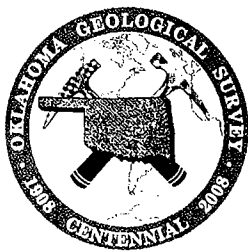
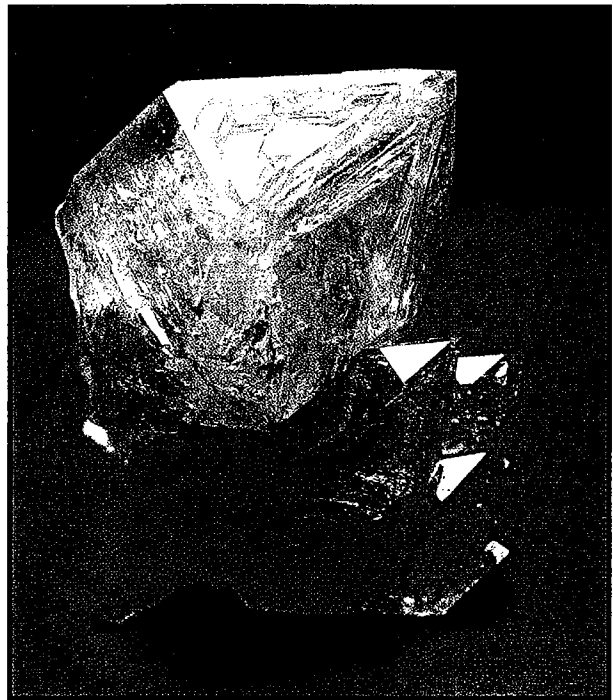
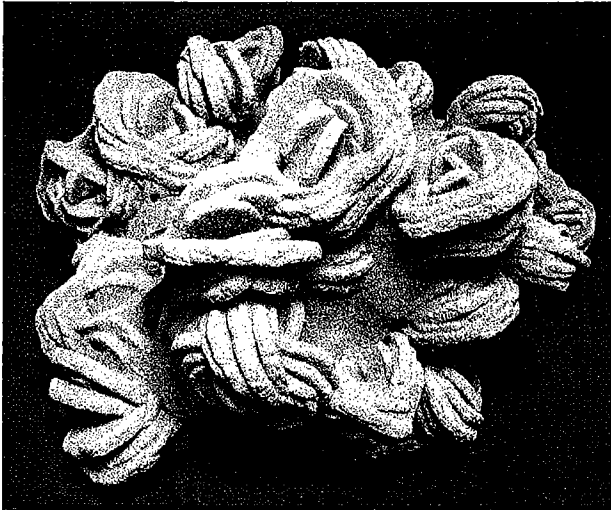
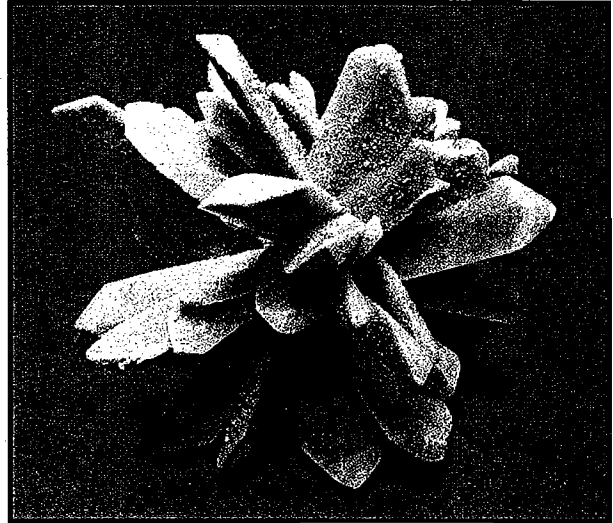
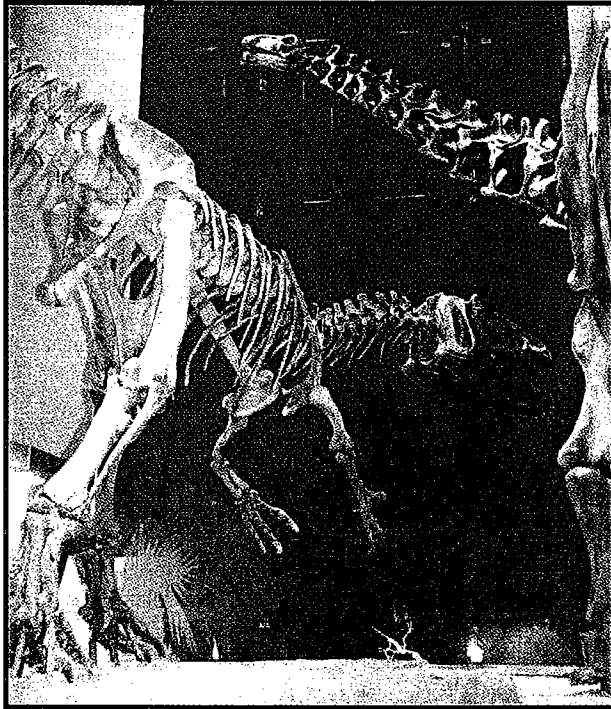


OKLAHOMA MINERAL LOCALITY INDEX

Arthur E. Smith, Jr., Robert O. Fay, Joe Lobell



OKLAHOMA GEOLOGICAL SURVEY
INFORMATION SERIES 12
2008

Reprinted from *Rocks and Minerals*,
Vol. 72, No. 4, July/August 1997

OKLAHOMA GEOLOGICAL SURVEY

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Cover Description

Upper left: *Saurophaganax maximus*, Oklahoma State Fossil, established 2000, Cimarron County. Image courtesy Sam Noble Oklahoma Museum of Natural History.

Upper right: Sand Gypsum, Alfalfa County. David London specimen, image © 2006 David London, all rights reserved. Hourglass selenite, the Oklahoma State Crystal (established 2005), is a variety of sand gypsum.

Lower left: Oklahoma Rose Rock (Barite Rose), Oklahoma State Rock, established 1968. David London specimen, image © 2006 David London, all rights reserved.

Lower right: Quartz crystals, McCurtain County. David London specimen, image © 2006 David London, all rights reserved.

Cover design by Jim Anderson, Oklahoma Geological Survey.



OKLAHOMA GEOLOGICAL SURVEY
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Oklahoma Geological Survey
Mewbourne College of Earth and Energy
The University of Oklahoma
Norman, Oklahoma
2008

OGS Celebrates 100 Years of Service 1908-2008

The Oklahoma Geological Survey has the distinction of being the only geological survey provided for in a state constitution. The legislative mandate is to:

Investigate the state's land, water, mineral, and energy resources and disseminate the results of those investigations to promote the wise use consistent with sound environmental practices.

Governor Charles N. Haskell signed the Enabling Act: The OGS began work on May 29, 1908

The basic mission then, as now, is research, field work and mapping to produce reports and maps that add to the body of knowledge about Oklahoma's geology and resources. In cooperation with academia and industry, this information is printed, disseminated in workshops, provided over the Internet, and made public through contact with individuals, schools, scout and civic groups.

Charles Newton Gould, Father of Oklahoma Geology Director 1908-1911 and 1924-1931

When he came to OU in 1900, drive, determination and relentless energy made Charles Newton Gould the perfect person to found OU's geology program and, in 1907, to foster in the State Constitution—what would become the Oklahoma Geological Survey.

Gould saw the need to blend academics, industry concerns and public needs in a single research and public service agency that would bring together these areas to better serve Oklahoma. His actions and vision provided the foundation for Survey programs for the next 100 years.

Gould went into the oil industry in 1911, becoming one of the pioneering geologists to work in Oklahoma. He returned to the Survey, however, when needed in 1924.

Daniel W. Ohern, Director 1911-1914

Charles W. Shannon, Director 1914-1923

Because basic reconnaissance work still was needed, investigations of oil and gas, coal, glass sand, building stone, gypsum, lead and zinc, water, and building materials resulted in a number of publications and maps. The first full-color geologic map of Oklahoma was issued in 1926.

Shannon noted that the "need of conservation is apparent to members of the Survey," and pointed to wastes of coal, oil, natural gas, forests and animal life. The Geological Survey still is mindful of the legislative mandate to conserve Oklahoma's natural resources and promote their wise use.



Robert H. Dott, Director 1935-1952

Dott's Survey focused on non-fuel mineral resources suitable for manufacturing and worked to develop new uses for some of the most mundane resources, Dott's "humble materials." Manufacturing added monetary value to the resource, such as making pottery, tile and brick from clay.

He saw the OGS through the Depression era and World War II, and in 1935 conducted a state mineral survey that hired people to verify information for base maps, collect data on building materials, and examine industrial mineral deposits. The information and the jobs were much needed.

William E. Ham, Interim Director 1952-1954

Carl C. Branson, Director 1954-1967

Branson made significant contributions to the University of Oklahoma Geology Library. This effort continues today through a cooperative exchange program between the OGS and other agencies worldwide. The publications given to the OGS are donated to the Youngblood Geology Library.

Charles J. Mankin, Director 1967-2007

During Mankin's years, the OGS became more involved in cooperative studies with many state and federal agencies and concentrated on oil and gas activities that would help the small producers in Oklahoma. In 1978, a geophysical observatory southeast of Tulsa was added to the Survey. The Oklahoma Petroleum Information Center in Norman opened in 2002, and in 2006, the OGS officially became affiliated with the University of Oklahoma's Mewbourne College of Earth and Energy.

G. Randy Keller, Interim Director 2007-Present

Keller, a professor of geophysics at OU, came to the Survey to assist in operations after Mankin's retirement. His interest in and enthusiasm for the OGS mission is evident. As ever, the Survey's goals remain *wise use and conservation*.

