



Figure p1. Vein-related alteration zone (~80 m wide) that surrounds the Polar Star vein at the top of the divide, east of Engineer Mountain. Site of sample sequence PG13 (middle of bleached alteration zone near top of ridge).



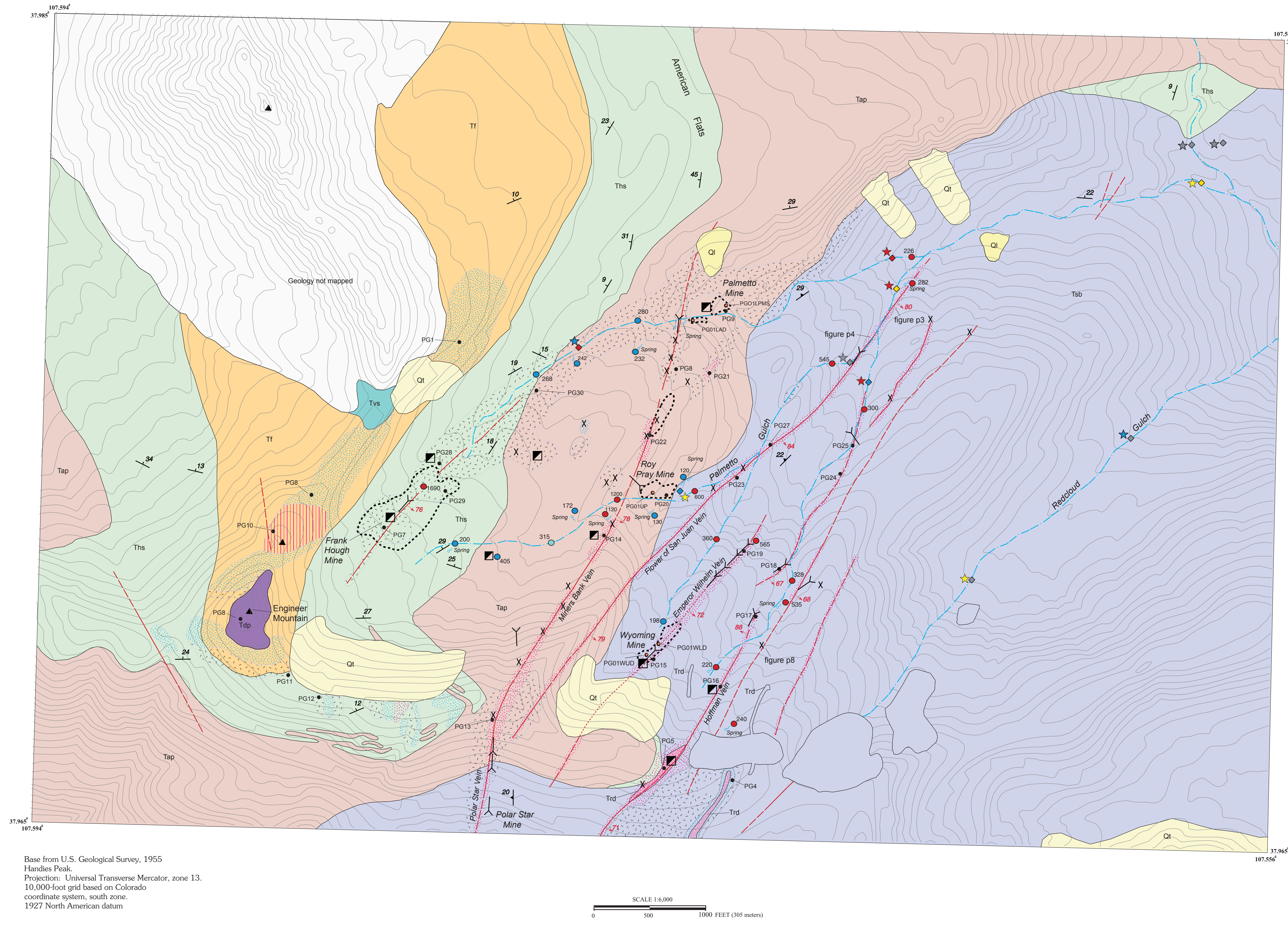
Figure p2. Alteration envelope (between orange lines) surrounding the Hoffman and another parallel vein structure. Rubble around pack is typical of the small accumulation of dump material around exploratory pits and shafts on these veins. Photo taken at sample site PG05 looking east toward sample site PG04 (southernmost map area) on the far side of the altered area.



Figure p3. Relatively narrow (~10 m wide) zone of vein-related alteration (tan rocks) surrounding the Flower of San Juan vein, in the lower reaches of the Palmetto Gulch watershed. Photo looking northeast; site of spring sample Wpalm26 (fig. 2; table 5) on bench area above alteration zone.



Figure p4. Vein-associated alteration (tan rocks) in drainage just upstream of site shown in figure p3. View looking south towards the high ridge line near the south border of the map area.



