DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

THERMOPOLIS

OPEN FILE REPORT
76-659

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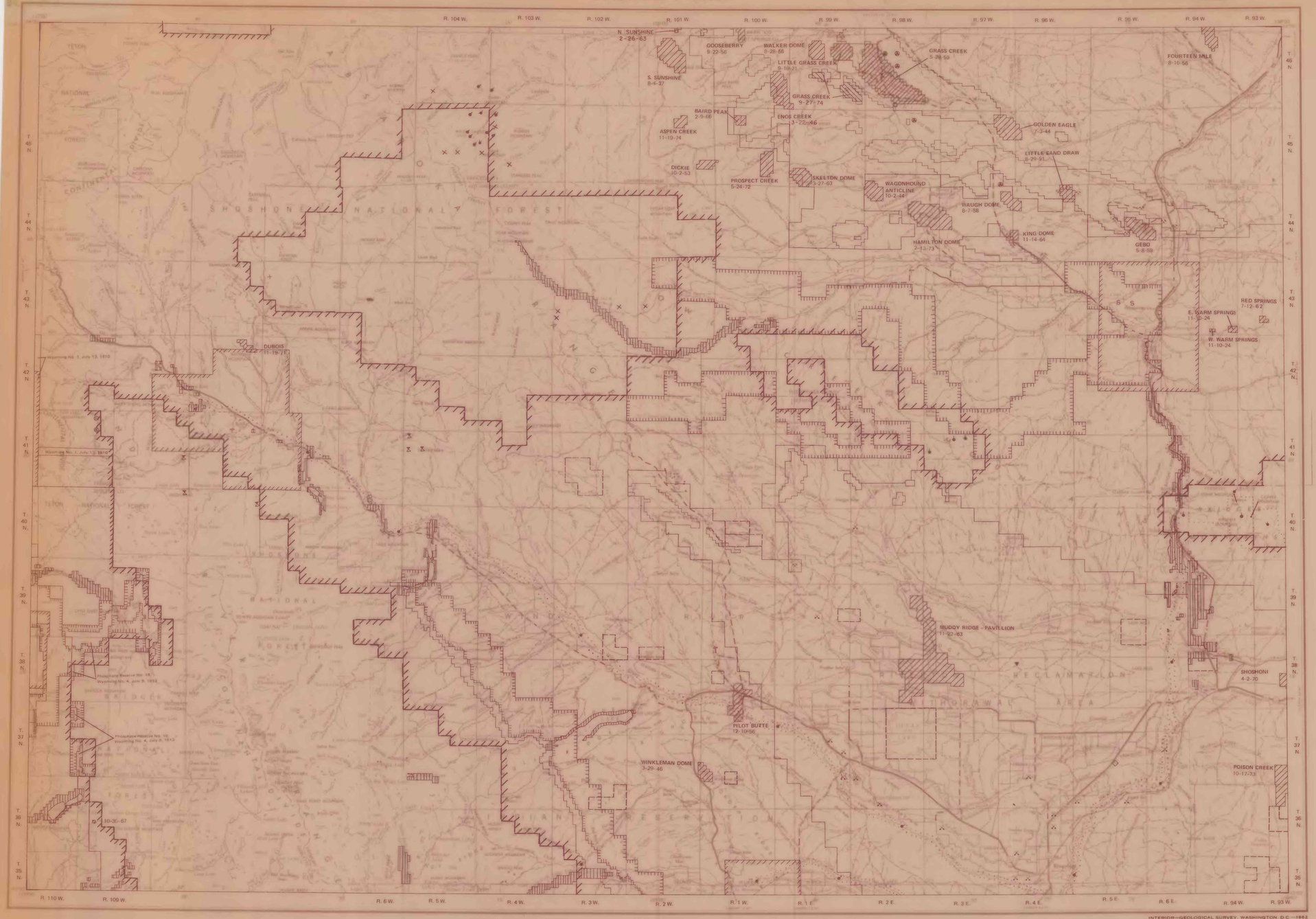

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1962
MR 3056

All information on this map compiled as of February 1, 1976

LOCATION DIAGRAM

LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP
THERMOPOLIS QUADRANGLE, WYOMING

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LANDS WITHDRAWN, CLASSIFIED, AND VALUABLE PROSPECTIVELY FOR LEASABLE MINERALS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LANDS WITHDRAWN OR CLASSIFIED FOR WATERPOWER AND RESERVOIR SITES

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EXPLANATION

This is a standardized explanation for leasable mineral and waterpower land classification open-file maps. Only the land classification categories present in the quadrangle are colored; however, an asterisk (*) preceding a colored classification category indicates that the category includes all lands in the quadrangle. 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 or 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 the mineral is present in the map area. Active and inactive mines are not differentiated, the size and grade of the mineral occurrence is not indicated, and only a few of the mines are named.

MINERAL LAND CLASSIFICATION

WITHDRAWN LANDS--Showing withdrawal number and date

- Coal
- Oil shale
- Phosphate

CLASSIFIED LANDS

- Coal
- Phosphate
- Sodium

LANDS VALUABLE PROSPECTIVELY FOR RETENTION OF FEDERAL MINERAL RIGHTS--Hachures, where present, are on valuable side of boundary

- Asphaltic materials
- Coal
- Geothermal resources
- Oil and gas
- Phosphate
- Potassium
- Sodium

KNOWN LEASING AREAS--Defined and undefined, showing name and effective date

- Known geologic structure of producing oil and gas field (KGS)
- Known geothermal resources area (KGRA)
- Known coal leasing area (KCLA)
- Known oil shale leasing area
- Known phosphate leasing area
- Known potassium leasing area
- Known sodium leasing area

WATERPOWER LAND CLASSIFICATION

- Classified or withdrawn for waterpower or reservoir sites

DESCRIPTION OF MAP SYMBOLS

SELECTED MINERALS--Symbol shows location of mineral occurrence to the nearest 40-acre tract; multiple occurrences of a mineral within a quarter section are not differentiated from a single occurrence.

Metallics

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

Nonmetallics

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

SYMBOL COMBINATIONS--Certain symbols, such as those for gold, silver, lead, zinc, tungsten, and molybdenum, are combined into a single symbol to show several minerals at the same locality. Other occurrences of different minerals at the same locality are shown by a dot and leader with the symbols in parentheses.

- Copper, gold, lead, zinc
- Chromium, cobalt, nickel
- Uranium and vanadium
- (△ ▸ ▽)--Beryllium, tungsten, and feldspar at same location

MINE OR PROSPECT WHERE MINERAL IS KNOWN--Mine or prospect is shown by mineral symbols or by a dot with leader to symbol or symbols in parentheses.

- Carlile Mine--uranium mine at location of symbol
- Eureka Mine (F) --gold, silver, lead, zinc, and fluorspar mine at location of dot

WIDESPREAD MINERAL OCCURRENCES--Areas of numerous or widespread occurrences of one or more minerals are shown by a dotted outline and symbol. An isolated occurrence of a different mineral within such an area is shown by a dot and a leader to symbol. Overlaps of widespread areas of occurrence of different minerals are outlined by short dashed lines.

OTHER SYMBOLS

- Leasable mineral mine
- Mine or prospect where mineral is not known
- Pit (bentonite or clay)
- Gravel or sand pit
- Quarry

U. S. Geological Survey
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This map has not been edited for conformity with Geological Survey editorial standards or stratigraphic nomenclature.