

(0.0, 11.5)

132°00'

55°37'

PE-120-05

PRELIMINARY REPORT OF FREE GOLD GROUP, HELM BAY,
CLEVELAND PENINSULA
June 23, 1938

Kx 120-59
119-123

Location and Accessibility:

The Free Gold group of claims is located along the west coast of Helm Bay, 4 miles from the entrance. The group adjoins the Gold Standard group on the north and west, and consists of ten lode claims; namely, Free Gold, and Free Gold Nos. 1 to 9, inclusive. All year salt water transportation makes this group very accessible.

Owners:

The owners of this group are Martin Bugge and H. W. Rogers, the former of Ketchikan, Alaska.

History:

The discoveries on this group were reported to have been made in 1903 and the property became known as the Gold Coin group. During the years following considerable stripping was done in the vicinity of the Mahoney cut and later the short crosscut tunnels were driven. Bugge obtained the property by restaking and interested Rogers as a partner. In 1932 the property was optioned to A. Rust and J. L. Freeburn. The Helm Bay Mining Company was formed and active development began. The Free Gold crosscut tunnel was started and completed to its present length with an expenditure of \$60,000. In 1934 the property was dropped and since only assessment work consisting of stripping and trenching has been done.

Geology:

The geology of this area is described in U. S. G. S. Prof. Paper No. 1, "The Ketchikan Mining District, Alaska," by A. H. Brooks, and bulletin 347, "Ketchikan and Wrangell Mining Districts, Alaska," by F. C. & C. W. Wright, pp. 152-155.

The formations noted within the claim boundaries consist of greenstone and greenstone schists. The schistosity of these schists strike N. 25° to 40° W. and contain various dips to the east. In contact with the schists is a band of black clay slates which borders the schists on the east and follows along the west shore of Helm Bay. To the south-west of this group a dioritic stock forms the central mountain mass, and this intrusive has at least in part caused the folding and deformation of the schists. Shear zones have developed parallel to the schistosity and along the limbs of the folds. Fissure veins cut the schists and these are quartz filled and represent a higher temperature type of quartz than that found in the folded shear zones. Development work has not been advanced sufficiently to determine the general direction and plunge of the folds.

Showings and Development:

Rogers Vein: The Rogers vein is located on the Free Gold Claim No. 6, due west of the Gold Standard Claim. This vein is exposed 600 feet along an east-west strike and has a low dip to the north. On the east end the vein is faulted by a fault that strikes N. 20° W. and the dip changes to the west. This may be termed as a rolled vein and was apparently caught in the folding of the schists, and the change in strike of the east showing is the result of folding and movement on the fold. The vein consists of massive white quartz, varies from 2 to 3 feet in width and contains a sparse scattered mineralization. Along the east outcrop the showing was channel sampled for 150 feet and reports of an average value of \$14 in gold per ton are contained in report "Free Gold Group" by George Crerar, 1935, p. 4 (on file). No samples were taken by the writer. This vein is developed by opencuts and at the time of the writer's visit most of the cuts were filled.

Bugge Vein: The Bugge, or High Grade vein, is located on the Free Gold claim and is exposed by opencuts for a distance of 800 feet. This vein strikes slightly west of north, has a steep dip to the west and the fissure acts as a footwall of the north quartz showing contained in the schists on the surface. This vein was followed 55 feet in the Free Gold crosscut tunnel at a point 450 feet from the portal. Here the vein is narrow--less than 6 inches--and consists mainly of gouge with a little crushed quartz and pyrite. High values were reported. On the surface this vein is exposed by numerous cuts and pits. Most of these were filled with water. Short quartz lenses occur in this fissure and free gold shows in several localities. These lenses vary from a few inches up to 3 feet in width. Small spur veins intersect on the footwall at various locations and at these intersections the highest values were reported obtained. Further work is warranted on this vein, as the fissure is strong, and shows good structure, and good values were obtained from assays.* The quartz is banded, bluish-gray in color, and the writer found the presence of black tourmaline in small black needles. This indicates a high temperature quartz which is indicative of continuation in depth.

