83-#635 - 11528

RECONNAISSANCE GEOLOGIC REPORT

ON THE

TIDE AND TIDE 2 CLAIMS

FOR

TENAJON SILVER CORPORATION

BY

GARRATT GEOSERVICES LTD.

GARRATT GEOSERVICES

Skeena Mining Division
Latitude: 56 degrees 17 minutes N.
Longitude: 130 degrees 5 minutes W.
NTS: 104 B/8

G.L. GARRATT, P. Geol.
AUGUST, 1983

part 1 of 3

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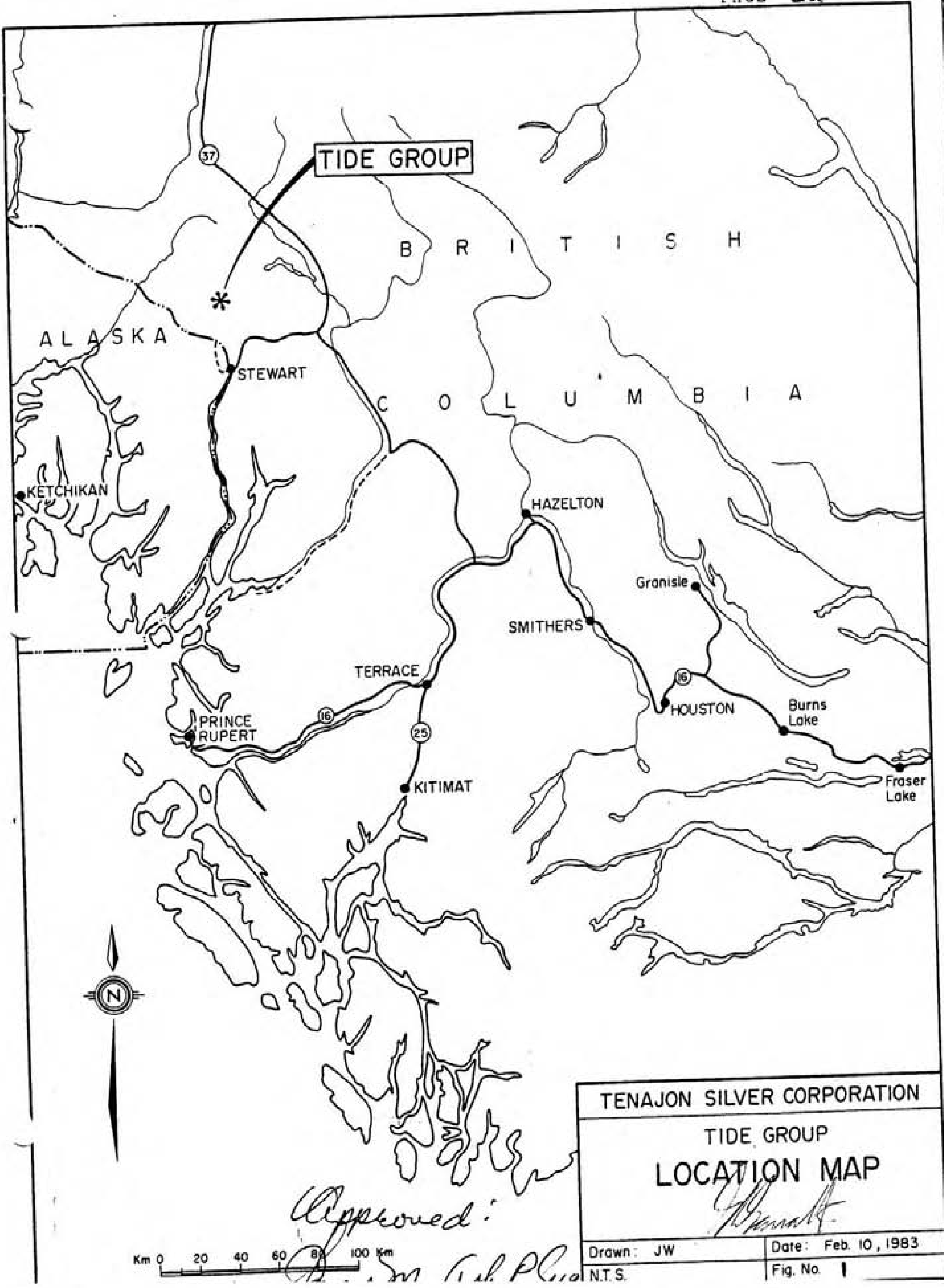
INTRODUCTION

The author was contracted by Tenajon Silver Corporation to visit their Tide and Tide 2 Claims in the Skeena Mining Division for the purpose of determining the exploration potential of known showings on the property. Previous work by the owners included extensive stream sediment sampling, prospecting, hand trenching and rock sampling as well as controlled soil/regolith sampling. Mr. Scott Angus, a prospector employed by Tenajon, ably directed the author to all known mineralized and sampled showings during a five day period between August 15 - 20, 1983. A reconnaissance geologic map on a topographic base at a scale of 1:2500, was prepared and shows the locations of the mineralized zones and observed geologic features. Three relatively distinct zones of structurally controlled epithermal quartz-sulphide precious metal mineralization were outlined. The character of these zones and their exploration potentials will be discussed in this report.

