

D.D.H. GEOMANAGEMENT LTD.

REPORT

825972

ON THE

SURF INLET PROPERTY

NAMELY

SURF THREE (5173) 6 UNITS

COUGAR 1 (2614) 6 UNITS

COUGAR 2 (2615) 2 UNITS

LOCATED AT

SURF INLET, PRINCESS ROYAL ISLAND, B.C.

SKEENA MINING DIVISION

LATITUDE 53° 03' NORTH

LONGITUDE 128° 52' WEST

N.T.S. 103 H/2W

FOR

FLEET DEVELOPMENTS LTD.

Suite 701 - 744 West Hastings Street

Vancouver, B.C. V6C 1A5

BY

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Geological Engineer

May 22, 1986

TABLE OF CONTENTS

	Page
Summary	1
Introduction	1
Location and Access	2
Property and Title	2
History	2
Regional Geology	8
Property Geology	8
Conclusions on Exploration Potential	17
Recommendation	20
Cost Estimate of Proposed Work Program	20
References	22
Certification	23

Illustrations

Figure 1:	Location Map	3
Figure 2:	Detail Location Map	4
Figure 3:	Property Map	5
Figure 4:	Regional Geology	9
Figure 5:	Geological Plan and Sections of Surf Inlet and Pugsley Mines	11
Figure 6:	Reproduction of Cassie Adit Sample Map, after N.L. Batten, Oct. 25/28	16
Figure 7:	Illustration Showing Surface Trace of Pugsley Structure in Relation to Surf Inlet Property	18
Figure 8:	Location of Reconnaissance Geochemistry South of of Cassie and Lakeview Claims	11

Appendix

Appendix A: Geochemical Lab Report, Bondar-Clegg and Co. Ltd.

SUMMARY

Fleet Developments Ltd. has staked and optioned a total of 14 units (Surf Three, Cougar 1 and 2) located on the southern extension of the Pugsley mine structure along the eastern side of Bear Lake near the head of Surf Inlet on Princess Royal Island, B.C. Access is via fixed wing aircraft or helicopter from Prince Rupert, B.C., a distance of about 170 kms. Coordinates are 53° 03' N and 128° 52' W.

The Pugsley fault-quartz vein structure is part of a 4,000 metre long mineralized zone from which the former producers of Surf Inlet and Pugsley mines produced 1,091,131 tons at a recovered grade of 0.35 oz/t gold, 0.18 oz/t silver and 0.29% copper, up to the mine closure in 1942. The mineralized structure occurs in massive to gneissic hornblende-biotite quart diorite of early to middle Cretaceous age. Mineralogy was simple with gold being associated with pyrite-chalcopyrite. Gold and silver were recovered in a bulk sulphide concentrate.

The property of Fleet Developments Ltd. covers the southern extension of the Pugsley structure. The closest workings to the Fleet property are the Summit and Cassie, the latter gave an average of nine samples along 54.5 m of adit of 0.87 oz/t gold and 1.09 oz/t silver over a width of 2.3 feet.

A program has been recommended to define the southern extension of the Pugsley structure on the Fleet Developments Ltd. property. The estimated cost of a two phase program is \$97,550.00 (Phase I - \$15,000.00 and Phase II - \$82,550.00).

INTRODUCTION

The firm of D.D.H. Geomanagement Ltd. was commissioned in April 1986 by Fleet Developments Ltd., 701 - 744 West Hastings Street, Vancouver, B.C., V6C 1A5 to appraise the exploration potential and to recommend an evaluation program on their Surf Inlet claims. This assignment was accomplished by reviewing published and unpublished data, private and government reports and from a visit to the subject area on 15 August 1980. This report outlines the exploration potential of the property and a work program to test that potential.

LOCATION AND ACCESS

The Fleet Developments Ltd. property is located on Princess Royal Island near the head of Surf Inlet in the central coastal area of the province approximately 580 kms (362 miles) northwest of Vancouver, B.C.; 170 kms (106 miles) southeast of Prince Rupert, B.C. and 165 kms (103 miles) south of Terrace, B.C. Access is via boat to the head of Surf Inlet which is about 3.5 kms (2.2 miles) south of the property or by float plane or helicopter to Bear Lake (see Figure 1 and 2).

Coordinates are 53° 03' North Latitude and 128° 52' West Longitude. The N.T.S. sheet is 103H/2W.

Topographic relief in the area is steep with timbered slopes rising from Bear Lake at about 27 metres (90 feet) elevation to rounded ridges at elevations of about 910 metres (3,000 feet). (See Figure 2)

PROPERTY AND TITLE

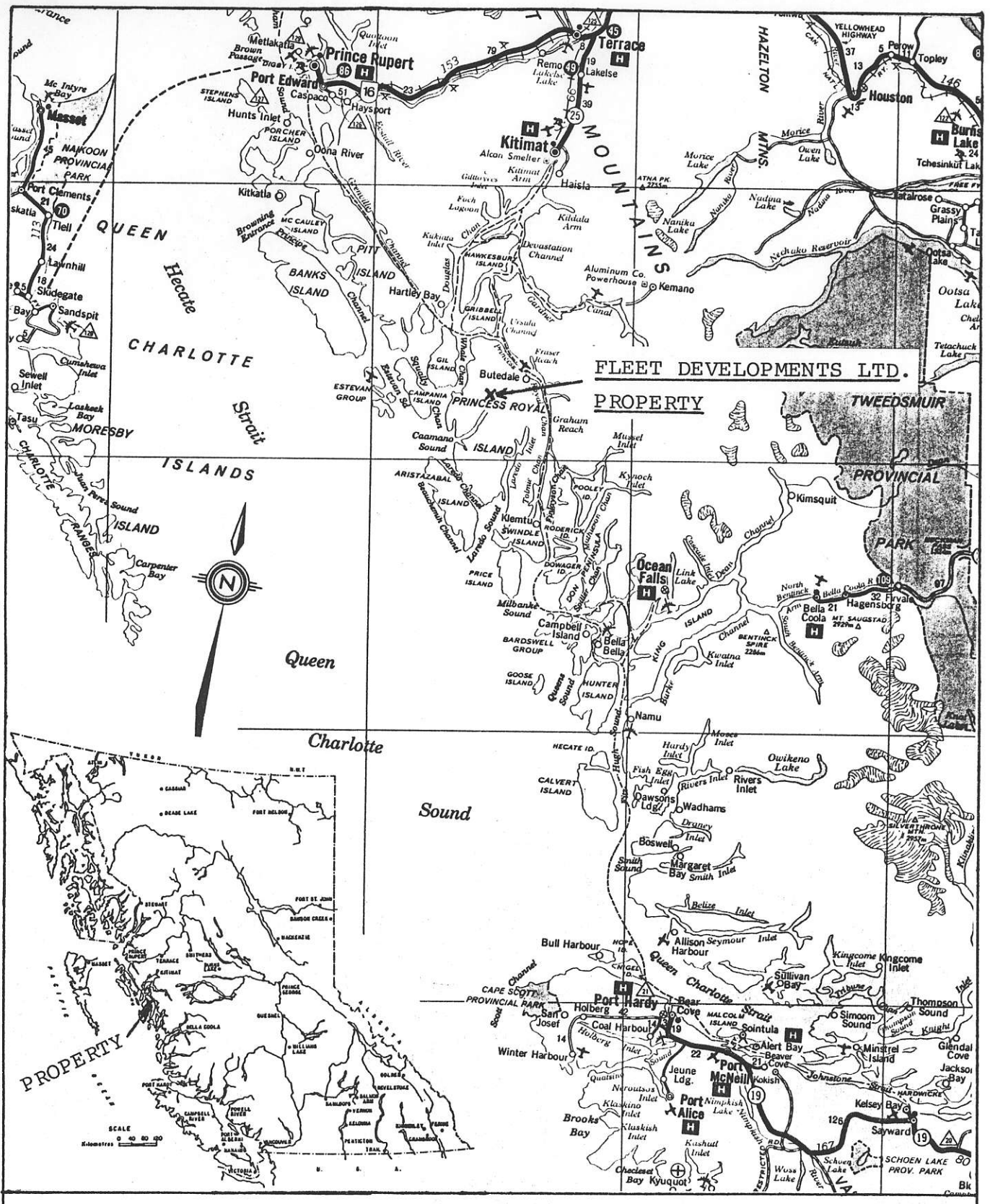
Fleet Development Ltd. has had staked and/or optioned the following mineral claims (see Figure 3).

