

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

MAP SHOWING MINERAL RESOURCE POTENTIAL OF U.S. FOREST SERVICE  
AND BUREAU OF LAND MANAGEMENT WILDERNESS STUDY AREAS IN ARIZONA

By J. A. Peterson, S. S. Page Nedell, and J. R. Bergquist

U.S. Geological Survey  
Open-File Report 84-408  
1984

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

The map and tables present a summary of information on the mineral resource potential of certain lands under the jurisdiction of the U.S. Forest Service and the Bureau of Land Management. Some of these areas were included in the proposed Arizona National Forest Wilderness Act of 1984 (S. 2242) and the proposed Arizona Wilderness Act of 1984 (H.R. 4707) introduced February, 1984.

Under the provisions of the Wilderness Act (Public Law 88-577), and the Federal Land Policy and Management Act (Public Law 94-579) the U.S. Geological Survey and the U.S. Bureau of Mines are required to conduct mineral surveys of lands scheduled for inclusion into the National Wilderness Preservation System. Areas that were scheduled for evaluation of mineral resource potential are indicated on the map by shading. Unshaded areas have not yet been scheduled for study.

Information on metallic and nonmetallic commodities was obtained from the USGS computerized Mineral Resources Data System (MRDS) and from published reports. Information on energy resources is from published reports.

## REFERENCE LIST

1. Anderson, C. A., and Blacet, P. M., 1972, Precambrian geology of the northern Bradshaw Mountains, Yavapai County, Arizona: U.S. Geological Survey Bulletin 1336, 82 p.
2. Beard, L. S., and Ellis, C. E., 1984, Fossil Springs Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 62-64.
3. Billingsley, G. H., Antweiler, J. C., and Ellis, C. E., 1984, Mineral resource potential map of the Kanab Creek Roadless Area, Coconino and Mohave Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1627-A.
4. Billingsley, G. H., and Ellis, C. E., 1984, Kanab Creek Roadless Area, Arizona in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 76-78.
5. Bush, A. L., and Lane, M. E., 1982, Mineral resource potential of the Vermilion Cliffs--Paria Canyon Instant Study Area, Coconino County, Arizona, and Kane County, Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-1475-D, scale 1:62,500.
6. Bush, A. L. and Lane, M. E., 1980, Preliminary Report on the Mineral Resource Potential of the Vermilion Cliffs-Paria Canyon Instant Study Area, Coconino County, Arizona, and Kane County, Utah: U.S. Geological Survey Open-File Report 80-1056, 32 p.
7. Canney, F. C., Lehmbeck, W. L., and Williams, F. E., 1967, Mineral resources of the Pine Mountain Primitive Area, Arizona: U.S. Geological Survey Bulletin 1230-J, 45 p.
8. Canney, F. C., and Williams, F. E., 1984, Pine Mountain Wilderness Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 94-96.
9. Conway, C. M., and McColly, R. A., 1984, Hells Gate Roadless Area, Arizona; in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 69-71.
10. Conway, C. M., McColly, R. A., Marsh, S. P., Kulik, D. M., Martin, R. A., and Kilburn, J. E., in press, Mineral resource potential map of the Hells Gate Roadless Area, Gila Conty, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1644-A, scale 1:48,000.

11. Creasey, S. C., and Jinks, J. E., 1984, Galiuro Wilderness and Contiguous Roadless Areas, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 65-68.
12. Creasey, S. C., Jinks, J. E., Williams, F. E., and Meeves, H. C., 1981, Mineral resources of the Galiuro Wilderness and contiguous Further Planning Areas, Arizona: U.S. Geological Survey Bulletin 1490, 94 p.
13. Drewes, Harald, 1972, Structural geology of the Santa Rita Mountains, Southeast of Tucson, Arizona: U.S. Geological Survey Professional Paper 748, 35 p.
14. Drewes, Harald, and Bigsby, P. R., 1984, North End Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 90-93.
15. Drewes, Harald, Forn, C. L., Moss, K. C., Watts, K. C., Jr., and Bigsby, P. R., 1983, Mineral resource potential of the North End Roadless Area, Cochise County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1412-D, scale 1:48,000.
16. Drewes, Harald, and Kreidler, T. J., 1984, Dragoon Mountains Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 58-61.
17. Drewes, Harald, Kreidler, T. J., Watts, K. C., Jr., and Klein, D. P., 1983, Mineral resource potential of the Dragoon Mountains Roadless Area, Cochise County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1521-B, scale 1:50,000.
18. Drewes, Harald, and Williams, F., E., 1973, Mineral resources of the Chiricahua Wilderness area, Cochise County, Arizona: U.S. Geological Survey Bulletin 1385-A, 53 p.
19. Drewes, Harald, and Williams, F. E., 1984, Chiricahua Wilderness, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 55-57.
20. Finnell, T. L., Bowles, C. G., and Soule, J. H., 1967, Mineral resources of the Mount Baldy Primitive area, Arizona: U.S. Geological Survey Bulletin 1230-H, p. H1-H14.