—Compiled by Connie Smith

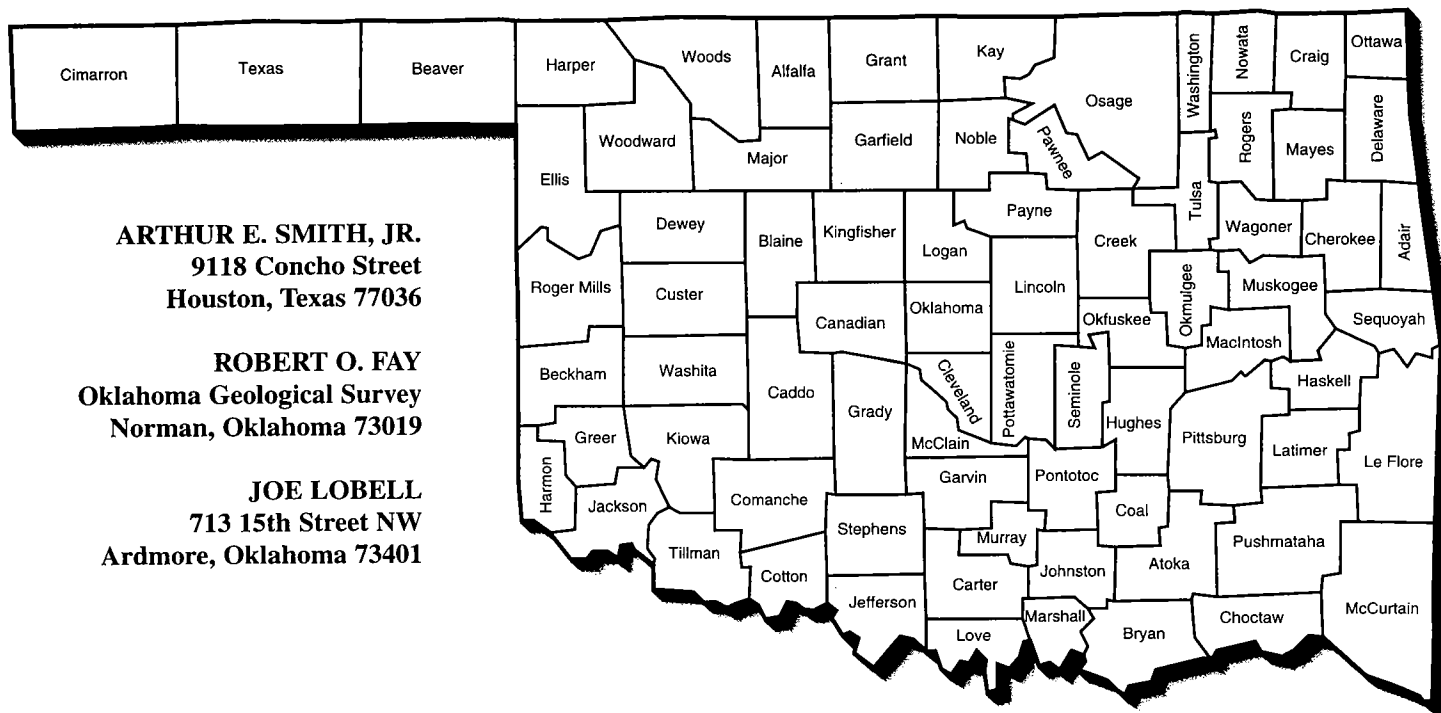


Figure 1. Oklahoma counties.

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OKLAHOMA Mineral Locality Index

Although perhaps best known for its gypsum crystals and barite roses, Oklahoma also boasts a variety of other species, including beautiful specimens of calcite, brochantite, and sphalerite.

Oklahoma, a state with an area of almost 70,000 square miles, is not known as the source for many "world-class" mineral specimens, but it has produced fine to excellent specimens from numerous mineral localities. And, best of all, with a little effort by collectors, most localities will continue to produce. However, many collectors are unaware of the variety of minerals available from Oklahoma and think primarily of the prolific gypsum crystals that are easily collected from the Great Salt Plains, where they continue to form. Most collectors also know of the reddish barite sand roses, the best of which occur near Noble and Norman, although they are also found at many other localities in several counties. In addition, the Tri-State zinc/lead mining area, active for more than one hundred years, extends into the northeast corner of Oklahoma and has produced notable specimens. Unfortunately, the ambiguities of labeling these specimens seldom identify the source as the Picher district, which is in the Oklahoma portion of the Tri-State. This district has probably produced as many specimens as the adjacent areas in Kansas and Missouri.

Since most of the state is underlain by sedimentary rocks and the exposure of igneous and metamorphic rocks is very

limited, the number of mineral species found in Oklahoma is also somewhat limited, but the potential for the mineral collector to still find and collect good specimens is excellent. An example is the Arkansas Ouachita quartz crystal belt that extends into southeastern Oklahoma. Only relatively recently has this area been seriously exploited by recreational and commercial mineral collectors, and the quality and variety of the crystals and the associated minerals have been impressive.

Some of the localities listed in this index have been so lightly collected that they are included because of their potential to produce specimens. An example of this type of locality is the copper mineral outcrops in the Permian red beds. Joe Lobell's (1986) article describes one group of localities that was recently collected with success.

To date, there have been few articles published on the mineral localities and the mineralogy of Oklahoma. Gilmore (1963) is the only comprehensive publication on the mineralogy of the state, but it is frustratingly brief, repetitious, and inadequate in its coverage of many localities. Robert Fay at the Oklahoma Geological Survey has accumulated much information on Oklahoma mineral occurrences, but it has yet to be

published. Fortunately, he has shared much of this information in this index. This Oklahoma index is just a beginning, and additional information is solicited by the authors.

Mineral locality indexes are not intended to be field trip guides, but this index lists specific localities using section, township, and range if the information was available to assure accuracy. Mineral species marked with an asterisk (*) are particularly noteworthy occurrences.

ACKNOWLEDGMENTS

We would like to thank Al Kidwell and Pete Modreski who read this manuscript and made helpful suggestions and generously contributed their knowledge to it.

Mineral Index by Counties

Adair County

Bunch, near Bunch, secs.15, 16, T.14N, R.24E: calcite (gray, massive, fluorescent and phosphorescent) (Gilmore 1963).



Figure 2. Collecting gypsum crystals at Great Salt Plains, Alfalfa County. Joe Lobell photo.

Alfalfa County

Carmen, 2 mi. NE of Carmen, 1.1 mi. W of Highway 8 on the Green property, NW1/4 sec.31, T.25N, R.11W, in the Hennessey Formation, which comprises shales and sandstones; gypsum (alabaster and satin spar) (Johnson 1972).

Great Salt Plains, about 6 mi. NW of Jet at Great Salt Plains National Wildlife Refuge, sec.22, T.26N, R.10W: gypsum* (Crystals form singly or in clusters in sand, silt, and clay less than 2 feet below the surface. These may have included sand and other materials that create an internal hourglass pattern.) (Johnson 1972).

Malachite locality, NE1/4 SE1/4 sec.11, T.26N, R.9W, Permian-age Crisfield Sandstone: malachite.

Beckham County

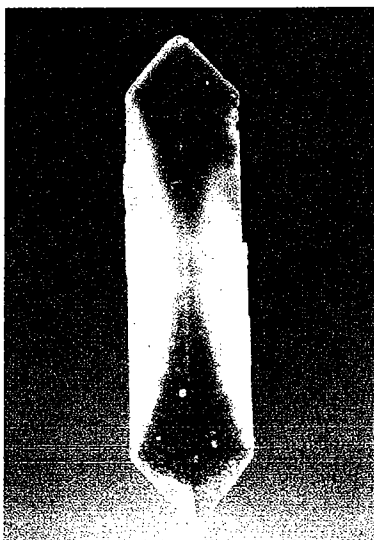
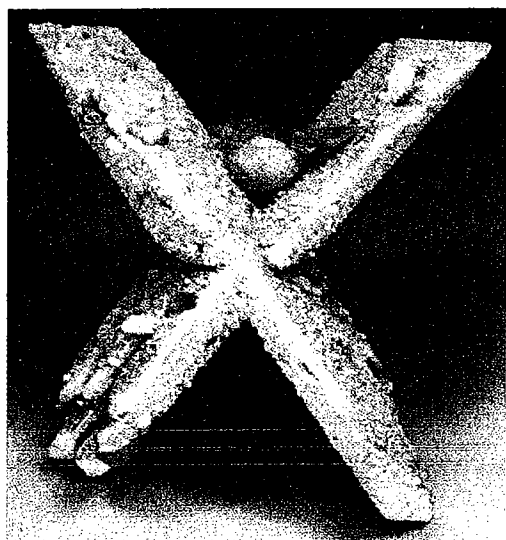
Malachite localities, SW1/4 SE1/4 sec.36 and SE1/4 SW1/4 sec.14, T.8N, R.23W; also, SE1/4 SW1/4 sec.13, T.8N, R.22W, Flowerpot Shale of Permian age: malachite (Stroud et al. 1970; Scott and Ham 1957).

Blaine County

Southard, quarries of the U.S. Gypsum Company, E and SE of Southard, Permian-age Nescatunga Gypsum of the Blaine Formation: anhydrite, celestine (microscopic crystals), gypsum* (crystals), priceite (tiny chalky nodules), probertite (nodules that may have hairlike crystals), thenardite (fine-grained nodules), ulexite (cauliflowerlike nodules) (Ham, Mankin, and Schleicher 1961).

Watonga, Universal Atlas quarry, 6 mi. NE of Watonga, Nescatunga Gypsum of the Blaine Formation: celestine (microscopic crystals), probertite (nodules that may have hairlike crystals) (Ham, Mankin, and Schleicher 1961).

Winnview West, SW1/4 SW1/4 sec.6 and NE1/4 NW1/4 sec.7 and NE1/4 NW1/4 sec.18, T.16N, R.10W; also, SE1/4 SE1/4 sec.27 and NW1/4 NW1/4 sec.16, T.17N, R.11W, plus others, Permian-age Cedar Springs Dolomite and Flowerpot Shale: malachite (Fay 1962, 1964).



Figures 3–5. Gypsum, variety selenite, Great Salt Plains, Alfalfa County. Left, 12 cm high; center, 17.6 cm high; right, 7 cm high. Fred and Sue Keitel specimens, Terry Huizing photos.



Figure 6. Calcite, 6.5 cm long, Picher district, Ottawa County. Richard Russell specimen, Terry Huizing photo.