OWNERSHIP

Tenajon Silver Corporation is exploring the Tide-Berendon group of claims under a joint venture agreement with Northair Mines Ltd. and Newhawk Gold. The claim group comprises 120 units divided into seven claim groups; these are:


TIDE GROUP
BRITISH COLUMBIA
ALASKA
STEWART
KETCHIKAN
HAZELTON
Granisle
SMITHERS
TERRACE
PRINCE RUPERT
HOUSTON
Burns Lake
KITIMAT
Fraser Lake
37
16
25
N
Km 0 20 40 60 80 100 Km
Approved:
TENAJON SILVER CORPORATION
TIDE GROUP
LOCATION MAP
Drawn: JW
Date: Feb. 10, 1983
N.T.S.
Fig. No. 1

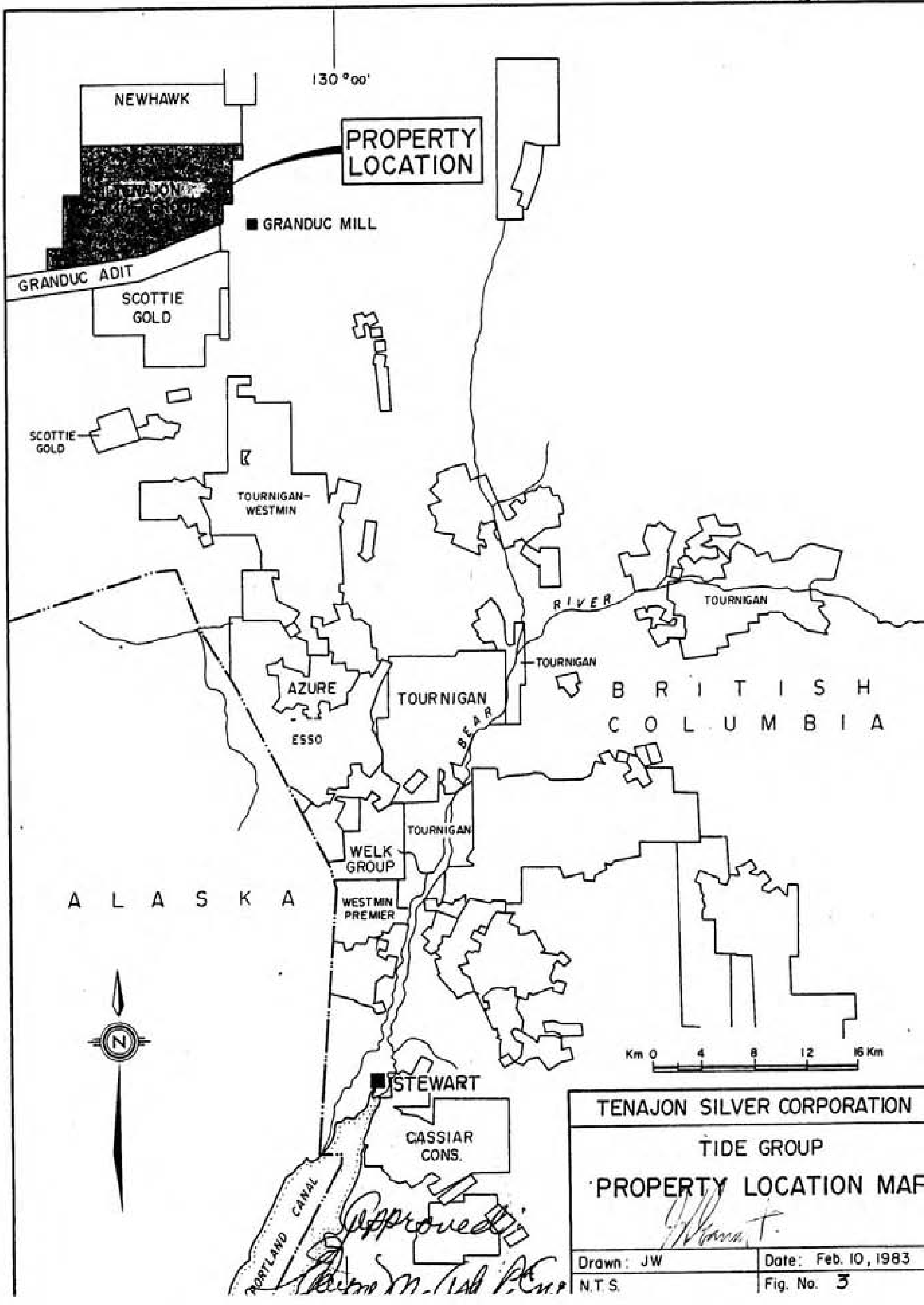
	No. of Units	Record No.
Tide	20	1600(8)
Tide 2	20	2569(9)
Berendon	20	2567(9)
Berendon 2	20	2568(9)
Berendon 3	18	3254(10)
Berendon 4	18	3255(10)
Berendon 5	12	3256(10)

LOCATION and ACCESS

The Tide claim group is located at approximately 56 degrees 17 minutes north latitude and 130 degrees 5 minutes west longitude in the N.T.S. map sheet 104 B/8. The property is accessable by a restricted-use gravel road leading 60 km north from Stewart, B.C. to a point 2 km north of the Granduc (Canada Wide Mines Ltd.) mill site, where a bridge crossing the Bowser River leads to a road accessing the lower elevations of the southeastern portion of the claims. Access to the higher elevations may be had by foot or helicopter travel. Two relatively flat areas at the 1200 and 1400 meter elevations have been used for temporary tent-camps to better access the regions of the prospect lying above tree-line, which occurs at approximately the 1125 meter elevation.

