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Mineral Resource Areas of the Basin and Range Province of New Mexico

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INTRODUCTION

The purpose of this map (pl. 1) and table 1 is to identify the mineralized areas within the Basin and Range Province which include areas of past or present mining and prospecting activity as well as areas of potential resources based on projection of geologic data. The limits of the resource areas shown on the accompanying map are not legal Mining District boundaries and may include more than one district (see table 1) as well as adjacent areas having resource potential. Informal names are used for those areas that have no formal name. Resource areas containing only building materials are not included. This is a preliminary evaluation and is subject to review and to future identification of additional occurrences.

Table 1 tabulates basic information for each resource area, including location, commodities, short description of the type and age of the deposit and the enclosing rock, and a few pertinent references.

Mineral deposits within the Basin and Range Province in New Mexico are predominantly in vein systems containing base and precious metals. They are generally low temperature deposits and are mostly relatively small with minor production records. Notable exceptions are the several porphyry copper deposits in the southwestern part of the State and at Cerrillos in the north-central part, and the massive sulfide deposits in the Willow Creek District east of Santa Fe.

Large underground mines were developed east of Santa Fe, at Magdalena (Kelley) and in the region around Silver City, and smaller but still significant mines around and south of Cerrillos, at Kingston, Lake Valley, Organ, and in the Silver City-Lordsburg region. The remainder of the mining districts have only small mines or prospects or small open cuts. Two of the porphyry copper deposits, Santa Rita (one of the largest in the U.S.) and Tyrone, have developed into large open pit mines; others are in early developmental stages.

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Bernalillo	Rio Puerco Coal	Tps. 9,10,11,12 N., Rs. 1 E., 1,2 W.	Coal	Coal beds within Cretaceous Mesaverde Group.	4, 7, 25
	Tijeras Canyon	Tps. 8,9,10 N., R. 5 E.	Ag, Au, barite, Cu, fluorite, Pb, stone	Veins in Precambrian granitic gneiss, directly beneath Pennsylvanian limestone.	4, 7, 25
	Tijeras Coal	T. 11 N., Rs. 5,6 E.	Coal	Coal beds within Cretaceous Mesaverde Group.	4, 7, 25
Catron	Mogollon	Tps. 10,11 S., R. 19 W.	Ag, Au, Cu, fluorite, Pb, U	Deposits along faults in Tertiary volcanics, including andesite, rhyolite, and quartz latite.	6, 7
	Sullivans Hole	Tps. 7,8 S., Rs. 9,10 W.	Ag	Fracture-filling veins and disseminated deposits in Tertiary volcanics.	15, 24
	Taylor Creek	Tps. 8,9,10,11 S., Rs. 11, 12 W.	Sn	Veinlets in altered Tertiary rhyolite; placer deposits in gravels.	7, 25, 30
	Wilcox	T. 12 S., R. 18 W.	Au, Bi, fluorite, Te	Veins along faults in Tertiary andesite.	7, 31
Doña Ana	Aden	T. 25 S., R. 3 W.	Scoria	Scoria from Quaternary cinder cone.	1, 7, 24
	Bear Canyon	T. 20 S., Rs. 4,5 E.	Barite, Pb, V	Replacement deposits in Silurian Fusselman Dolomite.	2, 7
	Bishops Cap	T. 24 S., R. 34 E.	Fluorite, barite	Fracture-filling and fault-zone deposits in Silurian Fusselman Dolomite.	23, 25
	Black Mountain No. 1	T. 21 S., R. 4 E.	Ag, Au, barite, Bi, Cu, fluorite, Pb, Zn	Replacement deposits in Silurian Fusselman Dolomite.	2, 7
	Black Mountain No. 2	Tps. 25,26 S., Rs. 1,2 E.	Scoria	Scoria from Quaternary basalt.	1, 7, 24
	Brickland	T. 29 S., R. 4 E.	Clay	Clay beds in Cretaceous rocks	7, 24
	Doña Ana Mountains	T. 21 S., Rs. 1,2 E.	Ag, Au	Fissure-filling deposits in rhyolite dike, cutting andesite.	2, 7
	Gold Camp	T. 21 S., R. 4 E.	Ag, Au, barite, Bi, Cu, fluorite, Mo, Pb, Te, W, Zn	Veins in Precambrian granite, often along dikes.	2, 7, 20
	Hembrillo	T. 16 S., Rs. 3,4 E.	Barite, Cu, talc	Replacement deposits associated with shear zones in Cambrian and Ordovician Bliss Sandstone and El Paso Limestone.	2, 7
	Iron Hill	Tps. 21,22 S., R. 1 W.	Fe	Hematite replacement deposits in Pennsylvanian Magdalena Limestone.	2, 7

