

# Water Availability and use at CC&V

### Location



Cripple Creek & Victor Gold Mine
70 miles (113 Km) South of Denver
24 miles (40 Km) West of Colorado Springs







### Cripple Creek Mining District History

#### 1880—Gold discovered in Poverty Gulch

- 1896—Victor population reached 8,000
- 1899—Victor burned leaving >3,000 people homeless
- 1894-1917—More than 500 mines operated in District
- 1899-1902—More than 800,000 oz gold produced/yr
- **1900—Victor pop. 12,000**; 8 pharmacies, 15 restaurants, 2 newspapers, 12 labor unions, 2 banks, 29 doctors, 5 architects, 48 saloons, 6 churches, and 15 attorneys
- 1891-1961—More than 21 million ounces produced
- 1962—Last underground mine and Carlton Mill close
- 1976—CC&V Gold Mining Co formed as joint venture 1994—Cresson Project permitted
- 1999—AngloGold Corp. formed joint venture with Golden Cycle Gold Corp. and is full owner in 2008
- 2002-Truck shop, new Crusher, and expanded ADR
- 2011—Donated gold to State of CO to resurface Capital dome
- 2012—CO and Teller County approved Mine Life Extension 2, extends mining through 2025, including a new mill, VLF, and ADR
- 2014—Mill began operation, first gold produced
- 2015—Newmont Mining Corporation purchased CC&V
- 2015—CC&V poured 5,000,000 oz since initiating in 1995









### CC&V Mine Stats

**Location**- Located 24 miles west Colorado Springs in central Colorado

Ownership- 100% Newmont

**Current Production Start** – 1994

Mine Elevation – 9100' – 10740'

**Current Mine Plan-** +5 years (2016 budget plan)



Average Annual Production- 380,000-420,000 ounces gold

Average Mining Rate – 165,000 tons per day (60 million tons per year)

