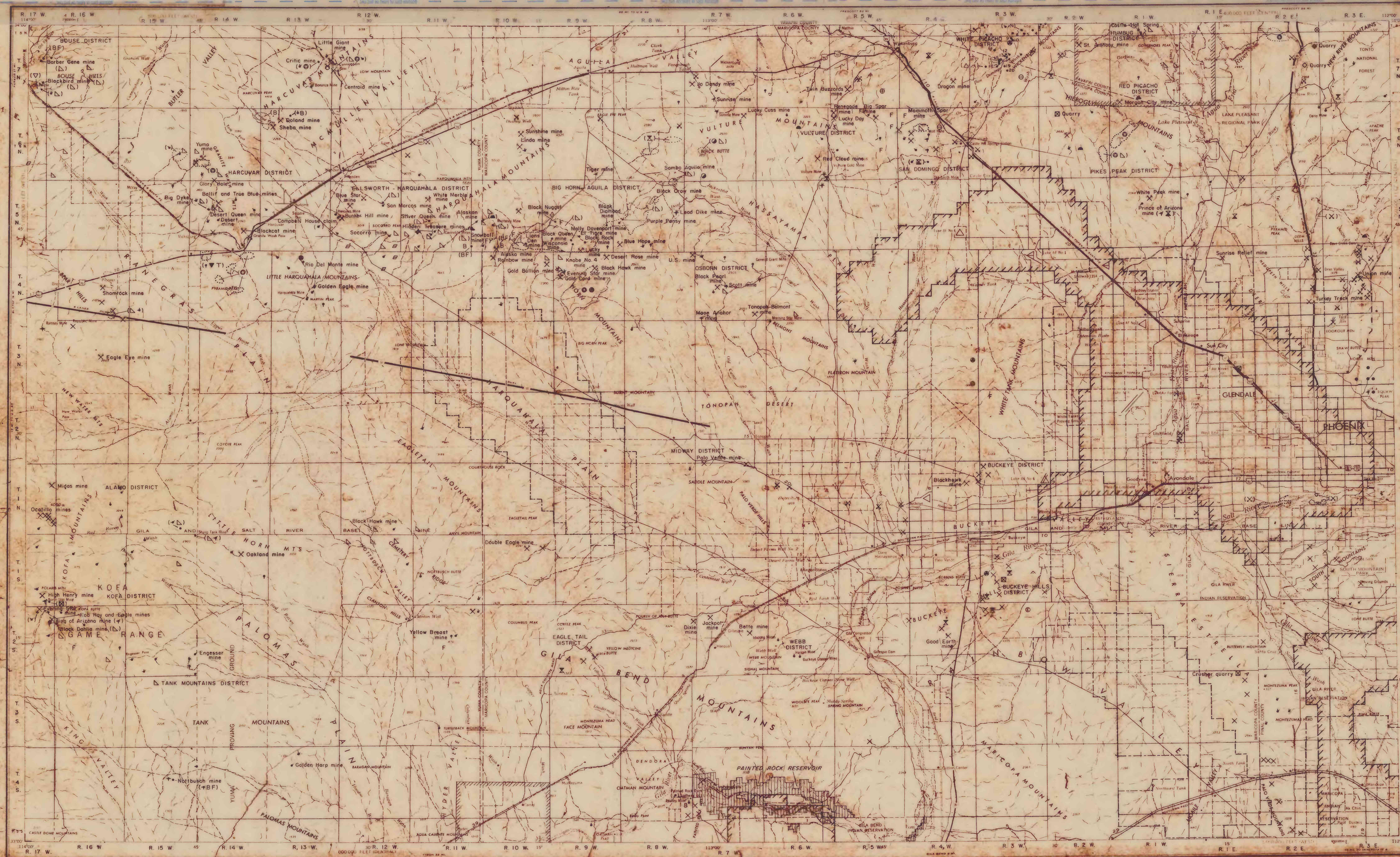


EXPLANATION

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WITHDRAWN LANDS

- Lands withdrawn pending classification for coal
- Lands withdrawn pending classification for coal and phosphate
- Lands withdrawn for oil shale
- Lands withdrawn pending classification for phosphate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

