DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

TO ACCOMPANY MAP MR-25

TUNGSTEN IN THE UNITED STATES

(Exclusive of Alaska and Hawaii)

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Introduction

The accompanying map shows the tungsten deposits of the United States (exclusive of Alaska and Hawaii). The relative importance of the deposits, groups, or districts is shown by four symbols, indicating tungsten contents of: (1) greater than 10,000 short tons of tungsten metal, (2) 10,000 to 500 tons, (3) 500 to 10 tons, and (4) less than 10 tons. In assigning size, production plus estimated reserves were taken into account, and also, for some deposits or areas, the presence of tungsten in large quantity but very low concentration.

The map symbols, plotted to the nearest minute, make no distinction between individual deposits and groups of deposits or districts; about 590 map symbols represent several times this number of deposits because many symbols stand for clusters of deposits spaced too closely to show individually at the scale used. All localities are numbered consecutively in each state and are identified in the Locality Index. Unpublished information has been used extensively. The tungsten data for Colorado, Idaho, Montana, New Mexico, South Dakota, Texas, Utah, and Wyoming were compiled by Tweto, and those for the remaining states by Lemmon.

Geology

The commercially important tungsten minerals are those of the wolframite group--ferberite, $FeWO_4$, wolframite, (Fe,Mn) WO_4, and huebnerite, $MnWO_4$--and scheelite, $CaWO_4$. Although the wolframite group is economically more important in the world as a whole, scheelite is more important in the United States and has accounted for nearly three-fourths of the domestic output.

Tungsten minerals are the only product recovered from many of the United States deposits. Complex ores containing other marketable minerals such as molybdenite, gold, or stibnite are found in a few deposits. A few tungsten ores yield gold, silver, copper, lead, or zinc as minor by-products, and conversely, some deposits of these metals yield tungsten as a by-product. Tungsten is associated with beryllium minerals in some ores, and deposits may be found that are workable for both metals. Small quantities of nonmetallic minerals such as garnet and fluorite have been marketed from a few tungsten deposits.

In the United States, tungsten occurs principally in quartz veins that contain minerals of the wolframite group, scheelite, or both, and in contact metamorphic deposits containing scheelite. It occurs also in hydrothermal replacement bodies in igneous or sedimentary rocks, and in stockworks, pegmatites, and residual placer deposits. Many deposits of tungsten-bearing manganese oxides of hydrothermal origin are known, and one at Golconda, Nev., was worked commercially. The brines of Searles Lake, Calif., contain a large quantity of tungsten in very low concentration--0.005 to 0.008 percent of WO_3; as yet no commercial method of extraction has been devised.

Of the six tungsten districts of major rank shown on the map, three are vein deposits, two are contact metamorphic deposits, and one is a stockwork. Of the 23 districts or mines of the next lower rank, 6 are vein deposits, 12 are contact metamorphic deposits, 2 are replacement deposits, 2 are stockworks, and 1 is a deposit of tungsten-bearing manganese oxides. The largest placer deposit worked in the United States was at Atolia, Calif., but it was far less productive than the scheelite-bearing veins there. Smaller placer deposits containing either scheelite or wolframite have been worked in many areas, but in general, placers have been only minor sources of tungsten, as the tungsten minerals are friable and become widely dispersed in stream deposits.

Most of the tungsten deposits of the United States are related to intrusive igneous bodies of Cretaceous or early Tertiary age. Almost all the deposits of California, Idaho, and Montana appear to be related, respectively, to the Sierra Nevada, Idaho, and Boulder batholiths, or to be of about the age of the batholiths. Most of the important deposits of Nevada, and also many in Utah, Arizona, and New Mexico, are related to smaller intrusive bodies of Late Cretaceous or early Tertiary age. The principal deposits of Colorado are elements of the Colorado Mineral Belt, of early Tertiary age, although some of their tungsten may have been derived from Precambrian deposits, as suggested by Tweto (1960). Scattered deposits of other associations and ages exist in the United States. The richly productive Hamme deposit, North Carolina, is probably of Paleozoic age. Minor deposits of Precambrian age occur in Wyoming, Arizona, Texas, and South Dakota as well as in Colorado. Scattered deposits related to intrusive rocks of middle or late Tertiary age occur in several western states, as do hot-spring, lacustrine, and placer deposits of Quaternary age.

Most of the tungsten produced in the United States has come from a small number of mines or districts, although many individual occurrences of tungsten are known. Of the 97,305 short tons of tungsten produced from 1900 through 1957, all but a small fraction came from the 29 deposits of first and second rank. The five states of California,

Nevada, Colorado, Idaho, and North Carolina provided 93.9 percent of the total; and Arizona and Montana, 4.39 percent (U. S. Bureau of Mines, 1957).

Locality Index

	Lat. N.	Long. W.
ARIZONA		
1. Boriana mine. Wolframite, scheelite, and chalcopyrite in narrow quartz veins in phyllite. Hobbs, 1944; Wilson, 1941.	34°57'	113°55'
2. Aquarius Range. Huebnerite in a quartz vein 2 to 24 inches wide. Hobbs, 1944; Wilson, 1941.	34°47'	113°26'
3. Black Pearl mine. Wolframite in a 3-foot quartz vein. Anderson and others, 1955; Wilson, 1941.	34°41'	113°02'
3a. Tungstona mine. Wolframite and beryl in thin, close-spaced quartz veins. Anderson and others, 1955.	34°38'	113°09'
4. Campo Bonito district. Scheelite in silicified limestone breccia in fault zone between granite and limestone. Wilson, 1941.	32°33'	110°44'
5. Little Dragoon Mountains (Primos). Huebnerite in narrow quartz veins in granite. Wilson, 1941.	32°04'	110°05'
6. Huachuca Mountains (Tungsten Reef mine). Scheelite in irregular ore shoots in a gently dipping quartz vein 1 to 15 feet thick. Other veins in range have been worked intermittently with small production. Wilson, 1941.	31°26'	110°17'
7. Las Guijas district. Huebnerite in quartz veins in granite. Wilson, 1941.	31°39'	111°22'
8. Big Bend. Scheelite, quartz, and silicates in Precambrian gneiss and schist. Pod 1.5 by 10 feet.	36°49'	113°52'
8a. Lime Liln Canyon. Scheelite pods in Precambrian schist and gneiss.	36°40'	114°01'
9. OK claim. A little wolframite with gold, limonite, siderite, galena, and molybdenite in 1.5 foot quartz vein in granite. Schrader, 1909.	35°49'	114°13'
10. Garnet Mountain. Coarse scheelite in tactite inclusion in granite.	35°48'	114°03'
11. Zonell. Lenticular tactite layers in schist.	35°22'	113°28'
12. Three-in-one. Wolframite and scheelite in quartz veins 1 to 18 inches wide.	35°07'	113°52'

ARIZONA (cont'd.)		
13. Telluride Chief. Small masses of wolframite and scheelite in quartz veins formerly worked for gold, silver, and molybdenite.	35°09'	113°37'
14. Dutch Flat (Kampf). Scheelite and a little wolframite in narrow veins worked for gold and silver.	34°33'	114°10'
15. Greenwood region. Wolframite and scheelite in 2 narrow quartz veins in granodiorite.	34°32'	113°31'
16. Zannaropolis. Scheelite in lenses of epidote-diopside rock in schist.	34°29'	113°16'
17. Warrior. Ferberite in quartz vein 1 to 5 inches wide in granodiorite.	34°17'	112°50'
18. Blade. Wolframite and scheelite in shear 1 to 5 feet within quartz monzonite with schist inclusions.	34°09'	112°16'
19. C and W. Wolframite and scheelite in lenticular quartz 1 to 2 inches wide in schist.	34°05'	112°27'
20. Black Butte (Castle Creek). Vein 1.5 to 2.0 feet wide in andesite contains psilomelane and pyrolusite that assays about 1 percent of WO_3.	34°03'	112°25'
21. Tip Top. Accessory wolframite in a quartz vein mined for silver and gold.	34°03'	112°15'
22. White Picacho district. (Climax, Scheelite Reef, Buena Vista properties). Scheelite disseminated in lenticular calcareous layers in hornblende-biotite schist.	33°59'	112°32'
23. Gold Cliff. Ferberite, locally with auriferous pyrite, chalcopyrite, fluorite, and minor molybdenite, in quartz veins in granite.	33°55'	111°56'
24. Rose Tungsten (Shoestring). Wolframite, a little scheelite, tourmaline, hematite, and minor calcite, in two 8-inch quartz veins in diorite porphyry. Wilson, 1941.	34°01'	111°03'
25. Jackpot and Velma (Quartzite claims). Large crystals of scheelite irregularly distributed in idocrase rock in schist.	33°45'	114°19'
26. Nighthawk, Colorado, and White Dike. Scheelite in short quartz veins in schist.	33°34'	114°05'
27. Gold Reef. Quartz vein 1 to 24	33°05'	114°31'

ARIZONA (cont'd.)

inches thick contains scattered particles of scheelite, limonite, and hematite.

28. Jolene and El Oso properties, Mazatzal Mountains. Scheelite and wolframite in steep quartz veins in granite. 33°46' 111°22'

28a. Armer Wash. Tungsten-bearing psilomelane vein; in Apache group. Hewett and Fleischer, 1960. 33°45' 111°02'

29. Wagner. Wolframite and scheelite in veins in granite. 33°36' 111°00'

30. Summit. Wolframite in quartz veins several inches thick and and 12 feet or less long in granite. 33°22' 110°58'

31. Falcon. Wolframite and a little scheelite in quartz vein in granite. 33°22' 110°51'

32. Samsel, Westlake, and Bobtail mines. Wolframite in narrow quartz veins in Pinal schist. 33°16' 110°52'

32a. Almino. Tungsten-bearing psilomelane vein; in Gila conglomerate. Hewett and Fleischer, 1960. 33°07' 110°56'

32b. Cochise. Tungsten-bearing psilomelane vein; in Gila conglomerate. Hewett and Fleischer, 1960. 33°07' 110°53'

33. Sunset Limited (Yellow Aster). Scheelite in quartz veins in granite. 32°15' 112°42'

34. Thanksgiving. Scheelite in quartz lens 1 foot by 15 feet in granodiorite. 32°21' 112°03'

35. Silver Dollar. Scattered wolframite and same scheelite and barite in a quartz vein 6 to 10 inches wide. 32°07' 111°52'

36. Gold Circle. Wolframite and scheelite in 2 narrow quartz veins in granite. 32°49' 110°57'

37. Tarr. A little wolframite and scheelite in 7 quartz veins. 32°50' 110°43'

38. Mammoth. Tungsten-bearing wulfenite, reported to contain up to 2 percent of WO_3 in Pb-Mo concentrates. Peterson, 1938. 32°43' 110°41'

39. Bear Cat. Scheelite in 2 narrow quartz veins. Wilson, 1941. 32°35' 110°44'

40. Coronado. Small bunches scheelite in quartz lenses in hornfels and schist. Corregidor. Scheelite in 2 limey lenses in quartzite. Geesman (Control) mine. Scheelite in tactite, in contact zone than contains copper ore bodies. 32°29' 110°45'

ARIZONA (cont'd.)