HISTORY

Old tagless claim posts and two small pits indicate minor historical exploration on the group but no written history is known. The claims were staked in 1979. Stream sediment sampling


130°00'
NEWHAWK
PROPERTY LOCATION
GRANDUC MILL
GRANDUC ADIT
SCOTTIE GOLD
SCOTTIE GOLD
TOURNIGAN-WESTMIN
RIVER
TOURNIGAN
TOURNIGAN
AZURE
TOURNIGAN
BEAR
ESSO
BRITISH COLUMBIA
TOURNIGAN
WELK GROUP
ALASKA
WESTMIN PREMIER
Km 0 4 8 12 16 Km
N
STEWART
CASSIAR CONS.
PORTLAND CANAL
TENAJON SILVER CORPORATION
TIDE GROUP
PROPERTY LOCATION MAP
Drawn: JW
Date: Feb. 10, 1983
N.T.S.
Fig. No. 3

was initiated in 1980 and this work outlined targets that were further sampled and trenched in 1981, 1982 and 1983. A prospecting and trenching crew were actively employed on the property during the time of the author's visit. Dramatic recession of permanent snow and ice cover in the past several decades and the subsequent uncovering of showings may be somewhat responsible for the lack of exploration history.

GENERAL GEOLOGY

The area covered by the Tide Claims is shown by Grove (1982) as being underlain by volcanic rocks of the Lower Jurassic Unuk River Formation. A Cenozoic stock of diorite-quartz monzonite composition is shown to occur near the southern border of the Tide 2 Claim. The present mapping indicates that dioritic (granodiorite?) intrusives occur at the 1100 meter elevation near the Tide and Tide 2 Claim boundary and similar intrusive bodies occur in limited aerial extent as faulted wedges within the claim area. The volcanic rocks on the property may be divided into two groups: (1) Massive andesitic flows and flow breccias which dominate the northern half of the map area; (2) andesitic-rhyolitic tuffs which dominate the southern part of the map area. The flows have been partially granitized over large areas as indicated by coarsening of phenocrysts which renders these rocks similar in texture to the irregular dioritic intrusive bodies. It is likely that errors could easily be made in distinguishing these igneous varieties without the presence of distinguishing features characteristic of the less altered flows. Where the original character of the flow rocks is preserved, rounded and often elongated, sub-parallel fragments, which are compositionally and texturally similar to their host, are commonly observed. Flow contacts or distinguishable varieties of flows were not observed and it is concluded that, for reconnaissance purposes, the northern part of the area be mapped generally as massive andesitic flows and flow breccias. Float and sub-outcrop of lithic lapilli tuff and crystal tuff were observed at a few localities within this mass but appear to form a small percentage of the area. The southern portion of the map area is dominated by andestic to rhyolitic thin bedded, well sorted tuffs. Massive andestic flows occur in this area but their relative volume was not determined. Once float specimen displaying slump features also showed reverse grading, indicating a subaqueous setting. Bedding attitudes are often difficult to determine due to shearing and fracturing but it was determined that these units strike westerly to northwesterly and dip near vertically to the southwest. These attitudes fit reasonably well with the north-south division of flows and bedded volcaniclastics described above. It is also probable that the break from the mass of flows in the north to the mass of tuffaceous rocks in the south may be marked by a strong structural break, as indicated by air photo lineaments. The apparently youngest rock type observed in the area is a grey, massive, hornblende porphyry andesite that occurs as two to fifteen meter wide dykes. These distinctive grey dykes were only observed at four localities but all showed northerly trends and appear to have post-dated all shearing events. The location of one dyke west of the East Zone may have been incorrectly plotted in the field as it appears to differ from a location determined from the airphoto; the location to the southwest is favoured and is taken from the position of this distinctively weathering dyke as observed on the airphoto.

STRUCTURE

Faulting, shearing and fracturing appear to dominate the structural setting and at least three tectonic events are indicated. Major folding was not observed and would not likely be easily noted in the competent northern flows. The variable attitudes and steep dips of the pyroclastic sequence indicates substantive tectonic reorientation which might have involved folding. Minor drag folds were commonly seen in calcite veins and pods located along shear/fault zones. From airphoto lineaments it was noted that very strong east-northeasterly (60-70 degrees) and northerly trends transect most of the area while northwesterly and northeasterly lineaments are less intense. Notably, the majority of the mineralized shears and their enclosed veins trend northeasterly (30 - 60 degrees) and this orientation may indicate tension fissuring relative to movement along other fault zones; the elliptical form of the majority of shear zones would comply with this interpretation. The allignment of the North Zone showings into a linear northeast bearing zone appears to be the sum result of shear/vein orientations varying from 20 to 70 degrees. The South Zone showings are marked by trends of 30 to 70 degrees, though south of the camp, northerly trends appear to be indicative of the strong north trending lineaments noted in this area on the photos. This northerly trend appears to have exerted the greatest control over the deposition of shallow dipping (10 to 35 degrees) north trending quartz veinlets in the area from the south camp northward for approximately 350 meters, where the veining often approaches stockwork density and occasionally was observed to follow more random orientations. The youngest igneous event appears to be the grey andesitic dykes which follow north trends which might indicate that the opening of these structures marked the last strong tectonic event in the area. The diorite (granodiorite?) stock shown in the lower reaches of the East Zone appears to be at least partially controlled in its exposure by a strong north trending lineament. Northwesterly trending shears observed in the central portion of the map area appear to correlate somewhat with observed lineaments and major drainage orientation in this area, though controls over mineralization by these structures appears limited as evidenced by the pauicity of known showings in this area.