21. Finnell, T. L., and Soule, J. H., 1984, Mount Baldy Wilderness, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 88-89.
22. Hayes, P. T., and Brown, S. D., 1984, Bunk Robinson Peak and Whitmire Canyon Roadless Areas, New Mexico and Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 798-800.
23. Hayes, P. T., Watts, K. C., Hassemer, J. R., and Brown, S. D., 1983, Mineral resource potential map of Bunk Robinson Peak and Whitmire Canyon Roadless Areas, Hidalgo County, New Mexico and Cochise County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1425-B, scale 1:62,500.
24. Hinkle, M. E., and Ryan, G. S., 1982, Mineral resource potential map of the Pusch Ridge Wilderness, Pima County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1356-B, scale 1:50,000.
25. Hinkle, M. E., and Ryan, G. S., 1984, Pusch Ridge Wilderness, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 97-99.
26. Huff, L. C., and Raabe, R. C., 1984, Sycamore Canyon Primitive Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 117-119.
27. Huff, L. C., Santos, Elmer, and Raabe, R. G., 1966, Mineral resources of the Sycamore Canyon Primitive Area, Arizona: U.S. Geological Survey Bulletin 1230-F, 19 p.
28. Karlstrom, T. N. V., Billingsley, G. H., and McColly, Robert, 1983, Map showing geology and mineral resource potential of the Rattlesnake Roadless Area, Yavapai and Coconino Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1567-A, scale 1:24,000.
29. Karlstrom, T. N. V., and McColly, R. A., 1984, Rattlesnake Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 100-102.

30. Keith, W. J., and Kreidler, T. J., 1984, Winchester Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 130-132.
31. Keith, W. J., Martin, R. A., and Kreidler, T. J., 1982, Mineral resource potential of the Winchester Roadless Area, Cochise County, Arizona: U.S. Geological Survey Open-File Report 82-1028, 7 p.
32. Knechtel, M. M., 1938, Geology and Ground-water resources of the valley of Gila River and San Simon Creek, Graham County, Arizona: U.S. Geological Survey Water Supply Paper 796-F, p. 181-222.
33. Kreiger, M. H., 1967, Reconnaissance geologic map of the Camp Wood quadrangle, Yavapai County, Arizona: U.S. Geological Survey Miscellaneous Geological Investigations Map I-502, scale 1:62,500.
34. Krieger, M. H., 1967, Reconnaissance geologic map of the Sheridan Mountain quadrangle, Yavapai County, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-505, scale 1:62,500.
35. Krieger, M. H., 1967, Reconnaissance geologic map of the Iron Springs quadrangle, Yavapai County, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-504, scale 1:62,500.
36. Krieger, M. H., Johnson, M. G., and Bigsby, P. R., 1979, Mineral resources of the Aravaipa Canyon Instant Study Area, Pinal and Graham Counties, Arizona: U.S. Geological Survey Open-File Report 79-291, 27 p.
37. Marshall, C. H., 1956, Photogeologic map of the Jacob Lake NE quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-194, scale 1:24,000.
38. McQueen, Kathleen, 1956, Photogeologic map of the House Rock Spring NE quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-199, scale 1:24,000.
39. Minard, J. P., 1956, Photogeologic map of the House Rock Spring NE quadrangle, Coconino county, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-198, 1:24,000.
40. Minard, J. P., 1957, Photogeologic map of the House Rock Spring NW quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-253, scale 1:24,000.
41. Otton, J. K., Light, T. D., Shide, A. F., Bergquist, J. R., Wrucke, C. T., Theobald, P. K., Duval, J. S., and Wilson, D. M., 1981, Map showing mineral resource potential of the Sierra Ancha Wilderness and Salome Study area, Gila County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1162-H, scale 1:48,000.

