

Appendix A

Guidance for Managing the Secretary's Potash Area

1.0 Introduction

This appendix includes the full versions of the Order of the Secretary of the Interior (51 FR 39425, Oct. 28, 1986), called the 1986 Order, Order R-111-P issued by the New Mexico Oil Conservation Commission, and BLM guidance for management of the SPA, in that order.

The 1986 Order defines the Secretary's Potash Area, otherwise called the Known Potash Leasing Area, and is the guiding authority for governing BLM decisions regarding oil, gas, and potash leasing and development.

Order R-111-P was issued by the State of New Mexico's Oil Conservation Commission, which is under the Energy, Minerals, and Natural Resources Department. The order was issued on April 21, 1988, to amend previous orders related to management of the Known Potash Leasing Area to clarify overlapping leasehold interests and "confusion recording the boundaries of the Known Potash Leasing Area."

BLM Instruction Memorandum No. NM-2011-003 was issued on October 1, 2010, to provide guidance on the processing of oil and gas applications for permits to drill within the SPA. These interim guidelines will guide BLM decisions on issuing permits until completion of a review of potash enclave standards and an economic evaluation of potash grades have been completed.

DEPARTMENT OF THE INTERIOR**Office of the Secretary****Oil, Gas and Potash Leasing and Development Within the Designated Potash Area of Eddy and Lea Counties, New Mexico****Order**

Section 1. *Purpose.* This order revises the rules for concurrent operations in prospecting for, development and production of oil and gas and potash deposits owned by the United States within the designated Potash Area and for revising the designated Potash Area to which the provisions of this Order are applicable.

Section 2. *Authority.* This order is issued in accordance with the authority vested in the Secretary of the Interior in the Mineral Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 *et seq.*) and the Mineral Leasing Act for Acquired Land of 1947, as amended (43 U.S.C. 351-359).

Section 3. Restatement of Rules for Concurrent Operations in Prospecting for, Development and Production of Oil and Gas and Potash Deposits Owned by the United States within the Designated Potash Area and to Revise the Designated Potash Area as follows:

I

The Order of the Secretary of the Interior dated February 6, 1939 (4 FR 1012), withholding certain lands in New Mexico from application or lease under the provisions of the Mineral Leasing Act of February 25, 1920, as amended and supplemented (30 U.S.C. 181 *et seq.*), which Order was revoked by Order of the Secretary of the Interior dated October 16, 1951 (16 FR 10669), shall continue to be revoked. The lands described in the Order of February 6, 1939 (except the E1/2E½, W½SE¼, sec. 25, T. 20 S., R. 20E, New Mexico Principal Meridian, which were withdrawn from all forms of entry by Public Land Order No. 569 (14 FR 1086)), which were opened for oil and gas leasing by the Order of October 16, 1951, shall continue to be open for oil and gas leasing. This Order shall not affect the current status of lands within respect to their being withdrawn from, or open for, entry or leasing.

II

Subject to the provisions of I above, the provisions of the Order of the Secretary of the Interior dated November 5, 1975 (40 FR 51486), are revised to change the Potash Area Designated therein as specified in this Order.

III. General Provisions**A. Issuance of Oil and Gas Leases**

The Department of the Interior reaffirms its position that the lease stipulations contained in the Order of November 5, 1975, adequately protect the rights of the oil and gas and potash lessees and operators. Therefore, each successful applicant for a noncompetitive oil and gas lease, and any party awarded a competitive lease, for lands included in the designated Potash Area is required, as a condition to the issuance of such lease, to execute a stipulation to the lease as follows:

1. Drilling for oil and gas shall be permitted only in the event that the lessee establishes to the satisfaction of the authorized officer, Bureau of Land Management, that such drilling will not interfere with the mining and recovery of potash deposits, or the interest of the United States will best be served by permitting such drilling.

2. No wells shall be drilled for oil or gas at a location which, in the opinion of the authorized officer, would result in undue waste of potash deposits or constitute a hazard to or unduly interfere with mining operations being conducted for the extraction of potash deposits.

3. When the authorized officer determines that unitization is necessary for orderly oil and gas development and proper protection of potash deposits, no well shall be drilled for oil or gas except pursuant to a unit plan approved by the authorized officer.

4. The drilling or the abandonment of any well on said lease shall be done in accordance with applicable oil and gas operating regulations (43 CFR 3160), including such requirements as the authorized officer may prescribe as necessary to prevent the infiltration of oil, gas or water into formations containing potash deposits or into mines or workings being utilized in the extraction of such deposits.

In taking any action under Part A, Items 1, 2, 3 and 4 of this Order, the authorized officer shall take into consideration the applicable rules and regulations of the Oil Conservation Division of the State of New Mexico.

B. Renewal or Extension of Oil and Gas Leases

As a condition to the granting of any discretionary renewal or extension of any existing lease embracing lands included in the designated Potash Area, the lessee shall execute a stipulation identical to that specified in Part A, Items 1, 2, 3 and 4 of this Order.

C. Potash Leases

All potash permits and leases hereafter issued or existing potash leases hereafter renewed for Federal lands within the designated Potash Area, shall be subject to a requirement either to be included in the lease or permit or imposed as a stipulation, to the effect that no mining or exploration operations shall be conducted that, in the opinion of the authorized officer, will constitute a hazard to oil or gas production, or that will unreasonably interfere with orderly development and production under any oil or gas lease issued for the same lands.

D. Mineable Reserves

1. Each potash lessee shall file annually by January 1, with the District Manager, Bureau of Land Management, a map(s) on which has been delineated the following information with respect to the Federal Potash leases which are then held:

a. The areas where active mining operations are currently in progress in one or more ore zones;

b. The area where operations have been completed in one or more ore zones;

c. Those areas that are not presently being mined which are considered to contain a mineable reserve in one or more ore zone, i.e., those areas (enclaves) where potash ore is known to exist in sufficient thickness and quality to be mineable under existing technology and economics; and

d. The areas within these enclaves which are believed to be barren of commercial ore.

The authorized officer shall review the information submitted in this regard and make any revisions in the boundaries or the proposed mineable reserves (potash enclaves) which are consistent with the data available at the time of such analyses. The authorized officer shall commit the initial findings to a map(s) of suitable scale and shall thereafter revise that map(s) as necessary to reflect the latest available information.

E. Oil and Gas Drilling

1. It is the policy of the Department of the Interior to deny approval of most applications for permits to drill oil and gas test wells from surface locations within the potash enclaves established in accordance with Part D, item 1 of this Order. Two exceptions to this policy shall be permitted under the following conditions.

a. Drilling of vertical or directional holes shall be allowed from barren areas within the potash enclaves when

the authorized officer determines that such operations will not adversely affect active or planned mining operations in the immediate vicinity of the proposed drillsite;

b. Drilling of vertical or directional holes shall be permitted from a drilling island located within a potash enclave when: (1) There are no barren areas within the enclave or drilling is not permitted on the established barren area(s) within the enclave because of interference with mining operations; (2) the objective oil and gas formation beneath the lease cannot be reached by a well which is vertically or directionally drilled from a permitted location within the barren area(s); or (3) in the opinion of the authorized officer, the target formation beneath a remote interior lease cannot be reached by a well directionally drilled from a surface location outside the potash enclave. Under these circumstances, the authorized officer shall establish an island within the potash enclave from which the drilling of that well and subsequent wells will be permitted. The authorized officer, in establishing any such island, will, consistent with present directional drilling capabilities, select a site which shall minimize the loss of potash ore. No island shall be established within one mile of any area where approved mining operations will be conducted within three years. To assist the authorized officer in this regard, he/she may require affected potash mining operators to furnish a three-year mining plan.

2. In order to protect the equities between oil and gas lessees, while at the same time reducing the number of oil and gas wells which operators propose to drill in the Potash Area, the authorized officer shall make greater use of his/her prerogative to require unitization pursuant to the regulations in 43 CFR 3180. Unitization shall be mandatory in those cases where completion of the proposed well as a producer might result in the drainage of oil and gas from beneath other Federal lands within a potash enclave. This unitization will be a prerequisite to the approval of any well which is: (1) Located adjacent to a potash enclave (within one-quarter of a mile if an oil test well or one-half mile if a gas test well) and which is to be drilled vertically to the prospective formation; (2) to be directionally drilled from an adjacent surface location to bottom in a formation beneath an enclave; or (3) to be vertically or directionally drilled from a barren area or island within an enclave. Any unit plan hereafter approved or prescribed that includes oil

and gas leases covered by this Order shall include a provision embodying in substance the requirements set forth in Part A, items, 1, 2, 3 and 4 of this Order.

3. The Department of the Interior shall cooperate with the New Mexico Oil Conservation Division in the implementation of that agency's rules and regulations. In that regard, the Federal potash lessees shall continue to have the right to protest to the New Mexico Oil Conservation Division the drilling of a proposed oil and gas test on Federal lands provided that the location of said well is within the State of New Mexico's "Oil-Potash Area" as that area is delineated by New Mexico Oil Conservation Division Order No. R-111, as amended. However, the Department shall exercise its prerogative to make the final decision of whether to approve the drilling or any proposed well on a Federal oil and gas lease within the Potash Area.

4. Applications for permits to drill vertical test wells for oil and gas at locations that are in the Potash Area but outside the State of New Mexico's "Oil-Potash Area" and which do not directly offset an enclave (within one-quarter mile if an oil test well or one-half mile if a gas test well) shall be routinely processed by the authorized officer.

F. Access to Maps and Surveys

1. Well records and survey plats that an oil and gas lessee is required to file pursuant to applicable operating regulations (43 CFR 3160), shall be available for inspection at the Roswell District Office, Bureau of Land Management, by any party holding a potash permit or lease on the lands on which the well is situated insofar as such records are pertinent to the mining and protection of potash deposits.

2. Maps of mine workings and surface installations and records of core analyses that a potash lessee is required to file pursuant to applicable operating regulations (43 CFR 3570), shall be available for inspection at the Roswell District Office, Bureau of Land Management, by any party holding an oil and gas lease on the same lands insofar as such records are pertinent to the development and protection of oil and gas deposits.

3. Maps of potash enclaves shall be available for inspection in the Roswell District Office and Carlsbad Resource Area, Bureau of Land Management. Copies of such maps shall be available at the same offices.

G. Definition

The term "potash" as used in this Order shall be deemed to embrace potassium and associated minerals as

specified in the Act of February 27, 1927 (30 U.S.C. 281-287).

IV

The lessee of any existing lease in the designated Potash Area may make such lands subject to the rules and regulations of Part III of this Order by filing an election to do so, in duplicate, with the New Mexico State Office, Bureau of Land Management, Santa Fe, New Mexico. Except to the extent modified by this Order, the general regulations contained in 43 CFR Parts 3100, 3160 and 3180 (governing the leasing and development of potash deposits) and 43 CFR Group 3500 (governing the leasing and development of potash deposits), shall be applicable to the lands covered by this Order.

