UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Bibliography and Index of the Geology of the Creede Mining District and Vicinity Colorado

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PREFACE

This bibliography and index of the geology of the Creede mining district and vicinity was prepared in support of the increased number of studies being conducted in conjunction with the proposed deep drilling program at Creede. It was our intent to include in this compilation all papers, abstracts, and maps which contribute any information pertaining to the geology of the Creede district. Thus, references range from papers dealing entirely with Creede to those which contain only a small amount of data relevant to some aspect of Creede geology. Even abstracts of talks, which were later published as papers, are included in an effort to be as complete as possible. We would appreciate any corrections or additions to this bibliography and index.

This compilation is divided into two parts. The first part is an index, in which only the authors, year and title of references are listed. The complete citation for each paper is given in the second part, the bibliography. The following headings were used to index the references:

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Bethke, 1985, Scientific drilling in hydrothermal systems: proposed program, Creede mining district, Colorado [abs.].

Bethke and Eidel, 1985, Research drilling opportunities in ore deposits and active hydrothermal systems [abs.].

Bethke and Lipman, 1987, Research drilling in caldera-hosted epithermal mineralization, Creede, CO [abs.].

Bethke and Lipman, 1987, Deep environment of volcanogenic epithermal mineralization: proposed research drilling at Creede, Colorado.

Bethke and others, 1987, Research drilling in the mineralized hydrothermal system at Creede, Colorado.

Continental Scientific Drilling Committee, 1984, Mineral resources: research objectives for continental scientific drilling.

Eidel and Meyer, 1985, Scientific drilling to study the roots and margins of hydrothermal mineral systems.

Stehli and Andrews, 1987, The United States continental scientific drilling program.

EPITHERMAL DEPOSITS VIS-A-VIS CREEDE

Barton, 1987, The role of archetypes in understanding ore genesis: lessons from Creede, Colorado [abs.].

Barton and others, 1982, Silver/base metal epithermal deposits.

Berger and Eimon, 1983, Conceptual models of epithermal precious metal deposits.

Bethke, 1984, Controls on base and precious metal mineralization in deeper epithermal environments [abs.].

Bethke, 1985, Geothermal systems and epithermal ores: lessons from Creede, Colorado [abs.].

Buchanan, 1981, Precious metal deposits associated with volcanic environments in the southwest.

Dreier, 1984, Regional tectonic control of epithermal veins in the western United States and Mexico.

Hayba and others, 1985, Geologic, mineralogic and geochemical characteristics of volcanic-hosted epithermal precious-metal deposits.

Heald and others, 1987, Comparative anatomy of volcanic-hosted epithermal deposits: acid-sulfate and adularia-sericite types.

Heald-Wetlaufer and others, 1983, Comparative anatomy of epithermal precious- and base-metal districts hosted by volcanic rocks: a talk presented at the GAC/MAC/GGU joint annual meeting, May 11-13, 1983, Victoria, British Columbia.

Mosier and others, 1986, Grade and tonnage model of Creede epithermal veins.

Mosier and others, 1986, Descriptive model of Creede epithermal veins.

Price and others, 1987, Tectonic controls on orientation and size of epithermal veins.

FLUID INCLUSIONS

Bazrafshan and Norman, 1987, Fluid inclusion study of the northern Amethyst vein system [abs.].

Bodnar and Bethke, 1984, Systematics of stretching of fluid inclusions I: fluorite and sphalerite at 1 atmosphere confining pressure.

Bodnar and others, 1985, Fluid inclusion systematics in epithermal systems.

Czamanske and others, 1963, Neutron activation analysis of fluid inclusions for copper, manganese, and zinc.

Foley and others, 1982, A re-interpretation of δD_{H_2O} values of inclusion fluids in quartz from shallow ore bodies [abs.].

Foley and others, 1987, Pseudosecondary fluid inclusions in shallow ore- forming environments: clues to interpreting a dynamic pressure- temperature regime [abs.].

Hayba, 1983, A compilation of fluid inclusion and stable isotope data on selected precious- and base-metal epithermal deposits.

Hayba, 1984, Documentation of thermal and salinity gradients and interpretation of the hydrologic conditions in the OH vein, Creede, Colorado [abs.].

Hayba, 1985, CreedeFI: A Micrograsp database file of fluid inclusion data from the Creede mining district, Colorado.

Hayba, 1986, District-wide fluid mixing during precious/base-metal epithermal mineralization at Creede, Colorado [abs.].

Hayba, 1987, Fluid-inclusion evidence for hydrologic and hydrothermal processes in the Creede mineralizing system, Colorado [abs.].

Hayba and Bethke, 1987, Techniques for analyzing and interpreting fluid- inclusion data sets: examples from Creede, Colorado [abs.].

Hemingway, 1986, Mineralogy and geochemistry of the southern Amethyst vein system, Creede mining district, Colorado.

Misantoni, 1985, Mineralization along the Midwest fault system, Creede district, Mineral County, Colorado.

Plumlee and Hayba, 1985, Solubility-temperature-salinity diagrams as a means for interpreting fluid-inclusion/mineral-zoning data from the Creede district, Colorado [abs.].

Rama and others, 1965, Excess radiogenic argon in fluid inclusions.

Robinson, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Robinson and Norman, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede, Colorado [abs.].

Robinson and Norman, 1984, Mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Roedder, 1960, Fluid inclusions as samples of the ore-forming fluids.

Roedder, 1960, Primary fluid inclusions in sphalerite crystals from the OH vein, Creede, Colorado [abs.].

Roedder, 1962, Studies of fluid inclusions I: Low temperature application of a dual-purpose freezing and heating stage.

Roedder, 1963, Studies of fluid inclusions II: Freezing data and their interpretation.

Roedder, 1965, Evidence from fluid inclusions as to the nature of the ore- forming fluids.

Roedder, 1965, Non-Brownian bubble movement in fluid inclusions - a thermal gradient detector of extreme sensitivity and rapid response [abs.].

Roedder, 1965, Report on S. E. G. symposium on the chemistry of the ore- forming fluids.

Roedder, 1970, Application of an improved crushing microscope stage to studies of the gases in fluid inclusions.

Roedder, 1977, Changes in ore fluid with time, from fluid inclusion studies at Creede, Colorado.

Roedder, 1977, Stable and metastable fluid inclusion data, Browns Canyon fluorspar district, Chaffee county, Colorado, and similar epithermal and hot-spring (?) deposits.

Roedder, 1977, Fluid inclusions as tools in mineral exploration.

Roedder, 1984, Creede, Colorado, U.S.A.

Roedder and Skinner, 1968, Experimental evidence that fluid inclusions do not leak.

Rosasco and Roedder, 1979, Application of a new Raman microprobe spectrometer to nondestructive analysis of sulfate and other ions in individual phases in fluid inclusions in minerals.

Tsui and Holland, 1976, The Cu content of fluid inclusions in three epithermal ore deposits [abs.].

Tsui and Holland, 1979, The analysis of fluid inclusions by laser microprobe.

Woods and others, 1982, Fluid inclusion data on samples from Creede, Colorado, in relation to mineral paragenesis.

GEOCHRONOLOGY (see also PALEONTOLOGY)

Armstrong, 1969, K-Ar dating of laccolithic centers of the Colorado Plateau and vicinity.

Bethke and others, 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: II. Age of mineralization.

Lanphere, 1987, High-resolution $^{40}Ar/^{39}Ar$ geochronology, central San Juan caldera complex, Colorado [abs.].

Lipman and others, 1970, Volcanic history of the San Juan Mountains, Colorado, as indicated by potassium-argon dating.

Steven and others, 1967, Age of volcanic activity in the San Juan Mountains, Colorado.

GEOLOGY, Creede Formation (see also PALEONTOLOGY and PALEOENVIRONMENT)

GEOLOGY, District

Lipman, 1987, Oligocene central San Juan caldera cluster, Colorado [abs.].

Matty and others, 1987, Common-Pb isotopic characteristics of central San Juan ash-flow tuffs [abs.].

Matty and others, 1985, Magmatic conditions of the Snowshoe Mt. Tuff, San Juan volcanic field, Colorado [abs.].

Pinnell, 1969, Directional fabric of ash-flow tuffs studied by differential X- ray absorption [abs.].

Ratte, 1968, Identification of ash-flow boundaries within densely welded tuff, Creede area, Colorado [abs.].

Ratte and Steven, 1959, Distribution and characteristics of ash flows associated with the Creede caldera, San Juan Mountains, Colorado [abs.].

Ratte and Steven, 1964, Magmatic differentiation in a volcanic sequence related to the Creede caldera, Colorado.

Ratte and Steven, 1967, Ash flows and related volcanic rocks associated with the Creede caldera, San Juan Mountains, Colorado.

Sangster, 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting; Discussion.

Sawyer and others, 1987, Correlation of late crystal-rich tuffs from the central San Juan caldera cluster, Colorado [abs.].

Steven, 1967, Geologic map of the Bristol Head quadrangle, Mineral and Hinsdale Counties, Colorado.

Steven, 1968, Critical review of the San Juan peneplain, southwestern Colorado.

Steven, 1971, Geologic environment of ore deposition in the Creede district, San Juan Mountains, Colorado [abs.].

Steven and Bieniewski, 1977, Mineral resources of the La Garita Wilderness, San Juan Mountains, southwestern Colorado, with a section on geophysical interpretation by G. P. Eaton.

Steven and Eaton, 1975, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting.

Steven and Lipman, 1968, Central San Juan cauldron complex, Colorado [abs.].

Steven and Lipman, 1973, Geologic map of the Spar City quadrangle, Mineral County, Colorado.

Steven and Lipman, 1976, Emplacement of a batholith, as chronicled by calderas in the San Juan Mountains, Colorado [abs.].

Steven and Lipman, 1976, Calderas of the San Juan volcanic field, southwestern Colorado.

Steven and Ratte, 1959, Caldera subsidence in the Creede area, San Juan Mountains, Colorado [abs.].

Steven and Ratte, 1960, Relation of mineralization to caldera subsidence in the Creede district, San Juan Mountains, Colorado.

Steven and Ratte, 1963, Resurgent cauldrons in the Creede area, San Juan Mountains, Colorado [abs.].

Steven and Ratte, 1964, Revised Tertiary volcanic sequence in the central San Juan Mountains, Colorado.

Steven and Ratte, 1965, Geology and structural control of ore deposition in the Creede district, San Juan Mountains, Colorado.

Steven and Ratte, 1973, Geologic map of the Creede quadrangle, Mineral and Saguache Counties, Colorado.

Steven and others, 1974, Ash-flow stratigraphy and caldera structures in the San Juan volcanic field, southwestern Colorado.

Steven and others, 1974, Relation of mineralization to calderas in the San Juan volcanic field, southwestern Colorado.

GEOLOGY, Regional

Atwood and Mather, 1932, Physiography and Quaternary geology of the San Juan Mountains, Colorado.

Baars and Stevenson, 1984, The San Luis uplift, Colorado and New Mexico - an enigma of the ancestral Rockies.

Chaffee, 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale, and Saguache Counties, Colorado [abs.].

Chaffee, 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale and Saguache Counties, Colorado.

Christiansen and Lipman, 1972, Cenozoic volcanism and plate-tectonic evolution of the western United States. II. Late Cenozoic.

Cross and Larsen, 1935, A brief review of the geology of the San Juan region of southwestern Colorado.

Ellwood, 1982, Estimates of flow direction for calc-alkaline welded tuffs and paleomagnetic data reliability from anisotropy of magnetic susceptibility measurements: central San Juan Mountains, southwest Colorado.

Gephart, 1985, A clockwise change in regional tension at 26 m.y. based on fault patterns in S.W. Colorado [abs.].

Gries, 1985, San Juan Sag: Cretaceous rocks in a volcanic-covered basin, south central Colorado.

Hayden, 1877, Geological and geographical atlas of Colorado and portions of adjacent territory.

Hayden, 1881, Geological and geographical atlas of Colorado and portions of adjacent territory.

Larsen and Cross, 1956, Geology and petrology of the San Juan region, southwestern Colorado.

Lipman, 1970, Relations between Cenozoic andesitic and rhyolitic volcanism in the western interior of the United States [abs.].

Lipman, 1979, Emplacement of high-level granitic batholiths: evidence from the San Juan volcanic field of Colorado and the Boulder Batholith of Montana [abs.].

Lipman, 1980, Oligocene ash-flow eruptions of the San Juan volcanic field, Colorado [abs.].

Lipman, 1980, Cenozoic volcanism in the western United States: implications for continental tectonics.

Lipman, 1981, Volcano-tectonic setting of Tertiary ore deposits, southern Rocky Mountains.

Lipman, 1984, The roots of ash-flow calderas in western North America: windows into the tops of granitic batholiths.

Lipman, 1984, Ash-flow calderas in western North America.

Lipman and Mehnert, 1975, Late Cenozoic basaltic volcanism and development of the Rio Grande depression in the southern Rocky Mountains.

Lipman and Sawyer, 1988, Preliminary geology of the San Luis Peak quadrangle and adjacent areas, San Juan Volcanic Field, southwestern Colorado.

Lipman and Steven, 1969, Petrologic evolution of the San Juan volcanic field, southwestern Colorado, U.S.A. [abs.].

Lipman and Steven, 1974, Andesites and related volcanic rocks of the San Juan volcanic field, southwestern Colorado, U.S.A. -- a record of the rise and differentiation of a large composite batholith in Oligocene time [abs.].

Lipman and others, 1978, Petrologic evolution of the San Juan volcanic field, southwestern Colorado: Pb and Sr isotope evidence.

Lipman and others, 1969, Similarity of Cenozoic igneous activity in the San Juan and Elk Mountains, Colorado, and its regional significance.

Lipman and others, 1971, Evolving subduction zones in the western United States, as interpreted from igneous rocks.

Lipman and others, 1972, Cenozoic volcanism and plate-tectonic evolution of the western United States. I. Early and middle Cenozoic.

Lipman and others, 1970, Volcanic history of the San Juan Mountains, Colorado, as indicated by potassium-argon dating.

Perry and others, 1987, The role of asthenosphere and lithosphere in the genesis of late Cenozoic basaltic rocks from the Rio Grande rift and adjacent regions of the southwestern United States [abs.].

Raymond and others, 1983, Mineral resource potential and geology of the Wheeler Wilderness Study Area, Mineral County, Colorado.

Riecher (ed.), 1979, Rio Grande Rift: Tectonics and magmatism.

Ryder, 1977, Hydrocarbon potential of Archuleta anticlinorium, Brazos uplift, and Chama basin in southwestern Colorado [abs.].

