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GEOLOGICAL, GEOCHEMICAL, ⁴
AND GROUND GEOPHYSICAL
EXPLORATION PROGRAM

Operator: STACKPOOL RESOURCES LTD.

Owner: Eugene Dodd / Stackpool.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,121

GEOLOGICAL, GEOCHEMICAL, AND GROUND GEOPHYSICAL

EXPLORATION PROGRAM

STACKPOOL RESOURCES LTD.

SQUAMISH, B.C. CLAIMS, VANCOUVER M.D.

Latitude $49^{\circ}40'$ N.; Longitude 123° W.

92 G/10 W, 11E

By: W.G. Timmins, P.Eng., and

G.W.G. Sivertz, B.Sc.

February 7, 1983

W.G. Timmins Exploration
& Development Ltd.

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SUMMARY

Stackpool Minerals Ltd., a wholly-owned subsidiary of Stackpool Resources Ltd., holds over 1,000 claim units in the Squamish, B.C. area. The claims lie east and west of Howe Sound, and are underlain by volcanic and sedimentary 'roof pendant' rocks of the Gambier Group, granitic rocks belonging to the Coast Plutonic Complex, and lavas of the Garibaldi Group.

Ground exploration programs were conducted on parts of the claims from July to October, 1982. The target was 'Kuroko' type volcanogenic massive sulfide mineralization; exploration areas were selected using geological criteria and data from a low-level combined magnetic and VLF-EM airborne geophysical survey.

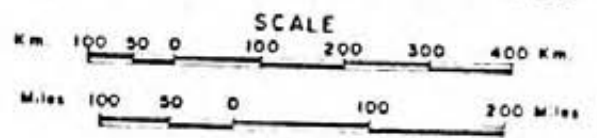
All of the claims underlain by 'roof pendant' rocks of the favourable Gambier Group were examined on a reconnaissance basis; seventeen areas were selected for more detailed exploration. Further work is warranted for seven of these areas, based on encouraging results obtained during 1982.

February 7, 1983



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PROPERTY LOCATION MAP



INTRODUCTION

Ground exploration crews were headquartered at a base camp on the Mamquam River logging road, near the junction of Skookum Creek and Mamquam River. Access to work areas was gained by both truck and helicopter.

Exploration of interesting areas followed this sequence:

- (a) Reconnaissance prospecting and sampling.
- (b) Widely spaced soil and geophysical survey traverses.
- (c) Detailed grid controlled soil, geophysical, and geological surveys; systematic sampling of mineral showings.

In some very steep areas, grid controlled surveys were not feasible.

Preliminary work was guided to some extent by the data from a low level magnetic and VLF-EM airborne survey. As regional geology became better understood, geological criteria became a more valuable aid to the selection of target areas, since the type of deposits sought were 'Kuroko' type volcanogenic massive sulfides, which occur within volcanic rocks.

The Britannia mine, originally considered a shear controlled deposit, has been recently re-interpreted as a deformed volcanogenic massive sulfide deposit (Payne, Bratt, and Stone,

Economic Geology, Vol. 75, pp 700 - 721). This re-interpretation might also be applied to other smaller deposits in the Gambier Group 'roof pendant' rocks, and to the district as a whole for exploration purposes.

The following mineral claims, owned by Stackpool Minerals Ltd., received exploration work in 1982:

<u>Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>
Snow	20	943	July 17, 1981
Hail	20	944	July 17, 1981
Ice	20	945	July 17, 1981
Rum	20	947	July 17, 1981
Cat	20	949	July 17, 1981
Scotch	18	951	July 17, 1981
Owl	20	953	July 17, 1981
Gin	20	959	July 27, 1981
Mink	18	983	August 10, 1981
Moon	20	1016	September 8, 1981
Echo	20	1018	September 8, 1981
Romeo	20	1019	September 8, 1981
Sky	18	1020	September 8, 1981
Cony 1	20	1022	September 8, 1981
Lisa Dawn	16	1234	August 10, 1982
W.C. 1-4	4	25054-25057	September 10, 1973

LOCATION, ACCESS AND TOPOGRAPHY

The large eastern block of claims is centered southeast of Squamish, B.C., and extends from 5 to 20 kilometers east of Britannia Beach.

The claims cover the drainages of Raffuse Creek, the Mamquam River, and the Stawamus River, and the intervening peaks and ridges including Goat Ridge and Mt. Habrich.

Good access to most of the drainage basins of the main streams is provided by logging roads which are maintained by the local logging company divisions. Access to the higher subalpine ridges can be gained by helicopter but the lower, heavily forested ridges are inaccessible except on foot.

The country is steep and mountainous, with elevations ranging from sea level to 2,000 meters. Local relief can exceed 500 meters per kilometre. Steep-walled, northwest and east trending valleys dissect the landscape. The ridge crests are irregular in outline due to scarps and bluffs of rock.

The original heavy forest cover of Douglas fir, cedar, and hemlock has been logged off along the valleys and gentler slopes, leaving thickets of blueberry, devil's club, and slide willow

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cut by numerous skid and haulage roads. Progress on foot in these clear-cut areas can be extremely slow and difficult due to unseen logs and small scarps which are obscured from view by the brush.

West of Howe Sound, scattered claim blocks are located just west of Squamish, just west of Woodfibre, in the Mt. Conybeare-Lake Lovely Water area, and just south of Phantom Lake at the head of Clowhom River. Access to all of these areas is best gained by helicopter, since they are all in steep terrain.

MINING HISTORY

The history of the areas dates back to 1898 when Oliver Furry and associates discovered and staked extensive copper showings which later became the Britannia mining camp. The Britannia camp produced, from 1905 to 1974, 55 million tons of ore grading 1.1% copper, 0.65% zinc, 0.2 oz/ton silver and 0.02 oz/ton gold. This ore came from a large number of separate orebodies within the Britannia shear zone.

The discovery of the Britannia camp sparked a flurry of prospecting both to the east and west. A number of copper showings were discovered between 1908 and 1911 in the Indian River Valley, near the Stawamus - Indian River divide, and also on Mt.

Baldwin near the headwaters of Raffuse Creek. The Howe Sound Company, which controlled the Britannia mine, acquired many of the Indian River showings at this time. The showings in the Raffuse Creek area called the McVicar showings, were optioned by various companies including Consolidated Mining and Smelting (Cominco), and are presently held by Kidd Creek Mines Ltd.

Maggie Mines Ltd. holds the War Eagle and other claims on the Stawamus River - Indian River divide, which cover copper-lead-zinc showings discovered in 1976 in the pass between Indian and Stawamus rivers. A 1982 discovery by Maggie, about one kilometer southeast of the pass, on the southwest side of the Indian River Valley, consists of copper-zinc mineralization with considerable values in gold. This is significant in that gold has not been of major importance in previously known deposits in the area, including the Britannia mine.

Minor, sporadic exploration work has been done on other copper properties near Ray Creek on the lower Stawamus River, near Martin Creek in the middle section of the Mamquam River, and south of Alpen Mountain at the headwaters of the Mamquam River.

GEOLOGY

The area is underlain by three main geologic units:

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- (a) 'Roof pendants' of metavolcanic and metasedimentary rocks belonging to the Gambier Group of Upper Jurassic to Lower Cretaceous age;
- (b) Granitic rocks of the Coast Plutonic Complex of Cretaceous age;
- (c) Pyroclastic rocks, dykes, and lavas of Tertiary to Recent age, belonging to the Garibaldi Group.

The volcanic rocks of the Gambier Group range in composition from basaltic andesite (greenstone) to rhyolite. The greenstones are dominantly flows and sills with minor associated pyroclastic units. The felsic rocks are mostly tuff and agglomerate with porphyritic domes or flows near volcanic 'centers'.

Andesite predominates in the Goat Ridge-Sky Pilot Mountain area. Here the rocks are highly altered, and the original textures damaged to the point where tuffaceous rocks are difficult to distinguish from flows or sills. The andesite volcanics form durable, steep sided topographic features similar to those underlain by granitic rock.

Rhyodacite tuff, agglomerate, and porphyry are common in the Mt. Baldwin-Mt. Mulligan area. Tuffs with coarse porphyritic clasts form beds locally several hundred meters thick. Interbedded with the tuffs are units of porphyritic dacite and

rhyodacite which are either subvolcanic sills or extrusive domes. Also present in the felsic pile are minor sedimentary rocks and more basic volcanic rocks. The felsic volcanic rocks underly topographically subdued areas which contrast strongly with the nearby granitic terrain.

Sedimentary rocks, mostly shale, argillite, and siltstone, are present in most sections of the Gambier Group. Bands of hard, black, cherty argillite can be traced for kilometers along the north face of the Sky Pilot-Goat Ridge escarpment. These bands are marked by prominent gossans, due to the fine grained pyrite pervading the rocks. The argillites are present in the lower section of the Sky Pilot greenstone unit, where they are marked by white weathering.

Other sedimentary units are found northwest of Clarion Lake and on the ridge between Raffuse Creek and the Mamquam River.

The granitic rocks in the area are quite varied. Quartz diorite predominates, but granodiorite is common in the western part of the area. Mafic constituents of the quartz diorite and granodiorite masses are mainly hornblende and biotite. Mafic rich and mafic poor phases of both rock types have been observed. Magnetite rich phases of quartz diorite have been observed northeast of Sky Pilot Mountain, northeast of Mt. Habrich, and

on the ridge between Skookum Creek and Mamquam River. The magnetite rich phases also have higher mafic mineral contents.

Intrusive and extrusive rocks of late Tertiary to Recent age are present throughout the area, although lavas have not been seen south of the Stawamus River-Raffuse Creek divide. The largest lava flow in the area is the Ring Creek flow, which lies between Ring and Skookum Creeks. This flow is of dacite, and is one of the longest acid lava flows on earth. Smaller dacite flows are present on the north flank of Mt. Mulligan and on the Skookum Creek-Mamquam River divide.

Andesite and basalt dykes of Tertiary or younger age cut all rocks in the area; the dykes are usually narrow and steeply inclined. They are widespread but not numerous in any one area.

West of Howe Sound, the rocks covered by Stackpool claims are mostly granitics of the Coast Plutonic Complex. A narrow 'roof pendant' of Gambier Group rocks lies west of Lake Lovely Water. The composition of the band is unknown to the writer but is marked by a series of prominent gossans. Near Phantom Lake, sandstone and slate mapped as Gambier Group are in contact with migmatite and gneiss, which in turn are in contact with granodiorite.

MINERALIZATION

The Gambier Group rocks in the Squamish area host a large number of mineral deposits and showings. The largest deposits, known collectively as the Britannia Mine, were of great importance to the economy of British Columbia through most of this century. Many smaller deposits are known but have yet to be proven commercially viable. Descriptions of the Britannia Mine and other deposits follow.

(a) Britannia Mine

The following is an abstract from a paper entitled "Deformed Mesozoic Volcanogenic Cu-Zn Sulfides in the Britannia District, British Columbia" by J.P. Payne, J.A. Bratt, and B.G. Stone and published in Economic Geology, Vol. 75, pp 700 - 721.

"The Britannia copper-zinc sulfide deposits, previously described as having formed from hydrothermal solutions emplaced into foliated host rocks, are re-interpreted as volcanogenic in origin and to have been deposited from hydrothermal and exhalative solutions related to contemporaneous dacitic volcanism and then deformed during later shearing and faulting. Massive sulfide deposits occur near the upper contact of coarse dacitic tuff. Anhydrite, barite, and chert form related exhalative deposits.

Several periods of inhomogeneous strain produced a broad zone of S-Tectonites, the Britannia shear zone, which contains all of the known orebodies; metamorphic assemblages are those of lower greenschist facies of regional metamorphism. Sulfide textures are similar to metamorphic and deformational textures described in the literature. During ore formation and later shearing, the rocks were chemically altered with increases in K_2O , SiO_2 , and H_2O , and decreases in CaO and total Fe. Following major metamorphism, dacite dykes were intruded into the sheared rocks and were controlled by foliation; sulfides were remobilized into late quartz veins during emplacement of dacite dykes.

A major system of late faults developed subparallel to the foliation.

A pre-deformation reconstruction suggests that the orebodies are segments of two original massive sulfide deposits; this requires a near-vertical displacement along one fault zone followed by subhorizontal offset with right-lateral displacement of several thousand feet."

(b) Maggie Mines Ltd. Property

Pyrite, pyrrhotite, chalcopyrite, sphalerite, and galena are the principal sulfide minerals. The mode of occurrence of gold

and silver which have been reported in important quantities is unknown to the writer.

The sulfide minerals occur in several forms. Pyrite and pyrrhotite are frequently disseminated in some of the volcanic and volcanoclastic units, although not necessarily together. Observations suggest that the principal occurrence of the base metal sulfides is in association with silicified zones.

Reports and news releases from the Maggie Mines property indicate the presence of significant intersections of copper, lead, zinc, and silver mineralization indicated by drilling carried out within a possible massive sulfide bearing volcanic belt sub-parallel to and approximately six kilometers northeast of the Britannia Mine area.

(c) McVicar Crown Grants

Mineralization on the McVicar grants consists of lenses, veins, stockworks, and breccias containing chalcopyrite, sphalerite, and galena as the dominant ore minerals. The showings are located on the north flank of Mt. Baldwin, in a belt of rhyodacite volcanic rocks. They occur along a more or less sheared belt about one kilometer long. Several are of high grade, with values in copper, zinc, lead, and to a lesser

extent, silver. Considerable diamond drilling over the past 50 years by different operators has apparently confirmed that the showings are discontinuous and of erratic grade. Nonetheless the property is an important one with major mineralized structures that may yield economic discoveries in the future.

DISCUSSION OF WORK AREAS

Initially, work areas were selected on the basis of raw-data airborne geophysical anomalies. Anomalous areas were typically covered by two or more single-line soil, VLF-EM, and magnetometer survey traverses. One area, the Skookum, ('O' area on location map), received considerable work after the initial surveys were completed.

Later in the season, work areas were selected by geological or geological-geophysical criteria.

The following areas received only reconnaissance-level attention:

<u>Area Name</u>	<u>Mineral Claim</u>	<u>Location Map Code Letter</u>
Mt. Conybeare	Cony 1	'A'
Romeo	Romeo	'B'
Adit	Echo	'C'
Sky Pilot	Snow	'E'
Delta Lake	Cat	'G'

Upper Ray Creek	Scotch	'I'
Mulligan Road	Scotch	'J'
East Raffuse	Ring 9	'L'
East Alpen	Mink, Owl	'P'
Lisa Dawn	Lisa Dawn	'Q'
Detailed work was performed on:		
Ray Creek Grid	Rum	'D'
Ice-Hail Grid	Ice, Hail	'F'
WC Claims	WC 1 - 4	'H'
MUG Grid	Scotch	'K'
Raffuse Creek Grid	Gin	'M'
Slide Creek	Gin	'N'
Skookum	Sky, Moon	'O'

Descriptions of the reconnaissance-level work performed on the first ten areas follow:

(1) Mt. Conybeare

A traverse was made to investigate four gossans on the west flank of Mt. Conybeare, near the headwaters of Mill Creek. Disseminations and fracture fillings of pyrite are present in zones of limited size in medium grained diorite of the Coast Plutonic Complex. No chalcopyrite was positively identified. Assays taken of pyritic material return copper values of 0.01% to 0.05%.

(2) Romeo Area

The area was prospected in the hope of locating the trace of the Britannia shear zone. Gambier Group rocks extend through the claim block, with plutonic rocks to the east and west. The contacts between Gambier and plutonic rocks are not visible. There is only a suggestion of shearing in the Gambier tuffs and volcanic sediments exposed in a narrow ravine that bisects the claim in a north-south direction.

Two soil lines with 125 meter sample spacing were run east-west across the southern part of the claim, and a 5 meter chip sample was taken across an exposure of pyritic quartz-sericite schist. Copper results of all samples taken were 'background' level.

(3) Adit Area

An old adit on the Echo claims, at about 600 meters elevation above Howe Sound, was sampled to check copper and precious metal values in a north-trending shear zone. Copper values range from 0.03% to 0.21%, and silver ranges from 0.01 to 0.17 oz per ton. Chances for higher grade material being present in the shear appear slim. The rocks in the adit area are granitics of the Coast Plutonic Complex.

(4) Sky Pilot Area

The Sky Pilot Mountain-Goat Ridge area was examined for massive sulfide occurrences. The area is underlain by a thick pile of andesite flows and sills, with interbedded argillite, limy sediments, and felsic volcanic rocks. Minor occurrences of chalcopyrite, pyrite, pyrrhotite, and magnetite were found and sampled. Copper values were low, and the small size of the occurrences precludes the likelihood of important deposits being developed from them.

The excellent rock exposure in the area, coupled with the easy access, make it unlikely that new discoveries of major size will be made here.

(5) Delta Lake Area

A fly camp was established near Delta Lake to investigate anomalies detected during the airborne geophysical survey. The area surveyed is entirely underlain by diorite and quartz diorite of the Coast Plutonic Complex. Five single-line soil, VLF-EM, and magnetometer survey traverses were completed, with negative results.

(6) Upper Ray Creek Area

Two single-line traverses were made along the east wall of upper Ray Creek valley, in an attempt to better locate anomalies detected during the airborne survey. Soil results were negative; geophysical results were inconclusive. Follow-up geophysical surveys were not performed because the area traversed proved to be held by other interests.

(7) Mulligan Road Area

Four lines, following a logging access road, were surveyed in an attempt to locate a weak VLF-EM airborne anomaly. Geophysical results were negative, but several soil samples returned weakly anomalous copper, lead, zinc, or silver values; follow-up operations revealed that the anomalous samples were taken from soils overlying shear zones in highly altered granitic and volcanic rocks. The shear zones have north-northwest strikes and can be traced for hundreds of meters. They contain abundant pyrite and very rare chalcopyrite and sphalerite in silicified zones, which occur at random intervals. Prospecting to the south of the Mulligan Road lines resulted in the discovery of massive sulfide float; the area surrounding the float occurrence was subjected to a detailed exploration effort. (MUG grid, maps 6a - 6g)

(8) East Raffuse Area

Two east-west and one north-south soil, VLF-EM, and magnetometer survey traverses were carried out here in an attempt to locate a large magnetic low located by the airborne survey. Ground geophysical results were negative; three anomalous (20 to 60 p.p.b.) gold values were detected by the soil sample survey. The anomalous samples were investigated and are apparently due to very high pyrite content in argillaceous sediments underlying the sample sites.

(9) East Alpen Area

A single north-south traverse was made to test an area of magnetic highs detected by the airborne survey. The area is underlain by barren quartz diorite of the Coast Plutonic Complex.

(10) Lisa Dawn Area

Anomalous stream sediment samples were collected by staking crews in the Lisa Dawn area in 1981. Follow-up work in 1982 consisted of stream sediment and soil sampling during prospecting traverses. A total of 12 silt samples returned copper values ranging from 72 to 580 p.p.m.; some of the higher results were obtained in the lower part of the stream drainages, suggesting

copper-bearing rocks in the Lisa Dawn claim itself, rather than upstream in claims held by other interests. The Lisa Dawn claim is underlain by a mixed bag of volcanic and intrusive rocks, possibly within a contact zone. A strong gossan has developed on large outcrops in the stream canyons just west of the Lisa Dawn claim line; the rust is apparently due to several large, heavily pyritized rhyolite dykes exposed in the canyons. Grab samples of pyritized dyke rocks returned very low base metal values. The source of the metals in the stream sediments is obviously not the dykes themselves.

Soil sampling operations on the Lisa Dawn claim are severely hampered by thick glacial overburden on the lower slopes. Geological mapping and prospecting are restricted to stream canyons. Some type of work should be performed to find the source of the stream sediment anomalies, but choices appear to be restricted to some type of geophysical survey, or exploratory diamond or percussion drilling.

The following is a discussion of the areas that received detailed exploration work:

(11) Ray Creek Grid (maps 3a - 3d)

The grid area is underlain by strongly foliated andesite tuff,

dacite tuff, and quartz-chlorite schist equivalents. The foliation has a north-northwest strike. Shear zones parallel to the foliation, with silicification and pyritization, are present.

A total of 147 soil samples were analyzed for copper, zinc, lead, and silver. The results were generally negative (see maps (3a-3d) but copper-zinc highs are present at 800E on lines 800N and 850N, and at 900E on line 950N. Lead and zinc are "high" at 1050E on line 950N, and zinc is high at 1050E on line 1000N. The causes of these anomalies are not presently known. They should be investigated further.

(12) Ice-Hail Grid (maps 4a - 4d)

The area is underlain by andesite flows and sills of the Gambier Group. The relatively flat topography in the grid area is due partly to flat-lying volcanic rocks, and partly to an enormously thick fan of glaciofluvial and fluvial debris at the mouth of Omer Creek.

A total of 63 soil samples were analyzed for copper, zinc, lead, and silver. No anomalous results were obtained; the very low values occurring in some places suggest that the sampled material was quartz sand from the breakdown of granodiorite,

carried into its present position by Omer Creek and its interglacial predecessors.

(13) W.C. Claims (maps 5a - 5e)

Introduction - W.C. Claims

The W.C. 1-4 claims, held under option, are located on the east flank of Indian River Ridge, about 2.5 km. southeast of the Indian River - Stawamus River divide. They cover copper-zinc showings discovered in the early 1900's. Previous work, undoubtedly hindered by precipitous slopes and thick underbrush in the area of the showings, consisted of hand trenching and the driving of two crosscut adits. The adits are no longer accessible and it appears that their portals have been obliterated by rockslides. Recent work, except for a TURAM survey carried out by New Jersey Zinc, Ltd., is not documented. Work by Stackpool includes approximately 4.5 kilometers of linecutting, with geological mapping, soil sampling, and geophysical surveys on the cut lines and elsewhere on the property.

Geology - W.C. Claims

The W.C. claims are underlain by volcanic and metasedimentary rocks of the Gambier Group, intruded by diabase and basalt dykes

of unknown age, and quartz diorite of the Coast Plutonic Complex. The Gambier rocks have a general northwest trend with moderate to steep southwesterly dips. Faulting is ubiquitous and complex. The whole package has been regionally metamorphosed and locally has been contact metamorphosed. The volcanic/metasedimentary sequence appears to be:

<u>Unit</u>	<u>Comments</u>
(3) Rhyolite lapilli tuff.	Often thinly laminated; water-lain.
(2) Fine-grained rhyolite.	A flow or sill. Hosts most of the copper-zinc showings.
(1) Quartz-eye metamorphic rock.	Has a knotted appearance in outcrop due to resistant quartz eyes.

Rhyolite lapilli tuff (unit 3) outcrops extensively on the W.C. 2 claim. It is dark grey-green to light green, often well laminated, and weathers rusty brown to olive grey. Most exposures contain abundant chlorite and epidote. Locally, the tuff is contact metamorphosed to a biotite hornfels.

The fine-grained rhyolite flow or sill extends north-northwestward across the central part of the claims. This unit is

described by James (G.S.C. Mem. 158, 1929, pp. 113-114) as "a light coloured, fine grained, granular rock composed chiefly of oligoclase, quartz, and orthoclase, in variable proportions, and containing in addition small amounts of brown biotite, chlorite, rutile, apatite, zircon, and magnetite. Although rutile and apatite represent only a very small proportion of the rock they are very abundant for accessory constituents, particularly the former. Mineralogically the rock resembles the batholithic rocks of the area, but the microscopic texture is that of a recrystallized rock rather than of an ordinary igneous rock. The original texture is so completely destroyed that the origin of the rock could not be determined. Camsell refers to it as "granodiorite porphyry" and it appears to grade into the batholith on the north side. Exposures, however, were not sufficiently good to prove this conclusively, and since the two thin sections examined obviously represent a highly metamorphosed rock, it seemed advisable to refer to them, for the present at least, as "metamorphic rocks of unknown origin".

Geological mapping on the north side of the W.C. claim block suggests that the fine-grained "granodiorite porphyry" of Camsell is conformable with the Gambier sequence. This provides evidence that the unit is either a flow or a conformable sill⁴. Its silica content is obviously very high, so it is fair to

refer to it as rhyolite.

The most unusual rock on the property is Unit 1. This underlies the fine-grained rhyolite body previously described. It is a grey-brown to reddish-purple, recrystallized rock composed of 'eyes' of quartz and cordierite in a red-brown, fine-grained matrix composed of feldspar, biotite, and magnetite. It has a peculiar weathering aspect, where the quartz 'eyes' weather out in high relief, giving the rock outcrops a pebbled appearance. Camsell (G.S.C. Summary Report 1917, Part B, pp. 23-24) describes limestone in the Indian River area with "a peculiar silicification whereby kernels of quartz have been developed". He goes on to describe a limestone on the Bulliondale Group, south of what is now the W.C. claim block, as a "reddish, knotted, silicified limestone". The quartz and cordierite 'eyes' in the rock on the W.C. claims appear to be porphyroblasts rather than phenocrysts.

The Gambier Group rocks have been intruded by a variety of dykes. These are on the whole of mafic composition. The most common are fine-grained, green diabase or 'greenstone'. They vary in width from 0.5 to several meters, have steep dips, and are parallel or sub-parallel to the strike of the bedded rocks on the property.

Basalt dykes, probably of Tertiary age and belonging to the Garibaldi Group, intrude lapilli tuffs on the southern section of the claim block. These have near-vertical dips and crosscut the bedded rocks.

Isolated outcrops of felsic rocks found on the northwest part of the claims may represent acid dykes; there is insufficient evidence to establish their true characteristics.

Quartz diorite lies to the west and north of the bedded Gambier Group rocks on the property. A few quartz diorite outcrops on the east side of the claims suggest that the bedded rocks are nearly totally enclosed in Coast Plutonic Complex rocks, which may explain the high degree of regional and contact-thermal metamorphism exhibited by the Gambier Group rocks on the property.

Faults are extremely common. High-angle, crosscutting faults and low-angle, bedding plane or thrust faults are the two dominant types. Insufficient mapping has been done to establish the direction or degree of displacement of these faults.

Mineralization - W.C. Claims

Copper and copper-zinc mineralization, consisting of chalcopyrite,

sphalerite, and galena with large amounts of pyrite, occur in a series of silicified zones in a north-northwest trending belt traversing the property. Ten showings with copper or zinc values in excess of 0.5% are known to date, over a lateral distance of more than 800 meters. The showings are in fault zones and along the margins of diabase dykes in lapilli tuff, rhyolite, or quartz-eye metamorphic rock. Three main clusters of showings are present on the northwest part of the claim block. The best-exposed and apparently highest-grade showings are in the canyon of the creek bisecting the claim block. Chalcopyrite and pyrite occur in lenses or 'beds' along the contact of diabase dykes, in a gangue of quartz and limonite. Short sections of the lenses assay as high as 15.7% copper, with 3.19 oz/ton silver. Average grades of copper across the lenses are in the 3 to 4% range. Other lenses occur 150 and 250 meters west of the creek showings; these, like the creek showings, range in thickness from 1 to 2 meters, are associated with diabase dykes, and average from 2.5 to 7% copper. The lenses appear to be discontinuous along the strike of the dykes; old open-cuts testify to the attempts made by previous operators to establish continuity.

To the southeast of the creek showings, three copper-zinc-lead zones occur, about 100, 250, and 650 meters away. These showings are lower grade than the others, and have much higher

zinc and lead contents. They occur in fault zones; their association with dykes appears to be less certain than in the other cases. Methodical channel sampling of the showings returned grades of 0.5 to 1% copper; grab samples in one case returned 3.26 to 7.06% zinc with 0.17 to 1.09% lead.

Traces of copper, lead, and zinc mineralization are widespread in all the Gambier Group rocks on the property. The dominant sulfide in these showings is pyrite. Silicification is not nearly so intense as in the higher grade showings.

Soil Geochemistry - W.C. Claims

A total of 220 soil samples were taken from the property and analyzed for copper, zinc, lead, and silver. Results are somewhat uneven, due to variations in overburden thickness and composition caused by logging operations on the eastern half of the claims, and downslope soil transport. However, the distribution of metals in the soils does reflect the apparent distribution of bedrock mineralization; copper soil concentrations are more numerous and of greater intensity in the western section of the claims, while zinc concentrations are more common in the east.