<u>Claim</u>	<u>Record No.</u>	<u>Units</u>	<u>Expire Date</u>	<u>Registered in Name of</u>
Surf Three	5173(2)	6	February 28, 1987	J.T. Shearer
Cougar 1	2614(10)	6	October 1, 1986	Coastoro Resources Ltd.
Cougar 2	2615(2)	2	October 1, 1986	Coastoro Resources Ltd.

An option agreement between Fleet Developments Ltd. and Coastoro Resources Ltd. was signed February 4, 1986.

HISTORY

The Fleet Developments Ltd. property is geologically associated with the former gold producers of the Surf Inlet and Pugsley Mines in that the Fleet Developments Ltd. property covers the southern extension of the Pugsley Mine structure. Consequently,



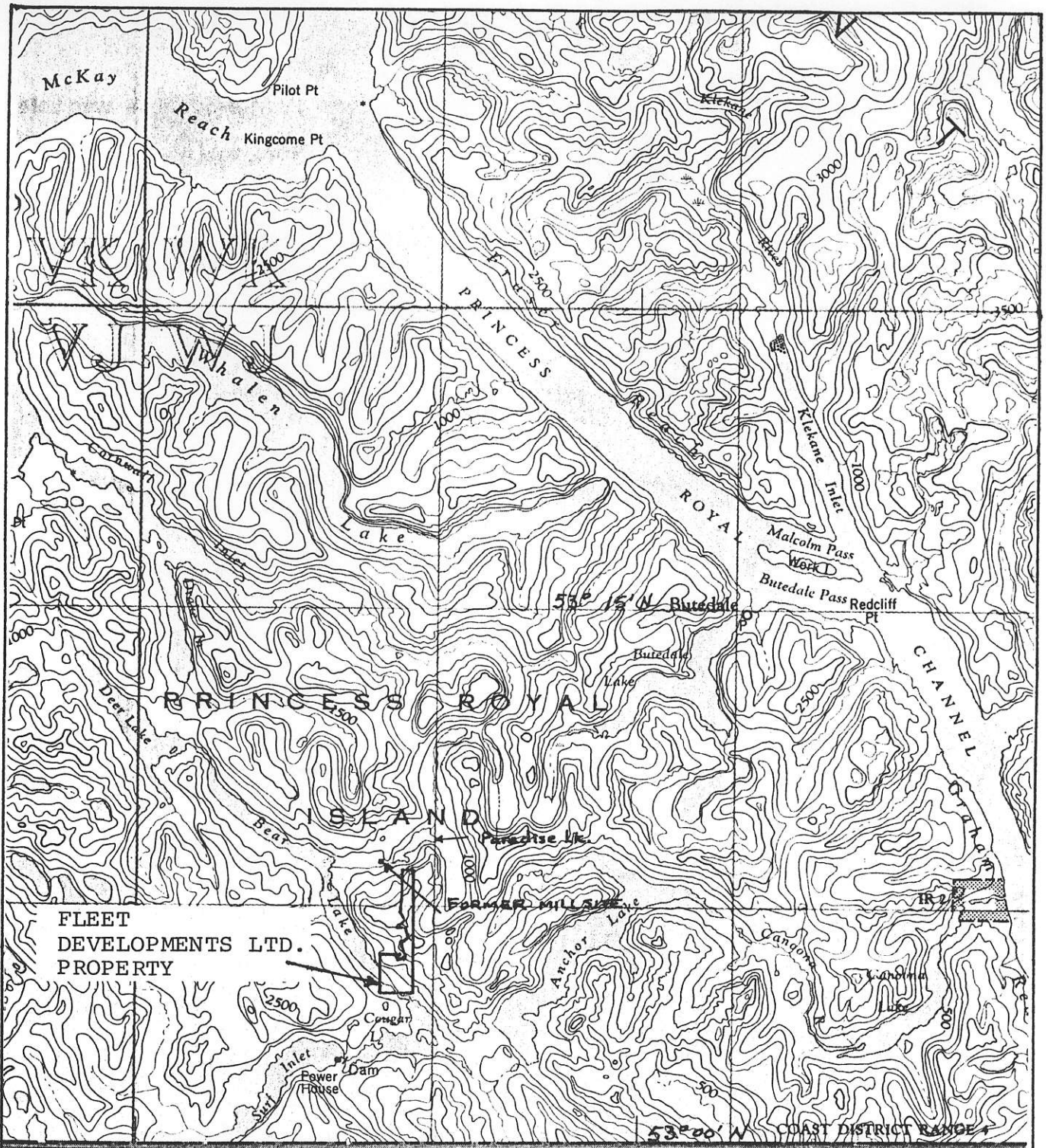
FLEET DEVELOPMENTS LTD.

SURF INLET PROPERTY, B. C.

LOCATION MAP

FIGURE 1

Scale 1 : 2,400,000



FLEET
DEVELOPMENTS LTD.
PROPERTY

129°00'

45'

COAST DISTRICT RANGE 3

FLEET DEVELOPMENTS LTD.

