ASBESTOS IN THE UNITED STATES

(Exclusive of Alaska and Hawaii)

By A. H. Chidester and A. F. Shride

Introduction

The asbestos deposits in the United States (exclusive of Alaska and Hawaii) are shown on the accompanying map. The principal mineralogic types of asbestos (chrysotile and amphibole) are indicated by the shape of symbols, and the relative importance of the deposit is indicated by the size of symbols.

The text lists localities by State by numbers that are keyed to the map. Localities are distinguished by name of mine, prospect, or geographic area; their coordinates are given to the nearest minute of latitude and longitude. Geologic relations of each occurrence, if known, are characterized briefly. The text and map were compiled from published and unpublished information, and at least one reference is given for each locality if reports on it have been published.

Chrysotile asbestos, a variety of serpentine, occurs chiefly in serpentinized peridotite and is distributed in the United States in two principal belts, the eastern extending from Maine to Alabama, and the western extending from Washington to California, where numerous masses of ultramafic rocks were intruded in Paleozoic and Mesozoic time, respectively. Domestic production from deposits of this type has not been large compared with that of Canada from the extensively developed deposits in Quebec, Ontario, and British Columbia. The principal mine in the United States is located at Belvidere Mountain, Vt. Minor amounts of asbestos have been produced from other deposits in these belts and from scattered occurrences of chrysotile elsewhere in a number of States between them. Increased exploration and development activity for short-fiber chrysotile has recently been reported in California.

Chrysotile also occurs in bedded limestone, metamorphosed close to intrusions of diabase. The principal occurrences of this type are in Arizona, where small quantities of long-fiber, low-iron chrysotile have been mined from numerous small deposits.

Several species of amphibole occur in fibrous forms; in the United States only anthophyllite and tremolite are known to have commercial importance. As both the anthophyllite and tremolite occur in ultramafic rocks, associated greenstone, and amphibolite, the overall distribution of amphibole asbestos in the United States is like that of chrysotile. The deposits are generally small and erratic in distribution.
Locality Index (cont'd.)
ARIZONA (cont'd.)
Gila County (cont'd.)
18. Maricopa Mtns. Gila County, 33°25' 110°36'
19. Fitzx Mountains prospects, 33°15' 110°38'
Pinal County
20. Pinto Creek prospects.
21. Red Mountain deposit, Pinal County, 33°26' 111°04'

CALIFORNIA
Siskiyou County
5. Shasta View (Sylvester) prospect, Narrow veins of chrysotile asbestos in serpentine, Wiebelt and Smith, 1959.
7. Johnson deposit, Type of asbestos is unknown, Averill, 1935.

Shasta County
13. Asbestos Empress (Blas) claims, Chrysotile asbestos in serpentine and peridotite, Wiebelt and Smith, 1959.

33° 25', "kt9. Irta * . N16tifiells. pros acts. 33° 15'

CALIFORNIA (cont'd.)
Trinity County
15. Tamarack Lake (Trinity Asbestos) claims, Chrysotile asbestos in serpentine.
17. Red Mountain deposit, Chrysotile asbestos in serpentine.

Lake County
All deposits are chrysotile asbestos in serpentine.
18. Copsey and Jones prospect, 38°51' 122°40'
19. Marylyne prospect, 38°55' 122°30'

Napa County

Contra Costa County

Alameda County

Plumas County
23. Asbestos Nos. 1, 2, and 3, Amphibole asbestos, Logan, 1943.
24. Spring Garden Tunnel, Amphibole asbestos in sheared "greenstone".

Sierra County
25. Lloyd and Milward claims. 39°39' 120°40'
26. W. W. Casserly prospect, 39°33' 120°54'
27. Lloyd and Milward prospect. 39°33' 120°38'
Locality Index (cont'd.)

CALIFORNIA (cont'd.)

Nevada County

Yuba County
31. Mount Hope prospect. Small seams of asbestos of unknown variety along a serpentine-slate contact.
32. Galena Hill. Small seams of asbestos of unknown variety in serpentine.

Placer County

El Dorado County

Amador County
Deposits are the amphibole asbestos type. General reference: Wiebelt and Smith, 1959.
40. George Thomas prospect.

Calaveras County
41. Neugebauer. Veinlets of chrysotile asbestos associated with a chromite deposit in a schistose

CALIFORNIA (cont'd.)

Calaveras County (cont'd.)
44. Murphy area. Veins and veinlets of slip-fiber tremolite or actinolite. Wiebelt and Smith, 1959.

Tuolumne County
47. Premier (Rawhide) Asbestos mine.
48. Ashley prospect.

Madera County

Fresno County

San Benito County
All deposits are chrysotile asbestos in sheared serpentine.

