ASSESSMENT REPORT

SCOTTIE GOLD MINES LTD.

GEOLOGICAL REPORT

LAT. 56° 31' N

LONG. 130° 05' W

NTS 104 B/1

SKEENA M.D.

SCOTT CLAIMS

SEPTEMBER, 1982

R. Wares, P. Eng.
W. Gewargis, B.Sc.

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SUMMARY

A programme of detailed geological mapping was carried out on the property of Scottie Gold Mines Ltd. The property is located north of Stewart, B. C. in the vicinity of Summit Lake.

The claim group was mapped at a scale of 1"=200' (1:2400). The area mapped totalled 2.68 sq. miles (6.87 Km^2).

Ground control was established with picket lines established from a 5400 ft. (1646 m) north-south base line. Lines were at 200' intervals.

The geology consists essentially of a central granodiorite/quartz monzonite stock emplaced into a series of volcaniclastic breccias and finer grained sediments. The volcaniclastic rocks are variably altered. Locally a quartz-chlorite-pyrrhotite alteration sequence is present. A wide but variable contact alteration halo surrounds the intrusion, resulting in silicification and an overprinting on the volcaniclastic rocks.

The property is transected by a westerly dipping fault system termed the Morris Summit fault, which separates different structural domains.

Sulphide mineralization is widespread on the property but is only consistent in size and gold values in the area of the present mine workings. The veins in that area are components of a shear system developed as a secondary shear component of the Morris Summit fault zone.

I GENERAL

1.1 Location

The Scottie claim group is located about 24 miles (38 kms) north of Stewart, B. C. (Fig. 1). The claim group is located on the west side of Summit Lake, 2-3 kms. south of the Canada Wide concentrator.

1.2 Access

Access to the property is from Stewart by the restricted access Canada Wide road. The claim groups are located on the west side of Summit Lake and are accessible in part from the Scottie mine road. The mine road transects the eastern edge of the claim group. Access elsewhere on the property is on foot.

1.3 Topography

The topography of the claim group is rugged. Elevation ranges from 2600', (800 m) to 6200' (1900 m). The central area of the claim group is occupied by a relatively static snow field (Fig.2) with strongly serrated ice fields occupying the upper reaches of the Morris Summit glacier. Although outcrops are generally plentiful, some are inaccessible by virtue of their steepness.

Scrub timber and slide alder occupies ground below 1050 m except where recent ice retreat has occured.

In general, there has been a rapid ablation of ice and snow fields in the area, giving rise to large areas of fresh outcrop with little established alpine vegetation.

1.4 Claim Status

Claim Status	Recording Date
Scot Group	
6407 - 6412	
6296 - 6301	Crown Grants
6405 - 6406	
680	31/7/78
1601 - 1602	2/8/79
2029 - 2030	13/2/80
2200	25/2/80
3283 - 3287	25/9/81