Figure 7. Barite ("rose"), 5 cm across, Norman, Cleveland County. Fred and Sue Keitel specimen, Terry Huizing photo.

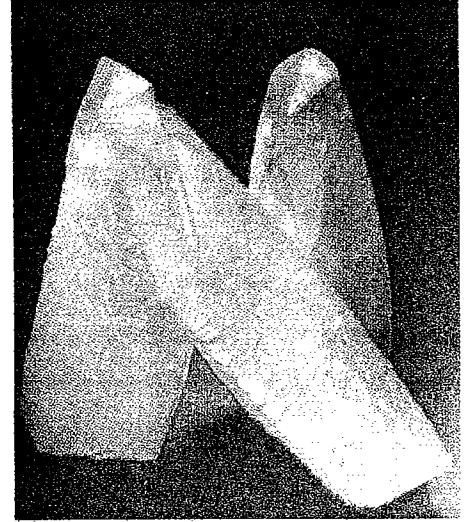


Figure 8. Calcite, 11 cm high, Tri-State mine, Cardin, Ottawa County. Terry Huizing specimen and photo.



Figure 9. Gypsum, variety selenite, 8 cm high, Glass Mountains, Orienta, Major County. Fred and Sue Keitel specimen, Terry Huizing photo.

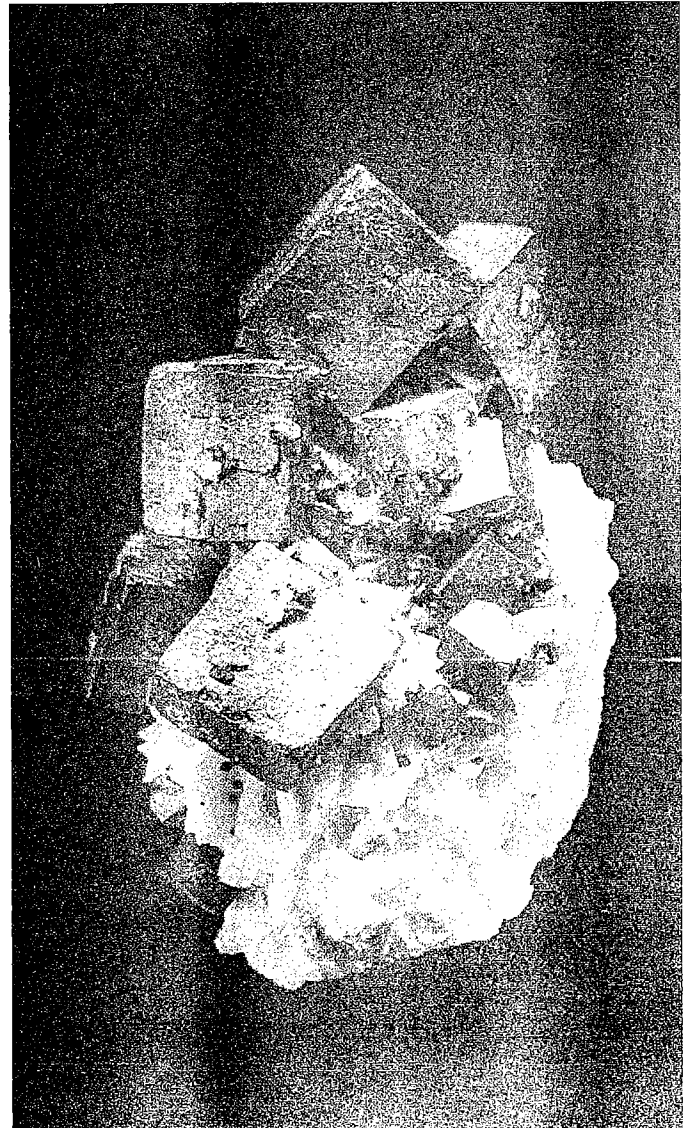


Figure 10. Galena and dolomite, 6.6 cm high, Picher district, Ottawa County. Grant Gibson specimen, Jeff Scovil photo.

Caddo County

Apache, a calcite mine near Apache, a vein of massive calcite exposed in a hill: calcite (fluoresces blue, pink, and cream, phosphorescent) (Kennedy 1972).

Cement, near, in Rush Springs Sandstone, top 4 feet mined: carnotite, tyuyamunite (Gilmore 1963).

Canadian County

Calumet, Scheiter gypsum quarry, 7.5 mi. N of Calumet, SE1/4 sec.2, T.14N, R.9W, Permian-age gypsum: gypsum (crystals, satin spar, alabaster) (Naff 1981).

Carter County

Lone Grove, Wilson, and Healdton areas, in clay seams: gypsum (crystals to 7.5 cm, some fluorescent yellow-green).

Milo area, NW1/4 SE1/4 sec.7, T.2S, R.1W: pyrite (crystal clusters) (Gilmore 1963).

Cherokee County

Eagle Bluff, in black shale: marcasite (crystals) (Zeitner 1972).

Tiger, in a quarry: fluorite (purple) (Zeitner 1972).

Cimarron County

Kenton, includes Wiggins and Labrier prospects, N of Kenton and Black Mesa, secs. 19, 20, 28, 29, 30, T.6N, R.1E, mineralized brecciated plugs of Triassic-age Sheep Pen Sandstone, prospected in 1898: azurite, chalcocite (nodules), hematite, malachite (Fay 1983).

Cleveland County

Norman, E of Norman near Lake Thunderbird in a belt extending to the N and S to the SE of Slaughterville, sec.18, T.9N, R.2E; secs. 18, 22, 30, 31, T.9N, R.1E; secs. 18, 19, 30, 31, T.9N, R.1W; secs. 22, 30, 31, T.9N, R.2W; secs. 5, 8, 25, T.8N, R.1W; sec. 29, T.9N, R.1W, weathers from Garber Sandstone of Lower Permian age: barite* ("roses" with included sand) (Ham and Merritt 1944; Towner 1975).

Coal County

Bromide, Mosley prospect, 4 mi. N of Bromide in the valley of Mosley Creek, NE1/4 NE1/4 sec.20 and NE1/4 NE1/4 and NW1/4 NE1/4 sec.17, T.1S, R.8E; NW1/4 SW1/4 sec.28, T.1S, R.8E, manganese replacement of Silurian Hunton Lime-

stone along faults, fractures, and bedding planes, 40-foot-long trench and open cuts; ankerite, asphaltite, barite, calcite (some black, manganese rich), chalcopyrite, goethite, hausmannite, hematite, manganite, neotocite, pyrite, psilomelane, pyrolusite, quartz, rhodochrosite, "wad" (Merritt 1941; Ham and Oakes 1944).

Comanche County

Cache, several locations S of Cache, secs. 7 and 18, T.1N, R.13E; sec.26, T.1N, R.14E; sec.32, T.2N, R.13W; sec.6 and W1/2 SE1/4 sec.18, T.1N, R.13W, maroon Permian-age Hennessey shales; barite (veins, nodules, claystone concretions and roses, not all at each locality), aragonite (fluorescent in claystone concretions), malachite (Ham and Merritt 1944).

Chattanooga, 2 mi. N of Chattanooga, extends into Tillman County; autunite, bayleyite, carnotite, torbernite (Gilmore 1963).

Fletcher, Texas Gypsum Company quarry, SW1/4 NW1/4 sec.11, T.4N, R.10W, 60-foot gypsum bed at base of Permian Cloud Chief Formation, production began in 1962: gypsum* (crystals, alabaster) (Johnson and Denison 1973).

Hale Copper mine, in Sandy Creek, NW1/4 NE1/4 and SW1/4 NE1/4 sec.9, T.3N, R.15W, Cambrian-age Quanah Granite pegmatite and gabbro: bornite, chalcopyrite, copper, cuprite, pyrrhotite (Powell et al. 1982).

Hobbs Canyon, cent. NW1/4 sec.30, T.4N, R.14W, at the contact of Mount Scott Granite and gabbro: clinohumite, diopside (Huang 1957).

Indiahoma, near Indianhoma, sec.36, T.2N, R.15W, in claystone geodes: aragonite, barite (also as nodules, fluorescent), calcite (Gilmore 1963).

Lawton, American Girl mine, Coal lode, Copper Eagle mine, and Starley mine (Parker prospect), a few miles NW of Lawton all in the Fort Sill Military Reservation, shafts and pits, quartz veins in Quanah Granite of Cambrian age associated with faulting: barite, chalcopyrite, galena, malachite, sphaerite.

Meers, Hazel quarry, just W of Meers, sec.5, T.3N, R.13W, granitic pegmatite: amphibole, biotite, chlorite, epidote, hypersthene, orthoclase (crystals), quartz (crystals) (Gilmore 1963).

Mount Scott, 1.5 mi. WNW of Lake Lawtonka dam, cent. 1/2 SE1/4 sec.11, T.3N, R.13W, Mount Scott Granite with miarolitic cavities: epidote, hematite, orthoclase (crystals), quartz (crystals) (Johnson and Denison 1973)

Post Oak Creek, in the bed of the creek, secs. 25 and 36, T.3N, R.14W: quartz (smoky with included rutile needles) (Gilmore 1963).

Quanah Parker Lake, near the spillway, SE1/4 SE1/4 sec.23, T.3N, R.14W, Permian red sandstone: calcite, malachite, novacekite (rectangular microcrystals in cavities), quartz (Huang 1956).

Taupe, W of Taupe between Blue Beaver and Cache Creek, Permian red beds: barite (roses and nodules), chalcocite, malachite (Zeitner 1972).

Twin Mountain, 0.5 mi. NW of Twin Mountain, cent. sec.14, T.3N, R.15W, small cavities in sandstone: novacekite (Gilmore 1963).

Arthur E. Smith, a consulting editor of Rocks & Minerals, is a petroleum geologist. His most recent article for the magazine was on the mineral hall at the Houston Museum of Natural Science and appeared in the May/June 1997 issue.

Robert O. Fay, a geologist with the Oklahoma Geological Survey, is a frequent contributor to popular and scientific publications in mineralogy and paleontology.

Joe Lobell specializes in collecting Oklahoma and Texas minerals. His last article for Rocks & Minerals was titled "Rediscovering Lampasas Celestine" and was in the March/April 1992 issue.

