

Asbestos Minerals Sites – Initial Screening

Conducted by North Carolina Division of Waste Management,
in cooperation with US EPA Region IV and North Carolina
Division of Public Health, Health Hazards Control Unit

A. SITE INFORMATION Site Number: NC-38			
Historical Name	Sapphire mine (Sapphire Valley Gem Mine)		
Latitude / Longitude	35.11814N -83.00503W		
State, County, nearest City/Town	North Carolina, Jackson County, Cashiers		
Site Type	<input checked="" type="checkbox"/> Mine	<input type="checkbox"/> Prospect	<input type="checkbox"/> Occurrence
Mineral reported	<input type="checkbox"/> chrysotile	<input type="checkbox"/> crocidolite	<input type="checkbox"/> tremolite
	<input type="checkbox"/> amosite	<input checked="" type="checkbox"/> anthophyllite	<input type="checkbox"/> actinolite
	<input type="checkbox"/> Other (name) _____		

B. INFORMATION SOURCES (include publication date)	Pratt and Lewis (1905, p. 43). Conrad and others (1963, p. 34). USGS 7.5' Topo Map: Cashiers Quadrangle (7/1/88). USGS Orthophotoquad for Cashiers Quad (3/25/95). Land map from Jackson County land GIS site (Nov. 2005) http://ims.metrostat.net/website/JCGIS/viewer.htm . Jackson Co. NCDOT road map (2005) http://www.ncdot.org/it/gis/DataDist/GISCountyMap_TIFs.html .
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C. SITE AND AREA RECONNAISSANCE		Date of Site Reconnaissance	11/9/05
1. Was the site located and a site visit completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, site could not be located		
2. Is the site property developed and in use of any kind?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, site is wooded / undeveloped		
3. Land use on site (check all that apply)	<input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Recreational (golf course, park, etc.) <input type="checkbox"/> Construction or clearing in progress <input checked="" type="checkbox"/> Other (please describe below)		
4. Are there large areas of bare soil visible on the property?	<input type="checkbox"/> Yes (Please describe below) <input checked="" type="checkbox"/> No		
5. Are there residences, apartments, stores or businesses, or day care facilities on the site, or within 200 feet of it?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please note which, and describe the item and its location (relative to the site) below.		
6. Where is the nearest residence, place of business, or place frequented by local residents located, in relation to the site?	<input checked="" type="checkbox"/> N/A (addressed at 5 above) _____ (Place and distance/direction to site)		
7. Are any physical barriers present (fences, gates) that prevent access?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Description Access to the site is unrestricted		

D. ADDITIONAL INFORMATION

(Indicate by letter and number which topic the information supports)

A3. Asbestiform anthophyllite was identified in samples taken from the mine. Initial PLM analysis was performed by Ronald D. McDaniel. Confirmation analysis by PLM was performed by Stephen H. Westbrook, Asbestos Analysis and Information Service, Inc., a NVLAP accredited laboratory.

C3. The site is included within a very large development, Fairfield Sapphire Valley. One of the recreational amenities offered to those who are members or visitors is access to Fairfield's private gem mine. Their recreational department provides equipment for the "miners" to use when they visit the mine. Land records show that the Sapphire Valley Gem Mine is located on land owned by Fairfield Sapphire Valley Master Association and Holly Forest Association, Inc. (see land map attached).