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Doña Ana	Northern Franklin Mountains	Tps. 25,26 S., R. 4 E.	Fluorite, gypsum, jarosite, Pb	Jarosite replacement deposits in shear zones in Pennsylvanian Magdalena Limestone; lead and fluorspar ore bodies in Silurian Fusselman Dolomite; bedded gypsum in Pennsylvanian or Permian Hueco Limestone.	2, 7
	Organ	Tps. 21,22 S., Rs. 3,4 E.	Ag, Au, barite, Bi, Cu, fluorite, Mo, Pb, Te, W, Zn	Fissure veins in quartz monzonite; replacement veins in Pennsylvanian Magdalena Limestone; and contact-metamorphic deposits along contact zone of quartz monzonite and limestone.	7, 20
	Organ Mountains	Tps. 21,22,23,24 S., Rs. 3, 4 E.	Ag, Au, barite, Bi, Cu, fluorite, Mo, Pb, Te, W, Zn	Fissure veins in quartz monzonite; replacement deposits in Pennsylvanian Magdalena Limestone; along contact of quartz monzonite and limestone; and in other Tertiary intrusives.	2, 20, 23, 25
	Potrillo Mountains	Tps. 27,28 S., Rs. 1,2,3 W.	Barite, marble?, Pb	Replacement deposits near shear zones in limestone of disputed age (Cretaceous, Permian, or Pennsylvanian).	2, 7
	Rincon	Tps. 17,18 S., Rs. 2,3 W.	Barite, fluorite, Mn, W	Vein deposits in Tertiary extrusives.	2, 7, 25
	San Andrecito (San Andres Mountains)	T. 17 S., R. 4 E.	Cu	Deposits along faults and fissures, in or near Precambrian granites and schists, in vicinity of quartz monzonite and other intrusives.	7, 19
	San Andres Canyon (San Andres Mountains)	T. 18 S., R. 4 E.	Barite, Pb	Deposits along faults and fissures in or near Precambrian granites and schists, in vicinity of quartz monzonite and other intrusives.	7, 19
	South Canyon	T. 23 S., R. 4 E.	Mg?, Mn	Deposits in dolomite xenoliths within mass of quartz monzonite.	2, 7
	Tonuco Mountain	Tps. 19,20 S., R. 1 W.	Ba, fluorite	Veins in Precambrian rocks.	2, 7
	Tortugas Mountain	T. 23 S., R. 2 E.	Fluorite	Replacement veins in Pennsylvanian Magdalena Limestone.	2, 7
Grant	Alum Mountain (Alunogen, Gila River)	T. 13 S., R. 13 W.	Alum	Deposits associated with Tertiary volcanic rock (part of Mogollon-Datil field), which contains disseminated pyrite altering to alunite.	7, 33
	Black Hawk	T. 18 S., R. 16 W.	Ag, Co, Ni, U, W	Fissure-filling deposits in Precambrian quartz diorite gneiss near Laramide diorite porphyry.	7, 9
	Bound Ranch	T. 23 S., Rs. 15,16 W.	Au, fluorite, perlite, U, W	Deposits along faults in Precambrian granite.	7, 9

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Grant	Burro Mountains	Tps. 18,19,20,21 S., Rs. 15,16,17 W.	Ag, Au, Cu, fluorite, Mo, Te, turquoise, U	Veinlets and fracture fillings within shear zones in Precambrian granite and Laramide quartz monzonite stock.	7, 9
	Caprock Mountain	T. 19 S., Rs. 19,20 W.	Mn	Veins in quartzite and Tertiary Gila Conglomerate.	7, 20
	Carpenter	Tps. 16,17 S., R. 9 W.	Ag, Au, Pb, Zn	Veins along shear zones cutting Ordovician crystalline limestone.	7, 21
	Central	Tps. 17,18 S., Rs. 12, 13 W.	Ag, Au, Cu, Pb, V, W, Zn	Veins in quartz diorite porphyry sills intruded into sandstone and shale of Upper Cretaceous Colorado Formation.	7, 20
	Chloride Flat	Tps. 17,18 S., R. 14 W.	Ag, Fe, Mn	Irregular replacement deposits in limestone in Silurian Fusselman Dolomite.	20
	Eureka	Tps. 27,28 S., R. 16 W.	Ag, Au, Cu, Pb, turquoise, W, Zn	Vein, replacement, and disseminated deposits in Comanchean age sedimentary rocks (mostly limestone), near intrusions of monzonite, quartz monzonite and porphyritic granite; also placer deposits	7, 17
	Fierro-Hanover	Tps. 16,17, S., R. 12 W.	Ag, Cu, Fe, Mn, Pb, Zn	Replacement deposits in Paleozoic limestones, including Ordovician El Paso, Mississippian Lake Valley, and Pennsylvanian Magdalena Limestones, near Laramide granodiorite stock.	7, 20, 29
	Fierro Manganese	Tps. 16,17 S., R. 12 W.	Mn	Fissure-vein deposits in Carboniferous limestones.	7, 30
	Fleming	T. 17 S., R. 15 W.	Ag, fluorite, Mn	Veins in locally brecciated Cretaceous Beartooth Quartzite.	7, 20, 21
	Georgetown	Tps. 16,17 S., Rs. 11, 12 W.	Ag	Deposits in Ordovician limestone, near dikes of granodiorite porphyry.	7, 21
	Gila Fluorspar	T. 14 S., R. 16 W.	Fluorite	Deposits in hydrothermally altered Tertiary volcanic rocks.	7, 9
	Gold Hill	Tps. 21,22 S., Rs. 16, 17 W.	Ag, Au, fluorite, rare earths, Ta	Pegmatites and hydrothermal veins in Precambrian granites.	7, 9
	Juniper	T. 16 S., R. 14 W.	Meerschaum	Veins in Tertiary igneous rocks.	7, 33
	Lone Mountain	T. 18 S., R. 13 W.	Ag, Fe, Mn, Pb	Fracture-filling deposits in strata of Ordovician limestone in vicinity of granodiorite porphyry.	7, 21
	Malone	T. 20 S., R. 16 W.	Ag, Au, florite, perlite	Fissure-filling deposits at Burro Mountain in Precambrian granite, near fault contact with volcanic rocks.	7, 9

