DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

TO ACCOMPANY MAP MR-60

FLUORITE IN THE UNITED STATES
(Exclusive of Hawaii)

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INTRODUCTION

The accompanying map shows fluorspar deposits and many minor occurrences of the mineral fluorite in the conterminous United States and Alaska. Fluorspar (an ore) is composed of fluorite plus varying kinds and amounts of impurities and is graded in terms of its CaF_2 (fluorite) content with deductions for undesirable impurities such as silica, $CaCO_3$, sulfide or total sulfur, iron, lead, zinc, and phosphorus. Fluorite deposits indicated on this map are those which are past, present, or possible future sources of commercial fluorspar. Six types of deposits, distinguished by the shapes of the symbols, are recognized. Associated metals or minerals are shown by tick marks on the fluorite deposit symbols. Minor fluorite occurrences of all types are noted with an X. Four size categories of deposits, reflected by the symbol size, indicate the relative importance of the deposits.

The six types of deposits are: (1) veins and simple fissure fillings, (2) breccia pipes and stockworks of veins and veinlets, (3) mantos, (4) disseminated deposits where fluorite is disseminated through igneous plutonic, hypabyssal, and extrusive rocks, volcaniclastic sediments, marine carbonate sediments, evaporite sequences, or large masses of altered and mineralized rock, (5) skarn, tactites, greisens, and other deposits within contact zones, and (6) pegmatites including carbonatite veins.

Both past production and estimations of proved, probable, and possible reserves have been combined to assign the deposits, groups of closely spaced deposits, or districts on this map to one of four general size categories. The cutoffs of 50,000, 250,000, and 2,000,000 tons CaF_2 for delimiting these four sizes indicate only order of magnitude with no pretense of precision. Deposits for which insufficient data are available to estimate size are shown as being of the smallest category. The map symbols do not distinguish between individual deposits, groups of deposits, or districts. In many places there are many more closely spaced deposits than plotting at the map scale will allow with clarity. Locations of deposits or localities are given to the nearest minute, where possible, in the text. Areas on the map enclosed by a dashed line represent large districts or groups of mines and occurrences, and approximate limits only are given in the text. Individual symbols representing districts or groups of mines and occurrences are positioned either for the principal mine in the area or for the approximate center of the area.

The more important deposits or localities are numbered consecutively in each State and are identified in the index. Minor fluorite occurrences are not numbered. Both published and unpublished sources of data were used in compiling the map. References given are the latest or most comprehensive reports that discuss the fluorspar or fluorite of the deposit or locality.

Geology

Fluorite is the major fluorine-bearing mineral in the earth's crust and until recently almost the only commercial source of fluorine (Worl and others, 1973). However, a resource of increasing importance is the byproduct recovery of fluorine during processing of phosphate rock; fluorapatite ($Ca_5(PO_4,CO_3)_3F$) is the major component of phosphate rock. Other fluorine minerals of possible future significance are topaz ($Al_2SiO_4(F,OH)_2$), cryolite (Na_3AlF_6), sellaite (MgF_2), and villiaumite (NaF). Fluorspar deposits and fluorite occurrences only are noted on this map.

Major fluorspar production in the United States has been from veins and manto deposits in limestones of the Illinois-Kentucky district. This district is one of the major fluorspar-producing regions of the world and at present (1972) is accounting for about 80 percent of the United States production. However, the United States is currently producing only about 20 percent of the fluorspar it consumes. The other major U.S. fluorspar areas are in the Western States, where production has been chiefly from hydrothermal vein and breccia deposits in limestones, granitic rocks, and volcanic rocks.

LOCALITY INDEX

Mining district or locality	Lat. N.	Long. W.
ALABAMA		
1. Gilley deposit. Fluorite and barite disseminations in Paleozoic limestone. Van Alstine and Sweeney (1968).	34°00′	85°45′
2. Rockford area. Fluorite and topaz in tin greisen and pegmatites.	32°55′	86°00′
3. Sinks Proper area. Fluorite and barite disseminations in Paleozoic limestone. Van Alstine and Sweeney (1968).	33°05′	87°00′
ALASKA		
1. Lost River area. Veins, pipes, stockworks, and tactite localized in shattered limestone beneath thrust faults. Sainsbury (1969).	65°25′ to 65°35′	166°00′ to 168°00′
2. Sinuk River area. Pervasive barite, fluorite, and sulfide mineralization of marble along thrust faults. Brobst and others (1971).	64°30′	166°00′
3. Ear Mountain. Fluorite in tin greisen. Cobb (1964)	66°00′	166°00′
4. Darby Mountains alkalic province. Fluorite in small amounts is widespread where alkalic rocks intrude limestones. Miller (1971).	64°30′ to 66°30′	161°00′ to 162°00′