40a. Bush claim. Tungsten-bearing psilomelane vein; in granite. Hewett and Fleischer, 1960. 32°27' 109°43'

40b. Thurston-Hardy. Tungsten-bearing manganese oxide mineral; in Tertiary basalt. Hewett and Fleischer, 1960. 32°47' 109°15'

40c. Fourth of July. Tungsten-bearing manganese oxide mineral; in Tertiary andesite. Hewett and Fleischer, 1960. 32°51' 109°07'

40d. Lucky. Tungsten-bearing psilomelane vein; in Tertiary andesite. Hewett and Fleischer, 1960. 32°54' 109°06'

41. Republic Copper mine (Johnson). Small amounts of scheelite and molybdenite in garnet tactite extensively exploited for copper and silver. 32°07' 110°05'

42. Circle. Scattered bunches of wolframite, sparse scheelite, and some pyrite in quartz vein 6 to 18 inches wide. Wilson, 1941. 31°44' 111°36'

43. Black Gold. Wolframite and trace of scheelite in narrow quartz vein in andesite. 31°43' 111°24'

44. Senator Morgan. Scheelite in two quartz veins in altered shale and sandstone. 31°54' 111°04'

45. Helvetia district. Finely disseminated scheelite in copper ore in tactite. 31°52' 110°47'

46. Hilton Ranch. Fine-grained scheelite sparsely disseminated in tactite 4 feet thick. 31°53' 110°38'

47. Whetstone Mountains. Conlig (Chadwick). Wolframite and scheelite in quartz veins in granite. Evening star. Wolframite in quartz vein in schist. San Juan (Nunnelly, Valenzuelos). Wolframite in quartz vein in granite. 31°50' 110°23'

48. Calabasas area. Wolframite and some scheelite in narrow quartz veins in granodiorite. 31°26' 110°57'

49. Red Mountain. Unidentified tungsten mineral in sericitized zone 5 feet wide in porphyry. Wilson, 1941. 31°24' 110°43'

50. Patagonia district. Scheelite 31°23' 110°42'

ARIZONA (cont'd.)

sparsely disseminated in some tactite and associated lead-zinc-copper ore bodies.

51. Zaleski. Vein up to 7 inches wide contains irregularly distributed scheelite and sparse galena in granite. 31°22' 110°14'

CALIFORNIA

1. Grass Valley district. Scheelite widespread, though usually not present in economic quantities, in gold-bearing quartz veins, Johnston, 1940; Farmin, 1941. 39°13' 121°01'
2. Alpine mine. Scheelite in tactite. 38°44' 119°58'
3. Valpine mine (Burnside Lake deposit). Scheelite in tactite. 38°43' 119°53'
4. Strawberry mine. Scheelite in tactite. Krauskopf, 1953. 37°33' 119°18'
5. Black Rock mine. Scheelite in tactite. Rinehart and Ross, 1957. 37°41' 118°31'
6. Pine Creek area (includes Pine Creek, Round Valley Peak, Brownstone, Adamson, Hanging Valley, Lakeview, Lambert, Molly Tungstite, Mountain Basin, and Tungstar mines). Scheelite with molybdenite and powellite in tactite. Bateman, 1956. 37°23' 118°43'
7. Tungsten Hills (includes Aeroplane, Buttermilk (Van Loon), Hilltop, Jackrabbit, Little Shot, Little Sister, Lucky Strike, Round Valley, Tungsten Blue, Western, and White Caps mines). Bateman and others, 1950; Bateman, 1956. 37°21' 118°32'
8. Rossi and Yaney mines. Scheelite in tactite at the Rossi mine; ferberite pseudomorphous after scheelite, in altered siliceous rock, at the Yaney mine. Bateman, 1956. 37°19' 118°24'
9. Schober mine (also Oomph, Black Monster, and Snow Queen). Coarse-grained scheelite in tactite, composed principally of pyrrhotite, quartz, and some garnet, epidote, and calcite. Bateman, 1956. 37°14' 118°32'
10. Marble mine. Scheelite in tactite. Bateman, 1956. 37°12' 118°23'
11. Mud Lake (Garnet) deposit. Scheelite in tactite. Krauskopf, 1953. 37°07' 119°05'
12. Garnet Dike and Quigley Kings River mines; also Quigley, Wet Spot, and Lime Ridge. Scheelite in tactite. Krauskopf, 1953. 36°53' 119°01'

13. Obelisk mine. Scheelite in tactite. 36°54' 118°52'
14. Consolidated tungsten mine (Harrel Hill). Scheelite in tactite. Goodwin, 1958; Krauskopf, 1953. 36°38' 119°07'
15. Tulare County Tungsten mine (Big Jim mine). Scheelite in tactite. Goodwin, 1958; Krauskopf, 1953. 36°17' 118°55'
16. Darwin district. Scheelite in tactite. Hall and MacKevett, 1958. 36°16' 117°34'
17. Tyler Creek mine. Scheelite in tactite. Goodwin, 1958; Krauskopf, 1953. 35°53' 118°43'
18. Tungstore mine. Scheelite in tactite. Goodwin, 1958; Krauskopf, 1953. 35°47' 118°40'
19. Woody mine. Scheelite in tactite. 35°46' 118°49'
20. Cedar Creek district (includes Owl, Addelsack and Moyer, Cadillac, Buckhorn (Why Not) Major Tungsten (Junehone and Sweet Marie, Rand) mines, High Power claim, and Ideal group). Scheelite in tactite. 35°45' 118°34'
21. Hi Peak mine. Scheelite in tactite. 35°41' 117°53'
22. Searles Lake. Tungsten recognized in brines and end liquors of chemical processing early in World War II. No commercially feasible process to recover it as a by-product has been developed. Brines contain 0.005 to 0.008 percent WO_3. Staff of American Potash and Chemical Co. estimate total amount of WO_3 in brines to be about 8,500,000 units. Carpenter and Garrett, 1959. 35°45' 117°20'
23. Tungsten Chief mine; also, Marsey, Green Wonder, Basin View, Mountain View, Little Wonder, and No-See-Um. Scheelite in tactite. Dibblee and Chesterman, 1953. 35°27' 118°31'
24. Atolia district. Scheelite in quartz veins in quartz monzonite; scheelite placer. Lemmon and Dorr, 1940; Bateman and Irwin, 1954. 35°19' 117°37'
25. Starbright mine. Scheelite in tactite. Hazenbush, 1952; Wright and others, 1953; Bateman and Irwin, 1954. 35°07' 116°54'

CALIFORNIA (cont'd.)

26. Greens mine. Wolframite in quartz veins. Wright and others, 1953.	35°33'	115°34'
27. Old Woman Mountains. (Hidden Value and Howe Tungsten mines). Small rich lenses of tactite. Bateman and Irwin, 1954; Wright and others, 1953.	34°32'	115°13'
28. Aguanga district. Scheelite in tactite. Bateman and Irwin, 1954.	33°25'	116°42'
29. Washington mine. A little scheelite in quartz vein mined for gold.	40°43'	122°40'
29a. Wangoodlord claims. Scheelite in tactite.	41°14'	123°15'
30. Clear Creek. Thin films of scheelite in biotite quartz diorite. Kinkel and others, 1956.	40°32'	122°32'
31. Inverness (E. A. Bender and C. R. Noren properties). Scheelite in tactite bodies in granitic rock. Ver Planck, 1955.	38°04'	122°50'
32. Dobbins Ranch. Scheelite in quartz.	39°21'	121°14'
32a. Dewey Anderson Ranch. Scheelite in tactite.	40°04'	120°10'
32b. Rubicon River Tungsten prospect. Scheelite in tactite.	39°05'	120°21'
33. Bear Creek mine (Comeback Consolidated). Scheelite in lenses of coarse calcite in phyllite. Clark and Carlson, 1956.	38°50'	120°45'
34. Williams prospect. Scheelite in tactite.	38°40'	120°43'
35. Grizzly Flat (Sciaroni Bros.) Scheelite in tactite. Clark and Carlson, 1956.	38°40'	120°34'
36. Zaca mine. Huebnerite in epithermal gold and silver ore. Gianella, 1938.	38°40'	119°42'
37. Garnet Hill and Moore Creek. (Bay Horse and White Horse). Scheelite in garnet tactite.	38°29'	120°15'
38. Sivori and Lucky Strike groups. Scheelite in tactite. Abundant pyrrhotite and pyrite.	38°02'	120°11'
39. Montezuma, Dorothy Lake, and Yosemite National Park mines. Scheelite in tactite.	38°10'	119°37'
40. Big Grizzly group. A little scheelite in gold-bearing quartz veins.	37°40'	119°53'
41. Blue Dipper. Scheelite in tactite.	37°42'	119°50'
42. Blue Shot group. Scheelite in tactite.	37°41'	119°48'

CALIFORNIA (cont'd.)

43. Blue Star group. Scheelite in tactite.	37°40'	119°50'
44. War Baby. Scheelite in tactite.	37°25'	119°41'
45. White Goat claims. Tactite.	38°35'	119°25'
46. Brown Horse. Tactite.	38°32'	119°32'
47. Laughmont claims. Tactite.	38°28'	119°27'
48. Saddlebag Lake. Tactite.	37°58'	119°17'
49. Laurel Creek (Jessie). Tactite.	37°34'	118°55'
50. Tiptop (McGee Mountain, Tactite.	37°35'	118°49'
51. Scheelore. Scheelite, in tactite, and in talus. Output 1,032 units in 1942-1944.	37°32'	118°51'
52. Hilton Creek. Tactite.	37°31'	118°46'
53. Black Irishman, Morris (Ameil), Pine Tree, Granite, and West Tower (Otey). Scheelite in tactite.	37°43'	118°36'
54. Shadow Creek (Nidever). Scheelite in tactite.	37°41'	119°11'
55. Beasore claims. Wolframite in quartz vein in granite.	37°39'	119°11'
56. Church and Jones, and Ghost Canyon claims. Scheelite in tactite.	37°32'	119°24'
57. Sunset and Sunnyside No. 2 (Walker group). Scheelite in tactite.	37°31'	119°23'
58. Yellow Jacket. Scheelite in tactite.	37°31'	119°28'
59. Red Lily and Tin Bucket No. 2 claims. Scheelite in tactite.	37°26'	119°35'
60. Victory group. Scheelite in tactite.	37°24'	119°35'
61. Love & Ibbeston (Central), and Lucky Day No. 1 (Tip Top, Sellars). Scheelite in tactite.	37°23'	119°31'
62. Washington No. 3. Scheelite in tactite.	37°24'	119°48'
63. IxL claim. Wolframite in quartz.	37°20'	119°50'
64. Victory mine. Scheelite in tactite.	37°20'	119°48'
65. Jones mine (R & W Tungsten Co.). Scheelite in tactite.	37°18'	119°43'
66. Black Eagle claims. Scheelite in tactite.	37°17'	119°35'
67. Church Ranch. Scheelite in tactite.	37°15'	119°36'
68. Welsh Ranch. Scheelite in tactite.	37°11'	119°34'
69. Lone Pine No. 2 claim. Sche-	37°09'	119°32'

CALIFORNIA (cont'd.)

elite in tactite. South side (Teaford; Fish Creek Mountain, Sherwood Green). Scheelite in tactite.