Sampling for copper was particularly successful in the north

and west-central part of the claims, where soils are undisturbed by logging operations and bedrock copper occurrences are known. Areas where copper soil concentrations exceed 100 p.p.m. are located as follows:

- (1) Line 600E, from 1000N to 1075N. Cause unknown, not on claims.
- (2) Line 700E, 950 - 975N. Cause unknown.
- (3) Line 700E, from 700N to 775N; Line 750E, from 750N to 850N.

This anomaly appears restricted to these two lines, and appears to be related to copper float occurrences in this area, and possibly to copper showings centered at 734E/720N. These showings are actually upslope and south of the soil anomaly, and it is not known whether the anomaly is merely transported downslope from the showings by normal solifluction, or reflects underlying subcropping mineralization.

- (4) Line 850E, 765N to 850N. The sample taken at 850E/765N is near a major copper showing, but the more northerly samples may represent mineralized bedrock, since they are well west of a simple downslope path from the showing.
- (5) Line 750E, 950N; Line 800E, 925N, 950N, and 1000N; Line 850E, 925N to 1000N; Line 900E, 875N, 900N, and 1000N; Line 950E, 950N to 1000N. These samples, on and south of the baseline, form an irregular, northwest trending anomaly in an area of generally heavy overburden. The cause of the anomaly is presently unknown.

In the eastern section of the claims, copper is very unevenly distributed. No anomalies exist south of 600N. Concentrations greater than 100 p.p.m. are located as follows:

- (1) Line 1100E, 600N to 700N. These samples are near the northern contact of the main rhyolite body and quartz-eye metamorphic rock; traces of copper mineralization are present in this area but do not appear to be related to the soil anomaly.
- (2) Line 1250E, from 675N to 800N. The cause of this anomaly is not known. Only the samples from this line are anomalous in copper; adjacent lines show only background values. The very high result at 800N (6965 p.p.m.) suggests that actual sulfides were included in the sample.
- (3) Line 1550E, 675N and 700N. The samples are on the 'CAT' claim.

Zinc soil concentrations are restricted to the eastern section of the claims, primarily near areas of known zinc showings. Zinc values ranging from 225 p.p.m. to 520 p.p.m. were obtained on Line 1450E from 500N to 600N, and values from 35 to 2550 p.p.m. on a reconnaissance line lying 25 to 75 meters east of Line 1300E, from about 575N to 675N. In both cases, extensive low grade sphalerite showings are nearby, and logging operations have scattered sphalerite-bearing float from the showings across

the anomalous areas.

Lead concentrations are also restricted to the east-central section of the claims; anomalous values of 100 p.p.m. and up are generally coincident with zinc anomalies.

Silver in concentrations of 1.0 p.p.m. or more is coincident with lead-zinc anomalies in the eastern part of the claims. In the western half of the property, silver is erratically distributed and shows only a partial correlation with copper anomalies.

Conclusions and Recommendations - W.C. Claims

A series of lenses of nearly massive pyrite-chalcopyrite, ranging in thickness from 1 to 2 meters, are exposed in the west-central section of the W.C. claim block. The best-exposed and apparently highest grade lenses are in the canyon of the creek bisecting the claim block; other lenses occur approximately 150 and 250 meters northwest of the creek showings.

The lenses in this belt have nearly identical mineralogy and texture and have similar geological settings; namely, they occur in fine to medium coarse, locally recrystallized siliceous rhyolite, in association with diabase dykes, near the contact

of the rhyolite and underlying metamorphic rock, which may have sedimentary origins.

Other showings on the property have more diverse mineralogical and geological characteristics; their distribution is irregular and they should be considered as isolated occurrences for the time being.

Previous attempts to develop the pyrite-chalcopyrite lenses in the west-central part of the claims have consisted of open-cutting and limited diamond drilling of the creek showings, apparently using very light equipment (P. Delancey, personal communication). Old reports describe two crosscut adits driven below the creek showings; no evidence of these could be found.

It is recommended that an attempt be made to diamond drill the pyrite-chalcopyrite occurrences in the creek canyon and further northwest. The individual lenses have north-south to southeast strikes and moderate west to southwest dips. Drilling should be conducted from their hanging walls, topographically above the showings. Initial holes should be spotted not more than 50 meters horizontal distance away from target lenses and drilled at -45° , at right angles to the strike of the lenses. Holes drilled at steeper angles or greater distances away from their targets run a risk of missing altogether, due to possibly

complex geology. Follow-up holes can be drilled as 'fan' holes from initial sites, or the drill can be moved to new sites if conditions permit.

Plans for further surface exploration work directed to the discovery of base metal occurrences should be made contingent upon the initial drill results; there would be little point in intensive exploration if the results are negative. However, in light of the interesting gold values discovered on Maggie Mines' ground to the northwest, the property may be worth reassessing for precious metal potential.

The following is a list of assay samples taken from the W.C. claims during 1982:

<u>Grid Coordinates</u>	<u>Width-Length</u>	<u>Cu%</u>	<u>Zn%</u>	<u>Pb%</u>	<u>Ag, Oz/t</u>	<u>Au, Oz/t</u>
734E - 720N	1 meter width	7.04	.05	.01	1.58	.002
734E - 720N	1.2 m. length	3.55	.01	.01	0.84	.001
734E - 720N	0.75 m. width	0.27	.01	.01	0.01	.001
734E - 720N	0.10 m. width	17.30	.05	.01	3.28	.062
734E - 720N	0.50 m. width	2.88	.01	.01	0.89	.002
726E - 720N	0.15 m. width	13.60	.03	.01	3.15	.002
825E - 830N	1 meter width	0.02	.03	.01	0.01	.001

		<u>Cu</u>	<u>Zn</u>	<u>Pb</u>	<u>Ag</u>	<u>Au</u>
850E - 650N	grab	0.18	.05	.01	0.01	.001
840E - 765N	1 meter width	4.28	.01	.01	1.29	.008
840E - 765N	2 meter length	3.21	.01	.01	0.80	.026
870E - 765N	1 meter width	2.69	.01	.01	1.05	.004
870E - 765N	2 meter length	2.66	.01	.01	1.03	.002
915E - 835N	grab	0.03	.02	.01	0.01	.001
925E - 692N	grab	3.35	.01	.04	0.52	.002
990E - 650N	grab	2.48	.01	.01	0.86	.001
1005E - 637N	grab	4.24	.01	.01	0.69	.001
1010E - 615N	2 meter width	8.78	.03	.01	3.17	
1010E - 615N	0.5 m. width	15.70	.04	.01	3.19	.010
1010E - 615N	0.15 m. width	2.18	.01	.01	1.28	.004
1017E - 593N	1 meter width	0.15	.15	.01	0.01	.001
1017E - 593N	1 meter width	0.39	.21	.13	0.05	.001
1020E - 606N	0.10 m. width	2.33	.01	.01	0.71	.008
1050E - 625N	grab	1.86	.01	.01	0.45	.001
1110E - 517N	grab	0.50	.46	.01	0.22	.003
1355E - 547N	grab	0.17	7.06	.17	0.06	.002

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		<u>Cu</u>	<u>Zn</u>	<u>Pb</u>	<u>Ag</u>	<u>Au</u>
1365E - 545N	grab	0.06	3.26	1.09	0.15	.009
1462E - 526N	grab	0.01	.01	.01	0.01	.001
1462E - 526N	grab	0.01	.01	.01	0.01	.001
1530E - 550N	grab	0.07	.01	.01	0.01	.003
1575E - 510N	3 meter width	1.02	.02	.01	0.35	.001
1605E - 665N	grab	0.01	.01	.01	0.01	.001
1720E - 638N*	grab	1.08	.07	.01	0.24	.001

* This sample may be on Anaconda's crown grant No. 5065.

(14) MUG Grid (maps 6a - 6g)

The MUG grid was established to aid in exploration of a north-northwest trending zone of foliated and sheared andesite and dacite, located on the northeastern flank of Mt. Mulligan. An occurrence of massive, fine-grained pyrite float was discovered on a logging road crossing the shear zone. Efforts to discover the bedrock source of the float have so far proved fruitless, but the shear zone contains large amounts of coarser pyrite and rare disseminations and blebs of chalcopyrite. Soil and VLF-EM surveys were conducted over the grid. The soil results

were negative, but the VLF-EM survey indicated that the shear zone is a strong conductor.

Structures in Ray Creek valley, on the northwest flank of Mt. Mulligan, closely resemble the MUG shear zone, and have received considerable work over the past 50 years. The problem has been to locate zones of higher copper values within the intensely pyritized sections of the shear zones. The only conclusive method used to date has been widely spaced diamond drilling; this would also be effective on the MUG shear zone.

(15) Raffuse Creek Grid (maps 7a - 7d)

A total of 73 soil samples were collected between two logging roads on the west side of Raffuse Creek, over an area of sheared, pyritized andesite and metadiorite. A reconnaissance soil survey had previously returned very high copper and zinc values in the area.

The results from the survey are difficult to interpret due to the constraints imposed by the logging roads and slashed areas, but it is clear that the northwestern section of the area is anomalous in copper and zinc, and, to a lesser extent, in lead and silver. Two other areas, in the west-central part of the grid, are also anomalous to a lesser degree.

No mineralization has been found within the area sampled, but a small quartz vein, with chalcopyrite, sphalerite, and pyrite, outcrops just west of the road at the northwest end of the grid. (see map 8)

The bedrock underlying the soil grid is heavily faulted and sheared, and intruded by dykes of dacite porphyry and basalt. Pyritization and silicification are intense in some areas exposed along the logging roads. Float containing small amounts of chalcopyrite has been found in the gorge of the creek at the northwest end of the grid.

The soil grid should be extended further northwest and west. Some lines may be extended east as well, although the debris from road construction extends right into Raffuse Creek itself in some places, and will hamper and distort sampling efforts and results. Careful prospecting in the anomalous areas outlined to date may uncover the cause of the anomalies; this work will be difficult due to the extremely thick brush cover and steep slopes.

(16) Slide Creek Area (map 8)

Copper showings discovered by Texas Gulf Inc., just north of their Baldwin claim on the west side of Raffuse Creek valley,

lie in shear and fracture zones with northerly strikes. These zones were followed into the Slide Creek headwaters by Stackpool personnel, and a number of low grade copper, zinc, and lead showings were discovered. The locations and sample results of these showings are given on the Slide Creek area map (No. 8).

The Slide Creek area is underlain by andesite and rhyodacite porphyries and tuffs, locally sheared into quartz sericite and quartz chlorite schist. Certain highly silicified sections of the shear zones carry small amounts of chalcopyrite, sphalerite, and galena. Locally, nearly massive chalcopyrite with smaller amounts of lead and zinc sulfides occurs in discontinuous lenses.

Due to extremely steep slopes and heavy second-growth vegetation, much of the area north of Slide Creek is difficult to prospect, and detailed grid-controlled exploration is impossible. Nonetheless, an effort should be made to trace the north and northwest trending shear zones, with their relatively abundant mineralization, northwards from the Slide Creek headwaters.

The chalcopyrite bearing fracture zone just south of Slide Creek warrants diamond drill testing. A truck mounted drill could easily be employed here.

(17) Skookum Area (maps 9a - 9d)

This area is located on the ridge north of Mamquam River and east of Skookum Creek. An intense northwest-trending coincident magnetic and Annapolis VLF-EM anomaly traverses the area. Ground follow-up work included magnetometer, VLF-EM, and soil sample lines along the many logging roads on the ridge.

Reconnaissance-level geological studies indicate that the ridge is underlain by metadiorite and quartz diorite of the Coast Plutonic Complex, which is intruded by various dykes of andesite to basalt composition. The north and northwest slopes of the ridge are mantled by a thin veneer of Pleistocene to Recent dacite, andesite, and basalt of the Garibaldi Group.

The quartz diorite and metadiorite rocks contain a number of narrow quartz veins filled with disseminated pyrite and traces of chalcopyrite. The veins are within fracture or shear zones with west-northwesterly trends and steep dips.

The results of the ground geophysical surveys are inconclusive. A number of spot magnetic highs were obtained, and appear to be due to magnetite in the shear and fracture zones, and magnetite rich phases of the metadiorite. Ground VLF-EM surveys did not confirm the airborne anomaly, which is probably due to the

conductive, west-northwesterly shear zones.

The geochemical survey results indicate anomalous copper, lead, and zinc in narrow southeasterly and southwesterly trending zones. These zones coincide roughly with the strike projections of the shear zones exposed in the roadcuts.

In summary, the Skookum area is not considered a favourable target for 'Kuroko' type massive sulfides. However, considerable fracturing and low grade greenschist facies (chlorite-epidote) alteration is present within the geophysically anomalous area. Magnetite, hematite, pyrite, and rare chalcopyrite mineralization are widespread enough to give rise to a soil geochemical anomaly.

It is recommended that a 40 x 40 meter grid of about 25 hectares area be established in the geochemically anomalous area, to better define the soil anomalies.

(18) Reconnaissance Silt Samples

The following is a list of reconnaissance silts taken during 1982, and the results of their analysis. Please refer to map (1) for their locations.

<u>Number</u>	<u>Cu</u>	<u>Zn</u>	<u>Pb</u>	<u>Ag</u>	
3	18	106	18	0.1	
4	20	192	16	0.3	
5	30	43	5	0.2	
6	18	60	16	0.1	
7	13	68	28	0.1	
8	50	138	94	0.2	
9	98	<u>585</u>	34	<u>0.8</u>	
10	42	155	19	0.4	Raffuse Creek
11	<u>445</u>	<u>505</u>	43	0.3	Raffuse Creek Grid
12	38	245	34	0.4	
13	90	<u>824</u>	<u>135</u>	0.2	Slide Creek
14	38	108	18	0.1	
15	45	94	28	0.2	
16	76	90	28	0.2	
17	88	275	30	0.3	
18	70	194	42	0.4	
19	90	450	80	0.4	
20	38	78	6	0.3	
21	30	56	11	0.1	
22	17	54	7	0.1	
23	28	47	6	0.1	

24	28	54	10	0.1	
25	48	58	10	0.1	
26	24	37	12	0.1	
27	62	66	10	0.3	
28	275	33	6	0.2	
29	198	42	8	0.1	
30	58	36	6	0.2	
31	92	60	5	0.1	
32	21	36	5	0.2	
33	20	28	4	0.2	
34	37	49	8	0.2	
35	36	48	9	0.3	
36	18	58	15	0.2	
37	19	64	8	0.3	
38	24	48	10	0.3	
39	42	78	17	0.3	
40	35	90	13	0.3	
41	28	72	16	0.2	
42	35	78	20	0.2	
43	58	100	25	0.4	
44	28	40	8	0.1	Mamquam River
45	<u>580</u>	128	26	<u>0.6</u>	Lisa Dawn
46	<u>185</u>	80	19	0.3	Lisa Dawn
47	<u>131</u>	89	22	0.2	Lisa Dawn
48	<u>103</u>	92	26	0.2	Lisa Dawn

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49	<u>254</u>	278	22	0.3	Lisa Dawn
50	<u>106</u>	106	23	0.6	Lisa Dawn
51	<u>254</u>	217	17	0.4	Lisa Dawn
52	<u>360</u>	347	26	0.4	Lisa Dawn
53	76	87	19	0.1	Lisa Dawn

CONCLUSIONS AND RECOMMENDATIONS

Results warranting further exploration were obtained in the following areas:

- (1) East Raffuse area (GIN claim)
- (2) LISA DAWN claim
- (3) MUG-Mulligan Road area (SCOTCH claim)
- (4) Raffuse Creek grid (GIN claim)
- (5) Ray Creek grid (RUM claim)
- (6) Skookum area (SKY, MOON claims)
- (7) Slide Creek area (GIN claim)
- (8) W.C. claims

General recommendations for each area are given in the previous section. The areas are at varying stages of exploration at present; the latter two have showings worthy of diamond drilling. One additional area, not mentioned in the report text, was staked late in the 1982 season and should receive a careful appraisal in the coming season.

An exploration program consisting largely of follow-up prospecting, mapping, sampling, and limited initial diamond drilling is recommended for 1983. For maximum flexibility, work should be conducted from a centrally-located tent camp, staffed with a crew of prospecting-oriented, geologically knowledgeable.

experienced persons. Access to work areas will be by helicopter and truck.

Cost estimates for the planned work are provided on the following pages. Phase 1 will be an initial diamond drilling program directed to test the best mineralized areas on the W.C. 1-4 claims. This program will be conducted in the early part of the season. Phase 2 will consist of follow-up and evaluation of areas explored and staked in 1982. Phase 3, contingent on the results of Phase 1, will be a detailed and extensive program of prospecting, mapping, trenching, and diamond drilling on the W.C. 1-4 claims, and in other areas if Phase 2 results warrant it.

PHASE 1
Initial W.C. Drilling Program
Cost Estimate

This cost estimate is based on the following presumptions:

- (1) Snow will be present in the drilling area in depths ranging from 1 to 2 meters (3' to 6').
- (2) Drill mob./demob. will be by truck as far as possible; a helicopter will be used for drill moves and support.
- (3) Crews will be based in Squamish, B.C., and will commute to the property by truck. Final access to the drill will be on foot: crews must be in excellent physical condition.
- (4) Drilling will be conducted on a continuous 12 hour shift basis.

Direct drilling costs: 2,000' x \$30/ft.	\$ 60,000
Helicopter Mob./Demob., moves, support. 20 hours x \$500/hr.	10,000
Drill support costs, core boxes, etc.	2,000
Drill fuel, 1 bbl./shift x 20 shifts	2,000
Crew accommodation, food: 80 m.d. x \$50/m.d.	4,000
Transportation, incl. drill to site	2,000 ¹

Geological supervision, incl. core logging, splitting, assaying, report		<u>7,500</u>
	Total	\$ 87,500
Contingencies, 20%		<u>17,500</u>
	Grand Total	\$ <u>105,000</u>

Transportation:	Truck rental x 3 x \$750/mo.	\$ 4,500
	Fuel, repairs, maintenance	2,500
	Helicopter, 25 hr. x \$500/hr.	<u>12,500</u>
	Total Transportation	\$ <u>19,500</u>
Exploration Costs:	Geochemical analysis, 2,000 samples x \$7.50	\$ 15,000
	Assays, 100 x \$25	2,500
	Equipment purchases	2,000
	Staking, aquisition	5,000
	Linecutting	<u>5,000</u>
	Total Exploration	\$ <u>29,500</u>
Supervision, Report:	Engineering Fees	\$ 4,000
	Report Preparation	<u>5,000</u>
	Total Supervision	\$ <u>9,000</u>
	Total Costs, Phase 2	\$ <u>140,000</u>
Contingencies, 10%		<u>14,000</u>
	Grand Total	\$ <u>154,000</u>

PHASE 3

Detailed Diamond Drilling

Cost Estimate

This cost estimate is based on the following presumptions:

- (1) Drilling will be conducted under optimum conditions on a continuous 12 hour shift basis.
- (2) Cost of support staff such as supervisors, surveyors, and geological crews will be additional to Phase 1 & 2 cost.
- (3) Drill crews and support staff will be fed, housed, and transported separately from Phase 2 exploration crews.

Direct drilling costs: 10,000' x \$25/ft.	\$ 250,000
Helicopter Mob./Demob., moves, support 50 hours x \$500/hr.	25,000
Drill support costs, core boxes, etc.	10,000
Drill fuel, 1 bbl./shift/100 shifts	10,000
Crew accommodation, food: 300 m.d. x \$50/m.d.	15,000
Support crew accommodation, food: 200 m.d.	10,000
Surveying	5,000
Support crew wages	20,000
Transportation	5,000
Communication	1,000

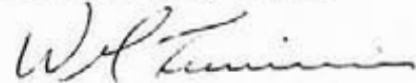
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Geological supervision, including core logging, splitting, assaying, report		<u>30,000</u>
	Total	\$ <u>381,000</u>
Contingencies, 15%		\$ <u>57,150</u>
	Grand Total	\$ <u>438,150</u>
TOTAL COST OF 3 PHASES		\$ <u>697,150</u>

Respectfully submitted,

G.W.G. Sivertz, B.Sc.



W.G. Timmins, P.Eng., P.Geol.

W.G. Timmins Exploration
& Development Ltd.

February 7, 1983

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CERTIFICATE

I, WILLIAM G. TIMMINS maintaining office at #203, 4 Parkdale Crescent N.W., Calgary, Alberta do hereby certify that:

1. I am a geologist having been practising my profession since 1964.
2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario and have attended Michigan Technological University, Houghton, Michigan.
3. I am a member in good standing of the Association of Professional Engineers of British Columbia and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I have no interest direct or indirect in the property or securities of Stackpool Resources Ltd. or Stackpool Minerals Ltd., nor do I expect to receive any such interest.
5. This report is based on a study of private, government and published reports and maps, and field work consisting of geology, geophysics and geochemistry carried out by exploration crews supervised by G. Sivertz, B.Sc., B. DeWonck, B.Sc., and G. Richmond, B.Sc., geologists employed by me under my personal direction of the ongoing field program. I have had numerous examination visits to the properties.

Dated at Calgary, Alberta this 7th day of February, 1983:



W.G. Timmins, P.Eng., P.Geol.
W.G. Timmins Exploration
& Development Ltd.

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

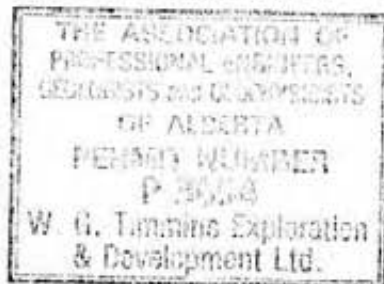
CONSULTING GEOLOGISTS

CERTIFICATE

I, GEORGE WILLIAM GUSTAV SIVERTZ, residing at 3016 West Nineteenth Avenue, Vancouver, British Columbia do hereby certify that:

1. I am a geologist having been practising my profession for seven years.
2. I am a graduate of the University of British Columbia, having received a B.Sc., (Honours) degree in Geology in 1976.
3. I have no interest direct or indirect in the property or securities of Stackpool Minerals Ltd., or Stackpool Resources Ltd., nor do I expect to receive any such interest.
4. I am the author of this report, which is based on personal knowledge of the area gained during an exploration program supervised by W.G. Timmins and conducted by myself and a field crew, between August 9, 1982 and October 19, 1982.

Dated at Calgary, Alberta this 7th day of February, 1983;



George Sivertz
G.W.G. Sivertz, B.Sc.
W.G. Timmins Exploration
& Development Ltd.

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APPENDIX I

Cost Breakdowns

Project Cost, including Camp, Supervision, Engineering, and Mobilization-Demobilization: To be distributed to specific claims on a per man day basis.

(1) Administration: Office Costs, W.G. Timmins Exploration and Development Ltd:	\$ 5,625.00
(2) Engineering and Supervision: W.G. Timmins, P. Eng., 34 days @ \$400/day:	\$ 13,600.00
G. Sivertz, BSc: 10 days @ 138.61:	\$ 1,386.10
B. Dewonck, BSc: 5 days @ 135.00	\$ 675.00
G. Richmond, BSc: 10 days @ 63.61	\$ 636.10
(3) Camp maintenance, security: Equipment Rental, fly camp:	\$ 750.00
Food & sundries:	\$ 5,726.33
Cook Wages: F. Myberg:	\$ 2,006.52
L. Mosky :	\$ 3,245.64
Propane, gasoline:	\$ 1,250.00
Generator repairs, backup rental:	\$ 550.00
Maintenance and security, labour: T. Daly, 10 days @ 74.93	\$ 749.30
G. Krause, 10 days @ 72.97	\$ 729.70
B. Timmins, Jr: 10 days @ 40.00	\$ 400.00
(4) Camp Mob., construction: B. Krause, 6 days @ 79.74	\$ 478.44
D. Proudfoot, 6 days @ 77.30	\$ 463.80
B. Timmins, Jr, 6 days @ 40.00	\$ 240.00
(5) Camp Demob., demolition: B Cross, 5 days @ 81.72	\$ 408.60
T. Daly, 5 days @ 74.93	\$ 374.65
L. Eccles, 3 days @ 135.00	\$ 405.00
G. Sivertz, 3 days @ 138.61	\$ 415.83
G. Krause, 5 days @ 72.97	\$ 364.85
Total:	\$ 40,480.86

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

Project Cost, cont'd.

Total Project Cost from preceding page:	<u>\$ 40,480.86</u>
Total Exploration Man Days:	<u>548</u>
Project Cost per Man Day:	<u>\$ 73.87</u>

Notes: The Project Cost figure is the net cost of operating a ten man tent camp for a period of approximately 3½ months, and includes all support services except transportation. Security measures, necessary because of the location of the camp on a logging mainline open to the public at all times, involved leaving one man in camp at all times. The camp cook usually served in this capacity, but during shopping days and the cook's holidays, an exploration assistant had to be used for this purpose.

The Supervision category includes the time spent by the project consultant, Mr. W.G. Timmins, P. Eng., and also the time spent by the field supervisors, Mr. G. Richmond, BSc, Mr. B. Dewonck, BSc, and Mr. G. Sivertz, BSc, on coordinating the efforts of the field crews, correlating sample results, and plotting field data.

Project Transportation Expenses (Truck): To be distributed to specific claims on a per man day basis.

(1) Truck Rentals.

W.G. Timmins Exploration and Development Ltd.

1982 Ramcharger 4X4: Invoice No. 32119	\$ 875.00
" 32121	875.00
" 32123	875.00
" 32125	592.76
	<hr/>
	\$ 3217.76

Redhawk Rentals Ltd.

1981 Chevrolet 4X4 P.U.: Contract No. 239	\$ 3217.76
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Prism Resources Ltd.

1980 Chevrolet Suburban 4X4: Invoice.	\$ 1800.00
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(2) Gasoline.

<u>Imperial Oil Ltd, N.B. Smith, Agt:</u>	\$ 3431.00
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Transportation: \$11667.00

Exploration Man Days: 548

Transportation Expense/ Man Day: \$ 21.29

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

Report Cost, including correlation of results, composition, drafting, typing, and accounting: To be distributed to specific claims and groups according to the proportion of time and money spent on each, both in the field and during the report writing process, on a percentage basis.

Labour: G. Sivertz, 30 days @ \$138.61/day:	\$ 4,158.30
W.G. Timmins, 1 day @ \$400.00	\$ 400.00

Drafting: Brad's Drafting Service Ltd:	\$ 1,200.00
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Administration, typing, binding, printing:	<u>\$ 600.00</u>
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Total Cost:	<u>\$6,358.30</u>
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Cost breakdown per claim.

SKY and MOON Claims, Skookum Area (36 units)

Labour: July 9- Aug. 12

B. Cross, 5 days @ 81.72	\$ 408.60
T. Daly, 5 days @ 74.93	\$ 374.65
B. Krause, 21 days @ 79.74	\$ 1,674.54
G. Krause, 5 days @ 72.97	\$ 364.85
D. Proudfoot, 21 days @ 77.30	\$ 1,623.30
G. Richmond, 15 days @ 63.61	\$ 954.15
B. Timmins, 21 days @ 40.00	\$ 840.00
93 days total	\$ 6,240.09

Geochemical analysis, assays:

Acme Analytical Laboratories, Ltd	
Inv. 82-0648	\$ 1,266.00
-0657	510.00
-0674	82.00
-0713	1,827.00
-0910A	315.40
	\$ 4,004.40

Transportation Expenses, from Project Total:

93 m.d. @ 21.29 \$ 1,979.97

Project Cost Distribution, 93 m.d. @ 73.87 \$ 6,869.91

Report Cost Distribution, 10% of Total Report Cost: \$ 635.83Total Costs, SKY/MOON \$ 19,730.20**W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.**

CONSULTING GEOLOGISTS

Cost Breakdown per claim, cont'd.

