Claiming the Cabinets: The Right to Mine in Wilderness Areas

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I. INTRODUCTION

The Cabinet Mountains Wilderness could be the first designated wilderness to be commercially mined: world-class copper-silver deposits have been discovered there by two mining companies, American Smelting and Refining Company (ASARCO) and United States Borax and Chemical Corporation (Borax). This portent reveals a fundamental conflict inherent in public land laws which were passed at different stages in our nation’s history. Due to the Mining Act of 1872 and certain provisions of the Wilderness Act of 1964, miners were granted a foothold in wilderness...
America's public policy of promoting the settlement and mining of federal lands was pervasive in the latter half of the nineteenth century. The 1872 Mining Act exemplified this policy by allowing citizens to enter freely onto public lands and claim mineral resources—and even surface lands—as their own private property. Even as this land disposition policy predominated, however, a movement was underway to either reserve or preserve public lands for the enjoyment of all citizens. Beginning with legislation establishing National Parks\(^5\) and forest reserves\(^6\) in the late nineteenth, and early twentieth centuries, this preservation movement was a major force behind the passage of the 1964 Wilderness Act. Because entry and appropriations under the mining laws were allowed to continue in federally designated wilderness areas until December 31, 1983, the stage was set for conflicts between land preservation goals and mineral development ventures.

The actualization of these conflicts is perhaps best exemplified by the current situation in the Cabinet Mountains. This comment examines the interrelationship between the 1872 Mining Act and the 1964 Wilderness Act, focusing on their implementation by the Forest Service for the Cabinet Mountains Wilderness area in the Kootenai National Forest in Montana. The upshot of this implementation will set possible precedents for other wilderness areas facing similar conflicts. Therefore, results of Forest Service administration of laws and policies concerning mining activities in the Cabinets will have far-ranging effects.

This comment examines certain laws, regulations, and policies which govern mining rights in wilderness, and uses the Cabinets area to illustrate their administration by the Forest Service. Issues which have been raised in Forest Service appeal proceedings are also examined through a chronological presentation of the appeal process. This case study of the interrelationship between the Mining Act and the Wilderness Act, and Forest Service administration of these opposing mandates, may assist in discerning the background of future conflicts associated with hardrock mining rights in wilderness areas.

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4. In the context of this comment, wilderness areas refer to those designated by Congress pursuant to the Wilderness Act or subsequent individual wilderness legislation. Because the Cabinet Mountains Wilderness is managed by the United States Forest Service, emphasis is placed on national forest wilderness areas. Three other federal agencies manage wilderness areas: National Park Service (NPS), United States Fish and Wildlife Service (FWS) and Bureau of Land Management (BLM).

Miners had 92 years after the passage of the 1872 Mining Act in which to explore and develop mineral resources on lands which were to become statutory wilderness areas.


II. Pertinent Statutes and Regulations

Two primary statutes which govern hardrock mining in national forest wilderness areas are the 1872 Mining Act and the 1964 Wilderness Act. This section suggests how the Mining Act has been somewhat modified throughout its long history. It also details the "steps" a miner must have completed by December 31, 1983 to possess valid rights to locatable minerals in wilderness areas. Forest Service administration of the Wilderness Act’s mining provisions is examined, as are agency regulations. Examples are provided from the Cabinets situation to illustrate each section.

A. The Mining Act of 1872

Although a remnant of America’s land disposition policy, the Mining Act of 1872 continues to govern the mining of hardrock (locatable) minerals—for example, gold, silver, copper—on public lands. It remains an invitation to citizens to explore for and extract mineral deposits, and allows for the patenting (acquisition of land title in fee simple) of mining claims.8

Having survived over a century essentially intact, certain aspects of this anachronistic law have been modified. Some of these changes may be attributed to increased societal concern with environmental and preservation goals. Modifications of the law include: the successive removal of different minerals from the statute’s purview; the adoption of a marketability standard for discovery and the inclusion of environmental considerations in this standard; the withdrawal of minerals in certain lands, including wilderness areas, from appropriations under the law; increased agency control of mining operations; and, with the Federal Land Policy and Management Act of 1976,9 a formal policy declaration of public land retention and a requirement to record mining claims. These changes demonstrate a decreasing emphasis on mining as the best form of public land use, showing a shift in values toward other resource uses. While these modifications of the 1872 Mining Act may have diminished its purview somewhat, there are strongly divided opinions as to its current relevance and adequacy.10

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10. A treatise evaluating the 1872 Mining Act is beyond the scope of this paper, although excellent commentaries on this topic are available. See Knutson & Morrison, Coping with the General Mining Law of 1872 in the 1980’s, 16 LAND & WATER L. REV. 411 (1981); Comment, The 1872 Mining Law: A Statute By-Passed by Twentieth Century Technology and Public Policy, 1981 UTAH L. REV. 575; Noble, Environmental Regulation of Hardrock Mining on Public Lands: Bringing the
The Act originally encompassed the mining of most minerals on federal land, the notable exception being coal. Beginning in 1920, other minerals have since been removed from the Act’s purview.  

Certain required steps must be performed by the miner seeking to establish a valid claim to locatable minerals, such as the copper-silver deposits in the Cabinets, the mining of which is under the aegis of the 1872 Mining Act. These steps are the result of incorporating local, state and territorial customs concerning the location and recordation of mining claims into state law and into the Act. The steps have been refined by court decisions and modified by the Federal Land Policy and Management Act (FLPMA) of 1976.

First, a valuable mineral deposit must be discovered. Although the 1872 Act did not define the word “valuable” in its relation to the discovery requirement, an 1894 Solicitor’s Opinion established the standard “prudent person” rule: “[W]here minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met.”

The prudent person rule is complemented by the “marketability
test" advanced in a 1968 Supreme Court ruling, *United States v. Coleman*. Hence, this interpretation implies that another modification of the 1872 Mining Act occurred almost a century after its passage. The marketability test requires a showing that the deposit can be presently mined, processed, and marketed at a profit. In calculating present marketability, a claimant may consider historic trends in prices and costs. Profitability may be proven if a claimant shows that "as a present fact, considering historic price and cost factors and assuming that they will continue, there is a reasonable likelihood of success that a paying mine can be developed."

Environmental protection or mitigation measures must be factored into the marketability test. This modification is obviously a new concept, relative to the original 1872 Mining Act principles. If a claimant attempting to develop a paying mine is unable to comply with federal and state laws governing water and air quality, reclamation, endangered species, and other environmental protection measures, then there has been no discovery of a valuable mineral deposit.

Claimants operating in wilderness areas must consider the additional costs incurred by working in remote and roadless areas, and also of
complying with surface use restrictions imposed by the Forest Service. To meet the marketability requirement a wilderness operation should have a "reasonable prospect" of attaining revenues greater than those gained by operating in non-wilderness. Greater revenues are necessary to compensate for the increased costs and, therefore, to obtain a profit.20

Discovery of a valuable mineral deposit is followed by location.21 Locating a claim involves marking the boundaries on the land, recording the claim in the appropriate county land office(s) and state BLM office, and performing a minimum of $100 worth of annual assessment work. A lode claim, typical of those staked in the Cabinet Mountains, may not exceed 1500 feet in length along the vein, or extend over 300 feet on either side of the middle of the vein;22 hence, the maximum size of a claim is about 20 acres. If these requirements of discovery and location are met, an unpatented mining claim has been established, granting the miner the right to mine the deposit.

In order for valid existing rights to vest in national forest wilderness areas, these steps of discovery and location must have been completed by December 31, 1983.23 Additionally, the determination of validity for a mining claim in an area that was subsequently withdrawn from entry and appropriations under the mining laws requires both that the claim was valid at the time of withdrawal and is valid as a present fact.24 A mining claim cannot be considered valid if, although a valuable mineral deposit had been located at the time of withdrawal, it does not presently have a proper discovery. The loss of the discovery—whether through exhaustion of the minerals, changes in economic conditions, or other circumstances—results in the loss of location, and therefore, of claim validity.25