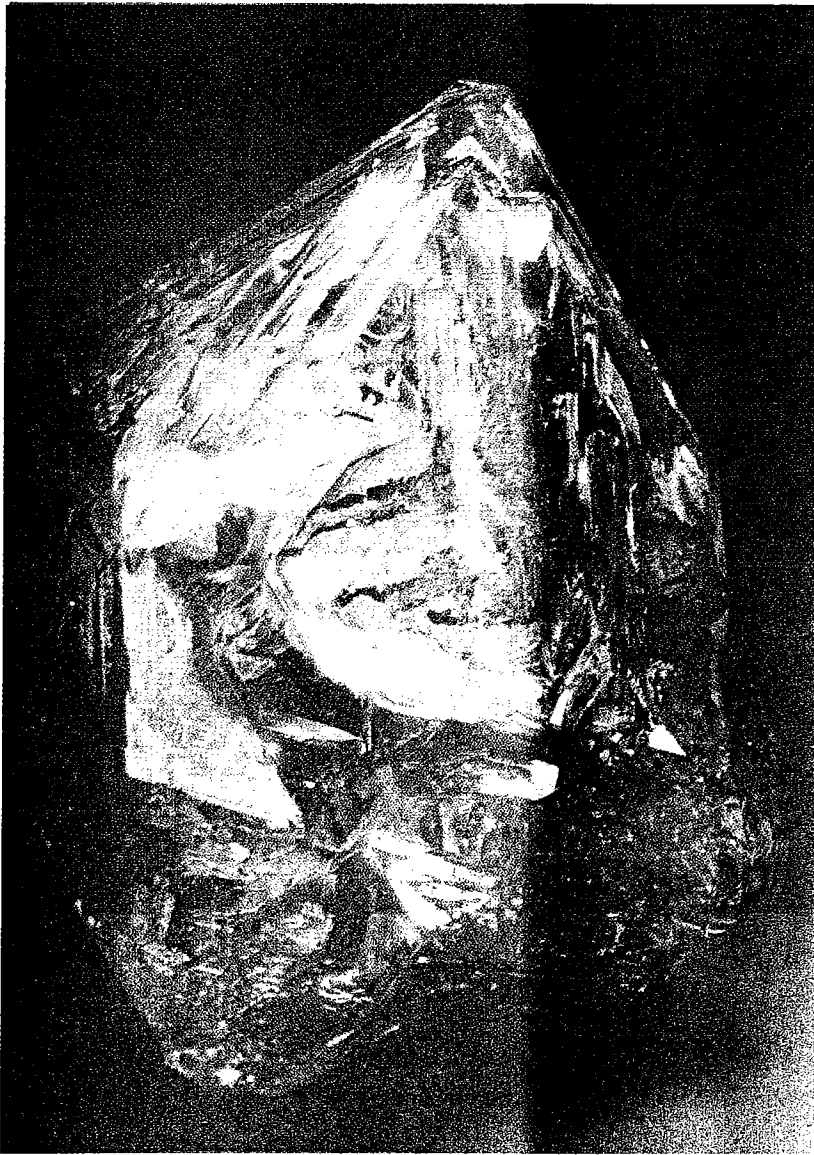


Figure 11. Quartz, 12 cm high, northwest of Broken Bow, McCurtain County. Art Smith specimen, Terry Huizing photo.

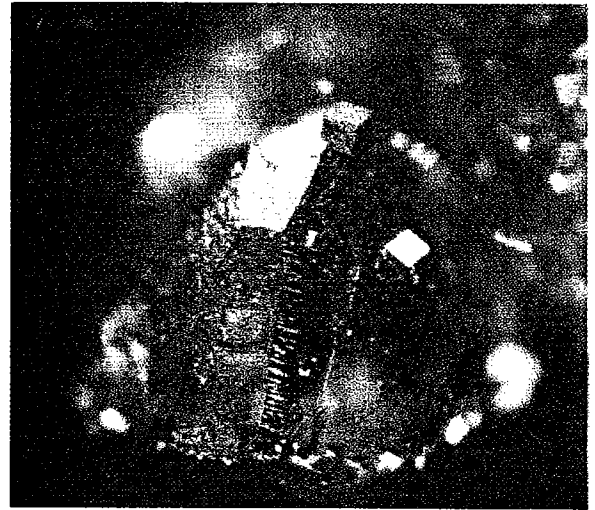


Figure 13. Pyrite on sphalerite, Tri-State district, Picher. Sphalerite 1.25 mm high. Dan Behnke specimen and photo.

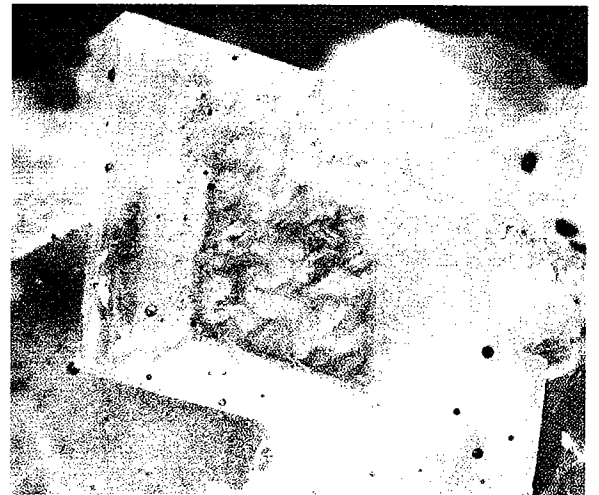


Figure 14. Hematite on and in calcite, specimen 4.3 mm high, Davis, Murray County. Dan Behnke specimen and photo.

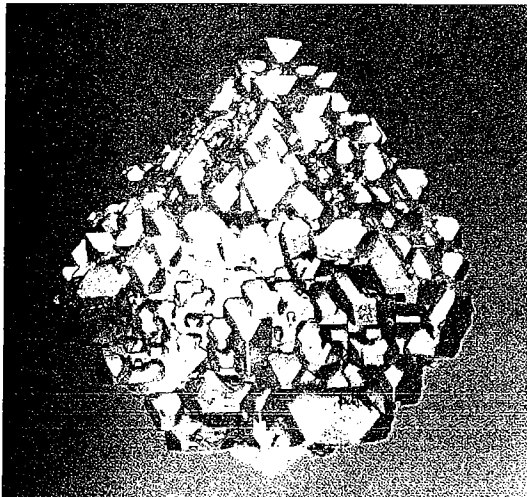


Figure 12. Galena, 7.5 cm high, Kenora mine, Picher district, Ottawa County. Martin Zinn specimen, Jeff Scovil photo.



Figure 15. Arsenopyrite on sphalerite, 1.5 mm high, Picher district, Ottawa County. Dan Behnke specimen and photo.

Wichita National Wildlife Refuge, Crystal King Zircon mine, also called Ashton location, 6 mi. NNW of Indianola, SW1/4 NE1/4 sec.21, T.3N, R.15W, other mines 600 feet SSW and 0.25 to 0.5 mile N, Hale Spring pegmatite in Cambrian-age Quanah Granite: zircon* (crystals) (Anderson 1946; Johnson 1955; Bush 1956).

Wichita Mountains, dike rock cutting gabbro, SE1/4 sec.4, T.3N, R.15W: aegirine (crystals 1 to 2 cm long), arfvedsonite, orthoclase, quartz (Gilmore 1963).

Cotton County

Benson prospect, NE1/4 NE1/4 sec.3, T.4S, R.11W, Ryan Sandstone member at base of the Permian-age Wellington Formation: azurite, atacamite, chalcocite, malachite, and uranium minerals (Totten and Fay 1982).

Cherry Canyon, in Cherry Canyon, secs. 19 and 31, T.4S, R.11W, calcareous geodes in shale: aragonite (crystals), barite (crystals), calcite, malachite (Ham and Merritt 1944).

Matthews prospect, SW1/4 NW1/4 sec.30, T.4S, R.11W, Permian-age Asphaltum Sandstone member of Garber Sandstone: malachite (Branson, Burwell, and Chase 1955).

Randlett, SE of Randlett, SW1/4 sec.3, T.5S, R.12W, in a sandstone: autunite, carnotite, uraninite (Gilmore 1963).

Creek County

Sapulpa, W of Sapulpa, NW1/4 sec.35, T.18N, R.10E, in cavities of Dewey Dolomite: goethite (pseudomorph after pyrite), hematite (pseudomorph after pyrite) (Gilmore 1963).

Custer County

Foss, NE of Foss, also into Washita County, SW1/4 NW1/4 sec.29, T.12N, R.18W, Upper Cloud Chief shales and Lower Doxey siltstone: carnotite, tyuyamunite (Fay and Hart 1978).

Weatherford, 3 mi. W to 6 mi. SW of Weatherford, cores in the Cloud Chief Gypsum of Permian age: anhydrite, gypsum, probertite (in nodules), ulexite (in nodules, not with probertite) (Ham, Mankin, and Schleicher 1961).

Delaware County

Leach, NNW of Leach on top of a bluff, SE1/4 sec.7, T.21N, R.22E: calcite (massive, fluorescent and phosphorescent) (Gilmore 1963).

Garfield County

Hillsdale, O. P. Barnes farm (W. W. Thomas farm in 1940), NE1/4 SE1/4 sec.24, T.24N, R.8W, shaft 80 feet deep in red shale and clay of the Salt Plains Formation of Permian age: copper (thin plates) (Merritt 1940b).

Garvin County

Paoli, 2.1 mi. SSE of Paoli, extreme E edge of sec.24, T.4N, R.1W, mined-out for specimens in 1981, sandstones and shales of Garber Formation of Permian age: azurite, barite, brochantite* (botryoidal and microcrystals), chalcantite, chrysocolla, cuprite, chalcocite (nodules and stringers), goethite, hematite, malachite, pyrite (small crystals) (Lobell 1986).