70. Mt. Tungsten prospect. Scheelite in tactite. 37°07' 119°38'
71. Hughes claim. Scheelite in tactite. 37°10' 119°27'
72. Carothers and Wisseman mines. Scheelite in tactite. 37°15' 119°20'
73. Prior Lake claim. Scheelite in tactite. 37°18' 119°11'
74. Question and Twin Lakes claims. Scheelite in tactite. 37°18' 119°10'
75. Emerald Peak claims. Scheelite in tactite. 37°10' 118°47'
76. Garnet mine (Defense group, Qualls). Scheelite in tactite. 37°09' 119°05'
77. Homer's Tungsten quartz vein and Little Uncle claim. Scheelite in tactite. 37°04 119°06'
78. Dinkey Creek mine (Lobo, Saddler), and We Hope claims. Scheelite in tactite. 37°03' 119°09'
79. Victory mine. Scheelite in tactite. 37°01' 118°57'
80. Big Oak. Scheelite in tactite. 37°00' 119°30'
81. Home Front prospect (Humphreys, Western Sierra) and Three Buddies claim. Scheelite in tactite. 37°00' 119°24'
82. Jackpot and Adrain Alexander (Red Bud, Spanish Peak) mines. Scheelite in tactite. 36°59' 119°21'
83. Benson-McMurtry, Rabbit's Foot, and Ground Hog. Scheelite in tactite. 36°58' 119°17'
84. Lone Pine claim. Scheelite in tactite. 36°58' 119°15'
85. Ridge prospect and Toprock claim. Scheelite in tactite. 36°57' 119°10'
86. Kings River Tungsten mine (Houghton Bros.) and Poor Man claims. Scheelite in tactite. 36°55' 119°08'
87. Balch claims (McBride Tungsten). Scheelite in tactite. 36°54' 119°07'
88. Spanish Peak claim. Scheelite in tactite. 36°55' 118°53'
89. Converse Creek. Scheelite in tactite. 36°50' 118°49'
90. Terrill prospect. A little scheelite in 3-inch gouge between schist and quartz diorite. 36°54' 119°17'

91. Traweek mine (Strickland) and Fulgham prospect. Scheelite in tactite. 36°45' 119°10'
92. Dixie Queen and Hurley. Scheelite in tactite. 36°44' 119°08'
93. Lone Pine Nos. 1-3 claims. Scheelite in tactite. 36°46' 119°06'
94. Barrington and Cutler prospects. Scheelite in tactite. 36°36' 119°03'
95. Kaweah River mine and Eshom Creek. Scheelite in tactite. 36°37' 118°55'
96. Redwood Canyon (Barton). Tactite. 36°39' 118°52'
97. Homer and Davis Ranches. Scheelite in tactite. 36°32' 118°58'
98. Alice Homer prospect. Scheelite in tactite. 36°30' 119°01'
99. Kaweah Molybdenum Mining Co. A little wolframite, scheelite, molybdenite, and pyrite disseminated in granodiorite. 36°34' 118°34'
100. Carter. Tactite. 36°24' 118°55'
101. Blossom Peak. Scheelite in tactite in shear zone in granodiorite. Goodwin, 1958. 36°25' 118°53'
102. Eagle (Buckeye) claim. Tactite. 36°23' 118°49'
Grey Fox (Three Rivers). Scheelite in tactite. 36°23' 118°50'
103. Mineral King. Tactite. 36°28' 118°35'
104. Baty mine. Scheelite in tactite. 36°19' 119°02'
105. Baker Lease. Scheelite in silicated limestone. Goodwin, 1958. 36°20' 118°59'
106. Royal Tungsten and Martin Claims. Tactite. Pioneer (Good Hope). Scheelite in tactite. 36°20' 118°49'
107. Thanksgiving. Scheelite in contact zone with hedenbergite and and pyrrhotite. Goodwin, 1958. 36°14' 118°53'
108. Herbert and Crabb (Vernon Gill Ranch). Tactite. Big Mack. Scheelite in tactite. Goodwin, 1958. 36°06' 118°48'
36°07' 118°47'
109. Tule Indian Reservation. Tactite. 36°02' 118°46'
110. Carver. Scheelite in tactite. 36°00' 118°33'
111. Sunnyside Nos. 1-6. Tactite. 36°02' 118°28'
112. Kern River claims. Tactite. 35°59' 118°29'
113. Sherman Peak. Tactite. Brush Creek Nos. 1-4. Scheelite in tactite. 36°00' 118°23'
35°58' 118°24'
114. Credon Mountain. Scheelite in tactite. Goodwin, 1958. 35°55' 118°52'
115. Blue Ridge claim. Scheelite in 35°54' 118°47'

CALIFORNIA (cont'd.)

tactite.

116. White River Lode mine. Scheelite in quartz. 35°48' 118°52'

117. Indian mine. Tactite. 35°48' 118°49'

118. Kern-Sierra mine. Tactite. 35°54' 118°08'

119. Division Creek. Tactite. 36°57' 118°20'

120. Mohawk shaft area, White Mountains. Scheelite in quartz vein. 37°29' 118°18'

121. R and R claims, White Mountains. Tactite. 27°21' 118°15'

122. Shasta Rose and Mountain View. Scheelite in quartz veins in quartz monzonite. 37°26' 118°03'

123. Scheelite Nugget, Deep Spring Valley. Scheelite, in veins 1 to 9 inches thick in marble, with calcite, quartz, pyrite, and oxidized copper minerals. 37°22' 118°06'

124. Target claims. Scheelite in quartz veins in quartz monzonite. 37°21' 118°02'

125. Copper Queen. Scheelite with lenses of oxidized copper ore in fractures in limestone. 37°23' 117°58'

126. Scheelite group, Inyo Range. Some scheelite in 12-inch vein of copper minerals. 37°14' 117°58'

127. Waucoba (Last Rose), Inyo Range. Scheelite in veinlets in altered argillaceous dolomite. 36°58' 117°56'

128. Jumbo, Inyo Range. Scheelite in tactite. 36°48' 118°02'

128a. Saline Valley. Tungsten-bearing cryptomelane; in hotspring travertine. Hewett and Fleischer, 1960. 36°49' 117°46'

129. Ubehebe district. Monarch. Huebnerite (or ferberite) in quartz vein. Cuprotungstite (Alvord?). Scheelite in tactite. McAllister, 1955. 36°35' 112°30'
36°36' 117°33'

130. Lone Pinyon, Coso Range. Scheelite in tactite. 36°15' 117°47'

131. Coso Range. Beverly. Scheelite in crushed quartz diorite. Keough and Panyo. Mountain Kid. Scheelite in tactite. 36°13' 117°39'
36°13' 117°36'
36°11' 117°40'

132. Feldman, Coso Range. Scheelite in quartz vein. 35°56' 117°53'

133. Sheephead. Scheelite in quartz. Victory, Panamint Range. Scheelite in limestone and tremolite rock. 36°19' 117°02'

CALIFORNIA (cont'd.)

134. Panamint district. Scheelite in quartz veins with silver minerals. 36°07' 117°05'

135. Aldridge, Black Mountain King, Jackpot No. 2, Regan, Trojan, (El Diablo) and Tungsten Queen. Scheelite in tactite. 35°43' 118°30'

136. Buck. Tactite. 35°42' 118°28'

137. Big Blue mine. A little scheelite in quartz veins formerly worked for gold. 35°44' 118°25'

138. Mintern group, Good Hope and Little Dick group, Grandad, and Play Boy. Scheelite in tactite and limey hornfels. 35°44' 118°23'

139. Sure Go, Big Shot, Scheelite King, and Starlite. Tactite. 35°46' 118°04'

140. Valentine claims. Tactite. 35°39' 118°05'

141. Magnolia and Pyavin groups (Indian Wells Canyon). Tactite. 35°42' 117°58'

142. Bald Eagle. Tactite. 35°37' 118°22'

143. Stardust (Cottonwood, Dorris and Cuddleback), Tungsten Big Lode, Digger Pine (Plasse, R. S.), and Kelso View. Tactite. 35°36' 118°17'

144. Bald Mountain group. Scheelite in 3 quartz veins in granodiorite. 35°35' 118°30'

145. Prosperity, Tungsten-V, Brown Ranch, Blackbird, Four K, Tungsten King, and Tungsten Hill. Scheelite in quartz veins in granodiorite, and in tactite. 35°33' 118°31'

146. Fidgie group. Scheelite, molybdenite, and powellite in tactite. 35°34' 118°24'

147. Weldon Meadow claim (Moreland). Tactite. 35°29' 118°20'

148. Naja, and Williams Ranch (Nita prospect). Tactite. 35°26' 118°23'

149. Locarno, and Gwynne mine. Minor scheelite in gold-bearing quartz veins in granite. New Deal claims (Orrell; Donlevy). Small amount of scheelite with arsenopyrite and muscovite in quartz vein in granite. 35°24' 118°20'
35°25' 118°17'

150. Top of the World. A little scheelite in stibnite-bearing vein. 35°16' 118°31'

151. Minnehaha mine (Indian Creek). Scheelite in gold-bearing quartz vein. 35°16' 118°22'

152. Big Boy claims (Blue Point, 35°19' 118°05'

CALIFORNIA (cont'd.)

Jawbone Canyon). Scheelite and wolframite in greisenized granite.