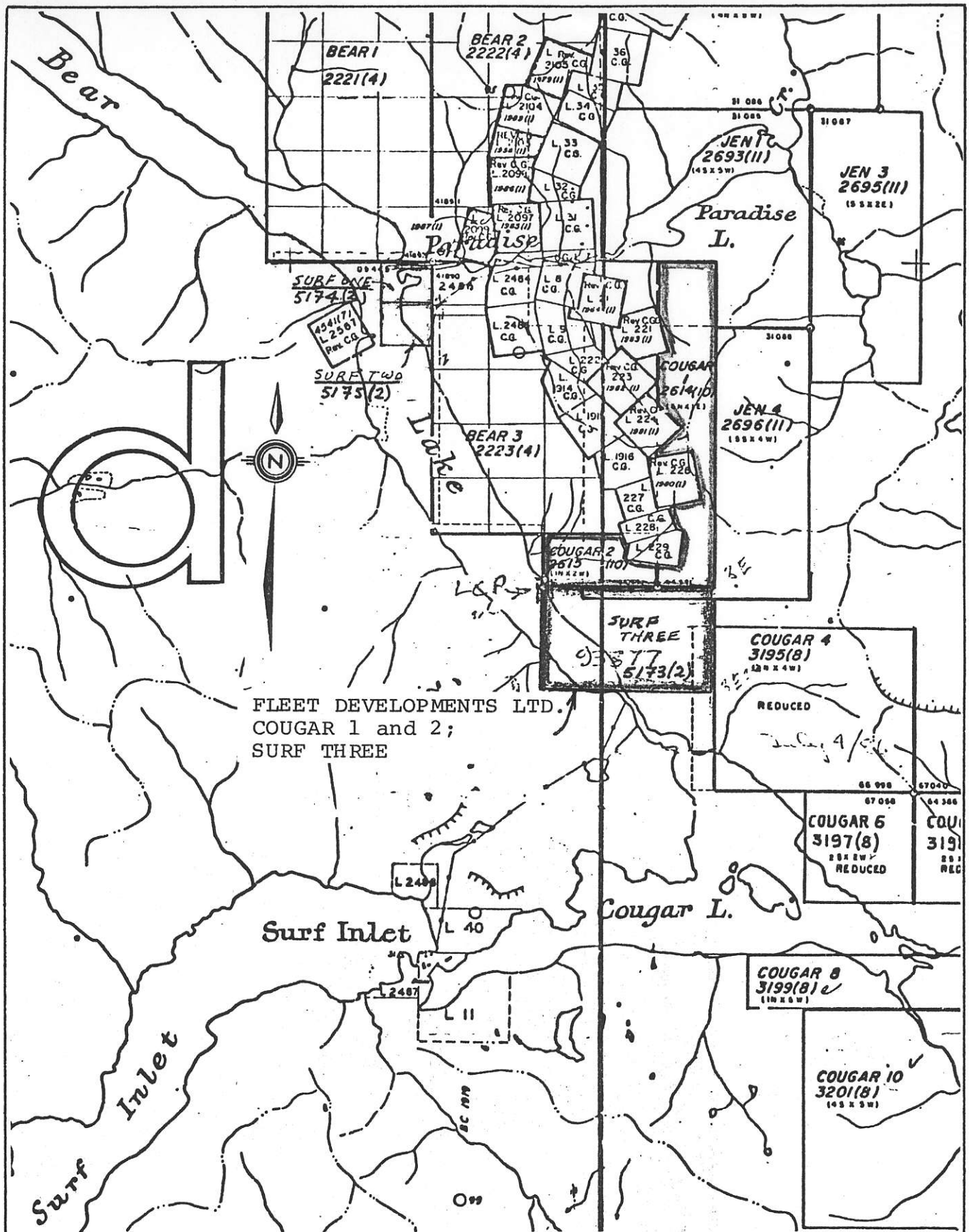
SURF INLET PROPERTY, B. C.

DETAIL LOCATION MAP

FIGURE 2

Scale 1 : 250,000

(Topography after Douglas Channel B.C. Sheet - 103 H, Ed. 1)



FLEET DEVELOPMENTS LTD.

FIGURE 3

PROPERTY MAP

SURF INLET PROPERTY, B.C.

Scale 1 : 50,000

the historical development of the Surf Inlet and Pugsley Mines is presented. Data is taken from Gill and Byers (1948), Honsberger (1973), Batten (1928) and Dolmage (1921, 1947).

The Surf Inlet and Pugsley Mines were developed and operated by Belmont Surf Inlet Mines Limited between 1914 and 1926, both years inclusive, and from the operations it is reported, from a total of 850,000 tons of ore, a recovery of approximately \$9.50 per ton in gold (at \$20.67 per ounce) principally, with some silver and copper, was made. During this period \$1,437,500 was paid out in dividends. The bulk of this ore came from the Surf Mine. The property was closed down and dismantled in 1926. In 1934 the price of gold advanced approximately 75 per cent to \$35.00 per ounce. The increased return to be obtained caused renewed interest to be taken in the property in 1934 by Mr. J.B. Woodworth and Associates, and the mining and milling plant was rehabilitated for production. The Pugsley Mine was further tested at a somewhat greater depth.

By 1936, milling was in process at 50 tons per day. The rate was stepped up then to a little over 100 tons daily. To June 30, 1941, ore had been produced as follows:

	<u>Tons Drawn</u>	<u>Oz. Au Recovered</u>
Surf Mine	37,144	12,182
Pugsley Mine	<u>98,627</u>	<u>34,000</u>
	135,771	46,182

To the 15th of December, 1942, the new company, Surf Inlet Consolidated Mines Ltd., had from January 1936, produced gold with a little copper valued at \$2,324,013 from 166,546 tons of ore. Due to wartime restrictions and scarcity of efficient labour, the mill was closed down on the 15th of December, 1942.

Production for the five years ending June 30, 1942, in a yearly breakdown was as follows:

	<u>1942</u>	<u>1941</u>	<u>1940</u>	<u>1939</u>	<u>1936</u>
Tons Milled	37,511	39,643	34,295	22,531	14,691
Production	\$ 495,033	\$595,577	\$ 496,478	\$ 334,712	\$ 188,822
Average per ton	\$ 13.20	\$ 15.02	\$ 14.48	\$ 14.86	\$ 12.85
Oz/t at \$35.00/oz.	.377	.429	.414	.424	.367

Up to the time of the 1942 closure total recorded production from the property amounted to 1,091,131 tons of which 169,886 tons came from Pugsley and the remaining 921,245 tons came from the Surf Mine. From this ore were recovered 382,351 ounces of gold, 200,752 ounces of silver and 6,314,341 pounds of copper (Dolmage 1946).

