Natural Gas pipeline and this
8 is Castlewood. Here are the reserves that Virginia Gas
9 has in Buchanan County. If the testing proves successful
10 it will extend the life of the field shortly destined to
11 become just another depleted oil and gas field. It would
12 also provide numerous royalty owners in Early Grove with
13 a steady income that would otherwise diminish and
14 eventually terminate within economic demise of this gas
15 field. Virginia Gas Company will provide testimony today
16 that the Early Grove Gas and Oil Field in the southern
17 Appalachian Basin demonstrates characteristics that make
18 it a very desirable area of the country to develop a
19 storage reservoir. Reservoirs like the Early Grove Gas
20 Field have become converted to storage fields in Pennsyl-
21 vania and West Virginia in this Appalachian Basin and
22 this was done in the mid 30's. They're still in opera-
23 tion today. Such a long term project would not only
24 provide income to landowners in the field for numerous
25 years to come, but it also allows Virginia Gas Company to

1 meet seasonal demands for natural gas that would impose
2 difficulty and expensive requirements on currently
3 existing pipeline systems. An underground storage
4 facility would permit Virginia Gas Company to provide
5 peak day and peak hour deliverability at lower prices
6 than is required through affirmed deliveries from a
7 pipeline supplier. The proximity of the Early Grove Gas
8 and Oil Field to pipelines in the market together with
9 its geological characteristics renders it the perfect
10 economic resolution to the area's growing demands for
11 natural gas. The testing procedures proposed by Virginia
12 Gas Company will verify: 1; The integrity of the Early
13 Grove Field as a storage container. 2; The assurance of
14 deliverability for withdraw. 3; The adequacy of compres-
15 sion for the injection of gas. A temporary order for the
16 testing of the Price Formation as a gas storage reservoir
17 in the Early Grove Field should be established in order
18 to meet the seasonal demand for natural gas that would
19 impose difficult and expensive requirements of a pipeline
20 system if delivered solely by that means, provide peak
21 day and peak hour deliverability of gas, provide a
22 leveling mechanism for supply requirements, and most
23 importantly provide industrial customers of Russell
24 County, Scott County, Wise County, and Washington County
25 with an economically and environmentally attracted field

1 alternative. Virginia Gas Company therefore seeks relief
2 from the Gas and Oil Board in the form of a temporary
3 order for the testing of the Price Formation as a gas
4 storage reservoir in the Early Grove Gas and Oil Field.
5 The applicant respectfully requests that the Board enter
6 a temporary order: A; Granting a modification to the
7 Early Grove order entered March 20, 1989, effective as
8 of August 10, 1988, and approving the wells for testing
9 at the coordinates set forth herein and depicted on the
10 plat attached as Exhibit B for the units. B; Name the
11 applicant, Virginia Gas Company, as the operator and
12 granting the operator the right to test the Price
13 Formation underlying the units. C; Requiring that the
14 operator take adequate precaution during the testing
15 phase to maintain the integrity of the well bore for each
16 well. D; Requiring that the operator report monthly to
17 the Virginia Gas and Oil Inspector or at such other
18 times as may be required the qualities or volumes of gas
19 stored and/or removed from the units, also requiring that
20 the operator monitor the well head pressures and report
21 them. E; Require that the Inspector make or cause to be
22 made any inspection or surveys deemed necessary to
23 determine if the provisions of this order are adhered to.
24 And finally, requiring that the maps and data filed with
25 this application be amended or supplemented semi-annually

1 in case any material changes have occurred provided,
2 however, that the Inspector may require the operator to
3 amend or supplement such maps and data at more frequent
4 intervals if material changes occur justifying earlier
5 filing. Before I introduce our witnesses, Jim Gillespie
6 has joined us today. Jim is the County Administrator for
7 Russell County and he's also the Secretary/Treasurer of
8 the Russell County Industrial Development Authority. He
9 would like to confirm and expand upon the statements we
10 have made regarding the potential contributions of this
11 project to the southwestern Virginia economy.

12 MR. GILLESPIE: Good morning. My name is Jim Gillespie. As
13 said, I'm County Administrator and Secretary/Treasurer of
14 the Russell County Development Authority. In speaking
15 for my Board of Supervisors and for the Industrial
16 Development Authority, they feel that the introduction of
17 natural gas into Russell County as a usable commodity
18 for industry and for residential use will be a great boom
19 for the County. Russell County's economic base over the
20 years has traditionally relied on the coal industry and
21 agriculture. Of course, the coal industry while it has
22 been of great assist to the County, the coal industry is
23 one in which fewer people are employed on an annual basis
24 as the technology advances and they are able to mine
25 coal -- even increasing amounts of it with fewer people.

1 Russell County's coal reserves also are dwindling. So
2 what we have sought to do in Russell County over the
3 recent years is to diversify our economic base. Since
4 the 1980's we have been plagued by double digit unemploy-
5 ment. Our people having -- and our population has
6 declined approximately 3,000 persons from early 1980's to
7 the 1990 census. So we have been seeking diversification
8 to make our County strong and to provide jobs for those
9 citizens who are there. Natural gas we see as a great
10 benefit in helping us provide this. Natural gas -- we
11 are fortunate in Russell County to have the coal supplies
12 that we do, inexpensive electric power that is also
13 provided. But many industries are also looking for
14 natural gas as an alternate or an alternative means of
15 providing heat for the plants and we see this as a great
16 boom for us or a great assist in that we would be able to
17 attract many more companies in to look at Russell County
18 as a potential area to expand their industry or to
19 create new industry and thereby provide jobs for our
20 citizens. As much as the interstate highway is a means
21 of channelling and determining where industry will go and
22 as much as digit and electronic switching of telephones
23 are the new interstates of the communication age, so is
24 natural gas as an alternative supply of energy. We see
25 this as being able, as I said, to attract many new

1 industries, industries that we would not have had an
2 opportunity to talk to before, industries that may be
3 heavier concentration of capital investment than some of
4 the industries that we have been able to entice into our
5 County in the past. I speak of that from the standpoint
6 of with greater capital investment, of course, that has a
7 greater favorable impact on our tax base. The Russell
8 County Board of Supervisors and the Russell County
9 Industrial Development Authority have both passed
10 resolutions supporting Virginia Natural Gas coming into
11 the County and of their seeking certifications by the
12 State of Virginia. The Russell County Industrial
13 Development Authority has just recently, in fact, at
14 their last meeting passed an inducement resolution and
15 will be working with Virginia Natural Gas for the
16 issuance of economic development revenue bonds. Russell
17 County is 100 percent behind this and we see it as vital
18 to the economic future of our County. Thank you.

19 MR. CHAIRMAN: Thank you, Mr. Gillespie. Any questions,
20 members of the Board? Okay.

21 MR. STREET: We've been joined here by Mr. Quillen here this
22 morning.

23 MR. QUILLEN: Good morning.

24 MR. STREET: I'd like to introduce now the witnesses we plan
25 on calling today. We will call Mr. Brad Swanson who's

1 the Senior Land Agent for Virginia Gas. He will explain
2 the current ownerships and control Virginia Gas has. Jim
3 Wilson is an independent geologist contracted by Virginia
4 Gas. He will explain the geologic formations, etc.
5 Steve Wilburn is the Vice-president of Virginia Gas and
6 also Petroleum Engineer and will explain the supply and
7 marketing and the operations of the proposed testing.
8 Finally, Laura Langer who is a petroleum engineer with
9 Equa-Trans, an equitable company. At this time I would
10 like to call Ms. Langer as our first witness.

11 COURT REPORTER: (Swears witness.)

12
13 LAURA L. LANGER

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

16
17 DIRECT EXAMINATION

18
19 BY MR. STREET:

20 Q. Would you state your name, please?

21 A. Laura L. Langer.

22 Q. And your address?

23 A. 3500 Park Lane, Pittsburgh, Pennsylvania, 15275. That's
24 my work address.

25 Q. Ms. Langer, what is your profession?

1 A. I'm a petroleum engineer.

2 Q. And who are you employed by?

3 A. I work for Equa-Trans, Incorporated.

4 Q. What is your position with Equa-Trans?

5 A. I'm the manager of the Reservoir Engineering Department.

6 Q. Could you go over some of your responsibilities and
7 duties for the Board?

8 A. Yes. I currently manage the staff group that's respons-
9 ible for all of Equa-Trans storage and production
10 operations. Equa-Trans operates fifteen storage reserv-
11 oirs in Pennsylvania and West Virginia and over 1,000
12 producing wells between the two states. We also handle
13 the development of the acreage holdings of the company as
14 well as local gas purchase agreements and lease hold and
15 right-of-way acquisition.

16 Q. Ma'am, could you please go over your educational back-
17 ground?

18 A. I have a Bachelors and a Masters degree in mathematics
19 from the University of Colorado, a Masters degree in
20 Petroleum Engineering from Stafford University, and a
21 Masters degree in Secondary Education from DeCaine
22 University.

23 Q. And would you please go over your work background?

24 A. I've been with Equa-Trans since the company was formed.
25 Equa-Trans is a transmission and storage company that was

1 formed by the separation of the transmission facilities
2 from the local distribution facilities that formerly were
3 held by Equitable Gas Company, a Pittsburgh base local
4 distribution company. The transmission facilities were
5 separated from the distribution facilities in 1987 to
6 improve the overall through capacity of the transmission
7 facilities. Prior to the formation of Equa-Trans I held
8 the same position with Equitable Gas Company for two
9 years. Before we moved to Pittsburgh I worked for
10 Southern California Gas Company in their storage opera-
11 tions in the Los Angeles Basin for five years.

12 Q. Ms. Langer, could you please go over your membership in
13 any professional associations?

14 A. I am a member of the Society of Petroleum Engineers, the
15 Society of Professional Well Log Analysts, the Pittsburgh
16 Geologic Association. I'm the former chairperson of the
17 Pennsylvania Gas Association Supply and Storage Committee
18 and the American Gas Association's Underground Storage
19 Committee. And I currently sit as an advisor on the Gas
20 Research Institute's Gas Storage Steering Committee that
21 oversees all of GRI's involvement in underground storage
22 research.

23 Q. Ms. Langer, have you written any articles or books on oil
24 and gas subjects?

25 A. No books, but I have written articles for presentations

1 that I have made. I've made presentations at the Eastern
2 Mineral Law Foundation, the American Association of
3 Petroleum Geologists presentations, and I've given
4 presentations at Gas Mart, Gas Daily Executive Enterpris-
5 es on underground storage.

6 Q. Have you received any awards or recognition for achieve-
7 ments in your field?

8 A. I received recognition for my chairmanship of both the
9 Pennsylvania Gas Association Committee and the American
10 Gas Association Committee as well as letters from several
11 commissioners of the Federal Energy Regulatory Commission
12 for presentations I have made to that body.

13 Q. Have you ever participated in any arbitration proceed-
14 ings?

15 A. I've participated in one settlement date proceeding for
16 the State of West Virginia on a lease hold dispute.

17 Q. Have you ever been qualified as an expert witness and if
18 so, when and where?

19 A. I've been qualified as an expert witness most recently in
20 a proceeding in Green County court regarding the right
21 of a coal company to plug a well that was sold to them by
22 Equa-Trans. Prior to that I have testified before the
23 Indiana Public Service Commission on a dispute between a
24 producer and a storage operator as to the ownership of
25 gas that was being produced at the edge of a storage

1 field. I have also given testimony in the Middle
2 District Court of Pennsylvania and the Northern District
3 Court of West Virginia related to company production
4 capabilities and to breach of contract with an independ-
5 ent producer.

6 MR. STREET: At this time I would like to submit Mr. Langer as
7 an expert witness in petroleum engineering.

8 MR. CHAIRMAN: Any objection. Without object.

9 Q. (Mr. Street continues.) Ma'am, is the Virginia Gas
10 application a storage project proposal?

11 A. It is a proposal to test a formation for its suitability
12 for future use for underground storage.

13 Q. What is the relief requested by Virginia Gas Company's
14 application?

15 A. Permission to go ahead with that testing that will allow
16 them to ascertain whether or not it is a suitable
17 formation.

18 Q. If a storage reservoir is feasible in the Early Grove
19 Field how long would you expect for the project to be in
20 existence?

21 A. Underground storage operations basically have a length
22 that's determined by their usefulness. And there are
23 underground storage facilities in this country that have
24 been in operation since 1916 on a continuous basis. So
25 they have a very long longevity.

1 Q. Is it consistent with other similar projects?

2 A. Yes, it is.

3 Q. Once the Early Grove is converted to a storage field and
4 during the time period as its operated as a storage
5 field will the landowners continue to receive royalties?

6 A. When it is operated as a storage field they will no
7 longer receive royalty payments for production. They
8 will, however, receive a storage rental payment that will
9 probably be very similar in quantity to the production
10 royalties that they are now receiving. Of course, you
11 realize that in any production field as the production
12 declines there comes a point in time when you receive no
13 royalty payment whereas a storage rental payment is
14 consistent over time for the duration of the storage
15 project.

16 Q. Okay. Would you like to do your slides at this time?

17 A. Sure. I have a short and, I hope, instructive slide
18 presentation I am going to give you now to just give you
19 a little bit of history about underground storage
20 operations and some of the mechanics of how it works and
21 what we're trying to accomplish with an underground
22 storage operation. Okay. This is a rough outline of
23 what I'm going to talk about and you'll see this slide
24 again. Most of the slides -- the important ones -- you
25 have as parts of your exhibit. I think it's 1 through

1 11. Right, Elizabeth?

2 MS. McCLANNAHAN: Uh-huh.

3 A. (The Witness continues.) Some of the photographs you do
4 not have but they aren't as important. I'm going to talk
5 a little bit about the history and geography of storage,
6 the geology and chemistry or physics, if you will, of
7 what we're doing and then some of the mechanics of how
8 the operation actually occurs. First, for a little bit
9 of history, underground storage or the concept of
10 reinjecting gas back into a depleted oil and gas field
11 has been around for a long time. In the early 1900's
12 companies began reinjecting gas in eastern Ohio to help
13 with oil production. In 1915 an affiliate of National
14 Field Gas Corporation, a Canadian affiliate, said, "Well,
15 gee. We don't have enough wintertime supply coming
16 through our pipeline system and we've got these depleted
17 fields sitting around. What if we put the gas in the
18 fields during the summer and took it back out again
19 during the winter?" The experiment was successful and in
20 1916 another affiliate of National Field Gas started the
21 first United States underground storage project just
22 south of Buffalo, New York in the Zora Field. That
23 field is in operation today and has been in continuous
24 operation since 1916. In 1934 my company developed its
25 first storage operations in Pennsylvania and in 1936 the

1 first two storage projects were developed in West
2 Virginia by my company. And those two projects, like-
3 wise, are still in existence and operation today. Let's
4 talk a little bit about where underground storage takes
5 place in the United States. Today there are approximate-
6 ly 397 storage reservoirs in existence in the United
7 States. I say approximately because these -- all the
8 statistics and information I'm going to give you today
9 come from data collected by the American Gas Association
10 and there are companies that have underground storage
11 that are not members of the AGA. So an attempt is made
12 to collect information from all of the companies that are
13 operators, but needless to say it's not 100 percent. So
14 there are about 397 storage reservoirs in operation and
15 you can see that they pretty well cover the country from
16 the west coast to what we call the Appalachian Basin
17 states. That's New York, Pennsylvania, West Virginia,
18 Maryland, Virginia, eastern Kentucky and Ohio. Further
19 east than that you don't have any underground storage
20 because you don't have any sedimentary basins in which to
21 develop depleted fields and you don't have suitable
22 (Inaudible.) formations for the development as well. So
23 the Appalachian Basin is the ideal location for the
24 eastern Sea Board markets for natural gas in terms of the
25 underground storage of natural gas. A 144 of the 397

1 storage reservoirs in the country are in the Appalachian
2 Basin. New York, Ohio, Pennsylvania, West Virginia,
3 Maryland and Kentucky. But more important than that, of
4 the eight trillion cubic feet of gas that is in storage
5 in the country today a fourth of it is in storage in the
6 Appalachian Basin -- about two trillion feet. And to put
7 that number into some context for you, you all remember
8 the cold December that we had in 1989 when it was cold
9 all over the country, two trillion cubic feet of gas was
10 sent out to residential, commercial and industrial
11 customers during that month alone. And all of that could
12 have been supplied by underground storage from the
13 Appalachian Basin. That's how much we have in storage in
14 the basin. Okay. Let's talk a little bit about the
15 geology since that's what's important here today of how
16 this occurs. I'm going to give you some terminology to
17 help set up the presentations you will hear from Jim
18 Wilson and from Steve. We don't store underground --
19 when we talk about storing natural gas underground we
20 don't store it in a tank. Many of you have seen a gas
21 station under construction. You know that what they're
22 putting gasoline into is a metal tank under the ground
23 and they can see how much gas is in there by sticking a
24 wooden stick in there and measuring it. And I wish it
25 was that simple for the underground storage of natural

1 gas. When we store natural gas underground we are
2 storing it in rock -- in layers of rock buried below the
3 ground most of which -- and unfortunately, you don't have
4 this slide. You have a better one in your package there
5 that actually shows stratigraphic traps. That one's
6 suppose to be on its way down here and hasn't arrived.
7 So the one in your package is a better picture than this
8 artist rendition here that makes it look like we have a
9 big red blob under the ground there. We're storing the
10 gas in reservoir rock and I'm going to give you a piece
11 of that rock to look at while I'm talking here. These
12 are some sidewall core samples from the Price Formation
13 that you can pass around. These are from an edge well.
14 So they don't have the permeability and thrust that we
15 would like to see that's in the reservoir (Inaudible.)
16 These piece that's in this little core barrel to show you
17 how we get a piece of rock this shape out of a well is
18 from one of our storage reservoirs and you can see the
19 greater core space in that piece of rock. So the key
20 things that I've just mentioned that are important that
21 using rock for underground storage is that you have to
22 have core space. You have to have porosity and perme-
23 ability in the rock in order to use it for underground
24 storage. What you're looking at up here is a thin slice
25 from a piece of rock that has been stained to show the

1 core spaces between the sand grains and we'll talk about
2 that in a little more detail with the schematic.
3 Obviously to have rock you have to have something holding
4 those grains of sand or whatever the rock material is
5 together. And this black that you see in this picture
6 here is what's called the cementing material. It might
7 be calcite. It might clay particles or shell. And it
8 holds the sand grains together. Otherwise, when you took
9 that core barrel out you'd have loose sand like you have
10 in your children's sandbox. And some formations actually
11 come out that way. I mean, the Arabians are fortunate
12 enough to have that kind of rock where their oil is.
13 It's very loosely held together with lots of core space.
14 The blue in this picture is the core space that's
15 available for the rock to hold fluids, whether it's gas,
16 oil or water. In any rock situation you have what's
17 called connate water. It's the water that actually
18 adheres to the surface of the rocks. It does move. It's
19 stuck there. It might be water, might be oil, all of
20 which effect what we call the permeability of the rock to
21 natural gas. So porosity then is the actual amount of
22 physical space between the grains of the sand that can be
23 used for your container. Permeability, on the other
24 hand, is how easily can you move a fluid through this
25 rock. And the permeability of a rock depends on all of

1 these things. It depends on the size and shape of the
2 core spaces. It depends on how well connected together
3 they are. It depends on what type of fluid is stuck to
4 the surface of the rock, whether it's water or oil. And
5 it depends on the shape and the pathways and how the rock
6 is actually weighed down during the sedimentary process.
7 Permeability is a measure of how well a fluid can be
8 transmitted through this rock. And you can see that if
9 you have little isolated core spaces like this one that
10 aren't connected to anything else they're going to be
11 ineffective for that transmission. Now, you're holding
12 that piece of rock in your hand and you're looking at and
13 you're saying, "I don't see any core spaces. I don't
14 know how they're going to get anything into this rock or
15 back out of it again." So I have a very simple demonstr-
16 ation here, kind of like a magic show, and I will ask you
17 to be my lovely assistant. Magicians need a lovely
18 assistant. And verify for your fellow members of the
19 Board here that both of these containers are full. We
20 have a container here that is full of loose gravel. This
21 is not like our rock in the Appalachian Basin well
22 cemented together, but it is rather like what the Saudis
23 are producing oil from. We're now going to take this
24 container and pour about a fourth to a third of it into
25 this one without changing the level of the rock in the

1 container and thus, very effectively demonstrating the
2 fact that there really is space between the sand grains
3 that you can put something into. Now, the tricky part
4 always comes when somebody else says, "Okay. Get it back
5 again." And I didn't bring any straws so -- to represent
6 our wells. So basically that is what we're talking about
7 storing gas in. We're talking about storing it in rock.
8 We're talking about storing in rock that has sufficient
9 permeability and porosity. You're going to hear a
10 little bit later about how that porosity and permeability
11 have been quantified or at least what they know to date
12 about the Price Formation, both from core samples such as
13 the one that's being passed around, but more in this case
14 because they don't have a lot of core data from electric-
15 al log information. And that's information that has been
16 obtained by running instruments into the existing wells
17 and taking readings on physical properties within the
18 well bore that give them some idea about the potential
19 porosity and permeability of the reservoir. To gain a
20 better understanding, the initial data that they have
21 today seems to indicate that yes, this is a prospect
22 that should be investigated further for its storage
23 potential to get a better handle on what those parameters
24 are. And to understand whether or not this will truly be
25 an effective reservoir they need to do the type of well

1 testing that they're asking your permission to do. So
2 let's go back again and talk a little bit about -- we're
3 going to talk about the physics and chemistry side of
4 this operation and talk about why we store natural gas
5 underground as opposed to some other way. Some other way
6 might be like this. This is an above ground gas holder
7 that was filled for Northern Indiana Gas and Electric in
8 1929. This thing is 105 feet in diameter, 137 feet tall,
9 takes up a lot of land surface, puts the gas in close
10 proximity to the urban environment, and only holds 1,000
11 MCF of gas. Now, 100,000 MCF of gas is more or less
12 enough to heat ten homes for one season. There are
13 underground storage reservoirs on the hand in operation
14 that hold one-hundred million MCF of gas. And as I
15 mentioned earlier, the entire national send-out in
16 December of 1989 could have been handled from Appalachian
17 storage alone. So underground storage of natural gas is
18 effective because you can put more gas in a space that
19 takes up less space both in terms of surface usage as
20 well as less physical volume. And it takes up less
21 physical volume because when you put it into rock
22 underground you're putting it in under pressure and
23 you're putting it in under all the weight of all the
24 overlying sediments and the fluids they contain. To give
25 you a little bit of an idea of how much difference in

1 volume we're talking about, this is something that you
2 hear about in the gas industry all the time and my boss
3 had this put together because he just had to have one.
4 This is a cubic foot. And that's how natural gas is
5 measured. It's measured in cubic feet. This is a cubic
6 foot at standard conditions -- at the conditions of the
7 temperature and pressure in this room. Unlike fluid, as
8 you can see, if I kept pouring water into this glass the
9 water would overflow onto the table because liquids
10 occupy all of the space of whatever container you put
11 into them and don't hold their shape and they would
12 overflow and run over. Gas, on the other hand, when you
13 put into a container tends to fill up all of the space in
14 the container and you can keep putting it in until you
15 reach the strength of whatever the container is. Like if
16 you overfill a balloon it will break eventually. But you
17 can keep putting the gas in under pressure and how much
18 gas can go in there depends both on that pressure and the
19 temperature. You've all had the experience of having to
20 add more air to your tires in the winter time when the
21 temperatures get cooler. So temperature and pressure
22 both determine how much gas goes into a container. Well,
23 at the conditions below the surface where you're using
24 for underground storage you have both higher pressure and
25 temperature and this cubic foot of gas would fit into a

1 container this size at 3,000 pounds. So that gives you a
2 little bit of an idea of the difference in actual volume
3 spacial requirements for storing gas if you store it
4 under this kind of pressure. And the other important
5 thing, of course, with underground storage of natural gas
6 is surface use of the land. Just as in the production
7 phase for oil and gas, the land surface itself can be
8 used for other things while you're using the subsurface
9 and the rock below it for the storage of natural gas. In
10 Los Angeles there's an underground storage field that
11 actually underlies the entire city of Montebella and it
12 has been in operation for probably fifty years. And the
13 residents in that area, because it is a former depleted
14 oil and gas field, are actually better off than they
15 would be had that field been abandoned and left and not
16 utilized for the future storage of natural gas because
17 the gas company is in there. They are present. They are
18 constantly monitoring not only their own wells but the
19 wells that have been formally used for oil and gas
20 production prior to the inception of storage and you have
21 a thriving residential community with very expensive
22 property sitting on top of this underground storage
23 operation. In the Appalachian Basin typically the
24 surface of the land is used more for farming and for
25 other types of uses. But nonetheless, those uses are not

1 inhibited by the use of the subsurface for the storage of
2 gas. Okay. We've talked about the geology and chemist-
3 ry. Now let's go through very quickly how do we do
4 this -- the mechanics of it. There are three basic
5 requirements for an underground storage operation. First
6 you have to do what Virginia Gas is proposing to do. You
7 have to verify both the integrity and the suitability of
8 the container for the purpose of storing gas underground.
9 That's the number one consideration. You've got to have
10 a container. The second thing that you then have to do
11 is you have to assure that you're going to have suffi-
12 cient deliverability. If you want to be able to meet the
13 peaking needs of your local customers above and beyond
14 what the pipeline is capable of bringing it in the winter
15 time you have to have a sufficient number of wells to
16 withdraw the gas from the reservoir in a timely fashion.
17 And thirdly, you have to have adequate compression to get
18 the gas back in during the summertime when there is more
19 gas coming through the pipeline system than the customers
20 need. To do that you use wells to put the gas both in
21 and out of the ground. Because of the subsurface -- all
22 rock has some water in it, maybe a little bit of oil, you
23 have to have some separation facilities at the surface.
24 I'm sure you've seen these types of facilities for the
25 oil and gas extraction process to clean the gas up both

1 before it goes in and when it comes back out of the
2 ground and you need compressors to put the gas into the
3 ground. And that's basically what's involved in the
4 physical operation of an underground storage facility.
5 Finally, why do we bother storing gas at all? We've
6 talked about why we store it underground as opposed to on
7 the surface, but why do we store it? And these are some
8 of the key things that are important to the potential
9 future operation of the Early Grove Field as a storage
10 facility. Gas is stored underground for both peak day
11 and peak hour deliverability. If all of the pipelines
12 across our country were built to deliver a sufficient
13 volume of gas for the coldest day of the year, which
14 usually occurs during Christmas week for reason, we would
15 have miles and miles of much larger diameter pipe running
16 all over the country than we have today. Underground
17 storage facilities were developed when they were develop-
18 ed and have continued to be developed to provide that
19 peak day capability without having to go through the
20 expense and the additional usage of land for the develop-
21 ment of pipelines to deliver that same amount and then
22 those pipelines would sit there half the year empty
23 because you would have built them to deliver a volume
24 that they aren't delivering for most of the year.
25 Likewise, most gas companies that deliver to residential

1 customers have what they have peak hour requirements.
2 Everyone gets up in the morning, you cook your breakfast,
3 you put in a load of laundry, you turn the heat up in the
4 house, at 6:00 the gas company experiences a surge in
5 demand on their pipeline system. People go off to work,
6 they turn the heat down, they aren't cooking, they aren't
7 running the washing machine, they come back at 6:00 in
8 the evening and they cook dinner, they turn the heat up
9 and they put in another load of laundry and at 6:00 in
10 the evening the gas company experiences another surge of
11 demand on their system. Underground storage facilities
12 all over the country help local distribution companies
13 meet those peak hour requirements so that again they
14 don't have to build facilities or set up strange supply
15 arrangements to allow them to have an excess supply for
16 two short periods during the day. Most underground
17 storage facilities, however, operate for the traditional
18 reason of leveling supply requirements. This is how
19 underground storage got started as I mentioned in 1915
20 and 1916. There's an excess of supply in the summer time
21 and not sufficient supply in the winter time and you can
22 level out those seasonal peaks through the use of
23 underground storage. This slide was developed by the
24 Pennsylvania Public Utility Commission to illustrate just
25 that point. The yellow line on here represents the

1 supply coming into a northeast utility on a continuous
2 basis from a southwest supplier. And you can see that
3 it's a fairly level amount that fits contractual obliga-
4 tions. You don't write contracts that deliver large
5 volumes at one time of the year and smaller volumes at
6 other times of the year although with the changes in our
7 industry that may be coming. The blue line, on the
8 other hand, represents the requirements of the utility to
9 serve it's customer. And you can see in the winter
10 months, November, December, January, February, those
11 requirements are higher than the supply that is coming
12 into the system. So the green shaded areas represent the
13 parts of the year when gas is being taken from under-
14 ground storage to meet those supply requirements, and the
15 red areas represent the part of the year when the
16 pipeline supply in excess of customer demand and the gas
17 is being injected into storage. Finally, a very import-
18 ant consideration today is, as we all know, natural gas
19 prices fluctuate year round and we have developed a spot
20 market in the summer time for gas supply that can't be
21 sold otherwise. Without underground storage most
22 companies cannot take advantage of those prices because
23 they don't have customer burn-off so they can't buy the
24 gas at the lower prices. With underground storage they
25 can take full advantage of the seasonal prices, buying

1 the gas in the summer time when its cheapest, putting it
2 into storage, and then having it available at that lower
3 cost to their customers in the winter time when the
4 demand is high. That concludes the formal presentation I
5 have with my slides. If you have any other questions at
6 this point I would be more than happy to answer them.

7 MR. CHAIRMAN: Any questions?

8 MR. MCGLOTHLIN: If you have a pipeline delivering the gas to
9 the storage area and you talk about the volume of size
10 that a pipeline would have to be to supply on the coldest
11 days of the year. Is there not going to be a restric-
12 tion -- is that pipeline not going to be a restriction
13 also for the storage facility to supply that demand?

14 THE WITNESS: Well, you'll find that the pipeline systems that
15 deliver to the eastern Sea Board were built with a
16 sufficient diameter to provide that peak day supply from
17 the Appalachian Basin to the market. But coming from the
18 southwest into the Appalachian Basin they can get by with
19 a smaller diameter of pipe precisely because you can flow
20 the gas on a continuous basis in the summer time, put it
21 into storage, and then take it out through the large
22 diameter pipe in the winter time and deliver it to the
23 markets so that the building of underground storage
24 facilities in the Appalachian Basin in the 30's, 40's and
25 50's was -- definitely impacted the diameter of the pipe

1 that had to be built from the southwest to the Appala-
2 chian Basin at roughly the same time. It is smaller
3 diameter pipe than it would be otherwise. Without
4 underground storage in the Appalachian Basin in December,
5 1989 the entire eastern Sea Board would have had their
6 pilot lights go out because there wouldn't have been a
7 sufficient supply to get to them and couldn't be through
8 the existing pipelines.

9 MR. MCGLOTHLIN: Thank you.

10 MR. CHAIRMAN: Mr. Evans.

11 MR. EVANS: Ms. Langer, how long will this test be run? When
12 will you know?

13 THE WITNESS: Well, I coul defer that question to Mr.
14 Wilburn. I think --

15 MR. EVANS: Okay.

16 MS. McCLANNAHAN: Yeah, Mr. Wilburn is vice-president in
17 charge of this project. So since she's our expert
18 witness with another company it would probably be better
19 for him to answer that question, if that's okay. We need
20 to have him sworn in, though.

21 COURT REPORTER: (Swears witness.)

22 MR. WILBURN: I'm Steve Wilburn with Virginia Gas. To answer
23 your question, we expect the test will probably last over
24 a period of -- where we're injecting, probably a over
25 period of two to three months. That's also depending on

1 market -- the factors going on at the time when we're
2 running the test.

3 MR. EVANS: Thanks.

4 MR. CHAIRMAN: How are you going to know native gas from
5 stored gas, which ever one of them?

6 MR. WILBURN: Good question. Do we want to go into that or --

7 MS. McCLANNAHAN: That's a big answer.

8 MR. STREET: That's part of our presentation.

9 MR. CHAIRMAN: Okay.

10 MS. McCLANNAHAN: Right. So if you don't mind, we'll wait on
11 that.

12 MR. CHAIRMAN: I'll wait.

13 Q. (Mr. Street continues.) Ms. Langer, were the slides used
14 to prepare the Exhibits 1 through 11 prepared under your
15 supervision?

16 A. Yes, they were.

17 MR. STREET: We would like to have those admitted if we could.

18 MR. CHAIRMAN: Okay.

19 MR. STREET: And we would also like to reserve the right to
20 recall Ms. Langer later on in the hearing.

21 MR. CHAIRMAN: Sure.

22 MR. STREET: Thank you.

23 (Witness stands aside.)

