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REPORT
ON

FAITH LAKE
GOLD-COPPER

1963

Nanaimo
MINING DIVISION

J. J. MCDOUGALL,
GEOLOGIST

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FAITH LAKE GOLD-COPPER

1963

Vancouver, B. C.
January 29, 1964.

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Geologist

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REPORT ON
FAITH LAKE GOLD-COPPER
1963

INTRODUCTION

This report summarizes earlier Faith Lake data and includes description, maps and drill logs of 1963 work. The writer visited the property on a number of occasions throughout the summer.

PROPERTY & OWNERSHIP

Twelve located claims (the Rim Group), Rim #1 to 6 located in June, 1962 and adjoining Rim #7 to 10 located in September, 1962 and Rim #11 and 12 in October, 1962 are in good standing until 1964. Falconbridge has rights only to the gold and silver as the property is in the E. & N. (C.P.R.) Land Grant which carries exclusive rights to all other metals.

LOCATION, ACCESS, CLIMATE & DEVELOPMENT

The property is located around picturesque Faith Lake which occupies a cirque-like valley lying between 6800-foot Mount Albert Edward and 6300-foot Mount King George V. The lake is at the head of Eric Creek, a tributary of the Cruickshank River, in the Forbidden Plateau region of east central Vancouver Island. It is 19 miles west of the cities of Courtenay and Comox and 26 miles south of Campbell River. (See Map FL 1/63 enclosed.)

Our Gem Lake (MEG) property boundary is about a mile to the north on the northern slopes of Mt. Albert Edward. The Western Mines' property on Buttle Lake is 9 miles to the southwest and Mt. Washington Copper Mines is 10 miles to the northeast.



FAITH LAKE AREA
FORBIDDEN PLATEAU
 MAP FL 1/63
 SCALE: 1:50,000
 (1.25" to 1 MILE)

As Faith Lake (elev. 4000 feet - this elevation is probably 220 feet too high but rather than change previous maps, this base is used throughout) is too small for aircraft, access is either by helicopter or by a 2-mile trail leading from the Comox Lake, Cruickshank River-Eric Creek road of Comox Logging & Railway Co. Abandonment last year of logging and road upkeep in the area resulted in a large number of washouts on the Cruickshank River and the last 10 miles of the road is now impassable. Aircraft can land on Moat Lake which is approximately at the same elevation as Faith Lake and 2 miles to the north. Regardless of the ground route taken, the last mile into the lake is rough - this preventing casual access in the past.

The showings of interest are found generally up to the 6000-foot level of all slopes (N. W. & S.) leading into Faith Lake. Timber occurs as far up the valley as the lake but terminates rapidly a few hundred feet above it. The hillsides are rocky and barren but despite the steepness (45-55°) a fair percentage of the country is talus covered.

The valley is in a bad snow belt and is practically "snowed in" between November and May or June. Slides occur originating off the steep southern slopes, making impossible any hopes of permanent installations near the lake. However, the head of Eric Creek, some 1-1/2 miles to the east at elevation 2000 feet [±] is open practically year-round with rain taking the place of snow. Summers are generally pleasant although fog in the valleys below can be troublesome. In the past exploration of the Forbidden Plateau has been discouraged by C.P.R. ownership, thus this impressively mineralized and accessible area has had less investigation than even the remotest parts of the Yukon. No record of the Faith Lake showing exists.

HISTORY & DEVELOPMENT

Gold and copper-bearing veins were first discovered during early fall of 1961 (?) by Dave Kimball and Gene Evans. These prospectors were working out of our Gem Lake camp and had been sent to Faith Lake to examine a large reddish alteration aureole mapped during earlier helicopter and Super Cub recce trips of the mountainous Forbidden Plateau country. Kimball's sampling of the "Discovery Vein" not far from the lake returned assays of 5 oz. gold while float picked up by Evans south of the lake showed gold as well as copper values.

The six Rim Claims were staked by Norman Anderson, via helicopter, with snow still on the ground in 1962. Six more were added that summer. Kimball spent a few weeks prospecting the zone during the early part of the year and, along with Alex Smith Jr. and Norman Anderson, returned for a second period later on. This prospecting resulted in a large number of auriferous veins being discovered. A couple of short packsack holes, mostly for assessment work purposes, were put in on the Discovery Zone. The writer, accompanied by Don Highe, surveyor, and Steve Presunka, geophysicist, did a preliminary 1-day survey of the zone (Map FL 1/62.) The self potential method proved highly effective with the test showing the well-defined Discovery Vein to continue easterly at least 300 feet under overburden.

In June of 1962, drillers Schussler and Evans were lifted into Faith Lake and did 660 feet of EX drilling in 4 holes along the "S.P. indicated" Discovery Zone extension. They returned in September to complete a couple packsack holes on a galena showing (90 feet) and to probe with a fourth EX hole (504 feet) along strike to the west of the Original discovery. A helicopter landing was cleared at this site.

With a much receded snowline the drillers did about 10 days of effective prospecting, resulting in a number of new discoveries plus extensions to old ones. Kimball and Mott did a week's self-potential work late in the year (Map FL 3/63). Don Highe and the writer surveyed in the drill holes and, with the aid of a hovering helicopter, "triangulated in" some of the newer discoveries (Map FL 2/63). Two bulk samples totalling approximately 400 pounds were shipped to Lakefield for metallurgical tests, mainly to determine recoveries possible in the "ores" which were assumed to be refractory.

GENERAL GEOLOGY

The Forbidden Plateau region, as well as most of Vancouver Island, has unfortunately not been geologically mapped, although the groundwork was laid following work by H. C. Gunning of the G.S.C. some 30 years ago. (See 1961 Gem Lake Report for more detail.)

In general, this section of the island consists of thick, andesitic to basaltic "Karmutsen" lava flows, etc. resting on a rarely exposed Permian basement. The volcanic complex is flanked by Cretaceous sediments. Small, almost ^Wsignificant, quartz monzonite and quartz diorite stocks, related to a larger batholithic body to the west, cut the complex, resulting in local irregular, sill-like intrusive sheets and dykes. These latter generally occur in structurally anomalous areas and such rare mineral deposits as exist are generally related to them.

In the vicinity of Faith and Gem Lakes the massive volcanics, generally andeso-basalts, make up the mountain range, and dip at low 10-20° angles to the north and northwest. In this section the generally amygdaloidal flows, with a thickness aggregating at least 6000 feet, can be massive or on occasion take the form of pillow lavas. Columnar jointing

is sometimes exhibited. Agglomerates and tuffs are noted. Rhyolite (?) or alaskite-type dykes occur as well as the more common feldspar porphyry types. Intraformational breccias or crush zones between the flows are very common and an important feature as far as mineral deposits are concerned. Jointing is quite intense, especially near intrusives, and oxidized iron and copper sulphides now occupying the joint planes impart a reddish hue to these rocks resulting in a distinct radially arranged "alteration" halo.

A system of through-going approximately north-south and east-west faults cut all rocks in the Faith and Gem Lake areas, but displacements are minor. The granitic volcanic fragments, generally in a magnetite-chlorite matrix, are found under such conditions as to indicate intrusive breccias. Certainly such were highly mobile and, in some cases, suggest at least two main periods of brecciation.

DESCRIPTION OF PROPERTY

In the Faith Lake area a quartz diorite stock, which is just barely exposed (by deep erosion) northwest of the lake, has intruded the massive Karmutsen Volcanics in an apparently structurally weak zone resulting from intersecting NS and EW fault systems along with minor folding. Mineralization related to but following the intrusion has resulted in an unusually widespread distribution of gold-bearing copper and arsenic sulphides accompanied by quartz. Practically every structurally favourable setting within a 3/4 mile radius of the intrusive has been mineralized to a greater or less degree. Thus the more receptive fault structures, and more important, the brecciated intraformational contacts were favoured by the mineralizing process and now form the deposits of interest.

