

Figure 1.—Index map showing location of study area. Shaded areas are excluded lands: (1) Wauhatchie National Fish Hatchery and adjacent lands; (2) Right-of-way for South Carolina Route 107; (3) Right-of-way for Burrell's Ford Road (Forest Service road 1938); (4) Cherry Hill Recreation Area; (5) Private homesteads; (6) Thrift Lake cottage sites and access roads; (7) Private land.

Table 1.—Management classification, state, county, and national forest association, and coverage of Ellicott Rock Wilderness and additions

Name of area	Management classification	County and State	National Forest	Total acreage
Ellicott Rock Wilderness	Wilderness	Oconee County, S.C.; Jackson County, N.C.; Macon County, N.C.; Rabun County, Ga.	Sunter Nantahala Chattahoochee	3,332
Ellicott Rock Extension	Roadless Area (RARE II—Wilderness recommendation)	Oconee County, S.C.; Jackson County, N.C.; Macon County, N.C.; Rabun County, Ga.	Sunter Nantahala Chattahoochee	5,600
Ellicott Rock Expansion	Roadless Area (RARE II—Further planning)	Oconee County, S.C.	Sunter	5,512
Persimmon Mountain	Roadless Area (RARE II—Further planning)	Oconee County, S.C.	Sunter	6,678

Table 2.—Mines, prospects, and mineral sites in the Ellicott Rock Wilderness and additions

