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Check lists of minerals for mining districts of Colfax, northern Taos, and Union Counties, New Mexico

Stuart A. Northrop
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CHECK LISTS OF MINERALS FOR MINING DISTRICTS OF COLFAX, NORTHERN TAOS, AND UNION COUNTIES, NEW MEXICO

By

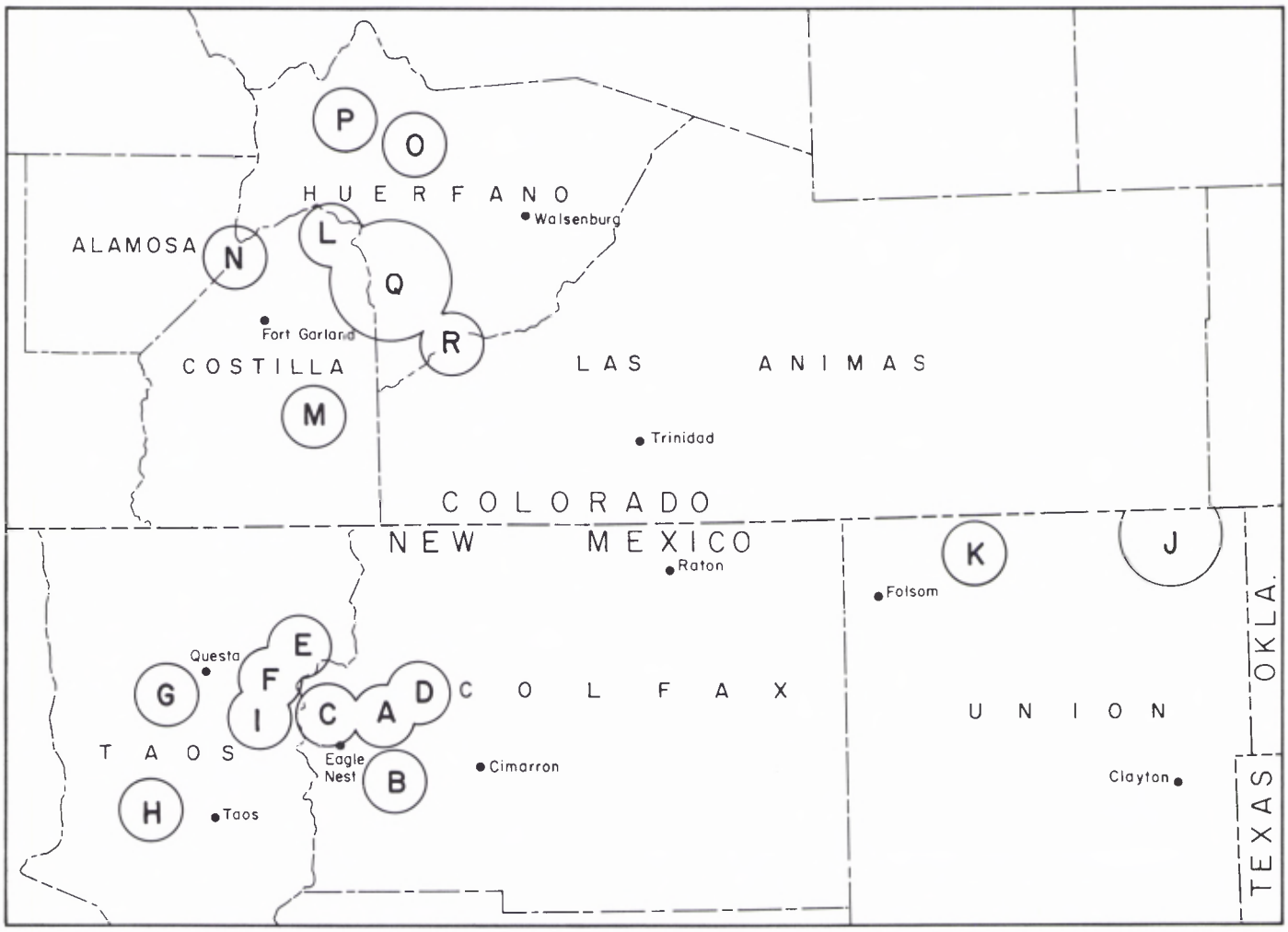
STUART A. NORTHROP

The University of New Mexico

Most of these records of occurrence are taken from the writer's (1959) "Minerals of New Mexico." Mineral occurrences of unusual interest are indicated by an exclamation mark (!); exceptional occurrences are indicated by two such marks (!!).

