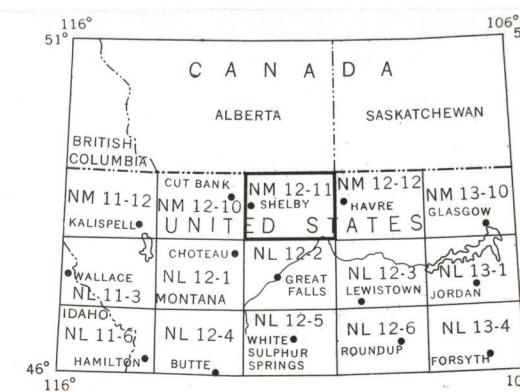


Base from U.S. Geological Survey, 1954-67

LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP OF THE SHELBY 1° x 2° QUADRANGLE, MONTANA

Lands withdrawn, classified, and prospectively valuable for leasable minerals;
occurrences of other selected minerals; and lands withdrawn or
classified for waterpower and reservoir sites

Compiled by Andrew F. Bateman, Jr., and Gale A. Lutz
1977



SCALE 1:250 000

5 0 5 10 15 20 25 MILES
5 0 5 10 15 20 25 KILOMETERS

DATUM IS MEAN SEA LEVEL

Interior-Geological Survey, Reston, Va.-1977-C76241

Data as of February 1, 1976

EXPLANATION

FOR MISCELLANEOUS INVESTIGATIONS MAPS I-1011-I-1018

Only the land classifications categories present in the quadrangle are patterned or colored in the explanation. The symbol on the map an asterisk (*) preceding a patterned classification category in the explanation indicates that the category includes all land in the quadrangle and so, to reduce clutter, the pattern is omitted from the map. Categories not patterned in the explanation are not present in the quadrangle. All withdrawn lands are prospectively valuable for the mineral for which they were withdrawn. Land classification applies only to public lands within category boundaries. Leasable minerals are coal, oil and gas, and oil shale; phosphates or phosphate rock; chlorides, sulfates, carbonates, borates, silicates, and nitrates of potassium and of sodium; sulfur in Louisiana and New Mexico; and native asphalt, solid and semisolid bitumen, and bituminous rock (including oil-impregnated rock or sands from which oil is recoverable only by special treatment after the deposit is mined or quarried). However, all minerals are leasable on Federal acquired lands and restricted allotted and tribal Indian lands. Leasable mineral outcrops are not shown. A symbol preceding a mineral name on the selected minerals list indicates that the mineral is present in the map area. Active mines are not differentiated from inactive mines, the size and grade of the mineral occurrence are not indicated, and names are given hereon for only a few of the mines.

MINERAL LAND CLASSIFICATION

WITHDRAWN LANDS Showing withdrawal number and date (month-day-year)	CLASSIFIED LANDS
Coal	Phosphate
Oil shale	Oil shale

KNOWN LEASING AREAS—Defined and undefined, showing name and effective date (month-day-year). Note: Not all areas have been assigned names

Known geologic structure of producing oil and gas field (KGS)
Coal
Geothermal resources
Oil and gas
Known oil shale leasing area
Oil shale
Known phosphate leasing area
Potassium
Sodium

WATERPOWER LAND CLASSIFICATION

CLASSIFIED OR WITHDRAWN FOR WATERPOWER OR RESERVOIR SITES

DESCRIPTION OF MAP SYMBOLS

SELECTED MINERALS—Symbol shows location of mineral occurrence or mine to the nearest 40-acre tract; multiple occurrences within a quarter section (160 acres; 64.75 hectares) are not differentiated from a single occurrence. For cartographic reasons, an occurrence may be shown by a black dot and a leader to the symbol in parentheses.

METALLICS
Aluminum
Cobalt
Antimony
Columbium and tantalum
Arsenic
Copper
Beryllium
Germanium
Bismuth
Gold
Cadmium
Iron
Cesium and rubidium
Lead
Chromium
Manganese

NONMETALLICS
Abrasives
Clay, refractory
Alunite
Diatomite
Asbestos
Dumortierite
Barite
Feldspar
Bentonite
Fluorite
Borates
Fuller's earth
Bromine
Gem and ornamental stones
Brucite
Graphite
Calcite, optical
Gypsum
Calcium chloride
Mica
Carbon dioxide
Mineral pigments
Helium
Nephelite

SYMBOL COMBINATIONS—Certain symbols (such as silver, lead, zinc, or uranium and vanadium) are combined into a single symbol to show several minerals at the same locality, as illustrated in the three examples below. Where cartographic reasons dictate or where individual symbols cannot be combined into a single symbol, several minerals at the same locality are shown by a black dot at the locality and a leader to the composite symbol or series of symbols in parentheses.

♦ Copper, gold, lead, zinc
✖ Chromium, cobalt, nickel
✖ Uranium and vanadium

→ (♦, □, F) Beryllium, tungsten, and feldspar at same location

MINE OR PROSPECT WHERE LOCATABLE MINERAL IS KNOWN—Mine or prospect is shown by a red symbol at the location or by a black dot at the location and a leader to the symbol or symbols in parentheses. Mine name shown in red.

△ Carlie mine—Uranium mine at location of symbol

→ (♦, □, E) Eureka mine—Gold, silver, lead, zinc, and fluorite mine at location of dot

→ (♦, □, F) WIDESPREAD MINERAL OCCURRENCES—Gray pattern indicates area of numerous or widespread occurrences of one or more minerals, identified by a red symbol circled in black. An occurrence of another mineral or minerals within such an area is shown by a red symbol at the locality or by a black dot at the locality and a leader to the symbol or symbols in parentheses. Dotted lines indicate where one widespread area of mineral occurrence overlaps another.

• OTHER SYMBOLS

△ Leasable mineral mine

✖ Mine or prospect where mineral is not known

● Pit (bentonite or clay)

◆ Gravel or sand pit

◇ Quarry

▲ Areas previously designated as Known Coal Leasing Areas (KCLA's) are now designated for coal leasing as Known Recoverable Coal Resource Areas (KRCRA's) (Federal Register, v. 41, no. 189, p. 42684, Sept. 28, 1976)