GIN claim, Raffuse Creek area. (20 units)

Labour: Aug. 26 - Oct. 5, 1982

B. Cross	2 days @	81.22	\$	163.44
T. Daly	6 "	74.93	\$	449.58
B. Dewonck	7 "	135.00	\$	945.00
L. Eccles	4 "	138.73	\$	554.92
G. Krause	8 "	72.97	\$	583.76
D. Penner	2 "	135.00	\$	270.00
G Sivertz	12 "	138.61		1663.32
B. Timmins	1 "	40.00		40.00
42 days			\$	4670.02

Geochemical Analysis, Assays:

Acme Analytical Laboratories Ltd

Invoice 82-0985A	\$	53.95
-1104		236.40
-1162		69.00
-1260A		149.40
-1260B		161.00
-1284 A		116.20
-1324 A		369.40
- 1395		7.90
	\$	1163.25

Transportation: 42 m.d. X 21.29 (from project total)	\$	894.18
Okanagan Helicopters Inv. H27579	\$	298.80

Project Cost Distribution: 42 m.d. @ 73.87	\$	3102.54
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Report Cost Distribution, 10% of Total Report Cost:	\$	635.83
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Total Cost, GIN: \$10,764.62

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.**CONSULTING GEOLOGISTS**

Cost breakdown per claim, cont'd.

ICE and HAIL claims (40 units)

Labour: Sept. 9-Oct. 11, 1982

B. Cross	1 day @	81.72	\$ 81.72
T. Daly	3 "	74.93	\$ 224.79
B. Dewonck	3 "	135.00	405.00
L. Eccles	2 "	138.73	277.46
G. Krause	5 "	72.97	364.85
G. Sivertz	5 "	138.61	693.05
19 days			\$2046.87

Geochemical Analyses, Assays:

Acme Analytical Laboratories, Ltd

Invoice No. 82-910A	\$ 149.40
-1104	91.30
-1260A	58.10
-1284	8.30
-1324A	59.30
	<hr/>
	\$ 366.40

Transportation expenses, from project total:

19 m.d. @ 21.29 \$ 404.51

Project Cost Distribution, 19 m.d. @ 73.87 \$ 1403.53

Report Cost Distribution, 5 % of Report Cost \$ 317.92

Total Cost, ICE/HAIL: \$4,539.23**W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.**

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WC 1-4 and CAT claims (24 units)

Labour: Aug. 20 to Oct. 15, 1982

B. Cross	14	days @ 81.72	\$ 1144.08
T. Daly	8	" 74.93	599.44
B. Dewonck	3	" 135.00	405.00
L. Eccles	7	138.73	971.11
G. Krause	6	" 72.97	437.82
R. McArthur	10.5	155.62	1634.08
D. Penner	1	" 135.00	135.00
G. Richmond	4	63.61	254.44
G. Sivertz	10	" 138.61	1386.10
	63.5		\$ 6967.07

Geochemical Analyses and Assays, Acme Analytical Laboratories:

Invoice # 82-0910A	\$ 112.05
-0961B	56.00
-1103B	39.00
-1211A,B	737.15
-1284A	172.40
-1284B	420.00
-1324A	209.75
-1324B	252.00
-1395	132.00
82-1395B	140.00
	\$ 2215.15

Transportation Expenses, from project total 63.5 m.d. @ 21.29 1351.92

Project Cost distribution, 63.5 m.d. @ 73.87 \$ 4690.75

Report Cost distribution, 20% of total: \$ 1271.66Total Cost, WC1-4/CAT: \$ 16,496.55**W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.**

CONSULTING GEOLOGISTS

Cost breakdown per claim, cont'd.

LISA DAWN claim (16 units)

Labour: Aug. 24- Sept. 16, 1982

B. Cross	1 day @	81.72	\$ 81.72
T. Daly	1 "	74.93	74.93
B. Dewonck	3 "	135.00	405.00
G. Krause	1 "	79.74	79.74
G. Sivertz	1	138.61	138.61
D. Penner	1 "	135.00	135.00
	8		\$ 915.00

Geochemical Analyses and Assays, Acme Analytical Laboratories:

Invoice 82-0985A	\$ 45.65
82-1211A	394.25
	<u>\$ 439.90</u>

Transportation Expenses, from project total: 8 m.d. @ 21.29: \$ 170.32

Project Cost distribution, 8 m.d. @ 73.87 \$ 590.96

Report Cost distribution: 5 % of report cost: \$ 317.92Total Cost, LISA DAWN: \$2,434.10

Cost breakdown per claim, cont'd.

RUM claim (20 units)

Labour: Aug. 12, Oct 10-14, 1982

B. Cross	5 days @	81.72	\$ 408.60
T. Daly	5 "	74.93	374.65
G. Krause	1 "	72.97	72.97
G. Richmond	1 "	63.61	63.61
G. Sivertz	1	138.61	138.61
B. Timmins	1	40.00	40.00
	14		\$ 1098.44

Geochemical Analyses, Assays, Acme Analytical Laboratories:

Invoice No. 82-910A	\$ 116.20
82-1395	751.15
	<u>\$ 867.35</u>

Transportation Expenses from Project Total: 14 m.d. @ 21.29 \$ 298.06

Project Cost distribution, 14 m.d. @ 73.87 \$ 1034.18

Report Cost distribution, 10% of Report Total: \$ 635.83

Total Cost, RUM: \$3,933.86

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Cost breakdown per claim, cont'd.

SCOTCH claim (18 units)

Labour: Aug. 13 - Oct. 12, 1982

B. Cross	4 days	@ 81.72	\$ 326.88
T. Daly	4	74.93	299.72
B. Dewonck	4	135.00	540.00
G. Krause	6	" 72.97	437.82
D. Penner	4	135.00	540.00
G. Richmond	6	" 63.61	381.66
G. Sivertz	4	138.61	554.44
B. Timmins	5	" 40.00	200.00
	37		\$ 3280.52

Geochemical Analyses and Assays, Acme Analytical Laboratories:

Invoice No. 82-0910A	\$ 381.50
-1066	771.90
-1395	65.55
-1395B	28.00
	<u>\$ 1246.95</u>

Transportation Expenses, from Project Total: 37 m.d. @ 21.29 \$ 787.73

Project Cost distribution: 37 m.d. @ 73.87 \$ 2733.19

Report Cost distribution, 15% of Report Total: , \$ 953.75Total Cost, SCOTCH: \$9,002.14

Cost Breakdown: Reconnaissance Work.

Labour: July 15 to Oct. 1, 1982

P. Crook	2 days	@	75.00	\$	150.00
B. Cross	16.5	"	81.22		1348.38
T. Daly	23.5	"	81.72		1760.86
B. Dewonck	19	"	135.00		2565.00
L. Eccles	7	"	135.00		945.00
B. Krause	27	"	79.74		2152.98
G. Krause	28.5	"	72.97		2079.65
D. Penner	12	"	135.00		1620.00
D. Proudfoot	6	"	77.30		463.80
G. Richmond	8	"	63.61		508.88
G. Sivertz	22	"	138.61		3049.42
B. Timmins	6	"	40.00	\$	240.00
	177.5				\$16883.97

Geochemical Analyses and Assays, Acme Analytical Laboratories,
Various Invoices July 15 to Oct.1, 1982: \$ 2419.85

Transportation Expenses, from project total,
177.5 m.d. @ 21.29/m.d.: \$ 3778.98

Okanagan Helicopters Invoice H27468: \$ 1642.46

H27579: \$ 5179.20

H27992: \$ 972.30

Project Cost distribution: 177.5 m.d. @ 73.87: \$13111.93

Report Cost distribution: 25% of Report Total: \$ 1589.56

Total Cost, RECONNAISSANCE: \$ 45578.25

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

Application Of Costs For Assessment Purposes-By Claim.

SKY/MOON Claims: 36 units.	1 year @ \$100/unit:	\$ 3,600.00
	2 year @ \$200/unit:	\$ <u>14,400.00</u>
	Total:	\$ 18,000.00
	Cost Incurred:	\$ <u>19,730.20</u>
	Balance To PAC	\$ 1,730.20
GIN Claim: 20 units.	1 year @ \$100/unit:	\$ 2,000.00
	2 year @ \$200/unit:	\$ <u>8,000.00</u>
	Total:	\$ 10,000.00
	Cost Incurred:	\$ <u>10,764.62</u>
	Balance To PAC:	\$ 764.62
ICE/HAIL Claims: 40 units.	1 year @ \$100/unit:	\$ 4,000.00
	Cost Incurred:	\$ <u>4,539.23</u>
	Balance To PAC:	\$ 539.23
WC 1-4/CAT Claims: 24 units.	1 year @ \$100/unit	\$ 2,400.00
	3 year @ \$200/unit	\$ <u>14,400.00</u>
	Total:	\$ 16,800.00
	Cost Incurred:	\$ <u>16,496.55</u>
	Balance From PAC	\$ 303.45
LISA DAWN Claim: 16 units.	1 year @ \$100/unit:	\$ 1,600.00
	Cost Incurred:	\$ 2,434.10
	Balance To PAC:	\$ 834.10
RUM/SCOTCH Claims: 38 units.	1 year @ \$100/unit:	\$ 3,800.00
	1 year @ \$200/unit:	\$ <u>7,600.00</u>
	Total:	\$ 11,400.00
	Cost Incurred:	\$ <u>12,936.00</u>
	Balance To PAC:	\$ 1,536.00

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

Application Of Costs For Assessment Purposes: Reconnaissance.

The reconnaissance work declared in this report consisted of geological, geochemical, and geophysical surveys conducted on widely-spaced pace-and-compass lines and along logging roads. A silt survey was also completed. All work declared was performed upon claims owned by Stackpool Minerals Ltd.

Credit To PAC, Reconnaissance Costs:	\$ 45,578.25
Credit To PAC, SKY/MOON Claims:	1,730.20
Credit To PAC, GIN Claim:	764.62
Credit To PAC, ICE/HAIL Claims:	539.23
Credit To PAC, LISA DAWN Claim:	834.10
Credit To PAC, RUM/SCOTCH Claims:	<u>1,536.00</u>
Total PAC Credit:	\$ 50,982.40
Debit From PAC, WC 1-4/CAT Claims:	<u>303.45</u>
Total PAC Credit:	<u>\$ 50,678.95</u>

APPENDIX 2

Reconnaissance Surveys: Sample Results

Appendix 2

Reconnaissance Surveys: Sample Results

Areas are identified by code letters on the location map included in this report. In a few cases, actual sample locations are shown on detailed maps also included in the report. The following section lists samples by area, number, and results. Assay samples are identified by the letter 'a' and results are given in % for base metals and oz/ton for precious metals. Geochem. samples are identified by the letter 'g' and results are in p.p.m. except for gold, which is given in p.p.b..

<u>Area, Code, Claim</u>	<u>No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>	<u>Type</u>
Mt. Conybeare, 'A', Cony 1.	CB-1	0.01		0.02	0.01	.001	a
" " "	CB-2	0.03		0.01	0.01	.001	a
" " "	CB-3	0.05		0.01	0.01	.001	a
" " "	CB-4	0.03		0.01	0.01	.001	a
" " "	CB-5	0.01		0.01	0.01	.001	a
Woodfibre Ck., 'B', Romeo.	ROM-1	27	16	31	0.2		g (soil)
" " "	ROM-2	22	12	39	0.4		g
" " "	ROM-3	26	14	47	0.2		g
" " "	ROM-4	14	14	29	0.2		g "
" " "	ROM-5	18	12	32	0.1		g
" " "	ROM-6	10	10	20	0.1		g "
" " "	ROM-7	10	9	18	0.1		g
" " "	ROM-8	14	9	25	0.5		g "
" " "	ROM-9	12	8	20	0.2		g
" " "	ROM-10	15	9	21	0.1		g "
" " "	ROM-11	25	11	40	0.2		g
" " "	ROM-12	30	8	45	0.1		g "
" " "	ROM-13	40	14	52	0.1		g
" " "	ROM-14	18	14	54	0.4		g "
" " "	ROM-15	26	11	54	0.2		g
" " "	ROM-16	28	11	47	0.2		g
" " "	ROM-17	12	12	29	0.3		g "
" " "	ROM-18	30	12	28	0.2		g
" " "	ROM-19	12	9	30	0.1		g

(Soils collected at 100 m. intervals on east-west traverse on south end of claim block, 300 m. north of Woodfibre Creek.)

Adit area, 'C', Echo	ADIT-1	0.21	0.01	0.01	0.01		a
" " "	ADIT-2	0.08	"	"	"		a

Appendix 2, cont'd

<u>Area, Code, Claim</u>	<u>No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>	<u>Type</u>
Adit area, 'C', Echo	ADIT-3	0.07	0.01	0.01	0.07		a
" " "	ADIT-4	0.09	0.03	0.04	0.17		a
" " "	ADIT-5	0.10	0.01	0.01	0.01		a
" " "	ADIT-6	0.03	0.01	0.01	0.01		a
Sky Pilot, 'E', Snow	SPGS-6						a
" " "	SPGS-7						a
" " "	SPGS-8						a
" " "	SPBD-1						a
Delta Lake, 'G', Cat	DL-1, 0	14	8	38	0.1		g (soil)
" " "	" 0+40	4	26	21	0.2		g "
" " "	" 0+80	2	10	8	0.1		g "
" " "	" 1+20	12	22	32	0.3		g "
" " "	" 1+60	15	31	21	0.1		g "
" " "	" 2	14	16	39	0.1		g "
" " "	" 2+40	20	46	47	0.2		g "
" " "	" 3+20	2	3	12	0.1		" "
" " "	" 3+60	2	13	6	0.1		" "
" " "	" 4	2	6	5	0.1		" "
" " "	" 4+40	2	5	4	0.2		" "
" " "	" 4+80	15	10	18	0.1		" "
" " "	" 5+20	10	18	38	0.5		" "
" " "	DL-2 0	9	39	48	0.1		" "
" " "	" 0+40	4	10	10	"		" "
" " "	" 0+80	8	58	24	"		" "
" " "	" 1+20	5	21	9	0.2		" "
" " "	" 1+60	8	40	28	0.1		" "
" " "	" 2	6	28	12	"		" "
" " "	" 2+40	4	12	17	"		" "
" " "	" 2+80	5	26	18	0.2		" "
" " "	" 3+20	3	18	6	0.1		" "
" " "	" 4	7	46	60	0.1		" "
" " "	" 4+80	5	12	12	0.8		" "
" " "	" 5+20	5	15	10	0.3		" "

(These soil samples were taken along log haulage roads with a rough north-south trend, in the central section of the claim block. Sample interval was 40 meters.)

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

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Appendix 2, cont'd

The following soil samples were collected along east-west and northeast-southwest trending logging roads on the northwest flank of Mt. Mulligan. The general area of exploration is about 500 meters north of the Ray Creek grid (Area 'D' on location map).

File No. 82-0910-A

<u>Area, Code, Claim</u>	<u>No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>
	RAY-C 0	10	32	35	.3
	0+40	22	20	92	.2
Ray Creek, 'D', Rum	0+80	10	18	42	.1
" "	1+20	16	17	82	.2
" "	1+60	17	19	36	.5
" "	2	20	16	108	.3
" "	3+20	16	16	62	.3
" "	3+60	6	28	24	.1
" "	4	14	19	108	.4
" "	4+40	10	18	47	.5
" "	4+80	5	15	14	.3
" "	5+60	7	34	27	.1
" "	6	22	21	44	.6
" "	6+40	18	12	16	.8
" "	8	10	17	13	.2
" "	8+40	14	24	19	.2
" "	8+80	8	14	22	.9
" "	9+20	10	18	245	.2
" "	9+60	14	29	300	.1
" "	RAY-C 10	40	25	380	.2
" "	RAY-C1 0+80	4	4	11	.1
" "	1+60	14	18	36	.5
" "	2+40	4	8	12	.3
" "	3+20	18	22	66	.5
" "	3+60	5	14	19	.2
" "	4	5	15	22	.3
" "	4+40	5	12	18	.3
" "	4+80	12	26	52	.4
" "	5+20	6	14	23	.3
" "	5+60	6	15	21	.1
" "	6	8	20	46	.4
" "	7+20	12	22	115	.5
" "	RAY-C1 7+60	12	28	47	.5

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.
CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-0910-A

Area, Code, Claim

Ray Creek, 'D', Rum

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

6

SAMPLE No.		Cu	Pb*	Zn	Ag*
RAY-C1 8+40		6	21	28	.1
8+80		8	27	24	.2
9+20		20	20	52	.4
9+60		17	26	42	.2
RAY-C1 10		14	19	36	.3
RAY-C2 0		5	3	6	.1
0+40		12	21	45	.1
0+80		20	14	70	.4
1+20		15	20	49	.2
1+60		20	20	47	.1
2		10	21	33	.3
2+40		18	17	50	.1
2+80		18	14	30	.2
3+20		20	10	42	.1
3+60		20	21	66	.5
4		12	14	36	.1
4+40		19	40	320	.4
4+80		72	194	114	.7
5+20		17	32	126	.3
5+60		10	18	74	.3
6		32	12	58	.2
6+40		40	11	32	.3
6+80		12	12	33	.3
7+20		27	10	41	.2
7+60		8	10	29	.1
8		34	8	43	.2
8+40		35	8	26	.2
8+80		19	10	29	.3
RAY-C2 9+20		30	9	34	.2
RAY-C3 6+40		10	12	29	.2
7+20		8	20	22	.3
8+80		7	24	28	.2
RAY-C3 9+20		42	38	26	.3

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Appendix 2, cont'd

The following soil samples were taken on east-west lines over an area just east of Delta Lake, near the west claim boundary, at 40 m. spacing.

Area, Code, Claim	SAMPLE No.	Cu	Pb*	Zn	Ag*
Delta Lake, 'G', Cat	UDL-1 0	5	10	22	.1
	0+40W	5	18	28	.1
	0+80	4	32	32	.4
	1+20	5	22	38	.1
	1+60	7	15	36	.1
	2	12	18	15	.4
	3+60	5	14	29	.1
	4+40	4	6	13	.1
	4+80	10	23	18	.1
	5+20	2	9	10	.1
	5+60	4	10	23	.1
	UDL-1 6 W	9	45	25	.1
	UDL-2 0	2	3	15	.1
1+20W	6	104	35	.2	
1+60	2	15	13	.2	
2	8	10	14	.3	
2+40	8	18	24	.2	
2+80	6	12	10	.5	
3+20	5	52	24	.3	
3+60	2	8	9	.2	
4	2	5	6	.1	
4+40	4	6	10	.1	
4+80	3	11	10	.2	
5+20	8	20	34	.2	
UDL-2 6 W	3	10	18	.1	
UDL-3 0	3	8	13	.1	
0+40W	4	16	15	.2	
0+80	3	15	16	.2	
2	2	3	9	.1	
2+40	2	10	11	.1	
3+20	4	9	18	.1	
3+60	5	6	20	.1	
4+40	6	5	15	.2	
UDL-3 4+80W	15	9	16	.4	
UDL-5 0+80	6	12	20	.2	
UDL-5 3+60	6	7	14	.2	

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Appendix 2, cont'd

The following soil samples were taken at 40 meter intervals along log haulage roads in the north central part of the Scotch claims. Actual sample locations are shown on the Mt. Mulligan detail map.

<u>Area, Code, Claim</u>		<u>SAMPLE No.</u>	<u>Cu</u>	<u>Pb*</u>	<u>Zn</u>	<u>Ag*</u>
Mulligan Road, 'J', Scotch	1	J1 0	50	35	215	.7
"	"	0+40	20	18	68	.5
"	"	0+80	62	60	164	.4
"	"	0+90 R	45	15	32	.4
"	"	1+20	28	32	130	.3
"	"	1+55 R	104	156	154	.4
"	"	1+60	64	60	400	.4
"	"	2	18	36	200	.2
"	"	2+40	15	22	104	.4
"	"	2+80	30	112	136	.3
"	"	3+20	21	144	310	.7
"	"	3+60	14	134	83	.3
"	"	4	3	20	6	.1
"	"	5 R	68	10	31	.4
"	"	6	34	110	146	.3
"	"	J1 7	30	32	114	.4
"	"					
"	"	J2 0	22	16	142	.2
"	"	0+40	26	12	445	.2
"	"	0+80	10	13	148	.2
"	"	1+20	15	25	124	.1
"	"	1+60	8	15	62	.1
"	"	2	12	12	72	.1
"	"	2+80	20	18	82	.1
"	"	3+20	29	26	390	.2
"	"	3+60	16	245	92	1.8
"	"	J2 4	17	32	116	.2
"	"					
"	"	J3 0	14	18	52	.1
"	"	0+40	13	74	118	.4
"	"	0+80	18	44	52	.2
"	"	1+20	18	72	154	.2
"	"	1+60	8	24	76	.1
"	"	2	8	9	31	.1
"	"	2+40	10	14	58	.2
"	"	2+80	10	22	78	.1
"	"	3+20	15	50	215	.2
"	"	3+60	16	12	90	.1
"	"	4	8	14	44	.1
"	"	J3 4+40	24	10	49	.1

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Appendix 2, cont'd

The following soil samples are a continuation of the 'J' series and two east-west lines run in the southwestern corner of the Scotch claim. Sample locations are shown on the Mt. Mulligan detail map.

<u>Area, Code, Claim</u>	<u>No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>
Mulligan Road, 'J', Scotch	J4 0	26	10	43	.1
	0+40	20	16	70	.1
	0+80	32	20	62	.2
	1+20	16	38	210	.1
	1+60	12	14	54	.1
	2	13	10	36	.1
	2+40	10	12	32	.2
	2+80	16	10	47	.1
	3+20	40	26	72	.2
	3+60	16	12	46	.1
J4 4	32	20	48	.2	
West Flank Mt. Mulligan, Scotch	MU 100N 0 E	27	16	64	.2
	MU 100N 1 E	15	16	41	.2
	1+50	12	14	40	.3
	2	14	14	40	.1
	2+50	6	16	24	.1
	3	18	18	46	.4
	3+50	6	14	15	.2
	4	10	21	24	.3
	4+50	10	20	18	.4
	MU 100N 5 E	10	14	20	.6
	MU 200N 0 E	11	16	12	.4
	0+50	4	6	14	.1
	1	2	5	11	.1
	1+50	6	5	15	.1
	2	10	16	25	.3
	2+50	3	9	12	.1
	3	3	4	5	.1
	3+50	3	6	8	.1
	4	3	5	7	.1
	4+50	7	12	18	.2
5	6	7	14	.1	
5+50	4	10	7	.1	
6	14	18	32	.1	
6+50	8	14	16	.1	
7	5	9	14	.1	
7+50	5	12	10	.3	
MU 200N 8 E	20	14	18	.1	
MU 100N 0+50E	15	17	60	.1	
MU 100N 0+91E	16	18	44	.2	

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

The samples on this and the following page were taken along logging roads just north of Slide Creek (SC-series) and on east-west lines spaced about 300 meters apart, on the east flank of Mt. Mulligan (RA-series). Sample spacing on the SC-series was 50 meters; on the Ra-series, 25 meters. The sample locations are plotted on the Mt. Mulligan detail map at the rear of this report.

File No. 82-1260-A -soils

<u>Area, Code, Claim</u>	<u>No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>
Slide Creek, Gin Claim	SCTD 1	44	58	140	.1
	2	76	38	112	.1
	3	62	65	148	.3
	4	52	42	106	.3
	5	72	45	170	.7
	6	40	43	635	.4
	7	25	54	140	.5
	8	26	60	112	1.2
	9	30	30	152	.9
	10	68	48	195	1.2
	11	24	68	110	.5
	12	44	40	160	.5
	13	52	100	164	.7
	14	48	54	142	.6
	SCTD 15	54	60	185	.3
" " " " " " " " " " " " " " " " " " " "	SCTD 16	130	86	370	1.3
	17	40	37	135	.9
	18	34	54	115	2.8
	19	33	44	126	.8
	20	32	40	98	.6
	21	56	50	155	.2
	22	85	56	315	.8
	23	44	58	330	.6
	24	128	54	240	.3
	25	24	38	70	.6
	26	56	88	165	.6
	27	30	24	72	1.2
	28	125	128	428	3.1
	29	34	85	170	1.1
	30	15	27	88	.8
	31	33	32	76	1.1
	32	34	44	105	1.2
	33	25	22	102	.5
	34	24	17	52	.3
	35	26	24	64	.4
	SCTD 36	20	18	74	.3

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-1104

Area, Code, Claim	No.	Cu	Pb	Zn	Ag
Slide Creek, Gin claim	RABC - 1	7	14	18	.4
	2	10	18	30	.3
	3	16	17	150	.6
	4	10	32	84	.2
	5	10	22	158	.2
	6	7	13	86	.3
	7	5	16	29	.1
	8	12	18	22	.3
	9	3	7	15	.1
	10	11	20	92	.3
	11	9	21	60	.2
	12	24	20	92	.1
RABC - 13	20	20	126	.2	
RABC - 14	6	18	35	.2	
15 silt	12	12	54	.1	
16	7	15	22	.1	
18	18	22	92	.3	
RABC - 22	80	66	132	.3	
RABD - 14	48	32	120	.4	
16	20	30	102	.2	
17	10	23	35	.2	
18	26	28	72	.2	
19	48	27	255	.4	
20	26	25	80	.5	
21	14	16	32	.4	
22	18	14	33	.3	
23	15	15	36	.3	
24	9	20	22	.2	
25	6	18	16	.2	
26	13	23	43	.4	
27	4	4	9	.1	
28	12	22	40	1.3	
RABD - 29	15	23	36	.6	
RAGK - 1	22	20	60	.6	
2	7	15	18	.1	
3	19	22	60	.2	
4	26	20	45	.3	
5	15	16	25	.3	
6	39	25	88	.5	
9	6	15	82	.1	
10 silt	38	27	575	.4	
12 rock	3	14	20	.1	
13	14	60	50	.4	
14	8	19	30	.3	
15	5	13	16	.3	
16	11	15	13	.6	
17	18	25	17	.4	
18	11	22	28	.5	
19	5	18	19	.5	
RAGK - 20	28	104	198	.7	

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

The following soil samples were taken at 40 meter spacings along east-west log haulage roads on the north flank of Mt. Alpen. Lines were approximately 200 meters apart.

File No. 82-0961A

Area, Code, Claim		SAMPLE No.	Cu	Pb*	Zn	Ag	ppb Au
East Raffuse, 'L', Ring 9	1	RL1 0 N	30	16	64	.2	5
	"	0+40	12	15	20	.1	5
	"	0+80	14	12	16	.1	5
	"	1+20	5	7	12	.1	5
	"	2	10	12	26	.1	5
	"	2+40	12	13	26	.1	5
	"	2+80	15	11	27	.2	5
	"	3+20	13	13	42	.2	5
	"	3+60	4	22	30	.1	5
	"	4	9	18	20	.2	5
	"	4+40	5	5	16	.1	5
	"	4+80	6	8	24	.1	5
	"	5+20	6	11	30	.1	5
	"	5+60	12	8	33	.1	5
	"	6	26	13	48	.2	5
	"	7+20	54	6	43	.1	60
	"	7+60	22	8	56	.1	5
	"	8	11	9	38	.1	5
	"	8+40	18	10	25	.1	5
	"	8+80	30	7	36	.1	5
	"	9+20	11	12	23	.1	5
	"	9+60	20	10	32	.2	5
	"	10+50	14	45	60	.1	5
	"	10+80	8	12	20	.1	5
	"	RL1 11+20N	17	11	35	.1	5
	"	RL1 50 W	64	14	82	.2	5
	"	RL1 100 W	14	12	33	.1	5
"	RL1C 0 E	37	15	54	.2	5	
"	0+40	8	18	19	.1	5	
"	1+20	16	8	29	.1	5	
"	1+60	18	10	42	.1	5	
"	2	16	10	32	.3	5	
"	2+40	8	9	20	.3	5	
"	2+80	36	10	75	.2	5	
"	3+20	82	18	100	.5	5	
"	3+60	68	10	64	.7	5	
"	RL1C 4 E	31	8	39	.6	5	

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-0961-A

Area, Code, Claim	SAMPLE No.	Cu	Pb*	Zn	Ag*	ppb Au
2 East Raffuse, 'L', Ring 9	RLIC 4+40E	12	8	26	.4	5
	5+20	10	20	30	.3	5
	5+60	7	10	22	.6	10
	6+40	9	8	24	.1	45
	6+80	23	44	73	.4	5
	7+20	22	30	50	.3	5
	7+60	36	32	90	.5	5
	8	26	48	85	1.0	5
	8+40	23	37	84	.2	5
	RLIC 8+80E	10	13	25	.2	5
	RLICA 5+60E	26	18	45	.5	20
	6	22	7	50	.3	5
	6+40	21	13	184	.4	5
	6+80	15	11	33	.3	5
	7+20	78	12	106	.6	15
	7+60	92	20	94	.5	5
	8	42	16	65	.4	5
	8+40	52	32	105	.3	15
	8+80	23	18	84	.2	5
	9+20	180	30	106	.3	5
9+60	22	13	40	.4	5	
RLICA 10 E	22	35	78	.4	5	

The following were collected along a north-south line on the east flank of Mt. Alpen.