COLFAX COUNTY

Lindgren, Graton, and Gordon (1910) recognized four mining districts in this county: Cimarroncito, Moreno (Elizabethtown), Ponil, and Ute Creek (Baldy). The



INDEX MAP OF MINING DISTRICTS

NEW MEXICO: *Colfax County:* Baldy District (A), Cimarroncito District (B), Elizabethtown District (C), Ponil District (D). *Taos County:* Anchor District (E), Red River District (F), Rio Colorado Placers (G), Rio Grande Valley Placers (H), Twining District (I). *Union County:* Black Mesa District (J), Folsom District (K). COLORADO: *Costilla County:* Grayback District (L), Plomo District (M), Sierra Blanca Area (N). *Huerfano County:* Badito Cone District (O), Huerfano District (P), La Veta District (Q), Spanish Peaks Area (R).

Clason (1911) map shows the same four districts but uses the names Baldy (Ute Creek), Cimarroncito, Elizabethtown (Moreno Valley), and Ponil. Hill's (1912) map is essentially the same as Lindgren, Graton, and Gordon's (1910). Lasky and Wootton (1933) combined Baldy and Elizabethtown into a single district.

In the first edition of "Minerals of New Mexico" (1942), I recognized four districts: Baldy, Cimarroncito, Elizabethtown, and Ponil. Anderson's (1955) map shows five districts: Baldy (Ute Creek), Cimarroncito, Elizabethtown (Moreno), Ponil, and Willow Creek. Willow Creek District lies southeast of Baldy Mountain. In the revised edition of "Minerals of New Mexico" (1959), I regarded Willow Creek as an eastward extension of the Baldy District.

BALDY DISTRICT

Subdistricts and synonyms include Aztec, Baldy Mountain, Copper Park, Eagle Nest, Maxwell's, Mount Baldy, Ute Creek, and Willow Creek.

- Amphibole
- Anglesite
- Calcite
- Cerargyrite(?)
- Cerussite
- Chalcopyrite
- Chlorite
- Chrysocolla
- Copper
- Cuprite
- Epidote
- Feldspar
- Galena(?)
- Garnet
- Gold!
  - Placer
- Hematite
  - Specularite
- "Limonite"
- Magnetite
- Malachite
- Molybdenite
- Proustite
- Pyrargyrite
- Pyrite
- Pyroxene
- Quartz!
- Rhodochrosite
- Scapolite, var.
  - Wernerite
- Silver
- Sphalerite
- Stephanite
- Stilbite
- Tetradymite
- Tetrahedrite
- Zoisite

CIMARRONCITO DISTRICT

Subdistricts and synonyms include Bonito, Cimarron Canyon, Uraca, Urraca, and Urraca Creek.

- Calcite
- Chalcopyrite
- Epidote
- Garnet
  - Andradite
- Gold
  - Placer
- Hematite
  - Specularite
- "Limonite"
- Magnetite
- Malachite
- Pyrite
- Quartz

ELIZABETHTOWN DISTRICT

Subdistricts and synonyms include Eagle Nest, E-Town, Hematite, Hematite Creek, Iron Mountain, Moreno, Moreno Valley, and West Moreno.

- Amphibole
- Argentite
- Calcite
- Chalcopyrite
- Chrysocolla
- Cuprite
- Diopside
- Epidote
- Feldspar
- Galena
- Garnet
- Gold
  - Placer
- Hematite
  - Specularite
- Hornblende
- "Limonite"
- Magnetite
- Malachite
- Muscovite
- Pyrite
- Pyrrhotite
- Quartz
- Scapolite, var.
  - Wernerite
- Tremolite
- Uraninite
- Wolframite, var.
  - Ferberite
- Zoisite

In addition to these, Clark (1966) cites biotite, bornite(?), cassiterite(?), and lepidolite(?). The last two minerals were reported by R. F. Pettit, Jr. from the Hematite Creek subdistrict.