42. Peterson, D. W., and Jinks, J. E., 1983, Mineral resource potential maps of the Superstition Wilderness and contiguous roadless areas, Maricopa, Pinal, and Gila Counties, Arizona: U.S. Geological Survey Open-File Report 83-472, scale 1:24,000.
43. Peterson, D. W., and Jinks, J. E., 1984, Superstition Wilderness, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 113-116.
44. Pomeroy, J. S., 1957, Photogeologic map of the House Rock Spring SW quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Geological Investigations Map I-254, scale 1:24,000.
45. Ratte, J. C., and Briggs, J. P., 1984, Hells Hole Roadless Area, Arizona and New Mexico, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 72-75.
46. Ratte, J. C., Hassemer, J. R., and Martin, R. A., 1982, Mineral resource potential map of the Hells Hole Further Planning Area (RARE II), Greenlee County, Arizona and Grant County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1344-E, scale 1:62,500.
47. Ratte, J. C., Hassemer, J. R., Martin, R. A., and Lane, Michael E., 1982, Mineral resource potential of the Lower San Francisco Wilderness study area and contiguous roadless area, Arizona and New Mexico: U.S. Geological Survey, Miscellaneous Field Studies Map MF-1463-C, scale 1:62,500.
48. Ratte, J. C., Landis, E. R., Gaskill, D. L., and Raabe, R. G., 1969, Mineral resources of the Blue Range Primitive area, Greenlee County, Arizona and Catron County, New Mexico, with a section on Aeromagnetic interpretation by G. P. Eaton, U.S. Geological Survey: U.S. Geological Survey Bulletin 1261-E, 91 p.
49. Ratte, J. C., and Lane, M. E., 1984, Lower San Francisco Wilderness Study Area and Contiguous Roadless Areas, Arizona and New Mexico, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 79-82.
50. Ratte, J. C., and Raabe, R. G., 1984, Blue Range Wilderness, Arizona and New Mexico, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 52-54.
51. Ross, C. P., 1925, Aravaipa and Stanley mining districts, Graham County, Arizona: U.S. Geological Survey Bulletin 763, 120 p.

52. Sharp, R. P., 1942, Multiple Pleistocene Glaciation on San Francisco Mountain, Arizona: Journal of Geology, v. 50, no. 5, p. 481-503.
53. Stipp, T. F., Haigler, L. B., Alto, B. R., and Sutherland, H. L., 1967, Reported occurrence of selected minerals in Arizona: U.S. Geological Survey Mineral Investigations Resource Map MR-46, scale 1:500,000.
54. Thorman, C. H., Drewes, Harald, and Lane, M. E., 1978, Mineral resources of the Rincon Wilderness Study Area, Pima County, Arizona: U.S. Geological Survey Bulletin 1500, 62 p.
55. Thorman, C. H., and Lane, M. E., 1984, Rincon Wilderness Study Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 103-105.
56. Throckmorton, M. L., and Hamm, L. R., 1980, Mineral resource map of the Turbinella--Gambel Oak Instant Study Area, Mohave County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1146-B, scale 1:24,000.
57. Twenter, F. R., and Metzger, D. G., 1963, Geology and ground water in Verde Valley--The Mogolton Rim region, Arizona: U.S. Geological Survey Bulletin 1177, 132 p.<sup>o</sup>
58. Ulrich, G. E., and Bielski, A. M., 1983, Mineral resource potential map of West Clear Creek Roadless Area, Yavapai and Coconino Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1555-A, scale 1:24,000.
59. Ulrich, G. E., and Bielski, A. M., 1984, Wet Beaver Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 123-125.
60. Ulrich, G. E., and Bielski, A. M., 1984, West Clear Creek Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 120-122.
61. Ulrich, G. E., Bielski, A. M., and Bywaters, J. S., 1983, Mineral resource potential map of the Wet Beaver Roadless Area, Coconino and Yavapai Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Report MF-1558, scale 1:24,000.
62. Villalobos, H. A., and Hamm, L. W., 1980, Summary Report of the Mineral Resource Appraisal of the Paiute Instant (Primitive) Study Area, Mohave County, Arizona: U.S. Geological Survey Open-File Report 80-984, 12 p.