The owner of an unpatented mining claim may proceed to patent that

20. Toffenetti, supra note 15, at 64-65; interview with Michael J. Burnside, Mining Geologist, Forest Service Northern Region Office, Missoula, Montana, (March 12, 1986).
21. As a practical matter, location (the staking or monumenting of claim boundaries) often precedes discovery. G. COGGINS & C. WILKINSON, FEDERAL PUBLIC LAND AND RESOURCES LAW, at 351-52 (1981). However, the location is not valid until a discovery has been made. Toffenetti, supra note 15, at 36.
22. 30 U.S.C. § 23 (1982). Although this section of the Act requires parallel endlines, only extralateral rights (see infra section on Apex Provision) are affected by non-parallel endlines. The claim itself is not invalid, but extralateral rights will not apply. However, a liberal view held by the courts allows extralateral rights in the case of converging endlines, because the area involved necessarily includes that covered by parallel endlines. 2 AMERICAN LAW OF MINING § 37.02[4] (2nd ed. 1984).
claim by performing at least $500 worth of annual labor which tends to
develop the claim, and filing for the patent. Whereas a patent is usually a
grant of land title in fee simple, conferring rights to both the surface and
subsurface resources, this is not the case in wilderness areas. Patents
conveyed for mining claims with valuable mineral deposits discovered in
national forest wilderness areas after passage of the Wilderness Act (or
subsequent establishing legislation for individual wilderness areas) grant
title only to the subsurface resources; title to the surface estate remains
with the United States.26 Patents for lode claims issue for $5 per acre and
"[t]hereafter, no objection from third parties to the issuance of a patent
shall be heard . . . "27 No patents shall be issued within wilderness areas
after December 31, 1983, except those for valid claims existing on or before
this date.28 The Bureau of Land Management (BLM) of the Department of the
Interior administers the mineral patent process,29 and
requires that a mineral survey and placement of permanent
monuments be completed prior to the formal application to the
BLM for mining patent. Upon receiving a mineral patent
application involving National Forest Lands, the BLM contacts
the Forest Service and requests a mineral examination on the
subject mining claims. The examination is then documented in a
report with recommendations made to the BLM to either issue or
deny patent. The Forest Service role is only to recommend a
course of action to the BLM based on the mineral report.30
When proposed activities will occur within wilderness, a mineral validation
report (mineral report) is prepared by the Forest Service subsequent to a

27. 30 U.S.C. § 29 (1982). Even where the surface rights are retained by the United States, the
patented mineral estate is private property, thus fully subject to state regulation. The possessory right
conferred by an unpatented mining claim is also a private property interest which can be regulated and
taxed by the state. UNITED STATES CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, MANAGEMENT
OF FUEL AND NONFUEL MINERALS IN FEDERAL LANDS 251 (1979). Reclamation requirements are one
form of state control: article IX, § 2 of the Montana Constitution (1972) requires that all lands
disturbed by the taking of natural resources must be reclaimed. See MONT. CODE ANN. §§ 90-6-401 to
-405 (1985), on hard-rock mining impact property tax base sharing.
29. In 1905, jurisdiction over forest reserves was transferred from the Department of the Interior
to the Department of Agriculture, except that concerning the mineral estates of such lands. 16 U.S.C. §
472 (1982). The Forest Service performs mineral examinations to determine claim validity and then
makes recommendations to the BLM, regarding contest proceedings and patent requests. The two
Departments, Interior and Agriculture, work cooperatively on this split jurisdiction, and Interior "is
without authority to question the methods by which the Forest Service deals with mining claimants in
the national forests. . . ." UNITED STATES v. BERGDAL, 74 INTERIOR DEC. 245, 253 (1967).
30. KOOTENAI NATIONAL FOREST, ENVIRONMENTAL ASSESSMENT, DECISION NOTICE AND
FINDING OF NO SIGNIFICANT IMPACT FOR ADDENDING THE ENVIRONMENTAL ASSESSMENT APPROVED
company filing an operating plan. On the basis of a mineral examination, this report documents which claims have valuable mineral deposits located within their boundaries, both as of December 31, 1983 and as a present fact. The mineral report may then be used in patent filings, as will be the case when ASARCO files patent requests with the BLM for its claims in the Cabinets.\(^{31}\)

The U.S. Borax-Rock Lake Mineral Report was the first of several mineral reports to be issued for claims in the Cabinets, with the ASARCO Incorporated-Rock Creek Mineral Report following.\(^ {32}\) The reports documented that 4 of 202 of Borax’s Hayes Ridge claims are valid,\(^ {33}\) while ASARCO has valid rights to 101 of 133 Cur and Lynn claims.\(^ {34}\) Forthcoming mineral reports will concern two other Borax claim groups and possibly claims located by small companies.\(^ {35}\) Although title would be only to the mineral resources, not surface lands, mining companies working in the Cabinets are still interested in patenting their claims. Patents will help ensure financing for mine development ventures\(^ {36}\) and will also guarantee ownership of the minerals.\(^ {37}\)

### B. Apex Provision

Perhaps the crucial section of the 1872 Mining Act, relative to the appeal proceedings in the Cabinets, is section 26, commonly referred to as the “apex law”:

> The locators of all mining locations made on any mineral vein, lode, or ledge, situated on the public domain . . . shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which

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32. Borax submitted its plan of operations to the Forest Service before ASARCO, on January 1984 and April 1984, respectively; therefore mineral validation was completed for Borax first. The agency has a one to two year turnaround time for completing mineral reports after receiving operating plans. Interview with Bob Thompson, Forest Geologist, Kootenai National Forest, Libby, Montana (August 20, 1985).
33. U.S. Forest Service, U.S. Borax-Rock Lake Mineral Report 55 (February 27, 1985). However, extralateral rights extend beneath at least ten additional claims, based on the discovery of the apex within the four valid claims. See infra sections Apex Provision and Mining the Cabinets.
35. One of the small companies is Heidelberg Silver Mining Company. Thompson, supra note 32.
36. As a general rule, it is difficult to borrow money to develop a mineral property which is not patented. T. MALEY, HANDBOOK OF MINERAL LAW 74 (2nd ed. 1979).
37. Interview with James Mershon, Cabinet District Ranger, Kootenai National Forest, Trout Creek, Montana (August 6, 1985); Gregory, Cabinet Miners Boring In On the Payoff, Missoulian, September 22, 1985.
lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations. But their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward as above described, through the endlines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges.\textsuperscript{38}

The apex of a mineral vein may or may not crop out on the surface of the ground; it is the uppermost edge of that mineral vein nearest the surface.\textsuperscript{39} Extralateral rights to the dip\textsuperscript{40} of a vein are conferred upon the lode claimant who possesses the apex of that vein through a valid location. These rights are to the vein beyond the side line, but within the endline, limits of a valid lode location.

Once extralateral rights have been established, the claimant must prove continuity of the ore body outside the claim and demonstrate that it could be followed on its downward course. This imposes a substantial burden of proof on the claimant.\textsuperscript{41} There is no standard for assessing continuity and it is always a legal question of fact, although courts will adopt neither speculation nor conjecture as the requisite evidence of continuity.\textsuperscript{42}

A claimant may not use extralateral rights as the sole basis to validate mining claims on which there has been no actual, physical exposure of mineralization. However, under certain circumstances, extralateral rights may aid in the estimation of extent and potential value of the deposit, so as to satisfy the marketability test necessary for a valid discovery.\textsuperscript{43} Utilizing the apex provision in wilderness areas is permissible, as long as the extralateral rights are associated with valid lode mining claims located prior to withdrawal.\textsuperscript{44}

Both ASARCO and Borax may have limited extralateral rights in the Cabinet Mountains Wilderness. It was determined that Borax's extralateral rights extend under at least ten additional claims in its Hayes Ridge (HR) claim group, because the apex of this vein is located on the company's

\textsuperscript{39} 2 AMERICAN LAW OF MINING § 37.01[4] n.57.
\textsuperscript{40} Dip refers to the direction of the vein's downward course into the earth. \textit{Id. at} § 37.02[2], n.9.
\textsuperscript{42} 2 AMERICAN LAW OF MINING § 37.02[3].
\textsuperscript{43} Haggard & Curry, supra note 15, at 8-30. Mr. Haggard's law firm, Evans, Mitchel and Jenckes, is representing ASARCO in the appeal proceedings. See infra section Appeal Proceedings.
four valid claims. ASARCO and Borax may, to a limited extent, have extralateral rights to certain of each other's claims in the wilderness.

In addition, one of the issues raised in ASARCO's appeal of the Forest Service's decision notice which modified and approved Borax's Hayes Ridge-Rock Lake plan of operations concerns that of extralateral rights. The company is contesting the basis upon which the apex provision was applied in the Hayes Ridge claim group of Borax. This issue, and others raised on appeal, will be discussed in a later section.

Provisions of the 1872 Mining Act, including the apex law, must be considered in conjunction with the Wilderness Act and also with relevant agency regulations, in order to further evaluate the situation in the Cabinet Mountains Wilderness Area.

C. The Wilderness Act of 1964

The 1964 Wilderness Act stands as a notable expression of America's preservation policy. This landmark legislation was passed after eight years of debate and sixty-five revisions. Compromise and concessions are apparent in the statute, for many non-conforming uses of wilderness are allowed, including mineral exploration and development. Sections 4(d)(2) and 4(d)(3) comprise the mining mandate of the Wilderness

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45. See infra text accompanying notes 113-115.

46. ASARCO-ROCK CREEK MINERAL REPORT, supra note 31, at 65-67. ASARCO may have limited extralateral rights extending beneath Borax's Copper Gulch and Wynn claim groups; Borax may have limited rights extending beneath ASARCO's Lynn Group.