153. Summit Lime Co. (B C Mines; BCM Mines), Pine Tree, and Wild Cat (Baltic, Nixon). Rich scheelite and some gold in quartz-carbonate veinlets in granite. 35°05' 118°29'

154. Standard district, Evening Star (Bernice claims), Blue Grass claims, and Maynard Tin prospect. Scheelite in tactite. 35°23' 115°33'

155. New York Mountains. Carbonate group. Wolframite in quartz. 35°17' 115°21'
Door mine and Brooks prospect. Huebnerite in quartz. 35°15' 115°20'
Live Oak mine (Bronze). Scheelite, sphalerite, fluorite, pyrite, and chalcopyrite in quartz vein in granite. 35°16' 115°17'
Sagamore mine. Huebnerite, galena, sphalerite, chalcopyrite, and minor scheelite in quartz vein. 35°15' 115°17'
Gillsmith and Victory. Scheelite and fluorite in quartz. 35°18' 115°18'
Tungsten King. Huebnerite in quartz. 35°15' 115°24'

156. Pat claims, Providence Mountains. Huebnerite in quartz veins. 35°04' 115°30'

157. Signal district. Wolframite in quartz veins in granite. 35°02' 115°09'

158. Shadow Mountains, Northern part. Just Associates, Blue Star, and Baxter Apex. Scheelite in tactite. 34°45' 117°32'

159. Shadow Mountains, Southern part. Beacon and Bonanza Dome claims, Tungsten King, Maybelle, New Discovery, White House, and Oraibi. Scheelite in tactite. 34°40' 117°32'

160. White Dollar mine (Mayday). Scheelite in tactite in shattered metavolcanic rocks. Wright and others, 1953. 34°43' 116°48'

161. Pure Quill. Scheelite irregularly disseminated in Precambrian amphibolite. Wright and others, 1953. 34°39' 116°53'

162. Morongo district. Shooting Star (United Tungsten Copper Mines Co.), Blue Vase, Antelope, and Treasure Chest. Scheelite in tactite. Morongo King (Sunnyside). Scheelite in quartz. 34°13' 116°42'

163. Clipper Mountains mine. Scheelite in tactite in Precambrian gneiss and schist with limestone lenses. Wright and others, 1953. 34°47' 115°23'

CALIFORNIA (cont'd.)

164. Udsogn (Chubbock scheelite). Scheelite in tactite. Wright and others, 1953. 34°26' 115°14'

165. Beatty. Scheelite in quartz veins in granite. 33°47' 117°20'

166. Blue Boy and Black Mountain. Scheelite in tactite. 33°51' 116°52'

167. Andreas Canyon. Scheelite in tactite. 33°45' 116°34'

168. Cottonwood. Scheelite in tactite. 33°44' 116°27'

169. Santa Rosa Mountains. Garnet Queen, Ragsdale, Milky Way, and Ribbonwood. Scheelite in tactite in migmatite. 33°34' 116°29'

170. Miller Ranch. Scheelite in tactite. 33°30' 116°19'

171. Big Henry. Scheelite in tactite. 33°52' 115°35'

172. Chuckawalla Mountains. Scheelite in quartz veins on south side of mountains. Also wolframite, with scheelite, in quartz on north side. 33°38' 115°20'

172a. Red Ocher claims. Scheelite in quartz veinlets in limestone. 33°53' 114°52'

173. Palomar. Scheelite in tactite. 33°18' 116°49'

174. New Hope No. 2. Scheelite in tactite. 32°57' 116°29'

174a. Felden and Holloway. Scheelite in tactite. 33°01' 116°26'

175. Sundown. Scheelite in tactite. 32°55' 116°28'

176. Mica Gem (Randsburg). Scheelite in tactite. 32°38' 116°08'

176a. Paymaster district. Tungsten-bearing psilomelane; in veins in Tertiary sandstone. Hewett and Fleischer, 1960. 33°12' 114°49'

177. Cargo Muchacho. Scheelite in quartz veins and lenses in gneissic quartz diorite. 32°50' 114°47'

COLORADO

1. Greenrock and Spaudling deposits. Scheelite in Precambrian calc-silicate gneiss. Belser, 1956a. 40°43' 105°19'

2. Lookout and Challenger deposits. Scheelite in Precambrian calc-silicated gneiss. Belser, 1956a. 40°38' 105°25'

3. Masonville deposits (Carter Tun-

COLORADO (cont'd.)

nel and Mason Ranch). Minor occurrences of scheelite in old stopes on gold-quartz veins.

4. Thomson Canyon. Scheelite showings in Precambrian calc-silicate gneiss and amphibolite. 40°25' 105°13'

5. Jamestown district. Pockets of ferberite and wolframite (two stages of tungsten mineralization) in gold telluride veins, particularly in Wano mine. Lovering and Goddard, 1950; Lovering and Tweto, 1953. 40°07' 105°22'

6. Ward district. Wolframite and scheelite in pyritic gold-copper quartz veins. Lovering and Goddard, 1950; Lovering and Tweto, 1953. 40°04' 105°30'

7. Boulder County tungsten district. Ferberite ore (and minor scheelite) in chalcedonic quartz veins cutting Precambrian granite and metamorphic rocks. Ore in veins only a few inches wide, forming small but rich ore shoots, many containing less than 1,000 tons, but with grades of 5 to 20 per cent WO_3. Average ore shoot yields 2,000-3,000 units WO_3. Tungsten deposits worked in more than 200 miles, mostly small, and mostly less than 200 feet deep. Many undiscovered ore shoots probably remain. Lovering and Tweto, 1953; Colorado Metal Mining Fund Board, 1960. 39°57'-40°02' 105°22'-105°32'

8. Blackhawk district. Pockets of ferberite ore in copper-silver-gold veins, particularly in Chihuahua mine. Sims and others, in press. 39°48' 105°29'

9. Lake Fork Gulch (Foster Ranch) deposit. Scheelite in Precambrian calc-silicate gneiss. Tweto, 1960. 39°47' 105°25'

9a. Red Mountain deposit. Huebnerite in quartz veins (?) near border of Urad molybdenum deposit. Theobald and Thompson, 1959. 39°46' 105°50'

10. Monte Cristo Gulch deposits. Huebnerite-quartz veins in Precambrian rocks. Quartz veins are lenticular, and huebnerite within them is erratically distributed; production from pockets yielding only a few pounds to a few tons of high-grade (over 5 percent WO_3) ore. Singewald, 1951. 39°23' 106°06'

11. South Platte Gulch. Wolframite and scheelite in pyritic quartz veins in Precambrian gneiss. Singewald, 1951. 39°21' 106°05'

12. Climax. Huebnerite is an accessory mineral in the Climax molybdenum deposit, which is a circular and partially domed body surrounding a plug-shaped mass of barren silicified Precambrian rock. Tungsten is erratically distributed in the molybdenum ore; large blocks of ore contain 0.02 to 0.04 percent WO_3, but some ore contains as much as 0.1 percent WO_3, and some as little as 0.001 percent. Vanderwilt and King, 1955; Wallace and others, 1960. 39°22' 106°11'

13. Sweet Home mine. Huebnerite in sulfide-quartz veins in Precambrian granite and overlying Cambrian quartzite. Singewald and Butler, 1941. 39°18' 106°07'

14. Leadville. Wolframite and scheelite in pyritic gold ore of Breece Hill. Emmons and others, 1927; Fitch and Loughlin, 1916. 39°14' 106°14'

15. Tarryall Springs district. Scheelite-Powellite in Precambrian calc-silicate gneiss, which forms at least three long, narrow streaks, a mile or two apart, in granite near the west edge of the Pikes Peak batholith. Belser, 1956b; Tweto, 1960. 39°01' 105°27'

16. Heavystone prospect. Minor wolframite in quartz vein in shear zone in Precambrian granite. 38°45' 104°57'

17. Nipple Mountain prospect. Wolframite in quartz veins in Precambrian granite. Belser, 1956b; Mining and Sci. Press, 1915. 38°38' 105°07'

18. Bond Ranch deposit. Wolframite in quartz veins in Precambrian granite. Belser, 1956b. 38°35' 105°06'

19. Guffey district, west. Scheelite at several localities in Precambrian calc-silicate gneiss and skarns. Belser, 1956b. 38°45' 105°34'

20. Guffey district, southeast. Scheelite at several localities in Precambrian calc-silicate gneiss, and in copper-bearing quartz veins or lenses in the gneiss. Belser, 1956b. 38°43' 105°30'

21. Currant Creek deposits. Sche- 38°37' 105°30'

COLORADO (cont'd.)

elite at several localities in Precambrian calc-silicate gneiss. Belser, 1956b.

22. Oliver prospect. Scheelite in Precambrian amphibolite. Belser, 1956b. 38°22' 105°30'
23. Copperhead mine. Scheelite in copper-quartz ore of old copper mine. 38°37' 105°48'
24. Calumet mine. Scheelite in old iron mine; magnetite and tactite in Mississippian limestone near contact with granodiorite stock. 38°39' 105°58'
25. Sage prospect. Scheelite in psilomelane matrix of strong breccia zone. Belser, 1956b. 38°35' 105°56'
26. Cleora district. Scheelite in copper-quartz veins of Precambrian age in several old copper mines; also, in quartz fragments in thick breccia on flat thrust fault. Belser, 1956b; Tweto, 1960. 38°31' 105°58'
27. Mt. Aetna deposits. Huebnerite-quartz veins in quartz monzonite porphyry. Dings and Robinson, 1957. 38°35' 106°18'
28. Gold Hill (Cumberland Pass) deposits. Several huebnerite-quartz veins, some of which are pyritic, in Precambrian granite. Dings and Robinson, 1957. 38°41' 106°29'
29. Poncha Pass prospects. Scheelite in quartz veins in Precambrian schist. 38°27' 106°03'
30. Villa Grove deposit. Tungsten in unknown form in manganese ore filling breccia along faults cutting volcanic rocks. 38°14' 105°58'
31. Bonanza district. Minor wolframite in copper sulfide ore, particularly in Rawley tunnel. Burbank, 1932. 38°19' 106°08'
32. Cochetopa prospect. Scheelite in small amounts in Precambrian pegmatite and metamorphic rocks. 38°18' 106°46'
33. White Earth district (Kezer and Lilly Belle mines). Scheelite in quartz and clay veins on faults between Precambrian rocks and Tejtiary volcanics. Belser, 1956b. 38°23' 107°07'
34. Ouray. Tungsten in unknown form in manganiferous hot spring deposits. 38°02' 107°40'

COLORADO (cont'd.)