63. Villalobos, H. A., and Hamm, L. W., 1981, Map showing mineral resource potential of the Paiute Instant (Primitive) Study area, Mohave County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1160-D, scale 1:24,000.
64. Weir, G. W., Beard, L. S., and Ellis, C. E., 1983, Mineral resource potential map of the Fossil Springs Roadless Area, Yavapai, Gila, and Coconino Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1568-A, scale 1:24,000.
65. Wells, J. D., 1958, Preliminary Geologic map of the House Rock Spring NE quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-188, scale 1:24,000.
66. Wells, J. D., 1959, Preliminary geologic map of the House Rock Spring SE quadrangle, Coconino County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-189, scale 1:24,000.
67. Wells, J. D., 1960, Stratigraphy and structure of the House Rock Valley Area, Coconino County, Arizona: U.S. Geological Survey Bulletin 1081-D, p. 117-158.
68. Wilson, E. D., 1939, Pre-Cambrian Mazatzal revolution in central Arizona: Geological Society of America Bulletin, v. 50, no. 7, p. 1113-1164.
69. Wolfe, E. W., and Light, T. D., 1982, Mineral resource potential map of the Strawberry Crater Roadless Areas, Coconino County Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1394-C, scale 1:24,000.
70. Wolfe, E. W., and Light, T. D., 1984, Strawberry Crater Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 110-112.
71. Wolfe, E. W., and McColly, R. A., 1984, Arnold Mesa Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 48-51.
72. Wolfe, E. W., Wallace, A. R., McColly, R. A., and Korzeb, S. L., 1983, Mineral resource potential map of the Arnold Mesa Roadless Area, Yavapai County, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1577-A, scale 1:24,000.
73. Wrucke, C. T., and Ellis, C. E., 1984, Mazatzal Wilderness and Contiguous Roadless Areas, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 83-86.

74. Wrucke, C. T., and Light, T. D., 1984, Sierra Ancha Wilderness, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 106-109.
75. Wrucke, C. T., Marsh, S. P., Conway, C. M., Ellis, C. E., Kulik, D. M., and Moss, C. K., 1983, Mineral resource potential map of the Mazatzal Wilderness and contiguous roadless areas, Gila, Maricopa, and Yavapai Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1573-A, scale 1:48:000.
76. Wrucke, C. T., and McColly, R. A., 1984, Whetstone Roadless Area, Arizona, in Marsh, S. P., Kropschot, S. J., and Dickinson, R. G., Wilderness mineral potential: Assessment of mineral resource potential in U.S. Forest Service lands studied 1964-1984: U.S. Geological Survey Professional Paper 1300, p. 126-129.
77. Wrucke, C. T., McColly, R. A., Scott, D. C., Werschky, R. S., Bankey, Viki, Kleinkopf, D. M., Staatz, M. H., and Armstrong, A. K., 1984, Mineral resource potential map of the Whetstone Roadless Area, Cochise and Pima Counties, Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-1614-A.

Table 1.--U.S. Forest Service Areas

[Summary of U.S. Forest Service Study Areas. Forest Service area I.D.'s, known deposits, potential for indicated resource, and mineral resource potential correspond to information on map. Abbreviations listed in Table 3. "Mineral resource potential" ratings are as follows: A - highly favorable geologic environment for resources of some or all indicated commodities; B - favorable geologic environment for resources of some or all indicated commodities; C - unfavorable geologic environment for resource accumulation; D - insufficient data to evaluate. Cross (†) by name of area indicates inclusion of area in the proposed Arizona Wilderness Act of 1984 (H.R. 4707). Asterisk (\*) in references column indicates published USGS/Bureau of Mines jointly authored report on mineral resource potential. These reports are summarized in USGS Professional Paper 1300]