Within the Faith Lake Map Zone, an area of about 2-1/2 square

miles, we have to date discovered approximately 30 assayable veins. These range in size from 2 to 4 inch wide lenses to 2 to 4 foot veins fully exposed vertically through at least 2000 feet. Some of the undulating veins occupying intraformational contacts, although rarely more than 1-1/2 feet in width, can be traced through mountains or around contour distances actually measurable in miles. (See 1-Mile Topog. Map.) Narrow ones occur in the quartz diorite and as such generally accompany local aureoles of disseminated "porphyry copper" type chalcopyrite mineralization.

The banded veins are generally composed of comb textured quartz plus occasional ankeritic (?) carbonates, and massive to coarsely crystalline sulphides. In order of abundance the latter include arsenopyrite, chalcopyrite, pyrite and pyrrhotite with minor secondary chalcocite and possible bornite. In one section of the zone coarsely crystalline sphalerite and galena are evident. Gold occurs closely tied up with the sulphides and is recognizable only under the microscope as minute blebs, rarely over 50 microns in size, occupying fractures in the arsenopyrite and occasionally in the less abundant minerals.

While the intraformational veins dip gently northward, the fault controlled north-south and the more common east-west ones are generally near vertical. Where seen in the granitic rock, however, the veins parallel a master joint or fracture system which strikes N.60-70°E. and dips 65-80° south. A secondary joint direction of N.10°W / 75°S. is less important.

There are no easily recognizable fault offsets although such are suggested by S.P. work in the overburdened valley area.

About 5 main subdivisions of vein types are possible. Short descriptions of specific occurrences follow and include:

- (a) east-west veins in granitic rock
- (b) east-west veins in volcanic rock
- (c) north-south veins in volcanic rock
- (d) intraformational veins including disseminated replacement bodies
- (e) breccia zone replacement type

(a) The east-west veins in granitic rock are not common although so little of the intrusive crops out that uncertainty regarding their relative abundance exists.

The Discovery Vein is located at the base of a small falls about 900 feet up Faith Creek which enters Faith Lake at its northwest end. In this locale the granitic rock, a medium grained, only slightly altered biotite quartz diorite or quartz monzonite, is in contact with volcanics under talus 100 feet or so to the south. The intrusive is more fractured than usual with a dominant direction, along which there has apparently been minor movement, striking southeasterly and dipping 75° to the south. About a dozen quartz and/or arsenopyrite-chalcopyrite veins varying from a fraction of an inch to a much less common foot in width, occupy these fractures in a zone some 50 feet wide. Disseminated chalcopyrite related to the fracture system is common and through surface oxidation, imparts a reddish hue to the rock. Molybdenite is occasionally present. The zone is bounded by a few hundred feet of more massive granitic rock on the north. To the east the creek-cut exposes "zone-type" material, but with only "hairline" veins, for a few hundred feet. Beyond this, overburden takes over as it does immediately south of the falls area

as well as beyond the 50 feet of zone length exposed uphill to the west.

The only vein of interest in the system varies in size between 6 and 8 to 10 inches. It is well exposed at the base of the falls but is badly weathered and overburdened at both ends of its 50-foot length which is governed by the exposure of granitic rock. The vein consists of bands up to 6 inches wide of massive to well-crystalline arsenopyrite in white comb-textured quartz. Chalcopyrite, also generally banded, is the second most common sulphide and minor pyrrhotite, molybdenite, pyrite and pyrrhotite. Irregular pyrite and chalcopyrite bands tend to occur between the massive arsenopyrite and the free walls. Local sericitic alteration of the country rock is common.

Assays of up to 5 oz. gold have been obtained across 8 inches of the vein but this obviously included surface enriched material. A 200-pound representative sample sent to Lakefield assayed about .80 oz. gold and this is more representative. Tests showed material of this type to be fairly responsive to amalgam and cyanide with an average recovery of 90% being indicated; this is fairly good as the amount of arsenic present is high and the ores were expected to be refractory.

As arsenopyrite deposits at Faith Lake appeared extremely responsive to self-potential type geophysical methods, a test survey of 1962 suggested the vein to continue eastward at least 300 feet. At this point (the extremity of outcrop available to collar in) EX holes #1, 2, 3 and 4 were put in during 1963 and the vein or a reasonable facsimile picked up as predicted geophysically and geologically. Unfortunately the width did not increase as the geophysical work had suggested it might - this apparently due to the cone effect of a narrow, highly responsive vein upwards through overburden. Widths of 6 inches assaying

0.72 Au, 3.5 Ag, and 3% Cu (Hole #1) showed the main vein to be continuous for a distance of 200 feet from the falls, and 4-inch widths assaying 0.48 Au and 2.1 Ag (Hole #2) were met with at 300 feet - this at 120-foot depth.

Hole #1, an attempted flat one from the approximate location of #2, was abandoned in cave at 38 feet. A paralleling hole, #3, cut a 2-foot zone composed of several very small arsenopyrite-chalcopyrite veins but across this full width showed only a small gold content.

DDH #5, drilled southerly from a distance 400 feet west of the falls, failed to intersect any worthwhile veins in granitic rock before entering the volcanics. The 2- to 3-foot wide brecciated contact was encountered as hoped for but associated mineralization was poor.

The copper content of the granitic rock is seldom greater than 0.25% across 4 to 6-foot widths although chalcopyrite is visible in most of the cores.

(b) East-west veins in volcanic rock - Gold-bearing veins in this system are most common on the east slopes of Mt. King George V. Although seldom more than 6 inches in width and generally only 2 or 3, they are remarkably persistent with some being traceable, with projection through frequent intervening talus, for at least 1000 feet - this involving a vertical range of almost 800 feet.

The fissure-type veins are generally composed of massive arsenopyrite with minor quartz. They strike a little south of west and dip steeply south, approximately at right angles to the flattish massive volcanic flows. In most cases these veins occupy widely spaced fractures with a direction similar to that shown at the Discovery Zone. Topographically suggested east-west faults - the proposed "valley break" to

the north and the similarly drift-covered "main break" some 1500 feet to the south of it - bound the zone in general.

About 20 individual outcrops have been sampled. These are believed to represent about 12 separate veins which, judging by float, are about half of those occurring across the 1500-foot width of the Zone. Unfortunately the better exposures farther up the mountain to the west, where most float is coming from, are in dangerously steep country and essentially inaccessible without climbing equipment.

Assays range from 0.02 to 1.24 oz. gold with an average around 0.77 oz. being suggested. We had hoped to find a number of these narrow veins in close enough proximity to form a lode but this condition does not seem to exist.

One impressive east-west vein, which unfortunately returned only low values where samples at its only accessible outcrop, runs from the first exposure above the valley talus to the top of Mt. King George where it disappears under a small icecap - a vertical range in excess of 1000 feet. The vein, composed essentially of quartz with minor arsenopyrite, is 1 to 4 feet wide and occupies an east-west crack or fracture on the precipitous, near vertical side of the mountain. Although some 1/2 to 1 oz. float has been found below it, the value of this showing whose persistence is remarkable, must remain in doubt. It does, however, reflect structural possibilities.

Drill hole #5 was designed to cut several hundred feet of talus-covered volcanic rock as well as the granitic contact area. The southerly directed hole was collared 400 feet east and 100 feet below the most easterly of the east-west fissure veins described. It failed to pick up any of the usual arsenopyrite veins although these should have

present at this point of projected strike. However a couple of small 4-inch chalcopyrite-pyrrhotite quartz veins were cut, one returning assays of 1.04 oz. Au. Several weakly mineralized breccia zones (about 0.25% copper)(across 10-foot widths) were encountered within the volcanics and at the contact of the granitic rock.

