

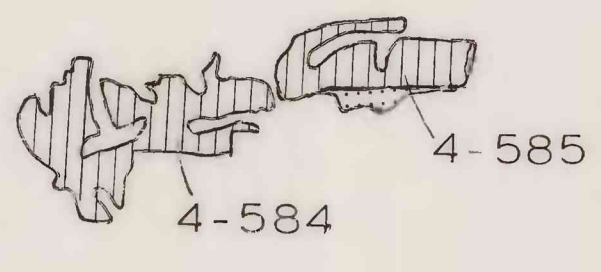
114°

112°

42°

40°

38°



Wasatch fault line

ROCKY
MOUNTAINS

GREAT
BASIN

4-757

4-730

4-731

4-722

4-319

COLORADO
PLATEAU

4-253

4-251

4-252

Hurricane fault line

MAP OF WESTERN UTAH SHOWING MINERAL RESOURCE POTENTIAL OF RARE II AREAS

--Preliminary assessment of mineral resource potential of proposed Roadless Areas in the National Forests of Western Utah (Exclusive of coal, oil, gas, and construction materials)

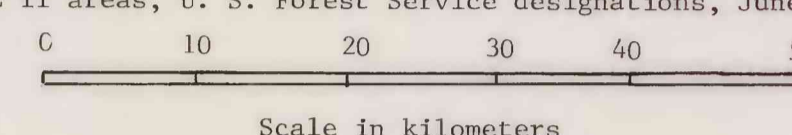
E. W. Tooker and H. T. Morris, Compilers 1977
U. S. Geological Survey
Menlo Park, California

EXPLANATION

- AREA RATINGS
- A -- Many known occurrences and (or) geologically favorable for prospecting
 - B -- Few known occurrences and (or) geologically favorable for prospecting
 - C -- No known deposits or prospects and probably geologically unfavorable for prospecting
 - D -- Insufficient information to evaluate resource or prospecting potential

Major mining districts

4-211 RARE II areas, U. S. Forest Service designations, June 1978



This preliminary map, compiled on short notice mainly from personal knowledge and selected literature sources, was prepared in December 1977 in response to a request from the U. S. Forest Service for an immediate brief evaluation of the mineral resource potential of proposed roadless areas of the national forests in western Utah. These areas were selected by the Forest Service for purposes of the RARE II inventory. Supplemental oral briefings held in Menlo Park on December 8 and 9, 1977 for Forest Service personnel were based on the map and explanatory materials submitted in this U. S. Geological Survey open file report.

The map resource designations, A through D, are based on geological considerations as amplified in Table 1. They have been applied very broadly to whole areas, although it is recognized that specific sites within these areas may be identified by more extensive search of the literature and onsite field examination. Table 1 indicates the main commodities that have been found or that may occur in the favorable geologic environments present.

The map considers only those roadless areas in Utah that are west of the Wasatch and Hurricane fault lines, which are generally considered to form the eastern boundaries of the Great Basin. Geologic expertise for these areas exists with the Menlo Park staff of the Geological Survey. The areas to the east of these fault lines were reported by the U. S. Geological Survey staff of the Denver, Colorado, office. A composite map for the whole State prepared by the Denver staff incorporates data from both of these sources.

This resource assessment is considered preliminary because it is based on incomplete information that currently is at hand. In the oral presentation the compilers noted that an inventory of mineral resources is only a catalog or index of the metals or nonmetals that were economically attractive or technologically possible to extract in the past. Thus, this inventory does not provide a systematic or necessarily accurate evaluation of all the mineral resource possibilities in this region. Such an assessment of resources should be a continuing dynamic process and provide for the identification of critical new mineral resource materials such as byproduct platinum and uranium now produced at the Bingham, Utah, copper mine, and the disseminated gold of the Carlin, Nevada region, which was thought to be a "mined out" gold lode and placer district.

Selected References

- U. S. Geological Survey, 1964, Mineral & water resources of Utah: U.S. Senate Document, 88th Congress, 2nd session, Committee on Interior and Insular Affairs, 275 p.
- Butler, R. S., Loughlin, G. F., Heiken, B. C., and others, 1920, The ore deposits of Utah: U.S. Geological Survey Professional Paper 111, 672 p.

U. S. GEOLOGICAL SURVEY
OPEN FILE MAP
1978

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

Table 1.--Evaluation of RARE II Roadless Area potential metal and nonmetal resources in the Great Basin of western Utah

F/S Area	Area No.	Reported Metals	Reported nonmetal materials	Estimated relative significant production or potential			Area Rating	Geologic favorability factors ¹
				Good	Mod	Low/Insignif.		
Baft River	4-584	As			x		B	1,2a,2c,3a,3b,3d,4
Clear Creek	4-585	U	Bldg. Stone (Green Quartz)	x	x		B + C	1,2a,2c
Stansbury Mtns	4-757	Cu, Au, Pb, Zn, Ag, Bi, Fe	Onyx, silica, variscite, ilmenite		x		B	1,2b,2c,3a-d,4,5a
Red Pine Mtn	4-731	Be, Cu				x	B	1,2a-c,3a-d,4
Vernon	4-722	Be, Au, Pb, Zn, Ag, Mn, Th, Bi, Rare Earths	Pegmatite, Ba, F		x		B	1,2a-c,3a-d,4
Traverse Mtn (Lone Peak)	4-730 (partial)	Cu, Au, Mo?				x	C(?) in Great Basin area	Volcanic rock, no surface evidence of mineralization, but to east are major (A) deposits.
Oak Creek	4-319	Cu, Pb, Ag	Silica, Limestone			x	E-	2a-c,3c,3d?
Pine Valley Mtns	4-251	Cu, Pb, Zn, Ag, Mo, V, Fe?	Gen Qz, Gypsum, Perlite		x		B	1,2c,3a,3d,6
Cedar Bench	4-252	Cu, Pb, Zn, Ag				x	B	1,2c,3a,3d,6
Ashdon Gorge ²	4-253	U?	Gemstones (calcite)				D	6

- ¹Geologic favorability characteristics:
1. Producing deposits in or close to area
 2. Status of geologic knowledge:
 - a. Available good quality geologic maps/reports for detailed knowledge
 - b. Two-degree quad. resource assessment map coverage - systematic reconnaissance
 - c. Regional (State, County) maps available - good general knowledge
 3. Favorable Great Basin ore setting
 - a. Close to intermediate intrusive rocks of Tertiary age
 - b. Hydrothermal alteration present
 - c. Sedimentary (carbonate) strata, favorable hosts elsewhere
 - d. Favorable fault or other structures and (or) regional lineament controls present
 4. Evidence of geochemical leakage and (or) surficial placers
 5. Geophysical anomalies present
 - a. Magnetic
 - b. Gravity (depth of burial)
 6. Need more information to fully assess

²Area missed in December 1977 evaluation