24 MR. STREET: Our next witness is Brad Swanson, Senior Land
25 Agent for Virginia Gas.

1 COURT REPORTER: (Swears witness.)

2

3

4

BRAD SWANSON

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

7

8

DIRECT EXAMINATION

9

10 BY MR. STREET:

11 Q. Could you state your name, please?

12 A. My name is Brad Swanson.

13 Q. And your address?

14 A. Route 5, Abingdon, Virginia.

15 Q. And who are you employed by, sir?

16 A. I work for Virginia Gas Company.

17 Q. And your position?

18 A. I'm the Senior Land Agent.

19 Q. What are your responsibilities and duties in that
20 capacity for Virginia Gas?

21 A. I work to negotiate contracts with lessors and buy right-
22 of-way and other land related duties.

23 Q. Could you go over your educational background, please?

24 A. I have a BA degree from Emory & Henry College in business
25 and economics.

- 1 Q. Do you have any professional licenses?
- 2 A. I'm a licensed real estate broker in the State of
3 Virginia.
- 4 Q. Okay. Would you go over your work background?
- 5 A. I started in the gas industry in 1980 with Bartlett
6 Geological Consultants and worked for Mr. Bartlett until
7 about 1984 and came on board with Virginia Gas as Edwards
8 & Harding Petroleum Company in 1987 and have been working
9 for them since that time.
- 10 Q. Mr. Swanson, has there been a continuous property
11 acquisition program in the development of the Early
12 Grove Field?
- 13 A. That's true.
- 14 Q. And how are the names of the potential owners of the
15 coal, gas and minerals identified?
- 16 A. Well, Virginia Gas bought this field back in the fall and
17 we bought it from Penn-Virginia Resources and at that
18 time they gave us lots of information about the land
19 owners and the properties involved in the field. Since
20 that time we've made numerous visits to the courthouse
21 and numerous visits to the field getting to know the
22 lessors and identifying for our own records those owners.
- 23 Q. Could you please name each unit that's involved in the
24 testing project?
- 25 A. We plan to test four units. The 103 is the Hensley well.

1 The 88 unit is the Baker. The 89 is the Dure. The 105
2 is the Gardner.

3 Q. How much control of the oil and gas estate has been
4 acquired in the units?

5 A. Virginia Gas now controls 100 percent of the gas in these
6 units.

7 Q. Are these the same ownership control percentages listed
8 on the application as filed?

9 A. That's true, yes.

10 MR. STREET: We would like to have introduced as an exhibit
11 the notices in your booklets.

12 MR. CHAIRMAN: Okay.

13 Q. (Mr. Street continues.) Mr. Swanson, the notice in the
14 package put together, is that the notice of hearing that
15 was mailed to the parties containing the application for
16 modification of the Early Grove Gas and Oil Field?

17 A. Yes.

18 Q. How was this accomplished?

19 A. We sent them by certified mail, return requested. We
20 asked that the signature card be returned to us.

21 MR. STREET: We would also like to ask that the copies of the
22 return receipts be marked as exhibits. That would be
23 Exhibit 13.

24 MR. CHAIRMAN: Okay.

25 Q. (Mr. Street continues.) Do you have the return receipts,

1 Mr. Swanson?
2 A. They have been submitted to the Board.
3 Q. How were the persons whose names and/or addresses that
4 were listed as unknown notified?
5 A. We did that by certified mail through the Bristol Herald
6 Courier on June 28th of this year.
7 Q. On complicitation notice?
8 A. Yes, sir, that is correct.
9 Q. Do you have the proof of publication?
10 A. It has also been submitted.
11 MS. McCLANNAHAN: We don't have any further questions of this
12 witness unless you have any questions.
13 MR. CHAIRMAN: Any questions, members of the Board? Okay.
14 Thank you.

15 (Witness stands aside.)

16 MS. McCLANNAHAN: Our next witness is Jim Wilson.
17

18 JAMES WILSON

19 a witness who, after having been duly sworn, was examined and
20 testified as follows:
21

22 DIRECT EXAMINATION
23

24 BY MS. McCLANNAHAN:

25 Q. Mr. Wilson, could you please state your name for the

1 record?

2 A. My name is James B. Wilson.

3 Q. And your address?

4 A. 635 Island Road, Kingsport, Tennessee.

5 Q. Your profession?

6 A. I'm an exploration geologist.

7 Q. And by whom are you employed?

8 A. I'm an independent contractor and I'm presently contract-

9 ed by Virginia Gas Company to handle any of their in-

10 house geological prospects.

11 Q. Your educational background?

12 A. I have a BS degree in geology from (Inaudible) Poly-

13 technic Institute in Troy, New York.

14 Q. Could you describe your work history for the Board,

15 please?

16 A. After graduation I worked for the Consolidated Natural

17 Gas System for 24 years as an exploration geologist, much

18 of my efforts being applied to they storage programs in

19 both New York and Pennsylvania.

20 Q. And after CNG?

21 A. After CNG I worked for an independent out of Dallas,

22 Texas who set up an office here in the Appalachians and

23 that was for three years. After that I joined Union

24 Drilling in Buchanan, West Virginia which was later

25 absorbed into EREX in Kingsport, Tennessee. So I was

1 transferred to Kingsport from Buchanan. My purpose there
2 was to do geological exploration and also geophysical
3 interpretation.

4 Q. And you worked for Union and EREX for seven years, is
5 that --

6 A. Seven years total. Then in 1991 I elected to start my
7 own company as a consultant and in 1992 I was contracted
8 by Virginia Gas to study the Early Grove Field to
9 determine the liability for storage.

10 Q. Are you a member of any professional association?

11 A. I'm a member of the American Association for Petroleum
12 Geologists and the Society of Exploration Geophysics.

13 MS. McCLANNAHAN: We would submit Mr. Wilson as an expert
14 witness in the area of geology.

15 MR. CHAIRMAN: Any objections? Okay.

16 Q. (Ms. McClannahan continues.) Mr. Wilson, can you tell us
17 where the Early Grove Field is located?

18 A. The Early Grove Field is located in the southern Appala-
19 chian overthrust belt in Scott and Washington Counties,
20 Virginia just north of the Tennessee State line.

21 Q. Is that described on Exhibit 14?

22 A. Right. Exhibit 14 in your exhibit folder shows the
23 location of the field in yellow sitting astride of
24 Scott/Washington County boundary. It is located geo-
25 logically in the Greendale (Inaudible.) which is a

- 1 structure depression that extends from Bland, Virginia to
2 just north of Knoxville, Tennessee. A distance of some
3 170 miles. The southeast boundary --
- 4 Q. Mr. Wilson, excuse me just a second.
- 5 A. It is bounded on the southeast by the Saltville thrust
6 fault which pressed cambrian -- older cambrian rocks on
7 top of Mississippian sediments in the Syncline. The
8 northwest boundary is the Clinch Mountain, which is a
9 solarium outcrop of (inaudible) equivalent sandstone.
10 Within this geo Syncline several anticlinal folds exist,
11 the largest of which is Early Grove.
- 12 Q. And on Exhibit 14 that has been presented to the Board
13 the Greendale synclitorium is shown in green, is that
14 correct?
- 15 A. Yes.
- 16 Q. And the Early Grove Field is designated in yellow?
- 17 A. Yes.
- 18 Q. And did you prepare this exhibit?
- 19 A. Yes, I did.
- 20 MS. McCLANNAHAN: We submit this as Exhibit 14.
- 21 Q. (Ms. McClannahan continues.) Mr. Wilson, what is the
22 structural arrangements of the geological formations
23 contained in the Early Grove Field in relation to the
24 Price Formation?
- 25 A. In response to that question I refer to Exhibit 15.

1 There's a cross section along the Scott/Washington County
2 boundary through the Early Grove Field. It demonstrates
3 that the Early Grove anticline is a shallow seeded
4 structure caused by thrust faulting that emanated from the
5 southeast. The Price Formation is a group of silts,
6 sands and shells that has a minimum thickness of some 800
7 feet within which local sand bodies have developed. One
8 of these sand bodies sits astride Early Grove anticline
9 and is the target for the wells in question. Thrust
10 faults that are shown here have created the anticline,
11 but also has caused additional fracturing of the Price
12 Formation and therefore, has given us more porosity and
13 permeability than existed originally. The four wells
14 that are proposed to be tested are projected into this
15 section and are shown as such, the Hensley on the north
16 which is counted the northern most structural block in
17 the pool, the Gardner well on the south which encountered
18 the southern most structural block in the field, and the
19 Dure and Baker sit astride the same structural fault
20 block.

21 Q. Mr. Wilson, did you also prepare this exhibit?

22 A. Yes, I did.

23 MS. McCLANNAHAN: We would submit this as Exhibit 15.

24 Q. (Ms. McClannahan continues.) Mr. Wilson, we've heard Ms.
25 Langer indicate that the porosity and permeability of a

1 particular formation are the two important factors to
2 consider in determining whether a particular reservoir
3 may be appropriate for a storage field. Can you describe
4 the porosity and permeability of the Price Formation as
5 it's located in the Early Grove Field?

6 A. The permeability is to be evaluated in the proposed
7 testing of the wells. At this point in time we do not
8 have hard and fast permeability numbers for the Price
9 Formation. Porosity, on the other hand, we do have a
10 handle on through well logs that Laura mentioned. At no
11 time is the interstitial porosity of the Price sand in
12 question more than 5 percent interstitially. But the
13 faulting which has created a fracturing has enhanced
14 these porosities to a much greater extent. Again, the
15 magnitude of these numbers we do not know at this time.
16 That would require possible future coring and evaluation,
17 etc. But as of now we have no numbers for that.

18 Q. The testing that is proposed for these particular wells
19 will give you that information, though, is that correct?

20 A. We will gain better insight into those questions, yes.

21 Q. Exhibits 16 and 17, those are isopack maps, is that
22 correct?

23 A. That is correct.

24 Q. And both of these were prepared by you?

25 A. Yes.

- 1 Q. And what data did you use to prepare those isopack maps?
- 2 A. Figure 16 is a net clean sand map contoured at a five
3 foot interval that shows the thickness that's determined
4 from gamma ray logs of the Price sand. Of interest in
5 this particular map, there is a longate depositional axis
6 in the southwestern portion of the field with a maximum
7 thickness of 26 feet in the Baker #2 well which is --
8 basically it is a confined feature with aerial limits as
9 shown on this display. Figure 17 is an extension of this
10 which is an net feet of pay map. The values for this
11 map were ascertained from the gamma gamma density logs
12 which are indicative of amounts of porosity within the
13 formation. In this case you can see that the body in
14 question is more confined and we therefore feel quite
15 comfortable that it is a contained feature with limited
16 aerial extent. Also it is sitting astride a structural
17 high which would make it an ideal candidate for storage.
- 18 Q. Exhibits G, H, I and J attached the application as it was
19 filed, Mr. Wilson, those are compilation of the logs that
20 you've just referred to, is that correct?
- 21 A. Yes, it is.
- 22 Q. A compilation of the data that's included in those logs?
- 23 A. Right.
- 24 Q. And from the information that is listed on these parti-
25 cular compilations that you've done as Exhibits G

1 through J you created the isopack maps, is that correct?

2 A. Yes. These are data sheets -- basically formation comps
3 evaluated from the logs in question for each of the
4 wells.

5 Q. And the information that is on these particular sheets
6 are for each of the four wells that are listed in the
7 application, is that correct?

8 A. That is correct.

9 Q. Is the Price Formation the significant producing forma-
10 tion in each of the four wells that have been proposed to
11 be tested?

12 A. Yes, they are. We have both cumulative production and
13 natural open flows approaching naturally four million
14 cubic feet of gas per day, again being indicative of the
15 good permeability of the formation.

16 MS. McCLANNAHAN: We would submit the isopack maps as Exhibit
17 16 and 17.

18 Q. (Ms. McClannahan continues.) Mr. Wilson, have you worked
19 in any other storage fields within the Appalachian Basin?

20 A. Yes, I have.

21 Q. What are those?

22 A. With the Consolidated Natural Gas System I worked the
23 Five Forks Field which was subsequently converted to
24 storage by the Columbia System because the pool was sold
25 to Columbia on an acreage financial exchange swap. Also

1 in northern Pennsylvania I worked in the Lighty, Green
2 Lick and Tamarack pools both as well site location
3 geologist and also on doing seismic work and selecting
4 additional wells to be drilled within those fields.

5 Q. Do those storage fields contain structures that are
6 similar to the Early Grove Field?

7 A. Yes. Those features in which gas is stored are actually
8 structural highs on actual closures very similar to what
9 the Early Grove scenario is.

10 Q. And is that shown on Exhibit 18?

11 A. Yes. Exhibit 18 demonstrates that Early Grove, even
12 though it is structurally quite far east in the eastern
13 overthrust belt, is on trend with known storage fields
14 further to the north in both West Virginia and Pennsyl-
15 vania. Pools A, B and C are active storage fields. A is
16 Five Forks operated by Columbia Transmission. B and C
17 are Little Cacapon and Augusta operated by Washington Gas
18 Light. Therefore, the trend is continuous and bears
19 heavily as to Early Grove's liability as a storage field.
20 It's sitting in a proper geologic environment to do so.

21 Q. Mr. Wilson, did you prepare the structural provinces map
22 at Exhibit 18?

23 A. Yes, utilizing Pennsylvania publications. This was taken
24 from Lou Heiman Publication in 1981.

25 MS. McCLANNAHAN: We would submit that as Exhibit 18. Those

1 are all the questions I have for Mr. Wilson unless the
2 Board has any.

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

4 MR. EVANS: Mr. Wilson, you've spoken to the porosity and some
5 of the other permeability values that are necessary to
6 utilize this formation as storage. The initial concern
7 that I would have is -- just like was presented earlier.
8 Your first concern is is the tank "the Price Formation"
9 sound? Will it hold the gas? I notice that you've got
10 four little thrust faults there that extend beyond the
11 Price -- I assume that that's part of the anticlinal
12 nature of how far up do those extend and also the fault
13 system that produced that. How far southeast does that
14 extend and what bearing does that have on your gas
15 storage and gas retrieval?

16 MR. WILSON: The fault that caused the structure to occur was
17 due with the lower fault vacuum off to the southeast.
18 It goes essentially out through the Blue Ridge and it
19 will merge with additional faults further to the east.
20 Pulaski and as far as you want to go. As far as cutting
21 through the top of the Price and it's overlying forma-
22 tions, yes, and there's one particular incidence. The
23 Hensley well -- I do know from log information that as
24 shown it does cut through the Little Valley formation up
25 above. It's a double duty scenario. It can be good for

1 you or it can be bad for you. But the answer is it's a
2 concealed confined trap because the gas was there
3 naturally to start with. That's the answer to the
4 question. It's a confined reservoir for that reason.
5 Had it been leaking the gas would have escaped.

6 MR. EVANS: You're not necessarily sure exactly what the
7 extent of that reservoir is. However, you are relatively
8 certain that there is a confining layer surrounding this
9 gas field. Exactly where that boundary is you may not be
10 able to tell me right now?

11 MR. WILSON: The confining layer, I do feel it's the upper
12 portion of the Price because on the gamma ray logs the
13 top of this sand unit that we're interested in is encased
14 in a shell -- a very radioactive shell. That makes an
15 immediate cap. And perhaps over time there might have
16 been some seepage through that fault, how ever slow, how
17 ever little, which might allow for an explanation of why
18 sometimes you get shallow shows of gas in the shallower
19 beds. Not accumulations, just shows.

20 MR. EVANS: All right. I understand.

21 MR. WILSON: Good question. It bothers all of us sometimes.

22 MR. EVANS: Well, I'm sure it does.

23 MR. WILSON: But I feel confident that it is a confined
24 reservoir.

25 MR. EVANS: But there is -- I know in some of the cases there

1 is a surface expression of increased fracturing from
2 anticlines and folds.

3 MR. WILSON: Exactly.

4 MR. EVANS: And obviously we're talking about 4,000 feet -- or
5 3,500 feet anyway. There's not much of an indication of
6 surface expression of these small minute cracks. Do we
7 have ground water problems? Do you have --

8 MR. WILSON: No. This gets complicated because the out
9 cropping formations are Green Briar and we have (in-
10 audible) topography. So that in itself is a honeycomb
11 of which rock and --

12 MR. EVANS: Good old limestone.

13 MR. WILSON: Exactly, friendly good old limestone. Therefore,
14 it masks the effect of these faults if they should go to
15 the surface. I do not know if they go to the surface.
16 As you see here, I have terminated them in Little Valley.
17 As far as the log data goes, there is very little to no
18 repetition in the shallower beds on the wells in ques-
19 tion.

20 MR. EVANS: Okay. I'm done.

21 MS. McCLANNAHAN: Those are all the questions I have for Mr.
22 Wilson.

23 MR. CHAIRMAN: Is there any gas reservoir near by -- deeper or
24 further to the south, further to the north?

25 MR. WILSON: Two of the wells that were drilled in the Early

1 Grove Field were taken as deep as the Clinch Sandstone.
2 There were shows of gas in the Clinch not large enough to
3 be economic. 100,000 cubic feet was the gauge and one
4 of the wells was drilled by Tidewater. There were minor
5 accumulations of no commercial consequence as far as the
6 deeper formations.

7 MR. CHAIRMAN: What about as far as nearest reservoir and
8 similar formation -- same formation?

9 MR. WILSON: In the Price?

10 MR. CHAIRMAN: Yes.

11 MR. WILSON: None to my knowledge. No place along this trend.
12 This will be the first production in this Greendale --
13 this is the first production in the Greendale synclin-
14 orium. There are no other pools in this trend.

15 MR. CHAIRMAN: Okay. Any other questions? Thank you.

16 (Witness stands aside.)

17 MS. McCLANNAHAN: We'd like to call Steve Wilburn.

18
19 STEVEN WILBURN

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

22
23 DIRECT EXAMINATION

24
25 BY MS. McCLANNAHAN:

1 Q. Could you state your full name for the record, please?

2 A. Steven A. Wilburn.

3 Q. And your address?

4 A. 429 Oakhill, Abingdon.

5 Q. And you profession?

6 A. I'm vice-president of marketing and supply with Virginia
7 Gas and a petroleum engineer.

8 Q. What are your responsibilities and duties as vice-
9 president?

10 A. I'm responsible for the marketing efforts of the company,
11 also for supply related projects, our pipelines, and the
12 distribution project that we're looking to develop and
13 also the development of the Early Grove storage project.

14 Q. Do you hold any licenses?

15 A. I'm a registered professional engineer in the State of
16 Kentucky and have a pending registration in the State of
17 Virginia.

18 Q. And could you give us a brief history of your work
19 experience, please?

20 A. After graduation from college in 1979 I started work with
21 Halliburton Services down in Louisiana -- the Louisiana/-
22 Texas/Arkansas region where I was the district engineer
23 for Halliburton overseeing their completion well bore
24 testing and stimulation services at the camp there.
25 After that I worked with an independent producer in the

1 Appalachian Basin for Tennessee and Kentucky where I was
2 manager of operations of their pipelines and production
3 operations. I then worked for myself as a consulting
4 petroleum engineer in the Appalachian Basin for a few
5 years before then going to an independent consultant firm
6 where I did consulting to distribution companies for
7 natural gas -- natural gas distribution. After that I
8 worked with East Tennessee Natural Gas, Tennico Company,
9 the company that has the interstate pipeline where I was
10 responsible for all of their supply acquisition for the
11 past four years. I've been with Virginia Gas since
12 January of this year.

13 Q. Are you a member of any professional associations?

14 A. Yes. Society of Petroleum Engineers.

15 MS. McCLANNAHAN: I would submit Mr. Wilburn as an expert
16 witness in petroleum engineering.

17 Q. (Ms. McClannahan continues.) When did the development of
18 the Early Grove Gas and Oil Field begin?

19 A. Development first began back in the 1930's and had
20 continued in some phase from that time forward.

21 Q. When were the first wells placed into production?

22 A. In the late 30's the gas was sold through a pipeline over
23 to Bristol, Tennessee.

24 Q. And how did Virginia Gas Company become involved in the
25 development of the Early Grove Field?

1 A. Well, if we can look at the map that we have on the
2 screen here. Virginia Gas from been involved in the
3 production areas in working to move their gas to market
4 was looking at additional outlets to sell the gas. From
5 working with the people in the communities in realizing
6 that there was a strong need for Virginia Gas to be sold
7 and be available to the local residents Virginia Gas
8 endeavored on a project to develop some distribution
9 companies that would allow gas to be sold to all the
10 local areas. As you can see by the lines that are in
11 orange, these are some of the projects that Virginia Gas
12 is working on. Currently under construction we have this
13 project going over to Castlewood, Virginia. In the near
14 future we would like to run our lines over to Lebanon and
15 then out to some of the areas in Wise and other areas.
16 As we've talked about earlier, one of the problems or one
17 of the concerns you always have with developing distribu-
18 tion projects is how do you handle the peaks and how do
19 you handle the valleys to keep your supply on a level
20 basis. Since East Tennessee Natural Gas -- the inter-
21 state pipeline does not have a lot of additional capacity
22 at an economic cost. We had to come up with another
23 idea, along with supplying production to local areas, how
24 to keep a good steady supply -- an economic supply. What
25 we decided to do was try and develop the Early Grove

1 Field as a supplement to our production as Lori talked
2 about. In the summer time we can develop -- pump gas
3 from our projects - from our development areas when the
4 gas is not needed and pump it into the Early Grove Field
5 and in the winter time when the residential areas and the
6 businesses have a higher need for the gas we can then
7 pull both the gas out of the Early Grove Field plus the
8 gas out of production break for assurance of supply and
9 basically potential sources of supply.

10 Q. As a smaller version of that map, is that Exhibit 19 as
11 we have submitted to the Board?

12 A. Yes, it is.

13 Q. Did you supervise the making of this map?

14 A. Yes, I did.

15 MS. McCLANNAHAN: We would submit that as Exhibit 19.

16 Q. (Ms. McClannahan continues.) Is Virginia Gas proposing a
17 storage project by this application?

18 A. No, we're not proposing a storage project at this time.

19 Q. What is the relief that's actually requested by Virginia
20 Gas Company in it's application?

21 A. We asking for the ability to go in and test the four
22 units that we've identified and determine if they are
23 viable for storage.

24 Q. Once the testing is completed then you would return to
25 the Board for an approval of the commercial storage

- 1 project or operate under regulations if they are proposed
2 by that time, is that correct?
- 3 A. That's correct.
- 4 Q. If a storage reservoir is feasible in the Early Grove
5 Field, how long would you expect for the project to be in
6 existence?
- 7 A. This project could be in existence for another twenty to
8 fifty years -- as long as it's economic for the area.
- 9 Q. Is this consistent with other similar projects?
- 10 A. That's correct. As we noted earlier, some of the fields
11 have been in production since the early 30's and they're
12 still in continuous production.
- 13 Q. So that means that for the landowners in the Early Grove
14 Oil and Gas Field once production is depleted in that
15 field they would still be able to have income from this
16 particular field if it was converted to a storage field,
17 is that right?
- 18 A. That's right.
- 19 Q. If a storage project is not allowed to be tested in the
20 Early Grove Field when the royalties to the landowners
21 most likely be terminated?
- 22 A. Production should decline to its economic limit within
23 the next two to five years and all the wells will then be
24 shut in and plugged.
- 25 Q. Could you locate the wells that have been drilled which

- 1 you plan to test as gas storage wells.
- 2 A. Yes. If we were to look at Exhibit B of the application
3 for units we have discussed earlier, the 88, the 89, the
4 103 and the 105.
- 5 Q. How did you choose these particular wells for testing?
- 6 A. We chose them by their location within the Price sand and
7 in our identification as the Price sand as a viable
8 project. Other factors that come into play is the
9 location and proximity of the wells to a ready market.
10 Also the pipeline facilities are already existing. We
11 feel we have a fairly -- we are real certain we have a
12 defined reservoir which provides the integrity we need to
13 store the gas and also that there are no other minerals
14 in the area that would be effected by this project.
- 15 Q. At what depth has gas production from the units been
16 found?
- 17 A. In the range of 3,700 to 3,900 feet.
- 18 Q. What is currently being done with the gas that's produced
19 from the wells in these units?
- 20 A. Currently the wells are all shut in.
- 21 Q. And are the royalty owners receiving any sort of payment
22 during this shut in period?
- 23 A. They receive a shut in payment which is probably an
24 average of \$250 per well.
- 25 Q. In your opinion, which formation is most capable of

1 storing gas in the Early Grove Field?

2 A. The Price sand.

3 Q. Would this Early Grove storage testing provide an
4 extension of the useful life of the Early Grove Field?

5 A. Yes, very much so.

6 Q. Can you describe the storage -- the actual testing
7 proposal as we've been talking about the bigger picture
8 of what we would do with a storage field if our testing
9 proves successful?

10 MS. McCLANNAHAN: I think this particular part of Steve's
11 testimony will explain to you the relief that we're
12 actually requesting in this application, and that is how
13 we plan to test the four wells that are in each of these
14 units using Exhibit 20.

15 A. (The witness continues.) Using Exhibit 20, what we plan
16 to do on the four wells is to go into the wells and
17 actually remove the tubing that is currently in the
18 wells. There is an inch and a half tubing. And we would
19 remove that well, go in and verify the TD and verify the
20 integrity in the bottom of the hole. We would then pull
21 out and rig the well head up for injection back into the
22 well. This is similar to what we would do in all of the
23 wells. All of the four wells are pretty much similar on
24 their down hole completion techniques. We would then,
25 like I say, rig up everything for injection and begin an

- 1 injection and fall-off testing period for the test.
- 2 Q. Well EH-89 which is also referred to as the Dura #1 is
3 what is described on the diagram as Exhibit 20, is that
4 correct?
- 5 A. That's right.
- 6 Q. This diagram shows that one well. You have proposed four
7 wells. Would the diagram for the other three wells be
8 similar to this and would your operations proposal for
9 testings also be similar?
- 10 A. Yes. All the wells are similar except for one well which
11 has four and a half casing, but all the wells are
12 similar, very much identical, and the testing program on
13 each of the four wells would be the same.
- 14 Q. What considerations have determined the characteristics
15 of this operations plan as you've described it?
- 16 A. Well, we've gone and evaluated each of the four holes and
17 looked at them -- determined -- verify in our minds that
18 they were safe and they do have integrity. We have gone
19 in and ran a rehab program on our pipeline to verify the
20 integrity of the pipeline and also from looking at other
21 wells, other storage projects, and compared them to what
22 we're trying to do here.
- 23 Q. Was Exhibit 20 prepared by you?
- 24 A. Yes.
- 25 MS. McCLANAHAN: We would submit that as our Exhibit 20.

- 1 Q. (Ms. McClannahan continues.) With regard to the rehabil-
2 itation and maintenance on the pipelines, has that
3 already been conducted at this particular time?
- 4 A. The rehab on the pipelines has been carried out at this
5 time.
- 6 Q. And with what information did this rehab provide you?
- 7 A. It gave us a strong feeling -- a comfortable level that
8 our pipeline was safe and they we did have a good
9 integrity of the pipeline to do the testing that we're
10 proposing.
- 11 Q. And did it also prepare the pipeline for the reversal of
12 gas flow?
- 13 A. Yes, it did.
- 14 Q. Have you also hydro tested the pipeline?
- 15 A. Yes. We hydro tested the pipeline and determined that it
16 was a safe, sound pipeline.
- 17 Q. Can you explain what a hydro test is?
- 18 A. A hydro test is a matter of pumping water into your
19 pipeline. For a testing medium of a pipeline water is
20 the safest medium you can use. We fill the pipeline with
21 water, pressure it up, leave pressure on the pipeline for
22 eight hours or more and verify that there are no leaks
23 and that there is no problem with the pipeline. That was
24 done and we did have a safe pipeline.
- 25 Q. How will you determine if the Price reservoir is an

1 appropriate formation for storage?

2 A. By testing of the wells we will gather a lot of pressure
3 data information. We'll get information as far as
4 deliverability rates, how the formation injection rates
5 into the formation. We will record our pressure informa-
6 tion. From all this information we'll then go back and
7 evaluate to -- look at different parameters that we need
8 to evaluate to determine if it is a safe, sound formation
9 for this project.

10 Q. Can you explain the injectivity test that you plan to
11 conduct?

12 A. In the injectivity test what we will do, we will inject
13 into each of the four wells. While we are injecting into
14 the wells we will record pressures and volumes injected
15 into each of the wells, analyze the data as we are
16 injecting back into it and determine how long we need to
17 inject. After a period of injection we will then close
18 the wells in, watch the pressure, monitor the pressures
19 that falls off on each of the wells, record that pres-
20 sure, use that for analyzing. And then after that we
21 will then turn around and do another injection --
22 extended injection test to gather additional information.

23 Q. How will you monitor the gas that's injected into the
24 Price Formation?

25 A. Each of the four units we're proposing has an water at

1 each well and the amount of gas is recorded on a continu-
2 ous basis with pressure and time and volumes that will be
3 injected into each well.

4 MR. EVANS: Simultaneous all four wells or one at a time?

5 MR. WILBURN: We'll probably inject all of them simultaneous-
6 ly.

7 Q. (Ms. McClannahan continues.) Mr. Wampler previously
8 asked you the question as to how you -- once this testing
9 begins and you start to withdraw gas from each of these
10 wells, how will you determine to whom the gas belongs?

11 A. We'll first go to Exhibit 21. I have a number of
12 exhibits here that will explain what we plan to do as far
13 as monitoring the gas going in and decipher what comes
14 back out. If we go to 21, this is a typical decline
15 curve -- an example of a typical decline of a well in the
16 Price sand. Now, this curve represents -- on the left
17 hand side it represents the production rate on a monthly
18 basis. On any well you start out with a high rate and it
19 declines over time till the well reaches its economic
20 life.

21 Q. Mr. Wilburn, before you go on, each of these Exhibits 21
22 through 24 are all exhibits that you prepared as a result
23 of actual data on wells that are presently in the Early
24 Grove Field, is that correct?

25 A. That is correct. And this particular curve is an actual

1 curve of one of the wells and it is representative of all
2 the wells in the Price Field. As you go with the curve,
3 on the bottom axis, this is time starting at time zero
4 when the well is first brought into 89 which is 89
5 months and that is where our production is currently on
6 this well. So, as you see, we have a declining produc-
7 tion over the life of the well. As we talked earlier,
8 for a reservoir these curves are indicative of all the
9 parameters within the ground. They're indicative of the
10 size of the reservoir, the pressure you start with, the
11 permeability and the porosity. These are all inter-
12 related and these are unchanging characteristics. So for
13 a well -- this curve over the life of the well -- if it
14 then becomes a storage project this well would exhibit
15 this same declined curve every year based on the amount
16 of gas that is in the well. We then go to the next
17 curve --

18 MR. MCGLOTHLIN: Excuse me. What's the table on the right
19 hand side?

20 MR. WILBURN: The table on the right hand side indicates the
21 pressure of each of the wells -- the initial pressures.

22 A. (The witness continues.) As we indicated, the pressure,
23 porosity, permeability are all inter-related functions.
24 Pressure on this particular well started out -- if you
25 look on the right hand side, it started out at approx-

1 imately 1,200 pounds and it's declined over time with
2 the -- just the black squares. So it will decline just
3 like the production rate declines. If we go to Exhibit
4 22, our next curve, we have the same production decline
5 rate, the same well, but what I have done is included the
6 cumulative production and that's shown on the right hand
7 side of your graph. On this particular well cumulative
8 production in this well is a little below 250,000 MCF.
9 As we talked about earlier, all of these factors are
10 inter-related. The amount of gas -- because we do have a
11 confined container, the amount of gas, the porosity, all
12 this, these are unchanging characteristics for this
13 curve. So for this particular well the cumulative curve
14 which is the dark black curve and the declining curve are
15 inter-related. At any point in the well's life, depend-
16 ing on the amount of gas left within the reservoir, you
17 could go to this cumulative curve and drop down to
18 decline curve and figure out -- you'll have a good
19 indication of what this well would do from then on. What
20 I have done on the next chart, example 23, is addressing
21 -- I guess we addressed Benny's question earlier -- how
22 will we define the amount of gas -- the native gas that's
23 in the formation. By having individual meters on each of
24 the four wells and recording the volume that goes back in
25 each well, what we do on this production decline curve

1 and this cumulative curve is merely move back in time.
2 We have -- the 250 represents the amount of gas that was
3 taken out of this reservoir. If we now go back in and
4 fill this reservoir back up we can backtrack on this
5 cumulative curve and then drop down to our decline to see
6 what type of production rate we would have. For in-
7 stance, if we go back and we inject 50,000 MCF back into
8 the well we can backtrack on our cumulative curve. Since
9 the two curves are related we can then just drop down to
10 decline curve and that shows us where our curve produc-
11 tion would be if we had that amount of gas back in the
12 reservoir. If we inject 100 cubic feet back in the
13 reservoir instead we backtrack that much further on the
14 cumulative curve because we're just going back and
15 filling the reservoir back up. We've move back in time
16 on the production decline curve to a point at which
17 delivery would be quite a bit higher.