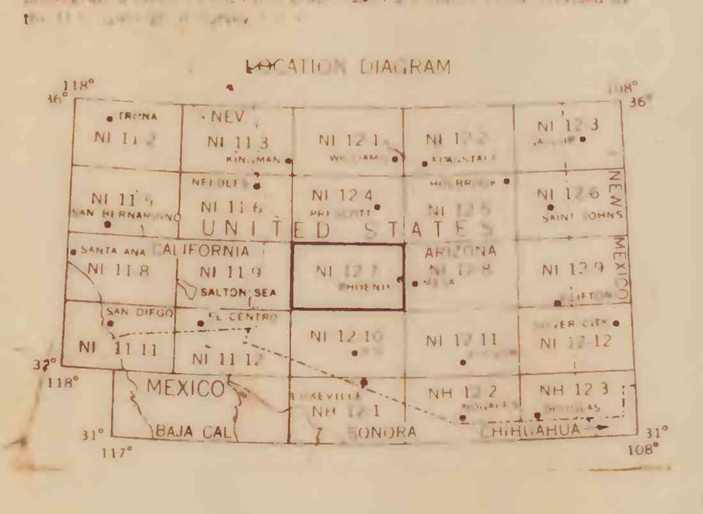
Local occurrence of fluorspar at dot within an area of widespread occurrence of beryllium, tungsten, and columbium-tantalum

Mine (Leasable minerals only)	Mine or prospect where mineral is unknown	Pit (Bentonite or clay)	Gravel pit	Quarry

METALS	METALS	NONMETALS
Aluminum	Titaniferous iron	Fuller's earth
Antimony	Titanium	Gem and ornamental stones
Arsenic	Tungsten	Graphite
Beryllium	Uranium	Gypsum
Bismuth	Vanadium	Helium
Cadmium	Zinc	Iodine
Cesium and Rubidium	Zirconium and Hafnium	Kaolin
Chromium		Kyanite group
Cobalt	NONMETALS	Limestone
Columbium and Tantalum		Lithium minerals
Copper	Abrasives	Magnesite
Germanium	Alunite	Magnesium sulfate
Gold	Asbestos	Meerschaum
Iron	Barite	Mica
Lead	Bentonite	Mineral pigments
Manganese	Borates	Nephelite
Mercury	Bromine	Olivine
Molybdenum	Brucite	Quartz
Nickel	Calcite, optical	Serpentine
Platinum group	Calcium chloride	Silica sand
Rare earths	Carbon dioxide	Strontium minerals
Silver	Clay, refractory	Sulphur
Selenium	Diatomite	Talc, Soapstone
Tellurium	Dumortierite	Volcanic ash, Pumice, Perlite
Thorium	Feldspar	Vermiculite
Tin	Fluorspar	Wollastonite

WATER

Lands classified or withdrawn for waterpower or reservoir sites



WHITE PICACHO DISTRICT MINES

1. Long Dike (⊠ ^ △)
2. Midnight Owl (⊕ ^ △ ⊖)
3. Independence (⊕ ^)
4. New Look (⊠)
5. Climax
6. Friction (◸)
7. Great Southern
8. Monarch
9. Outpost (◸ ⊖)
10. Outpost Extension (+ ⊖)
11. Lone Wolf
12. Picacho View (✱ ◸ △)
13. Sunrise (⊕ △)
14. White Jumbo (⊕)
15. Lower Jumbo (⊕ ^)
16. Sunset (⊠)
17. North Morning Star (⊕ ◸ △)
18. Morning Star (◸)
19. White Cloud
20. Little San Domingo

Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

LEASABLE MINERAL AND WATERPOWER LAND CLASSIFICATION MAP
PHOENIX QUADRANGLE, ARIZONA

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., Elizabeth G. Allen, and Vernon C. Indermuhle

January 1974

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.

No land in this quadrangle is classified as valuable for asphaltic materials, coal, oil shale, or phosphate.

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

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.