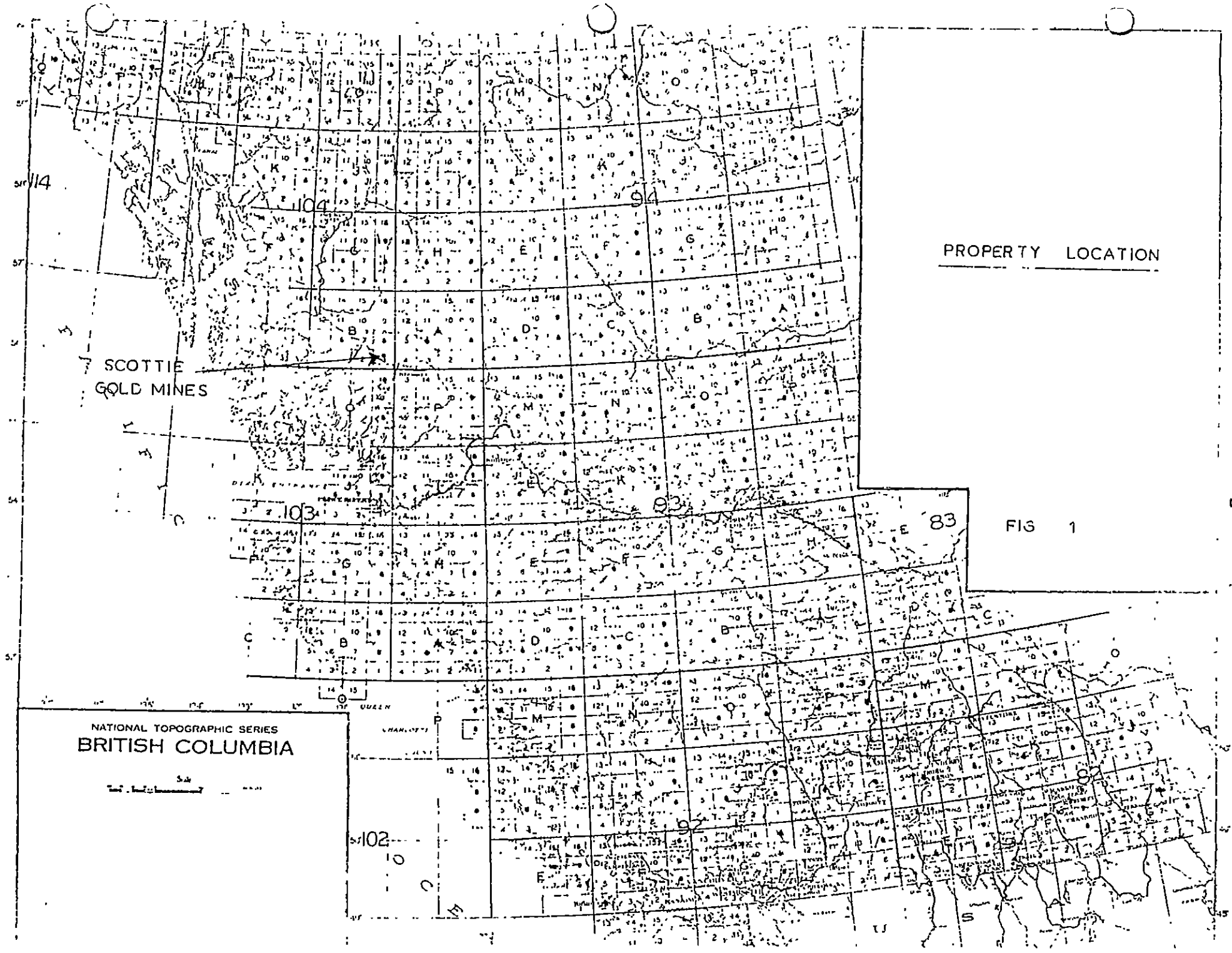

PROPERTY LOCATION
SCOTTIE
GOLD MINES
NATIONAL TOPOGRAPHIC SERIES
BRITISH COLUMBIA
114
104
94
103
93
83
102
92
82

FIG 1

The property consists of the following Crown Grant claims:

NAME	LOT
Prince No. 1 C.G.	L 6407
Prince No. 2 C.G.	L 6408
Prince No. 4 C.G.	L 6409
Prince No. 5 C.G.	L 6410
Prince No. 6 C.G.	L 6411
Prince Fraction C.G.	L 6412
Summit Lake No. 1 C.G.	L 6296
Summit Lake No. 2 C.G.	L 6297
Summit Lake No. 3 C.G.	L 6298
Summit Lake No. 4 C.G.	L 6299
Summit Lake No. 5 C.G.	L 6300
Summit Lake No. 6 C.G.	L 6301
Summit Lake FR# 7 C.G.	L 6405
Summit Lake FR# 8 C.G.	L 6406

1.5 Previous Work

The Scottie claim group has been the locus of prospecting activity over a 50 year period.

The showings in the area were discovered in 1930. Prospecting and drilling was carried out by Premier Mines in 1931.

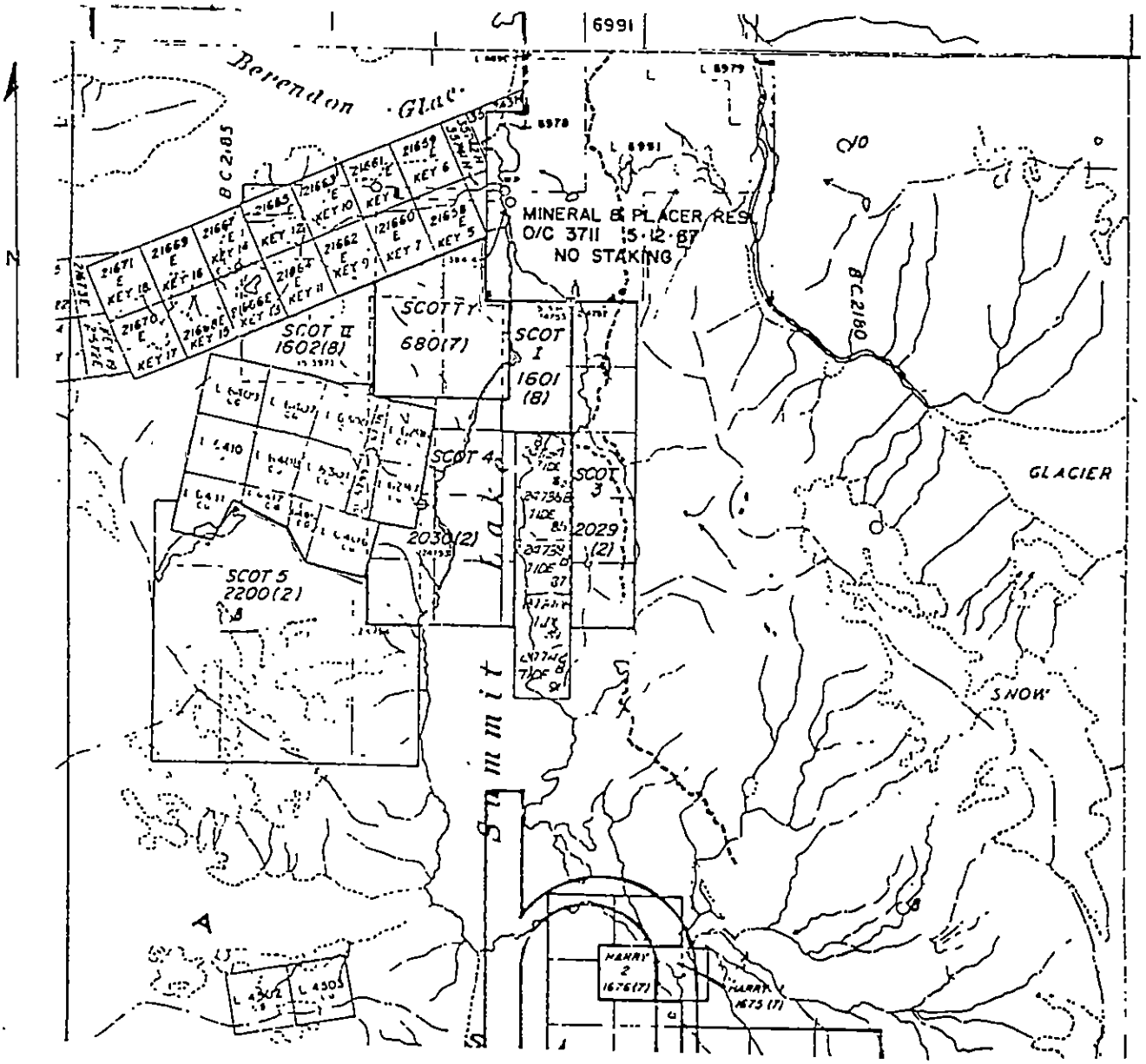
The property was optioned to Consolidated Mining and Smelting who drilled some deep drill holes.

Salmon Gold Mines carried out underground work from 1936 to 1939.

In 1945 Morris Summit Gold Mines acquired the property and carried out diamond drilling.