**Processing**- Crushing and grinding circuit, gravity and flotation followed by carbon-in-leach gold recovery circuit

**Crusher Capacity** – 60,000 tons/day primarily for leaching operations

#### High Grade mill started in 2014



## CC&V Employees

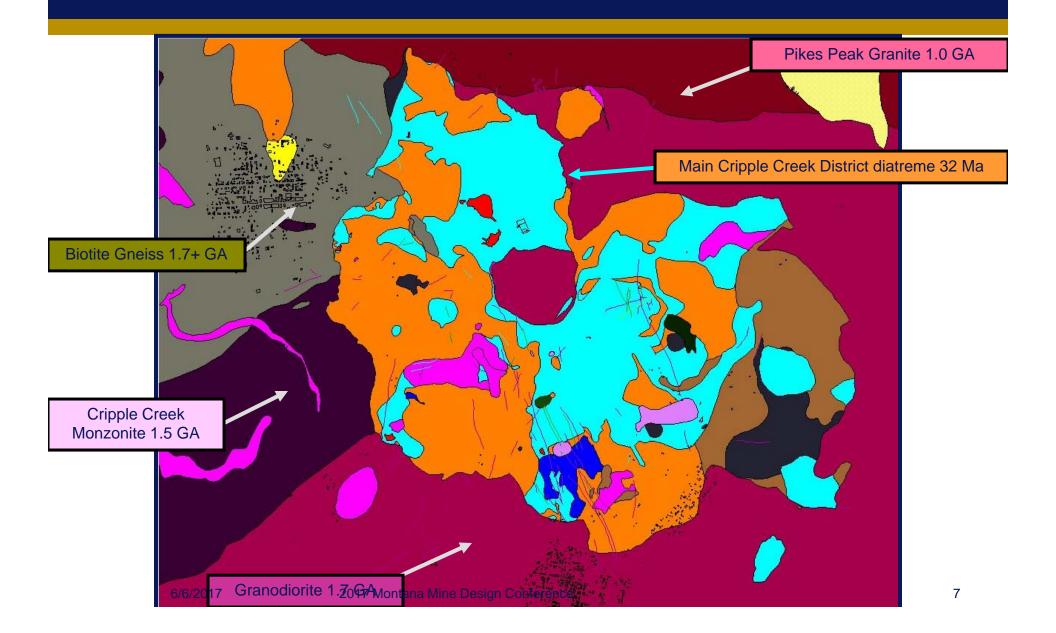




| By City                  | #           | 0/              | By County |                                  |                 |  |  |
|--------------------------|-------------|-----------------|-----------|----------------------------------|-----------------|--|--|
| <u>City</u>              | <u>#</u>    | <u>%</u>        | County    | ŧ                                | <u>%</u><br>14% |  |  |
| Canon City               | 110         | 19%             | El Paso   | 82                               |                 |  |  |
| Cripple Creek            | 45          | 8%              | Fremont   | 129                              | 22%             |  |  |
| Colo Springs             | 67          | 12%             | Other     | 46                               | 8%              |  |  |
| Divide                   | 46          | 8%              | Park      | 20                               | 3%              |  |  |
| Florissant               | 91          | 16%             | Pueblo    | 4                                | 1%              |  |  |
| Guffey                   | 12          | 2%              | Teller    | 300                              | 52%             |  |  |
| Lake George              | 9           | 2%              | Tener     | 581                              | 100%            |  |  |
| Other                    | 61          | 10%             |           | 001                              | 10070           |  |  |
| Penrose                  | 12          | 2%              | % F       | % Female = 12.7%<br>Avg Age = 41 |                 |  |  |
| Pueblo/Pueblo W.         | 1           | 0%              | ,         |                                  |                 |  |  |
| Ute Pass                 | 0           | 0%              | 0         | YOS = 7.4                        | 0               |  |  |
| Victor/Goldfield         | 21          | 4%              | 7.1.9     |                                  |                 |  |  |
| Woodland Park            | 106         | 18%             |           |                                  |                 |  |  |
|                          | <br>*As     | *As of May 2016 |           |                                  |                 |  |  |
| *Employee Population inc | ludos Manad | ors             |           | · · · · ·                        |                 |  |  |

