



INTREPID POTASH – NEW MEXICO, LLC

176 IBLA 110

Decided September 29, 2008

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United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Land Appeals
801 N. Quincy St., Suite 300
Arlington, VA 22203

INTREPID POTASH – NEW MEXICO, LLC

IBLA 2006-288

Decided September 29, 2008

Appeal from decision of the State Director, New Mexico State Office, Bureau of Land Management, affirming the separate approvals of 11 applications for permits to drill oil and gas wells in the Secretary's Potash Area. NM-940995; NM-520-06-0869.

Affirmed.

1. Application for Permit to Drill--Oil and Gas Leases: Drilling

The identification of potash enclaves under a 1986 Secretarial Order requires that the thickness and quality of potash in an area be “known to exist” before BLM can determine whether such potash is of “sufficient thickness and quality to be mineable under current technology and economics” and identify that area as a potash enclave.

2. Application for Permit to Drill--Oil and Gas Leases: Drilling

In deciding whether it has sufficient data to determine the thickness and quality of potash “known to exist” under a 1986 Secretarial Order, BLM may rely upon the expertise of the U.S. Geological Survey, as reflected in its published bulletins and expressed by its personnel.

3. Federal Land Policy and Management Act of 1976: Generally--
Oil and Gas Leases: Generally--Oil and Gas Leases: Stipulations

When BLM approves an application for a permit to drill, its decision will not result in unnecessary or undue degradation of the public lands if its conclusions have a rational basis in the record. Since approving applications within the Potash Area are subject to Secretarial Orders which expressly address undue waste of potash resources, a party challenging approval based upon claimed

unnecessary or undue degradation of potash under the Federal Land Policy and Management Act of 1976 must show that BLM action under such Secretarial Orders lacked a rational basis.

4. Application for Permit to Drill-- Federal Land Policy and Management Act of 1976: Generally--Oil and Gas Leases: Drilling

Applications for permits to drill may be denied pursuant to a 1986 Secretarial Order and the Federal Land Policy and Management Act of 1976 if BLM determines that such drilling will result in undue waste of potash or constitute a hazard to potash mining. BLM is not required to determine that undue waste will not occur or that hazards to potash miners will not result before approving an application within the Potash Area covered by that Secretarial Order.

5. Environmental Quality: Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements

BLM properly approves applications for permits to drill absent preparation of an environmental impact statement where, in accordance with section 102(2)(C) of the National Environmental Policy Act of 1969, 42 U.S.C. § 4332(2)(C) (2000), it has prepared an environmental assessment which took a hard look at the environmental consequences of approving such applications, considered all relevant matters of environmental concern, and made a convincing case that no significant impact will result therefrom or that any such impact will be reduced to insignificance by the adoption of appropriate mitigation measures. BLM's decision will be affirmed where the appellants fail to demonstrate, with objective proof, that BLM failed to consider a substantial environmental question of material significance to the proposed action, or otherwise failed to abide by the statute.

APPEARANCES: Robert Tuchman, Esq., Steven B. Richardson, Esq., James F. Cress, Esq., and Colin G. Harris, Esq., Denver, Colorado, for appellant Intrepid Potash - New Mexico LLC; James E. Haas, Esq., Artesia, New Mexico, and Phillip Wm. Lear, Esq.,

and Stephanie Barber-Renteria, Esq., Salt Lake City, Utah, for intervenor Yates Petroleum Corporation; Sue E. Umshler, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Albuquerque, New Mexico, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE JACKSON

Intrepid Potash – New Mexico, LLC (Intrepid) has appealed from a September 19, 2006, decision issued by the State Director, New Mexico State Office, Bureau of Land Management (BLM), affirming the August 17, 2006, approvals of 11 applications for permits to drill (APD) oil and gas wells, designated as Caper BFE “17” Federal (Caper) Nos. 6 through 16.¹ The State Director’s decision was based on an environmental assessment (EA), NM-520-06-0869, prepared pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4332(2)(C) (2000), and 11 separate Decision Records/Findings of No Significant Impact (DR/FONSI) issued by the Field Manager, Carlsbad Field Office, on July 3, 2006. Each of these 11 wells would be located within the Potash Area designated by order of the Secretary of the Interior. *See* 51 Fed. Reg. 39425 (Oct. 28, 1986) (1986 Order). Intrepid challenges the State Director’s decision as being contrary to the 1986 Order, section 303(b) of the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. § 1732(b) (2000), and applicable NEPA requirements and implementing regulations promulgated by the Council on Environmental Quality (CEQ).

Background

Yates Petroleum Co. (Yates) filed the APDs at issue in mid-April 2006. Intrepid protested BLM’s proposed approval of these APDs on June 9, 2006, claiming that BLM was required to consider its gamma ray log data² to update maps identifying potash enclaves under the 1986 Order. *See* EA at ¶¶ 3.9, 5.1. The Field

¹ The 11 wells would be situated on public lands in sec. 17, T. 21 S., R. 32 E., New Mexico Principal Meridian, Lea County, New Mexico (hereinafter “sec. 17”). All 640 acres of public land in sec. 17 are subject to an oil and gas lease, NM-94095, held by Yates Petroleum Co., Yates Drilling Co., Abo Petroleum Corp., and Sharbro Oil Limited Co. Yates Petroleum Co. is the designated operator of these wells, as well as the Caper Nos. 1 through 5 wells (for which APDs had been earlier approved by BLM).

² Gamma ray log data are electronic data generated during the logging of an oil or gas well which measure gamma rays emitted by the surrounding geologic formation, also commonly referred to as a type of E-log data.