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Grant	Meerschaum	T. 14 S., R. 13 W.	Meerschaum	Veins in Tertiary igneous rocks.	7, 33
	Northern Cooks Range	T. 19 S., R. 9 W.	Fluorite	Small, fault-controlled veins near the top of limestone Silurian Fusselman Dolomite.	3, 7, 25
	Pinos Altos	Tps. 16,17 S., Rs. 13, 14 W.	Ag, Au, Cu, Fe, Pb, Zn	Fissure veins in granodiorite, diorite, and diorite porphyry; and replacement deposits in Paleozoic limestone.	7, 21
	Ricolite	T. 18 S., R. 18 W.	Fluorite, Mn, ricolite (var. of serpentine)	Ricolite in tabular xenoliths of serpentine-carbonate rocks of Precambrian Ash Creek Group.	7, 9
	Santa Rita	T. 17 S., R. 12 W.	Ag, Au, Cu, Fe, Mo, Pb, Zn	Contact metamorphic, porphyry, and vein deposits in Paleozoic and Mesozoic sedimentary and igneous rocks, including Lake Valley Limestone, Abo Formation, Colorado Formation, and various intrusives.	7, 28
	Seventy-four Mountain	T. 13 S., Rs. 17,18 W.	Fluorite	Veins in Tertiary volcanic rocks in vicinity of Mogollon Fault.	7, 9
	Silver City	Tps. 17,18 S., R. 14 W.	Ag, Fe, Mn	Replacement deposits in Ordovician El Paso Limestone and Montoya Dolomite and Silurian Fusselman Dolomite; also subordinate fissure deposits.	7, 20, 21
	Steeple Rock	Tps. 15,16,17 S., Rs. 20,21 W.	Ag, Au, fluorite, Pb, Zn	Veins along faults and fissures in Tertiary volcanic rocks.	7, 9
	Telegraph	Tps. 16,17,18 S., Rs. 16,17,18 W.	Ag, Cu, fluorite, Mn, Pb, Zn	Veins near major faults in Precambrian granite near Burro Mountain and in Cretaceous Beartooth(?) Quartzite.	7, 9
	White Signal	Tps. 20,21 S., Rs. 15, 16,17 W.	Ag, Au, Bi, Cu, fluorite, garnet, ocher, Pb, rare earths,Ta, turquoise, U, Zn	Veins in Precambrian granite, generally associated with Tertiary dikes.	7, 9
Hidalgo	Animas	T. 25 S., R. 19 W.	Fluorite	Fissure veins in Tertiary pyroxene andesite.	7, 8
	Antelope Pass	T. 27 S., Rs. 20,21 W.	Ag, Au, fluorite, fire clay, Mn	Refractory clay deposits in Pennsylvanian rocks.	7, 24
	Apache No. 2	T. 28 S., R. 14 W.	Ag, Au, Bi, Cu, W	Deposits in contact-metamorphosed Paleozoic limestone, near intrusive porphyry.	7, 21
	Big Hatchet Mountains	T. 31 S., R. 15 W.	Cu, gypsum, Pb, Zn	Faulted Paleozoic limestones and Cretaceous shales, intruded by granitic porphyries.	7, 21
	Fremont	Tps. 28,29 S., R. 14 W.	Ag, Au, Cu, Pb, U, V, Zn	Vein along fault in Lower Cretaceous Howells Ridge Formation.	7, 11