Mining district or locality	Lat. N.	Long. W.
ALASKA—Continued		
5. Zarembo Island. Crustified and banded fluorite and chalcedonic quartz in narrow veins and as breccia cement in Tertiary volcanic rocks. Cobb (1964).	56°20′	133°00′
6. Bokan Mountain. Small amounts of fluorite associated with uranium minerals.	54°48′	132°30′
7. Groundhog, Glacier, and Berg basins. Fluorite gangue in quartz sulfide veins. Cobb (1964).	56°00′	131°40′
8. Mt. Michelsen area. Fluorspar veins and veinlets in altered rock and greisens in and near a large batholith.	69°36′	143°40′
9. Walker Fork area. Fluorspar veinlets in granodiorite.	64°00′	141°35′
10. Interior Alaska tin belt. Numerous fluorite occurrences in float and bedrock, associated with tin deposits and tin-bearing granites.	63°30′ to 66°00′	141°00′ to 162°00′
ARIZONA		
1. Chiricahua Mountains. Fluorite in quartz veins. Van Alstine and Moore (1969).	31°56′	109°12′
2. Whetstone Mountains. Coarse-grained banded fluorite and quartz veins in Precambrian schist. Van Alstine and Moore (1969).	31°51′	110°21′
3. Little Dragoon Mountains. Fluorite in quartz-barite veins with beryllium, tungsten, copper, zinc, and lead. Van Alstine and Moore (1969).	32°03′	110°04′
4. Castle Dome copper district. Banded and vuggy fluorite-barite-calcite-quartz veins in quartz monzonite. Van Alstine and Moore (1969).	33°23′	110°57′
5. Stanley Butte. Irregular seams of quartz, fluorite, and sulfides in andesite breccia and trachyte. Van Alstine and Moore (1969).	33°03′	110°20′
6. Aravaipa district. Fluorite, chalcedonic quartz, pyrite, and lead, zinc, and copper sulfides occur as stringers, pods, and veins in an elongate silicified breccia zone cutting altered intrusive rhyolite and limestone. Fluorite also occurs in tactite deposits in association with the same minerals. Van Alstine and Moore (1969).	32°57′	110°21′
7. Spar deposit. Fluorspar vein in volcanic rocks. Van Alstine and Moore (1969).	32°56′	110°08′
8. Clark district. Minor fluorite in barite-calcite veins with gold and silver. Van Alstine and Moore (1969).	32°44′	110°09′
9. Duncan district (includes Fourth of July mine). Several small veins and lenses of fluorspar in brecciated zones in basalt and andesite. Calcite, barite, chalcedonic quartz, quartz, and manganese oxides are associated with the fluorite. Van Alstine and Moore (1969).	32°51′	109°03′
10. Boriana mine. Purple fluorite in tungsten-bearing quartz veins. Van Alstine and Moore (1969).	34°56′	113°55′
11. Silver Bell Mountains. Abundant fluorite and barite in lead-silver-gold veins in limestone. Van Alstine and Moore (1969).	32°26′	111°32′
12. Sierrita Mountains. Quartz-barite-fluorite veins in Precambrian schist. Mineralization is associated with rhyolite dikes. Van Alstine and Moore (1969).	31°55′	111°13′
13. McCloud Mountains. No data.	34°25′	112°59′
14. Harquahala Mountains. Veins and mantos of fluorite, barite, quartz, black calcite, manganese oxides, and calcite in gneiss, schist, limestone, and agglomerate. Van Alstine and Moore (1969).	33°45′	113°19′
15. Abe Lincoln mine area. Several veins containing fluorite, calcite, black calcite, barite, quartz, manganese oxides, pyrite, galena, chalcopyrite, and uranium minerals. The veins cut sandstone, schist, gneiss, granite, and porphyry dikes. Van Alstine and Moore (1969).	34°03′	112°31′
16. Bouse district. Minor fluorite, barite, calcite, black calcite, and quartz in manganese oxide veins cutting agglomerate, conglomerate, and metamorphic rocks. Van Alstine and Moore (1969).	33°50′	114°02′
17. Trigo Mountains. Fluorite-calcite-manganese oxide-quartz-barite-black calcite veins with sulfides in rhyolite flows and Precambrian schist. Van Alstine and Moore (1969).	33°07′	114°35′
18. Castle Dome lead district. Banded and crustified fluorite-barite-quartz-calcite veins associated with lead-silver veins. Van Alstine and Moore (1969).	33°02′	114°10′
19. Tonto Basin. Fluorite-quartz-muscovite veins. Van Alstine and Moore (1969).	33°52′	111°11′
20. Congress Junction pegmatites. Van Alstine and Moore (1969).	34°13′	112°51′
21. Bagdad area pegmatites. Fluorite in dikes and quartz veins. Van Alstine and Moore (1969).	34°35′	113°14′
22. Vulture Mountains (Wickenburg area). Banded and crustified fluorite, calcite, barite, manganese oxides, black calcite, and chalcedonic quartz as fissure filling and breccia cement. Wallrocks are monzonite and basalt. Van Alstine and Moore (1969).	33°53′	112°44′
ARKANSAS		
1. Arkansas alkalic rock province. Fluorine-bearing syenites and related Cretaceous alkalic igneous rocks which include many small occurrences of fluorite as stockworks or disseminations. Erickson and Blade (1963).	34°20′ to 34°50′	92°06′ to 93°08′

Mining district or locality	Lat. N.	Long. W.
CALIFORNIA		
1. Clark Mountains district. Fluorite and sericite replacement deposits in Paleozoic dolomite. Elevatorski (1968).	35°34′	115°34′
2. Ivanpah Mountains. Fluorspar veins in partly sericitized quartz monzonite porphyry. Crosby and Hoffman (1951).	35°18′	115°31′
3. Live Oak mine. Fluorite-calcite-sulfide vein along edge of alaskite dike cutting granite and limestone. Crosby and Hoffman (1951).	35°17′	115°16′
4. Nipton deposit (also in Nevada). Several small fluorite veins in gneiss and quartzite associated with iron and copper oxides. Crosby and Hoffman (1951).	35°28′	115°12′
5. Providence Mountains. Fluorite-calcite-quartz vein in fine-grained granite with minor amounts of gold and uranium. Crosby and Hoffman (1951).	34°50′	115°33′
6. Palen Pass deposit. Quartz-fluorite-calcite-sulfide veins in monzonite Crosby and Hoffman (1951).	33°55′	115°05′
7. Red Bluff deposit. Fluorspar veins in quartzite and mica schist. Elevatorski (1968).	33°53′	114°52′
8. Orocopia deposit. Banded and crustified fluorite in fault fissures cutting quartz monzonite. Chesterman (1966).	33°38′	115°41′
9. Warm Springs mine. Fluorite and quartz in shear zones in Precambrian gneiss. Crosby and Hoffman (1951).	35°58′	116°56′
10. Afton Canyon district. Fluorite, quartz, calcite, siderite and manganese oxides in irregular veins and breccia zones in andesite and basalt flows. Some fluorite in vesicles in basalt. Elevatorski (1968).	34°59′	116°22′
11. White Mountain. Fluorite in small fissures in limestone and as disseminated crystals in dikelike epidote tactite bodies. Crosby and Hoffman (1951).	37°23′	118°09′
12. Mountain Pass district. Fluorite and bastnaesite (rare-earth fluorcarbonate) disseminated through Precambrian carbonatite. Olson and others (1954).	35°29′	115°31′
COLORADO		
1. Eldorado Springs deposit. Small pods and stringers of fluorite in Precambrian granite. Van Alstine (1964).	39°56′	105°20′
2. Evergreen district. Complex vein with sulfides and fluorite. Van Alstine (1964).	39°38′	105°19′
3. Jefferson area. Fluorite veins in Precambrian granite. Van Alstine (1964).	39°26′	105°48′
4. Buffalo deposit. Fluorite vein in granite with quartz and galena. Van Alstine (1964).	39°24′	105°17′
5. Bear Cat deposit. Van Alstine (1964).	39°13′	105°38′
6. Tarryall district. Fluorite veins in Precambrian granite. Van Alstine (1964).	39°06′	105°24′
7. C and S deposit. Van Alstine (1964).	39°11′	105°09′
8. Kyner deposit. Fluorite fissure veins and replacement bodies in granite. Van Alstine (1964).	38°59′	105°20′
9. Cripple Creek district. Fluorite gangue in gold deposits. Loughlin and Koschmann (1935).	38°45′	105°13′
10. St. Peters Dome district. Fissure veins of fluorite, barite, and sulfides in granite. Steven (1949).	38°44′	104°55′
11. Cotopaxi deposit. Fluorite veins in coarse-grained granite. Van Alstine (1964).	38°20′	105°42′
12. Beryl deposit. Fluorite-filled fracture in schist. Van Alstine (1964).	38°02′	105°40′
13. Antelope Creek deposit. Siliceous fluorspar vein in granite gneiss. Van Alstine (1964).	38°01′	105°12′
14. Poncha Springs district. Fissure veins and breccia filling in gneiss; mainly fluorite. Van Alstine (1964).	38°30′	106°04′
15. Browns Canyon district. Large fissure veins and breccia fillings in volcanics and quartz monzonite. Mainly fluorite, locally with manganese oxides. Van Alstine (1969).	38°39′	106°05′
16. Quartz Creek deposits. Van Alstine (1964).	38°36′	106°25′
17. Winfield area. Minor fluorite veins in Precambrian gneiss. Van Alstine (1964).	38°58′	106°26′
18. Vernal Mesa deposit. Small fluorite vein in Precambrian granite and gneiss. Van Alstine (1964).	38°34′	107°43′
19. Wagon Wheel Gap district. Fluorspar and barite veins in sheeted zone in rhyolitic tuff. Van Alstine (1964).	37°45′	106°49′
20. Red Mountain district. Fluorite gangue in base-metal veins. Van Alstine (1964).	37°55′	107°43′
21. Silverton district. Fluorite gangue in base-metal veins. Van Alstine (1964).	37°48′	107°38′
22. North Star deposit. Van Alstine (1964).	39°24′	106°07′
23. Dillon deposit. Banded columnar fluorspar as coatings on and veinlets in landslide fragments. Minor amounts of gold and silver. Tweto and others (1970).	39°41′	106°05′
24. Jamestown district. Fluorite stockworks and pipes in large breccia zones in Precambrian granite and Tertiary granodiorite. Goddard (1946).	40°07′	105°23′
25. Northgate district. Banded fluorite-filled fissure veins in Precambrian granitic rocks and fluorspar breccia cement in Tertiary volcaniclastic sediments. Steven (1960).	40°56′	106°17′
26. Crystal district. Banded fluorite filling fissure veins in Precambrian granite. Van Alstine (1964).	40°41′	106°35′