Nothing in this chapter shall prevent within national forest wilderness areas any activity, including prospecting, for the purpose of gathering information about mineral or other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment. Furthermore, such areas shall be surveyed on a planned, recurring basis consistent with the concept of wilderness preservation by the Geological Survey and the Bureau of Mines to determine mineral values, if any, that may be present.


Notwithstanding any other provisions of this Act, until midnight December 31, 1983, the United States mining laws shall, to the same extent as applicable prior to September 3, 1964, extend to those national forest lands designated by this Act as "wilderness area"; subject, however to such reasonable regulations governing ingress and egress as may be prescribed by the Secretary of Agriculture consistent with the use of the land for mineral location and development and exploration...and restoration as near as practicable of the surface of the land...[H]ereafter, subject to valid existing rights, all patents issued under the mining laws of the United States affecting national forest lands designed by the Act as wilderness areas shall convey title to the mineral deposits within the claim...but each such patent shall reserve to the United States all title in or to the surface of the land...No patent within wilderness areas...shall issue after December 31, 1983, except for the valid claims existing on or before December 31, 1983. Mineral...permits covering lands within national forest wilderness areas...shall contain reasonable stipulations...for the
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There is no discussion in the legislative history of the Wilderness Act concerning the relationship between these two sections, perhaps because 4(d)(3) only appeared in final versions of the legislation. Nevertheless, a few points may be noted regarding these two mining sections of the Act. Congress did determine that certain mining activities could occur in and be compatible with wilderness. One commentator suggested that Congress made a distinction between exploring for and extracting minerals: extractive activity would be allowed only in times of genuine national need, while exploratory activity would be allowed and encouraged, subject to regulation. Exploration was advocated in order to determine the extent of mineral reserves in wilderness, which would then only be used as "bank accounts" in times of national need. Such an idea may have contributed to the language of 4(d)(2), which allows continued exploration for the purpose of gathering information—but not for the purpose of accruing additional rights as a result of the discovery of a valuable mineral deposit—after December 31, 1983.

The two mining sections of the Wilderness Act appear to be contradictory. Section 4(d)(2) allows for prospecting and mineral exploration if these activities are compatible with the preservation of the wilderness environment; section 4(d)(3) permits activities governed by the mining laws and makes them subject to regulation, but does not stipulate that they be compatible with the preservation of the wilderness environment. In the protection of the wilderness character of the land... Subject to valid existing rights then existing, effective January 1, 1984, the minerals in lands designated by this Act as wilderness areas are withdrawn from all forms of appropriation under the mining laws.

50. W. Coldiron, Memorandum to Director-BLM, Minerals Management in BLM Designated Wilderness Areas, (October 19, 1981) (available from U.S. Forest Service Northern Region Office, Missoula, Montana). He noted that although the provisions in the Wilderness Act deal specifically with National Forest lands, they are also applicable to BLM lands by FLPMA's mandate. 43 U.S.C. § 1782 (1982).


53. Id. at 7-13.

54. Id. at 9.

55. The mineral surveys to be conducted on a "planned, recurring basis" were not performed to the extent envisioned in 4(d)(2). Cawley, supra note 52, at 9-10. However, the United States Geological Survey (USGS) and the Bureau of Mines did evaluate the mineral potential of the Cabinets area around Chicago Peak during field sessions in 1972-74, and recommended drilling in the wilderness to determine the extent of mineralization. Kootenai National Forest, Environmental Assessment: ASARCO-Rock Creek Property (Chicago Peak) Plan of Operations (June 17, 1980) [hereinafter cited as EA: ASARCO-CHICAGO PEAK].
early 1980's, the Northern Regional Forester\textsuperscript{56} and the Solicitor to the Department of the Interior\textsuperscript{57} clarified Forest Service and BLM policy concerning the applicability of these apparently conflicting sections. Initially, the resolution relied on the timing of the two sections: 4(d)(3) controlled mining activity until December 31, 1973, and thereafter on valid locations; 4(d)(2) governed mineral information gathering activities after the deadline "except when a discovery has been made."	extsuperscript{58}

When these policy statements were issued however, the current complex situation in the Cabinets could not have been envisioned. Thus, in the Cabinets, a somewhat revised interpretation has section 4(d)(2) governing mineral information gathering activity, even when a discovery has been made.\textsuperscript{59} Such is the case with Borax's Hayes Ridge claim group at Rock Lake: 4 out of 202 claims have a valid "discovery" exposed within their boundaries. Surface and downdip rights associated with these four valid claims were preserved by, and are controlled by, section 4(d)(3).\textsuperscript{60} Downdip rights to the four claims are based on the apex provision of the 1872 Mining Act, although this explicitly grants no concomitant surface rights.\textsuperscript{61} Forest Service authority—to allow Borax drilling outside of valid claim boundaries in order to pursue its downdip (extralateral) rights—is based on sections 4(d)(2) and 5(b)\textsuperscript{62} of the Wilderness Act and also its 1897 Organic Act,\textsuperscript{63} by which agency regulations are authorized.\textsuperscript{64} Thus, although Borax's drilling activity was in conjunction with a discovery, 4(d)(2)—rather than 4(d)(3)—is the controlling section in this situation.

To summarize the Cabinets-Borax situation: surface and downdip
rights to the mineral deposit within valid claim locations are preserved by and controlled by section 4(d)(3) of the Wilderness Act. Surface and access rights outside of valid claim boundaries—although in conjunction with the discovery and development of a valuable mineral deposit—are governed by sections 4(d)(2) and 5(b) of the Wilderness Act. The 1897 Organic Act is the basis for Forest Service authority to regulate mining activities on national forest lands. Borax operations on and off of valid claims must adhere to agency regulations.

D. Forest Service Regulations

Another infringement on the ideals of the 1872 Mining Act occurred when the Forest Service established its mining regulations in 1974. Some argued that this increased agency control over mining operations exceeded Forest Service authority. Others suggested that federal land management agencies do have a regulatory power, based on general statutes like the Forest Service's Organic Act, at least to impose restrictions on mining operations for the mitigation of surface damage.

In wilderness areas, Forest Service mining regulations currently apply only to operations associated with mining claims where valid existing rights, as per the 1872 Mining Act and the 1964 Wilderness Act, have been verified. However, Forest Service authority vested in its 1897 Organic Act and section 4(d)(2) of the Wilderness Act permits the agency to require some form of prior approval before any hardrock mineral information gathering will be allowed in wilderness. And "(i)n no case after December 31, 1983, can information gathered under section 4(d)(2) be used to establish a discovery." Mining operations occurring within national forest wilderness areas


66. COGGINS & WILKINSON, supra note 21, at 373-74. This regulatory power is probably not broad enough to authorize agencies to forbid prospecting or mining, however. Id.


68. Burnside, supra note 20; Coston, supra note 56. Because wilderness areas are now withdrawn from entry under the general mining laws and the purpose and scope of the agency's mining regulations limit their applicability only to operations authorized by the mining laws, these regulations no longer apply to mineral exploration or information-gathering activities which are not associated with valid existing rights.

69. This prior approval can take the form of a notice of intent to operate (NOI) or a plan of operations (POO). NOI is required from anyone proposing to conduct operations which might cause disturbance of surface resources. If operations are expected to cause significant disturbance of surface resources, a plan of operations is required. 36 C.F.R. § 228.4(a) (1985). Mining companies in the Cabinets Wilderness have submitted plans of operations for their activities.

70. Coston, supra note 56.
before December 31, 1983 and those on or associated with present valid existing locations (i.e., where section 4(d)(3) of the Wilderness Act preserved rights acquired under mining laws) must comply with these Forest Service mining regulations, in addition to those specifically applicable to wilderness areas. The Forest Service may impose substantial surface use and development restrictions for mining in designated wilderness areas, through its approval of operating plans. Prior to December 31, 1983, the agency was only concerned with the environmental effects of operating plans. After the December 31, 1983 deadline, mineral reports are first required in order to document which mining claims covered by a wilderness operating plan have valid rights.

Following the mineral validation examination and subsequent report is an environmental review of the plan. An environmental assessment (EA) and possibly an environmental impact statement (EIS) will be prepared regarding any operating plan. If a “finding of no significant impact” (FONSI) document results from the EA for that particular stage of mining activity, and there is no incompatibility with preservation of the wilderness environment under section 4(d)(2) of the Wilderness Act, the activity may proceed. This was the situation with Borax’s operating plan.


72. 36 C.F.R. § 228.8; 36 C.F.R. § 228.15 (1985). A plan of operations shall include name of operators and claimants; map or sketch detailing operating area; and information describing the type of operations, proposed roads and access, means of transport, time span of activity, and measures to be taken to meet the requirements for environmental protection. 36 C.F.R. § 228.4(c) (1985).