Manager issued a DR/FONSI for each APD on July 3, 2006,³ determining that an environmental impact statement (EIS) was not required and that APD approval was consistent with the Carlsbad Resource Area Resource Management Plan (RMP), and a 1997 Amendment to that plan.⁴ Also on that date, the Field Manager executed a checklist for APD approval, **POTASH AREA - CATEGORY I**, referred to in the EA at ¶ 4.9, which states that each proposed well “is in an area classified as *inferred* potash ore reserves” (emphasis added),⁵ would “not intersect measured ore (potash enclave),” is outside Intrepid’s “life of mine reserves,” and is more than a mile away from any Three-Year Mine Plan or Open Mine Workings.

On August 28, 2006, Intrepid filed a “Request for Immediate Cessation of Oil and Gas Operations Pending Review and Immediate Stay of BLM’s Decision Approving Yates Applications for Permits to Drill Caper Wells” (Request), urging the State Director to suspend drilling of the approved Caper Nos. 1 through 5 wells and to “stay the effectiveness of your approval of the Yates Caper APDs in order for Intrepid to have a meaningful opportunity to seek a stay and review of your decision.” Request at 2. It there claimed that section 17 contains “mineable potash” which would be “permanently wasted” if oil and drilling under the approved APDs were to proceed. *Id.* In addition, Intrepid renewed an offer made in its protest “to pay the costs for the BLM to cause a core hole to be drilled immediately in the vicinity of the Yates Caper BFE Federal #1 Well in the SW[1]/4 of Section 17 to conclusively establish the presence of potash [e]nclave to the BLM’s satisfaction.” *Id.* at 2-3.⁶ In addition, Intrepid petitioned for State Director Review (SDR) on September 14, 2006.

³ Since each DR/FONSI and APD case file is virtually identical, we reference the DR/FONSI and case file pertaining to Caper No. 6 as representative of the others.

⁴ The impacts of oil and gas leasing were addressed in the September 1986 EIS for adoption of the Carlsbad Resource Area RMP and the January 1997 EIS prepared for an amendment to this RMP in 1997. *See* EA at ¶ 1.3.

⁵ The executed checklist in each APD case file is the same, except that the checklists for Caper No. 13 and No. 14 state they are located “in an area classified as *indicated* potash ore reserves” (emphasis added). Category II checklists apparently apply to APDs within identified potash enclaves.

⁶ In order to assess the nature of Intrepid’s efforts to obtain BLM’s permission for core hole drilling, we sought and obtained from BLM a copy of a Sept. 12, 2006, letter to BLM, in which Intrepid applied for an exploration license to drill two core holes in sec. 17, near the locations for the Caper Nos. 1 and 10 wells. APDs for this exploratory drilling were approved by BLM on Apr. 11, 2008. Intrepid Reply to BLM Supplemental Answer at 14.

By decision dated September 19, 2006, the State Director treated Intrepid's August 28 filing as "a request for consultation under 43 C.F.R. § 3162.3-2(h)," concluded that its September 14 petition did not provide any additional information not already considered by BLM, and stated: "We do not believe it is necessary to reconsider the APD approvals, nor is it appropriate to stay the Decisions and require Yates to cease its drilling operations." Intrepid filed its notice of appeal on September 20, 2006, as well as a combined petition for stay and statement of reasons (SOR).

Procedural Issues

Our consideration of this case has resulted in several orders addressing the parties' numerous motions and requests. For example, we granted Yates' motion to intervene, denied its motion to dismiss, and took Intrepid's stay request under advisement by Order dated November 1, 2006. We later granted the stay request by Order dated September 28, 2007, determining that Intrepid had shown a likelihood of success in light of our decision in *IMC Kalium Carlsbad, Inc.*, 170 IBLA 25 (2006) [*dismissed on jurisdictional grounds, Potash Association of New Mexico v. Dept. of the Interior*, No. 1:06-CV-01190-MCA-ACT (D.N.M. decided Aug. 29, 2008)] (*IMC Kalium*).

Throughout the pendency of this appeal, Yates has sought access to reports and other information to rebut Intrepid's claim that BLM had ignored its gamma ray log data which identified a potash enclave in sec. 17. Yates submitted requests under the Freedom of Information of Act, 5 U.S.C. § 553 (2000), in September and October 2006, and filed a Motion to Compel Production of Documents (Motion to Compel) on October 30, 2006.⁷ See Order dated Jan. 12, 2007, at 1-2; Order dated Nov. 1, 2006, at 8-9. Yates later filed a Motion to Disclose Record Proper (Motion to Disclose) under 43 C.F.R. § 4.31(a) and then withdrew its Motion to Compel.

BLM responded to Intrepid's arguments on the merits in its Answer and Supplemental Answer without reference to the information sought by Yates. Yates separately responded in detail to Intrepid's SOR on September 24, 2007. Because of the disposition of this appeal, we find Yates' interests are not prejudiced by its not

⁷ Yates initiated a separate proceeding before Administrative Law Judge Patricia McDonald Dan (ALJ) to obtain sealed testimony and exhibits from the record in *IMC Kalium*, then under judicial review in *Potash Association of New Mexico v. Dept. of the Interior*, No. 1:06-CV-01190-MCA-ACT (D.N.M. filed Dec. 6, 2006). The ALJ denied that effort on jurisdictional grounds by order dated May 31, 2007; we affirmed and separately denied the relief Yates sought in *Yates Petroleum Corporation*, 175 IBLA 44 (2008).

having access to the information at issue and therefore deny Yates' Motion to Disclose as moot.

Discussion and Analysis

Intrepid asserts that BLM's approval of the APDs at issue violated the Secretary's 1986 Order, FLPMA, and NEPA. Each such violation is addressed separately below.