Site number	Name	Production and development	Remarks
1.	Ammons Branch mine (gold)	Produced 10 lb of free gold prior to 1896 (Yeates and others, 1896); 50-ft trench extends into a 60-ft adit; numerous small pits and trenches in vicinity. A nearby stream was placier mined prior to 1896 (Yeates and others, 1896).	Analyses of wall-rock and dump samples revealed trace amounts of gold and silver; the ore body, a gold-bearing quartz vein, has been entirely mined out; no vein quartz was observed in prospect pits. Wall rock is coarse-grained garnet-biotite schist.
2.	Unmined prospect (mica)	Production unknown; 25-ft-long and 6- to 10-ft-wide trench was developed.	Some muscovite in dump is clear and free of defects. Maximum size of sheets is 2.5 by 3.90.
3.	Unmined quarry (road metal)	Production unknown.	Bedrock gneiss, Tallulah Falls Formation.
4.	High Lonesome mine (mica)	Limited production probably before 1900; adit leads to cave underground workings.	Muscovite in dump is brownish-green and partly clear (Olson, 1952).
5.	Wilson mine (mica)	Production unknown; pit 20 by 80 ft and 15 ft deep leads to cave underground workings of unknown extent (Olson, 1952).	Muscovite in pegmatite exposed in pit is green, stained, and some has "X" structure (Olson, 1952). Sheets up to 1.25 in. have good electrical properties (Jones and Lancaster, 1950).
6.	Coldside Mountain mine (asbestos)	Production unknown; open cut having high wall of up to 35 ft, 100 ft wide at base, was mined by Pawhatan Mining Co. in 1955 and 1956 (Conrad and others, 1963).	Anthophyllite asbestos occurs as thin cross-fiber veins that cut the peridotite body in numerous directions. Mass fiber one ft found in the peridotite zone (Conrad and others, 1963). Vermiculite occurs in the 1- to 2-ft-wide contact zone.
7.	Unmined prospect (asbestos)	No production; prospect by Pawhatan Mining Co. (Conrad and others, 1963).	A small enstatite body.
8.	Group of mines and prospects (mica)	Production unknown; group of five small mines and prospects (Olson, 1952).	Muscovite in these pegmatites is commonly brownish-green and clear; some is stained, "X" structure is rare.
9.	Round Mountain mine (asbestos)	A large tonnage of mass-fiber asbestos was produced by Pawhatan Mining Co. during 1956 and 1957; entire ultramafic body was removed during mining (Conrad and others, 1963).	High-grade, mass-fiber anthophyllite asbestos (Conrad and others, 1963).
10.	Soapstone occurrence	Occasional production for local use; blocks of soapstone have been used from several outcrops on a steep hillside.	Massive, gray-mottled soapstone.
11.	See Cove Creek prospect (asbestos)	No production; limited trenching by Pawhatan Mining Co. in 1971 at top of slope above ultramafic outcrop.	Outcrop (approximately 30 ft high by 20 ft wide) is altered ultramafic rock; some asbestos can be seen in hand specimens. Prospect ES-888A, issued by U.S. Bureau of Land Management in November 1971, is on this site.
12.	Magnetite occurrence	No production; Roper and Dunn (1970) report prospect pits nearby with 200-lb magnetite boulders.	Magnetite-rich rock yields blocks up to 1 m ² at this site. Unit has above-background radioactivity. Analyses indicate anomalous concentrations of gallium, 0.06 percent; niobium, 0.20 percent; uranium, 5.9 percent. Additional analyses and information in Luce and others (1985), and Siems and others (1981).
13.	John O'Leary prospect (uranium, thorium)	No production; prospect consists of at least six prospect pits about 5 ft across and 10 to 15 ft deep. Shallow trenches up to 10 ft long and 3 ft deep.	Three separate samples contained the following concentrations: uranium (fluorometric), 60 ppm, 10 ppm, and 6 ppm; thorium (radiochemical), 260 ppm, 140 ppm, and 100 ppm. Highest spectrometer readings, 13 times background, was from a ditch beside a logging road on this site. Highest spectrometer readings by scanning-electron microscope show thorium and lanthanum as primary radioactive minerals. Additional analyses are reported in Atomic Energy Commission (1968), Price (1976), and Luce and others (1981) and Luce and others (1985).