Monterey County

Inyo County
55. Huntley Industrial Minerals, Inc. 36°49' 117°27'


Kern County


Los Angeles County

60. Fiber Queen. Short fiber chrysotile asbestos along a shear zone in chloritized shale. Gay and Hoffman, 1954.

San Bernardino County


Riverside County


63. Perris deposit. Amphibole asbestos in a shear zone in granite.

64. Percival mine. Veins of slip-fiber tremolite in schist.

65. Serpentine Hill. Narrow seams of amphibole asbestos.

66. Dunn deposit. Amphibole asbestos in belt of serpentine schist.

CONNECTICUT (cont'd.)

Litchfield County


New Haven County


GEORGIA


Rabun County

1. Pine Mountain area (Laurel Creek, Hicks and Pig Pen Mountain). Long-fiber anthophyllite asbestos associated with peridotite (dunite). Hunter, 1941.

2. Mill Creek area. Anthophyllite asbestos in harzburgite.


Habersham County


White County


Barrow County


Coweta County

Locality Index (cont’d.)

GEORGIA (cont’d.)

Meriwether County

Troup County

IDAHO


Clearwater County
2. Orofino Creek. Idah County

MAINE

Somerset County

Hancock County

MARYLAND


Harford County
1. Dublin area. Slip-fiber tremolite associated with basic igneous rocks.
2. Jenkins and Neikirk mines.
3. Slade farm.
4. Durham farm.
5. Coopstown area.

Baltimore County
7. Powhatan area. Tremolite asbestos.
8. Bok Asbestos mine, Slip-fiber anthophyllite.

MASSACHUSETTS

Berkshire County

Hampshire County

MONTANA


Lincoln County
1. Libby (Rainy Creek). Brittle tremolite asbestos associated with vermiculite in dikelike masses in pyroxenite.

Gallatin County

Madison County
3. Cliff Lake (Montbestos, Little Mile Creek). Chrysotile asbestos in limestone similar to Arizona deposits.

NEW YORK

General references: Luedke and others, 1959; Newland, 1921.

Warren County

1. Brant Lake prospect.
2. Thurman prospect.
NEW YORK (cont'd.)

Putnam County


4. C. Chrysotile asbestos in serpentinized zones in dolomite.

Richmond County


NORTH CAROLINA

Ashe County


Watauga County


Wilkes County


Avery County

4. Frank area (Squirrel Creek). Slip-fiber anthophyllite asbestos in serpentinized dunite, Bowles, 1955; Hunter, 1941; Murdock, 1950; Pratt and Lewis, 1905.

Mitchell County


Yancey County


Transylvania County


NORTH CAROLINA (cont'd.)

Jackson County


Macon County


OREGON

Grant County


Baker County


Josephine County


Jackson County


7. Graves Creek.


PENNSYLVANIA

Delaware County

1. Media area (Village Green, Rockdale, and Smedley) mines. Unknown variety of asbestos associated with ultramafic igneous rocks.
Locality Index (cont'd.)

RHODE ISLAND
Providence County
   41°58' 71°28'

SOUTH CAROLINA
Spartanburg County
1. Landrum area. Unknown variety of asbestos in dikes of pyroxenite altered to amphibolite.
   34°54' 81°54'
2. Enoree area. Unknown variety of asbestos in magnesian rocks.
   34°39' 81°55'

Pickens County
3. Pickens area. Asbestos of unknown variety formed by alteration of magnesian rock in aphanitic hornblende slates.
   34°54' 82°43'
4. Woodall Mountain (Hagood property). Asbestos of unknown variety in narrow belt of partly metamorphosed rock in aphanitic hornblende slates.
   34°53' 82°49'

Oconee County
5. Ramsay place. Asbestos of unknown variety in partly metamorphosed amphibolite.
   34°46' 82°52'

Anderson County
   34°26' 82°45'

Newberry County
7. Saluda Old Town. Asbestos of unknown variety in basic igneous rock.
   34°13' 81°52'

TEXAS
Llano County
1. Rode. Long brittle fibers of tremolite asbestos in vein in shear zone between hornblende and mica-quartz schist.
   30°30' 98°56'
2. Crab Apple Creek. Small deposit of tremolite (?) asbestos.
   30°30' 98°46'
   30°37' 98°42'

Blanco County
4. Coal Creek. Several small deposits of tremolite asbestos in serpentinite. Small veinlets of chrysotile in some localities.
   30°29' 98°33'

VERMONT
Orleans County
General references: Chidester and others, 1951; Pearre and Calkins, 1957.
   44°56' 72°23'
   44°53' 72°25'
   44°49' 72°27'

Lamoille and Orleans Counties

Washington County
   44°24' 72°41'
   44°14' 72°48'

Windsor County
   43°23' 72°39'

Windham County
   42°58' 72°46'