COLORADO—Continued

Mining district or locality	Lat. N.	Long. W.
27. Liberty deposit. Fluorite vein in quartzite. Van Alstine (1964).	37°52′	105°35′
28. Central City district. Fluorite in pyritic and telluride veins.	39°44′	105°36′
29. Poncha Pass deposit. Botryoidal masses of fluorspar mainly along fractures in quartzite Van Alstine (1964)	38°26′	106°05′
30. Unaweep district. Fluorite-filled fissure veins in limestone and sandstone. Van Alstine (1964).	38°52′	108°40′
31. Canon City deposit. Banded and crustified fluorspar veins in Paleozoic limestone.	38°37′	105°14′
32. South Platte pegmatite district. Fluorspar in pegmatite. Van Alstine (1964).	39°24′	105°13′
33. Teller and Crystal Peak pegmatites. Van Alstine (1964).	39°00′	105°18′
34. Cascade-Ute and Stove Mountain pegmatites. Van Alstine (1964).	38°47′	104°55′
35. Trout Creek Pass pegmatites. Van Alstine (1964).	38°49′	105°59′
36. Mt. Antero pegmatite district. Van Alstine (1964).	38°40′	106°13′
37. Pine Ridge pegmatite. Van Alstine (1964).	38°26′	105°47′
38. Climax molybdenum deposit. Fluorite and topaz associated with molybdenum mineralization.	39°22′	106°10′
39. Henderson molybdenum deposits. Fluorite and topaz associated with molybdenum mineralization.	39°45′	105°50′

CONNECTICUT

Mining district or locality	Lat. N.	Long. W.
1. Lanes mine. Fluorite vein with barite and sulfides. Sohon (1951).	41°20′	73°14′
2. Middletown pegmatite district. Fluorite in pegmatites. Sohon (1951).	41°33′	72°38′
3. Haddam Neck pegmatite. Fluorite in pegmatite.	41°30′	72°31′
4. Thomaston Dam area. Fluorite in veins with sulfides. Sohon (1951).	41°42′	73°04′
5. Trumbull and Long Hill areas. Fluorite, topaz, and scheelite in veins and tactite. Schairer (1931).	41°17′	73°14′
6. Willimantic area. Fluorite disseminations and veinlets in gneiss associated with topaz and scheelite. Schrader and others (1917).	41°43′	72°13′

IDAHO

Mining district or locality	Lat. N.	Long. W.
1. Challis and Bayhorse districts. Fluorspar as fissure veins and disseminations in Bayhorse Dolomite. Anderson and Van Alstine (1964).	44°28′	114°21′
2. Meyers Cove district. Banded and crustified fluorspar in veins and breccia zones in volcanics. Anderson and Van Alstine (1964).	44°51′	114°30′
3. Parker Mountain deposit. Fluorite and chalcedony in small gash veins in volcanics. Anderson and Van Alstine (1964).	44°36′	114°34′
4. Pungo Creek deposit. Minor fluorspar veins. Anderson and Van Alstine (1964).	44°46′	115°04′
5. Stanley area. Fluorite in shear zones cutting the Idaho batholith and in rhyolite dikes. Anderson and Van Alstine (1964).	44°15′	114°51′
6. Yankee Fork district. Veins composed of fluorite, chalcedony, calcite, feldspar, and sulfides. Anderson and Van Alstine (1964).	44°27′	114°46′
7. Alder Creek district. Minor fluorite in contact-zone deposits. Anderson and Van Alstine (1964).	43°52′	113°39′
8. Upper Lost River area (Alta district). Lenses of fluorite in quartz veins and disseminated fluorite in skarn. Anderson and Van Alstine (1964).	43°51′	114°15′
9. Big Squaw Creek deposit. Fluorite in hanging wall of wide quartz vein cutting gneiss pendant in Idaho batholith. Weis and others (1972).	45°28′	114°57′
10. Big Creek (Edwardsburg) deposit. Anderson and Van Alstine (1964).	45°09′	115°21′
11. Blue Wing district. Quartz, huebnerite, fluorite, orthoclase, rhodochrosite, scheelite, and sulfides in veins and replacement deposits. Anderson and Van Alstine (1964).	44°30′	113°44′

ILLINOIS

[NOTE: Areas 2-9 are subdivisions of well-known Illinois—Kentucky district; see inset map]