14.	Moodie(?) property (silver, lead)	Production unknown; described by Sloan (1960) as a shaft on the west side of the creek and a drift on the west side.	Argentiferous galena in a quartz vein, which was mined by Sloan (1960) as a shaft on the west side of the creek and a drift on the west side. Mine was not located during present field investigation.
15.	Unmined mine (silver)	Production unknown; 5-ft-high adit extends into hill 150 ft; dumps at prospect pits north of the adit appear barren.	Quartz veins in adit wall-rock are 1 in. wide and stained black; analyses of a sample show 6.9 ppm (0.2 oz/ton) silver and no gold.
16.	Unmined mine (silver, lead)	Production unknown; 15-ft-diameter shaft extends 1400 ft to 100 ft below the surface; at elevation 1340 ft a 100- to 150-ft-long and 3-ft-deep shaft extends 50 ft below the surface; 8 ft by 18 ft high adit, trenching on strike continues above the adit; small prospect pits are scattered throughout the area.	Remains of an ore furnace are near the mine shaft. Lead and silver were produced in the furnace (Alan-Jon Zupan, South Carolina Geological Survey, personal communication, 1984). Analyses of a sample show 0.1 percent silver and only a trace of gold.
17.	Smelter site (silver)	Production unknown; section of smelter built into hillside is still visible.	Silver ore, usually as argentiferous galena in quartz veins, came from several local mines whose locations were not established. (D. A. Wilkins, personal communication, 1979).
17a.	Unmined mine (gold?)	Production unknown; trench leading to a cave adit trends S 60° E (Alan-Jon Zupan, South Carolina Geological Survey, personal communication, 1984).	Rocks in the dump show hydrothermal alteration. Pyrite lenses and nodules, in the diameter of a few centimeters, are scattered throughout the dump (Alan-Jon Zupan, South Carolina Geological Survey, personal communication, 1984).
18.	Unmined prospect (soapstone, silver)	No soapstone production; 60-ft trench follows the contour; additional trenching extends up to 100 ft; 8 ft by 18 ft high adit, trenching on strike continues above the adit; small prospect pits are scattered throughout the area.	Ultramafic body is poorly exposed, but soapstone and anthophyllite asbestos are found in the dump at the shaft and it is possible that silver was produced for the site (Alan-Jon Zupan, South Carolina Geological Survey, personal communication, 1984).
19.	Ultramafic body	No production.	Local residents report early use by Cherokee Indians. Locals were not located. Fanned construction from the stream draining the area yielded 137 ppm gold and 10.3 ppm silver.
20.	Unmined prospect (gold)	Production unknown; two adits reported (Jack Lombard, personal communication, 1979).	Adits were not located. Fanned construction from the stream draining the area yielded 137 ppm gold and 10.3 ppm silver.
21.	Chattahoochee river prospect (asbestos)	About 10 tons of slip-fiber asbestos was extracted by Pawhatan Mining Co. in 1955 (Teague, 1956).	Ultramafic body is 200 ft long by 40 to 60 ft thick; veins of anthophyllite asbestos up to 1/2 in. thick are found near the hanging wall. Teague (1956) estimates that underground resources remain.
22.	Page property (gold)	Production unknown; considerable amount of placer mining done on Page Branch and Law Ground Creek (Jones, 1930).	Nuggets weighing up to 1 oz were reported from Law Ground Creek (Jones, 1930).