18 Q. The point at which you arrive on the production decline
19 curve is the production then that you would be paying to
20 the landowner, is that correct?

21 A. That's correct. If we go over to our next curve, example
22 24, this is the -- we've taken the last curve we looked
23 at and extrapolated that curve into the future. We've
24 taken current time, production history and then into the
25 future. We have the cumulative production curve. We

1 have the history of the well, the decline curve that we
2 have seen up to this time which is production history.
3 At current time we know what the level of production is.
4 As you can by the past history, it's a fairly straight
5 decline on the well. This well will exhibit the same
6 decline in the future if nothing is done to the well. So
7 we have a projective curve which is the native gas depth
8 within the formation and what would be withdrawn. If we
9 then go in and inject gas -- and I take our last example
10 where I say we injected 100,000 into the reservoir that
11 moves us back in our cumulative time and that tells us
12 what this well will exhibit in the future. If you look
13 at the jump up and the decline curve, we see this the
14 amount of gas that will be injected into those reservoir.
15 We then -- we know what our production will be in the
16 future from all of our history. From this projected
17 curve we know what we should jump up to based on the
18 amount of gas we put back in the reservoir. The differ-
19 ence between the two curves is gas that Virginia Gas
20 injects, the remaining gas is native gas in the forma-
21 tion. What we do on the withdrawal period is we would
22 continue to pay the same royalties that the landowners
23 would see -- if nothing happened we intend to pay the
24 same royalties, but on the injected gas that would be gas
25 that is not native to the formation and the royalty would

1 not be paid on. That was paid back in the field when it
2 was originally withdrawn from the production areas. So,
3 like I say, we have a projective curve from knowing what
4 the well has done, knowing that the characteristics of a
5 well do not change, have a projective curve knowing what
6 it will do in the future. By putting a known quantity of
7 gas back into the reservoir we know how we're going to
8 change this curve, how far back in time we're going to
9 move back to what the well would have done originally.
10 But the difference between the two -- we know what the
11 gas is. Virginia Gas' gas is coming out of the reservoir
12 and we know it isn't native gas that's being withdrawn.

13 Q. And with regard to the native gas that's being withdrawn
14 you will be paying those landowners according to your oil
15 and gas leases on this property, is that --

16 A. That's correct. We'll continue to pay our lease owners
17 as if nothing was going on in the field.

18 Q. So in other words, during the testing period the land-
19 owners would not be able -- there will be no stopping of
20 the payments to them?

21 A. That's correct.

22 MR. CHAIRMAN: Are you saying that -- I may be getting
23 confused on the terminology. You're dealing with one
24 well.

25 MR. WILBURN: Right.

1 MR. CHAIRMAN: You're saying that well has it's own unique
2 reservoir rather than the reservoir trap that we're
3 trying to test?

4 MR. WILBURN: Within the limits of the tests that we're going
5 to conduct, which is a very short period test, it's not a
6 long extended test, yes, on a short period test the
7 reservoir, although it is disconnected, it's basically an
8 isolated -- no isolated, but it is a contained reservoir.

9 Q. (Ms. McClannahan continues.) And the pressures that
10 you're using to inject the gas will not exceed the
11 original reservoir pressure, is that right?

12 A. No. We will not exceed original reservoir pressures
13 during the tests.

14 MR. CHAIRMAN: The reservoir pressure for that well?

15 MR. WILBURN: That's correct.

16 MS. McCLANNAHAN: Right.

17 MR. CHAIRMAN: Do you know the reservoir pressure for the
18 entire reservoir?

19 MR. WILBURN: Yes. Original pressures in the field were about
20 1,400 pounds.

21 MR. CHAIRMAN: And you're going to stay below that --

22 MR. WILBURN: That's correct.

23 MR. CHAIRMAN: -- for the field as well?

24 MR. WILBURN: Uh-huh.

25 MR. MCGLOTHLIN: So you won't be trying to put anymore gas

1 back into that field than was originally there?

2 MR. WILBURN: Now --

3 MR. MCGLOTHLIN: Or originally from the first --

4 MR. WILBURN: No. Just during this testing phase we're just
5 trying to put enough gas back into it to acquire the data
6 we need to further evaluate and analyze the formation.
7 We don't have the time -- we don't need to put that much
8 gas back into it. We'll just have a limited amount of
9 gas go into the formations.

10 MR. CHAIRMAN: Do you have ownership storage rights?

11 MR. WILBURN: Yes. We have acquired storage rights on the
12 leases on the wells.

13 MR. EVANS: On the map there's four wells located. Are there
14 any wells in between -- you've got two separate areas.

15 MR. WILBURN: In between those there aren't -- there aren't
16 any additional wells between those units.

17 MR. EVANS: So these are pretty much on their own. Are there
18 adjacent wells either on east or west or either?

19 MR. WILBURN: There are some --

20 MR. EVANS: And what are the distances? What are we talking
21 about?

22 MR. WILBURN: There are some plugged and abandoned wells off
23 to the southeast that have been plugged and abandoned.
24 You're asking about the limits of the reservoir. It is a
25 fairly defined reservoir because of some of those plugged

1 in abandoned wells. There are some other wells but they
2 do not go through the Price Formation.

3 MR. EVANS: My main concern was in between the two units as
4 opposed to -- on the outside was the question. There
5 might have been another well drilled fairly close to the
6 next unit boundary and I thought I might ask about that
7 -- in between those wells --

8 MR. WILBURN: That's correct. There are -- yeah, in between.

9 MR. CHAIRMAN: Have you done an inventory of all the wells in
10 the field?

11 MR. WILBURN: Yes, we have. We have gone in and researched
12 and gone back to the other records. There are some old
13 plugged in abandoned wells and they have all been
14 identified and located and we know where they all are
15 within the field.

16 MR. CHAIRMAN: Do you plan to do anything with them at this
17 time or --

18 MR. WILBURN: I have a monitoring plan put together for the
19 wells. What we plan to do is we have identified all of
20 them and located them, we know where they are, we have
21 them marked. During the testing -- there is only one
22 well that is within the bounds of where we will be
23 testing. I have some exhibits. (Pause.) This is a plan
24 for monitoring the plugged well that has been located
25 that is close to the Dure well, Scott A-6 which was

1 drilled back in 1935, and although it was not drilled
2 into the Price Formation what we plan to do during the
3 test is we will go out and visually inspect the well and
4 monitor it with a gas detector before we start the
5 testing. Once we get into the testing phase we will
6 periodically monitor the well and we will maintain
7 records of our test checking the -- like I say, visually
8 inspecting the well and checking for any signs of gas
9 that might be around during the test. If we note any
10 changes during the test we will elevate the well and
11 determine if any remedial measures need to be taken at
12 that time.

13 MS. McCLANAHAN: We would submit this plugged well monitoring
14 plan as Exhibit 24.

15 A. (The witness continues.) If you look on the second sheet
16 it shows the location of the 86 well. If you look in the
17 bottom right rectangle, about the middle of the page to
18 the right of the line is the EH-89. Just left to that is
19 the EH-103. It don't show up real well, but just right
20 above the EH-89 is the 86 well which is the plugged well
21 we will monitor. And this is the only plugged well that
22 is located close to these units.

23 MR. CHAIRMAN: Do you plan to run any pressure to it to see if
24 you have communication between any of these -- what I'll
25 call well reservoir rather than the field reservoir?

1 MR. WILBURN: We do plan to run some temperature logs before
2 the test and also after the test to verify that there is
3 not any gas going where we wouldn't expect it to.

4 Q. (Ms. McClannahan continues.) You also have temperature
5 logs that have been previously ran on all these wells, is
6 that correct?

7 A. That's correct.

8 MR. CHAIRMAN: Did those temperature logs on previous tests
9 show any communication?

10 THE WITNESS: No. We have seen no indications that there's
11 gas coming from anyplace else in the well bores.

12 MR. MCGLOTHLIN: Ms. McClannahan, I have a couple of questions
13 here. What effect will the project have on the gas
14 fields of the Commonwealth?

15 MS. McCLANNAHAN: Mr. Wilburn.

16 MR. WILBURN: Actually it tends to make them more economic.
17 If you are familiar with any of the other producers in
18 the area and as we discussed earlier showing -- if you
19 remember Lori's curve where it shows the peaks in the
20 winters and the valley in the summer time, that's what
21 happens to the gas production in Virginia. During the
22 summer time it's cut back to very low levels because
23 everybody doesn't need it, but in the winter time it's
24 very hard to supply these peak demands. So it would do,
25 it would level out these valleys, tend to make them a lot

1 flatter, a lot more stable production for the producers.

2 MS. McCLANNAHAN: And Ms. Langer can add to that.

3 MS. LANGER: In the Appalachian Basin, as you know, in
4 Pennsylvania/West Virginia area there are three large --
5 well, two large and one smaller, namely us, pipeline
6 companies that buy gas from the Appalachian producers.
7 Columbia, Consolidated, and Equa-Trans. Through the
8 utilization of our storage independent gas producers
9 connected in our system anyway have not be shut in for
10 the last five or six years during the summer time because
11 we base load our storage with their production and it
12 allows their storage to -- it allows their production to
13 flow year around. And this is actually better for the
14 production from the wells than being shut in every summer
15 and then being put back on withdraw especially if
16 there's any water in the reservoir at all. If you shut
17 wells in periodically over the summer towards the end of
18 their life you're going to have a more rapid decline into
19 non-economic production. So using storage to allow the
20 producing wells to flow on a year round basis actually
21 increases the total recovery from the reservoirs.

22 MR. WILBURN: I'd like to add something to that. We've talked
23 about the production side and the benefits from the
24 production and the producer's side. One of the real
25 benefits is also to the market side because of the fact

1 if you have a plant out here operating and they don't
2 want to operate on a five day work week, on the weekend
3 that plant shuts down. That plant has a contract with a
4 producer or a pipe line and it says, "I'll buy X amount
5 of gas." On the weekend when that plant shuts down he's
6 got no place for that gas to go. So he's either got to
7 dump it back to the producer or he's got to find some-
8 thing to do with his gas. Typically what is done is an
9 industrial or a distribution customer, be it Abingdon or
10 whoever, the utility company here will try and dump that
11 gas into a storage field on the weekend to smooth his
12 loads. So it's very viable for both sides.

13 MS. McCLANNAHAN: And I would just add that that's why Mr.
14 Gillespie is here representing the Russell County IDA and
15 also the County.

16 MR. WILBURN: It's very hard to turn your wells off and on
17 just back and forth. So this levels the whole production
18 stream.

19 MR. McGLOTHLIN: And my last question is are you anticipating
20 using gas from outside of the Commonwealth to be placed
21 in storage?

22 MR. WILBURN: Virginia Gas has ample production up in Dicken-
23 son County that they can use for testing and for the
24 testing of this project.

25 MS. McCLANNAHAN: If there are no further questions for Mr.

1 Wilburn we would like to recall Ms. Langer.

2 MR. CHAIRMAN: Any further questions? Okay.

3 (Witness stands aside.)

4
5
6 LAURA L. LANGER

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

9
10 DIRECT EXAMINATION

11
12 BY MS. McCLANAHAN:

13 Q. Ms. Langer, you've reviewed Virginia Gas Company's
14 application for testing the Early Grove Field and the
15 Price Formation in that field, is that correct?

16 A. Yes.

17 Q. And you have had experience in other storage fields in
18 the Appalachian Basin, is that right?

19 A. That's correct.

20 Q. In your opinion is this particular testing proposal in
21 the Early Grove Field a viable project?

22 A. Yes, it is.

23 Q. Is it similar to other storage projects that you've been
24 involved in?

25 A. Yes. It's exactly what we'll be doing soon in a new

1 project we're developing.

2 MS. McCLANNAHAN: Those are all the questions I have for Ms.
3 Langer.

4 MR. CHAIRMAN: Ms. Langer, have you reviewed the -- with your
5 review of this test procedure do you find it adequate to
6 determine whether or not you actually have a reservoir
7 trap?

8 MS. LANGER: Yes, I think it is. And I think what they're
9 really looking for with their testing is whether there's
10 adequate injectivity and deliverability from the field to
11 make it suitable for storage. The integrity of the
12 reservoir container, I think, has been fairly well
13 established from pressure decline data and from surround-
14 ing drilling. We haven't mentioned this before, but my
15 company looked at this field as a potential storage
16 project about six months before it was purchased by
17 Virginia Gas. And our evaluation was that it was an
18 ideal candidate for storage of gas but not for our system
19 due to it's size and location. We serve markets on the
20 eastern Sea Board through different pipelines than the
21 ones that this one would be attached to and the size
22 wasn't sufficient for some of the projects that we're
23 looking at. But the evaluation in terms of its storage
24 suitability and especially in terms of the adequateness
25 of the containment mechanism was that this was definitely

1 a candidate that should be looked at further.

2 MR. CHAIRMAN: The Early Grove Field, is that a well defined
3 field? In other words, do we know the outer extent of
4 that field through dry wells or by what means do we know
5 the outer extent of the Early Grove Field?

6 MS. LANGER: I think the outer extents both through the dry
7 wells and through the known geology of the faulting
8 mechanisms is fairly good. This reservoir has -- I would
9 say it has a combination of what I would call the ideal
10 mechanisms for containment both from a stratigraphic
11 mechanism -- that is the disappearance of the perme-
12 ability and porosity that allowed the reservoir to exist
13 in the first place as you move away from the reservoir
14 proper and it also have the nice addition of structural
15 features usually found in deeper formations like the
16 Aristhaia that are used for storage in West Virginia and
17 Pennsylvania. So it's kind of got the best of both
18 worlds.

19 MR. CHAIRMAN: Any further questions?

20 (Witness stands aside.)

21 MS. McCLANAHAN: We would move that Board approve Virginia
22 Gas' application for the testing of the four wells as
23 they're listed in that application.

24 MR. CHAIRMAN: I'll ask again, is there anyone here that has
25 anything else to present? Any individual or group that

1 wishes to address the Board regarding this application?
2 The record will show that there are none. You did state
3 that the time period for the test was two to three
4 months, is that --

5 MR. SWANSON: We expect it to be in a two to three month
6 period.

7 MR. CHAIRMAN: What will determine that time period? In other
8 words, that's not in the specified relief sought.

9 MR. SWANSON: Right. The gathering of the information, the
10 gathering of the data during the test will determine the
11 actual time frame.

12 MR. CHAIRMAN: Okay. What's your pleasure?

13 MR. MCGLOTHLIN: Since I have a few questions I would vote
14 executive session -- I move that we adjourn and reconvene
15 in Executive Session.

16 MR. CHAIRMAN: We have a motion to convene in Executive
17 Session.

18 MR. EVANS: Second.

19 MR. CHAIRMAN: A motion and a second. All in favor signify by
20 saying yes. (ALL AFFIRM.) Opposed say no. (NONE.)
21 We're in Executive Session.

22 (Thereupon, the Board convened in Executive Session at
23 11:10 and reconved the open meeting at 11:25.)

24 MR. CHAIRMAN: We're back on record. I'm do a certification
25 of Executive Session, whereas the Virginia Gas and Oil

1 Board has convened in executive meeting on this date
2 pursuant to the affirmative recorded vote in accordance
3 with the provisions of the Virginia Freedom of Informa-
4 tion Act, and whereas Section 2.1-344.1 of the Code of
5 Virginia requires the certification by this Board that
6 each executive meeting was conducted in conformity with
7 Virginia Law. Now therefore be it resolved the Virginia
8 Gas and Oil Board hereby certifies to the best of each
9 member's knowledge that only public business matters
10 lawfully exempted from open meeting requirements of the
11 Virginia Law were discussed in the executive meeting to
12 which this certification resolution applies, and only
13 such business matters as were identified in the motion
14 convening the executive meeting were heard, discussed or
15 considered by the Virginia Gas and Oil Board. I'll ask
16 each member to say yes or no to that starting with Kevin.
17 (MEMBERS AFFIRM.)

18 MR. CHAIRMAN: The record will show that all the members that
19 were identified at the beginning of the meeting all voted
20 yes. I have one other question I'd like to ask. Is the
21 order identified in the relief to which you're requesting
22 modification the only Board order that is impacted by
23 this application?

24 MS. McCLANAHAN: You're referring to the first Early Grove
25 Gas and Oil Field order --

1 MR. CHAIRMAN: Yes.

2 MR. McCLANNAHAN: -- that establishes units? Yes, that's
3 correct. Actually it's not the first Early Grove order
4 but it's the most current Early Grove order.

5 MR. CHAIRMAN: But there are no forced pool orders or anything
6 like that impacting any of these wells?

7 MS. McCLANNAHAN: You mean units that have previously been
8 forced pooled?

9 MR. CHAIRMAN: Uh-huh.

10 MS. McCLANNAHAN: No. No, there aren't. We have 100 percent
11 lease hold interest in all four units.

12 MR. CHAIRMAN: Okay. Thank you. Board, what's your pleasure?

13 MR. KELLY: Mr. Chairman, I'd like to make a motion that the
14 application by Virginia Gas Company be approved.

15 MR. CHAIRMAN: Motion.

16 MR. EVANS: Second.

17 MR. CHAIRMAN: Motion and a second. Any further discussion?

18 MR. McGLOTHLIN: Any time limit specification?

19 MS. McCLANNAHAN: The application contains a time limit.

20 MR. EVANS: The application as submitted.

21 MS. McCLANNAHAN: Yes, exactly.

22 MR. KELLY: I'll amend my motion to reflect that.

23 MR. CHAIRMAN: Any further discussion? Signify your approval
24 by saying yes. (ALL AFFIRM.) Your disapproval by saying
25 no. (NONE.) It's unanimous.

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(AFTER A BRIEF RECESS, THE PROCEEDINGS CONTINUED AS
FOLLOWS:)

ITEM IV

1
2
3 MR. CHAIRMAN: The next item on the agenda is a petition for
4 the establishment of a compulsory pooled drilling unit
5 from Buchanan Production Company for unit Y-20. This is
6 docket number VGOB-92/07/21-0234.

7 MR. SWARTZ: Mr. Chairman, my name is Mark Swartz and I'm
8 appearing for Buchanan Production Company today. The
9 balance of the items on your docket today all pertain to
10 Buchanan Production. I have some witnesses here who are
11 necessary for the last item that's scheduled on the
12 docket and if I could I would like to advance Item XV on
13 your docket which is for the creation of a sealed gob
14 unit for the VP-6 mine and take that first, if I might,
15 and then that would allow me to let Mr. LouEllen who's a
16 geologist from Island Creek and Mr. VanGolen from
17 Buchanan Production and OXY, let those two gentlemen go
18 because their testimony is not required on the rest of
19 them.

20 MR. CHAIRMAN: Being sensitive to all the folks that are here
21 in attendance and not being presumptuous, are there any
22 other parties that wish to address the Board on this
23 matter of Buchanan Production Company's application?
24 Does anyone object to moving to Item XV on the agenda?
25

ITEM XV

1
2
3 MR. CHAIRMAN: Hearing no objection we'll move on to Item XV
4 which is a petition for the creation of a drilling unit
5 compulsory pooling by Buchanan Production Company for
6 unit SGU VP-6. docket number VGOB-92/07/21-0244. We
7 would ask the parties that wish to address the Board in
8 this matter to identify themselves, please.

9 MR. FULMER: I have some letters with regard to this item.
10 They were received by the office prior to the hearing
11 today, prior to us sending the docket to the Board
12 members.

13 MR. CHAIRMAN: Did you have other letters, Mr. Fulmer?

14 MR. FULMER: This letter was not in regard to any objections
15 placed in front of the Board but it pertains to the
16 docket that the Board is currently addressing. It's
17 from a Bonnie and James Davis. That's the only other
18 letter. (Pause.) That's all, Mr. Chairman.

19 MR. CHAIRMAN: Is there anyone else that wishes to address the
20 Board in this matter at this time? Okay. Mr. Swartz,
21 you may go ahead.

22 MR. SWARTZ: Before I call my first witness, if I could just
23 take a moment to kind of give you the sense of what this
24 unit is. It will be helpful -- I've given you an Exhibit
25 L in advance of calling a witness which is a mine map of

1 a portion of the VP-6 mine that underlies this unit.
2 Also if you would turn to Exhibit, page 1, which is the
3 plat map that you usually see with these applications --
4 it's not the little bitty map but the full size page.
5 It's Exhibit A, page 1. It's probably part of the
6 application as opposed to the notice. It looks like --
7 this is upside down but it looks like this.

8 MR. CHAIRMAN: It's right at the back of the application,
9 Board members.

10 MR. SWARTZ: Right. What this application pertains to is, as
11 the Board will recall, the Oakwood Field rules 1 and
12 Oakwood Field rules 2 do not apply to sealed gob gas
13 units. This is a sealed gob unit. The unit is shown
14 from the standpoint of the tracts that are involved in
15 the unit on Exhibit A, page 1. You can see that the
16 boundaries of the unit are shown on that, the dimensions
17 and so forth. And the tracts that are involved in this
18 unit are depicted there which, of course, relate to
19 Exhibit B. There are stars on Exhibit A, page 1 that are
20 primarily in the southeast quarter of the map and those
21 represent the five VVH well bores that are going to be
22 converted and used to produce gas from this sealed gob
23 unit. So that is the location of the VVHs that ultimate-
24 ly may be used to produce gob from this sealed gob unit.
25 Exhibit L I gave you this morning which has the mine map

1 simply takes the same size unit as you see on A-1 and
2 looks at it from mine level and removes the tracts and
3 gives you a sense of how this unit relates to an area of
4 the VP-6 mine. I should tell you that on the right hand
5 side if you looking at Exhibit L you'll see that is says
6 "trade line". The sealed gob unit for Consol and PGP
7 that you may recall, the BUN1 or the BUNE1 -- or is it
8 the BUS1?

9 MR. CHAIRMAN: BUS.

10 MR. SWARTZ: The BUS1 actually butts up to and adjoins this
11 line. So we have run this unit up to be contiguous with
12 the BUS1 so that there is not a gap there and you need to
13 know that. I think you would probably want to know that.
14 To the north of the mining that you see depicted on
15 Exhibit L there are still active mining in the VP-6
16 mine. The left hand side of the map which would be the
17 east on Exhibit L, of course, is the solid coal barrier.
18 We have tried to cut off the unit except where it butts
19 up against the BUS1 unit at 80 acre unit grid lines. And
20 I think it works well and you can see that. But we have
21 tried to size it to 80 acre units because it worked well
22 in this incidence. This unit contains 1,069.85 acres.
23 That is stated in the application and also it's written
24 on Exhibit A, page 1. But that is the total acreage in
25 this proposed sealed gob unit. Eventually Mr. Breeding

1 will testify and tell you how the seals were in place and
2 where they were put in place. I need to tell you one
3 other thing before we move on. Because there is active
4 mining to the north there are three small VVHs that will
5 be left in place. They're not shown on -- well, they
6 are, but may not be shown on Exhibit L. Those will be
7 left in place to control pressures at the seals that are
8 adjacent to active mining. Presumably, the five wells
9 that we are leaving in place and are converting will be
10 able to control pressure, but in the event that there
11 would be a need from a mine safety standpoint there are
12 three additional wells involved which could be used to
13 vent methane to make sure that we are not building
14 positive pressures on the seals where there is mining
15 adjacent to the north. The witnesses will ultimately
16 tell you this, but I can tell you up front so you're not
17 wondering, the cost of those VVHs is not embedded in any
18 of the costs that you will see here, the ones that are
19 for mine safety at the northern boundary in any of the
20 numbers for participation purposes or anything that you
21 will see. The projected or estimated cost with regard to
22 the seals and the five VVHs that are proposed to be
23 converted, those, of course, are in the cost data that
24 you will see and we'll be discussing that. As my first
25 witness I'd like to call Sam Gordon.

1 COURT REPORTER: (Swears witness.)

2

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SAMUEL EDWARD GORDON, II

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

8

9

DIRECT EXAMINATION

10

11 BY MR. SWARTZ:

12 Q. Would you state your full name for us?

13 A. Samuel Edward Gordon, II.

14 Q. And where do you live, sir?

15 A. I live in Tazewell, Virginia.

16 Q. Are you an employee of OXY, USA, Inc.?

17 A. Yes, I am.

18 Q. Do you also have a position with Buchanan Production
19 Company, the applicant here today?

20 A. Yes, I do.

21 Q. And what is that position?

22 A. Regulatory manager.

23 Q. Is Buchanan Production Company a Virginia general
24 partnership?

25 A. Yes, it is.

1 Q. And are it's two partners Appalachian Operators, Inc. and
2 Appalachian Methane, Inc.?
3 A. That is correct.
4 Q. Is Buchanan Production Company authorized to do business
5 in the Commonwealth of Virginia?
6 A. Yes, it is.
7 Q. Are you asking that someone other than Buchanan Produc-
8 tion Company be the designated operator on behalf of
9 Buchanan Production Company?
10 A. Yes, we are.
11 Q. And who would that be?
12 A. OXY, USA, Inc.
13 Q. Is OXY, USA a Delaware corporation?
14 A. Yes, it is.
15 Q. And is there any formal relationship between Buchanan
16 Production Company and OXY, USA?
17 A. Yes. We're both wholly owned subsidiaries of Oxidental
18 Petroleum Corporation.
19 Q. Has Buchanan Production Company appointed OXY to perform
20 certain functions for it?
21 A. Yes, it has.
22 Q. Okay. We have attached to our application Exhibit J,
23 pages 1 and 2, and does Exhibit J pertain to OXY's role
24 as designated operator for and on behalf of Buchanan
25 Production?

- 1 A. Yes, it does.
- 2 Q. Exhibit J, page 1, accomplishes what?
- 3 A. Page 1 is the resolution of management which resolves
4 that the management committee has the properties and
5 assets of Buchanan Production.
- 6 Q. And essentially this is the resolution of the management
7 committee of Buchanan Production delegating specifically
8 in writing certain duties to OXY, USA, is that correct?
- 9 A. That's correct.
- 10 Q. On page 2 of Exhibit J is a consent of OXY, is it not, to
11 act as designated operator to comply with rules and
12 regulations and orders that might be entered in the event
13 that the Board were to appoint OXY as designated operator
14 on behalf of Buchanan Production?
- 15 A. That is correct.
- 16 Q. Is OXY, USA authorized to do business in the Common-
17 wealth?
- 18 A. Yes, it is.
- 19 Q. Is OXY registered with the DMME?
- 20 A. Yes, it is.
- 21 Q. Does OXY have a blanket bond on file as required by law
22 of well operators?
- 23 A. Yes, it does.
- 24 Q. Now, OXY had delegated authority to act on behalf of
25 Buchanan Production to three specific people, correct?

1 A. Yes.

2 Q. You are the regulatory manager designated by OXY to
3 handle the affairs of Buchanan Production, correct?

4 A. That is correct.

5 Q. And who are the other two people that have been specific-
6 ally authorized to act on behalf of Buchanan Production?

7 A. Glen VanGolen is general manager and Martin Wirth is land
8 manager.

9 Q. Did you participate in drafting the notice of hearing and
10 application with regard to this sealed gob unit?

11 A. Yes, I did.

12 Q. And did you, in fact, sign both of those?

13 A. Yes, I did.

14 Q. Was the notice published in a newspaper as required by
15 the Code?

16 A. Yes, it was. It was published in the Virginia Mountain-
17 eer.

18 Q. And it was published on?

19 A. July 2nd, 1992.

20 Q. And did you file a certificate of publication that you
21 received from the newspaper with the Board and Mr.
22 Fulmer's office?

23 A. Yes, I did.

24 Q. In addition to publication and the certificate of
25 publication that you filed, did you also cause notices to

1 be sent to people that you had identified as people who
2 needed to be joined as respondents because they had an
3 interest and OXY had not been able to lease from them?
4 A. That is correct.
5 Q. And is there somewhere in the application or notices a
6 list of people who were notified?
7 A. Yes, there is. It's Exhibit B.
8 Q. Have we found it necessary to amend Exhibit B?
9 A. Yes, we have.
10 Q. And we amended it once before we got to the hearing,
11 correct?
12 A. That is correct.
13 Q. And have we brought some additional amendments with us
14 today?
15 A. Yes, we have.
16 Q. With regard to the amended documents that you've just
17 provided to the Board, would it be fair to say that you
18 have provided the Board with an amended Exhibit A, page
19 37
20 A. I've got that here in my hand.
21 MR. SWARTZ: Glen, have you passed that around yet?
22 MR. VANGOLEN: No.
23 MR. SWARTZ: What you should now have in terms of amendments
24 is you should have an amended Exhibit A, page 3. The
25 purpose of this exhibit which we'll get to in a minute,

1 but just so you'll recognize it, is the exhibit that
2 discloses the amount of coalingate coal, the amount of
3 oil and gas that's subject to lease, the amount in a
4 gross sense that is not subject to lease and is subject
5 to being forced pooled.

6 Q. (Mr. Swartz continues.) Mr. Gordon, with regard to
7 Exhibit A, what is the percent of the coalbed methane
8 rights that Buchanan Production has leased or controls
9 with regard to this proposed sealed gob unit?

10 A. We have 100 percent of the coal with a net of 98.8533
11 percent. Oil and gas ownership we have 100 percent
12 growth with a net of 77.1074 percent.

13 Q. And essentially the amount of the undivided interest in
14 the tracts that is outstanding that is subject to lease
15 in shown in section 2, is it not?

16 A. That is correct.

17 Q. And how much of the coal ownership or coal rights have
18 not been leased by Buchanan Production or not controlled
19 by Buchanan Production?

20 A. 1.1467 percent.

21 Q. And that would be subject to being pooled under this
22 order if this petition were granted?

23 A. That is correct.

24 Q. And with regard to outstanding oil and gas interests that
25 have not been leased to Buchanan Production or not.

1 controlled by Buchanan Production how much is outstanding
2 that would be subject to this pooling application?
3 A. 22.8926 percent.
4 Q. You have also furnished the Board previously with an
5 Exhibit B which has subsequently been amended, correct?
6 A. Yes.
7 Q. And they should have an amended page with regard to tract
8 1C, correct?
9 A. Correct.
10 Q. And then they should have an amended page that starts
11 with the number twenty-three at the top -- Pauline
12 Presley, do you see that?
13 A. Yes.
14 Q. And that is a continuation of tract 1C?
15 A. That is correct.
16 Q. And they should also have an amended page which has the
17 number forty at the top, the name is Commans Presley but
18 it also deals with tract 3 and tract 5, correct?
19 A. Correct.
20 Q. All right. And then lastly with regard to tract 17 they
21 should have an amended list of seven -- well, that shows
22 a total of seven people?
23 A. Correct.
24 Q. Could you describe in a very general sense what Buchanan
25 Production and it's agent OKY, USA has done to attempt to

1 identify all of the owners of record or potential
2 claimants in this sealed job unit from whom Buchanan
3 Production has not acquired leases?

4 A. We have published in the paper the names of the parties
5 that we do not know the whereabouts of along with parties
6 that we have been able to contact but have not secured
7 leases from. And our field people have been in contact
8 with a lot of the local residents as well as checking
9 phone books and everything else trying to run these --
10 find the location of these people.

11 Q. On Exhibit A, page 1, it shows all the tracts within this
12 1,069.85 acre unit, correct?

13 A. That is correct.

14 Q. Has someone on behalf of Buchanan Production Company
15 visited the record room and made a search to locate or to
16 identify the names of potential owners with regard to
17 each of those tracts?

18 A. Yes, we have.

19 Q. And is Exhibit B, as amended, a list of owners and
20 potential claimants that Buchanan Production and OXY have
21 prepared that is as complete -- that is a complete list
22 as far as you know of owners of record or potential
23 claimants from whom Buchanan Production Company or OXY
24 have not obtained a lease?

25 A. To the best of our ability it is.

1 Q. And in Exhibit B, as amended, did you cause someone in
2 your office to mail copies of the notice and the applica-
3 tion to every person that you've identified with the
4 exception of those people who Exhibit B states you do
5 not have addresses for?
6 A. That is correct.
7 Q. And have you filed with Mr. Fulmer's office in advance of
8 this hearing copies of your proof of publication and the
9 letters that were sent, the cards that were returned
10 indicating what was sent and what was returned?
11 A. Yes, we did.
12 MR. MASON: Can I interrupt, Mr. Chairman?
13 MR. CHAIRMAN: Mr. Mason.
14 MR. MASON: I just want to make sure -- you all have notified
15 all oil and gas owners effected by this well. Are they
16 included within the notice?
17 MR. SWARTZ: All oil and gas owners from whom we do not
18 already have a lease that we are aware of, yes.
19 MR. MASON: But you have some means of notifying them?
20 MR. SWARTZ: Right. Would you --
21 MR. GORDON: Yes, that's true.
22 MR. SWARTZ: That's the point and that's what we have tried to
23 do. I didn't mean that in a negative way. I just meant
24 that is the exercise.
25 MR. MASON: Because of the nature of this type of well and the

1 potential conflict over the job production between oil
2 and gas owners and coal owners and I think it's important
3 to know for certain that all oil and gas owners have had
4 notice of this. But you have means of contacting them.