Mining district or locality	Lat. N.	Long. W.
1. Anna area. Fluorite in vugs and disseminations in Paleozoic carbonate rocks along and near Ste. Genevieve fault zone. Heyl (1968).	37°28′	89°15′
2. Cave in Rock district. Large fluorspar bedding replacement deposits in Mississippian limestones. These deposits are elongate in plan and concentric or wedge-shaped in cross section and extend outward from a central or marginal joint or fault. The ore is thickest at the main fracture and wedges out at the margins. Calcite, quartz, barite, chalcopyrite, pyrite, marcasite, witherite, strontianite, and locally abundant sphalerite and galena are the other minerals present. Grogan and Bradbury (1968).	37°28′ to 37°34′	88°07′ to 88°16′
3. Rosiclare district. Large fluorspar veins in northeastward-trending faults. Fluorite occurs largely as fissure fillings with some replacement of calcite and limestone. Calcite is the principal gangue with some quartz, pyrite, chalcopyrite, and barite. Sphalerite and galena occur in varying but generally small amounts. Grogan and Bradbury (1968).	37°24′ to 37°28′	88°19′ to 88°22′
4. Interstate group of veins. Heyl and others (1965).	37°24′ to 37°30′	88°20′ to 88°25′
5. Stewart group. Fluorspar veins in fault zone. Heyl and others (1965), Baxter and others (1967).	37°25′ to 37°31′	88°23′ to 88°27′

Mining district or locality	Lat. N.	Long. W.
ILLINOIS—Continued		
6. Hicks Dome group. Fluorite, barite, and rare-earth minerals in explosion breccias in dikes, pipes, and a possible cryptovolcano. Heyl and others (1965).	37°30′ to 37°36′	88°16′ to 88°25′
7. Empire group. Fluorspar veins and mantos. Heyl and others (1965), Baxter and others (1967).	37°29′ to 37°36′	88°24′ to 88°27′
8. Lusk Creek fault group. Fluorspar veins in fault zone. Heyl and others (1965).	37°28′ to 37°32′	88°28′ to 88°34′
9. Golconda area. Veins. Heyl and others (1965).	37°16′ to 37°23′	88°29′ to 88°34′
IOWA		
1. Volga deposit. Fluorite in Ordovician shale. Brown (1967).	42°48′	91°34′
KENTUCKY		
1. Central Kentucky district. Fissure veins and residual deposits of fluorite, barite, sphalerite, galena, and calcite in Middle Ordovician limestones. Commercial fluorite occurs only in central part of district. Jolly and Heyl (1964).	37°40′ to 38°06′	84°08′ to 84°54′
2. Cumberland River area. Fissure veins in Middle Ordovician limestone. Barite, fluorite, sphalerite, galena, and calcite. Jolly and Heyl (1964).	36°57′	85°04′
3. Elliott County kimberlites. Fluorite-bearing igneous breccia and tactite zones of Pennsylvanian or Permian age. Zartman and others (1967), Heyl (1968).	38°08′	82°58′
4. Western Kentucky district (subdivision of well-known Illinois-Kentucky district; see inset map). Permian or Mesozoic fissure veins, blankets, and residual "gravel spar" deposits of fluorite with or without sphalerite, barite, galena, and calcite. Trace (1954), Weller and Sutton (1951), Williams and Duncan (1955).	37°10′ to 37°28′	88°00′ to 88°30′
MAINE		
1. Paris pegmatites. Minor fluorite in complex pegmatites with associated beryllium and lithium minerals and topaz. Maine Geological Survey (1957).	44°15′	70°30′
2. Winslow area. Minor fluorite in tin veins. Morrill and others (1958).	44°32′	69°38′
3. Deer Isle area. Fluorite in zinc, lead, copper, silver, and gold veins. Morrill and Hinckley (1959).	44°13′	68°43′
4. Long Island area. Fluorite in tactites with associated molybdenum, beryllium, and tungsten. Morrill and Hinckley (1959).	44°20′	68°29′
MARYLAND		
1. Mountain View deposit (Cox mines). Mineralized breccia containing copper, lead, and zinc sulfides with barite, calcite, quartz, and fluorite along marble-metavolcanic rock contacts. Heyl and Pearre (1965).	39°33′	77°12′
MASSACHUSETTS		
1. Connecticut Valley. Several large lead-barite-fluorite veins. Schrader and others (1917).	42°00′ to 42°43′	72°15′ to 72°52′
MICHIGAN		
1. Mt. Pleasant oil field. Thick stratiform fluorite and tarry petroleum in Devonian rocks, cut in two drill holes at more than 3,700 ft depth. Fitzgerald and Thomas (1932).	43°38′	84°28′
MISSOURI		
1. Furnace Creek structure. Fluorine-bearing basalt breccia pipe of Cambrian age. Fluorine probably in fine-grained fluorite.	37°50′	90°47′
2. Pilot Knob deposit. Abundant fluorite and fluorapatite in iron deposits in Precambrian tuff. Also in nearby Iron Mountain and Pea Ridge iron mines in granite and granite porphyry. Snyder (1968).	37°38′	90°45′
3. Perry County area. Fluorite-barite-sulfide occurrences in limestone near Ste. Genevieve fault. Heyl (1968).	37°38′	89°40′
4. Silver Mines. Fluorite in high-temperature tungsten, tin, and silver-lead Precambrian veins. Heyl (1968).	37°35′	90°25′
MONTANA		
1. Crystal Mountain district. Pegmatitic pods of fluorite in granite and gneiss. Geach (1963).	46°01′	113°53′
2. Snowbird deposit. Fluorite-carbonate pods in argillite. Geach (1963).	46°48′	114°47′
3. Spar deposit. Pegmatitic pods of fluorite associated with a mass of pure white quartz in argillite and carbonate rocks. Geach (1963).	47°13′	115°05′
4. Jetty mine. Fluorite-barite-sulfide vein parallel to bedding in Madison Limestone. Geach (1963).	46°10′	113°07′
5. Weathervane Hill. Fluorite as irregular pods in fault zone. Geach (1963).	46°06′	112°57′
6. Silver Bow deposits. Fluorite and lenses of quartz in silicified shear zone in volcanic rocks. Geach (1963).	46°01′	112°40′
7. Austin (Boeing) deposit. Irregular pockets and pods of fluorite in limestone. Geach (1963).	46°38′	112°17′
8. Normandy deposit. Fluorite as fracture fillings and as partial replacement in limestone. Geach (1963).	46°31′	111°19′
9. Sweetgrass Hills (including Tootsie Creek deposit). Fluorite as veins, skarns, and mantos in Madison Limestone in contact zone of syenite porphyry, and as disseminations in altered porphyry. Geach (1963).	48°52′	111°06′
10. South Moccasin Mountains. Fluorite as gangue with gold ore, also in clay seams and in fissure veins and mantos in Madison Limestone. Geach (1963).	47°11′	109°32′