Ryder, 1977, Hydrocarbon potential of the Archuleta anticlinorium, Brazos uplift, Chama basin.

Scott, 1975, Cenozoic surfaces and deposits in the southern Rocky Mountains.

Steven, 1975, Middle Tertiary volcanic field in the southern Rocky Mountains.

Steven and Epis, 1968, Oligocene volcanism in south-central Colorado [abs.].

Steven and Epis, 1968, Oligocene volcanism in south-central Colorado.

Steven and others, 1974, Geologic map of the Durango quadrangle, southwestern Colorado.

Steven and others, 1969, Mineral resources of the San Juan Primitive Area, Colorado.

Steven and others, 1972, Upper Cretaceous and Cenozoic igneous rocks.

Tweto, 1968, Geologic setting and interrelationships of mineral deposits in the mountain province of Colorado and south-central Wyoming.

Tweto, 1975, Laramide (late Cretaceous-early Tertiary) orogeny in the southern Rocky Mountains.

Tweto, 1976, A preliminary geologic map of Colorado.

Tweto, 1976, A preliminary Montrose quadrangle 1° by 2° sheet.

Webber and others, 1987, Mammoth Mt. and Wason Park Tuffs: development of the magmatic system in the central San Juan volcanic field, Colorado [abs.].

Whitney and others, 1986, Are mass extinctions caused by volcanic eruptions? Negative evidence from the Late Oligocene of the southern Rocky Mountains and Great Plains [abs.].

GEOMORPHOLOGY

Atwood and Mather, 1932, Physiography and Quaternary geology of the San Juan Mountains, Colorado.

Colton and others, 1975, Preliminary map of landslide deposits, Durango 1° by 2° quadrangle, Colorado.

Scott, 1975, Cenozoic surfaces and deposits in the southern Rocky Mountains.

Steven, 1968, Critical review of the San Juan peneplain, southwestern Colorado.

GEOPHYSICAL SURVEYS

Beck and others, 1977, Further paleomagnetic results for the San Juan volcanic field of southern Colorado.

Decker, 1987, Temperatures and gradients in four mining company boreholes near Creede, Colorado.

Diehl and others, 1974, Paleomagnetism and magnetic-polarity zonation in some Oligocene volcanic rocks of the San Juan Mountains, south-western Colorado.

Eaton and others, 1972, Comparative geophysical expression of ash flow-related calderas, southwestern United States [abs.].

Ellwood, 1982, Estimates of flow direction for calc-alkaline welded tuffs and paleomagnetic data reliability from anisotropy of magnetic susceptibility measurements: central San Juan Mountains, southwest Colorado.

Plouff and Pakiser, 1972, Gravity study of the San Juan Mountains, Colorado.

Rosenbaum and others, 1987, Paleomagnetism of Oligocene ash-flow tuffs, central San Juan Mountains, Colorado [abs.].

Sheriff, 1976, Paleomagnetism of the San Juan volcanic field, southwestern Colorado.

Skokan and others, 1987, Transient electromagnetic sounding studies in the San Juan volcanic field [abs.].

Stanley and Labson, 1987, Results from preliminary geoelectrical surveys in the Creede mining district [abs.].

Steven and Eaton, 1975, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting.

Tanaka and Kono, 1973, Paleomagnetism of the San Juan volcanic field, Colorado, U.S.A.

Tanaka and Kono, 1974, Origin of NRM of San Juan volcanic rocks from Colorado, U.S.A.

U.S. Geological Survey, 1987, Aeromagnetic map of the Creede mining district, southwestern Colorado.

Western Geophysical Co. of America, 1979, Airborne gamma-ray spectrometer and magnetometer survey, Durango quadrangle, Colorado.

Williams and Abrams, 1987, Preliminary results of gravity and aeromagnetic studies in the central San Juan caldera complex, Colorado [abs.].

GEOTHERMAL

Bethke, 1985, Geothermal systems and epithermal ores: lessons from Creede, Colorado [abs.].

Brogan and Birkhahn, 1981, Faults and occurrence of geothermal anomalies.

Pearl and Barrett, 1977, Use of hydrogeology, geochemistry, and geothermometer models in reconnaissance exploration for a hydrogeothermal resource [abs.].

Reiter and others, 1979, Geothermal characteristics of the Rio Grande rift within the southern Rocky Mountain complex.

Wetlaufer and others, 1978, The Creede mining district, central San Juan Mountains, Colorado: a fossil geothermal system [abs.].

Wetlaufer and others, 1979, The Creede Ag-Pb-Zn-Cu-Au district, central San Juan Mountains, Colorado: a fossil geothermal system.

ISOTOPES, Stable and Radiogenic

Bethke and Rye, 1979, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part IV. Source of fluids from oxygen, hydrogen, and carbon isotope studies.

Bethke and others, 1973, Hydrogen, oxygen, and sulfur isotopic compositions of ore fluids in the Creede district, Mineral County, Colorado [abs.].

Doe, 1968, Lead and strontium isotopic studies of Cenozoic volcanic rocks in the Rocky Mountain region - a summary.

Doe and others, 1979, Genesis of ore deposits in the San Juan volcanic field, southwestern Colorado - lead isotope evidence.

Foley and others, 1987, The isotopic composition of ore lead of the Creede mining district and vicinity, San Juan Mountains, Colo. [abs.].

Foley and others, 1987, The isotopic composition of ore lead of the Creede mining district and vicinity, San Juan Mountains, Colo. : A talk presented at the San Juan Symposium in honor of Thomas A. Steven.

Foley and others, 1982, A re-interpretation of δD_{H_2O} values of inclusion fluids in quartz from shallow ore bodies [abs.].

Hayba, 1983, A compilation of fluid inclusion and stable isotope data on selected precious- and base-metal epithermal deposits.

Larson and Taylor, 1986, $^{18}O/^{16}O$ ratios in ash flow tuffs and lavas erupted from the central Nevada caldera complex and the central San Juan caldera complex, Colorado.

Matty and others, 1987, Common-Pb isotopic characteristics of central San Juan ash-flow tuffs [abs.].

Perry and others, 1987, The role of asthenosphere and lithosphere in the genesis of late Cenozoic basaltic rocks from the Rio Grande rift and adjacent regions of the southwestern United States [abs.].

Plumlee and Rye, 1986, Extreme sulfur isotope, As, Sb and Ag variations in late-stage botryoidal pyrite from Creede, Colorado: vestiges of a waning hydrothermal system [abs.].

Rye and others, 1987, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system [abs.].

Rye and others, 1988, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system.

Steven and Friedman, 1968, The source of travertine in the Creede Formation, San Juan Mountains, Colorado.

MAPS

Colton and others, 1975, Preliminary map of landslide deposits, Durango 1° by 2° quadrangle, Colorado.

Hayden, 1877, Geological and geographical atlas of Colorado and portions of adjacent territory.

Hayden, 1881, Geological and geographical atlas of Colorado and portions of adjacent territory.

Lipman and Sawyer, 1988, Preliminary geology of the San Luis Peak quadrangle and adjacent areas, San Juan Volcanic Field, southwestern Colorado.

Ratte and Steven, 1967, Ash flows and related volcanic rocks associated with the Creede caldera, San Juan Mountains, Colorado.

Raymond and others, 1983, Mineral resource potential and geology of the Wheeler Wilderness Study Area, Mineral County, Colorado.

Steven, 1967, Geologic map of the Bristol Head quadrangle, Mineral and Hinsdale Counties, Colorado.

Steven and Lipman, 1973, Geologic map of the Spar City quadrangle, Mineral County, Colorado.

Steven and Ratte, 1965, Geology and structural control of ore deposition in the Creede district, San Juan Mountains, Colorado.

Steven and Ratte, 1973, Geologic map of the Creede quadrangle, Mineral and Saguache Counties, Colorado.

Steven and others, 1974, Geologic map of the Durango quadrangle, southwestern Colorado.

Tweto, 1976, A preliminary geologic map of Colorado.

Tweto, 1976, A preliminary Montrose quadrangle 1^{o} by 2^{o} sheet.

U.S. Geological Survey, 1912, Creede and vicinity.

U.S. Geological Survey, 1916, Creede quadrangle.

U.S. Geological Survey, 1987, Aeromagnetic map of the Creede mining district, southwestern Colorado.

MINERAL DEPOSITS, Creede district (see also FLUID INCLUSIONS; ISOTOPES; and ALTERATION)

Anonymous, 1980, Anatomy of an ore deposit: case history from Creede, Colorado.

Barton, 1987, The role of archetypes in understanding ore genesis: lessons from Creede, Colorado [abs.].

Barton and Bethke, 1987, Chalcopyrite disease in sphalerite: pathology and epidemiology.

Barton and others, 1977, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part III. Progress toward interpretation of the chemistry of the ore-forming fluid for the OH vein.

Barton and others, 1982, Silver/base metal epithermal deposits.

Berger and Eimon, 1983, Conceptual models of epithermal precious metal deposits.

Bethke, 1980, The Creede mining district, Colorado: studies of the evolution of a hydrothermal system [abs.].

Bethke, 1985, Geothermal systems and epithermal ores: lessons from Creede, Colorado [abs.].

Bethke, 1987, The Creede, Colorado ore-forming system: a summary model [abs.].

Bethke, 1988, The Creede, Colorado ore-forming system: a summary model.

Bethke and Barton, 1971, History of filling of the OH vein, Creede, Colorado [abs.].

Bethke and Steven, 1979, Base- and precious-metal deposits in the San Juan Mountains, Colorado [abs.].

Bethke and others, 1960, Time-space relationships of the ores at Creede, Colorado [abs.].

Bethke and others, 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: II. Age of mineralization.

Bethke and others, 1987, Research drilling in the mineralized hydrothermal system at Creede, Colorado.

Cannaday, 1950, The OH vein and its relation to the Amethyst fault.

Emmons, 1913, The enrichment of sulphide ores.

Emmons and Larsen, 1912, Ore deposits of the Amethyst vein, Creede, Colorado.

Emmons and Larsen, 1913, A preliminary report on the geology and ore deposits of Creede, Colorado.

Emmons and Larsen, 1923, Geology and ore deposits of the Creede district, Colorado.

Giudice, 1980, Mineralization at the convergence of the Amethyst and OH fault systems, Creede district, Mineral County, Colorado.

Giudice, 1981, Ore geology of the central Amethyst vein area, Creede, Colorado.

Hayba and others, 1985, Geologic, mineralogic and geochemical characteristics of volcanic-hosted epithermal precious-metal deposits.

Heald-Wetlaufer and Plumlee, 1984, Significance of mineral variations in time and space along the Bulldog Mountain vein system with respect to the district-wide hydrology, Creede district, Colorado [abs.].

Hemingway, 1986, Mineralogy and geochemistry of the southern Amethyst vein system, Creede mining district, Colorado.

Henley and Huffman, 1987, Gold: sources to resources [abs.].

Hills, 1924, Petrified wood carrying silver at Creede, Colo.

Hull, 1970, Geology of the Puzzle vein, Creede mining district, Colorado.

Hull, 1970, Geology of the Puzzle vein, Creede mining district, Colorado [abs.].

Kirby, 1892, The ore deposits of Creede and their possibilities.

Lindemann and others (eds.), 1981, Creede mining district, San Juan volcanic province, Colorado.

Lunt, 1921, An interesting silver deposit.

Lunt, 1924, Ore deposition at Creede, Colo.

MacMechan, 1892, The ore deposits of Creede, Colo.

Meeves and Darnell, 1968, Study of the silver potential, Creede district, Mineral County, Colorado.

Misantoni, 1985, Mineralization along the Midwest fault system, Creede district, Mineral County, Colorado.

Mosier and others, 1986, Grade and tonnage model of Creede epithermal veins.

Mosier and others, 1986, Descriptive model of Creede epithermal veins.

Rice, 1984, Controls on silver mineralization in the Creede Formation, Creede, Colorado.

Ring, 1924, Silver-bearing petrified wood.

Robinson, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Robinson, 1981, Mineralization along the southern Amethyst vein.

Robinson and Norman, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede, Colorado [abs.].

Robinson and Norman, 1984, Mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Roeber, 1981, A summary of the geology and ore deposits of the Bulldog Mountain mine, Creede mining district, San Juan Mountains, Mineral County, Colorado.

Sangster, 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting; Discussion.

Smith, 1981, Bachelor Mountain silver deposit, Mineral County, Colorado.

Steven, 1968, Ore deposits in the central San Juan Mountains, Colorado.

Steven, 1969, Possible relation of mineralization to thermal springs in the Creede district, San Juan Mountains, Colorado: a discussion.

Steven, 1971, Geologic environment of ore deposition in the Creede district, San Juan Mountains, Colorado [abs.].

Steven and Eaton, 1975, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting.

Steven and Ratte, 1960, Relation of mineralization to caldera subsidence in the Creede district, San Juan Mountains, Colorado.

Steven and Ratte, 1965, Geology and structural control of ore deposition in the Creede district, San Juan Mountains, Colorado.

Steven and others, 1974, Relation of mineralization to calderas in the San Juan volcanic field, southwestern Colorado.

Wason, 1983, The Bachelor Mountain silver deposit, Creede mining district, Colorado.

Wetlaufer and others, 1978, The Creede mining district, central San Juan Mountains, Colorado: a fossil geothermal system [abs.].

Wetlaufer and others, 1979, The Creede Ag-Pb-Zn-Cu-Au district, central San Juan Mountains, Colorado: a fossil geothermal system.

Wisser, 1960, Mining districts associated with anticlines; Creede, Colorado.

MINERAL DEPOSITS, Geochemistry

Barton, 1981, Physical-chemical conditions of ore deposition.

Barton, 1983, Unconventional mineral deposits: a challenge to geochemistry.

Barton and others, 1977, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part III. Progress toward interpretation of the chemistry of the ore-forming fluid for the OH vein.

Barton and others, 1962, Equilibrium in ore deposits, I - concepts [abs.].

Barton and others, 1963, Equilibrium in ore deposits.

Barton and others, 1971, Tentative interpretation of the chemistry of the ore- forming fluid for the OH vein, Creede, Colorado [abs.].

Bethke, 1984, Controls on base and precious metal mineralization in deeper epithermal environments [abs.].

Bethke, 1984, Controls on base and precious metal mineralization in deeper epithermal environments.

Bethke and others, 1962, Equilibrium in ore deposits, II - natural assemblages [abs.].

Chaffee, 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale, and Saguache Counties, Colorado [abs.].

Chaffee, 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale and Saguache Counties, Colorado.

Eugster, 1985, Oil shales, evaporites and ore deposits.