In 1978 the Scottie Gold group acquired the property and as a result of engineering studies, prepared the property for production, Production commenced in late 1981.

The present claim groups incorporate the former "Scotty" claims, investigated in 1946. Prospecting activity was carried out in 1980 and 1981 with detailed mapping in 1982. The mapping program was carried out on a scale of 1" = 200 (1:2,400) with more detailed maps of selected areas at 1:480. Control was established with a north-south base line and lines at 200' (60.96m) intervals. The mine and surface features were tied by ground survey.



SCOTTIE GOLD MINES LTD	
CLAIM MAP	
Project: Surface	**Drawn:** R.W
Date: Sept 1982	**Approved:**
Scale: 1:50,000	**Revised:**
N.T.S. 104 B/1	**Figure:** 2

II REGIONAL GEOLOGY

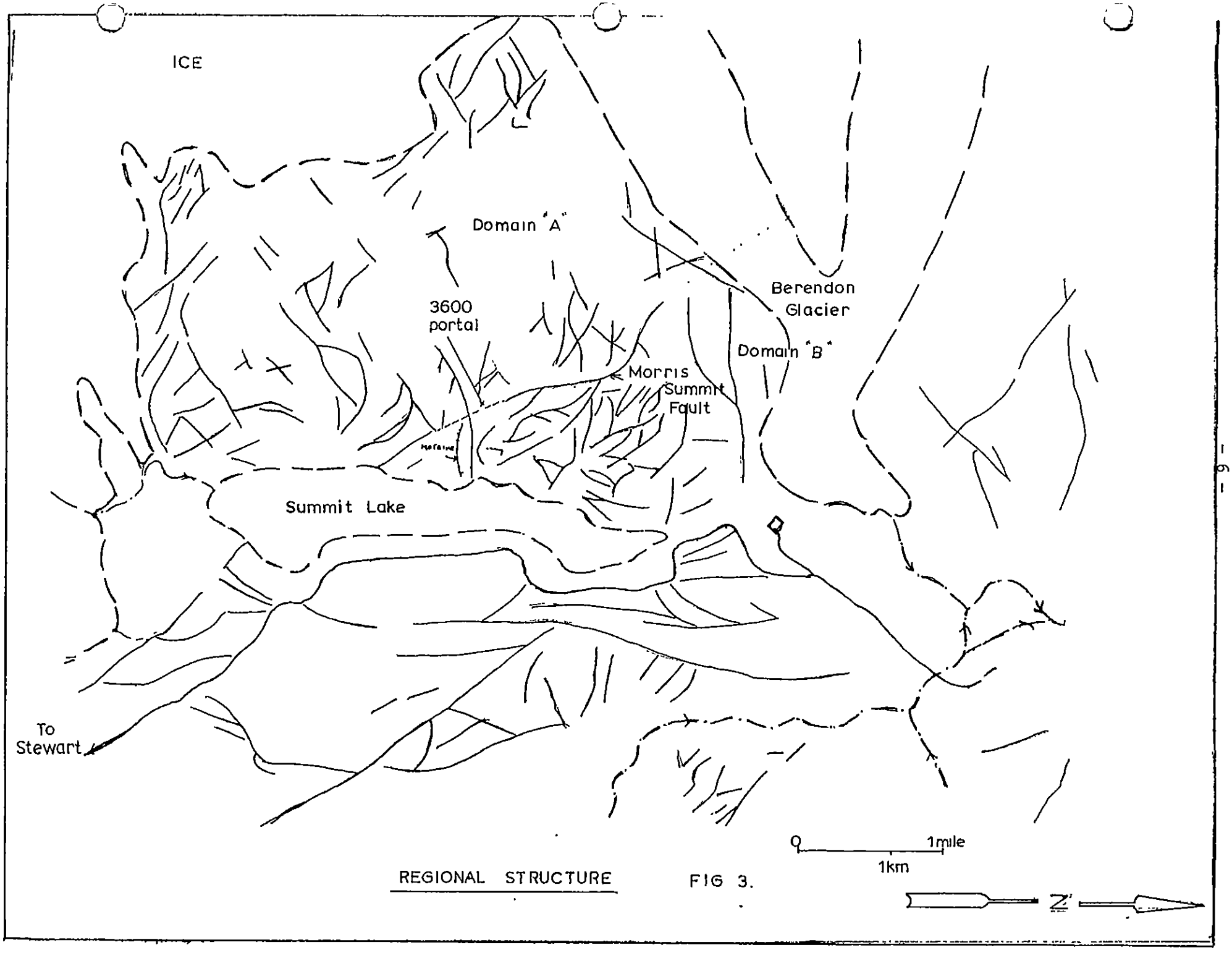
The regional geology of the Scottie area has been described by Groves (B.C. Dept. of Mines, Bull. #58,1971).

In essence the geology of the Scottie area has been described as a sequence of Hazelton assemblage volcanic fragmentals cut by a Tertiary granodiorite stock. One unit described by Groves is an altered assemblage of cataclastic rocks, forming a structural inlier in fresher volcaniclastic rocks.

The geology of the scale mapped revealed somewhat greater complexity.

A regional air photo linear study (Fig.3) revealed a difference in structural style in the Scottie property. A difference in structural fabric is evident on the footwall and hanging wall of the Summit Lake fault zone. The eastern domain is characterized by a strong north trending fabric, while the western side is dominated by easterly trending fractures.

The cataclastic assemblage, identified as a regional unit, proved to be less well-defined under more detailed mapping.



REGIONAL STRUCTURE FIG 3.

III GEOLOGY

3.1 General

The general geology of the Scottie Gold Mines property consists of a central granodiorite/quartz stock emplaced into variably altered units of Hazelton aspect. (Fig. 4(2) 4(3))

The Hazelton assemblage comprises a predominance of matrix supported breccias of andesitic affinity. A prominent unit on the property is an altered sequence of Hazelton units that gives rise to a quartz-chlorite-pyrrhotite/pyrite assemblage, exposed on the cliffs west of Summit Lake, and north of "No Name" creek.