In mid 1946, the Pugsley Mine was unwatered and drifting and raising was done and extensive diamond drilling was carried out. Considerable development was done on the 10th, 11th and 13th levels of the Pugsley Mine. In May 1947, a new horizontal tunnel was driven at 900-foot level to investigate large unexplored area to south of the workings.

The reports of progress of exploration and diamond drilling from 1942 to 1947 which are available to the writer are sketchy and incomplete. No work is reported on the property since 1947.

In December 1954, the name of the company was changed from Surf Inlet Consolidated Gold Mines Limited to Surf Inlet Consolidated Mines Limited. In November 1959, the name was again changed from Surf Inlet Consolidated Mines Limited to Western Surf Inlet Mines Limited on the basis of one new share for four old shares.

In May 1966, Western Surf Inlet Mines Limited merged with Matachewan Consolidated Mines Limited on the basis of five new shares for four old shares.

During 1981, Matachewan Consolidated Mines Ltd., optioned the property on the joint venture basis to Cominco Ltd. and Placer Development Ltd. Cominco Ltd. was the operator and diamond drilled 10 holes along the gold bearing structure between the central portion of the Surf Inlet Mine on the north and the central portion of the Pugsley Mine on the south. No further work was done in 1982 and the joint venture was terminated in 1984.

REGIONAL GEOLOGY

The regional geology has been taken from Roddick (1970). Princess Royal Island lies near the western boundary of the 200 km wide Coast Crystalline Belt. The oldest rocks in the area are Permian or older metasediments comprised of thin-bedded impure quartzites with interlayers of quartz-feldspar-biotite schist or silty limestone, conglomerate, sandstone, and argillite (Unit 2b) which lie along the eastern shore of the Island (Figure 4) and at the head of Surf Inlet.

The oldest plutonic rocks are basic complexes that encompass the above metasediments: a gabbro-diorite-migmatite complex (Unit 5a), and a gneissic diorite-migmatite complex (with no gabbro) (Unit 5b).

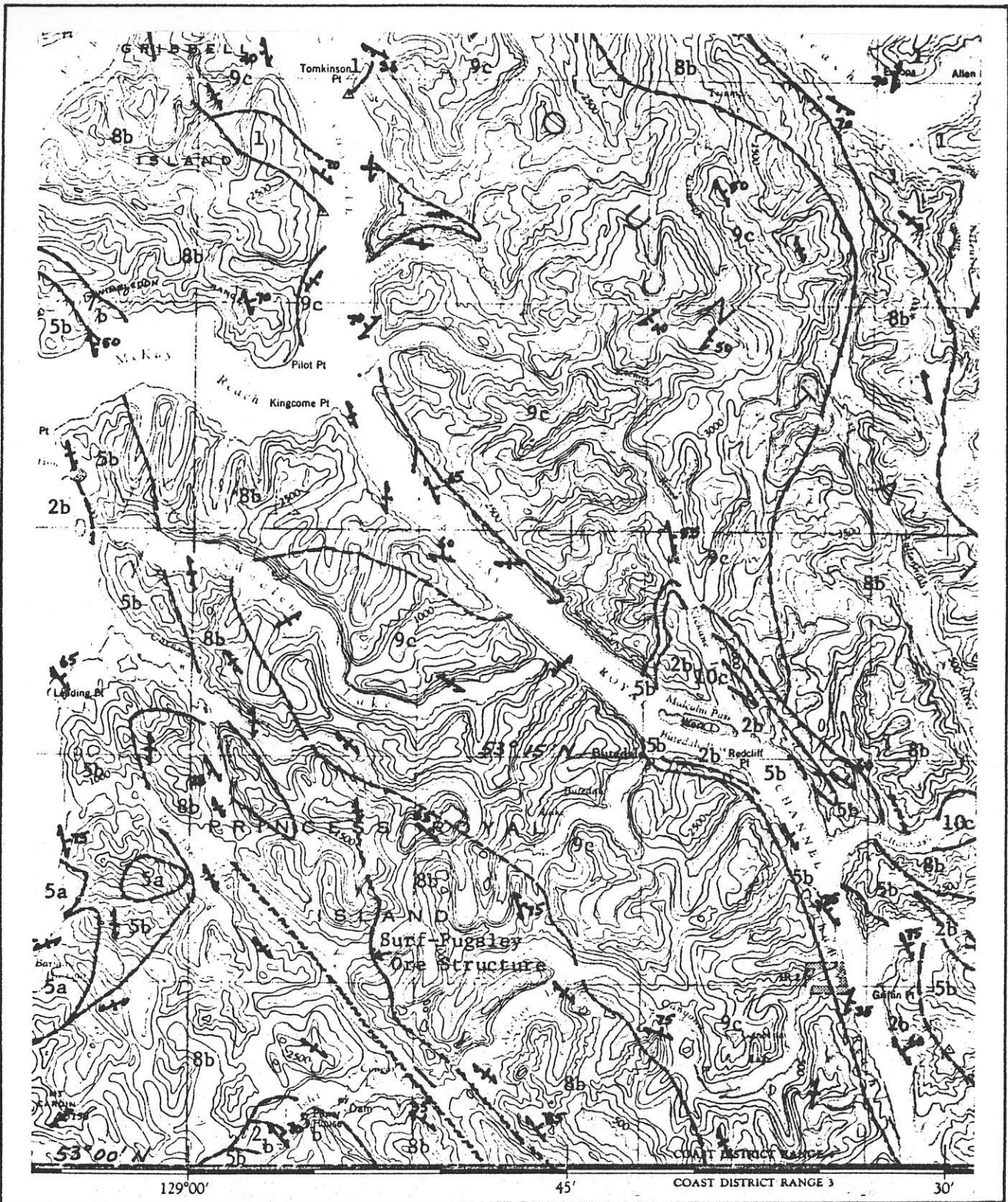
Princess Royal Island is composed principally of a moderately dark hornblende-biotite quartz diorite pluton either a massive or gneissic variety (Unit 8b) of early to middle Cretaceous age. Hornblende-biotite granodiorite (Unit 9c) comprises a younger Butedale pluton about 8 km northeast of Bear Lake.

PROPERTY GEOLOGY

The Fleet Developments Ltd. property lies along the southern portion of the Surf Inlet - Pugsley mines structure. Geology in the vicinity of the Surf Inlet gold deposits is best described by J.E. Gill and A.R. Byers in "Structural Geology of Canadian Ore Deposits - A Symposium" published by the Canadian Institute of Mining and Metallurgy (1948). Their description is abstracted below.

General

The ore deposits of Surf Inlet on the north and Pugsley on the south (see Figure 5) are in quartz-pyrite veins along a complex fault zone with a general north-south strike and westerly dip between 45° and 60°. The fault zone is along or near the east side of a roof pendant(?) or screen(?) of meta-sediments and volcanics in the 'Coast Range batholith', which is composed mainly of quartz diorite and bordering gneisses. The roof rocks are best preserved in the north Surf workings. Farther south they have been recrystallized and injected by material of the batholith to form paragneiss and injection gneiss.