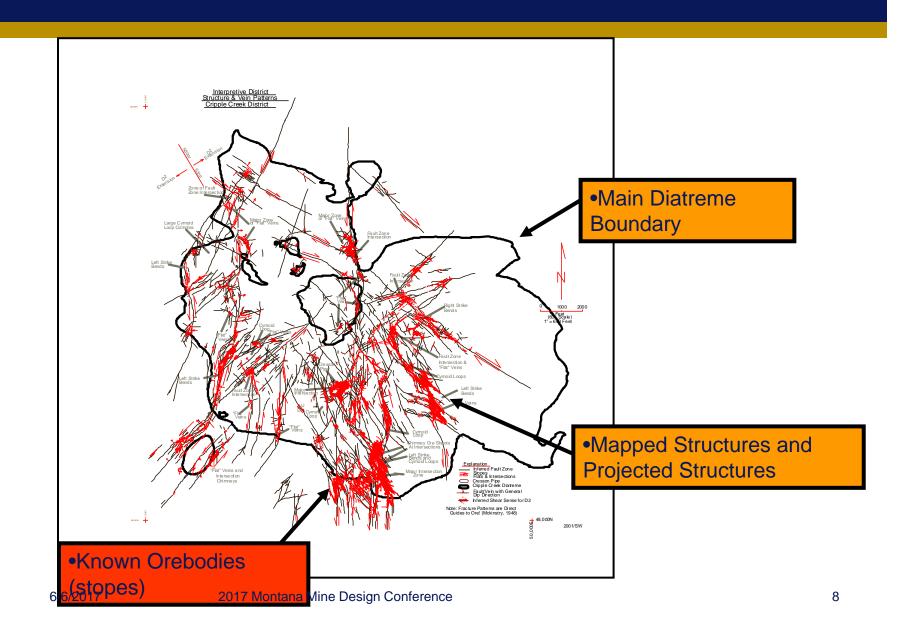
# Geology





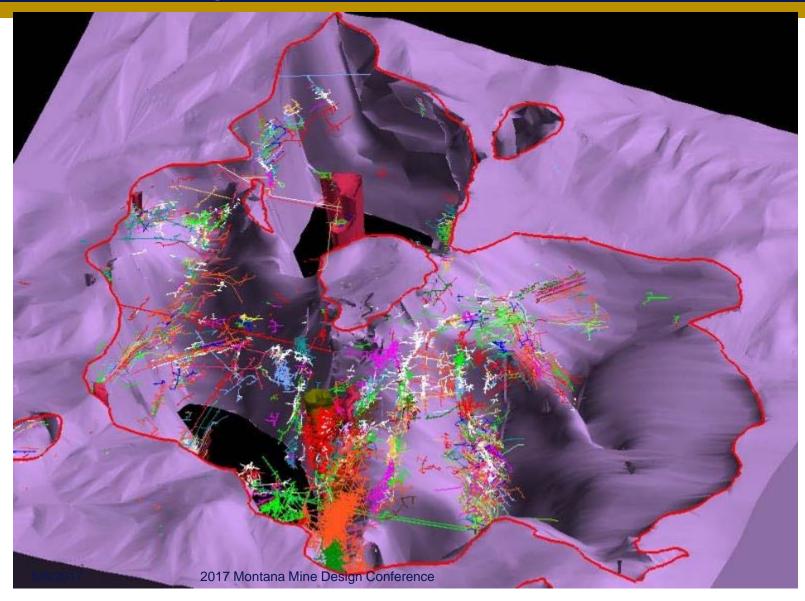
### **District Structural Model**







## Historic Underground Mines in the District



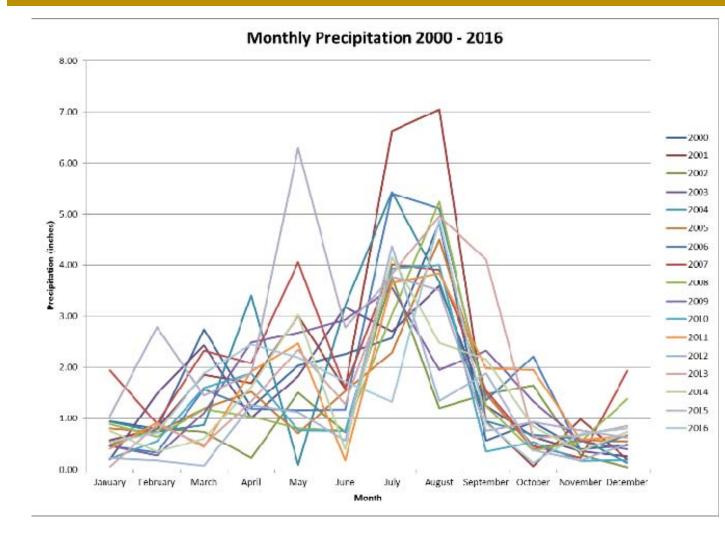
# Modern Mining in a Historic District





# Water Availability Monthly Precipitation



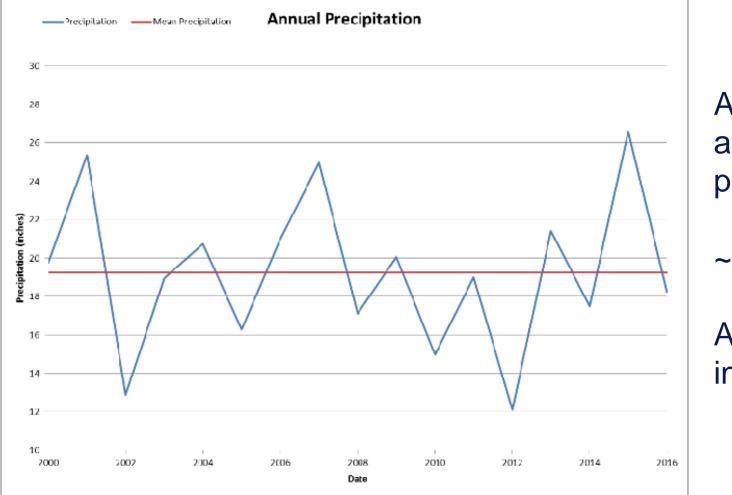


Monthly average precipitation: 1.60 inches

Wettest month: August

Driest Month: November