Paoli, Teepee Queen Copper Company area, just E of Paoli, sec.18, T.4N, R.1E, ore shipped from surface workings, Permian-age red sandstones and shales: barite (rosettes, crystal aggregates, cement, and in concretions), chalcocite (nodules and fragments), copper, hematite, malachite* (needlelike crystals), pyrite (Merritt 1940b)

Paoli, other areas, secs. 7, 18, 19, T.4N, R.1E, Permian-age sandstones and shales: azurite, barite (crystals in concretions, nodules, and roses), chalcocite* (concretions), malachite (Ham and Merritt 1944).

Grady County

Alex, S side of Route 19: barite (miniature roses) (Morrison 1986).

Grant County

Salt Fork, NE1/4 NE1/4 sec.35, T.25N, R.3W, on the side of a hill in Blue Wellington Shale overlain by Garber Sandstone of Permian age: malachite (nodules), quartz (petrified wood) (Branson, Burwell, and Chase 1955).

Greer County

Altus Lake, N of the bridge along the lake shore, NE1/4 sec.30, T.6N, R.20W: quartz (crystals lining geodes) (Gilmore 1963).

Granite, gravel quarry, SW1/4 SW1/4 sec.9, T.6N, R.21W, pegmatites: biotite (books), hornblende, orthoclase* (crystals), quartz (colorless and smoky crystals) (Gilmore 1963).

Jester, W and NW of Jester, along Elm Fork of Red River and to the N into Beckham County: gypsum (crystals to 25 cm).

Lobaris prospect, NE1/4 NE1/4 sec.34, T.4N, R.22W, in Meadows Copper Shale of Permian age and Flowerpot Shale: chalcocite, malachite (Johnson 1977).

Quartz Mountain, W side of Quartz Mountain, SE1/4 sec.17 and NE1/4 sec.20, T.5N, R.20W, vugs in pegmatite lenses: albite, biotite, magnetite, orthoclase* (crystals, many twinned), quartz* (crystals), zircon (Gilmore 1963).

Red River, 200–300 feet W of north fork of Red River, SW1/4 sec.15, T.5N, R.20W, mirolitic cavities in Lugert Granite: quartz (crystals) (Gilmore 1963).

Harper County

General, common in much of the county: quartz (variety moss, plume, and banded agate, and jasper) (Gilmore 1963).

Buffalo, SSW of Buffalo, NE1/4 NW1/4 sec.25, T.26N, R.23W, 5-cm veins in red clay: celestine (fibrous, pale blue) (Gilmore 1963).

Selman, 2.5 mi. N of Selman: gypsum (crystals, rosettes) (Huckaby 1955).

Twin Buttes, 8 mi. N of Rosston and 1 mi. E of U.S. 283, halfway up the north Butte: aragonite* ("Indian money," pseudo-hexagonal plates), calcite (crystals) (Lovell 1974).

Hughes County

Wetumka, SW of Wetumka, sec.30, T.8N, R.9E: barite (coarsely crystalline) (Ham and Merritt 1944).

Locality Cross-Reference

Acme Coal mine (Tulsa, Tulsa Co.)
 Ada (Pontotoc Co.)
 Ahlosa (Pontotoc Co.)
 Alex (Grady Co.)
 Altus Lake (Greer Co.)
 American Girl mine (Lawton, Comanche Co.)
 Apache (Caddo Co.)
 Arbuckle mine (Murray Co.)
 Arbuckle Mountains (Pontotoc Co. and Murray Co.)
 Ashton zircon locality (= Crystal King zircon mine, Wichita Mountains, Comanche Co.)
 Asphalt mine (Murray Co.)
 Barnes farm (Garfield Co.)
 Ben Franklin mine (Murray Co.)
 Benson prospect (Cotton Co.)
 Black Mesa (Cimarron Co.)
 Broken Bow (McCurtain Co.)
 Broken Bow Lake (McCurtain Co.)
 Bromide (Coal Co. and Johnston Co.)
 Buffalo (Harper Co.)
 Buffalo mines (Watson, McCurtain Co.)
 Bunch (Adair Co.)
 Byars (McClain Co.)
 Cache (Comanche Co.)
 Calumet (Canadian Co.)
 Camp McFadden (= McFarland, Kay Co.)
 Camp McFarland (Kay Co.)
 Capitol quarry (Troy, Johnston Co.)
 Carmen (Alfalfa Co.)
 Carson Creek (Broken Bow Lake, McCurtain Co.)
 Cement (Caddo Co.)
 Chattanooga (Comanche Co. and Tillman Co.)
 Cherry Canyon (Cotton Co.)
 Cheyenne (Roger Mills Co.)
 Clinton (Washita Co.)
 Coal lode (Lawton, Comanche Co.)
 Cold Springs (Kiowa Co.)
 Comanche (Stephens Co.)
 Copper Eagle mine (Lawton, Comanche Co.)
 Corn (Washita Co.)
 Creta (Jackson Co.)
 Criswell mine (Byars, McClain Co.)
 Crystal King zircon mine (Comanche Co.)
 Davis (Murray Co.)
 Davis zinc field (Murray Co.)
 Duke (Jackson Co.)
 Eades mine (Watson, McCurtain Co.)
 Eagle Bluff (Cherokee Co.)
 Eagle-Picher mine (Jackson Co.)
 Eagletown (McCurtain Co.)
 Eldorado (Olustee-Eldorado, Jackson Co.)
 Enos (Marshall Co.)
 Fairview (Major Co.)
 Fletcher (Comanche Co.)
 Foss (Custer Co.)
 Glass Mountains (Major Co.)
 Glenco (Payne Co.)
 Goose Nest mine (Murray Co.)
 Government quarry (Lugert, Kiowa Co.)
 Granite (Greer Co.)
 Granite Mountains (Lugert, Kiowa Co.)
 Great Salt Plains (Alfalfa Co.)
 Greenville (Love Co.)
 Hale Copper mine (Comanche Co.)

Hazel quarry (Meers, Comanche Co.)
 Healdton (Carter Co.)
 Hillsdale (Garfield Co.)
 Hobbs Canyon (Comanche Co.)
 Hochatown (McCurtain Co.)
 Holly Creek Campground (Broken Bow Lake, McCurtain Co.)
 Hope-Sober mine (Murray Co.)
 Indiahoma (Comanche Co.)
 Iron Mountain (Kiowa Co.)
 Jackstown (Lincoln Co.)
 Jester (Greer Co.)
 Johnson copper prospect (Eagletown, McCurtain Co.)
 Kenton (Cimarron Co.)
 King Zircon mine (see Crystal King, Wichita Mountains, Comanche Co.)
 Konawa Country Club (Seminole Co.)
 Labrier prospect (Kenton, Cimarron Co.)
 Langley (Mayes Co.)
 Lawrence quarry (Ada, Pontotoc Co.)
 Lawton (Comanche Co.)
 Leach (Delaware Co.)
 Lela (Pawnee Co.)
 Little Beaver Creek (see Marlow, Stephens Co.)
 Lobaris prospect (Greer Co.)
 Lone Grove (Carter Co.)
 Lotsee (Tulsa Co.)
 Lugert (Kiowa Co.)
 Lugert granite quarry (= Government quarry, Lugert, Kiowa Co.)
 Magnetite deposits (Kiowa Co.)
 Malachite locations (see Alfalfa Co. and Beckham Co.)
 Manitou (Tillman Co.)
 Marble City (Sequoyah Co.)
 Marlow (Stephens Co.)
 Matthews prospect (Cotton Co.)
 McFadden (Kay Co.)
 Meeker (see Jackstown, Lincoln Co.)
 Meers (Comanche Co.)
 Miami (see Picher district, Ottawa Co.)
 Mill Creek (Thompson Ranch, Johnston Co.)
 Mill Mountain (Murray Co.)
 Miller prospect (Sugden, Jefferson Co.)
 Milo (Carter Co.)
 Morrison (Noble Co.)
 Mosley prospect (Bromide, Coal Co.)
 Mount Scott (Comanche Co.)
 Mulhall (Logan Co.)
 Murray Ranch (Sulphur, Murray Co.)
 Nebo (Murray Co.)
 Norman (Cleveland Co.)
 Oklahoma City (Oklahoma Co.)
 Olustee (Jackson Co.)
 Orlando (Logan Co.)
 Paden (Okfuskee Co.)
 Paoli (Garvin Co.)
 Parker prospect (= Starley mine, Lawton, Comanche Co.)
 Peoria (Picher district, Ottawa Co.)
 Perry (Noble Co.)
 Picher (Ottawa Co.)
 Picher mining district (Ottawa Co.)
 Pine Creek State Park (Pushmataha Co.)

Pine Mountain (McCurtain Co.)
 Pink (Pottawatomie Co.)
 Pontotoc (Johnston Co.)
 Post Oak Creek (Comanche Co.)
 Quannah Parker Lake (Comanche Co.)
 Quartz Mountain (Greer Co.)
 Quartz Mountain State Park (Lugert, Kiowa Co.)
 Randlett prospect (Cotton Co.)
 Ravia (Johnston Co.)
 Red River (Greer Co.)
 Republic Gypsum quarry (Duke, Jackson Co.)
 Rock Products quarry (Davis, Murray Co.)
 Rumney (incline) (Murray Co.)
 Saddle Mountain (Kiowa Co.)
 St. Clare Lime quarry (Marble City, Sequoyah Co.)
 Salt Fork (Grant Co.)
 Salt Plains (Great Salt Plains, Alfalfa Co.)
 Sandy Creek (Hale Copper mine, Comanche Co.)
 Sapulpa (Creek Co.)
 Scheitzer gypsum quarry (Calumet, Canadian Co.)
 Schuler (Okmulgee Co.)
 Selman (Harper Co.)
 Sooner Rock quarry (Davis, Murray Co.)
 Southard (Blaine Co.)
 Spavinaw (Mayes Co.)
 Spavinaw Lake (Mayes Co.)
 Springbrook deposit (Bromide, Johnston Co.)
 Sproul Shale pit (Fairview, Major Co.)
 Starley mine (Lawton, Comanche Co.)
 Stevens Gap Recreational area (Broken Bow Lake, McCurtain Co.)
 Sugden (Jefferson Co.)
 Sulphur (Murray Co.)
 Taupe (Comanche Co.)
 Teepee Creek (Kiowa Co.)
 Teepee Queen Copper Company (Paoli, Garvin Co.)
 Ten Acre Rock (Troy, Johnston Co.)
 Texas Gypsum Company quarry (Fletcher, Comanche Co.)
 Thompson Ranch (Johnston Co.)
 Thunderbird Lake (Cleveland Co.)
 Tiger (Cherokee Co.)
 Trospen Park (Oklahoma Co.)
 Troy (Johnston Co.)
 Tulsa area (see Tulsa Co. and Wagoner Co.)
 Twin Buttes (Harper Co.)
 Twin Mountain (Comanche Co.)
 U.S. Gypsum Company quarries (Southard, Blaine Co.)
 Universal Atlas quarry (Watonga, Blaine Co.)
 Warwick (Lincoln Co.)
 Watonga (Blaine Co.)
 Watson (McCurtain Co.)
 Weatherford (Custer Co.)
 Wetumka (Hughes Co.)
 White Mound (Nebo, Murray Co.)
 Wichita Mountains (Comanche Co.)
 Wiggins prospect (Kenton, Cimarron Co.)
 Wilson (Carter Co.)
 Winnview West (Blaine Co.)
 Wright City (McCurtain Co.)