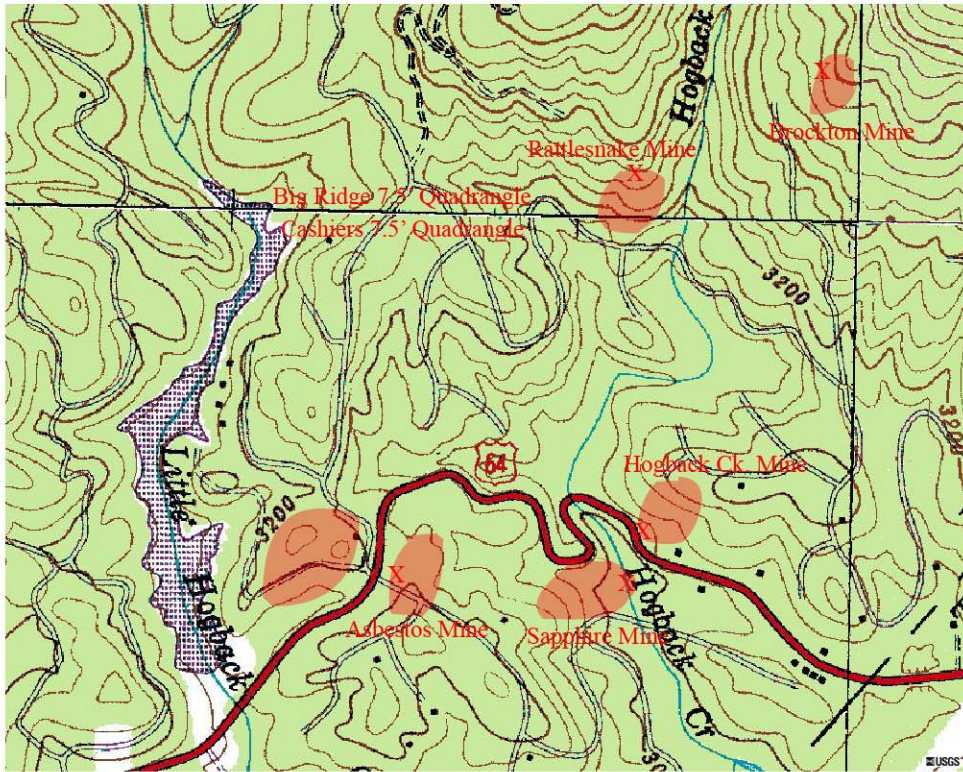
C4. There are no large areas of bare soil but small areas of bare soil along the trail leading to the mine and in the mine area contain friable anthophyllite-rich rock fragments. Visitors to the mine have been hammering on boulders at the site exposing areas with very high anthophyllite asbestos content. Large chunks of anthophyllite-rich rock are scattered around the site where they have been broken from the outcropping ultramafic body. This recreational mine has been available to the public for at least twenty years according to Darryl Wood, President of Sapphire Management Company, Inc. and the mine has received thousands of visitors during that time.

C5. There is a new home under construction a few hundred feet west of the parking area for the mine. Proximity of this home to the contact of the asbestos-bearing ultramafic body is unknown as the contact is not exposed.

Directions to the mine:

The Sapphire mine is located in Jackson county on the south side of U.S. 64 about 0.5 mile west of the Jackson-Transylvania County line. A parking area for the mine is directly off of the south side of U.S. 64. A trail leads from the lot several hundred feet east to the mine.

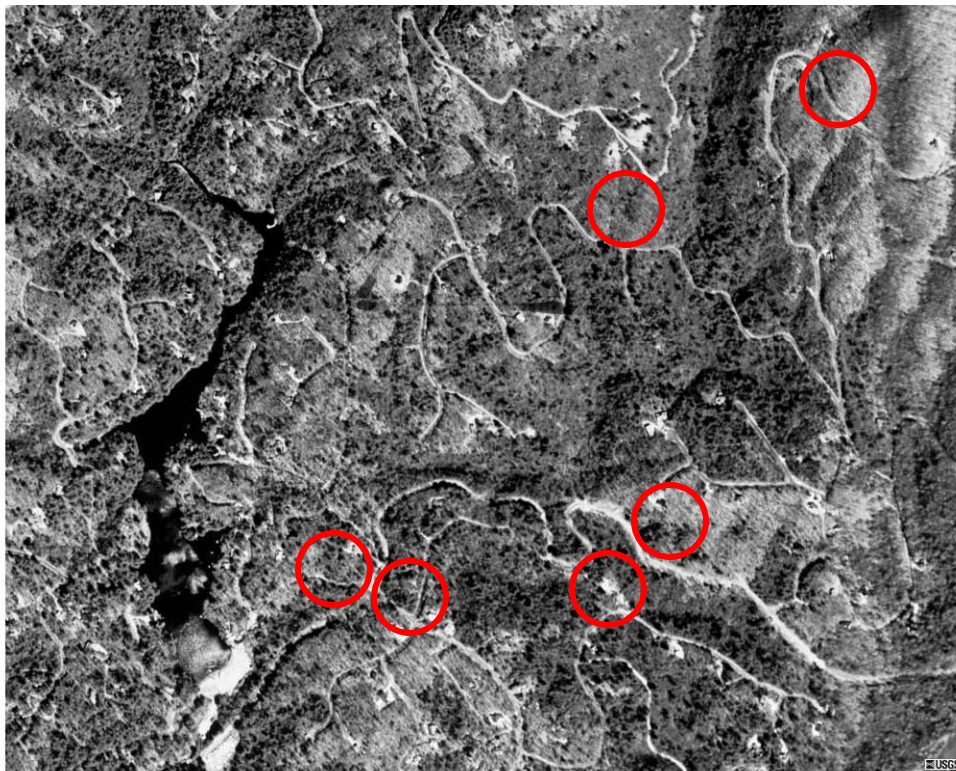
Asbestos Mines of the Sapphire Valley Area



USGS Topographic Map 7-1-88

 Approximate Location of Ultramafic Rocks
(From Conrad, 1963, p.33)

 2000 FEET
Scale



USGS Orthophoto 3-25-95



Parking area for Fairfield's Sapphire Valley Gem Mine.