File No. 82-0961-A

Area, Code, Claim	SAMPLE No.	Cu	Pb*	Zn	Ag*	ppb Au
East Alpen, 'P', Mink, Owl.	M-1 0 N	45	12	44	.3	10
	0+80	14	13	32	.2	5
	1+20	12	7	29	.4	5
	2+40	7	10	31	.3	5
	3+40	14	8	45	.3	5
	3+60	30	8	65	.2	5
	4	12	5	43	.2	5
	4+40	4	9	28	.2	5
	6	22	5	50	.3	5
	6+40	14	3	65	.3	5
	6+80	14	4	48	.2	5
	7+20	12	6	40	.3	5
	7+60	25	6	50	.3	5
	8	3	7	28	.2	5
	M-1 8+40N	10	4	35	.1	5

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-0961-A

Area, Code, Claim

East Alpen, 'P', Mink,
Owl.

3

SAMPLE No.		Cu	Pb*	Zn	Ag*	Au
M-1	8+80N	2	9	35	.1	5
	9+20	10	8	36	.1	5
	9+60	10	5	20	.1	5
	10	4	4	17	.1	5
M-1	10+40N	3	6	15	.1	5
M-2	1+20W	11	18	44	.3	5
	1+60	4	4	16	.1	5
	3+20	3	4	20	.1	5
	3+60	4	11	19	.1	5
	5+60	6	14	23	.3	5
	6+40	4	5	20	.2	5
M-2	6+80W	18	12	21	.5	5
M-2C	0+40	10	10	36	.2	5
	1+20	15	15	18	.2	5
	1+60	4	7	15	.5	5
	2	3	10	20	.1	5
	2+40	5	14	38	.1	5
M-2C	2+80	3	8	18	.1	5
M-2C	4 S	4	12	11	.1	5
M-2C	4+40	3	10	15	.2	5
	4+80	25	10	13	.6	5
	5+20	3	7	12	.1	5
	6	5	8	19	.1	5
	6+40	4	8	22	.1	5
M-2C	6+80	5	12	15	.2	5

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-1211-A

Area, Code, Claim

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Lisa Dawn 'Q', Lisa Dawn

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SAMPLE No.	Cu	Pb*	Zn	Ag
LD8D 1	205	22	118	1.6
2	52	18	58	.2
3	54	12	94	.1
4	35	10	66	.1
5	18	11	37	.1
6	8	4	16	.1
7	20	13	44	.2
8	34	13	39	.4
9	52	12	68	.2
10	30	11	45	.4
11	15	10	30	.6
12	15	5	37	.2
13	4	4	11	.2
14	7	6	12	.3
15	4	4	10	.1
16	6	5	12	.2
17	18	6	23	.1
18	2	2	10	.1
19	33	15	56	.1
20	2	3	17	.1
21	3	2	9	.3
22	31	12	31	.4
23	30	14	39	.1
24	38	15	45	.1
LD8D 25	2	2	10	.1
LDGS 1	124	88	570	.6
2	920	146	2150	1.5
3	112	48	980	1.0
4	145	128	550	.6
5	4	4	18	.4
6	2	2	9	.1
7	6	4	25	.1
8	3	4	15	.2
9	2	3	26	.1
10	15	4	17	.2
11	32	4	26	.3
LDGS 12	54	8	84	.2

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CONSULTING GEOLOGISTS

Appendix 2, cont'd

File No. 82-1211-A

Area, Code, Claim

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Lisa Dawn, 'Q', Lisa Dawn

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SAMPLE No.	Cu	Pb*	Zn	Ag
LDGS 13	8	6	19	.1
14	13	6	20	.1
15	40	12	35	.6
16	38	10	15	.1
17	58	56	154	.1
18	12	5	21	.1
19	6	6	16	.1
20	2	2	12	.1
21	208	35	265	.3
22	42	40	128	.5
23	15	14	49	.4
LDGS 24	40	15	72	.3
LDGK 1	2	7	21	.2
2	30	13	72	.3
3	21	7	28	.3
4	8	14	33	.2
5	2	8	7	.4
6	13	17	52	.5
7	2	4	11	.1
8	2	9	21	.1
9	7	15	31	.2
10	3	3	16	.1
11	2	15	11	.2
12	2	4	5	.1
13	5	8	22	.1
14	1	7	7	.1
15	3	2	8	.1
16	4	4	10	.1
17	2	14	13	.4
18	13	15	41	.5
19	8	4	11	.1
20	45	18	70	.4
21	10	7	21	.2
22	16	15	37	.3
23	18	13	42	.4
24	23	12	34	.6
LDGK 25	5	4	15	.3

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Appendix 2, cont'd

The soil samples listed on this and the preceding two pages (LD-series) were taken on east-west lines approximately 400 meters apart. Sample spacing was 75 to 100 meters. The lines crossed the entire claim block. Silt samples taken from creeks traversing the claim are shown on the property location map, and their results given in Appendix 3.

File No. 82-1211-A

Area, Code, Claim

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Lisa Dawn, 'Q', Lisa Dawn

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SAMPLE No.		Cu	Pb*	Zn	Ag
LDGK 26		14	16	21	.1
27		6	7	7	.1
28		56	11	60	.1
LDGK 29		12	15	25	.2
LDTD 1		5	15	106	.3
2	Miss				
3		21	18	98	.5
4		5	2	14	.1
5		2	2	9	.1
6		5	3	10	.1
7		26	16	44	.2
8		2	9	9	.1
9		2	8	4	.1
10		1	6	2	.1
11		4	3	12	.1
12		6	2	5	.2
13		2	2	11	.1
14		40	46	36	.9
15		22	13	52	.1
16		52	17	166	.3
17		230	13	46	.7
LDTD 18		8	4	7	.1

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

APPENDIX 3

Analysis Procedures



ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone : 253 - 3158

To: W.G. Timmins Exploration

Feb. 2, 1983

GEOCHEMICAL LABORATORY METHODOLOGY

Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10 ml with demineralized water. Extracted metals are determined by :

A. Atomic Absorption (AA)

Ag*, Cu, Pb and Zn

(* denotes with background correction.)

B. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Geochemical Analysis for Au

10.0 gram samples that have been ignited overnight at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 5 ppb direct AA and 1 ppb graphite AA.)



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Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone : 253 - 3158

GEOCHEMICAL LABORATORY METHODOLOGY - 1982

Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10 ml with demineralized water. Extracted metals are determined by :

A. Atomic Absorption (AA)

Ag*, Bi*, Cd*, Co, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Sb*, Tl, V, Zn
(* denotes with background correction.)

B. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, K, La, Mg,
Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Geochemical Analysis for Au

10.0 gram samples that have been ignited overnight at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 5 ppb direct AA and 1 ppb graphite AA.)

Geochemical Analysis for Au, Pd, Pt, Rh

10.0 - 30.0 gram samples are subjected to Fire Assay preconcentration techniques to produce silver beads.

The silver beads are dissolved and Au, Pb, Pt and Rh are determined in the solution by Atomic Absorption.

Geochemical Analysis for As

0.5 gram samples are digested with hot dilute aqua regia and diluted to 10 ml. As is determined in the solution by Graphite Furnace Atomic Absorption (AA) or by Inductively Coupled Argon Plasma (ICP).



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Geochemical Analysis for Hg

A 0.5 gram sample is digested with aqua regia and diluted with 20% HCl.

Hg in the solution is determined by cold vapour AA using a F & J Scientific Hg assembly. An aliquot of the extract is added to a stannous chloride / hydrochloric acid solution. The reduced Hg is swept out of the solution and passed into the Hg cell where it is measured by AA.

Geochemical Analysis for Ga

0.5 gram samples are digested with hot aqua regia. Ga is determined in the diluted extract by Atomic Absorption.

Geochemical Analysis for Ge

0.5 gram samples are fused with sodium peroxide and leached with water. Ge in the solution is determined by either direct or graphite AA.

Geochemical Analysis for Tl

0.5 gram samples are fused with sodium peroxide and leached with water. Tl is determined in the extract by graphite AA.

OTHER LEACHING SYSTEMS FOR AA ELEMENTS

1. Oxalic Acid Leach of Rock, Soil and Silts

0.5 gram samples are digested hot with 10 ml of 5% Oxalic Acid solution. Oxalic acid dissolves Fe and Mn from their oxides of M-1 Fraction (but not magnetite and ilmenite) limonites and clays. The following metals are determined by Atomic Absorption : Cu, Zn, Pb, Ni, Mo, Fe and Mn.

2. Cold HCl Acid Extraction

0.5 gram samples are leached with 10 ml 5% HCl solution at room temperature for 2 hours with occasional shaking. This leach will dissolve heavy metals from organic and surface layers of clay fractions.

3. EDTA Extraction

0.5 gram samples are leached at room temperature for 4 hours with 10 ml of EDTA solution.



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Geochemical Analysis for Barium

0.1 gram samples are digested with hot NaOH and EDTA solution.

Ba is determined in the solution by Atomic Absorption.

Geochemical Analysis for Uranium

0.5 gram samples are digested with hot aqua regia and diluted to 10 ml.

Aliquots of the acid extract are solvent extracted using a salting agent and aliquots of the solvent extract are fused with NaF, K_2CO_3 and Na_2CO_3 flux in a platinum dish.

The fluorescence of the pellet is determined on the Jarrel Ash Fluorometer.

Geochemical Analysis for Tungsten

1.0 gram samples are fused with KCl, KNO_3 and Na_2CO_3 flux in a test tube, and the fusions are leached with 10 ml water. W in the solution determined by ICP with a detection of 1 ppm.

Geochemical Analysis for Fluorine

0.25 gram samples are fused with sodium hydroxide and leached with 10 ml water. The solution is neutralized, buffered, adjusted to pH 7.8 and diluted to 100 ml.

Fluorine is determined by Specific Ion Electrode using an Orion Model 404 meter.

Geochemical Analysis for Tin

1.0 gram samples are fused with ammonium iodide in a test tube. The sublimed iodine is leached with dilute hydrochloric acid,

The solution is extracted with MIBK and tin is determined in the extract by Atomic Absorption.



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Geochem Whole Rock

A .1 gm sample is fused with .6 gm LiBO2 and is dissolved in 100 mls of 5% HNO3 . The analysis is completed by either AA or ICP.

Other Digestions by Request

- A. .5 gm by 1 ml nitric and 3 ml perchloric acid to fuming, final volume of 10 mls.
B. .5 gm by 5 ml hydrofloric nitric, 5 ml hydrochloric and 5 ml perchloric acid, to fuming, final volume 50 mls.

ICP GEOCHEMICAL ANALYSIS

A .500 GRAM OF SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 NITRIC ACID TO HYDROCHLORIC ACID TO WATER AT 90 DEG. C FOR 1 HOUR. THE SAMPLE IS DILUTED TO 10 ML WITH WATER. THE RESULTS ARE REPORTED IN PPM EXCEPT FOR : FE, CA, P, MG, BA, TI, AL, NA, AND K WHICH ARE IN PERCENT. THIS LEACH IS PARTIAL FOR : CA , P, MG, AL, TI, LA, NA, K, U & CR IS= INTERNAL STANDARD.

O/USA CERTIFIED STD GXR-2
EGC

Table with 10 columns (IS, MO, U, LA, CU, Au, CR, PB, TH, MG, ZN, SR, BA, AG, CD, TI, NI, SB, B, CO, BI, AL, MN, V, NA, FE, K, AS, P, W) and 5 rows of data.

*O/USA CERTIFIED STD GXR-4
EGC

Table with 10 columns (IS, MO, U, LA, CU, Au, CR, PB, TH, MG, ZN, SR, BA, AG, CD, TI, NI, SB, B, CO, BI, AL, MN, V, NA, FE, K, AS, P, W) and 5 rows of data.

ICP Notes

This type of analysis is most suited for low sulphide or metal contents of soils and rocks.

* Detection for Au is 3 ppm and ignore lower values.

APPENDIX 4

Complete List of Mineral Claims
 Held by Stackpool Minerals
 in Squamish Area

List of Mineral Claims

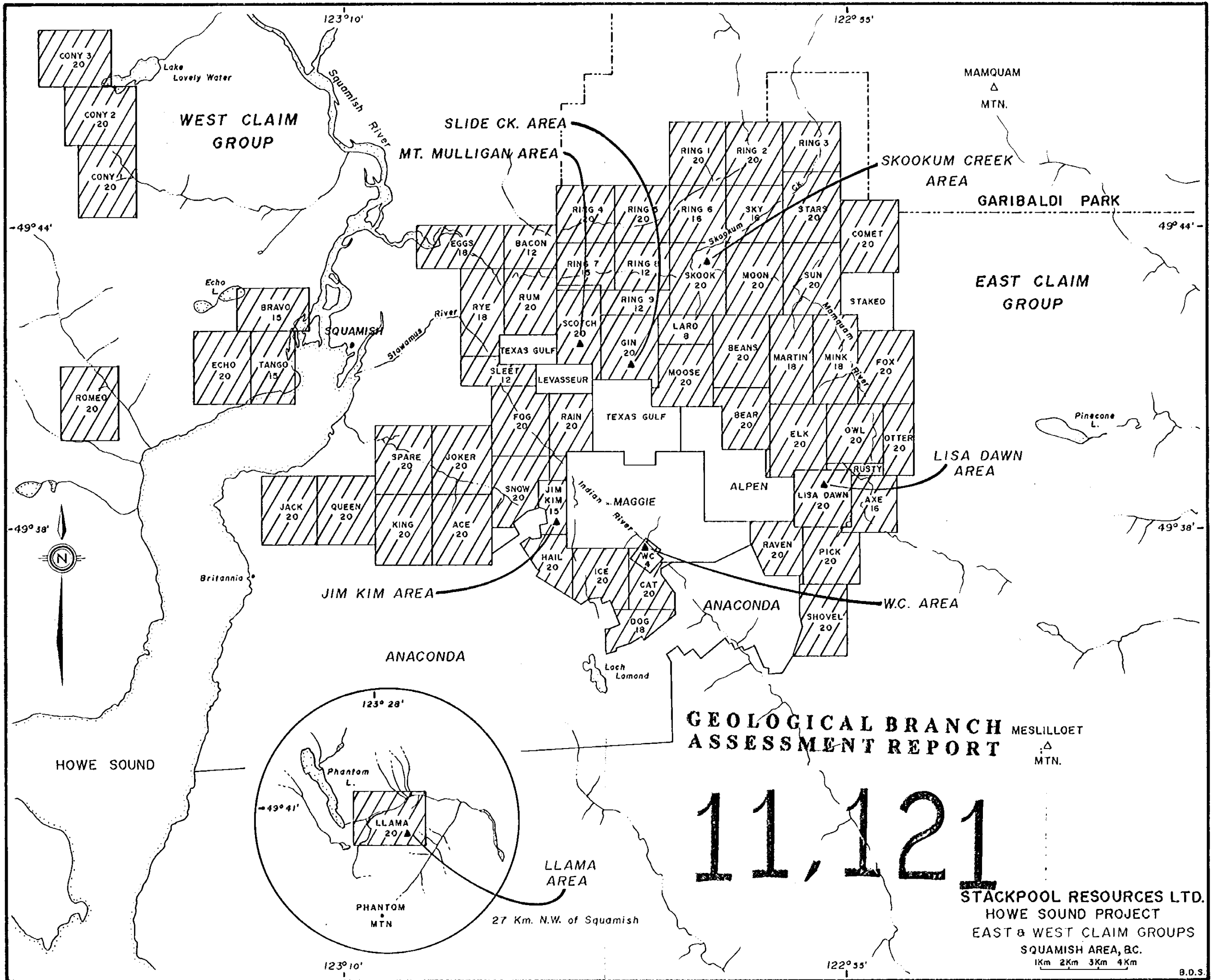
<u>Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>
Rain	20	942	July 17, 1981
Snow	20	943	July 17, 1981
Hail	20	944	" "
Ice	20	945	" "
Sleet	12	946	July 17, 1981
Rum	20	947	" "
Rye	18	948	" "
Cat	20	949	" "
Dog	18	950	" "
Scotch	18	951	" "
Moose	20	952	" "
Owl	20	953	" "
Fog	20	954	July 20, 1981
Fox	20	955	July 27, 1981
Otter	10	956	July 27, 1981
Elk	20	957	" "
Bear	20	958	" "
Gin	20	959	" "
Shovel	20	960	" "
Pick	20	961	" "

<u>Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>
Raven	20	962	July 27, 1981
Axe	16	980	August 10, 1981
Beans	20	981	" "
Lard	8	982	" "
Mink	18	983	" "
Rusty 1-4	4	976 - 979	" "
Rusty 5-6	2	997 - 998	August 24, 1981
Fire 1-4	4	999 - 1002	August 24, 1981
Martin	18	1003	" "
Eggs	18	1004	" "
Bacon	12	1005	" "
Sun	20	1013	September 8, 1981
Comet	20	1014	" "
Stars	20	1015	" "
Moon	20	1016	" "
Tango	15	1017	" "
Echo	20	1018	" "
Romeo	20	1019	" "
Sky	16	1020	" "
Skook	20	1021	" "
Coney 1	20	1022	" "
Coney 2	20	1023	" "
Coney 3	20	1024	" "
Bravo	15	1025	" "
Ace	20	1037	October 6, 1981
Deuce	4	1038	" "
King	20	1039	" "
Joker	20	1050	October 9, 1981
Queen	20	1051	" "
Jack	20	1052	" "
Spare	20	1053	" "
Jim Kim	15	1156	March 1, 1982
Ring 1	20	1235	August 10, 1982

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

<u>Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>
Ring 2	20	1236	August 10, 1982
Ring 3	16	1237	" "
Ring 4	20	1250	August 24, 1982
Ring 5	16	1251	" "
Ring 6	16	1238	August 10, 1982
Ring 7	15	1239	" "
Ring 8	12	1240	August 10, 1982
Ring 9	12	1241	August 10, 1982
WC 1-4	4	25054 - 25057	<i>Sept 10, 1973</i>
Lisa Dawn	16	1234	August 10, 1982
Cat 2	4		
Llama 1	20	1260	September 24, 1982



123°10'

122°55'

-49°44'

49°44'

-49°38'

49°38'

123°28'

-49°41'

123°10'

122°55'

CONY 3
20

CONY 2
20

CONY 1
20

WEST CLAIM GROUP

SLIDE CK. AREA
MT. MULLIGAN AREA

SKOOKUM CREEK AREA

GARIBALDI PARK

EAST CLAIM GROUP

BRVAO 15
ECHO 20
TANGO 15

EGGS 18
BACON 12
RING 1 20
RING 2 20
RING 3 20
RING 4 20
RING 5 20
RING 6 18
RING 7 15
RING 8 12
RING 9 12
RUM 20
RYE 18
SCOTCH 20
GIN 20
LARD 8
MOOSE 20
BEANS 20
MARTIN 18
MINK 18
FOX 20
STAKED
SQUAMISH RIVER
TEXAS GULF
SLEET 12
LEVASSEUR
MOOSE 20
BEAR 20
ELK 20
OWL 20
OTTER 20
RUSTY
ALPEN
LISA DAWN 20
AXE 16

JACK 20
QUEEN 20

SPARE 20
JOKER 20
KING 20
ACE 20

SNOW 20
JIM KIM 15
HAIL 20
ICE 20
CAT 20
DOG 18

ANACONDA

W.C. AREA

JIM KIM AREA

ANACONDA

GEOLOGICAL BRANCH ASSESSMENT REPORT

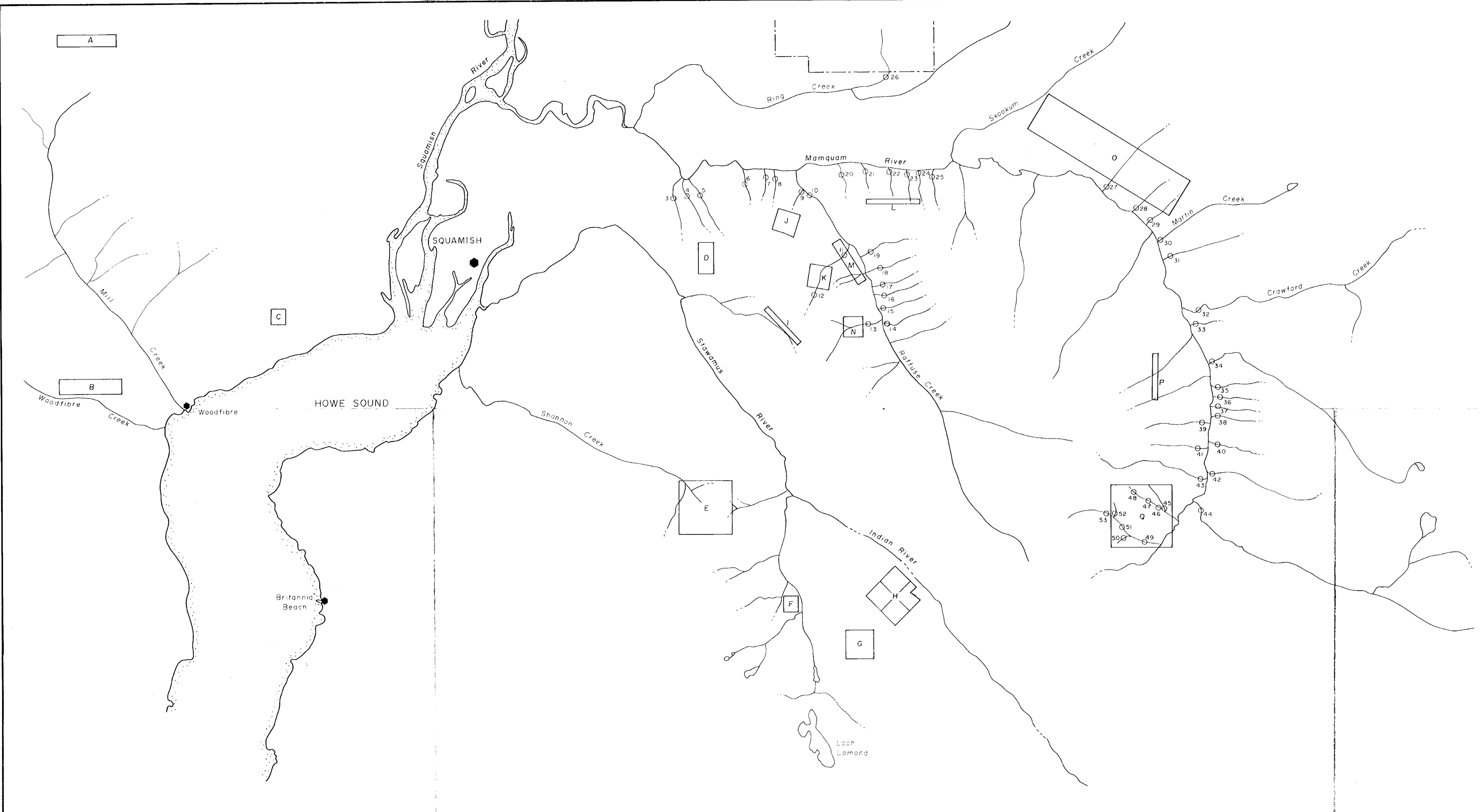
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STACKPOOL RESOURCES LTD.
HOWE SOUND PROJECT
EAST & WEST CLAIM GROUPS
SQUAMISH AREA, BC.

1Km 2Km 3Km 4Km

B.D.S.

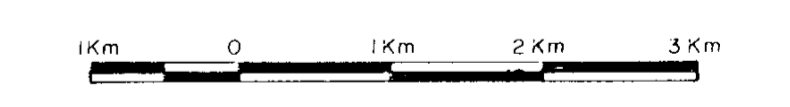


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 ASSESSMENT REPORT
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LEGEND

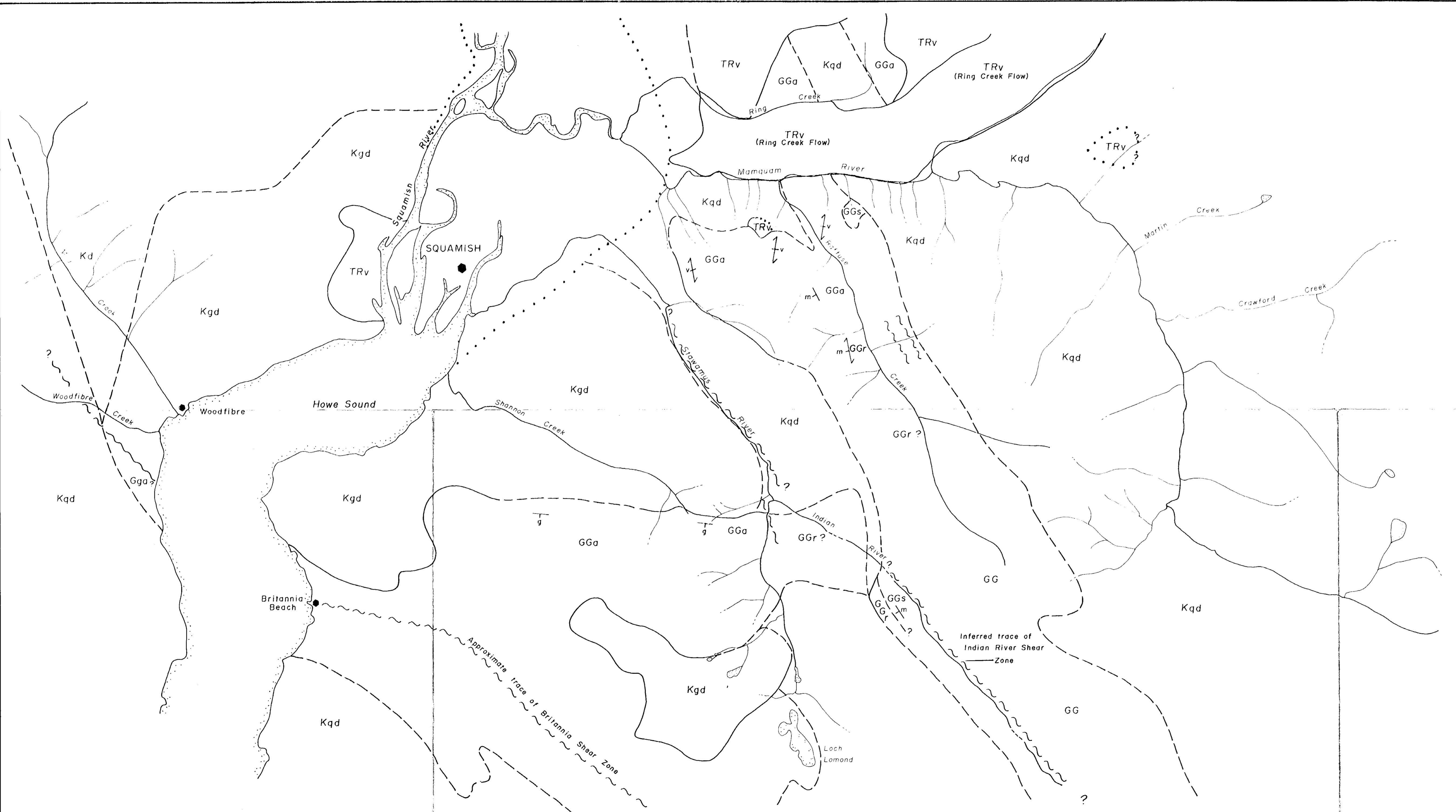
- Silt sample location and number ○21
- Grid or work area location □A
- Mt. Conybeare Area A
- Romeo Area B
- Adit Area C
- Ray Creek Grid D
- Sky Pilot Area E
- Ice-Hail Grid F
- Delta Lake Area G
- W.C. Claims H
- Upper Ray Creek Area I
- Mulligan Road Area J
- Mug Grid K
- East Raffuse Area L
- Raffuse Creek Grid M
- Slide Creek Area N
- Skookum Creek Area O
- East Alpen Area P
- Lisa Dawn Area Q

Map features from N.T.S. maps 92 G/10 W-11 E



STACKPOOL RESOURCES LTD.
 SILT SAMPLE LOCATION MAP
 WORK AREA LOCATION MAP
 SQUAMISH AREA
 VANCOUVER M.D.
 NEW WESTMINSTER M.D.