Lying to the west of this unit, and apparently in fault contact with the above unit, are somewhat fresher volcanic breccias, somewhat epidotised . Fragments are clearly recognizable. In and near the Morris Summit fault zone, the volcanic units are fine grained and it is probable that deformation and alteration have obscured the breccia fragments.

The Summit Lake Intrusion, a granodiorite/hornblende quartz monzonite stock, is locally sheared and chloritised. A wide but variable contact aureole is present. The inner envelope comprises a pervasively silicified contact zone with fine, disseminated pyrrhotite, grading outwards to altered volcanic breccias, with a metamorphic overprint.

The structural geology is dominated by a set of northerly trending faults, the most dominant of which is the Morris Summit fault, a moderate, west dipping fault. Associated with, and in the footwall of the fault are steep, intermeshed fault zones.

The dominant area of gold bearing mineralization is in the area to the west of the 3600 portal, and lying in the hanging wall of the Morris Summit fault. The area of mineralization has a number of variable quartz-carbonate veins. The area of strong sulphide mineralization comprises intersecting shear planes carrying predominantly pyrrhotite. The shear and tension planes form a clear fault pattern, though complex on a small scale.

3.2 Hazelton Assemblage (2b, 2c)

The Hazelton assemblage in the Scottie Mines area is predominantly a matrix supported breccia. Finer grained members of the assemblage are present but appear to be deformed members with fragments obliterated by pervasive deformation and alteration.

3.2 Cont'd.

Units categorized as volcanic conglomerates have been described but are rare. None were observed on surface.

The matrix supported breccia (2b) shows some areal variation in fragment size. None is sufficiently clear to establish bedding or facing directions by itself. Fragments of andesitic aspect are angular to sub-angular but are not uniform in size within outcrop scale. Fragments that are not andesitic in character are relatively rare.

Fragments that resemble broken pillows were recognized about 2000' south of the 3000 portal. This is the only locality where exotic fragments were recognized.

The finer grained members (2c) of the Hazelton assemblage are present, but are problematic in aspect. In part this is due to the weathering characteristics of the breccia, rendering some areas difficult to categorize. Weathering often prevents the fragmental character being recognized.

However, even in well-exposed outcrops, a belt of finer-grained volcanic arenite , with sparse or rare fragments,was recognized. This forms a belt lying in the footwall of the Morris Summit fault. The units here are greenish to medium green, slightly epidotised volcanic arenite but devoid of any bedding variations. About 1800' south of the 3600' portal, some cherty horizons were recognized.

The unit (2c) is gradational with fine, contact altered units. These are present in an elongate belt, peripheral to the Summit Lake stock, from 4+00s, 18+00W to 16+00N, 16+00 W . The megascopic characteristics of the unit at these locations is not dissimilar from unambiguous volcanic arenite. The spatial relationship to the Summit Lake stock suggests that the unit has a contact metamorphic overprint.

Unambiguous bedding or gradational fragment sizes are rare, despite strenuous efforts to locate these.

Bedding, with a fragment gradation from breccia to arenite was noted at 5800 N, 11300 E. Trough structures, cross-bedding and fragment variation demonstrate a strike of 160^0, dip of 70° to the west, with the beds "facing" west. Similar west facing structures were observed 1800' south of the 3000 portal, in volcanic arenite.

Out with the map sheet, and about 2 miles west of 3600 portal, similar west facing bedding/trough structures were observed.

No felsic horizons or felsic tuff units were observed.

The Hazelton assemblage on the property is a deeper water facies of debris flow andesitic pyroclastics.

3.3 Regional Alteration (3b)

The area to the north of Camp Creek is characterized by the widespread occurrence of altered Hazelton volcanic rocks.

The alteration is characterized by the development of fine-grained pyrrhotite or pyrite in the volcanic host. Remnant fragments and bedding are observable at a number of locations.

The unit forms a wide zone on the west of Summit Lake. To the south of Morris Summit glacier, an elongate zone of the altered assemblage is present. The zone has a gradational contact with less altered Hazelton assemblage. This zone can be traced north of the glacier and to Camp Creek.

On the basis of field relationship and regional geology, the unit appears to be an altered regional sequence. The steep cliff zone to the west of Summit Lake shows some evidence of an overprinting of the regional assemblage be contact effects of the Summit Lake Stock. This is evidenced by the development of pyrite and pyrrhotite along joint cleavage planes, a feature not widespread elsewhere in the assemblage, where sulphides are generally fine-grained and disseminated.

The alteration assemblage is not clearly related solely to the Summit Lake Stock, but appears to be a structurally controlled alteration pattern.

3.4 Siliceous Hornfels (3a + 3a(1))

The above unit is variable in its development. It, in general, flanks the contact with the Summit Lake Stock. Exceptions to this are units from 8+00N, 10+00 W to 0+00, which may be fault slivers from a contact zone.

The unit forms an inner component that weather to a grey to cream sucrosic unit. The unit is generally massive in aspect with only rarely a well developed cleavage. Pre-existing lithological variations are generally markedor obliterated by the pervasive alteration and silicification. Fine-grained disseminated pyrrhotite is ubiquitous in the unit, giving rise to a reddish surface discolouration.

The outer envelope of the unit (3a (1)) is categorized by the development of a variable, closely spaced cleavage/jointing and occasional quartz veins and siliceous replacement zones. The latter are characteristically podiform in nature.

In one area 11+00N, 10+00E there is the development of coarse hornblende in an irregular altered zone.

Some irregular quartz veins are present.

3.5 UNIT 4 SUMMIT LAKE STOCK

The Summit Lake stock generally comprises a hornblende quartz monzonite or hornblende granodiorite.

The unit is generally uniform in texture and only locally more porphyritic. Igneous lamination is locally present but generally rare.

Compositional variations are subtle and indistinct. Within the area mapped there is no clear evidence of a composite intrusion.