PONIL DISTRICT

From this district, placer gold and quartz have been cited.

EASTERN COLFAX COUNTY

Many of the following minerals have been cited in petrographic descriptions.

- Acmite-diopside
- Aegirite!
- Analcime!
- Anorthoclase
- Apatite
- Arfvedsonite
  - Barkevikite
- Augite
  - Titan-augite
- Biotite
- Cancrinite
- Chlorite
- Diopside
- Garnet
- Gypsum, var.
  - Selenite
- Hauynite
- Hematite
- Hornblende
  - Basaltic hornblende
- Hypersthene
- Ice (in ice caves)
- "Iddingsite"
- Ilmenite
- "Limonite"
- Magnetite
  - Titano-magnetite
- Muscovite
- Natrolite
- Nepheline
- Noselite
- Olivine
- Orthoclase
  - Cryptoperthite
  - Microperthite
  - Soda-orthoclase
- Plagioclase
  - Albite
  - Andesine
  - Bytownite
  - Labradorite
  - Oligoclase
- Prehnite
- Pyrite
- Pyroxene
- Quartz
  - Chalcedony
- Resin!!
- Riebeckite
- Rutile
- Serpentine
  - Antigorite
- Sodalite(?)
- Sphene
- Thomsonite
- Thorium minerals
- Uranium minerals
- Zeolites
- Zircon

Staatz (1965, p. 231) describes thorium-bearing veins in the Chico Hills area:

> "at least seven veins ranging from a fraction of an inch to 15 feet in width . . . in irregularly brecciated zones in Dakota sandstone and in phonolite. Their exposed length is from 10 to 550 feet. Vein material consists principally of quartz, iron-oxide minerals, thorite, plumbogummite, and brockite; brockite is the principal thorium mineral."

Parker (1965, p. 294) describes an occurrence of niobium in the Laughlin Peak area:

> "some veins which cut phonolite and the Dakota Sandstone are rich in thorium, niobium, and rare earths and contain also carbonate, phosphorus, barium, and strontium. The niobium content in some veins is as much as 0.37 percent, but the

minerals containing the niobium have not yet been identified."

At various other localities in Colfax County, the following have been noted.

Aragonite
Arsenopyrite
Augite
Biotite
Calcite
  Iceland spar
Graphite!
Gypsum, var.
  Selenite
Hauynite
Hornblende
"Iddingsite"
Ilmenite
"Leucoxene"
"Limonite"
Montmorillonite
Muscovite
Olivine
Orthoclase
  Sanidine
Plagioclase
Quartz
  Jasper
Resin!!
Rutile
Siderite
  Spherosiderite

NORTHERN TAOS COUNTY

Mining districts in southern Taos County, such as Glenwoody, Harding Mine, and Picuris, are not included in this resume.

In northern Taos County, Lindgren, Graton, and Gordon (1910) recognized only three districts: Anchor (La Belle), Red River, and Twining (Arroyo Hondo). The Clason (1911) map shows six districts: Anchor (La Belle), Black Copper, Red River, Rio Colorado Placers, Rio Grande Placers, and Rio Hondo (Twining). Hill (1912) recognized the same three districts as did Lindgren, Graton, and Gordon (1910). Lasky and Wootton (1933) treated Anchor, Red River, Rio Grande Valley Placer, and Twining.

In the first edition of "Minerals of New Mexico" (1942), I used the same four, and Anderson's (1955) map uses the names Anchor, Red River, Rio Grande Placer, and Rio Hondo Districts. In the revised edition of my book (1959), I accepted Rio Colorado Placers as distinct from the Rio Grande Valley.