FLEET DEVELOPMENTS LTD.

SURF INLET PROPERTY, B. C.

FIGURE 4

Scale 1 : 250,000

REGIONAL GEOLOGY

(After Roddick, 1970)

(See Legend on following page)

LEGEND

STRATIFIED ROCKS

- | | |
|-----------|--|
| CENOZOIC | QUATERNARY
PLEISTOCENE AND RECENT
12 Alluvium and glacial deposits |
| | UPPER MIOCENE (?)
11 Basalt flows (pillows common) |
| MESOZOIC | JURASSIC
MIDDLE JURASSIC
HAZELTON GROUP
4 Greenstone, siliceous tuff, calcareous and micaceous quartzite, breccia, greywacke, argillite, slate |
| | LOWER JURASSIC (?) OR
UPPER TRIASSIC (?)
3 Greenstone, chlorite schist |
| | PERMIAN (?) AND/OR OLDER
2 Mainly metasediments: 2a, hornblende-biotite-plagioclase amphibolite and schist; biotite schist (locally garnetiferous), kyanite-staurolite-almandine mica schist, sericite-epidote schist, sillimanite-quartz-plagioclase gneiss, graphitic schist, quartzite, crystalline limestone; conglomerate; lit-par-lit gneiss, agmatite and minor granitic rock; 2b, mainly thinly laminated micaceous quartzite; crystalline limestone, skarn, schist; 2c, mainly massive to thick bedded crystalline limestone; 2d, mainly thin bedded crystalline limestone, skarn, intercalated quartzite and schist |
| PALEOZOIC | 1 Granitoid gneiss, gneissic quartz diorite, rusty fine grained gneiss and schist, migmatite; minor garnet-sillimanite-biotite schist, crystalline limestone, diopsidic skarn, garnet-staurolite-kyanite schist; 1a, agmatite |

PLUTONIC ROCKS (Age of formation and intrusion unknown)

- | | |
|----|---|
| 10 | 10a, mainly biotite quartz monzonite; 10b, biotite hornblende quartz monzonite; 10c, leucoquartz monzonite or granite; 10d, aplitic, garnetiferous quartz monzonite |
| 9 | Granodiorite: 9a, biotite only; 9b, biotite hornblende; 9c, hornblende biotite; 9d, sheared granodiorite and gneiss; 9e, fine-grained, even textured granodiorite |
| 8 | Quartz diorite: 8a, biotite hornblende; 8b, hornblende biotite; 8c, hornblende-chlorite; 8d, hornblende only; 8e, quartz diorite and abundant gneiss |
| 7 | Diorite: 7a, biotite hornblende; 7b, hornblende and hornblende-biotite |
| 6 | Gabbro |
| 5 | Basic complexes: 5a, gabbro-diorite-migmatite complex; 5b, gneissic diorite-migmatite complex |

From: GSC Map 23-1970
J.A. Roddick

- | | |
|--|--|
| Geological boundary (approximate or assumed) | |
| Limit of alluvium | |
| Bedding (horizontal, inclined, vertical) | |
| Foliation (horizontal, inclined, vertical, dip unknown). | |
| Anticline | |
| Fault (approximate, assumed) | |

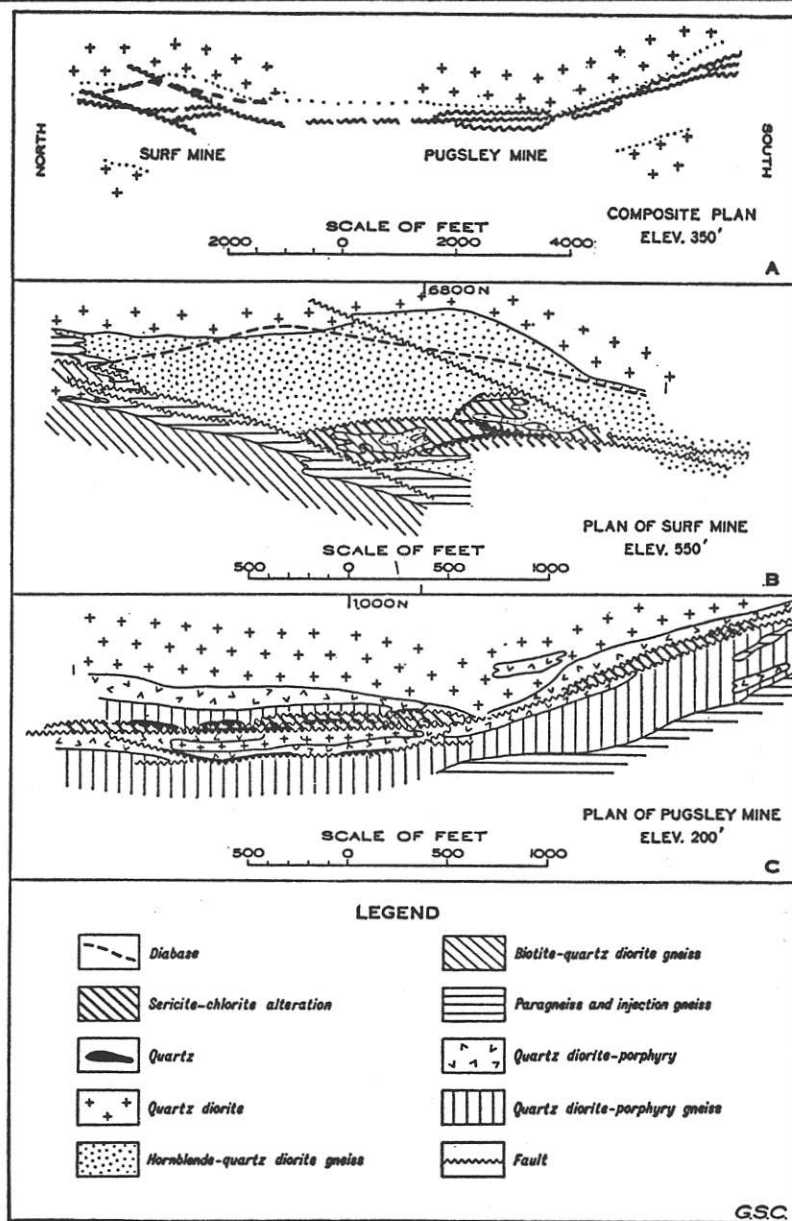


Fig. 1.—Geological plans, Surf Inlet and Pugsley mines.

