Boulder County

Magnolia District

The Magnolia District is a minor district located about five miles west of Boulder. It never was a major producer but received attention because of the high grade telluride ores found there. The geology of the Magnolia District is characterized by the Boulder Creek Granite and granitic gneiss.. The presence of several breccia reefs caught the attention of early prospectors. In addition to these breccia zones, the "iron dike" - a large diabase dike - crosses the area (Lovering and Goddard, 1950). Gold tellurides were discovered shortly after the discoveries at Gold Hill. The district mostly gold and some tungsten, as the district overlaps the Boulder Tungsten District in the north.

The mineralization consists of small veins that enjoyed rather modest production, although some high-grade zones were found. Normally, the production included gold, silver and a bit of tungsten (Vanderwilt, 1947). Most of the valuable ore came from the intersection of veins. The fissure veins contain telluride minerals, chalcedonic quartz, pyrite and small amounts of free gold, sphalerite, marcasite, fluorite, and calcite. Tellurides occur as small blades 2.5 mm or less in length. The tellurides occur in seams within the fissure veins, striking northwest. Only a few were traced more than 1000 feet. Tungsten veins were later, cutting the telluride-bearing veins. They strike east to northeast. Tungsten veins are also small, most only an inch or two wide and several hundred feet long.

Aggregated production shows about 40,000 ounces of gold from 1859 to 1980. Small production of silver and tungstenn was reported also. As many as twenty-two mines were producing in 1936.

Ore mineralogy of the district according to Lovering and Goddard includes

native gold Au,
tellurite TeO_2 ,
melonite Ni Te_2,
coloradoite HgTe,
petzite Ag_3SbS_3,
ferberite $FeWO_4$,
roscoelite $K(V,Al,Mg)_2AlSi_3O_{10}(OH)_2$,
native tellurium Te,
ferro-tellurite $FeTeO_4$,
sylvanite $(Ag, Au)_2Te_4$,
hessite Ag_2Te,
altaite PbTe,
molybdenite MoS_2,
galena PbS.

Mindat.org adds to that the minerals
empressite AgTe
hubnerite $MnWO_4$,
paratellurite TeO_2
calavarite $AuTe_2$, sz
keystoneite $(Na_{0.07}K_{0.02}Mg_{0.78})[Ni_{1.26}Fe^{3+}_{0.47}Mn_{0.10})_{E1.83}Te_{3.04}O_{9J}\,4.5H_2O$,
magnolite Hg_2TeO_3.

Additionally, Mindat.org list these minerals:

allanite	acalcite	chalcopyrite	chlorite
epidote	feldspars	fluorite	garnet
ilmenite (picrotitanite)	limonite	marcasite	mercury
molybdenite	olivine	pyrite	pyrrhotite
quartz	chalcedony	roscoelite	serpentine
sphalerite	stibnite	various micas	

Midat.org lists these mines and prospects in the Magnolia District:

Magnolia District
American Eagle - Interocean Occurrence
Beggar
Belmont (Graphic; Holy Cross; Tungsten King Occurrence)
Cheyenne (Modoc; Tiger Nos. 1 & 2 Occurrence)
Dun Raven Mine
Fortune Occurrence
Golden Glow
Humbug
India Mine
Pandora No. 1 & 4 Lode Claims
Park Placer (Congo Chief; Apex; Dominion; American; Josie Mansfield Placer; Don; Rico; Deyling; Enterprise)
Pickwick
Poorman Mine (1)
Power Shaft
Recluse
Rusty Dime

Kansas City Tunnel
Kekionga Mine
Magnolia Vein
Keystone Mine
Lady Franklin Mine
Little Maud
Lord Byron
Magnolia mine
Missoula
Molly Gibson
Mountain Lion Mine - Keystone Vein
New Year
Sac and Fox
Santa Lasaria (Mtn. Mexico; Bravo Occurrence)
Mill Sites
Senator Hill and Ophir Veins
Snow Flake
Sylvanite Tunnel
Valley View
Zephyr Occurrence

References:

Mineral Resource Data System (MRDS) - Online Spatial Data – Magnolia District

Lovering, T.S. and Goddard, E.N., 1950, Geology and Ore Deposits of the Front Range, Colorado; U.S.G.S. Professional Paper 223.

Wilkerson, Albert S., 1939, Geology and ore deposits of the Magnolia Mining District and adjacent area, Boulder County, CO; Colorado Scientific Society Proceedings, vol. 14, pp. 81-101.

www.mindat.org: Magnolia District, accessed 8 August 2012.