The border phase of the intrusion is manifested by a fine-grained aspect, though this is relatively uncommon. In the area where the intrusion is transected by the Morris Summit fault zone, there is a development of some chloritization and shearing. There is no evidence that this site specific alteration is associated with sulphide mineralization.

3.6 DYKE ROCKS (3a & 5b)

A diverse assemblage of dyke rocks are exposed on the Scottie property. In particular the area to the west of the 3600 portal is characterized by a heterogeneous suite of dykes.

UNIT 5a - MILL PORPHYRY

The above unit, of distinctive aspect, is only found in the area lying structurally below the Morris Summit fault.

The unit is a medium grained porphyry with 40% orthoclase phenocrysts. It is generally fresh and not significantly deformed or altered. It forms a suite of dyke and sill-like bodies. It is especially well exposed near the mill portal.

Only one exposure was noted at or near the Morris Summit fault zone. Immediately to the south of 3600 portal and on the south side of Morris Summit glacier, a narrow 15' dyke of the porphyry is exposed. It lies above a shallow dipping fault.

The distribution of the Mill porphyry has aspects of emplacement above a shallow (and hidden) subjacent porphyry stock.

UNIT 5b - XENOLITH DYKE

The above unit forms a narrow dyke, up to 15' wide. The distinguishing feature is that it carries xenoliths of the mill porphyry in an andesitic matrix. These fragments are from 3"-8" diameter and are frequently, but not invariably epidotised.

No occurrences of the dyke were noted to the east of the Morris Summit fault zone. The dyke was noted in the 3600 portal area and in a zone 2 miles west of the mine area (not on map sheets).

The dyke was not observed to cut the Mill porphyry. It is cut by five later dykes. On the basis of the fragments it is considered to be cogenetic with the mill porphyry but emplaced at a different structural level.

UNIT 5c, 5d. - MICRODIORITE DYKES

A strong suite of microdiorite dykes is present throughout the property. These dykes, up to 40' wide, appear to form part of a regional dyke swarm.

The dykes vary from an aphanitic to fine grained, occasionally banded margin to a fine to medium grained core unit.

At one location 31+00N 67+00E, a fine grained phase was observed to cut the microdiorite dyke but was only noted in and associated with the microdiorite.

The microdiorite swarm has been observed at several localities to cut the northerly trending shear zones.

The units are occasionally cut by east trending narrow shears, up to 6" wide. These appear to be a regional suite of joints and thin shears with minor movement.

5e, 5f - SPHERULITIC, LAMPROPHYRE DYKES

These dyke rocks are restricted to the mine area. They form a cogenetic suite.

The earliest unit (5e) is a greenish, fine to medium grained dyke of andesitic aspect. Distinctive to this unit is that development of gloneroporphyritic clasts of feldspar phenocrysts which exhibit a preferential development in and near the margins of the dyke unit. No flow banding is present in the unit. The dykes trend 060°.

Cutting, but closely associated with the spherulitic dyke, are a swarm of lamprophyre dykes. These weather to a dun brown, occasionally purple colour. They are fine grained. These have been termed in the past, a spessartite dyke swarm.

The dykes are found individually as separate dykes, up to 5' wide and as marginal units of the spherulitic dykes. This appears to be chilled against the spherulitic dyke. They have a similar trend.

5g-DIATREME DYKES

These dykes are relatively rare on the property. They have been noted at two general areas. In the area from the 3600 portal to west of 3600 several thin dykes were noted, up to 2' wide and exposed over 200' strike length.

At these locations the dykes are heterolithic breccia dykes with a fine grained matrix. Fragments comprise fine grained volcanic rocks and (apparently) fine grained sediments. The matrix weathers to a sandy textured unit.

A second type of breccia dyke was noted at several locations in the Summit Lake stock. The dyke was noted as marginal phases of 5c dykes. These problematic units comprise rounded fragments of hornblende quartz monzonite in an andesitic matrix. They are up to 3' wide. They appear to form diatreme dykes emplaced by gas streaming in the fault zones, rather than tectonic breccias.

The relationship of both dyke types is unknown.

The relationship to the other dyke types is unknown. The mine area diatreme dykes are inferred to be the youngest dykes though no irrefutable evidence is present.

Both dyke types have aspects of gas streaming or diatreme breccias.

3.7 ALTERATION ASSEMBLAGES

There are distinct areal variations in alteration on the Scottie Gold Mines property.

The most distinctive unit is 3b, the pervasively latered Hazelton assemblage. These units are altered to grey to green fine grained quartz - chlorite-pyrite pyrrhotite assemblage albeit overprinted by contact alteration in part.

Below the Morris Summit fault and lying between the (faulted) 3b unit, and the fault zone. The Hazelton rocks, generally comprise matrix supported breccias which are altered to a greenschist facies epidote-chlorite assemblage. Below the Morris Summit fault, incipient deformation appears to have obliterated fragments and the units were mapped as the fine grained assemblage.

Above the Morris Summit fault, (and hosting the mine area), the Hazelton Assemblage comprises a greenschist facies assemblage but different in aspect from that underlying the Morris Summit fault. Obliteration of texture is present in the peripheral area of the Morris Summit intrusion.

3.8 STRUCTURAL GEOLOGY

The dominant element of the structural geology of the Scottie Gold Mines property is the strong break which is present from 14+00S, 6+00W to 32+00N, 17+00W. This break can be traced further south to the edge of Summit Lake, 2500'(800m) south of the 3600 portal.

The break comprises a set of faults. The most western element has a strike of 160° and dip of 45° to the west. It can be traced underground in the 3000 level.To the east of this fault is a set of steeper but still westerly dipping faults, that form a set of splays and intermeshed faults.

An examination of the air photo linears (Fig. 3) shows a difference in structural style east and west of the Morris Summit fault zone, as the above fault has been termed. East of the fault zone, the domain is dominated by a predominance of northerly trending linears and fault zones. Some arcuate fractures are present (Fig. 3) on the flanks of the contact altered assemblage. These are inferred to by a ring type of fracture related to the emplacement of the Summit Lake stock. It is present from 24+00N, 18+00E, to 10+00N,21+00E.