I. The 1986 Secretarial Order

The 1986 Order establishes parameters for concurrent oil, gas, and potash operations within the Potash Area. *See IMC Kalium*, 170 IBLA at 29.⁸ A prominent and oft-debated feature of this Order is the enclave policy: "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." 51 Fed. Reg. at 39425 (Section III, Part E, Item 1). APDs within an identified potash enclave are denied under that policy unless they would be located in either a barren area (and "not adversely affect active or planned mining operations") or a BLM-designated drilling island, *IMC Kalium*, 170 IBLA at 48, *see* 51 Fed. Reg. at 39425-26; APDs located outside an enclave may be approved by BLM if they comply with the 1986 Order's oil and gas lease stipulations, *IMC Kalium*, 170 IBLA at 50-53; *see* 51 Fed. Reg. at 39425 (Section III, Part A, Items 1-4). Consequently, "the identification of potash enclaves is central to BLM's proper administration of the Potash Area under the Secretarial Order." *IMC Kalium*, 170 IBLA at 34.

[1] Potash enclaves are defined as areas "where potash ore is known to exist in sufficient thickness and quality to be mineable under existing technology and economics." 51 Fed. Reg. at 39425 (Section III, Part D, Item 1.c). Thus, where the requisite thickness and quality of potash ore is "known to exist," BLM must determine whether such ore is "mineable under existing technology and economics" and implement that determination consistent with the enclave policy. *IMC Kalium*,

⁸ Contrary to Intrepid's repeated representation that BLM must "preserve and protect" potash under the 1986 Order, BLM is obligated to take action "within the parameters established by that Order." *Yates Petroleum Corp.*, 131 IBLA 230, 235 (1994) (*Yates Petroleum*). As to protecting resources within the Potash Area, we have stated: "The potash lease stipulation protects oil and gas development from potash activities that 'will unreasonably interfere' with its operations; the oil and gas lease stipulations similarly protect potash mining from oil and gas activities that would 'unduly interfere' with its operations." *IMC Kalium*, 170 IBLA at 54; *see* 51 Fed. Reg. at 39425 (Section III, Parts B and C).

170 IBLA at 39. To aid in identifying enclaves and updating enclave boundaries, the Order requires the annual submission of maps by potash lessees delineating their mineable potash reserves, as well as areas barren of commercial ore. 51 Fed. Reg. at 39425 (Section III, Part D, Items 1.c and 1.d). The 1986 Order then directs BLM to analyze this information, “consistent with the data available at the time of such analysis,” and to revise enclave boundaries “as necessary to reflect the latest available information.” *Id.* (Section III, Part D). At issue in *IMC Kalium* was the 1974 Van Sickle Standard, “a numerical formula used by BLM to establish a bright line for identifying what is mineable under the Secretarial Order: ‘Potash ore of minimum quality and thickness greater than 4’ of 10% K₂O/Sylvite or 4’ of 4% K₂O/Langbeinite or equivalent combination of the two.’” 170 IBLA at 37; *see* 170 IBLA at 31 n.6; Memorandum by Donald M. Van Sickle, Area Geologist, U.S. Geological Survey (USGS), dated Apr. 5, 1974 (Van Sickle Memorandum), BLM Answer, Attach. 2. In affirming Judge McDonald’s order setting aside BLM’s denial of APDs under the enclave policy (ALJ Decision), we stated:

The record presented does not demonstrate that BLM conducted any review of current technology and economics or periodically evaluated whether the Van Sickle Standard remained effective and appropriate for identifying potash enclaves, under and as required by the Secretarial Order. Accordingly, we hold that BLM failed to identify potash enclaves properly and in the manner prescribed by the Secretarial Order.

170 IBLA at 38-39, 40.

In articulating a numeric standard for what thickness and quality of potash ore are sufficient to be mineable in the Potash Area, Van Sickle also identified a data sufficiency guideline of three core holes (or mine face samples) no more than 1½ miles apart to identify “Measured Mineable Reserves (Potash Enclave).” Van Sickle Memorandum.⁹ Following our referral in *Yates Petroleum* and assignment to ALJ McDonald, oil and gas lessees challenged this guideline by arguing that more core hole data was needed to identify potash enclaves properly (*e.g.*, 4-16 core holes per section); expert witnesses for potash industry intervenors countered that data from three core holes were “an excellent method to be applied” and “a reasonable and fair approach” for identifying enclaves. *See* ALJ Decision at 114, 118, 121. After reviewing the 1973 Handbook of the Society of Mining Engineers, the Principles of the Mineral Resource Classification System issued as U.S. Geological Survey Bulletin 14550-A (1976) (USGS Bulletin), and the evidence presented, the ALJ concluded that

⁹ Where data show potash mineralization but do not meet the data sufficiency guideline (*e.g.*, three core holes more than 1½ miles apart or data from less than three core holes), the area is identified as an “Indicated Reserve.” Van Sickle Memorandum at 1; *see* discussion *infra*.

“three ‘data points no more than 1½ miles apart’ may have been minimal, but the record does not establish that it was an improper geological method.” ALJ Decision at 124; *see* ALJ Decision at 114-24, 169 (“core holes provide critical information for evaluating the extent and richness of a potash deposit”). Since no party elected to appeal that ruling, the data sufficiency guideline for potash ore “known to exist” was not expressly addressed in our affirmance of the ALJ Decision in *IMC Kalium*.¹⁰