1:50,000	Map I	Jan. 83	B.D.S.
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LEGEND

VOLCANIC AND SEDIMENTARY ROCKS
 Tertiary to Recent volcanic rocks
 Gambier Group metasediments
 Gambier Group rhyolite and sheared equivalents
 Gambier Group andesite, greenstone and sheared equivalents
 Undivided Gambier Group rocks

- TRv
- GGs
- GGr
- GGa
- GG

PLUTONIC ROCKS
 Cretaceous (?) granodiorite
 Cretaceous (?) quartz diorite
 Cretaceous (?) diorite

- Kqd
- Kqd
- Kd

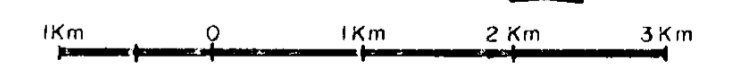
- Contact, location defined
- Contact, location extrapolated or inferred
- Contact, location approximate
- Bedding attitude, gentle, medium, steep dip
- Foliation attitude, gentle, medium, vertical dip
- Fault or shear zone, location approximate

Map features from N.T.S. maps 92G/10W-11E
 Geology is a modification of GSC OF 611 and GSC map 1151a

Re-interpretations are based on the author's observations

GEOLOGICAL BRANCH ASSESSMENT REPORT

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STACKPOOL RESOURCES LTD.
 GEOLOGICAL COMPILATION MAP
 SQUAMISH AREA
 VANCOUVER & NEW WESTMINSTER M.D.

	700 E	750 E	800 E	850 E	900 E	950 E	1000 E	1050 E	1100 E	1150 E	1200 E	1250 E	1300 E
1150 N	051	051	030	016	026	026	010	0	06	013	08	017	0
1100 N	043	08	012	0	0	040	010	07	014	08	08	010	0
1050 N	0	016	028	010	061	051	016	08	08	015	08	012	0
1000 N	014	03	017	02	015	023	04	043	06	05	020	08	015
950 N	07	0	033	03	0106	08	058	034	04	010	03	04	014
900 N	020	029	079	013	07	020	030	08	042	014	04	015	09
850 N	012	039	0234	046	036	018	015	025	027	015	023	03	019
800 N	011	0	0199	014	033	015	017	033	024	012	09	014	017
750 N	015	013	021	031	06	018	034	031	07	07	014	012	013
700 N	031	06	058	022	029	010	08	028	013	010	016	08	019
650 N	024	055	038	015	010	08	037	011	018	011	010	016	022
600 N	027	012	054	0177	013	0104	026	014	09	0	035	062	0
550 N	014	025	011	018	016	015	030	010	08	012	022	034	0
500 N	064	050	031	04	010	013	026	033	07	062	024	021	026
450 N	077	021	022	014	020	06	056	07	06	015	09	015	08
400 N							014						

LEGEND

Sample location ○

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N.T.S. 92 G/11 E



STACKPOOL RESOURCES LTD.

RAY CREEK GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY · COPPER IN P.P.M.

1:2500

Jan. 83

Map 3 a

B.D.S.

	700 E	750 E	800 E	850 E	900 E	950 E	1000 E	1050 E	1100 E	1150 E	1200 E	1250 E	1300 E
1150 N	023	021	020	020	081	029	029	0	029	048	025	039	0
1100 N	038	019	018	0	0	036	025	036	039	018	026	033	0
1050 N	0	027	048	025	030	023	022	025	049	042	025	021	0
1000 N	037	012	058	013	045	038	016	0421	039	019	034	025	031
950 N	044	0	0219	014	01100	039	092	0494	016	033	09	010	033
900 N	080	0129	0152	066	031	089	0122	054	0173	033	09	020	021
850 N	047	0164	01326	0439	074	0113	042	055	050	068	021	09	026
800 N	0172	0	01293	0218	0277	057	085	0125	042	027	021	023	036
750 N	047	026	046	0122	026	028	0106	080	022	015	021	020	012
700 N	035	011	053	054	093	039	039	030	030	022	017	013	036
650 N	041	036	025	018	026	034	0171	031	054	019	010	024	025
600 N	031	029	044	047	048	0129	0105	043	014	0	044	0150	0
550 N	022	044	018	025	053	069	068	027	021	032	030	086	0
500 N	031	027	033	07	040	035	0131	069	017	0435	066	070	085
450 N	039	026	042	041	038	018	085	027	014	038	027	040	027
400 N							038						

LEGEND

Sample location 0

GEOLOGICAL BRANCH
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50m 0 50m 100m 150m 200m

N.T.S. 92 G/11 E



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RAY CREEK GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY · ZINC IN P.P.M.

1:2500

Jan. 83

Map 3b

B.D.S.

	700 E	750 E	800 E	850 E	900 E	950 E	1000 E	1050 E	1100 E	1150 E	1200 E	1250 E	1300 E
1150 N	011	011	009	007	028	016	012	0	015	016	011	015	0
1100 N	012	009	022	0	0	015	009	015	010	007	013	008	0
1050 N	0	015	010	011	019	015	021	015	011	015	014	010	0
1000 N	011	006	008	004	009	014	004	064	015	008	010	009	014
950 N	007	0	008	002	021	005	013	0338	009	010	001	002	009
900 N	009	009	012	015	010	028	035	020	024	017	001	011	009
850 N	009	022	027	027	014	029	015	021	017	015	008	001	011
800 N	019	0	019	012	029	015	051	036	014	010	010	009	006
750 N	007	008	019	022	012	012	030	038	015	005	012	008	005
700 N	015	006	055	017	038	018	016	014	010	015	010	007	010
650 N	015	012	012	008	010	012	051	015	022	007	005	013	011
600 N	012	011	014	016	018	039	040	012	014	0	009	029	0
550 N	010	015	008	009	026	019	020	012	011	014	007	028	0
500 N	015	012	015	001	015	016	036	0165	010	040	028	028	023
450 N	015	015	010	016	015	008	031	019	007	013	008	014	007
400 N							018						

LEGEND

Sample location



N.T.S. 92 G/11 E



GEOLOGICAL BRANCH
ASSESSMENT REPORT

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RAY CREEK GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY - LEAD IN P.P.M.

1:2500

Jan. 83

Map 3c

B.D.S.

	700 E	750 E	800 E	850 E	900 E	950 E	1000 E	1050 E	1100 E	1150 E	1200 E	1250 E	1300 E
1150 N	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0	0.2	0.1	0.1	0.1	0
1100 N	0.1	0.1	0.1	0	0	0.2	0.1	0.1	0.1	0.4	0.1	0.1	0
1050 N	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0
1000 N	0.3	0.1	0.2	0.1	0.4	0.4	0.2	0.5	0.3	0.2	0.1	0.1	0.1
950 N	0.2	0	0.4	0.2	1.0	0.3	0.4	1.1	0.2	0.5	0.2	0.2	0.2
900 N	0.2	0.2	0.2	0.5	0.4	0.6	0.9	0.2	0.4	0.6	0.1	0.2	0.2
850 N	0.3	0.2	0.7	0.1	0.4	0.5	0.7	0.5	0.5	0.6	0.2	0.1	0.2
800 N	0.2	0	0.6	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2
750 N	0.2	0.1	0.2	0.8	0.6	0.8	0.4	0.4	0.3	0.2	0.2	0.2	0.1
700 N	0.3	0.2	0.4	0.8	0.3	0.5	0.3	0.5	0.3	0.3	0.3	0.4	0.2
650 N	0.3	0.5	0.5	0.5	0.4	0.4	0.3	0.5	0.3	0.2	0.5	0.3	0.3
600 N	0.3	0.4	0.3	0.2	0.5	0.3	0.4	0.3	0.5	0	0.2	0.2	0
550 N	0.3	0.2	0.3	0.5	0.3	1.0	0.2	0.3	0.3	0.4	0.3	0.2	0
500 N	0.5	0.7	0.5	0.2	0.6	0.5	0.2	0.3	0.3	0.3	0.3	0.9	0.4
450 N	0.7	0.4	0.7	0.5	0.5	0.5	0.2	0.3	0.2	0.3	0.2	0.2	0.4
400 N							0.4						

LEGEND

Sample location ○



N.T.S. 92 G/11E



GEOLOGICAL BRANCH
ASSESSMENT REPORT

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STACKPOOL RESOURCES LTD.

RAY CREEK GRID

SQUAMISH AREA

VANCOUVER M.D.

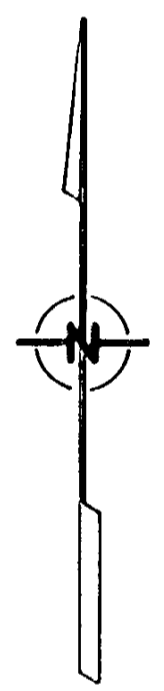
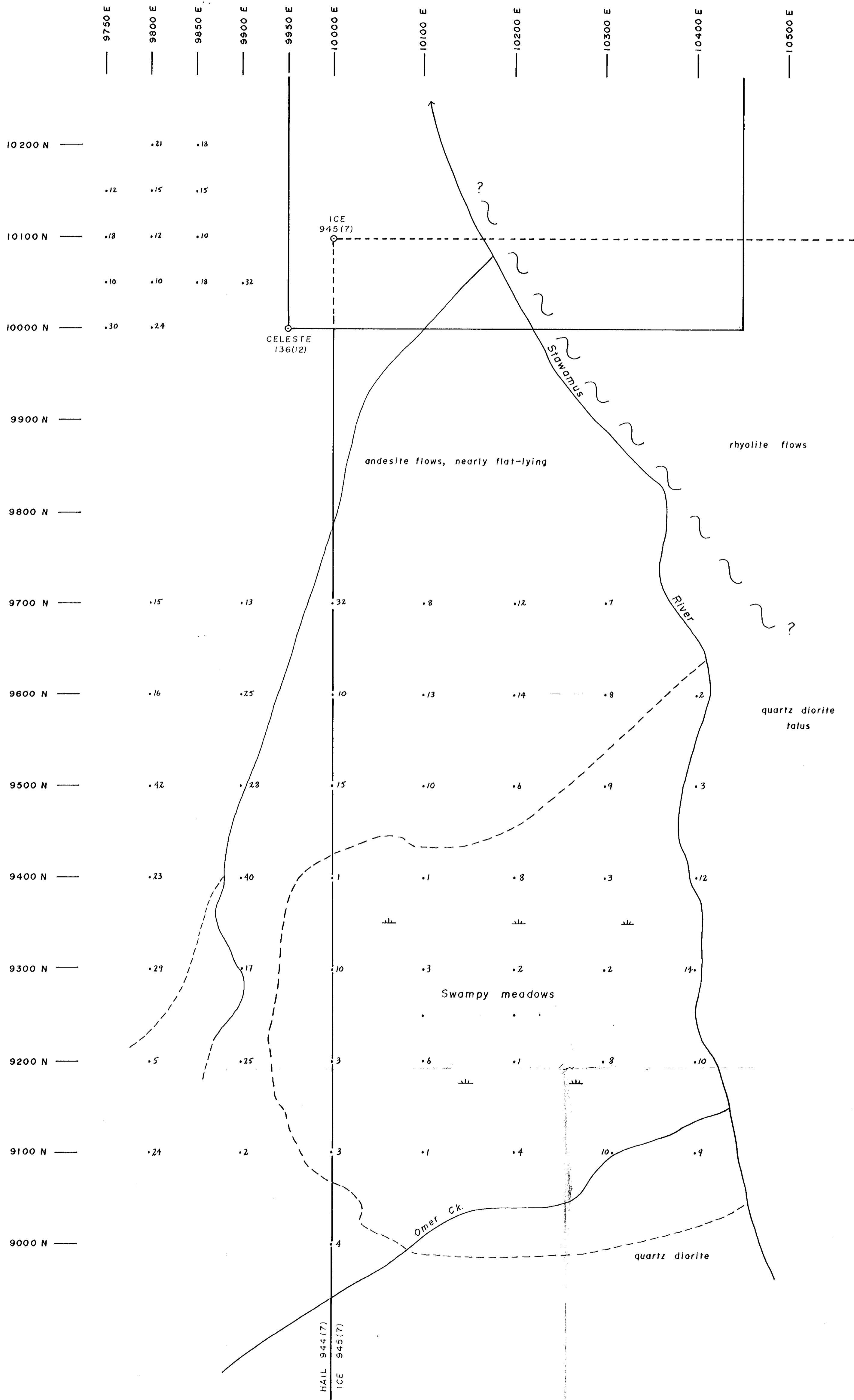
SOIL GEOCHEMISTRY · SILVER IN P.P.M.

I-2500

Jan. 83

Map 3d

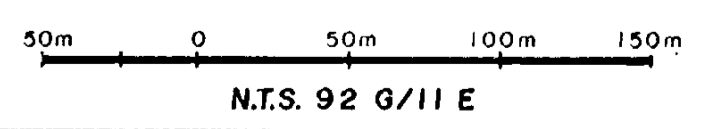
B.D.S.



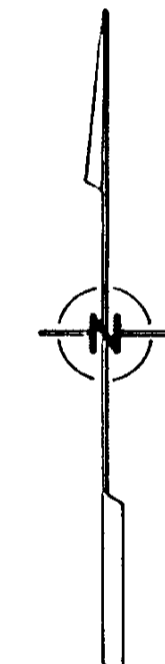
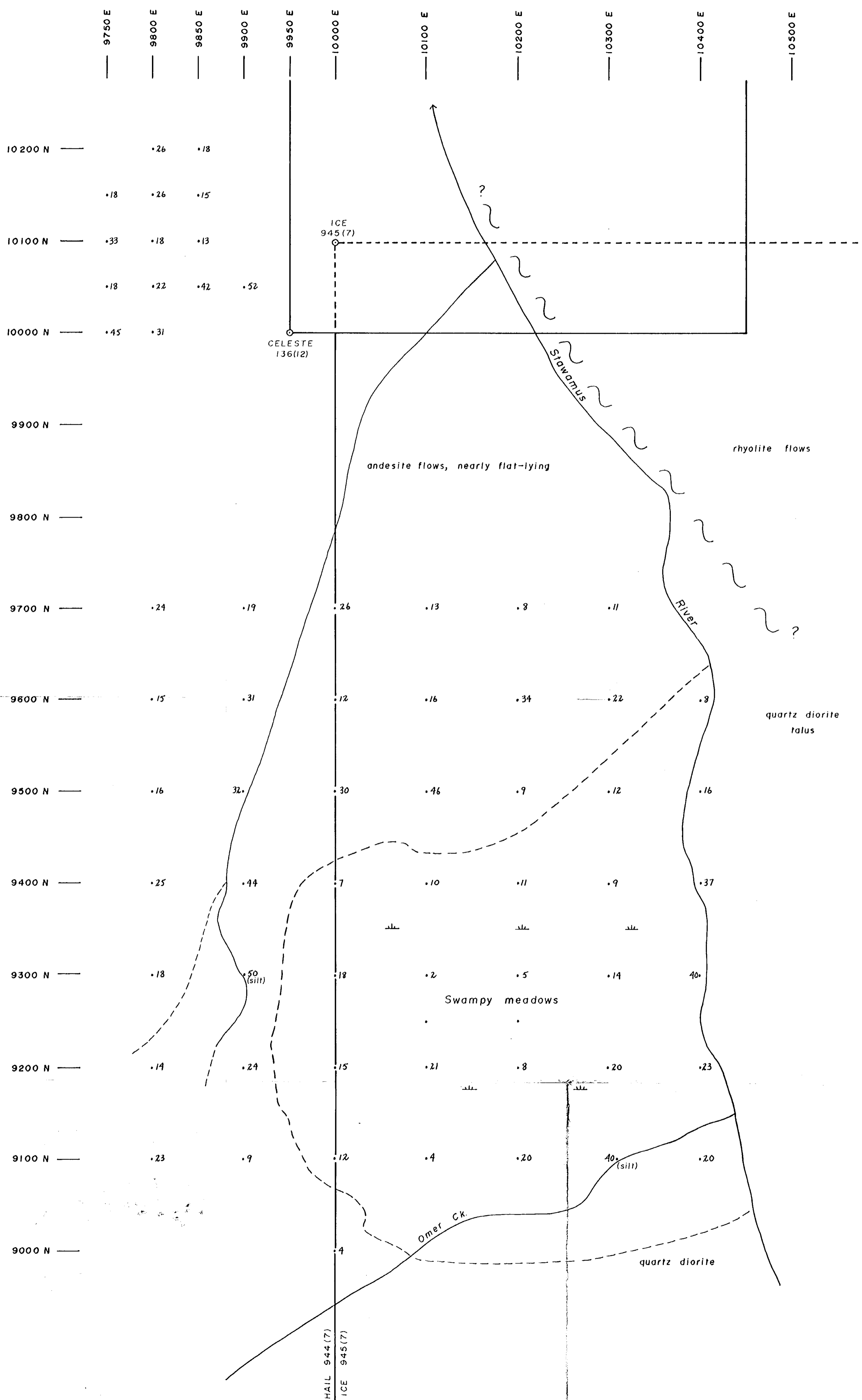
LEGEND

- Sample station
- Claim post
- Creek direction →
- Claim boundaries
- Inferred fault

11,121



STACKPOOL RESOURCES LTD.			
ICE & HAIL GRID			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY: COPPER IN P.P.M.			
1: 2500	Jan. 83	Map 4a	B.D.S.



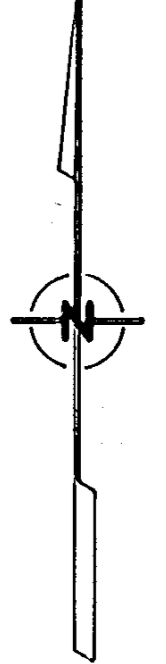
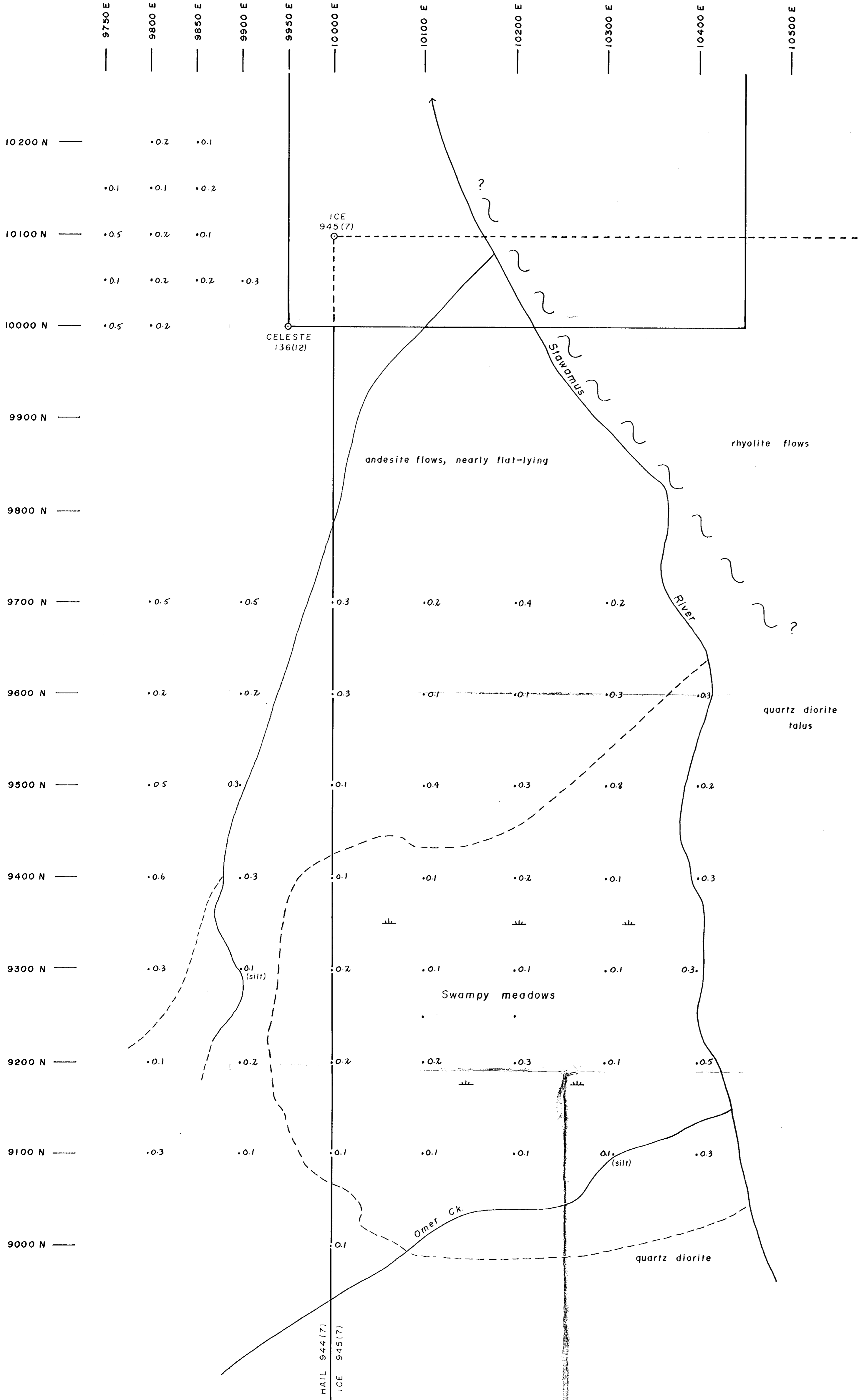
- LEGEND**
- Sample station
 - Claim post
 - Creek direction
 - Claim boundaries
 - Inferred fault

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,121

50m 0 50m 100m 150m
N.T.S. 92 G/11 E

STACKPOOL RESOURCES LTD.			
ICE & HAIL GRID			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY: ZINC IN P.P.M.			
1:2500	Jan. 83	Map 4 b	B.D.S.



LEGEND

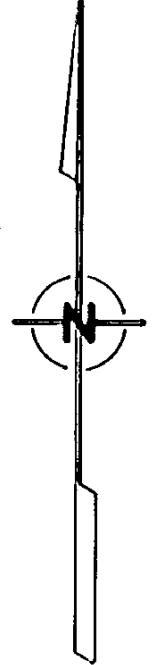
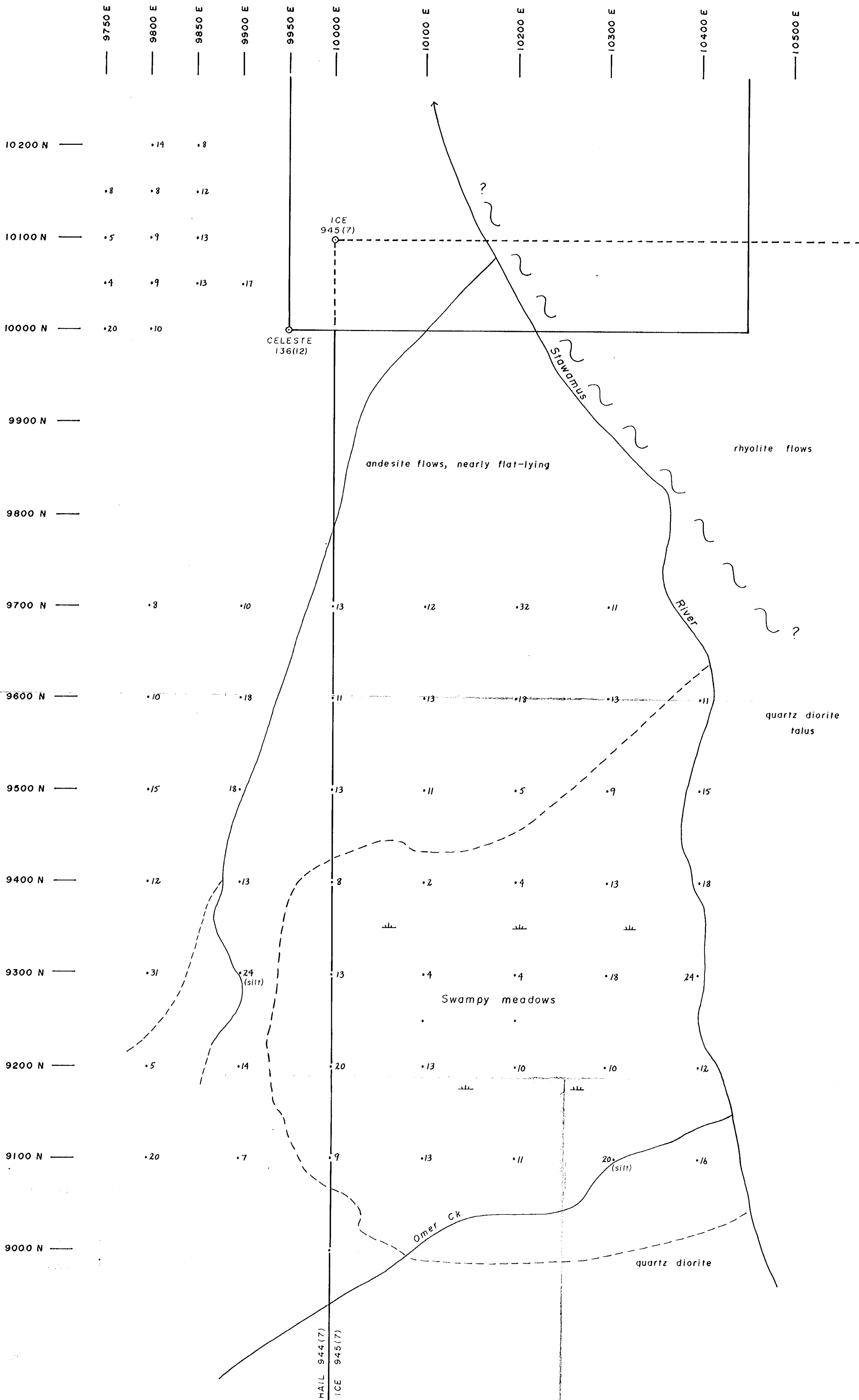
- Sample station
- Claim post
- Creek direction →
- Claim boundaries
- Inferred fault

**GEOLOGICAL BRANCH
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N.T.S. 92 G/11 E

STACKPOOL RESOURCES LTD.			
ICE & HAIL GRID			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY: SILVER IN P.P.M.			
1:2500	Jan. 83	Map 4 d	B.D.S.



LEGEND

- Sample station
- Claim post
- Creek direction
- Claim boundaries
- Inferred fault

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,121

50m 0 50m 100m 150m
N.T.S. 92 G/11 E

STACKPOOL RESOURCES LTD.

