CASE 6665: AMAX CHEMICAL CORPORATION FOR THE AMEMOMENT OF ORDER NO. R-111-A, EDDY COUNTY, NEW MEXICO

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CASE NO.

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# APPlication, Transcripts, Small Exhibits,

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1 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT Ź Oil Conservation Division State Land Office Bldg. 3 Santa Fe, New Mexico 19 September 1979 EXAMINER HEARING 5 8 IN THE MATTER OF: 7 Application of Amax Chemical Corpor-) CASE 8 ation for the amendment of Order No.) 6665 R-111-A, Eddy County, New Mexico. ) 9 ) 10 SALLY WALTON BOY SERVED MORTIAND REPORT BEFORE: Daniel S. Nutter 11 12 TRANSCRIPT OF HEARING 13 14 APPEARANCES 15 16 For the Oil Conservation Ernest L. Padilla, Esq. Legal Counsel for the Division Division: 17 State Land Office Bldg. Santa Fe, New Mexico 87503 18 19 Charles A. Feezer, Esq. For the Applicant: DOW AND FEEZER 20 Carlsbad, New Mexico 88220 21 22 23 24 25



		Page3
	1	MR. NUTTER: We'll call next Case Number
	2	6665.
	3	MR. PADILLA: Application of Amax Chemical
	4	Corporation for the amendment of Order No. R-111-A, Eddy
	5	County, New Me×ico.
	6	MR. NUTTER: I'll call for appearances in
	7	Case Number 6665.
	8	MR. FEEZER: My name is Charles A. Feezer,
	9	from Carlsbad, New Mexico, the firm of Dow and Feezer, and
OYD OMTEN 1-1452	10	I am appearing on behalf of the applicant, Amax Chemical
	11	Corporation.
WALT C	12	
VLLY MLLY Starts 10	13	(Witnesses sworn.)
	14	
	15	MR. FEEZER: The first witness is Mr. Bob
	16	Kirby, Mr. Nutter.
	17	
	18	BOB KIRBY
	19	being called as a witness and having been duly sworn upon
	20	his oath, testified as follows, to-wit:
<u>And Laboration of the second seco</u>	21	
	22	DIRECT EXAMINATION
С	23	BY MR. FEEZER:
	24	MR. FEEZER: Mr. Examiner, if I may, I
	25	will hand you a duplicate of the exhibit which the witness
	N L	<b>i</b> 
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		Page 4
$\sim$	1	will be testifying from so that you may follow his testimony
	2	Q. Would you please state your name, sir?
* 	3	A. Robert Kirby.
	4	Q And what is your address and occupation?
	5	A. 1504 Jefferson, Carlsbad. I'm the Super-
	6	intendent of Engineering and Mine Planning for Amax Chemical
	- 7	0. And have you previously testified before
an a	8	the Commission on matters affecting potash and oil and gas?
	9	
o 5 °		A. Yes, I have.
	10	MR. FEEZER: Will the Commission accept
	11	the qualifications of Mr. Kirby?
WAL WAL	12	MR. NUTTER: Mr. Kirby is qualified.
ALLY	13	Q. (Mr. Feezer continuing.) Mr. Kirby, do
0 7 <del>2</del>	14	you have before you what is or will be marked Applicant's
·	15	Exhibit Number One, a map consisting of a portion of your
	16	mine workings and exploratory work in Eddy County, New
	17	Mexico?
	18	A. Yes, I have.
	i 19	Q. The applicant, Amax Chemical, has a conso-
	20	lidated application in Sections 19, 19, 30 East; and 22, 19,
na sa sa sa ka sa sa sa M	21	29 East; as well as 22, 19,29; and 23, 19, 29.
	22	Are you familiar with those areas which
	23	are in the proximity of Amax Chemical Corporation's mining
	24	operations in Eddy County, New Mexico?
	25	
*	4	A. Yes, I am.
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		-		. <b>Alla and a state of the st</b>
		1	Q.	Calling your attention to the Exhibit One
		2	as to Sections I	19, Township 19 South, Range 30 East, this
······································		3	shows as an 80-a	acre tract with an orange circle in the ap-
		4	proximate center	along the or near to the north boundary
		5	of that 80-acre	tract, does it not?
		6	А.	Yes, it does.
		7	Q.	Would you tell the Commission what number
		9	154 signifies or	
		9	A.	154 is a potash test which recently was
		10		the third ore zone assayed 63 inches at 11
	O O THE		percent K <sub>2</sub> 0.	the state of a fund apparent of themes at 11
			bercent 150.	
	New York	2	Q.	And you have done other drilling in areas
		13	approximately lo	cated to 154, for example, hole number 143,
	<b>3</b> 5 <b>*</b> 1	14	149, and 118, as	well, have you not?
	. 1	15	А.	Yes, we have.
	1	16	Q.	Now what does or do I read correctly
	1	7	the legend on th	e map that the orange circle, as shown on
	1	18	the legend, is t	hird ore zone potash?
	1	19	А.	Yes, it is.
	2	0	Q.	What is the significance of 63 inches of
	2007 - 19 20 - 19 - 19 - 19 - 19 - 19 - 19 - 19 - 1	1	11.0 K <sub>2</sub> 0?	
	2	2	20. A	It is considered mineable ore grade in
		3	thickness.	IT TO CONDITICION MENCADIE DIE GIAGE IN
	}			
	21	5	Q.	There has been attached to the application
			of Amax a mìne p	lan projecting your anticipated approach to
				2 <b>.</b>

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		Pege6
	1	this area, is that correct?
	2	A. Yes.
	3	Q And as Mine Engineer, when would you anti-
	4	cipate, based on your present rate of progress, that this
	5	area would be reached for commercial production of potash
	6	ore?
	7	A. We could be mining in this area within
·	8	three to five years.
	9	Q. And are you progressing at this time
	10	towards that area from the west to the east?
ON B Non NEI AND AND	11	A At this particular time, no. We are not
Solar		advancing from the west to the east; however, we are deve-
	13	loping a mining panel in the north to the south which would
	14	allow us access into that area.
	15	Q. And would you tell the Hearing Examiner
	16	from which direction that development is going to occur with
	17	a little more specific information?
	18	A. In the to the northwest there is an
	19	area marked "110 south slope" up in Section 8. We are cur-
· .	20	rently developing a three entry main line directly south.
	21	At this point we're approximately 700 feet on the advance.
	22	Q Is a test of this nature sufficient in your
	23	judgment to merit the necessary investment to proceed toward
•	24	it in an orderly fashion?
	25	A. Yes, it is.
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			Page 7
		1	Q. And is this ore present, in your judgment,
		2	in commercially recoverable quantities in the area under
		3	discussion?
en en ser en ser		4	A. Yes, it is.
· · · ·	ч.	5	Q. Moving now to Section 22, Township 19
		6	South, Range 29 East, the southeast quarter, containing 160
		7	acres, would you tell the Hearing Examiner what the data is
	-	8	relating to this portion of the application?
		9	A. Which portion was this?
		10	Q. The southeast quarter of Section 22, 19, 29
<u> An Frank Antonin an</u> Said		11	East.
	ALTC	12	A. We have drilled hole number 145 with the
		13	results of third ore zone 53 inches thick at 11.3 percent
	SAI Saint	14	K <sub>2</sub> 0. This is again mineable ore.
		15	Q Has Amax under your direction been pursuing
		16	a progressive exploratory program from east to west towards
		17	this particular quarter section?
		18	A. Yes, we have.
		19	Q. And have you, as you have advanced, going
		20	from east to west, discovered commercially recoverable
		21	quantities of potash ore in Section 23 to the east of the
		22	area we are talking about?
	<b>)</b>	23	A. Yes, we have.
		24	Q. And is it your opinion that hole number 145
		25	in this guarter section discloses commercially recoverable
	and a state of the second s	y w that have the second	

	1	
		ore
	2	A. Yes, it does.
	3	Q that can be profitably mined?
	4	A. Yes, it does.
	5	Q. Moving to Section 22, Township 19 South,
	6 ]	Range 29 East, the northeast quarter, would you tell the
	7.	Commission what core hole data indicates in that quarter
	8 :	section?
	9	A. Hole 77 intercepted third ore zone with a
	0 3	reading of 48 inches of 11 percent K <sub>2</sub> 0.
	1	Hole Number 19 intercepted the third ore
	2	zone with an ore bed of $48$ inches of 11.5 percent $K_20$ .
	3	Q. And for purposes of the record, would you
	4	tell the Commission how close, if you can, is the explora-
1	5 1	tory hole number 144 to the boundary line of the northeast
1	<b>6</b> (	quarter of Section 22, 19, 29 East?
11 11	7	A. I would say within 300 feet.
11	в	Q. And what does that core test disclose?
18 27 (1994) - Constant (1997) - 18 28 (1994) - 19	•	A. This test is a little bit better ore, it's
20		48 inches at 15.1 percent, or adding some upper strata onto
2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		that, we could mine 75 inches at 12.1 percent, both of which
22 21 21 21 21	2	are economical ore.
23 24 - China Marine (1997) 24 - China Marine (1997) 24 - China Marine (1997)		MR. NUTTER: Now, the 75 inches of 12.1
24	I	percent includes the other 48 inches, is that it?
25		A. Yes, sir.