Intrepid contends that approval of the APDs at issue violated the enclave policy because its “gamma ray log data from sec. 17 conclusively demonstrates that this section does contain [a] potash enclave.” SOR at 31-33. Intrepid supports its claimed “conclusive demonstration” by referring to data earlier submitted to BLM, as well as newly acquired data. *Id.* at 31, 36-38, 40-41, 42-44; *see* Supplemental SOR at 11-13; Reply at 7-9; Supplemental Reply at 11-17. Intrepid also claims that the data sufficiency guideline used by BLM to determine the thickness and quality of potash ore “known to exist” in the Potash Area (*i.e.*, data from three core holes and/or mine face samples within 1½ miles) must be periodically reviewed, just as the standard for determining whether such ore is “mineable under existing technology and economics” must be reviewed under the 1986 Order, *citing IMC Kalium*, 170 IBLA at 39. SOR at 35-36; Supplemental SOR at 3-6, 8; Reply at 3-5; Supplemental Reply at 3-4. Intrepid then argues that no APDs can be approved unless and until BLM complies fully with our remand in *IMC Kalium* and identifies potash enclaves properly under the 1986 Order. SOR at 3. Intrepid also argues that reliance upon this data sufficiency guideline to discount its gamma ray log data lacks a rational basis and that BLM erred in approving these APDs by not first determining that they “will not unduly waste ‘potash deposits’” under the 1986 Order’s oil and gas lease stipulations. SOR at 38-40; Supplemental SOR at 15-17; Supplemental Reply at 21-22.

The burden is on appellant to demonstrate error in BLM’s actions or decisions under the 1986 Order. *IMC Kalium*, 170 IBLA at 39-40. Since we are unpersuaded that gamma ray log data “conclusively demonstrates” that sec. 17 is a potash enclave, we find that Intrepid has not met its burden in this case. As discussed, the thickness and quality of potash ore “must be known to exist” before BLM can determine that such potash is of “sufficient thickness and quality to be mineable under existing technology and economics” and identify that area as a potash enclave. It is

¹⁰ Both BLM and Yates argue that Intrepid is barred by collateral estoppel from relitigating data sufficiency because that issue was decided in the ALJ Decision. Supplemental Answer at 15-45; Yates Response at 20-21. While the ALJ sustained the use of a three core hole data sufficiency guideline, she did not address whether other information (*e.g.*, gamma ray log data) could also be used to identify the thickness and quality of potash ore, the issue on appeal in this case. Moreover, neither Intrepid nor its predecessor-in-interest, Mississippi Potash, was even a party to that proceeding. We consider collateral estoppel no further herein.

uncontroverted that potash exists in sec. 17, that BLM uses gamma ray logs and other data to map areas of inferred and indicated potash within the Potash Area, and that BLM uses such data together with core hole data in its decisionmaking under the 1986 Order (*e.g.*, to identify areas of known potash ore, enclaves, and barren areas). Thus, BLM did not “ignore” Intrepid’s data but determined that this proffered data was insufficient to establish the thickness and quality of potash ore “known to exist” in sec. 17 and to identify an enclave in that section. *See* EA at ¶¶ 3.9, 4.9.

Intrepid contends that its interpretative methodology for analyzing gamma ray log data demonstrated that potash ore is “known to exist” in sec. 17. BLM counters that Intrepid did not provide BLM “with sufficient justification to modify the long-accepted BLM/USGS and industry standard of adequate core hole data being required to distinguish between known reserves and indicated areas of potential deposits,” and that while gamma ray and other E-log data can be useful and correlated with core hole data, “scientific uncertainty,” as well as “limitations and problems associated with relying [on] e-log data as stand alone data points,” render them of only limited utility to decisionmaking under the 1986 Order. Supplemental Answer at 14, 48; *see id.* at 45-50. The record shows that BLM reviewed Intrepid’s methodology but concluded that it “could not justify relying solely on e-logs ‘to determine not only the thickness [or mere presence] of the potash beds, but the mineralogy and the grade, too.’” Supplemental Answer at 48, *quoting* Briefing Paper for the Deputy State Director, June 7, 2006, BLM Answer, Att. 13; *see* Supplemental Answer at 50 (“without core holes the grade and actual mineral type is unknown and most importantly the economic mineability of any potash ore is uncertain”).

Yates elaborates on the scientific uncertainty concerns raised by BLM, emphasizing that gamma ray log data yield “false positives” because such data cannot differentiate between potash types (commercial/noncommercial), clays, and associated shales. Yates Response at 15-18, 23; *see* Intrepid Exs. 20 (E.R. Crain Report), 25 (Discovery Group Report); Yates Exs. 22, 24 (reports by Dr. Lawrence Teufel, Professor of Geology, New Mexico Tech University). Based upon its expert’s review, Yates also identifies flaws in Intrepid’s methodology (*e.g.*, inadequate data measurement intervals, insufficient statistical data, and a “hopelessly flawed” predictive model). Yates Response at 23-24; *see* Yates Ex. 22.

BLM has issued and periodically updated maps required under the 1986 Order and a virtually identical Secretarial Order issued in 1975. Supplemental Answer at 10-12; *see* 40 Fed. Reg. 51486 (Nov. 5, 1975). In addition to identifying potash enclaves and other information required by Secretarial Order, these maps of the Potash Area have identified areas of indicated and inferred potash ore since at least 1984. Supplemental Answer at 11-12. Thus, the EA at ¶ 3.9 states:

The surface and bottom hole locations [for Caper Nos. 6-12, 15, 16] are located within Inferred Potash Resources. This identifies potash resources which are probable, but tonnage and grade cannot be computed due to the absence of specific data. Lithologic descriptions and Gamma logs indicate probable mineralization, and the data can be reasonably correlated. According to existing guidelines and standards established by the Mineral Review, the wells are located within inferred or indicated potash and not within measured ore as defined by “Principles of a Resource/Reserve Classification for Minerals” published by the U.S. Bureau of Mines and the U.S. Geological Survey These are the standards that have been established, to which BLM must adhere. The methodology established by the Mineral Review Board used to determine Measured Ore is through the drilling of core holes and assaying the ore extracted from the core holes. To establish a new methodology of utilizing E-logs [suggested by Intrepid] would require a Mineral Review Board to be convened to analyze the validity of utilizing E-log data to determine the grade and mineralogy of potash ore and thereby establishing a new acceptable methodology for determining where the enclave or measured ore deposits are located. Convening a Mineral Review Board and analyzing the data, etc. could take two years or longer. In the interim and in lieu of that sort of determination, BLM must utilize current established guidelines and criteria regarding measured ore, inferred ore, and indicated ore.[¹¹]

. . . The surface and bottom hole location [for Caper Nos. 13-14] is located within Indicated Potash Resources. This identifies potash resources that are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on geologic evidence. The sites available for inspection, measurement, and sampling are too widely, or otherwise inappropriately, spaced to permit the mineral bodies to be outlined completely or the grade established throughout.