5 MR. SWARTZ: Mr. Mason, if you were to look --

6 MR. MASON: Yeah, I know the list. I looked at the list.

7 MR. SWARTZ: Not just the list, but to take any several
8 portions of the list and compare it, we do state after
9 the name of everybody that we have on Exhibit B whether
10 they're an oil and gas owners -- and you'll notice there
11 are many, many oil and gas owners listed. And then some
12 of them may just be coal. Some of them may be oil, gas
13 and coal. So we do not make any distinction between oil
14 and gas or coal. We try to notify ever mineral owner.

15 MR. MASON: Okay. The people that I was most concerned about
16 is somebody that might be a coal and gas lessee and if
17 that would be their sole interest in this.

18 Q. (Mr. Swartz continues.) Do you wish to dismiss any
19 respondents at this time?

20 A. Yes. We wish to tract #1-C, dismiss Raymond Guy Boyd and
21 Barbara Boyd.

22 Q. And why do you want to move to dismiss them today?

23 A. They have just executed the lease to Buchanan.

24 Q. And when did they execute that?

25 A. Today.

- 1 Q. So you're talking about dismissing with regard to tract
2 1-C as amended, the respondents listed as number one,
3 Raymond Guy Boyd and Barbara Boyd for the reason that
4 they've signed a lease?
- 5 A. That is correct.
- 6 Q. Is there anyone else that you want to dismiss?
- 7 A. No.
- 8 Q. Is there anyone else that you are aware of at this point
9 that is not reflected on Exhibit B, as amended, that you
10 want to add today?
- 11 A. Not to our knowledge, no.
- 12 Q. It's obvious that Buchanan Production and OXY on behalf
13 of Buchanan Production have, in fact, leased from many of
14 the coal owners and many of the oil and gas owners in
15 this sealed gob unit, correct?
- 16 A. Correct.
- 17 Q. And what terms have you in general leased from those
18 folks that you have been able to enter into leases with
19 for the coalbed methane?
- 20 A. Our recommendation before the Board today would be that
21 we offer these parties \$1 an acre as bonus consideration
22 with a one-eighth royalty for a term of five years.
- 23 Q. And are those precisely the terms of the leases that you
24 have with people within this sealed gob unit -- or this
25 proposed sealed gob unit that you've already obtained?

- 1 A. Yes, it is.
- 2 Q. I'd like to spend a moment in general with regard to some
3 of the aspects of this unit. What coal seams will be
4 contained within this unit or will be contained within
5 the production of this unit? What horizons are we
6 talking about?
- 7 A. We are talking about the seams below the Tiller Formation
8 down through the Pokey 2.
- 9 Q. And the VP-6 mine is in what coal seam?
- 10 A. It's in the Pocahontas #3 coal seam.
- 11 Q. And with regard to Exhibit L, does Exhibit L accurately
12 depict the condition of the mine in terms of what has
13 been removed by longwall and solid blocks of coal in the
14 pillar as they stand today?
- 15 A. Yes, it does.
- 16 Q. And mining is complete in that area?
- 17 A. Yes, it is.
- 18 Q. And have seals already been installed to seal this VP-6
19 unit off from the balance of the mine?
- 20 A. Yes, it has.
- 21 Q. And who installed those?
- 22 A. Island Creek.
- 23 Q. Have you obtained cost estimates and information from
24 Island Creek with regard to that cost?
- 25 A. Yes, we have.

- 1 Q. On Exhibit L there are a number of wells depicted in
2 addition to the five that OXY proposes to use to produce
3 gas from this sealed gob unit on behalf of Buchanan
4 Production, is that correct?
- 5 A. That is correct.
- 6 Q. What's happening to the other wells, the ones that are
7 not proposed to be used, the ones that aren't shown on
8 Exhibit A, page 17?
- 9 A. All of the well locations where Island Creek's vertical
10 vent holes where they vented the mine for mine safety we
11 have now -- or Island Creek has now plugged 16 to 19 of
12 these holes.
- 13 Q. And do you have estimates with regard to the costs
14 incurred today with regard to the plugging?
- 15 A. Yes, we do.
- 16 Q. Did you prepare a cost estimate with regard to this
17 sealed gob unit?
- 18 A. Yes, I did. It's Exhibit C.
- 19 Q. And was that something that you personally did?
- 20 A. I did that accumulating information both from Island
21 Creek and from our own department.
- 22 Q. Item 1 is cost of sealing, correct?
- 23 A. That is correct.
- 24 Q. Why do you have to spend money to seal this unit?
- 25 A. We need to localize the production from this area for

- 1 mine safety in the rest of the mine.
- 2 Q. And does sealing the unit also have an impact on the
3 quality of the gas that you're likely to be producing?
- 4 A. Yes, it does.
- 5 Q. Less oxygen?
- 6 A. Less oxygen, yes.
- 7 Q. Is it your opinion that the sealing costs are a reasona-
8 ble cost to be incurred and are necessary to produce
9 quality gas from a sealed gob unit?
- 10 A. Yes, it is.
- 11 Q. With regard to plugging costs, can you tell whether or
12 not it's your understanding that the plugging of the
13 well that you've just discussed was done by a contract-
14 or?
- 15 A. To my knowledge it was done by a contractor.
- 16 Q. And was there bidding?
- 17 A. Yes, there was bids.
- 18 Q. Can I assume it's your understanding that the contract
19 was left the lowest bidder?
- 20 A. That's my understanding, yes.
- 21 Q. Is the \$306,000 at this point an estimate or the final
22 cost?
- 23 A. It's a pretty solid figure, but it's still an estimate.
24 All costs haven't come in yet.
- 25 Q. Item 3 is bore hole fees and where does that number come

- 1 from?
- 2 A. That number comes from the agreement that OXY on behalf
3 of Buchanan has with Island Creek regarding the wells
4 that we propose to produce from.
- 5 Q. Is the \$712,500 figure the result of multiplying five
6 times \$142,500?
- 7 A. That is correct.
- 8 Q. What is Glen passing around to the Board members right
9 now?
- 10 A. Mr. VanGolen is passing around the contract approval
11 abstract that the Board has seen before.
- 12 Q. Are we going to be referring to this document on numerous
13 occasions today?
- 14 A. Yes, we are.
- 15 Q. So have you put every docket number today that this
16 pertains to on this exhibit so that it's reusable?
- 17 A. Yes, we have.
- 18 Q. In essence, would you agree that this document is an
19 abstract of agreement or a summary of agreement between
20 Island Creek, Buchanan Production Company, and OXY, USA
21 whereby Island Creek in exchange for \$142,500 per well
22 bore agrees to let Buchanan Production Company and OXY
23 utilize the well bore to produce coalbed methane?
- 24 A. This is correct.
- 25 Q. And there are five wells in this unit -- the sealed gob

- 1 unit that we're talking about today subject to this
2 agreement, correct?
- 3 A. That is correct.
- 4 Q. And that's where the number with regard to bore holes on
5 Exhibit C comes from?
- 6 A. That's correct.
- 7 Q. Then you've got title, title curative, legal DO take-
8 off. What's DO?
- 9 A. Division order.
- 10 Q. DO title opinion, regulatory and surveying. My question
11 is whether or not it is your opinion that the total
12 reported on Exhibit C is, in fact, or represents the
13 reasonable estimated costs to seal the unit, utilize well
14 bores, plug some of the wells, do title work necessary to
15 produce this unit?
- 16 A. It is a reasonable estimate. These were the numbers we
17 had available to us at the time I compiled this list. We
18 still have numbers outstanding, but this should cover the
19 bulk of it.
- 20 Q. Would you tell me why it is necessary to plug the bore
21 holes that you are not proposing to use to produce gas
22 from the sealed gob or to vent along the north boundary
23 of this unit?
- 24 A. Well, we plugged the wells to eliminate oxygen coming in
25 and creating impure gas. And then, as you earlier

1 explained, the ones on the northern boundary will be
2 there to release pressure on the seals should it build up
3 to an unsafe level.

4 Q. And are any costs associated with the three vertical
5 ventilation holes that will remain along the north
6 boundary of this units are any costs at all with regard
7 to those three wells that are left for mine safety
8 purposed plugged in to Exhibit C in any way, shape or
9 form?

10 A. No, there is not.

11 Q. IF a person wanted to calculate the costs associated with
12 participation in this sealed gob unit would they simply
13 take the percentage assigned to the tract in which they
14 had a common interest in Exhibit B, as amended, and
15 multiply that times the total figure shown on Exhibit C
16 to come up with the number that would represent their
17 participation contribution?

18 A. Yes. That's correct.

19 Q. So in order to determine what your participation might be
20 percentage wise, your carried interest percentage wise
21 from an election standpoint or your royalty interest,
22 those percentages are reported on Exhibit B, as amended?

23 A. Well, your royalty interest -- you would only take one-
24 eighth of it for royalty, but for your gross -- what you
25 would have to contribute to the cost of this unit you

1 would take those decimals times what shown in Exhibit C.
2 Q. From a working interest end?
3 A. For a working interest, yes.
4 Q. And royalty would be the percentage times one-eighth?
5 A. Right.
6 MR. EVANS: Excuse me. I have one question, real quick. On
7 Exhibit B, net acreage within unit, is that the figure
8 you're using?
9 MR. GORDON: That is net acres in the unit, yes.
10 MR. EVANS: Okay. Thank you.
11 Q. (Mr. Swartz continues.) But to get the percentages shown
12 on Exhibit B you've taken the net acres in the unit and
13 divided it by the total acres in the unit, 1,000 --
14 whatever --
15 A. The gross acres, yes.
16 MR. SWARTZ: I have no further questions of Mr. Gordon at this
17 point. If you all have any questions you can have at him
18 now or you can wait.
19 MR. CHAIRMAN: Any questions for Mr. Gordon now?
20 MR. EVANS: I have a number. Do you want to do that now or do
21 you want to wait till later?
22 MR. CHAIRMAN: It's up to you.
23 MR. EVANS: Okay. Let me ask one question. Do you anticipate
24 calling any additional witnesses with regard to the
25 financial information?

1 MR. SWARTZ: I'm going to have Mr. Breeding from Island Creek
2 comment on the bidding process and where these numbers
3 came from and how they're generated. If you're looking
4 at plugging costs or sealing costs you probably -- he's
5 going to be here and you probably would want to ask him.
6 The cost numbers that don't relate to that, you probably
7 better ask Mr. Gordon.

8 MR. MASON: You testified that the sealing costs are \$156,000,
9 correct?

10 MR. GORDON: That's correct.

11 MR. MASON: Did Buchanan Production Company pay that?

12 MR. GORDON: That is the cost that will be ITVed between
13 Island Creek and OXY when that gets there.

14 MR. MASON: What is an ITV?

15 MR. GORDON: It's an internal transfer of funds.

16 MR. MASON: Is Buchanan Production Company going to pay Island
17 Creek \$156,000?

18 MR. GORDON: Yes.

19 MR. MASON: Why?

20 MR. GORDON: To get pure gas.

21 MR. MASON: This contract that you just gave us says that --
22 number two that ICC agrees to use best efforts in mines
23 to deliver pipeline quality coalbed methane gas to the
24 surface. Why is Buchanan Production Company paying for
25 those sealing cost when they have a contractual obliga-

1 that occurs after the immediate roof lets go and it
2 profligates up, correct?

3 A. Right.

4 Q. And what you're saying is that seams from which you think
5 to the extent there is coalbed methane gas that primarily
6 the production will come from the Beckley, War Creek and
7 down, is that what your testimony is?

8 A. Right.

9 Q. And those are definitely coal seams below the Tiller?

10 A. Right.

11 Q. And above the Pocahontas #2?

12 A. Right.

13 Q. The other exhibit that you've given us we've marked as
14 Exhibit N. Could you tell the Board what portion of this
15 exhibit pertains to the VP-6? Maybe hold it up and show
16 them?

17 A. This is just a cross section of the division area and on
18 the right hand side the L-299 and L-85 are in the actual
19 -- are next to or in the area that they're trying to
20 permit in the VP-6 gob.

21 Q. And this, in fact, shows the dip of the coal, does it
22 not?

23 A. What it's showing is the variations in thickness of the
24 Tiller to Pokey 2 horizon. Overall the number of seams

25

1 MR. SWARTZ: This is relation to your question, Mr. Mason.
2 Then you can either accept it as something that's headed
3 in the right direction or pursue it further.
4 Q. (Mr. Swartz continues.) Exhibit K, the abstract of the
5 agreement with Island Creek, does that apply to sealed
6 gob, active gob and short hole?
7 A. Yes, it does.
8 Q. When that agreement was being negotiated with Island
9 Creek were you a party to the negotiations?
10 A. Yes, I was.
11 Q. Was there an intention on your part to impose on Island
12 Creek an obligation to take extra care in bringing short
13 hole gas to a well bore in terms of not allowing that gas
14 to be contaminated? Were there discussions with Island
15 Creek with regard to that?
16 A. Yeah, there sure was.
17 Q. The provision which Mr. Mason has focused on, bearing
18 this is a summary of oral agreements reached and contract
19 negotiations dealing with best efforts to deliver
20 pipeline quality, Item 2 on your comments, do you see
21 that? Can you tell me what type of operation that
22 comment pertains to? Does it pertain to active gob,
23 short hole, sealed gob? I mean, why was that negotiated?
24 A. It pertains to all of them, Mr. Mason. That is strictly
25 a surface operation -- best efforts.

1 MR. MASON: Let me ask you another question. Is there any
2 contractual obligation of any kind by Buchanan Production
3 Company to pay for these costs? You know, these plugging
4 costs and sealing costs are things that we've heard a
5 great deal about as being conducted in the ordinary
6 course of events as a part of mining. Are you telling me
7 that BUS 4, this gob well -- that these seals would
8 never be installed?

9 MR. VANGOLEN: That's right. The seals will never be install-
10 ed.

11 MR. MASON: The VVHs would never be plugged?

12 MR. VANGOLEN: The wells would not be plugged in probably our
13 lifetime. As long as that remains an active mine those
14 wells would continue to exist there until some point
15 where that mine was abandoned. All the costs that are in
16 this estimate are to Buchanan's advantage to pay for --
17 it makes economic sense to produce pipeline quality gas.

18 MR. MASON: And even though according to this agreement Island
19 Creek has an obligation to use its best efforts to
20 deliver pipeline quality gas, you don't think that's
21 included?

22 MR. VANGOLEN: Not for the sealing cost. That consent was
23 strictly related concerning each individual well bore.
24 Basically, it refers to an operation vacuum operation.
25 Try not to suck on it too hard, you know, to keep the

1 quality in the well bore.

2 MR. MASON: But Mr. Gordon testified that all of the sealed
3 costs and plugging costs all relate to the ability to
4 deliver pipeline quality gas.

5 MR. VANGOLEN: Uh-huh.

6 MR. MASON: Let me ask you this. These bore hole fees, in
7 this agreement it says this \$142,500 per well, how is
8 that to be paid?

9 MR. SWARTZ: As each well bore is utilized. Basically, what
10 we plan on doing, there's five well bores in particular
11 that we have identified and looked at and Mr. LouEllen
12 will testify as to the geology of that. They're all up
13 structure on the high part of the mine. Currently we are
14 anticipating just to start with two of those.

15 MR. MASON: I know that, but I mean are you going to pay it
16 all up front or are you going to pay it as you produce?

17 MR. SWARTZ: We're going to pay it all up front. If we hook
18 up to that well we pay the usage. Now, there's five
19 wells identified and we may not have to use all five
20 wells. We're currently just looking at two of them.

21 MR. MASON: How do you anticipate counting for that on
22 Buchanan Production Company's book for gap purposes?

23 MR. SWARTZ: It will be considered a capital cost and depreci-
24 ated unit production.

25 MR. MASON: Okay. So you're going to recover the cost under

1 the production of the well?

2 MR. SWARTZ: Right.

3 MR. MASON: Why shouldn't it be treated as an operating cost
4 on this well as opposed to a cost up front?

5 MR. SWARTZ: I'm not sure we're allowed to do that.

6 MR. MASON: No. I'm talking about as regards to the account-
7 ing on the well itself. I agree with you on the account-
8 ing part. I guess what I'm concerned about is that you
9 all are basically going to charge what seems to me to be
10 a usage charge related to the use of this bore hole which
11 will be earned by you as the well is produced and yet
12 you're going to pay for that up front. Now, it would
13 seem to me that that's a necessary cost that somebody's
14 going to have to advance in order to participate in this
15 well if they elect to do something. Something that could
16 well be determined to be an operating cost and that this
17 payment for this well bore could just as easily be
18 charged against operations as they occur. And it appears
19 to me that you all have made an arbitrary decision to pay
20 this up front and charge it as a well cost which has a
21 very dramatic effect on the amount of money --

22 MR. SWARTZ: I'm not sure that was arbitrary, though. I think
23 that's --

24 MR. MASON: Well, you yourself admit that you're accounting
25 for it is going to be in which you weightability expense

1 it over the production of the well.

2 MR. SWARTZ: On an after tax basis.

3 MR. MASON: Pardon?

4 MR. SWARTZ: On an after tax basis.

5 MR. MASON: Well, for accounting purposes.

6 MR. SWARTZ: Yeah.

7 MR. MASON: Okay. Which means that, basically, the expense is

8 actually going to be incurred over the life of the well.

9 That's the whole theory of capital recovery over a

10 production method.

11 MR. SWARTZ: Right. As any oil and gas well is, though.

12 MR. MASON: I understand that. What I don't understand is why

13 the decision was made to charge this entire amount as an

14 up front cost to this well and when someone would elect

15 to participate in it they would have to pay that up front

16 as opposed to having it paid as a part of the operating

17 expense.

18 MR. SWARTZ: What he's asking you is why didn't you enter into

19 a twenty year lease with monthly payments.

20 MR. MASON: No, I'm not.

21 MR. SWARTZ: It sounds like it.

22 MR. MASON: Well, you could have done that. This agreement

23 doesn't specify when it's paid.

24 MR. SWARTZ: Well, he's told you it's payable up front.

25 MR. VANGOLEN: It's payable up front.

1 MR. MASON: The agreement itself is silent and you all are
2 going to account for it on a regular basis, but what I
3 don't understand is why you have elected --

4 MR. SWARTZ: No. That capital will hit the books straight up
5 front.

6 MR. MASON: Well, I understand that. But it makes a big
7 difference in the economics of the participant in this
8 well as to whether you treat this as a cost up front or
9 whether you treat it as an operating cost. I guess my
10 concern is that the nature -- you know, the very nature
11 of what you're talking about here is the usage of the
12 bore. I mean, you're talking about -- you don't own it.
13 You're paying for the gas to pass through it, as you all
14 testified previously which seems to me to be more the
15 nature of a usage which relates to operating as opposed
16 to up front -- I mean, I understand you're buying a
17 contract right. But I guess I'm concerned about the
18 effect of this in terms of whether it's fair to anyone
19 for against whom this forced pooling is made in terms of
20 the fact that where there's an election to be made as to
21 how this is accounted for one has a negative effect and
22 one has a non-negative effect in terms of anybody being a
23 participant.

24 Q. (Mr. Swartz continues.) Mr. VanGolen, let me ask you
25 this question. Could you drill any one of these five

1 VVHs for \$142,500?

2 A. No.

3 MR. MASON: But the issue is not the cost itself. It's how
4 it's paid.

5 Q. (Mr. Swartz continues.) Well, if you drilled one it
6 would hit your books in the full amount, would it not?

7 A. Yeah. I mean, just like any other well that you're
8 capital expenses would. If I utilize one of these well
9 bores I write a check to use it.

10 MR. MASON: Well, I don't dispute that. If you elected to
11 drill a well -- what you elected to do was to basically
12 acquire the rights to use somebody else's well?

13 MR. SWARTZ: Right. And that arrangement could either be in a
14 capital payment or a lease rental type of arrangement.
15 And the arrangement that we've entered into with the
16 person that we're utilizing this well bore with is a
17 capital arrangement. It's not the other.

18 MR. MASON: And this contract is silent as to when it's to be
19 paid.

20 MR. SWARTZ: I think the full contract will probably be very
21 explicit --

22 MR. MASON: Well, I don't know. I don't have the benefit of
23 that. Let me ask you another question. The title
24 opinions for drilling, you've got on here \$95,000. Who's
25 going to pay that? Is Buchanan?

1 MR. SWARTZ: Buchanan.

2 MR. MASON: Who are they going to pay it to, lawyers?

3 MR. SWARTZ: Lawyers, land brokers.

4 MR. MASON: Why wasn't the title work done when the original
5 wells were drilled? Weren't these areas originally
6 drilled as wells- VVHs?

7 MR. SWARTZ: They were drilled just to liberate methane.
8 There was no work done for oil and gas. There was some
9 work done for coal, but it had to be brought forward.
10 But no oil and gas title was done and no surface title
11 was done.

12 MR. MASON: Okay. So these are actually costs. They're not
13 reimbursements to Island Creek.

14 MR. SWARTZ: No, they're not reimbursements.

15 MR. MASON: These are actual and out and out legal costs that
16 you're going to incur leading solely to the oil and gas?

17 MR. SWARTZ: Right. We don't rely on their opinions. No
18 offense, Steve.

19 MR. MASON: Thank you.

20 MR. McGLOTHLIN: You're talking about utilizing five wells.
21 If your allowable cost -- the whole figure of 1,000,
22 335,565.

23 MR. SWARTZ: Excuse me, Mr. McGlothlin. You've sort of
24 misstated his testimony. He's talked about utilizing
25 two and if that works no more, and if that doesn't work

1 as many as five. He has not said that they're going to
2 charge for five well bores. But if they need them
3 they're in this DWE is what his testimony has been.

4 MR. MCGLOTHLIN: Thank you, Mr. Swartz. Now may I finish with
5 my question?

6 MR. SWARTZ: Sure.

7 MR. MCGLOTHLIN: For the record, Mr. VanGolen, do you plan on
8 charging this entire fee or just prorate it on a per well
9 basis?

10 MR. VANGOLEN: Just prorate it on a per well basis.

11 MR. MCGLOTHLIN: Thank you.

12 MR. CHAIRMAN: Other questions? Next witness.

13 (Witness stands aside.)

14 MR. SWARTZ: Steve Breeding.

15 COURT REPORTER: (Swears witness.)

16

17

18

STEVEN BREEDING

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

21

22

DIRECT EXAMINATION

23

24 BY MR. SWARTZ:

25 Q. State your name for us.

- 1 A. My name is Steve Breeding.
- 2 Q. Who do you work for?
- 3 A. I work for Island Creek Coal Corporation.
- 4 Q. And what's your title?
- 5 A. My title is coalbed methane coordinator.
- 6 Q. Have you testified before this Board before and have they
7 accepted your qualifications and credentials?
- 8 A. Yes, I have and yes, they have.
- 9 Q. We talked some about Exhibit L before you got up here,
10 Steve, but is this, in fact, a map of the mine works in
11 the portion of the VP-6 mine that is within this proposed
12 sealed gob unit?
- 13 A. Yes, it is.
- 14 Q. And does the BUS1 unit that was previously created by the
15 Board, in fact, adjoin this proposed unit on the east?
- 16 A. Yeah. It's directly adjacent to the east side of this --
17 our VH-6 sealed gob, yes.
- 18 Q. They meet? They touch?
- 19 A. Yeah. The boundaries touch, yes. They overlap.
- 20 Q. And immediately to the north of the portion of the mines
21 shown on Exhibit L is there active mining still ongoing?
- 22 A. Yes. A little further to the north we have development
23 works that are directly to the north and above that we
24 have another north/south longwall panel.
- 25 Q. And there is active mining up there ongoing?

- 1 A. Yes, there is.
- 2 Q. Have seals been installed already to seal off this unit
3 from the rest of the VP-6 mine?
- 4 A. Yes, they have.
- 5 Q. Who did that work?
- 6 A. The VP-6 mine did those work. Island Creek Coal Company.
- 7 Q. And have you given Mr. Gordon an estimate with regard to
8 what you believe those sealing costs will ultimately be
9 determined to be?
- 10 A. We obtained a preliminary estimate rather hurriedly. We
11 are still in the process of trying to tie down and
12 itemize the list of the actual costs that went into that
13 and hope to have that very soon.
- 14 Q. Not with a lot of detail, but in order to build a seal
15 between any two pillars shown on this map what physically
16 does someone have to do in the mine?
- 17 A. Well, it's a physical barrier that actually shuts off the
18 development itself. They go in and channel out into the
19 rock to prevent seepage over the seal itself and actually
20 physically construct concrete block walls and concrete --
21 if I'm not mistaken they're a double wall. Then they
22 seal around those with a special sealant to prevent air
23 from seeping through it.
- 24 Q. So at every pillar or between every two pillars to the
25 extent it's necessary there has been a solid concrete

- 1 Block barrier installed?
- 2 A. Yes.
- 3 Q. And I assume you have tried to do it in -- rather than
- 4 running the length of the main, doing it across entries?
- 5 A. Yes. There is a seal located right down -- if I can use
- 6 this. Rather than seal each one of these individually
- 7 there's a seal located right in this area and then each
- 8 one of these are sealed basically just right across this
- 9 area right through here.
- 10 Q. Does the coal or the floor of the VP-6 mine slope in any
- 11 direction?
- 12 A. Yes. The bottom of the VP-3 we have bottom of seam
- 13 contours that dips to the northwest which --
- 14 Q. You said VP-3.
- 15 A. Excuse me. VP-6. Bottom of the seam contours dip from
- 16 the southeast corner down to the northwest corner, the
- 17 high side being on the southeast corner.
- 18 Q. If I was going to take this map that you've got on the
- 19 bulletin board and just figure the dip, it would dip like
- 20 this?
- 21 A. Yes. something along those lines fairly contours -- those
- 22 of you who are familiar with -- perpendicular right here
- 23 with the low side being right here, and a very high
- 24 topographic high being in this area right here.
- 25 Q. Did you take into consideration the dip for the high

1 point in the mine and also the fact that gas is lighter
2 than air and tends to seep in higher areas? Is that a
3 factor --

4 A. With respect to locating it?

5 Q. Right.

6 A. Yes, we did.

7 Q. So the five wells are essentially in the southeast
8 quadrant which would be the highest point of the mine
9 that is within this unit?

10 A. Correct. The wells are located at 217, 292, 263, 261,
11 and 234.

12 Q. In addition to utilizing what you knew about the dip and
13 selecting the high point of the mine for the wells that
14 you would propose to use to produce coalbed methane
15 within mine, was there also something about production
16 history that you looked at in selecting these?

17 A. Well, we looked back over the production history from all
18 the ventilation. We try to keep tab of how much methane
19 was produced throughout this gob area. And reviewing the
20 production history, it appears that hopefully it won't
21 take anymore than five wells, hopefully less than that.

22 Q. Would it be fair to say that five would seem to you --
23 based on historical methane production from this area,
24 that five wells would be adequate from a mine safety
25 standpoint to drain the methane that is likely to develop

- 1 in this sealed unit?
- 2 A. The trick is to balance the pressure on the seals in this
3 particular area.
- 4 Q. To the north -- to the top?
- 5 A. Yeah, to the north. We want to make sure that the
6 pressure is balanced in this area. So you would have to
7 cut on enough of these -- a large enough number of these
8 five wells to make sure that the pressure -- a proper
9 balance is maintained at these seals so that you don't
10 get an intake of oxygen or a throughput of methane into
11 the mine.
- 12 Q. With regard to the northern boundary where the seals are
13 between this proposed unit and the active mining that
14 continues in VP-6, are there, in fact, three small VVHs
15 that going to be left up there?
- 16 A. Yes, there are.
- 17 Q. And are those fitted with one-way valves so that oxygen
18 cannot get into the mine but you can pull on them to get
19 methane out if necessary?
- 20 A. Right. Each one of those is fitted with a small north
21 American pump that's -- it's a low volume type pump that
22 have flat valves on them to prevent any kind of intake
23 going into the mine. Those will only be cut on in
24 case -- and those are used as control mechanism to try to
25 control the pressure at the seals. Hopefully if these

- 1 pressures can be controlled by these producing wells
2 these will never have to be used.
- 3 Q. They're sort of an emergency back-up?
- 4 A. Yes.
- 5 Q. Have any costs with regard to the three VVHs near the
6 north boundary been included in any of the estimates you
7 provided Mr. Gordon for him to use?
- 8 A. No, none of those.
- 9 Q. Island Creek is bearing those costs?
- 10 A. Yes.
- 11 Q. And not attempting to pass them on to any --
- 12 A. It's a mine safety concern.
- 13 Q. With regard to the five VVHs that are being converted
14 here, can you give the Board some idea of what the cost
15 to build roads to those, the cost to drill those, and the
16 cost to equip those has been for Island Creek?
- 17 A. I'm going to just guess. I don't have any particular
18 figures on those particular wells. But somewhere in the
19 neighborhood of -- I'd say on the average probably
20 \$200,000 to \$220,000.
- 21 Q. Per well -- per VVH?
- 22 A. Per well depending on the length of the road and the
23 access into it and the particular site.
- 24 Q. Would you describe to the Board what happens to the
25 overlying strata -- the immediate roof in the mine and

- 1 the overlying strata in an area such as the VF-6 sealed
2 gob as longwall mining progresses and is concluded?
- 3 A. Well, as the longwall actually proceeds to cut the coal
4 out across the face we'll have a zone that will immediat-
5 ely fall probably in the neighborhood of 40 or 50 feet
6 that will cave directly behind the longwall sheer and
7 behind the shields. At some point in time after the
8 longwall phase advances on out you'll get additional
9 cracking on up into the upper strata to a depth of
10 probably 380 or 400 feet above the top of the #3 seam.
11 And above that you get a little minor cracking -- on up a
12 little bit higher. And then it reaches a point to you
13 have a deflection zone where there's not really actually
14 any cracking but the strata bends, so to speak, without
15 substantial additional cracking. I would say that
16 probably goes up as high as 500 or 600 feet above the top
17 of the #3 seam.
- 18 Q. Your opinion with regard to the pool or the reservoir
19 that will be drained out of this sealed gob unit, is it
20 between or below the Tiller and above the Pocahontas #27
- 21 A. Yes, it would be.
- 22 Q. And is it also your opinion that for all practical
23 purposes the drainage will be also contained within the
24 exterior boundaries?
- 25 A. Yes.

- 1 Q. Have you tried to size the unit in terms of solid coal
2 blocks and other mine attributes to keep the drainage
3 from the projected wells and the projected unit within
4 the boundaries you've established?
- 5 A. Yes, we have.
- 6 Q. The solid coal blocks or barriers on the west, the solid
7 coal and seals to the north and so forth?
- 8 A. Yes.
- 9 Q. Is it your opinion that this sealed gob unit that it is
10 fair to treat it essentially as a container lying between
11 the Tiller as it's very upper boundary and the Pocahontas
12 #3 as its lower boundary and then its sides being
13 essentially the shape that we see depicted on the map
14 which is the solid blocks or the seals?
- 15 A. Yes, I do.
- 16 Q. And that is the area that would be drained by the two to
17 five wells we've been talking about?
- 18 A. That's correct.
- 19 Q. Is it your opinion that this plan in terms of the
20 utilization of the five bore holes, the sizing of this
21 unit, the seals that have been put in place, that this is
22 a reasonable plan to develop the methane within this gob
23 area?
- 24 A. Certainly it is, yes.
- 25 Q. And is it your opinion further that this plan and this

1 unit would protect the correlative rights of the owners
2 of the methane within this unit and also protect against
3 physical waste and economic waste?
4 A. Yes. Yes, it would.
5 MR. SWARTZ: I don't have anymore questions of Mr. Breeding.
6 MR. CHAIRMAN: Questions, members of the Board?
7 MR. MASON: I have a question. Let me ask you this. You
8 testified that you expect that the fractured area above
9 the #3 to be 380 to 400 feet, is that correct?
10 MR. BREEDING: From a subsidence standpoint that's a --
11 MR. MASON: How much actual rubble are you going to -- I mean
12 drop are you going to get?
13 MR. BREEDING: Actual rubble -- you're probably talking 40 or
14 50 feet physical rubble that you can see behind the
15 shields. Actually when you're underground you can look
16 behind the seals and you can see the size of broken rock.
17 That probably only goes up only 40 or 50 feet. When I
18 talk about up to 380 feet I'm talking about zones of high
19 fracturing.
20 MR. MASON: Right. Within that area there are a number of
21 coal seams, is that correct?
22 MR. BREEDING: Yes.
23 MR. MASON: Do you know how many?
24 MR. BREEDING: Some coal seams. Mr. LouEllen could probably
25 better address that. I'm not familiar exactly what --

1 MR. SWARTZ: He's here. He's going to testify on the chart.

2 MR. BREEDING: He can probably tell you exactly is within that

3 500 or 600 feet above the #3 seam.