Forest Service area I.D.	Name of area	Designation of area	Gross acreage	National forest	Congressional district	Known deposits or occurrences	Potential for indicated resource(s)	Mineral resource potential	References
NP 3013	†Chiricahua Wilderness	W	17,500 <sup>1</sup>	Coronado	2	--	Ag, Au, Mo	B	*18, 19
3016	Mazatzal Wilderness	PP	83,750	Tonto	3/4	--	Mo	C	*73, 75
3017	Contiguous Roadless Area Pine Mountain Wilderness	NW	7,050	do.	3	--	--	C	
3018	Contiguous Roadless Area Superstition Wilderness	PP	32,160	do.	4	--	--	C	*42
3019	Contiguous Roadless Area Sierra Ancha Wilderness	NW	11,520	do.	4	Aab	U, Fe, Aab	A	*41
3020	Contiguous Roadless Area Line Creek	NW	43,050	do.	3/4	Ag	Ag	C	
3021	†Hells Gate	PP	30,400	do.	4	--	Sn	C	*9, 10
3022	†Salome	NW	30,470	do.	4	U	U	B	*41
3023	Cherry Creek	NW	12,130	do.	4	U	Aab, U	B	do
3024	Boulder	NW	45,000	do.	4	--	--	C	
3025	†Four Peaks	NW	54,990	do.	4	--	--	C-D	53, 68
3026	Goldfield	NW	16,930	do.	4	--	--	C	
NP 3026	†Galluro Wilderness	W	52,700 <sup>1</sup>	Coronado	4	Ag, Cu, Zn	Au, Mo, Ag, Cu, Zn	A	*11, 12
3027	Black Cross	NW	6,290	Tonto	4	--	--	C	
3028	Horse Mesa	NW	10,450	do.	4	--	--	C	
3029	†Salt	NW	41,290	do.	4	--	Aab, U	C	
3030	Picacho	NW	7,200	do.	4	Aab	Aab	B	
3040	Jacka Canyon	NW	5,010	Coconino	3	--	--	C	
3041	East Clear Creek	NW	1,730	do.	3	--	--	C	
3042	Barberhop Canyon	NW	1,290	do.	3	--	--	C	
3043	Lower Jacka Canyon	NW	870	do.	3	--	--	C	
3044	Hackberry	NW	24,910	do.	3	--	--	C	
3045	†Net Beaver	PP	9,890	do.	3	--	--	C	*59, 61
3046	†Posill Springs	PP	14,090	do.	3/4	--	Cu, U	C	*2, 64
3047	†West Clear Creek	PP	33,660 <sup>1</sup>	do.	3	--	Gyps	C	*58, 60
3048	Strawberry Crater South	PP	8,050	do.	3	--	--	C	*69, 70
NP 3048	†Mazatzal Wilderness	W	205,346 <sup>1</sup>	Tonto	3/4	Au, Ag, Pb, Hg, Cu	Mo, Au, Ag, Pb, Hg, Cu	B	*73, 75
3049	†San Francisco Peaks	W	17,980 <sup>1</sup>	Coconino	3	--	--	C	52
3050	†Kendrick Mountain	W	2,200	do.	3	--	--	C	
do.	† do.	W		Katibab	3	--	--	C	
3051	Padre Canyon	NW	9,910	Coconino	3	--	--	C	
3052	Sycamore Canyon Wilderness	NW	2,650	do.	3	--	--	C	
3053	Contiguous Roadless Area †Red Rock-Secret Mountain	W	47,480	do.	3	--	--	C	26, 27
NP 3053	MT. Baldy	W	7,400	Apache	4	--	--	C	*20, 21
3054	†Mattlansake	PP	32,070	Coconino	3	--	--	C	*28, 29
3055	Walker Mountain	NW	8,840	do.	3	--	--	C	
3056	House Mountain	NW	20,770	do.	3	--	--	C	
3057	Clarron Hills	NW	5,280	do.	3	--	--	C	
3058	Boulder Canyon	NW	4,550	do.	3	--	--	C	
3059	Strawberry Crater North	PP	1,790	do.	3	--	--	C	*69, 70
A3060	Kanab Creek	W	64,162	Katibab	3	--	U, Cu, Gyps	B	
B3060	do.	PP	9,168	do.	3	--	U, Cu	B	*3, 4
3061	Coconino Rim	NW	8,510	do.	3	--	--	C	
A3062	Saddle Mountain	W	38,240	do.	3	--	--	C	