V. The designated Potash Area is as follows

New Mexico Principal Meridian

T 22 S., R. 28 E.,
Secs. 25 and 36.
T. 23 S., R. 28 E.,
Sec. 1.
T. 19 S., R. 29 E.,
Secs. 1 and 2;
Secs. 11 to 15 inclusive;
Secs. 22 to 27 inclusive;
Secs. 34 and 36.
T. 20 S., R. 29 E.,
Secs. 1 and 2;
Secs. 11 to 15 inclusive;
Secs. 22 to 27 inclusive;
Secs. 34 and 36 inclusive.
T. 21 S., R. 29 E.,
Secs. 1 to 5 inclusive;
Secs. 10 to 15 inclusive;
Secs. 22 to 27 inclusive;
Secs. 34 and 36 inclusive.
T. 22 S., R. 29 E.,
Secs. 1 to 5 inclusive;
Secs. 8 to 17 inclusive;
Secs. 19 to 36 inclusive.
T. 23 S., R. 29 E.,
Secs. 1 to 17 inclusive;
Secs. 21 to 28 inclusive;
Secs. 33 to 36 inclusive.
T. 24 S., R. 29 E.,
Secs. 1 to 4 inclusive.
T. 18 S., R. 30 E.,
Secs. 8 to 17 inclusive;
Secs. 20 to 29 inclusive;
Secs. 32 to 36 inclusive.
T. 19 S., R. 30 E.,
T. 20 S., R. 30 E.,
T. 21 S., R. 30 E.,
T. 22 S., R. 30 E.,
T. 23 S., R. 30 E.,
T. 24 S., R. 30 E.,
Secs. 1 to 18 inclusive.
T. 19 S., R. 31 E.,
Secs. 7, 18;
Secs. 31 to 36 inclusive.
T. 20 S., R. 31 E.,
T. 21 S., R. 31 E.,
T. 22 S., R. 31 E.,
T. 24 S., R. 31 E.,
Secs. 1 to 18 inclusive;
Secs. 35 and 36.

T. 25 S., R. 31 E.,
Secs. 1 and 2.
T. 19 S., R. 32 E.,
Secs. 25 to 28 inclusive;
Secs 31 to 36 inclusive.
T. 20 S., R. 32 E.,
T. 21 S., R. 32 E.,
T. 22 S., R. 32 E.,
Secs. 1 to 12 inclusive.
T. 19 S., R. 33 E.,
Secs. 21 and 36 inclusive.
T. 20 S., R. 33 E.,
T. 21 S., R. 33 E.,
T. 22 S., R. 33 E.,
Secs. 1 to 12 inclusive.
T. 19 S., R. 34 E.,
Secs. 19 and 20;
Secs. 29 to 32 inclusive.
T. 20 S., R. 34 E.,
Secs. 3 and 10 inclusive;
Secs. 15 and 36 inclusive.
T. 21 S., R. 34 E.,
Secs. 5 to 8 inclusive;
Secs. 17 to 20 inclusive;
Secs. 29 to 32 inclusive.
T. 22 S., R. 34 E.,
Sec. 6.

The area described, including public and non-public lands, aggregates 497,002.03 acres, more or less.

Section 4. *Administrative Provisions.* The Director, Bureau of Land Management, is authorized to delegate responsibilities herein as are determined appropriate.

Section 5. *Effective Date.* This Order is effective immediately.

Dated: October 21, 1986.

Donald Paul Hodel,

Secretary of the Interior.

[FR Doc. 86-24314 Filed 10-27-86; 8:45 am]

BILLING CODE 4310-10-M

Bureau of Land Management

[I-21104]

Idaho; Realty Action, Sale of Public Land in Power County

AGENCY: Bureau of Land Management, Idaho, Interior.

ACTION: Notice of Realty Action, Sale of Public Land in Power County, Idaho.

DATE AND ADDRESS: The sale offering will be held on Wednesday, January 14, 1987, at 2:00 p.m. at Deep Creek Resource Area Office, 138 South Main, Malad City, Idaho 83252.

SUMMARY: The following described land has been examined and through the public-supported land use planning process have been determined to be suitable for disposal by sale pursuant to section 203 of the Federal Land Policy and Management Act of 1976, at no less than fair market value as determined by an appraisal:

Parcel	Legal description	Fair market value	Sale type
I-21104	T. 10 S., R. 33 E., B.M.; Sec. 17, Ne¼SE¼, SW¼ (10 acres).	\$2,000	Direct.

When patented, the lands will be subject to the following reservations:

Parcel	Reservations
I-21104	Ditches and canals, oil and gas to U.S.

Continued use of the land by valid right-of-way holders is proper subject to the terms and conditions of the grant. Administrative responsibility previously held by the United States will be assumed by the patentee.

The previously described lands are hereby segregated from appropriation under the public land laws including the mining laws for a period of 270 days or until patent is issued, whichever comes first.

Sale Procedures

Sale parcel I-21104 is being offered directly to Luther Estep because of his past inadvertent use of the parcel.

Fair market value must be submitted and will constitute an application to purchase that portion of the mineral estate of no known value for the parcel. A thirty percent (30%) deposit must be submitted and an additional \$50,000 non-returnable mineral conveyance processing fee is required. The filing fee and deposit must be paid by certified check, money order, bank draft, or cashiers check. Submittal will be rejected if accompanied by a personal check.

SUPPLEMENTARY INFORMATION: Detailed information concerning the conditions of the sale can be obtained by contacting Wes Duggan at (208) 766-4766 or Karl Simonson at (208) 678-5514.

For a period of 45 days from the date of publication of this notice in the *Federal Register*, interested parties may submit comments to the District Manager, Bureau of Land Management, Rt. 3, Box 1, Burley, Idaho 83318. Objections will be reviewed by the State Director who may sustain, vacate, or modify this realty action. In the absence of any objections, this realty action will become the final determination of the Department of Interior.

Dated: October 20, 1986.

John Davis,

District Manager, Burley.

[FR Doc. 86-24263 Filed 10-27-86; 8:45 am]

BILLING CODE 4310-GG-M

[NM-060-07-4322-02]

Roswell District Grazing Advisory Board; Meeting

AGENCY: Bureau of Land Management, Interior.

ACTION: Roswell District Grazing Advisory Council Meeting.

SUMMARY: This notice sets forth the schedule and proposed agenda of a forthcoming meeting of the Roswell District Grazing Advisory Board.

DATE: Tuesday, November 25, 1986, beginning at 10 a.m. A public comment period will be held following the last agenda item.

Location: BLM Roswell District Office, 1717 West Second St., Roswell, NM 88201.

FOR FURTHER INFORMATION CONTACT: David L. Mari, Associate District Manager, or Guadalupe Martinez, Public Affairs Specialist, Bureau of Land Management, P.O. Box 1397, Roswell, NM 88201, (505) 622-9042.

SUPPLEMENTARY INFORMATION: The proposed agenda will include: (1) Carlsbad RMP Completion; (2) Statewide Road Policy; (3) BLM/FS Land Exchange; (4) Status of FY 86 Range Improvement Projects; (5) Status of FY Range Improvement Projects; (6) Range Improvement Task Force (expenditure of 8100 funds); (7) Operation Respect; (8) Animal Damage Control Plan. The meeting is open to the public. Interested persons may make oral statements to the Council during the public comment period or may file written statements. Anyone wishing to make an oral statement should notify the Associate District Manager by November 14, 1986. Summary minutes will be maintained in the District Office and will be available for public inspection during regular business hours within 30 days following the meeting. Copies will be available for the cost of duplication.

Francis R. Cherry, Jr.,
District Manager.

[FR Doc. 86-24265 Filed 10-27-86; 8:45 am]

BILLING CODE 4310-FB-M

[Alaska AA-48414-CG]

Alaska; Proposed Reinstatement of a Terminated Oil and Gas Lease

In accordance with Title IV of the Federal Oil and Gas Royalty Management Act (Pub. L. 97-451), a petition for reinstatement of oil and gas lease AA-48414-CG has been received covering the following lands:

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPT.
OIL CONSERVATION COMMISSION

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

CASE NO. 9316
Order No. R-111-P

APPLICATION OF THE OIL CONSERVATION
DIVISION UPON ITS OWN MOTION TO
REVISE ORDER R-111, AS AMENDED, PERTAINING
TO THE POTASH AREAS OF EDDY AND LEA
COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on
February 18, 1988, at Santa Fe, New Mexico, before the Oil
Conservation Commission of New Mexico, hereinafter referred to
as the "Commission."

NOW, on this 21st day of April, 1988, the Commission,
a quorum being present, having considered the testimony
presented and the exhibits received at said hearing, and being
fully advised in the premises,

FINDS THAT:

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

(2) Order R-111-A was entered July 14, 1955, and since
that time no amendments have been entered, except amendments
to Exhibit "A" attached thereto, despite significant advances
in drilling technology and practices.

(3) Operation under Order R-111-A has become virtually
unworkable because of 1) the lack of tolerance on the part of
both oil/gas and potash industries in regarding the activities
of the other industry in areas where leasehold interests are
overlapping and 2) confusion recording the boundaries of the
known Potash Leasing Area (KPLA) established by the U.S.
Bureau of Land Management (BLM) and the R-111-A area as
amended by Orders R-111-B through O.

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CO The then Director of the **Oil** Conservation Division (OCD) by memorandum dated March 21, 1986 convened a study committee of volunteer **representatives** from the oil and potash industries and other interested parties.

(5) The committee met May 29, September 25-26, and November 13-14 (field trip) in 1986 and on March 19, 1987.

(6) By committee agreement a work committee was formed from the larger committee consisting of three members and one alternate from each industry and this work committee was **chaired** by the OCD Chief Petroleum Engineer and charged with the **responsibility** to develop proposed amendments to Order R-111-A. It met on April 30, May 1, July 23-24 and November 23, 1987.

(7) Each meeting of the work committee was held in the presence of **representatives** of both **BLM** and OCD; and at its final meeting November 23, 1987 an agreement was reached and signed by the committee members present, which agreement is attached hereto as Exhibit "B", for the purpose of providing background information and **acknowledging** the concensus reached by **representatives** of the **Oil** and Gas and Potash industries relating to the multiple use of resources in the potash area.

(8) Exhibit "B" is regarded by the Commission as a report of both the work committee and the **full** study committee since a draft copy of a nearly identical agreement was furnished to each member of the study **committee** for **comment**, and comments received thereon were addressed at the final **meeting**.

(9) The agreement represents a compromise by both **industries**, the potash operators **relinquishing** lower grade marginal or uneconomic ore deposits in order to more **fully** protect their higher grade ore deposits; and the oil/gas operators receiving such lands containing sub-economic ore deposits as prospective **drill-sites**.

(10) The **Oil** and Gas Act, 70-2-3 F **NMSA** 1978, declares as waste "**drilling** or producing operations for **oil** or gas within any area containing commercial deposits of potash where such operations would have the effect unduly to reduce the total quantity of such commercial deposits of potash which may reasonably be recovered -- or where such operations would interfere unduly **with** the orderly commercial development of such potash **deposits**".

(11) The **Oil** and Gas Act in 70-2-12 B(17) empowers the Division "to regulate and, where necessary, prohibit **drilling**

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or producing operations for oil and gas" in areas which would cause waste as described in 70-2-3 F.

(12) The report of the work committee presents a reasonable process for determining where **wells** for oil and gas would cause waste of potash and the pertinent portions of said report should be contained in the order as a reasonable process for prohibiting oil and gas drilling in such areas in the absence of substantial evidence that waste of potash as described by the statute would not result.

(13) Release of methane into potash mine workings would endanger the **lives** of miners and would render further mining activities uneconomic because of the additional, and more expensive safety requirements which would be imposed by the Mine Safety and Health **Administration (MSHA)** of the U.S. Department of Labor.

(14) Salt and potash deposits are **essentially** non-porous and impermeable but are inter-bedded with clay seams which, in an undisturbed state are porous but of extremely low **permeability**.

(15) Primary mining activity creates minor localized disturbance but secondary mining causes subsidence of the overburden the effects of which tend to expand beyond the mined out area a distance **approximately equal** to the depth of the mined area.