Jackson County

Creta area, includes Eagle-Picher mine, extends from Creta to the SE for 5 mi., first copper mineral was recognized in 1852, mine discovered by Kenneth E. Smith in January 1962, copper mined by Eagle-Picher from 1965 to 1975, Per-

mian-age shales with two copper-bearing shales in the upper part of the Flowerpot Shale: azurite, barite, botallackite, bornite, brochantite* (with malachite forms pseudomorphs after gypsum), callaghanite, chalcocite (minute crystals), chalcopyrite, covellite, cuprite(?), galena, gypsum (crystals), mala-

chite* (fibrous aggregates, microcrystals), pyrite, silver (Dinges 1966; Ham and Jackson 1964; Kidwell and Bower 1976).

Duke, Republic Gypsum Company quarry, W1/2 sec.24, T.2N, R.23W, three gypsum horizons in upper part of Blaine Formation: gypsum* (white, alabaster) (Johnson and Denison 1973).

Olustee-Eldorado area, along State Highway 6: gypsum ("fishtail twins" to 10 cm).

Jefferson County

Sugden, Miller prospect, NE1/4 SW1/4 sec.7, T.5S, R.8W, in Permian-age Ryan Sandstone of Wellington Formation: autunite, carnotite (Chase 1954).

Johnston County

Bromide, Springbrook deposit, also called Viola prospect, 3 mi. SW of Bromide, NW1/4 SW1/4 sec.13 and NE1/4 SE1/4 sec.14, T.2S, R.7E, prospect trenches, mineralized fault zone in Chimneyhill Limestone: ankerite, calcite (manganian, gray to reddish-brown), dolomite, glauconite, hausmannite (tiny pyramids, veinlets), hematite, manganite, neotocite, pyrite, quartz (some chalcedony), rhodochrosite, siderite (Merritt 1941; Ham and Oakes 1944).

Pontotoc, W of Pontotoc, top and flanks of a hill, SW1/4 sec.16, T.1S, R.6E, long trench, bog iron-ore deposit, Arbuckle Dolomite outcrops: goethite (cellular, fine needles lining cavities, rhombohedra after siderite), hematite, quartz (chert), wavellite (radiating needle crystals) (Merritt 1940a).

Ravia, area just S of Ravia, sec.1., T.4S, R.5E, granite porphyry dike: chlorite, galena, hornblende, kaolinite, orthoclase (crystals), quartz (crystals), serpentine, smithsonite, sphalerite (Zeitner 1972).

Thompson Ranch, NE of Mill Creek, NW1/4 sec.15, T.1S, R.5E., in clay: barite* (crystals, white with bluish interiors), calcite, goethite (after pyrite cubes), pyrite, quartz (chalcedony), siderite (Ham and Merritt 1944).

Troy, Ten Acre Rock, and Capitol quarry, near Troy just E of Rock Creek, cent. 1/4 sec.3., T.3S, R.5E, Tishoming Granite with pegmatite that has cavities, quarry opened in 1915: fluorite (purple), microcline* (crystals), quartz* (crystals, rutillated) (Ham 1973).

Kay County

Camp McFarland, also McFadden, 10 mi. NE of Ponca City, Campfire Girls Camp in hills and along the river, geodes: barite, calcite (scalenoedral crystals, fluorescent) (Gilmore 1963).

Kiowa County

Cold Springs, W of Cold Springs at apex of most northern peak, medium-grained granite: orthoclase (crystals), quartz (crystals) (Evans 1936).

Iron Mountain area, sec.7, T.4N, R.16W, pegmatite veins in troctolite and gabbro in Glen Mountains layered complex, prospect pits: azurite, chalcophyrite, copper, cuprite, malachite (Chase 1950).

Lugert, Government quarry, also called Lugert granite quarry, 0.75 mi. E of Lugert, just E of the dam, SE1/4 sec.26, T.5N, R.20W, miarolitic cavities in granite: biotite (books), brookite (microscopic red needles), microcline (crystals), opal (hyalite), quartz (large crystals), riebeckite (crystals) (Gilmore 1963).

Lugert, Granite Mountains, SW1/4 sec.35, T.5N, R.20W, pegmatite dike: biotite, columbite-tantalite* (crystals), galena, hematite, magnetite, orthoclase (crystals), quartz (crystals), zircon (Gilmore 1963).

Lugert, Quartz Mountain State Park area, in a railroad cut near Lugert Dam, cent. E1/2 sec.27, T.5N, R.20W, basalt with seams and cracks: prehnite* (crystalline, botryoidal, pale green) (Gilmore 1963).

Magnetite deposits, W bank of a creek, SE1/4 sec.14, T.4N, R.17W; old prospect pit, SE1/4 SE1/4 sec.18, NW1/4 SW1/4 sec.24; side of a hill, NW1/4 sec.29; shaft, NW1/4 sec.33, T.4N, R.16W, loose fragments from weathered anorthosite: chalcophyrite, magnetite (poor octahedra, brown or yellow coating), ilmenite, malachite (Merritt 1940).

Saddle Mountain, 8 mi. E of Cooperton, conglomerates along streams: goethite (after pyrite), pyrite (crystals) (Evans 1936).

Teepee Creek, SW1/4 SW1/4 sec.6, T.4N, R.18W, in a trench and inclined adit, also secs. 32 and 33, T.5N, R.18W: analcime (microcrystals) (Gilmore 1963).

Lincoln County

Jackstown, crossroads 6 mi. W of Meeker along the road to the S: barite (nodules, fluorescent), calcite.

Warwick, 2.5 mi. N along highway on E side, NE1/4 sec.19, T.14N, R.3E, concretions in Permian red beds: barite, calcite (crystals) (Naff 1981).

Logan County

Mulhall, NW of Mulhall, road cut through a hill, Permian red beds with nodules, septarians, and geodes: calcite (fluorescent red and phosphorescent) (Kennedy 1972).

Orlando, 1 mi. NE of Orlando off Highway 77 and along railroad right-of-way, Permian redbeds with nodules, geodes, and septarians: barite (crystals), calcite* (fluorescent pink), gypsum (Kennedy 1972).

Love County

Greenville, in a creek bank near Greenville, claystone geodes: dolomite (crystals).

Major County

Fairview, NE of Orion, 4–6 mi. SW of Fairview, S1/2 sec.24, T.21N, R.15W; S1/2 secs.27 and 28 and N1/2 secs.33 and 34, T.21N, R.14W: dolomite ("pyramids," partial hopper pseudomorphs after halite), gypsum and calcite (halite pseudomorphs) (Gilmore 1963).

Glass Mountains, 6 mi. W of Orienta on N and S sides of State Route 15, S1/2 SW1/4 sec.22, T.22N, R.13W, shales and siltstones of Flowerpot Formation (Permian) capped by Blaine Gypsum: gypsum* (crystals, satin spar, nodules, coralloid) (Johnson 1972).

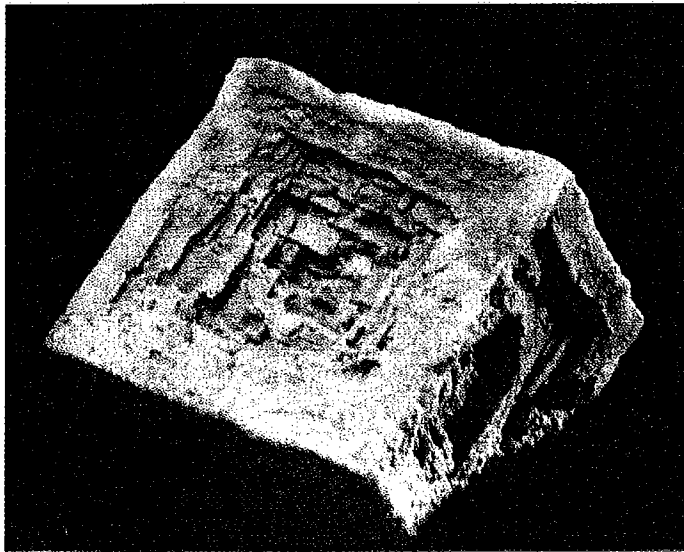


Figure 16. Gypsum after halite, 4 cm on edge, Fairview, Major County. Cincinnati Museum of Natural History specimen, Terry Huizing photo.

Marshall County

Enos, near Enos in a creek bank: pyrite (cuboctahedral crystals and pseudomorphs after carbonized wood).

Mayes County

Langely, E of Langely, NE1/4 sec.20, T.22N, R.21E: barite (crystals) (Gilmore 1963).

Spavinaw, 0.5 mi. W of Spavinaw, NE1/4 NW1/4 sec.15, T.22N, R.21E, prospect shaft: copper* (arborescent crystal masses), goethite (after pyrite), malachite, quartz (fluorescent) (Gilmore 1963).

Spavinaw Lake areas, W of the dam to the bridge, sec.15, T.22N, R.21E, Spavinaw Granite: cerussite, dolomite, galena, goethite (after pyrite), magnetite (crystals), pyrite, quartz (crystals) (Zeitner 1972).