35. Dunmore vein. Huebnerite in siliceous pipes in Dunmore mine, and in quartz at other localities on Dunmore vein; in Tertiary volcanic rocks. Kelly, 1946. 37°59' 107°39'
36. Upper Uncompahgre mines. Huebnerite in pockets in base-metal sulfide veins in Tertiary volcanic rocks. Belser, 1956a; Kelley, 1946. 37°57' 107°34'
37. Animas Forks deposits. Huebnerite in quartz bands in base-metal sulfide veins, particularly in Tom Moore mine. Burbank and others, 1947; Belser, 1956a. 37°55' 107°32'
38. Cement Creek-Gladstone area. Huebnerite in pockets and in banks of quartz in base-metal sulfide veins. Burbank and others, 1947; Belser, 1956a; Prosser, 1910. 37°53' 107°39'
39. Ruby mine. Huebnerite in quartz bands in base-metal sulfide vein in volcanic rocks. Burbank and others, 1947; Belser, 1956a; Prosser, 1910. 37°51' 107°33'
40. Sultan Mountain. Huebnerite in sulfide veins cutting Tertiary quartz monzonite stock. Burbank and others, 1947; Belser, 1956a; Prosser, 1910. 37°48' 107°41'
41. Ophir district. Huebnerite in sulfide veins, and in quartz stringers in vein walls; in quartz monzonite. Burbank and others, 1947; Belser, 1956a. 37°54' 107°51'
42. Marshall Creek. Huebnerite in base-metal Montana vein. Burbank and others, 1947; Belser, 1956a. 37°58' 107°46'

CONNECTICUT

1. Monroe (Lane's mine). Wolframite, tungstite, and scheelite in quartz vein rich in marcasite and also containing sphalerite, galena, arsenopyrite, native bismuth, and native silver. Shepard, 1837; Gurlt, 1894; Hobbs, 1901; Kerr, 1946. 41°22' 73°12'
2. Long Hill (Trumbull). Scheelite and wolframite in pegmatite and tactite. Silliman, 1819. 41°23' 73°16'

IDAHO

1. Queen Mtn. deposits. Scheelite with sulfides in quartz vein in basic sill. Kirkham and Ellis, 1926; Livingston, 1919. 48°54' 116°17'

IDAHO (cont'd.)

2. Talache district. Huebnerite and scheelite in silver veins. Sampson, 1928.	48°07'	116°28'
3. Murray district. Accessory scheelite in gold-quartz veins. Shenon, 1938; Livingston, 1919; Auerbach, 1903.	47°37'	115°53'
4. Pine Creek district (Big It mine). Scheelite in antimony-quartz veins. Jones, 1920.	47°28'	116°13'
5. Beauty Bay (Elk Mountain) district. Scheelite in quartz veins and stringers in rhyolite dike. Jones, 1920.	47°35'	116°37'
6. Tenmile district. Accessory wolframite and scheelite in quartz-sulfide veins. Shenon and Reed, 1934.	45°50'	115°40'
7. Seven Devils district. Scheelite-powellite in tactite in small quantities at several localities. Livingston and Laney, 1920.	45°08'	116°38'
8. Warren district. Scheelite in gold-quartz veins. Livingston, 1919.	45°17'	115°41'
9. Grunter deposit (Shoup). Disseminated scheelite in fractured gneiss. Umpleby, 1913.	45°23'	114°18'
10. Big Creek district. Huebnerite and scheelite in quartz veins in quartzite, and in quartz lenses shear zone. Cook, 1956.	45°08'	115°24'
11. Profile Gap deposits. Scheelite in sheared tactite. Cook, 1956.	45°03'	115°25'
12. Quartz Creek deposit. Scheelite in tactite. Cook, 1956; White and Carpenter, 1945.	44°59'	115°28'
13. Oberbillig deposit. Scheelite in tactite stringer in granite. White and Carpenter, 1945.	44°57'	115°29'
14. Yellow Pine deposit and vicinity. Scheelite in gold-antimony ore in large shear zone in granitic rocks. Cooper, 1951.	44°55'	115°20'
15. Springfield deposit. Scheelite-bearing pyrrhotite-tactite in granite. Cook, 1956.	44°47'	115°23'
16. Merry Blue deposit. Wolframite and scheelite in gold-quartz veins and in quartz in shear zones. Cook, 1956.	44°21'	115°35'
17. White Hawk Meadows. Wolframite and scheelite in quartz stringers and lenses in granite.	44°15'	115°30'
18. Thompson Creek mines. Scheelite in tactite and in altered granite bordering tactite. Cook, 1956; Ross, 1937.	44°19'	114°34'

19. Ima mine. Huebnerite in quartz veins, with sulfides, in quartzite near granite. Callaghan and Lemmon, 1941; Anderson, 1948.	44°32'	113°41'
20. Mackay district. Scheelite-powellite in tactite, some copper-bearing. Cook, 1956; Umpleby, 1915.	43°52'	113°40'
21. Wildhorse district. Scheelite in strip of tactite in pendant of metasedimentary gneisses. Several occurrences over length of 3 miles. Cook, 1956; Umpleby and others, 1930.	43°47'	114°06'
22. Summit Creek district. Scheelite in tactite; several occurrences. Cook, 1956; Umpleby and others, 1930.	43°52'	114°12'
23. Fourth of July deposits (Meadow View, etc.). Scheelite in silver-zinc veins or streaks in tactite. Cook, 1956; Ross, 1937.	44°03'	114°39'
24. Washington Basin deposits. Scheelite in pyrrhotite-quartz vein. Cook, 1956; Ross, 1937; Umpleby, 1915.	44°01'	114°39'
25. Boulder Creek deposit. Scheelite in tactite. Cook, 1956.	43°48'	114°31'
26. Atlanta district. Scheelite in gold-quartz veins. Anderson, 1939; Skidmore, 1941.	43°47'	115°08'
27. Corral Creek deposit. Ferberite in narrow chalcedony veins. Cook, 1956; Livingston, 1919.	43°26'	114°56'
28. Croy Creek deposits. Scheelite in tactite. Cook, 1956.	43°27'	114°27'
29. Midnight deposit. Scheelite and ferberite in quartz-sulfide veins. Umpleby and others, 1930.	43°26'	114°17'
30. Muldoon district. Scheelite in silicified shear zones in limestone. Cook, 1956.	43°38'	113°54'
31. Lava Creek district. Scheelite-powellite in tactite; huebnerite in quartz veins. Cook, 1956; Umpleby, 1917; Livingston, 1919; Anderson, 1929.	43°31'	113°39'

MAINE

1. Tunk Pond. Scheelite in pegmatite. Hess, 1917.	44°45'	67°58'
2. Blue Hill. Wolframite reported. Hitchcock, 1861.	44°24'	68°37'
3. Bowdoinham. Wolframite re-	44°01'	69°54'

MAINE (cont'd.)

ported. Hitchcock, 1861.

4. Topham. Wolframite reported. Hitchcock, 1861. 43°56' 69°58'

MISSOURI

1. Silver mine. Wolfrwmite and silver-lead minerals in quartz veins. Tolman, 1933. 37°32' 90°29'

MONTANA

1. Callahan Creek deposits. Scheelite in lead-silver vein. Calkins and MacDonald, 1909. 48°27' 116°02'
2. Midas Mine. Scheelite in quartz-sulfide veins. Gibson, 1948. 48°05' 115°31'
3. Miller Creek deposits. Scheelite in quartz streaks in shear zone. Calkins and MacDonald, 1909. 48°05' 115°27'
4. Argo Mine. Wolframite in pyritic gold quartz veins. 46°35' 113°33'
5. Franz deposit. Huebnerite with sulfides in quartz vein. Walker, 1960. 46°31' 113°25'
6. Combination-Black Pine. Huebnerite with sulfides in quartz veins. Volin and others, 1952; Emmons and Calkins, 1913; Walker, 1960. 46°27' 113°21'
7. Henderson Gulch deposits. Scheelite in gold placer, and in low concentration in quartz-scheelite veinlets in fractured granodiorite and bordering tactite. Hundhausen, 1949; Emmons and Calkins, 1913; Walker, 1960. 46°30' 113°18'
8. Ophir district. Scattered occurrences of scheelite in tactite. Pardee and Schrader, 1933. 46°42' 112°30'
9. Marysville district. Scheelite in tactite at several localities, and also in gold placers. Pardee and Schrader, 1933; Barrell, 1907; Knopf, 1913. 46°46' 112°19'
10. Colorado Gulch deposits. Scheelite in tactite. Knopf, 1913; Pardee and Schrader, 1933. 46°32' 112°10'
11. Yogo Peak deposits. Scheelite in sulfide-magnetite tactite and its oxidation products. Weed, 1899. 46°57' 110°30'
12. Kendall deposits. Huebnerite in large dike of mineralized intrusion breccia cutting limestone. Fisher, 1930. 47°17' 109°27'
13. Diamond Hill mines. Scheelite in oxidized gold ore of old mine workings. Stone, 1911. 46°19' 111°40'

14. Woodville deposit. Scheelite in quartz vein granite. Weed, 1912. 46°02' 112°24'
15. Butte district. Huebnerite as an accessory in several of the copper veins; and in silver-quartz veins east of Butte, where it forms small ore shoots. Weed, 1912; Winchell, 1910; Mining and Scientific Press, 1907. 46°00' 112°30'
16. Foster Creek district. Scheelite and huebnerite in quartz veins; scheelite in tactite. Emmons and Calkins, 1913; Walker, 1960. 46°13' 113°07'
17. Georgetown district. Scheelite in replacement bodies and quartz veins in marble. Emmons and Calkins, 1913; Walker, 1960. 46°09' 113°14'
18. Storm Lake deposits. Scheelite in quartz veins. Emmons and Calkins, 1913; Walker, 1960. 46°05' 113°16'
19. Red Buttons deposit. Scheelite in tactite. 45°51' 113°10'
20. Brown's Lake deposit. Scheelite in tactite in Amsden formation in roof pendant in granite. Myers, 1952; Mining World, 1955; Pattee, 1960. 45°31' 112°50'
21. Lost Creek deposit. Scheelite in tactite in Amsden formation near granite. Myers, 1952; Pattee, 1960. 45°29' 112°48'
22. Birch Creek deposits. Low grade scheelite-powellite in tactite. Myers, 1952; Pattee, 1960. 45°23' 112°49'

22a. Bald Mountain district. Scheelite in tactite. Pattee, 1960. 45°16' 113°04'

23. Potosi deposits (Pony district). Huebnerite in quartz-sulfide veins at several localities. Winchell, 1914; Tansley and others, 1933. 45°34' 111°58'
24. Emigrant district. Tungsten in unknown form in Cu-Au-Bi veins. Reed, 1950. 45°15' 110°38'
25. Jardine-Crevasse Mountain districts. Scheelite in quartz-gold-arsenopyrite veins. Seager, 1944. 45°04' 110°38'

NEVADA

1. Defense mine. Scheelite in tactite. 41°52' 118°41'
2. Garnet Tungsten mine. Scheelite with molybdenite, powellite, and pyrite in tactite. Granger and others, 1957. 41°47' 115°41'
3. Osgood Range. Scheelite in tac- 41°13' 117°15'

NEVADA (cont'd.)

tite. Hobbs and Clabaugh, 1946; Newman, 1957.