Free Gold Tunnel: The Free Gold tunnel consists of underground workings of crosscuts and drifts totaling 1470 feet and was driven to cut the large quartz showings exposed on the surface and the Bugge vein. At a point 250 feet from the portal a stringer zone was cut measuring 42 feet along the tunnel. This consists of various narrow quartz stringers, bunches and quartz veins, mostly inclosed between schist layers. The schistosity strikes N. 10-15° W. and dips vary from 35° to 45° E. A channel sample

*Op. cit., Crerar's report

across 7 feet of this zone was reported as assaying \$14 in gold. Car samples across the 42 feet were reported as averaging \$4 to \$5 per ton in gold. (Note section A-B on sketch). The tunnel continues and cuts the Bugge vein and thence turns southeast and east and undercuts the south showing and Mahoney cut. At the latter point only a sheared folded zone shows which lacks quartz. Considerable quartz shows on the surface in the Mahoney cut. (Note section C-D). The shear zone in the crosscut 250 feet from the portal is the downward extension of the north showing shear zone.

Mahoney Cut Showing: The Mahoney cut or south showing is located on the Free Gold and Free Gold No. 1 claims, and consists of several trenches and strippings with one large cut into the hill. Several flat lying quartz veins and exposures were observed and they represent outcroppings of an extensive shear zone. The schists dip 20 to 35° E. and the shear thickness is approximately 20 to 30 feet as shown in the Mahoney cut. Low gold values were reported. The workings are old and considerable of the pyrite has leached, and since this is definitely known to contain the gold values, present sampling would not reveal true values.

North Showings: The north showings are located on the north end of the Free Gold claim 700 feet north of the south showing. This showing represents another outcropping of a similar shear and consists of numerous flat lying veins and stringers on the limit of a fold. This fold and shear zone appear to be overlying the south shear, and it is possible that with detail geological work a series of these shears could be shown. A total of 108 feet of underground work has been done on these showings. This zone lies in contact on the footwall with the Bugge vein with the schistosity dipping 20-35° E. and the Bugge vein dipping steeply to the west. Gold values were reported with free gold showing on the Bugge vein.

Further development on these shears is warranted and low grade orebodies of large size might be developed.

Mineralization:

The metallic minerals noted both in the quartz veins and the schists consist of pyrite, minute amounts of chalcopyrite and free gold. The pyrite carries the gold in the schists and the crystals vary in size, the largest noted being 3/4 inch in diameter. A portion of the pyrite has been crushed and broken down by pressure and movement, and it has been found by assay that the highest gold values, other than the free gold in the quartz, is associated with the crushed pyrite.

The gangue minerals of the shear zones and associated quartz veins are milky white quartz, calcite, chlorite and various alteration products of the schists. The gangue minerals of the Bugge vein, which carries the greatest quantity of free gold, vary at different locations. Massive milky white quartz showing gold and calcite shows in several localities while others contain a bluish-gray quartz that shows gold and small needles of black tourmaline. This latter quartz contains the highest values.

Timber and Water Power:

Timber consisting of spruce and hemlock is abundant in the Helm Bay area. A small water project could be developed from the small lake and creek to the southwest of the property, however, a small portion of this water is under use by the Gold Standard mine.

Notes on
Daxco Property.

Rockwell Summary - 1938 (Ketchikan) P. 2
Property held by H. R. Dault - ^{operated by} ~~operated by~~ ^{leased to}
St. Peterson of Tacoma, ^{today for}
exam. and 1 year of operation.

Cleveland Peninsula

Reports by Rockwell -

1938 -

Portland Group (Bent Lake) also
called "Blue Jay"