Mining district or locality	Lat. N.	Long. W.
MONTANA—Continued		
11. Judith Mountains. Fluorite and quartz veins in porphyritic syenite, and veins and replacement bodies in limestone. Associated with gold mineralization. Geach (1963).	47°14′	109°13′
12. Little Rocky Mountains. Fluorite disseminated throughout porphyritic syenite. Geach (1963).	47°56′	108°34′
13. Old Glory mine. Fluorite in breccia zones and caves in Madison Limestone. Associated with uranium mineralization. Sahinen (1962).	45°07′	108°26′
14. Black Butte deposit. Fluorite veinlets and replacement bodies in limestone near contact with syenite.	47°14′	108°58′
NEVADA		
1. Walker deposit. Small fluorspar veinlets in garnet gneiss. Horton (1961).	36°37′	114°06′
2. Nipton deposit (also in California). Veinlets of fluorspar with copper in Precambrian gneiss. Horton (1961).	35°28′	115°11′
3. Wells Cargo mine. Fluorite-calcite-chalcedonic quartz as breccia cement and irregular masses in breccia zone in Paleozoic limestone. Horton (1961).	37°13′	114°17′
4. Tem Piute mine. Fluorite in tactite with associated tungsten minerals. Buseck (1967).	37°38′	115°36′
5. Florence deposit. Small fluorite and chalcedonic quartz veinlets associated with gold ores in Tertiary volcanics. Horton (1961).	37°55′	114°15′
6. Quinn Canyon Range district. Fluorspar replacement bodies and breccia fillings in Paleozoic limestone. Also veinlets in silicified volcanics. Sainsbury and Kleinhampl (1969).	38°09′	115°40′
7. Fluorine district. Fluorspar veins and breccia pipes in limestone and shale, associated with thrust fault (tabular bodies); also veinlets in rhyolite dikes cutting limestone. Cornwall and Kleinhampl (1964).	36°52′	116°41′
8. Union district. Fluorspar veinlets in limestone and shale. Horton (1961).	38°52′	117°36′
9. Colton mine. Fluorspar massive vein filling. Horton (1961).	38°36′	117°27′
10. Broken Hills district. Banded fluorspar veins in andesite and rhyolite. Archbold (1966).	39°03′	118°12′
11. Mount Montgomery Pass district. Fluorspar veins in shear zones cutting granite and volcanics. Archbold (1966).	37°57′	118°21′
12. Flora deposit. Fluorspar in quartz and sulfide veins in granodiortie. Horton (1961).	38°11′	118°00′
13. Amry deposit. Fluorspar veins in limestone pendant in granitic intrusive. Horton (1961).	37°21′	117°37′
14. Hilltop deposit. Quartz-calcite-fluorite-feldspar-mica veinlets as stockwork in altered quartz monzonite. Horton (1961).	39°54′	114°54′
15. Rattlesnake Heaven deposit. Fluorspar fissure veins cutting volcanic breccia. Horton (1961).	39°03′	114°32′
16. Sawmill Canyon mine. Fluorspar as fissure-filling veins in limestone and rhyolite. Horton (1961).	38°54′	114°54′
17. Ell Cee deposit. Fluorspar veins in granitic stock intruding limestone. Horton (1961).	39°50′	117°00′
18. Iowa Canyon mine. Banded and crustified fluorspar as fissure vein fillings in Tertiary andesite and granite. Horton (1961).	39°48′	116°57′
19. Mammoth deposit. Fluorspar lenses in limestone and argillite. Horton (1961).	40°41′	117°42′
20. Fluorine and Piedmont mines. Banded and crustified fluorspar in breccia zones cutting shale, volcanics, and limestone. Horton (1961).	40°33′	118°13′
21. Needle Peak deposit. Fluorspar in a shear zone in rhyolite and limestone. Horton (1961).	40°17′	117°31′
22. Emerald Spar and Bohannan deposits. Fluorspar lenses in calcareous shale; also disseminations in limestone, sandstone, and shale. Horton, (1961).	40°14′	118°13′
23. Susie and Harris deposits. Fluorspar fissure veins and mantos in dolomitic beds with quartz, calcite, sulfides, and b ite. Horton (1961).	40°05′	117°51′
24. Vesco deposit. Fluorspar pods in vein of quartz, calcite, and barite. Horton (1961).	40°02′	118°24′
25. Madraso deposit. Fluorspar breccia filling in silicified rock of extinct hot spring. Horton (1961).	39°52′	118°40′
26. Revenue mine. Fluorspar veins in shale and limestone. Horton (1961).	39°42′	118°15′
27. Purple Spar and Little Jim deposits. Fluorspar veinlets in andesite. Horton (1961).	39°30′	118°05′
28. Dixie mine. Fluorspar pods in contact zone of granitic intrusion. Horton (1961).	39°26′	118°20′
29. Merkt deposit. Fluorspar in alteration zone along a shale-limestone contact. Horton (1961).	39°17′	118°03′
30. Sunset deposit. Fluorspar vein with quartz and calcite in coarse granitic rock. Horton (1961).	41°18′	119°05′
31. Thunderbird deposit. Fluorspar-quartz-filled fissure veins in metamorphosed argillite, shale, and limestone. Horton (1961).	40°54′	117°42′
32. Boulder Hill mine. Fluorspar in brecciated and silicified contact zone between monzonite and limestone. Horton (1961).	38°42′	119°21′
33. Bullfrog pegmatite. Fluorite and molybdenite in pegmatites associated with a granitic intrusive. Horton (1961).	37°21′	117°24′