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			1
	1	MR. NUTTER: And these are all in the	
	2	third zone?	
	3	A. It's all in the third zone, Mr. Nutter.	
	4	MR. NUTTER: These are just some little	
	5	stringers that are up above the main ore body?	
	6	A. Well, they're lower grade intercepts right	
	7	at the top of the ore. We just added more analysis to it.	
a oon t	8	MR. NUTTER: All right.	
	9	Q. (Mr. Feezer continuing.) Either way,	
101	10	the results of core test hole number 144 are red. Are the	
111 (1) 1100 11	11	ores there commercially recoverable and would they be	
30 <b>36 Flaza Blanc</b> u (565/471-2463 <b>Santa F</b> e, New Mozico 57591	12	profitable to mine at this time?	
	13	A. Yes, they are.	
	. 14	Q. And do you project that in the future in	
	15	your mine plan, as attached to your application, that that	
	16	will still be the case as you progress westward with your	
	17	mining?	
	18	A. All indications tell us that it is.	
	19	Q. Referring now to that portion of the ap-	
	20	plication touching on the in Section 23, Township 19	
	21	South, Range 29 East, there are two quarter sections and a	
	22	40-acre tract. Would you outline to the Hearing Examiner	
	23	what the core tests in that area reveal, as shown on Exhibit	
·-	24	One?	
	25	A. In the southeast quarter we have two holes,	

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	~		1	number 129, which assayed in the third ore zone 51 inches	
			2	at 15.3 percent $K_2O$ . Hole number 132 assayed 48 inches at	
,					
			3	11 percent, 11.7 percent $K_2O$ in the third ore zone.	
			4	In the southwest quarter we have hole number	
			5	133, which intercepted 48 inches of 11.5 percent $K_{2}^{0}$ in the	
			6	third ore zone and hole number 142, which intercepted 48	
			7	inches of 10.1 percent $K_{2}^{0}$ in the third ore zone.	
			8	MR. NUTTER: Mr. Kirby, just for the re-	
			9	cord's sake, would you state what is considered to be com-	
		OVD ONTEN DOTEN	10	mercial potash ore? Feet and or inches and percent?	
<u></u>	<u>_</u>		11	A. In regards to thickness we assume that	
	$\bigcirc$	MALT New Mark	12	48 inches is the minimum mining height that we could possibly	
			13	obtain and the ore grade, we are, or have been mining	
		<b>C B B</b>	14	profitably below 11 percent, actually; closer to 9 percent	
			15	is the real cutoff with 48 inches.	
			16	MR. NUTTER: Normally hasn't the rule of	
1. 1. 1. 1.			17	thumb been 48 inches at 10 percent?	
			18	A. 48 inches at 10 percent and this goes up	
		11	19	and down as the economics change.	
			20	MR. NUTTER: But normally the economic	
			21	limit is considered to be about 48 inches at 10 percent?	
			22		5 7 9 7
No.	-		23		1
			24	Q. (Mr. Feezer continuing.) In reference to	1.9 A
			25	the 40-acre tract, the southwest of the northwest of 23, 19,	i i i i i i i i i i i i i i i i i i i
				29, there is no core test within that 40-acre tract, but in	- ne - neger
					dan series

1	four test holes southwest and northeast of that 40-acre
2	tract is it your judgment as a mining engineer that that
3	40-acre tract embraces commercially recoverable ore in view
4	of the bracketing by the holes?

A. My judgment tells me that I would have to assume that this 40 acres would be all mineable ore.

Q. And is the pattern of core testing as shown Exhibit One a standard practice accepted by the potash mining industry insofar as the discovery or estimate of reserves are concerned?

A. Yes, it is.
 Q. Is there anything further regarding Applicant's Exhibit Number One that you can inform the Commission about which we haven't so far discussed?

A. No, I don't believe there is.

MR. NUTTER: Before you get off that exhibit, Mr. Kirby, now we've got a yellow line that zigzags across through Sections 14, 13, and down into the northern part of Section 23. What does that yellow line reflect?

A. That yellow line is the mining extremities of our first ore zone.

Q. Would you explain that more fully to the Commissioner as to whether or not those are open mine workings or otherwise?

They are open mine workings inside of that

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1 line and outside the line is virgin ground. 2 MR. NUTTER: Now where have you mined insofar as the third ore zone is concerned on this exhibit? 3 A. The cross hatched area in Section 24 and 23 and 13, the blue cross hatched areas are workings in the 5 third ore zone. 6 MR. NUTTER: And how do you get into that third ore zone for that area, Mr. Kirby? 8 9 We have two slopes coming from our first A. 10 ore zone. They are located and shown in Section 13. WALTION BOY 11 MR. NUTTER: Right in the middle of the 12 northern part of the southwest quarter of Section 13? 13 A. That's right. 14 MR. NUTTER: And is the third ore zone 15 above or below the first ore zone? 16 It's above the first ore zone. The interval A. 17 is 25 to 30 feet above. 18 MR. NUTTER: So those little slopes re-19 flect little hills where you come off to get into the third 20 ore zone? 21 That's right. λ. 22 MR. NUTTER: And then you've mined out 23 this cross hatched area in the third ore zone from where 24 you entered into it. 25 Yes, we have. A.

	1		MR. NUTTER: Now, you were referring to
	2	this slope up here	e in Section 8. Is that another little
	3	hill where you're	coming up out of the first ore zone into
	4	the third ore zone	e?
	5	Α.	That's right.
· 1	6	• •	MR. NUTTER: And what was that 700-foot
	7	face that you ment	tioned?
	8	A.	We've advanced, at this particular date
3	9	we're advanced fro	om the point where we were in the first
QYD		ore zone.	
ă Z			MR. NUTTER: And where do you get into it,
		at the end of the	two little vertical slopes there?
T	13	А.	That's right.
<b>8</b>	5 <sup>2</sup> 14		MR. NUTTER: And you have
	15	A.	We've advanced 700 feet from there.
	16		MR. NUTTER: South?
	17	А.	To the south.
	18		MR. NUTTER: And it's your intent, then,
	19	to come south and	then to mine to the west?
	20	А.	That's right.
an Antonio anto Antonio antonio antonio Antonio antonio	21	· ····· · · · · · · · · · · · · · · ·	MR. NUTTER: And eventually to intersect
	22	this other mine on	the third slope, then.
	23	А,	Yes, we will eventually open that.
	24		MR. NUTTER: I see.
	25	Q.	(Mr. Feezer continuing.) Are you presently
		-	
The second se			

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	1	working the third ore zone in the cross hatched area as	
	2	shown on Exhibit One?	
	3	A. We have been working that area diligently	
	4	up until approximately a month ago, three weeks ago, and	
	5	due to production problems elsewhere, we had to temporarily	
	6	stop mining there, but it's our plan to be back in there	
1915. 1	7	within several more months.	
	8	MR. FEEZER: Any further questions, Mr.	
	9	Examiner?	
OYD OATER Taol	10	MR. NUTTER: No further questions.	
	. 11	MR. FEEZER: We move the introduction of	ļ
	12	Exhibit One, the map, at this time.	
	13	MR. NUTTER: Does anyone have any questions	
	14	of the witness regarding this exhibit? Exhibit One will be	
	15	admitted in evidence.	
	16	MR. FEEZER: I'd like to call Mr. Everett	
	17	Jourdan.	
	18	MR. NUTTER: Mr. Kirby may be excused.	
	19		
	20	EVERETT JOURDAN	
	21	being called as a witness and having been duly sworn upon	
	22	his oath, testified as follows, to-wit:	
	23		
	24	DIRECT EXAMINATION	
	25	BY MR. FEEZER:	

	•			
	2	Ś	Q	Would you please state your name?
-	3	1	A.	Everett C. Jourdan.
	4	Ω.	Q.	What is your address and occupation?
	.~ 5	1	A.	1106 Tracy Place, Carlsbad, New Mexico.
	6	I am Chief	Mining	Engineer for Potash Company of America.
)	7	- Ç	Ď.	How long have you been employed in that
	8	capacity?		
	<sup>15</sup> 9	P	<b>A.</b>	Approximately thirty years.
OYD ONTER 1-1411	10	Ç	<b>)</b> .	And have you been present and have you
ON B 100 M	11	heard the t	testimon	y of Mr. Bob Kirby of Amax this morning
WALT HORTH New 1	12	before the	Examine	er?
	13	· · · · · <b>/</b>	A.	I have.
295	14	Ç	Q.	You have before you a copy of Exhibit One
	15	admitted in	n eviden	ice?
	16	A	F	It's not marked but I assume it is.
	17	Q	).	And assuming it is a copy, are you familiar
·	18	with the me	ethod of	exploration for potash ores in the basin
	19	in and arou	und Carl	sbad, New Mexico?
	20	A	F .	I am.
· · · · · · · · · · · · · · · · · · ·	21	to de la Constantia de la Constantia Q	).	Does this map reflect a standard procedure
	22	in the indu	istry to	advance exploratory drilling to outline
	23	and define	commerc	ially recoverable bodies of potash ore?
	24	A	r -	It does.
	25	Q	į.	In reference to the areas under discussion
	1			

today in Section 22, 23, and also in the northwest quarter of Section 19, Township 19 South, Range 30 East, do the 2 indications on this map suggest to you that commercially 3 recoverable quantities of potash ore exist, as shown by the data contained herein? 5 A. Yes, it does. 7 Q. Do any of these lands embraced on this map and under discussion today come under any sub-leases 8 9 from the Potash Corporation of America? Yes. We have sub-leases on I think 23, 10 A. 11 24, 25, and 26. 12 And as a matter of fact, this shows on Q. 13 the exhibit in the southeast quarter of Section 23, does it 14 not, as a PCA sub-lease? 15 PCA sub-lease is on this one between 25 A. 16 and 26, and 24 and 23, yes. 17 And is it in the interests of the Potash Q. 18 Company of America and other interested parties that this 19 dliscovered ore be mined? 20 It certainly does. A. 21 And is it your opinion that it can be done Q. 22 in the interests of the maximum recovery of this natural 23 resource in a manner suggested and outlined on this map and 24 as testified to by Mr. Kirby? ž Yes, it does. A.