23.	Pig Pen Mountain locality or Nicholson mine (asbestos)	A small quantity of mass-fiber anthophyllite asbestos was produced in 1936; a few additional carloads were produced in 1946 (Teague, 1956).	Peridotite body is about 200 ft long and 50 ft wide (Hopkins, 1914) and is composed of iron-stained mass-fiber asbestos, chlorite, serpentine, and talc. Asbestos from this mine required washing to remove magnetite, manganese, and clay (Teague, 1956).
24.	Laurel Creek asbestos (corundum, asbestos, vermiculite, olivine)	About 300 tons of corundum per year were produced from the mid-1870s to 1883 (Leavitt, 1895); mine development consisted of two open cuts, an inclined shaft, four vertical shafts, a tunnel, and numerous exploratory excavations. A considerable amount of approved vermiculite was mined (Hunter and Mattocks, 1936). Limited amounts of asbestos were produced before corundum was discovered (Hopkins, 1914).	Corundum was found in large noncrystalline masses sometimes exceeding a ton (King, 1934); mine was closed because of dusting problem; in main shaft; corundum resources remain. Prospecting in 1936; vermiculite was discovered and has been developed (Hopkins, 1914). The ultramafic body contains 1,440,000 tons of relatively unaltered forsterite olivine, but the olivine grains are uniformly intermixed with talc and asbestos (Hunter, 1914).
25.	Reid mine (asbestos)	Production unknown; development in 1941 consisted of an open cut 15 ft high, 30 ft long, and 12 ft deep. Asbestos was transported from the mine to a logging road on Laurel Creek in an 8-in.-2 ft pipe (Teague, 1956).	First mined for asbestos in the 1890s, then again in 1941; ultramafic body is at least 150 ft long and 40 ft thick; composition is mass-fiber anthophyllite asbestos, vermiculite, and chlorite (Teague, 1956). Vermiculite occurs at the hanging-wall contact in a zone up to 2 ft thick. Teague (1956) states that considerable quantities of mass-fiber asbestos remain.
26.	Hedden glacier mine (gold)	Production unknown; flood-plain gravels were worked for 1000 ft upstream from road for a width of up to 200 ft (Yeates and others, 1896).	Two 5-ft-deep prospect pits dug by Yeates and others (1896) into unworked gravelly till. Fair amount of gold in these pits occurred as coarse particles in gravels, which underlay 3 to 4 ft of overburden. Placer mining occurred concurrently in main drainage south (Yeates and others, 1896).
27.	Hicks mine (asbestos, vermiculite)	More than 50 tons of cross- and slip-fiber asbestos and 10 tons of vermiculite were produced in 1946 by Pawhatan Mining Co. from a drift entry (Teague, 1956). Earlier production, around 1895, was from an open cut and a 30-ft adit (Hopkins, 1914).	Ultramafic body is 300 ft long by 150 ft wide and contains reserves of mass-, cross-, and slip-fiber anthophyllite asbestos and vermiculite (Teague, 1956).
28.	Hicks mine (mica)	Production unknown. A caved, 60-ft-long drift follows a pegmatite (Galpin, 1915).	Pegmatite varies in width from 1 to 6 ft; mica is brownish and occurs in small, thick plates (Galpin, 1915).
29.	Pegmatite occurrence (mica)	No production; no evidence of prospecting.	Largest pegmatite seen in study area; exposure is 12 ft high, 10 ft deep, and 5 ft wide; mica, a few centimeters, is in blocks up to 3 in. thick; it is greenish, commonly free of inclusions and structures; chemical analyses indicate an iron content of 1.9 percent.
30.	Pegmatite occurrence (mica)	No production; no evidence of prospecting.	A partial exposure in road cut is 2 ft high and 10 ft long; appears to be border and wall zones of the pegmatite; border zone is a medium-grained mixture of feldspar, quartz, and biotite; wall zone is composed of microcline perthite in 2-in.-2 crystals and muscovite in 1-in.-2 contacts.
31.	Pegmatite occurrence (mica)	No production; no evidence of prospecting.	A 2-ft-high, badly weathered pegmatite is exposed in a logging roadcut for 15 ft; muscovite, which is greenish, has numerous inclusions, and is in blocks 2 in. by 0.25 in. thick.