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Hidalgo	Lordsburg	Tps. 23,24 S., Rs. 18, 19 W.	Ag, Au, Cu, fluorite, Pb, perlite, pumice	Veins along faults in Cretaceous and Tertiary basalt, as well as in other volcanic rocks, near granodiorite and other intrusives.	7, 18
	Red Hill	Tps. 30,31 S., Rs. 17, 18 W.	Ag, Au, Cu, Pb	Oxidized deposits in Tertiary volcanic rocks.	7, 20
	San Simon	Tps. 24,25 S., R. 21 W.	Ag, Au, Pb, rare earths, W, Zn	Deposits in cherty limestones, possibly of pre-Carboniferous age, in vicinity of granite porphyry dikes.	7, 21
	Steins Pass	T. 23 S., R. 21 W.	Ag, Au, Cu, Pb	Fault-fissure veins in volcanics and intrusives, including rhyolite and diorite porphyry, near monzonite porphyry dikes.	7, 21
	Sylvanite	Tps. 28,29 S., R. 16 W.	Ag, As, Au, Cu, Pb, Sb, Te, W, Zn	Disseminated, vein, and replacement deposits in Comanchean age sedimentary rocks (mostly limestone) near intrusions of quartz monzonite, monzonite, and porphyritic granite.	7, 17
Lincoln	Capitan	Tps. 7,8 S., Rs. 13, 14 E.	Fe, Th	Thorium in breccia veins in alaskite of Tertiary(?) age; iron in high-temperature replacement bodies in Permian San Andres Limestone.	7, 10
	Gallinas Mountains	Tps. 1,2 S., Rs. 11, 12 E.	Ag, barite, Cu, fluorite, Fe, Pb, rare earths, Zn	Deposits mainly in brecciated or highly fractured zones within Permian Yeso Formation, intruded by syenite and monzonite porphyry of Tertiary age.	7, 10
	Jicarilla	T. 5 S., R. 12 E.	Ag, Au, barite, Cu, Fe, W	Veins and placer deposits within area of Tertiary monzonite and monzonite porphyry intrusives surrounded by Permian sedimentary rocks.	7, 10
	Nogal	Tps. 8,9,10 S., Rs. 11,12 E.	Ag, Au, barite, Cu, Mo, Pb, Zn	Deposits in Tertiary volcanics (mostly andesite); also disseminated sulfide deposits in monzonite stock.	7, 10, 25
	Tecolote Iron	Tps. 2,3,4 S., R. 12 E.	Fe	Replacement deposits in Permian San Andres Limestone and Yeso Formation sedimentary rocks, near syenite, monzonite, and diorite intrusions.	10, 25, 32
	White Oaks	Tps. 6,7 S., Rs. 11, 12 E.	Au, fluorite, Fe, U, W	Deposits along contact between monzonite intrusives of Lone Mountain and Paleozoic sedimentary rocks; also in belt of extrusive and intrusive Tertiary(?) rocks and in adjacent Cretaceous sedimentary rocks.	7, 10