Hayba and others, 1985, Geologic, mineralogic and geochemical characteristics of volcanic-hosted epithermal precious-metal deposits.

Hemingway, 1986, Mineralogy and geochemistry of the southern Amethyst vein system, Creede mining district, Colorado.

Landis and Rye, 1987, Reconnaissance gas chemistry of the Creede, Colorado, hydrothermal system [abs.].

Morgan and Wandless, 1980, Rare earth element distribution in some hydrothermal minerals: evidence for crystallographic control.

Plumlee and Hayba, 1985, Solubility-temperature-salinity diagrams as a means for interpreting fluid-inclusion/mineral-zoning data from the Creede district, Colorado [abs.].

Plumlee and Hayba, 1986, Preliminary chemical modeling of epithermal processes at Creede, Colorado: the role of fluid mixing as an ore deposition mechanism [abs.].

Plumlee and others, 1987, Diverse chemical processes in the Creede, Colorado, epithermal system: a progress report [abs.].

Schnorr and others, 1986, Gas halos in hydrothermal clays associated with ore shoots at Creede, Colorado [abs.].

Wetlaufer, 1977, Geochemistry and mineralogy of the carbonates of the Creede mining district, Colorado.

Wetlaufer, 1978, Chemical similarities of hydrothermal fluids from diverse sources, Creede Ag-Pb-Zn-Cu district, San Juan Mountains, Colorado [abs.].

MINERAL DEPOSITS, Hydrology

Barton, 1983, Unconventional mineral deposits: a challenge to geochemistry.

Barton and others, 1970, An attempt to determine the vertical component of flow rate of ore-forming solutions in the OH vein, Creede, Colorado, U.S.A. [abs.].

Barton and others, 1971, An attempt to determine the vertical component of flow rate of ore-forming solutions in the OH vein, Creede, Colorado.

Bazrafshan and Norman, 1987, Fluid inclusion study of the northern Amethyst vein system [abs.].

Bethke, 1984, Controls on base and precious metal mineralization in deeper epithermal environments.

Bethke and Rye, 1979, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part IV. Source of fluids from oxygen, hydrogen, and carbon isotope studies.

Hayba, 1984, Documentation of thermal and salinity gradients and interpretation of the hydrologic conditions in the OH vein, Creede, Colorado [abs.].

Hayba, 1986, District-wide fluid mixing during precious/base-metal epithermal mineralization at Creede, Colorado [abs.].

Hayba, 1987, Fluid-inclusion evidence for hydrologic and hydrothermal processes in the Creede mineralizing system, Colorado [abs.].

Hayba and others, 1985, Geologic, mineralogic and geochemical characteristics of volcanic-hosted epithermal precious-metal deposits.

Heald-Wetlaufer and Plumlee, 1984, Significance of mineral variations in time and space along the Bulldog Mountain vein system with respect to the district-wide hydrology, Creede district, Colorado [abs.].

Hemingway and others, 1986, Epithermal mineralization resulting from mixing of ore solutions, southern Amethyst vein system, Creede, Colorado [abs.].

Landis and Rye, 1987, Reconnaissance gas chemistry of the Creede, Colorado, hydrothermal system [abs.].

Plumlee and Hayba, 1986, Preliminary chemical modeling of epithermal processes at Creede, Colorado: the role of fluid mixing as an ore deposition mechanism [abs.].

Plumlee and Rye, 1986, Extreme sulfur isotope, As, Sb and Ag variations in late-stage botryoidal pyrite from Creede, Colorado: vestiges of a waning hydrothermal system [abs.].

Robinson, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Robinson and Norman, 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede, Colorado [abs.].

Robinson and Norman, 1984, Mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado.

Rye and others, 1987, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system [abs.].

Rye and others, 1988, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system.

Steven and Eaton, 1975, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting.

White, 1974, Diverse origins of hydrothermal ore fluids.

MINERAL DEPOSITS, Peripherial to Creede district

Emmons and Larsen, 1913, The hot springs and the mineral deposits of Wagon Wheel Gap, Colorado.

Larsen and Hunter, 1912, Sulfur deposits of Mineral County, Colorado [abs.].

Larsen and Hunter, 1913, Two sulfur deposits in Mineral County, Colorado.

Larsen and Wells, 1916, Some minerals from the fluorite-barite vein near Wagon Wheel Gap, Colorado.

Phalen, 1912, Sulfur, pyrite, and sulfuric acid; sulfur deposits of Mineral County, Colo.

Seaman, 1935, Fluorite deposits of Wagon Wheel Gap, Colorado.

Sharps, 1965, Sulfur deposits of Colorado.

Steven, 1964, Geologic setting of the Spar City district, San Juan Mountains, Colorado.

Steven, 1968, Ore deposits in the central San Juan Mountains, Colorado.

Steven and Bieniewski, 1977, Mineral resources of the La Garita Wilderness, San Juan Mountains, southwestern Colorado, with a section on geophysical interpretation by G. P. Eaton.

MINERAL DEPOSITS, Uranium exploration

Dawson and Weaver, 1979, Uranium hydrogeochemical and stream sediment reconnaissance of the Durango NTMS quadrangle, Colorado.

Larsen and others, 1958, Distribution of uranium in the volcanic rocks of the San Juan Mountains, southwestern Colorado.

Maxwell, 1977, Uranium hydrogeochemical and stream sediment reconnaissance in the San Juan Mountains, southwest Colorado.

Pierson, 1953, San Juan Mountains, Colorado; reconnaissance.

Pierson and others, 1958, Reconnaissance for radioactivity in the metal-mining districts of the San Juan Mountains, Colorado.

Shannon and others, 1980, Uranium hydrogeochemical and stream sediment reconnaissance of the Durango NTMS quadrangle, Colorado, including concentrations of forty-two additional elements.

MINERALOGY (see also PETROLOGY)

Barton and Bethke, 1987, Chalcopyrite disease in sphalerite: pathology and epidemiology.

Dixon and McKee, 1972, Internal structure of halloysite particles [abs.].

Dixon and McKee, 1974, Internal and external morphology of tubular and spheroidal halloysite particles.

Foshag, 1921, The crystallography and chemical composition of creedite.

Hemingway, 1986, Mineralogy and geochemistry of the southern Amethyst vein system, Creede mining district, Colorado.

Kosnar, 1979, What's new in Colorado minerals?.

Larsen and Wells, 1916, Some minerals from the fluorite-barite vein near Wagon Wheel Gap, Colorado.

Larsen and Wherry, 1917, Halloysite from Colorado.

Olsen and Lewis, 1979, Ktenasite from Creede, Colorado.

Smith, 1974, Minerals of Creede, Mineral County, Colorado.

Steven and Van Loenen, 1971, Clinoptilolite-bearing tuff beds in the Creede Formation, San Juan Mountains, Colorado.

Van Loenen, 1980, Inesite, a new U.S. occurrence near Creede, Mineral County, Colorado.

Wetlaufer, 1977, Geochemistry and mineralogy of the carbonates of the Creede mining district, Colorado.

MINING

Anonymous, 1902, Summary of output of minerals and metals from different counties of Colorado: Mineral County.

Anonymous, 1902, The Humphreys mill, Creede, Colorado.

Anonymous, 1906, Mills and milling practices at Creede, Colorado.

Anonymous, 1970, Homestake's Bulldog Mountain mine.

Anonymous, 1979, Silver exploration at Creede.

Del Rio, 1960, Mineral County.

Eimon, 1981, The Creede mining district history and overview.

Henderson, 1926, Mining in Colorado, a history of discovery, development and production.

Howell, 1970, Homestake's Bulldog Mountain mill, Creede, Colorado.

Jackson, 1974, Homestake's hard work pays off at Bulldog Mountain mine.

Lakes, 1894, Colorado's new gold camps.

Lakes, 1903, Creede mining camp; valuable mines operated through the Nelson and Humphreys tunnels - a description of the Humphreys mill.

Larsen, 1929, Recent mining developments in the Creede district, Colorado.

Lee, 1903, Gases in metalliferous mines.

Lunt, 1921, An interesting silver deposit.

Meeves and Darnell, 1968, Study of the silver potential, Creede district, Mineral County, Colorado.

Mosier and others, 1986, Grade and tonnage model of Creede epithermal veins.

Rickard, 1896, The development of Colorado's mining industry.

Sharps, 1963, Lead and zinc in Colorado.

Vanderwilt, 1947, Mineral County.

PALEONTOLOGY and PALEOENVIRONMENT

Axelrod, 1987, The late Oligocene Creede flora, Colorado.

Axelrod, 1987, Vegetation, climate and altitude of the Creede caldera [abs.].

Caplan, 1935, The Miocene lake of Creede, Colorado.

Cockrell, 1933, A fossil sawfly from the Miocene shales near Creede, Colorado.

Hills, 1924, Petrified wood carrying silver at Creede, Colo.

Ring, 1924, Silver-bearing petrified wood.

Stewart, 1940, Ecological comparisons of Tertiary and present-day vegetation in the Creede Valley, Colo. [abs.].

Stewart, 1940, Plant ecology and paleo-ecology of the Creede Valley, Colorado [abs.].

Thompson, 1971, Creede Shale fossils.

Whitney and others, 1986, Are mass extinctions caused by volcanic eruptions? Negative evidence from the Late Oligocene of the southern Rocky Mountains and Great Plains [abs.].

PETROLOGY, Igneous (see also GEOLOGY, District and Regional)

Askren, 1986, Petrology and geochemistry of the Huerto Formation, South Fork Quadrangle, Colorado.

Askren and others, 1987, Petrology and geochemistry of the Huerto Formation, San Juan volcanic field, south central Colorado [abs.].

Dorais, 1987, Geochemistry, petrology, origin, and petrogenetic significance of mafic enclaves in silicic plutonic and volcanic lithologies.

Dorais and others, 1987, Petrology and geochemistry of trachytic inclusions of the Carpenter Ridge Tuff [abs.].

Dorais and others, 1985, Mafic fiamme from the Carpenter Ridge Tuff, central San Juan volcanic field: evidence for alkaline magmatism [abs.].

Ellwood, 1982, Estimates of flow direction for calc-alkaline welded tuffs and paleomagnetic data reliability from anisotropy of magnetic susceptibility measurements: central San Juan Mountains, southwest Colorado.

Fleisher, 1986, Petrology and stratigraphy of the Fish Canyon Tuff within the Mount Hope Caldera, San Juan Mountains, Colorado.

Fleisher and others, 1987, Stratigraphy, petrology, and geochemistry of the Fish Canyon Tuff, Mount Hope caldera, San Juan Mountains, CO [abs.].

Grunder and Boden, 1987, Comment on '...magmatic conditions of the Fish Canyon Tuff, central San Juan volcanic field, Colorado' by Whitney & Stormer (1985).

Kline and others, 1985, Problems with Fe-Ti oxide geothermometry in mixed magma systems: Carpenter Ridge Tuff, central San Juan Mountains, Colorado [abs.].

Krause and others, 1986, Mineralogy, geochemistry and magmatic conditions in the Wason Park Tuff, central San Juan volcanic field, Colorado [abs.].

Krause and others, 1987, The Mammoth Mt. Tuff and other shallow zoned rhyolitic ash-flow tuffs, central San Juan volcanic field [abs.].

Larsen and Cross, 1956, Geology and petrology of the San Juan region, southwestern Colorado.

Larsen and others, 1936, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 1, Geologic setting; pt. 2, The silica minerals; pt. 3, Pyroxenes; pt. 4, Olivine.

Larsen and others, 1937, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 5, The amphiboles; pt. 6, Biotite.

Larsen and others, 1938, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 7, The plagioclase feldspars.

Larsen and others, 1938, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 8, Orthoclase; pt. 9, Minor accessories; pt. 10, Summary and conclusions.

Lipman and Steven, 1969, Petrologic evolution of the San Juan volcanic field, southwestern Colorado, U.S.A. [abs.].

Lipman and others, 1978, Petrologic evolution of the San Juan volcanic field, southwestern Colorado: Pb and Sr isotope evidence.

Matty and others, 1985, Magmatic conditions of the Snowshoe Mt. Tuff, San Juan volcanic field, Colorado [abs.].

Mitchell, 1986, Oxygen isotope distribution during diagenesis and devitrification of the ash-flow tuffs of the central San Juan district, Colorado.

O'Leary, 1981, Magmatic paragenesis of the Fish Canyon Ignimbrite, San Juan volcanic field, Colorado.

O'Leary and Whitney, 1981, Magmatic paragenesis of the Fish Canyon ash-flow tuff, central San Juan Mountains, Colorado [abs.].

Pinnell, 1969, Directional fabric of ash-flow tuffs studied by differential X- ray absorption [abs.].

Ratte, 1968, Identification of ash-flow boundaries within densely welded tuff, Creede area, Colorado [abs.].

Ratte and Steven, 1959, Distribution and characteristics of ash flows associated with the Creede caldera, San Juan Mountains, Colorado [abs.].

Ratte and Steven, 1967, Ash flows and related volcanic rocks associated with the Creede caldera, San Juan Mountains, Colorado.

Sawyer and others, 1987, Correlation of late crystal-rich tuffs from the central San Juan caldera cluster, Colorado [abs.].

Stormer, 1983, Determination of the depth of origin of large volume silicic magmas: two-feldspar + Fe-Ti oxide method [abs.].

Stormer and Whitney, 1984, The Fish Canyon Tuff: a homogeneous large volume silicic magma with evidence for efficient mixing of a mafic component [abs.].

Stormer and Whitney, 1985, Two feldspar and iron-titanium oxide equilibria in silicic magmas and the depth of origin of large volume ash-flow tuffs.

Stormer and Whitney, 1986, The nature of ignimbrite producing magmas of the central San Juan volcanic field, Colorado, USA [abs.].

Stormer and others, 1987, Reply to a comment on '...magmatic conditions of the Fish Canyon Tuff...'.

Tyson, 1986, Petrology, stratigraphy, and geochemistry of the northern lobes of the Fish Canyon Tuff, San Juan Mountains, Colorado.

Webber and others, 1987, Mammoth Mt. and Wason Park Tuffs: development of the magmatic system in the central San Juan volcanic field, Colorado [abs.].

Whitney, 1982, Activity of sulfurous gasses in pyrrhotite-bearing silicic magmas [abs.].

Whitney, 1984, Fugacities of sulfurous gases in pyrrhotite-bearing silicic magmas.

Whitney, 1985, Composition and activity of sulfurous species in quenched magmatic gases associated with pyrrhotite-bearing silicic systems [abs.].