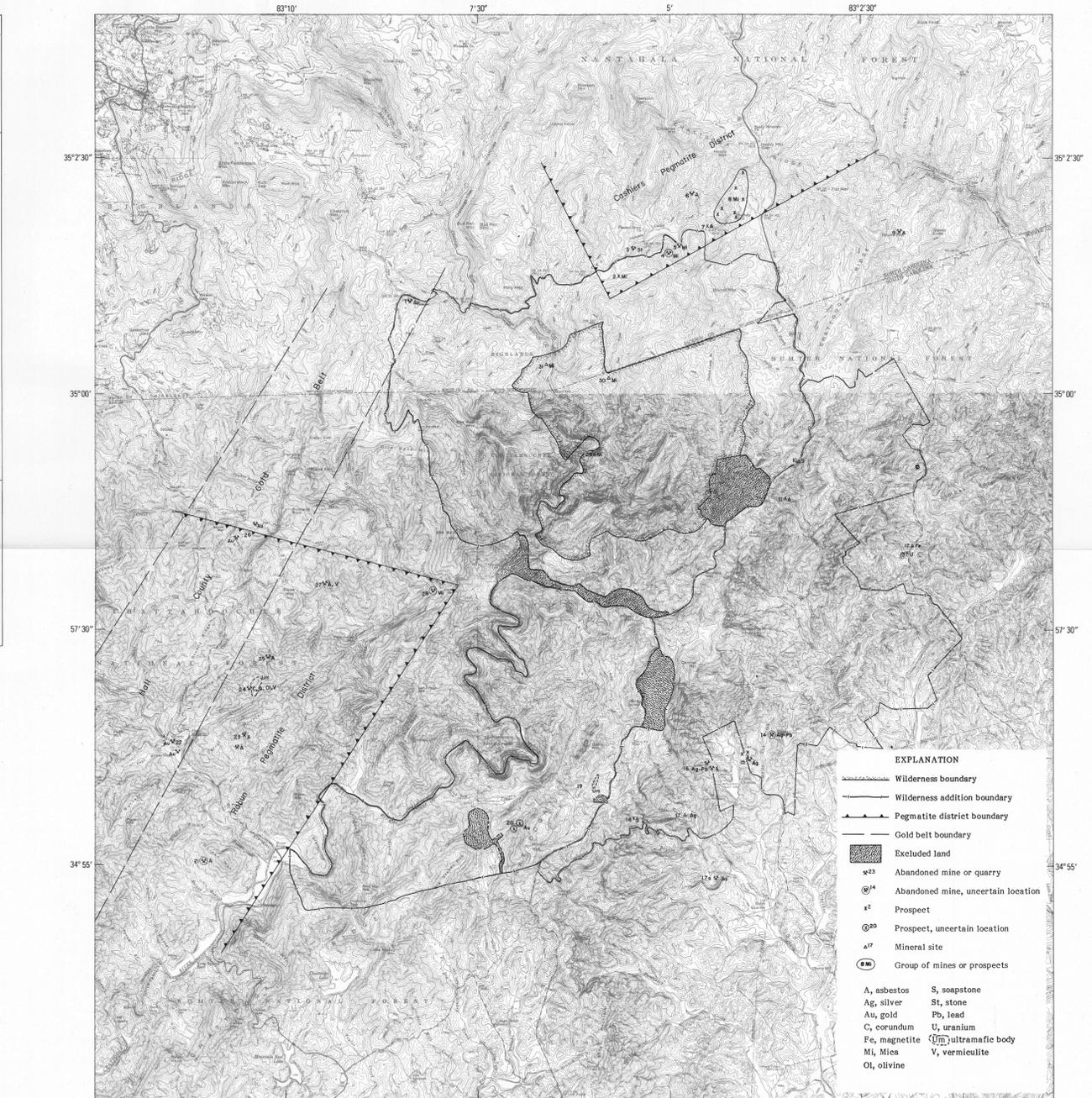


Figure 2.—Mines, prospects, and mineral sites.

STUDIES RELATED TO WILDERNESS

The Wilderness Act (Public Law 88-577, September 3, 1964) and related acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to determine the mineral values, if any, that may be present. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a mines and prospects survey of the Ellicott Rock Wilderness and additions in the Sunter National Forest, Oconee County, South Carolina; the Nantahala National Forest, Macon and Jackson Counties, North Carolina; and the Chattahoochee National Forest, Rabun County, Georgia. The Ellicott Rock Wilderness was established by Public Law 93-822, January 3, 1975. The Ellicott Rock Extension Roadless Area (A8031), in Sumter, Nantahala, and Chattahoochee National Forests, was recommended for wilderness and the Ellicott Rock Extension (88112) and Persimmon Mountain (L8116) Roadless Areas, in Sumter National Forest, were classified as further planning areas during the Second Roadless Area Review and Evaluation (RARE II) by the U.S. Forest Service, January 1979 (table 1).

INTRODUCTION

The Ellicott Rock Wilderness and additions were investigated for mineral resources by the U.S. Bureau of Mines (USBM) in the fall of 1978 and the fall of 1979; the U.S. Geological Survey (USGS) mapped the geology in 1978 and 1979 (Bell and Luce, 1983) and assessed the mineral resource potential of the study area (Luce and others, 1983). During the USBM field reconnaissance, 43 rock and mineral samples and 10 panned-concentrate samples were collected and submitted to the Bureau's Reno Research Center, Reno, Nev., for analysis. Testing included spectrographic analyses for 40 elements, fire assay for gold and silver, fluorometric determinations for uranium, radiometric determinations for thorium, and atomic absorption tests for iron, copper, lead, and zinc. In addition, mineral identifications and petrographic descriptions were obtained for many of the samples.

Analyses for 103 stream-sediment samples, 76 panned concentrates, and 73 rock samples collected by the USGS are reported in Siems and others (1981). Geochemical anomalies for stream drainage basins and rock types were determined by Luce and others (1985) on the basis of these analyses. Aeromagnetic and aerogravimetric data for the region that includes the study area were interpreted by Luce and Daniels (1985).