(16) During the drilling of **wells** for oil and gas, measures should be taken to protect the **salt-protection** casing from internal pressures greater than the designed burst resistance plus a safety factor so as to prevent any possible entry of methane into the salt and potash interval.

(17) A proposed revision of Order R-111-A was presented at the hearing and comments were received thereon both orally at the hearing and in writing subsequent to the hearing, the record **being** held open for two weeks subsequent to the hearing, as announced by the Chairman.

(18) Testimony and comments both in support and in **opposition** to the proposed revision of the order were received at the hearing and subsequent thereto, some pointing out that the number of **oil** or gas **wells** which could be **drilled** under the terms of the committee report would be reduced but no comments addressed the possible waste of potash as a result of **additional** drilling.

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(19) One member of the work committee from the potash industry testified the proposed revision of Order R-111-A failed to prohibit drilling in the commercial ore areas and was therefore contrary to the work committee report and the **Oil and Gas Act**.

(20) The Commission cannot abdicate its discretion to consider applications to drill as exceptions to **its** rules and orders but in the interest of preventing waste of potash should deny any application to drill in commercial potash areas as recommended in the work committee report, unless a clear **demonstration** is made that commercial potash **will** not be **wasted unduly** as a result of the **drilling** of the well.

(21) Confusion can be reduced and efficiencies can be obtained by making the area covered by Order **R-111** coterminous with the KPLA as determined by the **BLM**, and the area should be expanded and contracted by the regular **pool** nomenclature procedure rather than by separate hearings and further revisions of Order R-111.

(22) Expansion of the R-111 area to coincide with the KPLA **will** bring under the purview of this order areas where potash is either absent or **non-commercial** and such areas should be granted less stringent casing, cementing and plugging **requirements**, at the discretion of the OGD district supervisor.

(23) The proposed revision of Order R-111-A **will** permit the **drilling** of **wells** for oil or gas in areas previously not **available** for such drilling and **will** prevent waste of potash, and further, **will** serve to reduce confusion and uncertainty in the conduct of operations by both the potash and **oil/gas** industries, all to the benefit of the state and **its** citizens.

IT IS THEREFORE ORDERED THAT:

This order **shall** be known as The Rules and Regulations Governing the Exploration and Development of **Oil** and Gas in Certain Areas Herein Defined, Which Are Known To Contain Potash Reserves.

A. OBJECTIVE

The objective of these **Rules** and Regulations is to prevent waste, protect correlative rights, assure maximum conservation of the oil, gas and potash resources of New **Mexico**, and permit the economic recovery of **oil**, gas and potash minerals in the area hereinafter defined.

B. THE POTASH AREA

(1) The Potash **Area**, as described in Exhibit A attached hereto and made a part hereof, represents the area in various parts of which potash mining operations are now in progress, or in which core tests indicate commercial potash reserves. Such area is coterminous with the Known Potash Leasing Area (KPLA) as determined by the U.S. Bureau of Land Management (**BLM**).

(2) The Potash **Area**, as described in Exhibit "A" may be revised by the Division after due notice and hearing at the regular pool nomenclature hearings, to reflect changes made by BLM in **its** KPLA.

C. DRILLING IN THE POTASH AREA

(1) **All** drilling of oil and gas **wells** in the Potash Area **shall** be subject to these Rules and Regulations.

(2) No **wells shall** be drilled for **oil** or gas at a location which, in the opinion of the Division or its duly authorized **representative**, would result in undue waste of potash deposits or constitute a hazard to or interfere unduly with mining of potash deposits.

No mining operations **shall** be conducted in the Potash Area that would, in the opinion of the Division or its duly authorized **representative**, constitute a hazard to oil or gas production, or that would unreasonably interfere with the orderly development and production from any **oil** or gas **pool**.

(3) Upon discovery of oil or gas in the Potash **Area**, the **Oil** Conservation Division may promulgate pool rules for the affected area after due notice and hearing in order to address conditions not **fully** covered by these rules and the general rules.

(4) The **Division's** District **Supervisor** may **waive** the requirements of Sections D and F which are more rigorous than the general rules upon satisfactory showing that a location is outside the Life of Mine Reserves (**LMR**) and surrounding buffer zone as defined hereinbelow and that no commercial potash resources **will** be unduly diminished.

(5) AM encounters with flammable gas, including hydrogen sulfide, during drilling operations **shall** be reported immediately to the appropriate OCD District office followed by a written report of same.

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D. DRILLING AND CASING PROGRAM

(1) For the purpose of the regulations and the **drilling of wells for oil and gas, shallow and deep zones** are defined as follows:

(a) The **shallow zone shall include all** formations above the base of the Delaware Mountain Group **or,** above a depth of 5,000 feet, whichever is lesser.

(b) The deep zone shall include all formations **below** the base of the Delaware Mountain Group **or,** below a depth of 5,000 feet, whichever is lesser.

(c) For the purpose of **identification,** the base of the Delaware Mountain Group is hereby identified as the geophysical **log** marker found at a depth of 7485 feet in the Richardson and Bass No. 1 Rodke **well** in Section 27, Township 20 South, Range 31 **East,** NMPM, Eddy County, New Mexico.

(2) Surface Casing String:

(a) A surface casing string of new or used oil field casing in good condition **shall** be set in the "Red Bed" section of the basal Rustler formation immediately above the **salt** section, or in the anhydrite at the top of the **salt** section, as determined necessary by the regulatory **representative** approving the drilling operations, and the cement **shall** be circulated to the surface.

(b) Cement **shall** be **allowed** to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(c) Casing and **water-shut-off** tests **shall** be made both before and after drilling the plug and **below** the casing seat as follows:

(i) If rotary tools are used, the mud **shall** be displaced with water and a hydraulic pressure of six hundred (600) pounds per square **inch shall** be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures **shall** be applied.

(ii) **If** cable tools are used, the mud **shall** be **bailed** from the hole, and **if** the

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hole does not remain dry for a period of one hour, corrective measures **shall** be applied.

(d) The above requirements for the surface casing string **shall** be applicable to both the shallow and deep zones.

(3) Salt Protection String:

(a) A **salt** protection string of new or used oil field casing in good condition **shall** be set not less than one hundred (100) feet nor more than six hundred (600) feet **below** the base of the **salt** section; provided that such string **shall** not be set **below** the top of the highest known oil or gas zone. **With** prior **approval** of the OCD District Supervisor the wellbore may be deviated from the vertical after completely penetrating Marker Bed No. 126 (USGS) but that section of the casing set in the deviated portion of the **wellbore** shall be centralized at each joint.

(b) The **salt** protection string **shall** be cemented, as follows:

(i) For **wells drilled** to the **shallow** zone, the string may be cemented with a nominal volume of cement for testing purposes only. If the exploratory test **well** is completed as a productive **well**, the string **shall** be re-cemented with sufficient cement to fill the annular space back of the pipe from the top of the first cementing to the surface or to the bottom of the **cellar**, or may be cut and **pulled** if the production string is cemented to the surface as provided in sub-section D (5)(a)(i) below.

(ii) For **wells drilled** to the deep zone, the string must be cemented **with** sufficient cement to fill the annular space back of the pipe from the casing seat to the surface or to the bottom of the **cellar**.

(c) If the cement **fails** to reach the surface or the bottom of the cellar, where required, the top of the cement **shall** be located by a temperature, gamma ray or other survey and additional cementing **shall** be done **until** the cement is brought to the point required.

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(d) The fluid used to mix with the cement shall be saturated with the salts common to the zones penetrated and with suitable proportions but not less than 1% of calcium chloride by weight of cement.

(e) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(f) Casing tests shall be made both before and after drilling the plug and below the casing seat, as follows:

(i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of one thousand (1000) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(g) The Division, or its duly authorized representative, may require the use of centralizers on the salt protection string when in their judgment the use of such centralizers would offer further protection to the salt section.

(h) Before drilling the plug a drilling spool installed below the bottom blowout preventer or the wellhead casing outlet shall be equipped with a rupture disc or other automatic pressure-relief device set at 80% of the API-rated burst pressure of new casing or 60% of the API-rated burst pressure of used casing. The disc or relief device should be connected to the rig choke manifold system so that any flow can be controlled away from the rig. The disc or relief device shall remain installed as long as drilling activities continue in the well until the intermediate or production casing is run and cemented.

(i) The above requirements for the salt protection string shall be applicable to both the shallow and deep zones except for sub-section D (3) (b) (i) and (ii) above.

(4) Intermediate String:

(a) In drilling **wells** to the deep zone for oil or gas, the operator **shall** have the option of running an intermediate **string** of pipe, unless the Division requires an intermediate string be run.

(b) Cementing procedures and casing tests for the intermediate string **shall** be the same as provided under sub-sections D (3) (c), (e) and (f) for the salt protection **string**.

(5) Production String:

(a) A production string **shall** be set on top or through the **oil** or gas pay zone and **shall** be cemented as **follows:**

(i) For **wells drilled** to the **shallow** zone the production string **shall** be cemented to the surface if the salt protection string was cemented only with a nominal **volume** for testing purposes, in which case the **salt** protection string can be cut and **pulled** before the production string is cemented; provided, that if the salt protection string was cemented to the **surface**, the production string **shall** be cemented **with a volume** adequate to protect the pay zone and the casing above such zone.

(ii) For **wells drilled** to the deep zone, the production string **shall** be cemented with a volume adequate to protect the pay zone and the casing above such zone; provided, that if no intermediate string **shall** have been run and cemented to the surface, the production string shall be cemented to the surface.

(b) Cementing procedures and casing tests for the production string **shall** be the same as provided under sub-section D (3) (c), (e) and (f) for the **salt** protection string; however if high pressure oil or gas production is discovered in an area, the Division may promulgate the necessary rules to prevent the charging of the **salt** section.

E. DRILLING FLUID FOR SALT SECTION

The fluid used **while** drilling the **salt** section shall consist of water, to which has been added sufficient salts of a character common to the zone penetrated to completely saturate the mixture. Other admixtures may be added to the fluid by the operator in overcoming any specific problem. **This requirement is specifically intended to prevent enlarged drill holes.**

F. PLUGGING AND ABANDONMENT OF WELLS

(1) **All wells** heretofore and hereafter drilled within the Potash Area shall be plugged in a manner and in accordance **with** the general rules or field rules established by the Division that **will** provide a solid cement plug through the **salt** section and any **water-bearing** horizon and prevent liquids or gases from entering the hole above or below the **salt** section.

(2) The fluid used to mix the cement shall be saturated with the salts common to the **salt** section penetrated and **with** suitable proportions but not more than three (3) percent of calcium chloride by weight of cement **being** considered the desired mixture whenever possible.

G. DESIGNATION OF DRILLABLE LOCATION FOR WELLS

(a) Within ninety (90) days following effective date of this Order and annually thereafter by January 31 if revised, each potash lessee, without regard to whether the lease covers State or Federal lands, **shall** file with the District Manager, BLM, and the State Land Office (SLO), a designation of the potash deposits considered by the potash lessee to be **its life-of-mine** reserves ("**LMR**"). For purposes of this Agreement, "**life-of-mine** reserves" means those potash deposits within the Potash Area reasonably **believed** by the potash lessee to contain potash ore in sufficient thickness and grade to be mineable using current day mining methods, equipment and technology. Information used by the potash lessee in identifying its LMR **shall** be filed with the BLM and SLO but **will** be considered privileged and confidential "trade secrets and **commercial . . . information**" within the meaning of 43 C.F.R. §2.13(c) (4) (1986), Section 19-1-2.1 NMSA 1978, and not subject to **public disclosure.**

(b) Authorized officers of the BLM and SLO shall review the information submitted by each potash lessee

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in support of **its** LMR designation on their respective lands and verify upon request, that the data used by the potash lessee in establishing the boundaries of **its** LMR is consistent with data **available** to the BLM and SLO. Any disputes between the BLM and potash lessee concerning the boundary of a designated LMR **shall** be resolved in accordance with the Department of **Interior's** Hearings and **Appeals** Procedures, 43 C.F.R. Part 4 (1986).