Table 1.--U.S. Forest Service Areas (continued)

Forest Service area I.D.	Name of area	Designation of area	Gross acreage	National forest	Congressional district	Known deposits or occurrences	Potential for indicated resource(s)	Mineral resource potential	References
3128	Escudilla Mountain	NM	4,100	Apache-Sitgreaves	4	--	--	C	
3129	Black River Canyon	NM	11,630	do.	4	--	--	C	
3130	Centerfire	NM	13,100	do.	4	--	--	C	
3131	Bear Wallow	NM	9,501 <sup>1</sup>	do.	4	--	Cu	C	48
3132	Molan	NM	6,640	do.	4	--	--	C	
3133	Campbell Blue	NM	7,020	do.	4	--	--	C	
3134	Mother Hubbard	NM	2,100	do.	4	--	--	C	
3135	Painted Bluffs	NM	42,910	do.	4	Mn	Ag, Au, Cu, Mn, Mo, Pb, V, Zn	B	
3136	Mitchell Peak	NM	35,670	do.	4		Ag, Au, Cu, Mn, Pb, Zn	B	
3137	Pipestem	NM	34,370	do.	4	--	Mo, Cu, Ag, Mn, Pb, Zn	C	
3138	Hells Hole	PP	15,470	do.	4		Mo, Cu, Ag, Cu, Sn, Pb, Zn, Au, Ag, U	B	#45, 46
3139	Lower San Francisco	W	6,400	do.	4	--	Cu, Mo, Au, Ag, Geo	B	#47, 49
3140	Salt House	NM	22,270	do.	4	--	--	C	
3141	Hot Air	NM	31,700	do.	4	--	Mo, Cu, Ag	C	
3142	Sunset	NM	29,040	do.	4	--	--	C	
P3169	Blue Range Primitive	W	1,090	do.	4	--	--	C	#48, 50
3200	Bunk Robinson Peak	PP	740	Coronado	2	--	Mo, Bi, Pb, Zn, Au, Ag, Perlite	B	#22, 23
3201	Dragon Mountain	PP	33,140	do.	2		Mo, Au, W, Ag, Pb, Zn, Cu	A	#16, 17
3900	Blue Range Wilderness	W	ca. 221,000	Apache-Sitgreaves	4	--	Mo, Cu, Ag	C	#48, 50
3901	Galluro Additions	PP	61,590	Coronado	4	Ag, Au, Cu, Mo	Ag, Au, Cu, Mo	A	#11, 12

<sup>1</sup> Acres listed in H.R. 4707 different from original Forest Service BARE II acreages are as follows:

Chiricahua Wilderness 60,150  
 Galluro Wilderness 25,000  
 West Clear Creek 30,000  
 Mazatzal Wilderness 60,000  
 San Francisco Peaks 19,000  
 Juniper Mesa 7,300  
 Superstition Wilderness 40,000  
 Sycamore Canyon 10,930  
 Sheridan Mountain 38,380  
 Granite Mountain 8,540  
 Castle Creek 28,420  
 Arnold Mesa 20,000  
 Miller Peak 22,280  
 Rincon Mountains 39,700  
 Bear Wallow 7,000

Table 1.--U.S. Forest Service Areas--(continued)