There remains the possibility of mineral zoning and selective vein emplacement related to the intrusive - i.e. there may be no east-west arsenopyrite veins in the unexposed volcanics in proximity to the quartz diorite; there could also be a stratigraphic control. The gold content in the arsenopyrite appears to fall off near the inner and toward the outer portion of the alteration halo but in order to get enough data to properly exhibit this a number of different, possibly unrelated, types must be sampled.

(c) North-south veins in the volcanic rock - The north-south veins appear to be partly fissure and partly replacement in nature. They are not too common or well-defined and appear to be related to areas where subsidiary north-south faults have been affected by folding. Resultant, generally narrow, flexures were apparently favourable traps and the veins developed.

One such typical deposit, termed the "Butch Vein" (Photo #1) occurs between elevations 5200 and 6000 feet on the steep but passable hillside north of the lake. Through a well-exposed distance of nearly 1000 feet (7 to 800 feet vertically) the arcuate or crescent-shaped vein containing mostly arsenopyrite and chalcopyrite in a quartz-chlorite gangue, averages about a foot in width and assays about 0.36 gold, 6.0 silver and 2.0% copper. Smaller veins and diffuse areas of sulphide replacement adjoin it, these latter being found at several other similarly developed localities on the north side.

South of the lake similar but poorly exposed north-south veins occur. Some of these are in deep narrow cracks in the blocky volcanics and not readily sampled. Others are up to 2 or 3 feet wide locally but appear to pinch as fast as they swell. The gold content is lower than on the north side (0.1 to 0.2 range) but copper is more abundant.

(d) Intraformational veins in the volcanic rock - This is the most intriguing and widespread type at Faith Lake - also the most inaccessible.

Vein matter, consisting of coarsely crystalline to massive arsenopyrite and minor chalcopyrite in a quartz or occasionally quartz-carbonate (siderite) gangue, has replaced and filled open (?) spaces along brecciated regional contacts of the massive flow layers. As the lava flows are generally within 10° to 20° of being flat, these veins contour the mountains within the alteration aureole around Faith Lake, widths, although varying greatly along any one horizon, unfortunately are seldom more than a few feet and massive metallics, with which practically all gold values are associated, seldom more than 6 to 8 inches. The persistence, however, is remarkable with some of the deposits being fully traceable for at least 2 miles. Projections can be picked up through 1500 to 2000-foot mountain spurs or ridges. Fault offsets, if they occur, are not readily evident and may be restricted to the overburdened valley bottoms.

As is the case with the east-west veins, the flat bodies are nowhere close enough together to constitute a lode; the main intraformational breaks are usually 50 to 100 feet apart.

Photo #2 shows the typical environment in which these veins are found. This particular location at elevation 5800 feet was accessible by helicopter and 100 to 150 pounds of partially oxidized arsenopyrite and quartz was broken off the 2 to 6-inch wide vein. This sample, which assayed about 0.35 oz. gold, was shipped east for metallurgical tests.

Recovery was reportedly poor - probably because of oxidation as well as the refractory characteristics.

A related deposit, the "Galena Showing" occurs in close proximity to a small glacier at the 5500-foot level south of the lake. Although unfortunately masked by the ice, there is some evidence of a cross structure - a fault or a fold - cutting a persistent but narrow intraformational deposit resulting in a thickening to 3 or 4 feet. Coarse grained galena and sphalerite, rare elsewhere, plus chalcopyrite in a quartz-siderite gangue, are common near a bergschrund (see Photos #2 & #4). Samples running as high as 67.0 oz. silver and 0.12 oz. gold were taken from 200-foot long scarps in this area but drilling a short distance to the west intersected only a couple feet of sphalerite-rich material assaying 0.04 Au, 3.5 Ag and 2.5% copper. The lack of galena in the two short drill holes (PS #1 and PS #2) suggests a secondary control not decipherable without considerably more work on this little exposed zone.

(e) Breccia zone replacement types - This type appears more closely related to type "D" but differs from it in that brecciation, although of less intensity, is distributed through a much greater thickness - possibly a whole incompetent flow being affected rather than merely the contacts. Such a history is suggested for the "Schev Zone", a low-grade, poorly exposed deposit occurring 1200 feet north of the Discovery showing. Here between approximate elevations of 4720 and 4780 feet a mildly brecciated but highly chloritic and/or sericitic basic volcanic flow (?) containing disseminated arsenopyrite and chalcopyrite crosses a small dry creek bed. A thickness in the order of at least 50 feet is indicated but outcrop is so sparse that this width may be quite local and governed by relatively narrow unexposed north-south faults. Values are low, 0.06 Au, 0.18 Cu but occasional samples have returned up to 0.36 Au and 1.8 Ag.

The importance of this deposit lies in the fact that it is the only favourably altered and brecciated area of consequence exposed in the Faith Lake area. Despite the disseminated sulphides, it failed to react to S.P. surveys although an important-looking build-up began a few yards to the west along predicted strike. This anomaly, extending for at least 400 feet, could be important. (See Map FL #3/63.)

Disseminated type deposits in breccia occur in the vicinity of the "Butch Vein" already described, and through narrow sections of drill hole #5, although chalcopyrite without accompanying arsenopyrite is present in contrast to most other areas.

ASSAYS & RESERVES

Reserve calculations are meaningless at this time as most veins investigated are too small to be classified. Deposits such as the Upper IF vein exposed on three sides probably contain nearly 500,000 tons of 0.3 to 0.5 oz. gold and there are several others like it. The Butch Vein, one of the better exposed, makes 0.5 oz. ore at only 50 tons per vertical foot. With an expected minimum of 500 feet this is only 25,000 tons. The average grade of the narrow east-west veins is about 0.75 oz. The copper content is important but only as a possible by-product. The disseminated "porphyry type" occasionally met with in the area may be an indicator or guide but certainly no such workable deposit is suggested. The copper content of the better volcanic sections is about 0.30% through 20-30 feet, and in the intrusive 0.15 to 0.25 through the same distances.

CONCLUSIONS & RECOMMENDATIONS

Work around Faith Lake has shown a myriad of gold-bearing quartz veins to exist in a previously neglected part of Vancouver Island. In total numbers there are more such than seen by the writer at any ten

other properties combined. Unfortunately the veins are practically all too narrow to stand mining on their own without a doubling in the price of gold. The intraformational veins contain an attractive total amount of mineral but such flat bodies less than a foot or two wide and running less than 1 oz. just cannot be mined at a profit, especially in such rough locations. The total and widespread mineralization, however, is a teaser and we are loathe to leave the area while structural possibilities allowing a widening of any one type of deposit still exist undetected.

While all veins investigated are too narrow to warrant much more work at present, there is a possibility that large mineralized breccia areas do occur in the overburdened valley bottom. The S.P. survey has indicated such possibilities and the anomalies as shown on Map FL #3/63 (see page 17) are not to be neglected. The S.P. method has been thoroughly tested and works exceptionally well, with high selectivity, in this particular geological environment.


Future work should be concentrated near the Schev Showing where a couple packsack holes are required to test the partially exposed interestingly altered outcrop. Several EX holes are needed to probe the adjoining S.P. anomaly.

No problems are anticipated in this work as long as the helicopter is available to lift a 3-man crew and machine to site. About 2-1/2 weeks' work is required, plus an allowance for about 1000 feet of drilling. The size of the claim group should be rounded out at 20 to provide better protection on the north side and with work completed, 10 years' assessment credit will be available.

REFERENCES:

- (1) Faith Lake Gold - 1962 - J. J. McDougall
- (2) Gem Lake Reports - 1961, 1962 - J. J. McDougall
- (3) Interim Reports - 1963 Field Season - J. J. McDougall
- (4) Lakefield Metallurgical Test - Project No. L.R. 939, Oct./63.

Vancouver, B. C.
January 29, 1964.

