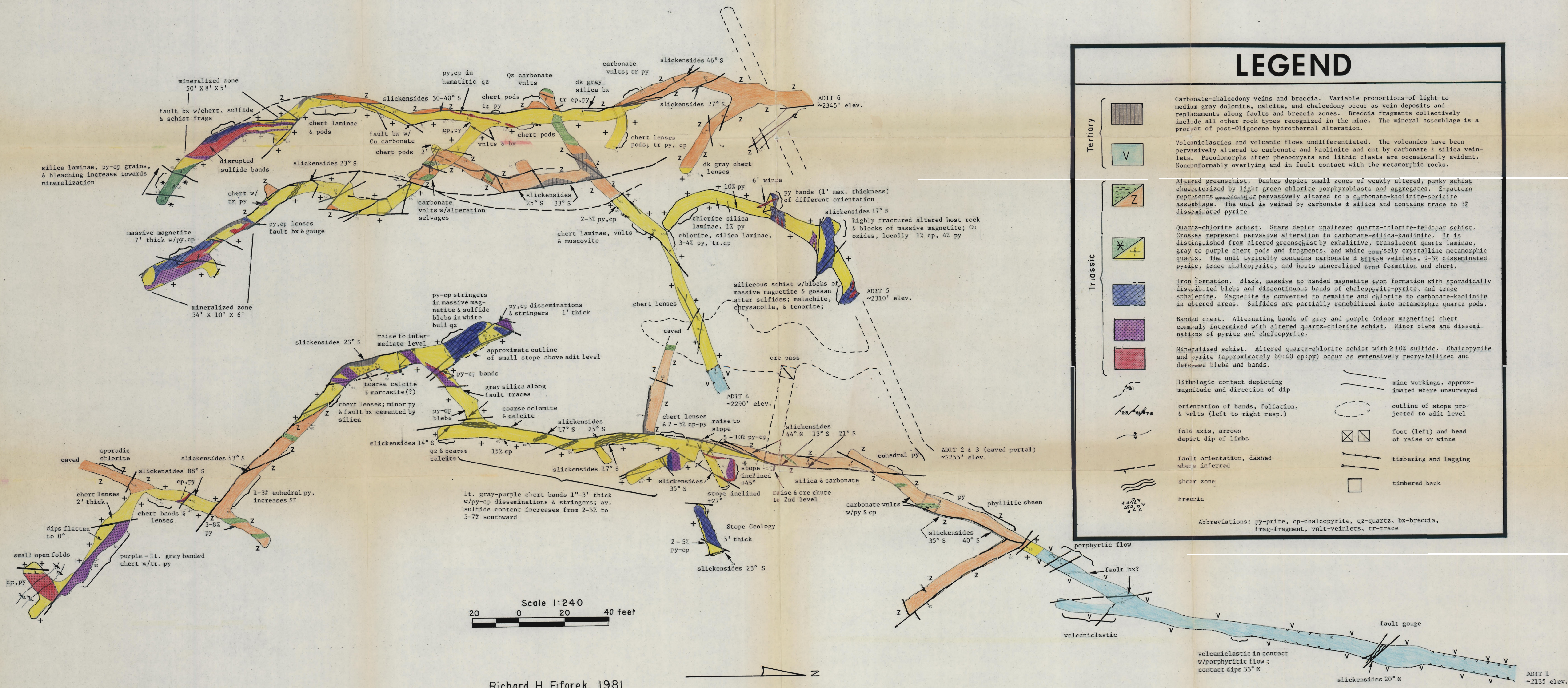


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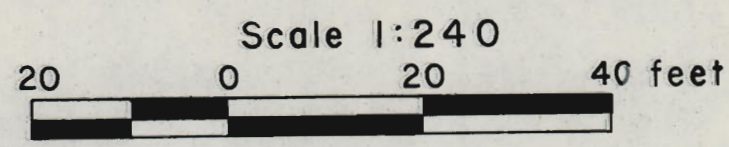
PLATE 3

GEOLOGY OF THE BANFIELD MINE, DOUGLAS COUNTY, OREGON



LEGEND

- | | | |
|-----------|--|--|
| Territory | | Carbonate-chalcedony veins and breccia. Variable proportions of light to medium gray dolomite, calcite, and chalcedony occur as vein deposits and replacements along faults and breccia zones. Breccia fragments collectively include all other rock types recognized in the mine. The mineral assemblage is a product of post-Oligocene hydrothermal alteration. |
| | | Volcaniclastics and volcanic flows undifferentiated. The volcanics have been pervasively altered to carbonate and kaolinite and cut by carbonate ± silica veinlets. Pseudomorphs after phenocrysts and lithic clasts are occasionally evident. Nonconformably overlying and in fault contact with the metamorphic rocks. |
| | | Altered greenschist. Dashes depict small zones of weakly altered, punky schist characterized by light green chlorite porphyroblasts and aggregates. Z-pattern represents pervasively altered to a carbonate-kaolinite-sericite assemblage. The unit is veined by carbonate ± silica and contains trace to 3% disseminated pyrite. |
| | | Quartz-chlorite schist. Stars depict unaltered quartz-chlorite-feldspar schist. Crosses represent pervasive alteration to carbonate-silica-kaolinite. It is distinguished from altered greenschist by exhalative, translucent quartz laminae, gray to purple chert pods and fragments, and white coarsely crystalline metamorphic quartz. The unit typically contains carbonate ± silica veinlets, 1-3% disseminated pyrite, trace chalcopryite, and hosts mineralized iron formation and chert. |
| Triassic | | Iron formation. Black, massive to banded magnetite iron formation with sporadically distributed blebs and discontinuous bands of chalcopryite-pyrite, and trace sphalerite. Magnetite is converted to hematite and chlorite to carbonate-kaolinite in altered areas. Sulfides are partially remobilized into metamorphic quartz pods. |
| | | Banded chert. Alternating bands of gray and purple (minor magnetite) chert commonly intermixed with altered quartz-chlorite schist. Minor blebs and disseminations of pyrite and chalcopryite. |
| | | Mineralized schist. Altered quartz-chlorite schist with ≥10% sulfide. Chalcopryite and pyrite (approximately 60:40 cp:py) occur as extensively recrystallized and deformed blebs and bands. |
| | | lithologic contact depicting magnitude and direction of dip |
| | | orientation of bands, foliation, & vnlts (left to right resp.) |
| | | fold axis, arrows depict dip of limbs |
| | | fault orientation, dashed where inferred |
| | | shear zone |
| | | breccia |
| | | mine workings, approximated where unsurveyed |
| | | outline of stope projected to adit level |
| | | foot (left) and head of raise or winze |
| | | timbering and lagging |
| | | timbered back |
- Abbreviations: py-pyrite, cp-chalcopryite, qz-quartz, bx-breccia, frag-fragment, vnl-veinlets, tr-trace



Richard H. Fifarek, 1981