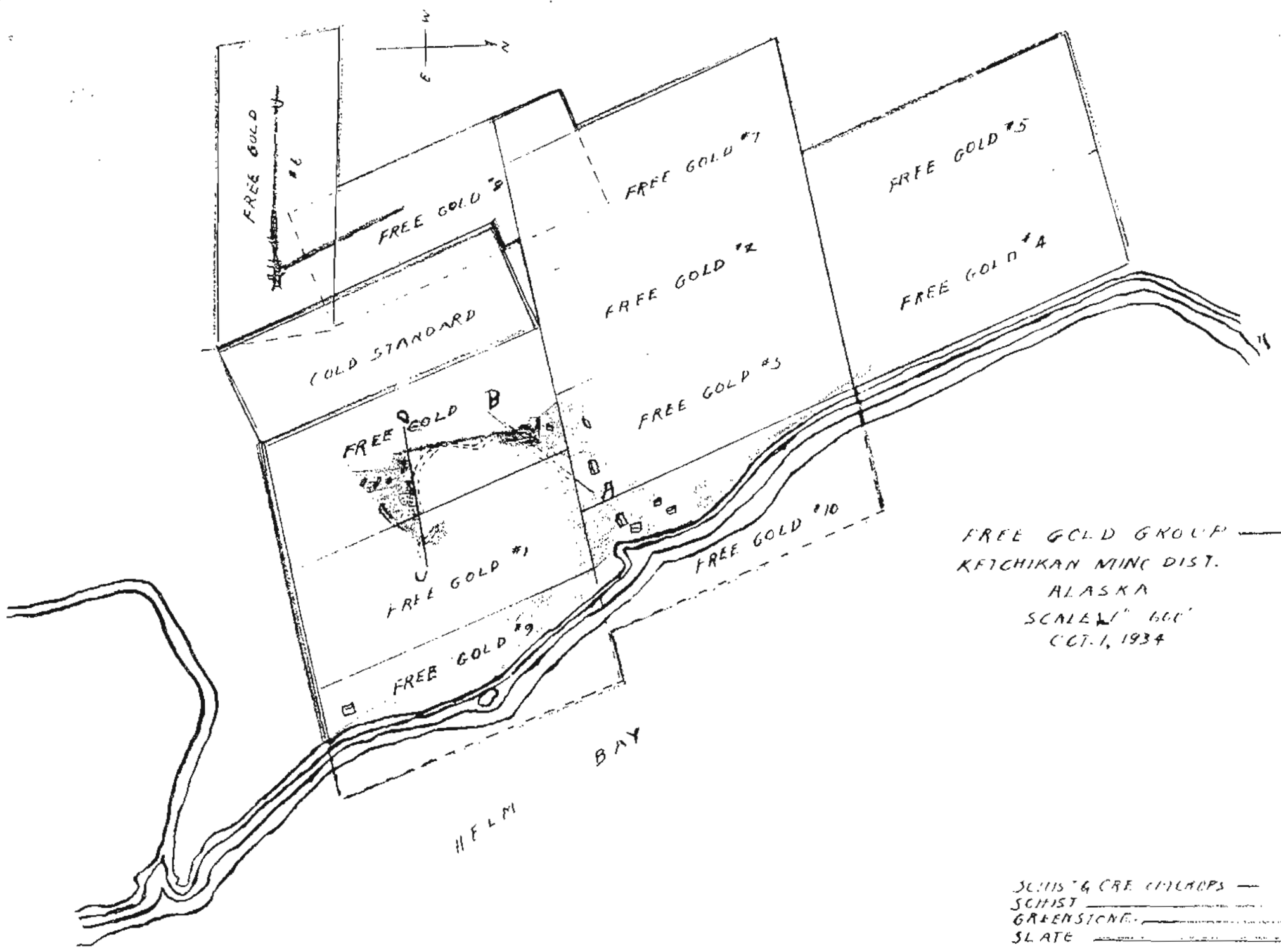
Sleeping Beauty Mining Co. (Herald)

