

## NEW MEXICO OIL CONSERVATION COMMISSION

## COMMISSION HEARING

SANTA FE, NEW MEXICOHearing Date FEBRUARY 18, 1988 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Norbert F. Reuniger	Yates Sch. Corp.	Albia NM
Gene Jensen	BASS	Fort Worth
Louis Wilpitz	BASS ENTERPRISES PRODUCTION CO	Fort Worth, TEXAS
VICTOR T. LYON	GCD	SANTA FE
Jim Knauf	Self	Artesia, NM
Bill Duncan	Exxon	Midland, TX
Dean H. Mutti	Exxon	Midland, TX
ROBERT GRADY	Exxon	MIDLAND, TX
Frank Cherry	BLM	Roswell NM
J. Bruce	Huntley-Lane Farm	Santa Fe
STAN STABO	SLO	Santa Fe
Jim Otis	GAS Co. of NM	ALBUQ.
CAROLYN THOMAS	GAS Co. of NM	ALBUQ.
Robert H. Greer	Bass	Santa Fe
MIKEY COULMAN	LUNDBERG	CARLSBAD
Guy Hollingsworth	CHEVRON	Hobbs
LARRY SANDERS	Chevron	Hobbs
HUGH INGENH	Phillips Petroleum Co.	Odessa, Texas
JOHN SEEMAN	Conoco	HOBBS
DENNIS LEHMEYER	TEXACO	HOBBS
JIM COLLIER	TEXACO	HOBBS
DAN CURKENS	AMOCO	HOUSTON
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NAME	REPRESENTING	LOCATION
H. RENE MOULINET	UNOCAL	MIDLAND, TX.
R. Hulm	Byram	Santa Fe
Scott Hall	Campbell & Jack	SF
JOHN WAID	Talisman Energy Corp	Houston, TX
John Dean	Mesa Ltd. Partnership	Amarillo, Tex.
RICHARD PARIS	SUN E & P	Midland, TX
Mike Mays	SUN	Midland
Alan Beers	Western Ag-Minerals	Carlsbad, NM
Don Galbraith	Louisiana Land & Expl Co.	Houston
Charles A. Caughey	Hondo Oil & Gas Company	Roswell
CHARLES SNOW	NEW MEXICO POTASH CORP	HOBBS
R. H. LAMIE	IMC	Carlsbad
John Purcell	BLM	Roswell
Armando Lopez	Self	Santa Fe
Ray D. Graham	BLM	Roswell
Dean Myklebust	Potash Industry	El Paso
Charles C. High, Jr.	IMC-FERT	CARLSBAD
WALTER D. THAYER	RLM	Roswell
Joe Lara	LOUISIANA LAND AND EXPLOR CO	HOUSTON, TX
PAUL F. NIELSEN	TENNECO OIL COMPANY	SAN ANTONIO, TX
REX BURLAND		

Ray Willis  
Roger Sweet  
Dan Sweet  
Richard Donnelly  
Buck Schaefer  
Patrick Turner  
James A Olsen  
Christopher Thompson  
Jerry Sells  
Mike Wilkins  
Russell Jentgen  
Owen Hopper  
Tom Boyd  
Bill Dalness  
George Buehler

Hanson Oil Co  
Hanson Oil Co  
Hanson Oil Co  
EASTLAND EXPLORATION  
Santa Fe Energy Co  
"  
BLM  
Mesa Ltd Partnership  
OCE  
"  
BLM - New Mexico State Office  
Hinkle Law Firm  
Enerco Resources Inc.  
BLM - NM State Office SF  
ANADARKO PET CORP.

Roswell  
Roswell  
Roswell  
Midland, TX  
Midland, TX  
"  
Santa Fe, NM  
Amarillo, TX  
Hobbs  
Arlington  
Santa Fe  
Santa Fe  
Roswell - Ruidoso  
Midland, TX

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

18 February 1988

COMMISSION HEARING

IN THE MATTER OF:

The hearing called by the Oil Conser- CASE  
vation Division on its own motion to 9316  
reconsider the agreement reached by  
the Potash-Oil and Gas Study Committee  
on November 23, 1987, to revise, amend,  
and recodify Order No. R-111, as  
amended.

BEFORE: William J. LeMay, Chairman  
Erling Brostuen, Commissioner  
William R. Humphries, Commissioner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: No attorney appearing.

For Bass Enterprises: W. Thomas Kellahin  
Attorney at Law  
KELLAHIN, KELLAHIN & AUBREY  
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For Texaco: Scott Hall  
Attorney at Law  
CAMPBELL & BLACK P. A.  
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Santa Fe, New Mexico 87501



## A P P E A R A N C E S

For Exxon:

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For the Potash Industry:

Charles C. High, Jr.  
Attorney at Law  
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MR. LEMAY: Case Number 9316 is  
herein called.

In the matter of the hearing  
called by the Oil Conservation Division on its own motion to  
consider the agreement reached by the Potash-Oil and Gas  
Study Committee on November 23, 1987, to revise, amend, and  
codify Order Number R-111, as amended, to consider the fol-  
lowing:

Changing the area covered by  
the order to coincide with the known potash leasing area  
(KPLA) as determined by the Bureau of Land Management.

Two, expanding and contracting  
said area by the pool nomenclature procedure rather than by  
further amendments to Order No. R-111.

Three, changing casing, cement-  
ing requirements of Order No. R-111-A.

Four, adopting directional drill-  
ing procedures.

Five, revising notice require-  
ments for proposed drilling wells.

Six, revising notice require-  
ments of mining operations and proposed mining operations.

And Seven, adopting and includ-  
ing any other provisions which may be advisable.

1                   The aforementioned KPLA con-  
2 sists presently of all or parts of Township 18 South, Range  
3 30 East; Township 19 South, Range 29, 34 East.

4                   Let the record show that as ad-  
5 vertised we'll include other locations in this case.

6                   We are looking for closure of  
7 this potash agreement, the Study Committee, we are looking  
8 at that agreement and how it would affect operations in the  
9 area and used as guidelines, used as points of agreement,  
10 used as whatever testimony and statements might convince the  
11 Commission to use it as.

12                   We are not in any form or  
13 fashion looking to take away any jurisdiction by any federal  
14 or state agency. They are by statute required to conduct  
15 their own appraisals of the potash and oil reserves and the  
16 Commission cannot take away that -- or doesn't want to take  
17 away that jurisdiction.

18                   In the matter of Case 9316 I'll  
19 now call for appearances.

20                   Mr. Lyon.

21                   MR. LYON: Mr. Chairman, Victor  
22 Lyon, Chief Engineer for the Oil Conservation Division and  
23 Chairman of the Oil-Potash Study Committee.

24                   MR. LEMAY: Thank you.

25                   MR. LYON: I'd like to present

1 testimony on the activities of the committee.

2 MR. LEMAY: Thank you. Mr.  
3 Kellahin.

4 MR. KELLAHIN: Mr. Chairman,  
5 I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kel-  
6 lahin & Aubrey. I'm appearing on behalf of Bass Enterprises  
7 Production Company and I have one witness.

8 We are proponents in this case.

9 MR. LEMAY: Thank you. Mr.  
10 (unclear).

11 MR. HALL: Mr. Chairman, Scott  
12 Hall from the Campbell & Black law firm in Santa Fe on be-  
13 half of Texaco. We may call one witness this morning.

14 MR. LEMAY: Thank you, Mr.  
15 Hall. Yes, Mr. Bruce.

16 MR. BRUCE: Mr. Chairman, my  
17 name is Jim Bruce, representing Exxon. We may call one or  
18 two witnesses.

19 MR. LEMAY: Thank you, Mr.  
20 Bruce.

21 MR. HIGH: Mr. Chairman,  
22 Charles C. High, Junior, of the Kemp, Smith law firm and I  
23 was a member of the Potash Committee and I'm here on behalf  
24 of the potash industry.

25 MR. LEMAY: Thank you, Mr.



1 High.

2 Additional appearances in the  
3 case?

4 After -- after testimony we  
5 will be taking statements and that does not involve having  
6 to be represented by legal counsel. We were asked that  
7 question.

8 At this point can I ask all the  
9 witnesses that will be giving testimony to stand and raise  
10 your right hands?

11

12 (Witnesses sworn.)

13

14 You may be seated. We shall  
15 begin with Mr. Lyon.

16 MR. LYON: If the Commission  
17 please, my name is Victor T. Lyon. I'm Chief Engineer for  
18 the Oil Conservation Division in Santa Fe. I have appeared  
19 before you previously and had my credentials accepted as an  
20 expert witness.

21 MR. LEMAY: Mr. Lyon's  
22 qualifications are acceptable. If you will, because we do  
23 lack counsel. The Governor had pressing matters with --  
24 you're all familiar with the Legislative session we have  
25 that's going to adjourn at noon, so we'll have a lawyer that

1 will be joining us late; however, we can certainly request  
2 the testimony. Mr. Lyon has been sworn in and we will ask  
3 him to explain in his own words what happened during the --  
4 the period of time, the year and a half that the Oil-Potash  
5 Committee was in existence, the sub-committee was formed,  
6 and what is recommended by the Division for the Commission  
7 to consider.

8 So with that, Mr. Lyon, if you  
9 will proceed.

10 MR. LYON: Thank you, Mr.  
11 Chairman.

12 Shortly after I came aboard the  
13 Commission March 3rd of 1986, the Director gave me several  
14 tasks, one of which was a review of Order R-111 to see  
15 whether it needed to be updated because the order is thirty  
16 years plus old. There have been many developments, improve-  
17 ments in techniques and technology in the oil and gas indus-  
18 try and for other reasons he thought that it might be appro-  
19 priate to consider updating the order.

20 The effort was initiated and I  
21 will -- I will be testifying from Exhibit One.

22 Exhibit One is essentially a  
23 copy of my file on the committee activities and I have num-  
24 bered the pages. Each item is -- is given a letter suffix  
25 and then there is a fraction following that if there's more

1 than one page and I show it page 1 of 3, page 2 of 3, and  
2 this sort of thing.

3 The first page is the call  
4 dated March 21st, 1986, for people to volunteer to serve on  
5 a committee to review Order R-111, and the second item is a  
6 notice to those who volunteered to serve on the committee to  
7 come to Santa Fe for the initial meeting on May 29th.

8 Page 3 and 4 of that particular  
9 mailing contains the mailing list that was used and the list  
10 comprises those who volunteered to serve on this committee,  
11 and I might point out that there was nobody excluded. Any-  
12 body who wanted to serve on that committee was welcomed.

13 Also attached to the original  
14 mailing, I don't think it's on that exhibit, was a copy of  
15 Order R-111-A, which was the order that the committee was  
16 going to be considering.

17 The next item is the agenda  
18 that was prepared for that initial meeting and at that  
19 meeting the Director came in and greeted the -- the commit-  
20 tee, gave them some suggestions on what he would like the  
21 committee to do and what they should consider and this sort  
22 of thing, and then when we got into the functions of the  
23 committee we -- we had some last minute additions to the  
24 committee. I think that there was a perception that we  
25 might decide some of these things by a majority vote and I

As you probably know, where has been a great deal of misunderstanding and distrust, dissatisfaction with R-111 between the two industries and the potash people did not want anybody drilling in the potash area, period, and the oil industry felt that they should be able to drill anywhere that was reasonable with no more restrictions than what they considered to be reasonable and the parties were far from any agreement and I told them that we would not consider any changes to Order R-111 until we had educated each other in the other's industry to the point that we could discuss these things with the knowledge and with some understanding of the other person's side.

19 And so the first meeting we de-  
20 cided how we were going to go about that and we appointed a  
21 chariman for each industry. For the potash Walt Thayer was  
22 the chairman and for the oil and gas John Wade was the  
23 chairman, and we broke up that -- that meeting with an  
24 understanding that each committee would prepare a training  
25 program to train the other industry on how we conducted our

1 business, why, and the concerns that we had about the  
2 other's operations in the same area.

3                   It took three letters to get  
4 the next meeting together. We finally did meet on September  
5 25th and the call was in Exhibit 1-D and that exhibit con-  
6 tains an outline of the presentations of each industry in  
7 educating all of us in how they operate.

8                   The next step that we undertook  
9 was a field trip where the committee members who -- who  
10 could went to Carlsbad. We took a field trip, field trip  
11 through IMC's mines and through their refining plant, and  
12 then that afternoon we went out to a drilling rig which was  
13 in operation and toured the drilling rig and let everybody  
14 look at it and ask all the questions they wanted. The same  
15 thing in the mining operation. Everybody was completely ac-  
16 cessible to answer questions and the flow of information was  
17 -- was very free and easy.

18                   The next morning we went  
19 through Lundberg's mine and the two mines were -- are very  
20 different. In the IMC mine they do their mining with explo-  
21 sives and they haul their equipment and people around in --  
22 in mining cart, diesel-operated, diesel-powered mining  
23 carts.

24                   In the Lundberg mine they use  
25 mining machines and the transportation has been through

1 trolley car systems.

2                   Also in the Lundberg mine we  
3 stopped and observed some oil seeps that they had encoun-  
4 tered and we had some discussions about that.

5                   Following that trip we went to  
6 -- to Roswell and toured the facility at the Eastern New  
7 Mexico Oil Technology Center. I'm not sure that's the right  
8 name but anyhow, that school in Roswell where they're train-  
9 ing technicians for the oil industry.

10                   We saw all kinds of equipment  
11 that the oil industry uses, including some drilling rigs,  
12 pulling units, valves, all types of downhole equipment. It  
13 was a very educational tour. That trip took place November  
14 13th and 14th, and it had turned cold that day, and I'll  
15 tell you, it was cold down in those mines.

16                   Before we could get together  
17 again there was an election. There was considerable change  
18 in personnel and that sort of thing, and it took us a little  
19 while to go to the next step.

20                   But the next meeting was held  
21 on March 19th and at that meeting I asked the committee what  
22 else we needed to do for us to better understand the other's  
23 industry and the other's problems, and so forth, and they  
24 seemed to be in complete agreement that we had done all of  
25 that that we needed to and it was time that we started look-

1 ing at the rules. In order to -- to have a group which was  
2 a little bit more manageable, we had about 32 members on our  
3 committee, and it was decided that we should pare the group  
4 down to a workable size, and so we had 3 representatives and  
5 an alternate from each industry to form what we called a  
6 work committee.

7 The first meeting of the work  
8 committee was held in El Paso in Charlie High's office and  
9 we set the dates of April 30th and May 1st and you -- the  
10 notice of the meeting was also sent to Commissioner Brostuen  
11 and to Jim Olsen with the BLM and to Les Clements with the  
12 OCD office in Artesia.

13 We held our meeting there and  
14 the potash people had prepared a proposal and the oil and  
15 gas people were not quite that well prepared.

16 We discussed the potash propos-  
17 al and then adjourned so that the oil and gas people could  
18 prepare (unclear).

19 The next meeting of the commit-  
20 tee was July 23rd and 24th and the potash people had devel-  
21 oped a proposal which was accepted -- well, not accepted, it  
22 was accepted for discussion purposes, reviewed in detail and  
23 we felt that there were a number of things that needed to be  
24 checked over and also the oil and gas group felt that they  
25 needed to go back to those people in the industry who were

1 not represented on the work committee to get -- inform them  
2 of what was being discussed and get their input so that they  
3 could, if possible, get a consensus in the industry.

4 Then we had our final meeting  
5 on November 23rd, I believe it was, November 23rd, and at  
6 that meeting there was a new draft of the agreement prepared  
7 by the potash people. We made some amendments there while  
8 the meeting was in progress and at the end of the meeting we  
9 came up with an agreement which was signed by all of the in-  
10 dustry representatives that were present.

11 Also present at that meeting  
12 were Chairman LeMay, Commissioner Brostuen, Fran Cherry from  
13 the BLM. Those two agencies, the OCD and the BLM were rep-  
14 resented at all of the work committee meetings and it was  
15 very helpful because we had the people there who will be ap-  
16 proving or disapproving the APD and getting their input as  
17 to what the parameters were that they will be using in mak-  
18 ing those decisions.

19 We really began to make some  
20 progress on this thing. If you -- I'm sure you can imagine  
21 that the oil and gas industry was reluctant to accept the  
22 stand-off from the commercial potash (unclear) and this was  
23 a very serious bone of contention until Mr. Cherry stated  
24 that he would not let the oil and gas people drill any  
25 closer than what the potash people were proposing, and since



1 the BLM controls about 90 percent of the acreage in there,  
2 it looked like it really wasn't worth arguing that point.

3 If there's anybody who has any  
4 concern that their particular, certain concerns were not ad-  
5 dressed by this committee, I can assure you that everything  
6 that you can think of was discussed. It was brought up; it  
7 was hashed over. This was not a passive committee. We got  
8 into the nitty gritty of this thing and I think that the  
9 agreement that came out was a true representation of -- rep-  
10 resentative of two industries who have felt they have gone  
11 as far as they can go protecting their interest.

12 Now, at the meeting we ex-  
13 plained that we, as the OCD, and the BLM, did not feel that  
14 they could bind themselves or be bound by an agreement; that  
15 we could not delegate our discretion about these matters,  
16 but we felt that it was a representation of the -- an agree-  
17 ment that people could live with and I have explained to  
18 people when they asked me as to who is bound by this, and I  
19 tell them there isn't anybody that's bound by it. I think  
20 even the people who -- who signed it did not feel that they  
21 were binding their individual company. Certainly nobody who  
22 signed it could possibly be bound by that agreement.

23 I don't feel that the OCD is  
24 bound by it. I really don't think that anybody is bound by  
25 it but it represents a report back to the OCD of an agree-

1 ment in this committee as to what they agreed to was a  
2 reasonable approach to the potash/oil conflict.

3 Exhibit Number Two is a copy of  
4 that agreement. It was -- and incidentally, there was a  
5 notice sent out in December advising that there had been an  
6 agreement reached, advising that we would be having a hear-  
7 ing, and attaching that agreement to the memorandum.

8 Exhibit Three is a map of the  
9 potash area. One of the things that we agreed to do in this  
10 committee was to eliminate the confusion between R-111 area  
11 and the known potash leasing area. There are some places  
12 where those boundaries criss-cross and I know there have  
13 been several instances where wells were approved because  
14 they thought it was outside the R-111 area and when they got  
15 to checking a little closer it was inside, and vice versa.  
16 It's a confusing situation and we were of the consensus that  
17 the order should be the same and it was my understanding  
18 that the BLM would attempt to get the secretarial order re-  
19 duced to the same area so that there would be one potash  
20 area that applies in all cases.

21 I have put a copy of Exhibit  
22 Three over here on the chalkboard. The white areas within  
23 the heavy outline, heavy line outline, are areas that are  
24 common both to R-111-A in its present form and the known  
25 potash leasing area.

1                   The area which is shaded is the  
2 area in the known potash leasing area outside of Order R-  
3 111.

4                   The red coloration is -- repre-  
5 sents areas that are in R-111 but are outside the known pot-  
6 ash leasing area.

7                   And then the cross hatched area  
8 on the outside is the area within the secretarial potash or-  
9 der but outside of the known potash leasing area or Order R-  
10 111.

11                  So you can see on the map how  
12 much we are expanding the R-111 area and the red areas indi-  
13 cate the amount that it will be contracted.

14                  We also propose rather than to  
15 issue an amendment to Order R-111 as each expansion or con-  
16 traction takes place, that we would do this in our normal  
17 pool nomenclature hearings so that there will be a hearing  
18 about it but we're about to run out of letters in the alpha-  
19 bet and I see no need to -- to continue to issue an R-111  
20 amendment in order to expand in the area.

21                  Exhibit Four is the proposed  
22 revision of Order R-111-A. After I had received the agree-  
23 ment or perhaps we should couch it as the report of the work  
24 committee, I sat down to see what changes we needed to make  
25 in R-111 in order to accommodate to the degree that we need

1 to the agreement of the work committee and I have prepared  
2 this as they do the Legislative bills. The language that is  
3 being deleted is in brackets with a line drawn through the  
4 wording, and the added language is underlined.

5 A good many of the changes are  
6 where we just changed the word "commission" to "division" in  
7 conformance with the present organization.

8 In Section -- no. In the head-  
9 ing there, right after "it is ordered that", Order R-111-A  
10 said that it was to govern the exploration of oil and gas in  
11 certain areas and I felt that -- that as it has been applied  
12 over the years, it certainly went beyond exploratory wells  
13 and included all development wells, and therefor, I added  
14 the words "and development".

15 The order has been inconsistent  
16 in that some areas it calls the potash oil area and other  
17 areas it just called it the potash area.

18 So in order to make it consis-  
19 tent I just eliminated the word "oil" where it was used.

20 I added a statement in Para-  
21 graph II (1) to the effect that the new area is coterminous  
22 with the known potash leasing area.

23 The next paragraph implements  
24 the change of expansion and contraction through the regular  
25 nomenclature hearings.

1 I've added a sentence, this is  
2 on page 6, -- oh, there was another inconsistency in R-111-A  
3 where in the definition of deep and shallow zones. The R-  
4 111-A first in those definitions referred to the Delaware  
5 sand. I've done a little work in the Delaware Basin and  
6 Delaware sand is not a very definitive term and so I just  
7 changed that to Delaware Mountain Group so it would be con-  
8 sistent.

9 I guess I skipped page 3. We  
10 -- I did not adopt the entire language of the agreement be-  
11 cause I feel that the Division, and I'm sure the BLM feels  
12 the same way, needs to retain its discretion about such mat-  
13 ters, but the added language says "The Division's District  
14 Supervisor may waive the requirements of Section IV(3)",  
15 that's the salt protection strings, "upon satisfactory show-  
16 ing, with concurrence of the BLM, that a location is outside  
17 the LMR and surrounding buffer zone and that no potash re-  
18 sources will be endangered."

19 We also added Paragraph (5)  
20 there, which is in conformance with the agreement that "all  
21 encounters with flammable gas, including hydrogen sulfide,  
22 during drilling operations shall be reported immediately to  
23 the appropriate OCD District office followed by a written  
24 report of same." And that is very little different than our  
25 general rules require.

1                   The agreement stated that wells  
2 could be deviated from the vertical after completely  
3 penetrating Marker Bed No. 126, and this is my -- my own  
4 implementation of that in that I am concerned that in a  
5 deviated hole there's a tendency of casing to lie -- lay  
6 against the down side of the -- of the hole, and I think  
7 this is a very important string of pipe and in order to  
8 assure that we get a good cement job, I have written in here  
9 that each joint of casing in the deviated portion of the  
10 hole will be centralized.

11                   On page 9 I added a paragraph  
12 in there, and I'd like to explain that a little bit.

13                   One of the things that the  
14 potash industry is greatly concerned about is the occurrence  
15 of methane in their mine and there's a very good reason for  
16 this concern. Should there be as much as a quarter of one  
17 percent of methane found in the mines, the mine will be  
18 classified as gassy and a very large part of their equipment  
19 must be changed out at a very large expense, and it would  
20 have the effect of shutting down mining operations.

21                   Of course, we have -- we have  
22 put the salt protection string in there. We have required  
23 cement to be brought to the surface and it occurred to me  
24 that the only time, really, that that potash may be in jeo-  
25 pardy is if before the intermediate or production string is

1 run should they run into a blowout situation, enclosed blow  
2 out (unclear) and pressure in excess of the burst rating of  
3 the casing, then there -- that is the only possibility that  
4 I can foresee where gas could be got into that section, and  
5 so I drafted this paragraph, which reads, "Before drilling  
6 the plug the casing outlet shall be equipped with rupture  
7 disc or other automatic pressure relief device set at 80  
8 percent of rated burst pressure of new casing or 60 percent  
9 of rated burst pressure of used casing, together with piping  
10 to divert any flow a safe distance from the rig. Such de-  
11 vice shall remain installed so long as drilling activities  
12 continue in the well until intermediate or production casing  
13 is cemented to surface."

14 Paragraph (4) I just rearranged  
15 the words a little bit. When I tried to go through there  
16 and cross out, underline, and so forth, it just became un-  
17 manageable so I just struck out the old sentence and put in  
18 the revised sentence. It really says the same thing.

19 On page 13, in conformance with  
20 the agreement of the work committee, we inserted a new Para-  
21 graph (1) that states as follows: "Within ninety days fol-  
22 lowing the effective date of this order, and on January 31st  
23 of each year thereafter each potash lessee shall file with  
24 the District Manager of the BLM a designation of the potash  
25 deposits on his lease which he considers to be life of mine

1 reserves as described in the agreement of the Potash-Oil and  
2 Gas Work Committee dated November 23rd, 1987, attached here-  
3 to as Exhibit B. Upon verification of the selection of LMR  
4 lands by the BLM such lands shall be committed to a map  
5 which together with appropriate buffer zones shall consti-  
6 tute lands on which drilling applications will not be ap-  
7 proved, except as provided in (3) below."

8 I'm not sure that that's -- I  
9 think that should probably be (4). Paragraph (4), which is  
10 added -- well, actually, it's to replace the one that's  
11 crossed out above, I believe, "Drilling applications on fed-  
12 eral lands will be processed for approval by BLM. Applica-  
13 tions on state or patented lands will be processed by the  
14 Division and in the case of state lands in collaboration  
15 with the Commissioner of Public Lands. The Division will  
16 first ascertain from the BLM that the location is not within  
17 the LMR area. Any application to drill in the LMR area, in-  
18 cluding buffer zones, may be approved only after notice and  
19 hearing, or by mutual consent of lessor and lessees of both  
20 potash and oil and gas interests. Applications to drill  
21 outside the LMR and associated buffer zones will be ap-  
22 proved as indicated in the guidelines established in Exhibit  
23 B."

24 We have struck the requirement  
25 that the potash companies file each year a 5-year projection



1 of their mining plans. As they have explained to us, that  
2 plan could very well be obsolete the day after they file it  
3 and therefor limited meaning.

4 We believe that the filing of  
5 the LMR's and they are still required to file plats each  
6 year showing where they have actually mined, and those plats  
7 are on file with the Division and are available for public  
8 inspection.

9 The 5-year mining plans were --  
10 were held confidential.

11 And as indicated on here, they  
12 -- we will attach as Exhibit A to the order, at least this  
13 is our proposal, the description furnished by the BLM of the  
14 areas comprising the known potash leasing area, and that de-  
15 scription is Exhibit Five.

16 Now, a number of people have  
17 indicated to me that they feel that the oil and gas industry  
18 is giving up too much in this agreement, but every well that  
19 was proposed to be drilled in the blue area on -- on the  
20 BLM's map met with opposition from a potash operator, and it  
21 seemed to me that the arbitration meetings were of no value.  
22 I have not seen an agreement come out of any of those arbit-  
23 ration meetings except where the applicant wanted to be as-  
24 sured that his lease was going to be extended because of the  
25 interference with the potash, and he really didn't want to

1 drill that well that much, anyway. And the others have re-  
2 sulted in agreement to disagree and go to hearing; either  
3 that or to drop the drilling plan.

4 I feel that the oil and gas in-  
5 dustry was getting nowhere with -- with wells and that the  
6 agreement and the changes in Order R-111 will allow some  
7 wells to be drilled that otherwise would not be drilled, and  
8 I think that the procedure for filing an application is  
9 clarified. I think we've eliminated confusion as to where  
10 the special casing rules need to be used and where they  
11 don't. It seems to me that it is just a clearer order than  
12 -- than what we had.

13 That's all I have.

14 MR. LEMAY: Thank you, Mr.  
15 Lyon.

16 Questions of the witness. Mr.  
17 Kellahin?

18 MR. KELLAHIN: Thank you, Mr.  
19 Chairman.

20  
21 QUESTIONS BY MR. KELLAHIN:

22 Q Mr. Lyon, when you refer to the BLM  
23 potash area were you referring to the area defined on the  
24 Secretary of Interior map from October of '84 that outlines  
25 the potash enclave?

1           A           Is that the Secretary's order?

2           Q           Yes, sir.

3           A           No.

4           Q           The Secretary area as defined in that Oc-  
5 tober '84 map, is that the boundary that you're making co-  
6 terminous with the R-111-A if this proposal is adopted?

7           A           No, the Secretary's order is the heavy  
8 black line shown on Exhibit Three and we do not intend to  
9 expand R-111 to cover that entire area. The small map that  
10 -- like this one, the ones that are available from the BLM,  
11 and so forth, the colored areas on that are the area that  
12 we're talking about as the known potash leasing area.

13          Q           When you define the current oil division  
14 area, potash/oil area, that's under R-111 through P, is it?

15          A           Yes. No, through O.

16          Q           Through O, and this would be proposal P  
17 to that series of orders.

18          A           Right.

19          Q           Lead me through, if you will, Mr. Lyon,  
20 what is the mechanics if an operator desires to drill a well  
21 in the OCD potash area under the existing procedures, where-  
22 by he wants to drill at any point within the R-111 area,  
23 even if the Secretary of Interior's map shows that it may be  
24 barren, may be minimal potash. He files his APD. He sends  
25 out the appropriate notices to the potash operators within a

1 mile of his well location and there is a timely objection by  
2 the potash operator. That matter then is sent to arbitra-  
3 tion and if arbitration is unsuccessful, it goes to the  
4 hearing. Is that not correct?

5 A That is correct.

6 Q And that hearing process is triggered  
7 without regard to whether or not the Secretary of Interior  
8 map shows that the area part the oil and gas operator seeks  
9 to penetrate is barren or not.

10 A That's true.

11 Q It becomes an issue at the hearing, and  
12 that's true of any APD proposed within the current R-111  
13 area. If you want to drill in that area and there's an ob-  
14 jection, you've got to go to hearing.

15 A Yes, sir.

16 Q If the proposed revision to the rules are  
17 adopted by the Commission will there not be greater flexi-  
18 bility for the operator of the oil and gas well to obtain a  
19 location within the R-111 area without a hearing?

20 A Yes, I think it's substantially improved.

21 Q And that is triggered based upon the in-  
22 corporation into the R-111 orders of the concept of life of  
23 the mine reserves.

24 A Correct.

25 Q Would you define what that means?

1           A           Life of mine reserves?

2           Q           Yes, sir, as it's used in the proposed  
3 order.

4           A           Well, of course, it refers to the -- to  
5 the agreement of the work committee. The agreement states  
6 it is the intention of the parties that certain areas of  
7 potash deposits, called life of mine reserves, or LMR's, be  
8 permanently protected from oil and gas drilling activities.

9           Q           In a general sense don't those -- doesn't  
10 that define, Mr. Lyon, what the potash industry believes to  
11 be those commercial deposits of reserves that are reasonably  
12 recoverable using current economics?

13          A           Yes, sir, it is, and I might state fur-  
14 ther that -- that at our work committee meetings the potash  
15 companies displayed the portion of -- percentage of the blue  
16 area which is shown on -- incidentally, there are some maps,  
17 copies of this small map down here on the table if anybody  
18 wants one.

19                       MR. KELLAHIN: If you don't  
20 mind, Mr. Chairman, perhaps we could mark this as Exhibit --  
21 what's your last exhibit, Four?

22          A           Five.

23                       MR. KELLAHIN: Five? This  
24 should be Five?

25          A           Six. This would be Six.

1 MR. KELLAHIN: May we mark this  
2 as Exhibit Six, Mr. Chairman?

3 MR. LEMAY: You may. It is so  
4 noted.

5 Q To aid us in our discussion, Mr. Lyon,  
6 the work study placed significance to the different colors  
7 that are coded on this display, did they not?

8 A Yes.

9 Q When we look at the yellow area on this  
10 colored display, what does that depict?

11 A The yellow area is areas that are cur-  
12 rently under mining operations.

13 Q Under the work study proposal, then, the  
14 yellow area was an area that is thought to include life of  
15 the mine reserves?

16 A I'm sorry.

17 Q Yes, sir. I'm trying to identify what  
18 the work study committee did with the yellow area. That is  
19 identified as working mine operations or mine operations  
20 that have been abandoned?

21 A No, the yellow is -- is the first mined  
22 areas where in the mining of potash the first mining they --  
23 they -- they dig fairly wide drifts and then they cross-  
24 drift. That may not be the proper term, but anyhow, they  
25 leave large pillars of potash between the mined areas and

1 those pillars plus the roof bolts and so forth hold the  
2 overburden up, but when they get to the secondary mining  
3 they mine out those pillars and then the overburden will  
4 cause the --

5 Q For our discussion, the yellow area,  
6 then, represents potash reserves that are near and dear to  
7 the potash industry.