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MR. FEEZER: Mr. Examiner. 2 MR. NUTTER: Are there any questions of 3 Mr. Jourdan? 5 CROSS EXAMINATION 6 BY MR. NUTTER: 7 Mr. Jourdan, where the limits of the PCA Q. 8 sub-lease to Amax in this area? 9 We have the entire 23, 24, 25, and 26 Sec-A. 10 tions. 11 MR. NUTTER: I see. 12 The total full sections of State land. A. 13 MR. FEEZER: If the Examiner please, I 14 believe that you will see a black line showing a sub-lease 15 boundary at the bottom of 26, 25, 27. Does that appear on 16 your --17 MR. NUTTER: Right, in other words, the 18 area that's marked in black dashed line. 19 MR. FEEZER: Yes, sir. 20 MR. NUTTER: Is the PCA property that's 21 under sub-lease to Amax. 22 MR. FEEZER: Yes, sir. 23 Yes. MR. FEEZER: I have nothing further of this witness.

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	1	0 (Mr. Nutter continuing.) Mr. Jourdan,
	. 2	PCA doesn't have any mines in this immediate area?
	3	A. No, we are cut off, Mr. Nutter, by Amax
• •	4	leases. This was an isolated lease we picked up and we are
	5	cut off and have no access to it.
2 -	6	Q So you sub-leased it to this
	7	A. We are some two miles away.
. · ·	8	Q company that did have access.
	9	A. That's right.
	10	MR. NUTTER: Are there any questions of
	11	Mr. Jourdan? He may be excused.
VALT	12	MR. FEEZER: Mr. Nutter, I would like, if
	13	you would do so, to hear whatever comment Mr. John Burleson,
	14	the USGS, has in regard to the application of Amax at this
	15	time, if he chooses to make some comment.
	16	MR. NUTTER: Mr. Burleson?
	17	MR. BURLESON: Yes, sir, with the Com-
	18	mission's permission.
	19	My name is John Burleson. I'm the Mining
	20	Supervisor for the U.S. Geological Survey in Carlsbad, New
	21	Mexico.
	22	Amax has supplied my office with the logs
	23	of these holes as well as their mining plan and I do concur
	24	in Mr. Kirby's testimony that this is commercial ore; that
	25	it is in the planning to be mined by Amax; and I respectfully

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recommend to the Commission that this application be favorably considered, and would be prepared to answer any questions that the Commission might wish to ask.

MR. NUTTER: Mr. Burleson, the 4 feet of 10 percent ore that Mr. Kirby testified is recognized as being a commercial limit, is that similar to the commercial limits that the USGS recognizes as being commercial ore? MR. BURLESON: We had the 4 feet at 10 as

a leasable standard, not as an economic limit, and these economic limits are varying from mine to mine, as well as from year to year.

MR. NUTTER: And company to company, pro-

bably.

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MR. BURLESON: And company to company, exactly. But the 4 feet at 10 for a sylvite was a leasing standard which was -- has been introduced to this Commission, in the past, but not a commercial limit.

MR. NUTTER: Have you found that 4 feet of 10 percent can usually be mined commercially by most companies?

MR. BURLESON: Not most companies. Amax can do so because they have a higher grade first ore zone, with which this lower grade third ore zone can be blended to make an economic product to ship to the mill, and we do have properties in the potash basin that are mining much lower grade than even the 10 percent, and that is, as you

1 said, it depends on the company, their -- their ore body, 2 what they have to blend with it, a number of factors, the 3 price of marketable potash, as well. 4 But there's no question that the basin will 5 be going to lower and lower grades and the price of muriate 6 is increasing, which is making this possible. 7 MR. NUTTER: Thank you, Mr. Burleson. 8 MR. BURLESON: Yes, sir. 9 MR. FEEZER: Mr. Marvin Watts. 10 11 MARVIN WATTS 12 being called as a witness and having been duly sworn upon 13 his oath, testified as follows, to-wit: 14 15 DIRECT EXAMINATION 16 BY MR. FEEZER: 17 I hand to you and to the Hearing Examiner Q. 18 what has been marked Exhibit Number Two, which we will dis-19 cuss in a moment. 20 Would you first give the Hearing Examiner 21 your name, address, and occupation? 22 I'm Marvin Watts, Box 56, Carlsbad, New Α. 23 Mexico. I'm General Surface Superintendent for Amax 24 Chemical Corporation in CArlsbad. 25 ۵

Prior to the time of your assumption of

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			1	those duties did you hold other offices or jobs with Ama $ imes$
			2	Chemical Corporation?
			3	A. Yes, I have been Chief Chemist with Amax
			4	Chemical Corporation. I've worked for Amax Chemical for
-			5	twelve years.
· .			6	Q. Are you thoroughly and have you pre-
			7	viously testified before this Commission for any purpose?
			8	A. I have not.
	1 1	a.	9	Q. Would you state where you had your training
			10	as a chemist and what degrees you hold?
			. 11	A. I hold a Bachelor's degree in Mathematics
	$\sum$		12	and Chemistry, a Master's degree in Chemistry, from Eastern
1		XXII XXII	13	New Mexico University; additional graduate work in chemistry
		SAL	14	from Oklahoma University of Oklahoma and Kansas State
			15	University.
			16	Q And how long have you worked in the area
			17	of potash chemistry?
			18	
			19	A. For twelve years.
2. 2.			20	MR. FEEZER: Do you care to make further
	an a		20	inquiries to his qualifications?
	10 <b>.</b>		2	MR. NUTTER: Mr. Watts is qualified.
÷				Q. (Mr. Feezer continuing.) Mr. Watts, you
			23	have heard briefly some discussion in this hearing as to the
			24	technique of blending. Could you inform the Commission of
			25	the significance of the test data on Exhibit One and how it
			li I	

.• . Q is blended at Amax to make a commercially recoverable product salable in today's market?

Yes. The lower grade material coming from A. this third ore zone is blended with the higher grade material coming from the first ore zone to furnish a mill feed that will be of a higher grade than this third ore zone material. And generally this is limited because of the mill was designed many years ago to handle higher grade ores, but by blending we can operate at an economic product ton level by blending this and utilizing the lower grade ore.

Q. In Exhibit Number Two, a copy of which 12 you have before you, have you outlined various grades of 13 potash which are now being produced and sold by Amax?

And what does this exhibit reflect in 0. addition to those grades and prices?

Yes.

At Amax Chemical Corporation we produce A. three grades of potash, standard, coarse, and granular.

The standard material is -- these grades are based on particle sizes, primarily, not on K20 quality of it. We guarantee a 60 percent K<sub>2</sub>O for all of our products but this is primarily based on particle size, the standard being the smaller particle size; coarse, the next in size; and granular is a larger size particle that we make. We compact to make a larger size particle, and today this is

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the premium product in the fertilizer industry. Reason for
this is that most of the phosphorus and nitrogen fertilizers
are prilled and they almost have a set particle size. So
to keep from having segregation and dry blended fertilizers,
we attempt to make a product of potassium that will blend,
without segregation.

So this is the reason for these various grades. Today Amax is producing primarily granular material, and if you'll notice on the exhibit, the granular material is a premium product as far as price is concerned.

Q. Is that granular product achieved by blending of the ores we are discussing, which appear to be recoverable on Exhibit One?

A. Oh, yes, all of the material coming through our processing plant is from the blended ore.

Q. Is it your opinion, based on your experience in potash production, that the application of Amax should be granted for the purpose of maximizing the recovery of a natural resource under leases which exist from the State and Federal government at this time?

A Yes.

A.

Q Can you tell the Commission what the present price of potash is per ton FOB Carlsbad, realizing that it's not absolute but fluctuates some?

Yes. This price list, as you see, is stated

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in terms of price per unit. That's K <sub>2</sub> O unit. If you take
that price and multiply it by if it happens to be exactly
60 percent K <sub>2</sub> O grade, then you get the price per ton.
That price per ton for standard there is
about \$53.00 going on up to granular price of about \$63.00.
Now this is the posted price for potash.
It does vary from that according to grades. If you had a
61 percent, of course it would be a little bit higher.
0. And at that price per ton of \$50-plus,
is all of the potential ore outlined in Exhibit One commer-
cially recoverable and in such quantity that you believe it
desirable to have an application approved to protect this
area for the future production of this ore?
A Yes, no question about it.
MR. FEEZER: Pass the witness.
MR. NUTTER: Are there any questions of
Mr. Watts?
MR. FEEZER: We'd move the admission of
Exhibit Number Two, Mr. Nutter.
MR. NUTTER: Mr. Watts may be excused and
Exhibit Number Two will be admitted in evidence.
MR. NUTTER: We have nothing further for
the Examiner at this time.
MR. NUTTER: Does anyone have anything they
wish to offer in Case Number 6665? Yes, sir.

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MR. CREECH: Mr. Examiner, may I make a

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statement?

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MR. NUTTER: Yes, sir.

4 MR. CREECH: I'm Bob Creech, independent
5 petroleum landman from Midland, Texas.

I do some work for the Petroleum Corporation of Delaware, who has proposed to drill two wells in Section 22, 19, 29, and to prevent waste and promote conservation and protect correlative rights, I'd like to request that the Examiner consider deferring the extension of this potash/oil area until some time in the future in order that we may go ahead with the drilling of these wells.