In his report on Taos County, Schilling (1960) noted that much confusion exists as to names and extent of some districts. He stated that the Anchor and Red River subdistricts are commonly included in a much larger Red River District which extends west to the Questa Molybdenum Mine and southeast to the Black Copper Mine. However, he recognized Rio Hondo (Twining, Arroyo Hondo) as a separate district. Schilling's Rio Grande Placer District extends from Questa southwestward along Red River to the Rio Grande and thence southward and southwestward to the south boundary of the county near Dixon, with lobes extending up several tributary streams such as the Rio Hondo. He also established No Agua as a new district to include the perlite and scoria deposits of northwestern Taos County.

ANCHOR DISTRICT

Subdistricts and synonyms include Keystone, La Belle, and Midnight.

Calaverite(?)
Chalcopyrite
Fluorite
Gold
  Placer
Hematite
"Limonite"
Muscovite, var.
  Sericite
Petzite
Pyrite
Quartz

In addition to these, Schilling (1960) cites the following:

Argentite
Biotite
Garnet
Sphalerite

Argentite occurs at the Memphis Mine; sphalerite is rare at the Cora Gibson and Neptune prospects; biotite and garnet occur at the Enderman prospect.

RED RIVER DISTRICT

Subdistricts and synonyms include Alum Gulch, Black Copper, Black Mountain, Questa, and Sulphur Gulch. (As noted above, some writers have included the Anchor District in the Red River District.)

Actinolite(?) asbestos
Alunite(?)
Anatase
Apatite
Argentite
Augite
Biotite!
Bismuth
Calaverite(?)
Calcite
  Manganoan calcite
Chalcocite
Chalcopyrite
Chlorite
Dolomite
Epidote
Feldspar
Ferrimolybdite!
Fluorite
Galena
Garnet
  Almandite
  Grossularite
Gold
  Placer
Graphite
Gypsum
  Selenite
Hematite
  Specularite
Hornblende!
Ilmenite
Jarosite
Kaolinite
Kyanite
"Limonite"
Magnetite
Malachite
Microcline
Molybdenite!!
Monazite(?)
Montmorillonite
Muscovite
  Red and purple muscovite
  Sericite
Orthoclase!!
  Adularia
Petzite
Plagioclase
  Albite
  Andesine
  Labradorite
  Oligoclase
Pyrite
Quartz
Rhodochrosite!
Rhodonite(?)
Rutile
Serpentine, var.
  Asbestos(?)
Sillimanite
Silver
Smithsonite
Sperrylite
Sphalerite
Sphene
Stibnite
Tellurium minerals
Tourmaline
Uraninite
Uranium minerals
Vanadinite
"Wad"
Wolframite
  Huebnerite
Zircon
Zoisite, var.
  Saussurite

In addition to these, the following have been cited by Schilling (1960):

Arsenopyrite
Azurite
Proustite(?)
Pyrargyrite(?)
Tenorite

Arsenopyrite and "ruby silver" were reported from the Jay Hawk Mine; azurite stains were observed at prospects along Spring Gulch and at the Copper King Mine; tenorite occurs also at the Copper King.

RIO COLORADO PLACERS AND RIO GRANDE VALLEY PLACERS

Placer gold and quartz seem to be the only minerals reported from these districts.

TWINING DISTRICT

Subdistricts and synonyms include Amizett, Amizette, Arroyo Hondo, and Rio Hondo. The last two names should not be confused with Hondo Canyon, northeast of Pilar, in southern Taos County. Northrop's (1959) Hondo Canyon District has been assigned by some writers to the large Picuris District. The following minerals have been reported from the Twining District.

- Amphibole
- Azurite
- Bornite
- Calcite
- Chalcocite
- Chalcopyrite
- Chlorite
- Copper
- Epidote
- Galena
- Gold
  - Placer
- Hematite
  - Specularite
- "Limonite"
- Magnetite
- Malachite
- Molybdenite
- Pyrite
- Quartz
- Siderite
- Sphalerite
- Stibnite(?)
- Talc
- Tourmaline

In addition, Schilling (1960) reported the following:

- Biotite
- Chrysocolla
- Cuprite
- Feldspar (pink)
- Muscovite

Chrysocolla occurs at the Frazer Mine and at the Comstock and Highline prospects; cuprite occurs at the Highline prospect. Clark (1966) cites hornblende.