The western domain is characterized by a predominance of easterly trending faults/linears.

In the eastern domain, there are a strong suite of northerly trending faults. In well-exposed area, the faults are marked by a relatively narrow gouge zone (2', 0.7m) with a close network of parallel shear joints. Displacement along the smaller faults is minor but recognized by displacement of the granodiorite contact. The displacement masked by contact variations may mask a greater displacement.

The evidence is not substantial for emplacement of the Summit Lake stock into an already deformed volcanic assemblage. The joint pattern in the intrusive suggests that the faults may in fact be propagated into the intrusion.

The northerly trending faults in the eastern domain are characterized by an intermeshed fault pattern. This is particularly evident in the area from 24+00N on the base line to 36+00N. The faults are cut by a suite of micro-diorite dykes that are not displaced at the fault/dyke junction. The dykes appear to be a regional swarm, related to tension release.

Along the trend of the Morris Summit fault, the contact of the Summit Lake stock shows some displacement, in the order of 3500' (900m) in the horizontal plane. There is no clear evidence to assess the style of displacement, whether solely strike slip or with an additional down dip component.

The western domain has a greater predominance of easterly trending faults. This is particularly evident in the surface geology of the mine area, west of the 3600 portal. Easterly trending faults are also evident in the intrusion and its contact zone from 4+00S, 20W to 16+00 N, 20+00 W.

Analysis of structural data from both the mine workings and the surface data, suggest that, in the mine area at least, the structural pattern is derived from the operation of a single shear system. The structural pattern is manifested as follows:

S_1	100°, 60°N
S_2	062°, 76°S
a b	085°, 80°N
a c	165°, 50°W
b c	0°, 40°E

The development of the shear system is not symmetrical.

The S_2 and ab fractures are the principal mineralized fractures. The bc tension joints are particularly noted in the mine area. The ac fracture set is less dominant and appears to have been reactivated during stress rotation to give rise to intermittent movement along the joint plane.

The S_2 shear set is poorly developed. The surface manifestation of the shear plane is strongly jointed zones, with late dyke intrusion. Two of these zones are noted on the map area to the west of the 3600 portal. The area under ice in the Morris Summit glacier is probably one of the 060° shear planes.

The dihedral angle between S_1 & S_2 is about 60°.

Each shear and joint set is marked by the presence of sets with a narrow dihedral angle (20°).

The S_1 set is manifested by the Main Creek fault zone and probably a similar shear zone near the edge of the ice, south of the 3600 portal.

On a detailed scale, the principle fractures (S_1 and ab) form intersecting set, with mineralization prominent at and close to the junction zone.

Although S_1, S_2 and ab are all mineralized, the S_1 and ab are the principal sets. They are well demonstrated on surface to the north of Main Creek (12+00S, 10+00 W). At this locality there are a group of veins that coalesce with the Main Creek shear zone (#1,2,3 veins).

The multiplicity of dykes in the mine area attest to repeated episodes of deformation and stress release. The microdiorite swarm (5c,5d) are a regional swarm. The mill porphyry (5a) and zenolith dyke (5b) are earlier dyke units that may relate to stress re-orientation above a (hidden) porphyry stock.

The lamprophyre suite (5e,5f) are related to stress reduction along the S_2 fracture set. The diatrene dykes are enigmatic. They appear to be late dykes related to gas streaming and late adjustment along east west fractures. These are noted (at 24+00N, 5+00E) to transect both the microdiorite dykes and the northerly trending fractures.

3.9 MINERAL SHOWINGS IN THE SCOTTIE CLAIMS

For the purposes of description, the mineral showings in the property are categorized into the following pattern.

a) quartz carbonate veins, with pyrite/pyrrhotite.
b) pyrrhotite bearing shear zones/fracture.
c) irregular pyrite bearing shears.
d) pyrite/pyrrhotite/pyrite in an altered volcanic host rock.
e) disseminated pyrrhotite/pyrite in an altered volcanic host rock.
f) hematite bearing shear zones.

a. Quartz Carbonate Veins

The quartz carbonate suite is predominantly restricted to the area of the mine. The characteristics of this suite of veins are the rapid variations in texture and mineralogy. The veins show some variation in quartz carbonate content and exhibit rapid lateral variations in sulphide content. On surface, the most consistent veins are exposed to the north of Main Creek where the set termed #1,2,3, veins show considerable variation in sulphide content. Pyrrhotite is the dominant sulphide but can pass laterally to veins with predominantly pyrite, but lower sulphide content.

The other area where these veins have some strike length, is at the edge of the ice, south of Main Creek. Elsewhere in the area south of Main Creek, the veins are erratic in strike length and width.

A characteristic of the veins are the diversity of fractures. They form a fracture set rather than a single vein direction. Of note is the concentration of sulphides apparent when two vein directions intersect.

Quartz carbonate veins are also found in the area north of Scotty Point, in the general area of the former "Scotty" showings. Quartz carbonate veins are not widespread however and are of limited strike length and width.

b. Pyrrhotite Bearing Shear Zones/Fractures

Pyrrhotite bearing shear zones, as distinct from the quartz-carbonate suite, are relatively widespread on the property.

The main area where they are developed is in the area to the east of the Summit Lake intrusive contact, 24N, 12E eastwards towards Summit Lake. An additional area where these are found is in altered contact rocks at 28N, 20W.

The pyrrhotite shears are well developed at 28N, 13E (RW-S-) where a shear zone of at least 300' strike length is present. The Scotty showings are a similar type of shear zone pyrrhotite zone. Both areas exhibit inconsistent and variable gold values.

The control of the pyrrhotite bearing shears appears to be essentially that of contact related redistribution of sulphide.

c. Irregular Pyrite Bearing Shears

This category of showing is generally restricted to the area of contact altered rocks lying above the Morris Summit fault. (8N, 12W, to 20N, 20W).