Whitney and Stormer, 1982, Primary sulfide inclusions within the Fish Canyon Ash-flow Tuff and their implications for the paragenesis of calc-alkaline silicic magmas and related ore deposits [abs.].

Whitney and Stormer, 1983, Igneous sulfides in the Fish Canyon Tuff and the role of sulfur in calc-alkaline magmas.

Whitney and Stormer, 1984, Magmatic conditions and magma mixing in the Carpenter Ridge Tuff: a zoned ash-flow in the San Juan volcanic field, Colorado [abs.].

Whitney and Stormer, 1985, Mineralogy, petrology, and magmatic conditions of the Fish Canyon Tuff, central San Juan Mts., Colorado.

Whitney and Stormer, 1986, Model for the intrusion of batholiths associated with the eruption of large-volume ash-flow tuffs.

Whitney and others, 1987, The Carpenter Ridge Tuff: the development of chemical and thermal gradients through magma mixing in a periodically replenished magma chamber [abs.].

Whitney and others, 1987, The development of chemical and thermal gradients in ash-flow tuffs through magma mixing in a periodically replenished magma chamber [abs.].

Williams and others, 1987, Andesitic volcanics of Table Mountain, central San Juan Mountains, Colorado [abs.].

STRUCTURE

Baars and Stevenson, 1984, The San Luis uplift, Colorado and New Mexico - an enigma of the ancestral Rockies.

Brogan and Birkhahn, 1981, Faults and occurrence of geothermal anomalies.

Cannaday, 1950, The OH vein and its relation to the Amethyst fault.

Dreier, 1984, Regional tectonic control of epithermal veins in the western United States and Mexico.

Gephart, 1985, A clockwise change in regional tension at 26 m.y. based on fault patterns in S.W. Colorado [abs.].

Gephart, 1986, Studies of stress and deformation in the Earth's crust: pt. II, Deformation around the Creede caldera, San Juan volcanic field, southwest Colorado: Implications for caldera mechanics.

Gephart, 1987, Isosatic relaxation of topography as a cause of late normal faulting around the Creede caldera [abs.].

Gephart, 1987, Deformation around the Creede caldera: A consequence of isostatic adjustment following caldera formation.

Gephart and Parmentier, 1982, On the formation of intercaldera grabens: a new interpretation for the generation of the Creede graben [abs.].

Gephart and Parmentier, 1983, Mechanics of resurgent doming based on structures around the Creede caldera [abs.].

Gephart and Parmentier, 1985, Mechanical properties of silicic intrusions based on patterns of deformation around the Creede caldera [abs.].

Larsen, 1949, The relation between earth movement and volcanism in the San Juan Mountains of Colorado.

Price and others, 1987, Tectonic controls on orientation and size of epithermal veins.

Sawyer and Lipman, 1987, Structure of the Bachelor caldera, Creede, CO [abs.].

Steven and Ratte, 1965, Geology and structural control of ore deposition in the Creede district, San Juan Mountains, Colorado.

Wisser, 1960, Mining districts associated with anticlines; Creede, Colorado.

Zyvoloski, 1987, The effect of structural resurgence on the thermal evolution of the Creede caldera [abs.].

BIBLIOGRAPHY

American Geological Institute, 1976, Bibliography and index of Colorado geology 1875 to 1975: Colorado Geological Survey Bull. 37, 488 p.

American Geological Institute, 1983, Bibliography and index of Colorado geology 1981-1982: Colorado Geological Survey Information Series 19, 111 p.

American Geological Institute, 1983, Bibliography and index of Colorado geology 1975-1980: Colorado Geological Survey Bull. 45, 294 p.

Anonymous, 1902, Summary of output of minerals and metals from different counties of Colorado: Mineral County: Mining Reporter, v. 45, p. 32.

Anonymous, 1902, The Humphreys mill, Creede, Colorado: Mining Reporter, v. 46, p. 472.

Anonymous, 1906, Mills and milling practices at Creede, Colorado: Mining Reporter, v. 54, p. 341-343.

Anonymous, 1970, Homestake's Bulldog Mountain mine: Skillings' Mining Review, v. 59, no. 12, p. 1, 8-9.

Anonymous, 1979, Silver exploration at Creede: Mining Eng., v. 31, no. 5, p. 478.

Anonymous, 1980, Anatomy of an ore deposit: case history from Creede, Colorado: U.S. Geol. Survey Yearbook 1980, p. 48-49.

Armstrong, R. L., 1969, K-Ar dating of laccolithic centers of the Colorado Plateau and vicinity: Geol. Soc. America Bull., v. 80, p. 2081-2086.

Askren, D. R., 1986, Petrology and geochemistry of the Huerto Formation, South Fork Quadrangle, Colorado: Unpub. M.Sc. thesis, University of Georgia (Athens), 154 p.

Askren, D. R., Roden, M. F., and Whitney, J. A., 1987, Petrology and geochemistry of the Huerto Formation, San Juan volcanic field, south central Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 258.

Atwood, W. W., and Mather, K. F., 1932, Physiography and Quaternary geology of the San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 166, 176 p.

Axelrod, D. I., 1987, The late Oligocene Creede flora, Colorado: Univ. of California Publications in Geological Sciences, v. 130, 235 p.

Axelrod, D. I., 1987, Vegetation, climate and altitude of the Creede caldera [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 258.

Baars, D. L., and Stevenson, G. M., 1984, The San Luis uplift, Colorado and New Mexico - an enigma of the ancestral Rockies: The Mountain Geologist, v. 21, no. 2, p. 57-67.

Barton, P. B., Jr., 1981, Physical-chemical conditions of ore deposition, in Rickard, D. T., and Wickman, F. E. (eds.), Chemistry and geochemistry of solutions at high temperatures and pressures: Physics and Chemistry of the Earth, v. 13 and 14, 509-528.

Barton, P. B., Jr., 1983, Unconventional mineral deposits: a challenge to geochemistry, in Shanks, W. C., III (ed.), Cameron volume on unconventional mineral deposits: AIME, p. 3-14.

Barton, P. B., Jr., 1987, The role of archetypes in understanding ore genesis: lessons from Creede, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 259.

Barton, P. B., Jr., and Bethke, P. M., 1987, Chalcopyrite disease in sphalerite: pathology and epidemiology: Am. Mineralogist, v. 72, p. 451-467.

Barton, P. B., Jr., Bethke, P. M., and Roedder, E., 1977, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part III. Progress toward interpretation of the chemistry of the ore-forming fluid for the OH vein: Econ. Geology, v. 72, p. 1-24.

Barton, P. B., Jr., Bethke, P. M., and Toulmin, M. S., 1970, An attempt to determine the vertical component of flow rate of ore-forming solutions in the OH vein, Creede, Colorado, U.S.A. [abs.]: IMA-IAGOD Meetings Collected Abs., p. 142.

Barton, P. B., Jr., Bethke, P. M., and Toulmin, M. S., 1971, An attempt to determine the vertical component of flow rate of ore-forming solutions in the OH vein, Creede, Colorado: Soc. Mining Geologists Japan, Spec. Issue 2, Proc. IMA-IAGOD Meetings '70, Joint Symp. Vol., p. 132-136.

Barton, P. B., Jr., Bethke, P. M., and Toulmin, P., III, 1962, Equilibrium in ore deposits, I - concepts [abs.]: Am. Mineralogist, v. 47, p. 185.

Barton, P. B., Jr., Bethke, P. M., and Toulmin, P., III, 1963, Equilibrium in ore deposits: Mineralogical Soc. America, Spec. Paper 1, p. 171-185.

Barton, P. B., Jr., Bethke, P. M., Heald-Wetlaufer, P., Foley, N. K., Hayba, D. O., and Goss, J. A., 1982, Silver/base metal epithermal deposits, in Erickson, R. L. (ed.), Characteristics of mineral deposit occurrences: U.S. Geol. Survey Open-File Report 82-795, p. 127-130.

Barton, P. B., Jr., Bethke, P. M., Roedder, E., and Rye, R. O., 1971, Tentative interpretation of the chemistry of the ore-forming fluid for the OH vein, Creede, Colorado [abs.]: Econ. Geology, v. 66, p. 1265.

Batory, B. L., 1981, Analysis of the lacustrine sediments of the Creede Formation, Mineral County, Colorado: Unpub. M.Sc. thesis, New Mexico Institute of Mining and Technology (Socorro), 120 p.

Bazrafshan, K., and Norman, D. I., 1987, Fluid inclusion study of the northern Amethyst vein system [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 259.

Beck, M. E., Jr., Sheriff, S. D., Diehl, J. F., Hailwood, E. A., and Lipman, P. W., 1977, Further paleomagnetic results for the San Juan volcanic field of southern Colorado: Earth and Planetary Sci. Letters, v. 37, p. 124-130.

Berger, B. R., and Eimon, P. I., 1983, Conceptual models of epithermal precious metal deposits, in Shanks, W. C., III (ed.), Cameron volume on unconventional mineral deposits: AIME, p. 191-205.

Bethke, P. M., 1980, The Creede mining district, Colorado: studies of the evolution of a hydrothermal system [abs.]: EOS (Am. Geophys. Union Trans.), v. 61, no. 46, p. 1145-1146.

Bethke, P. M., 1983, The Creede mining district, Colorado as a target for drilling into the roots of a hydrothermal system [abs.]: Geol. Soc. America Abs. with Programs, v. 15, no. 5, p. 435.

Bethke, P. M., 1984, Proposed scientific drilling program, Creede mining district, Colorado [abs.]: Internat. Symposium on Observation of the Continental Crust through Drilling, May 20-25, 1984, Lamont-Doherty Geological Observatory, Palisades, New York, p. 16-17.

Bethke, P. M., 1984, Controls on base and precious metal mineralization in deeper epithermal environments: U.S. Geol. Survey Open-File Report 84-890, 40 p.

Bethke, P. M., 1984, Controls on base and precious metal mineralization in deeper epithermal environments [abs.]: 113th AIME Annual Meeting, Los Angeles, Feb. 26-Mar. 1, 1984, Program and Abs., p. 42.

Bethke, P. M., 1984, Creede mining district, Colorado: a target for drilling in a mineralized, fossil hydrothermal system [abs.]: EOS (Am. Geophys. Union Trans.), v. 65, no. 45, p. 1096.

Bethke, P. M., 1985, Scientific drilling in hydrothermal systems: proposed program, Creede mining district, Colorado [abs.]: 114th AIME Annual Meeting, New York, Feb. 1985, Symposium on Continental Scientific Drilling, Program and Abs., p. 86.

Bethke, P. M., 1985, Geothermal systems and epithermal ores: lessons from Creede, Colorado [abs.]: Geol. Assoc. Canada Cordilleran Section Symposium, Silver '85, March 27-28, 1985, p. 4-5.

Bethke, P. M., 1987, The Creede, Colorado ore-forming system: a summary model [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 260-261.

Bethke, P. M., 1988, The Creede, Colorado ore-forming system: a summary model: U.S. Geol. Survey Open-File Report 88-403, 29 p.

Bethke, P. M., and Barton, P. B., Jr., 1971, History of filling of the OH vein, Creede, Colorado

[abs.]: Econ. Geology, v. 66, p. 1265.

Bethke, P. M., and Eidel, J. J., 1985, Research drilling opportunities in ore deposits and active hydrothermal systems [abs.]: EOS (Am. Geophys. Union Trans.), v. 66, no. 18, p. 371.

Bethke, P. M., and Lipman, P. W., 1987, Research drilling in caldera-hosted epithermal mineralization, Creede, CO [abs.]: Internat. Union Geodesy and Geophysics (IUGG), 19th General Assembly, Vancouver, Canada, Aug. 9-22, 1987.

Bethke, P. M., and Lipman, P. W., 1987, Deep environment of volcanogenic epithermal mineralization: proposed research drilling at Creede, Colorado: EOS (Am. Geophys. Union Trans.), v. 68, no. 13, p. 177, 187-189.

Bethke, P. M., and Rye, R. O., 1979, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: Part IV. Source of fluids from oxygen, hydrogen, and carbon isotope studies: Econ. Geology, v. 74, p. 1832-1851. [Also as U.S. Geol. Survey Open-File Report 79-1243.]

Bethke, P. M., and Steven, T. A., 1979, Base- and precious-metal deposits in the San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 11, no. 7, p. 388.

Bethke, P. M., Barton, P. B., Jr., and Bodine, M. W., Jr., 1960, Time-space relationships of the ores at Creede, Colorado [abs.]: Geol. Soc. America Bull., v. 71, p. 1825-1826.

Bethke, P. M., Barton, P. B., Jr., and Rye, R. O., 1973, Hydrogen, oxygen, and sulfur isotopic compositions of ore fluids in the Creede district, Mineral County, Colorado [abs.]: Econ. Geology, v. 68, p. 1205.

Bethke, P. M., Barton, P. B., Jr., and Toulmin, P., III, 1962, Equilibrium in ore deposits, II - natural assemblages [abs.]: Am. Mineralogist, v. 47, p. 185-186.

Bethke, P. M., Barton, P. B., Jr., Lanphere, M. A., and Steven, T. A., 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: II. Age of mineralization: Econ. Geology, v. 71, p. 1006-1011.

Bethke, P. M., Lipman, P. W., Barton, P. B., Jr., Daniels, J. J., Foley, N. K., and Hayba, D. O., 1987, Research drilling in the mineralized hydrothermal system at Creede, Colorado: A proposal submitted to DOSECC, Inc. (Deep Observation and Sampling of the Earth's Continental Crust), 130 p.

Bethke, P. M., Rye, R. O., and Barton, P. B., Jr., 1985, Pre-ore potassium metasomatism, Creede mining district, Colorado [abs.]: 114th AIME Annual Meeting, New York, Feb. 1985, Paul F. Kerr Memorial Symposium, Program and Abs., p. 117.

Bodine, M. W., Jr., Hay, R. L., Madsen, B. M., and Altaner, S. P., 1987, Lacustrine volcaniclastic sediments in the Creede Formation, San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 261-262.

Bodnar, R. J., and Bethke, P. M., 1984, Systematics of stretching of fluid inclusions I: fluorite and sphalerite at 1 atmosphere confining pressure: Econ. Geology, v. 79, p. 141-161.

Bodnar, R. J., Reynolds, T. J., and Kuehn, C. A., 1985, Fluid inclusion systematics in epithermal systems, in Berger, B. R., and Bethke, P. M. (eds.), Geology and geochemistry of epithermal systems: Reviews in Econ. Geology, v. 2, p. 73-97.

Brogan, G. E., and Birkhahn, P. C., 1981, Faults and occurrence of geothermal anomalies: Final report for Contract No. 14-8-08-0001-16310, U.S. Geological Survey Geothermal Research Program, 102 p.