(c) A potash lessee may amend its designated LMR by **filing** a revised **designation with** the BLM and SLO accompanied by the information referred to in Section A above. Such amendments must be **filed** by January 31 next following the date the **additional** data becomes **available**.

(d) Authorized officers of the BLM and SLO **shall** commit the designated LMR of each potash lessee to a **map(s)** of **suitable** scale and thereafter revise the **map(s)** as necessary to reflect the latest amendments to any designated **LMRs**. These maps **shall** be considered privileged and confidential and exempt from disclosure under 43 C.F.R. Part 2 and §19-1-2.1 **NMSA** 1978, and **will** be used only for the purposes set forth in this Order.

(e) The foregoing procedure can be modified by **policy** changes within the BLM and State Land Office.

(2) Before commencing drilling operations for oil or gas on any lands within the Potash Area, the **well** operator **shall** prepare a map or plat showing the location of the proposed **well**, said map or plat to accompany each copy of the Notice of Intention to Drill. In addition to the number of copies required by the Division, the **well** operator **shall** send one copy by registered **mail** to each potash operator holding potash leases within a radius of one **mile** of the proposed **well**, as reflected by the plats submitted under paragraph I (2). The **well** operator **shall** furnish proof of the fact that said potash operators were notified by registered **mail** of his intent by attaching return receipt to the copies of the Notice of Intention to **Drill** and plats furnished the Division.

(3) Drilling applications on federal lands **will** be processed for approval by BLM. Applications on state or patented lands **will** be processed by the Division and, in the case of state **lands**, in **collaboration** with the SLO. The Division **will** first ascertain from the BLM or SLO that the location is not within the LMR area. Active mine workings and **mined-out** areas **shall** also be treated as LMR. Any application to **drill** in the LMR area, including buffer zones, may be approved only by mutual agreement of lessor and lessees of

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both potash and oil and gas interests. Applications to **drill** outside the LMR **will** be approved as indicated below; provided there is no protest from potash lessee within 20 days of his receipt of a copy of the notice:

- (a) a **shallow well shall be drilled no closer** to the LMR than one-fourth (1/4) mile or 110% of the depth of the ore, whichever is greater.
- (b) A deep **well shall be drilled no closer than one-half (1/2) mile** from the LMR.

H. INSPECTION OF DRILLING AND MINING OPERATIONS

A **representative** of any potash lessee within a radius of one **mile** from the **well** location may be present during **drilling**, cementing, casing, and plugging of any **oil** or gas **wells** to observe conformance with these regulations. Likewise, a **representative** of the oil and gas lessee may inspect mine workings on his lease to observe conformance with these regulations.

I. FILING OF WELL SURVEYS, MINE SURVEYS AND POTASH DEVELOPMENT PLANS

(1) Directional Surveys:

The Division may require an operator to file a certified directional survey from the surface to a point below the lowest known **potash-bearing** horizon on any **well drilled** within the Potash **Area**.

(2) Mine Surveys:

Within 30 days after the adoption of this order and thereafter on or before January 31st of each year, each potash operator **shall** furnish the Division two copies of a plat of a survey of the location of his **leaseholdings** and all of his open mine workings, which plat **shall** be **available** for **public** inspection and on a scale acceptable to the Division.

J. APPLICABILITY OF STATEWIDE RULES AND REGULATIONS

All general statewide rules and regulations of the **Oil** Conservation Division governing the development, operation, and production of **oil** and gas in the State of New

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Case No. 9316
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Mexico not inconsistent or in **conflict** herewith, are hereby adopted and made **applicable** to the areas described herein.

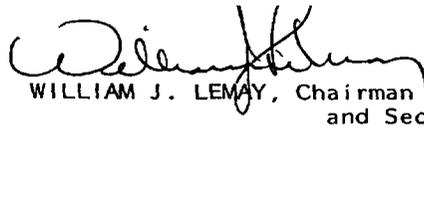
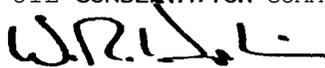
IT IS FURTHER ORDERED THAT:

(1) Order R-111 and amendments through R-111-O are hereby rescinded.

(2) 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



WILLIAM J. LEMAY, Chairman
and Sec

EXHIBIT "A"
CASE 9316
ORDER R-111-P

CONSOLIDATED LAND DESCRIPTION OF THE KNOWN POTASH
LEASING AREA, AS OF FEBRUARY 3, 1988

EDDY COUNTY, NEW MEXICO

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM

Section 10: SE/4 SE/4
Section 11: S/2 SW/4
Section 13: W/2 SW/4 and SE/4 SW/4
Section 14: W/2 NE/4, NW/4 and S/2
Section 15: E/2 NE/4, SE/4 SW/4 and SE/4
Section 22: N/2, N/2 SW/4, SE/4 SW/4 and SE/4
Section 23: All
Section 24: N/2 NW/4, SW/4 NW/4 and NW/4 SW/4
Section 26: NE/4, N/2 NW/4 and SE/4 NW/4
Section 27: N/2 NE/4 and NE/4 NW/4

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM

Section 11: SE/4 SE/4
Section 12: SE/4 NE/4 and S/2
Section 13: All
Section 14: NE/4, SE/4 NW/4 and S/2
Section 15: SE/4 SE/4
Section 22: NE/4, E/2 W/2 and SE/4
Section 23: All
Section 24: All
Section 25: NW/4 NW/4
Section 26: N/2 NE/4 and NW/4
Section 27: NE/4 and E/2 NW/4

TOWNSHIP 19 SOUTH RANGE 30 EAST, NMPM

Section 2: SW/4
Section 3: W/2 SW/4, SE/4 SW/4, S/2 SE/4 and
NE/4 SE/4
Section 4: Lots 3 and 4. SW/4 NE/4, S/2 NW/4
and S/2
Section 5: Lots 1, 2. and 3, S/2 NE/4.
S/2 NW/4 and S/2
Section 6: S/2 SE/4 and NE/4 SE/4
Sections 7 to 10 inclusive
Section 11: S/2 NE/4, NW/4 NW/4 and S/2
Section 12: NE/4, S/2 NW/4 and S/2
Section 13: NE/4, W/2, N/2 SE/4 and SW/4 SE/4
Sections 14 to 18 inclusive
Section 19: Lots 1, 2, and 3, NE/4, E/2 NW/4,
NE/4 SW/4, E/2 SE/4 and
NW/4 SE/4
Sections 20 to 23 inclusive
Section 24: NW/4. NW/4 SW/4 and S/2 SW/4

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Section 25: NW/4 NW/4
Section 26: NE/4 NE/4, W/2 NE/4, W/2, W/2 SE/4
and SE/4 SE/4
Section 27: Al I
Section 28: Al I
Section 29: E/2, E/2 NW/4 and NW/4 NW/4
Section 32: E/2 and SE/4 SW/4
Section 33 to 35 inclusive
Section 36: NW/4 NW/4, S/2 NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 31 EAST, NMPM

Section 7: Lots 1, 2, and 3 and E/2 NW/4
Section 18: Lots 1, 2, and 3 and SW/4 NE/4,
E/2 NW/4 and NE/4 SW/4
Section 31: Lot 4
Section 34: SE/4 SE/4
Section 35: S/2 SW/4 and SW/4 SE/4
Section 36: S/2 SE/4

LEA COUNTY. NEW MEXICO

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM

Section 31: Lot 4
Section 33: Lots 1 to 4 inclusive and N/2 S/2
Section 34: Lots 1 to 4 inclusive and N/2 S/2
Section 35: Lots 1 to 4 inclusive and N/2 S/2
Section 36: Lots 1 to 4 inclusive, SE/4 NE/4,
NW/4 SW/4 and NE/4 SE/4

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM

Section 22: SE/4 NE/4, E/2 SW/4 and SE/4
Section 23: S/2 NW/4, SW/4, W/2 SE/4 and
SE/4 SE/4
Section 25: SW/4 NW/4, W/2 SW/4 and SE/4 SW/4
Section 26: Al I
Section 27: Al I
Section 28: S/2 SE/4 and NE/4 SE/4
Section 30: Lots 2 to 4 inclusive, S/2 NE/4,
SE/4 NW/4, E/2 SW/4 and SE/4
Section 31: Al I
Section 32: NE/4, S/2 NW/4 and S/2
Sections 33 to 35 inclusive
Section 36: W/2 NE/4, SE/4 NE/4, NW/4 and S/2

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM

Section 31: Lots 3 and 4

EDDY COUNTY. NEW MEXICO

TOWNSHIP 2() SOUTH, RANGE 29 EAST, NMPM

Section 1: SE/4 NE/4 and E/2 SE/4
Section 13: SW/4 **NW/4**, W/2 SW/4 and SE/4 SW/4
Section 14: **NW/4** NE/4, S/2 NE/4, NW/4 and S/2
Section 15: E/2 E/2, SE/4 SW/4 and W/2 SE/4
Section 22: E/2 and E/2 NW/4
Section 23: All
Section 24: SW/4 NE/4, W/2, W/2 SE/4 and
SE/4 SE/4
Section 25: N/2, SW/4, W/2 SE/4 and NE/4 SE/4
Section 26: All
Section 27: E/2
Section 34: NE/4
Section 35: N/2
Section 36: W/2 NE/4 and NW/4

TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 4 inclusive
Section 5: Lots 1 to 3 inclusive, S/2 N/2
and S/2
Section 6: Lots 5, 6, and 7, S/2 NE/4, E/2 SW/4
and SE/4
Section 7: Lots 1 and 2. E/2 and E/2 NW/4
Sections 8 to 17 inclusive
Section 18: E/2
Section 19: E/2 and SE/4 SW/4
Sections 20 to 29 inclusive
Section 30: Lots 1 to 3 inclusive, E/2 and
E/2 W/2
Section 31: NE/4 and E/2 SE/4
Sections 32 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 31 EAST. NMPM

Section 1: Lots 1 to 3 inclusive, S/2 N/2
and S/2
Section 2: All
Section 3: Lots 1 and 2, S/2 NE/4 and SE/4
Section 6: Lots 4 to 7 inclusive, SE/4 NW/4,
E/2 SW/4, W/2 SE/4 and
SE/4 SE/4
Section 7: All
Section 8: S/2 N/2 and S/2
Section 9: S/2 NW/4, SW/4, W/2 SE/4 and
SE/4 SE/4
Section 10: E/2 and SW/4
Sections 11 to 36 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM

Sections 1 to 4 inclusive
Section 5: S/2 SE/4
Section 6: Lots 4 to 7 inclusive, SE/4 NW/4,
E/2 SW/4 and SW/4 SE/4
Sections 7 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM

Section 6: Lots 3 to 7 inclusive, SE/4 NW/4,
E/2 SW/4, W/2 SE/4 and
SE/4 SE/4
Section 7: All
Section 8: SW/4, S/2 NW/4, W/2 SE/4 and
SE/4 SE/4
Section 16: W/2 NW/4, SE/4 NW/4, SW/4 and
S/2 SE/4
Sections 17 to 21 inclusive
Section 22: N/2 NW/4, SW/4 NW/4, SW/4, W/2 SE/4,
and SE/4 SE/4
Section 26: SW/4, W/2 SE/4 and SE/4 SE/4
Sections 27 to 35 inclusive
Section 36: SW/4 NW/4 and W/2 SW/4

EDDY COUNTY, NEW MEXICO

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM

Sections 1 to 3 inclusive
Section 4: Lots 1 through 16, NE/4 SW/4 and
SE/4
Section 5: Lot 1
Section 10: N/2 NE/4, SE/4 NE/4 and SE/4 SE/4
Sections 11 to 14 inclusive
Section 15: E/2 NE/4 and NE/4 SE/4
Section 23: N/2 NE/4
Section 24: E/2, N/2 NW/4 and SE/4 NW/4
Section 25: NE/4 NE/4 and S/2 SE/4
Section 35: Lots 2 to 4 inclusive, S/2 NE/4,
NE/4 SW/4 and N/2 SE/4
Section 36: Lots 1 to 4 inclusive, NE/4,
E/2 NW/4 and N/2 S/2

TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM
Sections 1 to 36 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM

Sections 1 to 27 inclusive
Section 28: N/2 and N/2 S/2
Sections 29 to 31 inclusive
Section 32: NW/4 NE/4, NW/4 and **NW/4** SW/4
Section 34: N/2 NE/4
Section 35: N/2 N/2
Section 36: E/2. N/2 NW/4, SE/4 **NW/4** and
NE/4 SW/4

TOWNSHIP 21 SOUTH, RANGE 33 EAST, NMPM

Section 1: Lots 2 to 7 **inclusive**, Lots 10 to
14 inclusive. N/2 SW/4 and
SW/4 SW/4

Sections 2 to 11 inclusive
Section 12: NW/4 NW/4 and SW/4 SW/4
Section 13: N/2 NW/4, S/2 N/2 and S/2
Sections 14 to 24 inclusive
Section 25: N/2. SW/4 and W/2 SE/4
Sections 26 to 30 inclusive
Section 31: Lots 1 to 4 inclusive, NE/4,
E/2 W/2, N/2 SE/4 and
SW/4 SE/4
Section 32: N/2 and NW/4 SW/4
Section 33: N/2
Section 34: NE/4, N/2 NW/4 and E/2 SE/4
Section 35: All
Section 36: W/2 NE/4, NW/4 and S/2

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM

Section 17: W/2
Section 18: All
Section 19: Lots 1 to 4 inclusive, NE/4,
E/2 W/2. N/2 SE/4 and
SW/4 SE/4
Section 20: NW/4 NW/4
Section 30: Lots 1 and 2 and NE/4 NW/4
Section 31: Lots 3 and 4

EDDY COUNTY. NEW MEXICO

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM

Section 36: E/2 E/2

TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM

Sections 1 and 2 inclusive
Section 3 SE/4 SW/4 and SE/4
Section 9 S/2 NE/4 and S/2
Sections 10 to 16 inclusive
Section 17 S/2 SE/4
Section 19 SE/4 NE/4 and E/2 SE/4
Sections 20 to 28 inclusive
Section 29 N/2 N/2, S/2 NE/4 and SE/4
Section 30 NE/4 NE/4
Section 31 Lots 1 to 4 inclusive, S/2 NE/4,
E/2 W/2 and SE/4
Sections 32 to 36 inclusive

TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 36 inclusive

TOWNSHIP 22 SOUTH, RANGE 31 EAST, NMPM

Sections 1 to 11 inclusive
Section 12: NW/4 NE/4, NW/4 and NW/4 SW/4
Section 13: S/2 NW/4 and SW/4
Sections 14 to 23 inclusive
Section 24: W/2
Section 25: NW/4
Section 26: NE/4 and N/2 NW/4
Sections 27 to 34 inclusive

LEA COUNTY, NEW MEXICO

TOWNSHIP 22 SOUTH, RANGE 32 EAST, NMPM

Section 1: Lot 1
Section 6: Lots 2 to 7 inclusive and SE/4 NW/4

TOWNSHIP 22 SOUTH, RANGE 33 EAST, NMPM

Section 1: Lots 1 to 4 inclusive, S/2 N/2 and
N/2 S/2
Section 2: Al I
Section 3: Lot 1, SE/4 NE/4 and SE/4
Section 6: Lot 4
Section 10: NE/4
Section 11: NW/4 NE/4 and NW/4

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM

Section 6: Lots 4 to 6 inclusive

EDDY COUNTY, NEW MEXICO

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM

Section 1: Lot 1

TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM

Sections 1 to 5 inclusive

Section 6: Lots 1 to 6 inclusive, S/2 NE/4,
SE/4NW/4, E/2SW/4 and SE/4

Section 7: NE/4 and NE/4 NW/4

Section 8: N/2, N/2SW/4, SE/4SW/4 and SE/4

Sections 9 to 16 inclusive

Section 17: NE/4 and E/2 SE/4

Sections 21 to 23 inclusive

Section 24: N/2, SW/4 and N/2 SE/4

Section 25: W/2NW/4 and NW/4 SW/4

Section 26: All

Section 27: All

Section 28: N/2, N/2 SW/4, SE/4 SW/4 and SE/4

Section 33: N/2NE/4 and NE/4NW/4

Section 34: NE/4, E/2NW/4, NW/4NW/4,
NE/4 SW/4 and SE/4

Section 35: All

Section 36: W/2 NE/4, NW/4 and N/2 SW/4

TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM

Sections 1 to 18 inclusive

Section 19: N/2, N/2 SW/4, SE/4 SW/4 and SE/4

Section 20: All

Section 21: All

Section 22: N/2, S/2 SW/4, N/2 S/2 and SE/4 SE/4

Sections 23 to 25 inclusive

Section 26: E/2, SE/4 NW/4 and SW/4

Section 27: N/2 NW/4, SW/4 NW/4, SE/4 SW/4,
S/2 SE/4 and NE/4 SE/4

Section 28: N/2 and SW/4

Section 29: N/2 and SE/4

Section 30: N/2 NE/4

Section 32: N/2 NE/4

Section 33: SE/4 NE/4, N/2 NW/4, NE/4 SE/4
and S/2 SE/4

Sections 34 to 36 inclusive

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM

Section 2: Lot 4, SW/4 NW/4 and W/2 SE/4

Sections 3 to 7 inclusive

Section 8: NE/4 NE/4, W/2 NE/4 and W/2

Section 9: N/2 N/2

Section 10: NW/4 NW/4 and SE/4 SE/4

Section 11: S/2 NE/4, S/2 SW/4 and SE/4

EXHIBIT "A" con'd

Section 12: SW/4 NW/4 and SW/4
Section 13: SW/4 NE/4, W/2 and W/2 SE/4
Section 14: All
Section 15: E/2, SE/4 NW/4 and SW/4
Section 16: SW/4 and S/2 SE/4
Section 17: NW/4 and S/2
Sections 18 to 23 inclusive
Section 24: W/2 NE/4 and W/2
Section 25: W/2 NE/4, NW/4, N/2 SW/4 and
NW/4 SE/4
Sections 26 to 34 inclusive
Section 35: N/2 NW/4 and SW/4 NW/4

TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM

Section 2: Lots 2 to 4 inclusive
Section 3: Lot 1

TOWNSHIP 24 SOUTH, RANGE 30 EAST, NMPM

Section 1: Lots 1 to 4 inclusive, S/2 N/2,
SW/4 and NW/4 SE/4

Section 2: All
Section 3: All
Section 4: Lots 1 and 2, S/2 NE/4, SE/4 NW/4,
SW/4 SW/4. E/2 SW/4 and SE/4
Section 9: N/2, N/2 SW/4, SE/4 SW/4 and SE/4
Section 10: All
Section 11: All
Section 12: W/2 NW/4 and NW/4 SW/4
Section 14: W/2 NE/4 and NW/4
Section 15: NE/4 and N/2 NW/4

TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM

Section 3: Lots 2 to 4 inclusive, SW/4 NE/4,
S/2 NW/4, SW/4 and W/2 SE/4
Section 4: All
Section 5: Lots 1 to 4 inclusive, S/2 N/2,
N/2 S/2 and SE/4 SE/4
Section 6: Lots 1 to 6 inclusive, S/2 NE/4,
SE/4 NW/4, NE/4 SW/4 and
N/2 SE/4
Section 9: E/2 and NW/4
Section 10: W/2 NE/4 and W/2
Section 35: Lots 1 to 4 inclusive, S/2 N/2 and
N/2 S/2
Section 36: Lots 1 and 2, SW/4 NW/4 and N/2 SW/4

TOWNSHIP 25 SOUTH, RANGE 31 EAST, NMPM

Section 1: Lots 3 and 4 and S/2 NW/4
Section 2: Lots 1 to 4 inclusive and S/2 N/2

STATEMENT OF AGREEMENT BETWEEN
THE POTASH **INDUSTRY AND** OIL AND
GAS INDUSTRY ON CONCURRENT
OPERATIONS IN THE POTASH AREA
IN EDDY AND LEA COUNTIES, NEW MEXICO

Introduction

This Statement of Agreement sets **forth** the joint agreement of the Potash Industry and Oil and Gas Industry on important issues concerning **the** concurrent development of potash and oil and gas reserves in Eddy and Lea Counties, New Mexico. It represents the efforts of numerous representatives from each Industry over many months and is intended to resolve many of the disputes that have arisen as a result of concurrent oil and gas drilling activities in the vicinity of underground potash **mining.**

The parties recognize that this Agreement will not resolve all disputes or disagreements that may arise and that regulatory intervention may still be necessary in some instances. By entering into this Agreement, however, each industry recognizes the right of the other to develop its mineral resources in a safe and economical manner and acknowledges that concurrent development of multiple mineral resources places certain limits on each industry. Each also agrees that these limits can be better defined through **good** faith discussions among industry representatives familiar with industry technology and practices than repeated and prolonged litigation or administrative proceedings.

EXHIBIT "B"
CASE NO. 9316
ORDER NO. R-111-P

In attempting to accomplish this, **each** Industry has made concessions on issues considered critical to it in a good faith effort to obtain concessions from the other. For this reason, both Industries agree that the terms of this Statement of Agreement are subject to the following conditions:

1. Upon approval by representatives of each Industry, the terms of the Agreement will be submitted to and must be adopted without substantial change by the New Mexico Oil Conservation Commission ("**OCC**") in lieu of the current Order R-111A, as amended;
2. The terms of the **Agreement** will be submitted to and must be adopted without substantial change by the U. S. Department of Interior, Bureau of Land Management ("BLM") in lieu of Section III (E) of the Secretary of the **Interior's** Order of October 21, 1986 [51 **Fed. Reg. 39425**];
3. Each Industry will use its best efforts to secure approval of the terms of the Agreement from the OCC and BLM; and
4. In the event the terms in the Agreement are not adopted without substantial change by both the OCC and the BLM, this Statement of Agreement will become null and void and will not be referred to by any Industry representative on the Study Committee in any future proceeding before the OCC or BLM.

