

## **Gunnison County**

### **Tin Cup District (aka Pieplant District)**

The Tin Cup (or Tincup) District lies at the head of Willow Creek at the far southeast end of Taylor Park, extending east to the Continental Divide. Henderson (1926) considered the Tincup synonymous with the **Taylor River District** (which he in turn says is synonymous with the **Taylor Park** and **Forest Hill Districts**.) Hill (1912) also used the alternative name Pieplant District, but also included in the district mines around Taylor Park and Italian Mountain, which is inconsistent with other writers (and this compilation.) Vanderwilt (1947) used no alternative names. Dunn (2003) points out that two spellings are used: Tin Cup and Tincup. The district adjoins the **Quartz Creek District** on the south with an undefined boundary. The district is on the west margin of the Mount Aetna volcanic center at the south end of the Mount Princeton batholith (Toulmin and Hammerstrom, 1990).

Numerous studies have been published on the Tin Cup District and the area directly around it. Crawford (1913) looked at the nearby **Monarch** and **Tomichi Districts** and Crawford and Worcester (1916) addressed the **Gold Brick District**; Goddard (1936) studied the Tin Cup District specifically. Dings and Robinson (1957) reviewed the Garfield Quadrangle, including much of the Tin Cup District. Other workers have discussed specific aspects of the area. Toulmin and Hammerstrom (1990) studied the Mount Aetna volcanic center, in which the Tin Cup lies; Belser (1956) and Sharps (1965) looked at tungsten potential and Worcester (1919) at molybdenum, all including examples in the Tin Cup District. Heyl (1964) noted examples of oxidized zinc ore in the district.

The geology is similar to other nearby districts such as **Aspen** and **Dorchester**. Proterozoic crystalline and Paleozoic sedimentary rocks are intruded by Tertiary dikes and sills. On the east side of the district is the Tincup Fault - a shallow thrust fault (Vanderwilt, 1947). Deposits of Ag-Pb-Au mantos and veins with some molybdenite and hubnerite veins characterize the district.

Economic deposits in the Tin Cup District were both bedded replacement deposits and veins (Goddard, 1936). Overall, the replacement deposits were the most important. They occurred as stratabound zones typically 8 to 10 feet thick (a few as much as 59 feet) and 30 to several hundred feet long in carbonate-rich zones at the intersection of steeply-dipping faults. They are exposed in a broad anticline trending N25W in a belt past Tincup to upper Willow Creek. Most commonly the ore occurs in the Fremont Limestone (referred to as the Fairview Ore Horizon), but also in carbonate horizons in the Devonian Dyer Dolomite and the Mississippian Leadville Limestone. The ore contains argentiferous galena and pyrite and some sphalerite and chalcopyrite. Some "gray copper" (tetrahedrite-tennantite) is present containing silver. Silver-lead-gold veins have mineralogy similar to the replacement zones.

Total production from 1901 to 1935 was 298 oz. gold, 26,446 oz. silver, 177 lb. copper and 153,820 lb. lead (Vanderwilt, Ibid.) Heyl (Ibid) points out that while much of the ore in the district was rich in zinc, zinc was never recovered.

Mines listed in the district (mindat.org; Dings and Robinson, 1967) include:

- Anna; Union Gulch; Grubstake; Homestake; Monometalist Occurrence
- Anna Dedrika
- Bertha Gulch Placers
- Blistered Horn Tunnel<sup>1</sup>
- Consolidated; Nellie Placers
- Copper King Occurrence
- Cumberland; Sinbad; York; Deadlock; Michigan Occurrence
- Cumberland Mine<sup>1</sup>
- Deacon<sup>1</sup>
- Drew
- El Capitan<sup>1</sup>
- Gold Bug
- Gold Hill
- Goodale Placer
- Hotrocks Mine
- Indiana<sup>1</sup>
- Iron; Copper King; Little Copper King; Kalamazoo; Little Giant Placer
- Iron Cup Claim
- Iron Ore Lode Occurrence
- Jimmie Mack<sup>1</sup>
- Little Anna
- Little Giant; Willow Creek; What Is It; Vanadium; Hillerton Placers
- M.C.R.R.
- Madeline No. 2
- Magnetite Occurrence (MRDS - 10091069)
- Matchless; Boss; Peerless; Champion Occurrence
- McCormick Group
- Monitor Claim
- Mono Metalist Lode
- Napoleon Occurrence<sup>1</sup>
- National<sup>1</sup>
- Nellie Union Gulch Occurrence
- New Discovery Claims
- Orient Occurrence (Mammoth; Emma H.; Hubnerite; Occident; Bon Ton; Morning Glory; Molybdenite; Porcupine; Ida May)
- Oro; Nellie Placers
- Robert E. Lee<sup>1</sup>
- Robert E. Lee #2<sup>1</sup>
- Sections Lode
- Silver Cup<sup>1</sup>
- Sylvan Dell Occurrence<sup>1</sup>
- Tincup
  - Gold Cup Mine (Gold Cup Republic Mine)<sup>1</sup>
- Tincup Gulch Placers
- Tincup Mine<sup>1</sup>
- Tincup Pass
- Vanadium; Little Giant Placers
- Wahl
- West Gold Hill<sup>1</sup>
- Willow Creek Placers

Note: <sup>1</sup>Detailed description in Dings and Robinson (1967).

Minerals listed in the district (mindat.org) include:

Acanthite	Chalcopyrite	Galena
Anglesite	Chlorargyrite	'Garnet'
Azurite	Chrysocolla	Gold
Bornite	Copper	Hematite
Bromargyrite	Covellite	Hemimorphite
'Calamine'	Cuprite	Hübnerite
Calcite	Diopside	'Limonite'
Cerussite	Dolomite	Magnetite
Chalcocite	Ferrimolybdite	Malachite

Molybdenite  
Powellite  
Pyrite  
Pyrophyllite  
Quartz

'Serpentine Group'  
Silver  
Smithsonite  
Sphalerite  
*Stephanite ?*

Tetrahedrite  
Tremolite  
Wulfenite

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[www.mindat.org](http://www.mindat.org), accessed August 2015.