MR. NUTTER: Where would the wells be

drilled, Mr. Creech?

MR. CREECH: My understanding is that one will be in the east -- they'll be 320-acre units; one will be in the east half of Section 22 and one in the west half of Section 22.

I believe the proposed location -- well, I don't know the proposed location except as to the east half.

MR. NUTTER: Would both locations be in the east half?

MR. CREECH: The east, one in the east and

one in the west.

		Page 26
	1	MR. NUTTER: I understand. What company
	2	MR. CREECH: At orthodox
	3	MR. NUTTER: What company owns the oil
	.4	and gas leases there?
	· 5	MR. CREECH: The Petroleum Corporation of
	6	Delaware is proposing these.
	7	MR. NUTTER: Do you know when they're
	8	thinking about drilling those wells?
	9	MR. CREECH: I don't know an exact date
OYD 00YD 004TEN 11-1461	10	but it's my understanding that AFEs have been sent out and
	11	they are proposed for the immediate future.
WALT WALK	12	MR. NUTTER: I see. How do you spell
ALLY ALLY MITERS	13	your last name, Mr. Creech?
	14	MR. CREECH: C-R-E-C-H.
	15	MR. NUTTER: And what is your address in
	16	Midland, please?
	17	MR. CREECH: 518 Petroleum Building,
	18	Midland, Texas, 79701
	19	MR. NUTTER: Thank you.
	20	Are there any other statements to be made?
	21	Do you have anything further, Mr. Feezer?
	22	MR. FEEZER: No, sir.
	23	MR, NUTTER: If there is nothing further
	24	in Case Number 6665, we'll take the case under advisement.
	25	(Hearing concluded.)
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## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the said hearing, prepared by me to the best of my ability, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4 heard by me on 9/19 19 1979 , Examiner OII Conservation Division

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# STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

BRUCE KING GOVERNOR LARRY KEHOE SECRETARY

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (506) 827-2434

### October 15, 1979

Mr. Charles A. Feezer Dow & Feezer Attorneys at Law P. O. Box 128 Carlsbad, New Mexico 88220

Re:	CASE NO.	6665
	ORDER NO.	R-111-L

Applicant:

Amax Chemical Corporation

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Pours very truly, JOE D. RAMEY Director

JDR/fd

Copy of order also sent to:

Hobbs OCD Artesia OCD Aztec OCD

Other Robert Creech

#### STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 6665 Order No. R-111-L

APPLICATION OF AMAX CHEMICAL CORPORATION FOR THE EXTENSION OF THE POTASH-OIL AREA, EDDY COUNTY, NEW MEXICO.

#### ORDER OF THE DIVISION

#### BY THE DIVISION:

.....

This cause came on for hearing at 9 a.m. on September 19, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this <u>12th</u> day of October, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

#### FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amax Chemical Corporation, seeks an extension of the Potash-Oil Area as defined in Order No. R-111-A, as amended, by the addition of the following described lands in Eddy County, New Mexico:

> TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM Section 22: E/2 Section 23: SW/4 NW/4 and S/2

> TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM Section 19: N/2 NW/4

(3) That the evidence presented indicates that the abovedescribed acreage contains potash deposits in commercial quantities. -2-Case No. 6665 Order No. R-111-L

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(4) That to promote the orderly development of the natural resources in the potash-oil area, Order No. R-111-A should be amended to include the above-described acreage in the Potash-Oil Area.

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IT IS THEREFORE ORDERED:

(1) That Order No. R-111-A, as amended, be and the same is hereby amended to include the following~described acreage within the confines of the Potash-Oil Area in Eddy County, New Mexico:

> TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM Section 22: E/2 Section 23: SW/4 NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM Section 19: N/2 NW/4

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SEAL

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STATE OF NEW MEXICO OIL CONSERVATION DIVISION DOE D. RAMEY Director



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	1	MR. NUTTER: We'll call next Case Number
	2	6665.
	3	MR. PADILLA: Application of Amax Chemical
	4	Corporation for the amendment of Order No. R-111-A, Eddy
	5	County, New Mexico.
	6	MR. NUTTER: I'll call for appearances in
	7	Case Number 6665.
	8	MR. FEEZER: My name is Charles A. Feezer,
	9	from Carlsbad, New Mexico, the firm of Dow and Feezer, and
OYD Miles	10	I am appearing on behalf of the applicant, Amax Chemical
	11	Corporation.
	12	
	13	(Witnesses sworn.)
	14	
	15	MR. FEEZER: The first witness is Mr. Bob
\$ 7	16	Kirby, Mr. Nutter.
	17	
	18	BOB KIRBY
	19	being called as a witness and having been duly sworn upon
	20	his oath, testified as follows, to-wit:
	21	
	22	DIRECT EXAMINATION
	23	BY MR. FEEZER:
	24	MR. FEEZER: Mr. Examiner, if I may, I
·	25	will hand you a duplicate of the exhibit which the witness
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and the second s

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	1	will be testifying from so that you may follow his testimony.				
	2	Q. Would you please state your name, sir?				
	3	A. Robert Kirby.				
	4	Q And what is your address and occupation?				
	5	A. 1504 Jefferson, Carlsbad. I'm the Super-				
	6	intendent of Engineering and Mine Planning for Amax Chemical.				
	7	Q And have you previously testified before				
	8	the Commission on matters affecting potash and oil and gas?				
	9	A. Yes, I have.				
1011	10	MR. FEEZER: Will the Commission accept				
90000 FG. NOT MANDO 87501	11	the qualifications of Mr. Kirby?				
	12	MR. NUTTER: Mr. Kirby is qualified.				
	13	Q (Mr. Feezer continuing.) Mr. Kirby, do				
<b>.</b>	14	you have before you what is or will be marked Applicant's				
	15	Exhibit Number One, a map consisting of a portion of your				
	16	mine workings and exploratory work in Eddy County, New				
	17	Mexico?				
	18	A. Yes, I have.				
	19	Q. The applicant, Amax Chemical, has a conso-				
	20	Lidated application in Sections 19, 19, 30 East; and 22, 19,				
	21	29 East; as well as 22, 19,29; and 23, 19, 29.				
	22	Are you familiar with those areas which				
	23	are in the proximity of Amax Chemical Corporation's mining				
	24	operations in Eddy County, New Mexico?				
	25	A. Yes, I am.				

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1 Q. Calling your attention to the Exhibit One 2 as to Sections 19, Township 19 South, Range 30 East, this 3 shows as an 90-acre tract with an orange circle in the approximate center along the -- or near to the north boundary 5 of that 80-acre tract, does it not? Yes, it does. A. 7 Would you tell the Commission what number Q. 8 154 signifies on this exhibit? 9 A. 154 is a potash test which recently was 10 drilled and in the third ore zone assayed 63 inches at 11 11 percent K,0. 12 And you have done other drilling in areas ۵ 13 approximately located to 154, for example, hole number 143, 14 149, and 118, as well, have you not? 15 A. Yes, we have. 16 Now what does -- or do I read correctly Q. 17 the legend on the map that the orange circle, as shown on 18 the legend, is third ore zone potash? 19 Yes, it is. A. 20 What is the significance of 63 inches of 0 21 11.0 K<sub>2</sub>0? 22 It is considered mineable ore grade in A. 23 thickness. 24 There has been attached to the application **û** 25 of Amax a mine plan projecting your anticipated approach to

Y WALTON BOYD ED SHONTIAND REPORTER US Blues ((11), 111-243 1 this area, is that correct?

Yes.

Q And as Mine Engineer, when would you anticipate, based on your present rate of progress, that this area would be reached for commercial production of potash ore?

A We could be mining in this area within three to five years.

Q. And are you progressing at this time towards that area from the west to the east?

A At this particular time, no. We are not advancing from the west to the east; however, we are developing a mining panel in the north to the south which would allow us access into that area.

Q And would you tell the Hearing Examiner from which direction that development is going to occur with a little more specific information?

A. In the -- to the northwest there is an area marked "110 south slope" up in Section 8. We are currently developing a three entry main line directly south.
At this point we're approximately 700 feet on the advance.

Q Is a test of this nature sufficient in your judgment to merit the necessary investment to proceed toward it in an orderly fashion?

Yes, it is.