It is evident that at least two phases of shearing occurred, as the quartz vein/shear zones have been intensely fractured following the deposition of the quartz veins; the quartz veins were often noted to have been intensely fractured to the point of being crumbly. Fracturing of this intensity is common in the mineralized zones and allows hand-tool trenching at many of the showings as well as marking shear zones by troughs of differential erosion, giving the surface topography the appearance of local graben-like features.

DESCRIPTIONS OF MINERAL SHOWINGS

NORTH ZONE

L: This shear zone was traced over a strike length of approximately 29 meters of which the lower portion trends at 60 degrees for about 11 meters and the upper section trends 20 degrees for an additional 18 meters. The zone has been explored by three trenches from which sampling indicates significant gold values. The shear zone is approximately 5.4 meters wide at the lower end and pinches out completely at the upper (southwest) end, but probably averages 2 meters in width. The veins exposed within this intensely sheared zone vary from 0.5 cm to 20 cm in width, the larger vein showing little sulphide content. The quartz veins are themselves intensely sheared but show much greater competency where the arsenopyrite content reaches massive proportions (widths of 5 - 10 cm X strike of 1 meter). The veins pinch and swell dramatically over short intervals and several thin sulphide-barren quartz veinlets often occur peripherally to the mineralized veins. The vein exposed in the upper pit is grey and weakly banded and carries disseminated pyrite and arsenopyrite. Heavy chlorite alteration characterizes the shear zone and gives the rocks a dark green color on broken, fresh surfaces. Minor amounts of pyrite are disseminated along fractures and at the upper end of the zone an outcrop exposes a small area of weak silicification and pyritization. (60 - 70 cm wide and pinching to the southwest). An isolated, 5 - 10 cm wide iron oxide rich altered fracture occurs 14 meters to the southwest of L zone but cannot be traced to the shear.

K: This shear zone has been tested by two trenches and has dimensions of less than one meter wide by a strike length of approximately 10 meters. The zone pinches out at both ends and hosts a quartz vein that is 0.5 cm wide in the lower exposure and 5 cm wide in the upper exposure. The alteration and intense shearing are the same as at L, though peripheral quartz veinlets were not observed. The vein strikes 45 to 50 degrees and was noted in the lower pit to dip 50 degrees NW. The 78 meter zone between K and J is underlain by massive flows that contain patches of weakly pyritic zones as well as the development of one to three thin barren quartz veinlets per 30 cm locally. Whereas the shear zones are heavily gossanous, this area is marked by weak buff gossans relating to the pyritization.

J: The vein exposed here varies from 5 to 15 cm wide and occurs within a very narrow shear that adds only 5 to 10 cm to this width. The vein is oriented at 55/60 NW and contains small lenticular "pods" of massive arsenopyrite that measure 0.5 by 2 cm. Several very weakly gossanous zones occur around this site and appear to be fracture controlled and show no quartz veining. An erosional depression marks this shear.

H - I (trenches 5, 6, 7): This lenticular shear zone is explosed along a strike length of 40 to 45 meters and trends, with the enclosed vein at 65 degrees. The quartz vein varies from 1 cm to 5 cm wide and contains 2 to 5 cm wide pods of arsenopyrite. The vein is hosted in a 20 cm wide iron-oxide rich shear zone and is flanked by less fractured rocks giving a

2 meter total width to the zone. The flanking rocks to the main shear contain minor amounts of veinlet pyrite.

E - F - G: The trenches and pits at these stations exposed the same vein which appears to bend and change dip quite dramatically over the 16 meters of its exposure. An attitude of 65/35 NW at G produces a sharply curved surface trace of the vein at this location and the vein appears to steepen towards the southwest. A gossanous pod of pyritic altered volcanic rock at E marks a bend in the vein which may indicate fluid pooling at a fracture junction. The vein pinches and swells from 0 to 10 cm wide and contains arsenopyrite pods within that reach maximum strike lengths of 2 to 3 meters. The vein is enclosed in a narrow 20 cm wide, or less, shear.

D: Small 5 to 10 cm lenses of quartz which do not appear to carry sulphides are exposed along the narrow shear at D. The vein is 5 to 10 cm and is exposed for about 5 meters where it pinches and appears to die out. A sub-parallel small shear occurs 5 meters to the northwest of D but could not be traced to the D shear. This shear/vein trends 70/35 NW.

B - C: The gossanous shear zone at C is exposed over its full length of 15 to 20 meters and pinches dramatically from a maximum width of 8.0 meters. Several irregular thin quartz veins are exposed in the main trench and small pods of massive arsenopyrite occur sporadically in two of these. A small lens of calcite is also enclosed in the vein. Dark green chloritic alteration pervails and the less altered parts of the shear zone are cut by minor pyrite veining. A narrow vein exposed on the floor of the trench carries minor amounts of sphalerite and galena as well as a trace of chalcopyrite.

A: Two quartz-arsenopyrite-pyrite lenses are exposed in the trench here. These strike 50 degrees (and 50/40 NW) and are bound by narrow zones of higher intensity fracturing than in the rest of the shear zone. As at the other showings, the gossan extent is directly controlled by fracture density. The zone is 5.3 meters wide and pinches to a one meter width before dying out over a strike length of 7 meters.