73. See Watson, Mineral and Oil and Gas Development in Wilderness Areas and Other Specially Managed Federal Lands in the United States, 29 ROCKY MTN. MIN. L. INST. 37 (1973); Elliot, Closing the Mining Loophole in the 1964 Wilderness Act, 6 ENVTL. LAW 469 (1976); Comment, The Wilderness Act and Mining: Some Proposals for Conservation, 47 OREGON L. REV. 447-59 (1968).


75. An EA is a public document for which a federal agency is responsible which, inter alia, briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI). 40 C.F.R. § 1508.9 (1985). An EA for mining operating plans considers all feasible alternatives for complying with the rights of the claimant. FOREST SERVICE MANUAL, Part 2323.71b.

76. 36 C.F.R. § 228.4(f) (1985).
which involved drilling on four sites near Rock Lake—in wilderness, but off of valid mining claims—during the summer of 1985. However, even if significant impact reasonably incident to mining is proposed on valid claims, it may be permitted under section 4(d)(3). No unnecessary or undue degradation of wilderness is allowed however, and adequate reclamation measures must be taken to return the land (as nearly as practicable) to premining conditions.\(^7\)

Although the operating plan for exploratory drilling or minor surface disturbance will be conditionally approved,\(^7\) subsequent mine development will require further scrutiny and therefore, a comprehensive EIS.\(^7\)

The procedures outlined in this section have detailed the necessary steps a miner must take to secure a valid claim in wilderness, and also the laws and regulations which must be adhered to in this endeavor. Mining companies in the Cabinet Mountains Wilderness have completed many of the requisite procedures, with the Forest Service documenting the results.

### III. MINING THE CABINET MOUNTAINS

The Cabinet Mountains region, including the 94,272 acre wilderness area,\(^8\) is no stranger to mining activities. Since the 1960's, miners have extracted copper, silver,\(^8\) gold, lead, and zinc from geologic formations in the Cabinet range. Placer mining of gold began in the 1860's and lode mining soon followed. Numerous adits\(^8\) still remain in the wilderness area.

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77. Letter from Forest Service Chief R. Max Peterson to Senator Malcolm Wallop (June 21, 1982); Burnside, supra note 20.

78. It is generally recognized that the Forest Service was not given the authority in 36 C.F.R. § 228 to directly deny approval of a plan of operations because the agency cannot prohibit mineral activities which the 1872 Mining Act allows. See, e.g., Noble, supra note 10, at 153-54. However, denial may result indirectly from the imposition of restrictions governing environmental protection and reclamation measures, rendering a previously considered valuable deposit “not valuable.”


80. The Cabinet Mountains Wilderness was originally classified as a “primitive” area in 1935, and was subsequently reclassified as a “wild” area on June 26, 1964. Kootenai National Forest, Draft Cabinet Mountains Wilderness Action Plan 32 (January 1986). With the passage of the Wilderness Act in September of 1964 proclaiming all Forest Service “wilderness,” “wild,” and “canoe” areas as initial parcels of the National Wilderness Preservation System, it was thus “instant wilderness.” It is located on the Kaniksu National Forest, although the Trout Creek/Noxon Ranger District of this Forest (including the wilderness area) has been administered by the Cabinet Ranger District of the Kootenai National Forest since 1973. Interview with James Mershon, Cabinet District Ranger, Kootenai Forest, Trout Creek, Montana (August 19, 1985).

81. In the United States, 92% of the newly extracted copper and 84% of the silver are produced in the western states, mainly from reserves under national forest and public domain lands. CONGRESSIONAL QUARTERLY, THE BATTLE FOR NATURAL RESOURCES 172 (1983).

82. An adit is an almost horizontal entrance, or tunnel, to a mine. AMERICAN HERITAGE DICTIONARY 16 (New College ed. 1979).
from lode mining of gold-bearing quartz veins in the 1920's and 1930's.\textsuperscript{83}

\section*{A. American Smelting and Refining Company}

In the mid-1960's, Bear Creek Mining Company (a subsidiary of Kennecott Copper Corporation) discovered and explored stratabound copper-silver deposits of the Revett Formation\textsuperscript{84} in the Cabinet range. Company prospectors explored these deposits near Rock Creek and, in 1965, staked claims within the wilderness boundary. In the mid-1970's, ASARCO acquired the property from the Bear Creek Mining Company and subsequently began staking more claims in and around the wilderness.\textsuperscript{85}

In 1979, ASARCO submitted its plan of operations for mineral exploration in the Chicago Peak area of the wilderness. The Forest Service's EA for the plan determined that there would be no significant impact to the area from these operations, if the company adhered to the imposed restrictions. Consultation with the United States Fish and Wildlife Service (FWS) provided a "no jeopardy" opinion concerning the plan; operations would not adversely affect the continued existence of grizzly bears.\textsuperscript{86} The FWS emphasized that further consultation would be required for additional exploratory or developmental activities.\textsuperscript{87}

ASARCO received its permit from the Forest Service in August and drilled two holes within the wilderness and three holes immediately outside the boundary. Encouraged by the results of this drilling program, the company proposed a comprehensive four-year (1980-83) operating plan in 1980 to determine the extent and value of the deposit. This proposed plan for exploratory drilling was designed to meet the requirements of the Wilderness Act for establishing valid rights on or before December 31,

\begin{itemize}
\item \textsuperscript{83} U.S. Forest Service, U.S. Borax-Rock Lake Mineral Report 10 (February 27, 1985).
\item \textsuperscript{84} The Revett is one of the formations comprising the Precambrian Belt Supergroup, with possibly the greatest ore potential of these formations. Id. at 11-13.
\item \textsuperscript{85} Eggert, \textit{Grizzly Habitat in the Cabinet Mountains: A Vanishing Sanctuary?}, Western Wildlands Fall 1983, at 3. ASARCO's Troy mine, located at Spar Lake about six miles west of the wilderness, is the leading silver producer in the country; the silver deposits at Rock Creek are estimated to be at least twice as large as those at Spar Lake.
\item \textsuperscript{86} Forest Service consultation with the Fish and Wildlife Service is mandated by the Endangered Species Act, because the Cabinets area contains critical habitat for the grizzly, which is listed as a threatened species. 16 U.S.C. § 1536 (1982). The Act requires that all federal agencies consider the economic and environmental consequences of their decisions in order to ensure that the federal government does not jeopardize the continued existence of any endangered (in danger of extinction throughout all or a significant portion of its range) or threatened (likely to become endangered) species, or adversely modify such species' critical habitat (specific areas occupied by the species).
\item \textsuperscript{87} EA: ASARCO-Chicago Peak, \textit{supra} note 55, at 3.
\end{itemize}
The Forest Service's EA for this operating plan yielded another FONSI (finding of no significant impact), although mitigation measures were necessary to offset impacts to the surface resources and to grizzly bears. Requisite consultation with the FWS yielded a "jeopardy" opinion; ASARCO's proposed operations in the original plan would cause further displacement of the bears from habitat that was already very restricted. Therefore, the Forest Service imposed numerous restrictions and stipulations on the plan in an attempt to protect wildlife and wilderness values. These sixty-two "management requirements and restraints" included a shortened drilling season; strict helicopter-use limitations; drill site operation and recovery requirements; water, soil, and vegetative protection measures; reclamation work, with bond posted; measures to reduce air, noise, and visual pollution; and wildlife and water monitoring programs.

The Forest Service itself was required by the FWS Biological Opinion to postpone or eliminate certain timber sales in the area and to close roads, in order to compensate for increased human activity in the exploration area. Because these mitigation measures were incorporated into the company's operating plan, the Forest Service decided that impacts of the proposed activity had been assessed and the appropriate action taken and, therefore, that an EIS was unnecessary.

Conservation groups were dissatisfied with the results of the EA, and felt that an EIS was necessary to assess fully the cumulative impacts of the drilling program on the wilderness environment, including wildlife. These groups brought suit against the Forest Service, after unsuccessfully going through the administrative appeals process. Both the district and circuit courts for the District of Columbia upheld the agency's decision that an EIS was not necessary. The circuit court ruled that the appellants did not prove any deficiencies in the agency's decision-making process. The court found that the imposed mitigation measures completely compensated for potential adverse environmental impacts, thus not crossing "the statutory threshold of significant environmental effects" which necessitates an EIS. Both the district and circuit courts' holdings emphasized, however, that Forest Service approval of the four-year operating plan was "expressly limited to the proposed exploratory drilling activities; further activities such as developmental exploration or mineral extraction would require a
comprehensive examination of environmental effects."

The time for a comprehensive examination has arrived: A cumulative impacts report, recently issued by the Forest Service, will be used as a basis for the EIS concerning ASARCO's proposal for actual mine development. The purpose of the report is to avoid further piecemeal planning in the Cabinets area by identifying the cumulative impacts on resources from mining and other activities.