## Water Availability Annual Totals



Average annual precipitation:

NEWMONT.

NORTH AMERICA

~19 inches

Approx 30% infiltration

### Water Availability Near Site Surface Water





#### Surface water bodies include:

#### **Cripple Creek Reservoirs**

- Cripple Creek #2
- Cripple Creek #3

#### City of Victor Reservoirs

- Victor Reservoir #2
- Bison Reservoir

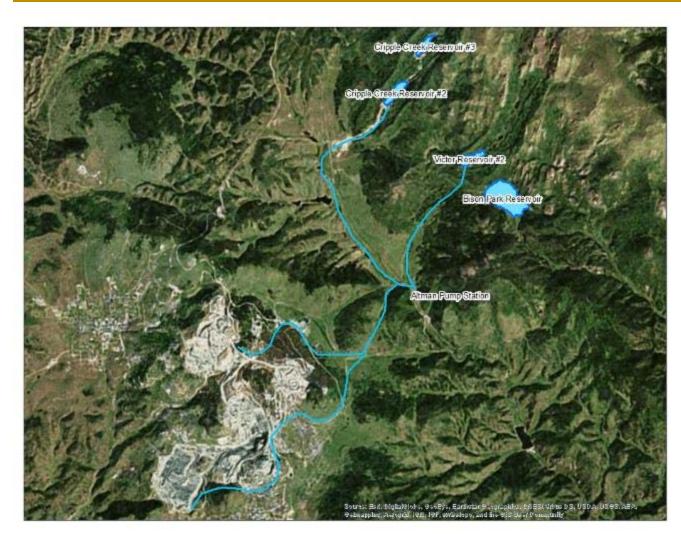
#### Colorado Springs Utility Reservoirs