8 A That's right. That's where their current  
9 workings are.

10 Q And that represents --

11 A Before they've pulled out the pillars.

12 Q That represents part of the area that  
13 would be included in the life of the mine definition, life  
14 of the mine reserve definition.

15 A Right.

16 Q All right. When we look at the orange  
17 area on the display, what does that depict?

18 A The orange area are secondary mined areas  
19 which have been abandoned for mining and are in the process  
20 of collapsing.

21 Q And is it your understanding that the  
22 orange area would also represent part of the area that's in-  
23 cluded within the life of the mine reserve definition?

24 A Yes.

25 Q Conversely, within the current boundary

1 of the R-111 area, there are areas that are depicted in red,  
2 are there not?

3 A Yes.

4 Q And what do those represent?

5 A Those areas are indicated to be barren.

6 Q And under this agreement, then, if the  
7 Commission adopts the proposed rule change, that -- that  
8 area is not under the definition of life of the mine reser-  
9 ves.

10 A That's right.

11 Q And therefor, without notice and hearing  
12 becomes available to the oil and gas opertors for the drill-  
13 ling of a well.

14 A Right.

15 Q When we look at the gray area, there are  
16 gray areas both within and without the current R-111 area,  
17 are there not?

18 A I'm sorry, say that again.

19 Q Yes, sir. I'm looking at the gray area  
20 on the colored photo.

21 A Yes.

22 Q I find gray area both within the current  
23 R-111 area and also outside that area.

24 A Yes, that's true.

25 Q When the areas expanded become terminus



1 with the Secretary area of the potash reserve, that gray  
2 area, however, will be an area that is not included in life  
3 of the mine reserve definition.

4 A As of now, no.

5 Q Therefor, the gray area, which constitute  
6 an area in which an oil and gas operator could drill through  
7 the potash area and not have to have a hearing to do so.

8 A I think that's true.

9 Q Now, for the blue area there is some ad-  
10 ditional work to be done, is that not true?

11 A Well, the representations made by the  
12 potash people were that there are areas in the blue that  
13 they do not consider to be life of mine reserves and there-  
14 for would be available for oil and gas drilling.

15 Q And part of the concept, at least if it's  
16 fully incorporated by both the BLM and the OCD, will be that  
17 the potash operators will on a confidential bases share that  
18 information with the BLM to more accurately define and de-  
19 lineate the life of the mine reserves to be contained.

20 A Yes.

21 Q Based upon that, then, the OCD can pro-  
22 cess applications for permits to drill and determine whether  
23 or not they're encroaching upon life of the mine reserves.

24 A Right. The BLM is going ot be the -- the  
25 point at which we can make a determination of whether a lo-

1 cation is drillable or not and I probably should explain  
2 that the potash people consider these determinations to be  
3 confidential and they are reluctant to release those to any-  
4 body besides the BLM and the BLM also has the data on which  
5 those determinations are made, namely the core information  
6 which has been taken, and they can verify the determination  
7 made by the potash people.

8 Q Finally, on display Six, when we look at  
9 the green area which is depicted as having inferred potash  
10 reserves --

11 A Yes.

12 Q -- under the proposal the green area  
13 would be excluded from the definition of the area that's in-  
14 cluded within life of the mine reserves, is that not true?

15 A I'm not clear on that without -- I be-  
16 lieve according to the agreement here, it's indicated that  
17 the green would probably be permitted but I think, and the  
18 people from BLM are here, they can correct me if this is not  
19 correct, but I understand that that green coloration indi-  
20 cates that there is not enough data available to make a good  
21 determination as to the quality of potash reserves in there,  
22 and it's likely that some of that may be recolored blue when  
23 they get additional core information. Or it could be red.

24 Q On page 13 of the -- I'm sorry, page 15  
25 of the proposed R-111-P, Mr. Lyon, if you'd refer to para-

1 graph immediately above Roman numeral VIII.

2 A Page 13?

3 A I'm sorry, it's 15.

4 A 15? Yeah, okay.

5 Q If this proposed rule change is adopted  
6 by the Commission and if we're looking at those areas that  
7 are now delineated as life of the mine reserve areas, under  
8 the proposed rule change, then an oil and gas operator could  
9 still drill those areas if he's able after notice and hear-  
10 ing to persuade the Oil Commission to enter an order grant-  
11 ing that drilling?

12 A Yes. I think that this is -- this is one  
13 of the things that we felt a little bit differently than the  
14 work committee. I feel that we need to retain our discre-  
15 tion about those things.

16 Q You've incorporated into the proposed or-  
17 der the November 23rd statement fo the industry work study  
18 committee, which utilizes the idea of a buffer zone around  
19 the life of the mine reserves? That is intended to be in-  
20 corporated into the order by reference, is it not, Mr. Lyon?

21 A Yes. Yes, it is. The agreement states  
22 that a buffer zone of a quarter mile or the depth of the ore  
23 plus 10 percent would be -- comprise the buffer zone for the  
24 shallow wells; it's wider for the deep wells. But this is  
25 based on their concern that at such time as they do secon-

1 dary mining in there and they mine out the pillars and bring  
2 about the subsidence, that the impact of that subsidence  
3 takes -- the angle of repose, you might say, is approximate-  
4 ly 45 degrees and, consequently, the -- you would have a  
5 projection at a 45 degree angle from the area where the sub-  
6 sidence takes place, and there is concern that -- that cas-  
7 ing for wells in there would be highly susceptible to dam-  
8 age, perhaps even shearing, if the well were operating there  
9 in an area of subsidence.

10 Q Mr. Lyon, are you familiar with the fact  
11 that the Oil Conservation Commission divisions -- Commission  
12 and Division's records are replete with disputes between the  
13 Oil Conservation -- the oil industry and the potash industry  
14 over the issue of subsidence and how far away a wellbore  
15 must be from -- from potash reserves?

16 A Yes, I'm aware of that.

17 Q Do you have any doubt in your mind as a  
18 professional engineer that it's fair and reasonable to have  
19 an area of buffer between life of the mine reserves and oil  
20 and gas drilling?

21 A I think it's entirely reasonable, yes.

22 Q We talk about examples of how we might  
23 implement drilling within the R-111 area, if modified. If  
24 you're within a quarter mile of the life of the mine reser-  
25 ves within the first buffer area you cannot do so, then,

1 without notice and a hearing to justify the drilling of that  
2 well?

3 A Well, that -- that's probably true unless  
4 the parties can -- can come to an agreement.

5 Q There is a way to drill that with agree-  
6 ment --

7 A Yes.

8 Q -- or a decision after a hearing.

9 A Right.

10 Q If you are greater than a quarter of a  
11 mile but less than half a mile from life of the mine reser-  
12 ves and you don't want to penetrate below the base of the  
13 Delaware, then you can drill that well provided you use the  
14 R-111 casing and cementing programs.

15 A I believe that's right.

16 Q If you're more than a half a mile away  
17 from the life of the mine reserves but not more than a mile,  
18 then you can drill the well down to the base of the Delaware  
19 without the R-111 casing and cementing requirement.

20 A Subject to the District Supervisor's ap-  
21 proving the case.

22 Q And if you want to drill below the base  
23 of the Delaware, being more than a half mile or less than a  
24 mile, then you can do so with the R-111 casing and cementing  
25 program.

1 A Right.

2 Q IN your opinion does that give the Com-  
3 mission, as well as the potash operators and the oil and gas  
4 operators a reasonable, flexible drilling program that al-  
5 lows the multiple use of this area by both industries?

6 A I think so. I think it's as close as we  
7 can come.

8 Q Do you have an opinion as to whether the  
9 proposed order as you've suggested to the Commission is one  
10 that will improve upon the current R-111 Order?

11 A Yes, I think it's an improvement.

12 Q Do you have an opinion as to whether or  
13 not the proposed rule change will be one that protects the  
14 oil and gas interests from undue waste, protects potash  
15 operations from undue waste, and promotes conservation for  
16 both industries?

17 A Yes, that would.

18 Q Let me direct your attention back to your  
19 proposed order again, to one of the earlier pages where  
20 there's a definition used on page 3, Mr. Lyon.

21 On page 3 above Roman numeral IV in para-  
22 graph (4).

23 A Yes, sir.

24 Q It talks about the Division's District  
25 Supervisor waiving the requirements for the casing and

1 cementing program.

2 A Yes.

3 Q Provided it's outside the life of the  
4 mine reserves and the surrounding buffer zone. We're talk-  
5 ing about the buffer zones, then, that are set forth in the  
6 statement of November 23rd of '87?

7 A Yes, sir.

8 Q Then when we go on and say, "and that no  
9 potash resources will be endangered."

10 A Yes.

11 Q What's the source of that phrase, Mr.  
12 Lyon?

13 A Well, it extends from representations by  
14 the BLM that they are not committing themselves to a blanket  
15 approval of that where they feel that there are potash re-  
16 serves that may not be commercial now but sometime in the  
17 future might be commercial.

18 Q I am unable to find that phrase used in  
19 any of the current statutes or rules and regulations of the  
20 Oil Conservation Division. Are you aware of it being used  
21 anywhere else (unclear)?

22 A Of what?

23 Q The phrase "no potash resources will be  
24 endangered"?

25 A I forgot to bring my rule book so I can't

1 refer to it.

2           Q           My concern, Mr. Lyon, is that it perhaps  
3 unintentionally creates a new definition that is something  
4 different than the statutory obligation of the Commission to  
5 protect the undue waste of commercial potash and there are  
6 enough lawyers in the room that we can probably think of  
7 about five different ways to fuss with this. I wonder if  
8 youj would have any objection, sir, if we deleted that lan-  
9 guage and had you go back and use the definitions used in  
10 70-2-12 (17), which is the ones we're familiar with refer-  
11 ring to the effect unduly to reduce total quantities of com-  
12 mercial deposits of potash; that's that typical definition  
13 we've seen. It certainly would make me more comfortable.  
14 Do you see any reason not to use the standard statutory de-  
15 finition?

16           A           I'd have to look at it a little closer.  
17 I'd be glad to consider it.

18           Q           Thanks. The notice of hearing talks  
19 about the potential issue of adopting directional drilling  
20 procedures?

21           A           Yes, sir.

22           Q           Would you identify for us where in the  
23 proposed order you've addressed the issue of directional  
24 drilling?

25           A           I have addressed it only in the case in



1 the salt protection string where they begin to deviate from  
2 the vertical and the committee, I asked the committee if  
3 they had any -- any suggestions for that and there were none  
4 given, but I think that if anybody who's present here today  
5 or who may want to respond to this order has any such sug-  
6 gestions, we are open to hear those suggestions. I do not  
7 intend to propose them.

8 Q Was there discussion by the committee  
9 about the technical reliability and feasibility of direc-  
10 tional dirlling in the potash enclave?

11 A We did not have a great deal of discus-  
12 sion about directional drilling. In our educational ses-  
13 sions we talked about, in general, directional drilling  
14 techniques.

15 Q There are wells in existence now in the  
16 potash area that have been directionally drilled, have they  
17 not?

18 A I don't know. I don't know for certain  
19 that there are.

20 Q I believe Belco's got two of them over in  
21 that James Ranch area. Are you aware of anyone alerting you  
22 to the difficulties or the impossibilities of directional  
23 drilling in the potash enclave?

24 A No.

25 Q As best you know as a professional en-

1 gineer it's a reasonably feasible thing to do?

2 A Yes.

3 Q The question then is one of economics as  
4 to whether the operator does it or not?

5 A Right.

6 Q Did the work study group review the  
7 casing and cementing program requirements of existing R-111  
8 orders?

9 A We did in our educational system -- or  
10 session, and went through it in great detail for the benefit  
11 of the potash people present to try to allay concerns that  
12 they might have about means of gas getting into mines. Of  
13 course this was a very important subject to them and we did  
14 go through it from that viewpoint. When I asked for sugges-  
15 tions that -- if there was any way that we could improve  
16 those, I got none.

17 The recommendation, then, is that there  
18 would be no changes to the casing and cementing requirements  
19 of the existing order?

20 A I don't -- I'm not proposing any other  
21 than those that I have discussed here and that appear in the  
22 order, but still, if there is anybody who has any sugges-  
23 tions on improving those, we would like to have their sug-  
24 gestions.

25 That was my purpose in listing those par-

1 ticular items in there. If we're going ot revise Order R-  
2 111, I'd like to do the best job that we can and if anybody  
3 has input other than the committee's, we would welcome it.

4 Q You indicated that the November 23rd, '87  
5 statement of the work study was sent out by the Division in  
6 a notice, Mr. Lyon.

7 A Yes.

8 Q Is that notice included in your Exhibit  
9 Number Two?

10 A No, but there are copies, I think, on the  
11 table over there and I believe I gave the Commissioners each  
12 a copy of that memorandum.

13 Q That's the memorandum dated November  
14 30th, '87?

15 A I don't remember the date.

16 MR. KELLAHIN: May I help the  
17 witness, Mr. Chairman?

18 MR. LEMAY: Yes, go ahead.

19 A Right, this is the one and attached is a  
20 copy of the agreement of the working interest.

21 Q What's your understanding of how that in-  
22 formation is disseminated to the industry?

23 A We sent it out on our -- on our regular  
24 mailing list for dockets.

25 Q Who does it go to, do you know, Mr. Lyon?

1           A           I don't know.   Anybody who has asked for  
2 it.

3           Q           Okay, it generally goes out to the gen-  
4 eral -- same general mailing list that receive the Commis-  
5 sion and Examiner dockets?

6           A           Right.

7           Q           Subsequent to sending that out, Mr. Lyon,  
8 have you received any written objections to the statement of  
9 November 23rd, '87, as it appears in that document?

10          A           Yes. I don't have them organized.

11          Q           Well, I wanted you to summarize for us  
12 the kinds of matters you were -- received objections to and  
13 how you at least addressed them and incorporated them into  
14 the proposed rule change or rejected them, so that we may  
15 know what the input of the industry was subsequent to the  
16 agreement and determine how you analyzed and processed those  
17 comments.

18          A           Well, I've read each of the responses and  
19 just in general I felt that those responses were based on  
20 some -- some perception other than -- that the work commit-  
21 tee, that there were some -- I think there was a feeling  
22 that we were going to adopt this agreement lock, stock and  
23 barrel, in place of Order R-111, and I felt that if they  
24 would come and listen to -- sit in on the hearing, and so  
25 forth, and see what we were proposing to issue is an

1 order that probably would allay their concerns. I did not  
2 respond to them.

3 Q Do I understand your testimony that dur-  
4 ing the course of the activity of the committee from its in-  
5 itial organization meeting in May 29th, 1986, ot the current  
6 date, that you've allowed any oil and gas operator that has  
7 shown an interest in participating to whatever extent, the  
8 opportunity to so participate in the work study?

9 A We certainly have.

10 Q Thank you, sir.

11 MR. LEMAY: Thank you, Mr.  
12 Kellahin.

13 Before we go on to additional  
14 questions, I'd like to make one thing -- make it a point  
15 that it will be the Commission's intent and we will allow  
16 this record to be left open for two weeks following this  
17 hearing, so those of you that -- that do have copies, and  
18 you can get additional copies of the proposed order as  
19 defined here by Mr. Lyon's Exhibit I think it's Number Four,  
20 that you'll be able to supply written comment to the  
21 Commission concerning this and won't be put under the time  
22 frame of trying to respond to it today.

23 Additional questions of Mr.  
24 Lyon?

25 Yes, sir, Mr. Hall.

1 MR. HALL: First, Mr. Commis-  
2 sioner, I might first advise the Commission we're prepared  
3 today to attack or oppose at least in part the joint indus-  
4 try agreement, which is now I understand Exhibit Two in the  
5 record this morning. We've not previously seen Exhibit  
6 Four, which is the proposed order, and initially I'd like to  
7 advise the Commission that we think it's a vast improvement  
8 and we're not sure whether we're proponents or opponents at  
9 this time. We'd still like to ask a couple of questions.

10 MR. LEMAY: Fine, Mr. Hall,  
11 please proceed.

12

13 QUESTIONS BY MR. HALL:

14 Q Mr. Lyons, let me ask you, was Exhibit  
15 Four distributed to anyone outside the Division prior to  
16 this hearing?

17 A Well, we just got it typed Thursday or  
18 Friday of last week and, of course, Monday was a holiday. I  
19 did give copies to one or two people who came to my office  
20 yesterday, but that's the only distribution other than here  
21 in this room.

22 Q All right. Going briefly through Exhibit  
23 Four, I understand that it calls for the adoption of Exhibit  
24 B, which is the joint industry agreement, as part of the  
25 proposed rule.

1                   Now, in view of some of the feedback that  
2 I understand the Division has received on that, do you un-  
3 derstand that there are some inconsistencies between Exhibit  
4 B and then the proposed rule itself?

5                   A           Yes.

6                   Q           Would some of those inconsistencies be  
7 concerned with the delegation of authority problems which  
8 the Commission Chairman has mentioned this morning?

9                   A           Yes, very definitely.

10                  Q           And does the Exhibit B also attempt to  
11 treat all owners of oil and gas interests in the area as a  
12 class? Is that your view?

13                  A           Well, I think it treats everybody alike.

14                  Q           All right, I think that answers the ques-  
15 tion.

16                               Also, the face of Exhibit Four calls for  
17 the designation of LMR's according to a potash holder's  
18 lease interest, whereas Exhibit B seems to allow him to des-  
19 ignate an LMR anywhere at all, whether or not he has an  
20 ownership interest in that. Do you recognize that?

21                  A           Yes. Yes, I do, and I tried to make the  
22 order a little more specific than the agreement.

23                  Q           Mr. Lyons, have you received any comments  
24 from industry with respect to the procedure for designating  
25 LMR's under confidential means?

1           A           Oh, yes, that's probably the thing that  
2 gets -- that gets most of the attention and it is something  
3 that certainly is undesirable to us. I'm sure it's unde-  
4 sirable to every oil and gas operator, but the potash  
5 people consider this to be confidential information and I  
6 frankly do not know another way that we can do it.

7           Q           Would the Division be opposed to estab-  
8 lishing some sort of procedure whereby in the LMR designa-  
9 tion process anyone with an affected property interest would  
10 have the right to -- a right of access to the information  
11 provided -- provided that those same property interest own-  
12 ers would be subject to confines of some confidentiality  
13 agreement themselves?

14          A           Well, I think -- I think this is some-  
15 thing that is in the discretion of the BLM and I don't think  
16 I can speak for them.

17          Q           Can you explain to me the provision in  
18 Exhibit Two, the industry agreement, calling for -- it's in  
19 Article IV on page 8 of the agreement. It states, oil or  
20 gas lessees -- I'm sorry -- "Oil or gas leases covering  
21 areas designated a LMR by a potash lessee will be unitized  
22 to the extent possible with other areas where drilling is  
23 allowed."

24                       What was the purpose of that phrase?

25          A           That language was provided by the --



1 MR. LEMAY: Would you refer to  
2 that again, Mr. Hall, what page you're on?

3 MR. HALL: Mr. Chairman, it's  
4 on page 8 of the joint industry agreement. That's Article  
5 IV, the second sentence of the first paragraph in (unclear).

6 MR. LEMAY: Page 8?

7 MR. HALL: Yes, sir.

8 A That language was furnished by the potash  
9 people and was agreed to by the oil and gas people and also,  
10 the Secretary's order states that unitization is one of the  
11 means that will be used to develop oil and gas and still  
12 protect potash. And I tried to explain to the potash people  
13 that unitization does not cover all possible situations in  
14 this area.

15 Q Well, let me ask, is it the purpose of  
16 that provision to simply perpetuate leases that might other-  
17 wise expire by unitizing them?

18 A I don't -- I don't think that was the  
19 purpose of the language. I did not think so at the time and  
20 I don't now.

21 Q Also, Mr. Lyons, isn't there language in  
22 Exhibit B which simply states there won't be any drilling  
23 approved in an LMR?

24 A Yes.

25 Q In view of those inconsistencies with the

1 proposed order, wouldn't you agree with me that any of those  
2 provisions are not necessary to accomplish the goals of any  
3 order?

4 A I don't think the order adopts that  
5 agreement.

6 Q Would the Division be opposed to a proce-  
7 dure whereby instead of adopting the industry agreement that  
8 the record be kept open and the Division accept comments and  
9 proposals from industry for adoption as (unclear) as opposed  
10 to adopting the order?

11 A Of course you're free to submit any com-  
12 ments you want to. We'd like to have them.

13 MR. HALL: No further ques-  
14 tions.

15 MR. LEMAY: Thank you, Mr.  
16 Hall.

17 Additional questions of the  
18 witness.

19 Yes, sir, Mr. Bruce.  
20

21 QUESTIONS BY MR. BRUCE:

22 Q Mr. Lyon, on page 9 of your proposed or-  
23 der --

24 A Yes, sir.

25 Q -- Paragraph (h), could you describe sub-

1 sequent operations and those resulting effects that opening  
2 the pressure relief valve might cause?

3 A Say that again, please?

4 Q What I'm getting at, Mr. Lyon, let me  
5 rephrase the question.

6 If the pressure relief valve opens, sub-  
7 sequent to that would the well operator lose control of the  
8 well? Could that conceivably happen?

9 A Well, I don't -- it depends on what he  
10 does with the piping after he takes it away from the well  
11 (unclear).

12 Q In your opinion could it result in an un-  
13 controlled pressure release at that time?

14 A Sure, it could.

15 Q Would the presence of geologic formations  
16 in the open wellbore, if their fracture strength would be  
17 reasonably expected to be low enough, aid in preventing the  
18 occurrence of high pressure at the surface of the wellbore?

19 A Say again.

20 Q If there were geological formations in  
21 the open wellbore whose fracture strength was low enough,  
22 would that aid in preventing the occurrence of high pressure  
23 at the surface of a wellbore?

24 A You mean have an underground blowout?  
25 Well, personally, I'd rather have the gas, if you don't have

1 control of the well, I'd rather have gas coming out at the  
2 surface.

3 Q As an alternative to the language here,  
4 would you, or the OCD, consider hooking the proposed relief  
5 line into the existing choke manifold on the rig since that  
6 would already be connected with the blowout valve?

7 A I think that would be a very shrewd thing  
8 to do.

9 MR. LEMAY: Additional ques-  
10 tions of the witness?

11 Commissioner Humphries.

12

13 QUESTIONS BY MR. HUMPHRIES:

14 Q Mr. Lyons, in the initial part of the  
15 agreement between -- between the parties there's language  
16 set forth on page 2 that I guess I have some questions  
17 about.

18 First of all, Paragraph 2, second line,  
19 "The terms of this agreement will be submitted to and must  
20 be adopted without substantial change. . .". What is sub-  
21 stantial change?

22 A I really don't believe I could define  
23 that.

24 Q Okay. I think that would be helpful be  
25 cause I know substantial change to one person may be signi

1    ficant --

2                   A           I certainly agree.

3                   Q           -- and the adjective leaves the question  
4   open.

5                               Farther down the page in the last para-  
6   graph, third line down, in discussing life of the mine re-  
7   serves, "LMR's be permanently protected". That sounds like  
8   throughout infinity. There's no release language. Some day  
9   there's, I assume, either going to be proposed secondary  
10  mining or abandonment of the project or collection of the  
11  entire reserve, a point at which "permanent" becomes super-  
12  fluous and (unclear).

13                              Did anybody discuss about release lan-  
14  guage or the terms at which we could mutually agree or the  
15  Division could -- or the Commission could draft an order  
16  that would deal with release?

17                   A           I don't -- I don't believe that this  
18  agreement creates such a situation.

19                   Q           No, I don't think the agreement is bin-  
20  ding on anybody at this point, but to accept it in some form  
21  and then accept the term "permanent" it strikes me that we  
22  have not dealt with a secondary thing that ought to be con-  
23  sidered and that's release language.

24                   A           Well, that's probably true. Of course  
25  these LMR's will be resubmitted each year with additions,

1 deletions, or whatever, that the potash lessee feels is ap-  
2 propriate.

3 But I don't know how better to address  
4 it.

5 Q You are aware that we have some concern  
6 at the Land Office about the language of the agreement and  
7 one of those that may call for speculation on your part but  
8 still I'd like you to address it, from the standpoint of  
9 how you approached it with the parties being in place, do  
10 you think that the language somehow or another subordinates  
11 the Commission of Public Lands jurisdiction, authority, con-  
12 trol over those resources that are state land resources to  
13 either the Bureau of Land Management or the OCD?

14 A Not any more than it is now, and inciden-  
15 tally, Mr. Humphries, I visited with some of your people  
16 about this overall situation and they -- they told me that  
17 they had in the past worked out, oh, some cooperative agree-  
18 ment with BLM where they would have access to the informa-  
19 tion so that under the circumstances I don't know how to --  
20 to do it any better and maintain confidentiality of the in-  
21 formation, but -- but they felt confident that they could  
22 work with BLM to get the evaluation of that acreage.

23 Q Okay, so if, from our standpoint, if  
24 we're able to work out language that we feel like needs to  
25 be added to it to insure that we're complying with our sta-

1   tutory   and enabling act responsiblity as well as   structure  
2   responsibility,   that   would   not   substantially   alter   the  
3   agreement?

4           A           I would not think so.

5           Q           I guess in a final question about   this,  
6   the   language changes in proposed rule R-111-P,   what is the  
7   rationale for the change from Commission to Division?

8                   Let me give you some background there be-  
9   cause obviously the Commissioner sets on the Commission and  
10   has always that input into it; however, the Commissioner  
11   does not direct the staff of the Division; therefor, I would  
12   feel more comfortable if we were able to leave the language  
13   Commission, which I believe clearly says in control of and  
14   in charge of the Division anyway, since the Director of the  
15   Division is the Chairman of the Commission.

16                   Do you think it would substantially alter  
17   it or the intent or confuse what you were trying to address  
18   in R-111-P?

19           A           Well, the Legislature went to the -- to  
20   the trouble of changing the word Commission to Division all  
21   through the Oil and Gas Act, and we did the same thing in  
22   our rules and so forth, and I thought, well, since it actu-  
23   ally is a division now rather than a commission, that -- I  
24   felt that the change was appropriate, but it seems to me  
25   there's a thing in the statute that says the jursidiction of

1 the Commission and the Division are the same.

2 So being a Commissioner, I'm sure that  
3 anything you wanted to -- for the Division to consider, that  
4 it would have the same impact as if we had the word Commis-  
5 sion.

6 MR. HUMPHRIES: I have no fur-  
7 ther questions.

8

9 QUESTIONS BY MR. LEMAY:

10 Q Just a couple things, Mr. Lyon. Let the  
11 record show, if I'm correct, that Exhibit Two that you've  
12 presented will be Exhibit B in the proposed order. There's  
13 some continued confusion to that.

14 A This is what I proposed.

15 Q Right. Okay. The other thing, I want,  
16 just a point of clarification, going back to Jim's Page 9,  
17 Subparagraph (h), in your proposed R-111-P, your last sen-  
18 tence, do you happen to know if current regulations require  
19 the cementing of the production string to the surface in the  
20 potash area?

21 A Yes, they do.

22 Q So there's no change in that phrasing  
23 there.

24 A Right. Well, let me -- let me back up a  
25 minute.



1                   The -- the rule, I think, requires that  
2 the production string be cemented up over the pay formation  
3 and to protect the pipe above the pay formation. I think,  
4 I'd have to check the language. There is some variation and  
5 there are some -- there's some -- I know that the inter-  
6 mediate casing is to be cemented to the surface but the pro-  
7 duction casing must be cemented across the pay zone and high  
8 enough to protect the pipe, whatever that means.

9                   Q                   So in the event the production casing by  
10 our current regulations would not have to be cemented to the  
11 surface, you would agree that some modification of that last  
12 sentence is not required?

13                  A                   I would assume that -- that it would be  
14 required to bring the cement up high enough to tie into the  
15 next larger casing.

16                  Q                   Thank you, Mr. Lyon.

17                                   MR. LEMAY: At this point I  
18 will, without objection, admit Exhibits One through Six into  
19 the record.

20                                   Commissioner Humphries.

21

22 QUESTIONS BY MR. HUMPHRIES:

23                  Q                   Mr. Lyon, I think I need a little clari-  
24 fication on your answer to Mr. Hall's question about the in-  
25 tent of the language about describing all of the oil and gas

1 leases within an LMR as a unit. I can't remember the exact  
2 place where that language was discussed. Was that in the R-  
3 111-P proposal?

4 A I think it was in the agreement.

5 Q That's what I thought. I couldn't find  
6 anything in --

7 A And I can't quote it, but it -- I think  
8 it says that oil and gas interests will be developed or pro  
9 tected or something through unitization.

10 Q Oh, yeah, on Page 8. I'm not sure I un-  
11 derstood the answer. Was the answer that the intent was to  
12 say that any leases overlying the LMR would be unitized for  
13 what purpose? I just didn't understand. Maybe I didn't un-  
14 derstand Mr. Hall's question but I also didn't understand  
15 the answer, so now, would you tell me what you think the in-  
16 tent of that language was?

17 A Well, the intent of the language, I  
18 think, is that if you have a unit, that all interests in  
19 there would be protected by the terms of the unitization and  
20 I think this applies primarily to protection of correlative  
21 rights, so that -- so that you could drill into areas where  
22 it's permissible to drill and the people who -- where you  
23 can't drill because of the LMR's -- would be able to parti-  
24 cipate through the unitization. I think that's what the  
25 idea was. That's what I interpreted it.

1           Q           Then I'm going to ask you a questions  
2 that calls for some conclusion on your part, but assume that  
3 as a result of the Commission order a given -- first of all,  
4 this language is in place and all of those leases are unit-  
5 ized, I don't know if they're talking about one single unit  
6 over the entire area or multiple units within it, but as a  
7 result, a company with a lease comes in and makes a case  
8 that prevails and is allowed to drill within that unit, then  
9 all of that unit is -- is it going to have an operating  
10 agreement before, a unitization agreement before that APD is  
11 authorized and that approval from the Commission is given,  
12 and then will that operate just as any other unit would?

13           A           Well --

14           Q           In other words, would the one well be  
15 compelled to pay the working interest owners and royalty  
16 owners throughout the unit their proportionate share  
17 regardless of the geology?

18           A           Well, of course, it would have to depend  
19 on the language of the unit and we all know that there's  
20 units and there's units and there's exploratory units where  
21 you drill the wells and then you have participating areas,  
22 for so far as you can -- can show that the reservoir reason-  
23 ably extends, but you have to do that through stages by the  
24 drilling of additional wells.

25           Q           But don't you think this language is, so

1 to speak, a political unit, not a geologic unit.

2 If we accept this language on its face it  
3 strikes me that it says that we are arbitrarily establishing  
4 a unit over the entire area designated as LMR's and, I mean  
5 I can see that we've offered the alternative of being able  
6 to allow the Commission the authority to allow a well to be  
7 drilled maybe by mutual agreement, although I don't antici-  
8 pate that to happen, that within an LMR a well may in fact  
9 be drilled in which case we now start to have an overlying  
10 phrase that says that whole thing will become a unit and we  
11 haven't either addressed that or maybe I'm over-complicating,  
12 but it seems to me like it has significant implication to just  
13 accept that language and at which point I think  
14 I would be a little bit reluctant to accept either that  
15 language or the implications that might have as far as State  
16 (unclear).

17 A Well, I just don't think that that interpretation  
18 could be implemented just because of the complications of -- of  
19 unitization itself. The -- I don't mean to demean anybody but the  
20 language was written by a person who does not know anything about  
21 unitization in oil and gas, and I think that he is drawing on the  
22 language of the Secretary's order that says unitization will be  
23 used to the maximum extent to prevent unnecessary drilling and  
24 unnecessary waste of potash, but I -- there certainly was not any  
25 intent

1 that I was aware of that the entire LMR area was going to be  
2 one unit.

3 Q Well, I don't think there was a devious  
4 intent, but yet I believe if we accept certain things that  
5 we may have burdened ourselves with a later problem.