4. Golconda. Tungsten-bearing iron and manganese oxides in Pleistocene hot spring deposits. Kerr, 1940; Penrose, 1893. 40°57' 117°26'

5. Rose Creek mine. Scheelite in tactite. Roberts, 1943. 40°51' 117°51'

6. Tungsten, Mill City district. Scheelite in tactite. Kerr, 1934. 40°47' 118°08'

7. Stormy Day mine. Scheelite in tactite. Johnson, 1958. 40°25' 119°17'

8. Oreana mine, Humboldt Range. Scheelite and beryl in pegmatitic vein. Kerr, 1938. 40°24' 118°15'

9. Nightingale district. (Alpine, MGL, and Nightingale mines). Scheelite in tactite. Smith and Guild, 1942. (For Nightingale mine.) 40°01' 119°14'

10. Ragged Top. Scheelite in tactite. 40°03' 118°48'

11. St. Anthony mine. Scheelite in tactite. 39°59' 118°42'

12. Long lease. Scheelite in tactite. 40°05' 118°23'

13. Battle Creek mine. Scheelite with a little quartz and pyrite in 2 small lenses of chlorite schist surrounded by granite and pegmatite. Granger and others, 1957. 40°30' 115°23'

14. Star (Ogilvie, Harrison Pass). Scheelite in tactite. Granger and others, 1957. 40°19' 115°28'

15. Hilltop mine. Scheelite in tactite. 39°41' 117°43'

16. Sand Springs district. Scheelite in tactite. 39°16' 118°21'

17. Rawhide district (Nevada Scheelite; Leonard mine). Scheelite in tactite. Geehan and Trengove, 1950. 39°02' 118°19'

18. Linka mine. Scheelite in tactite. 39°19' 116°50'

19. Bay State mine. Scheelite in quartz veins in Devonian limestone. 39°32' 115°48'

20. Monte Cristo deposits. Scheelite in tactite. 39°14' 115°34'

21. Cherry Creek district (Ticup mine and others). Scheelite, quartz, and calcite as breccia pipes in Cambrian limestone. Holmes, 1950. 39°56' 114°55'

22. Antelope claims. Scheelite in thin quartz veins. 39°45' 114°17'

NEVADA (cont'd.)

23. Tungstonia diytrict. Huebnerite in quartz veins. 39°40' 114°10'

24. Hub mine. Huebnerite in quartz veins. 38°57' 114°21'

25. Pole Canyon adit, Mt. Wheeler mines. Scheelite veinlets and disseminations in limestone bed in Pioche shale near intersections of fracture zone; contains phenacite, bertrandite, beryl, pyrite, and fluorite. Stager, 1960. 38°54' 114°20'

26. Minerva district. Scheelite in quartz veins. Newman and others, 1950. 38°48' 114°21'

27. Gardnerville (Eagle) district. Scheelite in tactite. Overton, 1947. 38°52' 119°34'

28. Gabbs area (Victory, El Capitan mines). Scheelite in sheared and feldspathized granodiorite. Humphrey and Wyatt, 1958; Vitaliano and others, 1957. 38°58' 117°55'

29. Silver Dyke mine. Scheelite in composite quartz vein that cuts diorite, Triassic volcanic rocks. Kerr, 1936. 38°19' 118°12'

30. Pilot Mountains. Scheelite in tactite. 38°20' 118°53'

31. Black Horse mine. Scheelite in tactite. 38°01' 118°07'

32. Tem Piute district. Scheelite in tactite. Binyon and others, 1950. 37°38' 115°38'

33. Oak Springs district. Scheelite in tactite. Johnson and Hibbard, 1957. 37°14' 116°03'

34. Flat Creek (Mountain Queen). Scheelite in gold-quartz veins. 41°43' 117°38'

35. Santa Rosa Mountains. Scheelite in tactite. 41°21' 117°38'

36. Charleston Hill National. Scheelite in gold-quartz veins. 41°22' 117°41'

37. Pasch. Scheelite in gold-quartz veins. 41°11' 117°47'

38. Dutch Flat. Scheelite, cinnabar, and gold in low-grade placer. Willden and Hotz, 1955. 41°10' 117°30'

39. New Chance (Stevens), Coon Creek (Madden), and Batholith (White Star Tungsten mines). Scheelite in tactite. 41°48' 115°29'

40. Robinette (June group). Scheelite and molybdenite in tactite. 41°53' 115°04'

41. Mt. Diablo. Scheelite. 41°01' 114°58'

42. Nash-Wharton. Scheelite in tactite. 40°52' 119°31'

NEVADA (cont'd.)

43. Arcturus. Scheelite in tactite.	40°42'	119°13'
44. Jeakins. Scheelite in tactite.	40°29'	119°17'
45. Thrasher. Scheelite in tactite.	40°28'	119°17'
46. Margrave-Maher. Scheelite in tactite.	40°09'	119°16'
47. White Blowout. Scheelite in tactite.	39°56'	119°17'
48. Star. Scheelite in tactite.	40°01'	119°07'
49. Three prospects. Scheelite in tactite.	40°35'	118°57'
50. Hilltop. Scheelite in tactite.	40°36'	118°56'
51. Scheelite, Seven Troughs Range. Scheelite in pegmatite.	40°25'	118°49'
52. Black Canyon (Esther). Scheelite in tactite.	40°21'	118°31'
53. Lone Mountain (Baker). Scheelite disseminated in granite along fractures and quartz veinlets.	40°11'	118°33'
54. Snowstorm. Scheelite in tactite pods in hornfels.	40°08'	118°33'
55. Granite Point. A little scheelite within 1 to 5 inches of aplite sill in limy shale.	40°06'	118°36'
56. Allied Tungsten, Inc. Scheelite disseminated in quartz stringers.	40°20'	118°14'
57. Arizona. Narrow rich streaks of scheelite in part of a quartz vein formerly worked for silver.	40°26'	118°09'
58. Panther Canyon. Scheelite in thin quartz veins.	40°27'	118°14'
59. Hebbard (Sunny Boy). Scheelite in quartz.	40°32'	118°14'
60. Lakeview. Scheelite with mica, fluorite, and beryl in pegmatitic quartz pockets in altered limestone.	40°35'	118°12'
61. East Range tungsten-manganese. Tungsten-bearing manganese oxides in calcite veins in shale.	40°52'	117°57'
62. Drag Ore. Scheelite in calcite veins in shaly limestone.	40°34'	117°28'
63. True American, Scheelite in 4 thin lenses of silicified limestone cut by many mineralized quartz veins.	40°26'	117°28'
64. Dixie. Scheelite with silver minerals in calcite veins.	40°05'	117°49'
65. Gold Acres. Scheelite in tactite.	40°15'	116°45'
66. Mill Gulch. A little scheelite in gold placers.	40°19'	116°41'

66a. Black Rock. Tungsten-bearing manganese oxide veins; in andesite.	40°40'	116°16'
67. Owl (Valley View). Scheelite in tactite.	40°21'	115°29'
68. Atlantic claim, Spruce Mountain district. Scheelite at contact of limestone and quartz monzonite dike.	40°34'	114°48'
69. Silver Zone Pass. Scheelite in quartz veins.	40°55'	114°16'
70. Epidote. Scheelite in tactite.	44°19'	114°11'
71. Kinsley district. Scheelite in tactite.	40°08'	114°20'
72. Keller-Stuart. Scheelite in tactite.	39°44'	119°32'
73. Wadsworth. Scheelite in tactite.	39°36'	119°21'
74. Pearl Harbor. Scheelite in tactite.	39°20'	119°28'
75. Churchill Butte. Scheelite in tactite.	39°21'	119°17'
76. Capitol. Scheelite in tactite.	39°12'	119°46'
77. Dixon. Tungsten-bearing manganese oxides in rhyolite tuff.	39°10'	119°37'
78. McTarnahan Hill. Scheelite in tactite.	39°06'	119°40'
79. Iowa Canyon. Scheelite in tactite.	39°51'	116°56'
80. Grass Valley. Scheelite in tactite.	39°42'	116°47'
81. T-Bone. Scheelite in tactite.	39°22'	117°03'
82. Black Rock (Angelo Belli mine). Scheelite in quartz-calcite vein, in dolomitic limestone.	39°26'	116°10'
83. Bald Mountain (Dees and Munter). Scheelite in tactite.	39°57'	115°33'
84. Taylor mine, Ely district. Scheelite in copper ore in shale.	39°16'	115°01'
85. Little Flower. Scheelite with oxidized silver, lead, and manganese minerals in a fault between quartzite and limestone.	39°44'	114°35'
86. Kolchek mine (Cleve Creek). Scheelite in quartz.	39°14'	114°37'
87. Grand View. Scheelite in silicified limestone, with veinlet of quartz, calcite, and galena.	39°22'	114°18'
88. Sacramento Pass. Scheelite and quartz in limestone.	39°10'	114°22'
89. Black Horse. Scheelite in quartz veins.	39°09'	114°19'

NEVADA (cont'd.)

90. Dirty Shirt. Scheelite in quartz vein in Prospect Mountain quartzite. 39°04' 114°24'

91. Black Mule. Scheelite in a pipe-like ore shoot in limestone bed of Pioche shale. 39°03' 114°25'

92. Lane Tilford. Scheelite in quartz veins in granite. 39°03' 114°22'

93. Taylor. Scheelite in quartz-calcite gangue in limestone. 38°54' 114°15'

94. Snake Creek (Bonita). Scheelite in narrow quartz veins in Cambrian shale and quartzite. 38°54' 114°10'

95. Lexington Canyon (Bonanzy). Scheelite in calcite veins in limestone. 38°51' 114°12'

96. Deer Trail (Georgie W.). Huebnerite and some scheelite in quartz vein in Prospect Mountain quartzite. 38°43' 114°28'

97. Cinch. Scheelite in brecciated quartz. 38°36' 114°41'

97a. Hulse. Tungsten-bearing psilomelane; in vein. Hewett and Fleischer, 1960. 38°24' 114°19'

98. Coleville area (Sweetwater Mining Co.). Scheelite in tactite. 38°37' 119°25'

99. Cowboy. Scheelite in tactite. 38°38' 119°10'

100. Lucky Four. Scheelite in tactite. 38°48' 118°36'

101. Midnight (Bell Flat). 39°06' 118°12'

102. Pamlico (Silver Star). Scheelite in tactite. 38°30' 118°29'

103. Bataan, Mabel, and Mollie. Scheelite in tactite. 38°27' 118°19'

104. Christine. Scheelite with oxidized silver, lead, and copper minerals in a vein in marble and lime silicate rock. 38°28' 118°01'

105. Black Jack (Sodaville). Small veins in tungsten-bearing manganese oxides. 38°21' 118°06'

106. Marietta district. Scheelite in tactite; scheelite-wolframite vein with beryl. 38°13' 118°26'

107. Queen. Scheelite in tactite. 37°57' 118°25'

108. Half Moon and Rock Hill. Scheelite in tactite and hornfels. 38°10' 117°58'

109. Ellsworth. Huebnerite and some scheelite in quartz veins. Type locality for mineral huebnerite. 38°58' 117°46'

110. Betty O'Neil. Scheelite in quartz vein, with leuchtenbergite. Kerr and Callaghan, 1935. 38°52' 117°53'

NEVADA (cont'd.)