Before ASARCO's plan of operations for mine development can be approved, which is contingent upon the results of the EIS, the Forest Service must determine the extent of the company's valid existing rights on claims within the wilderness. The mineral report for ASARCO's Rock Creek claims (Cur and Lynn groups) was published in late October of 1985. The report documented that ASARCO had established valid existing rights, as stipulated in the 1872 Mining Act and 1964 Wilderness Act, to 101 of the 133 claims situated partially or entirely within the wilderness. The section of the report concerning the marketability test required for discovery of a valuable mineral deposit noted that the markets for both copper and silver are currently depressed, with an "uncertain" outlook for silver and a "not very promising" outlook for copper.

Economic analyses, in the form of computer simulations, were performed using different values for copper and silver prices. Even using a reasonably average figure for both minerals, rather than ASARCO's excessively high values, the rate of return on investment was around 15%. For most mining operations, a rate of return of 15% is a minimum for a prudent investment. However, the Forest Service emphasized that: (1) there are too many variables to apply strictly the 15% minimum return as the test for profitability, and (2) factors concerning the parameters of the simulation model could vary the results so that a higher rate of return could be realized than that suggested by the model. Thus, the Forest Service concluded:

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93. Id. at 681. This appears to be a paraphrased version of statements made in the Decision Notice accompanying the EA: ASARCO—Chicago Peak, supra note 55, at Appendix K.

94. U.S. FOREST SERVICE, CABINET MOUNTAINS MINERAL ACTIVITY COORDINATION REPORT—KOOTENAI NATIONAL FOREST (February 1986) [hereinafter cited as MINERAL ACTIVITY COORDINATION REPORT].

95. ASARCO, Plan of Operations—Rock Creek Project (May 21, 1984) (available from the U.S. Forest Service Northern Region Office, Missoula, Montana).

96. MINERAL ACTIVITY COORDINATION REPORT, supra note 94, at 3.


98. Id. at 44-49.

99. Id. at 50 (citing O'Hara, Mine Evaluation, Mining Industry Costs 89-99 (Northwest Mining Association, 1982)). There is no basis in case law for requiring at least a 15% return on investment as a test for profitability. If it could be shown that a claimant could obtain a 14% or even a 10% return on investment, it is doubtful that a judge would rule there is no discovery. Burnside, supra note 20.
[I]t is sufficient if it can be shown that a prudent person could mine, remove, and market the deposit at a profit. If that person must then allocate this profit so that his individual rate of return on the investment is below a certain minimum, this should not reflect on the overall merits of the mineral deposit and the claimed discoveries.100

The mineral report also mentioned the potential for extralateral rights to be utilized both by ASARCO and Borax. ASARCO may have limited extralateral rights extending beneath some of Borax’s claims, which could affect the validity of certain Borax claims yet to be the subject of a mineral examination. On the other hand, Borax may have limited extralateral rights to certain ASARCO claims, although the probable limited extent of these rights will not affect ASARCO's claim validity.101

Now that claim validity has been established through the mineral examination and documented in the mineral report, Forest Service and state agency preparation of the EIS is the next step in processing ASARCO’s plan of operations for actual mine construction and operation.

ASARCO’s operating plan for mine and mill development proposes an underground room and pillar mine inside the wilderness boundary, with adits connecting the mine to the plant site outside the wilderness near the junction of Snort Creek and the West Fork of Rock Creek. Annual metal production is estimated at 5.3 million ounces of silver and 21,800 tons of copper. Claim markers and one or two ventilation portals may be the only surface evidence of wilderness mining. However, national forest and private land in the vicinity will be heavily impacted with ore stockpiles, a crusher, bins, a mill building, a warehouse, a power substation, storage buildings, a tailings thickener, slurry lines, and a mill water reservoir all to be situated about one mile from the wilderness boundary.102 There is also

100. Id. at 53. Some might advocate the use of a “comparative value test,” which balances nonmineral values directly against mineral values, to determine whether mineral development and production rights should be granted. United States Congress, Office of Technology Assessment, supra note 27, at 16. There has been some debate as to the use of the comparative value test and it is not at all clear how it could be objectively (or legally) utilized instead of, for example, the prudent person rule and marketability test of discovery. Compare United States v. Kosanke Sand Corp., 80 Interior Dec. 538 (1973) and In re Pacific Coast Molybednum Co., 90 Interior Dec. 352 (1983) with United States Congress, Office of Technology Assessment, supra note 27, at 198-99.

Nonmineral values are considered indirectly in the marketability test for assessing profitability, by the cost calculation of compliance with environmental protection and reclamation measures. Nevertheless, a direct comparison of mineral versus nonmineral values may be useful in assessing public resources. It is neither desirable nor accurate to place a monetary figure on tangible and intangible components of a wilderness environment which are not subject to market prices. For example, threatened and endangered species might be considered invaluable, and therefore would tip the comparative value test scales to nonmineral resources.


102. ASARCO, Plan of Operations-Rock Creek Project, (May 21, 1984) (available from the U.S. Forest Service Northern Region Office, Missoula, Montana).
concern over the number of people who will be concentrated in this small area and the impact of their activities on wildlife. Construction and operation of the mine and mill complex may have adverse effects on the wilderness environment; lines on a map cannot exclude impacts resulting from activities which occur outside the wilderness boundary. However, the extent of any impacts and mitigation measures to reduce or eliminate such impacts will be determined in the joint Forest Service/State of Montana EIS.

B. United States Borax and Chemical Corporation

Borax leased 11 claims situated in or near the wilderness from Heidelberg Silver Mining Company in the early 1980's. The company then staked over 200 claims in 1981 and submitted operating plans for drilling the Rock Peak and Copper Gulch areas late that year. These plans, covering a two-year span, detailed the exploratory work necessary on the claims within wilderness in order to meet the deadline for establishing valid rights imposed by the Wilderness Act. The intent of the plans was to validate mineral claims within the wilderness by defining the quantity, quality, and extent of the mineralized zone prior to December 31, 1983.

103. The National Wildlife Federation and other organizations are anticipating the deleterious effects which mine development may have on the area's wildlife, through a proposal to acquire private lands in the Bull River valley as a compensation measure for lands lost to mine construction and operation. Through these easements, the organizations hope to secure this important grizzly migration corridor, in an effort to mitigate adverse effects brought about by increased human activity in the mine and mill area. Telephone interview with Tom France, National Wildlife Federation attorney, Missoula, Montana (November 13, 1985).

104. A recent settlement [Cabinet Resource Group and Montana Wilderness Association v. Montana Dept. of State Lands, No. 43914, First Judicial District for the State of Montana (September 29, 1982) (interim ruling, subsequent settlement February 7, 1986)] ensures that the Department of State Lands will consider all the environmental effects of ASARCO's and Borax's proposed mines, before issuing the companies' hardrock mining permits. Woodruff, Lands Officials Agree To Back Rulings, Missoulian, February 12, 1986.

There is a dual-regulatory role (federal-state) in the administration of mining activities in Montana. In the Cabinets case, the majority of the lands involved are either federal (Forest Service) or private. The Forest Service and the Department of State Lands are currently working on a memorandum of understanding, which would decrease administrative overlap in the permitting process and monitoring of activities in the Cabinets. The Forest Service would take the lead role because most lands involved are federal, rather than state, lands. Interview with Michael J. Burnside, Mining Geologist, Forest Service Northern Regional Office, Missoula, Montana (February 21, 1986).

105. U.S. BORAX-ROCK LAKE MINERAL REPORT, supra note 83, at 47.


107. KOOTENAI NATIONAL FOREST, ENVIRONMENTAL ASSESSMENT: PACIFIC COAST MINES, INC. (U.S. BORAX AND CHEMICAL CORP.) COPPER GULCH-ROCK PEAK PLAN OF OPERATIONS (June
The Forest Service examined the cumulative effects of both plans in relation to other activities occurring in the vicinity (ASARCO and other claimholders' mineral exploration activities, and timber sales) and consulted with the Fish and Wildlife Service concerning potential adverse effects on grizzly bears. Based on these investigations, the Forest Service then imposed "management requirements and constraints" on Borax's operating plans, similar to those stipulated in the ASARCO-Chicago Peak environmental assessment which modified that company's operating plan. The Fish and Wildlife Service issued a "no jeopardy" opinion for the modified operating plans. The opinion noted that impacts to be expected from Borax operations would be similar to those from ASARCO operations which had been previously evaluated and modified in the environmental assessment for that operating plan. Thus, the opinion focused on the degree and extent of additional impacts created by Borax's proposed operations. Mitigation measures incorporated into the operating plans via the EA were found to be sufficient to offset the additional impacts of the proposed operations, and thus the EA led to a FONSI stamp of approval.