6 If we struck that sentence is that a sub-  
7 stantial change in the agreement?

8 A What sentence were you --

9 Q Well, I don't think we'd change the  
10 agreement, either, but if the -- that's page -- sentence  
11 three on page 8 in the agreement, under Roman numeral IV.  
12 If we wrote the -- if the R-III-P proposed rule was adopted  
13 and became in force, I think we ought to address that  
14 question and send back a substantial agreement change, which  
15 I'm not sure that both industries would not have a  
16 significant objection, that it's not an issue as far as  
17 they're concerned.

18 I see Jim's conferring with Mr. Kellahin  
19 from time to time down here.

20 A I'm sorry, I have not -- I still haven't  
21 found the specific language.

22 Q Okay, it's on Page 8 of the agreement.  
23 It's the last sentence in Paragraph A under Roman numeral  
24 IV.

25 A Oh, yeah. Well, the sentence itself is

1 -- is self-limiting and says that they will be unitized to  
2 the extent possible with others areas where drilling was al-  
3 lowed.

4 Q Okay, so in other words, it's your opin-  
5 ion that R-111-P could contain language sufficient to pro-  
6 tect all correlative rights of royalty owners within -- or  
7 mineral owners, within the new R-111 area without some kind  
8 of blanket unit laid over the LMR's?

9 A I really don't feel it's necessary to ad-  
10 dress that in order R-111.

11 Q Okay. We may have to talk about that  
12 (unclear).

13 A Yeah, R-111 is -- is designed, I think,  
14 to -- to permit the drilling of specific wells on a well-by-  
15 well basis and I think that the policies and directives of  
16 the Land Office and BLM as to how that acreage is to be  
17 developed would -- would govern how the acreage is actually  
18 developed and I don't think it's necessary to address that  
19 in R-111.

20 Q Thank you.

21 MR. LEMAY: Thank you, Commis-  
22 sioner Humphries.

23 MR. BROSTUEN: Just to clarify  
24 something.

25 MR. LEMAY; Mr. Brostuen.

1

2 QUESTIONS BY MR. BROSTUEN:

3

Q Just to clarify something, Vic. Controlling your presentation to just the concerns of the potash industry regarding the additional cost to be incurred if a well were declared to be a gassy well, and you and I were both present at a number of the meetins that were held. I think that the potash industry also demonstrated their concern for the safety of the miners. I just want that to be part of the record.

11

A Yes.

12

Q I think you agree with that.

13

A Yes, I certainly do. I'm sorry that I did not address that. There were a number of things I intended to say that I didn't say but I think very definitely the safety of the miners is -- is of utmost importance. I think it's addressed in the -- in the statute, also.

18

Q Thank you.

19

MR. LEMAY: Additional questions of the witness? If not, he --

21

MR. HIGH: If I --

22

MR. LEMAY: Oh, I'm sorry. Yes, Mr. High.

24

MR. HIGH: Yes, I have quite a few, if I may.

25

MR. LEMAY: Please.

QUESTIONS BY MR. HIGH:

Q Mr. Lyon, you served as the chairman, did you not, of the -- this joint industry study committee?

A Yes, sir.

Q And you were chairman during the duration of the work of that committee, were you not?

A Yes, I was.

Q And you presided at each meeting of the committee?

A Yes, sir.

Q And you acted in the capacity of chairman.

A Yes, sir.

Q And once the joint industry committee was reduced down to a -- I think you call it a working committee, you continued to preside as chairman of that working committee, did you not?

A Yes, I did.

Q And you participated in each meeting of that working committee?

A Yes.

Q And at each of the meetings, whether it was the full industry committee or the working committee,



1 there were representatives of both the oil and gas industry  
2 and potash industry present, were there not?

3 A Yes, there were.

4 Q During the initial meeting that you re-  
5 ferred to, you indicated that each industry made a presenta-  
6 tion, educational in nature.

7 A Yes, sir.

8 Q Did the potash industry proposal or pre-  
9 sentation deal primarily with a single, particular issue?

10 A No. No, there was a very broad spectrum.

11 Q What was the primary concern of the pot-  
12 ash industry with respect to the drilling of oil and gas  
13 wells in the potash area?

14 A Well, correct me if I'm wrong, but I per-  
15 ceived that their primary concern was to prevent the occur-  
16 rence of methane in the mines.

17 Q It was safety, wasn't it?

18 A Yes, sir.

19 Q The primary interest of the potash indus-  
20 try, the primary concern with respect to the drilling of oil  
21 and gas wells in the potash basin was the safety of under-  
22 ground miners.

23 A Correct.

24 Q And the potash industry submitted a  
25 rather comprehensive set of materials to this committee,

1 didn't they, dealing with the safety issue?

2 A Surely did.

3 MR. HIGH: I would, Mr.  
4 Chairman, if I may, I would like to mark that as Exhibit, I  
5 believe it's Seven, if I'm not mistaken.

6 Q Mr. Lyon, let me show you, if I may, what  
7 we will call Exhibit Seven and ask if you can tell me what  
8 that is?

9 A Yes, sir, this is a compilation of papers  
10 concerning mines and mine safety. I think there's a number  
11 of studies in here that were done in making studies for the  
12 WIPP site and drew on expertise of -- of a lot of the  
13 scientists who did make those studies and it's been awhile  
14 since I've read it, but I did read it all, Charlie.

15 Q It did deal with safety, didn't it?

16 A Yes, sir.

17 Q In fact, it identified, did it not, two  
18 instances in which oil has seeped into two mines in the  
19 potash basin.

20 A I don't remember the exact description  
21 but we saw -- we saw the oil seeps on our --

22 Q You saw that yourself, didn't you?

23 A Yes, sir.

24 Q The oil had seeped from somewhere into  
25 an underground, working potash mine.

1 A It was there.

2 Q And it migrated into that mine, didn't  
3 it?

4 A I don't know that it migrated there, but  
5 it was there.

6 Q It was in the overhead, wasn't it?

7 A Yes, sir.

8 Q Are you aware --

9 A I think there was one place where there  
10 was an oil stain on the -- on the wall.

11 Q And are you aware that ther is a similar  
12 instance at the Mississippi Chemical Mine where oil had  
13 seeped into the mine?

14 A That's my understanding. I don't believe  
15 I saw that.

16 Q But you are aware of that topic at least  
17 being discussed in the work of this joint industry commit-  
18 tee?

19 A Yes, sir.

20 Q And you -- you understand that that is of  
21 concern to the potash industry.

22 A Yes, I've heard it.

23 Q And you -- you underestand, do you not,  
24 even though you won't call it migration, you understand the  
25 potash industry is concerned that with those oil spots in the

1 underground mine, they are concerned that methane gas may  
2 very well migrate into the underground mines from that oil  
3 and gas well.

4 A I can understand their concern.

5 Q And during the discussions between the  
6 two industries trying to resolve these very difficult is-  
7 sues, that migration issue was always present, wasn't it?

8 A Yes, it really was. It was ever present.

9 Q In fact, isn't it a fair statement, Mr.  
10 Lyon, that the entire agreement has been -- that's been mar-  
11 ked here as Exhibit Two takes into the consideration and is  
12 based in large part on the concern of the potash industry  
13 for the safety of underground miners.

14 A Yes, I think that's a fair statement.

15 Q Let's -- let's go through this, if we  
16 can, and explaining so that everyone clearly understands,  
17 how this joint industry statement was constructed.

18 And you were chairman of the commission  
19 -- or excuse me, chairman of the committee and present at  
20 all the meetings, as you indicated earlier.

21 A Yes.

22 Q So I would like to go through with you,  
23 if I can, and explain to these people here this morning what  
24 has been agreed to so they, too, can understand the concern,  
25 not only of the oil and gas people but also the potash in-

1     dustry.

2                     Let's assume the display I've drawn on  
3     the blackboard is a potash lease. Under the joint industry  
4     agreement is it your understanding that within that potash  
5     lease the lessee, the potash lessee, will designate what's  
6     been called life of mine reserves?

7             A             Right.

8             Q             And do you also understand that that area  
9     that's called LMR's, or life of mine reserves, is smaller  
10    than the blue portion indicated on the BLM map?

11            A            Well, that's what you told us at our  
12    meeting, yeah, and I trust you.

13            Q            So let's -- let's let me draw a wider  
14    line and let's just call this the blue on BLM map. We, the  
15    potash industry has represented to you, to the committee,  
16    that what will be designated as an LMR will be smaller than  
17    the blue area shown on the BLM map, isn't that true?

18            A            That was my understanding, yes.

19            Q            In fact, hasn't it been stated or wasn't  
20    it stated during these meetings, Mr. Lyons, that there  
21    would be approximately 25 percent of the blue area that  
22    would be freed up for oil and gas drilling under this agree-  
23    ment?

24            A            Yes, sir, I was going to testify to that  
25    but I wasn't sure that it was appropriate for me to do that.

1 Q That statement was made during these  
2 meetings.

3 A Yes, it was.

4 Q Now, let's assume that what I've drawn,  
5 the squiggly line I've drawn up here, is it your understand-  
6 ing that this is the way the LMR's would work, that within  
7 the lease, within the blue area on the BLM map, there would  
8 be designated what's called the LMR?

9 A Right.

10 Q Now, under the agreement that was reached  
11 between the potash and the oil and gas working committees,  
12 what was the agreement with respect to drilling within this  
13 area designated LMR's?

14 A The agreement was there would be no drill-  
15 ing in LMR's.

16 Q And the potash industry was concerned  
17 that if there's drilling in the LMR's, where we're going to  
18 mine, it would be a safety hazard. Isn't that correct?  
19 would be a safety hazard. Isn't that correct?

20 So as a result the agreement on Page 5 of  
21 what's been called Exhibit Two, the statement in the Exhibit  
22 Two says that "no oil or gas well shall be allowed from a  
23 surface location within the LMR of any potash lessee or  
24 within one-fourth mile, or a distance equal to the depth of  
25 the ore plus ten percent, whichever is greater, of the LMR

1 of any potash lessee". So that agreement, as you understand  
2 it, Mr. Lyons, is that there'll be no drilling within the  
3 LMR or there will be no drilling within a buffer zone around  
4 that LMR that's equal to one-fourth mile or the depth of the  
5 ore plus ten percent, whichever is greater, is that correct?

6 A That is right.

7 Q So let me, let me put a little hatched  
8 marks on what we'll call as buffer zone around the LMR. So  
9 the area in which there will be no oil and gas activities  
10 under the working committee agreement is within the LMR of  
11 any potash lessee and within this buffer zone, is that cor-  
12 rect?

13 A That's right.

14 Q Now, I believe you stated earlier that in  
15 your opinion there was a valid reason to have a buffer zone  
16 between the potash operations and the oil and gas  
17 operations, isn't that true?

18 A That's right.

19 Q Now under the agreement reached by the  
20 working committee the further you get away from the LMR's  
21 the less stringent the restrictions are, isn't that correct  
22 as a general statement?

23 A That's true. The buffer zone is wider  
24 for the deep zone than it is for the shallow zone.

25 Q Okay, so the next step outside of this

1 buffer zone, under the agreement, and again this is on Page  
2 6 of Exhibit Two, says that "An APD for an oil and gas well  
3 at a location more than one-fourth mile" -- that would be  
4 outside the buffer zone, would it not, Mr. Lyon?

5 A Right.

6 Q -- "but less than one-half mile from the  
7 LMR of any potash lessee, may be approved only if --" let's  
8 stop there for a second. Let me draw another line around  
9 the buffer zone, and this is the distance from one-fourth to  
10 one-half mile I've indicated there on the board. Now, with-  
11 in that distance under the agreement between the potash in-  
12 dustry and the oil and gas industry, drilling can take place  
13 in that area, can't it, Mr. Lyon?

14 A Yes, sir.

15 Q And under the agreement wells can be  
16 drilled in the distance from one-fourth mile to one-half  
17 mile provided that the bottom hole location -- again I'm  
18 reading from Exhibit Two, -- providing that the "bottom hole  
19 location does not extend below the base of the Delaware  
20 Mountain Group, and the well is drilled in accordance with  
21 the cementing and casing requirements set forth in Section  
22 V." Referring to Exhibit Two.

23 A Right.

24 Q Now to put that in -- I hate to say it,  
25 but more understandable language, is that not saying that if



1 anyone wants to drill in the area from one-fourth mile to  
2 one-half mile of a buffer zone, they can do so provided the  
3 bottom hole location does not extend below the Delaware  
4 Mountain Group plus they use what we've always called R-111-  
5 A casing. Is that a fair statement?

6 A Right. That's correct.

7 Q Now, the next step away under the agree-  
8 ment is Paragraph 3 on Page 6, more than one-half mile but  
9 less than one mile from the LMR. Drilling is also allowed  
10 in that area, isn't it, of one-half mile to one mile?

11 A Yes, sir.

12 Q And under the agreement between the in-  
13 dustries, it says, "An APD for an oil or gas well at a loca-  
14 tion more than one-half mile but less than one mile... may  
15 be approved regardless of the depth of the bottom hole loca-  
16 tion..."

17 So in the area from one-half mile to one  
18 mile under the agreement there can be what you and I know as  
19 both shallow wells and deep wells. correct?

20 A Right.

21 Q "... provided," as the agreement says,  
22 "that wells with bottom hole locations below the base of the  
23 Delaware Mountain Group are drilled in accordance with the  
24 cementing and casing requirements set forth in Section V of  
25 this agreement ...". What that means, that's the reference

1 to R-111-A casing, right?

2 A Right.

3 Q So if someone wants to drill within a  
4 distance of one-half to one mile, they can do so at any  
5 depth provided if they go below the Delaware Mountain Group,  
6 they have to use R-111-A casing.

7 A Correct.

8 Q And "(b) wells to bottom hole locations  
9 above the base of the of the Delaware Mountain Group may be  
10 drilled without regard to the requirements in Section V...".  
11 Does that mean, Mr. Lyons, that if someone wants to drill in  
12 the area from one-half mile to one mile, a shallow well,  
13 they can do so without requiring the R-111 casing?

14 A It does say from -- from one-half mile to  
15 --

16 Q Yes, in the distance from one-half mile  
17 to one mile --

18 A Uh-huh.

19 Q -- if someone wants to drill a well with  
20 a bottom hole location above the Delaware Mountain Group,  
21 doesn't this agreement say they can do that and they don't  
22 even have to comply with the old R-111-A casing require-  
23 ments. Isn't that what it says in Paragraph 3 of on Page 6?

24 A I believe that's what it says.

25 Q That's a benefit to the oil and gas

1 industry, isn't it, a benefit as compared to the existing R-  
2 111-A?

3 A We did not -- I did not incorporate that  
4 in my --

5 Q Well, I'm -- I'm going to talk about  
6 that, but I intend, I'll tell you, to talk about what you  
7 did and did not incorporate, but under the agreement between  
8 the industries, didn't the potash industry agree that if the  
9 oil and gas industry wanted to drill a shallow well, bottom  
10 hole location above the Delaware Mountain Group, in one-half  
11 to one mile they could do so and they didn't even have to  
12 comply with R-111-A casing? Isn't that correct?

13 A That's correct.

14 Q And that would be of benefit to the oil  
15 and gas industry, wouldn't it?

16 A Yeah, that -- I think that's a concession  
17 that the potash industry made to the oil and gas industry.

18 Q And wouldn't it be a fair statement to  
19 say that the potash industry refused to do that any closer  
20 than those distances again for fear they'd create a safety  
21 hazard?

22 A Yes, I think that is correct.

23 Q Now on page, continue on Page 6, Section  
24 4, it contains an agreement, continues to graduate out with  
25 the next tier being in Paragraph 4, more than one mile from

1 the LMR, and the agreement says, "An APD for an oil and gas  
2 well -- or a gas well, -- at a location more than one mile  
3 from the LMR may be approved regardless of the depth of the  
4 bottom hole location and without regard to the requirements  
5 of Section V...".

6 Is it your understanding, Mr. Lyon, that  
7 that says that if someone wants to drill an oil or a gas  
8 well to any depth they want to at a surface location more  
9 than one mile from the LMR of a potash lessee, they can do  
10 so without regard to what we call R-111-A casing?

11 A That's correct.

12 Q That, too, is of benefit to the oil and  
13 gas industry, isn't it?

14 A It's a benefit.

15 Q And that was a concession of the potash  
16 industry, wasn't it?

17 A Yes, it was.

18 Q Now, when you put together Exhibit Four,  
19 Mr. Lyon, were you trying to make the changes that were set  
20 forth in Exhibit Two that had been agreed upon by the oil  
21 and gas industry and the potash industry?

22 A Not entirely.

23 Q So Exhibit Four, what you've put to-  
24 gether, does not reflect the concept that we've gone through  
25 here that's set forth in Exhibit Two, does it?

1           A           No, not in every respect.

2           Q           In fact, on Page 3 of your Exhibit Four,  
3 if we look at Page 3 of your exhibit, in Subparagraph (4),  
4 that section says that "the Division's District Supervisor  
5 may waive the requirements of Section Roman numeral IV(3)  
6 upon satisfactory showing, with concurrence of the BLM, that  
7 a location is outside the LMR and surrounding buffer zone  
8 and that no potash resources will be endangered."

9                       That's your language, isn't it?

10          A           Yes, it is.

11          Q           You didn't get that from the agreement  
12 between the potash industry and the oil and gas industry,  
13 did you?

14          A           No, sir, I didn't.

15          Q           Aren't you saying there, Mr. Lyons, that  
16 even within this area of one-quarter mile to one-half mile  
17 that someone could drill a well without R-111-A casing?

18                       Could the District Supervisor allow that  
19 under your proposal?

20          A           I think he probably could.

21          Q           Do you think that would create a concern  
22 for the potash industry after you've heard all of their com-  
23 ments about the safety of underground miners?

24          A           I'm sorry, I didn't --

25          Q           Do you think that kind of a proposal,

1 that would allow a District Supervisor to waive R-111-A cas-  
2 ing within the distances that you have in your Exhibit Four  
3 would be of concern to the potash industry?

4 Do you think that would be a concern to  
5 them?

6 A Yeah, I suppose it would.

7 Q You know how they feel about safety,  
8 don't you?

9 A Yes, sure.

10 Q You have seen the documentation they have  
11 provided you that deals with the explosive characteristics of  
12 methane, haven't you?

13 A That's right.

14 Q And that talks about underground explo-  
15 sions in some of those, don't they?

16 A I believe so. It's been awhile since I  
17 read it.

18 Q Is it your intent in your exhibit to al-  
19 low an oil and gas operator to drill a deep gas well within  
20 close proximity to the LMR of a potash mine without any cas-  
21 ing requirements under R-111-A?

22 A No. I probably did not word that the way  
23 I was really thinking. The -- what I was trying to do in  
24 that language, and I -- you can help me do it better, is  
25 that in those areas where the potash people say that we --

1 you do not have to use the casing requirements of R-111, I  
2 wanted to leave to the discretion of the District Supervi-  
3 sors that even though the potash people don't feel it's  
4 necessary, that the Supervisor may feel that it's necessary.

5 Q Okay.

6 A So I did not intend to make it less or  
7 more lenient than the agreement.

8 Q Okay.

9 A I tried to make it a little stricter.

10 Q That was my question. So you're not  
11 proposing in -- in -- on Page 3 Subparagraph (4) of your  
12 Exhibit Four to -- to lessen the restrictions that the  
13 potash industry and oil and gas industry have agreed to in  
14 Exhibit Four?

15 A No, that was not my intent.

16 Q Okay, fine. Now, also, on Page 15 of  
17 your Exhibit Four, do you have that in front of you, Mr.  
18 Lyon?

19 A Yes.

20 Q The top paragraph on Page 15, the first  
21 paragraph -- I'm sorry, the first sentence that begins on  
22 Page 15 says, -- I'm sorry, the second sentence says, "Any  
23 application to drill in the LMR area, including buffer  
24 zones, may be approved only after notice and hearing or by  
25 mutual agreement of lessor and lessees of both potash and

1 oil and gas interests." And that is not part of the agree-  
2 ment between the oil and gas and potash industries that has  
3 been worked out in the last eighteen months, is it?

4 A I'm sorry, I must have been reading the  
5 -- looking at a different paragraph than you are.

6 Q Okay, I'm sorry. On Page 15 of your Ex-  
7 hibit Four, at the top, the second sentence starts out, "Any  
8 application...", do you see that?

9 A Okay, yeah.

10 Q Okay. It says, "Any application to drill  
11 in the LMR area, including buffer zones, may be approved on-  
12 ly after notice and hearing or by mutual agreement of lessor  
13 and lessees of both potash and oil and gas interests."

14 A Yes.

15 Q Do you see that?

16 A Yes.

17 Q That is not from the joint agreement be-  
18 tween the potash industry and oil and gas industry, is it?

19 A No, it is not.

20 Q In fact, that's in direct opposition to  
21 what's been agreed upon between the two industries, isn't  
22 it?

23 A That's true, and this is one of the in-  
24 stances where I feel that we as a regulatory agency cannot  
25 delegate our discretion, and I really feel that we do not



1 have the right to deny anybody to come to a hearing for an  
2 exception.

3 Q So your Exhibit Four, at least to that  
4 extent, does not implement the joint agreement between the  
5 industries.

6 A That's correct.

7 Q You understand, do you not, Mr. Lyons,  
8 from your participation in the committee work, that the  
9 agreement with respect to the relaxation of the casing re-  
10 quirements that allows the oil and gas industry to get  
11 closer and closer to the LMR's of the potash mines was a  
12 trade-off for no drilling in the LMR, wasn't it?

13 A Yes, it was.

14 Q And that was made very clear to everyone  
15 in those meetings, wasn't it?

16 A Yes, it was.

17 MR. HIGH: I have nothing else,  
18 Mr. Chairman. Thank you.

19 MR. LEMAY: Thank you, Mr. High.  
20 Additional questions? If not,  
21 the witness may be excused. Yes, sir, Ernie.

22  
23 QUESTIONS BY DR. SZABO:

24 Q Did you in your introductory statement  
25 say that the -- about 90 percent of the acreage was federal?

1           A           That's my understanding, yes.

2           Q           And it seems to me I heard you make the  
3 statement that the BLM was not going to allow drilling within  
4 the potash area?

5           A           No, I don't think I said that.

6           Q           Life of mine reserves area, assuming the  
7 fact that the BLM has a habit of (unclear to the reporter)  
8 participating and nonparticipating areas.

9           A           What do I think would happen?

10          Q           Would we be cut out?

11          A           Well, it depends on where your acreage is.

12          Q           Well, if we're not participating, then we  
13 would be escheated of our rights.

14          A           If your acreage was in the LMR and a per-  
15 mit could not --

16          Q           Forced into a unit.

17          A           Say again.

18          Q           Forced into a unit?

19          A           How does that happen?

20          Q           Well, unless everyone participates in  
21 that unit we are being deprived of our income from that sec-  
22 tion.

23          A           Well, I don't understand the bit about  
24 your being forced into a unit.

25          Q           Well, your statement says that you would

1 unitize as much as possible within the potash area.

2 A Yeah, I think that was a general, philo-  
3 sophical statement that -- that unitization should be used  
4 to -- to protect correlative rights and, you know, so that  
5 the interests could participate in the -- in the oil and gas  
6 production, and --

7 Q In a (unclear) unit all the various par-  
8 ties participate. In a federal unit that's not necessarily  
9 true.

10 A That's true.

11 Q So if we're not participating, then we'll  
12 be deprived.

13 A By the terms of the unit agreement, but  
14 --

15 Q I'm bringing up a problem that I don't  
16 think (not clearly heard by the reporter) that possibly we  
17 will be cheated (not clearly heard by the reporter) partici-  
18 pating or not participating and I think that may need  
19 additional wording.

20 A Well, we'd be glad to work with you on --  
21 on language if you feel it's necessary.

22 MR. LEMAY: Additional ques-  
23 tions of the witness? If not, he may be excused.

24 Let's take a ten minute break.

25

1 (Thereupon a ten minute recess was taken.)

2  
3 MR. LEMAY: Please take your  
4 seats. We'll continue. Mr. Kellahin,

5 MR. KELLAHIN: Mr. Chairman,  
6 I'd like to call Mr. Jens Hansen.

7 MR. LEMAY: Before we continue,  
8 I'd like to accept for the record without objection Exhibit  
9 Number Seven.

10 MR. HALL: Your Honor, on  
11 behalf of Texaco we would like to state an objection. It's  
12 both irrelevant and hearsay.

13 MR. LEMAY: Fine. With those  
14 objections the Exhibit Seven will be admitted.

15 You may continue, Mr. Kellahin.

16 MR. KELLAHIN: Thank you, Mr.  
17 Chairman.

18  
19 JENS HANSEN,  
20 being called as a witness and being duly sworn upon his  
21 oath, testified as follows, to-wit:

22  
23 DIRECT EXAMINATION

24 BY MR. KELLAHIN:

25 Q Mr. Hansen, for the record would you

1 please state your name and occupation?

2           A           My name is Jens Hansen.    I'm a petroleum  
3 landman.

4           Q           Mr. Hansen, would you describe your edu-  
5 cational background for the Commission?

6           A           I have a BA degree from Texas Tech Uni-  
7 versity in history, with post graduate work in both geology  
8 and business.

9           Q           We don't have microphones here in this  
10 auditorium, Mr. Hansen, you'll have to speak up as best you  
11 can.

12                       In what year did you graduate?

13           A           1971.

14           Q           Would you describe what has been your em-  
15 ployment experience as a petroleum landman?

16           A           In 1971 I became an independent with a  
17 title company, checking titles, curing titles, checking the  
18 records.

19                       In 1973 I went to work for Coastal States  
20 Gas Producing Corporation in Corpus Christi, Texas.

21                       In 1976 I went to Oklahoma City, worked  
22 for Walter Duncan Oil Properties.

23                       In 1978 I became employed by what is Bass  
24 Enterprises Production Company, where I've been for ten  
25 years.

1 MR. LEMAY: Mr. Hansen's quali-  
2 fications are accepted as an expert witness.

3 MR. KELLAHIN: Thank you, Mr.  
4 Chairman.

5 Q Mr. Hansen, would you describe for us  
6 what has been your involvement in the oil/potash area of Ed-  
7 dy County, New Mexico, in the last ten years?

8 A My position with Bass Enterprises is I am  
9 a Division Landman for west Texas and New Mexico and we have  
10 managed the -- among other oil and gas properties -- the  
11 Federal units that Bass Enterprises operates, which are the  
12 Big Eddy, Poker Lake, and the James Ranch, which are in the  
13 general vicinity and do penetrate into the potash area.

14 Q Have you participated in prior hearings  
15 before the Oil Conservation Commission on issues concerning  
16 the oil/potash area?

17 A Yes, I have.

18 Q Mr. Hansen, let me direct your attention  
19 to what we've placed on the wall of the hearing room as Bass  
20 Exhibit Number One, and would you take a moment and simply  
21 identify that exhibit for us?

22 A That exhibit is the recent, most recent  
23 Midland Map Service map of the Eddy and Lea County, New Mex-  
24 ico area that embraces what is known as the potash area.

25 Q Why don't you go to the map or display on

1 the wall, Mr. Hansen, and let me ask you some questions  
2 about it.

3 If you'll turn the other way, sir, and  
4 move to the light switch so that your back is not to the  
5 Commission. Would you identify for us what is indicated by  
6 the red outline border?

7 A The red outline border is the KPLA area  
8 that is referred to in the 1975 Secretarial Order, '86 Sec-  
9 retarial Order.

10 Q And there's a black outlined area. What  
11 is that?

12 A The black outlined area is the R-111 A  
13 through O.

14 Q Would you describe for us what the var-  
15 ious color codes mean on the display, Mr. Hansen?

16 A The various color codes are oil and gas  
17 leases by company ownership.

18 The yellow represents Bass Enterprises  
19 oil and gas leases, which is approximately 83,000 acres, and  
20 other companies are Texaco, Amoco, Mobil, Exxon, Phillips,  
21 Santa Fe, Chevron.

22 The -- what we have endeavored to do was  
23 to find all of the oil and gas leases in their primary terms  
24 and use those. There are others that -- they have credit  
25 that their names are on that are past their primary terms

1 which may be suspended and we did not color those. So this  
2 may not be accurate as to the other companies.

3 Q As to Bass' interests, how are those  
4 identified on the display?

5 A In yellow.

6 Q All right, and those represent leases  
7 that you hold in the Secretarial area or oil and gas drill-  
8 ling and development?

9 A That's correct.

10 Q You've told us that Bass has been invol-  
11 ved in the potash/oil area since the early 1950's?

12 A 1952 is when these units were established  
13 and that constitutes most of our acreage.

14 Q Would you outline for us generally where  
15 the Big Eddy Unit is?

16 A The Big Eddy Unit acreage is mostly here;  
17 James Ranch acreage, here; and Poker Lake Unit acreage here,  
18 small portion of the Poker Lake in here.

19 Q Would you return to your seat, Mr. Han-  
20 sen?

21 Did you participate on behalf of your  
22 company in the Oil Conservation Division's called work study  
23 committee for the examination of the rules for the potash-  
24 oil drilling under Oil Commission supervision?

25 A Yes, we -- yes, I did.



1           Q           Why did you participate in that work stu-  
2 dy committee on behalf of your company, Mr. Hansen?

3           A           We participated in that because of the  
4 experience we have had with attempting to drill wells in the  
5 potash area and the success we have had with Mississippi  
6 Chemical in that regard.

7           Q           Let me direct your attention to your ef-  
8 forts under the existing R-111 procedures, and by that I  
9 mean all of the extensions or modifications of that order as  
10 applied to the Oil Conservation Division and the correspon-  
11 ding administration of the Federal properties by the Bureau  
12 of Land Management pursuant to the Secretary orders and di-  
13 rectives.

14                   From Bass' perspective as an operator in  
15 this area, have you personally been involved in the last ten  
16 years with that process?

17           A           Yes.

18           Q           Describe for us generally what is the  
19 procedure and method utilized by an operator to obtain ap-  
20 proval under existing rules for drilling on Federal acreage  
21 in the R-111-A area and how those relate to each other.

22           A           Well, the first step is to file an appli-  
23 cation to drill and if that -- that location of that well is  
24 within an area that's one mile from a potash lease, you have  
25 to notify the potash operator under R-111 rules, and if that

1 potash operator objects, you have a hearing and the BLM of-  
2 ficials attend the hearing and then, depending on whether  
3 it's State acreage or Federal acreage, appropriate action is  
4 taken.

5 Q Describe for us with specifics the last  
6 experience you've had with the drilling of the Rodke No. 3  
7 Well in terms of how you specifically handled the process of  
8 obtaining approval for that well.

9 A The Rodke No. 3 Well was an example of  
10 where the NMOCD and the Department of Interior disagreed on  
11 whether a well should be drilled or not.

12 In October of 1976 Bass filed an applica-  
13 tion to drill the Rodke 3 in Section 27 of 20 South, Range  
14 31 East, under a Federal oil and gas lease.

15 An arbitration hearing was conducted on  
16 April 21st, 1977, under the R-111 rules pursuant to Missis-  
17 sippi Chemical Corporation and Kerr McGee Corporation oppos-  
18 ing the proposed location.

19 In May of '77 the Department of Energy  
20 denied the Rodke 3 Well application. It was the southern  
21 Rocky Mountain Oil and Gas Supervisor of the USGS.

22 In April -- I mean, excuse me, in June of  
23 '77 Bass appealed that ruling to the Director of the United  
24 States Geological Survey.

25 In April of '78, and we're in the next

1 year now, the New Mexico Oil and Gas Division convened a  
2 hearing and entered Order 5725 in May of '78 authorizing the  
3 drilling of a well. Also in April, 18th, the Director of  
4 the United States Geological Survey affirmed the Area Super-  
5 visor's decision to deny the Rodke 3 application to drill.

6 Then in May of 1980 the Interior Board  
7 Land of Appeals affirmed the Director of the USGS decision  
8 not allowing the well to be drilled.

9 Then in August of 1981 Bass filed a  
10 motion to reverse the Interior Board of Land Appeal with the  
11 United States District Court. That motion was denied but  
12 having failed in tht endeavor we then sought the Department  
13 of Energy assistance in amending the 1975 Secretarial Order  
14 instructions for instrumentation.

15 In May of 1983 that directive was issued  
16 specifying drilling islands and under what conditions they  
17 would be established.

18 Q Let me show you Exhibit Number Two and  
19 let's look specifically at where the Rodke Well is located  
20 within the R-111-A area, Mr. Hansen.