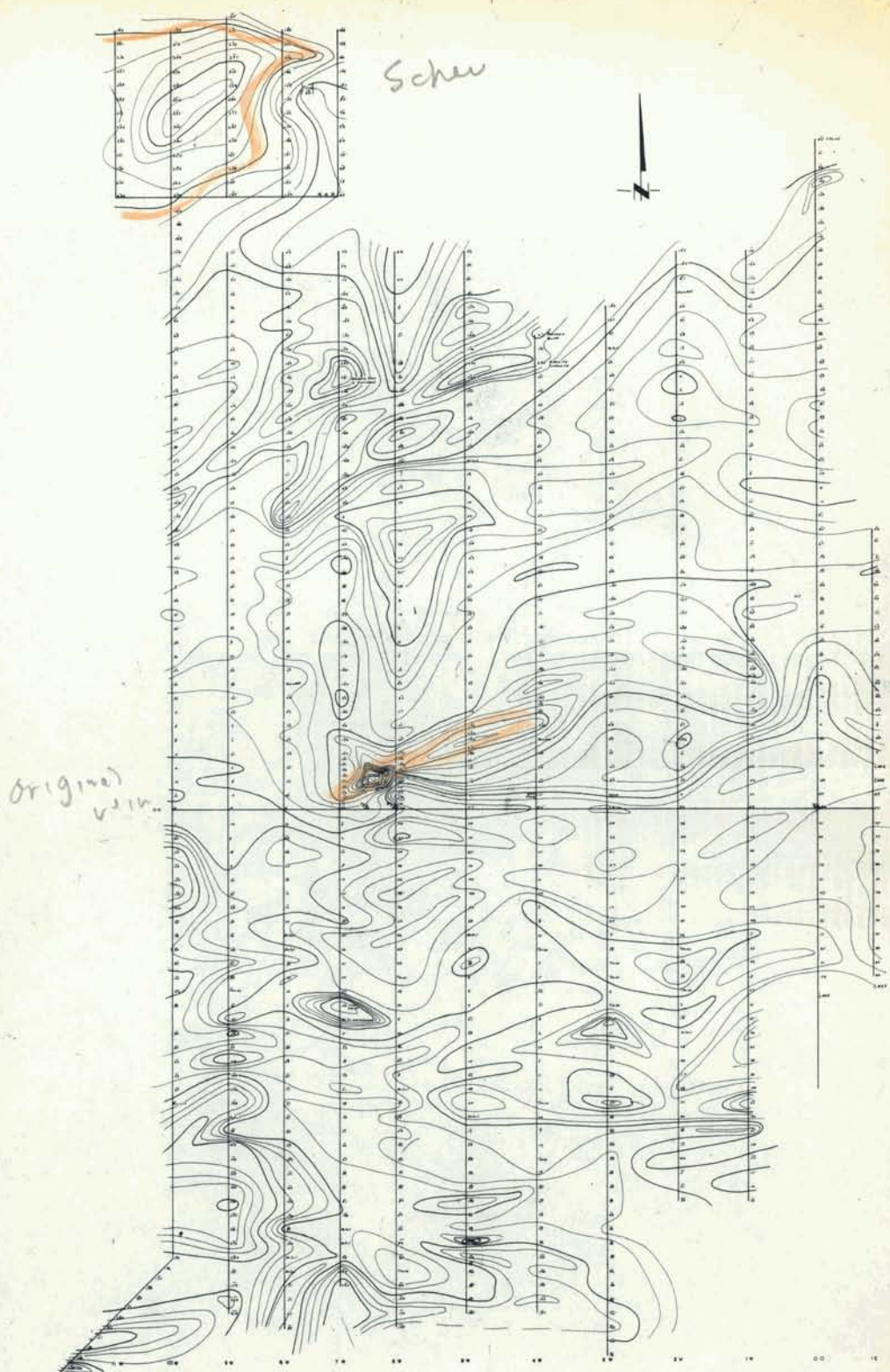


J. J. McDougall
Geologist

MAP FL 3163

Scheu

original
with

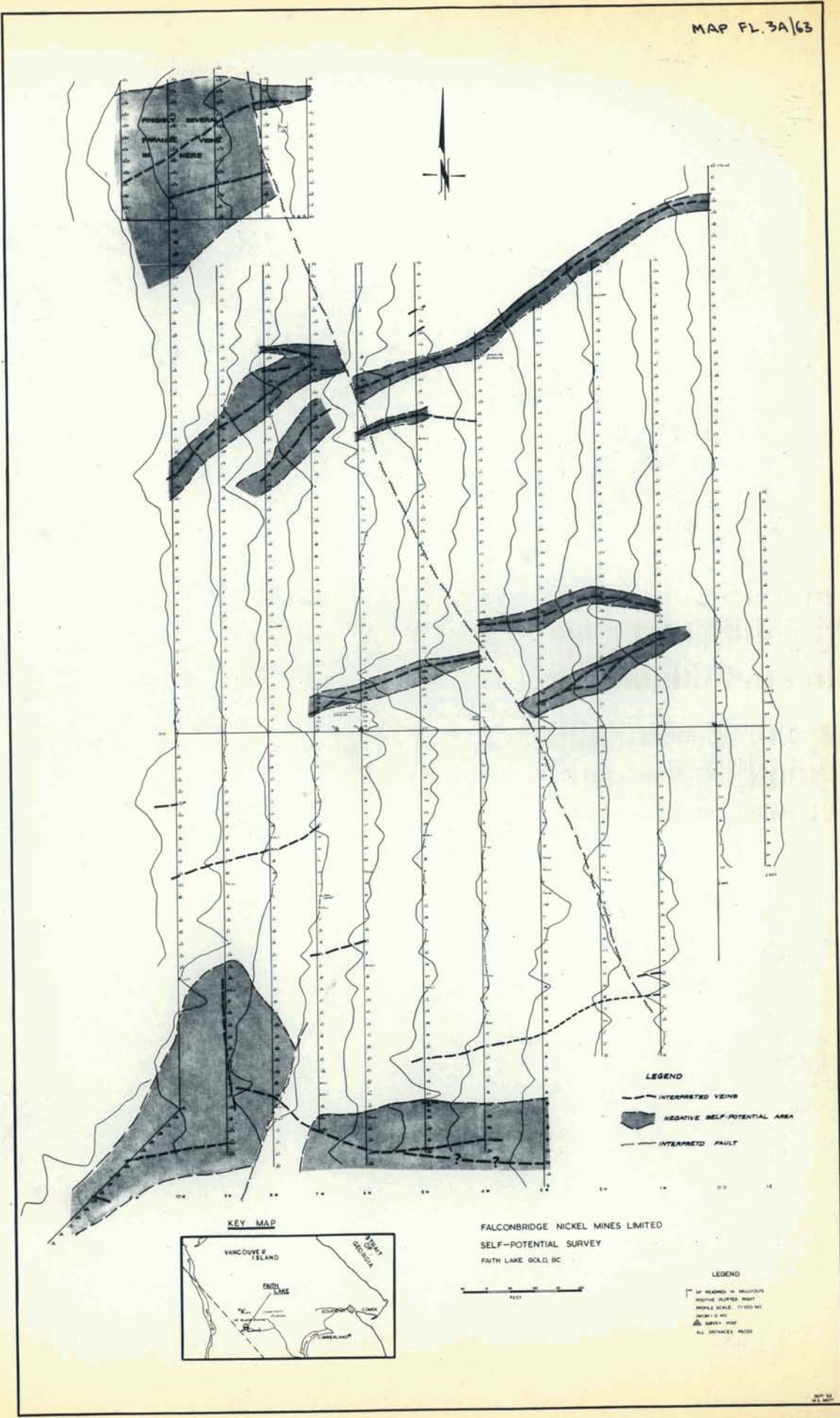


KEY MAP



FALCONBRIDGE NICKEL MINES LIMITED
 SELF-POTENTIAL SURVEY
 FAITH LAKE GOLD, B.C.
 CONTOUR INTERVAL 20 M.VOLTS





KEY MAP



FALCONBRIDGE NICKEL MINES LIMITED
SELF-POTENTIAL SURVEY
FAITH LAKE GOLD FIELD, BC

LEGEND
--- INTERPRETED VEINS
■ NEGATIVE SELF-POTENTIAL AREA
--- INTERPRETED FAULT

LEGEND
SP OF READINGS IN MILLIVOLTS
POSITIVE PLOTTED RIGHT
NEGATIVE PLOTTED LEFT
SCALE: 1" = 100 FT.
(HORIZONTAL)
ALL DISTANCES IN FEET