VIRGINIA
Clarke County
   39°03' 78°04'
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<th>Locality Index (cont'd.)</th>
<th>WASHINGTON (cont'd.)</th>
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<td><strong>SNOHOMISH COUNTY</strong></td>
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<tr>
<td>2. Centerville area. Asbestiform anthophyllite occurring with tremolite. Dietrich, 1955.</td>
<td>38°50' 77°24'</td>
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<td><strong>AMERILIA COUNTY</strong></td>
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<tr>
<td>3. Chula-Mattox Station area. Amphibole asbestos. Dietrich, 1953.</td>
<td>37°24' 77°57'</td>
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<td><strong>BEDFORD COUNTY</strong></td>
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<td><strong>FRANKLIN COUNTY</strong></td>
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<td><strong>FLOYD COUNTY</strong></td>
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<td>6. Floyd area. Asbestiform anthophyllite, Dietrich, 1955.</td>
<td>36°53' 80°17'</td>
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<td><strong>HENRY COUNTY</strong></td>
<td></td>
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<tr>
<td>7. Axton. Asbestiform anthophyllite.</td>
<td>36°39' 79°42'</td>
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<td>8. Ridgeway. Fine white asbestiform anthophyllite.</td>
<td>36°36' 79°50'</td>
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<td><strong>WASHINGTON</strong></td>
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<td><strong>WASHINGON COUNTY</strong></td>
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<tr>
<td>1. Twin Sisters. Veinlets of cross-fiber chrysotile asbestos in serpentine.</td>
<td>48°41' 121°58'</td>
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<td><strong>SKAGIT COUNTY</strong></td>
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<tr>
<td>2. Scott. Silky fibers of amphibole asbestos.</td>
<td>48°35' 122°10'</td>
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<td>3. Burlington. Fibrous soapstone with some amphibole asbestos in shear zones cutting greenstone.</td>
<td>48°29' 122°20'</td>
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<td>4. Lyman. Long-fibered asbestos of unknown variety.</td>
<td>48°32' 122°02'</td>
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<td><strong>SNOHOMISH COUNTY</strong></td>
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<td>5. Clear Creek. Talcose asbestos in serpentine dike.</td>
<td>48°07' 121°38'</td>
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<tr>
<td>6. Florence Rae prospect. Cross-fiber asbestos of unknown variety in veins in peridotite.</td>
<td>47°59' 121°30'</td>
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<tr>
<td>7. Mackinaw prospect. Slip-fiber asbestiform chrysotile asbestos veins in diopside and serpentine.</td>
<td>47°59' 121°26'</td>
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<tr>
<td><strong>TENNESSEE COUNTY</strong></td>
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<td>8. Chumack Mountain. Asbestiform anthophyllite asbestos in biotite gneiss.</td>
<td>47°38' 120°37'</td>
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<td>9. Peshastin Creek. Veinlets of cross-fiber asbestos in serpentine.</td>
<td>47°24' 120°41'</td>
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<td><strong>OKANOGAN COUNTY</strong></td>
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<td>10. Alta Lake. Lenesa of short-fiber amphibole asbestos.</td>
<td>48°01' 119°58'</td>
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<td><strong>SHERIDAN COUNTY</strong></td>
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<td>11. Laurier. White asbestos of unknown variety in peridotite.</td>
<td>48°58' 118°12'</td>
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<td>12. Stranger Creek. Tremolite asbestos in dolomite.</td>
<td>48°25' 118°02'</td>
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<td>13. Boundary Butte. Tremolite asbestos in dolomite.</td>
<td>47°59' 118°10'</td>
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<td><strong>PEND OREILLE COUNTY</strong></td>
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<td>14. Coffin prospect. Chrysotile asbestos veinlets in diopside and serpentine.</td>
<td>48°47' 117°30'</td>
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<td><strong>WISCONSIN</strong></td>
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<td><strong>MARINETTE COUNTY</strong></td>
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<td><strong>WYOMING</strong></td>
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<td><strong>TETON COUNTY</strong></td>
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<tr>
<td>1. Berry Creek (Brown Bear). Slip-fiber chrysotile and amphibole asbestos.</td>
<td>44°01' 110°49'</td>
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<td><strong>WASHINGTON COUNTY</strong></td>
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<td>2. Canyon Creek. Small amounts of brittle-fiber amphibole asbestos and talc in a sequence of metamorphic rocks.</td>
<td>44°06' 107°08'</td>
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<td><strong>FREMONT COUNTY</strong></td>
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<td>3. Fire King asbestos deposit. Cross-fiber chrysotile veins in serpentine in chlorite schist adjacent to granite intrusions.</td>
<td>42°33' 108°45'</td>
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<tr>
<td>4. Beaver Creek. Cross-fiber chrysotile veins in serpentine.</td>
<td>42°33' 108°21'</td>
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Locality Index (cont'd.)

WYOMING (cont'd.)

Natrona County

5. Casper Mountain area, Cross-fiber chrysotile veins in serpentine.

6. Smith Creek area, Cross-fiber chrysotile veins in serpentine cut by metadiabase dikes and surrounded by granite gneiss.

Converse County


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