21 To help the other participants in the  
22 room, Mr. Hansen, would you show on Exhibit Number One ap-  
23 proximately where the Rodke No. 3 Well is?

24 A The Rodke 3 Well is right there.

25 Q Would you take a moment and identify Ex-

1     hibit Number Two for us?

2             A             This exhibit is an enlargement of the  
3     area I just pointed to on this map, Exhibit Number One, and  
4     it locates just to the right where Duval Corporation is  
5     written Section 27, and inside Section 27 there is a dry  
6     hole symbol at approximately in the center of that section,  
7     and that is the location of the Rodke Federal No. 3, which  
8     was subsequently drilled under the well name the Big Eddy  
9     101.

10            Q            This well was drilled pursuant to the ex-  
11     isitng R-111 procedures?

12            A            Yes.

13            Q            And it was the subject of an Oil Conser-  
14     vation Commission hearing in which Bass was opposed with re-  
15     gards to the drilling of the well?

16            A            That's correct.

17            Q            You had two administrative hurdles to  
18     overcome for the drilling of this well. In addition to the  
19     Oil Conservation Division it was the Federal permitting pro-  
20     cess?

21            A            That's correct.

22            Q            What was the total length of time from  
23     the decision to drill the well to actual commencement of the  
24     well?

25            A            Eight years.

1 Q Did you ultimately obtain approval from  
2 the Oil Conservation Division to drill the well?

3 A The Oil Conservation Division gave us  
4 permission to drill the well under the -- under the order  
5 that they issued. The BLM, however, did not issue approval  
6 for drilling of that well until Bass Enterprises entered in-  
7 to an agreement with Mississippi Chemical Corporation.

8 Q All right. Let's talk for a moment about  
9 your involvement with potash operators in the enclave, and  
10 with regards to Mississippi Chemical, what other avenues  
11 that you have sought in order to utilize the area for oil  
12 and gas exploration.

13 A Well, we have, of course, attended multi-  
14 ple hearings in attempting to drill wells in the R-111 area.  
15 We haven't had much success in any of the are that would be  
16 colored blue on the colored map, the BLM map. That area has  
17 primarily been denied to the oil and gas industry.

18 Q I'll have you take a moment and help me  
19 put up this next display, Mr. Hansen.

20 Would you identify on Exhibit Number  
21 Three, Mr. Hansen, what is the source of that document?  
22 What is it?

23 A This is the Bureau of Land Management  
24 1984 map showing the distribution of potash resources in the  
25 Carlsbad Mining District, Eddy and Lea County, New Mexico.

1           Q           We can hear you better if you'll go to  
2 the exhibit and turn back this way.

3                   You've made reference to the Mississippi  
4 Chemical area in which Bass and Mississippi Chemical had an  
5 agreement about the development of that area?

6           A           That's correct.

7           Q           How is that identified on the exhibit?

8           A           That's identified with the red dots, many  
9 of which are in the blue area and a few of them are on the  
10 border of the red areas.

11          Q           Describe briefly what is the substance of  
12 that agreement.

13          A           The substance of that agreement is that  
14 after we obtained the directing from the Department of In-  
15 terior, Mississippi Chemical Corporation to a degree broke  
16 ranks with the other potash operators.

17          Q           In what way?

18          A           They sought an agreement to allow us to  
19 drill wells in areas that today would not be considered  
20 their life of mine reserves.

21          Q           Have you been successful in an effort to  
22 drill wells in areas that are within the R-111-A area under  
23 Mississippi Chemical's lease that are not within the life of  
24 the mine reserves for that company?

25          A           Yes.

1           Q           Identify for us which of the wells have  
2 been drilled.

3           A           We drilled two wells under this agree-  
4 ment. The first one, of course, is the Rodke 3, which is  
5 that location. We drilled that well several months after we  
6 entered the agreement. The Department of Interior allowed  
7 us to drill after Mississippi Chemical approved the drilling  
8 application, and we drilled this well here, which is within  
9 a little over half a mile from the mine workings under that  
10 agreement.

11                   I might add that the Rodke 3 was a Dela-  
12 ware test. The Big Eddy 91, which is closer to the mine,  
13 was a Morrow test.

14           Q           What effect did your ability to work out  
15 a voluntary agreement with Mississippi Chemical have on  
16 Bass' participation in the work study committee?

17           A           Well, it had a great deal to do with our  
18 involvement because we -- we felt that we had something to  
19 offer in the way of an example that would possibly allow the  
20 other operators, oil and gas operators, to drill wells in  
21 areas that they have oil and gas leases on the same type  
22 philosophy.

23           Q           That example was predicated on the oil  
24 and gas -- the potash operator setting aside life of the  
25 mine reserves in which the oil and gas operator would not

1 attempt to drill and as a concession, allowing the oil and  
2 gas operator to drill in other portions of the lease.

3 A That's correct.

4 Q Summarize for us, Mr. Hansen, what was  
5 your participation in the OCD work study committee for the  
6 revision of rule -- procedures to the R-111-A order.

7 A Repeat that for me.

8 Q Yes, sir. Describe for us your partici-  
9 pation in the work study committee.

10 A My participation was as a general commit-  
11 tee member at the initial meetings and then subsequent to  
12 those meetings we had the work committees, or subcommittees,  
13 and we participated in the work and negotiation of endeavor-  
14 ing to find a way to drill wells in this area.

15 Q Let me commence with that portion of the  
16 work study that generated the subcommittee that worked on  
17 the various drafts between the potash industry and the oil  
18 and gas industry. When did that take place, the creation of  
19 the subcommittee?

20 A You want the date?

21 Q Approximate one.

22 A The approximate date was March of '87.

23 Q On behalf of the oil and gas industry what  
24 individuals or companies participated in the subcommittee?

25 A Talisman participated, John Waid was the



1 chairman of our committee. Norbert Rempe participated with  
2 Yates. Dan Girand participated, and there was one other. I  
3 can't remember his name. A. J. Deans.

4 Q Did you participate in reviewing and  
5 analyzing the various drafts?

6 A Yes.

7 Q Describe for us generally as we move  
8 through the discussion drafts in the summer of '87, what the  
9 initial positions of the potash companies were in order to  
10 arrive at an agreement.

11 A The -- after the work -- the  
12 subcommittees were established, the potash subcommittee and  
13 the oil and gas subcommittee each devised the respective  
14 proposals. They were summarily rejected out of hand by each  
15 of the opposing subcommittees because, of course, our  
16 proposal was based on a total lopsided view of what we  
17 wanted to do in the area and theirs was to keep us  
18 completely out. That was before we began looking at this  
19 procedure.

20 Q Thereafter there as a subsequent draft  
21 prepared that was circulated among the committee members?

22 A Prior to that, at the -- at the work --  
23 at the subcommittee meeting in El Paso, after the potash  
24 committee, subcommittee had presented their proposals, we  
25 had presented our proposals, we were at a stalemate, and at

1 that point the potash industry made the offer that if we  
2 would not drill in their life of mine reserves, they would  
3 give us the remaining areas that we could drill, which would  
4 be all of the green, all of the gray, all the red, and a  
5 portion of the blue.

6 It was subsequent to that that the draft  
7 of what we now have as the statement was made.

8 Q Was there any guidance or direction given  
9 to the work study drafting committee with regards to the po-  
10 sition of the Bureau of Land Management in terms of what  
11 parameters they would accept?

12 A Yes, the representatives of the Bureau of  
13 Land Management attended the critical sessions and advised  
14 us what they would and would not live with insofar as our  
15 negotiation of where we would drill and the buffer zones, et  
16 cetera.

17 Q Did the Oil Conservation Division set any  
18 parameters or guidance for discussion with regard to the  
19 drafting of revised rules?

20 A They, as well, participated in guiding  
21 the subcommittees on which direction they would and would  
22 not go.

23 Q At what point were the drafts in such a  
24 form that they were shared with the other members of the  
25 committee?

1           A           After the November -- well, the -- let's  
2 see here.

3                   The potash subcommittee proposed -- they  
4 drafted the first form of the agreement. They sent it to  
5 me. Charlie High sent it to me under a letter and I sent it  
6 to the other committee members, not the subcommittee  
7 members, the full committee members, with their -- with the  
8 request that they respond with their comments and their  
9 suggestions on how we might better this agreement.

10           Q           Did you receive comments and suggestions  
11 from other members of the oil and gas industry participating  
12 in the study?

13           A           We received some of them.

14           Q           And did you pass on all those suggestions  
15 and comments on to the potash industry?

16           A           Yes, we passed that on in a letter.

17           Q           Subsequent to that, what then occurred,  
18 Mr. Hansen?

19           A           Well, we waited several weeks to obtain  
20 all of the comments that we received and at that point we  
21 went to the November 23rd subcommittee meeting and finalized  
22 the statement of recommendations.

23           Q           And how was that statement of  
24 recommendations executed on November 23rd, '87, distributed  
25 to the rest of the industries?

1           A           It was distributed -- it was executed by  
2 the members of the subcommittees that were in attendance at  
3 that time and it was subsequently sent to all the committee  
4 members for their information and their -- whatever they  
5 wanted to do with it.

6                   MR. LEMAY: I believe at this  
7 point we'll take a break for lunch and reconvene at 1:15.

8  
9                   (Thereupon the noon recess was taken.)

10  
11                  MR. LEMAY: Mr. Kellahin.

12                  MR. KELLAHIN: Thank you, Mr.  
13 Chairman.

14  
15                  JENS HANSEN,  
16 resuming the witness stand, testified as follows, to-wit:

17  
18                   DIRECT EXAMINATION CONTINUED

19 BY MR. KELLAHIN:

20           Q           Mr. Hansen, for the last ten years you've  
21 been personally involved in attempting to drill in the pot-  
22 ash area, attempting to obtain approval from the Secretary  
23 to the Bureau of Land Management for drilling in the potash  
24 area, and have struggled with the existing procedure.

25                   Exhibit Two that was introduced by Mr.

1 Lyon represents a statement of the potash industry and the  
2 oil industry's position executed on November 23rd. Does  
3 your signature appear on that document?

4 A It does.

5 Q Do you have an opinion, Mr. Hansen, as to  
6 whether or not the stated agreement of November 23rd  
7 represents an improvement over the existing R-111  
8 procedures?

9 A We believe it is an improvement.

10 Q In what way?

11 A Because it allows the wells to be drilled  
12 in the potash area that cannot normally be drilled under the  
13 prescribed procedures that have been followed over the last  
14 -- since 1955.

15 Q In your own words, Mr. Hansen, would you  
16 summarize what the give and take was as you understand it  
17 between the two industries that resulted in the statement of  
18 November 23rd?

19 A The give and take between the potash  
20 industry and the oil and gas, or the potash representatives  
21 and the oil and gas representatives, was primarily the same  
22 as the give and take in the Mississippi Chemical agreement  
23 between Bass and Mississippi Chemical, and that is that we  
24 protect the life of the mine reserves and drill the other  
25 areas. That -- that's the primary, fundamental concept of

1 this agreement.

2 Q Let's go through the agreement and talk  
3 about some of the specific reasons particular provisions are  
4 contained within the agreement.

5 First of all, on Page 2, Commissioner  
6 Humphries this morning directed Mr. Lyon's attention to the  
7 fact that in Subparagraph 1 it says or requests that the Oil  
8 Conservation Commission adopt this in lieu of the current  
9 order without substantial change.

10 What's the basis for having that language  
11 in the agreement?

12 A Well, because we believe the agreement is  
13 balanced the way that it is written to, like I said, to pro-  
14 tect oil and gas reserves, to drill them, and to protect the  
15 potash reserves under the life of the mine reserve concept.

16 Q Let's look at the bottom portion of Page  
17 2 and it says the intent of the parties are that, and it  
18 goes on and discusses the life of the mine reserves.

19 Mr. Humphries had a question this morning  
20 concerning what happens when those life of the mine reserves  
21 have been fully exhausted or depleted by the potash opera-  
22 tor. Do they continue to be life of the mine reserves for  
23 which the oil and gas operator is precluded from drilling?  
24 What is your understanding of the mechanism under the agree-  
25 ment by which the life of the mine reserves will be updated

1 or adjusted?

2           A           My understanding of the way this document  
3 would apply would be a provision that designates the minine  
4 reserves that's filed each year with the BLM. That designa-  
5 tion every year would -- would include either new areas that  
6 have been discovered as being life of the mine reserves or  
7 old areas that had theretofore been designated life of the  
8 mine reserves and were no longer considered so. Also, I  
9 would assume that it would also include mined out areas that  
10 could be safely drilled.

11           Q           Do you have an opinion as to whether that  
12 is a preferable procedure with more flexibility than the  
13 current R-111-A procedures whereby the potash operator files  
14 annually his 3-to-5 year mining plan?

15           A           Yes. We believe it would be a better  
16 procedure inasmuch as the Bureau of Land Management would be  
17 able to monitor the situation; be able to monitor the fil-  
18 ings that the potash operators would submit, and in so doing  
19 would only allow them to designate life of the mine reserves  
20 where they actually lie. We've been assured that by the  
21 Bureau of Land Management at the subcommittee meetings.

22           Q           When we look at the top portion of Page 3,  
23 there is a reference to the BLM Potash Resources Map of Oc-  
24 tober 1st of '84, and then it shows generally what areas are  
25 to be included or excluded from the life of the mine re-

1 serves.

2 A Yes.

3 Q Can you look at display number three,  
4 which is Bass Exhibit Three, and show us generally what is  
5 your understanding of how that would operate?

6 A As I understand the way it would operate,  
7 the areas in green, gray, red, and approximately 25 percent  
8 of the blue will be available for oil and gas drilling.

9 The areas in yellow, orange, and approxi-  
10 mately 75 percent of the blue would be off limits to all  
11 drilling.

12 Q Do you have an opinion as to whether that  
13 represents an advantage or a disadvantage under -- over the  
14 current system?

15 A I think it's an advantage inasmuch as we  
16 have sought the establishment of drilling islands since the  
17 '75 secretarial order was promulgated. We have yet to know  
18 of anyone in the industry, in the oil and gas industry, who  
19 has established a drilling island in the entire potash  
20 basin. It has not happened. We are to some degree advised  
21 that it will not happen.

22 Q When we look at Page 3 of the agreement  
23 and it talks about the potash area --

24 A Yes.

25 Q -- and it's the -- my understanding of



1 this language is it makes the -- proposed to make the R-111-  
2 A area coterminous with the BLM area. Is that what that  
3 does?

4 A Yes, that's correct.

5 Q Do you have any support or opposition to  
6 that proposal?

7 A We do not have opposition to that pro-  
8 posal under the conditions that the casing requirements cur-  
9 rently under regulation would not be increased by enlarging  
10 the R-111 area. That's covered further in the agreement.

11 Q When we look at Page 4 there is a sub-  
12 heading under here, Designation of Mine Reserves. What's  
13 the basis for having this particular provision in the agree-  
14 ment?

15 A Well, this would allow the protection of  
16 additional potash reserves if they were subsequently dis-  
17 covered from the date of this statement.

18 It would also allow for the contraction  
19 of the area if it was discovered that such an area did not  
20 represent a true life of mine reserves.

21 Q Are you bothered or concerned by the fact  
22 that the information conveyed by the potash operator to the  
23 BLM will be considered privileged and confidential informa-  
24 tion?

25 A No. To some degree we are but we think

1 -- we think that can be overcome.

2 Q We get now to Page 5 and it talks about  
3 the drilling in the potash area and it goes through a system  
4 that Mr. High and Mr. Lyon discussed earlier this morning in  
5 which there are various size buffer zones.

6 What is Bass' position with regards to  
7 the buffer zones as proposed in the November 23rd agreement?

8 A It's our position that these are the buf-  
9 fer zones the BLM now has under their policy and they are  
10 actually referred to in the 1986 Secretarial Order but the  
11 Bureau of Land Management at the subcommittee meetings war-  
12 ned us that these buffer zones would not be narrowed in any  
13 way.

14 So they're going to have to stand as they  
15 have been.

16 Q Assume this hypothetical, Mr. Hansen, if  
17 the OCD establishes a buffer zone that's less than this area  
18 described in the agreement, could the Bureau of Land Manage-  
19 ment still deny the permit to drill on Federal lands based  
20 upon a different buffer standard?

21 A Yes.

22 Q And that in fact is what has occurred,  
23 has it not?

24 A That's correct.

25 Q There is a notice provision set forth on

1 paragraph -- Page 8 and Subparagraph 14 (sic) in which the  
2 existing R-111-A notice provisions are expanded from the 10-  
3 day notice to potash operators to a 20-day period. Do you  
4 have any comments about notice provisions?

5 A No, we -- I think they're acceptable.

6 Q 20-day notice in your opinion is accept-  
7 able and that was a date that was negotiated and discussed  
8 among the potash industry and the oil and gas industry?

9 A That's correct.

10 Q There is a reference in the agreement  
11 which I must tell you I can't find right at the moment. I  
12 believe it's on Page 8, Subparagraph A of Paragraph IV, and  
13 there was language that Commissioner Humphries discussed  
14 this morning about unitization in the potash area.

15 First of all, would you describe the  
16 reason that that information is in the agreement?

17 A The reason that information is in the  
18 agreement is because it appears in the 1986 Secretarial Or-  
19 der.

20 Q What appears in the Secretarial Order?

21 A The possibility of unitizing areas due to  
22 drainage and the concept there is if a well is drilled, the  
23 border of one of these zones, border zones, is -- buffer  
24 zones, it's drilled at the edge of a buffer zone and it  
25 drains acreage, oil and gas from acreage underlying an oil

1 and gas lease that cannot be permitted and drilled, then  
2 there should be some mechanism for unitization to protect  
3 that leaseholder and the mineral -- owner of the minerals  
4 from drainage, and that -- it's only a well-by-well basis  
5 it's a concept in which we -- we saw this.

6 Q The suggested language that's used on  
7 Page 8 in Paragraph A about unitization is language that you  
8 suggested for the document?

9 A We requested that -- that Charlie High  
10 place something in the document that mentioned it. It would  
11 be virtually impossible to explore all the possibilities of  
12 unitization. You would have Federal units, State units, and  
13 all we wanted to do was to mention the possibility for pro-  
14 tecting correlative rights through this concept.

15 Q And it has its basis in the Secretarial  
16 Order?

17 A Yes.

18 Q And for no other reason?

19 A No other reason.

20 Q The concerns that Commissioner Humphries  
21 expressed this morning about having this used to create  
22 units for a large life of the mine reserve area was not the  
23 intent of that provision?

24 A No, in fact we do not -- we could not  
25 foresee anyone who owned an oil and gas lease in a life of

1 mine reserve who was not in danger of being drained, being a  
2 part of any unit that would be designated for that purpose.

3 Q Let's take a specific example, Mr. Han-  
4 sen, of what your opinion is with regards to how the pro-  
5 posed agreement, if adopted, would work in a particular in-  
6 stance, versus how it works now in that same instance.

7 I'd like to direct your attention to your  
8 Exhibit Number Three and to the Texaco well which is in  
9 their Forty-Niner Unit. It's the No. 3 Well?

10 A Correct.

11 Q And you've highlighted it on that exhi-  
12 bit?

13 A That's correct.

14 Q Would you go to the exhibit and show us  
15 all where it is?

16 A It's located right here.

17 Q It's the blue dot in the southern end of  
18 the display?

19 A That's correct.

20 Q Okay. Under the existing R-111-A proce-  
21 dures what was Texaco required to do in order to obtain the  
22 approval of one of the two wells they sought to drill in the  
23 potash area?

24 A They were required to file an application  
25 to drill and then notify the appropriate potash operators in

1 the vicinity of the proposed location.

2 Q And that subsequently resulted in a con-  
3 tested hearing?

4 A That's correct.

5 Q If the proposed agreement is incorporated  
6 into a new R-111-A rule, what is your understanding and  
7 opinion with regards to what would happen for that type of  
8 well?

9 A We asked specifically about that well un-  
10 der this statement and --

11 Q Whom did you ask?

12 A We asked International -- IMC, Walter  
13 Thayer.

14 Q And what is your understanding of whether  
15 or not under a procedure, if it's adopted under a rule  
16 change, whether or not that location, then, for the Texaco  
17 well would require notice and hearing and a contested dis-  
18 pute?

19 A It would have been approved under this  
20 provision and this agreement without hearing.

21 Q How would that be accomplished?

22 A Well, they would file the application,  
23 notify the potash operator; the potash operator would advise  
24 them that the well could be drilled because it is not lo-  
25 cated in a life of the mine reserve or the buffer zone pro

1     tecting that life of mine reserve.

2                     In this particular well here it would be  
3     in the barren area, anyway.

4             Q             Does Bass support the adoption by the  
5     Commission of the matters set forth in the statement of pos-  
6     ition for November 23rd, 1987?

7             A             Yes.

8             Q             Let's go to Mr. Lyon's or the Division  
9     staff's draft of a proposed order, which I believe is marked  
10    as Exhibit Number Four.

11                    Let me direct your attention to Page 15  
12    of that exhibit, Mr. Hansen. Do you have a copy of it?

13            A            Yes.

14            Q            Mr. High and Mr. Lyon discussed the por-  
15    tion of Page 13 that set forth a procedure where after no-  
16    tice and hearing there is a possibility that an oil and gas  
17    operator could drill a well within the life of the mine re-  
18    serve area.

19                    What was, in fact, the agreement between  
20    the oil and gas industry and the potash industry on that is-  
21    sue?

22            A            The agreement reached in the subcommittee  
23    on that -- on that issue is that we would not drill in a  
24    life of mine reserve in return for the areas around the life  
25    of mine reserve, and that the only -- under this particular

1 wording we would assume that the purpose of a hearing would  
2 be determine whether an area is actually in a life of the  
3 mine reserve, not whether they could drill in it or not.

4 Q Do you support the language as written by  
5 Mr. Lyon in this proposed draft order?

6 A It does not represent what the  
7 subcommittees agreed to in the statement.

8 Q Commissioner Humphries was concerned this  
9 morning about whether or not, intentionally or  
10 unintentionally, the Commissioner of Public Lands and his  
11 staff were being omitted from the process by which a  
12 decision would be made by either the OCD or the BLM  
13 affecting the drilling of wells on State potash acreage.

14 What was your understanding of how this  
15 agreement would apply and affect the operations of the  
16 Commissioner of Public Lands Office?

17 A Well, we -- it was not our purpose to  
18 exclude any portion of the New Mexico Oil Conservation  
19 Commission, including the Commissioner, and their control  
20 over State lands, and I think the reason the NMOCC was  
21 mentioned in here is because they handle most of the  
22 technical matters that arise out of these proceedings.

23 Q Have you had an opportunity to review Mr.  
24 Lyon's proposed order with regards to the way he's suggested  
25 the adoption of the provisions of the agreement executed by



1 the two industries on November 23rd of '87?

2 A Yes.

3 Q Apart from the observation about the  
4 hearing question on life of mine reserve areas, do you have  
5 any comments or observations about the way Mr. Lyon has pro-  
6 posed to implement the terms of the agreement?

7 A We have a little bit of problem with --  
8 on Page 3 regarding the casing programs. We realize that  
9 the Bureau of Land Management and the NMOC D want to have as  
10 much discretion in this matter as possible; however, we be-  
11 lieve that if the potash industry is comfortable with the  
12 casing program and provisions set out in the statement, then  
13 we believe those should be enacted and become policy.

14 Q Do you have any other observations about  
15 the way Mr. Lyon has structured a proposed order?

16 A No.

17 Q Do you have a summary conclusion, Mr.  
18 Hansen, with regards to Bass' position and recommendation to  
19 the Commission concerning the issue of revision to the R-  
20 111-A procedures and rules as they now exist?

21 A Yes.

22 Q What is that?

23 A Well, it's the position of our company  
24 that this area for fifteen and twenty years now has been a  
25 source of an emotional conflict between two industries and

1 that the conflict has resulted in an economic waste of time  
2 and money. We've accomplished very little under this proce-  
3 dure and we've been in a conflict phase for fifteen or twen-  
4 ty years and we believe that beginning with the MCC agree-  
5 ment, that that began a new phase of cooperation and under-  
6 standing, and I think the oil industry should in the future  
7 be a little more sensitive about what the non-gassy mine  
8 classification that these individuals enjoy and they're  
9 trying to protect, and that the potash industry be a little  
10 more sensitive about the areas we want to drill and the  
11 areas they've kept us out of because they were concerned  
12 that we would come too far and drill either in their mining  
13 areas or disturb their reserves.

14 So based upon that, we -- we endorse this  
15 statement and we think it's not a perfect document and it  
16 won't solve all the problems but it's another step and a new  
17 phase that should be looked at in a positive manner and im-  
18 plemented with optimism and cooperation.

19 MR. KELLAHIN: Nothing further  
20 of Mr. Hansen.

21 We move the introduction of  
22 Bass Exhibits One through Three.

23 MR. LEMAY: Without objection  
24 Bass Exhibits One, Two, Three will be admitted into the re-  
25 cord.

1 Thank you, Mr. Kellahin.

2 Questions of the witness? Yes,  
3 sir, Mr. Hall.

4 MR. HALL: Briefly, Mr. Chair-  
5 man.

6  
7 CROSS EXAMINATION

8 BY MR. HALL:

9 Q Mr. Jenson (sic), I wonder if you could  
10 clarify for us --

11 A Hansen.

12 Q I'm sorry, Hansen. Would you please  
13 clarify for the Commission and I just what exactly is Bass'  
14 position with respect to the adoption of Exhibit Four, which  
15 is the proposed rule, amending R-111 and the Exhibit B to  
16 that, which is Exhibit Two?

17 Does Bass come here today to support the  
18 adoption of Exhibit Four?

19 A You're talking about the proposed order,  
20 R-111-P?

21 Q Which Mr. Lyon suggests.

22 A Yes. This is the first time we've looked  
23 at it as this is the first time you've seen it and we like  
24 some of the things we see. We're a little concerned about  
25 the casing, the discretion of the casing, as I just testi-

1 fied. If the potash industry is comfortable with allowing  
2 us to abandon the R-111 casing requirements outside one mile  
3 from -- from the LMR, we would recommend that that be in-  
4 cluded in a subsequent order.

5 The other thing we have a little problem  
6 with is -- which I testified -- is this drilling in the life  
7 of the mine reserves. That was not part of our agreement at  
8 subcommittee level and the purpose for the potash industry  
9 in allowing us to come in and drill, as Mississippi Chemical  
10 has done, is the assurance that their potash reserves will  
11 be protected, and that we will not encroach to them as they  
12 have been concerned in previous years.

13 Q So does Bass support or oppose Exhibit  
14 Four?

15 A Generally it supports Exhibit Four.

16 Q Mr. Hansen, were you here earlier this  
17 morning and did you have an opportunity to hear the testi-  
18 mony of Mr. Lyons?

19 A Yes, I did.

20 Q Would you agree with Mr. Lyon's conclu-  
21 sion that there are in fact certain inconsistencies between  
22 Exhibit Four and the Exhibit B attachment to that which is  
23 the industry letter agreement?

24 A Yes, I would.

25 Q Instead of adopting the industry letter

1 agreement as Exhibit B to the new order, would Bass be op-  
2 posed to sending that letter agreement back to the drawing  
3 board and subjecting it to further deliberations and allowing  
4 other members of the industry an opportunity to make sugges-  
5 tions for appropriate language for an Exhibit B to make it  
6 more compatible with Exhibit Four?

7 A I think we would object to that.

8 Q Why?

9 A Because everyone had an opportunity to  
10 participate. The agreement was sent out, the proposed  
11 agreement was sent out to all the subcommittee, to all the  
12 committee members. They had the opportunity to respond.  
13 Some responded; some didn't.

14 If there are problems I think we can sit  
15 down and look at them but I don't -- I sense we're talking  
16 about a complete redrafting of this document, which we would  
17 be opposed it.

18 Q But you would agree with me that some of  
19 the objectives or goals of the letter agreement are directly  
20 opposed to those set out in the proposed order.

21 A Such as?

22 Q The drilling in the LMR area.

23 A We support that as it appears in the  
24 statement.

25 Q All right, so it is directly opposed to

1 what is shown.

2 A Yes, and we would -- we would recommend  
3 that the proposed Order R-111-P be amended to conform to the  
4 statement.

5 Q And would you also agree with me that  
6 the letter agreement still contains the problems that the  
7 Chairman of the Commission referenced with respect to the  
8 delegation of authority improperly (not clearly understood).

9 A And what are you asking me there?

10 Q If you agree with that.

11 A Yes. That's something I think they'll  
12 have to deal with.

13 Q Would Bass be in favor of having access  
14 to the information provided to the BLM by the potash indus-  
15 try in designating the LMR areas?

16 A Sure we would. We'd be interested in ob-  
17 taining all the information we can get in.

18 Q Let me ask you with respect to the Texaco  
19 Forty-Niner Ridge No. 3 Well.

20 A Yeah.

21 Q Were you present at the hearing in Case  
22 Number 9148, which is the application for that well?

23 A I was present but I didn't hear much of  
24 the testimony.

25 Q All right. I believe you testified ear-

1 lier that the representatives of IMC told you that had the  
2 provisions of the letter agreement been in effect that they  
3 would not have opposed that location?

4 A That's correct.

5 Q Did they also tell you that at that very  
6 hearing in which they were a party, they took the position  
7 that all of Section 16 contained mineable reserves?

8 A That doesn't surprise me because this has  
9 been going on -- this is the -- your point is well taken and  
10 that's what we've been saying all along. Without assurances  
11 that we will not disturb life of mine reserves, they're not  
12 going to allow us to drill anywhere and I think that's been  
13 their -- their purpose all along. That's why it took us  
14 eight years to drill the Rodke 3. You're exactly right.

15 Q Do you have an opinion on whether or not  
16 the information that would be provided to the BLM by the  
17 potash leaseholders would be reliable?

18 A Yes. I think it would be reliable.

19 Q Let me direct your attention to the let-  
20 ter agreement. Do you have that in front of you?

21 A Yes.

22 Q Throughout there are several references  
23 to what I call the transfer of liability and if I could dir-  
24 ect your attention to Page 9 of the letter agreement, let me  
25 read you a sentence.

1 A Okay.

2 Q "Oil and gas leaseholders and those  
3 persons and/or entities involved in the development of the  
4 lease shall be responsible, as provided by law, for any dam-  
5 ages caused by them to any person by the release of gases or  
6 liquids into the strata or atmosphere as a result of drill-  
7 ing activities."

8 Now, would it be your understanding that  
9 if I were to own a lease and farm it out to someone else, or  
10 if I were a non-operator under an oil and gas lease, and  
11 something happened, I would still be liable?

12 A No. I can only tell you -- I'm not a  
13 lawyer so I cannot speak from a legal standpoint. I can  
14 tell you what our counsel has informed us. That's the only  
15 way I can respond to your question and the way I respond to  
16 that is they even told us that this does not increase the  
17 liability of an oil and gas operator drilling under this  
18 agreement.

19 Q And what is the purpose of this transfer  
20 of liability language?

21 A To make the potash operators more comfor-  
22 table. It may be meaningless but it's in there.

23 Q Thank you. Nothing further.

24 MR. LEMAY: Thank you, Mr.  
25 Hall.



1 Additional questions of the  
2 witness?

3 Yes, sir.

4 MR. COHLMIA: Mickey Cohlma,  
5 Chevron.

6 I just want a clarification. I  
7 might have misheard what he said.

8 We're talking about the blue  
9 area, the LMR, the fact that approximately 75 percent of the  
10 LMR would be unavailable for drilling activities and approx-  
11 imately 25 percent would be available. Is that an arbitrary  
12 figure? How did you arrive at that?

13 A We didn't arrive at it. The potash in-  
14 dustry provided those figures to us and we don't know that  
15 those are correct yet. Over time we will find that out.

16 MR. COHLMIA: Thank you.

17 MR. LEMAY: Thank you. Addi-  
18 tional questions of the witness? Mr. High.

19  
20 CROSS EXAMINATION

21 BY MR. HIGH:

22 Q Mr. Hansen, you were a member of the Oil  
23 and Gas Committee, were you not?

24 A Yes.

25 Q And you were also a member of the working

1 committee, the small group that came up with the draft?