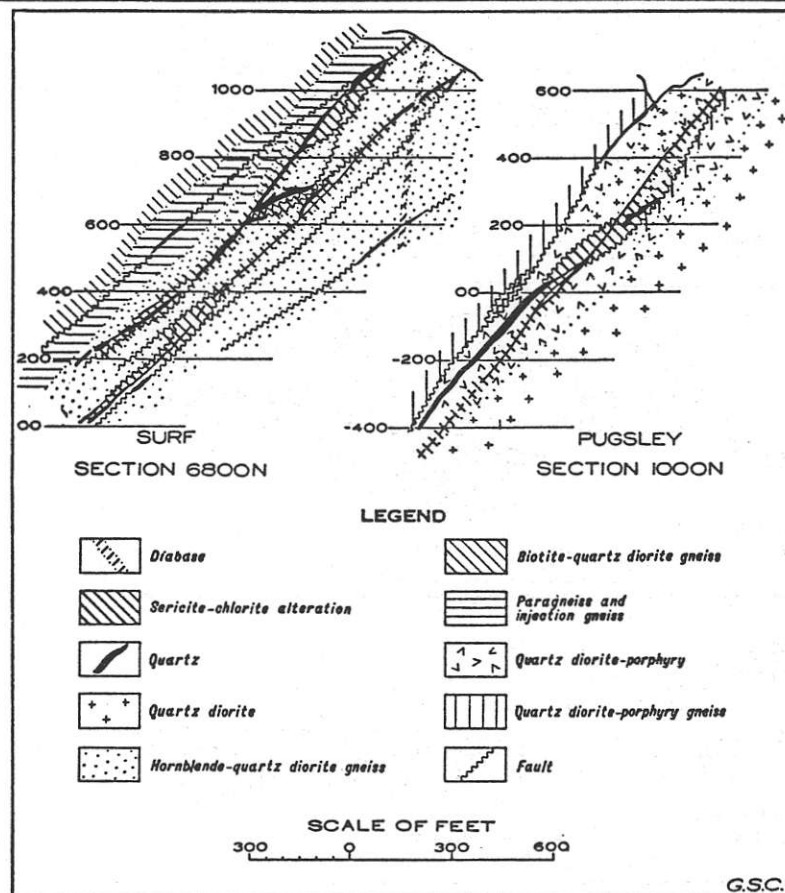


Fig. 2.—Geological cross-sections, Surf and Pugsley mines.

FLEET DEVELOPMENTS LTD.

SURF INLET PROPERTY, B. C.

FIGURE 5

GEOLOGICAL PLAN AND SECTIONS OF
SURF INLET AND PUGSLEY MINES

(After J.E. Gill and A.R. Byers (1948))

The fault zone traverses mainly gneissic marginal facies of the batholith. At a few places, massive quartz diorite or quartz diorite porphyry is found within the fault zone, but generally, the massive facies are at distances up to 500 feet to the east (Figure 5). A faint lineation is visible even in the massive rocks. It is more noticeable in the hornblende-quartz diorite gneiss nearer the fault zone, where a pronounced preferred orientation of hornblende laths and a streakiness due to segregation of hornblende crystals are striking features. It seems clear that movements occurred along this zone during the crystallization of the intrusive rocks traversed by the fault zone as well as afterward.

The Fault Zone

The fault zone has been traced for 14,500 feet horizontally and 3,300 feet vertically. In the part containing the two ore zones, it is broadly convex toward the west, striking N23°E at the north end, north-south in the central section, and N18°W at the south end. Dips range from 30° to 60°W averaging about 45°W. Internally it consists of two or more parallel or sub-parallel shear surfaces or zones from a few inches to 30 feet thick. In places there are two of these, 150 to 200 feet apart. More commonly, however, and particularly along the ore zones, there are several branch shear zones passing obliquely between these, or branching from and rejoining the same one to form loop structures (see Figure 5).

The Ore Zone

The Surf and Pugsley ore zones occur in complex parts of the fault zone developed at two prominent bends. The veins are of various sizes and shapes. Lengths range from less than 100 to 1,000 feet and thicknesses from 2 to 40 feet. Milky quartz is the main constituent, with pyrite forming up to 25 per cent by volume. Two stages of vein formation are evident. The early quartz and pyrite are locally seamed by later pyrite, chalcopryite, and quartz. Assay tests show that the major part of the gold came in late. Visible gold is extremely rare, but at high magnifications a few particles measuring from 7 to 40 microns have been identified in the fractured pyrite. Ankerite is locally present in quite large amounts, especially in marginal parts of veins. Calcite, dolomite, chlorite, and molybdenite also occur, but always in minor amounts.

Victor Dolmage (1947) summarized the two ore bodies as occurring in a fault where it is irregular in strike and dip and where it is split into two or three large parallel branches connected by small diagonal ones. The fault dips west at angles of 45° to 50° along a known length of more than three miles. Ore is found in all the branches but mainly in the larger ones. Some of the quartz veins which occupy the various branches of the fault carry sulphides and gold while others carry no sulphides and no gold (writer's note - point is that gold is associated with the pyrite and chalcopyrite).

In June 1939 Victor Dolmage (Private report to same company) in discussion of the Pugsley zone mentioned that "the occurrences along the outcrop of the shear zone at three points south of the Pugsley of bodies of quartz ore carrying commercial values is good evidence supporting the belief that other ore bodies do occur throughout the shear."

The Geological Survey of Canada in the Summary Report of 1921 (Domage, 1921) commented on the shear zone as being in chloritic schist on the 50-foot level of the Surf Inlet Mine but the amounts of schist decreased with depth to the 550 foot level. The schist is described as a dark greenish medium-fine grained, strongly schistose rock grading in places into gneiss and consisting of chlorite, sericite, talc, quartz, andesine, apatite, augite and where near veins, with ankerite. Metallic minerals, present in ore other than pyrite, are chalcopyrite, native silver, chalcocite, bornite, covellite, hematite, magnetite and molybdenite.

J.E. Gill (1941) makes comment on the Pugsley Mine southern extension possibilities. From north to south the crown granted claims are Anaconda, Bonanza, Summit and Cassie all of which contain showings. (Writer's note: Anaconda, Bonanza and Summit are now reverted crown granted mineral claims.)

(a) Anaconda Showing

There is a vein with irregular strike and dip, but in general lying across the regional structural trend, dipping eastward at about 10° to 40°. It is up to 3.5 feet thick and is traceable for about 150 feet horizontally. To the east of this vein exposure is a shear zone about 2 feet thick striking south and dipping toward the west at about 65°. This

cuts the local gneissic banding at a very acute angle, the banding dipping more steeply. (Writer's note: Cominco Ltd. drilled holes 81-1 and 81-2 on the Anaconda claim.)