4 MR. MASON: Okay. That's fine. Thank you.

5 MR. SWARTZ: Anything else?

6 MR. CHAIRMAN: Just one other question for Mr. Breeding. The

7 abstract of your contract -- we're not taking any action

8 on the contract itself, but I just noticed the statements

9 about the requirement to maintain pipeline quality gas

10 and do all those things. Do you have the necessary

11 flexibility -- I see that you've reserved the right to

12 vent gas for mine safety, but you addressed the import-

13 ance of being able to achieve that balance so that

14 you're not adding to the methane in the mine. Do you

15 feel that throughout all of your agreements that you have

16 the necessary flexibility to have the mine safety to be

17 the priority?

18 MR. BREEDING: That is the ultimate concern in all of our

19 agreements. That has been top priority from the word go

20 and it's given - on O'V part mine safety will not be

21 overridden by any kind of economic evaluation or economic

22 consideration or from a recovery resource standpoint that

23 mine safety is the top concern.

24 MR. CHAIRMAN: I certainly would emphasize that any action of

25 this Board would never jeopardize the safety of the

1 workers in the mines.

2 MR. BREEDING: Absolutely.

3 MR. CHAIRMAN: Thank you.

4 (Witness stands aside.)

5 MR. SWARTZ: I'd like to call Mr. LouEllen.

6

7

8 DENNIS G. LOUELLEN

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

11

12 DIRECT EXAMINATION

13

14 BY MR. SWARTZ:

15 Q. Could you state your full name for us?

16 A. Dennis G. LouEllen.

17 Q. Who do you work for?

18 A. Island Creek Coal Corporation.

19 Q. And do you have a title?

20 A. I'm the division geologist.

21 Q. And do you have a degree in geology?

22 A. Yeah, I have a Masters degree in geology.

23 Q. From whom?

24 A. Eastern Washington University.

25 Q. Have you testified before this Board before?

- 1 A. Yes, I have.
- 2 Q. And have they accepted your qualifications and credent-
3 ials?
- 4 A. Yes, they have.
- 5 Q. Did you prepared a couple of exhibits to use today with
6 regard to the strata and characteristics of the seams in
7 the area of the VP-6 mine?
- 8 A. Yes, I have. Exhibit M is a generalized section showing
9 the coal seams in the area and Exhibit N is just a cross
10 section.
- 11 Q. If we could start with Exhibit M. The Pocahontas #3 seam
12 is where this chart starts, correct?
- 13 A. Right.
- 14 Q. And the VP-6 mine is in that seam?
- 15 A. Right.
- 16 Q. There's a Pocahontas #2 seam below. About how far below
17 would that be?
- 18 A. If it's present it's approximately 50 feet below the #3
19 seam.
- 20 Q. You were here and heard Mr. Breeding describe his view of
21 what happens after longwall mining and I know from
22 talking to you that your's is in substance very similar
23 but slightly different. Could you as a geologist share
24 with us your view of what happens in terms of distressing
25 or rubblization behind or after longwall mining and is

1 likely to happen in this unit or has already happened in
2 this proposed unit?

3 A. Well, from what I have learnt I'd say most of the
4 production will come from the -- about the Beckley or
5 War Creek seam down to the Pocahontas #3 seam. That's
6 based in part on what Steve said about the rubblization
7 zone and the zone extensive fracturing. It's also based
8 upon some stimulation studies which show that the first
9 500 feet or so is where most of the gas production comes
10 from. And it's also based on inspection of well bores
11 with a down hole camera. Most of our damage to the
12 bores, breaks in the casing and what not, will start
13 occurring at 500 feet or less.

14 Q. A lot of these well bores do not even have casing,
15 correct?

16 A. No. They're all cased.

17 Q. Well, beyond the water protection streams and the coal
18 protection streams are you not drilling some without
19 casing?

20 A. Those that are drilled without casing -- I'm aware of
21 about 500 feet of casing.

22 Q. What enhances the production, obviously, is the fracking
23 that occurs after the immediate roof lets go and it
24 profligates up, correct?

25 A. Right.

- 1 Q. And what you're saying is that seams from which you think
2 to the extent there is coalbed methane gas that primarily
3 the production will come from the Beckley, War Creek and
4 down, is that what your testimony is?
- 5 A. Right.
- 6 Q. And those are definitely coal seams below the Tiller?
- 7 A. Right.
- 8 Q. And above the Pocahontas #2?
- 9 A. Right.
- 10 Q. The other exhibit that you've given us we've marked as
11 Exhibit N. Could you tell the Board what portion of this
12 exhibit pertains to the VP-6? Maybe hold it up and show
13 them?
- 14 A. This is just a cross section of the division area and on
15 the right hand side the L-299 and L-85 are in the actual
16 -- are next to or in the area that they're trying to
17 permit in the VP-6 gob.
- 18 Q. And this, in fact, shows the dip of the coal, does it
19 not?
- 20 A. What it's showing is the variations in thickness of the
21 Tiller to Pokey 2 horizon. Overall the number of seams
22 and the thickness of the formation decreases to the
23 northwest. And as it happens in this case that the seams
24 do dip to the northwest as well.
- 25 Q. But it does show the continuity of the seams or dis-

1 continuity of some of the seams?

2 A. Right.

3 Q. As a geologist would it be your opinion that the proposed
4 unit which is depicted on Exhibit L, for example, that it
5 would be fair to regard the pool which would be drained
6 by wells in that unit as being lying between the Pocahon-
7 tas #2 seam on the bottom, below the Tiller on the top,
8 and generally speaking within the confines depicted on
9 Exhibit B that it -- would be fair to regard the pool
10 and treat it as a pool within that unit that would be
11 drained by the proposed well?

12 A. Yes, it would be.

13 MR. SWARTZ: No further questions.

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

15 MR. MASON: If you look at this chart, just looking between
16 the Beckley War Creek on the left, if you add up those
17 numbers there seems to be approximately 630 feet of area
18 approximate distance between the seam?

19 MR. LOUELLEN: The interval between the --

20 MR. MASON: Uh-huh.

21 MR. LOUELLEN: -- between the Beckley and the Pokey 3 in that
22 area it's probably close to 550 feet or there about.

23 MR. MASON: This area would all be effected -- would probably
24 be effected by the gob fracturing?

25 MR. LOUELLEN: To some degree. The most intensely effected

1 areas would be down closer. But you would probably see
2 some fracturing and some effect on the others.

3 MR. MASON: Are any of these stratas between the coal capable
4 of producing gas on their own?

5 MR. LOUELLEN: Yes.

6 MR. MASON: Do you know whether there's any intent within this
7 job well to make any allocation of income to those?

8 MR. LOUELLEN: You're talking about strata adjacent to the
9 coal seams?

10 MR. MASON: Yes.

11 MR. LOUELLEN: I don't know.

12 MR. MASON: Anybody else? Glen?

13 MR. VANGOLEN: You may need to ask Marty that. But I think,
14 Mr. Mason, from the Tiller below they're all similar
15 mineral interests. So it's all one oil and gas owner
16 within a certain area or one mineral owner within a
17 certain area. There's not a division of interests within
18 the seam.

19 MR. MASON: Well I understand. I mean, I certainly think
20 within the scope of the pooling application you all have
21 the right to pool those associated strata. That's not
22 the point. The point is is there any intention to make
23 any allocation of income to anyone other than the coal --
24 to any strata other than the coal strata?

25 MR. VANGOLEN: We will allocate income to whoever the claim-

1 ants are -- whoever's perceived to be the owner or
2 whoever's deemed to be the owner.

3 MR. MASON: I understand that.

4 MR. VANGOLEN: Now, if those people have come to an arrange-
5 ment between themselves to allocate it in some manner we
6 will pay that.

7 MR. MASON: We're talking about if there's income generated
8 from the coalbed strata -- coalbed methane -- that there
9 are other people that have an interest in this well that
10 are oil and gas owners. What I'm trying to find out is
11 do you all anticipate -- and I think this is a question
12 that's important in all these gob wells. Is there any
13 intent to make any allocation of income from gas produced
14 other than the coal seam or any associated strata? I was
15 frankly surprised to hear your geologist testify that
16 there might income from the other strata because I had
17 been told at another hearing that there wasn't. I mean,
18 frankly you sort of curved me off in a different direc-
19 tion. What I would intend to establish was that there
20 wasn't any.

21 MR. SWARTZ: There is no commercial horizon anywhere between
22 that strata. It's all coalbed methane. I mean, anybody
23 who drills out there does not stop in any of those
24 strata. It's a very tightly noncommercial --

25 MR. MASON: Let me suggest to you all -- you all need to talk

1 about this a little bit. I would like to know whether or
2 not there is any gas to be produced from non-coal seams
3 associated with this well, because that raises some very
4 difficult questions.

5 MR. SWARTZ: You get answers to the questions you ask and what
6 you asked Mr. LouEllen very specifically and maybe you
7 need to ask him -- I think you think you got an answer
8 that's different than what you got. My recollection is
9 you asked him whether or not there would be methane
10 produced from strata other than coal seams in this
11 distressed zone. I believe that's what you asked him.

12 MR. MASON: Right.

13 MR. SWARTZ: And his answer was yes. But if you want to ask
14 him whether or not he has an opinion as to whether or not
15 that is coalbed methane that's being produced from those
16 other strata other the coal seam, you probably need to
17 ask him that because I think you'll get an answer that
18 perhaps will head you in a different direction. Or I'll
19 ask him if you don't --

20 MR. LOUELLEN: I think you're talking about the source and
21 where it's coming from out of a fractured rubblized area
22 and --

23 MR. MASON: Well, we all recognize the migratory nature of
24 gas.

25 Q. (Mr. Swartz continues.) Mr. LouEllen, you're familiar

1 with the fact that there is a Virginia Gas and Oil Act,
2 correct?

3 A. Right.

4 Q. And have you read before today and are you aware of the
5 fact that there is a definition in there of coalbed
6 methane gas?

7 A. Yes, sir.

8 Q. And how does it define coalbed methane gas?

9 A. It's defined as gas from the coal seams and associated
10 strata.

11 MR. MASON: I understand that.

12 Q. (Mr. Swartz continues.) And is there gas in strata
13 associated with coal seams?

14 A. Oh, yes.

15 Q. And with regard to this particular unit if we were to say
16 between the Pocahontas #3 and the Beckley War Creek,
17 would you agree that there is occluded methane in strata
18 other than coal seams in between that?

19 A. Yes.

20 Q. And what would your opinion be as to the source of that
21 gas?

22 A. From what we can see it's probably escaped from the coal
23 seams.

24 Q. And in terms of the statute, the Virginia Gas and Oil
25 Act, does it make any distinction between them?

1 A. No.

2 MR. SWARTZ: That's all I can offer.

3 MR. MASON: Any potential claimant to that gas being oil and
4 gas has been notified of this hearing?

5 MR. SWARTZ: We do a lot of leasing and noticing, yeah. If
6 you look at the list in the unit there are more oil and
7 gas owners listed as respondents than any other category.
8 That demonstrates the effort that was made to track those
9 people down. That's all I have of Mr. LouEllen.

10 MR. CHAIRMAN: Other questions?

11 MR. EVANS: I have one going back to another issue that was
12 beat to death. But again we'll go back to those bore
13 hole fees, that 712,500, that's for maximum of five.
14 Should you only do two and people elect to participate
15 how will -- and it becomes necessary to do three more,
16 where and how do you plan to handle that situation where
17 you have a variable number of wells that are possible in
18 a unit? Will you go back and offer them another bite at
19 the apple, so to speak, or once in always in at whatever
20 level and --

21 MR. SWARTZ: I'm going to almost answer your question with a
22 question and then I'll let Glen deal with it as well. We
23 have tried to get the Board to give us subsequent or
24 later operations language in the pooling orders so that
25 we can come in and ask for a minimum -- in other words,

1 we be here today asking for two wells and then have some
2 kind of ability to go to the people who participated for
3 the first two and say, All right. We need three or we
4 need four. Here's what it's going to cost and we want
5 you to kick in or tell us you want to be carried or tell
6 us you want out" without being forced to come back to the
7 Board. We have never been able to do that. And there
8 are very good reasons for the Board not to let us do that
9 and I understand. But when we're not allowed to go for
10 the minimum and every visit to the Board takes at least a
11 month and a lot of work on the filing fees and everybody
12 has to come down here, what we tend to do is think what
13 is the probably reasonable highest number of wells or
14 costs we're going to incur and let's get it on the first
15 trip because we can't -- so we made a decision to do
16 that and we really don't have a mechanism to do it
17 currently any other way. And it's not a very good
18 answer, but it's a practical problem that --

19 MR. EVANS: I guess you answered my question and the question
20 that I was going to ask is, this estimated allowable
21 costs are going to be maximums as opposed to anything
22 else?

23 MR. SWARTZ: It has to be under what I've just described.

24 MR. EVANS: That's fine.

25 MR. SWARTZ: And there are good reasons to do what the Board

1 has done because if you put it in the hands of the
2 operators their concern is that when you go back for the
3 second trip, although they have continuing jurisdiction,
4 they're not going to have that immediate control over it
5 and -- you know, a policy decision has been made by you
6 all which I can't argue with, but it leads to this kind
7 of result.

8 MR. EVANS: Oh, I understand why we -- I was just trying to
9 nail down to make sure that it got in the record that
10 these are probable maximums when we're talking about them
11 as opposed to -- it could be somewhat less, probably
12 won't be too much more.

13 MR. SWARTZ: It can't be more unless we come back is the way
14 things work. So it is our best judgement as to what will
15 probably do the job on the maximum end and you've heard
16 Glen testimony. He thinks two might do it and we're
17 going to try to and see what happens.

18 MR. EVANS: Sure.

19 MR. CHAIRMAN: If you would only use two of the bore holes
20 then it would be two-fifths of this cost?

21 MR. SWARTZ: Well, no. It would be two-fifths of 700 --
22 whatever that well cost number is. I mean, the title is
23 still there. A lot of the sealing costs are still there.
24 But the largest cost would go down dramatically.

25 MR. MCGLOTHLIN: If whoever owns the tract property of this

1 and he chooses to elect to participate, would his cost be
2 prorated on the entire allowable cost figure or per each
3 well?

4 MR. SWARTZ: Because of the way your orders provide that it's
5 payable -- I'm just telling you what kind of orders we've
6 got -- it would be on 100 percent because the money has
7 to be paid within a period of time. I mean, it would be
8 the big number.

9 MR. MCGLOTHLIN: It would be the big number, but what if --
10 are you going to give him back money if you don't use
11 all five?

12 MR. SWARTZ: You have to. He's your partner, right.

13 MR. MCGLOTHLIN: Can he elect to participate on one or does he
14 elect to participate on all of them?

15 MR. SWARTZ: As it's currently handled, you're either in or
16 out. You're in for the full ride -- you know, one of
17 the things that we have talked to you all about and we've
18 never gotten it and there are good reasons not to do it,
19 but if we went to some kind of layer or subsequent
20 operations procedure, if you came in on the first two, to
21 answer your question, and then they come to you for the
22 third one and you say, "Well, I don't want to spend that
23 money." We could provide under that kind of a way a
24 mechanism and say, "I want to be carried on the third
25 one." But as it stands right now we've got a pretty

1 straight forward way of dealing with that we deal with
2 the costs up front. They can't exceed a *maximum* and if
3 you wanted to participate under this proposal as it
4 stands you would have to pay X percent of the 1.3 million
5 -- whatever the total is.

6 MR. MCGLOTHLIN: Have you or OXY or Buchanan, whoever would
7 discuss the method, do they have a mechanism in place to
8 tell the potential participant how they can participate
9 and if you don't put in the five wells or you don't
10 change over to five wells they'll some money back if they
11 elect or --

12 MR. SWARTZ: Well, the communication with people who have an
13 opportunity to elect under statute is to send them a copy
14 of the order you enter. If they choose participate or be
15 carried, then there is periodic accounting information
16 that gets provided. But the up front notices -- the
17 order you all enter and that's what they get. Of course,
18 they've gotten notice of hearing and the application and
19 the information from the company that -- but in terms of
20 any information going to them that they haven't already
21 gotten will be your order because there's an obligation
22 to mail that to them.

23 MR. VANGOLEN: As a working interest owner they would receive
24 monthly statements on the account -- revenue statements.

25 MR. MCGLOTHLIN: Okay. Thank you.

1 MR. SWARTZ: That's all I have.

2 (Witness stands aside.)

3 MR. CHAIRMAN: Any other witnesses?

4 MR. SWARTZ: No.

5 MR. CHAIRMAN: Anyone else wishing to address the Board in
6 this matter? Let the record show that there are none.

7 Further questions, members of the Board?

8 MR. MASON: I just have a comment. I think that these well
9 bore costs or an operator cost shouldn't be allowed up
10 front. I think they should be recognized over the life
11 of the well and I think that the sealing cost is probably
12 based on the testimony of -- even though in the past the
13 Board has taken a different view, they've indicated here
14 that the sealing cost is something that would not happen
15 but from the well. I think can accept that. I think the
16 plugging costs of the wells is something that would
17 ultimately be done maybe at some long time in the future,
18 but ultimately the mining operation has the responsibil-
19 ity for those costs. And I think that some proration of
20 those costs should be made between the gas operation and
21 the mining operation. I think to put that entire burden
22 on this gob unit is not fair. Bear in mind that these
23 bore costs in the contract -- the amount to begin with
24 was entered into in a contract between brother and sister
25 corporations. So the cost is to some degree arbitrary

1 based on what they wish to allocate or determined to be a
2 fair price. And the fact that they chose to structure it
3 to where it's all paid up front is purely within their
4 own control and I don't think it reflects the real nature
5 of what's going on and that is that the bore is being
6 utilized over a period of time and should be charged to
7 the well over time. That's it.

8 MR. CHAIRMAN: Thank you, Mr. Mason.

9 MR. SWARTZ: If it's not too late, I would like to give Mr.
10 VanGolen an opportunity to make a comment with regard to
11 the tax affect of what Mr. Mason is proposing or at least
12 the possible tax affect with regard to tax credits which
13 I think is important. And if it's too late we'll make it
14 next time.

15 MR. CHAIRMAN: No, we'll hear it.

16 MR. VANGOLEN: One of the reasons it's structured this way, in
17 order to use Section 29 you have to have perceived
18 economic interest in the well bore.

19 MR. MASON: I agree with that.

20 MR. VANGOLEN: In a number of cases in the opinion of tax
21 counsel if production is taken through a rental basis or
22 payment is made for that well bore by a rental basis or
23 production basis then you are not deemed to have economic
24 interest or deemed to be at risk and most likely will be
25 disallowed to take any of the tax credit associated with

1 those well bores.

2 MR. MASON: All right. Let me ask you a question which is
3 what I was asking before. Do you intend to elect to
4 treat these costs as intentional drilling costs and
5 expenses? You indicated to me earlier that you were
6 going to book them as depreciated over a production
7 basis.

8 MR. VANGOLEN: Yeah, on book side -- on tax side it would be
9 normal depreciation.

10 MR. MASON: Okay. But you're not going to treat these bore
11 costs as intentional drilling costs. You're not going to
12 elect the expense as a potential drilling cost?

13 MR. VANGOLEN: I don't -- I can't answer that. I don't know
14 if our tax department will be allowed to take a portion
15 thereof as intangible. I don't know that.

16 MR. MASON: I understand the difference between rental and
17 ownership. In order to get Section 29 credit you have to
18 be an owner of the bore hole rights.

19 MR. SWARTZ: Correct.

20 MR. MASON: And the payments have to be a capitalized cost of
21 ownership. That still doesn't matter -- to me that does
22 not negate the probability of charging this cost over a
23 productive year even though you're an owner. There's a
24 difference in how it's spent and how it's paid for. Just
25 because you buy a piece of real estate and pay for it on

1 an installment basis, you can still elect to depreciate
2 it on a different basis. One does not dominate the
3 other.

4 MR. SWARTZ: I understand. You're asking the difference
5 between how this arrangement could have been structured,
6 whether it was scheduled as payments like a mortgage or
7 if it was paid up front, and either way as long as it's
8 understood it's an economic interest and a perceived
9 ownership and not a rental for the well bore.

10 MR. MASON: I understand all that. I'm certainly sympathetic
11 to it. I just think the affect of it in terms of what
12 affect it has on someone -- an unknown or a person who
13 wishes to elect to participate in there, it puts an
14 enormous economic burden on that person to be paid up
15 front and I find that unacceptable.

16 MR. SWARTZ: Every participant in the oil and gas industry,
17 every participant in the coal industry, is burdened by
18 that up front payment.

19 MR. MASON: I understand that.

20 MR. SWARTZ: Perceived risk.

21 MR. WIRTH: Maybe I can assist in the -- do I need to be sworn
22 in before I answer his question? Your concern is -- what
23 we have done, Mr. Mason, entered into a contract -- well,
24 first we've got waste, gas being vented into the atmos-
25 phere. We've arranged with Island Creek in some way of

1 using their technology and everything as to the sealing.
2 If you seal this away from the active we can capture this
3 lost revenue. Okay. That cost was incurred. The other
4 thing we had is we had existing VVHs for mine safety. We
5 did extensive testing. Everything we can. We could not
6 get pipeline quality. We found if we plugged some of
7 these wells we can get pipeline quality gas. We made the
8 decision, we'll reimburse you if you go out, plug these
9 wells, use your discretion for mine safety which ones,
10 and we've found -- we've plugged up what we can and maybe
11 possibly six more or three more, whatever we need, and
12 raised it up to pipeline quality. That arrangement and
13 that cost goes in there. We've also come into a con-
14 tractual obligation, either OXY's going to have to go in
15 there and permit through Division of Mines and drill a
16 \$250,000 well. In order to prevent economic waste, we've
17 said, "Can we enter into a contractual agreement to the
18 well bore?" We can either plug them and drill new ones
19 or since we have a well bore there, that's the reason we
20 tried to structure this also an economical waste and to
21 recoup waste that is now going into the atmosphere right
22 now. Therefore, as you saw in some other sealed units,
23 you had nine million dollars worth of costs. We feel
24 it's kind of fair and reasonable up front. Yes, there
25 will be recoup. We try to enter into joint operating

1 agreements. If they elect to participate we offer them a
2 joint operating agreement -- recoupment. This is an
3 estimate. If we do not use all these five well bores
4 they will get credit for what we did not use. So I hope
5 that feels a little bit more comfortable, but that's the
6 reason where we're coming from.

7 MR. MASON: Well, I think the fact that you're using the VVHs
8 and the fact that -- but there is a benefit that's been
9 derived from these VVHs to the mining company. I'm just
10 saying that some portion of the plugging cost should be
11 allocated to reflect that. And I'm saying with regard to
12 these bore hole costs -- I'm willing to accept the value
13 that's been placed on these bore hole costs between the
14 two companies and I'm willing to accept the fact that
15 they should be paid for it. My only concern is I think
16 that the method of payment should be ratably as used as
17 opposed to up front because I think that more accurately
18 reflects the reality of the transaction and I think it's
19 fair to the people that would participate in these
20 wells.

21 MR. VANGOLEN: And that's what Mark tried explain. We would
22 like to go in and say subsequent operations, if you do
23 this you will owe us within thirty days, but we don't
24 have that arrangement. So we give you a maximum estimat-
25 ed cost.

1 MR. MASON: I understand that.

2 MR. SWARTZ: One issue. I don't know if you're making an
3 assumption with regard to the five well bores that are
4 being used to produce out of this unit in terms of who's
5 going to plug that, but who's going to plug those five
6 well bores if we use all five at the end of the project?

7 MR. VANGOLEN: In the end it would be Island Creek. Those
8 are their well bores.

9 MR. SWARTZ: We're plugging the ones that produce the gas to
10 pipeline quality and ultimately we'll give these back to
11 them and they have the plugging obligation. It's not off
12 loaded on -- you got to make a deal some way and there's
13 a lot of ways you can structure it.

14 MR. CHAIRMAN: Okay. What's your pleasure? Do we have a
15 motion?

16 MR. EVANS: Mr. Chairman, I move we accept OXY's position
17 and their petition and grant the relief they request.

18 MR. CHAIRMAN: We have a motion to grant the relief requested.

19 MR. MCGLOTHLIN: Second.

20 MR. CHAIRMAN: A motion and a second. Any further discussion?
21 If not, all in favor signify by saying yes. (SOME
22 AFFIRM.) Opposed say no. (ONE DENIES.) The petition is
23 granted.

24 (AFTER A LUNCHEON RECESS, THE HEARING CONTINUED AS
25 FOLLOWS:)

ITEMS V, X, XI AND XII

1
2
3 MR. SWARTZ: Mr. Chairman, I'm not sure how many, but we have
4 a lot of pooling applications and I could consolidate
5 some of the generalized testimony and some units are
6 related. I think in fairness, however, to the people
7 that came here I might propose that maybe we could handle
8 the units that they are actually interested if it's a
9 finite number first and then with the Board's permission
10 maybe I could offer the basic testimony that's the same
11 on every unit for the balance of units and we could move
12 through them a little quicker and have some chance of
13 finishing by 5:00 or so.

14 MR. CHAIRMAN: That's fine with me if you know which ones
15 there interested in.

16 MR. SWARTZ: If they could just us what units they're inter-
17 ested in we'll try and get to those so they don't have to
18 sit here waiting.

19 (AFTER A BRIEF DISCUSSION OFF THE RECORD, THE HEARING
20 CONTINUED AS FOLLOWS:)

21 MR. SWARTZ: Mr. Chairman, we have spoken briefly off the
22 record and it's my understanding that the people who are
23 here now in the audience are interested in four units
24 which would be dockets ending in 0235 which is unit X-20,
25 0240 which is unit W-20, 0241 which is W-21, and 0242

1 which is X-21. And I've spoken to them briefly and
2 suggested that I would like to handle these four together
3 in the sense of handling the basic testimony that's
4 common to all of them and then go through to the extent
5 that there are some differences -- obviously there's
6 different people in the units and the numbers may be
7 different -- and go through that so that these four can
8 be heard together. It's my understanding that it's okay
9 with you all.

10 AUDIENCE MEMBERS: Fine.

11 MR. CHAIRMAN: That's fine with us. You are welcome to stay
12 for the entire agenda, of course, but we'll do this. So
13 if you want to start with -- we'll strike the one I just
14 called and go to docket number VGOB-92/07/21-0235. Now,
15 were you going to attempt to consolidate all four of
16 those?

17 MR. SWARTZ: Well, yes. I'd like to consolidate them because
18 I think I can offer the testimony with regard to Buchanan
19 Production and OXY as the operator and that sort of
20 basic stuff and I would like to offer that testimony
21 which usually come from Sam and then I'll move into the
22 distinctions and I'll tell you what it is so hopefully
23 you can follow that.

24 MR. CHAIRMAN: Okay. I'll go ahead and call the other three
25 docket numbers. 0240, 0241, 0242.

1 MR. SWARTZ: Thank you, Mr. Chairman.

2 MR. FULMER: Turning to the units docket number 0235 and 0240,
3 they basically all the same. Not same letter, but same
4 docket.

5 MR. CHAIRMAN: Does Mr. Swartz have a copy of those?

6 MR. SWARTZ: From Madeline Hunt?

7 MR. CHAIRMAN: Yes, from Madeline Hunt dated July 14, 1992.

8 (Pause.) Are any of you interested in addressing the
9 Board or do you just want to hear what they have to say
10 and then let us know after they finish?

11 MEMBER OF AUDIENCE: That's fine.

12 MR. CHAIRMAN: Okay.

13 MR. SWARTZ: I'd like to call Mr. Gordon as my first witness.

14

15

16 SAMUEL EDWARD GORDON, II

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

19

20 DIRECT EXAMINATION

21

22 BY MR. SWARTZ:

23 Q. I'll remind you you're still under oath. Would you state
24 your name, please?

25 A. Samuel Edward Gordon, II.

1 Q. And you work for OXY, USA?

2 A. Yes, I do.

3 Q. Do you also have a position with Buchanan Production?

4 A. Yes, I do.

5 Q. And what is that?

6 A. Regulatory manager.

7 Q. As regulatory manager for Buchanan Production Company did
8 you prepare and sign the notices of hearing and the
9 applications with regard to the four units that we've
10 consolidated for hearing which would be X-20, W-20, W-21
11 and X-21?

12 A. Yes, I did.

13 Q. Did you cause notices of publication to be issued with
14 regard to each of those applications and notices?

15 A. Yes, we did in the Virginia Mountaineer.

16 Q. And all of them would have been published in the Virginia
17 Mountaineer?

18 A. That's correct.

19 Q. And all of them were actually published the same day,
20 weren't they?

21 A. Yes. That's correct.

22 Q. And that was what, July 2nd?

23 A. July 2nd, yes.

24 Q. 1992?

25 A. 1992, right.

1 Q. And did you cause proofs of publications from the
2 newspaper to be filed with Mr. Fulmer's office?

3 A. Yes, we did.

4 Q. And that would be Exhibit D, I believe or F?

5 A. Yes.

6 Q. It would be Exhibit E?

7 A. Correct.

8 Q. And we'll get to this later in terms of the individual
9 respondents, but with regard to each of these four units
10 can you tell me what OXY, USA does on behalf of Buchanan
11 Production to identify people that are entitled to notice
12 who may have a record interest, who may have a possible
13 claim, to identify the list of respondents and the people
14 who need to be notified?

15 A. We do extensive title work primarily out of the court-
16 house. We have title opinions prepared. We identify the
17 estates and who owns each estate. And then we attempt to
18 contact them. We try to find people's locations both on
19 the ground and from phone books, different sources.

20 Q. And in some instances you are able to identify a person
21 or a name of a person who may have an interest but are
22 unable to identify their address or locate them?

23 A. That's correct.

24 Q. And with regard to each of these four applications would
25 it be fair to say that there is an Exhibit B which in

- 1 some instances has been amended and we'll get to that,
2 but there is an Exhibit B which lists all people you've
3 identified that you have not reached a lease agreement
4 with or some other agreement and would require a pooling?
- 5 A. That's correct.
- 6 Q. And on that Exhibit B does it state whether or not you
7 have an address or whether you do not have one and cannot
8 have one?
- 9 A. That is correct.
- 10 Q. And that would be true of all four of these applications?
- 11 A. That's right.
- 12 Q. Buchanan Production Company is a Virginia general
13 partnership?
- 14 A. That's correct.
- 15 Q. And is Buchanan Production Company authorized to do
16 business in the Commonwealth?
- 17 A. Yes, it is.
- 18 Q. Is Buchanan Production requesting that the Board appoint
19 OXY, USA as its designated operator in the event that
20 these four units or the pooling application with regard
21 to these four units would be approved?
- 22 A. That's correct.
- 23 Q. Is OXY a Delaware corporation?
- 24 A. Yes.
- 25 Q. Is OXY licensed and registered to do business in the

- 1 Commonwealth?
- 2 A. Yes, it is.
- 3 Q. Is it registered with the Department of Mines, Minerals
4 and Energy?
- 5 A. It is.
- 6 Q. And does it have a blanket bond on file as an oil and gas
7 operator with regard to its operations in the Common-
8 wealth?
- 9 A. Yes, it does.
- 10 Q. Has the management committee of Buchanan Production
11 Company delegated to OXY, USA the authority to explore,
12 develop and maintain the properties of Buchanan Produc-
13 tion Company?
- 14 A. Yes, it has.
- 15 Q. Have you filed anything with the Board with regard to
16 each of these four applications which demonstrates in
17 writing that appointment and who the people are at OXY,
18 USA that have been delegated certain responsibilities?
- 19 A. Yes, we have. Exhibit J.
- 20 Q. Page 1 and 2, right?
- 21 A. Page 1 and 2, that's correct.
- 22 Q. And is page 2 of Exhibit J a consent by OXY to act as
23 designated operator if the Board should appoint OXY?
- 24 A. That is correct. Yes.
- 25 Q. And who are the specific people at OXY, USA that have

- 1 been delegated certain duties with regard to the affairs
2 of Buchanan Production Company?
- 3 A. Glen VanGolen as general manager, Martin E. Wirth as
4 land manager, and myself as regulatory manager.
- 5 Q. Now, each of these four units that we're talking about,
6 are the pooling applications filed under the Oakwood
7 Field Rules II?
- 8 A. Yes, they are.
- 9 Q. And are we talking about active gob and/or short hole
10 gas?
- 11 A. We're talking about short hole gas and active gob, yes.
- 12 Q. And when we use the term short hole gas what are we
13 talking about with regard to these four units? How is it
14 produced in the mine? How does it get to the surface?
- 15 A. Island Creek in their mining operations drill holes into
16 the face coal seam and they make physical connections
17 down in the hole, pipe it to a central location, and that
18 in turn is piped to the surface.
- 19 Q. Now, these holes that are drilled into the coal face,
20 those are holes drilled by people working in the mine.
21 They're not drilled from the surface?
- 22 A. That is correct. They're horizontal.
- 23 Q. And then there's a PVC piping connection to connect those
24 short holes into the coal to a collection system and
25 eventually get to a well bore or VVR bore?