It is the intention of the parties to this Agreement that:

(1) certain areas of potash deposits, called "**life-of-mine-reserves**" or "**LMR's**," be permanently protected from oil and gas drilling activities; and (2) to make available for oil and gas drilling activities, certain areas within the Potash Area. The area of potash deposits protected will be determined in accordance with this Agreement but, generally speaking, will encompass the yellow, orange and a major portion of the blue

areas shown on the BLM Potash Resources Map as it existed on October 1, **1984**. Areas in the Potash Area that will be available for oil and gas drilling activities will be **those** areas outside the designated **LMR's which**, generally speaking, will be the red, green, grey and a minor portion of the blue areas shown on the BLM Potash Resources Map as it existed on October 1, 1984, less areas designated as buffer zones by this **Agreement**.

I. The Potash Area

A. The Area covered by this Agreement shall be known as the "**Potash Area**".

B. The "Potash Area" includes those tracts of land in Southeastern New Mexico, from the surface downward, which are designated as a "potash **area**" by the Secretary of the Department of Interior in Section V of the Order dated October 21, 1986 and published in the **Federal Register** on October 28, 1986 [**51 Fed. Reg.** 39426]. It shall also include any subsequent revisions to such **designations**. The terms "potash" and "commercial deposits of potash" shall have the same meaning as assigned by the U. S. Department of Interior.

C. It is the intent of the parties to this Agreement that the "Potash Area" designated by the State of New Mexico be identical to that designated by the U. S. Department of Interior. Accordingly, if the "potash area" designated in the Secretarial Order of October 21, 1986 [**51 Fed. Reg.** 39425] is revised, the OCC, on its own motion after notice and hearing as

provided by applicable laws and regulations, will adopt the same revision.

II. Designation of Mine Reserves

A. Within ninety (90) days following adoption of this Agreement by the OCC and BLM and annually thereafter by January 31 if revised, each potash lessee, without regard to whether the lease covers State or Federal lands, shall file with the District Manager, BLM, a designation of the potash deposits considered by the potash lessee to be its life-of-mine reserves ("LMR"). For purposes of this Agreement, "**life-of-mine reserves**" means those potash deposits within the Potash Area reasonably believed by the potash lessee to contain potash ore in sufficient thickness and grade to be mineable using current day mining methods, equipment and technology. Information used by the potash lessee in identifying its LMR shall be filed with the BLM but will be considered privileged and confidential "trade secrets and commercial . . . information" within the meaning of 43 C.F.R. **§2.13(c)(4)** (1986) and not subject to public disclosure.

B. An authorized officer of the BLM shall review the information submitted by each potash lessee in support of its LMR designation and verify, upon request, that the data used by the potash lessee in establishing the boundaries of its LMR is consistent with data available to the BLM. Any disputes between the BLM and potash lessee concerning the boundary of a designated LMR shall be resolved in accordance with the

Department of Interior's Hearings and Appeals Procedures, 43 C.F.R. Part 4 (1986).

C. A potash lessee may amend its designated LMR by filing a revised designation with the BLM accompanied by the information referred to in Section A above. Such amendments must be filed by January 31 next following the date the additional data becomes available.

D. An authorized officer of the BLM shall commit the designated LMR of each potash lessee to a map(s) of suitable scale and thereafter revise the map(s) as necessary to reflect the latest amendments to any designated LMRs. These maps shall be considered privileged and confidential and exempt from disclosure under 43 C.F.R. Part 2 and will be used only for the purposes set forth in this Agreement.

III. Drilling in the Potash Area

A. All oil and gas wells drilled in the Potash Area after approval of this Agreement by the OCC and BLM, including those currently pending **before** the OCC and/or BUM, shall be subject to the terms of this Agreement.

B. It is the policy of the OCC and BLM to approve or deny applications for permits to drill (APD's) in the Potash Area in accordance with the following:

1. LMR and Buffer Zone. No oil or gas well shall be allowed from a surface location: (a) within the LMR of any potash lessee; (b) within one-fourth (1/4) mile, or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of the LMR of any potash lessee; or (c) where the well casing will pass within one-fourth (1/4) mile, or a distance equal to

the depth of the ore plus ten percent (10%), whichever is greater, of the LMR of any potash lessee.

2. Outside Buffer Zone But Within One-Half (1/2) mile of LMR. An APD for an oil or gas well at a location more than one-fourth (1/4) mile, or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, but less than one-half (1/2) mile from the LMR of any potash lessee may be approved only **if**: (a) the bottom hole location does not extend below the base of the Delaware Mountain Group, and (b) the well is drilled in accordance with the cementing and casing requirements set forth in Section V.
3. More Than One-Half Mile But Less Than One Mile From LMR. An APD for an oil or gas well at a location more than one-half (1/2) mile but less than one mile from the LMR of **any** potash lessee may be approved regardless of the depth of the bottom hole location provided: (a) wells with bottom hole locations below the base of the Delaware Mountain Group are drilled in accordance with the cementing and casing requirements set forth in Section V of this Agreement, and (b) wells to bottom hole locations above the base of the Delaware Mountain Group may **be** drilled without regard to the requirements in Section V of this Agreement but must be drilled in accordance with then current Industry safety standards.
4. More Than One Mile From LMR. An APD for an oil or gas well at a location more than one mile from the LMR of any potash lessee may be approved regardless of the depth of the bottom hole location and without regard to the requirements of Section V of this Agreement.
5. Open Mine Workings. No oil or gas well shall be allowed from any location where the well casing will pass within **one-fourth** (1/4) mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of any open mine workings.
6. Abandoned Mine Workings. No oil or **gas** well shall be allowed from any location where the well casing will pass through or within one-fourth (1/4) of a mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of any abandoned mine workings that are connected to an existing mine by **an** opening or barrier of one-hundred (100) feet or less unless the APD is accompanied by the sealing and safety plan and **certification** described in Paragraph C below.

7. An **APD** for a directionally drilled oil or gas well to a bottom hole location underlying the LMR of any potash **lessee** may be approved subject to the limitations and requirements set forth in Paragraphs 1 - 6 above. Directionally drilled holes shall be drilled vertically until they have completely penetrated Marker Bed No. 126 (U.S.G.S.) of the Salado Formation at which time they may be deviated.

C. An oil and gas operator desiring to drill a well to a bottom hole location that does not extend below the base of the Delaware Mountain Group from a surface location where the well casing will pass through or within one-fourth (1/4) of a mile or a distance equal to the depth of the ore plus ten percent (10%), whichever is greater, of abandoned mine workings that are connected to an existing mine by any opening or a barrier of one-hundred (100) feet or less shall prepare and submit to all affected potash lessees a plan and program for sealing off the area to be penetrated from other mine workings. Approval of any such plan shall be in the sole discretion of the affected potash lessees. **Any approved** plan shall be attached by the oil and gas operator to the APD for filing with the OCC, and/or BLM. The oil and gas operator shall also complete a **certification** in the form prescribed by the OCC and/or BLM that the drilling of such well will not create a safety hazard to affected potash lessees.

D. It is the belief of both parties that the provisions of this Agreement eliminate the need for drilling islands and three-year mining plans and, therefore, both agree that no drilling islands will be established in the Potash Area and the filing of three-year mining plans will be eliminated.

IV. Location of Wells and Notice to Potash Lessee

A. The BLM, upon request, will advise oil and gas lessees of the surface locations where wells will be allowed to develop the leases. Oil or gas leases covering areas designated a LMR by a potash lessee will be unitized to the extent possible with other areas where drilling is allowed.

B. An oil or gas operator desiring to drill an oil or gas well in the Potash Area or within one (1) mile of a potash lease shall prepare and file an APD with the OCC and/or BLM along with a map or plat showing the location of the proposed well. One copy of the APD and map or plat shall be served by registered mail, return receipt requested, on all potash leaseholders within one (1) mile of the proposed well location. However, if the APD is for an oil or gas well that will penetrate abandoned mine workings, all potash leaseholders in the Potash Area shall be notified. Proof of such service shall be attached to the APD and filed with the OCC and/or BLM. Within twenty (20) days of service of an APD and required documents, any potash leaseholder within one (1) mile of the proposed well location (or any affected potash lessee if the proposed well will penetrate abandoned mine workings) may file an objection with the OCC to the proposed well. If the objections cannot be resolved by agreement of the parties, the matter shall be referred for hearing before the OCC.

C. The failure of a potash leaseholder to object to a well location or its agreement to the drilling locations

referred to in this Agreement shall not constitute a release of liability. Oil and gas leaseholders and those persons and/or entities involved in the development of the lease shall be responsible as provided by law for any damages caused by them to any person by the release of gases or liquids into the strata or atmosphere as a result of drilling activities.

V. **Drilling and Casing Program**

[Same as current R-111-A]

VI. **Drilling Fluid for Salt Section**

[Same as current R-111-A]

VII. **Plugging and Abandonment of Wells**

[Same as current R-111-A]

VIII. **Filing of Well Surveys**

The OCC may require an oil and gas operator to file a certified directional survey **from** the surface to a point below the lowest known potash bearing horizon on all wells drilled in the Potash Area. All encounters with flammable gases, including **H₂S**, shall be reported by the operator to the OCC.

IX. Additional **Safety Requirements and Emergency Action**

A. All oil and gas drilling activities within the Potash Area shall be performed using appropriate technology, equipment, and procedures to reduce the hazards of such activities to underground mines and miners and be conducted in accordance with the prudent operator standard.

B. Only the minimum number of wells necessary to develop an oil or gas lease will be allowed within the Potash Area.

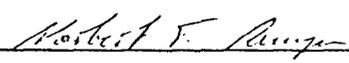
C. In the event the increased oil and gas drilling activities allowed by this Agreement result in a safety hazard or if data developed in the course of such increased activities make it reasonably appear that such activities are or will become a hazard to underground miners or mining activities, the BLM and/or OCC **will**, upon request, initiate proceedings in accordance with NMSA 70-2-23 and/or other applicable laws and regulations to review such data and take whatever emergency steps are **found** necessary to eliminate such hazard. Potash lessees may, in addition, initiate actions for injunctive relief under NMSA 70-2-29. The taking or failure to take such action by the OCC or any potash lessee shall not relieve **the** oil and gas **lessee** from liability for any damages caused by its oil and gas activities.

AGREED TO AND APPROVED THIS 23rd DAY OF November, 1987, BY THE FOLLOWING REPRESENTATIVES OF EACH INDUSTRY **COMPRISING** THE POTASH-OIL AREA SPECIAL RULES STUDY COMMITTEE:

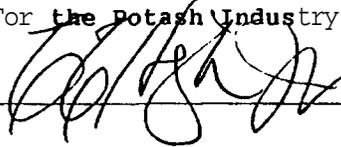
For the **Oil** and Gas Industry:



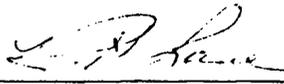




For the **Potash** Industry:



W.S. Shayer



Donald Galbraith

1727L-7



IN REPLY REFER TO:

3160 (9220) I
3530

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

New Mexico State Office
P.O. Box 27115
Santa Fe, New Mexico 87502-0115
www.blm.gov/nm



October 1, 2010

EMS Transmission – 10/14/2010
Instruction Memorandum No. NM-2011-003
Expires: 09/30/2012

To: DM-Pecos and FM-Carlsbad

From: State Director

Subject: Interim Processing Guidelines, Oil and Gas Applications for Permit to Drill (APDs) within the “Secretary’s Designated Potash Area” (Potash Area), Carlsbad Field Office

Program Area: Onshore Oil and Gas Operations, 43 CFR 3160.

Purpose: This directive provides guidance concerning the processing of APDs in the Potash Area, prior to the completion of the “potash enclave standards” review, which was ordered by the Interior Board of Land Appeals (IBLA) in IBLA 2003-334, et al. (IMC Kalium Carlsbad, Inc., et al.).