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Luna	Carrizalillo	Tps. 27,28 S., Rs. 11, 12 W.	Agate, Ag, Au, Cu, Mn, Pb, perlite	Deposits along contact of rhyolite dike with andesite, and in rhyolite breccia and welded tuffs; also in Lower Cretaceous limestones and conglomerates.	7, 11
	Cooks Peak	Tps. 19,20,21,22 S., Rs. 8,9 W.	Ag, Au, Cu, fluorite, Mn, Pb, U, Zn	Veins and replacement deposits in Silurian Fusselman Dolomite, directly below Devonian Percha Shale; also veins in granodiorite dikes.	7, 14, 25
	Cooks Range Manganese	T. 21 S., R. 8 W.	Fluorite, Mn	Veins and replacement deposits in andesite and andesite breccia.	7, 20, 25
	Florida Mountains	Tps. 25,26 S., Rs. 7, 8 W.	Ag, Au, barite, Cu, fluorite, Mn, Pb, Zn	Deposits in Tertiary agglomerate, Silurian Fusselman Dolomite, Ordovician El Paso Limestone (or Dolomite), and Precambrian granite, gabbro, and diorite.	7, 11
	Fluorite Ridge	Tps. 21,22 S., Rs. 8, 9 W.	Carnelian, fluorite	Fissure veins in Paleozoic sediments including Bliss Sandstone, El Paso Limestone, Montoya Dolomite, Fusselman Dolomite; also in Cretaceous Sarten Sandstone.	7, 11
	Little Florida Mountains	T. 24 S., R. 7 W.	Barite, fluorite, Mn	Veins along faults in Tertiary agglomerate and Tertiary Gila Conglomerate.	7, 11
	Tres Hermanas	Tps. 27,28 S., R. 9 W.	Ag, Au, Cu, Pb, travertine, Zn	Stratabound replacement deposits in Mississippian and Pennsylvanian limestones, and in Silurian Fusselman Dolomite, near monzonite dike. Vein system cuts through Lower Cretaceous rocks, latite breccias and flows, altered Paleozoic sediments, and into quartz monzonite stock.	7, 11
	Victorio	T. 24 S., R. 12 W.	Ag, Au, Be, Cu, Fe, Pb, W, Zn	Replacement and vein deposits, mostly in Silurian Fusselman Dolomite.	7, 11
Otero	Cornudas Mountains	Tps. 25,26 S., Rs. 13, 14,15 E.	Rare earths	Permian Yeso Formation, Cretaceous sedimentary rocks, and Late Cretaceous or Tertiary intrusives.	1, 25, 27
	Orogrande	Tps. 21,22 S., R. 8 E.	Ag, Au, Cu, Fe, Pb, turquoise, W	Deposits along bedding and in fractures of Carboniferous limestones near intrusive mass of monzonite porphyry.	7, 21, 25
	Sacramento (High Rolls)	Tps. 16,17,18 S., Rs. 10,11 E.	Barite, Cu, marble, Pb	Deposits in discontinuous beds, between red shales of Permian Abo Formation. Also found with calcite and barite, in Permian San Andres Formation.	7, 13, 25
	Three Rivers	Tps. 11,12 S., Rs. 9,10 E. (partly on Mescalero Indian Reservation)	Fe	Hematite and magnetite replacement deposits in Permian San Andres Limestone near syenite intrusions.	7, 24
	Tularosa	T. 13 S., R. 10 E.	Ag, alabaster "onyx," Au, Cu	Deposits along beds in Carboniferous(?) limestone and sandstone, and veinlets in limestone, sandstone, and diorite porphyry.	7, 21, 25

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Sandoval	Bland (Cochiti)	T. 18 N., Rs. 4,5 E.	Ag, Au, perlite, U	Replacement and open-space filling within Tertiary(?) volcanics.	4, 7, 20, 25
	Hagan Coal	Tps. 12,13,14 N., Rs. 5, 6 E.	Ag, Au, coal, Cu, Se	Coal beds (bituminous) within Mesaverde Group; main bed, the Hopwell, has strong sandstone roof and floor.	4, 7
	Jemez	Tps. 16,17,18 N., Rs. 1,2 E.	Cu	"Red-bed" deposits in Permian Abo Formation.	25
	Jemez Springs	T. 17 N., R. 2 E.	Ag, Au, Cu	"Red-bed" deposits in Permian Abo Formation.	4, 7, 25
	Jemez Sulfur	Tps. 19,20 N., Rs. 3,4 E.*	S	Sulfur in hot-springs deposits.	7, 25, 33
	Nacimiento Mountains	Tps. 19,20 N., R. 1 E. and W.*	Ag, Cu	"Red-bed" deposits in Permian and Triassic sandstone, marl, conglomerate, and shale.	7, 20, 25
	Nacimiento Mountains Uranium	Tps. 15,16,17,18 N., R. 1 E. and W.	U	Deposits in Jurassic Morrison Formation and Cretaceous Dakota Sandstone.	25
	Placitas	Tps. 11,12,13 N., Rs. 4,5,6 E.	Ag, Au, barite, Cu, F, gypsum, Pb	Pockets and veins in various Precambrian, as well as Carboniferous, rocks.	4, 7, 25
	Ponderosa	T. 17 N., R. 3 E.	Pumice	Pumice in Tertiary volcanic rocks.	7
	White Mesa	T. 15 N., R. 1 E.	Gypsum	Gypsum member of Jurassic Todilto Limestone.	7, 35
San Miguel	Willow Creek	Tps. 14,15,16 N., Rs. 10,11,12 E.*	Ag, Au, Cu, Pb, Zn	Deposits in pre-Carboniferous amphibolite.	7, 21
Santa Fe	Aspen Mountain (Aspen Ranch)	Tps. 18,19 N., Rs. 10, 11 E.*	Ag, Au, Cu, Mn, Pb, Zn, mica pegmatites	Veins in Precambrian rocks.	7, 24
	Cerrillos	Tps. 14,15 N., R. 8 E.	Ag, Au, Cu, Pb, turquoise, U, Zn	Disseminated and vein deposits in Jurassic Morrison Formation; Cretaceous Dakota Sandstone, Mancos Shale, and Mesaverde Group; Eocene and Oligocene(?) Galisteo Formation; and most significantly in intrusive Oligocene monzonites and extrusive equivalents, the Espinaso Volcanics.	4, 7
	Cerrillos Coal	Tps. 13,14 N., Rs. 7, 8 E.	Coal	Coal beds within Cretaceous Mesaverde Group.	7, 25
	Glorieta	Tps. 15,16 N., Rs. 10, 11,12 E.	Ag, Au, Cu, Fe, Pb, Zn	Replacement deposits in Permian San Andres Limestone; disseminated (copper) deposits in Pennsylvanian arkose and limestone beds; veins in Precambrian rocks.	4, 7, 25
	La Bajada	T. 15 N., R. 7 E.	Ag, Cu, gypsum, U	Vein along fault in Miocene Cieneguilla Limburgite, and Bishops Lodge Member of Tesuque Formation in Santa Fe Group.	4, 7, 25