The showings are irregular pyritic shears in a silicified volcanic fragmentals and fine grained altered fragmentals. They are inconsistent in strike length and width. Strike lengths up to 100' are present with widths of 6" to 2'. The cliff area above 16N, 16W, is particularly prominent with well developed gossans.

d. Pyrite/Pyrrhotite Along Joint Planes

Sulphide coated joint planes are a widespread feature of the Summit Lake intrusion, more especially in the marginal zones.

Though several joint directions are coated with pyrite, the most frequent direction is 110° strike, 80° dip N.

The joint surfaces occasionally give rise to a strong gossan stain but nowhere do these have any continuity or width, being largely coatings or joint infillings up to 1" wide.

They appear to have developed by a fracture/water circulation system at and close to the margin of the Summit Lake Stock.

e. Disseminated Pyrrhotite/Pyrite in an Altered Volcanic Host

The above unit forms a widespread unit on the property. It is exposed in one wedge near the 3000 portal and a large area exposed on the western hill slope above Summit Lake from 16N, 20E to 40N, 32E.

The unit appears to be a regionally altered sequence, with an overprint of contact metamorphic effects. Some redistribution of sulphides is apparently present with occasional joint coatings of later pyrite.

The alteration sequence is one characterized by the development of quartz-chlorite units with five, disseminated pyrrhotite. Some local zones, expecially near Scotty point, are more dominantly pyritic. Remnant volcanic fragments and bedding units attest to the unit being originally a volcanic fragmental unit.

Assay information on samples from this unit show that gold values are trace or below detectable limits.

There appears to be little economic potential to this unit.

f. Hematite Bearing Shear Zones

These are generally restricted to small narrow shears in the Summit Lake intrusion. They are generally easterly trending shears, up to 6"-8" wide that transect older shear zones and dykes.

Minor pyrite was observed in these shears. No gold values were obtained in any of the samples.

They are not of economic interest.

APPENDICES

A:1 STATEMENT OF COSTS

Field Costs

Wages:

W. Gewargis, Geologist, July 20 - 26	7 days $145/day	$1,015.00
W. Gewargis, Geologist, Aug. 4 - Sept. 16	44 days $145/day	6,300.00
R. Wares, Geologist, July 30-Sept. 16	49 days $160/day	7,840.00
B. Lang, Field Assist. July 21-Aug. 31	35 days $85/day	2,975.00
Sub-Total	135	18,210.00

Room & Board:

135 man days at $30/man day (Mine R & B Cost)	4,050.00
Sub-Total	4,050.00

Travel:

W. Gewargis, Vanc-Stewart, 2 trips
R. Wares, Vanc.-Stewart, 1 trip
B. Lang, Vanc-Stewart, 1 trip
4

Round trip airfare $421.40	
Sub-Total	1,785.60

Report Preparation:

Wages:

W. Gewargis, Sept.20-24, 1982 5 days $145/d.	725.00
R. Wares, Sept. 30-24, 1982 5 days $160/d.	800.00
Sub-Total	1,525.00

Map Preparation:

Pacific Survey, 1"-200'	2,943.33
Pacific Survey, 1"-40'	187.80
Sub-Total	3,131.21

Map Copying:

Western Reproducers	525.00
TOTAL	$29,227.31

OF WHICH A TOTAL OF $29,101.82 IS APPLIED TO THE SCOT GROUP, AS PER STATEMENT OF EXPLORATION & DEVELOPMENT

R. Wares

R. Wares

A:2 STATEMENT OF QUALIFICATIONS

I Roy Wares, P. Eng., with a business address in Vancouver, B. C. do hereby certify that:

a) The work herein described was carried out on the property of Scottie Gold Mines Ltd., at Stewart, B. C. under my supervision.

b) I am a registered member, in good standing, of the Professional Engineers of British Columbia.

c) I have been involved in various facets of mineral exploration, over a period of 18 years, in B. C., elsewhere in Canada, U. S. A. and the United Kingdom.

d) I am a graduate of Aberdeen University, Scotland with a B.Sc. (Geology) Queen's University, Kingston, Ontario with an M.Sc. (Geology).

e) I did personally supervise the work carried out on the Scottie Gold Mines property and am familiar with the work, qualifications and experience of Mr. Wilson Gewargis, who mapped under my supervision.

f) I am currently employed by Northair Mines Ltd. and performed the work for Scottie Gold Mines Ltd.

R. Wares

R. Wares, P. Eng.

Dated at Vancouver, B. C.
this 27th day of October, 1982

STATEMENT OF QUALIFICATION

I, Wilson A. Gewargis, with a business address in the city of Vancouver, and residential address in the District of Richmond, in the Province of British Columbia,

DO HEREBY CERTIFY THAT:

1. I am a graduate of the University of Mosul, Iraq with a Bachelor of Science Degree in Geology and two years Postgraduate Studies with the University of Stuttgart, West Germany.

2. I am registered with the Association of Professional Engineers of the Province of British Columbia as an Engineer-pupil.