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0 And is this ore present, in your judgment, in commercially recoverable quantities in the area under 2 discussion? 3 Yes, it is. A. Moving now to Section 22, Township 19 Q 6 South, Range 29 East, the southeast quarter, containing 160 acres, would you tell the Hearing Examiner what the data is 7 relating to this portion of the application? 8 A. Which portion was this? 9 10 The southeast quarter of Section 22, 19, 29 Q 20 20 11 East. 12 We have drilled hole number 145 with the A. 13 results of third ore zone 53 inches thick at 11.3 percent 14  $K_2O$ . This is again mineable ore. 15 Has Amax under your direction been pursuing Q. 16 a progressive exploratory program from east to west towards 17 this particular guarter section? 18 Yes, we have. A 19 And have you, as you have advanced, going 0 20 from east to west, discovered commercially recoverable 21 quantities of potash ore in Section 23 to the east of the 22 area we are talking about? 23 Yes, we have. Ā. 24 And is it your opinion that hole number 145 źô in this quarter section discloses commercially recoverable

	1	ore
	·	
	2	A. Yes, it does.
	3	Q that can be profitably mined?
• •	4	A. Yes, it does.
	5	Q. Moving to Section 22, Township 19 South,
ا معنی ا	6	Range 29 East, the northeast quarter, would you tell the
	7	Commission what core hole data indicates in that quarter
	8	section?
	9	A Hole 77 intercepted third ore zone with a
OYO Martin Marti	10	reading of 48 inches of 11 percent K <sub>2</sub> O.
	11	Hole Number 19 intercepted the third ore
	12	zone with an ore bed of 48 inches of 11.5 percent $K_2O$ .
	13	Q And for purposes of the record, would you
	14	tell the Commission how close, if you can, is the explora-
	15	tory hole number 144 to the boundary line of the northeast
	16	quarter of Section 22, 19, 29 East?
	17	A. I would say within 300 feet.
	18	Q. And what does that core test disclose?
	19	A. This test is a little bit better ore, it's
•	20	48 inches at 15.1 percent, or adding some upper strata onto
	21	that, we could mine 75 inches at 12.1 percent, both of which
	22	are economical ore.
	23	MR. NUTTER: Now, the 75 inches of 12.1
	24	percent includes the other 48 inches, is that it?
n da <b>n</b> a da	25	A. Yes, sir.
n menerala and the second s	entre stationer in the second second	
		n an

		1	MR. NUTTER: And these are all in the
		2	third zone?
		3	A It's all in the third zone, Mr. Nutter.
		4	MR. NUTTER: These are just some little
		5	stringers that are up above the main ore body?
		6	A Well, they're lower grade intercepts right
	-	7	at the top of the ore. We just added more analysis to it.
		8	MR. NUTTER: All right.
		. 9	Q (Mr. Feezer continuing.) Either way,
		10	the results of core test hole number 144 are red. Are the
	NO NO NO	11	ores there commercially recoverable and would they be
	WAL'FON MADITIAND	12	profitable to mine at this time?
	SALLY V CENTRYED II CENTRYED II Banda Fa.	13	A Yes, they are.
	SA	14	Q And do you project that in the future in
		15	your mine plan, as attached to your application, that that
		16	will still be the case as you progress westward with your
		17	mining?
		18	A All indications tell us that it is.
		19	Q. Referring now to that portion of the ap-
		20	plication touching on the in Section 23, Township 19
		21	
		22	South, Range 29 East, there are two quarter sections and a
-		23	40-acre tract. Would you outline to the Hearing Examiner
$\left( \begin{array}{c} \\ \\ \\ \\ \end{array} \right)$		24	what the core tests in that area reveal, as shown on Exhibit
		25	One?
		20	A In the southeast quarter we have two holes,

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1 number 129, which assayed in the third ore zone 51 inches 2 at 15.3 percent K20. Hole number 132 assayed 49 inches at 3 11 percent, 11.7 percent K20 in the third ore zone. In the southwest quarter we have hole number 5 133, which intercepted 48 inches of 11.5 percent  $K_{p0}$  in the third ore zone and hole number 142, which intercepted 48 7 inches of 10.1 percent K20 in the third ore zone. 8 MR. NUTTER: Mr. Kirby, just for the re-9 cord's sake, would you state what is considered to be com-10 mercial potash ore? Feet and .-- or inches and percent? 11 In regards to thickness we assume that A. 12 48 inches is the minimum mining height that we could possibly 13 obtain and the ore grade, we are, or have been mining 14 profitably below 11 percent, actually; closer to 9 percent 15 is the real cutoff with 48 inches. 16 MR. NUTTER: Normally hasn't the rule of 17 thumb been 48 inches at 10 percent? 18 48 inches at 10 percent and this goes up A. 19 and down as the economics change. 20 MR. NUTTER: But normally the economic 21 limit is considered to be about 48 inches at 10 percent? 22 A. Yes, that's right, sir. 23 (Mr. Feezer continuing.) In reference to O. the 40-acre Lrack, the southwest of the northwest of 23, 19, 25 29, there is no core test within that 40-acre tract, but in

Y WALTON BOYD D SHORTIMUD REPORTS ED BLAND (2005) 472-4402 four test holes southwest and northeast of that 40-acre tract is it your judgment as a mining engineer that that 40-acre tract embraces commercially recoverable ore in view of the bracketing by the holes?

My judgment tells me that I would have to
assume that this 40 acres would be all mineable ore.

Q. And is the pattern of core testing as shown Exhibit One a standard practice accepted by the potash mining industry insofar as the discovery or estimate of reserves are concerned?

Yes, it is.

A.

A.

A.

Q Is there anything further regarding Applicant's Exhibit Number One that you can inform the Commission about which we haven't so far discussed?

No, I don't believe there is.

MR. NUTTER: Before you get off that exhibit, Mr. Kirby, now we've got a yellow line that zigzags across through Sections 14, 13, and down into the northern part of Section 23. What does that yellow line reflect?

A. That yellow line is the mining extremities of our first ore zone.

Q. Would you explain that more fully to the Commissioner as to whether or not those are open mine workings or otherwise?

They are open mine workings inside of that

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1 line and outside the line is virgin ground. 2 MR. NUTTER: Now where have you mined in-3 sofar as the third ore zone is concerned on this exhibit? 4 The cross hatched area in Section 24 and 23 A, 5 and 13, the blue cross hatched areas are workings in the 6 third ore zone. 7 MR. NUTTER: And how do you get into that 8 third ore zone for that area, Mr. Kirby? 9 We have two slopes coming from our first Α. 10 ore zone. They are located and shown in Section 13. 11 MR. NUTTER: Right in the middle of the 12 northern part of the southwest guarter of Section 13? 13 That's right. A. 14 MR. NUTTER: And is the third ore zone 15 above or below the first ore zone? 16 It's above the first ore zone. The interva A. 17 is 25 to 30 feet above. 18 MR. NUTTER: So those little slopes re-19 flect little hills where you come off to get into the third 20 ore zone? 21 That's right. A 22 MR. NUTTER: And then you've mined out 23 this cross hatched area in the third ore zone from where 24 you entered into it. 25 Yes, we have. À.

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	1	MR. NUTTER: Now, you were referring to
	2	this slope up here in Section 8. Is that another little
	3	hill where you're coming up out of the first ore zone into
	4	the third ore zone?
	5	A. That's right.
	6	MR. NUTTER: And what was that 700-foot
	7	face that you mentioned?
	8	A. We've advanced, at this particular date
n an	9	we're advanced from the point where we were in the first
	10	ore zone.
	11	
		MR. NUTTER: And where do you get into it,
V Al	12	at the end of the two little vertical slopes there?
	13	A That's right.
	14	MR. NUTTER: And you have
	15	A. We've advanced 700 feet from there.
	16	MR. NUTTER: South?
	17	A. To the south.
	18	MR. NUTTER: And it's your intent, then,
	19	to come south and then to mine to the west?
	20	A. That's right.
	21	MR. NUTTER: And eventually to intersect
	22	this other mine on the third slope, then.
	23	
	24	A. Yes, we will eventually open that.
		MR. NUTTER: I see.
	25	û (Mr. Feezer continuing.) Are you presently
		A
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	∩ 1	working the third ore zone in the cross hatched area as
- -	2	shown on Exhibit One?
	3	A. We have been working that area diligently
	. 4	up until approximately a month ago, three weeks ago, and
	5	due to production problems elsewhere, we had to temporarily
	s <b>6</b>	stop mining there, but it's our plan to be back in there
	7	within several more months.
	8	MR. FEEZER: Any further questions, Mr.
	9	Examiner?
	<b>₽</b> ∰ <sup>2</sup> , 10	
		MR. NUTTER: No further questions.
		MR. FEEZER: We move the introduction of
		Exhibit One, the map, at this time.
	SALL BALL	MR. NUTTER: Does anyone have any questions
		of the witness regarding this exhibit? Exhibit One will be
	15	admitted in evidence.
	16	MR. FEEZER: I'd like to call Mr. Everett
	17	Jourdan.
	18	MR. NUTTER: Mr. Kirby may be excused.
	19	
	20 ·	EVERETT JOURDAN
	21	being called as a witness and having been duly sworn upon
	22	his oath, testified as follows, to-wit:
	24	DIRECT EXAMINATION
	25	BY MR. FEEZER:
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capacity?

Q And have you been present and have you heard the testimony of Mr. Bob Kirby of Amax this morning

Approximately thirty years.

Everett C. Jourdan.

I am Chief Mining Engineer for Potash Company of America.

before the Examiner?

Q

A.

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A.

Q

A,

A. I have.

Q You have before you a copy of Exhibit One admitted in evidence?

A. It's not marked but I assume it is.
Q. And assuming it is a copy, are you familiar
with the method of exploration for potash ores in the basin
in and around Carlsbad, New Mexico?

I am.

A.

0.

Q Does this map reflect a standard procedure in the industry to advance exploratory drilling to outline and define commercially recoverable bodies of potash ore?

It does.

In reference to the areas under discussion

15

Would you please state your name?

What is your address and occupation?

1106 Tracy Place, Carlsbad, New Mexico.

How long have you been employed in that

	Page16
1	today in Section 22, 23, and also in the northwest quarter
2	of Section 19, Township 19 South, Range 30 East, do the
3	indications on this map suggest to you that commercially
▲ ▲	recoverable quantities of potash ore exist, as shown by the
5	data contained herein?
6	A Yes, it does.
7	Q Do any of these lands embraced on this
8	map and under discussion today come under any sub-leases
9	from the Potash Corporation of America?
	A. Yes. We have sub-leases on I think 23,
	-24, 25, and 26.
	Q. And as a matter of fact, this shows on
	the exhibit in the southeast quarter of Section 23, does it
	not, as a PCA sub-lease?
15	A. PCA sub-lease is on this one between 25
18	and 26, and 24 and 23, yes.
17	Q And is it in the interests of the Potash
18	Company of America and other interested parties that this
19	dliscovered ore be mined?
20	A. It certainly does.
21	Q. And is it your opinion that it can be done
22	in the interests of the maximum recovery of this natural
~ 23	resource in a manner suggested and outlined on this map and
24	as testified to by Mr. Kirby?
	A. Yes, it does.