Mining district or locality	Lat. N.	Long. W.
NEW HAMPSHIRE		
1. Cheshire County district (Connecticut Valley). Quartz-fluorite-barite-calcite veins with minor sulfides, in gneiss. Bannerman (1941).	42°43′ to 43°00′	72°16′ to 72°30′
2. North Chatham pegmatites. Fluorite-bearing pegmatites with associated beryllium, lithium, and topaz. Morrill (1960).	44°15′	71°02′
3. Iron Mountain area. Magnetite skarn zones containing quartz, fluorite, pyroxene, and beryllium minerals. Cox (1970).	44°08′	71°15′
4. Silver Lake area. Silver, lead, and zinc sulfides, quartz, and fluorite in mineralized breccias. Disseminated fluorite also occurs in acid volcanics and intrusive rocks of surrounding White Mountains. Cox (1970).	43°50′	71°10′
NEW JERSEY		
1. Beemerville nepheline syenite and related rocks of Ordovician age. Fluorite-bearing igneous rocks. Zartman and others (1967).	41°14′	74°42′
2. New Jersey Highlands. Fluorapatite deposits, and in places concentrations of rare-earth fluorcarbonates and fluorapatite (Klemic and others, 1959). Fluorite and other fluorine-bearing minerals are common at the Franklin and Sterling Hill zinc deposits (Palache, 1935) and in associated marbles of Precambrian age. Minor fluorite and fluorapatite occur in most magnetite deposits in the Highlands. Baker and Buddington (1970), Williams (1967).	41°07′	74°35′
NEW MEXICO		
1. Sandia Mountains district. Fluorite-barite-quartz-calcite-sulfide fissure veins in granite, quartzite, limestone, and shale. Williams (1966).	35°12′	106°26′
2. Blackbird mine area. Fluorite-quartz-calcite-barite-sulfide fissure veins and breccias in Precambrian rock and Paleozoic sedimentary rocks. Williams (1966).	34°59′	106°25′
3. White Water Canyon (includes Huckleberry mine). Banded and crustified fluorspar as breccia filling and fissure veins in andesite and rhyolite. Williams (1966).	33°19′	108°50′
4. Holt Mountain area (Lonestar No. 7 and other deposits). Fluorspar in fault zones cutting andesite. Williams (1966).	33°18′	108°49′
5. Tonuco mine. Fluorite-barite-quartz fissure veins in Precambrian gneiss and schist. Williams (1966).	32°37′	106°58′
6. Stevens mine. Fluorite and barite replacement bodies in limestone. Williams (1966).	32°32′	106°25′
7. Ruby mine. Fluorspar fissure veins in fractured and metamorphosed shales and limestone. Barite, calcite, and quartz also present. Williams (1966).	32°22′	106°35′
8. Tennessee mine. Fluorite in contact zone between granite and diabasic dike; associated with quartz, galena, sphalerite, and manganiferous calcite. Williams (1966).	32°28′	106°29′
9. Tortugas Mountain. Banded and crustified fluorspar, barite, quartz, and manganiferous calcite as vein filling in shattered limestone and shale. Williams (1966).	32°17′	106°42′
10. Bishops Cap district. Fluorite, calcite, and barite stockworks, fissure veins, and replacement bodies in silicified limestone. Williams (1966).	32°12′	106°36′
11. Red Rock area (includes Anderson district). Fluorspar fissure veins in Precambrian granite and fluorite in manganiferous calcite, manganese oxide, and barite veins cutting Tertiary conglomerate. Gillerman (1964).	32°43′	108°41′
12. Cooks Peak district. Fluorspar fissure veins in Precambrian granite and stringers and pods of fluorspar in brecciated volcanic rocks. Williams (1966).	32°37′	107°45′
13. Fleming district. Fluorspar as vein fillings in breccia and fracture zones in granite and limestone. Williams (1966).	32°51′	108°24′
14. Gila district. Fluorspar veins in fault and breccia zones in andesite and latite. Gillerman (1964).	33°03′	108°31′
15. Gold Hills district. Several fluorspar veins in and near fault zone between Precambrian granite and Tertiary volcanics. Gillerman (1964).	32°25′	108°25′
16. Steeple Rock district (East Camp area). Numerous stringers of fluorite in volcanic rocks, and fluorite is a common gangue of district's gold-silver ores. Gillerman (1964).	32°50′	108°58′
17. Sacaton Mesa area. Fissure veins of fluorite, barite, calcite, quartz, and manganese oxides cutting andesite and latite. Gillerman (1964).	33°13′	108°44′
18. Bitter Creek area (includes part of old Steeple Rock district). Fluorspar and gold-silver veins in brecciated and silicified zones in volcanics. Gillerman (1964).	32°56′	109°03′
19. Telegraph district. Fluorspar in breccia zones in Precambrian granite. Williams (1966).	32°46′	108°34′
20. Big Burro Mountains (Tyrone district). Fluorspar as vein filling in breccia zones cutting Precambrian granite. Gillerman (1964).	32°39′	108°26′
21. White Signal district. Fluorspar as breccia cement and fissure filling in rhyolite and granite. Williams (1966).	32°33′	108°27′

Mining district or locality	Lat. N.	Long. W.
NEW MEXICO—Continued		
22. Animas mine. Fluorspar fissure vein in fine-grained andesite. Williams (1966).	32°07′	108°47′
23. Fluorite and Lone Star deposits. Fluorspar in a series of narrow discontinuous veins, pods, and breccia filling in basalt and granodiorite. Williams (1966).	32°16′	108°45′
24. Gallinas Mountains district. Fluorite, barite, calcite, quartz, sulfides, and bastnaesite in breccia zones and veins in sandstone at contact with alkalic intrusives. Perhac (1970).	34°12′	105°44′
25. Lone Mountain deposit. Fluorite in brecciated fault zone in limestone. Williams (1966).	33°47′	105°45′
26. Fluorite Ridge and Goat Ridge districts. Banded and crustified fluorspar as fissure filling and breccia cement in granodiorite porphyry, silicified limestone, and Tertiary conglomerate. Williams (1966).	32°24′	107°42′
27. Northern Sierra Caballo. Fluorite, barite, calcite, quartz, and sulfides in fissure veins and brecciated fault zones in limestone, sandstone, and granite. Williams (1966).	33°05′	107°14′
28. Southern Sierra Caballo. Fluorspar in fissure veins and fault breccia cutting limestone and granite. Williams (1966).	32°51′	107°14′
29. Fairview deposit. Banded and crustified fluorspar as fissure filling and breccia cement in silicified breccia zone cutting limestone. Fluorite stringers in rhyolite dike parallel to breccia zone. Williams (1966).	33°10′	108°38′
30. Mockingbird Gap mine area. Fluorspar vein along granite-quartzite contact. Williams (1966).	33°28′	106°26′
31. American Fluorspar deposit. Fluorite, barite, calcite, and sulfide in fault cutting gray limestone. Williams (1966).	32°59′	106°40′
32. Hansonburg district. Fluorspar in veins and breccia cement and replacement mantos in limestone. Roedder and others (1968).	33°49′	106°22′
33. Juan Torres deposit. Fluorspar vein in contact zone of granite and andesite. Williams (1966).	34°23′	107°05′
34. Gonzales deposit area. Siliceous fluorspar and barite in fault zone in sedimentary rocks. Williams (1966).	34°05′	106°49′
35. Mirabal mine. Fluorspar fissure veins in fault and shear zones in gneiss and schist. Williams (1966).	35°12′	108°08′
36. Zuni Mountains. Fluorspar fissure veins in Precambrian granite and schist. Goddard (1966).	35°05′	108°01′
37. Sierra Cuchillo district. Fissure veins and some mantos in fault zones cutting silicified limestone.	33°18′	107°34′
38. Iron Mountain deposit. Fluorite in tactite associated with iron, beryllium, tungsten, and zinc. Van Alstine (1965).	33°28′	107°38′
39. La Madera deposit. Fluorite with manganese oxides in veinlets and disseminations in Tertiary sedimentary rocks. Van Alstine (1965).	36°26′	106°01′
40. Ojo Caliente area. Minor disseminated fluorite in hot springs tufa and pods of fluorite in quartz veins in granite. Van Alstine (1965).	36°17′	106°05′
41. Cleveland deposit. Fluorite vein along granite-monzonite contact. Van Alstine (1965).	36°02′	105°18′
42. Petaca pegmatites. Fluorite in pegmatites. Van Alstine (1965).	36°31′	106°02′
43. Questa molybdenum mine. Fluorite and topaz in veins and disseminated in molybdenite porphyry deposit. Van Alstine (1965).	36°42′	105°35′
44. Willow Creek pegmatites. Fluorspar in pegmatites with copper minerals. Van Alstine (1965).	35°42′	105°42′
45. Winkler anticline (includes Volcano deposit). Banded crustified fluorite-calcite-black calcite and chalcedonic quartz as fissure and fracture filling in silicified limestone. Williams (1966).	31°40′	108°40′
46. Grants (Todilto) area. Small fluorite replacement bodies with uranium in limestone. Peters (1958).	35°20′	117°53′
47. El Rito deposit. Banded and crustified fluorspar veins in Tertiary siltstone and volcanics. Van Alstine (1965).	36°15′	106°10′
48. Tina deposit. Fluorite-barite vein in limestone. Williams (1966).	35°03′	106°10′
49. Harding pegmatite. Van Alstine (1965).	36°11′	105°48′
50. Rociada pegmatite. Van Alstine (1965).	35°51′	105°27′
51. El Porvenir pegmatite. Van Alstine (1965).	35°45′	105°24′
NEW YORK		
1. Edenville-Amity area. Fluorite and fluosilicates in marbles and in skarn magnetite deposits of Precambrian age. Schrader and others (1917).	41°16′	74°25′
2. Lockport area. Fluorite in vugs and disseminated in Silurian dolomite. Schrader and others (1917).	43°11′	78°39′
3. Lowville deposit. Fluorite and sphalerite disseminated in Paleozoic limestone, and in small veins.	43°48′	75°30′
4. Mineville deposit. Fluorite, fluorapatite, and rare earth fluorcarbonates in magnetite skarn deposits and in associated Precambrian skarn. McKeown and Klemic (1956).	44°05′	73°34′
5. Palmer Hill mine area. Fluorite in Precambrian magnetite deposits in skarn. New York Department of Commerce (1950).	44°28′	73°42′
6. Parish-Trembley Mountain area. Fluorite in large skarn magnetite deposits of Precambrian age. Leonard and Buddington (1964).	44°00′ to 44°30′	74°45′ to 75°20′

