

MAP OF IDAHO RARE II MINERAL RESOURCE POTENTIAL--  
APPRAISAL OF MINERAL RESOURCE POTENTIAL OF PROPOSED ROADLESS  
AREAS IN NATIONAL FORESTS, IDAHO (EXCLUSIVE OF COAL, OIL, GAS,  
AND CONSTRUCTION MATERIAL)

Compiled by  
B. F. Leonard  
1978

EXPLANATION  
MINERAL RESOURCE POTENTIAL

☒ HIGH  
▨ MODERATE  
□ LOW

0 10 20 30 40 Miles  
Scale 1:500,000

Compiled December 1977 by B.F. Leonard,  
U.S. Geological Survey, from data of F.C.  
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Map of Idaho Rare II Mineral Resource Potential--  
Appraisal of Mineral Resource Potential  
of Proposed Roadless Areas  
in National Forests, Idaho

B. F. Leonard, compiler, 1977  
U.S. Geological Survey, Denver, Colorado

This map was compiled and drafted November 28-  
December 5, 1977, in response to a request of the  
U.S. Forest Service for an immediate evaluation of the  
mineral resource potential of proposed roadless  
areas of the national forests in Idaho. The roadless  
areas, defined by the Forest Service for purposes of  
the Roadless Inventory, are shown on the published map  
(U.S. Forest Service, 1977a) prepared by the Forest  
Service as a base for mineral-resource and other  
inventories. A slightly different Road II map (U.S.  
Forest Service, 1977b) became available after the  
map was prepared. The mineral resource map can be compared  
with the Forest Service map, the geologic map of Idaho  
(Hess and Forrester, 1964), and the map of the mining  
districts of Idaho (Goss, 1943); all the maps have the  
same scale.

The Roadless Areas are slightly generalized on  
the mineral resource map. Their outlines are correct,  
but the areas shown include some narrow corridors and  
small outcrops that have not been proposed as  
"roadless." These small parcels could not be separately  
evaluated for mineral-resource potential, owing to the  
brief time allowed for evaluating all the territory  
proposed as "roadless."

The definitions of areas of high, moderate, and  
low mineral-resource potential are as follows: high,  
geologic environment highly favorable for the  
occurrence of mineral resources; moderate, geologic  
environment interpreted to be favorable for the  
occurrence of mineral resources; and low, geologic  
environment interpreted to be less favorable for the  
occurrence of mineral resources. The basis for classification is fundamentally geologic. It takes into  
consideration what we know about the geology of an area,  
the distribution of productive mineral deposits and  
promising mineral prospects in the area; the size and  
mode of occurrence of mineral deposits in comparable  
areas; and, to the extent that we can estimate the  
future, the expected occurrence of resources of new  
substances for which a use or demand is only now  
emerging, or for which new and unusual geologic occurrences  
are just now being recognized. Examples of such  
resources are silicon (from highly purified quartzites),  
for solar cells; chromium in the Phosphoria formation  
of Idaho and adjacent areas; and disseminated  
sulfur, vanadium, and uranium-bearing oxides in  
granitic rocks of the Gravelly region.

The current evaluation of the mineral-resource  
potential of proposed Roadless Areas in Idaho is on the  
whole conservative because it must be defended on the  
evidence at hand. Geologic information is scant for  
some parts of the State; there are only areas where  
geologic mapping is out of date and geochemical and  
geophysical data are almost lacking. Nevertheless,  
geologic evidence for recognizing either high or low  
mineral-resource potential is adequate for the immediate  
evaluation of most of the Roadless Areas in

Idaho. Geologic evidence for recognizing moderate  
mineral-resource potential is less good. Where better  
evidence is needed, it can be obtained by field studies,  
and the mineral-resource potential can be re-evaluated  
on the basis of the accumulated evidence. This  
gathering and assessing of evidence can be extended;  
it need not and should not be a chance event. In  
contrast, the emergence of an unforeseeable need for  
some mineral substance, or the discovery of a radically  
different geologic occurrence for a mineral deposit,  
can require a drastic re-assessment of the mineral-  
resource potential of whole regions. Such chance events  
have occurred and therefore can be expected to recur;  
but their character and timing cannot be estimated in  
advance.

Some of the evidence used for the current evaluation  
of the mineral-resource potential of proposed  
Roadless Areas in Idaho is available in the reference  
listed. Much more evidence was generously provided by  
the compiler's associates in the U.S. Geological Survey.  
Each contributor named on the map had special and  
current knowledge of the geology, mineral deposits, and  
resource potential of part of the State. The compiler  
accepts responsibility for the compilation and  
gratefully acknowledges the help immediately and  
unintentionally given by his associates.

The compilation was delivered and its results  
presented orally to members of the Forest Service on  
December 6, 1977. The map and text have been placed on  
open file by public request.

Selected references

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U.S. Forest Service, 1977a, Roadless and undeveloped  
area inventory, Road II, National Forests, Idaho:  
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was used for the U.S. Geological Survey compilation  
of mineral-resource potential.]

1977b, Roadless and undeveloped area evaluation  
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the map cited as 1977a.]

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Sess., 359 p. [Idaho published as Idaho Bur. Mines  
and Geology Special Rept. 1.]

U.S. Geological Survey  
OPEN FILE REPORT

This map is preliminary and has not  
been edited or reviewed for conformity  
with Geological Survey standards or  
nomenclature.