Buchanan, L. J., 1981, Precious metal deposits associated with volcanic environments in the southwest, in Dickinson, W. R., and Payne, W. D. (eds.), Relations of tectonics to ore deposits in the southern Cordillera: Arizona Geol. Soc. Digest, v. 14, p. 237-262.

Cannaday, F. X., 1950, The OH vein and its relation to the Amethyst fault: Unpub. M.Sc. thesis, Colorado School of Mines (Golden), 57 p.

Caplan, A., 1935, The Miocene lake of Creede, Colorado: Rocks and Minerals, v. 10, p. 152-154.

Chaffee, M. A., 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale, and Saguache Counties, Colorado [abs.]: Dissert. Abs., sec. B, Science and Engineering., v. 28, no. 4, p. 1574-B.

Chaffee, M. A., 1967, A study of the geology and hydrothermal alteration north of the Creede mining district, Mineral, Hinsdale and Saguache Counties, Colorado: Unpub. Ph.D. thesis, University of Arizona (Tucson), 194 p.

Christiansen, R. L., and Lipman, P. W., 1972, Cenozoic volcanism and plate- tectonic evolution of the western United States. II. Late Cenozoic: Royal Soc. London Philos. Trans., v. 271, no. 1213, p. 249-284.

Cockrell, T. D. A., 1933, A fossil sawfly from the Miocene shales near Creede, Colorado: Brooklyn Entomological Soc. Bull., v. 28, no. 5, p. 186-187.

Colton, R. B., Holligan, J. A., and Anderson, L. W., 1975, Preliminary map of landslide deposits, Durango 1° by 2° quadrangle, Colorado: U.S. Geol. Survey Misc. Field Studies Map MF-703, scale 1:250,000.

Continental Scientific Drilling Committee, 1984, Mineral resources: research objectives for continental scientific drilling: Report of the Panel on Mineral Resources of the Continental Scientific Drilling Committee, National Research Council, National Academy Press, Washington, D.C., 56 p.

Cross, W., and Larsen, E. S., 1935, A brief review of the geology of the San Juan region of southwestern Colorado: U.S. Geol. Survey Bull. 843, 138 p.

Czamanske, G. K., Roedder, E., and Burns, F. C., 1963, Neutron activation analysis of fluid inclusions for copper, manganese, and zinc: Science, v. 140, p. 401-403.

Dawson, H. E., and Weaver, T. A., 1979, Uranium hydrogeochemical and stream sediment reconnaissance of the Durango NTMS quadrangle, Colorado: Los Alamos Sci. Lab. Rep. LA-7348-MS (GJBX-10-79, Dept. of Energy, Grand Junction office), 107 p.

Decker, E. R., 1987, Temperatures and gradients in four mining company boreholes near Creede, Colorado: A report to DOSECC, Inc. and the Mesa Limited Partnership, 14 p.

Del Rio, S. M., 1960, Mineral County: Mineral Resources of Colorado, p. 205- 208.

Diehl, J. F., Beck, M. E., and Lipman, P. W., 1974, Paleomagnetism and magnetic-polarity zonation in some Oligocene volcanic rocks of the San Juan Mountains, south-western Colorado: Royal Astron. Soc. Geophys. Jour., v. 37, p. 323-332.

Dixon, J. B., and McKee, T. R., 1972, Internal structure of halloysite particles [abs.]: Clay Mineral Conf., Program Abstr., no. 21, p. 30.

Dixon, J. B., and McKee, T. R., 1974, Internal and external morphology of tubular and spheroidal halloysite particles: Clays and Clay Minerals, v. 22, no. 1, p. 127-137.

Doe, B. R., 1968, Lead and strontium isotopic studies of Cenozoic volcanic rocks in the Rocky Mountain region - a summary, in Epis, R. C. (ed.), Cenozoic volcanism in the southern Rocky Mountains: Colorado School Mines Quart., v. 63, no. 3, p. 149-174.

Doe, B. R., Steven, T. A., Delevaux, M. H., Stacey, J. S., Lipman, P. W., and Fisher, F. S., 1979, Genesis of ore deposits in the San Juan volcanic field, southwestern Colorado - lead isotope evidence: Econ. Geology, v. 74, p. 1-26.

Dorais, M. J., 1987, Geochemistry, petrology, origin, and petrogenetic significance of mafic enclaves in silicic plutonic and volcanic lithologies: Unpub. Ph.D. thesis, University of Georgia (Athens), 185 p.

Dorais, M. J., Whitney, J. A., and Stormer, J. C., Jr., 1987, Petrology and geochemistry of trachytic inclusions of the Carpenter Ridge Tuff [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 272.

Dorais, M. J., Whitney, J. A., Stormer, J. C., Jr., and Kline, S. W., 1985, Mafic fiamme from the Carpenter Ridge Tuff, central San Juan volcanic field: evidence for alkaline magmatism [abs.]: EOS (Am. Geophys. Union Trans.), v. 66, no. 46, p. 1152.

Dreier, J., 1984, Regional tectonic control of epithermal veins in the western United States and Mexico, in Wilkins, J., Jr. (ed.), Gold and Silver Deposits of the Basin and Range Province Western U.S.A.: Arizona Geological Society Digest, v. 15, p. 28-50.

Eaton, G. P., Steven, T. A., and Ratte, J. C., 1972, Comparative geophysical expression of ash

flow-related calderas, southwestern United States [abs.]: Geol. Soc. America Abs. with Programs, v. 4, no. 7, p. 496.

Eidel, J. J., and Meyer, C., 1985, Scientific drilling to study the roots and margins of hydrothermal mineral systems, in Raleigh, C. B. (ed.), Observation of the continental crust through drilling, I: Springer-Verlag, Berlin, p. 123-129.

Eimon, P., 1981, The Creede mining district history and overview: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, p. 2-10.

Ellwood, B. B., 1982, Estimates of flow direction for calc-alkaline welded tuffs and paleomagnetic data reliability from anisotropy of magnetic susceptibility measurements: central San Juan Mountains, southwest Colorado: Earth and Planetary Sci. Letters, v. 59, no. 2, p. 303-314.

Emmons, W. H., 1913, The enrichment of sulphide ores: U.S. Geol. Survey Bull. 529, 260 p.

Emmons, W. H., and Larsen, E. S., 1912, Ore deposits of the Amethyst vein, Creede, Colorado: Mining Science, v. 66, p. 170-171.

Emmons, W. H., and Larsen, E. S., 1913, A preliminary report on the geology and ore deposits of Creede, Colorado: U.S. Geol. Survey Bull. 530, p. 42-65.

Emmons, W. H., and Larsen, E. S., 1913, The hot springs and the mineral deposits of Wagon Wheel Gap, Colorado: Econ. Geology, v. 8, p. 235-246.

Emmons, W. H., and Larsen, E. S., 1923, Geology and ore deposits of the Creede district, Colorado: U.S. Geol. Survey Bull. 718, 198 p.

Eugster, H. P., 1985, Oil shales, evaporites and ore deposits: Geochim. et Cosmochim. Acta, v. 49, p. 619-635.

Fleisher, C. J., 1986, Petrology and stratigraphy of the Fish Canyon Tuff within the Mount Hope Caldera, San Juan Mountains, Colorado: Unpub. M.Sc. thesis, University of Georgia (Athens), 75 p.

Fleisher, C. J., Whitney, J. A., and Stormer, J. C., Jr., 1987, Stratigraphy, petrology, and geochemistry of the Fish Canyon Tuff, Mount Hope caldera, San Juan Mountains, CO [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 275.

Foley, N. K., Barton, P. B., Jr., Bethke, P. M., and Doe, B. R., 1987, The isotopic composition of ore lead of the Creede mining district and vicinity, San Juan Mountains, Colo. [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 275.

Foley, N. K., Barton, P. B., Jr., Bethke, P. M., and Doe, B. R., 1988, The isotopic composition of ore lead of the Creede mining district and vicinity, San Juan Mountains, Colo.: text of a talk: U.S. Geol. Survey Open-File Report 88-510, 24 p.

Foley, N. K., Bethke, P. M., and Rye, R. O., 1982, A re-interpretation of δD_{H_2O} values of inclusion fluids in quartz from shallow ore bodies [abs.]: Geol. Soc. America Abs. with Programs, v. 14, no. 7, p. 489-490.

Foley, N. K., Bethke, P. M., and Rye, R. O., 1987, Pseudosecondary fluid inclusions in shallow ore-forming environments: clues to interpreting a dynamic pressure-temperature regime [abs.]: Am. Current Research on Fluid Inclusions Programs and Abs., Jan. 5-7, 1987, Socorro, New Mexico.

Foshag, W. F., 1921, The crystallography and chemical composition of creedite: Proc. U.S. National Museum, v. 59, no. 2376, p. 419-424.

Gephart, J. W., 1985, A clockwise change in regional tension at 26 m.y. based on fault patterns in S.W. Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 17, no. 7, p. 590.

Gephart, J. W., 1986, Studies of stress and deformation in the Earth's crust: pt. II, Deformation around the Creede caldera, San Juan volcanic field, southwest Colorado: Implications for caldera mechanics: Unpub. Ph.D. thesis, Brown University, 101 p.

Gephart, J. W., 1987, Isosatic relaxation of topography as a cause of late normal faulting around the Creede caldera [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 277.

Gephart, J. W., 1987, Deformation around the Creede caldera: A consequence of isostatic adjustment following caldera formation: Jour. Geophys. Research, v. 92, p. 10601-10616.

Gephart, J. W., and Parmentier, E. M., 1982, On the formation of intercaldera grabens: a new interpretation for the generation of the Creede graben [abs.]: Geol. Soc. America Abs. with Programs, v. 14, no. 7, p. 494.

Gephart, J. W., and Parmentier, E. M., 1983, Mechanics of resurgent doming based on structures around the Creede caldera [abs.]: EOS (Am. Geophys. Union Trans.), v. 64, no. 45, p. 876-877.

Gephart, J. W., and Parmentier, E. M., 1985, Mechanical properties of silicic intrusions based on patterns of deformation around the Creede caldera [abs.]: EOS (Am. Geophys. Union Trans.), v. 66, no. 18, p. 396.

Giudice, P. M., 1980, Mineralization at the convergence of the Amethyst and OH fault systems, Creede district, Mineral County, Colorado: Unpub. M.Sc. thesis, University of Arizona (Tucson), 95 p.

Giudice, P. M., 1981, Ore geology of the central Amethyst vein area, Creede, Colorado: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, p. 29-42.

Gries, R. F., 1985, San Juan Sag: Cretaceous rocks in a volcanic-covered basin, south central Colorado: The Mountain Geologist, v. 22, p. 167-179.

Grunder, A. L., and Boden, D. R., 1987, Comment on '...magmatic conditions of the Fish Canyon Tuff, central San Juan volcanic field, Colorado' by Whitney & Stormer (1985): Jour. Petrol., v. 28, p. 737-746.

Hayba, D. O., 1983, A compilation of fluid inclusion and stable isotope data on selected precious- and base-metal epithermal deposits: U.S. Geol. Survey Open-File Report 83-450, 24 p.

Hayba, D. O., 1984, Documentation of thermal and salinity gradients and interpretation of the hydrologic conditions in the OH vein, Creede, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 16, no. 6, p. 534.

Hayba, D. O., 1985, CreedeFI: A Micrograsp database file of fluid inclusion data from the Creede mining district, Colorado: U.S. Geol. Survey Open-File Report 85-140, 60 p.

Hayba, D. O., 1986, District-wide fluid mixing during precious/base-metal epithermal mineralization at Creede, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 18, no. 6, p. 632.

Hayba, D. O., 1987, Fluid-inclusion evidence for hydrologic and hydrothermal processes in the Creede mineralizing system, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 282.

Hayba, D. O., and Bethke, P. M., 1987, Techniques for analyzing and interpreting fluid-inclusion data sets: examples from Creede, Colorado [abs.]: Am. Current Research on Fluid Inclusions Programs and Abs., Jan. 5-7, 1987, Socorro, New Mexico.

Hayba, D. O., Bethke, P. M., Heald, P., and Foley, N. K., 1985, Geologic, mineralogic and geochemical characteristics of volcanic-hosted epithermal precious-metal deposits, in Berger, B. R., and Bethke, P. M. (eds.), Geology and geochemistry of epithermal systems: Reviews in Econ. Geology, v. 2, p. 129-167.

Hayden, F. V., 1877, Geological and geographical atlas of Colorado and portions of adjacent territory: U.S. Geol. and Geographical Surveys.

Hayden, F. V., 1881, Geological and geographical atlas of Colorado and portions of adjacent territory: U.S. Geol. and Geographical Surveys.

Heald, P., Foley, N. K., and Hayba, D. O., 1987, Comparative anatomy of volcanic-hosted epithermal deposits: acid-sulfate and adularia-sericite types: Econ. Geology, v. 82, p. 1-26.

Heald-Wetlaufer, P. And Plumlee, G. S., 1984, Significance of mineral variations in time and space along the Bulldog Mountain vein system with respect to the district-wide hydrology, Creede district, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 16, no. 6, p. 535.

Heald-Wetlaufer, P., Hayba, D. O., Foley, N. K., and Goss, J. A., 1983, Comparative anatomy of epithermal precious- and base-metal districts hosted by volcanic rocks: a talk presented at the GAC/MAC/GGU joint annual meeting, May 11-13, 1983, Victoria, British Columbia: U.S.

Geol. Survey Open-File Report 83-710, 16 p.

Heiken, G., and Krier, D. J., 1986, Creede Formation moat rocks and postcollapse history of Creede caldera, CO [abs.]: Geol. Soc. America Abs. with Programs, v. 18, no. 6, p. 633.

Heiken, G., and Krier, D. J., 1987, Deposits of the Creede caldera, Colorado: Special Publication of Los Alamos National Laboratory, LA-10943-MS, 48 p.

Hemingway, M. P., 1986, Mineralogy and geochemistry of the southern Amethyst vein system, Creede mining district, Colorado: Unpub. M.Sc. thesis, New Mexico Institute of Mining and Technology (Socorro), 91 p.

Hemingway, M. P., Norman, D. I., and Robinson, R. W., 1986, Epithermal mineralization resulting from mixing of ore solutions, southern Amethyst vein system, Creede, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 18, no. 6, p. 634.

Henderson, C. W., 1926, Mining in Colorado, a history of discovery, development and production: U.S. Geol. Survey Prof. Paper 138, 263 p.

Henley, R. W., and Huffman, C. F., 1987, Gold: sources to resources [abs.]: Pacific Rim Congress 1987, PANCRIM Conf. in Goldcoast, p. 159-168.