[2] The USGS publication referenced in the EA announced “a standardized, definitive, broadly applicable classification system to derive uniform, coordinated resources estimates,” jointly adopted by USGS and the U.S. Bureau of Mines. USGS Bulletin 1450-A (1976) at III. It defines three types of identified resources/reserves: measured and indicated (collectively, demonstrated), as well as inferred:

¹¹ Convening a Mineral Review Board may well be required before E-log data can be used to identify “Measured Ore” under the USGS mineral classification system, but such is not necessarily required to support agency decisionmaking in identifying potash enclaves under the 1986 Order. See *IMC Kalium*, 170 IBLA at 35-36.

Measured. — Reserves or resources for which tonnage is computed from dimensions revealed in outcrops, trenches, workings, and drill holes and for which the grade is 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 the size, shape, and mineral content are well established. The computed tonnage and grade are judged to be accurate within limits which are stated, and no such limit is judged to be different from the computed tonnage or grade by more than 20 percent.

Indicated. — Reserves or resources for which tonnage and grade are computed partly from specific measurements, samples, or production data and partly from projection for a reasonable distance on geologic evidence. The sites available for inspection, measurement, and sampling are too widely or otherwise inappropriately spaced to permit the mineral bodies to be outlined completely or the grade established throughout.

Demonstrated. — A collective term for the sum of measured and indicated reserves or resources.

Inferred. — Reserves or resources for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements. The estimates are based on an assumed continuity or repetition of which there is geologic evidence; this evidence may include comparison with deposits of similar type. Bodies that are completely concealed may be included if there is specific geologic evidence of their presence. Estimates of inferred reserves or resources should include a statement of the specific limits within which the inferred material may lie.

Id. at A3-A4; *see id.* at A2.¹² Based on available data and its use of the data sufficiency guideline affirmed in the ALJ Decision, BLM identified nine of the proposed APD well locations as being in areas of “inferred” potash ore, two in areas of “indicated” potash ore, but none in areas of “Measured Ore.” EA at ¶3.9. BLM equated “measured” resources/reserves under the USGS Bulletin with potash that is “known to exist” under the 1986 Order. We find no error in BLM giving meaning to

¹² Measured resources and proven reserves “are essentially synonymous,” but indicated/inferred resources are not the same as probable/possible reserves. *Id.* at A3 n.1. Probable resources/reserves are deposits which have been “sampled on two or three sides,” whereas possible resources/reserves are deposits “sampled only on one side.” *Id.*

the term “known to exist” by relying on the USGS definition of “measured” resources/reserves or in applying the data sufficiency guideline identified by Van Sickle, the USGS Area Geologist. We therefore conclude that BLM properly relied upon the expertise of USGS and that its decision had a rational basis, Intrepid’s arguments to the contrary notwithstanding.

Intrepid also claims that BLM erred by failing periodically to update this data sufficiency guideline and that it is precluded from approving any APDs within the Potash Area until it has fully complied with our remand in *IMC Kalium*. As discussed, BLM is free to revise its guideline for what is sufficient to demonstrate the thickness and quality of potash ore “known to exist,” but it is not required to revise that guideline before taking action to identify potash enclaves under the 1986 Order. See n.11, *supra*. Since BLM had not considered advances in technology or changes to potash economics for over 30 years, we held its continuing reliance on the 1974 Van Sickle Standard to identify enclaves was not consistent with BLM’s “consideration of existing technology and economics” under the 1986 Order. *IMC Kalium*, 170 IBLA at 39. We therefore affirmed the setting aside of APD denials under the enclave policy and remanded that matter to BLM for its “proper identification of potash enclaves and subsequent application of the enclave policy to the APDs at issue.” *Id.* at 40; *see id.* at 38 n.14. While enclaves may be identified in sec. 17, as well as in other sections of the 497,000-acre Potash Area, at some point in the future, neither the 1986 Order nor *IMC Kalium* requires BLM to defer approving APDs until Intrepid and other potash mining companies are satisfied that all such enclaves have been properly identified.

In issuing the enclave policy, the Secretary did not suspend APD approvals until all potash enclaves were identified, but specified that certain oil and gas lease stipulations would be required of lessees and used by BLM to decide whether to approve their APDs. We find no basis in the 1986 Order for prohibiting BLM from approving any APDs until all enclaves have been identified following our remand in *IMC Kalium*. We there precluded BLM from *denying* APDs under the enclave policy until it had reconsidered and identified potash enclaves on remand, but we neither held nor suggested that it was precluded from *approving* APDs pending those actions. Our affirmance of the ALJ Decision suggests the opposite. The ALJ ruled that APDs for locations near an identified enclave (*i.e.*, in areas of “indicated” or “inferred” potash ore) could not be denied under the enclave policy and could be issued if consistent with the 1986 Order’s oil and gas lease stipulations, which she discussed at length. ALJ Decision at 52-65, 194-97, 234-37, 241-46.¹³ In affirming her decision

¹³ Intrepid separately argues under the 1986 Order that BLM erred in approving APDs without first determining that they would not “unduly waste” potash deposits, an issue we address together with Intrepid’s similar argument under FLPMA.

and remanding to BLM, we did not preclude BLM from approving APDs upon its proper consideration and application of the oil and gas lease stipulations, only that BLM could not deny APDs under the enclave policy until potash enclaves were properly identified under the 1986 Order. *IMC Kalium*, 170 IBLA at 51-53. There simply is no enclave policy to apply in this case because BLM has not identified any potash enclaves in sec. 17 and Intrepid has not shown that BLM acted improperly by failing to identify enclaves under the record here presented.