2 A Yes, sir.

3 Q Did you attend all the meetings that were  
4 held?

5 A All except going into the mine. I'd al-  
6 ready been in a mine.

7 Q You've been underground in a potash mine.

8 A Yes.

9 Q And did you receive copies of all the in-  
10 formation that the potash industry supplied to the oil and  
11 gas people with respect to the concern that it had about oil  
12 and gas drilling?

13 A That's correct.

14 Q And a lot of that information dealt with  
15 the issue of safety, did it not?

16 A Correct.

17 Q And would you agree with me that the  
18 structure of the agreement that was finally arrived at,  
19 which I've reflected on the chalkboard this morning with Mr.  
20 Lyon's testimony is based upon the potash industry's concern  
21 for safety.

22 A Correct.

23 Q That what can and cannot be drilled is --  
24 changes as you get further away from our mining activities  
25 because of the concern of the potash industry over the mi-

1 gration of methane gas.

2 A True.

3 Q Now, under the proposed order that Mr.  
4 Lyons came up with this morning, I believe you testified in  
5 response to questions from Mr. Kellahin and Mr. Hall that  
6 the proposal of Mr. Lyons that wells could be drilled in the  
7 LMR was inconsistent with our agreement.

8 A That's correct.

9 Q You're also aware, too, aren't you, Mr.  
10 Hansen, that there were a number of tradeoffs involved in  
11 these negotiations.

12 A That's correct.

13 Q The potash industry gave up some things  
14 that it considered very important, didn't it?

15 A Correct.

16 Q And in return the oil and gas industry  
17 gave up some things that you -- you people have wanted for a  
18 long time.

19 A Okay.

20 Q And the end result was that with all  
21 those compromises we finally reached a point where we could  
22 both agree to something.

23 A That's correct.

24 Q And to preserve that we put something in  
25 our statement of agreement, did we not?

1           A           That's correct.

2           Q           If you would -- if I could direct your  
3 attention to Page 2 and I'd like to refer you specifically  
4 to Paragraph Number 1 and Number 2 on Page 2, and I believe  
5 this has been received into evidence as Exhibit -- I believe  
6 it's Exhibit Two but -- in Exhibit Two on Page 2 Paragraph  
7 Number 1 says, "Upon approval by representatives of each in-  
8 dustry the terms of the agreement will be submitted to and  
9 must be adopted without substantial change by the New Mexico  
10 Oil Conservation Commission in lieu of the current Order R-  
11 111-A, as amended."

12                       That says that the agreement that we  
13 reached must be adopted without substantial change, doesn't  
14 it?

15           A           Yes.

16           Q           And Paragraph 2 says essentially the same  
17 thing with the exception of referring to the Bureau of Land  
18 Management as opposed to the New Mexico OCC, is that cor-  
19 rect?

20           A           Correct.

21           Q           Would you, based upon your participation  
22 in these negotiations, Mr. Hansen, agree with me that the  
23 proposed order of Mr. Lyons this morning that would allow  
24 drilling in the LMR is a substantial change from our agree-  
25 ment?

1           A           It is a substantial change, yes.

2           Q           Thank you.

3                       MR.    LEMAY:   Thank you, Mr.  
4 High.   Mr. Bruce.

5

6                       CROSS EXAMINATION

7 BY MR. BRUCE:

8           Q           Mr. Hansen, I believe you stated that you  
9 would support some mechanism to allow oil and gas operators  
10 knowledge of LMR boundaries.

11          A           We're in favor of it, yes.

12          Q           Well, in your opinion is that consistent  
13 with the statement of agreement?

14          A           Well, we want to know all we can know  
15 about where their life of mine reserves are. They say it's  
16 sensitive information but as it -- as it's divulged, we sure  
17 want to know about it. That's all I'm saying. We'd like to  
18 have all the information about it we can have.

19          Q           Well, is there anything in the statement  
20 of agreement about divulging that information?

21          A           No, there's nothing about divulging, only  
22 to the BLM, but that's -- all that information is going to  
23 come out over time as wells are proposed. You're going to  
24 know where the life of mine reserves are. If you propose  
25 wells on every 40 acres out there, you're going to know

1 where their life of mine reserves are. Then we're going to  
2 find out if they're kidding us or not, we're really going to  
3 get 25 percent of the area.

4 Q Well, that covers proposed wells on a  
5 case-by-case basis, Mr. Hansen, but what does that do as far  
6 as lease acquisition?

7 A I don't know. What does it do? I mean  
8 you can still acquire oil and gas leases. You're going to  
9 have the same potash --

10 Q But you really don't know what -- whether  
11 or not you'll be allowed to drill on them, do you?

12 A Well, I can tell you, you're not going to  
13 be allowed to drill on it if it's in blue. We -- with your  
14 law firm we spent probably a million dollars and couldn't do  
15 it.

16 MR. LEMAY: Do you have addi-  
17 tional questions?

18 MR. BRUCE: All I can say, I  
19 wasn't involved.

20 MR. KELLAHIN: He says taking  
21 the arrow out of his heart.

22 Q Mr. High asked you about substantial --  
23 substantial change, but of course that's kind of an individ-  
24 ual thing, isn't it? Substantial to one person might not be  
25 substantial to another.

1           A           I think what he was discussing would be a  
2 substantial change.

3           Q           In your opinion.

4           A           Yes, yes, because that's a primary, fun-  
5 damental concept of the agreement.

6                               MR. LEMAY: Thank you, Mr.  
7 Bruce.

8                               Commissioner Humphries.

9  
10 QUESTIONS BY MR. HUMPHRIES:

11           Q           Mr. Hansen, using Mr. High's map for a  
12 reference, and accepting that 25 percent deduction in the  
13 so-called holdings of the potash companies as being given  
14 up, given the inside line next to where you indicated LMR,  
15 the life of mine reserves, and the next line being a quarter  
16 mile buffer zone with the cross hatching, is it your under-  
17 standing that the 25 percent that we're talking about is  
18 outside of the quarter mile line or outside of the line de-  
19 picting life of the mine reserves?

20           A           We don't know. We don't know that yet.

21           Q           I'm not positive that I interpreted you  
22 correctly in saying your concerns about a difference between  
23 Exhibit Four and the agreement, the industry agreement, are  
24 the casing language, the introduction of the language that  
25 Mr. Lyon discussed this morning about the so-called APD's

1 for life -- inside the life of the mine reserves, and I  
2 think you said voluntary compliance. Did I -- did I under-  
3 stand that right?

4 A I don't know.

5 Q Okay.

6 A But you -- you have touched on the two --  
7 two areas.

8 Q Those are the only two concerns? Now --

9 A Yes.

10 Q -- as I understand it, this industry  
11 agreement was worked out by all the people who participated  
12 willingly in this and everybody that could have possibly,  
13 humanly been contacted was contacted, is that --

14 A We urged everyone to participate all they  
15 would.

16 Q Yet we don't have an unequivocal commit-  
17 ment on the part of all the mining companies or all of the  
18 oil companies. This is strictly a voluntary agreement,  
19 isn't it?

20 A That's correct.

21 Q Thank you.

22 MR. LEMAY: Mr. Ingram, do you  
23 have a question?

24 MR. INGRAM: Yes. I'm Hugh In-  
25 gram with Conoco. I'd like to ask Mr. Hansen a question, an



1 opinion question, if I might.

2

3 QUESTIONS BY MR. INGRAM:

4 Q Realizing, Mr. Hansen, that you do have a  
5 couple of reservations about the agreement, assuming that  
6 those reservations were resolved, and in view of the pro-  
7 posed R-111-P, do you still think that the agreement is a  
8 necessary instrument?

9 A Yes.

10 Q Will serve a useful purpose?

11 A Uh-huh.

12 Q And what purpose would it serve if the R-  
13 111-P in its present form or some revised form goes out?

14 A I just think it provides the necessary  
15 information to implement the new order, and the intentions  
16 of the parties that participated in the committee work and  
17 signed the statement.

18 That's the reason I think it should be on  
19 there.

20 Q Thank you.

21 MR. LEMAY: Additional ques-  
22 tions of the witness?

23 Redirect, Mr. Kellahin?

24 MR. KELLAHIN: Thank you, Mr.  
25 Chairman.

## REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Bruce raised an issue with you about confidentiality of the potash information as conveyed to the BLM. Under the current procedures do you have access to that confidential information now?

A Only core hole information and then you have to do the evaluations yourself.

Q So changing from the current system to the proposed implementation of the agreement doesn't give up something that the oil and gas industry has now, anyway.

A No, it doesn't. In fact, we don't give up much of anything in this thing.

Q Nothing further.

QUESTIONS BY MR. LEMAY:

Q I have just one question only to pursue a little bit more, Mr. Hansen, the concept of life of mine reserves.

Is it Bass' position that they would accept the definition of life of mine reserves as defined on Page 4 of Exhibit Two of the Commission staff? Division staff? Where it says, "Life of mine reserves means those potash deposits within the potash area reasonably believed

1 by the potash lessee to contain potash ore in sufficient  
2 thickness and grade to be mineable using current day mining  
3 methods, equipment and technology."

4 A We would be willing to accept that only  
5 because the BLM, the officials of the BLM have assured us  
6 that they will not allow that to be abused.

7 Q So is it -- I'm trying to narrow this  
8 thing down.

9 (REPORTER'S NOTE: The following paragraph of question by  
10 Mr. LeMay was determined to be confidential information and  
11 is hereby stricken from this transcript as directed by Mr.  
12 LeMay following objection by Mr. High.)

13 That would have to be as is currently set  
14 up; it would have to be more or less what the potash company  
15 would submit to the BLM who would approve that submittal?

16 A That's our understanding, yes.

17 Q That's what I'm getting at this point,  
18 too.

19 A Yes, sir. That we would rely upon the  
20 BLM to adjudicate all of these matters as far as making sure  
21 the life of the mine reserves as being enforced actually  
22  
23  
24  
25

1 represent what would be mined under current mining condi  
2 tions.

3 Q Well, then was it also your recommenda-  
4 tion, again referring to OCD Exhibit Number Four this time,  
5 Item Roman numeral VII (4), is it? I think so. The objec-  
6 tion which was in direct contradiction to the agreement, the  
7 hearing process whereby the OCD could override some life of  
8 the mine reserve area.

9 A Yes.

10 Q Was it your recommendation that a hearing  
11 process be substituted to determine the life of mine reser-  
12 ves or just the elimination of that?

13 No, it wasn't -- my understanding of how  
14 that would --

15 MR. HIGH: Excuse me, Mr.  
16 Chairman, may I point out something? You -- you just refer-  
17 red to testimony from another case that's subject to a con-  
18 fidentiality order. The testimony you just referred to with  
19 respect to reserves in 9148 was covered by an agreement that  
20 it was not to be exposed.

21 MR. LEMAY: That's true. I  
22 would apologize. Can we strike that from the record?

23 MR. HIGH: I would move that we  
24 strike that and would ask that we not refer to it again.

25 MR. LEMAY: I'm sorry, Mr.

1 High, that's correct. I had those in notes without an ac-  
2 companying confidentiality. I would just state that because  
3 commercial ore is considered commercial by different com-  
4 panies, and that is a confidential item, that if we're re-  
5 ferring to a hearing process and looking at the life of mine  
6 reserves, is it your recommendation that this hearing pro-  
7 cess apply to the definition of life of mine reserves in a  
8 given area or that we just strike out the recommended para-  
9 graph entirely?

10 A No, I think it should apply to -- to  
11 situations whereby a potash operator and the oil and gas  
12 operator who wants to drill a well cannot agree that they  
13 are, either are or not, life of mine reserves and they -- in  
14 some case they may not believe the BLM; they may want to  
15 have a hearing process, and under this provision it's the  
16 BLM that makes the determinations and the NMOCD provides a  
17 hearing structure for -- for that purpose and that's our  
18 understanding of the purpose of a hearing, would be under --  
19 for the sole purpose of determining life of the mine  
20 reserves boundaries.

21 Q Thank you.

22 MR. LEMAY: Additional  
23 questions of the witness?

24 Yes, Mr. Lyon.

25

1 QUESTIONS BY MR. LYON:

2 Q Mr. Hansen, you mentioned that there are  
3 a couple points in the proposed order that you felt were in  
4 contradiction to the agreement.

5 Am I correct that the two instances are  
6 in Section Roman numeral III, Paragraph (4) and Section VII,  
7 Paragraph (4)? Are those the two instances or have I been  
8 looking at the wrong language?

9 A Right, I think you've got it.

10 Q I'm really having a little bit of diffi-  
11 culty why you feel -- well, first, let me address the one,  
12 the second one.

13 Would you feel that -- would your feeling  
14 be the same if we deleted the words "after notice and hear-  
15 ing" in that next to the last paragraph, so that it would  
16 read, "Any application to drill in the LMR area, including  
17 buffer zones, may be approved only by mutual agreement of  
18 lessor and lessee of both potash and oil and gas interests."

19 A It's all right with me if it's all right  
20 with them.

21 MR. LEMAY: Is that all, Mr.  
22 Lyon, or do you have something further?

23 Q In regard to the first language, I've  
24 been trying to find some what that I thought might be more  
25 consistent with the agreement and I'm having trouble finding

1 it. I really don't see any problem in there.

2 A I guess the problem would be how large an  
3 area is in, for example, in the green and gray and the red,  
4 how large an area you would require us to set the casing un-  
5 der the R-111 rather than abandon that casing procedure as  
6 anticipated by this statement that we agreed to.

7 Q Well, it says that he can waive the re-  
8 quirements on showing that the location is outside the LMR  
9 and the surrounding buffer zone and then the language that  
10 no potash reserves would be endangered, for which Mr. Kella-  
11 hin said he would like to furnish us some suggested language  
12 for that.

13 Do you feel that we should have in there  
14 that there is -- there would be no requirement to use that  
15 salt protection string in the areas outside the LMR and buf-  
16 fer.

17 A That's what we think should be there, be-  
18 cause if they're not, you know, if they're not concerned,  
19 they're safety conscious, anyway, if they're willing to al-  
20 low us to do it, then I think we ought to do it. No sense  
21 in spending the money if you don't need to.

22 MR. LEMAY: Additional ques-  
23 tions of the witness

24 Yes, Mr. High.

25 MR. HIGH: If I may, Mr. Chair-

1 man. Thank you.

2

3

RECROSS EXAMINATION

4 BY MR. HIGH:

5 Q Mr. Hansen, as a follow-up to a question  
6 asked by Mr. Lyon concerning his draft of a proposed order,  
7 I believe it's Exhibit Number Four, Page 15 and following.  
8 Do you have that in front of you?

9 A Yeah.

10 Q As I understood his question, he asked  
11 you whether or not you would be in favor of a change in the  
12 top paragraph on Page 15 that would delete words so that it  
13 would read, beginning with the second sentence, "Any appli-  
14 cation to drill in the LMR area, including buffer zones, may  
15 be approved by mutual agreement of lessor and lessee of both  
16 potash and oil and gas," and what was your response to that  
17 question?

18 A My response was that it's okay with us if  
19 it's all right with you, because you're probably going to  
20 say no and that's the only way to concur.

21 Q You entered into -- I'm sorry, withdraw  
22 that -- Bass entered into an agreement with Mississippi  
23 Chemical, didn't they?

24 A That's correct.

25 Q And that agreement was a private agree-



1 ment between Bass and Mississippi Chemical with respect to  
2 the drilling of oil and gas wells in the potash area, wasn't  
3 it?

4 A That's correct.

5 Q And what position, if you know, did the  
6 potash industry take with respect to that agreement?

7 A Well, the potash industry vigorously op-  
8 posed it.

9 Q Wasn't it the potash industry's position  
10 that no two people, including oil and gas and potash les-  
11 sees, can sit down and enter into an agreement that vio-  
12 lates State law?

13 A That's correct.

14 Q And wasn't the potash industry position  
15 that State law protects potash?

16 A Correct.

17 Q And that Federal law protects potash.

18 A Correct.

19 Q And that private parties cannot by agree-  
20 ment change that law.

21 A That was your position.

22 Q And isn't that why we have in the state-  
23 ment of agreement now, Mr. Hansen, the requirement that our  
24 agreement, which is between private parties, be submitted to  
25 the regulatory agencies for adoption by them so that it's

1 not a private agreement but instead is a law applicable to  
2 everyone.

3 A That's correct.

4 Q Thank you.

5 MR. LEMAY: Mr. High.

6 Additional questions?

7 If not, the witness may be ex-  
8 cused.

9 MR. KELLAHIN; That concludes  
10 our presentation, Mr. Chairman.

11 MR. LEMAY: Thank you, Mr. Kel-  
12 lahin.

13 Are you ready, Mr. Hall?  
14

15 LEONARD JOHN SEEMAN,  
16 being called as a witness and being duly sworn upon his  
17 oath, testified as follows, to-wit:

18  
19 DIRECT EXAMINATION

20 BY MR. HALL:

21 Q For the record, please state your name.

22 A Leonard John Seeman.

23 Q Mr. Seeman, by whom are you employed and  
24 in what capacity?

25 A I'm employed by Texaco. I'm District En-

1 gineering Manager in Hobbs.

2 Q And are you familiar with the oil/potash  
3 area?

4 A Yes, sir.

5 Q Have you previously testified in front of  
6 the Commision and had your credentials accepted?

7 A Yes, I have.

8 Q Mr. Seeman, does Texaco have acreage in  
9 the oil/potash area?

10 A Yes, they do.

11 Q And do you have current production in the  
12 area?

13 A Yes, we have.

14 Q Mr. Seeman, you have seen Exhibit Two,  
15 which is the letter agreement between the potash and oil in-  
16 dustries, have you not?

17 A Yes, sir, I've studied it.

18 Q Do you have an opinion what affect that  
19 agreement would have with respect to the LMR and buffer zone  
20 areas on Texaco's acreage?

21 A On Texaco's acreage I do. Overall it's  
22 indeterminate.

23 Q All right.

24 MR. LEMAY; It's what?

25 A Over the whole enclave it's indeterminate

1 because we don't know where the areas of life of mine reser-  
2 ves are.

3 MR. LEMAY: Mr. Seeman's quali-  
4 fications, by the way, are accepted.

5 MR. HALL: Thank you, Mr.  
6 Chairman.

7 Q Let's refer to what's been marked Exhibit  
8 One and would you identify that, please, and explain what  
9 that shows?

10 A Okay. These -- these are two plats of  
11 our Forty-Niner Ridge Unit.

12 The map on the left shows an area that  
13 would be barren on the BLM map. Okay, that's this curved  
14 line here. All right. It also shows Texaco's three wells,  
15 the 1, 2, and 3 Wells. Okay. The hatched area would be  
16 available for drilling under current conditions. In other  
17 words, this is the barren area and these hatched locations  
18 are potential locations on our leases. These are Texaco's  
19 six leases.

20 Q What does the map on the right side show?

21 A Okay. The map on the right side shows in  
22 this dashed line a uarter mile buffer zone from what would  
23 be blue on the BLM map up here and down here.

24 This also -- want me to go on?

25 Q Yes, go ahead.

1           A           Okay. This would show, these hatched  
2 ones would be the ones available with that buffer. These  
3 would be available without the buffer.

4                       These are State acres. These are State  
5 leases here.

6                       Texaco last summer came to hearings and  
7 presented evidence and it obtained an APD for our No. 3  
8 well. The well has been drilled and recently completed as a  
9 top allowable well n the Cherry Canyon.

10           Q           Mr. Seemans, let me ask you one question.  
11 Is the buffer zone you've spoken of in conjunction with the  
12 exhibit the same buffer zone that's defined by the industry  
13 agreement?

14           A           Yes sir.

15           Q           How much acreage amount is involved and  
16 affected by that buffer zone?

17           A           It's essentially twenty 40-acre loca-  
18 tions, 800acres.

19           Q           Okay. Do you have an idea of the amount  
20 of reserve volumes that would be affected by the buffer  
21 zone?

22           A           This Cherry Canyon play is a little tough  
23 to put exact numbers on but we feel that 60,000 is what's  
24 necessary to be profitable, so must use 60,000, and the  
25 wells, like I say, two of them are top allowable right now,

1 so until we get a little history on them it would be hard to  
2 tell, Mr. Hall.

3 Q And that's 60,000 per location?

4 A Yes, sir.

5 Q What would the economic value of each of  
6 those locations be?

7 A May I just, you know, multiply? It would  
8 be like \$24,000,000 gross and \$20,000,000 net.

9 Q And it's for an 8/8ths interest?

10 A Yes, that's 8/8ths.

11 Q Would a portion of that be attributable  
12 to the State's royalty interest?

13 A An eighth; an eighth of the \$24,000,000.

14 Q I'm sorry.

15 A An eighth of the \$24,000,000.

16 Q All right. Mr. Seeman, you can set that  
17 down.

18 A Okay.

19 Q Do you have an opinion on the propriety  
20 of the procedure outlined in the letter agreement for the  
21 designation of the LMR areas by confidential means?

22 A Yes, sir, I do.

23 Q What is your opinion?

24 A My opinion is that it's inappropriate to  
25 keep that information confidential to an affected party.

1 The reason for that is that this information is interpretive  
2 and an affected party ought to be able to interpret the in-  
3 formation.

4 Q All right. Are you familiar with Oil  
5 Commission Case 9148, which is the application of Texaco --

6 A Yes, sir.

7 Q -- for an APD in the oil/potash area?

8 A Yes, sir.

9 Q In fact, did you testify in that hearing?

10 A Yes, I did.

11 Q Was the same acreage shown on Exhibit One  
12 the subject of the hearing --

13 A Exact same acreage.

14 Q And in what section was your APD?

15 A Section 16.

16 Q Was Texaco opposed at that hearing?

17 A Yes, they were.

18 Q What position did the potash lessee take  
19 with respect to identifying mineable reserves near that pro-  
20 posed well?

21 A Well, at the arbitration hearing they in-  
22 dicated that that whole section was mineable.

23 Q Did you dispute that contention?

24 A Yes.

25 Q Did the potash lessee honor all relevant

1 data having a bearing on determining the existence of mine-  
2 able reserves in that section?

3 A Excuse me?

4 Q Did the potash lessee honor all relevant  
5 data having a bearing on determining the existence of mine-  
6 able resservices in the area?

7 A No, sir, they ignored a (not understood).

8 Q Mr. --

9 MR. HIGH: Mr. Chairman, I  
10 don't want to interrupt Mr. Hall but I'm going to object to  
11 this witness testifying on behalf of the potash lessee un-  
12 less some foundation is laid to show he had any knowledge at  
13 all about what the potash lessee did or did not do.

14 MR. HALL: I think that's been  
15 established. He was present at the hearing. He knows what  
16 --

17 A Well, it was --

18 MR. LEMAY: Well, we're not  
19 going ot re-argue the --

20 A The same thing was at the arbitration  
21 hearing.

22 MR. LEMAY: -- those cases. I  
23 think your point is what will be mineable or not mineable  
24 under these exhibits. We can certainly accept that kind of  
25 evidence.



1                                   As far as going back and trying  
2 to restate what IMC said or didn't said or the criteria  
3 being used for mineable reserves, I don't think that's some-  
4 thing (unclear).

5                                   MR. HALL: That was not our  
6 tack, Mr. Chairman. We were commenting on the propriety of  
7 the confidentiality procedure outlined in the letter agree-  
8 ment.

9                                   MR. LEMAY: I think in a broad  
10 statement where we're looking at the confidentiality of pot-  
11 ash information, I think we'll certainly allow that testi-  
12 mony. That will help the Commission deliberate position.

13                   Q           Mr. Seemans, would the proposed proce-  
14 dures under the letter agreement allow you an opportunity to  
15 contest the designation of an LMR?

16                   A           As I understand the rule, no.

17                   Q           Mr. Seemans, in your opinion will com-  
18 pliance with R-111-A as it now exists result in undue waste  
19 of potash?

20                   A           It's my belief it would not.

21                   Q           In your opinion if the letter agreement  
22 is adopted as part of the order, will the waste of hydrocar-  
23 bon reserves (unclear)?

24                   A           Potentially very much. I might just cite  
25 our example here.

1 Q If the letter agreement is adopted in any  
2 form will it affect Texaco's future development plans in the  
3 area?

4 A Well, yes, sir, essentially we don't have  
5 any development plan with that agreement.

6 Q Was Exhibit One prepared by you or at  
7 your direction?

8 A Yes, it was.

9 MR. HALL: We'd move the admis-  
10 sion of Exhibit One.

11 MR. LEMAY: Without objection  
12 Exhibit One will be admitted into evidence.

13 Do you have any additional  
14 questions, Mr. Hall?

15 MR. HALL: No, sir.

16 MR. LEMAY: Are there questions  
17 of the witness?

18 Mr. High?

19

20 CROSS EXAMINATION

21 BY MR. HIGH:

22 Q Mr. Seeman, you were a witness in the  
23 Texaco case you referred to earlier, were you not?

24 A Yes, sir.

25 Q And that was an application involving the

1 potash industry, wasn't it?

2 A The hearing, yes.

3 Q Texaco wanting to drill some wells and  
4 the potash industry saying no, isn't that orrect?

5 A Yes, sir.

6 Q And you said that, if I understood you  
7 correctly, apparently a result of something that happened in  
8 that case, you're now suspect of the procedure that would be  
9 used to designate the LMR areas?

10 A I certainly am.

11 Q And that's because of what IMC testified  
12 to with respect to the potash in and around the area where  
13 you wanted to drill, is that correct?

14 A Yes, sir, both at the hearing and at ar-  
15 bitration.

16 Q The area that IMC was talking about was  
17 what color, Mr. Seeman?

18 A Pardon me?

19 Q The area of potash deposits that IMC was  
20 talking about in that hearing are shown as what color on the  
21 BLM map?

22 A Blue.

23 Q And what does that blue mean?

24 A Indicated reserves.

25 Q Would you please look at the map and tell

1 me what the blue means? Are you familiar with the map?

2 A Yes, sir.

3 Q Will you look, sir?

4 A Measured potash reserves.

5 Q And who made that determination, IMC or  
6 someone else?

7 A BLM.

8 Q That's the Federal government, correct?

9 A Yes, sir.

10 Q So the Federal government was saying that  
11 the potash deposits IMC was talking about was commercial  
12 grade ore, is that correct?

13 A Measured.

14 Q Yes, but the Federal government was say-  
15 ing that and you -- are you saying you're suspect of IMC be-  
16 cause it too was saying it was commercial deposits because  
17 that's what the Federal government said?

18 A No, sir. I'm saying that because the IMC  
19 map didn't agree with that.

20 Q But the Federal government said it was  
21 commercial deposits of potash ore, didn't it?

22 A Yeah, but your man didn't agree with it.

23 Q Well, doesn't the Federal government have  
24 an obligation, Mr. Seeman, to protect commercial potash ore?

25 A As I understand it. The well was drilled

1 in barren land.

2 Q Now you, you've testified about an exhibit.  
3 bit. May I see that?

4 A Yes, sir.

5 Q You describe a buffer zone, if I  
6 understand you correctly, is that right?

7 A That's right.

8 Q And you said this buffer zone would be  
9 the same as defined by the agreement that's been reached by  
10 the potsh industry and oil and gas industry.

11 A It's a quarter mile zone that's drawn  
12 around the edge of the barren area.

13 Q Okay, would you look at your, I guess  
14 it's your Exhibit Number One. The dotted line is what you  
15 call the outside of the buffer zone?

16 A Yes, sir. Quarter mile.

17 Q A quarter mile from what?

18 A From the edge of the blue and the red.

19 Q Okay, and you said that's consistent with  
20 the agreement that's been reached between the potash  
21 industry and the oil and gas industry?

22 A Yes, sir, exactly, I said.

23 Q Have you even read that agreement, Mr.  
24 Seeman?

25 A Yes, sir.

1 Q Where in that agreement, and I will loan  
2 you my copy if you would like, does it say that any buffer  
3 zone is measured from the edge of the blue?

4 A You established that that was the mine-  
5 able reserves at the hearing so I've got to assume that.

6 Q Look at Exhibit Number Two, if you will,  
7 and I'll loan you my copy, and find anywhere in there that  
8 tells, that says anything about measuring from the edge of  
9 the blue as shown on he BLM map.

10 A It's right here.

11 Q What page?

12 A Page 5.

13 Q Okay, would you read it out loud, please?

14 A Let me make sure I've got the right one.

15 (Reading) No oil or gas well shall be al-  
16 lowed from a surface location, (a) within the LMR of any  
17 potash lessee; within one-quarter mile or a distance equal  
18 to the depth of the ore plus 10 percent, whichever is great-  
19 er, of an LMR of any potash lessee.

20 Q All right, where in that language you  
21 just read, Mr. Seeman, did it refer to the blue as shown on  
22 the BLM map?

23 A As an LMR? Is that what you're saying?

24 Q No. Where, where in that agreement does  
25 it say you measure the one-quarter mile buffer zone from the

1 edge --

2 A (Unclear), excuse me.

3 Q Where in that agreement, is that what  
4 you're saying, the language you just read says you measure  
5 the buffer from the edge of the blue?

6 A From an LMR.

7 Q Okay, is there any difference between an  
8 LMR and the blue as shown on the BLM map?

9 A In this case, no.

10 Q By the agreement, is there?

11 A In this case, no. By the agreement in  
12 this case, no.

13 Q Have you read the agreement?

14 A Yes, sir; just read it.

15 Q Does -- does the agreement define LMR?

16 A Yes, sir.

17 Q And how does it define it, Mr. Seeman?

18 A Defines it as whatever you say it is.

19 Q Is it your testimony here today that it's  
20 your opinion that an LMR would be the same as the blue as  
21 shown on the BLM map?

22 A I'm sure it's not in every case but that  
23 was established as what I would take as LMR at the hearing.  
24 You testified that was mineable reserves and you was going  
25 to go mine it. I guess that is life of mine reserves, as I

1 understand life of mine.

2 Q Mr. Seeman, were you part of the working  
3 committee?

4 A Pardon me?

5 Q Were you part of the working committee for  
6 the oil and gas industry?

7 A Yes, sir.

8 Q Do you understand that the concept of  
9 this agreement that's been reached is to protect certain  
10 potash deposits and to release other potash deposits?

11 A Yes.

12 Q Do you understand that the agreement does  
13 not prohibit the mining of potash outside of an area that's  
14 otherwise protected? Would it ever occur to you that some  
15 of the potash may be mined yet it's not protected. Did that  
16 ever occur to you?

17 A No, sir.

18 Q Well, do you understand this agreement--  
19 that the agreement that's been reached releases areas to the  
20 oil and gas industry for the drilling of oil and gas wells  
21 that contain potash deposits?

22 A It also takes some away, so I don't know  
23 what the net result is?

24 Q I don't have anything else. Thank you.

25 MR. LEMAY: Thank you, Mr.



1 High.

2 Mr. Kellahin.

3

4 CROSS EXAMINATION

5 BY MR. KELLAHIN:

6 Q When you talked to Mr. High, Mr. Seeman,  
7 you said that the proposed procedure takes something away.

8 A Yes, sir.

9 Q Show me on any of those exhibits where it  
10 takes something away from Texaco's opportunity to drill its  
11 oil and gas leases.

12 A Right here. If you compare the two.  
13 These are State acres here.

14 Q Well, let's make clear what Texaco's ac-  
15 reage is.

16 A Okay.

17 Q Mr. Hansen has displayed the Texaco ac-  
18 reage in green on his Exhibit Number One. Have you had an  
19 opportunity to look at that?

20 A Yes.

21 Q Do you know whether or not that is a  
22 reasonable depiction of Texaco's acreage?

23 A It looks about right.

24 Q When we look at the area involved with  
25

1 the Forty-Niner No. 3 Well, that was in a section that was a  
2 State section?

3 A Yes, Section 16 of -- Section 16, Range  
4 30 East, Township 23 South.

5 Q Would you help me locate it on Bass Exhi-  
6 bit Number One, Mr. Seeman?

7 The other sections that Texaco controls  
8 in that immediate area, are they State of New Mexico leases,  
9 as well?

10 A No, there's some Federal acreage in  
11 there, too

12 Q But for Section 16, within that immediate  
13 area, the rest of your leases are Federal leases.

14 Have you ever had the pleasure and oppor-  
15 tunity of trying to get the Bureau of Land Management to ap-  
16 prove an APD in the potash area on a Federal lease?

