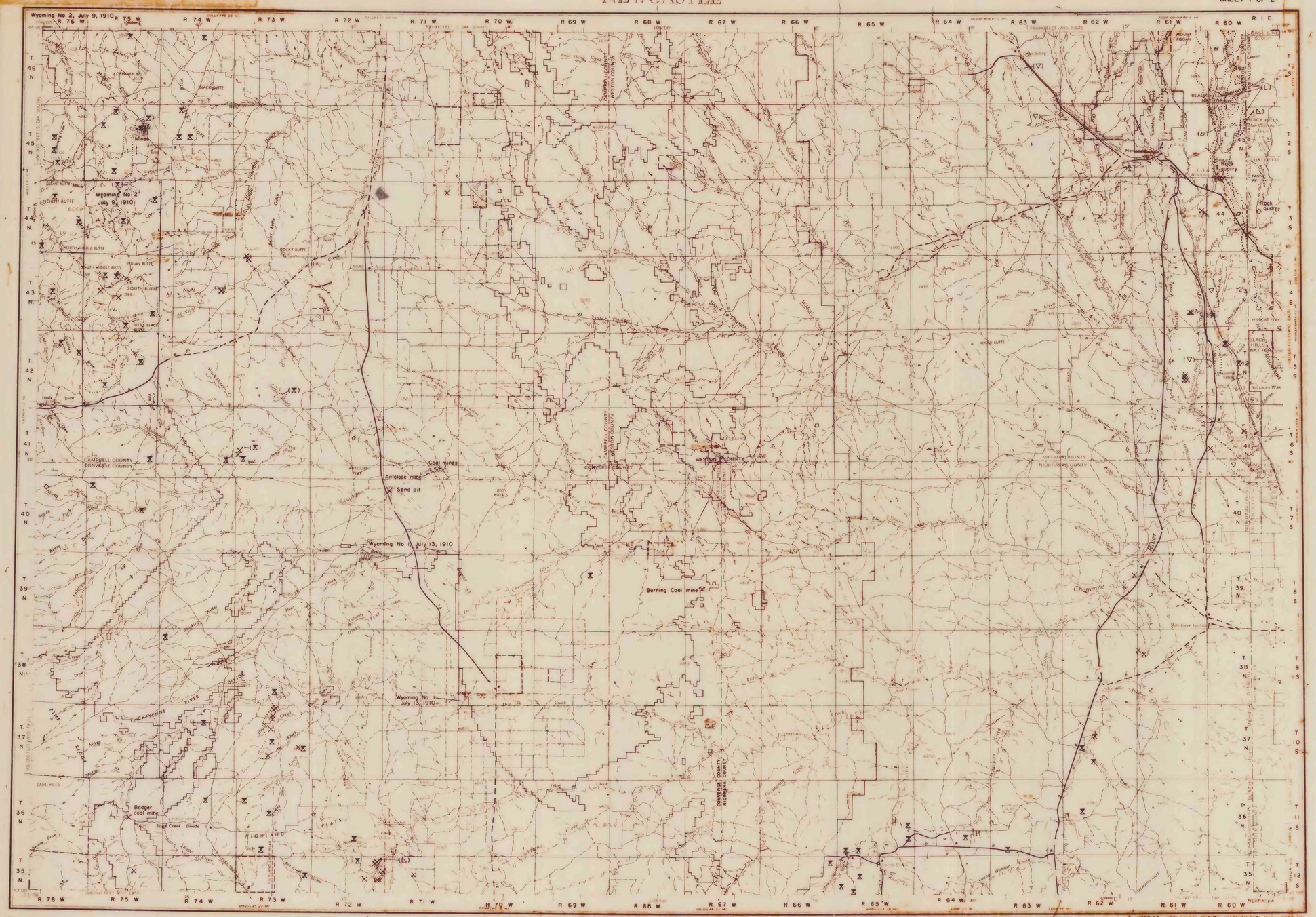
NEWCASTLE



Prepared by the Army Map Service (ASARI) Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1964 by photogrammetric methods and from USGS quadrangles, 1:24,000 and 1:25,000, 1949-1953. Planimetric detail revised by photogrammetric methods. Horizontal and vertical control by USGS, OSC&GS and USCE. Photography field annotated 1955. Limited revision by U.S. Geological Survey 1967

Scale 1:250,000

5 0 5 10 15 Statute Miles
5 0 5 10 15 20 Kilometers

LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP
NEWCASTLE QUADRANGLE, WYOMING, SOUTH DAKOTA, NEBRASKA

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LANDS WITHDRAWN, CLASSIFIED, AND VALUABLE PROSPECTIVELY FOR LEASABLE MINERALS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LANDS WITHDRAWN OR CLASSIFIED FOR WATERPOWER AND RESERVOIR SITES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

1974

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.

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Lands on this sheet withdrawn for coal are in Coal Land Withdrawal Wyoming No. 1, July 13, 1910, and Wyoming No. 2, July 9, 1910.

There are no lands classified or withdrawn for waterpower or reservoir sites.

No land in this quadrangle is classified as valuable for asphaltic materials, geothermal resources, oil shale, phosphate, or potassium. All lands on this sheet are valuable for oil and gas.

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.

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 mineral commodities. Inactive mines are not distinguished, nor is the size or grade of the mineral occurrences indicated. Each mineral occurrence is located to the smallest 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:

(Be·△Ta)

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:

Au Ag Cu Pb Zn W Mo — Copper, gold, lead, and zinc
Cr Co Ni — Chromium, cobalt, and nickel
U V — 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

(F)·△ — 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
- Selenium
- Tellurium
- Thorium
- Tin
- Titaniferous iron
- Titanium
- Tungsten
- Uranium
- Vanadium
- Zinc
- Zirconium and Hafnium

NONMETALS

- Abrasives
- Alunite
- Asbestos
- Barite
- Bentonite
- Boron
- Bromine
- Brucite
- Calcite, optical
- Calcium chloride
- Carbon dioxide
- Clay, refractory
- Diatomite
- Fluorite
- Feldspar
- Fluorspar
- Fuller's earth
- Gas and geothermal steam
- Graphite
- Gypsum
- Helium
- Iodine
- Kaolin
- Kyanite group
- Lithium
- 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