							Page	·	17
	1			MR. FEE	ZER:	Mr.	Examiner		
	2			MR. NUT	<b>TER</b> :	Are	there ar	y questi	ons of
	3	Mr. Jourdan	?						
	4				-			-	
	5			CROSS	EXAMI	NATIC	N		
	6	BY MR. NUTTH	ER:					• •	
	7	Ç.		Mr. Jou	ırdan,	wher	e the li	mits of	the PCA
	8	sub-lease to							
	9	A.					e 23. 24	, 25, an	d 26 Sec
		tions.						, <b></b>	
				MR. NUT	TER	Ise	е.		
	51 11 12			n an				f State	land -
	13	А						ner plea	
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	17	your		ND STOR		n/ _1-	<b>.</b> . <b>.</b>	han	. <b>.</b> .
	18						•	her word	5, ТПС
	19	area that's					2 2		
	20			MR. PEE		· . ·		• • •	
	21		*	:	TER:	Is t	he PCA p	roperty	that's
	22	under sub-le							
	23			MR. FEE	ZER:	Yes,	sir.		
	24	A		Yes.			•		
	25			MR. FEE	ZER:	I ha	ve nothi	ng furthe	er of
		this witness	<b>F.</b> .						
		•							
1	anna a stanna Gratharan a balan a sha a ba	م بواده هو کری در به و بر این بر در می در	مراده بالاحتيار موسطية ا	en de la servici de norgane de	e marataka 1994 T	Fall and a constant of a	an dheann an an an	ค.ศ. 20 <b>12ใช้สะ</b> สัตราได้เหลือเป็นนัยเริ่	a saƙariya sa kuti yang

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1 (Mr. Nutter continuing.) Mr. Jourdan, ۵ 2 PCA doesn't have any mines in this immediate area? 3 No, we are cut off, Mr. Nutter, by Amax Α. 4 leases. This was an isolated lease we picked up and we are Б cut off and have no access to it. 6 So you sub-leased it to this -a 7 We are some two miles away. A. 8 -- company that did have access. Ô. 9 That's right. Δ. 10 MR. NUTTER: Are there any questions of 11 Mr. Jourdan? He may be excused. 12 MR. FEEZER: Mr. Nutter, I would like, if 13 you would do so, to hear whatever comment Mr. John Burleson, 14 the USGS, has in regard to the application of Amax at this 15 time, if he chooses to make some comment. 16 MR. NUTTER: Mr. Burleson? 17 MR. BURLESON: Yes, sir, with the Com-18 mission's permission. 19 My name is John Burleson. I'm the Mining 20 Supervisor for the U. S. Geological Survey in Carlsbad, New 21 Mexico. 22 Amax has supplied my office with the logs 23 of these holes as well as their mining plan and I do concur 24 in Mr. Kirby's testimony that this is commercial ore; that 26 it is in the planning to be mined by Amax; and I respectfully

SALLY WALTON BOYD CERTIFIED SHORT-MID NETONTER 2010/Furn Blanch (2015) 411-4445 Bauk, Pr., New Martino 51101 recommend to the Commission that this application be favorably considered, and would be prepared to answer any questions that the Commission might wish to ask.

MR. NUTTER: Mr. Burleson, the 4 feet of 10 percent ore that Mr. Kirby testified is recognized as being a commercial limit, is that similar to the commercial limits that the USGS recognizes as being commercial ore? MR BURLESON: We had the 4 feet at 10 as

a leasable standard, not as an economic limit, and these economic limits are varying from mine to mine, as well as from year to year.

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MR. NUTTER: And company to company, pro-

MR. BURLESON: And company to company, exactly. But the 4 feet at 10 for a sylvite was a leasing standard which was -- has been introduced to this Commission, in the past, but not a commercial limit.

MR. NUTTER: Have you found that 4 feet of 10 percent can usually be mined commercially by most companies? MR. BURLESON: Not most companies. Amax

can do so because they have a higher grade first ore zone, with which this lower grade third ore zone can be blended to make an economic product to ship to the mill, and we do have properties in the potash basin that are mining much lower grade than even the 10 percent, and that is, as you

		Pege 20
	1	said, it depends on the company, their their ore body,
	2	what they have to blend with it, a number of factors, the
	3	price of marketable potash, as well.
	4	But there's no question that the basin will
	5	be going to lower and lower grades and the price of muriate
	6	is increasing, which is making this possible.
:	7	MR. NUTTER: Thank you, Mr. Burleson.
	8	MR. BURLESON: Yes, sir.
	9	MR. FEEZER: Mr. Marvin Watts.
	10	
	11	MARVIN WATTS
	12	being called as a witness and having been duly sworn upon
	13	his oath, testified as follows, to-wit:
	14	
	15	DIRECT EXAMINATION
	16	BY MR. FEEZER:
	17	Q. I hand to you and to the Hearing Examiner
	18	what has been marked Exhibit Number Two, which we will dis-
	19	cuss in a moment.
	20	Would you first give the Hearing Examiner
	21	your name, address, and occupation?
	22	A I'm Marvin Watts, Box 56, Carlsbad, New
	23	Mexico. I'm General Surface Superintendent for Amax
	24	Chemical Corporation in CArlsbad.
	25	Q. Prior to the time of your assumption of

1 those duties did you hold other offices or jobs with Amax Chemical Corporation? 2 Yes, I have been Chief Chemist with Amax Α. 3 Chemical Corporation. I've worked for Amax Chemical for 4 twelve years. 5 ° Q. Are you thoroughly --- and have you pre-6 viously testified before this Commission for any purpose? 7 A. I have not. 8 Nould you state where you had your training Q. 9 as a chemist and what degrees you hold? 10 11 I hold a Bachelor's degree in Mathematics A. 12 and Chemistry, a Master's degree in Chemistry, from Eastern 13 New Mexico University; additional graduate work in chemistry 14 from Oklahoma -- University of Oklahoma and Kansas State 15 University. **16** · And how long have you worked in the area Q. 17 of potash chemistry? 18 A. For twelve years. 19 MR. FEEZER: Do you care to make further 20 inquiries to his qualifications? 21 MR. NUTTER: Mr. Watts is qualified. 22 (Mr. Feezer continuing.) Mr. Watts, you a 23 have heard briefly some discussion in this hearing as to the 24 technique of blending. Could you inform the Commission of 25 the significance of the test data on Exhibit One and how it

is blended at Amax to make a commercially recoverable product salable in today's market?

A Yes. The lower grade material coming from this third ore zone is blended with the higher grade material coming from the first ore zone to furnish a mill feed that will be of a higher grade than this third ore zone material. And generally this is limited because of the mill was designed many years ago to handle higher grade ores, but by blending we can operate at an economic product ton level by blending this and utilizing the lower grade ore.

Q. In Exhibit Number Two, a copy of which you have before you, have you outlined various grades of potash which are now being produced and sold by Amax?

Yes.

Ã.

Q. And what does this exhibit reflect in addition to those grades and prices?

A At Amax Chemical Corporation we produce three grades of potash, standard, coarse, and granular.

The standard material is -- these grades are based on particle sizes, primarily, not on  $K_{20}$  quality of it. We guarantee a 60 percent  $K_{20}$  for all of our products. but this is primarily based on particle size, the standard being the smaller particle size; coarse, the next in size; and granular is a larger size particle that we make. We compact to make a larger size particle, and today this is

SALLY WALTON BOY CERTIPED SHORTI-AND REPORTE LOSOFALL BRANCE (661) 411-34 Bunta Fo, Now Kondoo 27501 2

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1 the premium product in the fertilizer industry. Reason for 2 this is that most of the phosphorus and nitrogen fertilizers 3 are prilled and they almost have a set particle size. So to keep from having segregation and dry blended fertilizers, 4 we attempt to make a product of potassium that will blend without segregation.

So this is the reason for these various grades. Today Amax is producing primarily granular material, and if you'll notice on the exhibit, the granular material is a premium product as far as price is concerned.

Is that granular product achieved by 0 blending of the ores we are discussing, which appear to be recoverable on Exhibit One?

Oh, yes, all of the material coming through A. our processing plant is from the blended ore.

Is it your opinion, based on your exper-Q. ience in potash production, that the application of Amax should be granted for the purpose of maximizing the recovery of a natural resource under leases which exist from the State and Federal government at this time?

Yes.

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Can you tell the Commission what the present price of potash is per ton FOB Carlsbad, realizing that it's not absolute but fluctuates some?

Yes. This price list, as you see, is stated

in terms of price per unit. That's K<sub>2</sub>O unit. If you take 2 that price and multiply it by -- if it happens to be exactly 60 percent K20 grade, then you get the price per ton. That price per ton for standard there is about \$53.00 going on up to granular price of about \$63.00. Now this is the posted price for potash. 7 It does vary from that according to grades. If you had a 61 percent, of course it would be a little bit higher. And at that price per ton of \$50-plus, Q 10 is all of the potential ore outlined in Exhibit One commer-11 cially recoverable and in such quantity that you believe it 12 desirable to have an application approved to protect this 13 area for the future production of this ore? 14 A. Yes, no question about it. 15 MR. FEEZER: Pass the witness. 16 MR. NUTTER: Are there any questions of 17 Mr. Watts? 18 MR. FEEZER: We'd move the admission of 19 Exhibit Number Two, Mr. Nutter. 20 MR. NUTTER: Mr. Watts may be excused and 21 Exhibit Number Two will be admitted in evidence. 22 MR. NUTTER: We have nothing further for 23 the Examiner at this time. 24 MR. NUTTER: Does anyone have anything they ð wish to offer in Case Number 6665? Yes, sir.