Hills, V. G., 1924, Petrified wood carrying silver at Creede, Colo.: Eng. and Mining Jour. Press, v. 117, p. 647.

Horton, D. G., 1982, Clay minerals associated with the Amethyst vein system, Creede mining district, southwest Colorado [abs.]: Circum-Pacific Clay Minerals Society 19th Annual Meeting, Hilo, Hawaii, Aug. 8-14, 1982, p. 55.

Horton, D. G., 1983, Argillic alteration associated with the Amethyst vein system, Creede mining district, Colorado: Unpub. Ph.D. thesis, University of Illinois (Urbana-Champaign), 337 p.

Horton, D. G., 1985, Mixed-layer illite/smectite as a paleotemperature indicator in the Amethyst vein system, Creede district, Colorado, U.S.A.: Contr. Mineralogy and Petrology, v. 91, p. 171-179.

Howell, F. M., 1970, Homestake's Bulldog Mountain mill, Creede, Colorado: Mining Year Book, 1970, Colorado Mining Assoc., p. 65-67.

Hull, D. A., 1970, Geology of the Puzzle vein, Creede mining district, Colorado: Unpub. Ph.D. thesis, University of Nevada (Reno), 151 p.

Hull, D. A., 1970, Geology of the Puzzle vein, Creede mining district, Colorado [abs.]: Dissert. Abs. Internat., sec. B, Science and Engineering, v. 31, no. 8, p. 4779-B.

Jackson, D., Jr., 1974, Homestake's hard work pays off at Bulldog Mountain mine: Eng. and Mining Jour., v. 175, no. 5, p. 65-70.

Kirby, E. B., 1892, The ore deposits of Creede and their possibilities: Eng. and Mining Jour., v. 53, p. 325-326.

Kline, S. W., Whitney, J. A., Dorais, M. J., Stormer, J. C., Jr., and Matty, D. J., 1985, Problems with Fe-Ti oxide geothermometry in mixed magma systems: Carpenter Ridge Tuff, central San Juan Mountains, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 66, no. 46, p. 1152.

Kosnar, R. A., 1979, What's new in Colorado minerals?: Mineralogical Record, v. 10, no. 6, p. 329-332.

Krause, K. W., Stormer, J. C., Jr., and Whitney, J. A., 1986, Mineralogy, geochemistry and magmatic conditions in the Wason Park Tuff, central San Juan volcanic field, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 67, no. 44, p. 1269.

Krause, K. W., Stormer, J. C., Jr., and Whitney, J. A., 1987, The Mammoth Mt. Tuff and other shallow zoned rhyolitic ash-flow tuffs, central San Juan volcanic field [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 287.

Lakes, A., 1894, Colorado's new gold camps: Eng. Mag., no. 7, p. 623-638.

Lakes, A., 1903, Creede mining camp; valuable mines operated through the Nelson and Humphreys tunnels - a description of the Humphreys mill: Mines and Minerals, v. 23, p. 433-435.

Landis, G. P., and Rye, R. O., 1987, Reconnaissance gas chemistry of the Creede, Colorado, hydrothermal system [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 288.

Lanphere, M. A., 1987, High-resolution $^{40}Ar/^{39}Ar$ geochronology, central San Juan caldera complex, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 288.

Larsen, E. S., 1922, Supplementary report on the geology of the areas covered by the Wagon Wheel Gap experiment stations, Rio Grande National Forest, Colorado: Monthly Weather Review, Supplement no. 17, p. 3-4.

Larsen, E. S., 1929, Recent mining developments in the Creede district, Colorado: U.S. Geol. Survey Bull. 811-B, p. 89-112.

Larsen, E. S., and Cross, W., 1956, Geology and petrology of the San Juan region, southwestern Colorado: U.S. Geol. Survey Prof. Paper 258, 303 p.

Larsen, E. S., and Hunter, J. F., 1912, Sulfur deposits of Mineral County, Colorado [abs.]: Mining Science, v. 65, p. 528-529.

Larsen, E. S., and Hunter, J. F., 1913, Two sulfur deposits in Mineral County, Colorado: U.S. Geol. Survey Bull. 530, p. 363-369.

Larsen, E. S., and Wells, R. C., 1916, Some minerals from the fluorite-barite vein near Wagon

Wheel Gap, Colorado: Natl. Acad. Sci. Proc., v. 2, p. 360- 365.

Larsen, E. S., and Wherry, E. T., 1917, Halloysite from Colorado: Washington Acad. Sci. Jour., v. 7, p. 178-180.

Larsen, E. S., Irving, J., Goyner, F. A., and Larsen, E. S., III, 1936, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 1, Geologic setting; pt. 2, The silica minerals; pt. 3, Pyroxenes; pt. 4, Olivine: Am. Mineralogist, v. 21, p. 679- 701.

Larsen, E. S., Irving, J., Goyner, F. A., and Larsen, E. S., III, 1937, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 5, The amphiboles; pt. 6, Biotite: Am. Mineralogist, v. 22, p. 889-905.

Larsen, E. S., Irving, J., Goyner, F. A., and Larsen, E. S., III, 1938, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 7, The plagioclase feldspars: Am. Mineralogist, v. 23, p. 227-257.

Larsen, E. S., Irving, J., Goyner, F. A., and Larsen, E. S., III, 1938, Petrologic results of a study of the minerals from the Tertiary volcanic rocks of the San Juan region, Colorado; pt. 8, Orthoclase; pt. 9, Minor accessories; pt. 10, Summary and conclusions: Am. Mineralogist, v. 23, p. 417-429.

Larsen, E. S., Jr., 1949, The relation between earth movement and volcanism in the San Juan Mountains of Colorado: Am. Geophys. Union Trans., v. 30, no. 6, p. 862-866.

Larsen, E. S., Jr., Gottfried, D., and Molloy, M., 1958, Distribution of uranium in the volcanic rocks of the San Juan Mountains, southwestern Colorado, in Survey of raw material resources: U.N. Internat. Conf. on Peaceful Uses of Atomic Energy, 2d, Geneva, Procedings, v. 2, p. 509-514.

Larson, P. B., and Taylor, H. P., Jr., 1986, $^{18}O/^{16}O$ ratios in ash flow tuffs and lavas erupted from the central Nevada caldera complex and the central San Juan caldera complex, Colorado: Contr. Mineralogy and Petrology, v. 92, p. 146.

Lee, H. A., 1903, Gases in metalliferous mines: Colorado Science Soc. Proc., v. 7, p. 163-188.

Lindemann, J. W., Babcock, J. W., and King, J. R. (eds.), 1981, Creede mining district, San Juan volcanic province, Colorado: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, 63 p.

Lipman, P. W., 1970, Relations between Cenozoic andesitic and rhyolitic volcanism in the western interior of the United States [abs.]: Geol. Soc. London Proc., no. 1662, p. 36-39.

Lipman, P. W., 1979, Emplacement of high-level granitic batholiths: evidence from the San Juan volcanic field of Colorado and the Boulder Batholith of Montana [abs.]: Geol. Soc. America Abs. with Programs, v. 11, no. 7, p. 467.

America Abs. with Programs, v. 11, no. 7, p. 467.

Lipman, P. W., 1980, Cenozoic volcanism in the western United States: implications for continental tectonics, in Studies in geophysics: Continental Tectonics, National Academy of Sciences, Washington, p. 161-174.

Lipman, P. W., 1980, Oligocene ash-flow eruptions of the San Juan volcanic field, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 61, no. 6, p. 65- 66.

Lipman, P. W., 1981, Volcano-tectonic setting of Tertiary ore deposits, southern Rocky Mountains, in Dickinson, W. R., and Payne, W. D. (eds.), Relations of tectonics to ore deposits in the southern Cordillera: Arizona Geol. Soc. Digest, v. 14, p. 199-213.

Lipman, P. W., 1984, The roots of ash-flow calderas in western North America: windows into the tops of granitic batholiths: Jour. Geophys. Research, v. 89, p. 8801-8841.

Lipman, P. W., 1984, Ash-flow calderas in western North America, in Easton, R. M., and Easton, M. G. (eds.), Growth and evolution of volcanic edifices: Geological Association of Canada Short Course Notes, v. 4, p. 124-161.

Lipman, P. W., 1987, Oligocene central San Juan caldera cluster, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 315.

Lipman, P. W., and Mehnert, H. H., 1975, Late Cenozoic basaltic volcanism and development of the Rio Grande depression in the southern Rocky Mountains, in Curtis, B. F. (ed.), Cenozoic history of the southern Rocky Mountains: Geol. Soc. America Mem. 144, p. 119-154.

Lipman, P. W., and Sawyer, D. A., 1988, Preliminary geology of the San Luis Peak quadrangle and adjacent areas, San Juan Volcanic Field, southwestern Colorado: U.S. Geol. Survey Open-File Report 88-359, 33 p. and map.

Lipman, P. W., and Steven, T. A., 1969, Petrologic evolution of the San Juan volcanic field, southwestern Colorado, U.S.A. [abs.]: Internat. Assoc. Volcanology and Chemistry Earth's Interior (IAVCEI), Internat. meeting, Oxford, England, Volume of Abs., p. 254-255.

Lipman, P. W., and Steven, T. A., 1974, Andesites and related volcanic rocks of the San Juan volcanic field, southwestern Colorado, U.S.A. -- a record of the rise and differentiation of a large composite batholith in Oligocene time [abs.]: Internat. Assoc. Volcanology and Chemistry Earth's Interior (IAVCEI), Internat. meeting, Santiago, Chile, Volume of Abs.

Lipman, P. W., Doe, B. R., Hedge, C. E., and Steven, T. A., 1978, Petrologic evolution of the San Juan volcanic field, southwestern Colorado: Pb and Sr isotope evidence: Geol. Soc. America Bull., v. 89, p. 59-82.

Lipman, P. W., Mutschler, F. E., Bryant, B., and Steven, T. A., 1969, Similarity of Cenozoic igneous activity in the San Juan and Elk Mountains, Colorado, and its regional significance: U.S. Geol. Survey Prof. Paper 650-D, p. D33-D42.

Lipman, P. W., Prostka, H. J., and Christiansen, R. L., 1971, Evolving subduction zones in the western United States, as interpreted from igneous rocks: Science, v. 174, no. 4011, p. 821-825.

Lipman, P. W., Prostka, H. J., and Christiansen, R. L., 1972, Cenozoic volcanism and plate-tectonic evolution of the western United States. I. Early and middle Cenozoic: Royal Soc. London Philos. Trans., v. 271, no. 1213, p. 217-248.

Lipman, P. W., Steven, T. A., and Mehnert, H. H., 1970, Volcanic history of the San Juan Mountains, Colorado, as indicated by potassium-argon dating: Geol. Soc. America Bull., v. 81, p. 2329-2352.

Lunt, H. F., 1921, An interesting silver deposit: Mining and Scientific Press, v. 122, p. 669-670.

Lunt, H. F., 1924, Ore deposition at Creede, Colo.: Eng. and Mining Jour. Press, v. 117, no. 24, p. 973.

MacMechan, T. R., 1892, The ore deposits of Creede, Colo.: Eng. and Mining Jour., v. 53, p. 301-303.

Matty, D. J., Lipman, P. W., and Stormer, J. C., Jr., 1987, Common-Pb isotopic characteristics of central San Juan ash-flow tuffs [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 319-320.

Matty, D. J., Stormer, J. C., Jr., and Whitney, J. A., 1985, Magmatic conditions of the Snowshoe Mt. Tuff, San Juan volcanic field, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 66, no. 18, p. 396.

Maxwell, J. C., 1977, Uranium hydrogeochemical and stream sediment reconnaissance in the San Juan Mountains, southwest Colorado: Los Alamos Sci. Lab. Rep. LA-6651-MS (GJBX-22-77, Dept. of Energy, Grand Junction office), 104 p.

McCrink, M. T., 1982, Diagenesis in the Creede Formation, San Juan Mountains, Creede, Colorado: Unpub. M.Sc. thesis, New Mexico Institute of Mining and Technology (Socorro), 161 p.

Meeves, H. C., and Darnell, R. P., 1968, Study of the silver potential, Creede district, Mineral County, Colorado: U.S. Bur. Mines, Inf. Circ. 8370, 58 p.

Misantoni, D. M., 1985, Mineralization along the Midwest fault system, Creede district, Mineral County, Colorado: Unpub. M.Sc. thesis, Colorado State University (Ft. Collins), 123 p.

Mitchell, M. D., 1986, Oxygen isotope distribution during diagenesis and devitrification of the ash-flow tuffs of the central San Juan district, Colorado: Unpub. M.Sc. thesis, University of Georgia (Athens), 85 p.

Morgan, J. W., and Wandless, G. A., 1980, Rare earth element distribution in some hydrothermal minerals: evidence for crystallographic control: Geochim. et Cosmochim. Acta, v. 44, p. 973-980.

Mosier, D. L., Sato, T., and Singer, D. A., 1986, Grade and tonnage model of Creede epithermal veins, in Cox, D. P., and Singer, D. A. (eds.), Mineral deposit models: U.S. Geol. Survey Bull. 1693, p. 146-149.

Mosier, D. L., Sato, T., Page, N. J., Singer, D. A., and Berger, B. R., 1986, Descriptive model of Creede epithermal veins, in Cox, D. P., and Singer, D. A. (eds.), Mineral deposit models: U.S. Geol. Survey Bull. 1693, p. 145.

O'Leary, W. J., 1981, Magmatic paragenesis of the Fish Canyon Ignimbrite, San Juan volcanic field, Colorado: Unpub. M.Sc. thesis, University of Georgia (Athens), 103 p.

O'Leary, W. J., and Whitney, J. A., 1981, Magmatic paragenesis of the Fish Canyon ash-flow tuff, central San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 13, no. 7, p. 521.

Olsen, E., and Lewis, C. F., 1979, Ktenasite from Creede, Colorado: Am. Mineralogist, v. 64, p. 446-448.

Pearl, R. H., and Barrett, J. K., 1977, Use of hydrogeology, geochemistry, and geothermometer models in reconnaissance exploration for a hydrogeothermal resource [abs.]: Am. Assoc. Petroleum Geologists Bull., v. 61, p. 1386.

Perry, F. V., Baldridge, W. S., and DePaolo, D. J., 1987, The role of asthenosphere and lithosphere in the genesis of late Cenozoic basaltic rocks from the Rio Grande rift and adjacent regions of the southwestern United States [abs.]: EOS (Am. Geophys. Union Trans.), v. 68, no. 22, p. 567.