17 A Not personally, no.

18 Q The only one you've ever been involved  
19 with was the drilling of the Forty-Niner Well No. 3 in the  
20 State Section 16?

21 In your participation in the study com-  
22 mittee, Mr. Seeman, did you raise with the other committee  
23 members, including the potash industry, your concerns about  
24 the buffer area being considered by the two industries?

25 A No, sir.

1 Q You attended the organizational meeting  
2 on May 29th, 1986, --

3 A Yes, sir.

4 Q -- here in Santa Fe? And did you attend  
5 the educational seminar in September of '86?

6 A Yes, sir.

7 Q And did you participate in the November  
8 13th and 14th, 1986 Carlsbad potash (unclear)?

9 A Yes, sir.

10 Q And did you subsequently participate in  
11 the meetings at El Paso in May of -- May 1st and April 30th  
12 of '87?

13 A No, sir.

14 Q You didn't go to those? Did you on be-  
15 half of your company --

16 A I wasn't invited.

17 Q -- receive communications from the study  
18 committees with regards to the drafts of documents being  
19 circulated?

20 A Yes, sir.

21 Q And the first time you raise your concern  
22 about the implementation of the buffer zone is today at this  
23 hearing?

24 A Yes, sir.

25 MR. KELLAHIN: No further ques-

1 tions.

2 MR. LEMAY: Thank you, Mr.  
3 Kellahin.

4 Additional questions of the  
5 witness?

6  
7 QUESTIONS BY MR. LEMAY:

8 Q I only have one, Mr. Seeman, and that was  
9 probably in terms of your Exhibit Number One. Is it fair to  
10 say that one has to make two assumptions on your Exhibit  
11 Number One, and that is that the blue area, which would that  
12 area as translate outside of these lines here, we know what  
13 is blue. I mean refer to these lines on the map --

14 A Yes, sir.

15 Q -- that the blue area, one, represents  
16 life of the mine reserves --

17 A Yes, sir.

18 Q -- and two, that -- that you have to say  
19 locations within this area would be approved. The APD would  
20 be approved by the appropriate agency, whether it went to  
21 arbitration and the Commission would hear it or whether the  
22 BLM had jurisdiction and would approve the APD. So in order  
23 for your thesis to hold up you have to make those two  
24 assumptions?

25 A Yes, sir.

1 MR. LEMAY: Additional ques-  
2 tions of the witness?

3 A But I'll point out the No. 2 Well is a  
4 Federal well.

5 Q Is on Federal land?

6 A Yes, sir, and it's top allowable.

7 Q It's a top allowable. Was that from a  
8 drilling island? Was that a re-entry of an exisitng well  
9 there?

10 A No, that was a regular -- yeah, that was  
11 a recompletion of a Morrow well.

12 Q So the original Forty-Niner Unit No. 1,  
13 if my recollection serves me correct, was drilled. The  
14 Cherry Canyon was not tested but at a subsequent date you  
15 went in and re-entered and got a top allowable well from the  
16 Cherry Canyon?

17 A Yes.

18 Q So if you look at potash reserves in  
19 there would you assume that they were already condemned or  
20 in some form not mineable within the radius of that well be-  
21 cause it was an old well, wasn't it?

22 A Yes.

23 MR. LEMAY: Additional ques-  
24 tions of the witness

25 Mr. Kellahin.

1 MR. KELLAHIN; Just a follow-up  
2 on your inquiry.

3

4 RECROSS EXAMINATION

5 BY MR. KELLAHIN:

6 Q Mr. Seeman, I thought you told me you had  
7 not participated and were not involved on behalf of your  
8 company with the drilling of any well on a Federal acreage  
9 in the potash area.

10 A I haven't been. That was a Getty well.

11 Q And Texaco subsequently acquired the  
12 Getty interest and that's how come Texaco has it?

13 Are you aware that the Federal rules  
14 prescribe a buffer zone around the wells drilled in this  
15 area?

16 A Yes.

17 Q Have you attempted to incorporate that  
18 with regards to the identification of this buffer you've  
19 described on your exhibits?

20 A No, I haven't.

21 MR. LEMAY: Additional ques-  
22 tions of the witness If not, he may be excused. Thank  
23 you, Mr. Seeman.

24 Do you have any additional  
25 witnesses, Mr. Hall?

1 MR. HALL: No, sir.

2 MR. LEMAY: Thank you. We'll  
3 take a ten~~m~~minute break before we continue.

4  
5 (Thereupon a ten minute recess was taken.)

6  
7 MR. LEMAY: Mr. Bruce?

8 MR. BRUCE: Thank you, Mr.  
9 Chairman.

10 Mr. Chairman, as a preliminary  
11 matter I'd like to set up Exxon's testimony. I would like  
12 to state that Exxon supports the proposed Rule R-111-P, es-  
13 pecially the provisions for any consideration of drilling  
14 within LMR's on a case by case basis.

15 In addition, Exxon supports the  
16 positive steps in the statement of agreement, including the  
17 permitting of wells outside LMR's and the elimination of ar-  
18 bitration.

19 However, the statement of  
20 agreement contains certain limitations. First, the extent  
21 of LMR areas, Exxon believes should be made available in  
22 some manner to enable operators to properly evaluate well  
23 prospects and lease acquisitions and secondly, we believe  
24 it's improper for the statement of agreement to attempt to  
25 impose liability on oil and gas interests.

1                   We believe that is the province of the  
2                   Legislature and the Courts. And with that we would like to  
3                   present the testimony.

4                                   MR. LEMAY: Please continue.

5  
6                                   GORDON A. JENNER,  
7                   being called as a witness and being duly sworn upon his  
8                   oath, testified as follows, to-wit:

9  
10                                   DIRECT EXAMINATION

11                   BY MR. BRUCE:

12                               Q                   Mr. Jenner, will you please state your  
13                   full name and city of residence?

14                               A                   Yes, sir. Gordon Jenner, Midland, Texas.

15                               Q                   And what is your occupation and who is  
16                   your employer?

17                               A                   I'm a Senior Geologist with Exxon Corpor-  
18                   ation.

19                               Q                   Have you previously testified before the  
20                   Commission?

21                               A                   No, I haven't.

22                               Q                   Will you please briefly describe your  
23                   educational and work experience?

24                               A                   I received my Bachelor's of Science in  
25                   geology from St. Lawrence University. I worked for two



1 years for a consulting firm, geologic consulting firm, in  
2 Washington, D. C., as a project geologist.

3 I received my Master's of Science degree  
4 from the University of North Dakota, also in geology, and  
5 I've been employed with Exxon since 1985 as a geologist in  
6 production operations.

7 Q In your position are you familiar with  
8 geological matters involved in Exxon's acreage in the Eddy  
9 County potash area?

10 A Yes, I am. As I mentioned earlier, I  
11 work in the Production Operations Group for Exxon. This, I  
12 have a geographical area that includes southern Eddy County,  
13 which includes a good deal of the "New Mexico Potash Basin."

14 MR. BRUCE: Mr. Chairman, are  
15 the witness' credentials accepted?

16 MR. LEMAY: Yes, his creden-  
17 tials are acceptable.

18 Q Mr. Jenner, does Exxon have plans to  
19 drill in the potash area?

20 A Yes, we do. Exxon is in the process of  
21 forming a Federal exploratory in Township 23 South, Range 29  
22 East, which also includes areas of the "potash -- oil/potash  
23 area."

24 This is shown on a map that is up on the  
25 wall here. The green outlined area is the proposed bound-

1 aries for this Federal exploratory unit. The area encompassed about 7360 acres. We have received preliminary approval from the BLM for this Federal exploratory unit. The remaining tasks that need to be accomplished before we form this unit is for approval of working interest partners, approval from the State, drilling of the unit qualifying well, and then final approval from the BLM.

8 And our interests in this Federal exploratory unit are twofold. One is a deep Pennsylvanian gas objective and the second is a shallower Delaware Mountain Group oil objective.

12 Q And is the proposed unit in the extreme southwest portion of the potash area?

14 A Yes, it is.

15 Q Would you please now refer to Exxon Exhibits One, One-A, and One-B and describe the unit a little further and Exxon's proposed drilling activities and discuss why Exxon favors an OCD rule which provides for consideration of drilling in the LMR areas.

20 A Yes, I would. Figure One-A, One, One-A and One-B and Figure Two, Two-A and Two-B, are the scenarios that we see for development of this Federal exploratory unit under existing and the proposed revisions to R-111-A.

24 If we turn to the back of Exhibit One you will see the white sheet with the proposed unit boundary on

1 it in Township 23 South, Range 29 East. This is a scale of  
2 1-to-4000. The, as I said, the proposed unit outline is  
3 shown by a dashed line. The location of the proposed unit  
4 qualifying well is shown by an orange dot.

5 Also shown on this map in the northern  
6 part are the Nash Unit, operated by Mesa, which Exxon also  
7 has some working interest in, and the Big Eddy Unit is lo-  
8 cated to the north.

9 If you turn the first overlay over you'll  
10 see some boundaries on it. These boundaries are the  
11 oil/potash area designated by the Secretary of the Interior,  
12 dated November 5th, 1975, and the oil/potash area covered by  
13 NMOCD Order No. R-111-A, as revised by R-111-O on November  
14 6th, 1980.

15 There are a series of blue dots that are  
16 shown on this overlay and these are what we consider to be  
17 locations that could conceivably be drilled under existing  
18 BLM and/or NMOCD guidelines. There are a total of 23 well  
19 locations shown on this, including the unit qualifying well.

20 If you now will turn to the next overlay,  
21 you will see a large blue area that now covers part of our  
22 Federal exploratory unit. This taken from the potash map  
23 that we have up here, the BLM Potash Resources Map dated Oc-  
24 tober, 1984, and which, according to the working agreement  
25 by the oil/potash study agreement, would be -- could poten-

1 tially be affected by -- with regards to leasing and oil and  
2 gas development.

3 If you'll look now there are six dots on  
4 this. These six dots are what we could drill under this  
5 scenario. I've also shown on this overlay the proposed  
6 buffer zones of zero to a quarter mile, in which no drilling  
7 would be allowed; a quarter to a half mile, in which shallow  
8 wells above the base of the Delaware Mountain Group would be  
9 allowed, provided there is adequate casing and cementing  
10 program as governed by existing R-111-A; and then finally a  
11 half mile to a mile zone, in which deep wells would be  
12 allowed.

13 Now these overlays again are for a deep  
14 prospect. The spacing here is 320, which is consistent with  
15 statewide Rule 104 governing spacing for this geological  
16 objective, and this depth.

17 As you can see, there are 6 wells and we  
18 have gone from 23 wells under existing guidelines to 6  
19 wells.

20 Q Is the proposed unit qualifying well  
21 approved by Exxon management?

22 A Yes, this well has been approved by Exxon  
23 management. They are prepared to drill this well sometime  
24 this year. We were hoping in the first quarter, but we are  
25 pending the outcome of this hearing today before we make

1 further actions, take further actions.

2 Q Would you please now refer to Exhibits  
3 Two, Two-A, and Two-B and discuss the contents of those ex-  
4 hibits?

5 A Yes, I will. Exhibit Number Two is a  
6 similar overlay exhibit as Exhibit One. If you turn to the  
7 back page again showing a unit outline, everything on it is  
8 the same as the last one, except for the exhibit number.

9 If you turn the first overlay you will  
10 see, again, a series of blue dots and the oil/potash Secre-  
11 tarial Order potash boundary, and the R-1 -- NMOCD R-111-O  
12 boundary.

13 There are a total of 120 40-acre loca-  
14 tions here. This would be for our shallow Delaware Mountain  
15 Group objective. This geologic model that was used here has  
16 been shown to the BLM and their geologists. They liked the  
17 geological concept of this model and have granted us prelim-  
18 inary approval.

19 The location of these 40-acre locations  
20 reflects this geological model.

21 If you'd turn to the next overlay, again  
22 you'll see a similar scenario as Exhibit One, and now in-  
23 stead of 120 wells there are 23 red dots and these would be  
24 the wells that would be allowed under the proposed Divi-  
25 sion's R-111-A being considered here today. Note also that

1 the unit qualifying well for this Federal exploratory unit  
2 could not be drilled under this scenario.

3 Q So would you please summarize the effect  
4 of the prohibition of drilling within LMR areas and the buf-  
5 fer zones on Exxon's development scenario?

6 A Yes. In the case of our deep prospects  
7 we very reasonably could go from a scenario of 23 deep gas  
8 wells to 6 wells if the -- we we were not -- if the buffer  
9 zones were allowed as they're being considered today, and in  
10 the case of our shallow objective, we would go from 120  
11 wells down to 23 wells.

12 Q Does Exxon support the proposed Rule R-  
13 111-P?

14 A Yes, they do. We like the exception pro-  
15 vision and -- and if that's included in R-111-P, that excep-  
16 tion provision is acceptable to us.

17 Q Mr. Jenner, in your position with Exxon  
18 do you make recommendations to management regarding drilling  
19 of wells and the acquisition of leases?

20 A Yes, I do.

21 Q And what are your duties with respect  
22 thereto?

23 A In regards to leasing, I will review the  
24 State and/or Federal lease sale notices. I will make deter-  
25 minations based on the geology of whether Exxon should be

1 interested in acquiring those leases.

2 I will then make a recommendation to man-  
3 agement based on the geological potential and the potential  
4 development costs on what price should be paid for that  
5 lease.

6 Q If the extent of the LMR's are not known  
7 what effect does that have on your recommendations?

8 A It makes it unable to determine the net  
9 value of that lease because I would not be able to determine  
10 how much development would be allowed.

11 Q Therefor, is there a need for oil and gas  
12 companies to have some type of access to records regarding  
13 the LMR extent?

14 A Yes, there is.

15 Q Now on Exhibits One and Two you showed  
16 possible development scenarios. Are these scenarios based  
17 on straight or directional drilling?

18 A These are based on straight hole drill-  
19 ling.

20 Q In your opinion is directional drilling  
21 an economic alternative for drilling in the Laguna Salado  
22 South Unit?

23 A We looked at the possibility of having to  
24 directionally drill wells in the proposed Laguna Salado  
25 South Unit, and we determined that it was uneconomic to pur-

1 sue those based on the additional cost associated with  
2 directional drilling.

3 Q In your opinion if the oil/potash state-  
4 ment of agreement is adopted without a provision for drill-  
5 ling exceptions within LMR's, would waste result?

6 A Yes, it would.

7 Q Were Exhibits One and Two prepared under  
8 your direction?

9 A Yes, they were.

10 MR. BRUCE: Mr. Chairman, I  
11 move the admission of Exxon Exhibits One through Two.

12 MR. LEMAY: Without objection  
13 Exhibits One through Two will be admitted into evidence.

14 Have you finished your direct?

15 MR. BRUCE: Yes.

16 MR. LEMAY: Mr. Kellahin.

17 MR. KELLAHIN: Thank you, Mr.  
18 Chairman.

19  
20 CROSS EXAMINATION

21 BY MR. KELLAHIN:

22 Q Mr. Jenner, do the proposed leases that  
23 are included in the Federal unit, are those all Federal  
24 leases?

25 A They are largely Federal but they also



1 include a State lease.

2 Q There is one State lease? Does that in-  
3 clude the entire State section?

4 A I don't understand your question.

5 Q How large is the State's lease interest  
6 in the unit compared to the Federal unit?

7 A I believe it's 640 but I'm not sure.  
8 It's approximately 640 State lease (unclear).

9 Q It would be a one section State lease  
10 then that would be dedicated to the unit?

11 A That is correct.

12 Q The leases that you acquired, were they  
13 acquired by Exxon directly?

14 A Yes, they were.

15 Q On a bid basis?

16 A Yes, they were.

17 Q Do they all contain the potash stipula-  
18 tions?

19 A Yes, they do.

20 Q Your unit area is contained within the  
21 entire Secretarial enclave area as depicted on the Federal  
22 maps?

23 A Yes, it is.

24 Q In getting your unit qualifying well per-  
25 mitted by the LM have you received their permission to

1 drill that well at this point?

2 A We are awaiting the results of this hear-  
3 ing before we file for an application to drill.

4 Q You've not yet filed.

5 A No, we have not.

6 Q Do you know whether or not you've deter-  
7 mined from the BLM whether they will approve this well at  
8 this location because of its proximity to measured potash?

9 A No, we do not know that at this time.

10 Q Who's the potash lessee that's involved  
11 with this well?

12 A At this time our Land Department has not  
13 given us all our potash lease information. There are sev-  
14 eral, I know, potash leases to the north and I'm not sure if  
15 the welllocation is within one mile of a potash lease.

16 Q So you haven't approached any of the pot-  
17 ash lessees that would be affected to determine whether or  
18 not the measured potash reserves are within any of their  
19 projections of life of the mine reserves?

20 A No, I have not.

21 Q What is the anticipated depth of the pro-  
22 duction to be developed by the unit?

23 A The projected TD for this well is 13,900  
24 feet.

25 Q This is gas development in the Pennsyl-

1 vanian?

2 A Yes, this is.

3 Q Do you see any prospects for shallower  
4 development in this area?

5 A Yes, we do.

6 Q In what formations?

7 A In the Bell Canyon formation of the Dela-  
8 ware Mountain Group.

9 Q What's the closest producing gas well be-  
10 low the top of the Wolfcamp in this immediate area?

11 A The nearest producing one is the Exxon  
12 Laguna Grande No. 3, located approximately two miles to the  
13 west of the proposed unit qualifier well.

14 Q What's the closest producing shallow oil  
15 well to the unit?

16 A The closest producing one, I believe,  
17 would probably be in the Malaga Field operated by Eastland.

18 Q And how far away is that?

19 A That would be located approximately, I  
20 would guess 6 miles, 6 to 8 miles west.

21 Q And what is the closest shallow gas pro-  
22 duction that would be spaced on 160 acres?

23 A That I do not know.

24 Q Is this an exploratory unit?

25 A Yes, this is.

1 Q Would you characterize it as a wildcat  
2 exploration?

3 A Yes, I would.

4 Q Your analysis of the impact that the  
5 proposed rule change will have on Exxon is predicated upon a  
6 similar analysis that Mr. Seeman presented, is it not?

7 A Yes, sir, that's a very reasonable  
8 scenario.

9 Q Well, let's test that for a moment.

10 A Okay.

11 Q You have taken the BLM October '84 plat  
12 that identifies the blue area s measured potash reserves --

13 A That is correct.

14 Q And your assumption is that that  
15 represents the outer boundary of some potash operator's life  
16 of the mine reserves?

17 A Yes.

18 Q And based upon that assumption, then, you  
19 have stepped out at the appropriate distances the contours  
20 that show the buffer.

21 A That is correct.

22 Q No further questions.

23 MR. LEMAY: Thank you, Mr.  
24 Kellahin.

25 Additional questions of the

1 witness? Mr. High.

2  
3 CROSS EXAMINATION

4 BY MR. HIGH:

5 Q Mr. Jenner, you understand now, do you  
6 not, that the edge of the blue as shown on the BLM map is  
7 not the same as an LMR?

8 A Yes, I do but it could conceivably become  
9 an LMR.

10 Q Well, you understand that the edge of  
11 the blue is not the asis on which LMR's are established, do  
12 you not?

13 A No, but I -- and if I may quote from the  
14 working agreement dated November 23rd on Page 2, where it  
15 says, "The area of potash deposits protected will be deter-  
16 mined in accordance with this agreement, but, generally  
17 speaking, will encompass the yellow, orange, and a major  
18 portion of the blue areas shown on the BLM potash resources  
19 mapas it existed on October 1st, 1984."

20 Q It doesn't say all the blue, does it?

21 A No, it does not, and because I don't  
22 know, I have to infer that it is all the blue in this in-  
23 stance.

24 Q So even though the agreement says it en-  
25 compasses only a major portion of the blue, you assumed it

1 included all the blue, didn't you?

2 A I have no choice unless you could tell me  
3 otherwise. That's exactly what I had to assume.

4 Q Do you understand that the LMR is not the  
5 same as the blue on the BLM map?

6 A I sure do.

7 Q Okay, given that understanding, then all  
8 the exhibits you have here are ncorrect.

9 A Not necessarily.

10 Q For these exhibits to be correct wouldn't  
11 the LMR's have to be exactly the same as the blue on the BLM  
12 map?

13 A LMR boundaries are not, as I understand  
14 it, are not fixed and can be construed to be at some point  
15 the blue.

16 Q My question is, for these exhibits to be  
17 accurate, don't you have to assume that the LMR's are exact-  
18 ly the same as the blue on the BLM map?

19 A Yes, in the strict definition, yes, I do.

20 Q And is it your opinion, Mr. Jenner, that  
21 the agreement that's been negotiated between the oil and gas  
22 industry and the potash industry would hinder the develop-  
23 ment of this unit that you describe?

24 A Yes, I do.

25 Q Would -- do you -- is it your opinion

1 that it would hinder the development more than the existing  
2 rules and regulations?

3 A Yes, I do.

4 Q What makes you think, Mr. Jenner, that  
5 you can drill a well today in the blue portion of the BLM  
6 map?

7 A I could not be 100 percent sure of that  
8 but I do have the option of a hearing and if we can present  
9 our case, we do have the possibility.

10 Q In how many of those hearings have you  
11 been involved?

12 A I have not been involved in any.

13 Q You've never filed an APD for a well in a  
14 blue portion of the BLM map.

15 A No, I have not.

16 Q So on what do you base your opinion that  
17 it would be more difficult under the agreement that's been  
18 negotiated than the existing rules, if you've never done it?

19 A It is my understanding, well, we do have  
20 that right, and until we test that, then I will know that,  
21 but I can't say from firsthand experience because, as you  
22 have pointed out, I have not gone through that experience.

23 Q You're guessing, aren't you?

24 A No, I'm not. I'm saying that I have not  
25 had firsthand experience, as you pointed out, so therefor I

1 cannot say that I would not be able to drill in there or  
2 that it could be very difficult.

3 Q If you assume, and if you will assume  
4 whether you agree with me or not, assume for a minute, that  
5 under the agreement that's been negotiated between the oil  
6 and gas industry and the potash industry a greater percent-  
7 age of the blue area would be opened up for oil and gas ac-  
8 tivity.

9 A Okay, where?

10 Q The blue. See the blue on the map?

11 A Okay, uh-huh, it covers a large area.

12 Q Okay, assume that a portion or percentage  
13 of that blue will become available to the oil and gas indus-  
14 try.

15 A Okay.

16 Q If some of that blue was in your area  
17 here, wouldn't that give you a greater place to drill?

18 A But I don't know if it is or not, so --

19 Q Well --

20 A -- okay, all right, I'll assume --

21 Q -- assume for a minute that it does re-  
22 lease and free-up --

23 A Okay.

24 Q -- some of the blue to drill in --

25 A Okay.



1 Q -- doesn't that give --

2 A I'll go along with that.

3 Q -- you a greater place to drill?

4 A Not compared to existing, if I assume  
5 that I am under existing guidelines develop potentially the  
6 entire Federal exploratory unit, then I could develop more  
7 if I assume that I can --

8 Q If you assume that today you could drill  
9 in the blue --

10 A Right.

11 Q -- then you're saying our agreement  
12 doesn't help you.

13 A Well, I assume that I can drill in the  
14 blue today. Isn't that correct? Do I always -- I can't  
15 drill in the blue today, can I, under existing regulations?  
16 Is there a chance that I can drill in the blue? I mean that  
17 -- it -- it -- I interpret it, yes, I can drill in the blue  
18 right now under existing regulations, probably with a hear-  
19 ing, but I --

20 Q Could you point out to me some wells that  
21 are drilled in the blue?

22 A They drilled up in the blue, Bass did, in  
23 their --their -- after their arbitration process.

24 Q As agreed to by the potash industry?

25 A Yes, uh-huh.

1 Q Do you know, Mr. Jenner, about the safety  
2 hazards presented by gas wells?

3 A I've had the fortunate experience to read  
4 this.

5 Q Is that the sole source of your  
6 knowledge?

7 A Yes, it is.

8 Q You know that methane explodes, doesn't  
9 it?

10 A Yes.

11 Q And it kills people, doesn't it?

12 A Yes, it does.

13 Q And it's your plan to drill these wells in  
14 the blue area to 13,000feet?

15 blue area to 13,000 feet?

16 A Yes, it is.

17 Q Do you think that might present a hazard  
18 to mining activities in that rea?

19 A I'm not qualified to answer in that re-  
20 gard.

21 Q Have you even given it any thought?

22 A Yes, I have given it thought.

23 Q And you decided to go ahead with your  
24 wells.

25 A I am -- I am a geologist and, as I said,

1 I'm not qualified to make statements regarding whether or  
2 not it would be safe for -- in my personal opinion, yes, it  
3 would be safe to drill them.

4 Q Are you familiar with the Federal  
5 standards on methane gas in underground potash mines?

6 A Yes, I am.

7 Q Pretty stringent, aren't they?

8 A .25 percent.

9 Q They're stringent, aren't they?

10 A Yes, they are.

11 Q Now, you said you needed the data on the  
12 LMR's for some reason.

13 A Yes.

14 Q Do you have information now on them?

15 A No.

16 Q You've never had that, have you?

17 A No.

18 Q How long have you worked for Exxon?

19 A Three years.

20 Q And you've been -- you've had activities  
21 in this area, haven't you?

22 A Yes, I have.

23 Q And you've been plugging right along  
24 without this data for all this time, haven't you?

25 A That is correct.

1 Q And all of a sudden now you're telling  
2 the OCC hat now you have to have it.

3 A Yes, it would be very good information to  
4 have.

5 Q But you've never had it.

6 A Never had it.

7 Q Now you also said that if these wells are  
8 not allowed it would waste -- I believe you said it would  
9 waste oil?

10 A It would waste -- it would be a waste of  
11 resources.

12 Q Okay. What kind of calculations have you  
13 done on the amount of potash that would be wasted if you  
14 drill these wells?

15 A Haven't done any because I'm not convin-  
16 ced that they would be -- it would be waste of potash  
17 resources.

18 Q You do understand that the Oil Conserva-  
19 tion Commission has a statutory obligation to protect and  
20 prevent the waste of potash, don't you?

21 A I do.

22 MR. HIGH: Thank you. I have  
23 nothing further.

24 MR. LEMAY: Additional ques-  
25 tions of the witness?

1

2 QUESTIONS BY MR. BROSTUEN:

3 Q I have a question. There's a well lo-  
4 cated in the center of the southeast quarter of Section 28  
5 in the -- it would be the southwestern portion of the pro-  
6 posed unit. Do you know what that well's completed in?

7 A That --

8 Q Is that the one you referred to in your  
9 -- in your previous testimony?

10 A I'm sorry, can you reword that?

11 Q The well is in the center of the south-  
12 east quarter of Section 28.

13 A Yes, that's the (unclear) Moore Estate.  
14 That's an Exxon well.

15 Q That's the one you referred to as being  
16 the closest deep well, you were saying?

17 A No, the closest deep one is in Section  
18 29, approximately two miles to the west.

19 Q Okay, the gas well over there.

20 A That is correct.

21 Q And you say the closest oil well was in  
22 the Malaga, Malage Pool.

23 A Producing. He asked me if that was a  
24 producing oil well.

25 Q Is it a producing well? Here it's shown

1 as a producer in Section 28.

2 A That was a -- briefly a producer in the  
3 Bone Spring, producing about 200 barrels of oil in the Bone  
4 Springs. It's plugged.

5 Q Okay --

6 A Or, excuse me, it's shut-in, I believe.

7 Q Thank you.

8

9 QUESTIONS BY MR. LEMAY:

10 Q I have just one question concerning your  
11 program at Exxon for lease acquisition.

12 A Uh-huh.

13 Q It was your testimony that certainly re-  
14 lease of information defining life of the mine reserves  
15 would be helpful in your analysis of what to pay for leases,  
16 but looking at your proposed unit, you have purchased leases  
17 without this information, so do you have a procedure now  
18 that applies some risk factor, I assume, to the fact you may  
19 not be able to drill and therefor might reduce your bid for  
20 that?

21 A Because we have this deep prospect with  
22 320 spacing, we always have potential of -- generally, when  
23 I was acquiring leases in this area, I would refer to the  
24 BLM potash map as a basis for determining approximately  
25 where potash resources may be.

1                   If I did pick up a lease in this area, I  
2 would generally make sure that I could get two legal prora-  
3 tion units on that lease, say, if it was a 640 that I could  
4 drill a well on that lease just on the basis of -- of the  
5 BLM potash resources map.

6                   Q               So you were assuming when you're recom-  
7 mending the lease purchases for Exxon that you could -- you  
8 could drill on it based on this, the blue of the map.

9                   A               A lease of the deep we could. Now, the  
10 shallow, we probably would not be able to develop, but the  
11 deep prospect we'd be able to develop.

12                               I may be wrong but I don't think Exxon  
13 has any lease that's entirely under the potash area.

14                   Q               Well, it looks like Section 23 is almost  
15 entirely -- the Federal lease is almost entirely in the  
16 blue.

17                   A               Yes. That was a lease that I did not  
18 pick up, so I've been working this area for about a year. I  
19 have picked up many of the leases. That lease I did not  
20 pick up.

21                   Q               I guess my point is that Exxon, as well  
22 as Santa Fe Energy and other people have acquired leases in  
23 an area they weren't sure they could drill. They have risk  
24 weighted that bid, whatever it would be, because the acreage  
25 seems to be leased under the potash reserve map, the blue

1 area, so I --

2 A Well, it's not necessarily leased. It is  
3 under the blue area.

4 Q I believe I could restate the question.

5 The industry has has acquired leases in  
6 the potsh area but they don't know if they can drill them or  
7 not.

8 A That is correct, and as you come into it,  
9 I think you -- you, as a geologist, and as you become more  
10 familiar with the stipulations, we have gotten contradicting  
11 information from the BLM that yes, we could develop these  
12 leases, but, you know, I think you're under the impression  
13 that that ould be -- that development would be in the pri-  
14 mary term, and maybe what they're implying is that that  
15 would actually be a suspended lease at some point and that  
16 you could develop it somewhere down the road.

17 But to your basis question, yes, we have  
18 picked up those leases, but, like as I said, I always saw  
19 thta could develop -- I believed that I could develop por-  
20 tions of those leases.

21 MR. LEMAY: Thank you, Mr. Jen-  
22 ner.

23 Anyone else have a question of  
24 Mr. Jenner?

25 If not, he may be excused.



1 Do you have any additional  
2 thing?

3 MR. BRUCE: I have a witness.

4  
5 R. M. "BOB" GRADY,  
6 being called as a witness and being duly sworn upon his  
7 oath, testified as follows, to-wit:

8  
9 DIRECT EXAMINATION

10 BY MR. BRUCE:

11 Q Would you please state your full name and  
12 city of residence?

13 A Robert Grady, Midland, Texas.

14 Q And what is your occupation and who are  
15 you employed by?

16 A I'm a Senior Staff Engineer, employed by  
17 Exxon in the Midland Drilling Organization as a drilling en-  
18 gineer.

19 Q Have you previously testified before the  
20 Commission?

21 A No, I haven't.

22 Q Would you please briefly describe your ed-  
23 ucational and work background?

24 A I graduated in 1973 from Texas A & M Uni-  
25 versity with a Bachelor of Science degree in industrial en-

1 gineering; spent the next five years on active duty, United  
2 States Air Force as an engineering officer; returned to A &  
3 M; received a Master of Engineering degree, industrial en-  
4 gineering in December of 1979.

5 Started work with Exxon in January of '80  
6 in the Andrews District in Andrews, Texas, as a subsurface  
7 engineer; for two years involved with completion activities  
8 and workovers.

9 From there I was transferrd to Midland  
10 and worked the next three years in the Production Technology  
11 Group involved with design and procurement of wellheads and  
12 Christmas tree and corrosion resistant alloy tubing for  
13 deep, sour gas wells in southwestern Wyoming for Exxon's  
14 LaBarge (sic) project.

15 And the last three years I've been invol-  
16 ved in drilling in the Permian Basin area, west Texas and  
17 southeastern New Mexico.

18 Q And have you made a study to compare a  
19 straight hole versus directional hole costs for drilling to  
20 the Atoka-Morrw objective in Exxon's proposed Laguna Salada  
21 South Unit?