McClain County

Byars deposits, includes the **Criswell mine**, 4 mi. SW of Byars along Garvin County line, sec.33, T.5N, R.2E, mined for silver, 1897–98, 1913–16, Permian-age Garber sandstones and

Figure 17. Goethite crystals, up to 1 mm, on calcite, silver mine, Byars, McClain County. Collected by Joe Lobell, Art Smith specimen and photo.



shales, aragonite (tiny crystals in geodes): azurite, barite (concretions and crystals), calcite (crystals in geodes), chalcantinite, chrysocolla, goethite* (microcrystals), malachite, quartz (petrified wood), silver chloride (unknown mineral) (Butler and Dunlop 1916; Lobell 1986).

McCurtain County

General. Quartz veins traverse the county east to west in two parallel bands. The first extends from DeQueen Lake in Arkansas westward between Broken Bow and Hee Mountain to Pine Creek Lake. The second band is 5–10 mi. to the north: brookite* (yellow to amber tabular crystals), quartz (crystals, clear, milky, and smoky; phantoms; chlorite, clay, pyrite, and manganese oxides may be included in the quartz, also skeletal or hopper crystals) (London 1994).

Broken Bow area, 150 paces S of cent. sec.8, and 200 paces N of SE1/4 corner sec.25, NE1/4 sec.28 and sec.24, T.5N, R.23E, quartz veins in Crystal Mountain Sandstone: chlorite* (in and with quartz), orthoclase (adularia), quartz* (crystals) (Gilmore 1963).

Broken Bow Lake, includes **Stevens Gap Recreational Area**, **Carson Creek area**, **Holly Creek Campground**, and elsewhere, secs. 1, 10, 11, 12, 13, T.5S, R.25E, quartz veins in Crystal Mountain Sandstone: goethite (after pyrite), marcasite (with pyrite), pyrite (encrusting petrified wood), quartz (crystals) (Massey 1990; Gilmore 1963; Morrison 1989).

Eagletown, **Johnson copper prospect**, N of Eagletown on Rock Creek, SW1/4 sec.16, T.5S, R.27E, discovered 1917, brecciated sandstone and shale with veins of milky quartz: chalcopyrite (crystals), galena, malachite, pyrite, quartz (crystals), sphalerite.

Hochatown, 0.5 mi. NE of Hochatown, SW1/4 sec.14, T.4S, R.25E, fractured novaculite, three pits: cryptomelane, pyrolusite (Gilmore 1963).

Pine Mountain prospect, on the crest of Pine Mountain, SW1/4 sec.15, T.3S, R.26E, fractured and jointed Arkansas Novaculite, eight shallow pits: cryptomelane* (botryoidal and stalactitic), manganite, pyrolusite (Merritt 1941).

Watson area, NW1/4 SE1/4 and SE1/4 NW1/4 sec.33, T.2S, R.26E, fractured Arkansas Novaculite, prospect holes and adit: cryptomelane (botryoidal) (Gilmore 1963).

Watson, **Buffalo mines**, 4 mi. S of Watson on Buffalo Creek, NW corner sec.14, T.2S, R.26E, fracture zone in black shale and quartzite, two shafts with dumps, active 1907–15: calcite (massive, white), galena, pyrite, sphalerite.

Watson, **Eades mine**, 2 mi. SW of Watson, SE1/4 NW1/4 sec.33, T.1S, R.26E., quartz vein in dark shale and quartzite: barite (crystalline), calcite (microcrystals), dolomite, pyrite (crystals, cubes, and octahedra), quartz (crystals).

Watson, 100 yards E of Watson on Highway 21 on N side: quartz (crystals with pyrite or hydrocarbon inclusions) (Gilmore 1963).

Watson, 3.5 mi. S of Watson, cent. of sec.10, T.2S, R.26E, vein cutting quartzite: barite, galena, sphalerite (Gilmore 1963).

Wright City, N of Wright City, sec.30, T.5S, R.23E, in shale: graphite (Gilmore 1963).



Figure 18. Hematite on and in calcite, 4.5 cm high, Davis, Murray County. Dan Behnke specimen and photo.

Murray County

General, garnets, gold (placer), magnetite, opal (common), pyrite, quartz (crystals, chlorite inclusions), staurolite, zircon.

Asphalt mine, S1/2 SW1/4 NE1/4 sec.22, T.1S, R.3E: Calcite (crystal aggregates) (Gilmore 1963).

Davis, Rock Products quarry, west of Davis, basalt and rhyolite: calcite, fluorite (crystals, green and purple), pyrite.

Davis, Sooner Rock quarry, near Davis: calcite (crystals to 5 cm) (London 1994).

Davis zinc field, includes **Arbuckle mine**, **Ben Franklin mine (United Mining)**, **Goose Nest mine**, **Hope-Sober mine**, **Rumney (incline)**, and **Arbuckle Mountains** to the west of the Washita River, porphyritic granite and Arbuckle Limestone: anglesite, cerussite, dolomite, galena, hematite, pyrite, smithsonite, sphalerite (Gilmore 1963).

Mill Mountain, near the mountain: elbaite (green) (Zeitner 1972).

Nebo, includes **White Mound**, near Nebo, sec.20, T.2S, R.3E; sec.5, T.2S, R.1W; sec.34, T.1S, R.2E, in Sylvan Shale: barite ("dollars" consisting of fine radiating needles) (Ham and Merritt 1944).

Sulphur, south of Sulphur on **Murray Ranch**, sec.24, T.1S, R.3E, along a fault line in red clay of the Mississippian-age Woodford Shale: barite (crystalline) (Ham and Merritt 1944).

Noble County

Morrison, 3 mi. SE, SE1/4 sec.27, T.21N, R.3E, Permian siltstone and sandstones: azurite, chalcocite (nodules), malachite (Naff 1981).

Perry, SW of Perry, several locations, NE1/4 SW1/4 sec.19, T.20N, R.1E; sec.5 and NE1/4 sec.24, T.20N, R.1W: azurite (replacing wood), barite (centers of concretions, nodules, veins), chalcocopyrite, malachite (Gilmore 1963).

Okfuskee County

Paden, 3 mi. SW of Paden, N of Canadian River, SW1/4 SW1/4 sec.31, T.12N, R.7E, mineralization along a fault in Pennsylvanian-age Ada Group sandstones, mining in 1920s and 1930s: azurite, calcite, chalcocite, chrysocolla, copper, dolomite, goethite, hematite, malachite (needle crystals), melanterite, quartz, tenorite (Zeitner 1972).

Oklahoma County

Oklahoma City, including **Trosper Park**, along a stream in the park and archery range located on 29th Street E of Interstate 35, sec.22, T.14N, R.2W; secs.7, 11, and 35, T.12N, R.2W; secs. 12 and 24, T.11N, R.3W, Permian-age Garber sandstones: barite (roses, miniature) (Ham and Merritt 1944; Naff 1981).

Okmulgee County

Schulter, near Schulter on burned dumps of coal mines, ammoniojarosite, letovicite, molysite, sal ammoniac (A. L. Kidwell collection).

Ottawa County

Picher district, zinc mining area surrounding Miami, Picher, Peoria, and most of the north part of the county. Many mines; each may have numerous names. Mississippi Valley-type deposits in Boone Chert of Mississippian age that is fractured, brecciated, and contains numerous solution cavities; ore discovered about 1901 with first production in 1904; peak production in 1925; mining ceased in 1957 but resumed in 1960 at a reduced rate into the early 1970s when the rising water level claimed most of the mines: anglesite (gray films), aragonite, arsenopyrite barite (plates), calcite* (crystals, twinned, scalenohedra and rhombohedra), carphosiderite (yellow crusts), cerussite (microcrystals), chalcocopyrite* (sphenoids, pseudomorphs after enargite), copiapite, covellite (thin blue coatings), diadochite (minute crystals), dolomite* (pink saddle-shaped crystals), enargite* (microcrystals and veinlets with chalcocopyrite), epsomite (postmining product), fluorapatite, galena* (cubes, octahedra and combinations, some platy crystals),



Figure 19. Calcite and galena, Picher district, Ottawa County; specimen 5 cm high. Terry Huizing specimen and photo.

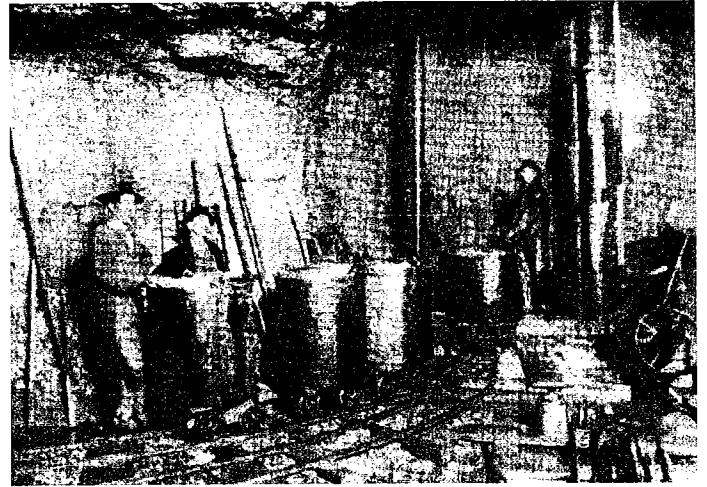
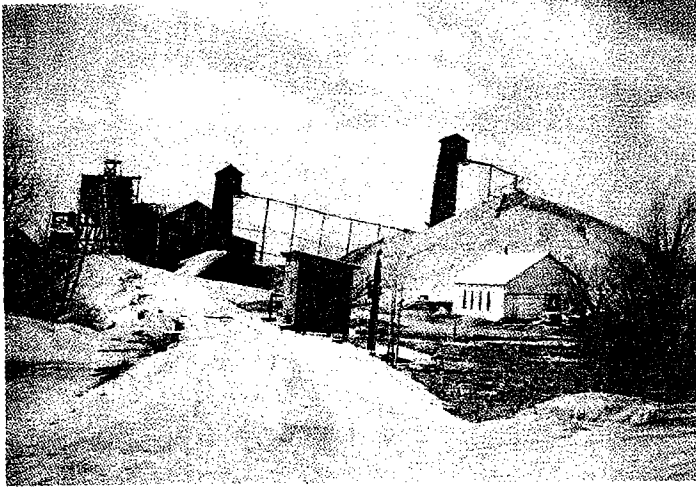


Figure 20 (above left). Custom mill, Picher district, Ottawa County. Art Smith photo (1959).