Phalen, W. C., 1912, Sulfur, pyrite, and sulfuric acid; sulfur deposits of Mineral County, Colo.: U.S. Geol. Survey Mineral Resources of the U.S., (1911), pt. 2, p. 944-945.

Pierson, C. T., 1953, San Juan Mountains, Colorado; reconnaissance: U.S. Geol. Survey Trace Elememt Inv. Rep. TE1-390, p. 110-111.

Pierson, C. T., Weeks, W. F., and Kleinhampl, F. J., 1958, Reconnaissance for radioactivity in the metal-mining districts of the San Juan Mountains, Colorado: U.S. Geol. Survey Bull. 1046-O, p. 385-413.

Pinnell, M., 1969, Directional fabric of ash-flow tuffs studied by differential X-ray absorption [abs.]: Geol. Soc. America Abs. with Programs, Rocky Mountain sec., pt. 5, p. 65.

Plouff, D., and Pakiser, L. C., 1972, Gravity study of the San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 800-B, p. B183-B190.

Plumlee, G. S., and Hayba, D. O., 1985, Solubility-temperature-salinity diagrams as a means for interpreting fluid-inclusion/mineral-zoning data from the Creede district, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 17, no. 7, p. 691.

Plumlee, G. S., and Hayba, D. O., 1986, Preliminary chemical modeling of epithermal processes at Creede, Colorado: the role of fluid mixing as an ore deposition mechanism [abs.]: Extended Abs. for Workshop on Geochemical Modeling, Sept. 14-17, 1986, Fallen Leaf Lake, California, 8 p.

Plumlee, G. S., and Rye, R. O., 1986, Extreme sulfur isotope, As, Sb and Ag variations in late-stage botryoidal pyrite from Creede, Colorado: vestiges of a waning hydrothermal system [abs.]: Geol. Soc. America Abs. with Programs, v. 18, no. 6, p. 719.

Plumlee, G. S., Barton, P. B., Jr., and Rye, R. O., 1987, Diverse chemical processes in the Creede, Colorado, epithermal system: a progress report [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 327.

Price, J. G., Conlon, S. T., and Henry, C. D., 1987, Tectonic controls on orientation and size of epithermal veins: Proc. North American Conference on Tectonic Control of Ore Deposits, Oct. 6-9, 1987, Rolla, Missouri, (in press).

Rama, S. N. I., Hart, S. R., and Roedder, E., 1965, Excess radiogenic argon in fluid inclusions: Jour. Geophys. Research, v. 70, p. 509-511.

Ratte, J. C., 1968, Identification of ash-flow boundaries within densely welded tuff, Creede area, Colorado [abs.]: Geol. Soc. America Spec. Paper 115, p. 439-440. [Also in Epis, R. C. (ed.), Cenozoic volcanism in the southern Rocky Mountains: Colorado School Mines Quart. v. 63, no. 3, p. 237.]

Ratte, J. C., and Steven, T. A., 1959, Distribution and characteristics of ash flows associated with the Creede caldera, San Juan Mountains, Colorado [abs.]: Geol. Soc. America Bull., v. 70, no. 12, p. 1785.

Ratte, J. C., and Steven, T. A., 1964, Magmatic differentiation in a volcanic sequence related to the Creede caldera, Colorado: U.S. Geol. Survey Prof. Paper 475-D, p. D49-D53.

Ratte, J. C., and Steven, T. A., 1967, Ash flows and related volcanic rocks associated with the Creede caldera, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 524-H, 58 p.

Raymond, W. H., Crock, J. G., and Bieniewski, C. L., 1983, Mineral resource potential and geology of the Wheeler Wilderness Study Area, Mineral County, Colorado: U.S. Geol. Survey Misc. Field Studies Map MF-1571, scale 1:50,000, and pamphlet, 12 p.

Reiter, M., Mansure, A. J., and Shearer, C., 1979, Geothermal characteristics of the Rio Grande rift within the southern Rocky Mountain complex, in Riecker, R. E. (ed.), Rio Grande Rift: Tectonics and Magnetism, p. 253-278.

Rice, J. A., 1984, Controls on silver mineralization in the Creede Formation, Creede, Colorado: Unpub. M.Sc. thesis, Colorado State University (Ft. Collins), 135 p.

Rickard, T. A., 1896, The development of Colorado's mining industry: Am. Inst. Min. Eng. Trans., v. 26, p. 834-848.

Riecher, R. E. (ed.), 1979, Rio Grande Rift: Tectonics and magmatism: Am. Geophys. Union, Washington, D.C., 438 p.

Ring, A. E., 1924, Silver-bearing petrified wood: Eng. and Mining Jour. Press, v. 117, no. 22, p. 891-892.

Robinson, R. W., 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado: Unpub. M.Sc. thesis, New Mexico Institute of Mining and Technology (Socorro), 85 p.

Robinson, R. W., 1981, Mineralization along the southern Amethyst vein: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, p. 43-50.

Robinson, R. W., and Norman, D. I., 1981, Ore mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 13, no. 7, p. 539.

Robinson, R. W., and Norman, D. I., 1984, Mineralogy and fluid inclusion study of the southern Amethyst vein system, Creede mining district, Colorado: Econ. Geology, v. 79, p. 439-447.

Roeber, M. M., Jr., 1981, A summary of the geology and ore deposits of the Bulldog Mountain mine, Creede mining district, San Juan Mountains, Mineral County, Colorado: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, p. 19-28.

Roedder, E., 1960, Fluid inclusions as samples of the ore-forming fluids: Report of the Internat. Geological Congress, XXI Session, Norden, 1960, pt. XVI, Genetic Problems of Ores, p. 218-229.

Roedder, E., 1960, Primary fluid inclusions in sphalerite crystals from the OH vein, Creede, Colorado [abs.]: Geol. Soc. America Bull., v. 71, p. 1958. [Also in Econ. Geology, v. 55, p. 1337.]

Roedder, E., 1962, Studies of fluid inclusions I: Low temperature application of a dual-purpose freezing and heating stage: Econ. Geology, v. 57, p. 1045- 1061.

Roedder, E., 1963, Studies of fluid inclusions II: Freezing data and their interpretation: Econ. Geology, v. 58, p. 167-211.

Roedder, E., 1965, Evidence from fluid inclusions as to the nature of the ore- forming fluids: Symposium--Problems of Postmagmatic Ore Deposition, Prague, 1963, v. 2, Czechoslovakia Geol. Survey, p. 375-384.

Roedder, E., 1965, Non-Brownian bubble movement in fluid inclusions - a thermal gradient detector of extreme sensitivity and rapid response [abs.]: Geol. Soc. America Spec. Paper 87, Abs. for 1965, p. 140.

Roedder, E., 1965, Report on S. E. G. symposium on the chemistry of the ore- forming fluids: Econ. Geology, v. 60, p. 1380-1403.

Roedder, E., 1970, Application of an improved crushing microscope stage to studies of the gases in fluid inclusions: Schweizer. Mineralog. u. Petrog. Mitt., v. 50, pt. 1, p. 41-58.

Roedder, E., 1977, Fluid inclusions as tools in mineral exploration: Econ. Geology, v. 72, p. 503-525.

Roedder, E., 1977, Stable and metastable fluid inclusion data, Browns Canyon fluorspar district, Chaffee county, Colorado, and similar epithermal and hot- spring (?) deposits: Internat. Assoc. on the Genesis of Ore Deposits Proc. (IAGOD), 4th Symposium, Problems of Ore Deposition, Varna, Bulgaria, 1974, v. 2, p. 186-195.

Roedder, E., 1977, Changes in ore fluid with time, from fluid inclusion studies at Creede, Colorado: Internat. Assoc. on the Genesis of Ore Deposits Proc. (IAGOD), 4th Symposium, Problems of Ore Deposition, Varna, Bulgaria, 1974, v. 2, p. 179-185.

Roedder, E., 1984, Creede, Colorado, U.S.A., in Fluid inclusions: Mineralogical Soc. America, Reviews in Mineralogy, v. 12, p. 429-436.

Roedder, E., and Skinner, B. J., 1968, Experimental evidence that fluid inclusions do not leak: Econ. Geology, v. 63, p. 715-730.

Rosasco, G. J., and Roedder, E., 1979, Application of a new Raman microprobe spectrometer to nondestructive analysis of sulfate and other ions in individual phases in fluid inclusions in minerals: Geochim. et Cosmochim. Acta, v. 43, p. 1907-1915.

Rosenbaum, J. G., Reynolds, R. L., Lipman, P. W., and Sawyer, D. A., 1987, Paleomagnetism of Oligocene ash-flow tuffs, central San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 330.

Ryder, R. T., 1977, Hydrocarbon potential of Archuleta anticlinorium, Brazos uplift, and Chama basin in southwestern Colorado [abs.]: Am. Assoc. Petroleum Geologists Bull., v. 61, p. 1389-1390.

Ryder, R. T., 1977, Hydrocarbon potential of the Archuleta anticlinorium, Brazos uplift, Chama basin: Oil and Gas Jour., v. 75, no. 50, p. 163-170.

Rye, R. O., Plumlee, G. S., Bethke, P. M., and Barton, P. B., Jr., 1987, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 330-331.

Rye, R. O., Plumlee, G. S., Bethke, P. M., and Barton, P. B., Jr., 1988, Stable isotope geochemistry of the Creede, Colorado, hydrothermal system: U.S. Geol. Survey Open-File Report 88-356, 41 p.

Sangster, D. F., 1976, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting; Discussion: Econ. Geology, v. 71, p. 821.

Sawyer, D. A., and Lipman, P. W., 1987, Structure of the Bachelor caldera, Creede, CO [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 331.

Sawyer, D. A., Matty, D. J., Yager, D. B., and Stormer, J. C., Jr., 1987, Correlation of late crystal-rich tuffs from the central San Juan caldera cluster, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 331.

Schnorr, P. H., Gorman, J. A., and Kesler, S. E., 1986, Gas halos in hydrothermal clays associated with ore shoots at Creede, Colorado [abs.]: Jour. Geochemical Exploration, v. 25, nos. 1-2, p. 258.

Scott, G. R., 1975, Cenozoic surfaces and deposits in the southern Rocky Mountains, in Curtis, B. F. (ed.), Cenozoic history of the southern Rocky Mountains: Geol. Soc. America Mem. 144, p. 227-248. Seaman, D. M., 1935, Fluorite deposits of Wagon Wheel Gap, Colorado: Mineralogist, v. 3, no. 5, p. 7-8.

Shannon, S. S., Jr., Gallimore, D. L., Hansel, J. M., Hensley, W. K., and Pirtle, J., 1980, Uranium hydrogeochemical and stream sediment reconnaissance of the Durango NTMS quadrangle, Colorado, including concentrations of forty- two additional elements: Los Alamos Sci. Lab. Rep. LA-7346-MS (GJBX-139-80, Dept. of Energy, Grand Junction office), 147 p.

Sharps, T. I., 1963, Lead and zinc in Colorado: Colorado School of Mines Mineral Industries Bull., v. 6, no. 6, 15 p.

Sharps, T. I., 1965, Sulfur deposits of Colorado: Colorado School of Mines Mineral Industries Bull., v. 8, no. 6, p. 1-8.

Sheriff, S. D., 1976, Paleomagnetism of the San Juan volcanic field, southwestern Colorado: Unpub. M.Sc. thesis, Western Washington State College (Bellingham), 113 p.

Skokan, C. K., Keller, G. V., Andersen, H. T., and Leslie, W. W., 1987, Transient electromagnetic sounding studies in the San Juan volcanic field [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 334.

Smith, A. E., Jr., 1974, Minerals of Creede, Mineral County, Colorado: Rocks and Minerals, v. 49, p. 394-400.

Smith, J. W., 1981, Bachelor Mountain silver deposit, Mineral County, Colorado: Denver Region Exploration Geologists' Society, Field Trip Guidebook, Creede mining district, p. 11-

18.

Stanley, W. D., and Labson, V. F., 1987, Results from preliminary geoelectrical surveys in the Creede mining district [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 335-336.

Stehli, F. G., and Andrews, R. S., 1987, The United States continental scientific drilling program, in Behr., H. J., Stehli, F. G., and Vidal, H. (eds.), Observation of the continental crust through drilling II, Springer- Verlag, New York, p. 37-43.

Steven, T. A., 1964, Geologic setting of the Spar City district, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 475-D, p. D123-D127.

Steven, T. A., 1967, Geologic map of the Bristol Head quadrangle, Mineral and Hinsdale Counties, Colorado: U.S. Geol. Survey Quadrangle Map GQ-631, scale 1:62,500.

Steven, T. A., 1968, Ore deposits in the central San Juan Mountains, Colorado, in Ridge, J. D. (ed.), Ore deposits of the United States 1933-1967, Graton- Sales volume, AIME, v. 1, p. 706-713.

Steven, T. A., 1968, Critical review of the San Juan peneplain, southwestern Colorado: U.S. Geol. Survey Prof. Paper 594-I, 19 p.

Steven, T. A., 1969, Possible relation of mineralization to thermal springs in the Creede district, San Juan Mountains, Colorado: a discussion: Econ. Geology, v. 64, p. 696-698.

Steven, T. A., 1971, Geologic environment of ore deposition in the Creede district, San Juan Mountains, Colorado [abs.]: Econ. Geology, v. 66, p. 1270.

Steven, T. A., 1975, Middle Tertiary volcanic field in the southern Rocky Mountains, in Curtis, B. F. (ed.), Cenozoic history of the southern Rocky Mountains: Geol. Soc. America Mem. 144, p. 75-94.

Steven, T. A., and Bieniewski, C. L., 1977, Mineral resources of the La Garita Wilderness, San Juan Mountains, southwestern Colorado, with a section on geophysical interpretation by G. P. Eaton: U.S. Geol. Survey Bull. 1420, 65 p. [Includes geol. map, magnetic survey map 1:48,000.]

Steven, T. A., and Eaton, G. P., 1975, Environment of ore deposition in the Creede mining district, San Juan Mountains, Colorado: I. Geologic, hydrologic, and geophysical setting: Econ. Geology, v. 70, p. 1023-1037.

Steven, T. A., and Epis, R. C., 1968, Oligocene volcanism in south-central Colorado [abs.]: Geol. Soc. America Spec. Paper 115, p. 450.

Steven, T. A., and Epis, R. C., 1968, Oligocene volcanism in south-central Colorado, in Epis, R. C. (ed.), Cenozoic volcanism in the southern Rocky Mountains: Colorado School Mines Quart., v. 63, no. 3, p. 241-258.

Steven, T. A., and Friedman, I., 1968, The source of travertine in the Creede Formation, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 600-B, p. B29-B36.