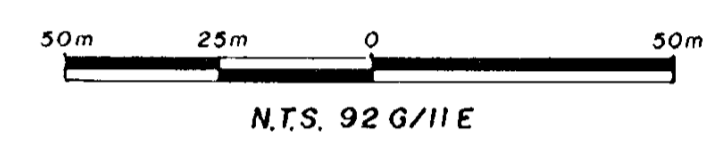
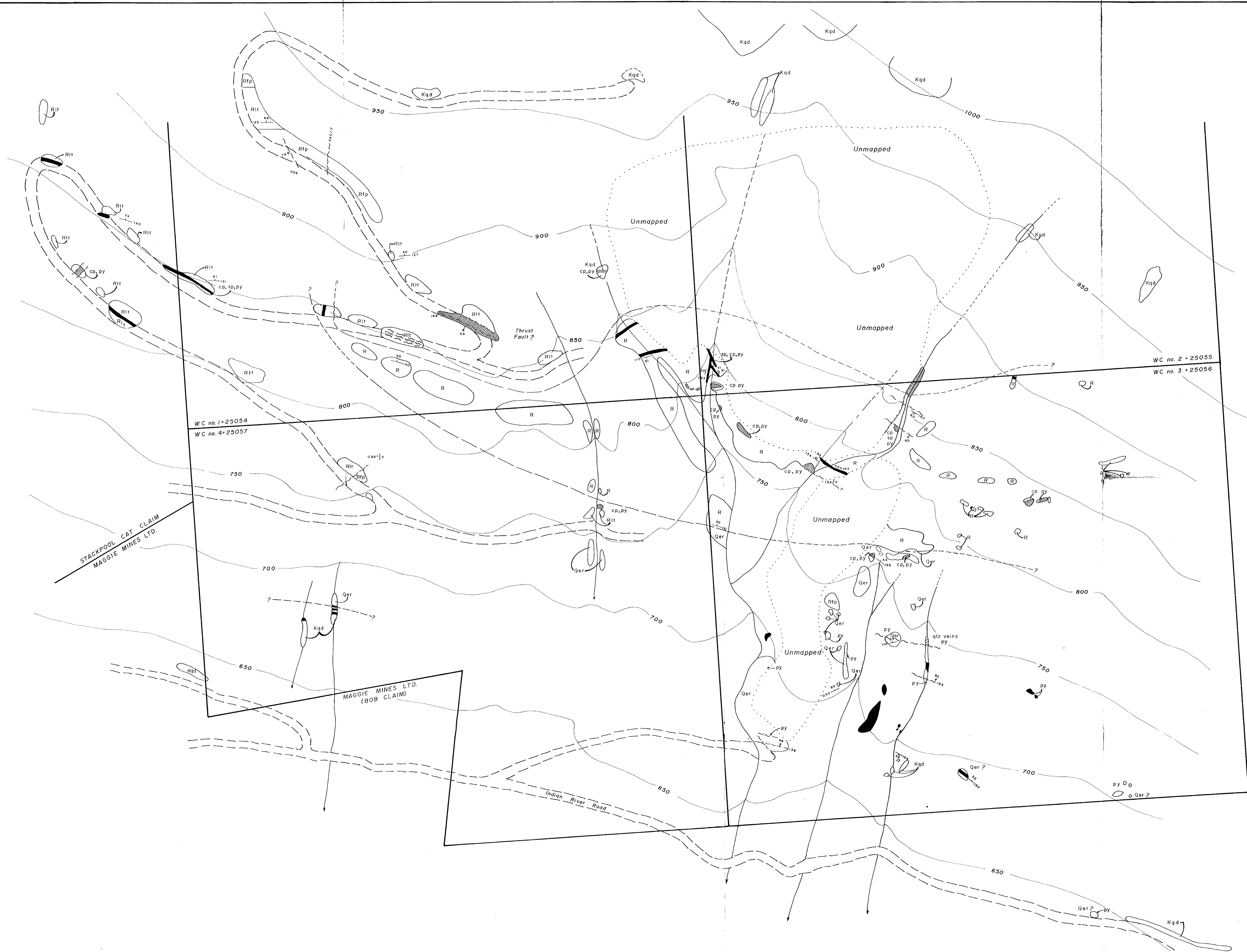
ICE & HAIL GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY: LEAD IN P.P.M.

1:2500 Jan. 83 Map 4c B.D.S.



N.T.S. 92 G/11E

LEGEND

- GAMBIER GROUP**
- Rhyolite feldspar porphyry/Rhyolite lapilli tuff Rfp
 - Rhyolite, fine grained (flow or sill) R
 - Quartzite metamorphic rock; possibly metamorphosed limestone. Qer
- INTRUSIVES**
- Diabase dykes and sills
 - Quartz diorite, probably Cretaceous-age Kqd
 - Coast Plutonic Complex Kqd
- Bedding, strike and dip**
- Foliation, strike and dip**
- Fracture, strike and dip**
- Fault, strike and dip**
- Outcrop boundary**
- Contact, approximate, defined**
- Limit of mapping**
- Road**
- Creek**
- Mineralized outcrop, chalcopyrite, sphalerite, pyrite.**
- Topographic contour (interval 50 meter)**

Geological mapping by G. Sivertz (West half) and L.K. Eccles (East half). Topographic features located by chain and compass surveys. Contours based on 1969 B.C. Government Air Photos (1:50,000) and aerial altimeter control points.

GEOLOGICAL BRANCH ASSESSMENT REPORT

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STACKPOOL RESOURCES LTD.

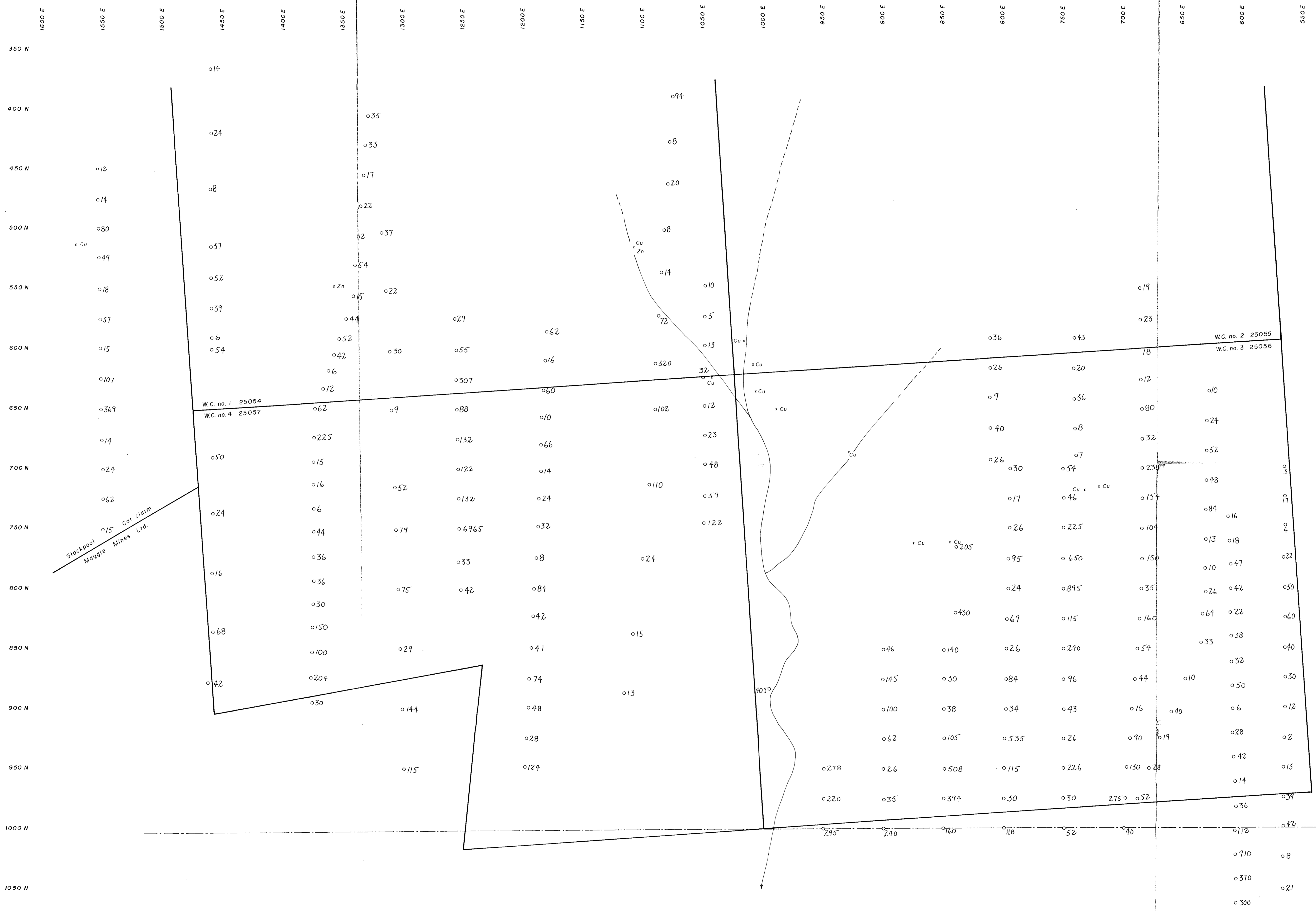
W.C. CLAIMS

SQUAMISH AREA

VANCOUVER M.D.

GEOLOGY

1:1250 Jan. 83 Map 5a B.D.S.



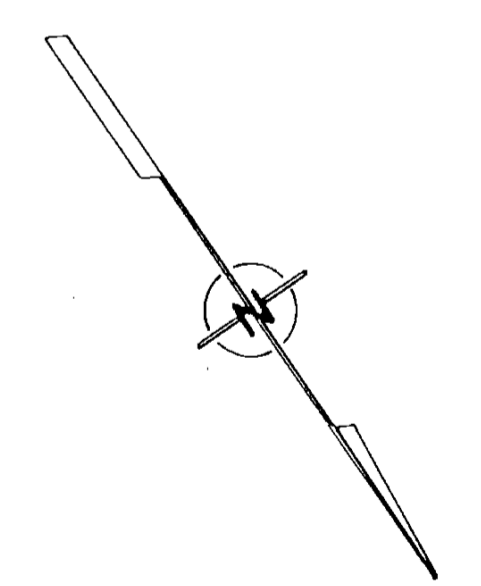
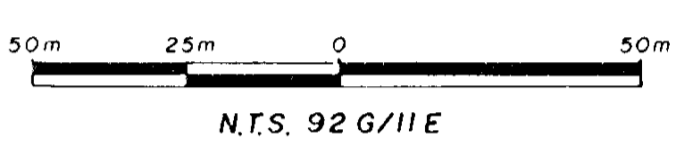
LEGEND

Creek direction

Claim boundaries

Sample location

Base line



GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,121

STACKPOOL RESOURCES LTD.

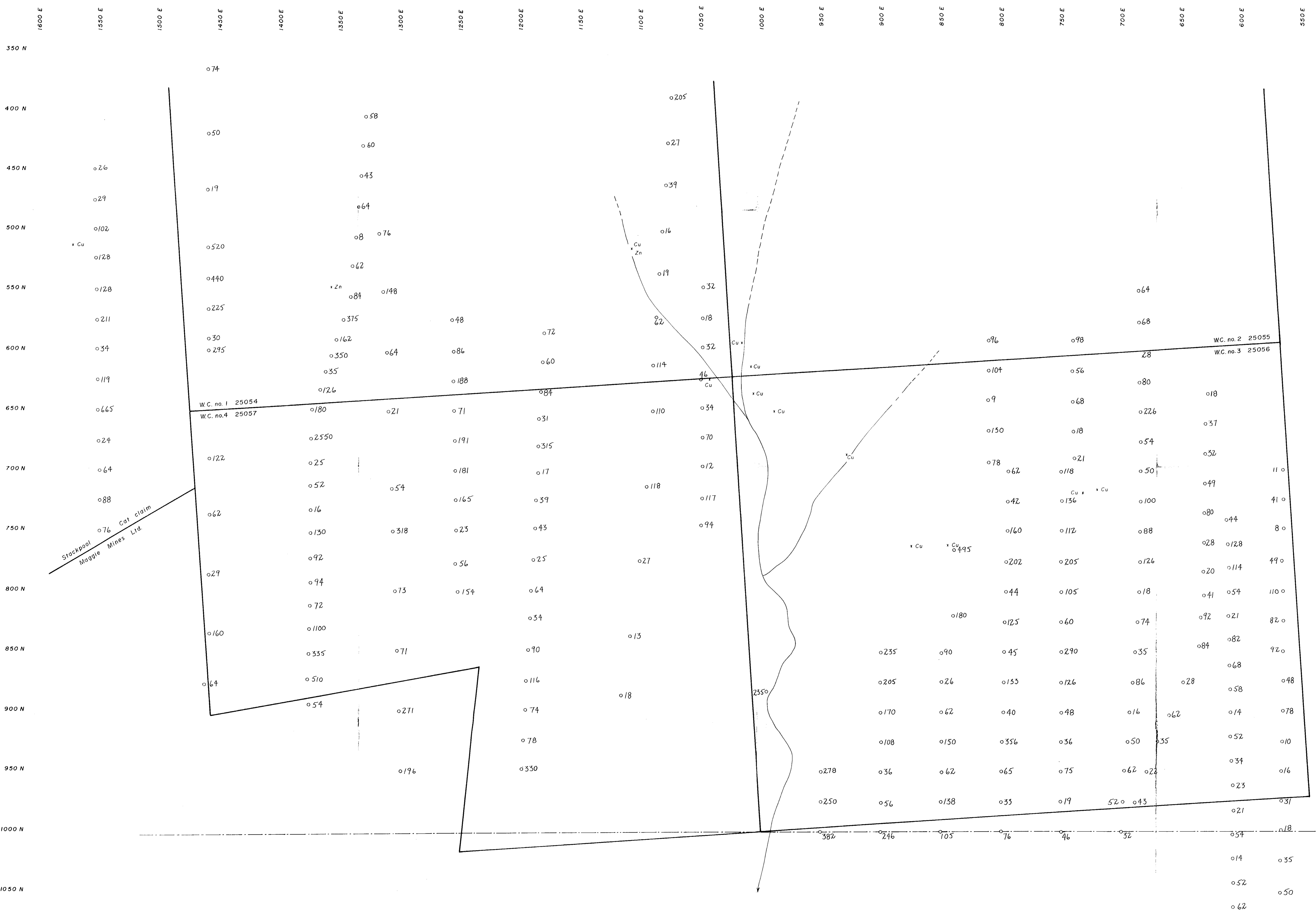
W.C. CLAIMS

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY - COPPER IN PPM

I-1250 Jan. 83. Map 5b B.D.5



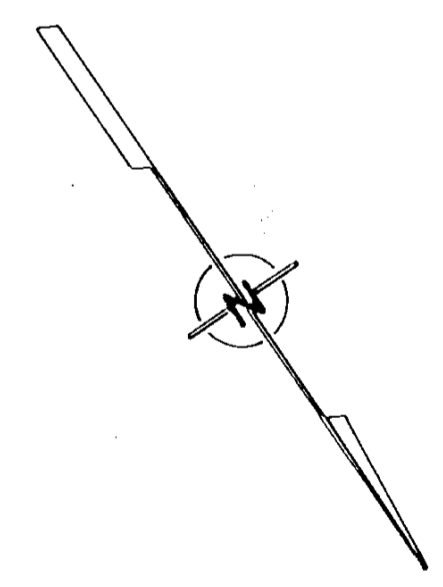
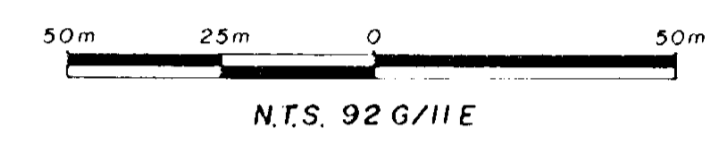
LEGEND

Creek direction

Claim boundaries

Sample location

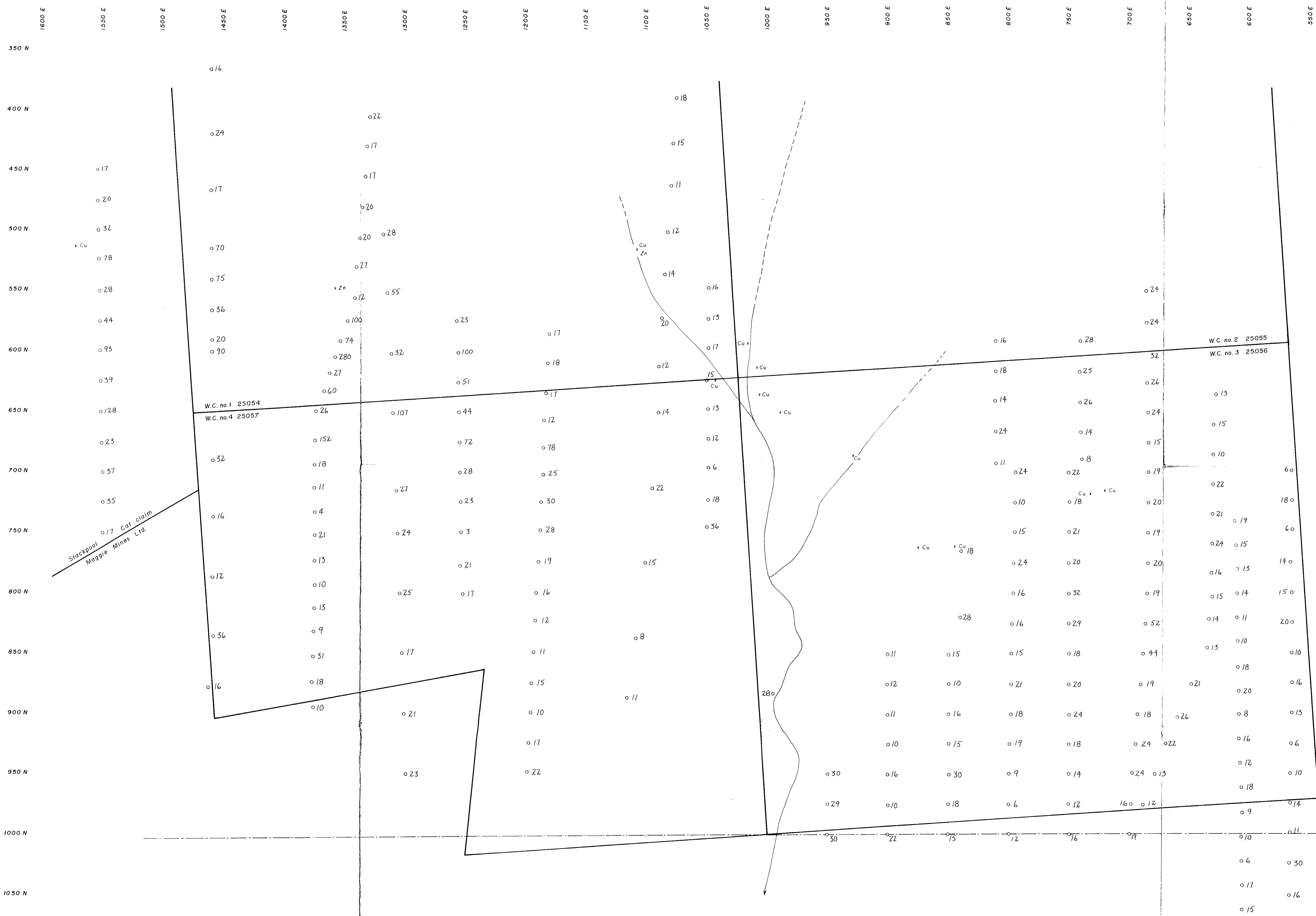
Base line



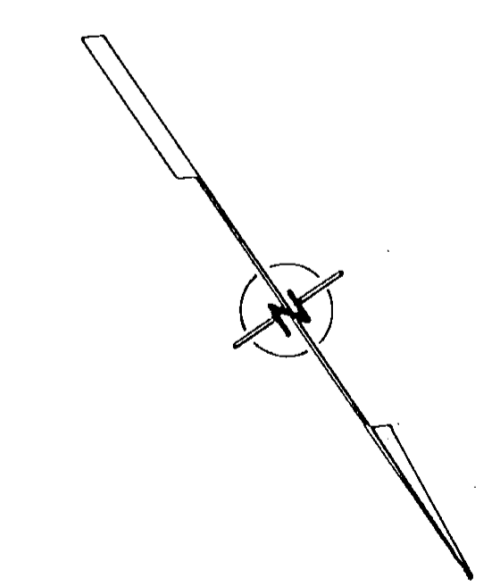
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STACKPOOL RESOURCES LTD.			
W.C. CLAIMS			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY - ZINC IN PPM.			
1-1250	Jan. 83	Map 5c	B.D.S.



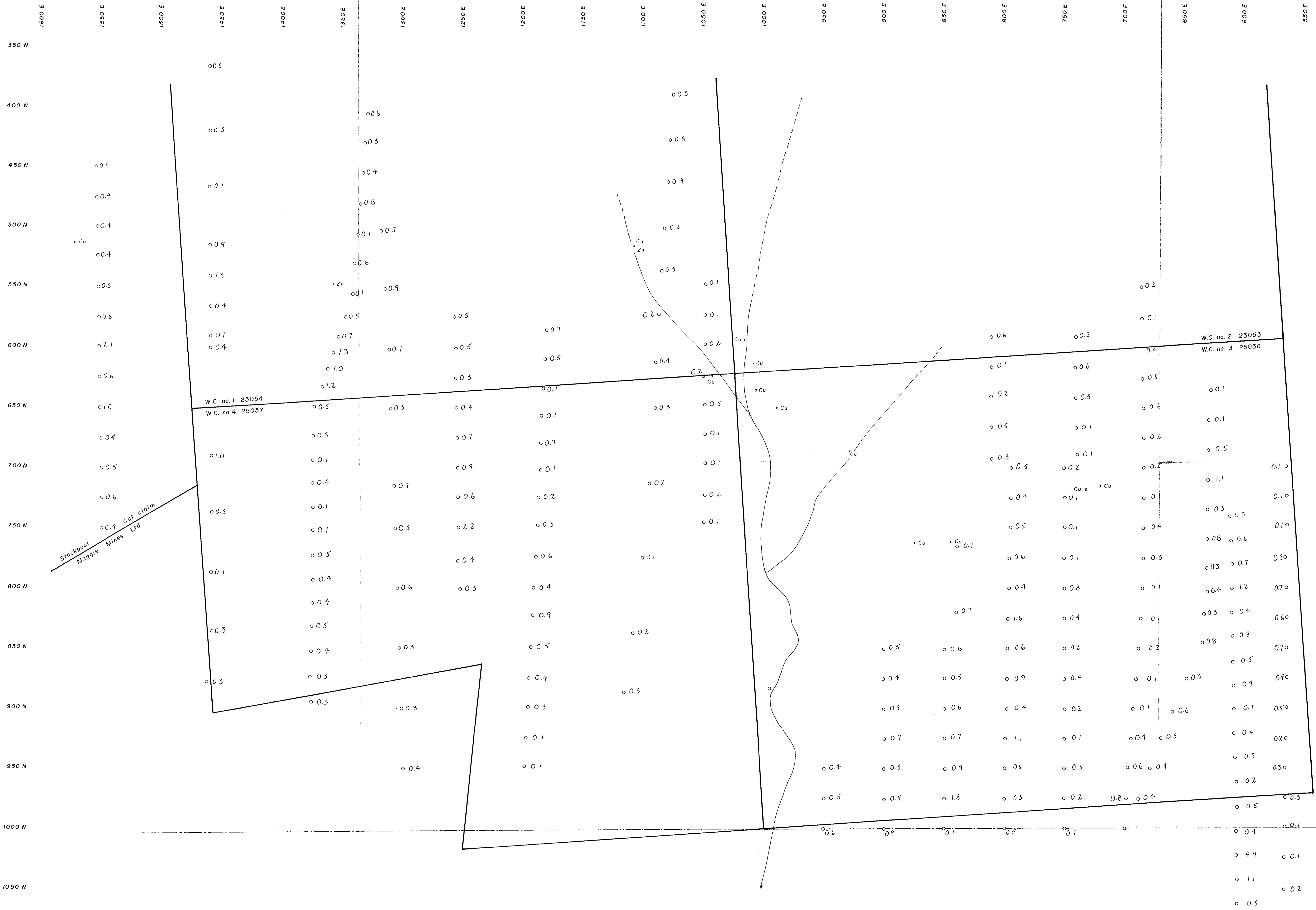
LEGEND
 Creek direction
 Claim boundaries
 Sample location
 Base line



**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

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STACKPOOL RESOURCES LTD.			
W.C. CLAIMS			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY - LEAD IN P.P.M.			
111250	Jan. 83	Map 5d	B.D.S.



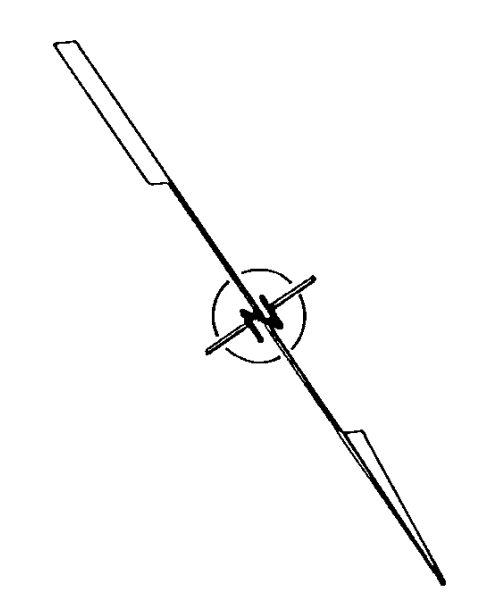
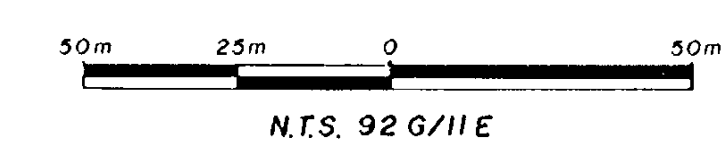
LEGEND

Creek direction

Claim boundaries

Sample location

Base line

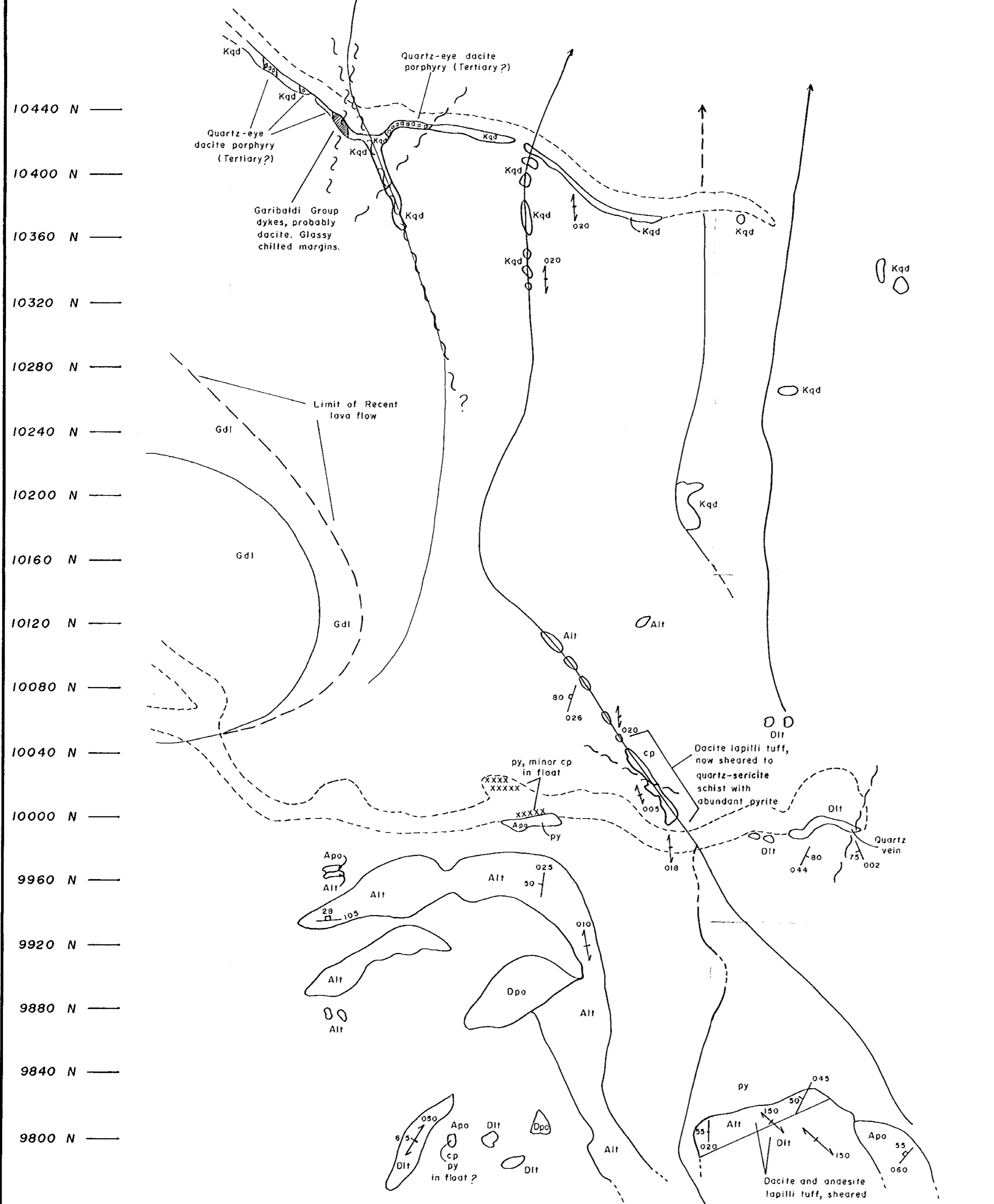


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ASSESSMENT REPORT**

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STACKPOOL RESOURCES LTD.			
W.C. CLAIMS			
SQUAMISH AREA			
VANCOUVER M.D.			
SOIL GEOCHEMISTRY - SILVER IN PPM.			
1-1250	Jan. 83	Map 5 e	B. D. S.