In August of 1983, Borax obtained a permit from the Forest Service for exploratory drilling on its Hayes Ridge (HR) group of claims. A plan of operations submitted October 5, 1983 called for mineral "exploration," including geologic mapping and numerous drill sites, within the wilderness. Amendments to this operating plan filed in 1984 and 1985 termed drilling "development." While the wording "exploration" versus "development" may seem inconsequential, it has important ramifications concerning mining rights in wilderness areas.

Before the Forest Service could process the 1985 amendment to the operating plan, it had to determine the extent of Borax's valid existing rights to the mining claims. As stipulated in the 1872 Mining Act and the 1964 Wilderness Act, only valid claims on which a valuable mineral deposit had been discovered and properly located by December 31, 1983 are allowed to be further developed. Exploration for the purpose of establishing a discovery or location under the mining laws is prohibited beyond this date.

11. 1982), at 1 [hereinafter cited as EA: COPPER GULCH-ROCK PEAK].
108. See supra notes 89-90 and accompanying text.
111. See supra section The 1964 Wilderness Act and infra section Exploration versus Development.
The results of the mineral examination show that Borax had established valid existing rights to 4 of 202 HR claims near Rock Lake in the Cabinet Mountains Wilderness. Under the apex provision of the 1872 Mining Act, extralateral rights to the four claims extend beneath at least ten additional Borax claims. The mineral report cited five criteria, based on extensive case law, to be met to qualify for extralateral rights:

1. The location must be a lode.
2. The vein or lode must be discrete and continuous in its downward course.
3. The apex of the vein or lode must lie inside the vertical extension of the location boundary lines, although the terminal edge need not crop out at the surface.
4. Endlines of the location must be parallel.
5. Extralateral rights are confined to that part of the lode or vein that exists between two vertical planes drawn through parallel endlines; i.e., rights can extend beyond sideline limits, but not endline limits of located claim.

The mineral report documented that Borax's four valid claims did meet these criteria for extralateral rights: the four claims are lode claims, "all available information indicates that (the deposit) is discrete and continuous" to the northwest, the apex lies within the four claims, and the endlines of the claim locations are parallel. Therefore, the inferred reserves lying downdip of the four valid claims, and within vertical planes drawn through their endlines, constitute extralateral rights for the four claims.

The mineral report concluded with the recommendation that Borax's amended plan of operations be processed. The purposes of Borax's proposed drilling, as outlined in the operating plan, were to determine the extent of its extralateral rights to the mineral deposit extending beyond the sidelines of its valid claims, and to assist in mine development planning.

The next step in processing the plan was an environmental assess-
ment\textsuperscript{118} concerning the proposed operations. This EA for the plan determined that there would be no significant impact from the operations. Therefore, the plan was approved, subject to forty-six management "requirements and constraints" to mitigate most adverse impacts associated with the project. Recommendations from a biological evaluation performed by the Cabinet District Wildlife Biologist were incorporated into the list of constraints.\textsuperscript{119} These mitigating measures included a shortened operating season, drill site restrictions and reclamation, measures to minimize conflicts with recreation users, and helicopter-use limitations.\textsuperscript{120}

Inherent in media coverage of both the Forest Service's mineral report for Borax's HR claim group and also the agency's approval of the modified operating plan was uncertainty whether proposed mineral activity—referred to as both exploratory and developmental—was legal in wilderness, after the Wilderness Act's deadline for establishing valid mining rights.\textsuperscript{121}

C. Exploration versus Development

While Borax's 1983 plan of operations termed drilling "mineral exploration," subsequent amendments to this plan termed the activity "development drilling."\textsuperscript{122} This is more than a case of semantics; mineral development is allowed if it is on or associated with valid claims, but exploration can yield no new rights to deposits which had not been discovered and properly located by December 31, 1983.\textsuperscript{123} A cursory review of literature and cases dealing with "exploration" and "development" assists in defining Borax's activities.

The crucial element differentiating exploration from development, as presented in case law, is discovery. Simply stated, exploration occurs

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\textsuperscript{118} Id.
\textsuperscript{119} The "no effect" decision of this evaluation made formal consultation with the Fish and Wildlife Service unnecessary.
\textsuperscript{122} U.S. Borax, HR Group-Plan of Operations, (October 5, 1983). Amendments to this plan were filed on January 11, 1984 and January 21, 1985.
\textsuperscript{123} See Coston, supra note 56. Any activity, including prospecting (exploration) may be permitted, under 4(d)(2) of the Wilderness Act, if the activity is compatible with the preservation of the wilderness environment. Burnside, supra note 20.
before discovery and development proceeds after discovery. Exploratory work is done prior to discovery to determine whether the land contains valuable minerals. Where minerals are found, further exploration may be necessary to determine their value, and to determine if there is a "reasonable prospect of success" in mining. Only when exploration shows such a reasonable prospect of success, has a valuable mineral deposit been discovered and will a prudent person proceed with development work.\textsuperscript{124}

While this appears to be a fully straightforward rule, it may not be satisfactory in practical usage:

Since discovery is a legalistic concept which has no existence outside the scope of the federal mining law, to use discovery as the dividing line between exploration and development is to create an arbitrary legalistic distinction which does not necessarily reflect the manner in which these terms are used in the mining industry.\textsuperscript{125}

Regardless of criticisms, the "before discovery—exploration, after discovery—development" rule is the legal basis for evaluating Borax's operations. Development drilling occurred on four sites within the wilderness during the summer of 1985; one site was on a valid claim, the other three were not situated on valid claims. The purpose for Borax drilling outside of valid claim boundaries was to delineate its extralateral rights to the mineral deposit extending beyond the sidelines of its valid claims.\textsuperscript{126} Although "extralateral portions of veins are usually pursued by exploratory drilling,"\textsuperscript{127} because this drilling was associated with claims having a valid discovery, the drilling was appropriately termed "development" (i.e., post-discovery).

Drilling proceeded sequentially on four sites near Rock Lake through September 30, 1985. The drilling permit stipulated that Borax had to begin the work on a valid claim and that the drilling rig could not be moved to the next site unless core samples indicated the ore deposit probably extended there.\textsuperscript{128} As the drilling proceeded toward the northwest and St. Paul pass, ore samples yielded high grades of silver and copper.\textsuperscript{129}

Although the initial drilling season is now over, controversy still surrounds Forest Service approval of Borax operations. Issues concerning


\textsuperscript{125} Reeves, supra note 15, at 434. See also Haggard & Curry, supra note 15, at 8-8, 8-9.

\textsuperscript{126} Kootenai National Forest, Decision Notice: U.S. Borax Hayes Ridge-Rock Lake (June 14, 1985).

\textsuperscript{127} 2 American Law of Mining § 37.02[3].


\textsuperscript{129} Gregory, Cabinet Miners Boring In On the Payoff, Missoulian, September 22, 1985.
the controversy are illustrated by ASARCO's appeal of this agency
decision and are described in the next section. Resolution may ultimately
be found through formal adjudication, but administrative appeals must
first be exhausted.

IV. APPEAL PROCEEDINGS

Appealing a decision of a Forest Service official is governed by Title
36, Section 211.18, of the Code of Federal Regulations. The appeal process
allows all parties to respond to statements, replies, and decisions made by
Forest Service personnel and also by other interested participants. This can
lead to a profusion of claims and counter-claims from opposing parties, as
is exemplified in the appeal process involving ASARCO (appellant) and
Borax (intervenor). A chronological presentation of the appeal proceed-
ings documents this fact.

An initial decision of a forest officer may be appealed within forty-five
days of the date of the decision. A notice of appeal and supporting
statement of reasons must be filed with this deciding officer during this
time. The notice of appeal must specifically identify the decision being
appealed, the date of the decision, the forest officer who made the decision,
how the appellant is affected by the decision, and the relief desired.

A request for stay may be submitted at any time during this first level
of appeal. The appellant must supply information detailing what he/she
wants stopped and why. This information must prove that adverse
environmental or resource impacts would occur from the activity and that
effects of the activity would be irreversible. The deciding officer
forwards this request to the reviewing officer, who shall either grant or deny
the stay within ten days of receiving the request.

The decision notice made public by the Kootenai Forest Supervisor,
and the accompanying environmental assessment, which approved Borax’s
modified plan of operations amendment at Hayes Ridge-Rock Lake was
signed June 14, 1985; Borax began drilling on June 19th. This decision
prompted two requests for stay and two accompanying notices of appeal in
early July—one from an individual, Cedron Jones, and one from fellow
mining company, ASARCO. The appellants based their appeals on
various reasons: Jones opposed the extent of environmental review in the

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130. 36 C.F.R. § 211.18(e)(1) (1985).
131. 36 C.F.R. § 211.18(e) (1985).
132. T. Coston, Decision Notice: ASARCO Request for Stay (July 22, 1985); ASARCO's Bid
133. 36 C.F.R. § 211.18(h)(1) (1985).
134. KOOTENAI NATIONAL FOREST, DECISION NOTICE, FINDING OF NO SIGNIFICANT IMPACT,
AND ENVIRONMENTAL ASSESSMENT: U.S. BORAX HAYES RIDGE-ROCK LAKE PLAN OF OPERATIONS
(June 14, 1985).
EA and was not satisfied with the mineral report documenting Borax's claim validity, while ASARCO basically disagreed with Forest Service interpretation of the apex provision of the 1872 Mining Law and the mining sections of the Wilderness Act. Jones' appeal record will first be examined, followed by ASARCO appeal proceedings.