111. Scheebar. Scheelite and cinnabar in limestone. Bailey and Phoenix, 1944. 38°49' 117°49'

112. Millett. Scheelite in tactite. 39°01' 117°14'

113. Round Mountain. Huebnerite, flurite, muscovite, and a little tetrahedrite in narrow quartz veins in granite. 38°41' 117°03'

114. Spanish Spring. Huebnerite in quartz veins cutting granite. 38°28' 117°01'

115. Tonopah Pegleg. Scheelite in tactite. 38°10' 117°13'

116. Tonopah district. Small amounts of wolframite and scheelite in silver-bearing veins. Bastin and Laney, 1918. 38°04' 117°13'

117. Sylvania district. Huebnerite in 2 veins; scheelite in tactite. 37°25' 117°45'

118. Grand Junction. Scheelite and wolframite in vein in quartzite. 36°48' 116°44'

119. Comet. Wolframite with galena, sphalerite, pyrite, and plumbojarosite in quartz vein. Westgate and Knopf, 1932. 37°53' 114°37'

120. Mesquite (Deer Trail; Cabin Canyon, Silver Leaf). Scheelite in amphibole-rich layers or in quartz veins and pegmatite, in Precambrian schist and gneiss. 36°38' 114°05'

NEW HAMPSHIRE

1. Jackson. Wolframite and cassiterite in veins. Sanford and Stone, 1914. 44°09' 71°11'

2. North Groton. Wolframite in pegmatite. Hess, 1921. 43°45' 71°51'

NEW MEXICO

1. Elizabethtown. Minor ferberite in veins near border of intrusive porphyry body. Ray and Smith, 1941. 36°36' 105°15'

2. Picuris district. Wolframite in quartz veins. Lasky and Wootton, 1933. 36°10' 105°41'

3. El Porvenir district. Scheelite and ferberite in small amounts with molybdenite in quartz-pegmatite. Lasky and Wootton, 1933. 35°44' 105°25'

4. Cunningham Hill deposits. Scheelite in fractures in breccia of quartz monzonite and sandstone. Anderson, 1954. 35°20' 106°06'

5. San Pedro mine. Scheelite in 35°14' 106°11'

NEW MEXICO (cont'd.)

tactite in old copper mines. Anderson, 1954; Smith, Cooper, and others, 1945.

6. White Oaks district. Wolframite in quartz veins in gold mines in monzonite intrusive body. Ellis, 1929. 33°45' 105°45'

6a. Reinhart. Tungsten-bearing psilomelane veins; in Tertiary agglomerate. Hewett and Fleischer, 1960. 33°53' 107°29'

6b. Cliffside. Tungsten-bearing hollandite; in Tertiary rhyolite. Hewett and Fleischer, 1960. 34°01' 107°08'

6c. Carretas. Tungsten-bearing coronadite; in Tertiary rhyolite porphyry. Hewett and Fleischer, 1960. 33°59' 106°53'

7. Grandview Canyon. Scheelite with bismuth minerals in quartz near granite contact. Lasky, 1932. 32°59' 106°34'

8. Merrimac mine. Scheelite in tactite worked principally for zinc. Dale and McKinney, 1959. 32°27' 106°26'

8a. Rockhouse. Tungsten-bearing psilomelane; veins in limestone. Hewett and Fleischer, 1960. 33°06' 107°15'

8b. Manganese Hill. Tungsten-bearing psilomelane; vein in limestone. Hewett and Fleischer, 1960. 32°52' 107°17'

8c. Jones-Reiland. Tungsten-bearing psilomelane; vein in limestone. Hewett and Fleischer, 1960. 32°50' 107°15'

8d. Velarde. Tungsten-bearing psilomelane; vein in Tertiary rhyolite. Hewett and Fleischer, 1960. 32°43' 107°10'

9. Iron Mountain district. Scheelite in tactite, some of which contains helvite. Jahns, 1944. 33°28' 107°38'

10. Silver Queen group. Sparse scheelite in fault zone in volcanic rocks and limestone. Dale and McKinney, 1959. 32°55' 107°45'

11. Berenda Creek prospects. Scheelite in quartz veins. 32°47' 107°44'

12. Central district. Tungsten in oxidized iron-manganese veins. Dale and McKinney, 1959. 32°49' 108°07'

13. Bullard Peak area. Scheelite in pegmatite and related quartz veins in gneiss and schist. Dale and McKinney, 1959. 32°40' 108°30'

14. Rice-Graves deposit. Scheelite in silicified amphibolite xenolith in granite. Dale and McKinney, 1959. 32°38' 108°33'

NEW MEXICO (cont'd.)

15. Bounds Ranch prospect. Scheelite in tactite. 32°23' 108°26'

16. Victorio Mountains. Minor scheelite in thin tactite bed, and some wolframite in quartz veins. 32°11' 108°06'

17. Granite Gap. Scheelite in tactite. 32°05' 108°58'

18. Little Hatchet Mountains. Minor scheelite in quartz-sulfide veins in metamorphosed sedimentary rocks. Lasky, 1947. 31°55' 108°26'

19. Apache group. Some tungsten in copper-bearing tactite. 31°44' 108°19'

20. Eagle Point deposits. Scheelite in tactite at limestone-granite contact. Lasky, 1947. 31°46' 108°26'

21. Hoggett manganese deposits. Tungsten in psilomelane ore in veins cutting rhyolite porphyry, in grades ranging up to 1 percent WO_3. 31°44' 108°42'

21a. Peace. Tungsten-bearing psilomelane, hollandite, and cryptomelane; vein in Tertiary rhyolite porphyry. Hewett and Fleischer, 1960. 31°36' 108°47'

NORTH CAROLINA

1. Hamme district. Huebnerite and some scheelite in quartz veins in granite and schist. Espenshade, 1947; Sweet, 1954; Bishop, 1948. 36°31' 78°28'

2. Cline mine. Some scheelite with chalcopyrite, hematite, and siderite in a quartz vein. Hickman, 1948. 35°29' 80°29'

3. Phoenix mine (includes Furniss). Some scheelite in a quartz vein formerly mined for gold. Jones and Peyton, 1950; Bell, 1960. 35°20' 80°30'

OREGON

1. Metzger property. Sparsely disseminated molybdenite and some scheelite exposed in an open cut on contact between marble and granodiorite. Wolfe and White, 1951. 45°20' 117°23'

1a. Le Gore prospect. Molybdenite, pyrite, chalcopyrite, minor sphalerite, traces of scheelite in tactite a few inches to 20 feet wide, between granodiorite and limestone. Smith, Allen, and others, 1941; Wolfe and White, 1951. 45°19' 117°23'

2. Wilmot property (Matterhorn 45°16' 117°20'

OREGON (cont'd.)

group). Sparsely disseminated molybdenite, pyrite, chalcopyrite, and scheelite in tactite composed of garnet, epidote, calcite, and quartz. Smith, Allen, and others, 1941; Wolfe and White, 1951.

3. Frasier. Some scheelite and molybdenite in garnet tactite surrounded by quartz diorite. Hess and Larsen, 1922; Wolfe and White, 1951. 45°10' 117°18'

4. Davis tungsten prospect. Trace of scheelite in minute fractures in coarsely crystalline white limestone near contact with greenstone. Wolfe and White, 1951. 45°00' 118°07'

5. Cliff and Flagstaff mines. Some scheelite in gold-bearing quartz veins in altered gabbro and hornblende diorite. Gilluly, 1937; Lindgren, 1901; Wolfe and White, 1951. 44°51' 117°43'

6. Pleasant Valley. Stephens group. Tungsten in manganese oxides in argillite. Gilluly, 1937; Pardee, 1922. 44°43' 117°37'

7. Chicken Creek prospects. Scheelite (Weatherby). Tungsten. Chicken Creek (Hallock). Meager scheelite in quartz veins worked for gold, and in placers. Parks and Swartley, 1916; Wolfe and White, 1951. 44°33' 117°20'
44°31' 117°20'
44°34' 117°17'

8. Sylvanite mine. Scheelite in gold-quartz vein with a little galena and much pyrite. Parks and Swartley, 1916; Wolfe and White, 1951. 42°28' 122°02'

9. Lady Slipper, Lucky Strike, and Blue Star. Scheelite disseminated in metamorphosed limey layers in metavolcanic rocks along contact with intrusives. Wolfe and White, 1951. 42°20' 123°09'

10. Rattlesnake and Mocks Gulch prospects. Scheelite and cinnabar in metavolcanic rocks. Wolfe and White, 1951. 42°07' 123°12'

11. Mattern prospect. Scheelite in tactite. Wolfe and White, 1951. 42°09' 122°47'

12. Bratcher mine. Scheelite in tactite enclosed in quartz diorite. Wolfe and White, 1951. 42°06' 122°47'

PENNSYLVANIA

1. Hoffman's quarry. Scheelite in hornblende gneiss. Bascom, Clark, Darton, and others, 1909. 40°01' 75°05'

RHODE ISLAND

1. Copper Mine Hill. Scattered scheelite in schist and limestone, associated with magnetite, garnet, tremolite, chlorite, epidote, chalcopyrite, and molybdenite. Quinn and Young, 1937; Quinn and others, 1948. 42°00' 71°27'

SOUTH DAKOTA

1. Lead district. Wolframite-huebnerite, and minor scheelite, in small, high-grade replacement bodies in dolomite of the Deadwood (Cambrian) formation, a short distance above the Precambrian. Also in silicified rhyolite. Connolly and O'Harra, 1929; Hess, 1908; Irving, 1901; and Runner and Hartmann, 1918. 44°20' 103°42'

2. Hill City district. Wolframite in pegmatites in quartz veins. Connolly and O'Harra, 1929; Hess, 1908; Runner and Hartmann, 1918. 43°55' 103°34'

3. Spokane district. Wolframite and scheelite in quartz veins. Runner and Hartmann, 1918. 43°51' 103°25'

TEXAS

1. Franklin Mountains. Wolframite with tin in quartz and greisen. Weed, 1901. 31°56' 106°28'

2. Van Horn region. Wolframite with iron oxides in quartz. Richardson, 1914. 31°26' 104°53'

2a. Chispa. Tungsten-bearing psilomelane. Hewett and Fleischer, 1960. 31°43' 104°47'

3. Llano region. Scheelite in tactite. Paige, 1912; Barnes and others, 1942. 30°42' 98°43'

UTAH

1. Grouse Creek Range (Lone Pine and vicinity). Scheelite in tactite. 41°32' 113°47'

2. Alta district. Tungsten as tungstenite, stolzite, and scheelite in sulfide veins; as scheelite in sulfide replacement bodies in limestone; as scheelite in tactite; and as scheelite in pyrite-sericite veinlets on joints and other fractures. Calkins and Butler, 1943; Crawford and Buranek, 1944; Sharp, 1958. 40°35' 111°38'

3. American Fork district. Scheelite in tactite. Calkins and Butler, 1943; Crawford and Buranek, 1944. 40°30' 111°41'

4. Stardust and vicinity. Scheelite 40°12' 113°52'

UTAH (cont'd.)

in tactite. Nolan, 1935.