Page ......

MR. CREECH: Mr. Examiner, may I make a 2 statement? 3 MR. NUTTER: Yes, sir. MR. CREECH: I'm Bob Creech, independent 5 petroleum landman from Midland, Texas. 6 I do some work for the Petroleum Corpor-7 ation of Delaware, who has proposed to drill two wells in 8 Section 22, 19, 29, and to prevent waste and promote conser-9 vation and protect correlative rights, I'd like to request 10 that the Examiner consider deferring the extension of this 11 potash/oil area until some time in the future in order that 12 we may go ahead with the drilling of these wells. 13 MR. NUTTER: Where would the wells be 14 drilled, Mr. Creech? 15 MR. CREECH: My understanding is that one 16 will be in the east -- they'll be 320-acre units; one will 17 be in the east half of Section 22 and one in the west half 18 of Section 22. 19 I believe the proposed location -- well, 20 I don't know the proposed location except as to the east 21 half. 22 MR. NUTTER: Would both locations be in the 23 east half? 24 MR. CREECH: The east, one in the east and 25 one in the west.

			Page 26
		1	MR. NUTTER: I understand. What company
· _		2	MR. CREECH: At orthodox
		3	MR. NUTTER: What company owns the oil
		4	and gas leases there?
•		5	MR. CREECH: The Petroleum Corporation of
		6	Delaware is proposing these.
		7	MR. NUTTER: Do you know when they're
		8	thinking about drilling those wells?
		9	MR. CREECH: I don't know an exact date
	OYD Miter 1411	10	but it's my understanding that AFEs have been sent out and
<u></u>		11	they are proposed for the immediate future.
		12	MR. NUTTER: I see. How do you spell
		13	your last name, Mr. Creech?
	SA Cem	14	MR. CREECH: C-R-E-E-C-H.
		15	MR. NUTTER: And what is your address in
		16	Midland, please?
		17	MR. CREECH: 518 Petroleum Building,
		18	Midland, Texas, 79701
	•	19	MR. NUTTER: Thank you.
		20	Are there any other statements to be made?
		21	Do you have anything further, Mr. Feezer?
		22	MR. FEEZER: No, sir.
		23	MR. NUTTER: If there is nothing further
		24	in Case Number 6665, we'll take the case under advisement.
		25	
	· · · ·		(Hearing concluded.)

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REPORTER'S CERTIFICATE

SALLY WALTCIN BOYD CERTIPHD SHOATEMD REPORTER 313127ALL SHOATEMD (5 11) 4111-4141 313127ALL SHOAT (5 11) 4111-4141 Shoate Fe, New Mindoo 3719-11

BOYD

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the said hearing, prepared by me to the best of my ability, from my notes taken at the time of the hearing.

Sally W. Doyd, C.S.R.

I do here a count that the foregoing la a comple e recerci of the proceedings the Examiner bearing offerse in heard by me Oil Conservation Division ., Examiner

### AMAX Chemical Corporation

35 MASON STREET, GREENWICH, CONNECTICUT 06830



JAMES L.DOW CHARLES A.FEEZER DOW & FEEZER, P. A. ATTORNEYS AT LAW BUS TERMINAL BUILDING P.O. BOX 128 CARLSBAD, NEW MEXICO 88220

August 20, 1979

Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

> Re: Application of Amax Chemical Corporation for an Order Amending R-111A.

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CH. CONSLEMATION DIVISION SANTA FE

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885-2185

AREA CODE 505

Case 6665

#### Dear Sir:

In re our telephone conversation last week regarding the consolidation of the Application you received August 14, 1979 and the one I enclose in triplicate, I would appreciate your advising me of the hearing date at your early convenience.

Thank you for your past courtesies and cooperation.

Very truly yours,

DOW & FEEZER, P. A.

su.

CAF : ah

Encl.

cc: Amax Chemical Corporation

#### BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

APPLICATION OF AMAX CHFMICAL ) CORPORATION FOR AN ORDER AMENDING ) <u>R-111A AND SEEKING AN EXTENSION OF</u>) THE POTASH-OIL AREA IN EDDY COUNTY,) NEW MEXICO. )

No. 6665

#### APPLICATION

COMES NOW Amax Chemical Corporation, a Delaware corporation, and authorized to do business in the State of New Mexico, states:

1. Amax Chemical Corporation is the owner of State Lease M 2657A and Federal Lease NM 21658, which leases cover, among other property, the following described lands:

SECTION 19	TOWNSHIP 19 SOUTH	RANGE 30 EAST
N/2 NW/4	Containing approximately	80 Acres
SECTION 22	TOWNSHIP 19 SOUTH	RANGE 29 EAST
SE/4	Containing approximately	160 Acres

All of the lands embraced in this Application are under the above numbered State and Federal Lease and consists of 240 acres.

2. That all of the lands sought to be included in R-111A et seq. boundaries by this Application are believed to contain commercially recoverable quantities of potash ore.

3. The Oil Conservation Commission received an Application on August 14, 1979. There is attached to said Application an exhibit consisting of the mine plan projection 1979 through 1983. The Applicant believes it is in the best interests of the Commission and other interested parties that this Application and the above referenced Application be consolidated for the purposes of a single hearing for the reason that so far as is known to the Applicant, all of the leasehold interests for oil and gas purposes and potash are similar in each Application insofar as they are set forth herein.

4. The names and addresses of the parties interested in the Application as known to the Applicant are as follows:

Atlantic Richfield P. O. Box 1710 Hobbs, NM 88240

Dalco Corporation Address Unknown WHEREFORE, Amax Chemical Corporation requests that the Commission fix a time and place for hearing before the Commission, after proper notice, to determine the propriety of the request as set forth herein.

Respectfully submitted,

AMAX CHEMICAL CORPORATION a By C. A. Feezer Attorneys for Applicant DOW & FEEZER, P. A. P. O. Box 128 Carlsbad, New Mexico 88220

#### BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

APPLICATION OF AMAX CHEMICAL ) CORPORATION FOR AN ORDER AMENDING ) R-111A AND SEEKING AN EXTENSION OF ) THE POTASH-OIL AREA IN EDDY COUNTY,) NEW MEXICO.

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N/2 NW/4	Containing approximately	30 Acres
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SE/4	Containing approximately	160 Acres

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Respectfully submitted,

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JAMES L.DOW CHARLES A.FEEZER DOW & FEEZER, P. A. ATTORNEYS AT LAW BUS TERMINAL BUILDING P.O. BOX 128 CARLSBAD, NEW MEXICO 88220

August 13, 1979

**Oil Conservation Commission** P. O. Box 2088 Santa Fe, New Mexico 87501

Superior Oil Company Box 71 Conroe, Texas 77301

Gulf 0il Corporation Box 3786 Odessa, Texas 79702

Southland Royalty 1100 Wall Towers West Midland, Texas 79701

G1 1979 **OIL CONSERVATION DIVISION** 

SANTA FE

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Michael Campbell Attorneys for Superior and Southland Royalty Campbell and Black P. O. Box 2208 Santa Fe, New Mexico 87501

Amax Chemical Corporation P. O. Box 279 Carlsbad, New Mexico 88220

> Re: Application of Amax Chemical Corporation for an Order Amending R-111A.

TO ALL INTEREJTED PARTIES:

The above captioned Application was filed this date with the OCC. All of the lands sought to be embraced in this extension are in Sections 22 and 23, Township 19 South, Range 29 East, Eddy County, New Mexico. (NOT Township 29 South).

I would appreciate your correcting your copy. Thank you.

Very truly yours,

DOW & FEEZER Feezer

CAF: ah

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885-2185 AREA CODE 505 JAMES L.DOW CHARLES A.FEEZER DOW & FEEZER, P.A. ATTORNEYS AT LAW BUS TERMINAL BUILDING P.O. BOX 128 CARLSBAD, NEW MEXICO 88220

885-2185 AREA CODE 505

ECEIVED August 10, 197 D //UGI 3 1979 OIL CONSERVATION DIVISION

Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

> Application of Amax Chemical Corporation for an Order Amending R-111A. Re:

SANTA FE

#### Dear Sir:

I enclose an Application for extension of R-111A for Amax Chemical Corporation in triplicate.

Very truly yours,

DOW & FEEZER, P. A.

CAF: ah

Encls.

- The Superior Oil Company w/ copy of Application Gulf Oil Corporation cc:
- cc:
- cc:
- Southland Royalty " " Amax Chemical Corporation w/ 3 copies of Application. cc:
- Michael Campbell, Attorney for Superior Oil and Southland Royalty w/copy of Application. cc:

# BEFORE THE NEW MEXICO OIL CONSERVATION

6665

No.

APPLICATION OF AMAX CHEMICAL CORPORATION FOR AN ORDER AMENDING R-IIIA AND SEEKING AN EXTENSION OF THE POTASH-OIL AREA IN EDDY COUNTY, NEW MEXICO.