Action: The Potash Area contains significant portions where the potash enclave boundary will not change no matter what revisions may result from the reevaluation of the potash enclave standards. The APDs, which have been or will be submitted in these areas, may be processed prior to the completion of the enclave standards review. These areas are:

- Areas Lacking Potash Data – The current enclave was projected ½ mile beyond the last data point which meets or exceeds the current potash thickness and quality standards. In the areas beyond this ½-mile zone, lowering or not changing the enclave standards would have no effect on the enclave boundary, and raising the standards would contract the enclave boundary. Therefore, you may process APDs in areas beyond the ½-mile zone, where no data points exist, in accordance with the current procedures.
- Area Between the Known Potash Leasing Area and the Potash Area – The majority of this area is classified as barren of potash due to the lack of data points, data points which are either barren of potash, or which indicate subeconomic potash. You may process APDs in this area as long as they are in an area which will not change whether the potash standards are raised or lowered.

When you receive an APD located within this area, you must first review available core data to confirm whether or not the core encountered only barren zones or subeconomic potash. If no core data exists or no potash was encountered in a core, you may process the APD. If subeconomic potash was encountered, you must defer the APD until after the enclave standards review is completed.

- Areas with a Low Density of Core Holes – The areas currently classified as “Indicated Potash Reserves” or “Inferred Potash Resources” are delineated as such due to the low density of data points. Changing the potash standard will not alter the Indicated or Inferred designations, since not enough data exists to define enclave, no matter what revisions may be made to the potash standard. Therefore, you may process APDs in Indicated and Inferred areas where the enclave boundary was not determined using one data point in “Measured Potash Reserves” and one data point located in either Indicated or Inferred areas.
- Mined-Out Areas – Areas exist where the potash enclave has been mined right up to the limits of ore. Even though the 1993 enclave map shows small quantities of enclave beyond the mine workings, no reasonable access exists to mine these areas by mechanical mining techniques. Therefore, you may process APDs in these areas as though no enclave exists, while considering potential safety hazards due to subsidence resulting from past mining operations.
- Barren Areas Defined by Core Holes – There are limited barren areas defined by core holes which are completely barren of potash mineralization in all relevant ore zones. These areas may be on the exterior of the enclave, or they may be completely surrounded by enclave. The enclave boundary with these barren areas may shift if the potash standards are revised, but it can never extend beyond the barren core holes. Therefore, you may process APDs in areas which will remain barren regardless of a change in the potash standards.
- Areas in Residuum – Areas exist on the western side of the Potash Area where salt dissolution has occurred completely through all of the potash ore zones, leaving insoluble residuum in place. The enclave boundary, as defined by residuum and enclave core holes, is not expected to shift; residuum areas are defined as having a total absence of potash. Therefore, you may process APDs in the areas which are non-mineralized due to dissolution of the salts through the ore zones, which will not change regardless of a change in the potash standards.
- Drilling Islands – The 1986 Secretarial Potash Order allows for the establishment of drilling islands in certain areas within the potash enclave to allow oil and gas drilling while minimizing impacts to measured potash reserves. The decision to establish a drill island “wastes” a minimum amount of potash ore to allow oil and gas drilling; and this decision would not change, whether the potash standards are raised or lowered. Thus,

appropriately sited drill islands can continue to be established within the potash enclave, and you may continue to process APDs in existing drill islands during the period the potash standards are being reevaluated.

- **Infield Drilling** – There are several areas where oil and gas wells have been drilled in areas on approximately 40-acre spacing, immediately adjacent to the potash enclave. No matter if the potash standards are raised or lowered, these areas will remain impacted by the existing wells. Drilling more wells within these fields will not create further impacts to potash resources. Therefore, you may process APDs which constitute infield drilling in these areas.
- **Interior High-Grade Areas** – Interior portions of the enclave, where ore is present with a quality well above the present standards, should not change with a reasonable foreseeable revision to the cutoff standards.

The IBLA stated that, although ore being mined today is inherently “mineable under existing technology and economics,” it does not necessarily follow that recent mining also establishes economic cutoff grades or identifies the outer limits of a potash enclave. This is true because the average ore grade is a mixture of higher- and lower-grade ores and indicates that the true economic cutoff grade must be lower than that of ore being mined today. Thus, the economic cutoff grade should not be higher than the average ore grade currently being mined. Therefore, any enclave established by an ore grade above the current mined average should remain enclave, and you must process APDs in these areas for denial.

Areas Which Could Be Affected By a Change In the Cutoff Criteria

Certain portions of the Secretary’s Potash Area could be affected by a change in the cutoff standard. In these areas, APD processing will be deferred until after establishment of new potash standards.

- **Areas with Core Holes Currently Containing Marginal or Subeconomic Ore** – There are portions of the Secretary’s Potash Area, within the enclave or close to the enclave boundary, where core holes contain mineralization just above or just below the current cutoff standard that meet the other measured ore reserve criteria of thickness and core-hole spacing. In these areas, a change in the standard would have an effect on the location of the enclave boundary. Processing APDs submitted near these areas will be deferred until after the cutoff standard is determined.
- **Recently Drilled Core Holes** – Areas where core holes have been drilled, since the last update of the potash enclave and the core hole assays could meet or exceed the new cutoff standard for measured ore, shall have APDs deferred until the potash reserves in the area are evaluated.

- Areas Between Core Holes Containing Economic Ore and Barren Core Holes – Areas classified as barren, which contain one or more core holes which are barren of mineralization and are located within a reasonable distance of other core holes where geologic inference is acceptable, will most likely have a change in the enclave boundary.
- Processing APDs submitted in areas where the enclave could change if the cutoff standard is raised or lowered will be deferred until the cutoff standard is reevaluated.

Conclusion: You may process APDs, either for approval or denial, in areas which conclusively will not be affected by raising or lowering the economic cutoff standard for potash. For those areas that might change, processing APDs will be deferred until after the cutoff standard is reevaluated. In either instance, you should make specific case-by-case, fact-based determinations to process or defer a particular APD. Final decisions will be made for any APD processed according to the requirements of the Secretary's 1986 Order and the guidance of the IBLA decision.

Timeframe: This interim guidance shall be followed until the review of the potash enclave standard is completed.

Background: Please refer to the attached Interim Operating Guidelines.

Contact: Jay Spielman, Geologist, Fluid Minerals Program, at (505) 954-2152.

Authenticated by:
Diane M. Ellenburg

Signed by:
Linda S.C. Rundell

1 Attachment:

1 - Interim Operating Guidelines (8 pp)

Distribution

WO300, MIB, Rm. 5625 - 1

NM9200, M. Tupper - 1

NM9210, J. Spielman - 1

NM9210, A. Brumley - 1

NM9220, L. Wu - 1

**Interim Operating Guidelines
for
Processing Applications for Permit to Drill (APDs) in the Potash Area
Prior to the Economic Evaluation for Potash Cutoff Grades**

Overview

Various oil and gas operators appealed the Bureau of Land Management's (BLM) decisions to deny their APDs during the period between 1992 and 1995. These APDs were denied because they would result in undue waste of potash deposits or constitute a hazard to or unduly interfere with mining operations being conducted for the extraction of potash deposits. Several of these appeals were consolidated under one case (Interior Board of Land Appeals (IBLA) 92-612). The case was scheduled for hearing by the Office of Hearings and Appeals. Administrative Law Judge Patricia McDonald heard the case between August 15, 1996, and March 27, 1997. The record addressed was massive and complex. The submission of over 1,200 exhibits, 68,000 pages of documents, and the testimony of 37 witnesses resulted in a transcript of 15,275 pages. The review of the voluminous record took a great deal of time to review and decide. Administrative Law Judge McDonald issued her decision July 7, 2003. Administrative Law Judge McDonald's decision was appealed by the three interested parties in 2003 as cases IBLA 2003-334, 335, 336, and 341.

The IBLA issued a decision in IBLA 2003-334, 335, 336, and 341 on September 7, 2006, regarding the appeals of 72 denied APDs. In this decision, the IBLA stated "the identification of potash enclaves is central to the BLM's proper administration of the Potash Area under the Secretarial Order." The IBLA found "that the BLM failed to consider existing technology and economics based upon the best data currently available in periodically identifying and revising potash enclaves under and as required by the Secretarial Order." The IBLA remanded most of the 72 denied APDs because the record failed to establish that they were located in properly identified potash enclaves.

The potash cutoff standard, established by Donald M. Van Sickle in 1974, was inherent in the establishment of the potash enclave. That standard defined the economic cutoffs for conventionally mined potash ores as 4 feet at 10 percent K₂O Sylvite, 4 feet at 4 percent K₂O Langbeinite, or a mixed ore equivalent of Sylvite and Langbeinite. Since that standard had not been revisited since 1974, IBLA found the BLM had not considered existing technology and economics in establishing the potash enclave. Thus, the IBLA remanded the APDs for further consideration of the potash enclave prior to the BLM making new decisions.

Mineral Lands Classification Board Determination of Cutoff

In 2005, the BLM convened a Mineral Lands Classification Board to determine if the potash enclave cutoff grade should be changed as directed by Administrative Law Judge McDonald's 2003 decision in the IBLA 92-612. Administrative Law Judge McDonald stated, "the record does not support a conclusion that the standards of 4 feet of 10 percent K₂O and Sylvite and

4 feet of K₂O of Langbeinite, or a combination of the two, as defined by Van Sickle in 1974, continues to identify the thickness and quality of potash which is mineable under existing technology and economics” as required by the Secretarial Order of 1986.

The Board made their determination based on the assumption that the best way to determine the parameters or standards that constituted ore is to examine the actual mining that is occurring. The Board examined numerous mining areas where development mining occurred to the “economic limit” of the ore body. The Board found that for Sylvite, development mining was discontinued when the ore grade was close to or below 10 percent K₂O Sylvite. Since very little Langbeinite ore has been mined at the economic cutoff, a simple ratio was used to determine the cutoff grade for Langbeinite. (Assuming mining costs, milling costs, and sales value are similar to Sylvite.) The analysis yields a cutoff grade for Langbeinite of 4 percent K₂O.

The Mineral Land Classification Board was convened during the time the IBLA was reviewing Administrative Law Judge McDonald’s decision in IBLA 92-612.

The IBLA’s Response and the Mineral Lands Classification Board

The IBLA concluded an analysis of the type used by the Board was inadequate in the determining the lowest grades that are mineable under existing technology and economics. The IBLA stated in 2003-334, et al.:

“Since potash mining is not a charitable undertaking, it logically follows that potash ore grades currently being mined are ‘mineable under existing technology and economics.’ It does not, however, necessarily follow that recent mining also establishes applicable economic cutoff grades (i.e., grades below which it is no longer economic to mine potash) or identifies the outer limits of a potash enclave (i.e., minimum grades of potash ore that are mineable under existing technology and economics).”

“For example, if 15 percent Sylvite were mined, such could support a finding that > 15 percent Sylvite is mineable but sheds little light on whether 10 percent is also mineable (but yet to be mined). Such mining would neither confirm nor rebut the continuing validity of the Van Sickle Standard (i.e., 4 feet of 10 percent Sylvite) for identifying potash enclaves under the Secretarial Order.” (170 IBLA 40.)

The Problem

The process of reevaluating the potash enclave is complicated and time consuming. The entire process could take several years to complete. In the meantime, appealed APDs were remanded, and new APDs continue to be submitted. Delaying the processing of APDs places a burden on the oil and gas companies and prevents the BLM from meeting the deadlines established in the Energy Policy Act.