Base from U.S. Geological Survey, 1955
Hinsdale Peak,
Projection: Universal Transverse Mercator, zone 13,
10,000 foot grid based on Colorado
coordinate system, south zone
1927 North American datum

DESCRIPTION OF MAP UNITS (see text for descriptions)

SURFICIAL DEPOSITS

- Ql Talus (Holocene)
- Qd Landslide deposits (Holocene)

EXTRUSIVE AND RELATED ROCKS

- Tve Local volcaniclastic rocks (Miocene)
- Tt Fish Canyon Tuff (Miocene)

Silvurian Volcanics (Oligocene)

- Tsh Henson Member (Oligocene)
- Tsa Puyssac Andesite Member (Oligocene)
- Tsb Burns Member (Oligocene)

INTRUSIVE ROCKS

- Tr Rhyolite intrusion (Miocene)
- Trd Rhyolite dike (Miocene)
- Trp Dacite porphyry intrusion (Miocene)

EXPLANATION OF MAP SYMBOLS

- Contact - All approximately located
- Vein or mineralized fault - Showing dip. Dashed where approximately located; dotted where concealed
- Strike and dip of beds
- Strike and dip of foliation
- Rock, mineralized vein, or dump sample
- Composite mine dump sample
- Shaft
- Adit
- Prospect
- Mine dump
- Stream
- Spring

HYDROTHERMAL ALTERATION ASSEMBLAGES

- Acid sulfate - Highly silicified with dickite, minor pyrophyllite, and pyrite
- Weak sericite - Bleached rock, plagioclase and mafics altered to sericite; sandstone metastable; pyrite typically oxidized. May contain minor kaolinite
- Hydrothermal propylite - Vein-related propylite alteration. Feldspars and mafics typically altered to chlorite, illite, and sometimes calcite
- Vein-related alteration suite - Alteration envelopes around veins. Alteration sequence changes outward from vein into moderately silicified quartz-sericite-pyrite assemblage, to bleached and weakly silicified to unaltered weak sericite-pyrite assemblage, and then into hydrothermal propylite-altered rock. Where unoxidized, disseminated pyrite ranges from 5-10 percent

STREAM SEDIMENT SAMPLE DATA

Copper abundance

- 0-100 ppm
- 100-500 ppm
- 500-1000 ppm
- 1000-5000 ppm

Zinc abundance

- 0-200 ppm
- 200-500 ppm
- 500-1000 ppm
- 1000-5000 ppm

WATER RECONNAISSANCE DATA

pH (conductivity data next to point)

- 6.9 - 7.3
- 5.1 - 6.0
- 4.2 - 5.1
- 3.3 - 4.2

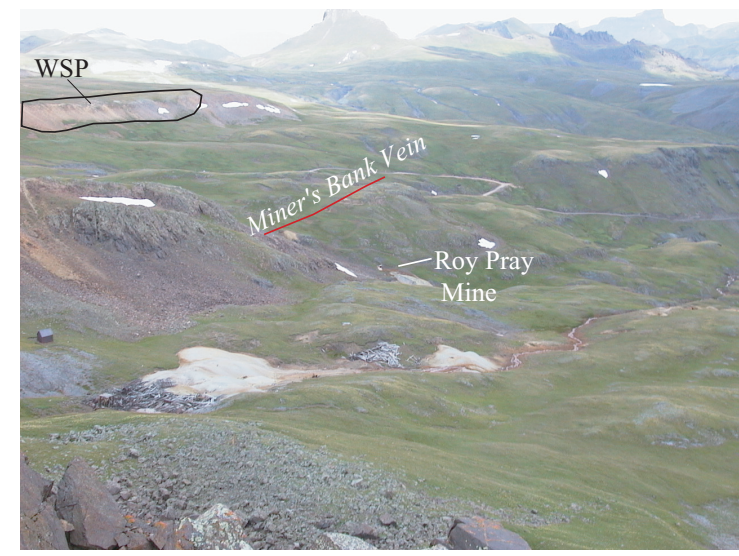


Figure p5. Photo looking down on the upper and lower dumps of the Wyoming mine (foreground); weak-sericite-altered zone (WSP) overprinting the Fish Canyon Tuff is outlined near top of photo. The location of the Roy Pray mine is also shown in relation to the Miner's Bank vein.



Figure p6. View of the upper dump of the Wyoming mine showing reddish mine drainage flowing across the top of the lower mine dump.



Figure p7. Roy Pray mine adit and dump. Note rails (gray linear feature on upper left side of dump) for scale. Width of dump is about 50 meters.



Figure p8. Small prospect (~3 m deep) on vein just east of the Hoffman structure. Photo shown to depict the typically small extent of workings in the vicinity of the Hoffman vein.

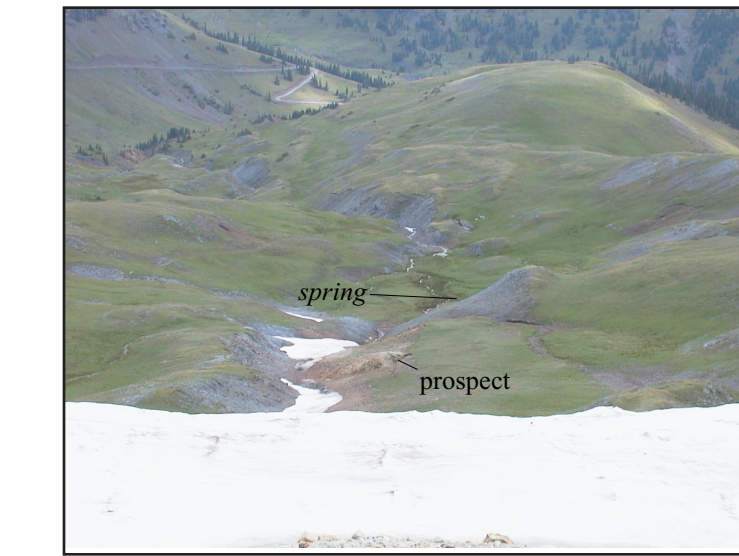


Figure p9. View looking down along easternmost tributary of Palmetto Gulch. Prospect pit shown in figure p8 is above spring site.

GEOLOGIC MAP OF THE PALMETTO GULCH AREA, HINSDALE AND OURAY COUNTIES, COLORADO

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