In sum, we find no error in BLM approving these APDs under and as permitted by the 1986 Order.

II. FLPMA

[3] Section 302(b) of FLPMA, 43 U.S.C. § 1732(b) (2000), directs the Secretary, “by regulation or otherwise, [to] take any action necessary to prevent unnecessary or undue degradation of the [public] lands.” Intrepid argues that drilling wells under these APDs would cause unnecessary and undue degradation under FLPMA (*i.e.*, the irreplaceable loss of potash). SOR at 48-49; Supplemental Reply at 32-34. We addressed similar FLPMA claims in *Biodiversity Conservation Alliance*, 174 IBLA 1, 5-6 (2008):

The Department has issued no regulation defining what might constitute “unnecessary or undue degradation” in the context of onshore oil and gas development, an activity where some level of environmental degradation is to be expected. As we recently explained:

As the Board has noted, “[n]either FLPMA nor implementing regulations defines the term ‘undue or unnecessary degradation.’” *Colorado Environmental Coalition*, 165 IBLA 221, 229 (2005); *see* 43 U.S.C. § 1702 (2000). In other contexts, BLM has promulgated regulations defining the term. *See, e.g., . . .* 43 C.F.R. § 3809.5 (surface management). No similar definition appears in the onshore oil and gas regulations. *Compare* 43 C.F.R. § 3100.0-5 (definitions for Onshore Oil and Gas Leasing: General) and 3160.0-5 (definitions for Onshore Oil and Gas Operations). However, those [latter] regulations provide that the right of a lessee to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold [is] subject to: Stipulations attached to the lease, restrictions deriving from specific, nondiscretionary statutes, and such reasonable measures

as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed.

Wyoming Outdoor Council, 171 IBLA 108, 121 (2007), quoting 43 C.F.R. § 3101.1-2.

Nonetheless, FLPMA coexists with mineral leasing statutes and recognizes the need for multiple use management, which includes taking into account the nation's need for nonrenewable resources such as minerals, 43 U.S.C. § 1702(c) (2000), and "domestic sources of minerals . . . from the public lands," 43 U.S.C. § 1701(a)(12) (2000). Congress thus recognized that the mere act of approving oil and gas development does not constitute unnecessary or undue degradation under FLPMA, and that something more than the usual effects anticipated from such development, subject to appropriate mitigation, must occur for degradation to be "unnecessary or undue." *See also* BCA Ex. CC, Instruction Memorandum No. (IM) 92-67 at 2 (Dec. 3, 1991) (standard "implies that there is also *necessary and due degradation*").

Unnecessary and undue degradation under FLPMA, as well as its multiple use mandate, are addressed under the 1986 Order by establishing concurrent procedures for oil, gas, and potash mining activities, restricting APDs within potash enclaves to barren areas and BLM-designated drilling islands, and prohibiting APDs outside of potash enclaves if BLM determines that such drilling "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." 51 Fed. Reg. at 39425 (Section III, Part A, Item 2). Thus, we hold that if a BLM decision under the 1986 Order has a rational basis, BLM has satisfied its obligations under section 302(b) of FLPMA, 43 U.S.C. § 1732(b) (2000). *See Biodiversity Conservation Alliance*, 174 IBLA at 8 ("We will not disturb BLM's discretion to balance the competing uses mandated by FLPMA where BLM has provided a reasoned explanation for its decision"). To the extent Intrepid's FLPMA claims are based on the possible existence of a potash enclave, they have been rejected; to the extent its claims are based on the 1986 Order's oil and gas lease stipulations, we find them misplaced and unsupported.

[4] Intrepid asserts that before an APD can be approved, BLM must determine that such drilling would not unduly waste potash deposits by analyzing potash resources in the vicinity of each proposed APD location and by conducting "an undue waste analysis." Supplemental Reply at 21, 22. While potash deposits may be affected and could be wasted by oil and gas drilling in sec. 17, we rejected similar claims advanced by the potash industry that the oil and gas lease stipulations "should

be interpreted as precluding oil and gas activities that ‘could’ result in potash waste or adversely affect potash mining” and concluded that APDs can be denied under those stipulations only if BLM determines that oil and gas drilling and/or contamination resulting from such drilling “will interfere with potash mining, result in undue potash waste, or constitute a hazard to potash mining.” *IMC Kalium*, 170 IBLA at 52. Since no such determination was here made by BLM, see EA ¶ 3.9, we hold the burden was on Intrepid to demonstrate with objective evidence that “undue waste” of potash deposits under the 1986 Order will occur. We find Intrepid has not made that demonstration and therefore conclude that it has not shown error in BLM’s approving these APDs under FLPMA (or the 1986 Order).¹⁴

III. NEPA

[5] Intrepid primarily contends that BLM’s decision to approve the 11 APDs based upon an EA and FONSI violates section 102(2)(C) of NEPA, 42 U.S.C. § 4332(2)(C) (2000), and separately argues that BLM failed adequately to involve the public in its decisionmaking. We have recently and repeatedly reiterated the framework against which to evaluate alleged noncompliance with section 102(2)(C) of NEPA:

A BLM decision to proceed with a proposed action, absent preparation of an EIS, will be upheld under section 102(2)(C) of NEPA, where the record demonstrates that BLM has considered all relevant matters of environmental concern, taken a “hard look” at potential environmental impacts, and made a convincing case that no significant impact will result therefrom or that any such impact will be reduced to insignificance by the adoption of appropriate mitigation measures. An appellant seeking to overcome such a decision must carry its burden of demonstrating, with objective proof, that BLM failed to consider a substantial environmental question of material significance to the proposed action, or otherwise failed to abide by section 102(2)(C) of NEPA.