- Big Horn Reservoir
- Wilson Reservoir

West Beaver Creek Grassy Creek Cripple Creek Wilson Creek

### Water Availability Mine Water Sources





Close proximity surface water bodies include: Cripple Creek Reservoirs

• Cripple Creek #2

#### City of Victor Reservoirs

• Victor Reservoir #2

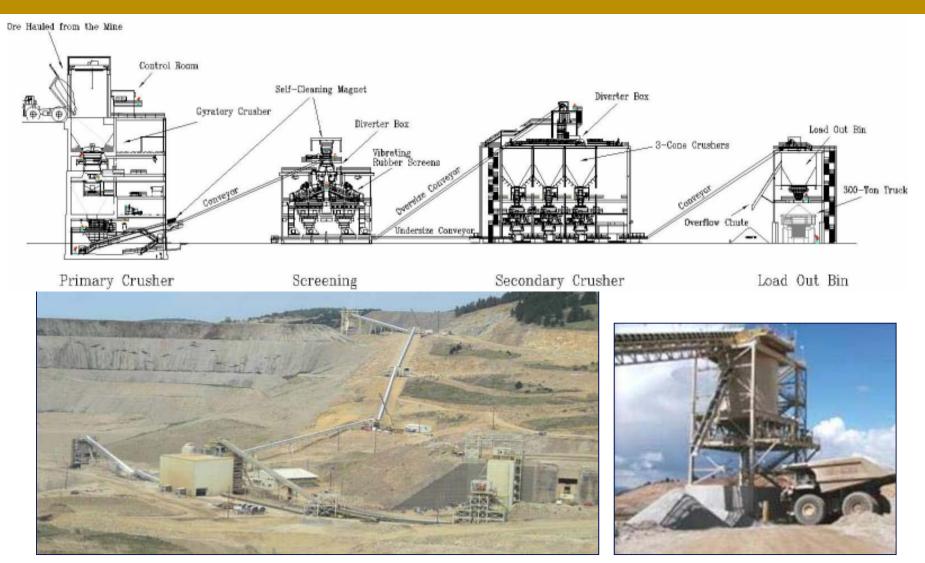
#### Colorado Springs Utility

- Big Horn Reservoir
- Wilson Reservoir

West Beaver Creek

• Altman pump station

### CC&V Water Use: Crusher Process





2017 Montana Mine Design Conference

NEWMONT.

NORTH AMERICA

# CC&V Water Use: Mining activity





### CC&V Water Use: Leach Facilities

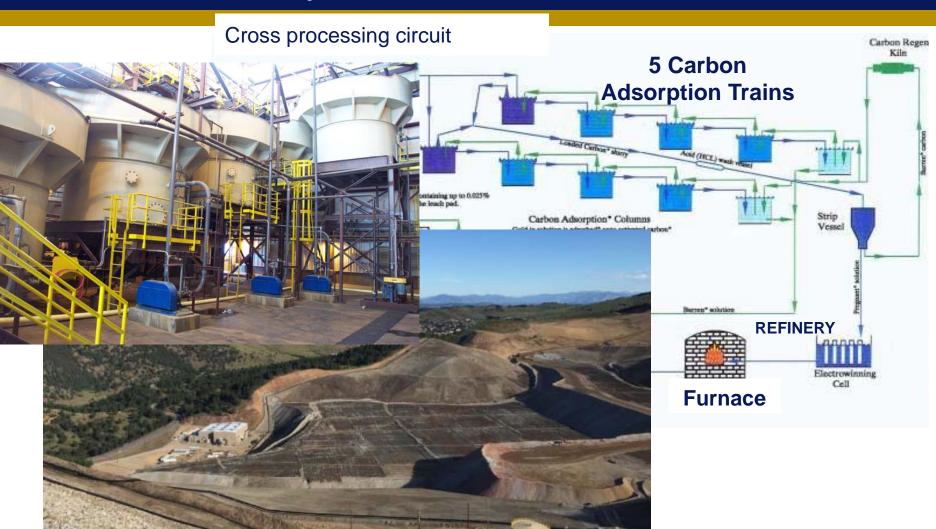




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### CC&V Water Use: Gold Recovery ADR 1 & 2





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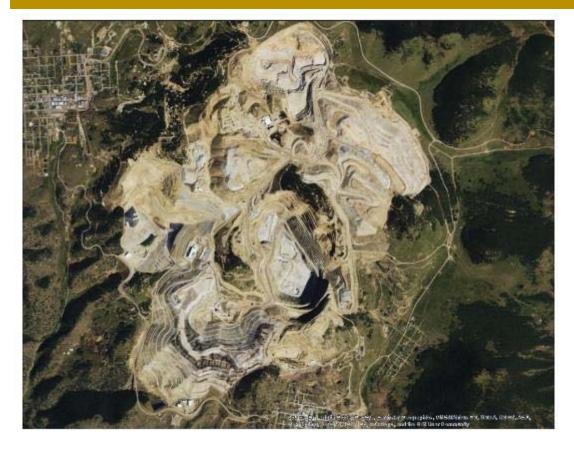
## CC&V Water Use: Milling Facility





### CC&V Water Use: Water Augmentation





Water Right Determination and Administration Act of 1969

Substitute water supply plans created to prevent injury to downstream water right holders due to up-gradient activity

Significant Water Consumption



### Questions?