FEET

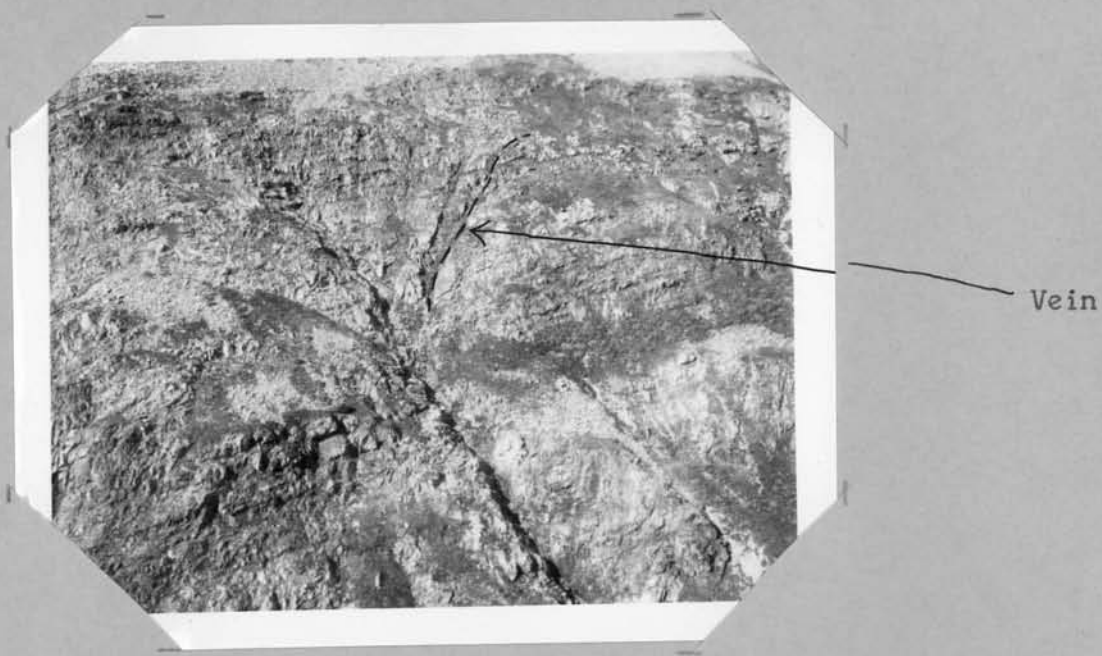


PHOTO #1 - "Butch Vein" looking north from Faith Lake.
Typical north-south type.



PHOTO #2 - Intraformational Vein west of Faith Lake.