(b) Bonanza Showing

Two quartz veins are exposed about 40 feet apart at an elevation of 2,700 feet. Both contain moderate amounts of pyrite and chalcopyrite, mainly in strips a few inches thick along the vein margins. Both lie in a prominent fault zone which has been worn down by stream erosion to the east of the vein outcrops, forming a gully. This fault zone is definitely part of the main break in which the Pugsley and Surf ore bodies lie.

One vein is exposed over a length of 50 feet, where it is from one to three feet thick. It strikes N5°W and dips at around 40° toward the west. The other, farther west, is seen for only about 10 feet in length. It strikes N15°E and dips at 50° toward the west. Chlorite schist forms the hanging wall at this point. A grab sample from each of the veins was taken; that from the west vein contained around 50% sulphides and gave 1.3 oz. gold per ton; that from the east vein had 80% sulphides and gave 1.38 oz. gold per ton.

(c) Summit Showing

On the Summit claim at elevations between 2,160 feet and 2,400 feet, there are several showings of quartz. One at 2,400 feet elevation contains a considerable amount of sulphides. Batten (1928) reported two samples, one taken across three and a half feet of quartz with some country rock, which assayed 0.32 oz/t in gold; another taken across a three-inch stringer, heavily mineralized, which gave 1.72 oz/t of gold. The showings at lower elevations contain very little sulphides.

Strikes taken on the various shear zones exposed were consistently 10 to 20 degrees west of north, and dips were 40 to 50 degrees toward the west. Gneissic banding is prominent in this area and is in general steeper than the shears in dip. The strike of the banding is N20° - 30°W.

(d) Cassie Showing

At an elevation of approximately 1,700 feet above sea level, about 250 feet of drifting and cross-cutting have been done on a shear zone in which short lenticular quartz veins occur. At about 60 feet in from the mouth of the adit a winze has been driven down a shear zone to a depth of approximately 35 feet. The vein material is of sulphides, mainly pyrite. From the mouth of the adit there is a length of about 30 feet of quartz exposed. This is a lens of quartz which appears to terminate at a shear striking N7°E and dipping 35°W. Beyond this for 30 feet there is no vein matter. Then the tunnel follows a vein fairly continuously for 105 feet. This vein strikes N43°E and dips 25° to 30°NW. The shear zone along which this part of the vein occurs, terminates against another shear striking approximately north-south.

Batten (1928) collected nine samples in the Cassie adit (see Figure 6 for reproduction of original sample location map) which assays are reported below:

<u>Sample No.</u>	<u>Description</u>	<u>Width</u>	<u>Gold (oz/t)</u>	<u>Silver (oz/t)</u>
3	quartz and crushed "granite"	4' (vert.)	0.90	1.2
4	Gouge	1.5'	0.52	0.8
5	Gouge & sulphides	1.0'	1.13	1.4
6	"Heavily mineralized vein"	2.0'	0.93	0.8
7	"Solid sulphides"	1.5'	1.02	1.1
8	"Heavily mineralized quartz vein"	3.0'	0.64	1.1
9	"Heavily mineralized quartz vein"	3.0'	1.40	1.6
10	Mineralized quartz and crushed "grainte"	3.0'	0.75	0.9
11	Mineralized quartz and crushed "granite"	2.0'	0.56	0.7
Weighted average 9 samples		2.3'	0.876	1.09