A. Cedron Jones Appeal Proceedings

The request for stay, submitted by Jones on July 3, 1985, asked that "any and all further action by U.S. Borax in the Rock Lake area" be stopped immediately.\textsuperscript{135} He noted that if his stay was denied, the appeal process would be "meaningless" because Borax's drilling season would likely be over before a decision on his appeal was reached. (This did indeed happen.) The request stated that the conclusions of the mineral report were erroneous, the environmental assessment did not consider the extent of potential groundwater contamination from drilling activities, and the sole enforcement provision—which concerned noncompliance—was so vague as to be "totally useless."\textsuperscript{136}

The request for stay was sent by the deciding officer, the Kootenai Forest Supervisor, to the reviewing officer, the Regional Forester, along with a recommendation to deny the stay.\textsuperscript{137} The Regional Forester followed the recommendation and denied the stay, stating: "Mr. Jones has failed to provide sufficient reasons to demonstrate that the benefits of granting a stay offset the adverse effects; the irreversibility of the activity, or the seriousness of the resource impacts."\textsuperscript{138} Financial hardship imposed on Borax and possible liability on the part of the Forest Service for breach of contract were additional justifications for denying the stay.

In his statement of reasons in support of appeal,\textsuperscript{139} Jones expanded on the rationale used in his request for stay, citing alleged deficiencies in the mineral report and environmental assessment—including noncompliance with the management requirement which stated that colors of Borax camp equipment at Rock Lake must blend in with the natural environment—and possible improprieties regarding administrative actions. The appeal was

\begin{itemize}
  \item \textsuperscript{135} C. Jones, Request for Stay (July 3, 1985).
  \item \textsuperscript{136} Id.
  \item \textsuperscript{137} J. Rathbun, Kootenai Forest Supervisor, Recommendation on Request for Stay on Implementation of Decision Notice for Pacific Coast Mines (U.S. Borax) Hayes Ridge-Rock Lake 1985 Plan of Operations, (July 9, 1985) (available from the U.S. Forest Service Northern Region Office, Missoula, Montana).
  \item \textsuperscript{138} T. Coston, Decision Notice: Request for a stay on the implementation of the Kootenai National Forest Supervisor's decision (June 14, 1985) to approve U.S. Borax and Chemical Corporation Hayes Ridge-Rock Lake 1985 Plan of Operations 3 (July 11, 1985).
  \item \textsuperscript{139} C. Jones, Statement of Reasons in Support of Appeal (July 24, 1985).
\end{itemize}
subsequently dismissed in part, denied in part, and remanded in part.\textsuperscript{140} The Regional Forester dismissed the portion of Jones' appeal concerning the mineral report, because it was not filed in a timely fashion.\textsuperscript{141} The portion of the appeal concerning groundwater contamination from drilling mud was "without merit" and denied. However, that part of Jones' appeal dealing with enforcement measures for noncompliance was remanded\textsuperscript{142} to the Forest Supervisor: the bright colors of Borax camp equipment were in violation of a management requirement which should either have been enforced or, if unimportant, not placed in the EA. Concerning Jones' charge that the Forest Service accommodated Borax's interests at the expense of public interests, the Regional Forester stated: "The record clearly shows that extreme care has been taken in the Cabinet Mountains to insure that mining-related activities do not harm the environment and that public interests are protected, while valid private rights are recognized."\textsuperscript{143} Therefore, this section of the appeal was also denied.

Jones did not appeal the Regional Forester's decision to the next level, which is to the Chief of the Forest Service.\textsuperscript{144}

B. ASARCO Appeal Proceedings

On the same day that the Regional Forester denied Jones' request for stay, ASARCO filed a similar request, a notice of appeal, and supporting statements with the Forest Service.\textsuperscript{145} ASARCO's request for stay noted that if Borax were allowed to drill, as per its amended operating plan, this could adversely affect property rights of ASARCO by permitting Borax to assert extralateral rights to ore beneath ASARCO's Rock Creek claims.

On July 21, 1985, Borax submitted a memorandum commenting on ASARCO's request for stay.\textsuperscript{146} The appeal process allows a party having an immediate interest in the subject to intervene at any level of the proceedings. Borax, as an intervenor, emphasized that ASARCO has no

\textsuperscript{140} J. Overbay, Northern Region Forester, Decision Notice: Appeal from the Kootenai National Forest Supervisor Rathbun's decision dated June 14, 1985 to approve a Plan of Operations by U.S. Borax and Chemical Corporation as amended on January 21, based on a finding of no significant impact, through an environmental analysis (October 28, 1985). Forest Supervisor Rathbun filed a responsive statement under 36 C.F.R. § 211.18(g) on August 28; Jones filed a response on September 11 to Rathbun's August 26 statement. The appeal record was closed on September 27. \textit{Id.}

\textsuperscript{141} A reviewing officer may dismiss an appeal when appellant has failed to file a timely statement of reasons supporting the appeal. 36 C.F.R. § 211.18(i)(2)(ii) (1985).

\textsuperscript{142} The reviewing officer may remand the case with further instructions. 36 C.F.R. § 211.18(q) (1985).

\textsuperscript{143} Overbay, \textit{supra} note 140, at 5.

\textsuperscript{144} 36 C.F.R. § 211.18(f)(1)(ii) (1985).


\textsuperscript{146} U.S. Borax, Memorandum in Response to Request for Stay (July 21, 1985).
interest in the Rock Lake claims of Borax and that the appellant is actually interested in settling a dispute over claims lying to the west of the HR group at Rock Lake. "The public interest is not served by resort to the appellate process for such ulterior and suspect purposes." The memorandum concluded, not surprisingly, by suggesting that ASARCO's request for stay of Borax operations be denied.

The Regional Forester, as reviewing officer, did deny ASARCO's request for stay, mainly because the validity and extralateral rights extensions of Borax's Hayes Ridge-Rock Lake claims in no way affect ASARCO's claim groups at Rock Creek, and also because no adverse environmental impacts or irreversible effects of the activity were cited. Evidently, ASARCO was anticipating future conflicts with Borax concerning other claim groups in the wilderness and hence, was attempting to get the issue resolved at an early date.

In a statement of reasons supporting its appeal, ASARCO contended that the result of the decision notice of June 14, 1985 is that Forest Service approval of Borax's operating plan allows that company to perform further exploratory work in a statutory wilderness area, in clear violation of the Wilderness Act. ASARCO disputed the finding of the mineral examination which found four of Borax's claims to be valid, stating that these claims were invalid, in part because, (1) a valid discovery had not been made by December 31, 1983, and (2) ore reserves, which would be attributable to the four claims only under the "theory" of extralateral rights, were considered in the validity determination. The statement of reasons cited extensive case law concerning geologic inference, extralateral rights, and discovery requirements to substantiate its assertions. For example, ASARCO cited the mineral report documenting Borax claim validity and went down the list of requirements for utilizing extralateral rights, disqualifying Borax's claims on every count, whereas the Forest Service had approved them on every count.

ASARCO also noted that exploratory drilling, to expose new sources of ore, is now prohibited in wilderness areas and implied that this was exactly what the Forest Service was allowing Borax to do. ASARCO went on to state that it was unlawful and beyond the scope of Forest Service authority to permit Borax to drill off of the four alleged valid claims.

147. Id. at 4.
150. ASARCO, Statement of Reasons 2-3 (July 11, 1985).
151. Id. at 7-9.
152. See text accompanying supra notes 114-115.
153. ASARCO, Statement of Reasons 30-32 (July 11, 1985).
The Kootenai Forest Supervisor then filed a responsive statement to ASARCO's statement of reasons. In this responsive statement, the Forest Supervisor, as deciding officer, noted that ASARCO should have contested the February 28, 1985 decision of the Regional Forester, which accepted the recommendation of the mineral report documenting Borax's HR claim validity at Rock Lake. Since many of ASARCO's contentions were based on the mineral report, the Forest Supervisor argued that the appeal should have been made of the decision accepting that report. Otherwise, the appeal was untimely because it was not filed within forty-five days of the relevant decision.

The responsive statement continued by asserting that the Forest Service has authority to approve Borax's plan of operations, and to permit drilling which is not on valid claims under section 4(d)(2) of the Wilderness Act and Title 36, section 228.15(f) of the Code of Federal Regulations. The issue was characterized as one of whether the drilling activity is compatible with the preservation of the wilderness environment, not whether the mining claims are valid.