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Santa Fe	La Cienga	T. 16 N., R. 8 E.	Mn, scoria	Scoria in Quaternary volcanic rocks; manganese in fractures and brecciated zones in volcanic rocks.	1, 5, 7
	New Placers	Tps. 11,12 N., Rs. 6, 7 E.	Au, Cu, Fe, Pb, W, Zn	Veins and replacement deposits in Pennsylvanian Madera Limestone, Permian Abo, Yeso, and San Andres Formations, and Triassic Dockum Group rocks; intruded by numerous dikes and stocks, including diabase, monzonite, and rhyolite porphyries.	4, 7, 25
	Old Placers	T. 13 N., R. 7 E.	Au, Cu, Fe, W	Veins and disseminated deposits in margins of vent; in heavily intruded Cretaceous Dakota Sandstone, Mancos Shale, and Mesaverde Group; and placer deposits.	4, 7, 25
	Ortiz	Tps. 12,13,14 N., Rs. 7,8,9 E.	Ag, Au, Cu, Pb, Zn	Veins and breccia pipes within sandstones of Cretaceous Mesaverde Group and contact-metamorphic zones in Paleozoic rocks, adjacent to stock of intermediate composition.	1, 25, 36
	Santa Fe	Tps. 16,17,18 N., Rs. 10,11 E.	Ag, Au, Cu, Pb, rare earths, Zn	Fissure fillings and shear zones in Precambrian granite, schist, and diabase; also some placer deposits.	4, 7, 25
	Santa Fe Manganese	Tps. 17,18 N., R. 10 E.	Mn	Replacement deposits in Pennsylvanian shale and fault-brecciated limestone.	4, 7, 25
Sierra	Bearden Canyon	Tps. 12,13 S., R. 3 E.	Barite, Cu, Pb, Zn	Veins in Pennsylvanian Magdalena Limestone.	7, 25
	Caballo Mountains	Tps. 14,15,16 S., Rs. 3,4 W.	Barite, Cu, fluorite, Fe, Mo, Pb, rare earths, Th, U, V	Fissure veins in Pennsylvanian Magdalena Limestone and Permian San Andres Limestone; probably associated with Tertiary monzonite intrusive.	7, 12, 25
	Chloride	Tps. 8,9,10,11,12 S., R. 9 W.	Ag, Au, Cu, Pb, V	Fissure veins in Tertiary andesite.	7, 12, 25
	Cuchillo Negro	Tps. 9,10,11,12 S., Rs. 6,7 W.	Ag, fluorite, Fe, Sn, U	Veins in volcanic flows.	7, 20, 25
	Derry	T. 17 S., Rs. 3,4 W.	Barite, fluorite, Mn, Th, U	Fissure-filling and replacement deposits in Paleozoic limestones, mostly of Pennsylvanian age.	7, 20, 23, 25
	Fra Cristobal	Tps. 10,11,12 S., Rs. 2,3 W.	Au, Cu, Mn, Pb, Zn	Deposits mainly in Precambrian rocks; also in Pennsylvanian, Permian, and Cretaceous rocks.	7, 12, 24
	Goodfortune Creek	Tps. 11,12 S., R. 3 E.	Ag, Cu	Veins along contact of Precambrian granite with Cambrian quartzite.	7, 19, 25