1: This 26 meter by 1 to 4 meter zone is characterized by its alteration to a white bleached state carrying minor amounts of disseminated and fracture coating pyrite. The alteration is more pronounced at the western end of the zone. The zone strikes 280 degrees and no quartz veins were observed. This occurrence weathers to a brightly contrasting orange and black color with the presence of abundant coatings of pyrolusite; this varies from the deeper red-brown colorations of the mineralized shear zones.

2: This zone strikes 75 degrees and averages one to two meters in width. A pod or vein of white calcite is exposed which varies from 2 cm to 1 meter in width and shows drag folding. The calcite trends 75/75 NW. Randomly oriented barren quartz veins cut the adjacent weakly gossanous country rocks; other weak gossans occur within a 50 meter radius.

3: 5 to 10 cm pods of quartz are exposed which carry smaller zones of massive arsenopyrite; these pinch out over a one meter strike. (Sample location 68332).

4: (Sample site 68333) Abundant calcite veins are hosted by this intensely fractured shear zone as well as a single 1 to 5 cm lensoidal quartz-arsenopyrite vein.

5: A 3 to 5 cm wide quartz-arsenopyrite vein is exposed for 20 meters at an orientation of 3/50 NW. The vein is accompanied by abundant calcite veining.

RED ZONE: This extremely bright and large gossan results from fewer veins than the extent of the gossan indicates. Two to three meter weakly pyritized alteration haloes follow the fracture controlled 2 to 5 cm wide quartz veins. Two types of mineralization occur in the veins and these are: 1. arsenopyrite and 2. chalcopyrite-pyrrhotite. The veins are traceable for about 20 meters. Thin pyrrhotite-chalcopyrite (trace galena) veinlets were observed occasionally.

One hundred meters southeast of the Red Zone, at the 1615 meter elevation, two quartz-pyrite-arsenopyrite veins are exposed in three separate non connected shears that appear to follow the same trend at 50/70 NW, and may connect at depth. The veins are 2 to 10 cm wide and strike for 2 to 3 m each where they pinch out. The overall strike length of the three occurrences is 50 meters.

What appears might be an isolated occurrence is exposed at the 1500 meter elevation, east-northeast of the last described zone. A 1 to 3 cm quartz-arsenopyrite-pyrite is flanked by a 10 cm to 1 meter wide chloritic altered zone and both were traced over a strike length of 20 meters, at an attitude of 310/90 degrees. Approximately 20 meters below this, occurs a small (1 meter X 2 meter) altered zone which hosts a 1 to 2 cm quartz-arsenopyrite vein. The zone shows pyrite-chlorite-calcite alteration and veining.

EAST ZONE: 1060 meter elevation: Several varieties of mineralization occur over an eighty meter by twenty meter area. Each of the veins or showings are separated by unaltered zones and have very limited dimensions. An 0.7 meter wide white quartz vein pinches to 10 to 20 cm over a 5 meter strike length and carries spotty galena-pyrrhotite mineralization. The vein is oriented 90/90 degrees and 5 meters south the same attitude applies to two branching veins. These branching veins occupy a one meter total width and are barren of sulphides. Immediately north of these veins, an 0.4 meter chlorite alteration zone carries 0.5 to 1.0% pyrrhotite. A small quartz vein was noted to contain minor quantities of chalcopyrite, pyrite and pyrrhotite. A shear trending 110°/90 degrees carries up to 20% pyrrhotite and trace amounts of an unidentified fine grained silvery metallic mineral in a weakly banded quartz vein. The vein pinches out to the east. Bands or restricted veins of quartz-feldspar-pyrrhotite were observed to attain 15 to 30 cm widths over short strike lengths. Gossan development is limited to the veins in this area as shearing does not appear to have been intense around the veins.

1180 meter elevation: A 1 to 2 meter by 5 meter gossanous shear is strongly chloritically altered, pinches out in a lenticular fashion and carries approximately 5% disseminated pyrite.

1265 meter elevation: A weak shear zone with dark green pervasive chlorite alteration carries minor pyrite and pyrrhotite.

SOUTH ZONE: Showings previously opened by trenching around the South Camp occur just south of the camp and at station Y and trench 2. The large trench south of the camp has been described and sampled in detail by previous workers and the severely slumped state of the trench will limit discussion here. Two prominent vein systems appear to be exposed in this trench. The main quartz-arsenopyrite vein typical of showings in the North Zone, trends 310/15 NE reflecting the strong northerly shear/vein trend in this area. Numerous thin sulphide-free quartz and pyrite veinlets share this attitude. An iron oxide rich narrow shear in the eastern part of the trench trends 50/80 E and a 5 cm wide clay-pyrite gouge zone trends 30/90 degrees. The gossan-shear zone enclosing these showings (including trench 2 and station Y) is north trending and covers an area of approximately 180 meters by 20 meters. The quartz-arsenopyrite veins at trench 2 and Y appear to be isolated lensoidal pods within the shear and thin to 1 cm from a core of 5 to 10 cm. These pods appear to trend approximately 40/75 SE, paralleling the shear direction at this, the northern end of the zone.

Two shears are exposed on the steep hill side east of the South Camp and these trend at 40 and 70 degrees. these two zones may connect under overburden cover to the east. Five to ten centimeter wide quartz-arsenopyrite pods are enclosed by the chlorite altered shear zone which also hosts fracture controlled pyrite-arsenopyrite mineralization as veinlets and disseminations.