#### APPLICATION

COMES NOW Amax Chemical Corporation, a Delaware corporation, and authorized to do business in the State of New Mexico, states:

1. Amax Chemical Corporation is the owner of the following described State leases, to-wit: M 873 and M 2657A, which leases cover, among other property, the following described lands:

SECTION 22	TOWNS	HIP 29 SOUTH	RANGE 29	EAST
NE/4	Containing	approximately	160	acres
SECTION 23	TOWNS	HIP 29 SOUTH	RANGE 29	EAST
SW/4 NW/4	*1	**	40	acres
SW/4	11	T1 .	160	EL
SE/4	11		160	11

All of the lands embraced in this Application are under State lease to the Applicant or are under sub-lease to the Applicant from Potash Company of America and consists of a total proposed extension to R-111A of 520 acres.

3. Amax Chemical has heretofore filed its Annual Mining Survey and Potash Development Plan with the Commission, a copy of which is attached hereto and marked Exhibit "A".

4. (a) That all of the lands sought to be included in R-111A, et seq. boundaries by this Application are believed to contain commercially recoverable quantities of potash ore for the reason that Applicant has proceeded vigorously with an exploratory drilling program to the extent that seven core tests have been drilled within the 520 acre area, all of which core holes show commercially recoverable quantities of potash ore reaching from a low of 48 inches of 11 percent K<sub>2</sub>0 to a high of 51 inches of 15.3 percent K<sub>2</sub>0.

page 2 Application for Order Amending R-111A

(b) Pursuant to Order R-111K of the Division in Case No. 6495, the Hearing Examiner denied the inclusion of the NE/4 SE/4 of Section 23, Township 19 South, Range 29 East, as not showing commercially recoverable deposits of potash; however, the extensive exploratory drilling since said date discloses commercially recoverable quantities of potash ore South and East of NE/4 SE/4, Section 23, Township 19 South, Range 29 East, and Applicant seeks to have the Commission re-determine the validity of its allegation that commercially recoverable ore exists within the above described 40 acre tract.

5. The names and addresses of the parties interested in the Application as known to the Applicant are as follows:

The Superior Oil Company Box 71 Conroe, Texas 77301

Gulf Oil Corporation Box 3786 Odessa, Texas /9702

Southland Royalty 1100 Wall Towers West Midland, Texas 79701

Dalco Corporation Address unknown

In view of the fact that three of the four above named interested parties are also interested parties in Case No. 6495, the Applicant has sent directly to their last known addresses copies of said Application.

WHEREFORE, Amax Chemical Corporation requests that the Commission fix a time and place for hearing before the Commission, after proper notice, to determine the propriety of the request as set forth herein.

Respectfully submitted,

AMAX CHEMICAL CORPORATION

00% By C. A. Feezer Attorneys for Applicant DOW & FEEZER, P. A.

P. O. Box 128 Carlsbad, NM 88220

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BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION OF THE STATE OF NEW MEXICO OIL CONSERVATION DIVISION SANTA FE

APPLICATION OF AMAX CHEMICAL CORPORATION FOR AN ORDER AMENDING R-111A AND SEEKING AN EXTENSION OF THE POTASH-OIL AREA IN EDDY COUNTY, NEW MEXICO.

No.

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SECTION 22	TOWNS	TH RANGE	29	EAST	
NE/4	Containing	, approximat	ely 1	.60	acres
SECTION 23	TOWNS	HIP-29 SOUT	H RANGE	29	EAST
SW/4 NW/4	. 11	11		40	acres
SW/4	FT	Ú	1	.60	11
SE/4	11	βŤ	1	.60	, it i

All of the lands embraced in this Application are under State lease to the Applicant or are under sub-lease to the Applicant from Potash Company of America and consists of a total proposed extension to R-111A of 520 acres.

3. Amax Chemical has heretofore filed its Annual Mining Survey and Potash Development Plan with the Commission, a copy of which is attached hereto and marked Exhibit "A".

4. (a) That all of the lands sought to be included in R-111A, et seq. boundaries by this Application are believed to contain commercially recoverable quantities of potash ore for the reason that Applicant has proceeded vigorously with an exploratory drilling program to the extent that seven core tests have been drilled within the 520 acre area, all of which core holes show commercially recoverable quantities of potash ore reaching from a low of 48 inches of 11 percent  $K_20$  to a high of 51 inches of 15.3 percent  $K_20$ .

page 2 Application for Order Amending R-111A

(b) Pursuant to Order R-111K of the Division in Case No. 6495, the Hearing Examiner denied the inclusion of the NE/4 SE/4 of Section 23, Township 19 South, Range 29 East, as not showing commercially recoverable deposits of potash; however, the extensive exploratory drilling since said date discloses commercially recoverable quantities of potash ore South and East of NE/4 SE/4, Section 23, Township 19 South, Range 29 East, and Applicant seeks to have the Commission re-determine the validity of its allegation that commercially recoverable ore exists within the above described 40 acre tract.

5. The names and addresses of the parties interested in the Application as known to the Applicant are as follows:

The Superior Oil Company Box 71 Conroe, Texas 77301

Gulf Oil Corporation Box 3786 Odessa, Texas 79702

Southland Royalty 1100 Wall Towers West Midland, Texas 79701

Dalco Corporation Address unknown

In view of the fact that three of the four above named interested parties are also interested parties in Case No. 6495, the Applicant has sent directly to their last known addresses copies of said Application.

WHEREFORE, Amax Chemical Corporation requests that the Commission fix a time and place for hearing before the Cormission, after proper notice, to determine the propriety of the request as set forth herein.

Respectfully submitted,

AMAX CHEMICAL CORPORATION

C. A. Feezer

Attorneys for Applicant DOW & FEEZER, P. A. P. O. Box 128 Carlsbad, NM 88220



BEFORE THE NEW MEXICO OIL CONSERVAT COMMISSION OF THE STATE OF NEW MEXICO OIL CONSERVATION DIVISION

SANTA FE

No. (01065

APPLICATION OF AMAX CHEMICAL CORPORATION FOR AN ORDER AMENDING R-111A AND SEEKING AN EXTENSION OF THE POTASH-OIL AREA IN EDDY COUNTY, NEW MEXICO.

## APPLICATION

COMES NOW Amax Chemical Corporation, a Delaware corporation, and authorized to do business in the State of New Mexico, states:

1. Amax Chemical Corporation is the owner of the following described State leases, to-wit: M 873 and M 2657A, which leases cover, among other property, the following described lands:

SECTION 22	TOW	RANGE	RANGE 29 EAST 160 acres		
NE/4	Containi	ly :			
SECTION 23	TOW	NSHIP 29 SOUTH	RANGE	29	EAST
SW/4 NW/4	11	11		40	acres
SW/4		11	1	L60	.11
SE/4		11	1	L60	11

All of the lands embraced in this Application are under State lease to the Applicant or are under sub-lease to the Applicant from Potash Company of America and consists of a total proposed extension to R-111A of 520 acres.

3. Amax Chemical has heretofore filed its Annual Mining Survey and Potash Development Plan with the Commission, a copy of which is attached hereto and marked Exhibit "A".

4. (a) That all of the lands sought to be included in R-111A, et seq. boundaries by this Application are believed to contain commercially recoverable quantities of potash ore for the reason that Applicant has proceeded vigorously with an exploratory drilling pro-gram to the extent that seven core tests have been drilled within the 520 acre area, all of which core holes show commercially recoverable quantities of potash ore reaching from a low of 48 inches of 11 percent  $K_20$  to a high of 51 inches of 15.3 percent  $K_20$ .

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WHEREFORE, Amax Chemical Corporation requests that the Commission fix a time and place for hearing before the Cormission, after proper notice, to determine the propriety of the request as set forth herein.

Respectfully submitted,

AMAX CHEMICAL CORPORATION

 $\mathfrak{Q}$ C. A. Feezer

Attorneys for Applicant DOW & FEEZER, P. A. P. O. Box 128 Carlsbad, NM 88220



- NEW HENDINGS BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR -THE PURPOSE OF CONSIDERING:

> CASE NO. 4665 Order No. R-111-L

APPLICATION OF AMAX CHEMICAL CORPORATION FOR THE EXTENSION OF THE POTASH-OIL AREA, EDDY COUNTY, NEW MEXICO.

#### ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September19, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of October, 1979, the Division \_\_\_\_\_ Director, \_\_\_\_\_\_, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

#### FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

- (2) That the applicant, Amax Chemical Corporation, seeks an extension of the Potash-Oil Area as defined in Order No. R-111-A, as amended, by the addition of the following described lands in Eddy County, New Mexico:

THOUSHIP 19 SOUTH RANGE 29 EAST, MAPM Section 22: E/2 Section 23: 3W/4 NW/4 and 5/2 TOWNSHIP 19 SOUTH, RANGE BOEAST, WAPM Section 19: N/2 NW4

(3) That the evidence presented indicates that the abovedescribed acreage contains potash deposits in commercial quantities.

(4) That to promote the orderly development of the natural resources in the potash-oil area, Order No. R-111-A should be amended to include the above-described acreage in the Potash-Oil Area.

-2-Case No. 6665 Order No. R-111-4

#### IT IS THEREFORE ORDERED:

(1) That Order No. R-111-A, as amended, be and the same is hereby amended to include the following-described acreage within the confines of the Potash-Oil Area in Eddy County, New Mexico:

TOWNSHIP 19 SOUTH, RANSE 29 EAST, NAMAN Section 22: E/2 Jection 23: SW/4 NW/4 and B/2 TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM Section 19: N/2 NW/4

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION R. TRUJILLO, Chairman Lucero LUCERO Member Jr., Member & Secretary PORTÉR

SEAL

jr/