A sign along the trail welcomes visitors to the mine.



Visitors to the mine have hammered on the boulders exposing areas of friable anthophyllite asbestos.



Some hammered areas contain a high percentage of anthophyllite asbestos.

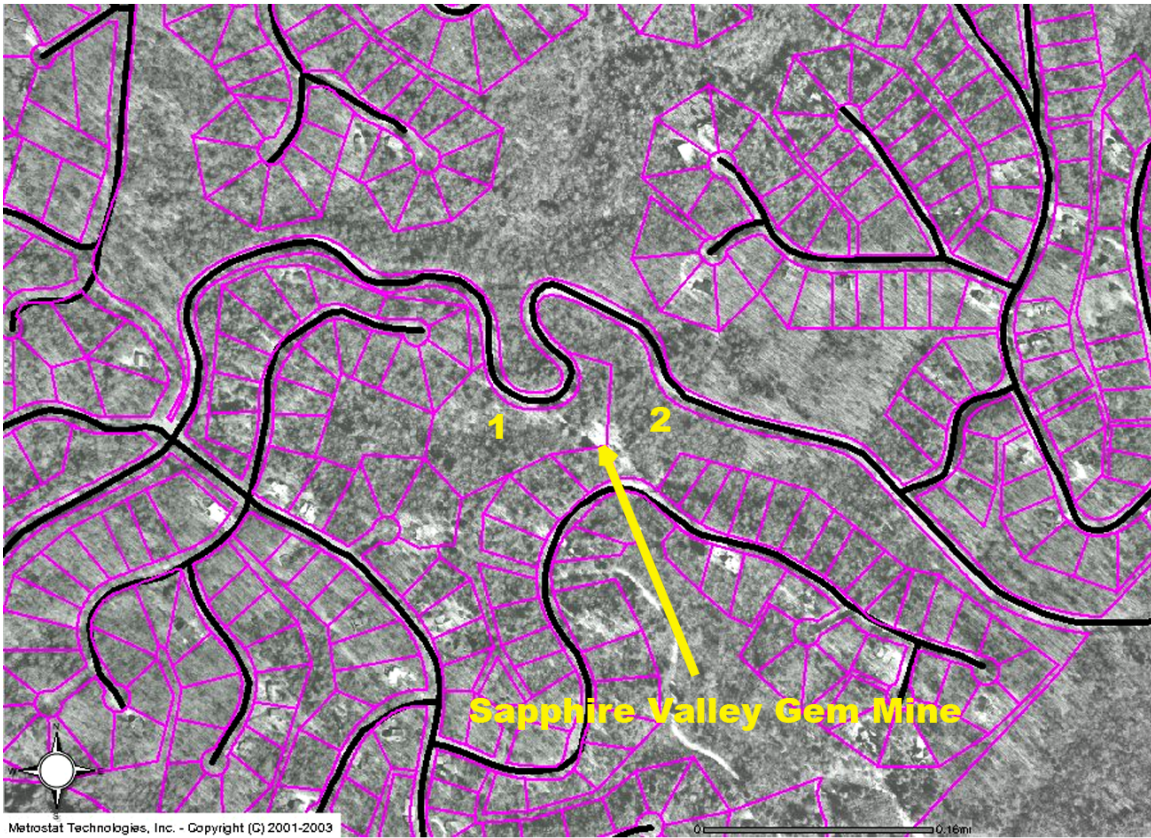


Some of the anthophyllite-rich rock is extremely friable and is easily airborne when dry and disturbed by physical abrasion.