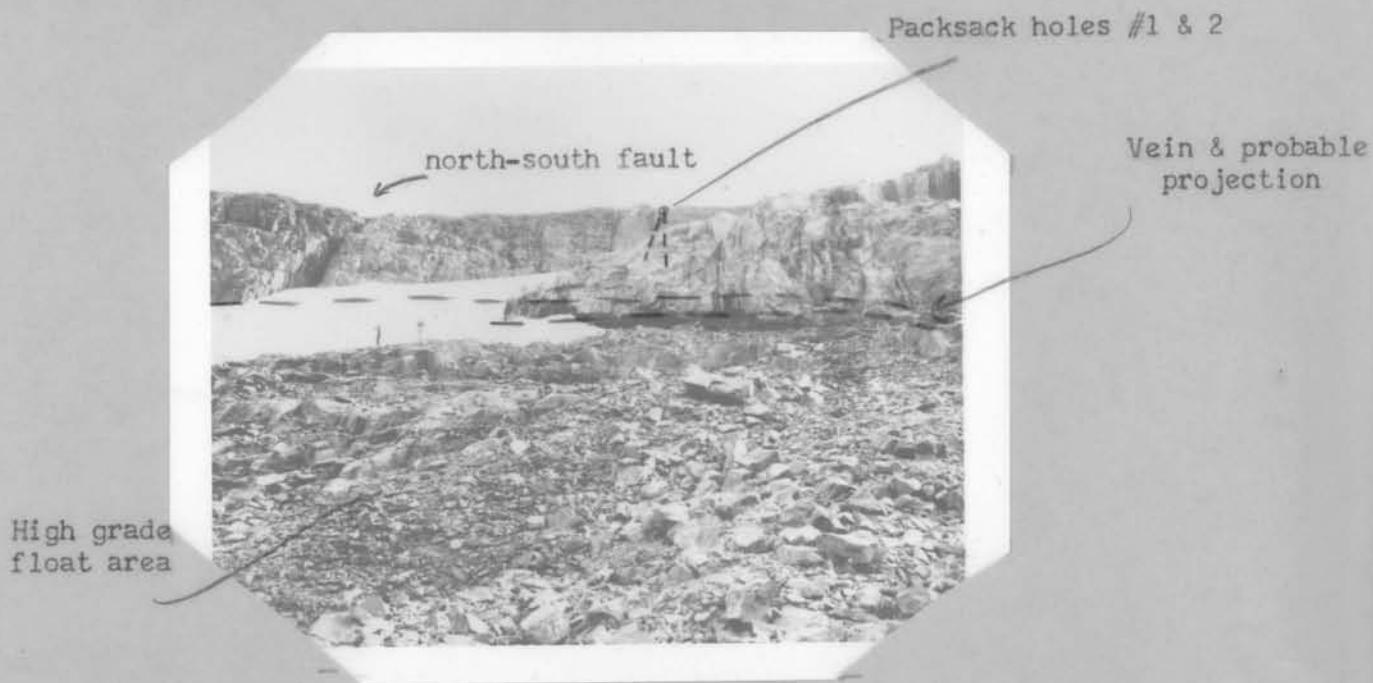


PHOTO #3 - "Galena" showing south of Faith Lake

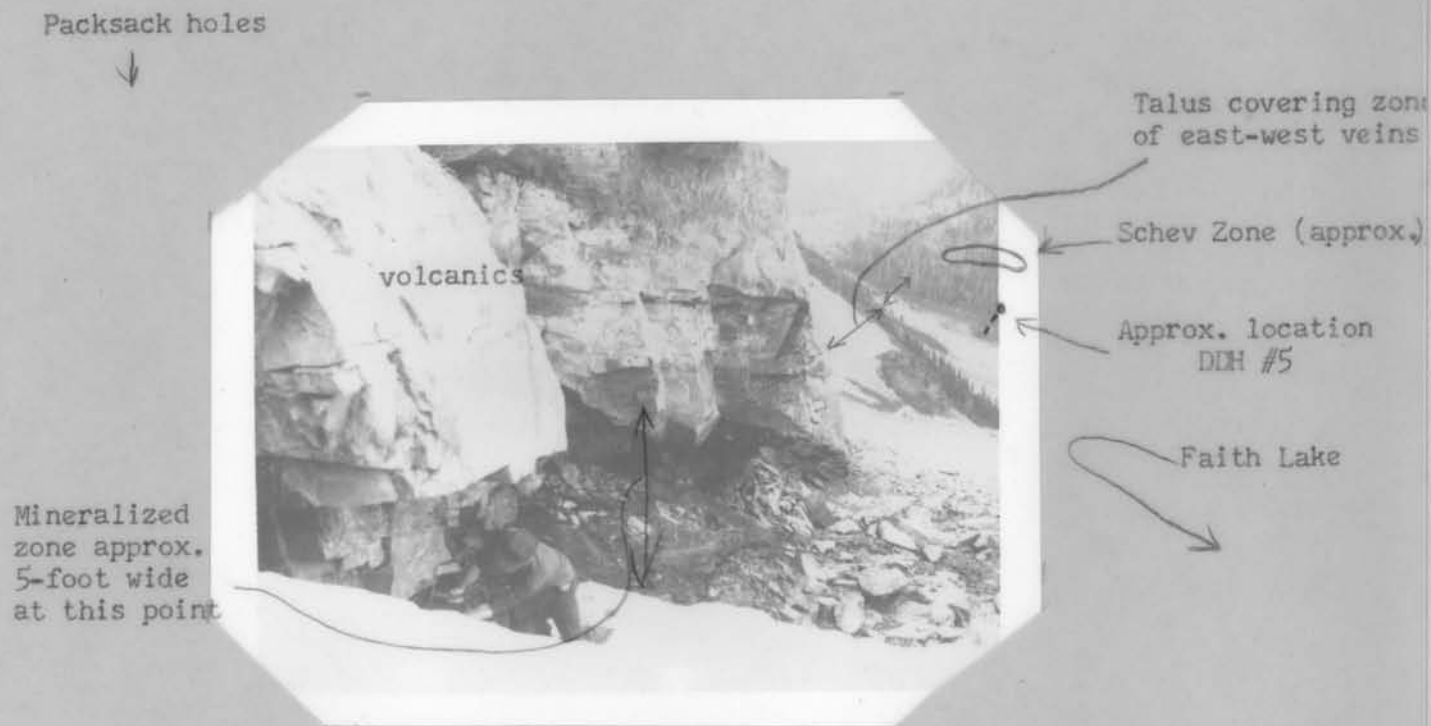


PHOTO #4 - Closeup of Galena Vein as above

PROPERTY FAITH LAKE (R I M)

HOLE NUMBER AX 2
 SHEET NUMBER 1
 SECTION FROM TO

DIAMOND DRILL RECORD

LOCATION: LAT 10,069.19
 DEP 9,548.29
 ELEVATION OF COLLAR 3897
 DATUM FL/63/1
 BEARING North
 DIRECTION AT START: DIP -60°

STARTED July/1963
 COMPLETED "
 ULTIMATE DEPTH 258 ft.
 PROPOSED DEPTH

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	Au	Ag	Cu
0 - 20	O. B.	147	147.3	0.3	0.48	2.1	
20 - 58	Mg, diffused qtz dior; sl sericitized quite massive but occ jnt @ 35° - occ Cp, pyrr strgs @ 50°; - occ granule-amphibolite vein plus greenish actinolite with sl S2 related. - feldspathic and porphyry in part.	146	148 (less above)	1.7	tr	tr	0.06
58 - 62	Darker granitic rx (biotite-diorite), increased sericitization; sl finer grained, number v w fractures @ various angles to core.						
62 - 73	Sl porph hblend diorite(?) as prev but v w & broken - sericitic.						
73 - 132.5	Massive qtz diorite - hornblend shows sl trachytic orient. 131.5-132.5 - sericitic section with 2-1/2" qtz vein @ 45°.						
132.5 - 150	Qtz dior as prev. 147 - Sl 2" band xstalline as paralleling 2" band Cp-pyrr. 1 ft sericitic alt each side. - S2 bndg @ 50°.						

PROPERTY FAITH LAKE

HOLE NUMBER AX - 2

SHEET NUMBER 2

SECTION FROM TO

DIAMOND DRILL RECORD

LOCATION: LAT.

DEP.

ELEVATION OF COLLAR

DATUM

DIRECTION AT START: BEARING
DIP

STARTED

COMPLETED

ULTIMATE DEPTH

PROPOSED DEPTH

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE				
150 - 175	Qd - grain size increased.							
175 - 258	- mg qtz dior as prev. - occ py, pyrr bleb & veinlets @ 30 - 40°.							
235 - 243	- sil bleached section.							
	E N D							
	Core Rec 100% - good drilling.							

PROPERTY FAITH LAKE

HOLE NUMBER AX - 3

SHEET NUMBER _____

DIAMOND DRILL RECORD

SECTION FROM _____ TO _____

LOCATION: LAT 10,019.33
 DEP 9,478.36
 ELEVATION OF COLLAR 3858
 DATUM FL/63/1
 DIRECTION AT START: BEARING North
 DIP -20°

STARTED July/1963

COMPLETED July/1963

ULTIMATE DEPTH 206 ft.

PROPOSED DEPTH Schussler - Evans.

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	Au	Ag	Cu
0 - 75	Mg qtz diorite; sil in pt 62 - 63 - oxid zone						
75 - 77	1/4 paralleling vein Cp & AsP	75 - 77		2.0			
77 - 86	Sl sil qtz dior -, r w in pt - occ qtz veinlet & low angle to core - sl diss AsP	76 - 90		14.0	0.02	tr	0.13
86 - 100	Qtz dior with sl diss Cp. Best section sampled. 96 - 96.5 - qtz vein in crushed zone.						
100 - 206	- qtz - dior - scattered diss Cp throughout; occ sl AsP						
	E N D						
	DID NOT HIT VEIN PROJECTED.						

PROPERTY FAITH LAKE

HOLE NUMBER AX - 4

SHEET NUMBER _____

DIAMOND DRILL RECORD

SECTION FROM _____ TO _____

LOCATION: LAT 10,019.33
 DEP 9,478.36
 ELEVATION OF COLLAR 3858
 DATUM FL/63/1
 BEARING N45°W
 DIRECTION AT START: DIP -18°

STARTED July/1963
 COMPLETED July/1963
 ULTIMATE DEPTH 152 ft.
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	Au	Ag	Cu
0 - 25	Qtz dior						
25 - 50	- 80% v w (oxid) qtz dior - sl diss Cp. - occ sil bndg @ 65°.	25	50	25.0	tr	tr	0.04
50 - 152	Normal qtz dior - occ v w sect., diss Cp thru-out. Occ dyke-like(?) inclusions. 107.5 - 110 - sil section; bndg @ 35 - 40°. 110 - 112 - sl sil. diss Cp, pyrr, sl AsP	107.5	112	4.0	.01	0.1	0.24
		less	109.5-110				
		109.5	110	0.5	0.72	3.5	2.99
	E N D						
	Vein cut may have been original but less arsenopyrite present.						

PROPERTY FAITH LAKE

HOLE NUMBER A X - 5

SHEET NUMBER 1

SECTION FROM _____ TO _____

DIAMOND DRILL RECORD

LOCATION: LAT. 10,149.55
 DEP. 8,866.94
 ELEVATION OF COLLAR 4061
 DATUM See Map FL/63/1
 DIRECTION AT START: BEARING - South
 DIP -40°

STARTED Sept. 7/63
 COMPLETED Sept. 17/63
 ULTIMATE DEPTH 504 ft.
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	As	Ag	Am
		Start	19476				
0 - 71	Sl feld Qtz dior - occ incl.	98 - 98.5		1.5	.01	tr	
71 - 73	brecciated ctct with V1 appears @ 35°.	104 - 104.5		0.5	.01	tr	
	Weakly min Cp-py	385 - 390		5.0	.02	tr	0.28
73 - 376	Andeso-basalt (V1) -	390 - 395		5.0	.02	tr	0.25
	some flows amygdaloidal, others not usually sl epidote.	398 - 398.3		0.3	1.04	0.9	
	- occ sl gr areas with increased min assoc	410 - 420		10.0	0.01	tr	0.09
	98 - 99, 104 - 104.5 - sl min Cp, pyrr -	450 - 460		10.0	0.01	tr	0.03
	Most banding and contacts @ 45°.	End	19482				
	206 - 206.5 - fault.						
	Cp & pyrr on most fractures.						
376 - 383	- Fault - mud seam - no core.						
383 - 390	V1 breccia, occ pyrr, py, Cp strgs. Core Rec. = 70%						
390 - 410	V1						
410 - 424	- 70% crushed and sheared V1 - occ sl min.						

