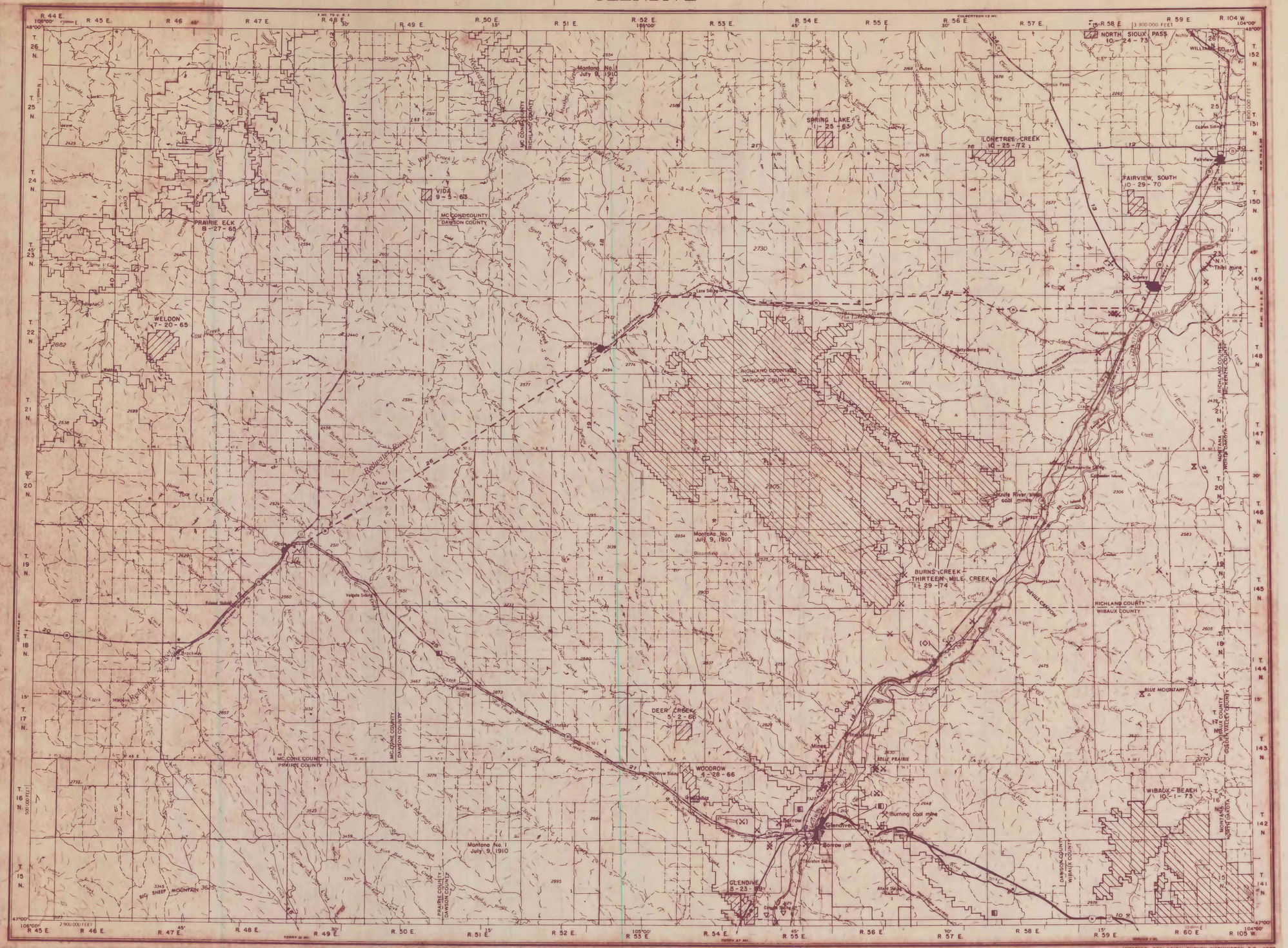
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
CONSERVATION DIVISION

GLENDIVE

NL 13-2



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WITHDRAWN LANDS

- Lands withdrawn pending classification for coal
- Lands withdrawn pending classification for coal and phosphate
- Lands withdrawn for oil shale
- Lands withdrawn pending classification for phosphate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
(Hachures, 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 40-acre tract 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 parenthesis 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 fluorspar 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 — Pit (Bentonite or clay) — Gravel pit — Quarry

METALS

- Aluminum
- Antimony
- Arsenic
- Beryllium
- Bismuth
- Cadmium
- Cesium and Rubidium
- Chromium
- Cobalt
- Columbium and Tantalum
- Copper
- Germanium
- Gold
- Iron
- Lead
- Manganese
- Mercury
- Molybdenum
- Nickel
- Platinum group
- Rare earths
- Silver
- Selentium
- Tellurium
- Thorium
- Tin
- Titaniferous iron
- Titanium
- Tungsten
- Uranium
- Vanadium
- Zinc
- Zirconium and Hafnium

NONMETALS

- Abrasives
- Alunite
- Asbestos
- Barite
- Bentonite
- Borates
- Bromine
- Brucite
- Calcite, optical
- Calcium chloride
- Carbon dioxide
- Clay, refractory
- Diatomite
- Dumortierite
- Feldspar
- Fluorspar
- Fullers earth
- Gem and ornamental stones
- Graphite
- Gypsum
- Helium
- Iodine
- Kaolin
- Kyanite group
- Limestone
- Lithium minerals
- Magnesite
- Magnesium sulfate
- Meerschaum
- Mica
- Mineral pigments
- Nepheline
- Olivine
- Quartz
- Serpentine
- Silica sand
- Strontium minerals
- Sulphur
- Talc, soapstone
- Volcanic ash, Pumice, Perlite
- Vermiculite
- Wollastonite

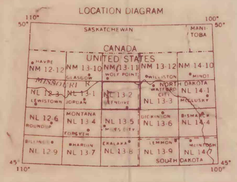
WATER

- Lands classified or withdrawn for waterpower or reservoir sites

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 (ASART), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1954 by photogrammetric methods. Aerial photography 1951. Horizontal and vertical control by USGS and USC&GS. Photography field annotated 1954. Limited revision by U.S. Geological Survey 1966.

LOCATION DIAGRAM



LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP
GLENDIVE QUADRANGLE, MONTANA, NORTH 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

Compiled by Andrew F. Bateman, Jr. and Elizabeth G. Allen

1975

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 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 Montana No. 1, July 9, 1910.

There are no lands classified or withdrawn for waterpower or reservoir sites.

The entire quadrangle area is classified as valuable for oil and gas; no land is classified as valuable for asphaltic materials, geothermal resources, oil shale, phosphate, or potassium.

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

● INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1967