22 A Yes, I have.

23 MR. BRUCE: Mr. Chairman, is  
24 the witness acceptable?

25 MR. LEMAY: His qualifications

1 are acceptable.

2 Q Mr. Grady, would you please refer to Ex-  
3 hibit Three and discuss the proposed No. 1 unit well if it  
4 is drilled as a straight hole?

5 A Exhibit Number Three called Laguna Salado  
6 South Unit No. 1 Straight Hole has two plots.

7 The plot to the left is the days versus  
8 depth curve with the vertical axis representing true verti-  
9 cal depth in feet; horizontal axis in days; and the plot to  
10 the right is the proposed wellbore.

11 We estimate it will take 48 days to drill  
12 this well from spud of the well to the release of the drill-  
13 ling rig. We'll drill the well by setting up, drilling a  
14 20-inch hole and setting 16-inch surface casing approximate-  
15 ly 250 feet, cementing back to surface. We'll then drill  
16 out with a 14-3/4-inch bit, drill down to about 2900 feet.  
17 There we'll set a 10-3/4-inch casing string to case off the  
18 salt in order to drill with the fresh water system. This  
19 casing string also complies with the special casing stipula-  
20 tion in R-111A.

21 From there we will drill out with 9-1/2-  
22 inch bit, drill down to approximately 10,800 feet; set 7-  
23 5/8ths-inch casing. This casing will be designed as protec-  
24 tive string while we drill out 6-1/2 -- drill a 6-1/2-inch  
25 production hole and will be used as production casing when

1 the well is completed.

2 And it will be designed in accordance  
3 with Exxon design guidelines.

4 Once we've set cement to 7-5/8ths, we'll  
5 drill out with a 6-1/2-inch bit, drill down to a true verti-  
6 cal depth of 13,900 feet. There we'd run a 5-inch liner.  
7 After cementing the liner in place we will dress off and  
8 test the liner (unclear), pressure test the liner, then turn  
9 the well over to our Production Department, who will com-  
10 plete the well and run the production tubing, which is not  
11 shown on this diagram.

12 Q Will you please move on to Exhibit Four  
13 and discuss the drilling and casing of a directionally drill-  
14 led hole for the proposed unit qualifying well?

15 A Exhibit Number Four, also titled Laguna  
16 South Unit No. 1 Directional Hole, this exhibit has the same  
17 two plots as the previous one, the straight hole. We esti-  
18 mate the directional well will take 81 days to drill this  
19 well from spud to release of the drilling rig, as compared  
20 to 48 days for the straight hole, or an additional 33 days.

21 The 16-inch and 10-3/4-inch casing  
22 strings would be the same as for the production hole. We  
23 would drill out again with a 9-1/2-inch bit; drill down to  
24 approximately 6,130 feet. There we will pull our bit, run  
25 in the hole with a bit (unclear), a downhole motor and

1 steering tool, and kick off to establish our initial direc-  
2 tion and angle and begin drilling at a build rate of 4-1/2  
3 degrees per 100. Once we've established this initial angle  
4 and direction, we will pull the downhole motor, trip back in  
5 the hole with a building assembly, and continue to build to  
6 our planned angle of 20 degrees, and once this angle is  
7 achieved we will pull our assembly and run in the hole with a  
8 holding assembly and attempt to hold this angle, drill down  
9 and set intermediate 7-5/8ths casing at a true vertical  
10 depth again of 10,800 feet. This casing will be designed as  
11 a protective string only in accordance with Exxon's design  
12 guidelines due to casing wear, due to the casing being sub-  
13 jected to drill type wear while we're drilling the direc-  
14 tional 6-1/2-inch hole.

15                   Once we complete the 6-1/2-inch hole we  
16 reach a true vertical depth of 13,900 feet, or a measured  
17 depth of 14,340 feet, an additional 440 feet for the direc-  
18 tional well, with a vertical displacement of 2000 feet from  
19 -- with a horizontal displacement of 2000 feet vertical with  
20 a plane angle of 20 degrees. We will then run a 5-1/2-inch  
21 tieback string as a production string, which will withstand  
22 anticipated shut-in pressures from the Atoka-Morrow forma-  
23 tions.

24                   Again, once we complete the well we'll  
25 turn it over to our Production personnel for completing and

1 running production tubing.

2 Q On Exhibits Three and Four there are es-  
3 timates of the days for drilling to total depth. What are  
4 these estimates based on?

5 A Based on industry experience.

6 Q And what is the difference in your esti-  
7 mate of days between them?

8 A We estimate it will take an additional 33  
9 days to drill the directional well as opposed to the  
10 straight hole

11 Q And how do your estimates compare with  
12 actual drilling operations in or near the potash area, and I  
13 refer you to Exhibit Five?

14 A Exhibit Five is a straight hole versus  
15 directional hole performance comparison of days versus depth  
16 in southeastern New Mexico.

17 Again the vertical axis is a true verti-  
18 cal depth in feet and horizontal axis is days.

19 We selected three wells, the Santa Fe En-  
20 ergy HB No. 3 Federal Com No. 1, a straight hole; Pogo Pro-  
21 duction IMC No. 1 is a straight hole; and the Bass James  
22 Ranch No. 13 is a directional hole. These wells were selec-  
23 ted because they were similar in mud weights, casing pro-  
24 grams, hole sizes, and approximately the same TD's and they  
25 were also similar to our proposed well.

1           The Santa Fe Energy HB No. 3 Well, repre-  
2   sented by the solid line, is about two miles to the south-  
3   east of our proposed well and was completed in January of  
4   '87, finished drilling in '87. It took them approximately  
5   50 days to drill the well.

6           Pogo Production IMC No. 1 Well is located  
7   about 5 miles southwest of our location. It was completed  
8   in February of '87. It took approximately 50 days, also, to  
9   drill this well.

10          The Bass James Ranch No. 13, a direction-  
11   al hole, is approximately 8 miles northeast of our location  
12   and was completed in July of 1982. We estimate it took ap-  
13   proximately 113 days to drill this well, which excludes ap-  
14   proximately 50 days for trouble.

15          When you look at only the rotating time  
16   involved, actual drilling time for these wells, the Santa Fe  
17   Energy Well had 583-3/4 hours of rotating time, or 24.3  
18   days.

19          The Pogo Well had 650-3/4 hours for 27  
20   days of drilling time.

21          And the Bass James Ranch No. 13 had 1,709  
22   hours of drilling time, or 71.2 days.

23          Q           Would you please refer to Exhibit Six and  
24   discuss briefly the general factors which increase the cost  
25   of directional drilling over the cost of straight well drill-

1 ling?

2           A           Listed on the top half of Exhibit Six are  
3 drilling operations which are usually encountered in a  
4 directional well but not usually encountered in the straight  
5 hole, such as, as I mentioned before, the additional hole  
6 depth or 440 feet for this well; kicking off with a downhole  
7 motor, bent sub (sic) and steering tool takes additional  
8 time to trip in and out of the hole with the motor to estab-  
9 lish angle and direction; additional surveys to confirm an-  
10 gle and direction; reaming the kickoff portion of the hole  
11 with a hole opener with a bit; reducing weight on the bit  
12 to control angle, which reduces the drilling rate of pene-  
13 tration, thus increasing additional time to drill the well;  
14 trips to change the bottom hole assembly from changes in  
15 hole angle; and additional trips of downhole motor and  
16 steering tool for changes in direction, which both of these  
17 would also add additional time to drill the well.

18                   The bottom half of the page is a list of  
19 additional cost items, for your information, that are asso-  
20 ciated with a directional well, such as the directional  
21 technician at approximately \$500 a day; steering tool with  
22 wireline truck at \$160 an hour; downhole motor, a 6-1/2 inch  
23 downhole motor for \$188 an hour; a 5-inch rotor for \$140,  
24 and so on.

25           Q           Would you please refer now to Exhibit



1 Seven and discuss directional versus straight hole cost es-  
2 timates?

3 A Exhibit Seven is a breakdown of the cost  
4 associated with drilling a straight hole and a directional  
5 well. Drilling and completing costs for a straight hole are  
6 estimated to be \$1,197,000 as compared to the directional  
7 hole of \$1,753,000, which represents 46 percent increase in  
8 cost.

9 Q So therefor, the directional costs are  
10 substantially greater than the straight hole costs.

11 A Yes, they are.

12 Q Were Exhibits Three through seven  
13 prepared by you or under your direction?

14 A They were.

15 MR. BRUCE: Mr. Chairman, I'd  
16 move the admission of Exhibits Three through Seven.

17 MR. LEMAY: Without objection  
18 the exhibits will be admitted into evidence.

19 MR. BRUCE: I have nothing  
20 further.

21 MR. LEMAY: Questions of the  
22 witness?

23 MR. HIGH: Just a few.

24 MR. LEMAY: Mr. High.

25

## CROSS EXAMINATION

BY MR. HIGH:

Q Mr. Grady, how many cases have you been involved in in drilling in the potash area?

A None.

Q How many directional holes have you drilled?

A Two.

Q How many in the potash area?

A None.

MR. HIGH: I have nothing else, thank you.

MR. LEMAY: If not, the witness may be excused.

Thank you, Mr. Bruce.

Are there any additional presentations in this case. Anyone wants to put a witness on?

Mr. High.

MR. HIGH: We'd like to call one witness, Mr. Chairman. Thank you.

Call Mr. Walt Thayer.

MR. LEMAY: Mr. Thayer.

1                   WALTER E. THAYER,  
2 being called as a witness and being duly sworn upon his  
3 oath, testified as follows, to-wit:

4  
5                   DIRECT EXAMINATION

6 BY MR. HIGH:

7                   Q           Mr. Thayer, would you state your name,  
8 please, and where you're employed and in what position,  
9 please?

10                  A           My name is Walter E. Thayer. I'm employed  
11 by IMC Fertilizer and I'm Production Manager at the Carlsbad  
12 Plant.

13                  Q           How long have you been employed at IMC?

14                  A           Approximately 27 years.

15                  Q           And how long have you been in th potash  
16 industry?

17                  A           I started when I was -- as an hourly at  
18 age 18. I was gone for about five years attending college.  
19 Other than that I've been in the potash business.

20                  Q           All right. Would you explain for us,  
21 please, your educational background?

22                  A           Mechanical engineer, graduate of New Mex-  
23 ico State with a Bachelor of Science degree.

24                  Q           Have you previously testified before the  
25 OCC?

1           A           Yes, several times.

2                       MR. HIGH:   Mr. Chairman, we  
3 would ask that Mr. Thayer's credentials be accepted by the  
4 Commission.

5                       MR. LEMAY:   His qualifications  
6 are acceptable.

7           Q           Mr. Thayer, were you involved in the com-  
8 mittee process that led up to the agreement negotiated be-  
9 tween the potash industry and the oil and gas industry?

10          A           Yes, I was.

11          Q           And what role did you play in those nego-  
12 tiations?

13          A           I was Chairman for the potash industry in  
14 the general committee and then I participated in the final  
15 negotiations of the work committee that put together the  
16 agreement.

17          Q           Were you present at all the meetings that  
18 were held between the potash industry and the oil and gas  
19 industry that led up to the agreement?

20          A           All except the tour to the mines, et  
21 cetera, and I had a conflicting schedule. I was not able to  
22 make those.

23          Q           Other than that you were present at each  
24 --

25          A           Yes, I was.

1 Q -- of the negotiating sessions?

2 A Yes, I was.

3 Q Would you -- let's talk for a few minutes  
4 about the LMR's, Mr. Thayer. You are familiar, I take it,  
5 with LMR?

6 A Yes, I am.

7 Q And you've heard all the testimony here  
8 today about LMR's.

9 A Yes, I have.

10 Q Are LMR's the same as the blue area shown  
11 on the BLM map?

12 A No, they -- they are not, definitely not.

13 Q What is the process that has been agreed  
14 to in the agreement between the oil and gas industry and the  
15 potash industry with respect to how LMR's will be desig-  
16 nated? What is the procedure, as you understand it?

17 A First of all, I'll go a little further  
18 than the question.

19 We intended, the idea of the LMR was to  
20 exchange some higher value ores and the assurance that they  
21 wouldn't be drilled in for some lower grade ores, and the  
22 procedure is to decide, each company decide what that LMR  
23 criterion would be, to establish it, and put it in the hands  
24 of the BLM, who also has the hard data, the core data, and  
25 give them the opportunity to confirm or disaffirm that it is

1 a legitimate line that's different from the blue line, or  
2 the blue area. and thereby monitor and verify that it's a  
3 reasonable selection of a line as being the -- a reasonable  
4 body of ore that can be mined by the potash companies.

5 Q And that designation will be made by each  
6 individual potash lessee?

7 A That's correct.

8 Q And it would include, as I understand  
9 your testimony, the ore that the mine projected it would in  
10 fact mine.

11 A That's correct.

12 Q Would it include all of the ore that a  
13 potash lessee could mine?

14 A No.

15 Q Now let's talk a few minutes about the  
16 issue that Mr. Hall raised about the Texaco well. You were  
17 at that hearing, were you not?

18 A Yes, I was.

19 Q And you testified with respect to the  
20 potash deposits that were in and around the areas where  
21 Texaco wanted to drill, did you not?

22 A I did.

23 Q And did those areas contain potash that  
24 IMC could in fact have mined?

25 A They did.

1           Q           And does it today contain potash ore that  
2 IMC could mine?

3           A           It does.

4           Q           Has IMC agreed to give up that potash ore  
5 under the agreement between the potash industry and the oil  
6 and gas industry?

7           A           It's one of -- one of the basic princip-  
8 les in this agreement is based on it.

9           Q           What is that basic principle?

10          A           To give up some of the lower grade fringe  
11 areas in exchange for the assurance that there will be no  
12 drilling inside the LMR, which is the higher grade ores.

13          Q           So in exchange for the agreement with the  
14 oil and gas industry that there would be no drilling within  
15 the higher grade ore of IMC, IMC in turn opened to oil and  
16 gas drilling areas that has -- that have potash deposits  
17 that could be mined but are lower grade ore.

18          A           That's true.

19          Q           How crucial is that to the acceptability  
20 of the agreement between the two industries?

21          A           Any deviation from that, as far as I'm  
22 concerned, would be a substantial deviation from this agree-  
23 ment.

24          Q           Would it in plain language torpedo the  
25 whole deal?

1           A           It would shoot the heck out of it.

2           Q           Now, what -- what process would be fol-  
3           lowed, Mr. Thayer, just so the Commission, as well as the  
4           people here today, will understand, what process would a  
5           mine operator go through to set up an LMR?

6           A           Establish a criterion, evaluate the core  
7           hole data, which is the same data that the BLM has, draw the  
8           line with the time constraint that's in the agreement, fur-  
9           nish the BLM with that that line and with the criterion upon  
10          which it's based.

11          Q           That would have to be limited to ore that  
12          the mine has the technology to mine?

13          A           That's correct.

14          Q           Okay, and that -- that date would be  
15          given to the BLM.

16          A           That's right.

17          Q           And I take it IMC considers that data  
18          confidential?

19          A           Yes, they do.

20          Q           Why is that?

21          A           I guess it's a similar thing, I'm assum-  
22          ing that the oil and gas people do not exchange or divulge  
23          or make public their reserve data, and neither -- that's  
24          confidential material considered to be proprietary, it's un-  
25          ique to each company, and we do not divulge it.



1 Q Okay.

2 A I think there would be also -- I'm con-  
3 cerned that there would also be some antitrust considera-  
4 tions involved and we've enjoyed about all that we can  
5 stand.

6 Q With the data that's given to the BLM, do  
7 they have the capability as you understand it, to verify the  
8 mine's capability with respect to mining that ore?

9 A They do. They do have.

10 Q Now there's been some testimony and ques-  
11 tions raised this morning, or today, about providing the  
12 data only to the BLM, and you've heard that testimony, have  
13 you not?

14 A Yes, I have.

15 Q Does IMC, or anyone else in the potash  
16 industry to your knowledge, have any objection to sharing  
17 the LMR data, or the data upon which the LMR would be estab-  
18 lished, with either the Oil Conservation Division or the  
19 State Land Office?

20 A Ordinarily our position would be to -- to  
21 limit it to only where it's needed but if it's considered or  
22 concluded that it's needed by either of these offices, and  
23 provided they will do what they've done in the past, and  
24 that's treat it as confidential information, we have -- IMC  
25 would have no objection and to my knowledge, I would guess

1 that others wouldn't.

2 Q So that would be, if that date were given  
3 to both the Oil Conservation Division and the State Land Of-  
4 fice, that would be two additional agencies that could veri-  
5 fy the accuracy of the LMR set up by a mine.

6 A Theoretically they could verify it. I'm  
7 not familiar with their expertise. I would say they do not  
8 have, in my estimation, the degree of expertise that the BLM  
9 has, but theoretically they could have, or could obtain it.

10 Q But if they want the information, as I  
11 understand it, you would not be opposed to giving it to  
12 them, provided they agree to keep it confidential.

13 A And provided it's considered to be essen-  
14 tial to business

15 Q Okay. Now, there's also been some testi-  
16 mony about 25 percent of the blue area. Would you explain  
17 to us, if you will, Mr. Thayer, what your understanding is  
18 with respect to the changes in the blue area that will come  
19 about if the agreement that's been negotiated is accepted?

20 A We asked each potash company to in all --  
21 to give their best effort to establishing to the best of  
22 their ability an estimate of what this difference would be,  
23 the difference being the area represented by the LMR as op-  
24 posed to the area currently represented by the blue on the  
25 1984 map.

1                   Then we took a weighted average for the  
2 entire industry and that difference in the LMR line and the  
3 blue line was 25 percent.

4                   And I might add that this can be verified  
5 by the BLM in the same manner that they can verify the blue  
6 line or any other line.

7                   Q               So with specific reference to a map,  
8 let's look, if you will, Mr. Thayer, to the BLM map on the  
9 wall. I'm not sure what exhibit number it is, but it is the  
10 BLM map of the -- 1984 BLM map of the potash area.

11                   Do I understand you correctly to say that  
12 if the agreement that's been negotiated is accepted by the  
13 OCC that the potash industry would not object to the oil and  
14 gas people drilling in up to 25 percent more of the blue  
15 area than what it could have?

16                   A               Less the buffer zone. In other words,  
17 there'd be 25 percent more blue area available, less the  
18 buffer zone.

19                   Q               Now, what is the reason, Mr. Thayer, that  
20 buffer zones were set up?

21                   A               For reasons of safety, or at least the  
22 belief that that would add some safety.

23                   Q               Do you have an opinion with respect to  
24 the need for a buffer zone between underground potash min-  
25 ing and oil and gas activities?

1 A I certainly do.

2 Q What is that opinion?

3 A I believe it's essential; also a signifi-  
4 cant factor in these negotiations, and we feel extremely  
5 strong about this buffer zone.

6 Q Is the potash industry regulated by the  
7 Federal government with respect to safety matters?

8 A Yes, it is.

9 Q And how would you characterize that regula-  
10 tion?

11 A Very stringent and becoming more so, not  
12 less, with new regulations coming out frequently, ever more  
13 stringent.

14 Q What remedies are available to the Fed-  
15 eral government if the -- if an underground potash mine  
16 fails to comply with the safety standards?

17 A They can stop the work immediately. Man-  
18 agers who willfully or knowingly allow a violation to exist,  
19 or condone it, can be prosecuted in -- as a criminal.

20 Q Do you know what a withdrawal order is?

21 A I'm sorry?

22 Q A withdrawal order.

23 A Oh, yes.

24 Q What is a withdrawal order?

25 A Stop the operation until the matter is

1 corrected to the satisfaction of the --

2 Q Who issues those?

3 A MSHA does; a number of agencies can, but  
4 MSHA does; safety feature.

5 Q Is it your testimony, Mr. Thayer, that  
6 the Federal government can require an underground potash  
7 operator to stop production and repair something before it  
8 ever gets a hearing on whether or not it was even a viola-  
9 tion?

10 A That is the procedure. That is the law.

11 Q Now, what safety hazard, in your opinion,  
12 Mr. Thayer, is presented by oil and gas activities in and  
13 around underground potash mines?

14 A The methane is probably -- or the oppor-  
15 tunity or possibility, even the possibility of a fire or an  
16 explosion, is probably the most feared thing that can happen  
17 in mining. It's right next to explosives and roof falls,  
18 and I'd say it's the most feared.

19 Q You are familiar, ar you not, with the  
20 data was put together and presented to the study committees  
21 with respect to the hazards of methane?

22 A Yes, I am.

23 Q You participated in that, did you not?

24 A Yes.

25 Q And I believe it's Exhibit Seven, if I'm

1 not mistaken, but that data discusses the hazards of me-  
2thane, does it not? I'm sorry, you'll have to either --

3 A Yes, it does. I'm sorry, yes.

4 Q Now, finally, Mr. Thayer, again I want to  
5 go back to the Texaco hole that Mr. Hall was talking about  
6 earlier.

7 The potash industry protested both of  
8 those holes, did it not? I'm sorry, you'll have an answer  
9 out loud.

10 A Yes, I did.

11 Q If the agreement that's been negotiated  
12 between the oil and gas industry and the potash industry is  
13 accepted, would either of those two holes have been allowed  
14 under that agreement?

15 A The one hole that was allowed by the OCD  
16 would be allowed under that, this agreement, proposed agree-  
17 ment.

18 MR. HIGH: I have no further  
19 questions, Mr. Chairman.

20 MR. LEMAY: Thank you, Mr.  
21 High.

22 Questions of the witness?

23 MR. HALL: Briefly, Mr. Lemay.

24 MR. LEMAY: Mr. Hall.

25

## CROSS EXAMINATION

BY MR. HALL:

Q Mr. Thayer, do you believe it's appropriate to have the BLM and potash industry to unilaterally determine the LMR boundaries for State and fee acreage?

A The question is, is there -- do I believe it's appropriate for the potash industry and the BLM to establish the LMR for the state?

Q For State and fee acreage.

A And fee acreage. First of all, the agreement proposes that the potash industry establish the LMR and that the BLM only confirm that it's a reasonable characterization of the intent of this agreement that was put together, and I think that's very appropriate and very reasonable, and I think it's badly needed that we have a uniform policy to assist and help the oil and gas industry and the potash industry so that we don't have too many parties with too many different rules --

Q Mr. Thayer, can you --

A -- trying to establish guidelines.

Q Are you finished?

A Yes, I am.

Q Can you point out to me any statute, rule or regulation which would give the Bureau of Land Management jurisdiction or authority over State or fee acreage?

1           A           I don't think -- have I -- no, no, I  
2 don't think I've said there is any. You asked my opinion; I  
3 gave you my opinion. I don't know of a -- of a regulation  
4 that gives the BLM authority over the State. There might  
5 be.

6           Q           Do you believe it's appropriate for the  
7 potash industry to be able to establish LMR's for acreage in  
8 which it does not have lease ownership rights or right to  
9 mine?

10          A           You're asking my opinion. I don't see  
11 any problem in it one way or the other. I don't feel  
12 strongly one way or the other.

13          Q           Do you feel it's appropriate or inappro-  
14 priate?

15          A           If -- appropriate or inappropriate. I'm  
16 not really sure --

17          Q           Ever heard those words before?

18          A           Oh, sure, I understand them, yes, but if  
19 an LMR line was needed to be provided by a potash operator  
20 in an area where probably they were the only ones who could  
21 physically mine that area, and they didn't have that area  
22 under lease, and it was pretty obvious that they would be  
23 the only operator who could possibly mine that, I think it  
24 would be very appropriate for that company and their techno-  
25 logy to be used as a basis for establishing any LMR line.



1 Q Thank you, Mr. Thayer.

2 MR. LEMAY: Additional ques-  
3 tions of the witness? Yes.

4 MR. BUELLER: George Bueller  
5 with Anadarko.

6  
7 QUESTIONS BY MR. BUELLER:

8 Q I'm confused as to the LMR information.  
9 Tell me if I'm right or wrong.

10 If these maps were made public, would the  
11 LMR lines around the individual mines be made public but not  
12 the information that is used to come up with the LMR's?

13 A No, the line would not be made public.  
14 Probably the best I can explain that, I know the oil and gas  
15 people would love to look at a line on a map and have that  
16 map. This is how close with this agreement that you get.  
17 Instead of looking at a line if you would simply look at  
18 your proposed site and its location, pick up the phone and  
19 call the BLM and say, "Can I drill at this site" and define  
20 it, you'd get a yes or no. They'd be looking at the line  
21 for you and tell you yes or no.

22 And that's -- somebody said, if you ask  
23 enough -- for enough spots, you could probably eventually  
24 generate your own line. We doubt that that would be a ser-  
25 ious problem.

1 Q I have a second --

2 A What this -- this took a lot of effort to  
3 try to get as close to what we felt you needed as we possib-  
4 ly could, and that's our (unclear).

5 Q My second question is you say that on the  
6 average after each individual mine determined their LMR,  
7 that 25 percent is going to be thrown back in that's drill-  
8 able.

9 A Less the buffer zone.

10 Q Less the buffer zone.

11 A Yes.

12 Q How about the areas that weren't under  
13 lease, that aren't under lease? Would you kind of stake  
14 those around each individual mine and assume that you were  
15 going to get those under lease?

16 A Let me tell you the procedure we used.  
17 We took the entire map and broke it into segments and gave  
18 potash company a portion that covered the entire blue area,  
19 whether it was under lease or not, and asked that they eval-  
20 uate that based on their data. So that's -- we felt that  
21 was the best we could do, covers the entire area, and we  
22 too the data back and made a composite, a weighted com-  
23 posite.

24 Q Okay, but in each one fo the areas as it  
25 was broken up, when the LMR was determined each individual

1 mine's cutoffs were what they consider commercial.

2 A We worked hard to, without violating any  
3 antitrust procedures and so on, came up with an industry  
4 standard and that was used.

5 Q So what you're telling me is basically  
6 the same criteria were used by all the mines.

7 A We think that would help the BLM and be  
8 appropriate, and that was our -- and we worked hard at that.

9 Q Thank you.

10 MR. LEMAY: Additional ques-  
11 tions of the witness. Yes.

12 MR. HOLLINGSWORTH: My name is  
13 Guy Hollingsworth. I'm with Chevron in Hobbs.

14  
15 QUESTIONS BY MR. HOLLINGSWORTH:

16 Q Mr. Thayer, I have to profess relative  
17 ignorance of the potash mining industry. I want to lean on  
18 your experience here a little bit.

19 Prior to R-111 in 1951, what was -- what  
20 was used prior to that time to separate drilling and mining  
21 operations? Could you explain that?

22 A Initially the potash area was perceived  
23 to be rare -- there's a big, long story behind -- for in-  
24 stance, we were paying \$200 a ton for potash during World  
25 War I when the Germans stopped our supply of potash. That's

1 where we got all of our potash.

2 And as a result of locating potash in New  
3 Mexico, the price of potash then in the U.S. dropped back to  
4 something that was reasonable, and initially that small  
5 area, comparatively small area, which was really the only  
6 deposit of potash known in the U.S. was protected, and there  
7 was going to be no drilling, and later on it became evident  
8 that there needed to be some co-use or there were pressures  
9 or requests to drill and the regulations have evolved since  
10 then.

11 And this conflict between the two indus-  
12 tries became ever increasingly intense and for the past 15  
13 or 20 years it's been something less than fun for those of  
14 us who've tried to protect our interests and protect our  
15 people and avoid a major catastrophe, and this agreement is  
16 a final culmination, we hope, for getting back to some sane  
17 and orderly use multiple use of this area.

18 I'm not sure I answered your question.

19 Q Yes, you did. Well, there were --  
20 there's been a lot of drilling out there in the past. To  
21 your knowledge has there been any gas in the mining industry  
22 attributed to drilling operations?

23 A No. Probably the way I would help you,  
24 is if, if something went awry, you're probably familiar with  
25 this, if something goes wrong with your hole, your drill

1 hole, you lose your investment in that hole. This risk that  
2 we're concerned about, if something goes wrong we lose a  
3 bunch of people. An explosion underground 4000 feet away,  
4 and that's what this document we've got indicates, an explo-  
5 sion is like an explosion -- underground, in a confining  
6 space is like an explosion in a gunbarrel. It doesn't  
7 diminish to speak of for long distances. So it could be a  
8 major catastrophe as far as lives. Something as simply as  
9 just the contamination of gas, just a little bit of methane  
10 passing through in our air, we have a certain fixed volume  
11 of air, and if it moved into an area where people exist and  
12 work, as opposed to escaping from the surface where it's  
13 dissipated and diluted in the atmosphere, it wipes out all  
14 those people that it contacts.

15               The final thing is instead of just losing  
16 a well and your investment, it would in effect wipe out our  
17 entire potash industry. MSHA would, if we ever detect this  
18 amount of gas, would declare the mine gassy, which would re-  
19 quire investments for -- for what is it, Code 30 equipment,  
20 explosion-proof equipment, which this industry couldn't  
21 stand, and if they imposed that on us, that would wipe out  
22 our entire industry.

23               So what I'm trying to describe to you is  
24 the consequences are so severe, so severe, that we can't af-  
25 ford that one time. It's not like saying, golly, get your

1 fixed or you'll have an accident, you know. It's like say-  
2 ing if -- it's the argument with WIPP. It's that type of  
3 argument. If something did go wrong it's such a disaster  
4 that we just can't afford to stand by and allow such a thing  
5 to happen.

6 Q But, based over decades of current opera-  
7 tions there have been no deaths.

8 A That's right, but on the other hand, let  
9 me ask you something. Have there been inadvertent occurren-  
10 ces, blowouts, things beyond -- even with the best operators  
11 and the good equipment, have there been things that are un-  
12 explainable, things you didn't intend to happen that are  
13 pretty catastrophic?

14 Q I think you know the answer to that.

15 A Yeah, I sure do.

16 MR. LEMAY: Yes, sir, Mr. Kel-  
17 lahin.

18 MR. KELLAHIN: Thank you, Mr.  
19 Chairman.

20

21 CROSS EXAMINATION

22 BY MR. KELLAHIN:

23 Q Mr. Thayer, I'd like to direct your at-  
24 tention back to the Texaco testimony and to that of Exxon.  
25 I've placed before you what is marked as Texaco Exhibit Num-

1 ber One, and also the Exxon Exhibit One, One-A and One-B.

2 You were in the hearing room, were you  
3 not, sir, when those particular witnesses identified and de-  
4 scribed the method by which they had analyzed the buffer  
5 area and applied it to the Secretarial map of 1984?

6 A Yes, I was.

7 Q Both gentlemen predicated their analysis  
8 of the impact of this proposed rule change on the basis that  
9 they equated the MLR (sic), life of the ine reserve area to  
10 the outer boundary of the blue area.

11 Do you have an opinion, sir, as to  
12 whether that's a correct and accurate method by which to an-  
13 alyze the proposed buffer that has been agreed upon by the  
14 two industries?

15 A In the case of Texaco I personally have  
16 evaluated that one and can say unequivocally, you know, tht  
17 was an incorrect analysis, to the extent that that Texaco  
18 hole would have been allowed.

19 I looked over briefly the Exxon --

20 Q Yes, sir.

21 A All right, and it -- this is simply a  
22 guess. This is simply an educated guess but my guess is  
23 that the blue area would diminish significantly under this  
24 new agreement.

25 Q Under the existing procedure that we live

1 with now and have coped with for years, is there any re-  
2 quirement or obligation upon the potash industry to disclose  
3 to the oil and gas ndustry any confidential information?

4 A Not that I'm aware of.

5 Q If the proposed agreement is adopted, in-  
6 corporated, there will at least be a method by which the oil  
7 and gas operator can contact the BLM and determine rather  
8 quickly whether or not a proposed location is within a  
9 buffer area or within a life of the mine reserve.

10 A That's true, and that's our intent, to do  
11 it very quickly.

12 Q And that would be an advantage over the  
13 exisitng system.

14 A I would think the oil and gas people  
15 would think it's a considerable advantage over the present  
16 system.

17 Q You participated, and I believe you were  
18 one of the signatories on the November 23rd agreement?

19 A I am.

20 Q Have you had an opportunity today, Mr.  
21 Thayer, to review Mr. Lyon's proposed draft order as Exhibit  
22 Four, I think he's labeled it P. Have you looked at that,  
23 sir?