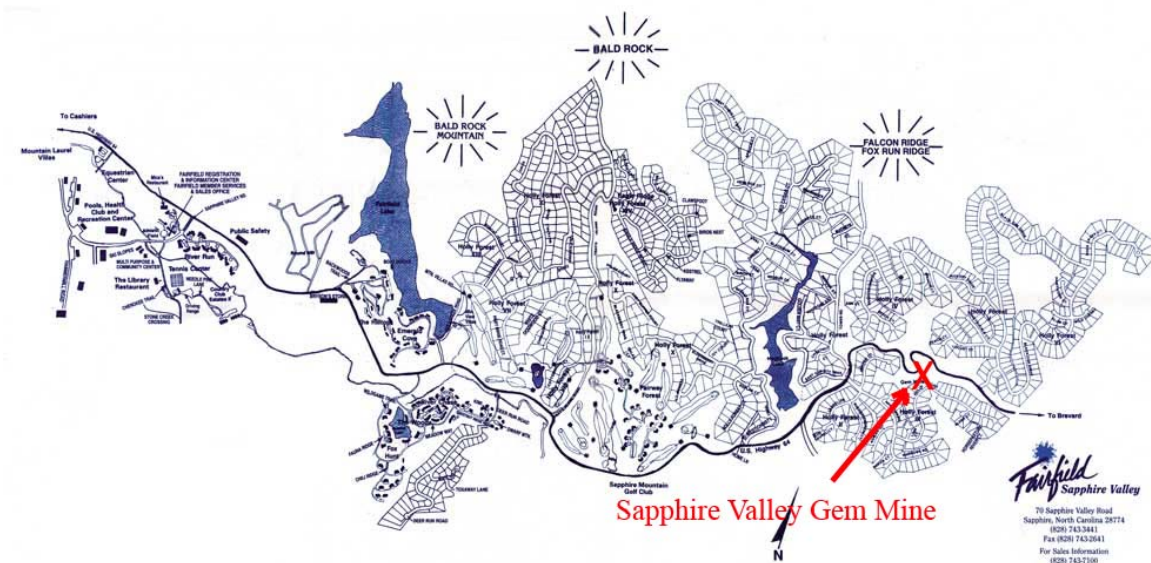


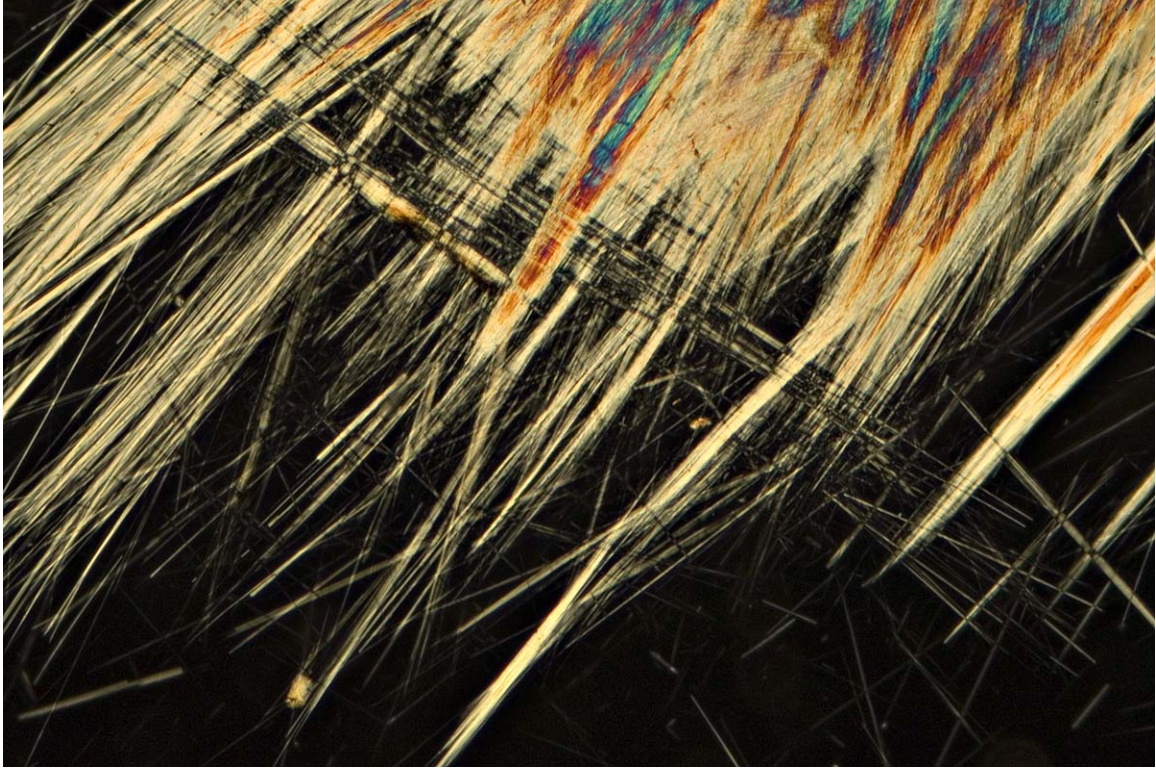
Bundles of anthophyllite fibers are common in the soil along the trail and in the mine area.

Sapphire Mine Property



Property Ownership:
1. Fairfield Sapphire Valley 2. Holly Forest Assoc., Inc.





Anthophyllite fibers from Sapphire Gem Mine (through polarizing light microscope with crossed polarizers).