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Sierra	Grandview Canyon	T. 15 S., R. 3 E.	Barite, Cu, W	Deposits in Precambrian granite and schist along contact with gabbro dikes.	7, 19, 25
	Hermosa	Tps. 13,14 S., R. 9 W.	Ag, Cu, Pb	Replacement deposits in Pennsylvanian Magdalena Limestone.	7, 12, 25
	Hillsboro	Tps. 15,16 S., R. 7 W.	Ag, Au, Cu, Mn, Mo, Te, V	Veins and disseminated deposits in Tertiary volcanics and intrusives, and replacement deposits in Silurian limestone.	7, 12, 25
	Hot Springs	T. 13 S., R. 4 W.	Ag, As, Cu, Mn	Spring-related deposits in Miocene/Pliocene sandstone.	7, 12, 25
	Iron Mountain No. 2	Tps. 9,10 S., R. 8 W.	Be, fluorite, Fe, U, W.	Deposits in Pennsylvanian Magdalena Limestone, associated with underlying Tertiary monzonitic, granitic, and rhyolitic intrusives.	7, 24, 29
	Kingston	Tps. 15,16 S., Rs. 8, 9 W.	Ag, Au, Cu, Mn, Pb	Pipes along fractures, beds, and pockets in limestones of Silurian Fusselman and Ordovician Montoya Dolomites near monzonite porphyry intrusion.	7, 12, 25
	Lake Valley	T. 18 S., R. 7 W.	Ag, Mn, Pb, perlite	Bedded deposits along Mississippian Lake Valley Limestone, blue and crinoidal limestone.	7, 12
	Las Animas Placer	Tps. 15,16 S., Rs. 6, 7 W.	Au	Veins in Tertiary andesite flows; disseminated deposits in Tertiary monzonite porphyry; replacement deposits in Silurian Fusselman Dolomite; and placer deposits.	7, 12, 25
	Lava Gap	Tps. 10,11 S., Rs. 4, 5 E.	Barite, fluorite	Veins in Pennsylvanian Magdalena Limestone.	7, 15, 25
	Macho	T. 19 S., R. 7 E.	Ag, Pb	Veins in Tertiary volcanic rocks and dikes.	7, 12, 14
	Monticello	T. 10 S., Rs. 5,6 W.	Au, fluorite, U	Veins in Pennsylvanian limestone and in mid-Tertiary andesite.	22, 25
	Mud Springs	T. 13 S., Rs. 4,5 W.	Ag, Cu, Pb, Zn	Veins in Precambrian, Upper Ordovician, and Silurian rocks.	25
	Old San Andres	Tps. 12,13,14,15 S., Rs. 2,3 E.	Barite, fluorite, Pb, Zn	Continuation of mineralization in adjacent mining areas, including Bearden Canyon, Goodfortune Creek, Grandview Canyon, Hembrillo, and Sulfur Canyon areas; not currently considered district, in itself.	25
	Pittsburg	Tps. 15,16 S., R. 4 W.	Au, barite, fluorite	Placer deposits in Quaternary gravels.	7, 12, 25
	Salado	Tps. 13,14 S., Rs. 6, 7 W.	Fluorite	Veins and mantos in Paleozoic limestones, including Magdalena Limestone, in jasperoid bodies.	23, 25

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Sierra	Salinas Peak	Tps. 11,12 S., Rs. 3,4,5 E.	Barite, Cu, fluorite, Pb	Veins along fault contact between intrusives and Pennsylvanian Magdalena Limestone.	7, 19, 25
	Sulphur Canyon	Tps. 14,15 S., R. 3 E.	Cu, fluorite	Deposits in Precambrian chlorite-rich schists.	7, 19
	Tierra Blanca	Tps. 16,17,18 S., Rs. 8,9 W.	Ag, Au, Cu, Pb	Pockets and pipes in Mississippian Lake Valley Limestone, in zones bordering monzonite porphyry intrusions.	7, 12, 25
Socorro	Abbey	Tps. 1,2 N., R. 4 W.	Ag, Cu, Pb, Zn	Quaternary volcanic rocks, Tertiary sedimentary rocks, Cretaceous Mancos Shale, and Triassic sedimentary rocks.	1, 25
	Carthage	Tps. 4,5 S., R. 2 E.	Cu, Pb	Cavity fillings in Magdalena Limestone, along fault zone.	7, 20, 25
	Cat Mountain	T. 3 S., Rs. 5,6 W.	Ag, Au	Veins in Tertiary andesite and rhyolite.	7, 19
	Chupadero	Tps. 2,3,4 S., Rs. 1, 2 E.	Barite, Cu, fluorite, Pb, U	Deposits in sandstone member of Pennsylvanian Magdalena Formation, and in Yeso, Glorietta, and San Andres Formations.	7, 20, 25
	Council Rock	Tps. 1,2 S., Rs. 5, 6 W.	Ag, Fe, Pb	Veins in Tertiary(?) rhyolite porphyry, and quartz latite.	7, 19, 25
	Estey	Tps. 5,6,7 S., Rs. 6, 7 E.	Cu	Stratabound deposits in Permian Abo Formation "red-beds"; also in cross fractures and joints.	10, 25
	Hansonburg	Tps. 5,6 S., Rs. 5, 6 E.	Barite, Cu, fluorite, Pb	Deposits along faults; and open-space fillings in fissures and fault breccia cavities in Pennsylvanian Magdalena Limestone.	7, 19, 25
	Hop Canyon	T. 3 S., Rs. 3,4 W.	Au, Cu, Pb	Deposits in shear zone cutting rhyolite.	21, 25
	Jones	Tps. 4,5 S., Rs. 6, 7 E.	Fe	Contact-metamorphic deposits in Permian Yeso, Glorietta, and San Andres Formations, adjacent to monzonite dike	
	Joyita Hills	T. 1 N., R. 1 E.	Barite, fluorite, Pb	Fissure veins in volcanic rocks and in limestone and quartzite of Magdalena Group, near contact with Precambrian granite.	7, 19
	Ladron	Tps. 2,3 N., Rs. 1,2, 3 W.	Barite, Cu, fluorite, Mn, Pb, U, Zn	Deposits in Precambrian granite near rhyolite, andesite, and basalt dikes.	7, 19, 25
	Lemitar Mountains	Tps. 1,2 S., Rs. 1, 2 W.	Barite, Cu, Pb, U, Zn	Fissure fillings and pockets along contacts of Precambrian granite with Precambrian schist and mafic dikes.	7, 19, 25
	Luis Lopez Manganese	T. 4 S., R. 1 W.	Mn	Fault or breccia zones in massive Tertiary rhyolite.	5, 7, 25, 26
	Magdalena	Tps. 2,3 S., Rs. 3, 4 W.	Ag, Au, barite, Cu, Mn, Pb, perlite, V, W, Zn	Replacement deposits in Mississippian Lake Valley Limestone, near monzonite stock.	7, 19, 25