Forest Service area I.D.	Name of area	Designation of area	Gross acreage	National forest	Congressional district	Known deposits or occurrences	Potential for indicated resource(s)	Mineral resource potential	References
B3062	do.	NW	950	do.	3	--	--	C	
3063	Red Point	NW	7,960	do.	3	--	--	C	37, 67
NF 3063	Pine Mountain	W	19,375	Tonto/	3	--	--	C	47, 8
3064	Big Ridge	NW	8,850	Katibab	3	--	--	C	37, 53, 67
3065	Burro Canyon	NW	20,510	do.	3	--	--	C	37, 38, 39, 44, 65, 66, 67
3066	Willis Canyon	NW	8,730	do.	3	Talc	Talc	C	40, 44, 53, 67
NF 3076	Sierra Ancha Wilderness	W	20,850	Tonto	4	Ash, U, Fe	Ash, U, Fe	A	41, 74
3080	Juniper Mesa	W	9,770 <sup>1</sup>	Prescott	3	--	--	C	33
NF 3080	Superstition Wilderness	W	124,410 <sup>1</sup>	Tonto	4	--	Cu, Pb, Zn, Ag, Au, U	C	42, 43
3081	Apache Creek	NW	5,610	Prescott	3	--	--	C	33
NF 3081	Sycamore Canyon	W	46,125 <sup>1</sup>	Katibab/ Prescott/ Coconino	3	--	--	C	426, 27
3082	Cornell Mountains	NW	9,040	Prescott	3	Kyanite	Kyanite	C	
3083	Sheridan Mountain	NW	37,380 <sup>1</sup>	do.	3	--	--	C	34
3084	Granite Mountain	W	8,580 <sup>1</sup>	do.	3	--	Cu	B	35, 53
3085	Castle Creek	W	28,600 <sup>1</sup>	do.	3	Au, Ag, Cu, Pb, Zn, Mo, W, Fe	Be, Au, Ag, Cu, Pb Zn, Mo, W, Fe	B	1
3086	Pritche	NW	14,660	do.	3	--	--	C	
3087	Muldoon	NW	5,160	do.	3	--	--	C	
3088	Woodchute	NW	5,540	do.	3	--	--	C	
3089	Black Canyon	NW	10,420	do.	3	--	Au, Pb, Zn, Cu	A	
3090	Ash Creek	NW	8,430	do.	3	Fe, Cu	Ag, Au, Mn, Pb, Zn, Fe, Cu	A	
3091	Grief Hill	NW	12,280	do.	3	--	--	C	
3092	Arnold Mesa	PP	28,000 <sup>1</sup>	do.	3	--	Cu, Geo	C	471, 72
do.	† do.	PP	320	Tonto	3	--	do.	C	do.
3093	Pine Mountain Wilderness	NW	2,910	Prescott	3	--	--	C	
3094	Sycamore Canyon	NW	8,280	do.	3	--	--	C	
3095	Contiguous Roadless Area	NW							
Contiguous Roadless Area									
Blind Indian Creek									
3099	Punch Ridge Wilderness	W	27,040	do.	3	Au, Ag, Cu, Pb	Fe, Au, Ag, Cu, Pb	B	
3109	Chiricahua Wilderness	W	55,000	Coronado	2	Zn, Mo, W	Cu, Pb, Zn, Mo, W	C	424, 25
Contiguous Roadless Area									
3110	Whitmore Canyon	PP	60,150	do.	2	--	--	C	418
3112	North End	PP	5,080	do.	2	--	--	C	422, 23
3113	Mc. Wrightson	W	23,550	do.	2	--	Cu, Pb, Zn, Ag, Au	A	414, 15
3114	Tumacacori	NW	25,170	do.	2	Ag, Au, Cu	Pb, Zn, Mo, Ag, Au, Cu	A	13, 53
3115	Pajarito No. 1	NW	51,490	do.	2	--	--	C	
3116	Pajarito No. 2	NW	10,320	do.	2	--	Ag, Au, Cu, Pb, Zn	C	
3117	Miller Peak	W	5,500	do.	2	--	Ag, Au, Mn	C	
3118	Brushy Peak	NW	22,510 <sup>1</sup>	do.	2	Ag, Au, Cu, Pb, W	Pb, U, V, Zn	A	53
3119	Canelo Hills	NW	8,480	do.	2	W, Au, Ag, Cu, Pb	W, Au, Ag, Cu, Pb	A	
3120	Whetstone	PP	8,650	do.	2	--	Mn, Ag, W	B	
3121	Santa Teresa	W	36,610	do.	2	Ag, Cu, Qtz	Pb, Au, Mn, W, U	A	476, 77
3122	Winchester	PP	27,160	do.	4	--	Crys, Ag, Cu, Qtz	B	51
3123	Mc. Graham	NW	14,100	do.	2	--	--	C	430, 31
3124	Galluro Wilderness	NW	55,090	do.	4	--	W	C	32, 53
Contiguous Roadless Area									
3125	Little Rincon	NW	22,130	do.	4	--	Cu	A	411, 12
A3126	Trincon Mountains	W	11,560	do.	2	--	--	C	
83126	do.	NW	43,360 <sup>1</sup>	do.	2	--	--	C	454, 55
3127	Kane Springs	NW	19,570	do.	2	--	--	C	do.
			6,970	do.	4	--	--	C	