These showings were discovered by reconnaissance regolith or "soil" sampling lines occuring approximately 20 meters downslope. The trends on these shears are similar to the attitudes at Y and trench 2 as well as the North Zone, denoting the predominant shear direction on the property, though a northerly structural overprint is evident in the South Zone. Two quartz-arsenopyrite veins similar to the above are located in fractures (little development of shearing) about 100 meters north of Station Y. One vein trends 80 degrees and follows shear direction over its 15 meter length. Small pods of arsenopyrite occur within the white "bull" quartz veins which are 1 to 5 cm wide. The other vein trends 45/90 which cross-cuts the local shear direction and follows a secondary fracture system. These veins lie within a weak buff colored gossan area that is exposed over an area of 250 to 300 meters by 100 meters. This weak gossan has a sharp contact on the uphill side, near the 1450 meter elevation, and disappears into talus cover to the east. The gossan appears to relate to extensive, generally randomly oriented quartz veining. The veining appears to be dominated by north trends and shallow dips, similar to the large trench south of the camp. Vein densities vary throughout the area from 1 vein per 10 meters to 10 veins per meter, in the latter case almost constituting a stockwork. The veinlets are generally 0.5 to 1.0 cm wide and individual veinlets can be traced for 5 to 10 meters. The veins may thicken to 20 to 40 cm over short intervals and it was by finding talus boulders of these thicker veins in the talus below that the author and Scott Angus were able to attach significance to this gossan area. The thicker veins are moderately well mineralized with course disseminated accumulations of varying amounts of sphalerite, galena, pyrite and tetrahedrite (plus associated malachite). Upon further investigation it was observed that the thinner quartz veinlets carry minor amounts of these minerals and that pyrite veinlets may also carry sparsely disseminated sphalerite or galena. It is most probable that this mineralized zone accounts for the abnormally high stream geochemical amonalies in this area for Cu, Zn, Pb, and Ag. (Previously postulated to indicate porphyry style mineralization). Only thin altered selvages enclose the veins and mineralization was not observed to be disseminated in the volcanic host rocks (dominantly tuffs). The larger veins carry angular country rock fragments along their boundaries, indicating a less passive emplacement than the quartz-arsenopyrite-shear zone mineralization. Where veins in this area do not assay significantly in gold, the presence of tetrahedrite should be checked for as it may have been mistaken for arsenopyrite in some cases. The subtle, yet distinctive gossan development in this zone should emphasize a need for further prospecting in other parts of the property where weak gossans occur but the strong shear zone mineralization was found absent; perhaps other quartz-base metal networks will be located.

Two gossanous zones occur 70 and 150 meters north of the above quartz-vein network zone and may reflect weaker, restricted zones of a similar character. Pyrite veining and minor quartz veining (random orientations relative to fracturing) account for these gossans. Intense shearing was not observed though fracturing is heavy. Chlorite alteration was noted locally.

Two large gossanous zones were observed in the steep bluffs below the ice line to the northwest of the South Zone, at the 1650 to 1700 meter elevations. These occurrences have not been visited and should be prospected.

DISCUSSION of MINERALIZATION

The section titled "Descriptions of Showings" outlined the basic characteristics of the individual mineral occurrences. There appears to be two significant styles of epithermal mineralization exposed in three areas: the North, South and East Zones. The North and South Zones are the most prolifically and continuously mineralized and, subsequently, most extensively prospected. The South Zone encloses two distinctive styles of mineralization, as described in the last section; the first being the quartz-arsenopyrite, dark gossanous shear zone hosted type that characterizes the North Zone, and the second being the quartz-base-precious metal vein networks. The quartz-arsenopyrite-shear mineralization appears to adhere fairly consistently to a northeasterly trend in all areas, as summated by the 30 to 70 degree orientations. The overprinted northerly trend in the South Zone appears to be related to strong lineaments visible on airphotos in this area and may be strongly associated as well with the existence of the quartz-base-precious metal vein networks.

The quartz-arsenopyrite systems are discontinuously located along a strong northeast trend forming the overall North Zone, covering an area approximately 500 to 600 meters long and 60 to 70 meters wide. This zone of discontinuous shears may be an indication of a stronger shear-mineralized zone underlying. Similar mineralization in the South Zone, though of the same tenor, does not appear to delineate such a strong zone of large dimension. The gossan-shear zone south of the South Camp is significantly large in itself and should be considered for deeper exploration, however. Further prospecting in overburden cover to the east and northeast may alter this assumption as well. The East Zone mineralization does not really constitute a consistent or continuous zone but is grouped for discussion purposes. Mineralized zones in this area are scattered and show less intense shearing than other areas. Consequently it is suggested that this area holds less potential for developing economic mineral potential than the North and South Zones, where concentrated groups of showings in a fairly definitive structural setting occur. Further prospecting in the bush/overburden covered area to the east of the East Zone might uncover further vein mineralization and enhance this areas' potential.