- 1 A. It is a well bore -- it's separately permitted as a well.
- 2 Q. And in each of these units we're talking about short
- 3 hole gas being brought to the surface through a well
- 4 bore, a VVH that's been converted and either is or will
- 5 be permitted as a CBM well?
- 6 A. That's correct.
- 7 Q. Is the short hole gas with regard to each of these four
- 8 units gas produced from the Pocahontas #3 seam or from
- 9 short holes drilled into the Pocahontas #3 seam?
- 10 A. It is produced from bores drilled into the Pocahontas #3
- 11 coal seam.
- 12 Q. In what mine?
- 13 A. In the VP-6 mine.
- 14 Q. Which is an Island Creek mine?
- 15 A. Which is Island Creek's mine, yes.
- 16 Q. In all instances in these four units is the gas being
- 17 brought to the surface through a bore hole that use to be
- 18 an Island Creek VVH?
- 19 A. Yes.
- 20 Q. There haven't been any new wells drilled to accomplish
- 21 bringing this short hole gas to the surface?
- 22 A. No.
- 23 Q. Earlier today we introduced Exhibit K and referenced this
- 24 docket numbers among others, the contract approval
- 25 abstract, the agreement between Buchanan Production

1 Company, Island Creek Corporation, and OXY. Is this bore
2 hole agreement pertinent to all four of these units in
3 terms of the bore holes that are being used or will be
4 used?
5 A. That is correct. Yes.
6 Q. And the \$142,500 usage charge is present in these four
7 applications in the various analysis of the costs and
8 allocable costs?
9 A. Yes.
10 Q. Let's look now specifically at unit X-20 which is
11 92/07/21-0235.
12 A. All right.
13 Q. Do you wish to dismiss any respondents?
14 A. Yes, we do.
15 Q. And who would that be?
16 A. In Tract 3, the only party listed there is Carlee
17 McCathy and we wish to dismiss him.
18 Q. And why is that?
19 A. He leased to us.
20 Q. Do you wish to add any respondents to unit X-20?
21 A. No, we do not.
22 Q. Now, we talked earlier about mailing notices by certified
23 mail. Did you mail with regard to unit X-20 by certified
24 mail a copy of the application and the notice of hearing
25 to the people listed on Exhibit B?

- 1 A. Yes, we did.
- 2 Q. I think you've indicated you subsequently filed proof of
3 mailing with Mr. Fulmer's office?
- 4 A. Yes, we did.
- 5 Q. Were all the cards returned?
- 6 A. Yes, they were.
- 7 Q. And are there any people with regard to unit X-20 whose
8 addresses are unknown?
- 9 A. I believe we have several in there that we didn't know
10 about.
- 11 Q. Go to tract 5. We've got a Mr. Cook at Item 5?
- 12 A. That's correct.
- 13 Q. And obviously if you don't know the address you don't
14 mail?
- 15 A. Right.
- 16 Q. And continuing in tract 5, Diane C. Webb, is she still
17 unknown in terms of her whereabouts?
- 18 A. That's correct.
- 19 Q. Have you found Nancy C. Duty?
- 20 A. Yes. She obviously saw a publication or got word somehow
21 and came forward and we have contacted her.
- 22 Q. Have you delivered a copy of the notice and the applica-
23 tion to her?
- 24 A. Yes, we have.
- 25 Q. So she is now gone from address unknown to known?

1 A. Yes.

2 Q. And the Hazel Cook heirs, is that still an unknown that
3 you were unable to mail to?

4 A. It's still an unknown, yes.

5 Q. Did you have some leads and try and mail but they came
6 back with regards to Hazel Cook?

7 A. Yes, we did.

8 Q. But thus far those addresses are still unknown?

9 A. That's correct.

10 Q. Continuing with unit X-20, I'd like you to turn to --
11 let's start with Exhibit G, page 1, first.

12 A. Okay.

13 Q. There appears to be a portion of a mine map on Exhibit G,
14 page 1, do you see that?

15 A. Yes.

16 Q. Is that mining actually in existence right now that's
17 depicted on this map?

18 A. Yes, it is.

19 Q. And then the grid that's overlaid is the Oakwood Field
20 Rules II grid?

21 A. That is correct.

22 Q. And the square that is outlined darker than the rest of
23 the squares in the grid, that's actually unit X-20,
24 correct?

25 A. That is correct.

- 1 Q. And how many longwall panels intersect unit X-20?
- 2 A. Three panels.
- 3 Q. And if we go back now to Exhibit C which is the prior
- 4 page to the one we've just been looking at, who prepared
- 5 this?
- 6 A. I prepared this.
- 7 Q. Did you prepare it within the last sixty days?
- 8 A. Yes, I did.
- 9 Q. And what does this represent with regard to this unit?
- 10 A. This represents that -- these are the estimated costs
- 11 attributable to this 80 acres in relationship to the
- 12 whole panel.
- 13 Q. And how many bore holes are called for by Exhibit C?
- 14 A. We have two bore holes.
- 15 Q. One in each of the panels 4 and 5?
- 16 A. That is correct?
- 17 Q. And no bore hole in what's shown as DEV-3 on the map?
- 18 A. That is correct.
- 19 Q. And then the rest of it is titled curative and permanent,
- 20 correct?
- 21 A. That is correct.
- 22 Q. If we go to Exhibit G, page 2, with regard to X-20, does
- 23 this attempt to capture the total costs with regard to
- 24 panels 5 and 4 as shown on the map?
- 25 A. That is correct.

- 1 Q. And for panel 5 it's \$176,000, correct, with regard to X-
2 20?
- 3 A. Yes.
- 4 Q. And the \$142,750 is a bore hole charge in 4, correct?
- 5 A. That is correct.
- 6 Q. Have you put all the title curative and other miscellane-
7 ous charges into panel 5? Is that why the number's
8 different?
- 9 A. That is correct. Yes.
- 10 Q. And then there is an allocation with regard to the two
11 panels to get back to the participation number that we
12 need to look at toward the bottom of Exhibit G, page 2,
13 correct?
- 14 A. That is correct.
- 15 Q. And to assess participation cost in unit X-20 what would
16 a person look to?
- 17 A. You would look to the -- in X-20 in development 5, that
18 panel is \$225,545. And in development 4 X-20 is \$166,-
19 551.
- 20 Q. So if you wanted to calculate your participation cost or
21 the carry charges and the multiple carried charges this
22 would be one of the numbers you would use?
- 23 A. That is correct.
- 24 Q. And then the other number you would use is on the next
25 page which is Exhibit G, page 3, correct?

- 1 A. Yes.
- 2 Q. Does Exhibit G, page 3, attempt to set forth the inter-
3 ests of the various respondents their net interest in the
4 unit, their net interest in the panel, and then a panel
5 interest expressed in percentage?
- 6 A. It expresses their individual interest in the unit and
7 then the next column expresses the percentage of the
8 panel lying under that unit and then their individual
9 interest.
- 10 Q. And you've done this for panel development 5. You've
11 done a different calculation for panel development 4.
- 12 A. That's correct.
- 13 Q. And you've done it again for panel development 3?
- 14 A. That's correct.
- 15 Q. Would these percentages be used for purposes of allocat-
16 ing royalty as well?
- 17 A. Yes, it would.
- 18 Q. Or calculating participation or carried interest?
- 19 A. Correct. Right.
- 20 Q. With regard to this unit, staying with X-20, I'd like you
21 to go back to Exhibit A, page 2.
- 22 A. All right.
- 23 Q. How much of the coalbed methane rights from coal owners
24 and from oil and gas owners has Buchanan Production
25 acquired or does Buchanan Production control in this unit

1 X-207

2 A. Buchanan has on the coal side a net of 78.0348 percent in
3 it and we have to add in Mr. McCathy's interest there
4 also. On the oil and gas side we have 53.3984, and
5 again, Mr. McCathy's interest would have to added to
6 that for the total.

7 Q. And then down at Item 4 have you expressed the outstand-
8 ing coal interest and outstanding gas interest that this
9 pooling application seek to deal with?

10 A. That is correct.

11 Q. And what are those percentages?

12 A. It's 21.9654 on the coal and the oil and gas would be
13 46.6016 percent.

14 Q. Now, what are the coal seams that are involved in this
15 field and in this unit?

16 A. The coal seam which the gas is coming from is the
17 Pocahontas #3 coal seam.

18 Q. And in term of eventual development would you contemplate
19 that longwall mining would eventually occur?

20 A. Yes.

21 Q. And in terms of longwall mining and seam involved, the
22 leases that Buchanan Production has deal with what seams?

23 A. It deals with all seams from the Tiller down to the Pokey
24 2.

25 Q. And with regard to the Oakwood Field Rules II, what seams

1 do those field rules encompass?

2 A. They encompass all seams below the Tiller -- uh --

3 Q. On down to the Pokey 2?

4 A. On down to the Pokey 2 and all adjacent seams.

5 Q. The dollars and cents reflected on Exhibit C and then

6 reflected also in Exhibit G, do those represent reason-

7 able estimates with regard to the cost of developing the

8 unit in question and the panels that affect these units?

9 A. Yes, they are.

10 Q. Is it your opinion that the plan of development for these

11 panels in this unit is a reasonable plan to develop the

12 coalbed methane within and under this unit for the

13 benefit of the owners of the resources?

14 A. Yes, it is.

15 Q. Is it your opinion that this proposed development will

16 contribute to and protect correlative rights of owners of

17 the methane within and under the unit?

18 A. Yes, it is.

19 Q. And is it also your opinion that it makes sense from an

20 economic standpoint and would, in fact, if this develop-

21 ment were followed lessen the likelihood of physical

22 waste and economic waste?

23 A. Yes, it would.

24 MR. SWARTZ: That's all I have on X-20. I can stop now and

25 move on to the specifics on the next unit or I can keep

1 going, whatever you pleasure.

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

3 MS. RIGGS: How many wells are we talking about?

4 MR. SWARTZ: Two.

5 MR. CHAIRMAN: Two wells.

6 MR. EVANS: The application just says one or more.

7 MR. SWARTZ: Well, except C set is basically two.

8 MR. EVANS: I've got a question. There are three shown in the
9 unit.

10 MR. SWARTZ: We're not using the other one or if we do, we're
11 not charging for it.

12 MR. EVANS: Okay. Which -- well, I guess it really doesn't
13 matter.

14 MR. SWARTZ: If you know --

15 MR. GORDON: To be determined.

16 MR. EVANS: But two of out of the three will be used?

17 MR. GORDON: Yeah. Under the field rules we're allowed one
18 well per panel per unit. So there will be two of them
19 used and which two we don't know until mine through.

20 MR. SWARTZ: Is there anything else on this one?

21 MR. CHAIRMAN: No. Continue.

22 MR. SWARTZ: The next one is W-20. Sam, if you could turn to
23 that. This is 0240, the one that we're starting on now.

24 Q. (Mr. Swartz continues.) You've indicated in general
25 testimony that you have mailed to all respondents on

1 Exhibit B for whom you have addresses and that you filed
2 your proofs of mailing with regard to this unit with Mr.
3 Fulmer, correct?

4 A. That is correct. Yes.

5 Q. Now, turning specifically to this unit in Exhibit B and
6 if you look at tract 1 and also tract 5, would you tell
7 the Board which folks you have been unable to get an
8 address for as disclosed by Exhibit B?

9 A. We've been unable to locate Diane C. Webb who is listed
10 at Item 9. Item 10 lists Nancy Duty as an addressee
11 unknown. She, again, came forward. Item 11, the Hazel
12 Cook heirs.

13 Q. Do they remain unknown?

14 A. Yes.

15 Q. Unlocatable, I should say.

16 MR. COOK: They would be items 2, 3, 4, 5, 6, 7, 8, 9 and 10.

17 MR. CHAIRMAN: The Hazel Cook heirs?

18 MR. SWARTZ: Tell me who they are again.

19 MR. COOK: 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10.

20 MR. CHAIRMAN: Could I get you to state your name for the
21 record?

22 MR. COOK: Harold Cook. Thank you.

23 Q. (Mr. Swartz continues.) Sam, have you been unable to get
24 an address for Mary C. Ellis?

25 A. That is correct?

1 MR. SWARTZ: Can you all give us any help? If you all know,
2 perhaps you'll be able to help us after the hearing in
3 terms of maybe tracking --

4 MR. DUTY: Probably later during the week we could. I could
5 get some addresses of her heirs.

6 MR. SWARTZ: That would be great. We'll make sure we give you
7 some cards. And if you could do that to help us find
8 them. We know the interest is there. We just don't know
9 who to get a hold of. Great. What's your name?

10 MS. DUTY: Nancy Duty.

11 MR. SWARTZ: I've seen your signature, but I've never seen
12 you.

13 Q. (Mr. Swartz continues.) Other than the people we have
14 listed now whose addresses -- the three whose addresses
15 were unknown, does that cover it in terms of the people
16 that you were unable to locate in advance of the hearing?

17 A. Yes. That is correct.

18 Q. With regard to the cards, is it true with regard to this
19 unit, W-20, that everyone for whom you had an address
20 signed for the mail and you got the receipt back?

21 A. That's correct.

22 Q. With regard to Exhibit A, page 2, on this unit, what is
23 the amount of outstanding acreage that needs to be
24 addressed by this pooling application that Buchanan
25 Production either hasn't leased or hasn't somehow

1 otherwise contracted for control?

2 A. As to the coal interest we still have 14.4888 percent
3 outstanding and on the oil and gas interest we have
4 16.2033 percent.

5 Q. Turning to Exhibit G, page 1, we are basically in the
6 same development that we just looked at with regard to
7 unit X-20, correct?

8 A. Correct.

9 Q. We've just moved up a unit?

10 A. That's right.

11 Q. And we have three longwall panels?

12 A. Yes.

13 Q. With regard to development 4 and development 5, there's a
14 VVH shown in each of those?

15 A. That's correct.

16 Q. Within in the unit and, of course, there isn't one with
17 regard to development 3?

18 A. Right.

19 Q. Turning back a page, you've done Exhibit C, an estimate
20 of allowable costs for this unit, correct?

21 A. Correct.

22 Q. And does the amount \$314,750 represent in your judgement
23 a reasonable estimate as to the total cost that will be
24 necessary to produce from these two panels out of this
25 units?

- 1 A. Correct.
- 2 Q. How many well bores are contemplated by Exhibit C?
- 3 A. Two.
- 4 Q. One in each panel?
- 5 A. One in each panel.
- 6 Q. Then turning to Exhibit G, page 2, is this the same
7 estimate of cost by panel with regard to development
8 panel 5 and 4 that we just went through with regard to
9 unit X-20?
- 10 A. That is correct.
- 11 Q. And you would follow the same kind of calculations with
12 regard to this unit, W-20 -- in other words, you would
13 you pick the percentages and the resulting amount which
14 in development 5 is \$225,545, right?
- 15 A. Correct.
- 16 Q. And in development 4 is \$166,551?
- 17 A. Correct.
- 18 Q. And then you would apply the percentages at page 3 of
19 Exhibit G, correct?
- 20 A. Correct.
- 21 Q. Well, actually -- yes, at page 3. And on page 3 and 4 of
22 Exhibit G have you set forth the percentage in the unit
23 with regard to each panel per each person who is a
24 respondent?
- 25 A. That is correct.

- 1 Q. And those are the percentages they could use with regard
2 to what their royalty interest might be. They multiply
3 times one-eighth?
- 4 A. Correct.
- 5 Q. Or in terms of participating or being carried they would
6 multiply that times the numbers that we just spoke about?
- 7 A. Correct.
- 8 Q. On page 2 of Exhibit G?
- 9 A. That is correct.
- 10 Q. Now, in addition to doing the cost side of this for
11 development 5 and development 4, you've also got a break
12 out on page 4 for royalty interest or revenue for panel 3
13 which just has that little strip in there?
- 14 A. Correct.
- 15 Q. Now, again, this unit is in Oakwood II, correct?
- 16 A. It's under the Oakwood II field rules, yes.
- 17 Q. And the leases that Buchanan Production has acquired or
18 has obtained control by other contractual means are
19 leases of coal below the Tiller?
- 20 A. Correct.
- 21 Q. Is it your opinion that the plan of development with
22 regard to this unit and the three projected panels is a
23 reasonable plan to develop the coalbed methane resource
24 within and under this unit for the benefit of the mineral
25 owners in the unit?

1 A. Yes, it is.

2 Q. And will this proposed plan contribute to the production
3 of correlative rights, lessen the likelihood of physical
4 waste and economic waste?

5 A. Yes, it will.

6 Q. Now, again, with regard to all this units, we're initial-
7 ly talking about short hole gas as we previously describ-
8 ed?

9 A. Correct.

10 Q. And ultimately if the mining proceeds we'll be looking at
11 gob gas?

12 A. Right.

13 MR. SWARTZ: Are there any questions on W-20?

14 MR. MASON: Back to my thing we were discussing earlier. The
15 fees in here for bores, are they arrived at under the
16 same agreement as we discussed earlier?

17 MR. GORDON: That is correct.

18 MR. SWARTZ: I probably should have said that, but Exhibit K
19 that we've offered today we have captioned all of the
20 docket numbers because it is pertinent. Exhibit K that
21 we offered earlier today, Mr. Mason, we put a caption and
22 we've got all the -- I should have said that, but it is
23 the same agreement -- would be applicable to all these
24 units. Okay. The next one is W-21 which is 0241.

25 Q. (Mr. Swartz continues.) With regard to this one do you

1 want to amend to add or amend to dismiss anybody?

2 A. No, we do not.

3 Q. We've talked about the fact that the notices were sent
4 via certified mail. And if you would turn to Exhibit B
5 regarding unit W-21, it looks like we have the same
6 situation?

7 A. Right.

8 Q. Diane Webb, as of up until now you do not have an address
9 for, correct?

10 A. No, we do not.

11 Q. So you were unable to mail to her?

12 A. Correct.

13 Q. You have found Nancy C. Duty and she is here today?

14 A. Correct.

15 Q. And we did not have an address for Hazel Cook or at least
16 had some uncertainty as to where she might be and it
17 looks like we're on the way to learning that today.

18 A. Correct.

19 Q. But nevertheless, Hazel Cook did not receive a mailing
20 for that reason?

21 A. Correct.

22 Q. Also because she's deceased. Now, you showed Robert B.
23 Cook as address unknown, but I believe you --

24 MR. COOK: I'm present.

25 MR. SWARTZ: I think we got an address for you. Okay.

1 Q. (Mr. Swartz continues.) So he received a mailing as
2 well?

3 A. Yes.

4 Q. Now, in terms of the people that you listed with address-
5 es in Exhibit B, did you mail to all of them and did all
6 of them sign for the main?

7 A. Yes, they did.

8 Q. Now, with regard to this unit, if you turn back to
9 Exhibit A, page 2, which is a summary of Buchanan
10 Production's interest and the outstanding interest and
11 go to item 4, how much of the coal interest is out-
12 standing and would be subject to this pooling applica-
13 tion?

14 A. We still have 5.68 percent outstanding as to the coal.
15 In oil and gas we have 63.6244 percent outstanding.

16 Q. And those are the interests addressed by this applica-
17 tion?

18 A. That is correct.

19 Q. Again, this is a short hole situation in the Pocahontas
20 #3 seam. Ultimately if mining progresses it would
21 involve active gob?

22 A. That is correct.

23 Q. This is an 80 acre unit in the Oakwood coalbed gas field
24 Rule II?

25 A. Correct.

1 Q. Which deals with coal seams below Tiller essentially down
2 to the Pokey 2?
3 A. That is correct.
4 Q. Who did Exhibit C, the estimated allowable costs on this
5 unit?
6 A. I did it.
7 Q. Did you also do the notice of hearing and the application
8 for unit?
9 A. Yes, I did.
10 Q. The costs are considerably less here than we've seen thus
11 far, correct?
12 A. That is correct.
13 Q. Why is that?
14 A. There's no bore hole in W-21. We have development 5
15 panel overlapping just a little bit into unit W-21.
16 Q. Ultimately if there is another development panel proposed
17 and additional costs would be under consideration I
18 gather you're telling the Board you're going to have to
19 come back at some future date?
20 A. Under a normal situation that's true, but since Consol
21 owns that I doubt it.
22 Q. Okay. So that's the trade line between you and Consol?
23 A. That is right.
24 Q. And basically what we're talking about here is allocating
25 cost and revenue just for the little bit of development

1 panel 5 that is into W-21?

2 A. That is correct.

3 Q. And since there is no well bore in W-21, in development
4 5 the costs would be less?

5 A. That is correct?

6 Q. Is the \$330,250 cost in your opinion a reasonable
7 estimate of the title and other costs which will be
8 incurred on this unit?

9 A. Yes, it is.

10 Q. Now, you're also got an Exhibit G, page 2. Is this the
11 same Exhibit G, page 2, that we've looked at twice
12 before?

13 A. That is correct.

14 Q. And the same calculations would apply to figure out what
15 amount of money to start with in terms of calculating the
16 participation interests?

17 A. That is correct.

18 Q. And if we turn to Exhibit G, page 3, the only panel we
19 need to deal with here is panel 5?

20 A. That's correct.

21 Q. Does Exhibit G, page 3, set forth the percentage inter-
22 ests of the individuals who are respondents which would
23 represent the percentage that they ought to multiply
24 times a one-eighth royalty to determine their royalty
25 interest or the percentage that they could use for

1 participation purposes or in terms of being carried?

2 A. That is correct.

3 Q. Is it your opinion that this plan of development is a
4 reasonable plan to develop this unit and the coalbed
5 methane resource within and under the unit for the
6 benefit of the owners of that resource?

7 A. Yes, it is.

8 Q. And will it contribute to the protection of correlative
9 rights, lessen the likelihood of both physical and
10 economic waste?

11 A. It will.

12 MR. SWARTZ: Any other questions?

13 MR. EVANS: I've got one question. This is just point of
14 interest. Back on W-20, Exhibit A, page 2, do you have a
15 typo in that between 3 and 4 net percentage? Oil and
16 gas owners 76.2033 and then in total interest to be
17 pooled 16.200.033 percent, is there a typo there?
18 Should not those two numbers be the same?

19 MR. SWARTZ: One would hope.

20 MR. GORDON: Yes.

21 MR. EVANS: You're saying the percentage of coalbed methane
22 rights not leased to applicant -- you've got a total
23 percent and that percentage under oil and gas owners is
24 76.2033?

25 MR. GORDON: Oh, yeah.

1 MR. EVANS: And in item 4, B -- sub B, oil and gas interests
2 you've got 16.2033?

3 MR. SWARTZ: I'd like to request that we can amend this by
4 just stating on the record -- although if you want to
5 follow-up with an amendment we will. Clearly Mr. Evans
6 is right. The oil and gas outstanding should be 76.2033
7 percent at Item 4-B in unit W-20, Exhibit A, page 2.
8 Thank you.

9 MR. CHAIRMAN: While we're going back and touching on that, I
10 was looking. Do you have the necessary percentage to be
11 designated as operator in that unit?

12 MR. SWARTZ: We don't need any percentage.

13 MR. CHAIRMAN: For the pooling?

14 MR. SWARTZ: Under conventional you need a certain percentage.
15 Under coalbed you do not. That's the way the statute is
16 set forth. You need to look at the gross percentages,
17 though, if you want to raise that issue and you'll
18 notice we have a piece of every tract.

19 MR. CHAIRMAN: All right.

20 MR. SWARTZ: So in terms of a gross percentage undivided
21 interest we've got something leased in every tract,
22 looking at unit W-20, for example, and obviously most of
23 the coal and about a fourth of the oil and gas. But my
24 understanding is that the only percentage requirement or
25 position requirement is on conventional gas and oil.

1 MR. CHAIRMAN: You may be right. I was trying to look and I
2 couldn't find it.

3 MR. GORDON: It is. Under Section 20 is different than
4 Section 22. But we do have 85 percent of the coal
5 leased in that.

6 MR. CHAIRMAN: Yeah. I knew that.

7 MR. SWARTZ: What you're referring to, Mr. Wampler. I think is
8 in --

9 MR. CHAIRMAN: Well, I was trying to refresh my memory and
10 decided just to ask it openly.

11 MR. SWARTZ: It's in Section 20 which is field rules and
12 drilling units generally. (Pause.) Here it is. It's in
13 21 C3, 25 percent per conventional.

14 MR. CHAIRMAN: Yeah.

15 MR. SWARTZ: In the legislation it's wisdom to not apply rule
16 to all the --

17 MR. CHAIRMAN: Thank you. I couldn't find it. I just asked
18 for your indulgence.

19 MR. SWARTZ: Anything else on W-21 from anybody? Okay. X-21
20 which is 0242.

21 Q. (Mr. Swartz continues.) Do you want to dismiss anybody?
22 Do you want to add anybody as of right now?

23 A. No, we do not.

24 Q. With regard to Exhibit B, again did you mail a card to
25 everyone you had an address for?

1 A. We mailed a notice and the application to everyone, yes.
2 And we got the cards back.

3 Q. My review of the record you filed with Mr. Fulmer
4 indicates that one of the cards came back unsigned, I
5 believe. Did you check with regard to --

6 A. Carrie B. Cook.

7 Q. Okay. So Carrie, although we had an address for her, she
8 has turned out to be unlocatable?

9 MR. COOK: She is deceased.

10 Q. (Mr. Swartz continues.) She's deceased?

11 A. She is deceased.

12 Q. Who did you send it to?

13 MS. DUTY: Sue Elkins is --

14 A. (The witness continues.) Sue Elkins.

15 Q. And that came back?

16 A. It came back.

17 MS. DUTY: She has a Raven address. I can supply you with
18 that address also.

19 MR. SWARTZ: Great. We need it.

20 Q. (Mr. Swartz continues.) So in terms of unlocatables as
21 of the time this was filed you had the heirs of Carrie
22 Cook, Hazel Cook's heirs. We have found Nancy Duty or
23 she has found us.

24 A. Correct.

25 Q. And Diane C. Webb is still address --

1 MS. WEBB: I'm present.

2 MR. SWARTZ: Okay. Great.

3 Q. (Mr. Swartz continues.) Now, with regard to this unit
4 which is X-21, going to Exhibit A, page 2, what are the
5 interests that need to be pooled or are addressed by this
6 pooling application that are still outstanding?

7 A. As to the coal 2.11 percent. In oil and gas 25.3848
8 percent.

9 Q. Now, if you turn to Exhibit C, this is another unit that
10 does not have a well bore located on it, correct?

11 A. Correct.

12 Q. And this is very similar to one we've just looked at. It
13 just catches a piece of development 5?

14 A. That is correct.

15 Q. Well, actually there is a well bore here but you're not
16 using it?

17 A. That's correct.

18 Q. So although there is a well bore located within X-21 it
19 is not anticipated to be used in development of this
20 un't or that panel?

21 A. That is correct.

22 Q. Why are the costs more on X-21 than on the unit we just
23 looked at? We've got \$33,000. Is it the title?

24 A. Yes. We have quite a few more tracts involved in this
25 unit than we did in the previous one.

- 1 Q. With regard to Exhibit C on X-21, is it your opinion that
2 the \$49,250 represents a reasonable estimate with regard
3 to the title curative and other items set forth in that
4 Exhibit C?
- 5 A. Yes, it is.
- 6 Q. The VP-6 mine map we've looked at before with X-21 now
7 highlighted. Exhibit G, page 2, is that the same exhibit
8 we've seen on the prior units?
- 9 A. Yes, it is.
- 10 Q. And then we have a different, I would hope, division of
11 interest that pertains specifically to X-21 and panel
12 development 5?
- 13 A. That is correct.
- 14 Q. And again this percentage that's assigned to each of the
15 respondents could be used in assessing royalty if you
16 multiplied times 1A or participation costs or carried
17 interest exposure?
- 18 A. Correct.
- 19 Q. Is it your opinion that the plan of development with
20 regard to this longwall panel that intersects unit X-21
21 is a reasonable plan to develop the coalbed methane
22 resource within this unit?
- 23 A. Yes, it is.
- 24 Q. And would this plan, if implemented, contribute to
25 protect correlative rights of owners and lessen the

1 likelihood of both physical waste and economic waste?
2 A. Yes, it would.
3 MR. SWARTZ: That's all I have.
4 MR. CHAIRMAN: Any questions? Do you have any other witness-
5 es?
6 MR. SWARTZ: No.
7 MR. CHAIRMAN: Do any of the folks that are here present have
8 any questions? Would you come forward and state your
9 name, please?
10 MS. GIBSON: My name is Betty Gibson. How did they derive the
11 interest? How did they set the interest to the oil and
12 gas? For each individual how is it derived -- the
13 percentage?
14 MR. SWARTZ: I'd like to have Mr. Wirth answer that.
15 MR. CHAIRMAN: Okay.
16 COURT REPORTER: (Swears witness.)
17 MR. WIRTH: Martin E. Wirth. Is this part of the Cook tract?
18 MS. GIBSON: Yes.
19 MR. WIRTH: We have just now received title opinion from our
20 title examiner and --
21 MR. CHAIRMAN: We can't hear you.
22 MR. WIRTH: Basically what we have done, initially we did a
23 stand up going through the courthouse records. We got
24 through all the deeds and all the wills, lists of heirs,
25 and everything like that. We turn over any and all

1 information we find into our title attorneys. We then
2 also go through what we find. If he has a requirement we
3 need to clear up they would come out and say the heirs of
4 Hazel Cook who are blah, blah, blah, each owned a certain
5 percentage of interest. That's how we came initially
6 through here. Now, a lot of times with the help as
7 yourself and everything there are some that are reported-
8 ly that we're not aware of. If it's not on record in the
9 courthouse we have no way to know that Ms. Cook might
10 have sold to her daughter or shared it or something like
11 this. So we have -- and the next phase we come through,
12 people like yourself or other people tell us that. We go
13 through. If it is recorded and we might have missed it
14 we go back or it's recorded in Tazewell County. Let's
15 say Ms. Cook passed away in Tazewell County and had it
16 recorded there because she also owned property in
17 Tazewell County. They also need to get it recorded in
18 Buchanan County. If it's not in Buchanan County we did
19 not pick it up. Therefore, a lot of the heirships you'll
20 see -- that's how we break it out by title examination of
21 how much interest each person owns. And in case of a
22 husband/wife, there is a dour courtesy interest depending
23 on the date and time of the death. That's how we handle
24 it.

25 MR. CHAIRMAN: Thank you.

1 MR. MASON: Isn't it true, Marty, that's how you -- you start
2 out by determining the relative percentage of the
3 drilling unit of each tract of land, is that correct?
4 MR. WIRTH: Now, in the unit -- if that's the question, I
5 might have misunderstood -- there's 80 acres in each
6 unit.
7 MS. GIBSON: That's what I was asking.
8 MR. WIRTH: The Board in 1990 and this year also have develop-
9 ed field rules where each person who owns - say you own
10 100 acres. 40 of these acres fell in X-21 and 40 fell in
11 X-20. You would have 50 percent of that unit because the
12 unit is comprised of 80 acres. You have 40. So you
13 would get 50 percent of production from it. That's a
14 gross number. Then you owned a sixth you get one-sixth
15 of the 50 percent depending on your elections if you
16 lease, participate, or be carried.
17 MS. GIBSON: It's all broken down?
18 MR. WIRTH: That's right.
19 MR. MASON: What I was trying to clarify is is there two parts
20 that one could determine what part of each drilling unit
21 each tract of land is a percentage and then within each
22 tract how much each individual owns of that tract?
23 MR. SWARTZ: What Marty is telling you, if we just took one --
24 this is the map that came with one of the units that
25 we're talking about today and every tract has a number.