5. Clifton area (Reaper and vicinity). Scheelite in pegmatitic pipes in quartz monzonite; also in minor bodies in tactite and in quartz veins, some of which contain gold and bismuth, and or copper. Nolan, 1935. 40°07' 113°50'

6. Hornet-Apex deposits. Scheelite in fractures in amphibolite. 39°46' 113°54'

7. West Tintic district. Scheelite in limonitic veins in roof pendant in granite, and to minor extent in tactite. Hobbs, 1945a; Stringham, 1942; Wilson, 1950. 39°51' 112°25'

8. House Range deposits. Scheelite in tactite at several places around rim of granite body intruded into limestone. Gehman, 1958. 39°12' 113°24'

9. Ryan Creek prospect. Some scheelite with fluorite on fault between granite and sandstone. Dane, 1935. 38°53' 109°06'

10. Louise deposit. Huebnerite in quartz stringers in prophyry. Butler and others, 1920. 38°24' 112°33'

11. Mineral Mountains deposits (Daily Metal and others). Scheelite in tactite; several deposits or occurrences. Hobbs, 1945b. 38°21' 112°48'

12. Milford deposits (Old Hickory and others). Scheelite in tactite, in part in deposits worked earlier for copper and iron. Hobbs, 1945b. 38°27' 113°04'

13. Cupric Mine. Scheelite in tactite at places in old copper mine. Hobbs, 1945b. 38°28' 113°19'

14. Beaver Dam Mountains. Scheelite in gneiss. 37°09' 113°53'

VIRGINIA

1. Irish Creek. Some wolframite and scheelite in tin deposits. Ferguson, 1918; Koschmann and others, 1942. 37°52' 79°13'

WASHINGTON

1. Tungsten Mines, Inc. (Washington Metals). Scheelite and wolframite in a quartz vein in granite. Culver and Broughton , 1945; Huntting, 1956. 48°15' 118°04'

2. Germania district. Wolframite in quartz veins. Culver and Broughton, 1945; Huntting, 1956. 48°01' 118°06'

3. Blue Grouse Mountain area. (Deer Lake Tungsten Co., Tungsten King, Harrison and others). Huebnerite in quartz veins in argillite and quartzite. Culver and Broughton, 1945; Huntting, 1956. 48°06' 117°30'

4. Red Mountain (Royal Development Co.). A little scheelite with pyrrhotite and chalcopyrite in a brecciated zone between gneiss and diorite. Culver and Broughton, 1945. 48°06' 120°56'

5. Holden mine. Some scheelite in garnet-epidote rock along footwall of sulfide zone. Culver and Broughton, 1945. 48°12' 120°46'

6. New Deal (Antimony Queen; Dixie Queen; Ready; Silver Seal). Stibnite, pyrite, and small amounts of scheelite in quartz veins. Culver and Broughton, 1945; Huntting, 1956. 48°12' 120°11'

7. Chelan. A few scheelite crystals in 2 quartz veins. Culver and Broughton, 1945. 48°06' 120°06'

8. Methow, Golden Eagle, Highland Mining and Milling Co., Holden-Campbell, New London, Washington, Oregon, and Idaho mines and claims. Scheelite with pyrite, chalcopyrite, gold, and silver in quartz veins. Culver and Broughton, 1945. 48°06' 120°02'

9. Seneff (Dutch John), Sherwood, and Lodge. Scheelite in tactite. 48°12' 120°03'

10. Minnie. Scheelite sparsely scattered through 3-foot quartz vein. Culver and Broughton, 1945. 48°16' 120°03'

11. Hatfield (Cathedral Peak, Tungsten Mountain, Tungsten Peak, Wolframite Mountains, Zellweger and others). Wolframite, some scheelite, and pyrite, irregularly distributed in a quartz vein 1 to 18 inches thick at intervals of about 1.5 miles. 48°58' 120°07'

12. Four Metals and Kaaba. Scheelite irregularly distributed in quartz veins with galena, chalcopyrite, and sphalerite. 48°57' 119°39'

13. Forty-ninth parallel, O. K. Copper, and Golden Chariot. Scheelite, molybdenite, chalcopyrite, and pyrite in quartz veins. Culver and Broughton, 1945. 48°59' 119°29'

14. Moncosilgo. Occasional scheelite in fractures in diorite lined with copper, cuprite, chalcopyrite, molybdenite, and pyrite. 48°57' 119°27'

Culver and Broughton, 1945.

15. Starr. Trace scheelite with pyrite and molybdenite in quartz lenses. Culver and Broughton, 1945. 48°43' 119°35'

16. Gubser, Lady of the Lake, and Silver King (Lone Star). Scheelite with pyrite, galena, and sphalerite in quartz veins. Culver and Broughton, 1945. 48°34' 119°45'

17. Tonasket. Scattered huebnerite in a narrow quartz vein. Handy, 1916. 48°38' 119°30'

18. Monse. Scheelite in garnet tactite. Huntting, 1956. 48°18' 119°35'

19. Crawfish Lake (Windiate-Auberton property). *Scheelite in* tactite. 48°29' 119°09'

20. Strawberry Lake. Some scheelite in magnetite-pyrite-garnet rock. Culver and Broughton, 1945. 48°58' 119°05'

21. Magnetic (Neutral) and Roosevelt. Scheelite in tactite. Culver and Broughton, 1945. 48°58' 118°59'

22. Crystal Butte. Scheelite with pyrite, pyrrhotite, magnetite, and chalcopyrite in altered quartzite and argillite. Culver and Broughton, 1945. 48°55' 119°00'

23. Kelly. Scheelite in tactite. 48°49' 118°50'

24. Morning Star. Sparse scheelite in quartz vein with gold-bearing pyrite and free gold. Culver and Broughton, 1945. 48°58' 118°31'

25. Big Iron. Minor scheelite and chalcopyrite, with abundant pyrite, pyrrhotite, and magnetite, in altered quartzite and limestone. Bancroft, 1914; Culver and Broughton, 1945; Weaver, 1911. 48°57' 118°03'

26. Surprise. Scheelite in tactite. 48°39' 118°29'

27. Addison (Pacific Mutual Silver and Lead Co.). Wolframite and a little scheelite with chalcopyrite, galena, sphalerite, and other minerals in quartz vein. Culver and Broughton, 1945; Huntting, 1956; Patty and Glover, 1921. 48°06' 118°35'

28. Gwin. A little wolframite in 2 quartz veins containing pyrite and freibergite and mined for silver. Culver and Broughton 48°18' 118°14'

1945; Huntting, 1956; Pardee, 1918.

29. Silver Leaf and Orion. A little scheelite in narrow quartz veins. Culver and Broughton, 1945; Pardee, 1918. 48°14' 118°12'

30. Black Horse (Stockwell). Wolframite in narrow quartz vein. Patty and Glover, 1921. 48°13' 118°08'

31. Daisy-Tempest (Silverado Mining Co.). A little scheelite and chalcopyrite, with more abundant sphalerite, galena, arsenopyrite, and pyrite in quartz veins. 48°23' 118°05'

32. Red Top and Boundary Silver and Lead (Lucile). Scheelite in quartz stringers and in Pb-Zn ore. 48°56' 117°34'

33. Magma. Scheelite and molybdenite in garnet-diopside rock. 48°46' 117°38'

34. Little Noisy. Scheelite with pyrite and a little sphalerite in vein quartz. 48°48' 117°16'

35. June-Echo (Western Molybdenum Co.). Scheelite, molybdenite, pyrite, chalcopyrite in a quartz vein in marble and monzonite. 48°18' 117°41'

36. Mint (Iowa). Small amounts of scheelite, powellite, and sulfides in quartz veins cutting quartz diorite. Culver and Broughton 1945. 47°59' 121°30'

37. Kromona. Trace of scheelite with abundant sulfides in narrow quartz veins in quartz diorite. Culver and Broughton, 1945. 47°55' 121°36'

38. Culver Gulch. A little scheelite, gold, pyrite, arsenopyrite, chalcopyrite, galena, and stibnite in 3 veins composed largely of quartz, calcite, and talc. Culver and Broughton, 1945; Weaver, 1911. 47°26' 120°40'

39. Silver Hill. Scheelite and wolframite in quartz pegmatite and 8 small quartz veins; associated with cassiterite pegmatite. Page, 1942. 47°33' 117°20'

40. Copper Mining Co. (Cascadia, Northwest Tungsten Co.). Scheelite, quartz, chalcopyrite, arsenopyrite, and a little molybdenite in shear zone in granodiorite. 46°48' 121°21'

Locality Index (cont'd.)

WYOMING

1. Nigger Hill tin deposits. Wolframite in tin-bearing pegmatitic granite. Darton, 1905; Irving, 1904.	44°22'	104°04'
2. Mosaic claim. Scheelite and a little wolframite in sulfide and gold-bearing quartz streaks in gneiss. Osterwald and Osterwald, 1952.	44°38'	107°19'
3. Sunlight District. Wolframite in pyritic silver-quartz vein. Parsons, 1937.	44°39'	109°44'
4. Durner and Keys deposit. Scheelite in massive quartz lenses in schist. Osterwald and Osterwald, 1952.	43°29'	107°14'
5. Copper Mountain deposits. Scheelite in Precambrian calc-silicate gneiss. Frey and Wilson, 1950; Hobbs, 1943.	43°25'	108°01'
6. Brantford (Mormon Canyon) prospect. Scheelite in Precambrian calc-silicate gneiss. Osterwald and Osterwald, 1952; Spencer, 1916.	42°44'	105°56'
7. Strong mine. Scheelite in copper-quartz-feldspar vein in anorthosite. Newhouse and Hagner, 1957.	41°23'	105°22'
8. Atlantic City deposits. Scheelite in gold-quartz veins in Precambrian gneiss. Spencer, 1916.	42°32'	108°43'
9. South Pass mines. Scheelite in quartz veinlets in Precambrian gneiss. Armstrong, 1945.	42°28'	108°49'
10. Lewiston District. Scheelite in gold-quartz veins. Osterwald and Osterwald, 1952.	42°26'	108°29'
11. Burr Claim and others. Scheelite in gold-quartz veins. Spencer, 1916.	42°21'	108°37'

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