In trying to apply an epithermal model to the occurrences on the Tide Claims a contradictory situation may exist. The chlorite-arsenopyrite-quartz shears would theoretically be formed at lower levels than the tetrahedrite-base metal-quartz network system. Although changes in the physio-chemical environment during a period of tetonic-hydrothermal activity could explain the overlap of these apparently dissimilar zones or perhaps indicate a lateral zonation, it is suggested that the two varieties of mineralization may indicate two separate episodes of epithermal activity, controlled by different active structural zones. The shattered nature of the quartz-arsenopyrite-shears indicates a post mineral tectonic event and this may possibly have been related to the stockwork-like mineralization. The first interpretation, therefore, is an overlapping of two epithermal systems, one being controlled by northeasterly shears and the second by northerly trending structures and related fracture zones. A second interpretation of the South Zone overlap could simply be that a transition zone in an episodic epithermal system is exposed and that some overlap must be expected to occur. Whatever the genetic implications, the two styles of mineralization are markedly different and must be explored in slightly different ways. The key to each is in defining the major structural control and exploring that feature for more economically viable mineralization than is now exposed on surface. The present level of erosion would indicate that bonanza type ore veins, rather than disseminated bulk tonnage deposits, would pose the most probable target here, though the quartz vein network mineralization does allow a possibility for discovering a bulk tonnage situation. Rock sampling of the showings has indicated that economic values of precious metal mineralization over significant widths do exist on the property. The strike extent of these mineralized zones, as they appear on surface, appears to be quite limited and large zones of barren country rock exist between showings. The author believes that the often spectacular assay values when taken qualitatively indicate a well mineralized precious metal epithermal system. The consistency of this mineralization over large areas, though lacking apparent continuity in detail, is a good indication that a strong underlying controlling structure exists which may be more continuously or prolifically mineralized.

CONCLUSIONS

1. The Tide and Tide 2 Claims are underlain by volcanic rocks of probable Lower Jurassic age and can be divided into: a northern area dominated by massive andesitic flows and flow breccias; a southern area dominated by thin to moderately bedded pyroclastics of andesitic to rhyolitic composition. These latter units apparently strike west to northwesterly and dip very steeply to the southwest.
2. Air photo lineament study and surface mapping indicate strong northerly and east-northeasterly fault/shear development with lesser structural breaks (in extent and surface expression) trending northeasterly and north-westerly.
3. The north trending structures appear to have been the focus of the latest tectonic adjustments, as indicated by young unfractured dykes within north-trending breaks.
4. Two types of economically interest mineralization were observed:
   (a) quartz-arsenopyrite ± pyrite veins and pods in chloritically altered, very gossanous northeast trending shear zones.
   (b) quartz-tetrahedrite-sphalerite-galena-chalcopyrite and pyrite base metal sulphide veining networks that

locally achieve stockwork densities, these may be related to northerly trending structures.

5. The above mineralization types were both observed to occur over substantial areas that are large enough to host mineable deposits.
6. Precious metal values in the mineralized showings indicate that economic grades occur, though these occurrences and goades do not define an economic ore body in their surface configuration.
7. The mineralization and associated gangue and alteration minerals, combined with the structural setting, define their classification as epithermal deposits of the silver-gold type (based on high Ag:Au ratios) and are speculated to have been related to Cenozoic hot-spring activity.
8. A good exploration potential exists for the North and South Zones and further prospecting and geologic mapping may even extend these zones, or discover new, related zones of mineralization.
9. Prospecting to date has focussed on the discovery of quartz-arsenopyrite shear zone mineralization and has ignored or missed vein-network mineralization or other geologic features (barren veins, shears) that might have an important bearing on the future exploration of the prospect.
10. Large areas of the property remain relatively unexplored, though stream sediment sampling has indicated good areas to the north and west for future prospecting and follow-up exploration.

11. A detailed geologic understanding of the property is lacking.

RECOMMENDATIONS

The Tide-Berendon claim group is a relatively young prospect in its very initial stages of exploration. Enough definition has been gained by prospecting and geochemical sampling to indicate a promising potential for the discovery of economically viable ore zones. To this end it is obvious that a controlled (via a base-line grid system) program of geologic mapping at a scale of 1:2500 should be undertaken over the entire accessable portions of the claim. This program would be aimed at defining the geologic setting and mineralization controls with the ultimate purpose of locating optimum sites for drill testing. It is suggested that a four man crew be utilized for a six week period and should consist of a senior geologist and geological assistant as well as two prospectors. The prospectors could initiate the placement of a control grid for the mapping and subsequently prospect the relatively unexplored portions of the group. This prospecting will aid the geologist in defining priorities for detail versus reconnaissance mapping as the program proceeds.

The use of geophysics has apparently not been very successful in defining similar vein deposits in the district, except where pyrrhotite rich bodies are located. The relative pauicity of this mineral on the group precludes the possibility of the successful use of magnetics. It is recommended, however, that a simple and inexpensive VLF survey be undertaken across known structures on the property to determine its effectiveness in

delimiting structural zones relating to mineralization. In this regard it is obvious that the North Zone should be tested along northwest lines perpendicular to the apparent host structure, and the South Zone should be tested in two directions, easterly and northwesterly. If this method proves effective, a more complete survey should be undertaken to cover areas deemed interesting by the geologic mapping. Geochemical sampling has been successful in locating broad zones of anomalous terrain (stream sampling) as well as locating small vein occurrences (soil/regolith sampling). It is apparent however that this technique has reached an hiatus in its usefulness and should be discontinued in the alpine regions for the present time. The geologic mapping may indicate some covered areas where further geochemical sampling might be used and this may entail some reconnaissance sampling in the more heavily covered lower slopes of the property.
Upon reviewing the results of the above mapping/prospecting program, drill testing is recommended. The presently known occurrences as described herein should be first tested to ascertain their characteristics at depth, unless more favourable areas are located during the mapping. Owing to the relatively steep dips of the zones, angle holes will likely be most effective though detailed mapping in the South Zone might determine vertical holes more effective. It is always difficult to determine an optimum or minimum amount of drilling that will adequately test a mineral zone. It is hoped that geologic mapping will give sufficient further definition to allow a greater chance for success in an initial and high risk drill

test situation. It will be suggested, however that approximately 1,000 meters of core drilling in four to six holes would be sufficient to evaluate the zones in terms of defining their potential in a more quantitative way.