To avoid holding up all APDs until the potash enclave is reevaluated, we recommend processing all APDs that we determine are not located in an area which could be affected by a foreseeable change in the enclave standard. Three possible outcomes exist for an evaluation of the enclave standard:

1. The standard will remain the same and the enclave will not change.
2. The standard will be raised and the enclave will contract.
3. The standard will be lowered and the enclave will expand.

Below is a brief discussion of the affects each outcome will have on the enclave.

The Standard Remains the Same

If the economic standard remains the same as it is today, there will be no change in the boundary of the enclave. Retaining the existing standard is supported by the conclusions reached by the Mineral Lands Classification Board in 2005. The Board examined the average grades being mined today and the grades at which mining was discontinued. The Board determined the grade at which mining was discontinued (cutoff grade) is very close to or below that of the current standard. The IBLA ruled that the type of evaluation used by the Board was inconclusive as to the lower limit of the cutoff grade; however, upper limit of the cutoff will be no higher than what is being mined today, but could be lower. That is, the potash ore grades currently being mined are "mineable under existing technology and economics." It does not, however, necessarily follow that recent mining also establishes applicable economic cutoff grades. That is, the grade at which mining becomes uneconomic.

The Standard is Raised

Raising the cutoff standard will have the net effect of contracting the area of measured ore (enclave) in the Secretary's Potash Area.

Raising the standard is one of the three possible outcomes of an evaluation of the cutoff standard. However, the level to which the cutoff standard can be raised is limited by the IBLA's determination that what is being mined today is mineable or economic. The average ore grade for Sylvite mining at the Mosaic mine since the first of the calendar year is 10.42 percent K_2O as Sylvite. It is logical to conclude that the cutoff grade for Sylvite will not be raised to a level higher than that what is currently being mined or 10.42 percent K_2O as Sylvite.

The Standard is Lowered

Lowering the cutoff grade will have the effect of expanding the enclave.

An economic study is required to determine the cutoff grade; there is no definitive information available at this time to estimate the lower limit economical for mining cutoff grade.

The Process and Solution

The potash enclave (Measured ore), as depicted on the "Preliminary Map Showing Distribution of Potash Resource, Carlsbad Mining District, Eddy and Lea Counties, New Mexico" last published in 1993, was drawn with the following three criteria:

1. Measured ore will be delineated by data points more than 1½ miles apart if geologic inference shows these projections to be reasonable.
2. Measured ore will not be delineated by less than three data points that meet all other distance and thickness and grade criteria.
3. Measured ore will not be projected further than ½ mile from a data point which meets thickness and quality standards where projection or geologic inference data exists.

Areas Not Affected by a Change in the Cutoff Criteria

The current potash enclave has significant areas where the enclave boundary will not change whether there is an increase or decrease in the economic cutoff grade for potash.

Areas Lacking Data

A significant portion of the enclave boundary is defined by a lack of data points rather than by existing points which are sub-economic. That is, there are no data points extending beyond where the enclave boundary is currently drawn. The enclave was projected ½ mile beyond the last known data point which meets thickness and quality standards. The boundary in these areas will remain the same whether the standard is lowered or stays the same. Only if the standard is raised is there a possibility the boundary will change. The condition necessary for this to occur is when the last known data point within the enclave contains ore quality between the current cutoff and where the cutoff would be if it were raised. In this case, the area surrounding the core hole would not be classified as measureable ore.

Since leaving the standard the same or lowering it will have no effect on the enclave boundary and raising the standard could only contract the enclave, if we process APDs, as if the standard did not change, then there is no irreparable harm to the potash resource. We conclude that APDs in these areas can be processed, as if the standard remained the same, according to the 1986 Secretary's Potash Order and the conditions set forth in the IBLA's decision.

Area Between the Known Potash Leasing Area (KPLA) and the Secretary's Potash Area Boundaries

Large portions of the Secretary's Potash Area are located between the KPLA boundary and the Secretary's Potash Area boundaries. The majority of this area is classified as barren of potash because the area either lacks data points, the data points are barren, or potash or the data points

contain subeconomic values of potash. In this area, APDs can be processed, as long as they are in an area which will not change whether the cutoff grade raised or lowered and according to the 1986 Secretary's Potash Order and the conditions set forth in the IBLA's decision.

Areas with a Low Density of Core Holes

The ore reserves in the Potash Area are divided into three categories: Measured, Indicated, and Inferred. Measured is defined as ore where the "quantity is computed from dimensions revealed in outcrops, trenches, workings, and drill holes; grade and/or quality are computed from the results of detailed sampling. The sites for inspection, sampling, and measurement are spaced so closely and the geologic character is so well defined that size, shape depth, and mineral content of the resource are well established." In the Potash Area, Measured ore reserves will be delineated by data points no more than 1½ miles apart if geologic inference shows these projections to be reasonable, and Measured ore will not be delineated by less than three data points that meet all other distance and thickness and grade criteria.

If an area does not meet Measured ore criteria, the next lower category is Indicated ore reserves. Indicated ore reserves are areas where the quantity and grade and/or quality are computed from information similar to that used for Measured resources, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for Measured resources, is high enough to assume continuity between points of observation. Spacing of data points does not meet Measured ore criteria; yet data points show mineralization higher than minimum thickness and quality.

Areas where some information is available, but not to the degree of Indicated ore reserves, are termed Inferred. Inferred ore reserves are estimates that are based on an assumed continuity beyond Measured and/or Indicated resources, for which there is geologic evidence. Inferred resources may or may not be supported by samples or measurements.

The areas currently classified as Indicated or Inferred ore in the Potash Area are delineated as such due to the low density of data points. In these areas, raising or lowering the cutoff standard will not impact the designation of either Indicated or Inferred.

The APDs can be processed for the areas in Indicated and Inferred ore where the enclave boundary was not calculated utilizing one data point in Measured ore reserves and one data point located in Indicated or Inferred ore. Processing will be done according to the 1986 Secretary's Potash Order and the conditions set forth in the IBLA's decision.

Mined-Out Areas

Areas exist where the potash enclave has been mined right up to the limits of ore. That is, no ore exists beyond what has already been mined, even though the 1993 map shows ore remaining. In these mined-out areas, there may or may not be data points on either side of the enclave boundary. Even if small quantities of ore remain beyond the mine workings, there may not be

any reasonable access for further mechanical underground mining. In these areas, it does not matter whether the standard is raised or lowered, no further mechanical mining is possible. For these areas, we conclude that APDs can be processed, as if no ore is present, while considering safety hazards created by subsidence resulting from past mining operations.

Barren Areas Defined by Core Holes

There are limited areas where a barren area is defined by core holes which are completely barren of mineralization in every relevant ore zone. These areas may be on the exterior of the potash enclave, or they may be completely surrounded by enclave. The enclave boundary present between these barren core holes and ones that have mineralization may shift as the cutoff standard changes, but it can never extend beyond the barren core holes. The APDs can continue to be processed in the areas which will remain barren regardless of a change in the cutoff standard.

Areas in Residuum

On the western side of the potash enclave, there are areas where dissolution of the Salado Salt has occurred. The flow of under-saturated groundwater moving in the formations at the top of the Salt has dissolved the Salt away, in places, completely through all of the potash ore zones leaving the insoluble residuum in place. The enclave boundary present between these core holes with all ore zones in residuum and ones that have mineralization in ore quality may shift as the cutoff standard changes, but it can never extend beyond the residuum core holes. The APDs can be processed in the areas which will remain non-mineralized due to dissolution of the salts through the ore zones, regardless of a change in the cutoff standard.

Drilling Islands

Areas within the potash enclave, where the BLM has previously established drilling islands pursuant to the 1986 Secretarial Order, can remain open for further applications. Drilling islands, by definition, are within the potash enclave and were established in areas that minimize the loss of potash ore. Their size is determined by existing condition or set to a minimum size and not in relation to the potash enclave boundary. Raising or lowering the cutoff standard may have an effect on the enclave boundary. However, since most drill islands are well within the enclave and established in particular locations for reasons other than the enclave boundary, changing the enclave boundary will not have any affect on the drill islands' size or location.

Since drill islands are established within the Potash Area in areas which minimize the impacts to measured potash reserves, the establishment of appropriately sited drill islands would be the same whether the cutoff standard is raised or lowered. Thus, nothing should prohibit the BLM from continuing to establish appropriately sited drill islands within the enclave or processing APDs in existing drill islands during the period the enclave cutoff standard is being reevaluated.

Infill Drilling

There are several areas where oil and gas wells have been drilled on approximately 40-acre spacing and are within or immediately adjacent to the potash enclave as presently drawn. If the cutoff standard is raised or lowered, these areas will remain impacted by the existing wells. Drilling more wells within these fields will not create further impacts to potash resources. The APDs which constitute infield drilling can continue to be processed.

Interior High-Grade Areas

Areas in the interior portion of the enclave, where ore is present with a quality well above the present cutoff, will not change whether the standard is raised or lowered.

The IBLA determined that what is being mined today is mineable, but not necessarily the lowest grades that can be mined economically. This implies that after the economic study of the cutoff grade is completed, the upper limit of the cutoff grade will not be higher than that of ore being mined today. The average ore grade for Sylvite mining at the Mosaic mine since the first of the calendar year is 10.42 percent K_2O for Sylvite. Thus, any enclave established with a grade above 10.42 percent will remain enclave, and APDs in these areas can be processed according to the 1986 Secretary's Potash Order, with the additional conditions required by the IBLA in the reference decision.

Areas Which Could be Affected by a Change in the Cutoff Criteria

There are areas within the Secretary's Potash Area which could be affected by a change in the cutoff standard. In these areas, the approval or denial of the APDs will be deferred until after establishment of a new cutoff standard.

Areas with Core Holes Currently Containing Marginal or Sub-economic Ore

There are areas in the Secretary's Potash Area, within the enclave or close to the enclave boundary, where core holes contain mineralization just above or below the current cutoff standard and meeting all other Measured ore reserve criteria. In these areas, a change in the standard would have an effect on the location of the enclave boundary. As described above, any areas of the enclave defined by core holes containing ore above 10.42 percent K_2O as Sylvite would remain enclave. Areas below this grade may change. Processing APDs submitted near these areas will be deferred until after the cutoff standard is determined.

Areas where Core Holes have been Drilled Since the Last Revision of the Potash Enclave

There are several areas where core hole drilling is currently ongoing. Each new core hole drilled and assayed may affect the location of the enclave boundary. In areas where new core holes contain assays that reasonably could be classified as economic and the core holes meet distance and density standards of measured reserves, processing APDs will be deferred until the new potash cut-off grade is determined and the enclave boundary re-drawn.

Areas Between Core Holes Containing Economic Ore and Barren Core Holes

Areas classified as barren, which contain one or more core holes which are barren of mineralization and located within a reasonable distance of other core holes where geologic inference is acceptable, will most likely have a change in the enclave boundary. Processing APDs submitted in areas where the enclave could change if the cutoff standard is raised or lowered will be deferred until the cutoff standard is reevaluated.

Conclusion

We conclude that APDs can continue to be processed, either for approval or denial, in areas which conclusively will not be affected by raising or lowering the cutoff standard for potash. For those areas that might change, processing APDs will be deferred until after the cutoff standard is reevaluated. In either instance, specific case-by-case, fact-based determination will be made to process or defer a particular APD. Final decisions will be made for any APD processed according to the requirements of the Secretary's 1986 Order and the guidance of the IBLA decision.