PROPERTY FAITH LAKE

HOLE NUMBER AX - 5

SHEET NUMBER 2

SECTION FROM _____ TO _____

DIAMOND DRILL RECORD

LOCATION: LAT _____

STARTED _____

DEP _____

COMPLETED _____

ELEVATION OF COLLAR _____

ULTIMATE DEPTH _____

DATUM _____

DIRECTION AT START: BEARING _____
DIP _____

PROPOSED DEPTH _____

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE			
424 - 444	Vl with oec sm veinlets Cp-py-pyrr.						
444 - 450	Diffused mottled feldp qtz diorite sill(?), breccia ctct.						
450 - 460	Vl - sl greater Cp, pyrr diss.						
460 - 504	Vl - sl min as previous.						
	E N D						
	<u>NOTE:</u>						
	No arsenopyrite mineralization encountered which is strange as such veins are numerous along strike.						

PROPERTY FAITH LAKE

HOLE NUMBER P S 1 /63

SHEET NUMBER 1

SECTION FROM TO

DIAMOND DRILL RECORD

LOCATION: LAT 7,250.0 N
 DEP 9,350.0 Determined by long
 ELEVATION OF COLLAR (5560±) distance triangulation only
 DATUM See Map FL/63/1 (helicopter shot)
 DIRECTION AT START: BEARING
 DIP -90°

STARTED July/1963
 COMPLETED Oct./1963
 ULTIMATE DEPTH 40 ft.
 PROPOSED DEPTH

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	ANALYSIS		
					Au	Ag	Cu
	Start 19483						
0 - 20.5	Greenish fg amyg andeso-basalt (V1) - scattered pyrr, py	20.0 - 25.0		5.0	0.01	tr	0.10
		(alt less 84)					
20.5 - 25	- Sl Cp & py repl of silic amygs	20.3 - 21.0		0.7	0.04	3.6	3.12
	20.5-21 - v w, buff qtz vein; sl Cp	25.5 - 26.5		1.0	0.04	3.3	1.35
	and sl ZnS, v sl AsP, ctct @ 62°	26.5 - 30.5		4.0	tr	tr	0.13
25 - 25.5	V1 - ctct @ 80°						
25.5 - 26.5	Ctct @ high angle with qtz - S2 vein - vuggy in part; banded ZnS @ 80°, plus gobs of Cp and pyrr.						
26.5 - 30.5	Buff tuffaceous(?) volc rex; repl weakly by py, pyrr & Cp; sl cu stn; sl feldspathic - ctct (#1) @ 75°, (#2) @ 40°.						
30.5 - 40	Amy V1						
	100% recovery						

PROPERTY FAITH LAKE

HOLE NUMBER P S 2/63

SHEET NUMBER 1

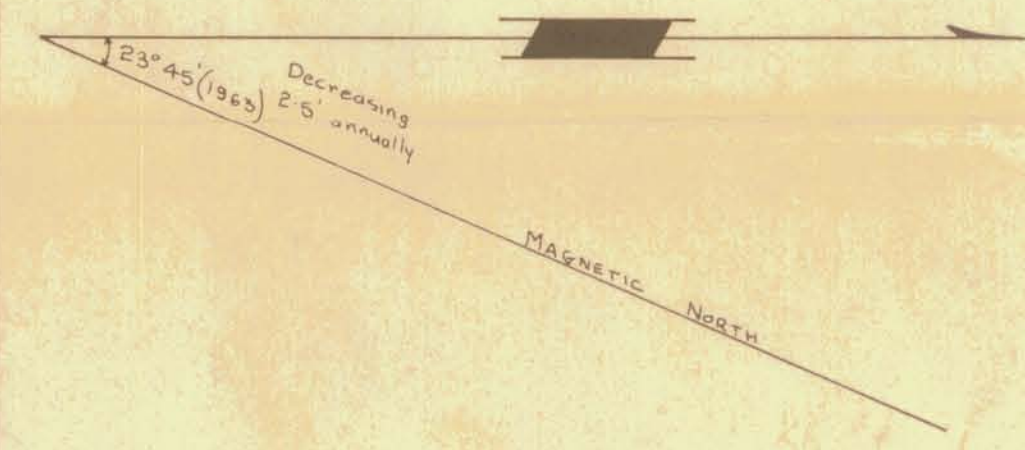
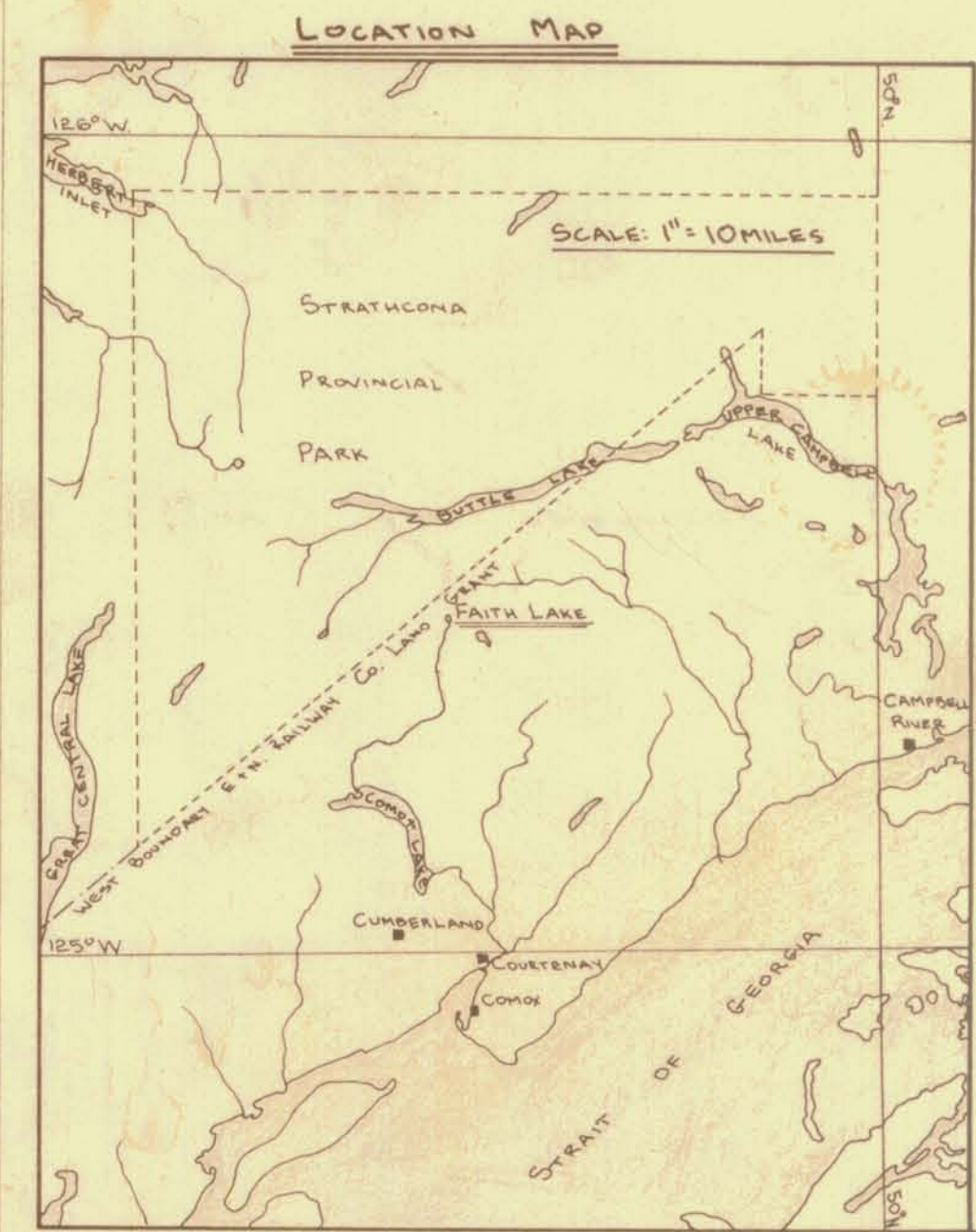
SECTION FROM TO

