



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

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RESOURCES, COMMUNITY,  
AND ECONOMIC DEVELOPMENT  
DIVISION

August 14, 1984



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Mr. Dallas L. Peck  
Director, U.S. Geological Survey  
Department of the Interior

Dear Mr. Peck:

Subject: Wilderness Mineral Assessment Reports  
Could Be Improved to Better Meet Land Use  
Decisionmaking Needs (008483)

Over the last 2 years the General Accounting Office has been examining a number of federal mineral land assessment programs. As part of that work we have explored aspects of the wilderness mineral assessment program conducted jointly by the U.S. Geological Survey (USGS) and the Bureau of Mines (BOM) for the Department of Agriculture's Forest Service (FS). We found that these USGS/BOM assessment reports are not as useful to FS planners as they could be. We are taking this opportunity to bring this matter to your attention and are offering suggestions for improvement.

As you are aware, the 1964 Wilderness Act requires USGS and BOM to prepare assessment reports of the oil, gas, and other mineral resource potential of candidate wilderness lands. These reports provide FS land managers and the Congress with mineral information to help them determine the suitability or unsuitability of areas of national forests for wilderness preservation. FS managers incorporate this information into environmental impact statements and forest plans, which serve as the basis for land use decisions. These plans are required for each national forest under the National Forest Management Act.

In interviews with FS officials we found that while the primary purpose of the wilderness mineral surveys is to aid land use decisionmakers, the survey reports are often difficult to understand and to use. We were told that many forest planners find the reports to be little more than raw data, requiring additional--and sometimes very lengthy--interpretation before the information becomes useful. FS officials also felt that information necessary to place mineral data in perspective was missing.

The wilderness area surveys performed by USGS and BOM are fairly detailed, as you know. Depending on the size and complexity of the area to be studied, a USGS and BOM survey team may

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spend up to 3 years on a single assessment. The data collected by the two agencies are then integrated into assessments of the potential for various minerals. Survey reports contain a summary of findings, geologic and mineral resource potential maps, and--if appropriate--geochemical and geophysical maps, prospect maps, and other special maps.

Although FS is a principal user of the mineral assessments, it has had little say in determining the format or the content of the assessment reports. These decisions were left to USGS and BOM as the acknowledged experts. According to a former USGS official in charge of the program, USGS intended the reports to be highly technical to meet high research standards and add to what is known about the nation's geology. Another official explained that USGS has traditionally perceived its mission as a research agency, and consequently wants to provide the best geologic and mineral data available from the assessment work performed. Although the wilderness survey reports are supposed to be aimed at land use decisionmakers, USGS has taken a broader view of the users of its information to include state and local governments, the oil and gas and mining industries, and academia.

The reports could be far more useful for land use decisions, however, if the data were interpreted and placed in a context of land management and planning, FS officials told us. These officials said they believed the reports should contain observations about the quantity or quality of mineral resources and the relative importance of the geologic inferences compared to other potential deposits in the United States, particularly in the case of minerals considered strategic and critical. A FS handbook on minerals management also suggests that land managers need to know not only where minerals are located, but also whether they are in demand, when they might be economically mined, and how they would be transported.

Both USGS and BOM have the capability to provide this additional interpretation and information. FS officials told us that on occasion USGS and BOM geologists have met with them to offer their opinions and conclusions about the mineral values of the lands studied. According to some forest managers, regularly scheduled briefings of this sort could be extremely valuable in explaining the significance of the assessment team's findings. This information, in our view, could also be added to the assessment reports.

BOM routinely collects much of the information FS has said it needs for planning, such as data on mineral reserves in the United States and the rest of the world. BOM also keeps track of mineral markets, examines changing demand for mineral commodities, and forecasts technological and economic changes in mineral industries.

USGS and BOM officials said that they have long been aware of the FS' criticisms. According to a USGS official, 6 years ago the

agency established the Branch of Resource Analysis in an attempt to develop methods for interpreting geologic data. At the same time, the assessment report format was shortened. These efforts have not, however, been very helpful. Improvements are taking time, this official said, and USGS is just now beginning to develop quantitative data more suitable for use by land planners.

BOM officials said that they too saw the need for additional information some time ago, noting particularly the need for mineral supply/demand analysis, assessments of environmental risks associated with mining a particular deposit, and information on the relative importance of a deposit vis-a-vis overall supply. In 1982 BOM commissioned the Association of American State Geologists to evaluate mineral assessments and to recommend any needed improvements. Although the association found that mineral assessment information could be improved to support decisionmaking, BOM made no changes. Since BOM's reorganization in 1982 officials have begun talking to USGS about supplementing the information contained in the assessment reports. They also said that BOM's automated information system, the Minerals Availability System, should be able to provide some of these data but that the system has only recently been sufficiently developed.

Despite these plans and intentions, however, few changes have been made to the assessment reports. Moreover, considering how long ago the problems were identified, it is unlikely that the reports will become more useful unless additional steps are taken. We recognize that providing land managers with all the mineral information they need may not be a simple task. For example, it may be difficult to predict the point at which a deposit becomes economical to mine, or to accurately forecast the demand for a particular mineral.

Nevertheless, while there may be some difficulties in improving the assessment reports, more could be done. Rather than limiting their interpretations to occasional briefing sessions, USGS and BOM study team members could routinely include their opinions about mineral values within the assessment reports. BOM analysts could also add to the report technological and economic information that would help planners determine whether and when mineral development might occur. In any event, USGS and BOM wilderness survey program officials, working with FS planning staff, could devise a format for the assessment reports that better meets the needs of land use planners and decisionmakers.

In the past, FS managers simply did without USGS/BOM data because they could not understand them. However, in light of a 1982 court decision, the Forest Service believes this is no longer possible. In California v. Black, a federal appeals court ruled that the information contained in an FS environmental impact statement was not specific enough to permit certain wilderness decisions. As a result, FS has determined that mineral information to support wilderness decisions must come from USGS and BOM

in order to meet both the standards set by the court as well as the agency's own standards under the National Forest Management Act.

Although USGS and BOM originally planned to complete their FS wilderness assessments by the end of fiscal year 1984, considerable work still needs to be done. Following the court decision, FS decided that it would be necessary, over the next 3 to 7 years, to have USGS and BOM survey 450 potential wilderness areas that had not been surveyed previously. These areas, totaling 6.7 million acres in 25 states, were ones that regional foresters deemed to have mineral potential that had not been adequately assessed. Improvements in the mineral assessment programs could therefore benefit these new inquiries.

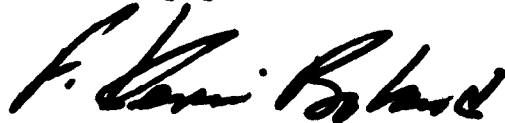
Overall, our work suggests that with greater attention, USGS and BOM could improve the usefulness of their wilderness mineral assessment reports to FS.

We therefore recommend that the U.S. Geological Survey and the Bureau of Mines, in consultation with the Department of Agriculture's Forest Service, revise the wilderness mineral assessment reports so that they are more useful to FS planners and land managers. The USGS should provide further interpretation of mineral resource data, and BOM should furnish resource, technological, and economic information that places the survey results in context for planning purposes.

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Thank you for the courtesy and assistance extended to our staff.

Sincerely yours,



F. Kevin Boland  
Senior Associate Director