Area I.D.'s, known deposits, potential for indicated resources, and mineral resource potential correspond to information on map. Abbreviations listed in table 3. "Mineral resource potential" ratings are as follows: A - highly favorable geologic environment for resources of some or all indicated commodities; B - favorable geologic environment for resources of some or all indicated commodities; C - unfavorable geologic environment for resource accumulation; D - insufficient data to evaluate. Cross (†) by name of area indicates inclusion of area in the proposed Arizona Wilderness Act of 1984 (H.R. 4707). Asterisk (\*) in reference column indicates published USGS/Bureau of Mines jointly authored report on mineral resource potential. These reports are summarized in USGS Professional Paper 1300]

Name of area	Area I.D.	I.D. sub-name	Acreage	Congressional district	Known deposits or occurrences	Potential for indicated resource(s)	Mineral resource potential	References
1. Cottonwood Point	1-41	Cottonwood Point	6,500	3	--	--	C	
2. Grand Wash Cliffs	1-111 1-112	Last Chance Grand Wash Cliffs	36,300	3	Kyanite --	Cu, Pb, Kyanite Cu, Pb	C	
3. Kanab Creek	1-33A A3060 B3060	Hack Canyon Kanab Creek do.	77,100	3	Ag, Cu -- --	QzG, Ag, Cu U, Cu, Gyp, QzG U, Cu, QzG	B	#3, 4
4. Mt. Logan	1-50 1-51 1-136	Tonto Weep Mt. Logan Mt. Bane	14,600	3	-- -- --	U U U	C	
5. Mt. Trumbull	1-52	Mt. Trumbull	7,900	3	--	--	C	
6. Palute	18A-1 18A-5 1-128 1-130 1-134	Palute Primitive Area Turbinella-Gambel Oak Natural Area Sand Cove Virgin River Lime Hills	84,700	3	-- -- -- -- W	Gyp, QzG Gyp, QzG Gyp, QzG Gyp, QzG Gyp, QzG, W	C	#56, 62, 63
7. Paris Canyon - Vermilion Cliffs	18A-2 18A-3	Paris Canyon Primitive Area Vermilion Cliffs	110,000	3	-- U	U, Mo, Au, Cu, V, Ag Mo, Au, Cu, V, Ag, U	C	#5, 6
8. Beaver Dam Mountains	1-6A 1-6B 1-6C 1-6D 1-8A-19	Primitive Area Perry Swale Jed Hollow Paris Rim Cedar Mountain Paris Plateau			-- -- -- -- --	QzG QzG QzG QzG QzG		
9. Saddle Mountain	1-5 1-135 A3062 B3062	Starvation Point The Narrows Saddle Mtn. do.	19,600 38,200	3 3	-- -- -- --	Gyp Gyp U U	C B/C	
OTHER BLM LANDS								
10. Navajo Canyon	--	N/A	6,670	2,4	2	--	C	#36
WILD AND SCENIC RIVER								
11. Verde River	--	N/A	unk. <1,280	3	--	--	C	

Table 3.--List of abbreviations Abbreviations

Designation of area (table 1)	Commodities (tables 1, and 2)	
W (wilderness area)	Ag	silver
NW (non wilderness area)	Asb	asbestos
FP (further planning area)	Au	gold
	Ba	barium
	Be	beryllium
	Bi	bismuth
	Cu	copper
	F	fluorine
	Fe	iron
	Geo	geothermal energy
	Gyps	gypsum
	Hg	mercury
	Kyanite	kyanite
	Mn	manganese
	Mo	molybdenum
	O & G	oil and gas
	Pb	lead
	Perlite	perlite
	Qtz	quartz
	Sn	tin
	Talc	talc
	U	uranium
	V	vanadium
	W	tungsten
	Z	zeolites
	Zn	zinc