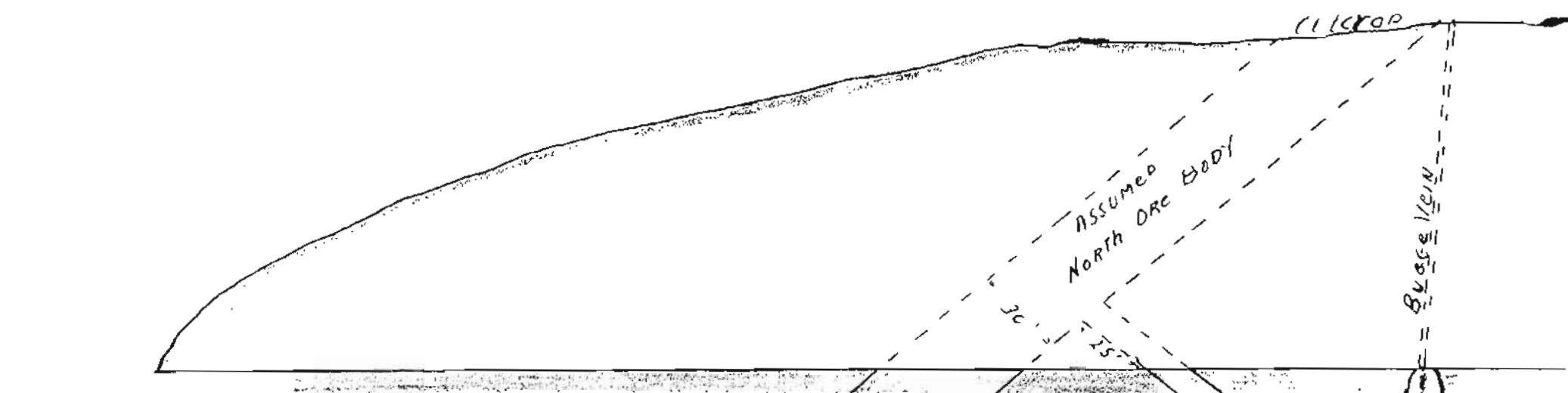
Alaska Gold Min. Mines

True Gold - (Byggstogers)

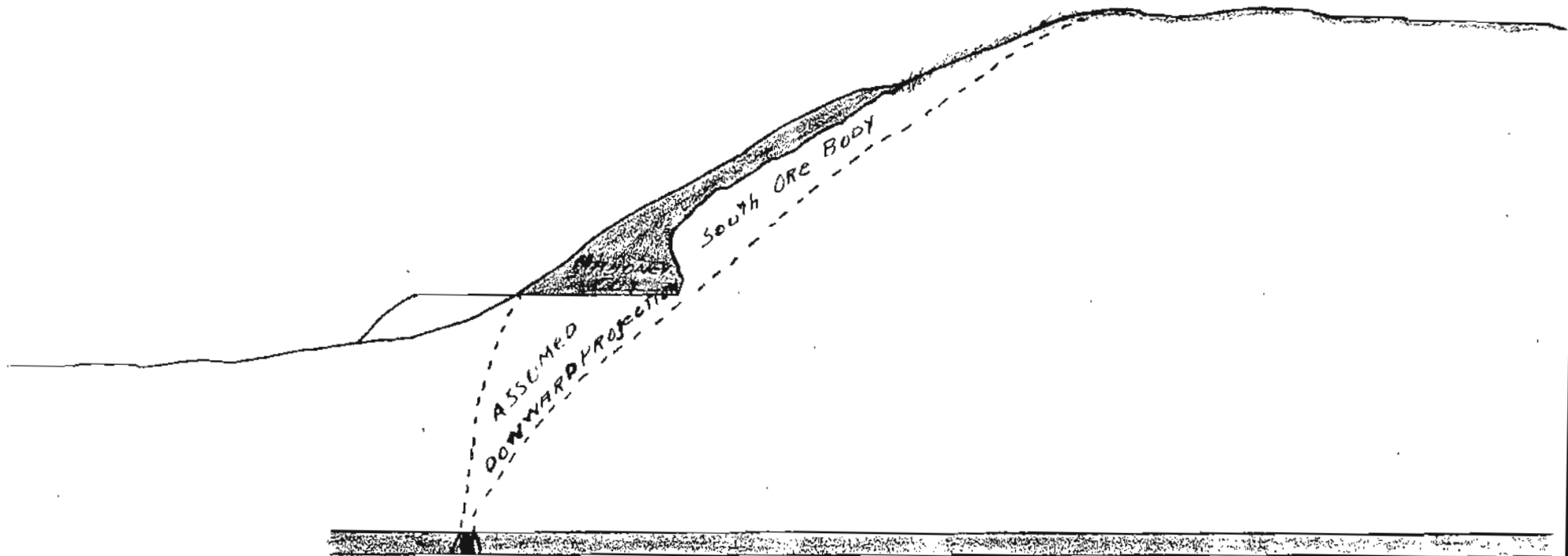
Gold Standard -

McBarron's Chrome





SFC. A-B
FREE GOLD GROUP
SCALE: 1" = 50'



SEC. C-D
FREE GOLD GROUP
SCALE: 1" = 50'