1 And if you wanted to figure out -- what he has done, if
2 you wanted to figure out what the interest of tract 6 was
3 and the owners who had an interest in tract 6 you would
4 take the acres in tract 6 that are in this 80 acre unit
5 and if it was 10 acres you would put it on top of the 80
6 and then you divide it so that you'd know that one-eighth
7 -- if it was 10 acres it would be one-eighth of the total
8 of this unit or it would get one-eighth of the revenue.
9 If you had to come up with an interest to participate
10 you'd have to pay one-eighth of the cost. Now, that's
11 pretty easy. What complicates it, if you stick these
12 longwall panel in -- now, this one is pretty simple. But
13 what you then have to figure out is how much of this
14 longwall panel which is this rectangle basically, this
15 white here, how much of this is in this unit. So you
16 take this acreage, you put it on top of this to get
17 another percentage and that's the interest in this panel
18 that comes back to this unit and then you've got to take
19 this percent. So it's a two step calculation. So you've
20 got to figure out what your interest in the unit is and
21 then -- and you've looked at other ones here where we
22 have like three pieces of panel. So you've got to figure
23 it out for every panel. But basically you take the acres
24 you've got in there, the 80 acres, and get a percentage
25 and then figure out whatever the longwall panel or the

1 short hole gas panel would be and you just figure out how
2 many acres in that panel is in the unit compared to how
3 many's in the total and do another percent and you
4 multiply those together and that's what you have. That's
5 how you get to -- if you look at Exhibit G with all
6 amounts that's how it was figured out. Is that clear as
7 mud or does that help a little?

8 MS. GIBSON: It helped.

9 MR. SWARTZ: Okay. And we'll talk to you afterwards, too.

10 Marty will give you a card. Do you have anything else?

11 MS. GIBSON: No. That was all. I was just wondering how you
12 did that.

13 MR. CHAIRMAN: Any other questions? Do you have anything
14 further? Any questions, members of the Board? What's
15 your pleasure?

16 MR. MASON: Mr. Chairman, I make a motion that we approve
17 OXY's request for the forced pooling on these four.

18 MR. CHAIRMAN: We have a motion to approve the four
19 applications as presented.

20 MS. ZANDER: Second.

21 MR. CHAIRMAN: A motion and a second. All in favor
22 signify by saying yes. (ALL AFFIRM.) Opposed say no.
23 (NONE.) The motion carries.

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

25 ~~XXXXXXXXXX~~

1 MR. SWARTZ: Mr. Chairman, I hate to admit this but I neglect-
2 ed to offer some testimony on the four units in general
3 with regard to consideration. And I'd like to have Mr.
4 Gordon testify just for a minute and have that as part
5 of the record.

6 MR. CHAIRMAN: We'll reopen the record on those four previous
7 units.

8
9
10 SAMUEL EDWARD GORDON, II

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

13
14 DIRECT EXAMINATION

15
16 BY MR. SWARTZ:

17 Q. Mr. Gordon, with regard to the four units that we have
18 been talking about, X-20, W-20, W-21 and X-21, a review
19 of Exhibit A, Page 2, in each of the units discloses that
20 Buchanan Production through OXY has leased significant
21 positions in all four of those units.

22 A. That is correct.

23 Q. And my question for you is with regard to making a record
24 in terms of the lease terms that are typically offered by
25 OXY on behalf of Buchanan Production. What would the

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typical bonus on just the coal bed methane lease be
bonus per acre?

A. It would be one dollar per acre.

Q. Okay. And the royalty that you've been offering?

A. One-eighth royalty. Five year term lease.

Q. Okay. And would you recommend any order of the Board
with regard to election options as required under the
statute incorporate those provisions?

A. Yes, we would.

MR. SWARTZ: That's all I have, Mr. Chairman. Thank you.

MR. CHAIRMAN: Without any exception those are accepted as
part of the record.

1
2 (ITEMS 4, 6, 7, 8, 9, 13, 14)
3

4 MR. SWARTZ: Not to usurp your ability to call the next item
5 on the docket, but we have I believe 1, 2, 3, 4, -- 7 of
6 these units left. They are all under Field Rules 2.
7 They are Item 4, which is unit Y-20, docket number 0234,
8 Item 6 on the docket, which is unit T-15-0236, Item 7 on
9 the docket, which is unit S-15, docket number ending
10 0237, Item 8 on the docket, unit S-5 ending on the docket
11 number 0238, then Item 9 on the docket, unit Y-21 and
12 it's number ends 0239 and then the last two are Items 13
13 and 14, which are units B-20, B-21 and their docket
14 numbers end in 0243 and 0246. And what I'd like to do
15 with your permission, is offer the general testimony
16 that's applicable to all these units once and then go
17 through each of them specifically and with the respects
18 that they may differ, with your permission.

19 MR. CHAIRMAN: That'll be fine.

20 MR. SWARTZ: Starting with the general testimony, I'd like to
21 call Sam Gordon again. Sam, you're still under oath.
22 You understand that?

23 MR. GORDON: Yes. I do.
24
25

- 1 A. Yes, it is.
- 2 Q. OXY USA is a Delaware Corporation.
- 3 A. That is correct.
- 4 Q. Is OXY USA authorized to do business in the Common-
5 wealth?
- 6 A. Yes, it is.
- 7 Q. Is OXY registered with the DMME and does it have a
8 blanket bond as a gas and oil operator on file in the
9 Commonwealth?
- 10 A. Yes, it does.
- 11 Q. Is there an Exhibit J annexed to each of these applica-
12 tions?
- 13 A. Yes, there is.
- 14 Q. And does Exhibit J, at Page 1, state as a resolution of
15 Buchanan Production Company that OXY USA is delegated to
16 act as its agent in respects and are spelled out in that
17 exhibit?
- 18 A. Yes, it does.
- 19 Q. And is Exhibit J, Page 2, a consent executed by OXY with
20 regard to each of the units under consideration consent-
21 ing to act as operator if the Board should appoint it and
22 to follow Board rules, regulations and code provisions?
- 23 A. Yes, it is.
- 24 Q. In addition to yourself in your role as Regulatory
25 Manager on behalf of Buchanan Production Company, who

1 are the other two OXY employess that have been appointed
2 to act on behalf of Buchanan Production?
3 A. Glen VanGolan, General Manager and Martin E. Wirth as
4 Land Manager.
5 Q. Okay. With regard to all of these consolidated matters
6 did you yourself participate in preparing both the
7 notices of hearing and the applications?
8 A. Yes, I did.
9 Q. And did you sign each of the notices and the applica-
10 tions?
11 A. Yes, I did.
12 Q. And did you sign each of the notices and each of the
13 applications?
14 A. Yes, I did.
15 Q. Is there an Exhibit B or an amended and/or and amended
16 Exhibit B on file with the Board with regard to each of
17 these?
18 A. Yes, there is.
19 Q. And to the extent that you had addresses would that be
20 disclosed in the Exhibit B with regard to each of these
21 units?
22 A. Yes, it does.
23 Q. And if you had an address is it your testimony that you
24 mailed a copy of both the notice and the application by
25 certified mail, return receipt requested as required by

1 the Code to all folks for whom you have addresses?

2 A. That is correct.

3 Q. Then you kept records with regard to cards that were
4 returned signed and cards that came back or matters that
5 came back unsigned?

6 A. That is correct.

7 Q. And we can deal with that on a unit by unit basis later?

8 A. Right.

9 Q. Were notices published in a newspaper with regard to each
10 of these applications?

11 A. Yes, it was.

12 Q. All in the same newspaper?

13 A. It was. And the same day. The Virginia Mountaineer on
14 July the 2nd.

15 Q. With regard to the newspaper notices have you filed
16 certificates of publication for each of these units with
17 Mr. Fulmer's office?

18 A. Yes, we have.

19 Q. And with regard to each of the units have you filed
20 proofs of mailing with regard to mailings to the respond-
21 ents for whom you've had addresses on each of these
22 units?

23 A. Yes, we have.

24 Q. You've filed that with Mr. Fulmer's office?

25 A. Right.

1 Q. In each of these units has OXY leased or obtained leases
2 of portions of the various tracts in these several units?
3 A. Yes, they have.
4 Q. And when OXY has done that what are the typical terms of
5 those OXY leases that people have entered into with you
6 all?
7 A. The terms of one dollar an acre at an one-eighth royalty
8 for a five year term.
9 Q. The dollar an acre would be the bonus?
10 A. That's correct.
11 Q. And would you recommend to the Board that in the event a
12 forced pooling order would be entered with regard to
13 these units that those terms be embraced in the order
14 insofar as election options are afforded?
15 A. That is correct, yes.
16 Q. Now, do each of these units under consideration involve
17 short hole production and hopefully eventually perhaps
18 gob production from the VP-6 mine?
19 A. Some of them are not in VP-6.
20 Q. Okay. Some are in VP-6 and some are in what?
21 A. VP-3.
22 Q. VP-3.
23 A. And one of them is in VP-5.
24 Q. Okay. Well, we'll get to that when we get to the exhibit
25 used -- we'll be able to tell. Do they all involve short

1 hole productions?

2 A. They do.

3 Q. And ultimately may involve, depending on the progress of
4 mining, gob production?

5 A. That is correct. Yes, sir.

6 Q. Are all of these applications made under Oakwood Field
7 Rules II, which applies specifically to active gob and
8 short hole?

9 A. That's correct.

10 Q. And we're talking about leases and production from seams
11 below the Tiller down to the Pokey 2.

12 A. That is correct.

13 Q. We filed an Exhibit K earlier today, which is contract
14 approval abstract which is a three way agreement between
15 Buchanan Production, Island Creek Corporation and OXY USA
16 and does that have relevance to these units insofar there
17 may be well bores on them?

18 A. That is correct, yes.

19 Q. And to the extent there are Exhibits C's that show a well
20 that would be projected to be used on these units can we
21 expect to see the charge of 142,500 per well bore that
22 may be used?

23 A. Yes.

24 Q. Okay. Now, with regard to the first unit taking them in
25 order -- we would be dealing with Y-20. Now, there has

1 been an amended Exhibit B filed with regard to applica-
2 tion Y-20, is that correct?
3 A. That is correct.
4 Q. With regard to unit Y-20, do you wish to dismiss anybody?
5 A. Yes, we do.
6 Q. And who would that be?
7 A. We wish to dismiss Carl McAfee because he has executed a
8 lease with us.
9 Q. And he is the only person listed under Tract 7 on the
10 amended Exhibit B, correct?
11 A. That is correct.
12 Q. Do you wish to add anybody to that?
13 A. No, we do not.
14 MR. EVANS: Sam, just before we go too much further can you
15 tell me on the amended Exhibit B, Carey B. Cook here, why
16 there's a difference and what was originally submitted as
17 far as percentages and whatnot goes?
18 MR. CHAIRMAN: It changes all the way down the column.
19 MR. GORDON: We received new title work on the survey itself
20 which changed it just a little bit in the acreage
21 position. And so we went back and recalculated based on
22 the new tract acreage.
23 MR. EVANS: So that resulted in better information?
24 MR. GORDON: Better information. That's exactly right.
25 Q. (Mr. Swartz continues.) There was an acreage different-

- 1 ial, it wasn't any additional folks?
- 2 A. Right. Right. It was just -- we had a survey error that
3 we found.
- 4 Q. Now, with regard to mailing here you sent -- with regard
5 to Carey B. Cook's heirs and so forth you sent a notice
6 in care of Sue Elkins. Did that come back?
- 7 A. Yes, it did come back.
- 8 Q. Is that the only mailing that you sent on this unit that
9 came back? Did all the rest of them come back signed?
10 Or the cards come back signed?
- 11 A. Yes. They were all signed.
- 12 Q. So at this point the heirs of Carey B. Cook, at least at
13 the point this amended exhibit was filed, were unlocated?
- 14 A. That's right. And we have now found them.
- 15 Q. Okay. And we have now found them. With regard to OXY's
16 position on behalf of Buchanan Production this unit -- if
17 you'll turn to Exhibit A, Page 2. This is with regard to
18 Y-20, what is outstanding that needs to be addressed on
19 the forced pooling application?
- 20 A. With the numbers that we show on Item 4, coal interest is
21 11.6681 percent, and oil and gas interest is 19.26
22 percent and that, of course, changes with the leasing of
23 Mr. McAfee's interest. We now would have a coal interest
24 of 11.2281 percent --
- 25 Q. Outstanding?

1 A. Outstanding. And the oil and gas interest would be
2 18.82.

3 Q. That's after dismissing Mr. McAfee? Removing his
4 interest?

5 A. That's correct.

6 MR. FULMER: Would you repeat those numbers?

7 A. (The witness continues.) On the coal, 11.2281. And I
8 just ran them real quick so I hope they're accurate. On
9 the oil and gas interest is 18.82.

10 Q. And if you would turn to Exhibit C for me, Sam, did you
11 prepare this exhibit within the last sixty days?

12 A. Yes, I did.

13 Q. Is it your best reasonable estimate as to the cost that
14 would be incurred on this unit Y-20 with regard to the
15 longwall panel shown on the subsequent exhibit?

16 A. That is correct. Yes.

17 Q. How many bore holes are contemplated in Exhibit C?

18 A. Two.

19 Q. One per panel of the two panels that -- well, that would
20 be Development 4 and Development 5 insofar as this unit?

21 A. That is correct.

22 Q. Turning to Exhibit G, Page 1, there are actually three
23 panels in the unit, correct?

24 A. That is correct.

25 Q. And the percentages are reported?

- 1 A. Yes.
- 2 Q. And we have the *same estimate of allowable cost by panel*
3 *that we looked at with regard to some of the four units*
4 *that we've just dealt with?*
- 5 A. That's correct.
- 6 Q. And this reports in this instance for Unit Y-20 the
7 portion of the cost for Development Panel 5 and Develop-
8 ment panel 4 that would be attributable to Y-20?
- 9 A. Correct.
- 10 Q. For people to use in determining a participation or
11 carried calculation?
- 12 A. Correct.
- 13 Q. And if we turn to Exhibit G, the Exhibit G that the board
14 that has we've had to amend, correct?
- 15 A. Correct.
- 16 Q. And the reason why we amended Exhibit G can I assume is
17 once you change Exhibit B we had to change G?
- 18 A. Correct.
- 19 Q. So it tracks and is consistent with the amended Exhibit B
20 that we have just discussed?
- 21 A. Yes.
- 22 Q. And this reports the percentage of each person who is a
23 respondent that they could use in applying to the one-
24 eighth royalty or in applying to determine what their
25 participation or carried interest would be?

1 A. Correct.

2 Q. Is it your opinion that the plan of development shown on
3 Exhibit G, Page 1, which discloses the mining map in
4 relation to this unit is a reasonable method to develop
5 the coal bed methane estate of this unit?

6 A. Yes.

7 Q. And if it's developed along these lines is it your
8 opinion that this is a means to minimize waste both
9 economic and physical and protect the correlative rights
10 of the people in this unit?

11 A. Yes, it is.

12 MR. SWARTZ: That's all I have on Y-20 unless you all have
13 some questions.

14 MR. CHAIRMAN: Mr. Mason?

15 MR. MASON: This Exhibit G would change further the change on
16 Mr. McAfee?

17 MR. SWARTZ: No.

18 MR. GORDON: No.

19 MR. MASON: No, it wold not? It will remain the same?

20 MR. SWARTZ: The only difference would be that he would
21 disappear from it, but the numbers of the people remain-
22 ing would remain the same.

23 MR. MASON: Well, that's my point. Number 2 would be further
24 amended by just this deletion.

25 MR. SWARTZ: Yes. If we were to do that he would disappear,

1 but the numbers of the other people would be the same as
2 they are right now.

3 MR. MASON: No other questions.

4 Q. (Mr. Swartz continues.) T-15 is the next one, I believe,
5 which is Docket 6. Mr. Gordon, do you desire to dismiss
6 any respondent today with regard to T-15?

7 A. No, we do not.

8 Q. Do you wish to add someone's name?

9 A. We do need to make a motion before the Board that we have
10 had one of the Reedy heirs come forward and contact us
11 and we are currently in touch with her. Her name is
12 Nancy Cox.

13 Q. And the Reedy heirs are listed as the fifth group of
14 folks under Tract 2 on Exhibit B?

15 A. Correct.

16 Q. And up until the time that Nancy Cox contacted you you
17 did not know their address or know how to reach them?

18 A. That is correct.

19 Q. Also, with regard to the Ann McGlothlin heirs I think we
20 got a letter -- or was that someone else? Are the Ann
21 McGlothlin heirs still unknown as far as you know?

22 A. Yes, they are.

23 Q. Did you mail cards to everyone shown on Exhibit B that
24 you had an address for?

25 A. Yes, we did.

- 1 Q. And did all those people that you mailed to sign for the
2 mail did you get the return receipt back?
- 3 A. Yes, we did.
- 4 Q. Now, on this unit. If you will turn to A, Page 2, and
5 just focus on the interests that are outstanding that
6 need to be forced pooled.
- 7 A. Okay.
- 8 Q. This shows that 100 percent of the coal interest is
9 listed, is that correct?
- 10 A. That is correct.
- 11 Q. So the only outstanding interest we need to deal with is
12 the oil and gas interest and what's outstanding that
13 needs to be addressed by this pooling application.
- 14 A. 39.36 percent is outstanding on the oil and gas.
- 15 Q. Turning to Exhibit C. Did you prepare the Exhibit C
16 within the last sixty days?
- 17 A. Yes, I did.
- 18 Q. Is the \$318,750 shown there in your opinion a reasonable
19 estimate of the cost to be incurred to proceed with the
20 development contemplated by the plan showing on Exhibit
21 G, Page 17?
- 22 A. That is correct.
- 23 Q. How many bore hole fees are contemplated?
- 24 A. Two.
- 25 Q. And the bore hole fees would come from Exhibit K, which

- 1 has been introduced prior?
- 2 A. Yes.
- 3 Q. The Unit T-15 has portions of two longwall panels in it
4 when we look at Exhibit G, Page 1, correct?
- 5 A. Correct.
- 6 Q. Are these proposed units or proposed panels?
- 7 A. Yes. They are proposed panels.
- 8 Q. The reason I asked, there's no mining shown. No mains.
9 No entries.
- 10 A. Right.
- 11 Q. On Exhibit G, Page 2, we have your estimate of allowable
12 cost by panel. Is this something you prepared?
- 13 A. Yes, it is.
- 14 Q. And this addresses all of the units that are intersected
15 by panels 12 and 13, correct?
- 16 A. Correct.
- 17 Q. And sets forth the cost incurred in the various units
18 totals and then attempts to allocate them to the various
19 units, in this case, the one we're interested is T-15,
20 correct?
- 21 A. Correct.
- 22 Q. And you would use this to calculate what the contribution
23 on behalf of someone who wanted to participate in T-15
24 would be?
- 25 A. Correct.

- 1 Q. And it's reported for both panels, is it not?
- 2 A. It is.
- 3 Q. Okay. And then Exhibit G, Page 3, would show the
4 interest of each person who is a respondent as a per-
5 centage that they would use to calculate their participa-
6 tion, what their carried obligation would be or by
7 multiplying it by one eighth, what their share of any
8 royalty would be?
- 9 A. That's correct.
- 10 Q. Is it your view that the plan which is disclosed on
11 Exhibit G, Page 1, is a reasonable method to develop the
12 coal bed methane in and with under Unit T-15?
- 13 A. Yes, it is.
- 14 Q. And if implemented this proposed plan would contribute to
15 the protection of correlative rights and would tend to
16 lessen the likelihood of both physical waste and economi-
17 cal waste. Is that also your opinion?
- 18 A. Yes, it is.
- 19 MR. CHAIRMAN: Mr. Gordon, why would you need to put two wells
20 in an area where you don't have any mining planned?
21 What's the necessity for the more than one well in an
22 eighty acre unit?
- 23 MR. GORDON: This is a mine plan of Island Creek and we are
24 not real sure where they are going to put those wells.,
25 But they have been talking to us about putting more wells

1 in the panels and so there could very easily be a well in
2 each of these panels in this unit. If there isn't one
3 there then that charge will not be in there when it
4 actually hits joint interest or accounting books.

5 MR. CHAIRMAN: I'm getting more at the necessities for more
6 than one well in a unit given by the mine plan?

7 MR. GORDON: This is one well per panel per unit is the
8 theory that this was created off of.

9 MR. CHAIRMAN: But didn't you say they didn't contemplate any
10 mining in this panel?

11 MR. GORDON: No. They do contemplate mining.

12 MR. CHAIRMAN: I mean in this unit?

13 MR. GORDON: Yes.

14 MR. CHAIRMAN: I'm sorry. I must have misunderstood you. I
15 thought you said that they did not contemplate any mining
16 in this unit.

17 MR. SWARTZ: No.

18 MR. CHAIRMAN: I just want to get it clarified, because I
19 thought I heard you say that there was no mining contem-
20 plated.

21 MR. GORDON: There is none right now. It is contemplated. It
22 is in the mine plan to mine this out.

23 MR. EVANS: Let me ask you this, Mr. Gordon. On Exhibit G,
24 Page 1, there are rectangles, two of them, labeled VP-
25 5, EM12-D and 13-D, what do those rectangles represent?

1 MR. GORDON: Those are projected panels in that coal seam.

2 MR. EVANS: Who did you get that information from that caused
3 you to put it on Exhibit G, Page 1?

4 MR. GORDON: This is information that we have received from
5 Island Creek based on their mine operation plans.

6 MR. EVANS: But these are future plans?

7 MR. GORDON: Yes, it is.

8 MR. EVANS: There's no mining in existence in these panels 12
9 and 13 right now?

10 MR. GORDON: Right now? No. No. But they are driving
11 entryways.

12 MR. EVANS: To get there?

13 MR. GORDON: Yes.

14 Q. (Mr. Swartz continues.) And if you said there was no
15 mining contemplated in T-15 in the sense that it wasn't
16 going to happen ever, did you mean to say that?

17 A. No, I did not.

18 Q. And was it inaccurate and incorrect?

19 A. It was inaccurate and incorrect.

20 MR. SWARTZ: I have nothing further on T-15. We want to go to
21 S-157

22 MR. CHAIRMAN: Any other questions?

23 MR. EVANS: I do have one question. There are no holes
24 currently existing in this --

25 MR. SWARTZ: Right.

1 MR. EVANS: -- but as I understand it Island Creek is going
2 to put two VVHs and as soon as they do you will convert
3 them to CBMs?
4 MR. GORDON: There's no wells drilled in either of these
5 panels yet.
6 MR. SWARTZ: Well, what I'm going --
7 MR. EVANS: Two that are proposed. Or leastwise the costs
8 are allocated for. Normal costs. So I'm assuming that
9 if that's the case there's going to be two stuck in
10 here, I'd like to know since there's not been now, are
11 they going to be drilled as VVHs and then converted? Or
12 are you going to drill them as CBNS initially and then
13 hook them up as short holes?
14 MR. SWARTZ: Steve, are you still here?
15 MR. BREEDING: Yes.
16 MR. SWARTZ: Come on up here. Mr. Evans has a question on
17 T-15. These are my plans out. There's no mining shown,
18 at least on this that you have reached it with develop-
19 ment. His question is, Sam's numbers include the
20 possibility of two holes in each -- one would be in Panel
21 12 and one in 13, and he's allocating that to T-15. I
22 think -- actually you got two -- the current question on
23 the table which I will go with first seems to me would
24 be, who is going to drill those? Is Island Creek going
25 to drill those as VVHs? Are they going to produce -- are

1 they going to vent as VVHs for some period of time?

2 What's the scenario?

3 MR. BREEDING: I think we planned it -- at that particular
4 point in time we probably planned to go strictly with
5 coal bed methane wells and not even go the VVH conversion
6 route. We'd like to get away from a duplication of
7 permitting. Why permit it as a VVH and then turn around
8 and do a conversion permit as coal bed methane.

9 MR. EVANS: Let me ask you this. Who is going to drill them?

10 MR. BREEDING: Island Creek.

11 MR. EVANS: Island Creek plans to drill them and permit them
12 under Island Creek?

13 MR. BREEDING: Yes.

14 MR. WIRTH: We're subcontractor for OXY USA.

15 MR. EVANS: Are we going to see another set of documents that
16 show the Buchanan Production or OXY USA or somebody else
17 ends up being the owner? If you permit it as CVM you've
18 got one eighty acre unit. You indicate here that you're
19 going to have two.

20 MR. SWARTZ: No. If we permit it as a CVM under Oakwood 2 we
21 can get one well per panel per unit so we can have two.

22 MR. EVANS: I guess what I'm saying is those panels aren't
23 there yet.

24 MR. SWARTZ: There are -- if you file them as -- no. This is
25 my opinion and this is the way we are headed. I think

1 what Steve is telling you is we would like to be drilling
2 CVM oils in advance mining and degasing and fracking at
3 some point. Whether we frack them or not is in debate,
4 but get this drilling out in front of the mining some
5 distance. We're kind of reacting upon it right now and
6 we're trying to plan ahead a little bit. If we permit
7 this total in advance of mining and we go for two wells
8 my view is if we tender a mine plan that shows what
9 you're looking at here, Exhibit G, Page 1. We are
10 projecting mining, these two panels. We would presumably
11 be saying that the mine plan dictates three to five VVHs
12 per panel and if we do indeed wind up with one per panel
13 in this unit we will be taking the position that's it's
14 mine plan driven and under the statute entitled -- so I
15 guess -- you're asking a real good question and you are
16 right. But if you superimpose a mine plan on it then
17 you have an ability to have more than one well per panel
18 and under the Oakwood Rules II I believe we, in general,
19 have in place a rule to get one per panel and you could
20 have two in theory.

21 MR. EVANS: I see what you're trying to get at. My only
22 question is can we -- I need you to tell me just exactly
23 what you told me as to the rationale of why we could do
24 this in this projection as opposed to panels already in
25 place?

1 MR. SWARTZ: When are these wells going to be drilled in the
2 mining process, Steve?

3 MR. BREEDING: I don't have any particular -- we do have
4 projections.

5 MR. SWARTZ: No. I don't mean a date. But just in terms of
6 the sequence of what's going on. I mean, how close are
7 the entries going to be --

8 MR. GORDON: Where are we now, Steve, as far as VV5 and
9 coming from where to where? How far away are we year-
10 wise?

11 MR. BREEDING: Well, we're down in the first panel. See 52877
12 The face of the mine is down below that. South of that
13 particular area. So when we start in that next panel
14 very soon.

15 MR. SWARTZ: Which is the 10-B panel?

16 MR. BREEDING: The 10-B panel. So those two particular panels
17 are probably -- I will guess and say six to nine months
18 in advance. Probably within the next six to nine months
19 the actual site construction and drilling will start to
20 take place in those panels.

21 MR. SWARTZ: What will be the first kind of production that
22 comes -- let's assume that there winds up being a well in
23 12-D and within T-15. Is it going to short-hole produc-
24 tion, the first production --

25 MR. BREEDING: Yes. Short-hole production will be the first

1 production to come out of that. Any ventilation or
2 vertical ventilation or CVH as permitted, the production
3 would not start until it was actually undermined and
4 maybe a day or two past the undermined date. We would
5 not get any production out of particular gob well. All
6 the production would be short-hole production.

7 MR. EVANS: In other words, the mining is so close that
8 you're not going to do advanced de-gas vertical?

9 MR. BREEDING: We don't have any plans for that at present. I
10 think in order to look at that you have to be two, three,
11 four years out in advance here and I --

12 MR. EVANS: That's what I was just saying that if the mining
13 if it's six to nine months away in these two panels it
14 doesn't -- you are not going to have any --

15 MR. BREEDING: The cost of fracking would not be recovered by
16 the additional degasification.

17 MR. EVANS: Okay.

18 MR. MCGLOTHLIN: Mr. Chairman?

19 MR. CHAIRMAN: Mr. McGlothlin?

20 MR. MCGLOTHLIN: Are you through, Ken?

21 MR. EVANS: Yes.

22 MR. MCGLOTHLIN: Okay. I understand the bore hole fee and all
23 of that. You've got wells that are already in place.
24 Now you've got a future well that you're talking about
25 and you've got a fixed cost or estimate allowable cost

1 here, 318,750 for two wells.

2 MR. SWARTZ: Right.

3 MR. MCGLOTHLIN: Okay. Not knowing what it's going to cost
4 you to drill those two wells are we going to see you
5 coming back and saying, "Hey, wait a minute. It cost
6 more than this. We are going to have to have more costs."

7 MR. SWARTZ: Well, the way this works -- and I think you're
8 asking kind of a legal question -- if we don't get enough
9 money -- if somebody participates in this unit at 308 --
10 well, it's not that simple. But if somebody participates
11 in this unit -- if you do the map. If you take G, Page
12 2, figure out what they have got to come up with and
13 apply the percentage and it turns out that that number
14 was too low, which I think is where you're headed. Well,
15 they're in the unit as a partner. If it turns out to be
16 another number we're not coming back to you. We're
17 sending them a bill. And if they're not happy with it
18 they may come back to you. But I mean, we don't -- as
19 the order is drafted to become a participant in this unit
20 you need to come up with your share of the reasonable
21 cost fixed by the Board in the order. If it turns out
22 that they're less we rebate. We don't come to you to do
23 that. And if it turns out that there are more their
24 client gets charged for it.

25 MR. MASON: Isn't it true, Mr. Swartz, that this well is one

1 of the ones under that assignment of bore hole interest?

2 MR. SWARTZ: Right. So they're catching a huge break on this
3 scenario here.

4 MR. MASON: Right. But according to that if you follow that
5 scenario if the drilling costs of this well is higher
6 than anticipated that's Island Creek's problem?

7 MR. SWARTZ: Right.

8 MR. MCGLOTHLIN: And there won't be any additional charges
9 thrown back into this --

10 MR. SWARTZ: Well, except you could overrun on title. There
11 are charges here --

12 MR. MASON: I understand that. But I'm talking about -- Kevin
13 asked about bore hole costs.

14 MR. SWARTZ: No, that's fixed. That's 142,500.

15 MR. MASON: That's fixed by contract. So if a well costs
16 \$100,000 instead of \$200,000 to drill Island Creek has
17 got to pay the difference?

18 MR. SWARTZ: This is the perfect example of why this is so
19 fair. Because if we went out and drilled these -- this
20 is a perfect example, because if we went out and drilled
21 these two wells today we'd be looking for roughly
22 \$450,000 instead of \$285,000 in bore hole costs. I mean,
23 you got to look at it overall.

24 MR. MASON: I understand. But that's my point exactly. In
25 other words you're saying that if there are additional

1 costs, but only if the costs relate to something other
2 than drilling costs.

3 MR. SWARTZ: Right.

4 MR. MASON: The drilling cost is fixed by contract. So what
5 you're saying is Island Creek has agreed in exchange for
6 having the fixed price per bore hole will assume any
7 risk relating to the additional drilling costs?

8 MR. SWARTZ: And they're going to pay more. You can't drill a
9 well for that.

10 MR. MCGLOTHLIN: I just have one more question. I keep
11 noticing nothing under equipment.

12 MR. SWARTZ: Oh, you mean like surface equipment and so forth.

13 MR. MCGLOTHLIN: Yes.

14 MR. SWARTZ: Sam, you want to comment on that?

15 MR. GORDON: All the surface equipment is owned by Oakwood
16 Gathering. We will own no equipment on those location.

17 MR. SWARTZ: That's why.

18 MR. MASON: I have a follow-up question on that, please.

19 MR. CHAIRMAN: Mr. Mason?

20 MR. MASON: Is there going to be any charge from Oakwood
21 Gathering to the partnership for the use of that equip-
22 ment?

23 MR. SWARTZ: Not to the partnership.

24 MR. MASON: Not to the partnership?

25 MR. SWARTZ: Well, essentially, it'll be a tariff.

1 MR. MASON: It's a function of price payed for the gas, I
2 guess.

3 MR. SWARTZ: No. Oakwood Gathering does not buy gas. It
4 compresses and gathers gas and gets it to a jurisdiction-
5 al pipeline ultimately. And there will be some charge
6 associated with that, which will find its way back.

7 MR. MASON: Okay. But that will be an operating cost?

8 MR. SWARTZ: That's correct.

9 MR. WIRTH: Yes.

10 MR. MASON: So to that extent then my complaint about capital
11 costs has been flipped around here to where you're taking
12 at ordinarily would be a capital cost because this
13 stuff is owned by Oakwood Gathering and will be treated
14 as an operating cost, is that correct?

15 MR. SWARTZ: Well, it's a capital cost to Oakwood Gathering,
16 but it becomes an operating cost because of the way it's
17 booked to this enterprise.

18 MR. MASON: What I'm trying to establish is that the way you
19 all have done this, even though I might have some diffi-
20 culty with one side of it, you in effect have diminished
21 the amount of upfront cost that a person would have to
22 put up to participate by having this -- the way you've
23 structured this from an equipment point of view you have
24 rendered an operating cost what might otherwise be a
25 capital cost and thereby reduce the amount that a person

1 would have go put up to participate.

2 MR. SWARTZ: Correct. I mean, that's true. There are some
3 reasons for that that are -- other than that, but, you
4 know.