SURFACE- AND MINERAL-RICH OWNERSHIP

With three exceptions (numbers 5, 6, and 7, fig. 1) all land within individual area boundaries is owned by the U.S. Government and is administered by the U.S. Forest Service. There are no outstanding mineral rights on Federal land in the study area. One prospecting permit in the Persimmon Mountain area (U.S. Bureau of Land Management, number ES-8884) was issued in 1971 to Pawhatan Mining Company to prospect for amphibole asbestos (site 11, fig. 2), but the prospect was not developed; the permit lapsed and was not renewed.

GEOLOGICAL SUMMARY

The following is summarized from Bell and Luce (1983). The study area is in the Blue Ridge physiographic province. Most of the rocks are of Precambrian age. The Toxaway Gneiss, a Middle Proterozoic granite to granodiorite, is overlain unconformably by the Tallulah Falls Formation of Late Proterozoic and (or) Early Paleozoic age. Both units are probably metamorphosed rather than igneous; they have been complexly deformed by five and possibly six periods of folding (Hatcher, 1977). A major structural feature in the study area is a northeast-trending, northwest-verging anticlinorium which is a possible nappe or dome (Luce and Daniels, 1985; Hatcher, 1977). Foliation within the two rock units, lithologic contacts, and fold-axis surfaces generally have a northeastward strike and a moderate dip to the southeast. Rocks of the Brevard fault zone, of Middle Proterozoic to Early Cambrian age, crop out in the southeast corner of the study area. Small slices of ultramafic rock of Late Proterozoic or Early Paleozoic age crop out in a northeastward trend near the western contact of the Toxaway Gneiss and Tallulah Falls Formation, near the western boundary of the Persimmon Mountain area.

MINING AND PROSPECTING

Mining has occurred in the study area and surrounding region. Quartz veins and placer deposits have yielded small amounts of gold, silver, and lead; and pegmatites have been the source of minor amounts of mica, feldspar, and beryl. Ultramafic bodies have yielded asbestos, corundum, soapstone, and vermiculite, and are a potential source of olivine. Magnetite, uranium, and thorium have been prospected. The region also has been a source of construction stone and gemstones. Within the Ellicott Rock Wilderness and additions, past activity has included mining and prospecting for mica, gold, asbestos, soapstone, silver, and probably lead (table 2).

Gold, silver, and lead

Sulfide-enriched quartz veins are the chief source of the small amounts of gold, silver, and lead mined in the region. The ore minerals are native gold and silver and argentiferous galena. Gold, particularly in placer deposits, was mined in the Hall County belt (Yeates and others, 1896) of Georgia and in its northern extension into Macon County, N.C. An underground mine and a placer mine in this belt are within the boundary of Ellicott Rock Extension (site 1, fig. 2). In Oconee County, S.C., silver and lead as well as gold were mined from quartz veins. Placer mining of adjacent streams often preceded the development of the underground mines. Several underground silver mines are located in the Persimmon Mountain area (sites 14, 15, 16, fig. 2); lead was probably mined as a byproduct. This area also contained two silver smelters (sites 16 and 17, fig. 2). Sloan (1908) described gold mines that would be within the boundary of the Persimmon Mountain area, but they were not found. A probable gold mine about 0.5 mi south of the boundary was reported recently by Alan-Jon Zupan of the South Carolina Geological Survey and has been added to figure 2 as site 17a. A little gold prospecting occurred in the Ellicott Rock Extension (site 20, fig. 2).

Analyses of vein quartz, mine wall-rock, and dump samples all show only minor concentrations of gold (0.2 parts per million (ppm)) and silver (6.9 ppm), and no detectable concentrations of lead. In panned-concentrate samples, gold constituted as much as 4 ppm, silver as much as 10 ppm, and lead as much as 100 ppm.