Figure 21 (above). Postcard view of ore cars waiting to be lifted to the surface (ca. 1910), Picher district, Ottawa County. Art Smith collection.

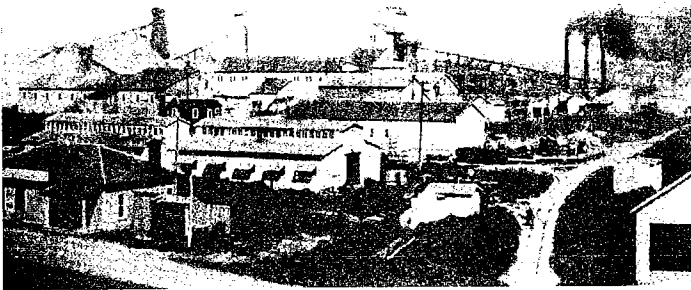


Figure 22 (left). Postcard view of lead and zinc mills near Miami, Picher district, Ottawa County. Art Smith collection.

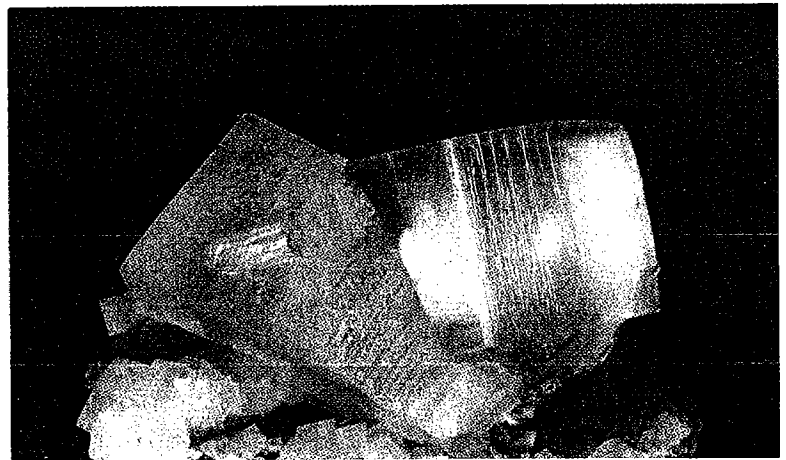
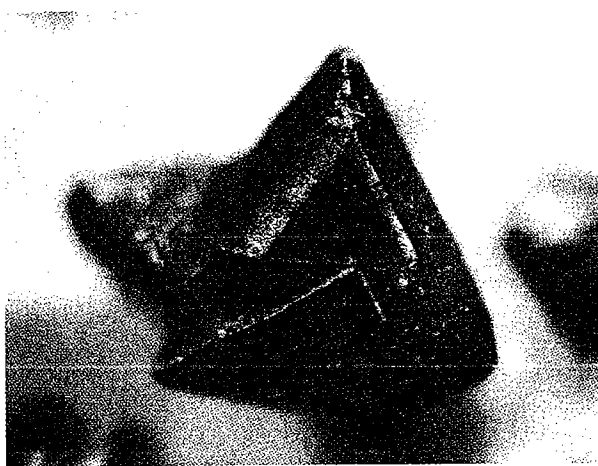


Figure 23 (above left). Sphalerite, 1.1 mm high, Picher district, Ottawa County. Dan Behnke specimen and photo.

Figure 24 (above). Calcite twin on (01 $\bar{1}$ 2), 7 cm across, St. Clair Lime quarry, Marble City, Sequoyah County, Terry Huizing specimen and photo.

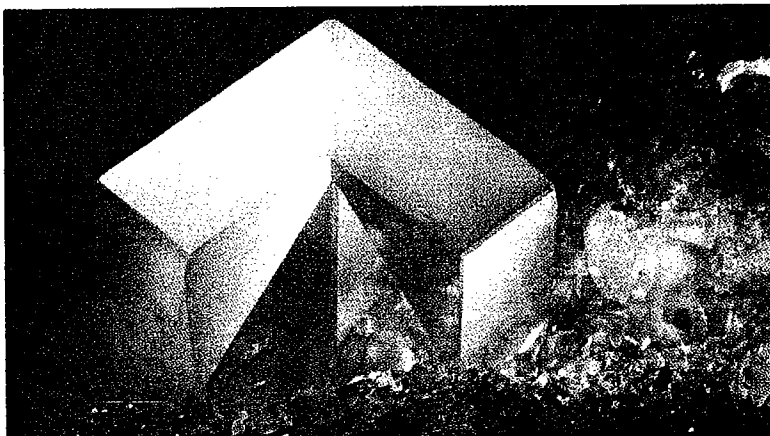


Figure 25 (left). Calcite, 4.9 cm across, Sequoyah County. Terry Huizing specimen, Jeff Scovil photo.

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- *Arkansas by Arthur E. Smith, Jr., March/April 1988*
- *Georgia by Jennings B. Gordon, May/June 1989*
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goslarite (postmining product), greenockite (yellow coatings), gypsum (clear crystals, also a postmining product), hemimorphite (called silicate and calamine), hydrozincite (fluorescent coatings), kaolinite, luzonite (minute crystallites on earlier minerals), malachite, marcasite* (crystals, some twins, botryoidal, hairlike masses), melanterite (postmining product), plumbojarosite (masses of minute platy crystals), pyrite (small cubes or pyritohedra), quartz (crystals), smithsonite (early-day ore), sphalerite* (black jack, rosin jack, ruby jack, crystals), sulfur (minute crystals), szomolnokite (postmining product) (McKnight and Fischer 1970; Ransome 1935).

Pawnee County

Lela, a few mi. N of Lela, NW corner NE1/4 SW1/4, sec.19 and NE1/4 sec.8, T.22N, R.4E, also NE1/4 sec.23 and NW1/4 sec.19, NW1/4 sec.28, T.22N, R.3E, red Permian sandstones and conglomerates: azurite, carnotite, chalcocite (nodules and fossil wood), malachite, uranophane (with lignite and copper minerals) (Fischer 1937; Merritt 1940b).

Payne County

Glencoe, 3 mi. SW of Glencoe, SE1/4 NW1/4 and cent. NW1/4 SW1/4 sec.23, also SE1/4 SE1/4 sec.22, T.20N, R.3E, Permian-age Doyle sandstones and shales, discovered 1901, 60-foot adit made in 1910: azurite, calcite, chalcantite, chalcocite (nodules and petrified wood), covellite, malachite, pyrite, tenorite (Merritt 1940b; Naff 1981).

Pontotoc County

Ada, Lawrence quarry, 6 mi. S of Ada near State Route 1, NE1/4 sec.36, T.3N, R.5E: calcite* (rhombohedral crystals),

galena* (cubes modified by octahedra), marcasite* (crystals), pyrite, sphalerite (marmatite) (Zeitner 1972).

Ahlosa, on the road to Ada in a shallow creek, shale: pyrite (crystal clusters) (Zeitner 1972).

Arbuckle Mountains, NE1/4 sec.17, T.2N, R.6E, in Hunton Limestone along a fault: galena (small crystals) (Reeds 1910).

Pottawatomie County

Pink area, S of Pink, sec.18, T.9N, R.2E: barite (roses) (Gilmore 1963).

Pushmataha County

Pine Creek State Park area, off access road to the park: quartz (small doubly terminated crystals) (Morrison 1984).

Roger Mills County

Cheyenne, 3 mi. S of Durham near Cheyenne: carnotite (bright yellow), tyuyamunite (yellow-green) (Zeitner 1972).

Seminole County

Konawa Country Club, SE1/4 NW1/4, sec.34 and SW1/4 NE1/4, sec.34, T.6N, R.5E, Hart Limestone of Pennsylvanian age: malachite.

Sequoyah County

Marble City area, St. Clair Lime quarry, NW1/4 SW1/4 sec.1, T.13N, R.23E: aragonite, calcite* (rhombohedral crystals, some twins), goethite, pyrite (Gilmore 1963).

Stephens County

Comanche, east of Comanche, SW1/4 SW1/4 SW1/4 sec.6, T.3S, R.6W and secs. 23, 25, 31, T.2S, R.7W: barite (veins, in clay carbonate concretions, and as radial nodules) (Ham and Merritt 1944).

Marlow, W of Marlow on S bank of Little Beaver Creek, SW1/4 sec.13 and SE1/4 sec.14, T.2N, R.8W: gypsum (sand included crystals, "rabbit ears") (Gilmore 1963).

Tillman County

Chattanooga, S of Chattanooga, secs. 27 and 28, T.3S, R.14W: barite (roses) (Ham and Merritt 1944).

Manitou, E of Manitou, NW1/4 NE1/4 sec.35, T.1N, R.16W, sec.31, T.1N, R.16W, veins in maroon shale: barite (crystalline veins, nodules, in clay carbonate concretions, roses), calcite (fibrous paramorphs after aragonite), hematite (Ham and Merritt 1944).

Tulsa County

Lotsee, N line sec.15 and SW1/4 sec.27, T.19N, R.10E: calcite, dolomite* (crystals), pyrite (Gilmore 1963).

Tulsa, Acme Coal mine, NE1/4 sec.18, T.20N, R.13E, burned dumps of a coal mine: sal ammoniac, sulfur (Gilmore 1963).

Wagoner County

Tulsa, E of Tulsa, waste dumps of strip pits, sec.18, T.18N,

R.15E: gypsum* (crystals, twins, and rosettes) (Gilmore 1963).

Washita County

Clinton, S of, Cloud Chief Formation: carnotite, tyuyamynite (Gilmore 1963).

Corn, NE of Corn, NE1/4 sec.22, T.11N, R.14W, in Cloud Chief Gypsum: celestine (bedded), dolomite, strontianite (Gilmore 1963).

See also listing for Foss in Custer County.

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