An estimate of the cost of such a project as follows:

Geologist: $300.00 (1 day) X 60 days	$ 18,000.00
Assistant: $ 90.00 (1 day) X 60 days	5,400.00
Prospectors:2 X $100.00 (1 day) X 40 days	8,000.00
Camp equipment	5,000.00
Food and supplies: 200 man days X $15/man/day	3,000.00
Diamond drilling: 1,000 meters X $80.00/meter	80,000.00
Helicopter: (approx.) 35 hours X $430.00/hour (estimate based on shared use of local helicopter if available)	15,050.00
SUB-TOTAL	$134,450.00
10% OVERHEAD	13,445.00
TOTAL	$147,895.00

This budget is a rough estimate and would have to be altered to account for current drilling and helicopter rates for the time the program was to be undertaken.

STATEMENT OF QUALIFICATION

I, GLEN L. GARRATT, residing at 2540 Skeena Drive in the City of Kamloops, Province of British Columbia, do hereby testify that:

1. I am a practising geologist and have been since 1972 after completing a B.Sc. in geology at the University of British Columbia.
2. I am a member in good standing of the Association of Professional Engineers, Geologist and Geophysicists of Alberta and a Fellow of the Geological Association of Canada.
3. The conclusions and statements made in this report are the author's and are the result of a five day visit to the property and subsequent review of past exploration data supplies to the author by the client.

G.L. GARRATT, P. Geol., F.G.A.C.

August 1983

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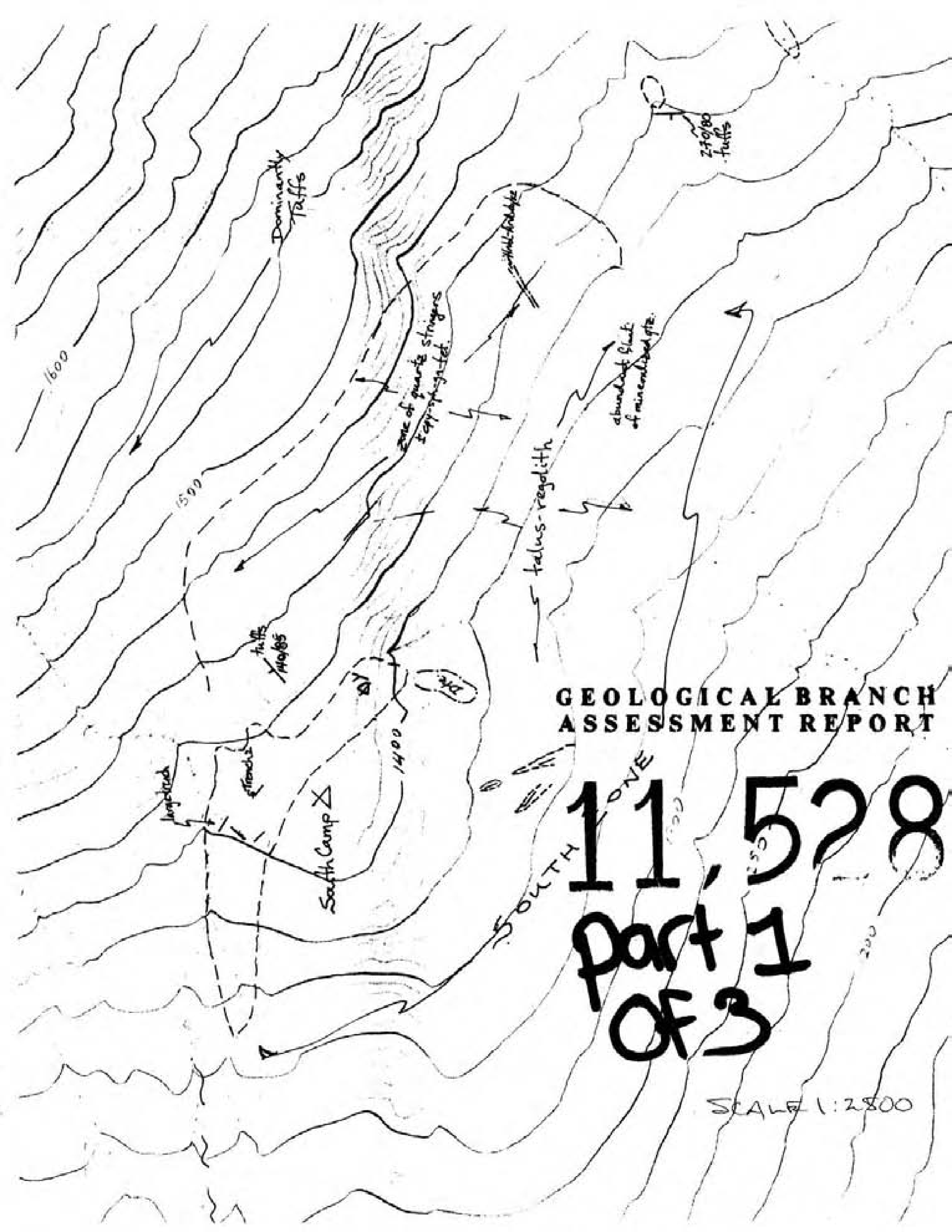

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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