5 MR. MASON: Well, I understand that. But the point is --

6 MR. SWARTZ: -- that are business oriented decisions that
7 caused us to do it that way. We do not want participants
8 in wells owning parts of gathering systems.

9 MR. MASON: I understand all of that. But the effect, though,
10 on a person who elected to participate, a person against
11 whom --

12 MR. SWARTZ: Minimize the first.

13 MR. MASON: -- there is a forced pooling order entered. The
14 effect to that is to reduce the amount of money that they
15 would have to pay up front.

16 MR. SWARTZ: Right.

17 MR. MASON: And that is fair to them?

18 MR. SWARTZ: Well, it's an advantage to them under those
19 circumstances, correct.

20 MR. MASON: And also there's an advantage in this other thing
21 in the sense that there's no risk to them for drilling
22 costs.

23 MR. SWARTZ: It is a cap on the cost of drilling the hole,
24 yes. It will not exceed 142,500.

25 MR. MASON: Exactly. So the actual risk of an overrun in cost

1 and such has been assumed by Island Creek through this
2 contract?

3 MR. SWARTZ: And, frankly, looking at this unit who knows
4 whether or not there is actually going to be two bore
5 holes on that.

6 MR. BREEDING: When you get down to the point of actual site
7 location it may be to one side or the other. It may be
8 very near that one by our initial plan.

9 MR. CHAIRMAN: One thing that I just wanted to discuss and
10 obviously it's this business of VVH versus CVM. If you
11 have a mine development plan already out with drill VVHs
12 already out there --

13 MR. BREEDING: Existing drilled VVHs?

14 MR. CHAIRMAN: -- existing drilled VVHs. I think that's one
15 thing to call it a VVH and then later decide to convert
16 it. When you're planning advanced work -- and I think
17 there's a real question about the permissibility of
18 drilling as VVH and converting to CBM because there's a
19 distinct difference in notice requirements and other
20 kinds of things. And that's why I probe that issue
21 often, both on the regulatory side and the Board side,
22 because I think somewhere we've got to draw the line and
23 say when you do it this way it's this and when you do it
24 that way it's that and get everybody on the same --.

25 MR. WIRTH: Basically, Island Creek has a lot of contracts in

1 place and obligations with the surface owners and other
2 people and they've already paid for the sites themselves.
3 It would be very uneconomical for OXY USA to go out there
4 and pay the same thing and permit it as CBM. What we
5 have done and we're trying to reach almost a cutoff
6 point. There will be a cutoff point here pretty soon.
7 They've already got them planned. They've may have gone
8 to Harry's shop and already got a permit and saying,
9 "We're planning to do this in the next nine months."
10 After this now as we did we're going to turn around and
11 say, "Well, let's permit them as CBM wells up front."
12 And we do plan to do that and Island Creek has already
13 posted bonds and everything.

14 MR. BRIFEDING: Ultimately, that's the way we need to go. Just
15 from a common sense standpoint. Why duplicate your
16 permitting if one particular permitting type accomplishes
17 all phases. From our standpoint we'll go straight with
18 CBMs as soon as we can phase into it. As Marty pointed
19 out we do have contractual obligations with some property
20 owners. We have VVH agreements that we have to exercise
21 under that, convert over. But eventually we will go
22 straight CBM.

23 MR. MASON: Mr. Chairman?

24 MR. CHAIRMAN: Mr. Mason?

25 MR. MASON: Was the addition or the drilling or proposed

1 drilling of additional wells per unit at the request of
2 the mine operator?

3 MR. GORDON: Yes, it is.

4 MR. SWARTZ: That's it for me on T-15 unless you all have
5 anything else on T-15.

6 MR. MCGLOTHLIN: I've got a follow-up -- about ten minutes
7 ago. Since I opened up a can of worms with this equip-
8 ment -- on your previous wells, is that going to affect
9 the way they're set up? Or is that the equipment on the
10 CBM that OXY drilled?

11 MR. SWARTZ: No.

12 MR. WIRTH: No. The ones that OXY drilled were under dif-
13 ferent field rules. They were probably a pre-mine
14 fracturing that you will have all this equipment.

15 MR. MCGLOTHLIN: I understand that. When you came out and
16 said that the gathering company was going to own the
17 equipment --

18 MR. WIRTH: That has always been consistent.

19 MR. SWARTZ: There were no compressors or flow lines on those
20 prior ones, Marty, as I recall.

21 MR. WIRTH: That's correct.

22 MR. MCGLOTHLIN: On your (inaudible) you had some.

23 MR. WIRTH: No, that was PGP. That's the difference between
24 our application and theirs.

25 MR. MCGLOTHLIN: I will stand corrected when I --

1 MR. WIRTH: Now, you'll have a logic control -- you might see
2 that, but that's not a compressor. That's safety steps.
3 MR. MASON: None of these units are to be fracked, are they?
4 MR. WIRTH: The ones we're talking about now?
5 MR. MASON: Yes.
6 MR. WIRTH: I have no plans at this time. It's too close to
7 active mine works.
8 MR. MASON: No pumps will be placed on them?
9 MR. WIRTH: No, sir.
10 MR. SWARTZ: Well, now, wait a minute.
11 MR. WIRTH: When you say pump -- compressors or pump?
12 MR. MASON: No, I'm talking about lifting pumps --
13 MR. WIRTH: That's right.
14 MR. MASON: -- and tubing. Stuff like that.
15 MR. WIRTH: There will be tubing casing type things.
16 MR. MASON: But will that all belong to Island Creek?
17 MR. BREEDING: That'll be water protection screens. They will
18 be primarily open holes.
19 MR. MASON: I understand that. You're talking about tubing --
20 MR. BREEDING: You are talking about tubing to dewater -- no.
21 MR. WIRTH: The tubing we're talking about comes up from the
22 short-hole gas and then comes up to the bore.
23 MR. FULMER: We're talking about two things here. One in
24 short hole gas and eventually gob gas, eliminating
25 conventional delivery gas.

1 MR. MASON: I understand that.

2 MR. FULMER: Which would have your equipment of the pump and
3 everything else.

4 MR. MASON: That's what I'm trying to get at. Basically, the
5 way you all are going to produce this well is short hole
6 and gob. You're not ever going to complete it as a
7 traditional well.

8 MR. WIRTH: We have our best fracturing right there.

9 MR. BREEDING: We provide the ultimate frack. Four or five
10 hundred feet of it.

11 MR. SWARTZ: Is there anything else on T-15? (Pause.) The
12 next one is S-15 which is Docket Item 7.

13 MR. MASON: I just want to ask something that's sort of a
14 general question. Have you all done any analysis of like
15 per MCF costs of production using this scenario? No
16 equipment charge, bore hole charges as opposed to a
17 conventional well?

18 MR. WIRTH: Yeah. But we haven't had the final results into
19 the gob situation. We've done some preliminary work,
20 yes

21 MR. MASON: Would it be fair to say based on what you know,
22 that based on this cost scenario that that MCF cost is
23 relatively the same or equitable in relation to conven-
24 tional well costs?

25 MR. WIRTH: Except for de-watering. Your conventional -- you

1 have such a large cost for de-watering and everything and
2 hauling and everything. You get a few cents in MCF dif-
3 ference.

4 Q. (Mr. Swartz continues.) Do you want to amend or add any
5 response on S-15 or amend to dismiss any response?

6 A. We do not.

7 Q. Okay. With regard to Exhibit A, Page 2, S-15, what is
8 the outstanding interest that is addressed by this force
9 pooling application?

10 A. Buchanan has 100 percent of the coal leased and we have
11 outstanding 90.26 percent of the oil and gas.

12 Q. Is there a mistake at 4-A on this Exhibit A, Page 2?

13 A. Where?

14 Q. So should 4A be zero percent coal?

15 A. That's right.

16 Q. But 4-B is correct at 90?

17 MR. EVANS: 4-B is wrong, too.

18 MR. SWARTZ: 4B is wrong also.

19 MR. EVANS: If you've got 90.26 under lease, you sure don't
20 want to pool --

21 Q. (Mr. Swartz continues.) So what's outstanding oil and
22 gas is 9.74?

23 A. Right.

24 Q. Okay. With regard to Exhibit B, did you send notices to
25 the folks shown on Exhibit B by certified mail, return

1 receipt requested?

2 A. Yes, I did.

3 Q. And you got signed cards back from them?

4 A. Yes, I did.

5 Q. And you filed that information in Mr. Fulmer's office?

6 A. Yes, I did.

7 Q. Okay. This turning to EXhibit C, the estimate of
8 allowable cost, is this document a document that you
9 prepared in the last sixty days?

10 A. Yes, it is.

11 Q. Contemplates two bore-holes?

12 A. Yes, it does.

13 Q. Is the cost of \$310,750, in your judgement, a reasonable
14 estimate as the cost to produce the gas as is contem-
15 plated by the plans shown in Exhibit G, Page 1?

16 A. Yes, it is.

17 Q. Okay. And what we've done here is we've just moved up
18 one unit to the north above T-15 which we were just
19 looking at, correct?

20 A. Correct.

21 Q. We got the same two panels, you're proposing potentially
22 two bore-holes? One per panel?

23 A. Correct.

24 Q. We got the same numbers on Exhibit G, Page 2, that we
25 just looked at, correct?

- 1 A. Correct.
- 2 Q. And obviously we had a different division of interest,
3 Exhibit G, Page 3, which is specific to the two respon-
4 dents that was seeking the force pool?
- 5 A. Correct.
- 6 Q. And it addresses their interest in each of the two
7 panels shown on the plan?
- 8 A. Correct.
- 9 Q. Is it your opinion that the plan shown on Exhibit G, Page
10 1, is a reasonable plan to develop the coal bed methane
11 resources within and under this unit?
- 12 A. Yes, it is.
- 13 Q. And with this plan of implemented intend to lessen the
14 likelihood of physical waste and economic waste and
15 contribute to the protection of correlative rights?
- 16 A. Yes.
- 17 Q. That's all I have on Unit S-15. Moving on to S-5, which
18 is 0238, if you would turn to Exhibit A, Page 2, Mr.
19 Gordon, going to Exhibit A, page 24A, that should be
20 zero, coal interest needs the address, correct?
- 21 A. That is correct.
- 22 Q. Okay. The oil gas interests however, at 4-B is correct.
23 Point 94 percent needs to be addressed by this applica-
24 tion?
- 25 A. That is correct.

1 Q. Turning to Exhibit B, you have two respondents. Are
2 these the only folks that you all have not obtained a
3 lease from for this unit?
4 A. That is correct.
5 Q. And their net acreages in the unit and their interests
6 are shown here and I take it that from Exhibit B that you
7 do not have addresses for these people?
8 A. That is correct.
9 Q. So you were unable to mail them?
10 A. Right.
11 Q. And the only notice was by publication?
12 A. That's correct.
13 Q. And you previously testified that the notice was publish-
14 ed in the Virginia Mountaineer on July 2nd with regard to
15 this unit as well as the other?
16 A. That's correct.
17 Q. Turning to Exhibit G, Page 1, with regard to S-5, the
18 plan for this unit shows that, ultimately, there would be
19 two portions of two longwall panels and possibly three if
20 we keep going or is this up against a tradeline as well?
21 A. No. This is not against a tradeline, but this would be
22 the last panel in that mine works.
23 Q. Okay. As far as the plans are that you've had --
24 A. Yes, sir. I'm aware of it.
25 Q. So we're looking at potentially portions of two panels in

1 Unit S-5 under this plan of development?

2 A. Correct.

3 Q. All right. Now, going back to Exhibit C, was Exhibit C
4 prepared by you in the last sixty days?

5 A. Yes, it was.

6 Q. And the only thing you show on Exhibit C is one
7 bore-hole charge?

8 A. That's correct.

9 Q. If we go to the breakout of costs, allowable cost by
10 panel, are the title and other costs in the other panel?

11 A. Yes, they are.

12 Q. So the bore-hole costs are in the 16-D panel, right?

13 A. It's in the 15-D panel.

14 Q. I'm sorry. The 15-D. And that's why the numbers are
15 different. The additional charges are in one panel to
16 both of those?

17 A. Right. We presented all that in April before the Board.

18 Q. The estimate of allowable costs by panel is the same type
19 of estimate that we seen in the past where you set forth
20 the cost attributable to a particular panel?

21 A. That's correct.

22 Q. And then with regard to Exhibit G, Page 4, have you again
23 broken up the interest of the respondents?

24 A. Yes.

25 Q. Okay. Is there an error on G, Page 4, that needs to be

- 1 corrected?
- 2 A. Yes, there is. There's a typographical error in the 16-D
3 panel. It lists Irene Blankenship-Dunley and it should
4 be Delores S. Horne again just as it is above in 15-D.
- 5 Q. All right. Ms. Blankenship-Dunley is not in this unit.
6 She is in another unit?
- 7 A. That's correct.
- 8 Q. And so that name should be crossed out. Delores S. as in
9 Sam, Horne should be substituted?
- 10 A. That's correct.
- 11 Q. Is the plan of development shown on Exhibit G, Page 1, in
12 your judgement, a reasonable plan to develop a coal bed
13 methane under Unit S-5?
- 14 A. Yes, it is.
- 15 Q. And if that plan is implemented will it contribute to the
16 protection of correlative rights in less likelihood in
17 both economic and physical waste?
- 18 A. Yes, it would.
- 19 Q. Is it your opinion that the dollar amount set forth in
20 Exhibit C and on Exhibit G, Page 2, represent reasonable
21 estimates with regard to the development and cost
22 associated with the proposed panels and the operations
23 within this unit?
- 24 A. Yes, it does.
- 25 Q. That's all I have on this one. The next one I have would

1 be Y-21, which is 0239. We have one respondent in Y-21?

2 A. Yes.

3 Q. And we have made some headway today with determining
4 Carey Cook's heirs, have we not?

5 A. That's correct.

6 Q. But at the time this application was put together and the
7 analysis got out you did not have an address for Carey
8 Cook's heirs, correct?

9 A. Correct.

10 Q. So the notice was by publication?

11 A. The notice was by publication.

12 Q. The mailings you attempted came back?

13 A. That's correct.

14 Q. But today people are showing up at the hearing and you
15 feel like you got some addresses now?

16 A. We will have. Yes.

17 Q. Okay. Turning to Exhibit A, Page 2, the outstanding
18 interest that this force pooling application addresses is
19 zero percent coal. I notice you got that leased. But
20 with regard to oil and gas, what amount is outstanding?

21 A. 24.75 percent.

22 Q. Do you want to add any respondents to today?

23 A. No, we do not.

24 Q. And I take it you do not want to dismiss any?

25 A. No.

- 1 Q. Going to the Exhibit B, does that set forth the net
2 acreage in the unit of the Carey Cook heirs?
- 3 A. Yes, it does.
- 4 Q. And then the undivided interest, as well?
- 5 A. Correct.
- 6 Q. Turning to Exhibit C, did you prepare that in the last
7 sixty days?
- 8 A. Yes, I did.
- 9 Q. Contemplates no bore holes?
- 10 A. Correct.
- 11 Q. Basically, talking title opinion, title curative, so
12 forth?
- 13 A. That is correct.
- 14 Q. Is the estimate \$25,250 a reasonable estimate in your
15 judgement with regard to those items in terms of doing
16 that work for this unit Y-21?
- 17 A. Yes. Very.
- 18 Q. It appears to me that on G, Page 1, we have actual mine
19 works and there's been development, is that correct?
- 20 A. That is correct.
- 21 Q. And the development has proceeded so that development
22 Panel 5 is slightly into unit Y-21, the one we're talking
23 about?
- 24 A. That is correct.
- 25 Q. Is the only production and cost that we're addressing in

1 this application at this point in time, the 2.369 percent
2 of panel development 5 that is in Unit Y-21?

3 A. That's correct.

4 Q. Then if we turn to Exhibit G, Page 2, we see the same
5 estimate of cost that we've seen before by panel?

6 A. Correct.

7 Q. Which can be used to calculate the participation interest
8 and carry obligations?

9 A. Correct.

10 Q. And then we've got the same G, Page 3, which sets forth
11 Carey Cook's percentage interest in terms of calculating
12 her heirs as a group in terms of calculating what a
13 participation contribution would be, what a carried
14 obligation might be and you could multiply it times one
15 eighth and figure out their royalty?.

16 A. That's correct.

17 Q. That's all I have for Y-21. Okay. The next one is V-20,
18 which is -- I think it's 0243. Is that right?

19 A. Yeah.

20 Q. Now, this one we have a written objection from an
21 attorney who we may have worn out.

22 MR. HCGLOTHLIN: Excuse me. Mr. Chairman, the attorney had
23 another engagement in Circuit Court and asked that his
24 objection would stand out on its own.

25 MR. SWARTZ: What I'd like to do is just note that there's an

1 objection and come back to that.

2 MR. CHAIRMAN: Okay.

3 Q. (Mr. Swartz continues.) Mr. Gordon, have you got V-20?

4 A. Yes, I do.

5 Q. With regard to the matter of adding or dismissing any
6 respondents do you want to add or dismiss anybody?

7 A. No, we do not.

8 Q. If we go to Exhibit B, we've got essentially three groups
9 of respondents. You have an address for Diana Graham?

10 A. Yes, we do.

11 Q. Did you mail to her and did she sign it for the notices?

12 A. Yes, we do. And she did.

13 Q. You do not have addresses for the W. S. Ellis heirs and
14 the W. S. Elliott heirs or at least you didn't when this
15 was prepared?

16 A. That's correct.

17 Q. So you were not able to mail them, you simply published.

18 A. That's correct.

19 Q. The objection, however, at least, has brought someone to
20 light with regard to W. S. Ellis and W. S. Elliott?

21 A. Yes.

22 Q. The position of Buchanan Production in this unit as
23 delineated in Exhibit A, Page 2, is none of the coal
24 interest need to be pooled because they have all been
25 released?

- 1 A. That is correct.
- 2 Q. And with regard to oil and gas how much needs to be
3 addressed by this application?
- 4 A. 100 percent of it.
- 5 Q. Is outstanding?
- 6 A. Correct.
- 7 Q. Did you prepare an Exhibit C with regard to this unit
8 within the last sixty days?
- 9 A. Yes, I did.
- 10 Q. And does this Exhibit C contemplate zero bore holes?
- 11 A. Yes, it does.
- 12 Q. We're simply talking title curative and those kinds of
13 fees?
- 14 A. Correct.
- 15 Q. Is the estimate of \$25,250 reasonable in your judgement
16 to cover the costs regarding the items under considera-
17 tion here for this unit?
- 18 A. Yes, it does.
- 19 Q. Plan is disclosed on Exhibit G, Page 1, correct?
- 20 A. That's correct.
- 21 Q. And what we have is two parts of two panels in the unit.
- 22 A. Three parts.
- 23 Q. Three parts of three panels in the unit?
- 24 A. Correct.
- 25 Q. Okay. But no well bores?

1 A. No well bores.

2 Q. Exhibit G, Page 2, is an estimate of allowable cost by
3 panel which we've seen before.

4 A. Correct.

5 MR. SWARTZ: Hey, Marty. I need to talk to you for a second.

6 (Pause.) Mr. Chairman, let me suggest something. It's
7 clear to me looking at G, Page 3, that when we filed it
8 we neglected to tell you what the panel division interest
9 was for, development panel 3. We can do that. Marty can
10 do it in a minute and I would like to let him do and come
11 back to this and put that in the record so that we have
12 the production from the three panels covered.

13 MR. EVANS: Estimated allowable cost by panel --

14 MR. SWARTZ: We will forego that because we can't do that
15 quickly. You understand? What I'm saying is we're not
16 going to come up with a number for estimated allowables
17 on that panel. But we do want to come up with a number
18 for estimated royalty.

19 MR. CHAIRMAN: The formula for the division of interest?

20 MR. SWARTZ: Mr. Chairman, if I could let my people do some
21 figuring and come back to this one?

22 MR. CHAIRMAN: Okay.

23 MR. SWARTZ: Let me finish the other questions, though. The
24 last couple of questions.

25 Q. (Mr. Swartz continues.) Mr. Gordon, have you shown on

- 1 Exhibit G, Page 3, the panel division of interest for the
2 development Panels 5 and 4?
- 3 A. Yes, we have.
- 4 Q. And are we going to calculate or are you going to proceed
5 to calculate the panel division which is with regard to
6 Panel 3 and we'll come back to this and supplant that
7 in a minute?
- 8 A. Yes, we will.
- 9 Q. Okay. And that's the only outstanding division of
10 interest that is not reported?
- 11 A. That's correct.
- 12 Q. Is the plan of development shown on Exhibit G, Page 1, a
13 reasonable plan of development for Unit V-20 to develop
14 the methane gas in that unit?
- 15 A. Yes, it is.
- 16 Q. And if the development plan is followed would it tend to
17 lessen and minimize physical and economic waste at
18 protective correlative rates?
- 19 A. Yes, it would.
- 20 Q. The next item on the docket and I believe it's the last
21 one is V-21, which is 0246. If you would turn to A,
22 Page 2, the total coal interest that needs to be pooled
23 is in what percentage?
- 24 A. 1.58 percent.
- 25 Q. And the outstanding oil and gas interest that needs to be

- 1 pooled?
- 2 A. 69.89 percent.
- 3 Q. Now, turning to Exhibit B, did you mail copies of the
4 notice and application to everyone for whom you had an
5 address?
- 6 A. Yes, we did.
- 7 Q. And at the appointed time when this was sent out did you
8 have an address for Mary C. Ellis' heirs?
- 9 A. No, we did not.
- 10 Q. And then consequentially you were unable to mail to them?
- 11 A. That's correct.
- 12 Q. Did you get back the notices that you sent to people for
13 whom you had addresses. Did everyone sign the bill?
- 14 A. Yes, they did.
- 15 Q. Turning to Exhibit C, did you prepare that in the last
16 sixty days?
- 17 A. Yes, I did.
- 18 Q. Is the \$29,250 a reasonable estimate of the cost that you
19 would need to be expended to proceed with the development
20 contemplated by Exhibit C, Page 1?
- 21 A. Yes.
- 22 Q. Exhibit G, Page 1, shows a portion of development panel 5
23 in V-21, correct?
- 24 A. That's correct.
- 25 Q. It doesn't show a well?

1 A. No.

2 Q. Exhibit G, Page 2, shows the per panel cost per unit,
3 correct?

4 A. Correct.

5 Q. We've seen that before. And it sets those forth with
6 regard to this particular unit, V-21?

7 A. Yes, it does.

8 Q. And then the last page, Exhibit G, Page 3, sets forth the
9 division of interest or the respondent's or parties to
10 this application that would represent the royalty if you
11 multiplied it times one-eighth -- at least to the extent
12 that they are tenants in common -- and would enable them
13 to calculate what percentage participation would be or
14 carried interest?

15 A. That is correct.

16 Q. You wish to add or dismiss anyone from Unit V-21?

17 A. No, we do not.

18 Q. That's all I have on V-21. Going back to V-20 and the
19 objection. I would just have a couple of comments with
20 regard to the objection that we received and I'll just
21 tender that. Basically, I don't think that any of the
22 objections has any legal significance. Essentially, what
23 they're saying is that they are unhappy that only 2.17
24 acres of the tract that they own happens to be within
25 Unit V-20 and it sounds like they would like you all to

1 change the shape of the unit from an 80 acre square to
2 some weird shape that just accomodates the bounds of
3 their tract. Because it says the size of the unit that
4 is numbered V-20 needs to be increased to provide for the
5 remaining acreage. So they wanted to have some sort of
6 weird ameba-like look to accomodate that. Obviously, we
7 established the field in the hopes of getting some
8 consistency, predictability and uniformity. I think this
9 is a poor suggestion and if you implemented something
10 like this you've opened the door to true nightmares for
11 the rest of our lives in terms of changing sizes of
12 units. But, basically, it seems to me that they say they
13 have an 84 acre tract. They're unhappy that only 2.17
14 acres are included in this unit. What's in there by
15 survey is what's in there by survey. In other units they
16 may have more acreage, but that to me does not seem to
17 be an objection that should be entertained.

18 MR. MASON: Mr. Chairman?

19 MR. CHAIRMAN: Mr. Mason?

20 MR. MASON: I guess Marty might be coming closer than one of
21 you all. Do you know whether the rest of this acreage --
22 is any of it outside of the Oakwood Field? It's not a
23 bordered unit or anything, is it?

24 MR. WIRTH: Which one are we on?

25 MR. SWARTZ: This is V-20. We're back to V-20.

1 MR. WIRTH: It's an interior unit.

2 MR. MASON: So even if it's not in this unit it's going to end
3 up in some other unit?

4 MR. WIRTH: Now, which tract are we talking about?

5 MR. SWARTZ: We're talking about the unit 3-B. She's in tract
6 1.

7 MR. MASON: Tract 1.

8 MR. SWARTZ: Which you can see if you look at A, Page 2.
9 Tract 1 is this piece here that essentially just kind of
10 catches the corner of the unit and if the next unit to
11 the --

12 MR. WIRTH: V-20?

13 MR. SWARTZ: I guess that would be the east were to develop --

14 MR. WIRTH: V-19.

15 MR. SWARTZ: Excuse me. So I mean they would have a pretty
16 big position in the unit to the east.

17 MR. WIRTH: V-20? Okay. So they would have an interest in V-
18 19?

19 MR. SWARTZ: Right. And she's going to be in V-19 which is a
20 panel.

21 MR. GORDON: It's going to be a later panel.

22 MR. SWARTZ: Right.

23 MR. WIRTH: It will be a later panel. We are doing title now.
24 She will pick up the majority of her interest in that.
25 And it looks like probably, some in the other to the

1 south.

2 MR. SWARTZ: That's really all I have to comment in terms of
3 the objection. Are there any questions on that?

4 MR. CHAIRMAN: We're discussing Exhibit B and relating to that
5 Exhibit A and your percentage of interest would be pooled
6 is 100 percent?

7 MR. MASON: I was having trouble with that in terms of where
8 it says, "Percentage of interest be pooled 100 percent."

9 MR. WIRTH: Gross. If I have one percent I have 100 percent.
10 If I leased one percent then gross I have 100 percent.
11 The net don't -- I only have 1 percent leased.

12 MR. SWARTZ: Yes? No?

13 MR. MASON: We've been through this before, I know.

14 MR. SWARTZ: If your lease is from a tenant in common with an
15 undivided interest --

16 MR. MASON: What you're saying is that this total --

17 MR. SWARTZ: Right. Let's take -- look. Take a map --

18 MR. MASON: Let's suppose -- what you're saying is that that
19 person owns 100 percent of the tract that's got to be
20 pooled, is that correct?

21 MR. SWARTZ: No. No. If you and Kevin had an undivided
22 interest in one tract and there were several other tracts
23 and Kevin gave me a lease but you wouldn't, in the gross
24 acreage in the unit I've got a lease potentially on a 100
25 percent. But on the net acreage I'm missing you in that.

1 tract. So, I mean, you could have a situation where you
2 literally had one tenant in common in every tract -- you
3 had a lease from them, so you had a position from a
4 tenant in common in every tract, you had a position in
5 the 100 percent gross, but the net that you control, you
6 back it down is not 100 percent. That's all he's saying.

7 MR. MASON: So you got some lessee --

8 MR. SWARTZ: In every tract.

9 MR. MASON: -- in every tract that gives you a 100 percent.

10 MR. WIRTH: If I had a little bit of interest at the time --
11 yes, you are correct.

12 MR. MASON: How do you -- I know we've been through this
13 before. But how do you all arrive at that method
14 equation?

15 MR. WIRTH: Colonel Drake I think came up with it.

16 MR. MASON: Just to the accepted oil field practice?

17 MR. WIRTH: Yes. That's throughout the industry practice. We
18 always report in gross and net. Some management say,
19 "Well, what's your position -- let's say in the Oakwood
20 Field. I have 300,000 gross acres. Well, Island Creek
21 only controls 100,000. Well, I have a gross acreage
22 because I have a certain percentage under oil and gas and
23 a certain percentage under coal.

24 MR. MASON: Virginia doesn't have waste against co-tenant so
25 if you got a 100 percent of the gross you've in fat city

1 here.

2 MR. WIRTH: Yeah. But we were always report -- they get paid
3 in net. We can internally, if you own one percent you
4 can -- that one percent has a right to that gas and they
5 can't stop anybody from drilling. They have a right
6 to their --

7 MR. MASON: So that position you take of the ownership of one
8 percent, if the 80 acres was owned by two heirs, two
9 people, if you have a lease from one of them you take the
10 position that you have the right to extract gas at 100
11 percent of it.

12 MR. WIRTH: You bet.

13 MR. MASON: But you would have to pay half of it to the other
14 person.

15 MR. WIRTH: That's correct. Whatever that percentage is.

16 MR. MASON: And that's based on this co-tenant.

17 MR. SWARTZ: No. That's based on the forced pooling. You
18 can't get away with that with your co-tenant. I mean,
19 you can't take a lease from one co-tenant and go out and
20 drill a well. I mean, you could, but you would not want
21 to do that.

22 MR. WIRTH: Well, you wouldn't want to do it --

23 MR. MASON: We don't want to talk about that law here, but
24 technically, as I understand the law on this, you could
25 do it.

1 MR. SWARTZ: You cannot do it in West Virginia. You'd get
2 sued, big time.

3 MR. WIRTH: And dower interest and everything you always take
4 -- you may have a lease from all the kids, but you don't
5 have a lease from the widow and you're taking a big
6 business risk of drilling that well without that lease.

7 MR. MASON: Okay. I understand. I'm just having trouble with
8 that. Mentally I have a hard time with that.

9 MR. WIRTH: We keep kicking around whether we should drop it
10 or not. It shows you that we do have a piece of every-
11 thing.

12 MR. SWARTZ: I mean, to give you the perfect example, if --
13 well forget it. We're spent enough time on that.

14 Q. (Mr. Swartz continues.) Sam, do you have the numbers that
15 we need for 0243 on V-207

16 A. Yes. I do. By the way, I will get these typed up and
17 sent to you. In panel 3, the panel that's missing, by
18 Anna L. Graham, that is in the unit 2.71 percent the
19 panel allocation is 1.116 percent which would give her a
20 percentage in the panel of .03024 percent. For the W. S.
21 Ellis estate in the unit is 48.71 percent. Again, the
22 panel is 1.116 percent, which will give them a panel
23 interest of .5436 percent. And then the W. S. Elliott
24 estate has 3.13 percent in the unit and again, the panel
25 interest is 1.116 percent and this will give that estate

1 a panel interest of .0363 percent.

2 MR. SWARTZ: Okay. That concludes our testimony on V-20 and
3 the other ones that we have consolidated.

4 MR. CHAIRMAN: Any questions?

5 MR. MASON: You will also provide a -- the amended Exhibit G,
6 page -- it's going to be page 2, but the portion that's
7 -- for panel development 3 or the one we were just
8 discussing? You got development costs, you know, you got
9 development 5 and development 4. If you've got develop-
10 ment 3 on G, Page 3, don't you need a little more on the
11 previous page?

12 MR. SWARTZ: Yeah.

13 MR. MASON: And that will be filed?

14 MR. WIRTH: I break that out and file this --

15 MR. MASON: -- as an amendment to Exhibit G, Page 2, you are
16 going to amend that?

17 MR. SWARTZ: Well, it'll be a supplement. It will be a next
18 page, yes. So you'll be getting a new Exhibit G, Page 3
19 that will have -- that will address panel 3 with the
20 numbers that Sam has just read on the record and then
21 there will be a supplement for G, Page 2, that deals with
22 the allocable caused by panel in that panel 3.

23 MR. CHAIRMAN: Any further questions? Do you have anything
24 else?

25 MR. SWARTZ: No.

1 MR. MCGLOTHLIN: Mr. Chairman?

2 MR. CHAIRMAN: Mr. McGlothlin?

3 MR. MCGLOTHLIN: I make a motion to accept the petitions as
4 filed.

5 MR. CHAIRMAN: We have a motin to accept the petitions.

6 MR. EVANS: Second.

7 MR. CHAIRMAN: Motion is second. All in favor signify by
8 saying yes. (All affirma.) All opposed say no. (None.)
9 Motion carries.

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(End of proceedings for
July 21, 1992.)

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CERTIFICATE

COMMONWEALTH OF VIRGINIA

COUNTY OF WASHINGTON

I, Cleadys D. Griffin, Notary Public in and for the Commonwealth of Virginia, at Large, do hereby certify that the foregoing proceedings of the Virginia Gas and Oil Board meeting held on July 17, 1992 at the Southwest Virginia 4-H Center, Abingdon, Virginia, were taken by me and that the foregoing is a true and correct transcript of the proceedings had as aforesaid to the best of my ability.

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

GIVEN under my hand this 6th day of August, 1992.


CLEADYS D. GRIFFIN
NOTARY PUBLIC

My commission expires March 30, 1993.