A number of other minerals occur at isolated mines and prospects not generally assigned to any district, such as those in the Culebra Range, northern Taos Range, Cabresto Creek area, and San Cristobal Creek. See Schilling (1960).

UNION COUNTY

No mining districts had been recognized by early workers, such as Lindgren, Graton, and Gordon (1910), the Clason (1911) map, Hill (1912), Lasky and Wootton (1933), Northrop (1942), and Anderson (1955). However, in his report on the geology and ore deposits of northeastern New Mexico exclusive of Colfax County, Harley (1940) had described two "mineralized districts," Folsom and Black Mesa. I decided in 1959 to accept these as mining districts.

BLACK MESA DISTRICT

Both Black Mesa and Folsom have been called the Dry Cimarron area or district.

- Azurite
- Barite
- Bornite
- Chalcocite
- Chalcopyrite
- Chrysocolla
- Copper
- Malachite
- Quartz
- Tenorite, var.
  - Melaconite
- Uranium minerals(?)

FOLSOM DISTRICT

- Azurite
- Chalcocite
- Gold
  - Placer
- Malachite
- Quartz
- Silver(?)
- Uranium minerals(?)

OTHER LOCALITIES IN UNION COUNTY

- Alunogen
- Analcime
- Apatite,
  - Carbonate-apatite
- Halloysite
- Hematite
- Malachite
- Nepheline
- Olivine
- Quartz
- Uranium minerals(?)

Baldwin and Muehlberger (1959) have cited the following, mostly in petrographic descriptions.

- Aegirite(?)
- Anorthoclase(?)
- Augite
- Barite
- Calcite
- Cancrinite(?)
- Enstatite
- Gibbsite
- Gypsum
  - Selenite
- Hauynite
- Hypersthene
- "Iddingsite"
- Kaolin
- Magnetite
- Microcline
- Pigeonite(?)
- Plagioclase
  - Andesine
  - Bytownite
  - Labradorite
  - Oligoclase
- Quartz
  - Agate
  - Chalcedony
- Zeolite

REFERENCES CITED

Anderson, E. C., 1955, Metal mining districts and subdistricts, New Mexico—1955. This map accompanies Anderson, E. C., 1957, The metal resources of New Mexico and their economic features through 1954: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 39.

Baldwin, Brewster, and Muehlberger, W. R., 1960, Geologic studies of Union County, New Mexico: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 63.

Clark, K. F., 1966, Geology and ore deposits of the Eagle Nest quadrangle, New Mexico: Univ. New Mexico doctoral dissertation.

Clason [Map Co.], 1911, Mining map of New Mexico: Denver, The Clason Map Co. This map accompanies Jones, F. A., 1915, The mineral resources of New Mexico: New Mexico School of Mines Mineral Res. Survey Bull. 1.

Harley, G. T., 1940, The geology and ore deposits of northeastern New Mexico (exclusive of Colfax County): New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 15.

Hill, J. M., 1912, The mining districts of the western United States, with a geologic introduction by Waldemar Lindgren: U.S. Geol. Survey Bull. 507.

Lasky, S. G., and Wootton, T. P., 1933, The metal resources of New Mexico and their economic features: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 7.

Lindgren, Waldemar, Graton, L. C., and Gordon, C. H., 1910, The ore deposits of New Mexico: U.S. Geol. Survey Prof. Paper 68.

Northrop, S. A., 1942, Minerals of New Mexico: Univ. New Mexico Bull. 379, Geol. ser., v. 6, no. 1. This first edition was reprinted in 1944 as a book by the Univ. New Mexico Press.

————, 1959, Minerals of New Mexico, rev. ed.: Albuquerque, Univ. New Mexico Press.

Parker, R. L., 1965, Niobium and tantalum, *in* U.S. Geol. Survey, Mineral and water resources of New Mexico: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 87, p. 290-294.

Schilling, J. H., 1960, Mineral resources of Taos County, New Mexico: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 71.

Staatz, M. H., 1965, Thorium, *in* U.S. Geol. Survey, Mineral and water resources of New Mexico: New Mexico Inst. Min. and Tech., State Bur. Mines and Mineral Res. Bull. 87, p. 230-234.