Mining district or locality	Lat. N.	Long. W.
NEW YORK—Continued		
7. Portland Point area. Fluorite-bearing kimberlite of Mesozoic age. Zartman and others (1967).	42°32′	76°31′
8. Rossie district. Epithermal veins of fluorite, galena, sphalerite, barite, and calcite in marble and gneiss. Leonard and Buddington (1964).	44°10′ to 44°30′	75°20′ to 75°40′
9. Tilly Foster deposit. Fluorite and abundant chondrodite in magnetite-rich skarn. New York Department of Commerce (1950).	41°25′	73°38′
10. Macomb deposit. Fluorite with lead-zinc sulfides in marble. Buddington (1934).	44°25′	75°32′
NORTH CAROLINA		
1. Beech Granite (Memory-Chestnut Ridge area). Fluorite in pegmatites and granite. Bryant and Reed (1970).	36°12′	81°55′
2. Brown Mountain Granite. Fluorite disseminations in granite. Bryant and Reed (1970).	35°50′	81°45′
3. Hamme tungsten district. Quartz, tungsten, and fluorite veins in granodiorite. Parker (1963).	36°30′	78°28′
4. Hot Springs district. Fluorite-barite veins in Precambrian crystalline rocks and overlying sedimentary rocks in and near thrust faults; disseminations in sedimentary rocks. Oriel (1950).	35°52′	82°45′
5. Kings Mountain district. Fluorite in tin greisens in schist and granite gneiss.	35°10′	81°15′
6. Redmond lead-zinc mine. Fluorspar vein in schist and granite. Hadley and Goldsmith (1963).	35°41′	83°01′
7. Salisbury area. Fluorite disseminations in granite. Fullagar and others (1971).	35°36′	80°27′
OHIO		
1. Northwestern Ohio area. Fluorite, barite, celestite, sphalerite, and calcite in vugs and disseminations in Silurian limestone. Heyl (1968).	41°35′	83°22′
2. Serpent Mound structure. Fluorite, barite, and sphalerite in explosion breccia. Wallrocks are brecciated Paleozoic limestone.	39°05′	83°28′
OREGON		
1. Rome area. Fluorite occurs as submicroscopic, nearly spherical grains in tuff, tuffaceous mudstone, and mudstone of Tertiary lacustrine deposits. Sheppard and Gude (1969).	42°50′	117°45′
PENNSYLVANIA		
1. Cornwall magnetite area. Fluorite in magnetite tactite. Lapham and Geyer (1965).	40°12′	76°27′
2. Dixonville kimberlite dike. Fluorite-bearing igneous rock.	40°36′	79°07′
3. Phoenixville area. Fluorite-copper-lead-zinc- and silver-bearing epithermal veins. Lapham and Geyer (1965).	40°08′	75°33′
4. Masontown kimberlite dikes. Fluorite-bearing igneous rock.	39°55′	79°53′
5. Waynesboro area. Barite-fluorite veins in Paleozoic limestone. Lapham and Geyer (1965).	39°45′	77°35′
6. York-Lancaster Valley area. Fluorite, zinc, and calcite in vugs and disseminations in Paleozoic limestone. Lapham and Geyer (1965).	39°55′	76°40′
RHODE ISLAND		
1. Eastern Rhode Island. Several minor occurrences of fluorite in veins and breccias, commonly associated with quartz and sulfides. Morrill and Winslow (1969).	41°30′ to 42°00′	71°10′ to 71°40′
SOUTH DAKOTA		
1. Lead area. Fluorite occurs in siliceous sulfide veins and replacement bodies. Roberts and Rapp (1965).	44°20′	103°48′
2. Jewel Cave area. Fluorite in small amounts occurs with gypsum in limestone. Roberts and Rapp (1965).	43°33′	103°57′
TENNESSEE		
1. Central Tennessee district. Fluorspar veins in Lower and Middle Ordovician limestone and dolomite, often associated with sphalerite, barite, galena, and calcite; some residual "gravel spar" deposits of fluorite and barite. Jewell (1947), Brobst (1958). Very large manto and breccia deposits of fluorite, barite, and sphalerite in Lower Ordovician dolomite extending up into Middle Ordovician limestone.	35°42′ to 36°34′	85°30′ to 86°44′
2. Del Rio district (continuation of Hot Springs district, North Carolina). Veins and replacement bodies of barite and fluorite in Precambrian and Cambrian sedimentary rocks. Ferguson and Jewell (1951).	35°58′	83°00′
3. Sweetwater district. Fluorspar veins and large stratiform breccia deposits in Lower Ordovician dolomite. Barite, fluorite, sphalerite, and dolomite are the main minerals. Laurence (1960), Brobst (1958).	35°04′ to 35°48′	84°16′ to 84°50′
TEXAS		
1. Chinati Mountains. Fluorspar in fissure veins in granite, associated with sulfides of lead and zinc. McAnulty (1972).	29°54′	104°31′
2. Quitman Mountains. Fluorspar in fissure vein cutting volcanics. Evans (1943).	31°03′	105°26′
3. Eagle Mountains district. Fluorspar as fissure filling in rhyolite and replacement bodies in limestone. Gillerman (1953).	30°55′	105°03′
4. Boquillas area. Small occurrences of fluorspar in limestone. McAnulty (1967).	29°14′	102°58′
5. Mariscal Mountains. Mantos and stringers of fluorite along faults and fractures in limestone. McAnulty (1967).	29°01′	103°09′