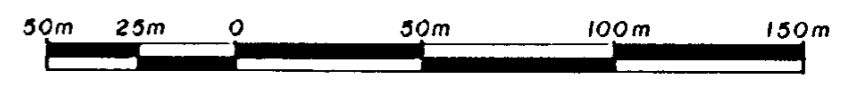
9800 E 9840 E 9880 E 9920 E 9960 E 10000 E 10040 E 10080 E 10120 E 10160 E 10200 E 10240 E



10440 N
10400 N
10360 N
10320 N
10280 N
10240 N
10200 N
10160 N
10120 N
10080 N
10040 N
10000 N
9960 N
9920 N
9880 N
9840 N
9800 N

GEOLOGICAL BRANCH
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N.T.S. 92 G/11 E

LEGEND

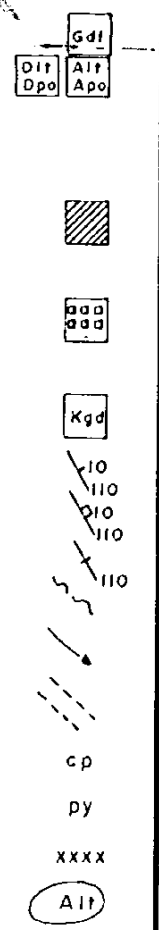
VOLCANICS

- Garibaldi Group dacite lava (Recent)
- Gambier Group(?) dacite and andesite lapilli tuff and porphyry

INTRUSIVES

- Garibaldi Group dacite dykes with black glass margins
- Quartz-eye dacite porphyry, possibly Tertiary age.
- Coast Intrusive Complex, quartz diorite

- Bedding, strike and dip
- Fracture, plane, strike and dip
- Foliation plane, vertical dip
- Fault
- Creek direction
- Road
- Chalcopyrite occurrence
- Pyrite occurrence
- Float occurrence
- Outcrop location



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Map 6a

B.D.S.

Dacite and andesite lapilli tuff, sheared to quartz-sericite and quartz-chlorite schist with abundant pyrite

py, minor cp in float

Dacite lapilli tuff, now sheared to quartz-sericite schist with abundant pyrite

Apo

Alt

Dpo

Apo

Dlt

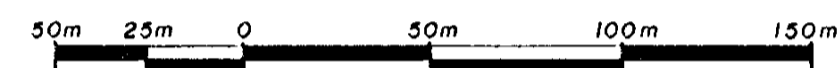
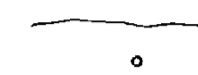
Apo

Dlt

	9800 E	9840 E	9880 E	9920 E	9960 E	10,000 E	10,040 E	10,080 E	10,120 E	10,160 E	10,200 E	10,240 E
10,440 N	014	014	029	018	015	014	024	026	013	008	018	021
10,400 N	006	013	014	010	013	017	039	014	020	012	014	014
10,360 N	006	015	020	022	013	026	0	016	014	021	017	008
10,320 N	0	010	019	016	016	022	0	013	025	018	038	0
10,280 N	012	020	019	016	039	008	024	022	032	020	009	010
10,240 N	020	010	007	014	020/41	022	026	016	0	006	009	015
10,200 N	023	012	020	020	021	018	005	021	001	013	0	0
10,160 N	037	0	0	022	006	075	018	006	012	015	005	017
10,120 N	0	019	012	021	022	028	0	004	006	005	022	015
10,080 N	023	013	034	037	025	021	016	006	013	011	015	008
10,040 N	020	0	0	0	0	023	0	044	021	0	0	0
10,000 N	005	016	022	045	041	020	019	015	012	029	004	001
9960 N	011	020	029	025	019	002	018	002	014	023	011	004
9920 N	049	026	012	019	007	004	013	064	007	004	002	008
9880 N	012	036	016	019	016	005	030	008	009	022	008	002
9840 N	006	017	001	003	012	006	009	022	009	015	0124	009
9800 N	004	0138	012	024	009	005	026	009	011	006	036	060

LEGEND

Creek direction
Sample location



N.T.S. 92 G/11 E

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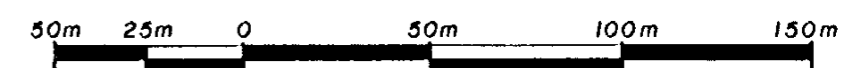
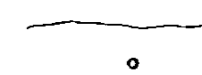
Map 6b

B.D.S.

	9800 E	9840 E	9880 E	9920 E	9960 E	10,000 E	10,040 E	10,080 E	10,120 E	10,160 E	10,200 E	10,240 E
10,440 N	0.41	0.54	0.66	0.58	0.42	0.64	0.56	0.78	0.164	0.38	0.50	0.104
10,400 N	0.21	0.22	0.41	0.23	0.32	0.24	0.158	0.86	0.53	0.48	0.64	0.43
10,360 N	0.13	0.46	0.50	0.40	0.36	0.132	0	0.59	0.48	0.98	0.60	0.18
10,320 N	0	0.44	0.62	0.60	0.29	0.62	0	0.49	0.102	0.66	0.114	0
10,280 N	0.29	0.48	0.54	0.44	0.124	0.17	0.54	0.116	0.140	0.76	0.32	0.22
10,240 N	0.39	0.22	0.23	0.31	0.58/144	0.82	0.64	0.52	0	0.20	0.20	0.76
10,200 N	0.47	0.29	0.56	0.54	0.66	0.84	0.16	0.86	0.7	0.33	0	0
10,160 N	0.42	0	0	0.41	0.30	0.200	0.35	0.50	0.32	0.64	0.19	0.52
10,120 N	0	0.42	0.21	0.50	0.58	0.85	0	0.15	0.15	0.8	0.118	0.43
10,080 N	0.37	0.29	0.86	0.40	0.54	0.38	0.76	0.18	0.56	0.31	0.96	0.41
10,040 N	0.36	0	0	0	0	0.39	0	0.156	0.64	0	0	0
10,000 N	0.21	0.52	0.32	0.150	0.43	0.44	0.38	0.40	0.25	0.44	0.14	0.6
9960 N	0.14	0.18	0.26	0.12	0.15	0.9	0.36	0.10	0.59	0.60	0.9	0.12
9920 N	0.180	0.23	0.6	0.21	0.6	0.15	0.32	0.98	0.20	0.8	0.6	0.29
9880 N	0.62	0.86	0.22	0.28	0.29	0.9	0.34	0.26	0.12	0.32	0.20	0.10
9840 N	0.13	0.58	0.6	0.10	0.16	0.18	0.20	0.45	0.42	0.23	0.110	0.10
9800 N	0.18	0.142	0.150	0.46	0.18	0.16	0.34	0.25	0.15	0.9	0.18	0.36

LEGEND

Creek direction
Sample location



N.T.S. 92 G/11 E

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SQUAMISH AREA

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SOIL GEOCHEMISTRY · ZINC IN P.P.M.

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Jan. 83

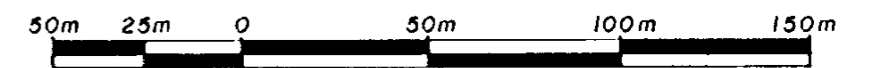
Map 6c

B.D.S.

	9800 E	9840 E	9880 E	9920 E	9960 E	10,000 E	10,040 E	10,080 E	10,120 E	10,160 E	10,200 E	10,240 E
10,440 N	017	017	016	015	018	029	030	058	056	020	022	043
10,400 N	010	012	015	011	018	019	088	028	023	023	024	024
10,360 N	006	011	021	020	019	021	0	031	020	038	021	022
10,320 N	0	015	016	011	016	022	0	025	032	024	038	0
10,280 N	009	010	015	021	035	003	015	020	035	035	019	012
10,240 N	014	016	018	011	014/21	025	018	016	0	013	020	020
10,200 N	014	015	018	017	016	034	005	027	003	016	0	0
10,160 N	010	0	0	014	011	054	024	023	020	080	012	010
10,120 N	0	014	011	016	014	029	0	015	008	003	020	022
10,080 N	014	018	016	017	020	018	027	009	026	022	016	029
10,040 N	017	0	0	0	0	020	0	026	025	0	0	0
10,000 N	002	016	012	050	014	010	019	022	017	011	003	011
9960 N	021	012	011	008	020	004	014	015	020	022	033	002
9920 N	017	012	003	010	015	008	015	009	005	025	019	030
9880 N	018	014	009	017	019	005	018	013	015	021	010	013
9840 N	009	017	015	014	011	024	010	012	010	012	016	021
9800 N	010	005	006	016	006	003	015	010	009	014	009	010

LEGEND

Creek direction 
Sample location 



N.T.S. 92 G/11 E

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MUG GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY · LEAD IN P.P.M.

1:2000

Jan. 83

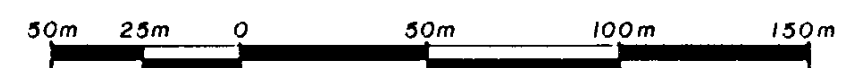
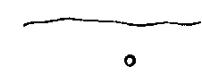
Map 6 d

B.D.S.

	9800 E	9840 E	9880 E	9920 E	9960 E	10,000 E	10,040 E	10,080 E	10,120 E	10,160 E	10,200 E	10,240 E
10,440 N	0.1	0.1	0.1	0.1	0.6	0.4	0.2	1.0	0.2	0.1	0.3	0.2
10,400 N	0.1	0.3	0.2	0.2	0.7	0.3	0.5	0.3	0.5	0.3	0.4	0.3
10,360 N	0.1	0.2	0.5	0.3	0.4	0.2	0	0.4	0.3	0.3	0.4	0.3
10,320 N	0	0.1	0.2	0.2	0.4	0.3	0	0.4	0.2	0.4	0.4	0
10,280 N	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1
10,240 N	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0	0.1	0.1	0.3
10,200 N	0.1	0.1	0.2	0.1	0.3	0.5	0.1	0.2	0.1	0.1	0	0
10,160 N	0.1	0	0	0.4	0.1	0.1	0.1	0.1	0.3	0.4	0.1	0.6
10,120 N	0.1	0.1	0.2	0.2	0.5	0.4	0	0.2	0.2	0.1	0.6	0.1
10,080 N	0.3	0.1	0.2	0.4	0.4	0.3	0.1	0.1	0	0	0	0
10,040 N	0.2	0	0	0	0	0.6	0	0.1	0.1	0	0	0
10,000 N	0.1	0.1	0.4	0.3	0.1	0.1	0.4	0.1	0.1	0.4	0.1	0.1
9960 N	0.1	0.4	0.3	0.4	0.8	0.1	0.2	0.1	0.2	0.3	0.5	0.3
9920 N	0.2	0.2	0.1	0.2	0.1	0.4	0.2	1.0	0.2	0.1	0.3	0.5
9880 N	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.2
9840 N	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.9	0.2
9800 N	0.1	0.8	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3

LEGEND

Creek direction
Sample location



N.T.S. 92 G/11 E

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STACKPOOL RESOURCES LTD.

MUG GRID

SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY · SILVER IN P.P.M.

1:2000



Jan. 83

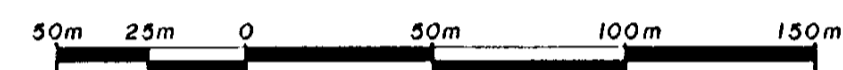
Map 6e

B.D.S.

	9800 E	9840 E	9880 E	9920 E	9960 E	10,000 E	10,040 E	10,080 E	10,120 E	10,160 E	10,200 E	10,240 E
10,440 N	0-35	0-38	0-35	0-32	0-26	0-28	0-24	0-22	0-19	0-17	0-18	0-11
10,400 N	0-32	0-40	0-29	0-32	0-30	0-30	0-22	0-24	0-24	0-21	0-20	0-20
10,360 N	0-21	0-34	0-35	0-31	0-32	0-29	0-27	0-22	0-24	0-23	0-19	0-22
10,320 N	0-24	0-34	0-36	0-32	0-32	0-30	0-28	0-24	0-23	0-20	0-19	0-21
10,280 N	0-20	0-28	0-34	0-35	0-29	0-21	0-28	0-26	0-25	0-23	0-23	0-24
10,240 N	0-14	0-17	0-22	0-29	0-30	0-26	0-28	0-23	0-23	0-25	0-21	0-20
10,200 N	0-9	0-8	0-15	0-16	0-26	0-26	0-30	0-30	0-24	0-24	0-25	0-25
10,160 N	0-7	0-5	0-7	0-7	0-16	0-22	0-21	0-24	0-23	0-26	0-26	0-21
10,120 N	0-5	0-6	0	0-2	0-8	0-17	0-21	0-24	0-24	0-29	0-30	0-24
10,080 N	0-1	0-2	0-4	0+1	0+1	0-6	0-24	0-24	0-26	0-22	0-25	0-23
10,040 N	0-4	0-7	0-7	0-5	0-4	0-3	0-14	0-30	0-26	0-23	0-25	0-26
10,000 N	0-7	0-8	0-7	0-7	0-3	0-3	0-6	0-26	0-29	0-29	0-24	0-23
9960 N	0-9	0-9	0-9	0-10	0-5	0-1	0-1	0-10	0-20	0-26	0-30	0-29
9920 N	0-10	0-11	0-12	0-11	0-8	0-8	0-6	0-6	0-9	0-12	0-27	0-28
9880 N	0-8	0-13	0-11	0-11	0-10	0-8	0-7	0-5	0-6	0-2	0-13	0-26
9840 N	0-8	0-14	0-11	0-12	0-10	0-10	0-10	0-7	0-6	0-4	0-5	0-10
9800 N	0-10	0-11	0-12	0-12	0-10	0-10	0-10	0-10	0-10	0-8	0-8	0-7

LEGEND

Creek direction 
Sample location 



N.T.S. 92 G/11 E

GEOLOGICAL BRANCH
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MUG GRID

SQUAMISH AREA

VANCOUVER M.D.

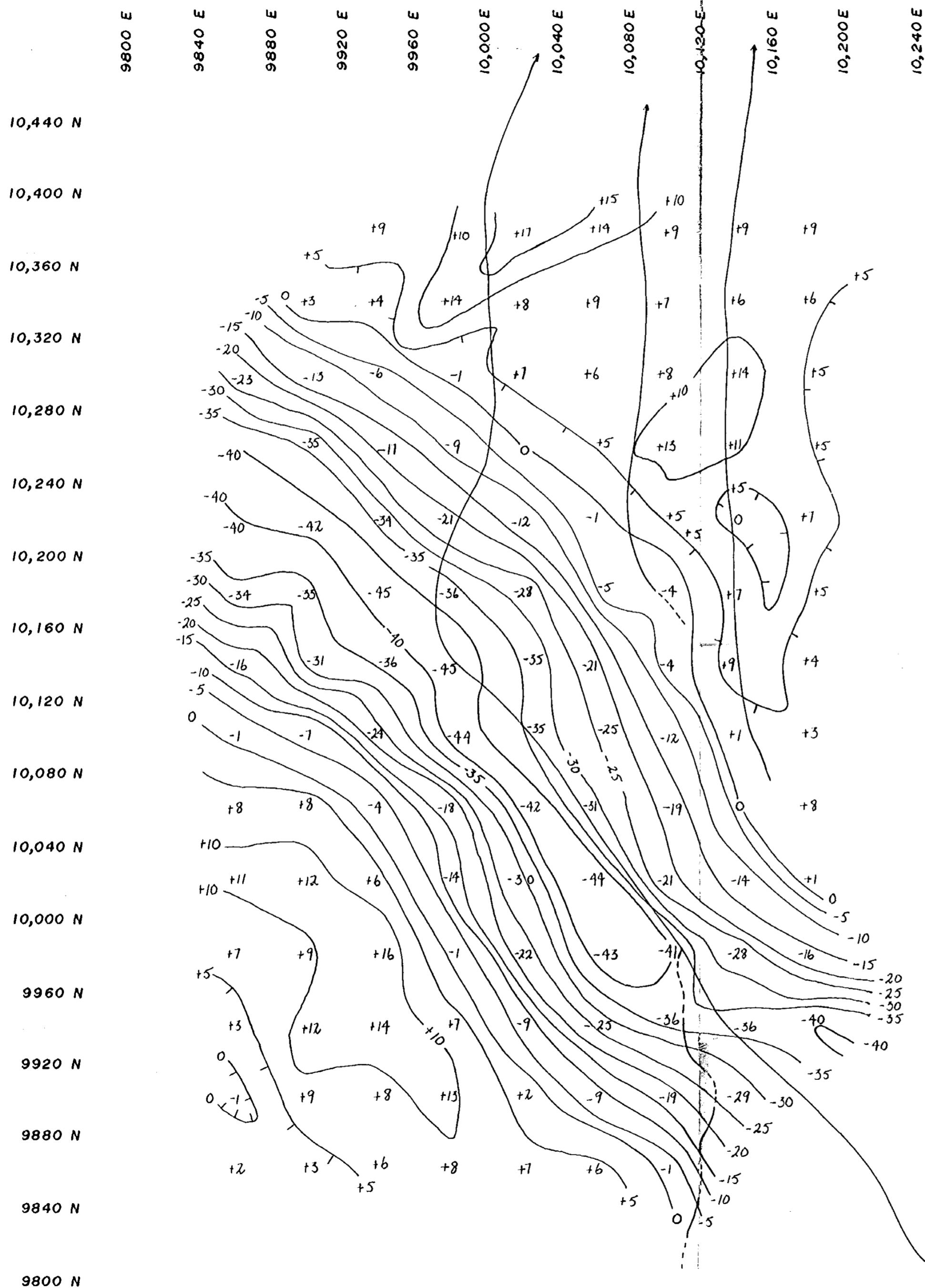
RAW VLF-EM DATA

1:2000

Jan. 83

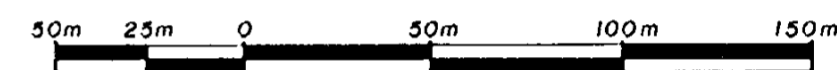
Map 6 f

B.D.S.



LEGEND

- Creek direction
- Dip angle contour -10
- Station-filtered value +12



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ASSESSMENT REPORT**

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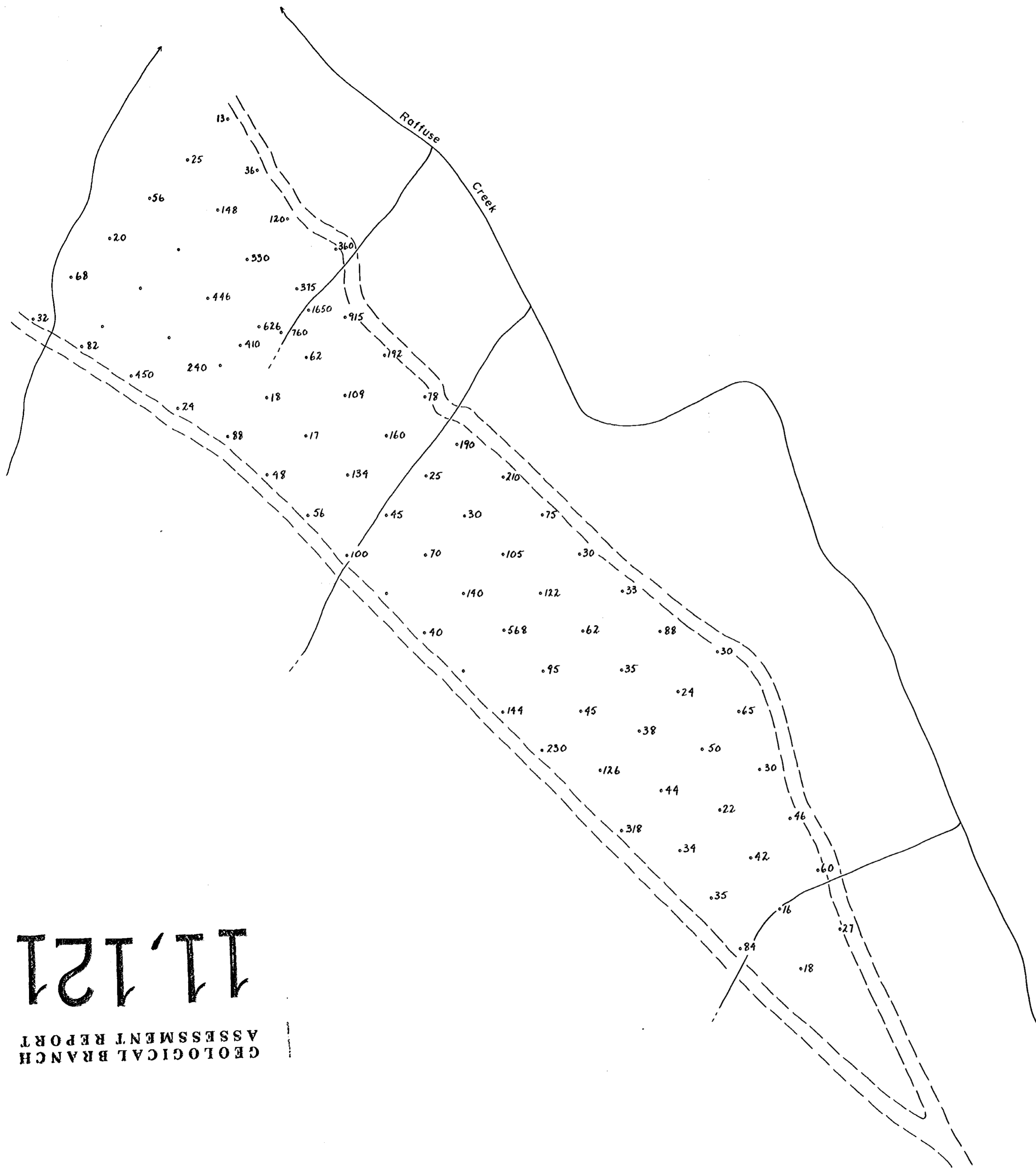
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Jan. 83

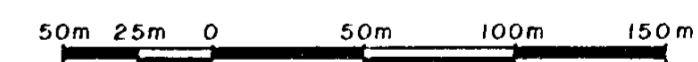
Map 6g

B.D.S.



LEGEND

- Sample location with soil metal content •21
- Soil metal content contour — 100
- Creek direction →
- Road - - -



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 GEOLOGICAL BRANCH
 ASSESSMENT REPORT

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RAFFUSE CREEK GRID

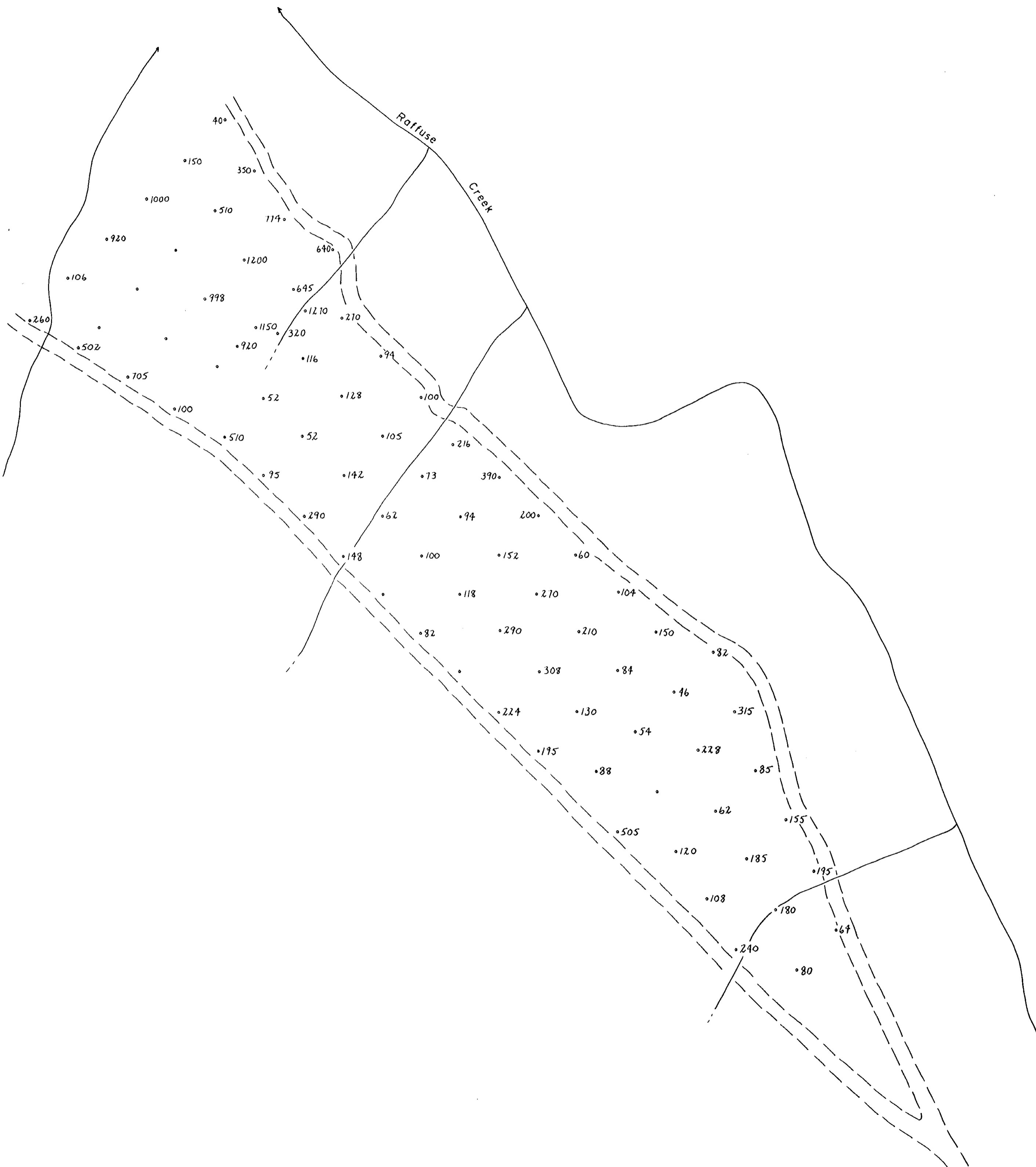
SQUAMISH AREA

VANCOUVER M.D.

SOIL GEOCHEMISTRY: COPPER IN P.P.M.