Pegmatites

Pegmatites have been the site of small-scale mining for mica, feldspar, and beryl in the region since about 1880. Two pegmatite districts are in the vicinity of the study area: the Cashiers district in North Carolina (Olson, 1952) and the Rabun district in Georgia (Leasure and Shirley, 1968). These districts are on strike with each other and are only 5 mi apart. The intervening area is national forest land and includes parts of Ellicott Rock Wilderness and Ellicott Rock Extension (fig. 2). Field evidence noted during the present investigation made it apparent that the zone of pegmatites is continuous and that the two districts are connected across the study area.

Pegmatite bodies in the region are usually small. Olson (1952) reported that 80 percent of those in the Cashiers district are less than 15 ft wide. Mica produced from these districts was usually green or brownish-green and generally was stained, bent, or ruled, although a clear, good-quality mica has been produced from a few Cashiers district mines (Olson, 1952).

Feldspar has also been mined locally, but the development by the USBM in 1946 of a method to concentrate it from feldspar-rich rocks has made production of this mineral from small pegmatites uneconomic.

The only recorded production of beryl from local mines was in the Cashiers district at the Sheep Cliff mine, approximately 9 mi northeast of the study area (Olson, 1952). Beryl was not observed in study area pegmatites during the present investigation.

Ultramafic bodies

Local ultramafic bodies have been mined or prospected for asbestos, corundum, soapstone, and vermiculite. They are a potential source of olivine, and may contain small amounts of chromium (Luce and others, 1985). Outcrops of four ultramafic bodies of undetermined size have been located in the study area. One of these is the site of asbestos prospecting (site 11, fig. 2). A soapstone deposit in the Persimmon Mountain area (site 10, fig. 2) has been a local source of dimension stones; several small outcrops from which stone has been sawed are found on the steep hillside about 50 ft below South Carolina Route 107. There is no evidence of commercial development. Site 18 (fig. 2) in the Persimmon Mountain area was also prospected for soapstone.

Uranium and thorium

Two areas displaying anomalous uranium or thorium concentrations have been recognized in the study area. One, in the Persimmon Mountain area, is the site of previous work in connection with the National Uranium Resource Evaluation program (NUREP) (Price, 1976); the other, in Ellicott Rock Extension, was revealed by stream-sediment analyses (Siems and others, 1981).

Magnetite

A 1.5-ft-thick magnetite-rich layer in the Toxaway Gneiss is exposed east of the Persimmon Mountain area (in the vicinity of site 12, fig. 2). Nearby, some small prospect pits are located near magnetite boulders that weigh up to 200 lbs (Roper and Dunn, 1970). Semiquantitative spectrographic analyses indicate that several elements associated with the magnetite have anomalously high concentrations: uranium, 5.9 ppm; gallium, 0.06 percent; niobium, 0.01 percent; tin, 0.64 percent; and vanadium, 0.06 percent. USGS samples have anomalously high

concentrations of lanthanum, 0.07 percent (Siems and others, 1981). The magnetite-rich layer has not yet been identified within the study area.

Gemstones

Amethyst is reported to have been found at the Ammons Branch mine (site 1, fig. 2). The region northeast of the study area has produced gem corundum—usually sapphire—from ultramafic bodies, and locally a small amount of gem beryl has been found in pegmatites.

REFERENCES CITED

Atomic Energy Commission, 1968, Reconnaissance for uranium in North and South Carolina, 1953-1956: Atomic Energy Commission RME-4105, p. 70.

Bell, Henry III, and Luce, R. W., 1983, Geologic map of the Ellicott Rock Wilderness and additions, South Carolina, North Carolina, and Georgia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1287-B, scale 1:48,000.

Conrad, S. G., Wilson, W. F., Allen, E. P., and Wright, T. J., 1963, Anthophyllite asbestos in North Carolina: North Carolina Department of Conservation and Development, Division of Mineral Resources, Bulletin 77, 61 p.

Galpin, S. L., 1915, A preliminary report on the feldspar and mica deposits of Georgia: Georgia Geological Survey Bulletin 30, 150 p.