Table 1.--Mineral resource areas of the Basin and Range province of New Mexico (by county)--Continued

County	Mining area	Location	Commodities	Description of deposit and host rock	References
Socorro	Magdalena Mountains Manganese	Tps. 4,5,6 S., Rs. 2, 3,4 W.	Ag, Au, Cu, Mn, Pb, W, Zn	Veinlets and breccias in Tertiary rhyolite and rhyolite tuff.	7, 25, 29
	Mill Canyon	T. 3 S., Rs. 3,4 W.	Au, Cu	Fissures in andesite.	7, 21, 25
	Mockingbird Gap	Tps. 8,9,10 S., Rs. 4, 5 E.	Barite, Cu, fluorite, Pb, Zn	Fault fissures in Precambrian and Paleozoic rocks.	7, 20, 25
	North Magdalena	T. 2 S., R. 4 W.	Ag, Au, barite, Cu, Pb, V, Zn	Fissures in Tertiary andesite and quartz latite.	7, 19, 25
	Ojo Caliente No. 2	Tps. 8,9 S., Rs. 7, 8 W.	Ag, Cu, Pb, Zn	Veins in altered andesite.	7, 20, 25
	Rayo	Tps. 1,2 N., Rs. 4, 5,6 E.	Cu	"Red-bed" deposits in loosely cemented Abo Sandstone.	7, 20, 25
	Red Hill	Tps. 7,8 S., Rs. 6, 7 W.	Au and base metals	Deposits in latite and rhyolite volcanics.	16, 25
	Rose Dale	Tps. 5,6 S., Rs. 5, 6 W.	Ag, Au	Veins in brecciated and sheared zone in rhyolite porphyry.	7, 19, 25
	San Jose	Tps. 7,8,9 S., Rs. 4, 5,6 W.	Ag, Au	Veins and stringers in volcanic rocks, mostly in a thick deposit of rhyolite.	7, 20, 25
	San Lorenzo	T. 1 N., Rs. 1,2 W.	Cu, Mn, U	Fault zone between andesite and basalt.	7, 19, 25
	San Mateo Mountains	T. 9 S., R. 6 W.	Ag, Au, Cu, Pb, U	Veins in Tertiary volcanic rocks.	7, 12, 25
	Scholle	Tps. 2,3,4 N., Rs. 4, 5 E.	Ag, Cu, U	"Red-bed" type deposits in Abo Sandstone.	7, 20, 25
	Socorro Peak	T. 3 S., R. 1 W.	Ag, barite, Pb, perlite	Deposits in Tertiary volcanic rocks.	7, 21, 25
	Spring Hill (Amy)	Tps. 1,2,3 N., Rs. 5, 6 W.	Barite, Cu, Pb, U	Quaternary part of Santa Fe Group, Tertiary sedimentary rocks, Cretaceous Mesaverde Group, and intrusives of various ages.	1, 7, 25
	Water Canyon	T. 3 S., R. 3 W.	Ag, Au, barite, Cu, Mn, Pb, Zn	Deposits in several horizons within Mississippian Lake Valley Limestone.	7, 19, 25
Torrance	Estancia Salt	Tps. 4,5,6 N., Rs. 9, 10 E.	Salt	Evaporite deposits from salt lakes.	7, 33
Valencia	Laguna	Tps. 9,10,11,12,13 N., Rs. 2,3,4,5,6,7 W.	U, V	Peneconcordant deposits in Jurassic Todilto Limestone and in sandstone members of Morrison Formation.	7, 25, 34

*Extends outside of designated Basin and Range boundary.

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