DIAMOND DRILL RECORD

LOCATION: LAT 7250.0 N
 DEP 9,350.0 E
 ELEVATION OF COLLAR 5560±
 DATUM FL/63/1
 BEARING south
 DIRECTION AT START: DIP -75°

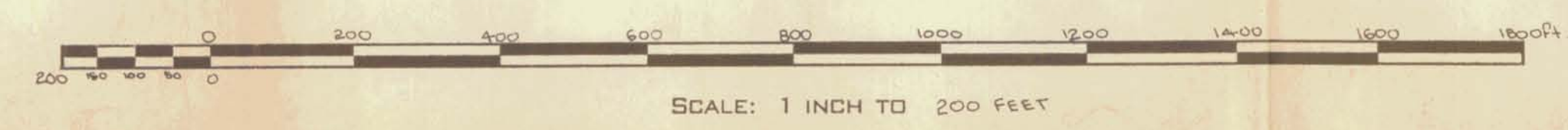
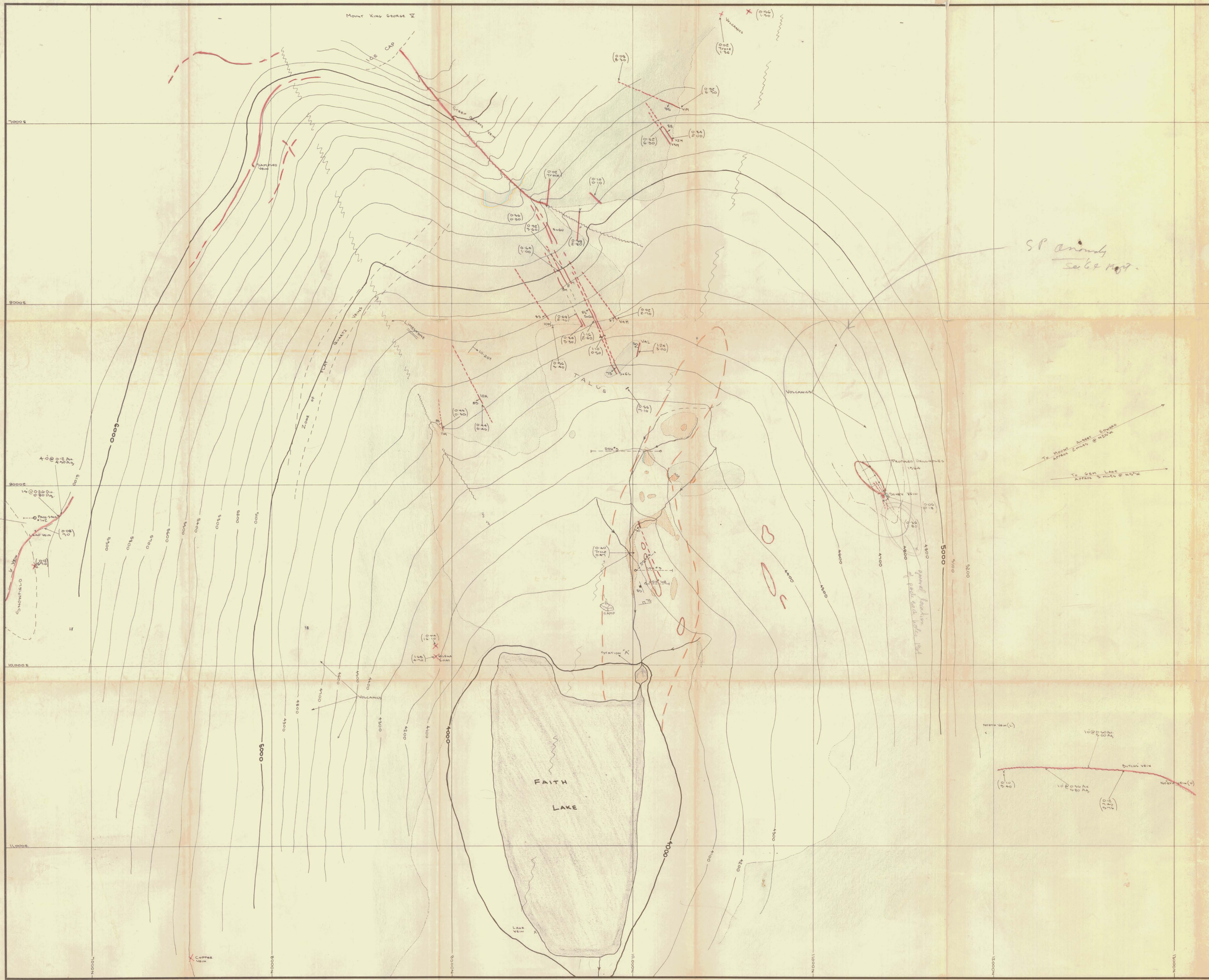
STARTED October/63
 COMPLETED "
 ULTIMATE DEPTH 50 ft.
 PROPOSED DEPTH

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE	Au	Ag	Cu	
		Start	19487					
0 - 26.7	VI - amy - 2 types - one epidote amygs, the other amys minor but increased black phenos	17	18.5	1.5	tr	tr	0.11	
	17 - 18.5 - lighter silic section with sl diss Cp, py in amygs.	25	30	5.0	tr	tr	0.08	
	25 - 26.7 - pyrr replacement of amygs.	(less 89)						
26.7 - 28.3	Qtz vein contains ZnS banded @ 60°, plus sl Cp - very minor galena.	26.7	28.3	1.6	.02	1.5		Zn 0.46
28.3 - 50	Amy VI							
	E N D							
	Veins intersected in P S #1 & P S #2 show little galens unlike those outcropping to the east - may be folded away.							



- LEGEND**
- 751 VOLCANICS (PROBABLY GRANITOID) INCLUDE BASALTIC TO ANDESITIC LAVAS, AGGLOMERATES, ETC.
 - 737 GRANITIC ROCK GENERALLY MEDIUM GRAINED QUARTZ DIORITE BUT INCLUDES PORPHYRIC TYPES AND PORPHYRY. METACALCINE SHALES, SLATES, GNEISS.
 - X745 FLOAT OCCURRENCE
 - 7145 MINERAL VEIN (SCALE EXAGGERATED)
 - Diamond Drill Hole
 - Basal Attitude Faults - Indicated Downward
 - Self-Potential Anomaly
- N.B. VEINS ARE 1/2" TO 5" WIDE UNLESS OTHERWISE MENTIONED IN ACCOMPANYING REPORT
- ANOMY VALUES
E.G. 0.10 (0.10)
0.10 (0.10)
0.10 (0.10)

ELEVATIONS ARE ASSUMED, STATION 'K' TAKEN AS A CHECK. ALL VEINATIONS ABOVE THE 4700 FEET WILL BE APPROPRIATE AND SUBJECT TO REVISION.



SCALE: 1 INCH TO 200 FEET

COMPANY .. FALCONBRIDGE NICKEL MINES LTD. WORKING PLACE ..
 PROPERTY .. FAITH LAKE GOLD TYPE OF MAP .. GEOLOGICAL - S.S. McEWELL
 LOCATION .. LATITUDE 49° 55' 10" N. LONGITUDE 125° 24' 35" W. BASED ON .. PRELIMINARY STRATA SURVEY
 DATE .. 7th January 1964 DRAWN BY .. DONALD P. WILSON
 DATE OF WORK .. 4th Oct '62 and 12th Sept '63