Hatcher, R. D., Jr., 1977, Macroscopic polyphase folding illustrated by the Toxaway Dome, eastern Blue Ridge, South Carolina-North Carolina: Geological Society of America Bulletin 88, no. 11, p. 1678-1688.

Hopkins, O. E., 1914, A report on the asbestos, talc, and soapstone deposits of Georgia: Georgia Geological Survey Bulletin 29, 319 p.

Hunter, C. E., 1941, Forsterite olivine deposits of North Carolina and Georgia: Georgia Geological Survey Bulletin 47, 117 p.

Hunter, C. E., and Mattocks, P. W., 1936, Vermiculites of western North Carolina and north Georgia: Tennessee Valley Authority, Division of Geology, Bulletin 5, 10 p.

Jahns, R. H., and Lancaster, F. W., 1950, Physical characteristics of commercial sheet muscovite in the southeastern United States: U.S. Geological Survey Professional Paper 225, 110 p.

Jones, S. P., 1909, Second report on the gold deposits of Georgia: Georgia Geological Survey Bulletin 19, 283 p.

King, F. P., 1894, A preliminary report on the corundum deposits of Georgia: Georgia Geological Survey Bulletin 2, 138 p.

Leasure, F. G., and Shirley, L. E., 1968, Mica, in U.S. Geological Survey and U.S. Bureau of Mines, Mineral resources of the Appalachian region: U.S. Geological Survey Professional Paper 590, p. 311-325.

Lewis, J. V., 1956, Corundum of the Appalachian crystalline belt: American Institute of Mining Engineers Transactions, no. 25, p. 852-906.

Luce, R. W., Bell, Henry III, and Gazdik, G. C., 1983, Mineral resource potential map of the Ellicott Rock Wilderness and additions, South Carolina, North Carolina, and Georgia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1287-D, scale 1:48,000.

1985, Geochronology of the Ellicott Rock Wilderness and additions, South Carolina, North Carolina, and Georgia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1287-A.

Luce, R. W., and Daniels, D. L., 1985, Aeromagnetic map and selected aerogravimetric data for the Ellicott Rock Wilderness and additions, South Carolina, North Carolina, and Georgia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1287-C, scale 1:48,000.

Olson, J. C., 1952, Pegmatites of the Cashiers and Zirconia districts, North Carolina: North Carolina Geological Survey Bulletin 64, 32 p.

Price, Vaneaton, 1976, Raw data from orientation studies in crystalline rock areas of the southeastern United States: U.S. Energy Research and Development Administration report GJRX-9476, 117 p.

Roper, P. J., and Dunn, D. E., 1970, Geology of the Tamassee, Satolah, and Cashiers quadrangles, Oconee County, South Carolina: South Carolina Division of Geology Map Series publication MS-16, 55 p., scale 1:24,000.

Siems, D. F., Meier, A. L., Luce, R. W., and Bell, Henry III, 1981, Analyses and descriptions of geochemical samples, Ellicott Rock Wilderness and additions, South Carolina, North Carolina, and Georgia: U.S. Geological Survey Open-File Report 81-594, 37 p.

Sloan, Earle, 1908, Catalogue of the mineral localities of South Carolina: South Carolina Geological Survey Bulletin 2, 505 p.

Teague, K. H., 1956, Georgia (asbestos) occurrences described: Georgia Mineral Newsletter, v. 9, no. 1, p. 4-7.

Yeates, W. S., McCallie, S. W., and King, F. P., 1896, A preliminary report on a part of the gold deposits of Georgia: Georgia Geological Survey Bulletin 4-A, 542 p.

MAP SHOWING MINES, PROSPECTS, AND MINERAL SITES IN THE ELICOTT ROCK WILDERNESS AND ADDITIONS, SOUTH CAROLINA, NORTH CAROLINA, AND GEORGIA

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