3. I am a fellow of Geological Association of Canada.

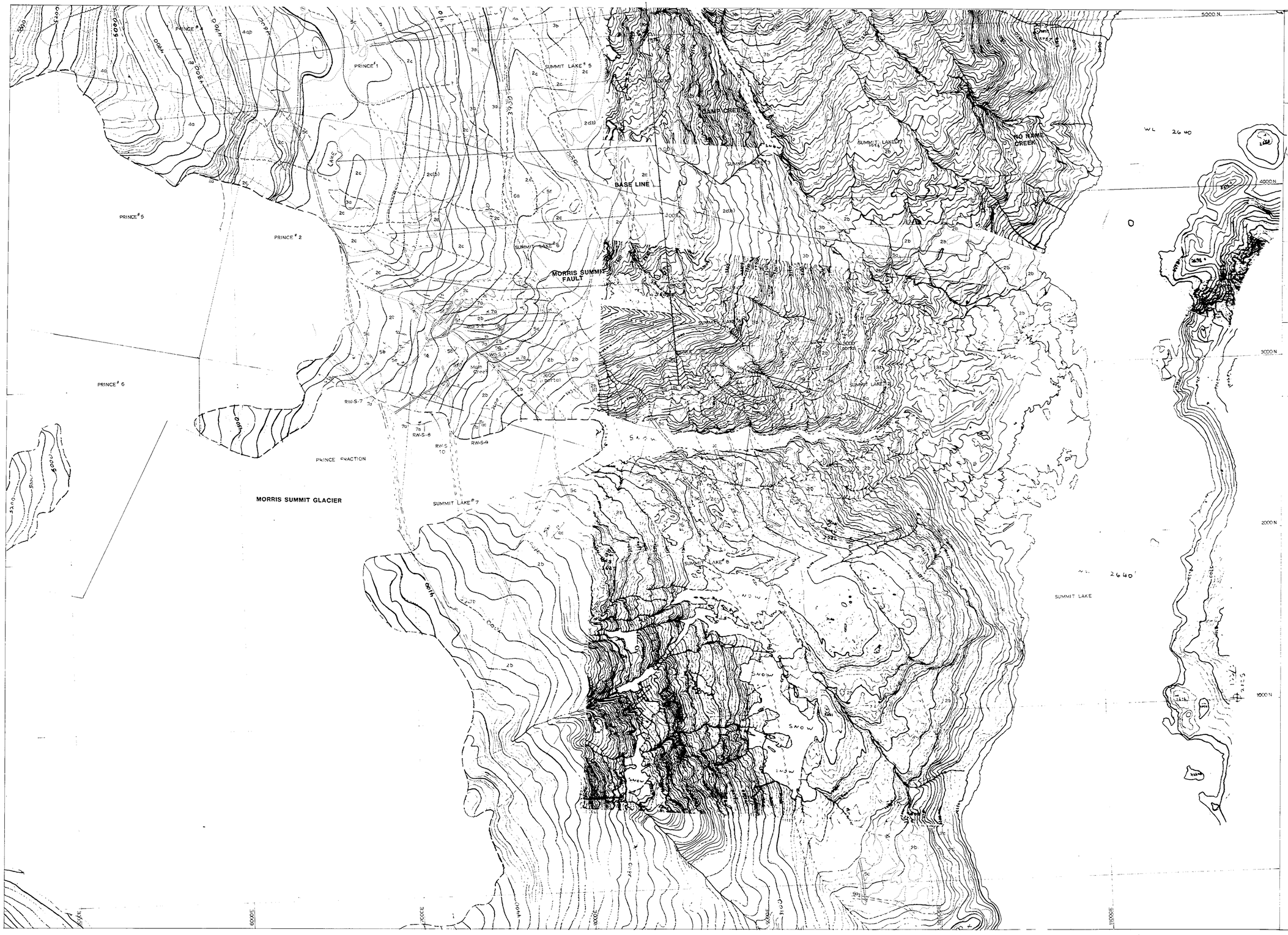
4. I have practiced my profession in Canada since 1974 in various aspects of mining and exploration.

5. I carried out part of the mapping program on the property of Scottie Gold Mines Ltd.

W. Gewargis

Wilson A. Gewargis, B.Sc. F.G.A.C.

Dated at the City of Vancouver in the Province of British Columbia this 27th day of October, 1982.



LEGEND

mineralization

7a po. 7c galena 7e chalcopyrite
7b py. 7d sphalerite q quartz vein
qc quartz/calcite

Alteration

6a silicification 6e epidotisation
6b feldspathisation 6f hematisation
6c secondary hornblende 6g iron oxides
6d chloritisation

Dyke Rocks

5a mill porphyry
5b xenolith dyke — cogenetic
5c microdiorite
5d darker dyke associated with 5c and cross cutting
5e lamprophyre dyke
5f spherulitic dyke — cross cutting but cogenetic
5g breccia dyke (diatreme) no colour

Summit Lake Intrusive

4a hornblende granodiorite
4b qtz monzonite
4c border facies (s) silicified (cl) chloritised

Metamorphic Rocks (Hazelton Equivalent)

3a siliceous hornfels 3a(1) outer margin
3b regional(?) qtz-py.-po. alteration

Hazelton Assemblage

2a volcanic conglomerate
2b volcanic breccia generally matrix supported breccia
2c volcanic arenite / undifferentiated massive volcanic arenite
2d siltstone (cherty unit)

Bowser Assemblage

not on map sheets

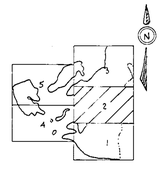
outcrop boundary
area of abundant outcrop
stream
fault (defined , assumed)
igneous foliation
geological boundary (defined , assumed , gradational)

Prismacolor

931	
918	
560	
922	
944	
939	
909	
910	

GEOLOGICAL BRANCH ASSESSMENT REPORT

10,738



SCOTTIE GOLD MINES	
SURFACE GEOLOGY	
SCALE 1:200	CONTOUR INTERVAL 10ft.
MAP REFERENCE 104B/1	
Drawn: R. Wares, W. Gewargis	Figure: 4(2)
Date: Sept. 1982	SHEET 2 OF 5
Mapped by: W. Gewargis, R. Wares	
PACIFIC SURVEY CORPORATION 82-77	0 100 200 300 400ft. / 50 100m

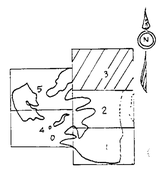
To accompany report by R. Wares, M.Sc. & W. Gewargis, B.Sc. dated Oct. 1982 R. Wares

FIG 4(2)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,738

Legend as Fig.2



SCOTTIE GOLD MINES		
SURFACE GEOLOGY		
SCALE 1:200	CONTOUR INTERVAL 10ft	MAP REFERENCE 104B/1
Drawn: R.Wares, W.Gewargis		Figure: 4(3)
Date: Sept.1982		SHEET 3 OF 5
Mapped by: W.Gewargis, R.Wares		
PACIFIC SURVEY CORPORATION 82-77	0 100 200 300 400ft. / 50 100m	

To accompany report by R. Wares P.Eng & W. Gewargis. BSc

FIG 4(3)

R. Wares