

EXPLANATION

MINERAL

WITHDRAWN LANDS

- Lands withdrawn pending classification for coal
- Lands withdrawn pending classification for coal and phosphate
- Lands withdrawn for oil shale
- Lands withdrawn pending classification for phosphate
- Naval Oil Shale Reserve
- Naval Petroleum Reserve

CLASSIFIED LANDS

- Coal
- Phosphate
- Sodium
- LANDS VALUABLE PROSPECTIVELY FOR RETENTION OF FEDERAL MINERAL RIGHTS (diacutures, where present, are on valuable side of boundaries.)
- Asphaltic materials
- Coal
- Geothermal resources
- Oil and gas
- Phosphate
- Potassium
- Sodium

KNOWN LEASING AREAS (defined and undefined)

- Known geologic structure of producing oil and gas fields
- Known geothermal resources area
- Known coal leasing area
- Known oil shale leasing area
- Known phosphate leasing area
- Known potassium leasing area
- Known sodium leasing area

Symbols show reported locations of mines, prospects, and occurrences of selected minerals. Inactive mines are not distinguished, nor is the size or grade of the mineral occurrence indicated. Each mineral occurrence is located to the nearest quarter section within a section. Multiple occurrences of the same mineral within a quarter are not differentiated from a single occurrence. Several different minerals at the same locality are shown by symbols in parentheses with a leader and dot.

Beryllium, tungsten, and columbium-tantalum at the same locality
Certain symbols such as those for gold, silver, copper, lead, zinc, tungsten, and molybdenum; chromium, cobalt, nickel, and platinum; and uranium and vanadium may be combined in a single symbol to show several different minerals at the same locality. Examples of combined symbols are:

Copper, gold, lead, and zinc Chromium, cobalt, and nickel Uranium and vanadium
Areas of numerous or widespread occurrences of one or more minerals are shown by a dotted outline. Symbols are shown inside the outlined area or by a leader. An isolated occurrence of a different mineral within such an area is shown by a dot and a leader. Examples are:

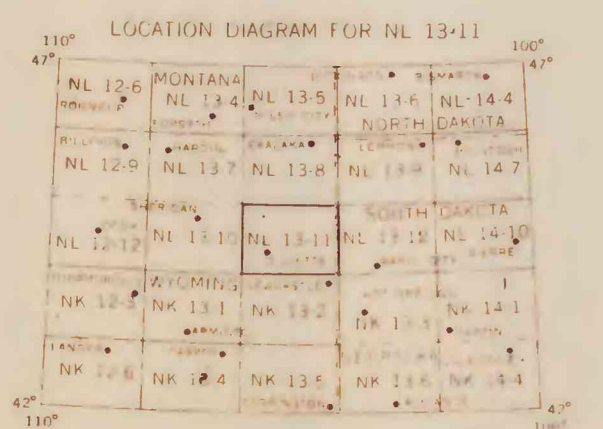
Bentonite occurs throughout area Local occurrence of fluorapatite at dot within an area of widespread occurrence of beryllium, tungsten, and columbium-tantalum

Mine (Leasable minerals only)	Mine or prospect where mineral is unknown	+	Gravel pit	Quarry
METALS				
Aluminum	● Titanium	▲ Fuller's earth		
Antimony	● Tungsten	▲ Gem and ornamental stones		
Arsenic	● Uranium	▲ Graphite		
Beryllium	● Vanadium	▲ Gypsum		
Bismuth	● Zinc	▲ Halite		
Cadmium	● Zirconium and hafnium	▲ Dolomite		
Cesium and rubidium		▲ Kaolin		
Chromium		▲ Kyanite group		
Cobalt		▲ Limestone		
Columbium and tantalum		▲ Lithium minerals		
Copper		▲ Magnesite		
Germanium		▲ Magnesium sulfate		
Gold		▲ Meerschaum		
Iron		▲ Nica		
Lead		▲ Mineral pigments		
Manganese		▲ Nephelite		
Mercury		▲ Olivine		
Molybdenum		▲ Quartz		
Nickel		▲ Serpentine		
Platinum group		▲ Silica sand		
Rare earths		▲ Strontium minerals		
Silver		▲ Sulphur		
Selenium		▲ Talc, soapstone		
Thorium		▲ Volcanic ash, tuff, perlite		
Tin		▲ Vermiculite		
		▲ Fluorspar		
				▲ Kallastonite

WATER

Lands classified as withdrawn for waterpower or for other uses
U. S. Geological Survey
OPEN FILE REPORT
This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

Prepared by the Army Map Service (AMSS), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1965 by photogrammetric methods and from 1:25,000 USGS quadrangle 1915. Horizontal and vertical control by USGS, USACE, and USACE. Aerial photography data annotated 1954. Minor corrections by U.S. Geological Survey, 1962.



LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP
GILLETTE QUADRANGLE, WYOMING, MONTANA, SOUTH DAKOTA

SHOWING

LANDS WITHDRAWN, CLASSIFIED, AND VALUABLE PROSPECTIVELY FOR LEASABLE MINERALS

AND OCCURRENCES OF OTHER SELECTED MINERALS

LANDS WITHDRAWN OR CLASSIFIED FOR WATERPOWER AND RESERVOIR SITES

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Not all classification categories or mineral occurrences shown in the explanation are present in this quadrangle. Categories shown apply only to any public lands included within boundaries. The leasable minerals in public domain lands named in the various mineral leasing acts as amended over the years are coal, oil, gas, and oil shale; phosphates, or phosphate rock; chlorides, sulfates, carbonates, borates, silicates or nitrates of potassium and of sodium; sulphur 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). All minerals are leasable on federal acquired lands and restricted allotted and tribal Indian lands.

Lands on this sheet withdrawn for coal are in Coal Land Withdrawal Wyoming No. 1, July 13, 1910, and Wyoming No. 13, June 9, 1911.

No land in this quadrangle is classified as valuable for geothermal resources, oil shale, phosphate, or potassium.

Known geologic structures and known coal leasing areas are shown on a separate overlay.

All information on this map compiled as of April 1, 1974.