Santa Fe Northwest Information Council (SNIC), 174 IBLA 93, 107 (2008) (citations omitted); accord *The Wilderness Workshop*, 175 IBLA 124, 132-33 (2008); *Orion Energy, LLC*, 174 IBLA 81, 89-90 (2008); see *Colorado Environmental Coalition*,

¹⁴ Intrepid suggests that BLM must create a record showing it intensively evaluated whether potash deposits exist in sec. 17 and then determine (based on that record) that drilling will not cause “undue waste.” Nothing in the 1986 Order or *IMC Kalium* places such a burden on BLM in approving APDs within the Potash Area; we reject Intrepid’s suggestion that we do so in this case.

169 IBLA 137, 140 (2006); *Biodiversity Conservation Alliance*, 169 IBLA 321, 331 (2006). We here address whether BLM took a “hard look” at potential environmental impacts and made a convincing case that no significant impact will occur (or will be reduced to insignificance by appropriate mitigation measures), as well as whether BLM adequately involved the public in its decisionmaking process under NEPA.

A. *BLM Took a “Hard Look” at Potential Environmental Impacts.*

Intrepid contends the EA failed adequately to consider direct and indirect effects on potash resources and air quality, “typical impacts of oil and gas development,” and cumulative impacts from such development. SOR at 22, 23, 24, 27-28; *see also* Supplemental Reply at 25-26, 28-29. Intrepid also contends that the EA’s consideration of alternatives and mitigation measures was deficient, SOR at 19-20, 24-26; *see also* Supplemental Reply at 27-31, and separately asserts that the EA is lacking in scientific integrity, as shown by BLM’s failure to identify potash enclaves in light of gamma ray log data and Intrepid’s interpretative methodology, SOR at 28-30; *see also* Supplemental SOR at 17-18; Reply at 11-12. In evaluating whether BLM has taken a hard look at the likely environmental consequences of a proposed action, we are guided by the “rule of reason.” *SNIC*, 174 IBLA at 107. As there explained, quoting from *Don’t Ruin Our Park v. Stone*, 802 F. Supp. 1239, 1247-48 (M.D. Pa. 1992):

An EA need not discuss the merits and drawbacks of the proposal in exhaustive detail. By nature, it is intended to be an overview of environmental concerns, *not* an exhaustive study of all environmental issues which the project raises. If it were, there would be no distinction between it and an EIS. Because it is a preliminary study done to determine whether more in-depth study analysis is required, an EA is necessarily based on “incomplete and uncertain information.” *Blue Ocean Preservation Society v. Watkins*, 767 F.Supp. 1518, 1526 (D. Hawaii 1991) So long as an EA contains a “reasonably thorough discussion of . . . significant aspects of the probable environmental consequences,” NEPA requirements have been satisfied.

174 IBLA at 107 (citations and footnotes omitted). So considered and under the facts and circumstances of this case, we find no error in BLM’s consideration of environmental impacts.

In various guises, Intrepid asserts that NEPA required BLM to do more to identify, evaluate, and protect potash resources and related mining activities. For example, it claims that the EA’s evaluation of potash resources lacks scientific integrity, that its analysis of cumulative impacts to potash resources and mining was deficient, and that its consideration of alternatives and mitigation measures to better

protect potash resources, potash mining, and potash miners was superficial. SOR at 19-20, 21, 23, 25, 27, 29. As characterized by Intrepid, BLM's failure to adequately identify potash resources "permeated every section of the EA rendering it flawed in nearly every aspect - in the analysis of alternatives, the affected environment, the environmental impacts, the mitigation measures." Supplemental Reply at 27.¹⁵ Intrepid claims BLM was required to obtain core hole data and analyze that data before it could act consistent with the procedural requirements of NEPA. Supplemental SOR at 18 ("BLM has a duty under NEPA to gather and evaluate relevant new information and to base its assumptions and conclusions about whether there is mineable potash in sec. 17 on an adequate scientific basis"); Supplemental Reply at 31; *see* SOR at 21, 29.

To the extent Intrepid claims that BLM's analysis of available data lacks sufficient scientific rigor vis-a-vis potash resources, we reject that claim; to the extent it claims BLM was required by NEPA to obtain additional potash data in order to identify the affected environment and adequately assess effects, impacts, alternatives, and mitigation measures, we are unpersuaded. The 1986 Order requires BLM to analyze all available data to identify enclaves and barren areas, which we find it has done, *see* discussion *supra*; having done so, we find that the EA's consideration of potash deposits and related potash concerns was adequate and in compliance with the procedural requirements of NEPA.