Mining district or locality	Lat. N.	Long. W.
TEXAS—Continued		
6. Christmas Mountains. Fluorspar as replacement of limestone near contact with fine-grained rhyolite. McAnulty (1967).	29°27′	103°27′
7. Guadalupe Mountains. Fluorite disseminated in vugs in Permian limestone. King (1948).	31°59′	104°47′
8. Llano uplift. Fluorspar veins in Precambrian gneiss, schist, and pegmatite. Barnes (1956).	30°06′ to 30°50′	98°16′ to 99°24′
9. Terlingua district. Fluorite gangue in cinnabar-calcite veins in limestone. Yates and Thompson (1959)	29°20′	103°38′
UTAH		
1. Blue Star deposit. Fluorspar vein in Precambrian granite. Buranek (1948).	39°00′	109°09′
2. Ryan Creek deposit. Fluorspar in fault breccia between sandstone and granite, and banded and crustified fluorspar fissure filling in sandstone. Thurston and others (1954).	38°53′	109°09′
3. Cold Water Canyon (Weber district) deposits. Fluorspar-bearing veins in gneiss, quartzite, and limestone. Dasch (1964).	41°13′	111°54′
4. Indian Peak Range district. Fluorspar veins and stockworks cutting volcanic flow rocks. Thurston and others (1954).	38°13′	113°50′
5. Staats mine area. Fluorspar with uranium in breccia zones along fault contact of rhyolite and dolomite. Whelan (1965).	38°15′	113°35′
6. Blawn Mountain area. Disseminated fluorite in altered rhyolite and in iron-rich skarn in altered dolomite. Whelan (1965).	38°15′	113°34′
7. Star district. Fluorspar as fissure filling in limestone and quartzite in and near contact zone with granite and as stockwork within granite. Thurston and others (1954).	38°22′	113°08′
8. Marysvale district. Fluorspar and fluorspar-uranium fissure veins within altered zones in quartz monzonite and in volcanic rocks in outlying areas of district. Dasch (1964).	38°29′	112°13′
9. Silver Queen mine. Fluorspar fissure veins in limestone. Thurston and others (1954).	40°28′	113°18′
10. Spor Mountain (Thomas Range) district. Siliceous fluorite occurs in circular pipelike bodies in dolomite. Staatz and Osterwald (1959). Microscopic fluorite occurs dispersed through large deposits in altered beryllium-bearing tuff. Staatz (1963).	39°44′	113°14′
11. Rain Bow deposit. Fluorspar-filled fractures in limestone. Dasch (1964).	38°37′	112°34′
12. Big Pass deposit. Fluorite in tactite with tungsten mineralization. Buranek (1948).	38°15′	112°50′
VERMONT		
1. Putney area. (continuation of veins of Cheshire County district, N. H.). Morrill and Chaffee (1960).	43°00′	72°32′
VIRGINIA		
1. Austinville-Marion area. Sphalerite, barite, fluorite, galena, and dolomite in mineralized breccias in Cambrian and Ordovician dolomites. Luttrell (1966).	36°35′ to 37°00′	80°42′ to 81°50′
2. Faber mine. Galena, sphalerite, quartz, and fluorite vein in shear zone in gneiss. Luttrell (1966).	37°50′	78°42′
3. Striped Rock Granite. Fluorite disseminated in granite. Stose and Stose (1957).	36°38′	81°10′
4. Irish Creek district. Fluorite in tin veins and greisens containing tin, tungsten, and beryllium in granodiorite. Lesure and others (1963).	37°48′	79°14′
5. Lebanon-Gate City area. Fluorite in mineralized breccias in Cambrian-Ordovician dolomites, associated with sphalerite. Luttrell (1966).	36°36′ to 37°12′	81°46′ to 82°34′
6. Taylor deposit. Fluorite and tungsten-bearing fissure veins in granodiorite. Luttrell (1966).	36°34′	78°24′
7. Timberville district. Sphalerite disseminations and breccia pipes in Lower Ordovician dolomite; in places they contain fluorite and galena. Herbert and Young (1956).	38°20′ to 39°08′	78°24′ to 78°55′
WASHINGTON		
1. Chelan or Slide deposit. Small parallel fluorspar veins in breccia zone cutting granite. Van Alstine (1966).	47°55′	120°13′
2. Montgomery deposits. Thin veinlets of fluorspar in limy argillite. Van Alstine (1966).	48°37′	119°32′
3. Riverside deposit. Small lenses of fluorspar in gneiss and schist. Van Alstine (1966).	48°31′	119°25′
4. Lost River deposits. Fluorite in shear zone with quartz and chalcedony in granite. Van Alstine (1966).	48°46′	120°24′
5. Zalla M deposit area. Fluorite as gangue in gold-silver ore in altered Tertiary volcanics. Van Alstine (1966).	48°46′	118°49′
6. Republic area. Fluorite associated with sulfide minerals in veins cutting Tertiary flows, breccias, and tuffs. Van Alstine (1966).	48°40′	118°45′
7. Mitchem mine. Single fluorspar vein cutting granite of Colville batholith. Van Alstine (1966).	48°05′	118°44′
WEST VIRGINIA		
1. Paw Paw area. Lead-zinc-fluorite veins in Devonian sandstone and shale. Schrader and others (1917).	39°32′	78°27′
WISCONSIN		
1. Wausau area. Alkalic syenite intrusives and pegmatite contaning disseminated fluorite. Weidman (1907).	44°56′	89°44′

Mining district or locality	Lat. N.	Long. W.
WYOMING		
1. Bear Lodge Mountains. Fluorspar in limestone and sandstone around trachytic porphyry and in silicified zones in porphyry. Osterwald and others (1959).	44°29′	104°24′

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