24 A Yes, I have.

25 Q Would you take a moment, sir, and go



1 through that exhibit with us and identify those changes or  
2 proposed rule amendments that you think constitute material  
3 changes from the agreement that was executed by you in Nov-  
4 ember of '87?

5 A First of all, I have my copy marked up.

6 Q Would you like to go get it?

7 A That might help me go faster.

8 Since we all just received these today, I  
9 wouldn't want to say these are the only ones, but these are  
10 the only ones I'm aware of.

11 Q Well, let's make it very clear, Mr.  
12 Thayer, that you and your counsel are reserving a comment  
13 period subsequent to the hearing to address those, but for  
14 the benefit for us now, could you find those items which you  
15 have discovered today which are inconsistent or constitute  
16 significant changes over the agreement?

17 A Well, certainly on Page 9 -- I'm sorry,  
18 certainly on Page 13, Paragraph 1, it refers to except as  
19 provided in 3, which I think was intended to be 4, which re-  
20 ferred to on Page 15 the item -- Item 4, where there would  
21 be the possibility, even, of drilling inside the LMR.

22 Q That was a sentence that Mr. High discus-  
23 sed with Mr. Hansen earlier this afternoon. Mr. Hansen tes-  
24 tified it was inconsistent with the agreement. Do you con-  
25 cur in his opinion that it's inconsistent?

1 A That's correct.

2 Q And that is a substantial change, in your  
3 opinion?

4 A It definitely is substantial, to the ex-  
5 tent that I think I indicated that that would put this  
6 agreement in jeopardy.

7 Q All right, sir, can you -- can you show  
8 us any others?

9 A Page 3, Item 4 on Page 3.

10 Q All right, sir, in what way describe how  
11 that is significant change over the agreement.

12 A Let me back up and let -- all right, hold  
13 it just a minute, let me read it.

14 I would say that at this stage I wouldn't  
15 make a comment one way or the other that is a substantial  
16 change without studying it further.

17 I will say that I'm concerned and would  
18 want a little more information regarding the salt string and  
19 discussions there, and I think that's -- I would rather not  
20 take a position at the moment as to whether that is a sub-  
21 stantial change or not. I'd want to study it first.

22 Q What about the use of the phrase that no  
23 potash resources will be endangered?

24 A I would want to understand that better  
25 before I took a --

1 Q Is that a common phrase that you and the  
2 oil and gas industry have utilized in your discussions over  
3 the last 18 months?

4 A No.

5 Q Apart from those two observations as  
6 being substantial changes, do you see any others in the pro-  
7 posed draft?

8 A No, I don't.

9 Q Do you see any substantial errors of  
10 omission whereby there is a provision in the agreement of  
11 November that Mr. Lyon has failed to include in the draft  
12 order?

13 A No.

14 Q Thank you.

15 MR. LEMAY: Thank you, Mr. Kel-  
16 lahin.

17 Ernie, do you have something  
18 you'd like to ask?

19

20 QUESTIONS BY DR. SZABO:

21 Q You will be giving us an outline essen-  
22 tially saying this is LMR, or would giving the BLM the  
23 description.

24 A Are you a part of the BLM, Dr. Szabo?

25 Q No.

1 A Okay. I would be giving the BLM --

2 Q I'm with the State Land Office.

3 A Yes. I would be giving the BLM a line  
4 and a criterion upon which it's based.

5 Q The problem is this: Is this one where  
6 the line would be reasonably dependable or is it one where  
7 this year we give it and next year we take it way, so that  
8 it would wax and wane like an amoeba?

9 A I think that's a fair question. So what  
10 --

11 Q We're faced with monetary planning, just  
12 like you, and our clients are faced with long term pur-  
13 chases. So if you giveth this year and taketh away next  
14 year, because you happen to drift into an area where possib-  
15 ly the ore was of a lower grade than you anticipated, and  
16 you back up and take this back, how can anyone plan for more  
17 than one year at a time, or maybe even be faced with the  
18 possibility that they got permission and by then they put it  
19 into effect, no, we can't do that any more.

20 A Okay. Let me try and answer the ques-  
21 tion. First of all, our own reserves that we based our in-  
22 vestments on and that we've had over the years, they do not  
23 act like an accordian. Okay, that's one of them. They have  
24 been established.

25 The next thing is I think it -- I think

1 you and I both would feel better if based on new data, new  
2 data doesn't come every year, but if it ever comes, it  
3 should be based on what's in the ground and that doesn't  
4 change like an accordion, that is a fact of nature, and as  
5 soon as we're aware of either less ore, we mine into an area  
6 that was inside our LMR, we find that, hey, we thought there  
7 was ore there and all the core data indicated there was ore  
8 there, we feel compelled to notify the BLM that there isn't  
9 ore here and our new LMR should be less and there should be  
10 more blue area made available.

11                   Conversely, if it's established that  
12 there is ore where we didn't believe it was before, by some  
13 basis, we'd be irresponsible if we just ignored that ore.

14                   Now this doesn't happen yearly. This  
15 might happen over a number of years.

16                   Q           I can see your -- the deposition of pot-  
17 ash ore is not a uniform thing. It can occur where the  
18 pockets or less concentration or greater concentrations, but  
19 there's --

20                   A           The other thing I'd like to respond to,  
21 we have no intention, we did this agreement and if we could  
22 be friends with somebody like Bass or Texaco, or somebody  
23 else, we're not going to play games with this agreement, if  
24 that's your concern.

25                   Q           Part of it's -- not that you're going to

1 play games --

2 A We couldn't anyway.

3 Q -- but you have to have been a sturdy in-  
4 dustry to have stayed there.

5 A We are.

6 Q And so the question only is how far ahead  
7 could we depend --

8 A Let me ask that, I mean answer that. We  
9 won't -- the LMR line will stand until we arrive there or  
10 unless more core hole data is obtained.

11 If you ask for a site, we couldn't alter  
12 that on any basis ithout some new data, so if -- it sort of  
13 says if you're there first, there's no question at all.

14 If we are there first and suddenly find  
15 that there's less re or there is more ore, then rightfully  
16 so, that line should be changed, but you can look at our  
17 progress each year, that, too, would not look like an accor-  
18 dian. That is a slow process.

19 Q In other words, (not clear to the repor-  
20 ter).

21 A Sure, sure, and it's not likely to change  
22 for several years. Now, there might be a coincidence that  
23 here's a case where somebody decided, by golly, here's a  
24 good spot, coincidentally with the arrival of a mining unit.  
25 Then, and only then, might there be a change or a potential

1 change in a short time frame.

2                   So what I'm saying is it will be very,  
3 very stable and change very, very slowly as new data -- and  
4 frankly, I can think of Mississippi Chemical, I don't think  
5 they've drilled any core holes in years and years, so their  
6 data upon which Bass negotiated, and I don't know how many  
7 years it's been since it's been.

8                   IMC, it's probably been, oh, ten years,  
9 since we've drilled any core holes, got any additional core  
10 hole data. Now had we mined in certain areas and it has  
11 happened, that we find that, gee, that core hole went right  
12 through a salt pillar and the probability of that occurring  
13 at the same site that somebody wanted to drill a well is  
14 minimal.

15                   DR. SZABO: Thank you.

16                   MR. LEMAY: Additional ques-  
17 tions of the witness

18                   MR. BROSTUEN: I have a ques-  
19 tion.

20                   MR. LEMAY: Commissioner Bros-  
21 tuen.

22

23 QUESTIONS BY MR. BROSTUEN:

24                   Q           Mr. Thayer, on Page 4 and also on Page 5  
25 of the agreement there is a discussion of designation of

1 mine reserves and a means for resolving disputes between a  
2 potash company and the BLM in the event that there's a dis-  
3 agreement as to what constitutes an LMR.

4 Do you have any idea what sort of time  
5 frame resolution of such a dispute might take? Other dis-  
6 putes, perhaps, have occurred between your company and BLM?

7 A You're asking my opinion.

8 Q I'm asking your opinion, yes, do you have  
9 any idea?

10 A I really believe that there will be very  
11 easy and comfortable agreement between the BLM's interpreta-  
12 tion and ours, and I base that on the fact that although we  
13 do interpret the blue line differently, it's not of signifi-  
14 cance. Those areas where it is of significance, I think  
15 it's more a matter of being sure we have the correct data  
16 rather than the differences in interpretation.

17 So I personally don't suspect that there  
18 will ever be one of these, and if it is, it would be rare  
19 and how long it would take to resolve it, some methods to  
20 resolve it would be additional core hole data; not really,  
21 not really. I think it would be a matter of sitting down  
22 and comparing methods and if we couldn't agree, it would be  
23 done before a hearing and it would be based on data and en-  
24 gineering methods rather than somebody's art or state of art  
25 or -- and my experience has been once you lay all the data



1 on the table, that usually clears up any confusion.

2 Q Thank you.

3 MR. LEMAY: Additional ques-  
4 tions of the witness

5 If not, he may be excused.

6 Is there any other party in the  
7 audience that wishes to put on testimony in this case?

8 If not, let's take a ten minute  
9 recess and when we come back we'll accept statements and  
10 we'll wind it up.

11

12 (Thereupon a ten minute recess was taken.)

13

14 MR. LEMAY: Prior to hearing  
15 closing statements, I'd like to recall Walt Thayer, if I  
16 may. Mr. Humphries has some questions he'd like to ask you,  
17 Walt, hope you don't mind.

18 MR. HUMPHRIES: Not very many.

19

20 WALTER E. THAYER,  
21 being recalled, testified as follows, to-wit:

22

23 QUESTIONS BY MR. HUMPHRIES:

24 Q Mr. Thayer, early in the discussion today  
25 when Mr. Kellahin was questioning Mr. Hansen, a figure was

1 presented that about 25 percent of the blue area would be  
2 released. Do you concur with that?

3 A The LMR line, according --

4 Q Nobody knows where LMR's are now, so --

5 A Okay, I understand that.

6 Q -- let's talk about what we perceive to  
7 be the areas today that there's no question about fall with-  
8 in the blue line on the map.

9 A Okay, the only way I can answer that is  
10 this way: The LMR line to the best of our ability to esti-  
11 mate it will be 25 percent less than the blue area on that  
12 map, right here, and you must take away the buffer zone.

13 Q Okay, so that's -- that was my next ques-  
14 tion, is the buffer zone, then, added to or taken away from  
15 it.

16 A That's right, rememer Charlie's little  
17 sketch over here?

18 Q That was what my -- one of the quesitons  
19 I wanted to ask you.

20 Then is it reasonable to assume that the  
21 majority -- no, that the blue less 25 percent plus the buf-  
22 fer zone is what the LMR's are going to be as far as indus-  
23 try is concerned?

24 A Okay, repeat that because I think that is  
25 just exactly what we stated. Go ahead. Repeat that to be

1 sure I didn't miss something.

2 Q The it is reasonable to assume that the  
3 --

4 A Okay.

5 Q -- LMR's will be the blue on the map as  
6 it exists today less 25 percent plus the buffer zone.

7 A That's exactly right.

8 Q So we're not talking about 25 percent ac-  
9 tually.

10 A No.

11 Q Then if an LMR is designated as confiden-  
12 tial, completely confidential, nobody can determine what it  
13 is, how would anybody ever make a reasonable expectation or  
14 a rational decision about what an LMR might be, not knowing  
15 anything more than approximately 75 percent less the buffer  
16 zone are all that could possibly be considered to be outside  
17 an LMR?

18 A First, the first thing is I think as  
19 we've negotiated with each other, we've gained some know-  
20 ledge to the extent that we believe both parties are cred-  
21 ible now whereas before, I don't know about the Bass and  
22 Texaco boys, but we didn't trust each other at all.

23 The next is it can be verified very soon,  
24 you will know very soon because as soon as we turn that over  
25 to the BLM, you can answer the question now and they can

1 compute that, and remember, our 25 percent is based on an  
2 estimate. We sure hope it comes out at 25 percent, but the  
3 BLM, you pick up the phone and call them, did they or did  
4 they not, and you'll have an answer.

5 Q Okay, let's -- let me ask you sort of a  
6 long range question that I think is part of what I -- the  
7 reason I was concerned about the language indicating perma-  
8 nent -- yeah, permanently protected.

9 Let's assume the map, you know, Mr.  
10 High's map is representative of any number of them but not  
11 any specific numbers, and for the sake of discussion, buffer  
12 zone included, the most reasonable expectation is that  
13 you're going to be operating in the southwest quadrant of  
14 that map for the next 15 or 20 years, and no expectations to  
15 operate in the northeast quadrant, and for some reason  
16 that's leased and there's good reason to consider something  
17 beyond your agreement, but an application to drill that's  
18 inside the LMR's, it ends up here, and it's 20 or 30 years  
19 away from any possibility that you're going to mine in that  
20 area. That presents kind of a problem, as far as I can  
21 tell. I mean with no mine plan, an LMR that says that that  
22 area is without question what you wish to protect, yet 20 or  
23 30 years from now there's a very good chance that the safety  
24 factor will probably have been mitigated, the production  
25 will be gone, and it may not present a problem to you. It

1 seems to me that without being very careful about those  
2 kinds of limitations with words like permanent and lack of  
3 mine plans, that we might be making an incredibly wasteful  
4 resource decision instead of what we thought we were doing  
5 to protect it.

6           A           We think the wisest decision you could  
7 possibly make is that those reserves that we've outlined,  
8 they will be mined. They will be mined. And we feel  
9 strongly, we feel very strongly, after all, that to go in  
10 and drill and then think you're going to come by later and  
11 mine safely, we reject that to the extent that we're  
12 willing, we're willing, in exchange for protecting that per-  
13 manently, don't worry about, don't plan to be there until  
14 we're gone, okay, exchange some of the lower grade, and this  
15 is logical, the lower grade less valuable fringe ores so  
16 that you can do that now or when you want, as opposed to  
17 exposing us to the risk of when we're going to be there that  
18 risk will be there.

19                       That's the exchange. That's the prin-  
20 ciple of this.

21                       Now, one other thing, once we're gone  
22 completely, the LMR will disappear completely and there is  
23 one example, you're familiar with it, the Wells-Weaver  
24 thing. Now, as far as the potash industry is concerned, we  
25 have no LMR there, that LMR has disappeared and that would

1 be the same principle, when we finish up with our ore  
2 reserves that we based all of our investments on, then there  
3 will be no LMR and then it will be between the oil and gas  
4 people and in the meantime, and this I want to underline,  
5 don't underestimate the availability of these fringes that  
6 up to now have -- we've fought over, we had to, that are  
7 going to become available, and my contention is they're  
8 going to be a whole lot more valuable than this concern that  
9 you're talking about which is of major concern to us. We  
10 don't think it's possible, technically possible, to have  
11 abandoned this and gone and have a hole punched through and  
12 we're come mining through there.

13 Q Well, first of all, I commend you and the  
14 people from the industry and the working group and the en-  
15 tire committee, for getting this far because a year ago I  
16 would have not counted on this --

17 A Late in the meetings I was concerned.

18 Q -- but from a real, pragmatic standpoint,  
19 the safety question is one among many safety hazards that  
20 you have in a mine; same as one among the safety hazards  
21 that any resource production endeavor is encumbered.

22 Now, a question about present value of  
23 money, if you start to talk about 40 years out, you're not  
24 -- there is no future value of money.

25 A Oh, we disagree.

1           Q           No, no, I mean you could get any econo-  
2           mist to disagree but --

3           A           We are in the process of it. Watch us  
4           with WIPP and watch us win.

5           Q           Well, --

6           A           That's old-fashioned thinking.

7           Q           No, I don't think so. I think that it's  
8           in fact sound economic logic that 40 or 50 years from now  
9           there is no future value of the money versus -- or present  
10          value of the money versus the opportunity to not have to do  
11          an either/or but to take both of them, and that's seems to  
12          be the challenge to me that gives me great concern when I  
13          see words like permanently protected and then to say that  
14          you some how or another want to take this agreement that I  
15          commend everybody for, and transfer that to 11 of the re-  
16          source decisions that have to be made, not only by this Com-  
17          mission but by our friends at the Federal government, and  
18          State Land Commissioner, and to avoid an either/or we may in  
19          fact have been faced with some very long term problems by  
20          not allowing at least what I would say the discretionary,  
21          continued decision-making process of the regulatory authori-  
22          ties that would not necessarily challenge.

23                       Now, I recognize you're always going to  
24          believe there's a risk and I believe there's that risk,  
25          also, but weighing out that risk we're going to look at a

1 lot of different things.

2           A           I think that's really -- your concerns  
3 are really what was right of the heart of the negotiations  
4 and I think had you been there, plus some other -- I con-  
5 sider you to be quite intelligent and easy to understand  
6 these principles. There are some new economic principles  
7 that are just like -- the potash industry is changing, all  
8 industries are, and what used to be the things we accepted  
9 and made A's and B's on our tests by answering correctly,  
10 are not necessarily true, and this time value of money, if  
11 we look back in history, we used the time value of money,  
12 we'd be saying -- IMC's been there 40 years, we'd say, okay,  
13 back in 1940 when we looked to 1988, that's essentially no  
14 value. I don't think -- I think that's old-fashioned think-  
15 ing now, and we can't cover that here. We can't cover --  
16 but if you'd like to have some discussions on that over the  
17 next two weeks, I think we can -- we can talk about it. We  
18 would love to discuss that with you and --

19           Q           Well, my only --

20           A           -- the safety thing, to say that there  
21 are a risk that you must assume, that also is not what the  
22 new laws are being based on. They're being based on the  
23 fact that we're not going to consider asbestos. Can you be-  
24 lieve, have you looked at the new State proposed regula-  
25 tions? They look at asbestos that people have sawed and



1 we've used for years and now we have to put suits on, like  
2 they're space cadets, and it's a --you think we have a par-  
3 ania regarding oil and gas, take a look at the feeling on  
4 asbestos, and that's the trend, and those are the new safety  
5 standards that are law to us.

6 Q Well, I accept the safety risks are some-  
7 thing that give you great concern and if I worked in a pot-  
8 ash mine, it would give me the same concern.

9 If I were a potash mine owner and I  
10 faced the possibility of contamination, I would have an eco-  
11 nomic consideration there as well as a safety consideration.  
12 I think both of those are wrapped up in your decision not  
13 just safety.

14 My only concern is that we rationally al-  
15 locate this resource conflict that's going to be around as  
16 long as there is a demand for potash or a demand for oil and  
17 gas, and that's why, when I see words like permanently, with  
18 no ultimate release language in them, I would be unwilling  
19 as one member of the Commission to allow that kind of lan-  
20 guage to continue.

21 A You realize that from a practical point  
22 of view, that word permanent is only permanent until that  
23 ore body is mined out.

24 Q But it doesn't say that.

25 A I think that's the only logical conclu-

1 sion that anybody could draw, and if that's the problem, we  
2 could change that wording.

3 Q Well, that's what I said here, there's no  
4 release language --

5 A Okay, that --

6 Q -- and until you see the release language  
7 you start to wonder is it permanent forever and ever. Is  
8 Wills-Weaver going to permanently --

9 A I really -- I think I can go back and say  
10 that's a classic example of a case where it indicates that  
11 that permanent word is no more permanent than the Wills-  
12 Weaver thing was.

13 Q Then we -- then it's our responsibility  
14 collectively with your efforts to avoid that kind of lan-  
15 guage that causes confusion 10 or 15 years from now.

16 A You could say that or you could say it's  
17 not logical that it will ever be a problem. It's perfectly  
18 logical that -- well, you can say what you want to.

19 Q Thank you.

20 MR. LEMAY: If there are no  
21 other questions, the witness may be excused.

22 MR. KNAUF: I wonder if I could  
23 ask a question.

24 MR. LEMAY: Yes, sir.

25

1 QUESTIONS BY MR. KNAUF:

2 Q You made the statement, I believe, that  
3 75 percent of this pool area will definitely be barren. Is  
4 there any kind of ime frame? What I'm wondering is, most  
5 of this acreage in Lea County owned by Noranda and also the  
6 stuff up north of Kerr-McGee, in all probability never will  
7 be mined.

8 A What would you like to do, just waste it?  
9 Just to make sure it doesn't --

10 Q Well, I --

11 A Just to make sure it doesn't get mined?

12 Q No, you just said 75 percent -- you're  
13 going to turn 25 percent back and 75 percent would definite-  
14 ly be mined.

15 A It's our opinion --

16 Q I believe you said that.

17 A Yeah. Let me speak for -- let's talk  
18 about IMC's leases.

19 Q Okay, now I can undertand IMC making that  
20 statement but most of this wildcat or what I call blending  
21 grade ore and even some of your IMC stuff over in 31 East, --

22 A Those areas that the companies truly be-  
23 lieve they will not mine, we've asked them to exclude, and  
24 that's what's in that 25 percent. That is it.

25 Q So 75 percent will be mined.

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A Is what we feel we will mine.

Q In what period of time?

A I think -- I think there are in the 10-K reports of each company there is the life of that mine and that's the answer to how long, and it's -- it's ten years for some; it's one or two years for some; and it's thirty years for some, and it seems like yesterday that we started this argument. I guess it's been fifteen years. It doesn't seem like very long to me.

And it's sure not such a long time that I'd be willing, and don't think the PLM would be willing, to just waste the potash.

MR. LEMAY: Additional questions?

Walt, you may be excused.

We're ready for some statements in the case.

Go ahead, Conoco? Would you like to make a statement, Mr. Ingram?

MR. INGRAM: First of all I would like to commend the NMOCD and the members of the committees for both industries for their efforts to improve the procedures for exploration and development of oil and gas and potash reserves.

The agreement signed by a very

1 limited number of representatives from each of the two in-  
2 dustries might be as close as one could come to a general  
3 agreement; however, after witnessing the procedures of this  
4 hearing it's my opinion that this agreement does not neces-  
5 sarily represent an agreement by the oil and gas industry,  
6 but only by a small segment of that industry.

7 Furthermore, it appears to me  
8 that the agreement is of no longer any real benefit if we  
9 assume the adoption of an order similar to what has been  
10 proposed in R-111-P.

11 I agree that steps must be  
12 taken to protect the mines and in my opinion those steps  
13 have been included in the proposed R-111-P; in fact, I even  
14 see some over-protection in my opinion but maybe that's a  
15 concession that the oil and gas industry would need to make  
16 in order to have an agreement between the industries.

17 So I would support the pro-  
18 posed order R-111-P and I'll commend the Commission for the  
19 action they have taken here today.

20 Thank you.

21 MR. LEMAY: Thank you, Mr. In-  
22 gram.

23 Mr. Thompson with Mesa?

24 MR. THOMPSON: Thank you, Mr.  
25 Chairman.

1 My name is Chris Thompson. I'm  
2 with Mesa Limited Partnership in Amarillo.

3 When Mesa received the proposed  
4 agreement we had an immediate problem with it. Mesa has got  
5 a small, relatively small, leasehold position in the south-  
6 west portion of the potash area. We have three undrilled  
7 sections we believe contain substantial recoverable  
8 reserves.

9 Our problem with the agreement  
10 as drafted is essentially this: We think it's possible that  
11 a potash lessee can designate that area an LMR, have that  
12 designation approved by the BLM, and then when we go to  
13 permit or to apply for a permit to drill our three sections,  
14 we'll be informed that no drilling activity can take place  
15 because they would be in the LMR.

16 The problem is that we never  
17 have an opportunity to present, in that scenario, our case  
18 before this Commission and our reason for being here this  
19 afternoon is simply to ask for the opportunity to be heard  
20 on these matters.

21 For that reason I was very  
22 grateful to hear the remarks of Mr. Lyon this morning by  
23 which he refused to delegate the discretion to use his term  
24 of the Commission to the agreement, because that concept of  
25 that policy decision is incorporated in proposed Rule 111P

1 and Mesa would like to state its support with proposed Rule  
2 111-P.

3 I think there are a few speci-  
4 fic problems in the draft of that rule that need to be ad-  
5 dressed before it's adopted, and I would like to (not clear-  
6 ly understood) briefly. I think it was quite clear from Mr.  
7 Lyon's remarks that he did not intend to adopt as part of  
8 the final rule, the entire agreement. He made reference to  
9 it twice in his draft, once in reference to the procedure  
10 for designating an LMR; once in reference to specifying the  
11 conditions under which a permit may be approved outside the  
12 LMR area and outside the buffer zone.

13 To my way of thinking, only  
14 those portions of the agreement that relate directly to  
15 those two concepts should be adopted as far as the final  
16 rule, as part of Exhibit B to the proposed rule.

17 Specifically, those provisions  
18 which pertain to the procedure of LMR adoption is Article II  
19 of the agreement and specifically those portions of it which  
20 pertain to approval designations outside the LMR; is Article  
21 III, Paragraph Nos. 2, 3, and 4, and no more than that in  
22 Article III, with particular reference to Paragraph 2 of Ar-  
23 ticle III. I think we've got an oversight there in the  
24 draft of the proposed rule, in that it was Mr. Lyon's inten-  
25 tion to delete from the proposed rule any absolute (unclear)

1 of drilling activities anywhere throughout the potash area.  
2 I believe that's what he meant with the refusal to delegate  
3 discretion.

4 If you'll examine Paragraph 2  
5 you'll see that it will not permit a deep well in the area  
6 between the buffer and the area one-half mile from the LMR,  
7 and I don't believe that prohibition should be allowed to be  
8 incorporated in the final rule. The Commission should re-  
9 serve its discretion to rule on that sort of application on  
10 a case-by-case rule-by-rule basis.

11 Continuing again briefly, Para-  
12 graph Number 5 of that Article III likewise contains an ab-  
13 solute prohibition on drilling in some areas that particu-  
14 larly related to open mines.

15 Paragraph 6 of that provision,  
16 I would point out divests the Commission of its authority to  
17 approve certain mining plans and vests that authority in  
18 "the sole discretion" of the potash lessee. Clearly that's  
19 not part of the Commission's wishes in this area.

20 And finally, in regard to the  
21 LMR designation process, we remain concerned that there's no  
22 procedure in the agreement for the input of interested par-  
23 ties in that determination. Essentially the BLM is going to  
24 acting as a finder of fact in regard to the designation of  
25 LMR's. We think that the best procedure for making those



1 kind of determinations is an adversary process where both  
2 parties have an opportunity to present their evidence.

3 Quite simply, that should be  
4 made part of the final rule.

5 In closing, I would like to in-  
6 troduce, if I may, Mr. John Dean of Mesa, who has sme brief  
7 economic arguments to make on behalf of the position that  
8 we've taken.

9 Thank you, Mr. Chairman.

10 (Thereupon a discussion was had off the record.)

11 MR. DEAN: Mesa operates one  
12 property in the potash area. It's in the southwestern por-  
13 tion. It's the Nash Federal exploratory unit. It's located  
14 in portions of Townships 23 South, Ranges 29 and 30 West --  
15 I'm sorry, East. It's located in this position here. It  
16 covers slightly less than eight sections, about 5,082 acres.

17 Mesa operates at this time five  
18 wells in the unit. The primary pays in the unit are the  
19 Atoka and the Morrow. We have, at this time we have four  
20 sections which have not been drilled in the unit, two of  
21 which we find very prospective both in the Morrow and the  
22 Atoka reserves.

23 We also have a well that is,  
24 due to mechanical problems, is going to be unable to produce  
25 the remaining reserves that it should -- should have pro-

1 MR. COHLMIA: Mickey Cohlmiia of  
2 Chevron.

3 Mr. Chairman, Chevron, too,  
4 commends your efforts and the efforts of the Commission in  
5 bringing the two industries together. What ever happens  
6 here today I think both industries have better understanding  
7 of the problems associated with each others business.

8 Quite frankly, Chevron came  
9 here today to voice opposition and we still have very -- a  
10 number of concerns that have not been addressed here today  
11 for whatever reason. We don't feel we were given the oppor-  
12 tunity to make this an industry agreeent as it's so called.  
13 Maybe, as Hugh said, it's as close as we can get to one, and  
14 I think it's the basis for some major understanding between  
15 the two industries. I don't think it could be taken in  
16 total. There's some major concerns, concerns that the Com-  
17 missioner voiced in his questioning; the expansion of the  
18 LMR; the statements of liability in there give us a lot of  
19 concern; and there's many things I think that need further  
20 discussion here and I can't see nything lost by sending  
21 this back to the fullindustry, both potash and oil, can be  
22 in full agreement this time. As far as R-lll-P, R-lll-P is  
23 a good agreement and I think Chevron will support it. R-lll-P  
24 with the rules and regulations -- or with the so-called  
25 agreement attached to it as part of it, I think is unaccep-

1 duced. It was a directional hole and encountered a great  
2 deal of problems. We need to drill a replacement well for  
3 this well

4 The reason for the directional  
5 hole was because of the potash mine located directly north  
6 of our unit area.

7 The Nash Draw Atoka Field has  
8 produced approximately 5.3 BCF of gas from two wells. The  
9 Nash Draw Morrow Field has produced approximately 6.6 BCF  
10 from three wells, for a total from the Atoka and Morrow of  
11 approximately 11.9 BCF of gas.

12 We feel that the two develop-  
13 ment wells that we need to drill would be probably average  
14 wells, just based on the cumulative production, not any  
15 future reserves, we're looking at something on the order of  
16 2.9 BCF of gas at those locations.

17 We also have unproduced from  
18 the well that's down from mechanical problems, we also have  
19 approximately 2.7 BCF of gas there which remains to be pro-  
20 duced.

21 So with these three wells we're  
22 looking at a potential of approximately 8.7 BCF of gas that  
23 remains on our property and unproduced.

24 If you give an average \$2.00  
25 per MCF for the life of the well from this point forward,

1 it's probably a pretty conservative number, we're looking at  
2 gross revenue from those three wells of approximately 17.4-  
3 million dollars.

4 BLM's royalty interest in these  
5 wells is 11.3 percent. The majority of the unit is Federal  
6 acreage. BLM's net revenue from this would be approximately  
7 1.9-million dollars.

8 Using a 7.7 percent average  
9 historical tax rate for our Nash property, and then putting  
10 into the -- into the total the amount of revenue from the  
11 small amount of State acreage in the unit, the State would  
12 also realize a revenue from taxes and from royalty payments,  
13 of 1.4-million dollars.

14 It's Mesa's contention that  
15 should the statement agreeent be adopted and the measured  
16 potash reserves limited within the Nash Unit declared an  
17 LMR, the potential value of the unit's undeveloped gas re-  
18 serves will likely not be realized by either the working in-  
19 terest partners, or the State, or the Federal government.

20 Thank you.

21 MR. LEMAY: Yes, thank you very  
22 much, Mr. Dean.

23 Additional statements in the  
24 case?

25 Yes, sir.

1 table, so I think while there are a lot of things we do sup-  
2 port and can support in the thing (unclear) and I know that  
3 hours and hours and hours of work went into this thing.  
4 Maybe we need some hours and hours and hours more to come up  
5 with an even better agreement, and then it can be fully sup-  
6 ported and I would request that perhaps we go back in study  
7 and come up with even a better agreement and more represen-  
8 tative of (unclear).

9 I appreciate it and again com-  
10 mend the Commisison for recognizing we've got problems out  
11 there on both sides of the industries.

12 Thank you.

13 MR. LEMAY: Thank you, sir.

14 Additional statements in the  
15 case? Yes, sir.

16 MR. SANDERS: Larry Sanders  
17 with Phillips Petroleum Company out of Odessa, Texas.

18 Mr. Chairman, I did have a pre-  
19 pared statement to present today. I would like to keep that  
20 statement in view of the proposed R-111-P and provide writ-  
21 ten copies of it.

22 MR. LEMAY: Thank you, sir, ad-  
23 ditional statements in the case?

24 In lieu of closing arguments I  
25 don't think they're necessary since we are leaving the file

1 open or two weeks for written comments. Those of you that  
2 wish to provide closing arguments, of course, you're welcome  
3 to do so; otherwise, those of you that have not had a chance  
4 to address this specific order that we as a Commission are  
5 considering, which is the R-111-P, you have a draft copy of  
6 that. Please look at it and if you have some comments send  
7 them to the Commisison. We'll take those comments as part  
8 of the record before we take the case under advisement.

9 So we will adjourn the case now  
10 for two weeks, at which time we'll take it under advisement.

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12 (Hearing concluded.)

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## C E R T I F I C A T E

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

Sally W. Boyd CSR