We reject Intrepid's claim that in order to take a scientifically sound, hard look at impacts, effects, alternatives, and mitigation measures to protect potash resources, BLM must first obtain additional core hole data and evaluate that data to identify resources. CEQ regulations specify that if there are "gaps in relevant information or scientific uncertainty," which are "essential to a reasoned choice among alternatives," and if the cost of obtaining such information is "not exorbitant," then the agency must obtain and include that information in an EIS. 40 C.F.R. § 1502.22. Although facially appealing, CEQ has made clear that this provision applies only to the preparation of an EIS, not to an EA. 51 Fed. Reg. 15618, 15620 (Apr. 25, 1986). Were we to interpret NEPA and this regulation in the manner suggested by Intrepid, we would transform the process of preparing an EA into a potentially never-ending

¹⁵ In aiming its potash shotgun at delaying (if not precluding) oil and gas drilling in areas not to its liking, Intrepid also asserts BLM failed to take a hard look at: migratory bird impacts (a migratory bird inventory had not yet been completed); air quality impacts; Alternative A (a less intensive alternative with reduced impacts); and additional mitigation measures. SOR at 22-26. Since Intrepid proffers no evidence to support its assertions, only argument, we find these claims reflect only a difference of opinion with BLM, which is insufficient to show error under NEPA. *See Concerned Citizens for Nuclear Safety*, 175 IBLA 142, 154 (2008).

quest for more information.¹⁶ Neither NEPA nor applicable implementing regulations require more than occurred in this case. We therefore find no error in BLM's consideration of potash resources in sec. 17 under NEPA.

Intrepid contends that the cumulative impacts of past, present, and future oil and gas drilling in sec. 17 on potash mining and miners were inadequately addressed, as were alternatives and mitigation measures. The EA collectively considered the drilling of these 11 exploratory wells, along with 5 prior wells in that section. Intrepid claims BLM should have evaluated the impacts of full field development, despite the fact that development in sec. 17 has yet to be proposed, much less the results from these wells analyzed to assess whether development is even feasible. We are unpersuaded that BLM should have assumed that full field development is likely and then evaluated the impacts of that likely development when assessing the cumulative impacts of these APDs. As to alternatives and mitigation measures, our review of the record finds no error in BLM's consideration of these issues, particularly as they affect or could affect potash resources.

B. BLM Made a Convincing Case that No Significant Impact Will Result.

Intrepid claims an EIS was required because APD approval will place the "physical environment at direct risk of massive calamity," and pose a "grave risk of injury or death" to potash miners. SOR at 14, 15. As to the loss of potash which could result from drilling, the "massive calamity" envisioned by Intrepid, we find the EA and FONSI made a convincing case that such impacts are not likely to be significant (or will be reduced to insignificance through specified mitigation measures). See discussion *supra*. With respect to possible injury or death to miners should potash mining occur in sec. 17, we find Intrepid's concerns speculative at best. The EA and case files for these APDs demonstrate that they are more than a mile away from any Open Mine Workings or Three-Year Mine Plan and beyond any "life of mine reserves," in an area that has not been leased for potash or even nominated for such leasing by the potash industry. Whatever speculative risks may arise at some time in the future, they do not compel the preparation of an EIS in this case.

C. The Public was Adequately Involved in BLM's Decisionmaking.

¹⁶ Under Intrepid's view of NEPA, BLM would be precluded from approving any APDs throughout the 497,000-acre Potash Area unless and until it comprehensively evaluated that area by obtaining additional data and identified areas without any potash and areas with potash known to be of insufficient thickness and quality to be mineable under current technology and economics (*i.e.*, barren areas). We are loathe to create such a requirement under the circumstances of this case.

Intrepid separately argues that BLM failed adequately to involve the public under NEPA by failing to provide an opportunity for public comment on a draft EA. SOR at 30-31; Supplemental Reply at 30-31. We have recognized the importance of public participation under NEPA, but rejected the suggestion that the public must be accorded an opportunity to review and comment on a draft EA, as is here claimed by Intrepid. *Lynn Canal Conservation, Inc.*, 169 IBLA 1, 4 (2006). In doing so, we reviewed relevant case law, including decisions which concluded that the requirements of NEPA were satisfied by providing an opportunity for public comment on an application/proposal and responding to those comments in an EA. *Id.* at 5-7; see *Alliance to Protect Nantucket Sound, Inc. v. U.S. Department of Army*, 398 F.3d 105, 115 (1st Cir. 2005); *Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1279 (10th Cir. 2004); *Pogliani v. U.S. Army Corps of Engineers*, 306 F.3d 1235, 1239-40 (2d Cir. 2002). We then held that “the question of whether the public was adequately involved in BLM’s NEPA process depends on a fact-intensive inquiry made on a case-by-case basis.” *Lynn Canal Conservation, Inc.*, 169 IBLA at 4; accord *The Wilderness Workshop*, 175 IBLA at 133.

In its protest dated June 6, 2006, Intrepid raised multiple issues concerning impacts and the use of gamma ray log data to identify potash deposits in sec. 17. Its concerns were acknowledged and BLM responded to them in the EA. EA at ¶¶ 4.9, 5.1; see *id.* at ¶ 3.9. Intrepid contends that BLM was nonetheless required to circulate a draft EA for comment because there is a “public controversy” over the effects of BLM’s approving the APDs at issue. Supplemental Reply at 31, citing BLM NEPA Handbook, H-1790-1, § 8.4.2.¹⁷ Without more being shown or alleged by Intrepid, we are unpersuaded that NEPA required BLM to circulate a draft EA for public comment under the circumstances presented in this case.

¹⁷ Oil and gas drilling in the Potash Area has been a source of contention and litigation for nearly 30 years between Intrepid and other potash mining companies on the one hand, and the oil industry on the other. See, e.g., *IMC Kalium* (2006); *Pogo Producing*, 138 IBLA 142 (1997); *Yates Petroleum* (1994); *Bass Enterprises Production Co.*, 48 IBLA 11 (1980); *Belco Petroleum Corp.*, 42 IBLA 150 (1979).

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 C.F.R. § 4.1, the September 19, 2006, decision of the State Director is affirmed.

_____/s/_____
James K. Jackson
Administrative Judge

I concur:

_____/s/_____
H. Barry Holt
Chief Administrative Judge