ASARCO then filed a reply to this responsive statement. The reply criticized the Forest Supervisor's "mischaracterization" of ASARCO's appeal, stating that the "decision" of the Regional Forester to accept the recommendations of the mineral report was not an appealable decision. Thus, ASARCO claimed its appeal was correctly based on the decision to approve Borax's "exploratory drilling in a wilderness area on invalid mining claims." Because this decision was based on the conclusions of the mineral report, ASARCO contended that it is permissible to use the factual discovery issues addressed in the report as a subject of appeal.

Borax, as an intervenor, submitted an opening memorandum on August 11, 1985. This memorandum stated that ASARCO should not be allowed to utilize the Forest Service appeal process because the company lacks standing to prosecute the appeal, the appeal is untimely, and the company has shown no error made by the Forest Service in either approving Borax's plan of operations or in concluding that certain HR group claims are valid. The memorandum concluded by reiterating that

155. At each level of appeal (except for decisions by the Chief), the deciding officer will, within 30 days, prepare a responsive statement to the appellant's statement of reasons. 36 C.F.R. § 211.18(g) (1985).
156. Mineral information gathering activity (drilling) may be permitted if compatible with the preservation of the wilderness environment. 16 U.S.C. § 1133(d)(2) (1982); Burnside, supra note 59.
158. Id. at 3.
159. Id. at 7.
ASARCO should not be allowed to go through the appeal process in order to force Borax into a boundary line adjustment over claims which may be disputed at a later date.

ASARCO’s response to this memorandum naturally disclaimed all assertions made by Borax. ASARCO claimed that it does have an interest in Borax “exploratory” drilling because the use of extralateral rights in the Rock Creek area could affect ASARCO’s valid claims.161 “ASARCO strenuously objects to the Forest Supervisor’s decision authorizing Borax to conduct exploratory drilling operations on its invalid mining claims for the purpose of attempting to prove a mineral discovery based on the theory of extralateral rights.”

A reply to ASARCO’s memoranda was subsequently advanced by Borax.163 In this response, Borax discredited ASARCO’s rationale, contending that issues raised by the mineral report are not appealable at this time:

[N]otwithstanding ASARCO’s protestations to the contrary—spiced as always with a whole array of adjectives—neither the Forest Supervisor nor [Borax] is required to address issues pertaining to the validity of [Borax’s] right to conduct operations because those issues are wholly irrelevant to the appeal at bar.164

After examining the appeal record, complete with a profusion of claims and counter-claims, the Regional Forester made his decision concerning ASARCO’s appeal; it was dismissed in part and denied in part.165 All contests concerning Borax’s valid rights and the application of the 1872 Mining Law were dismissed, on the basis that the appeal was not filed in a timely fashion. Once again, it was pointed out that ASARCO’s contentions were based on the decision which approved the recommendations advanced in the mineral report of February 27, 1985. The Regional Forester, as reviewing officer, relied on evidence that ASARCO was informed of this decision and could have appealed within the requisite 45 days, if it had chosen to do so.

The Regional Forester found that “the only timely and substantive issue raised” in ASARCO’s appeal was that of exploratory versus developmental drilling, in relation to Forest Service authority to approve plans of operations.166 This was the controversy mentioned in press

161. ASARCO, Response to Borax’s Opening Memorandum 2 (September 3, 1985).
162. Id. at 4.
163. U.S. Borax, Reply to Memoranda filed by ASARCO in Response to Statements made by the Kootenai Forest Supervisor and PCM (Borax). (September 9, 1985).
164. Id. at 4.
166. Id.
coverage of the mineral report, the amended plan of operations, and the environmental assessment for Borax's Hayes Ridge-Rock Lake claims during the first months of 1985. The decision notice denied this part of the appeal, stating that the activities are "neither exploration nor prospecting," but consist of "development drilling designed to facilitate mine planning."167

ASARCO then pursued its appeal to the final administrative level, the Chief of the Forest Service.168 The Chief upheld the Regional Forester's decision to deny and dismiss portions of the appeal.169 Therefore, the issue concerning Forest Service authority to allow Borax drilling in the Cabinet Mountains Wilderness will probably be formally adjudicated.170

In summary, ASACRO contends that allowing "exploratory" activities in wilderness areas after December 31, 1983 violates the Wilderness Act and that, for numerous reasons, Borax should not be allowed to use extralateral rights to pursue drilling off of valid claims.171 Both the Forest Service and Borax, as intervenor, suggest that ASARCO is actually contesting the decision which approved the recommendations documented in the U.S. Borax-Rock Lake Mineral Report of February 27, 1985.172 In that case, the company's appeal was not filed within the time span allowed.

The result of this appeal suggests an interesting question: How would the mining law issue concerning extralateral rights, valid claims, and exploratory versus developmental drilling have been addressed if ASARCO had appealed the decision which accepted the recommendations of the February 27, 1985 mineral report in a timely fashion? This issue will probably not be resolved in further proceedings, because the appeal is confined to the decision notice and environmental assessment relative to Borax's amended operating plan at Hayes Ridge-Rock Lake. The unlikelihood of adjudication of any mining law issues was emphasized by the Regional Forester when he asked, "In what forum shall this (adjudication) be done? By mining engineers or geologists? By the Office of General Counsel? By line management? Will we ask (or defer to) the Interior Department?"173

167. Id.
168. ASARCO, Notice of Appeal—before the Chief, (October 24, 1985); 36 C.F.R. § 211.18(1) (1985).
171. ASARCO, Statement of Reasons in Support of Notice of Appeal 8 (July 11, 1985).
172. Overbay, supra note 165; Pacific Coast Mines (Borax), Reply to Memoranda filed by ASARCO in Response to Statements made by the Kootenai Forest Supervisor and PCM (September 9, 1985).
ASARCO is essentially trying to protect its rights to Cabinets claims which lie about one mile west of Borax's Hayes Ridge (HR) claim group. Although the HR claim group poses no threat to ASARCO, Borax claims which abut ASARCO's near St. Paul Peak may be contentious: extra-lateral rights granted in that area could theoretically transfer mineral rights to Borax. As discussed previously, however, the ASARCO-Rock Creek Mineral Report noted that both companies may be able to apply extralateral rights to ore which extends beneath each other's claims. And the validity of ASARCO's claims will not be affected by Borax's possible extralateral rights, mainly because of the probable limited extent of any such rights. This fact presumably will not deter ASARCO from pursuing formal adjudication of the issue concerning Forest Service authority to allow Borax drilling in the Cabinet Mountains Wilderness.

V. Conclusion

With the discovery of perhaps the largest copper-silver deposits in the world, ASARCO and Borax are making plans to mine the Cabinet Mountains Wilderness in northwestern Montana. Because of the precedent-setting nature of these plans, the Forest Service—as the land managing agency—is being very thorough in its administration of relevant laws and regulations which govern mining rights in national forest wilderness areas.

The Cabinets area presents a unique case study of the interrelation-ship between the 1872 Mining Act and the 1964 Wilderness Act. As a result of these opposing mandates, wilderness areas were open to mineral exploration and development until December 31, 1983. After this date, development may proceed on valid claims, but exploration can yield no new rights to deposits which were not discovered by the deadline.

In reviewing relevant laws and regulations governing hardrock mining in national forest wilderness areas, it is clear that in order to have valid existing rights in wilderness after December 31, 1983, a claimant must have fulfilled these requisite steps: (1) have discovered and properly located a valuable mineral deposit by December 31, 1983 and (2) prove that the deposit is still valuable as a present fact. Mineral examinations were conducted on ASARCO and Borax claim groups in the Cabinets and the results show that both companies do have valid existing rights on some claims. Extralateral rights granted by the apex provision of the 1872 Mining Act will probably be applied to a limited extent by both companies, thus enabling each to claim ore which extends beneath certain claims of the other. However, it is Borax's application of extralateral rights extending

from its own valid claims which is a contested issue in appeal proceedings. ASARCO and Cedron Jones both asserted that Borax did not establish valid rights before the deadline imposed by the Wilderness Act. This mining law issue will probably not be resolved in these proceedings because neither appellant filed a timely appeal of the relevant Forest Service decision. The principal issue which could be resolved by the courts concerns Forest Service authority to allow Borax drilling operations in wilderness after December 31, 1983. ASARCO exhausted its administrative remedies in this matter, and now will likely take its case to the courts for formal adjudication.

It is hoped that this case study of Forest Service administration of the 1872 Mining Act and 1964 Wilderness Act is useful in understanding the inherent conflicts associated with hardrock mining rights in wilderness areas. In the meantime, mining operations in the Cabinet Mountains Wilderness will continue to be closely scrutinized by all parties, so as to discern the legal and environmental ramifications of current wilderness mineral rights.