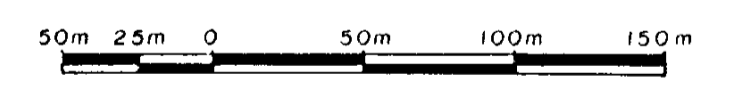
1:2500	Jan. 83	Map 7a	B.D.S.
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LEGEND

- Sample location with soil metal content •21
- Soil metal content contour — 100
- Creek direction →
- Road - - -



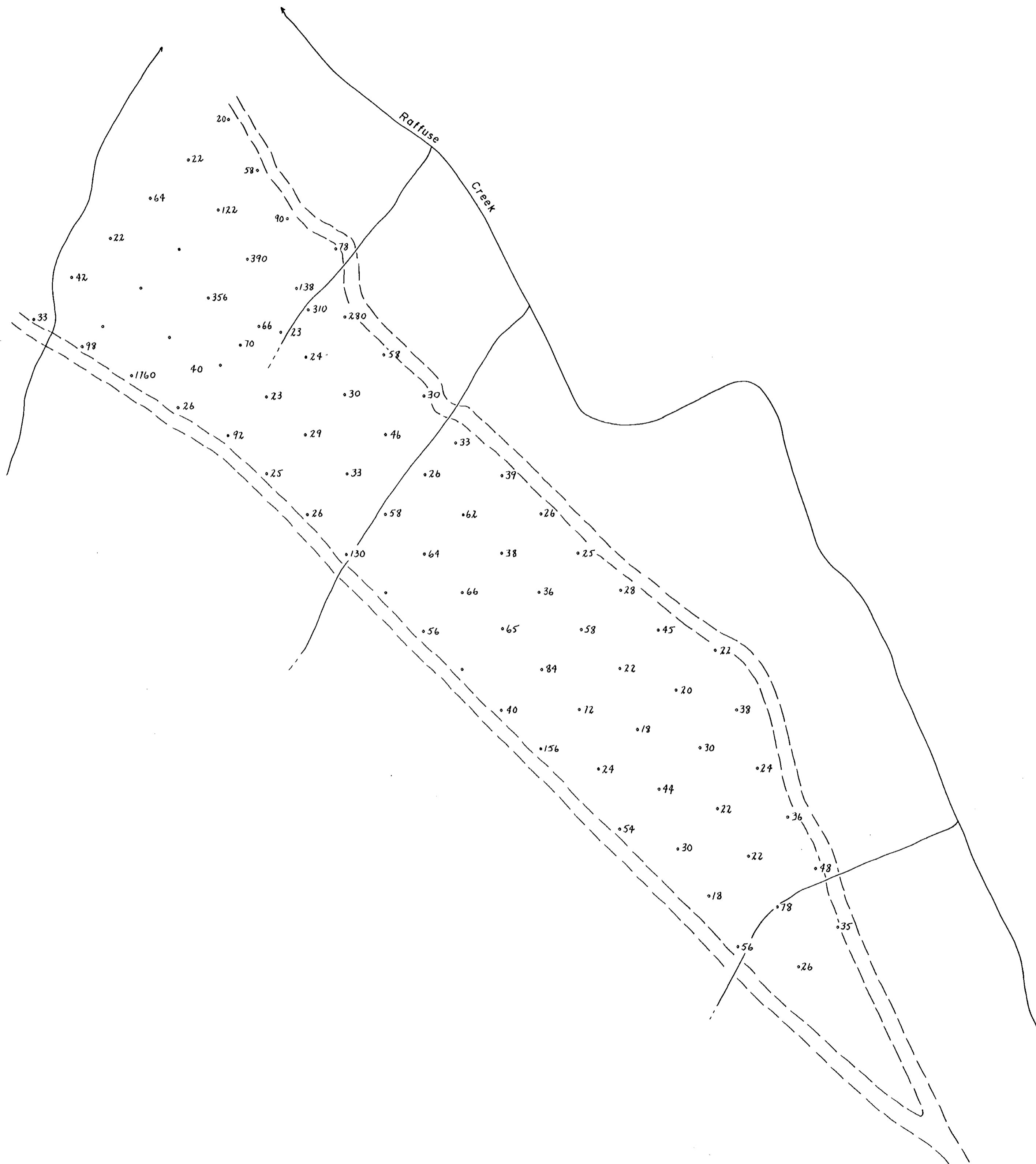
STACKPOOL RESOURCES LTD.
RAFFUSE CREEK GRID
SQUAMISH AREA
VANCOUVER M.D.

SOIL GEOCHEMISTRY: ZINC IN P.P.M.

1:2500	Jan. 83	Map 7 b	B.D.S.
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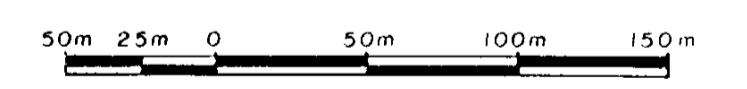
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ASSESSMENT REPORT

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LEGEND

- Sample location with soil metal content •21
- Soil metal content contour ---100
- Creek direction →
- Road - - -



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RAFFUSE CREEK GRID
SQUAMISH AREA
VANCOUVER M.D.

SOIL GEOCHEMISTRY: LEAD IN P.P.M.

1:2500	Jan. 83	Map 7c	B.D.S.
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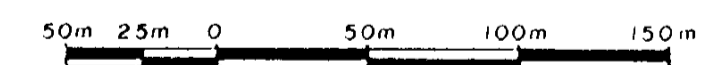
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LEGEND

- Sample location with soil metal content •21
- Soil metal content contour — 100
- Creek direction →
- Road - - -



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RAFFUSE CREEK GRID

SQUAMISH AREA

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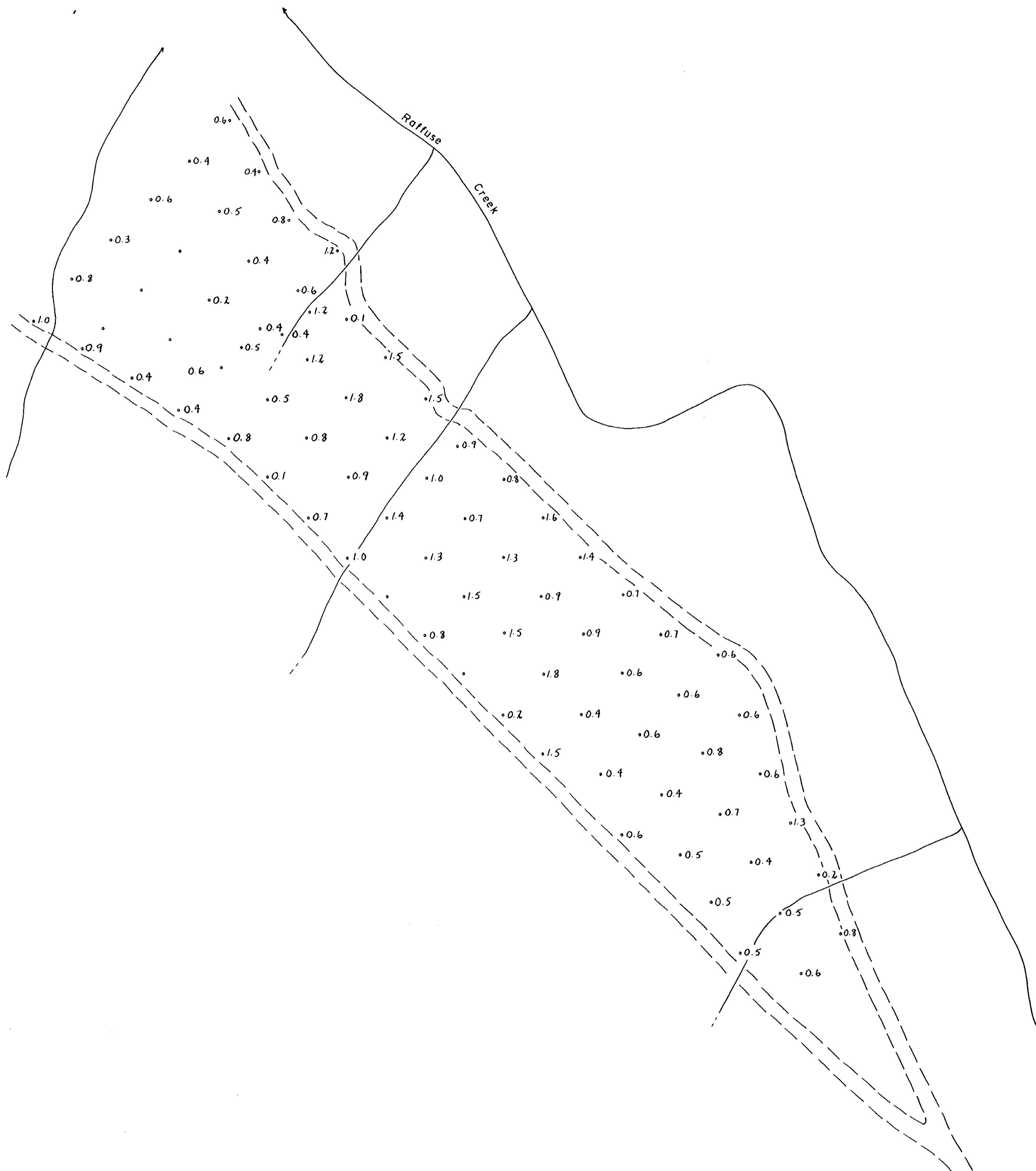
SOIL GEOCHEMISTRY: SILVER IN PPM.

1:2500

Jan 83

Map 7d

B.D.S.



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ASSESSMENT REPORT

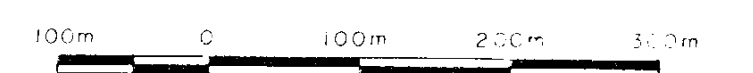
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LEGEND

- Creek direction
- Road (10m)
- Soil sample location
- Assay results 1% Cu, 1% Zn, 1% Pb, 0.5 oz./t Ag
- Assay interval 1.0 m width
- Foliation, strike and dip 50°
- Fault 160°
- Chalcopyrite occurrence
- Sphalerite occurrence
- Galena occurrence
- Pyrite occurrence

FOR KEY PLEASE REFER TO WORK AREA LOCATION MAP no. 1
Map based on B.C. Forest Service Forest Cover Maps 92 G 065-075



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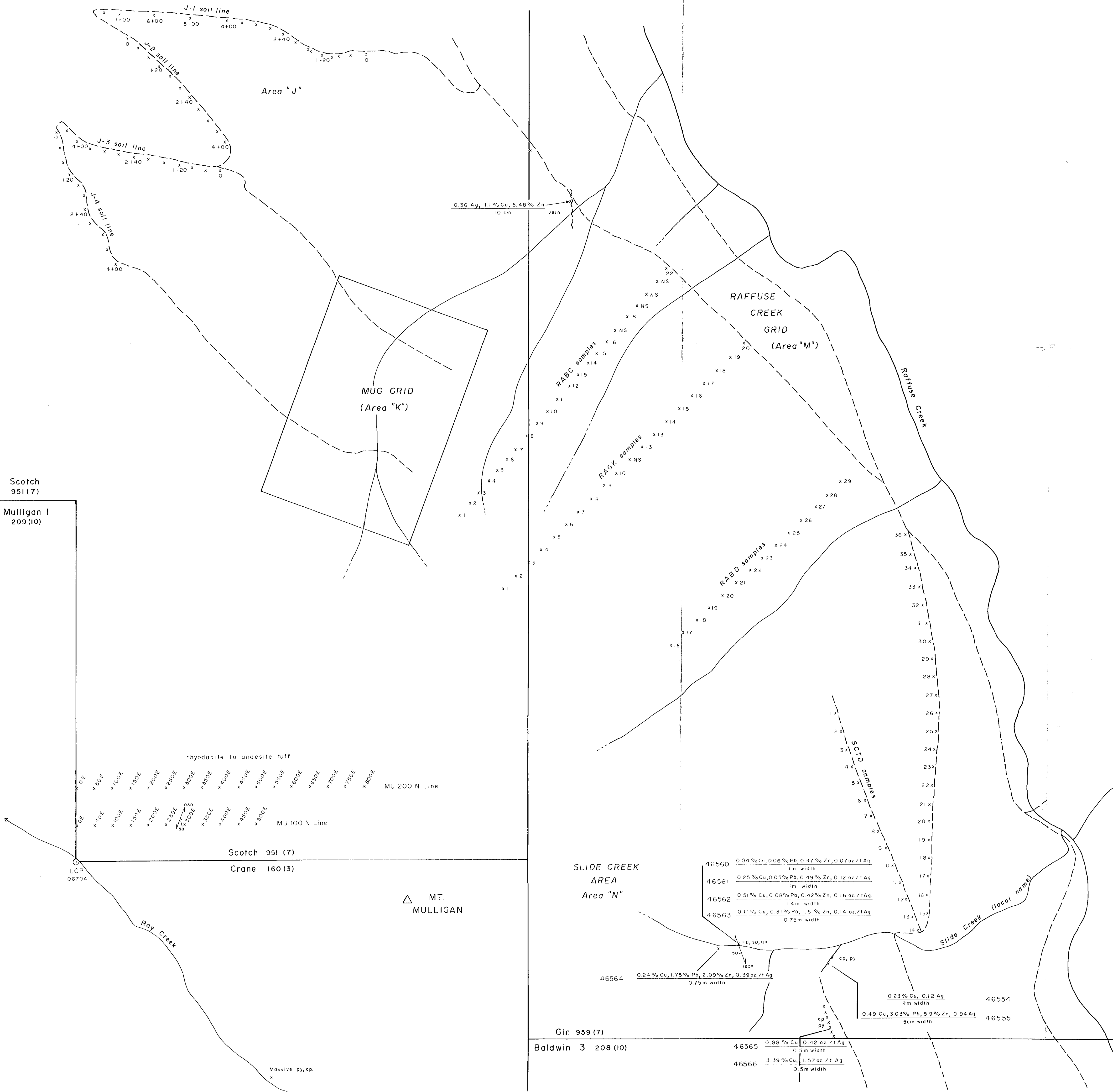
MT. MULLIGAN AREA

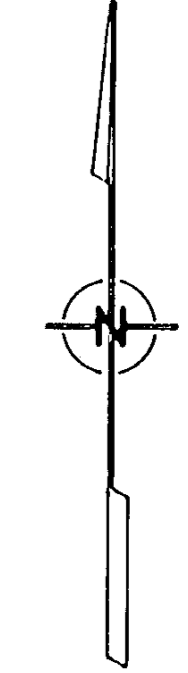
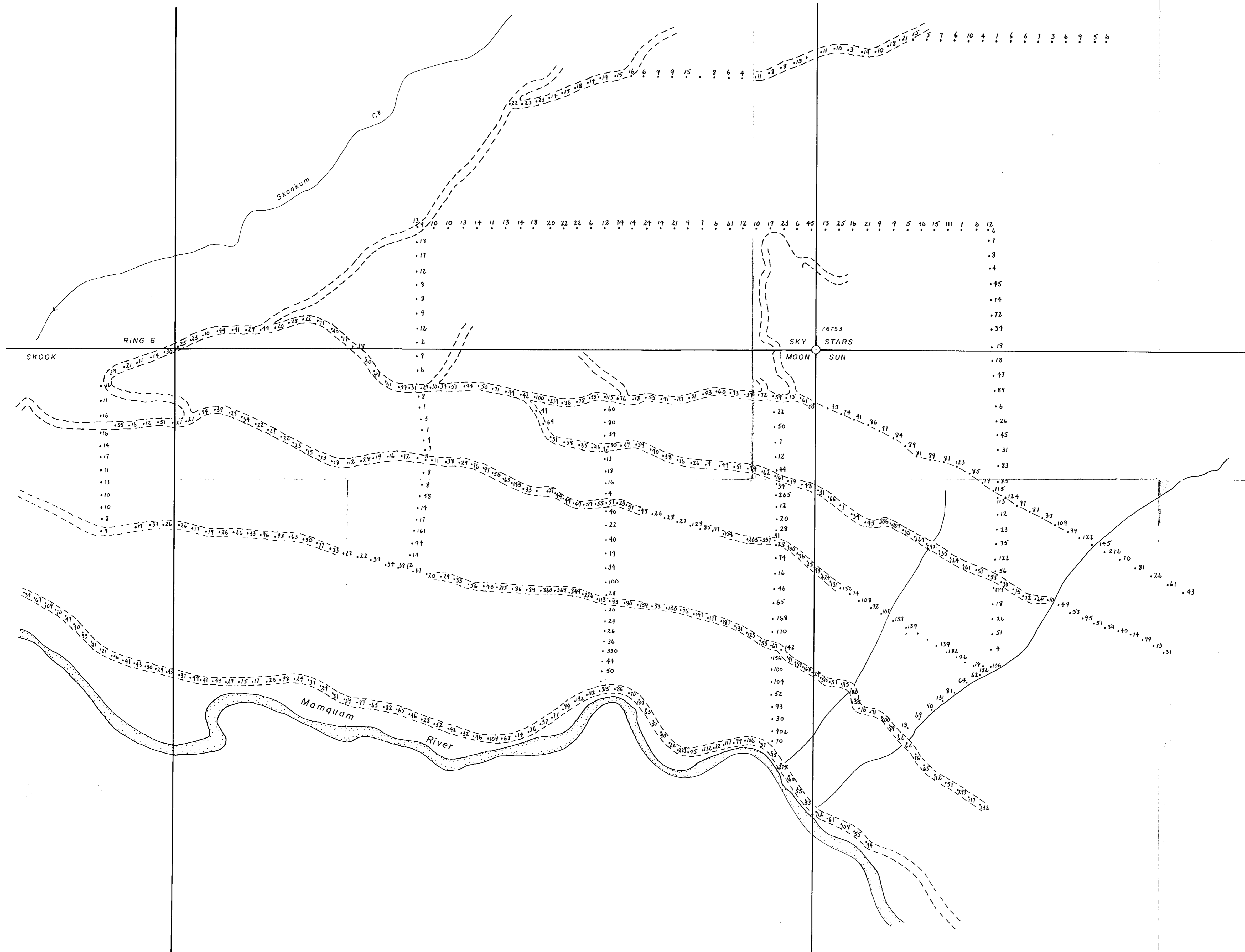
SQUAMISH B.C.

VANCOUVER M.D.

SAMPLE LOCATIONS

1:5000 Jan. 83 Map 8 B. D. S.



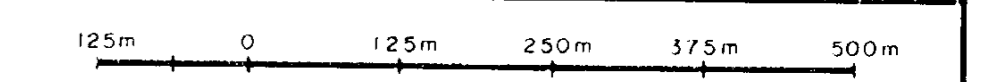


LEGEND

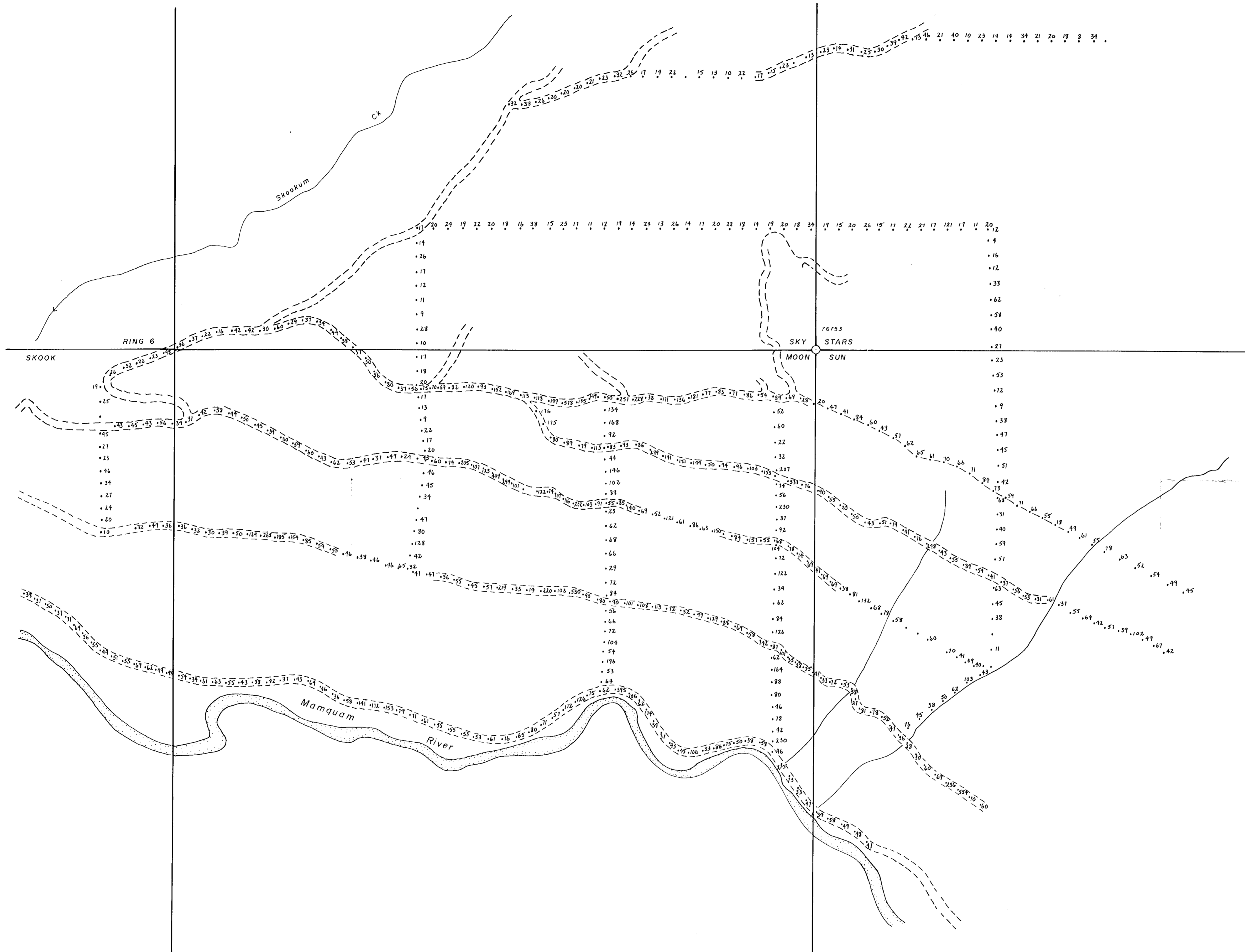
- Sample location
- Legal corner post
- Claim boundaries
- Creek direction
- Road

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SKOOKUM AREA			
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VANCOUVER M.D.			
SOIL GEOCHEMISTRY: COPPER IN P.P.M.			
1:6250	Jan. 83	Map 9a	B.D.S.



LEGEND

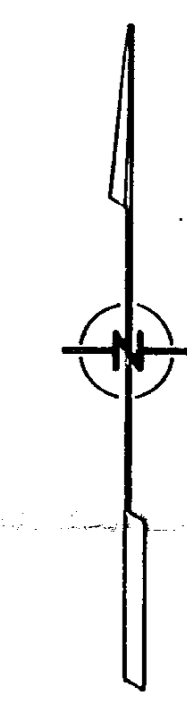
- Sample location •
- Legal corner post ⊙
- Claim boundaries — — — — —
- Creek direction →
- Road — — — — —

**GEOLOGICAL BRANCH
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125m 0 125m 250m 375m 500m

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SOIL GEOCHEMISTRY: ZINC IN P.P.M.			
I- 6250	Jan. 83	Map 9b	B.D.S.



LEGEND

- Sample location
- Legal corner post
- Claim boundaries
- Creek direction
- Road

**GEOLOGICAL BRANCH
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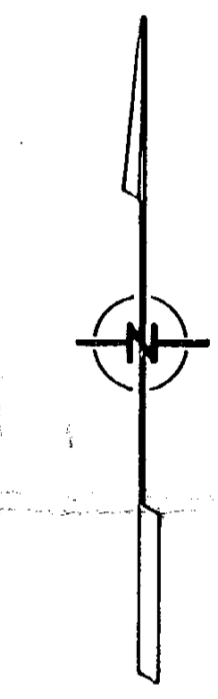
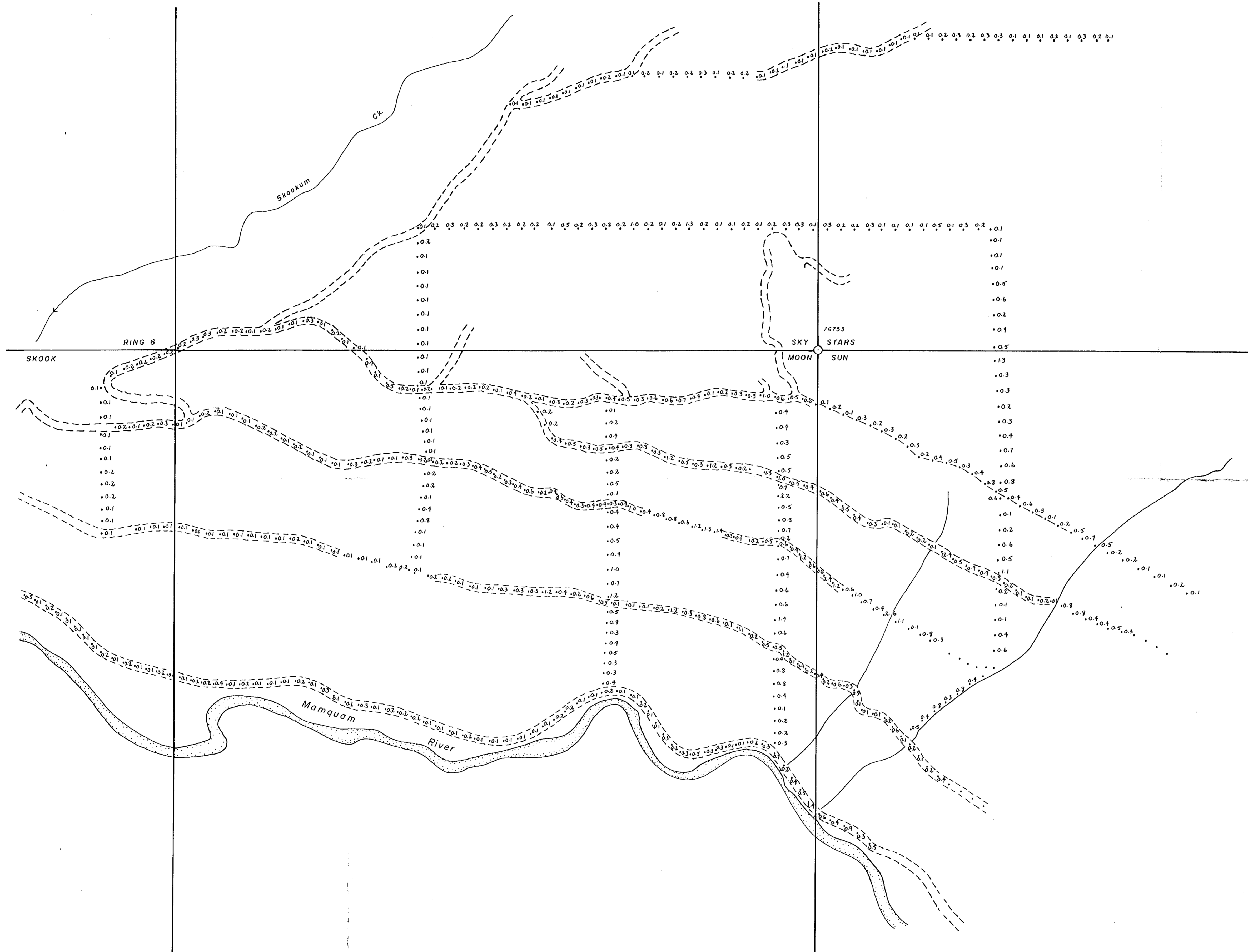
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SOIL GEOCHEMISTRY: LEAD IN P.P.M.

1: 6250	Jan. 83	Map 9c	B.D.S.
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LEGEND

- Sample location
- Legal corner post
- Claim boundaries
- Creek direction
- Road

**GEOLOGICAL BRANCH
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SOIL GEOCHEMISTRY: SILVER IN P.P.M.			
I-6250	Jan. 83	Map 9d	B. D.S.