Steven, T. A., and Lipman, P. W., 1968, Central San Juan cauldron complex, Colorado [abs.]: Geol. Soc. America Spec. Paper 115, p. 450-451. [Also in Epis, R. C. (ed.), Cenozoic volcanism in the southern Rocky Mountains: Colorado School Mines Quart., v. 63, no. 3, p. 209.]

Steven, T. A., and Lipman, P. W., 1973, Geologic map of the Spar City quadrangle, Mineral County, Colorado: U.S. Geol. Survey Quadrangle Map GQ- 1052, scale 1:62,500.

Steven, T. A., and Lipman, P. W., 1976, Emplacement of a batholith, as chronicled by calderas in the San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 8, no. 5, p. 635-636.

Steven, T. A., and Lipman, P. W., 1976, Calderas of the San Juan volcanic field, southwestern Colorado: U.S. Geol. Survey Prof. Paper 958, 35 p.

Steven, T. A., and Ratte, J. C., 1959, Caldera subsidence in the Creede area, San Juan Mountains, Colorado [abs.]: Geol. Soc. America Bull., v. 70, no. 12, pt. 2, p. 1788-1789.

Steven, T. A., and Ratte, J. C., 1960, Relation of mineralization to caldera subsidence in the Creede district, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 400-B, p. B14-B17.

Steven, T. A., and Ratte, J. C., 1963, Resurgent cauldrons in the Creede area, San Juan Mountains, Colorado [abs.]: Am. Geophys. Union Trans., v. 44, no. 1, p. 112-113.

Steven, T. A., and Ratte, J. C., 1964, Revised Tertiary volcanic sequence in the central San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 475- D, p. D54-D63.

Steven, T. A., and Ratte, J. C., 1965, Geology and structural control of ore deposition in the Creede district, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 487, 90 p.

Steven, T. A., and Ratte, J. C., 1973, Geologic map of the Creede quadrangle, Mineral and Saguache Counties, Colorado: U.S. Geol. Survey Quadrangle Map GQ- 1053, scale 1:62,500.

Steven, T. A., and Van Loenen, R. E., 1971, Clinoptilolite-bearing tuff beds in the Creede Formation, San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 750-C, p. C98-C103.

Steven, T. A., Lipman, P. W., and Olson, J. C., 1974, Ash-flow stratigraphy and caldera structures in the San Juan volcanic field, southwestern Colorado, in Changes in stratigraphic nomenclature by the U.S. Geological Survey, 1972: U.S. Geol. Survey Bull. 1394-A, p. A75-A82.

Steven, T. A., Lipman, P. W., Hail, W. J., Jr., Barker, F., and Luedke, R. G., 1974, Geologic map of the Durango quadrangle, southwestern Colorado: U.S. Geol. Survey Misc. Geol. Inv. Map I-764, scale 1:250,000.

Steven, T. A., Luedke, R. G., and Lipman, P. W., 1974, Relation of mineralization to calderas in the San Juan volcanic field, southwestern Colorado: Jour. Research, U.S. Geol. Survey, v. 2, no. 4, p. 405-409.

Steven, T. A., Mehnert, H. H., and Obradovich, J. D., 1967, Age of volcanic activity in the San Juan Mountains, Colorado: U.S. Geol. Survey Prof. Paper 575-D, p. D47-D55.

Steven, T. A., Schmitt, L. J., Sheridan, M. J., and Williams, F. E., 1969, Mineral resources of the San Juan Primitive Area, Colorado: U.S. Geol. Survey Bull. 1261-F, 187 p.

Steven, T. A., Smedes, H. W., Prostka, H. J., Lipman, P. W., and Christiansen, R. L., 1972, Upper Cretaceous and Cenozoic igneous rocks, in Geologic atlas of the Rocky Mountain region (including geol. maps): Rocky Mountain Assoc. Geol., p. 229-232.

Stewart, B. K., 1940, Ecological comparisons of Tertiary and present-day vegetation in the Creede Valley, Colo. [abs.]: Am. Jour. Botany, v. 27, no. 10, p. 11 (Supplement).

Stewart, B. K., 1940, Plant ecology and paleo-ecology of the Creede Valley, Colorado [abs.]: Colorado Univ. Studies Bull., v. 26, no. 3, p. 114-117.

Stormer, J. C., Jr., 1983, Determination of the depth of origin of large volume silicic magmas: two-feldspar + Fe-Ti oxide method [abs.]: EOS (Am. Geophys. Union Trans.), v. 64, no. 18, p. 336.

Stormer, J. C., Jr., and Whitney, J. A., 1984, The Fish Canyon Tuff: a homogeneous large volume silicic magma with evidence for efficient mixing of a mafic component [abs.], in Dungan, M. A., Grove, T. L., and Hildreth, W. (eds.), Proc. of the ISEM Conference on Open Magmatic Systems: Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas, p. 149-150.

Stormer, J. C., Jr., and Whitney, J. A., 1985, Two feldspar and iron-titanium oxide equilibria in silicic magmas and the depth of origin of large volume ash-flow tuffs: Am. Mineralogist, v. 70, p. 52-64.

Stormer, J. C., Jr., and Whitney, J. A., 1986, The nature of ignimbrite producing magmas of the central San Juan volcanic field, Colorado, USA [abs.]: Internat. Volcanological Congress, New Zealand, IAVCEI and Royal Society of New Zealand, Abstracts, p. 78.

Stormer, J. C., Jr., Whitney, J. A., and Dorais, M. J., 1987, Reply to a comment on '...magmatic conditions of the Fish Canyon Tuff...': Jour. Petrol., v. 28, p. 747-754.

Tanaka, H., and Kono, M., 1973, Paleomagnetism of the San Juan volcanic field, Colorado, U.S.A.: Rock Magnetism and Paleogeophysics, v. 1, p. 71-76.

Tanaka, H., and Kono, M., 1974, Origin of NRM of San Juan volcanic rocks from Colorado, U.S.A.: Rock Magnetism and Paleogeophysics, v. 2, p. 20-23.

Thompson, J. R., Jr., 1971, Creede Shale fossils, in Guidebook of the San Luis Basin, Colorado: New Mexico Geol. Soc. Annual Field Conf. Guidebook, no. 22, p. 247-248.

Tsui, T. F., and Holland, H. D., 1976, The Cu content of fluid inclusions in three epithermal ore deposits [abs.]: EOS (Am. Geophys. Union Trans.), v. 57, no. 12, p. 1014.

Tsui, T. F., and Holland, H. D., 1979, The analysis of fluid inclusions by laser microprobe: Econ. Geology, v. 74, p. 1647-1653.

Tweto, O., 1968, Geologic setting and interrelationships of mineral deposits in the mountain province of Colorado and south-central Wyoming, in Ridge, J. D. (ed.), Ore deposits of the United States 1933-1967, Graton-Sales volume, AIME, v. 1, p. 551-588.

Tweto, O., 1975, Laramide (late Cretaceous-early Tertiary) orogeny in the southern Rocky Mountains, in Curtis, B. F. (ed.), Cenozoic history of the southern Rocky Mountains: Geol. Soc. America Mem. 144, p. 1-44.

Tweto, O., 1976, A preliminary Montrose quadrangle 1° by 2° sheet: U.S. Geol. Survey Misc. Field Studies Map MF-761, scale 1:250,000.

Tweto, O., 1976, A preliminary geologic map of Colorado: U.S. Geol. Survey Misc. Field Studies Map MF-788, scale 1:500,000. Tyson, K. C., 1986, Petrology, stratigraphy, and geochemistry of the northern lobes of the Fish Canyon Tuff, San Juan Mountains, Colorado: Unpub. M.Sc. thesis, University of Georgia (Athens), 125 p.

U.S. Geological Survey, 1912, Creede and vicinity: U.S. Geol. Survey Topographic Map, scale 1:24,000.

U.S. Geological Survey, 1916, Creede quadrangle: U.S. Geol. Survey Topographic Map, scale 1:125,000.

U.S. Geological Survey, 1987, Aeromagnetic map of the Creede mining district, southwestern Colorado: U.S. Geol. Survey Open-File Report 87-422, scale 1:50,000.

Van Loenen, R. E., 1980, Inesite, a new U.S. occurrence near Creede, Mineral County, Colorado: Mineralogical Record, v. 11, p. 35-36.

Vanderwilt, J. W., 1947, Mineral County: Mineral Resources of Colorado, p. 142-144.

Vergo, N., 1984, Wallrock alteration at the Bulldog Mountain mine, Creede mining district, Colorado: Unpub. M.Sc. thesis, University of Illinois (Urbana-Champaign), 88 p.

Vergo, N., 1985, Wallrock alteration at the Bulldog Mountain Mine, Creede mining district, Colorado [abs.]: Abs., 1985 (8th) International Clay Conference, Denver, July 28 - Aug. 2, p. 248.

Vergo, N., 1987, Wallrock alteration at the Bulldog Mountain Mine, Creede, Colorado [abs.]:

Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 340.

Wason, D. J., 1983, The Bachelor Mountain silver deposit, Creede mining district, Colorado: Unpub. M.Sc. thesis, State University of New York (Stonybrook), 94 p.

Webber, K. L., Stormer, J. C., Jr., and Whitney, J. A., 1987, Mammoth Mt. and Wason Park Tuffs: development of the magmatic system in the central San Juan volcanic field, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 68, no. 44, p. 1512.

Western Geophysical Company of America, Aero Service Division, 1979, Airborne gamma-ray spectrometer and magnetometer survey, Durango quadrangle, Colorado: GJBX-143-79 (Dept. of Energy, Grand Junction office), 2 volumes.

Wetlaufer, P. H., 1977, Geochemistry and mineralogy of the carbonates of the Creede mining district, Colorado: U.S. Geol. Survey Open-File Report 77-706, 134 p.

Wetlaufer, P. H., 1978, Chemical similarities of hydrothermal fluids from diverse sources, Creede Ag-Pb-Zn-Cu district, San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 10, no. 7, p. 515.

Wetlaufer, P. H., Bethke, P. M., and Barton, P. B., Jr., 1978, The Creede mining district, central San Juan Mountains, Colorado: a fossil geothermal system [abs.]: Internat. Assoc. on the Genesis of Ore Deposits, 5th Symposium, Snowbird, Utah, Aug. 1978, Program and Abs., p. 203.

Wetlaufer, P. H., Bethke, P. M., Barton, P. B., Jr., and Rye, R. O., 1979, The Creede Ag-Pb-Zn-Cu-Au district, central San Juan Mountains, Colorado: a fossil geothermal system: Fifth IAGOD Quadrennial Symp., v. 2, Nev. Bur. Mines Geol. Report 33, p. 159-164.

White, D. E., 1974, Diverse origins of hydrothermal ore fluids: Econ. Geology, v. 69, p. 954-973.

Whitney, J. A., 1982, Activity of sulfurous gasses in pyrrhotite-bearing silicic magmas [abs.]: EOS (Am. Geophys. Union Trans.), v. 65, no. 45, p. 1142.

Whitney, J. A., 1984, Fugacities of sulfurous gases in pyrrhotite-bearing silicic magmas: Am. Mineralogist, v. 69, p. 69-78.

Whitney, J. A., 1985, Composition and activity of sulfurous species in quenched magmatic gases associated with pyrrhotite-bearing silicic systems [abs.]: Geol. Soc. America Abs. with Programs, v. 17, no. 7, p. 749.

Whitney, J. A., and Stormer, J. C., Jr., 1982, Primary sulfide inclusions within the Fish Canyon Ash-flow Tuff and their implications for the paragenesis of calc-alkaline silicic magmas and related ore deposits [abs.]: EOS (Am. Geophys. Union Trans.), v. 63, no. 18, p. 451.

Whitney, J. A., and Stormer, J. C., Jr., 1983, Igneous sulfides in the Fish Canyon Tuff and the

role of sulfur in calc-alkaline magmas: Geology, v. 11, p. 99-102.

Whitney, J. A., and Stormer, J. C., Jr., 1984, Magmatic conditions and magma mixing in the Carpenter Ridge Tuff: a zoned ash-flow in the San Juan volcanic field, Colorado [abs.]: EOS (Am. Geophys. Union Trans.), v. 65, no. 45, p. 1127.

Whitney, J. A., and Stormer, J. C., Jr., 1985, Mineralogy, petrology, and magmatic conditions of the Fish Canyon Tuff, central San Juan Mts., Colorado: Jour. Petrol., v. 26, p. 726-762.

Whitney, J. A., and Stormer, J. C., Jr., 1986, Model for the intrusion of batholiths associated with the eruption of large-volume ash-flow tuffs: Science, v. 231, p. 483-485.

Whitney, J. A., Dorais, M. J., and Stormer, J. C., Jr., 1987, The Carpenter Ridge Tuff: the development of chemical and thermal gradients through magma mixing in a periodically replenished magma chamber [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 342.

Whitney, J. A., Dorais, M. J., and Stormer, J. C., Jr., 1987, The development of chemical and thermal gradients in ash-flow tuffs through magma mixing in a periodically replenished magma chamber [abs.]: EOS (Am. Geophys. Union Trans.), v. 68, no. 16, p. 435.

Whitney, J. A., Philips, L. V., and Voorhies, M. R., 1986, Are mass extinctions caused by volcanic eruptions? Negative evidence from the Late Oligocene of the southern Rocky Mountains and Great Plains [abs.]: EOS (Am. Geophys. Union Trans.), v. 67, no. 44, p. 1247.

Williams, D. L., and Abrams, G. A., 1987, Preliminary results of gravity and aeromagnetic studies in the central San Juan caldera complex, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 342.

Williams, T. J., Roden, M. F., and Whitney, J. A., 1987, Andesitic volcanics of Table Mountain, central San Juan Mountains, Colorado [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 343.

Wisser, E., 1960, Mining districts associated with anticlines; Creede, Colorado, in Relation of ore deposition to doming in the North American Cordillera: Geol. Soc. America Mem. 77, p. 63-68.

Woods, T. L., Roedder, E., and Bethke, P. M., 1982, Fluid inclusion data on samples from Creede, Colorado, in relation to mineral paragenesis: U.S. Geol. Survey Open-File Report 82-313, 77 p.

Wright, A. F., 1979, Bibliography of geology and hydrology, San Juan Basin, New Mexico, Colorado, Arizona, and Utah: U.S. Geol. Survey Bull. 1481, 123 p.

Zyvoloski, G., 1987, The effect of structural resurgence on the thermal evolution of the Creede caldera [abs.]: Geol. Soc. America Abs. with Programs, v. 19, no. 5, p. 345.