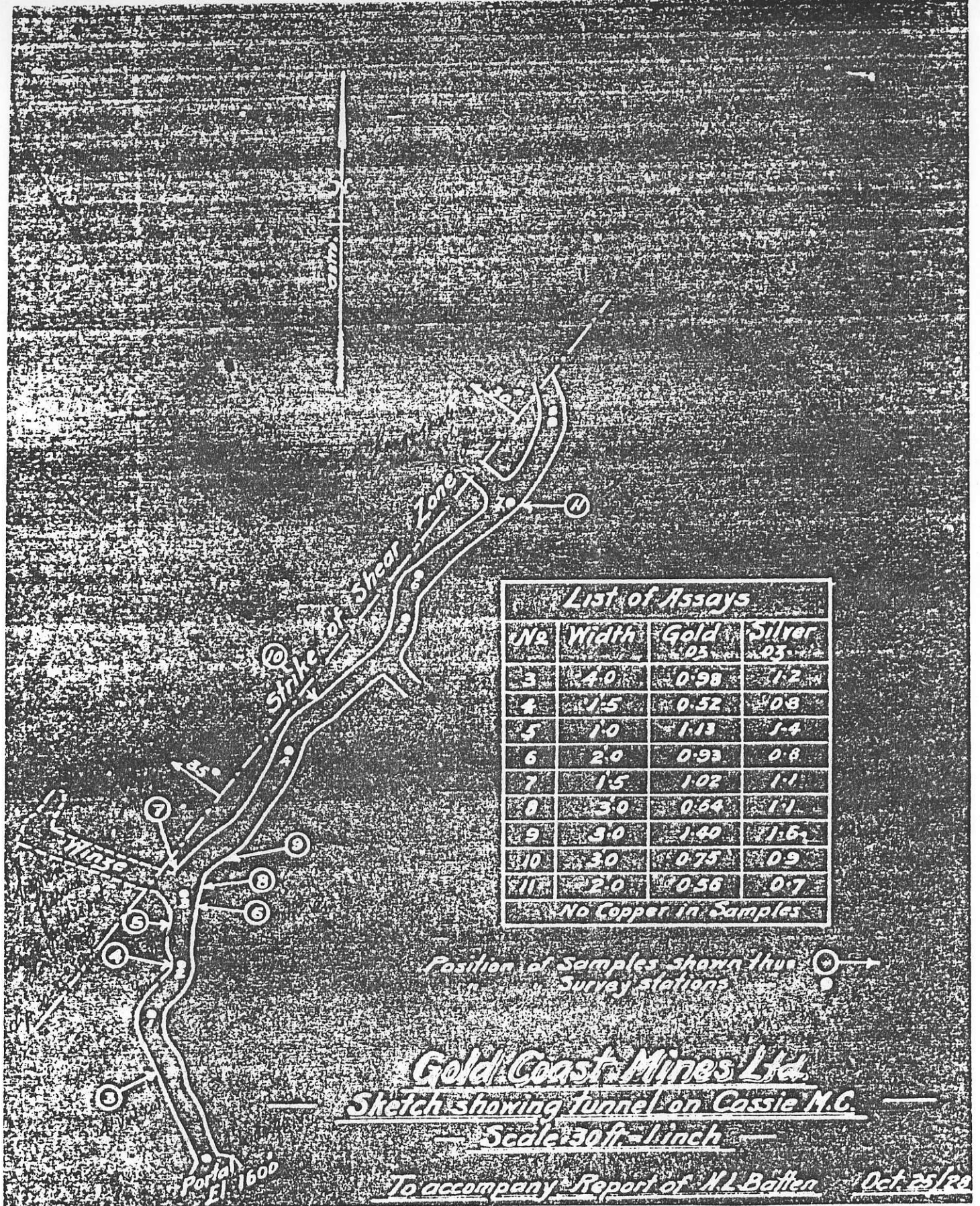


FIGURE 6

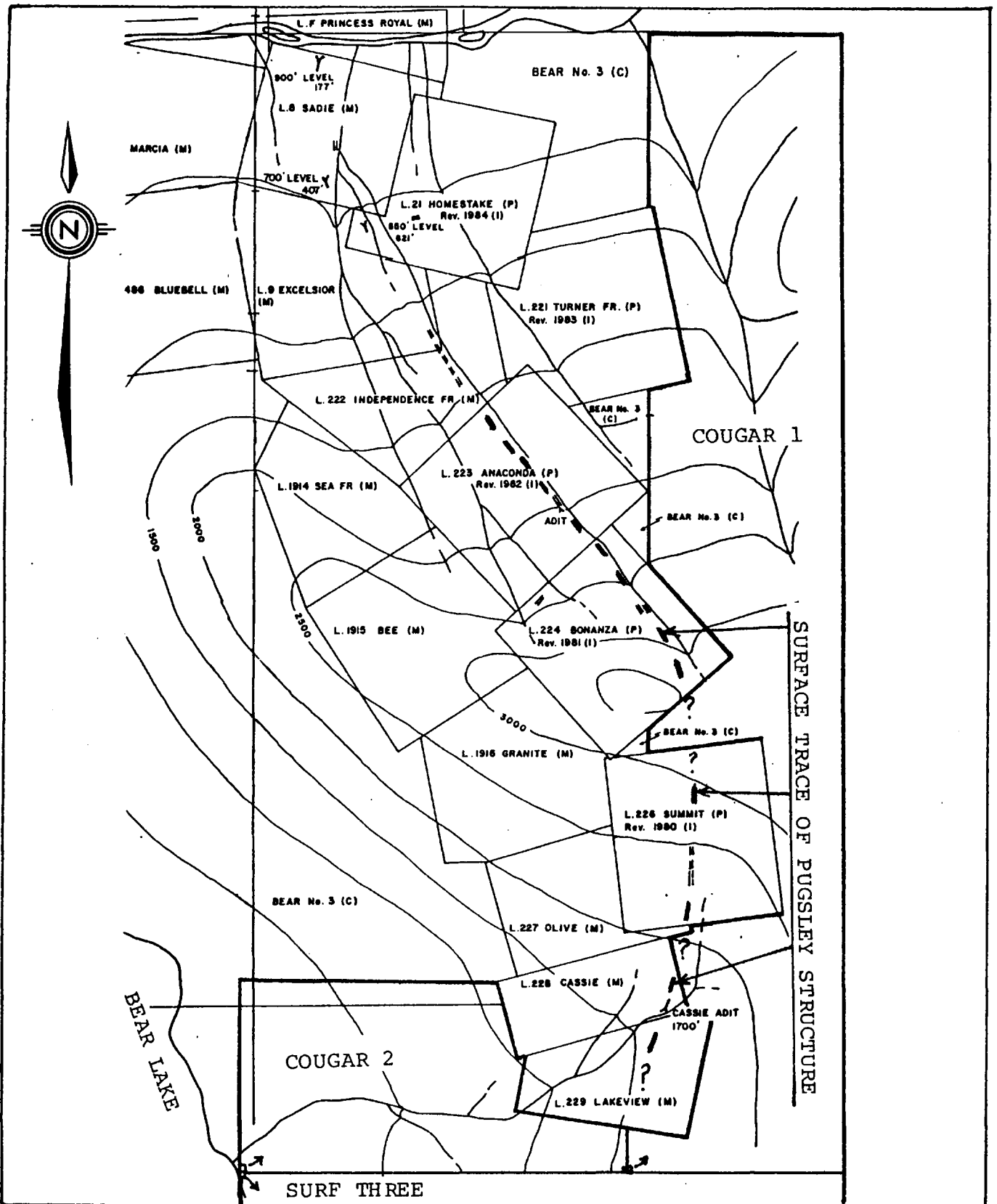
REPRODUCTION OF CASSIE ADIT SAMPLE
MAP. After N.L. Batten, Oct. 25/28

The surface trend of the Pugsley structure, considering the location of the known showings on the Matachewan Consolidated crown and reverted crown granted claims, can be inferred on surface from the Anaconda claim to the Bonanza claim to the Summit claim and to the Cassie adit on the Cassie claim (Figure 7).

Armstrong (1981) compiled an air photograph lineament interpretation and did reconnaissance geochemistry lines across the inferred southern extension of the Pugsley structure starting at the Cougar 2 claim and continuing south to Anchor Lake. The lines of importance to this report are Lines A and B (see Figure 8). Samples taken from these lines were assayed for copper and in part for gold by Bondar Clegg and Co. Ltd. of Vancouver, B.C. (see appended assay results in Appendix A). The eastern end of Line B indicates an increase in copper specifically samples B19+50 and B20+00. Line A may show some indications at sites A8+00, A9+50 and A11+50. Unfortunately, there are no results for any other elements. Further geochemical work should include 30 element I.C.P. analysis plus gold.

CONCLUSIONS ON EXPLORATION POTENTIAL

The former gold producers, Surf Inlet and Pugsley Mines, are situated within a curvo-linear northerly trending fault-quartz vein structure the length of which is approximately 3,940 metres (13,000 feet) as noted from the distribution of old workings. The southern extension of the Pugsley structure passes through the Cougar 1, Cougar 2 and Surf Three claims of Fleet Developments Ltd. Armstrong (1981) interpreted a structural zone from air photographs which passes through the Cassie showings of Matachewan Consolidated Mines Ltd. and traverses the eastern side of Bear Lake to the south. Batten (1928) reported a weighted average of nine (9) samples taken along a 180 foot length (54.5 m) in the Cassie adit which gave 0.87 oz/t gold and 1.09 oz/t silver over an average width of 2.3 feet (0.70 m). Preliminary geochemical reconnaissance (Armstrong, 1981) for copper and, in part, for gold along two lines (Lines A and B) were not definitive. Further examination by detailed geochemistry and geological mapping of the southern extension of the Pugsley structure on the Cougar 1, 2 and Surf Three claims is warranted.



FLEET DEVELOPMENTS LTD.

ILLUSTRATION SHOWING SURFACE TRACE OF PUGSLEY
STRUCTURE IN RELATION TO SURF INLET PROPERTY

FIGURE 7

Scale 1 inch = 1,250 feet

INFERRED SURFACE TRACE OF PUGSLEY STRUCTURE

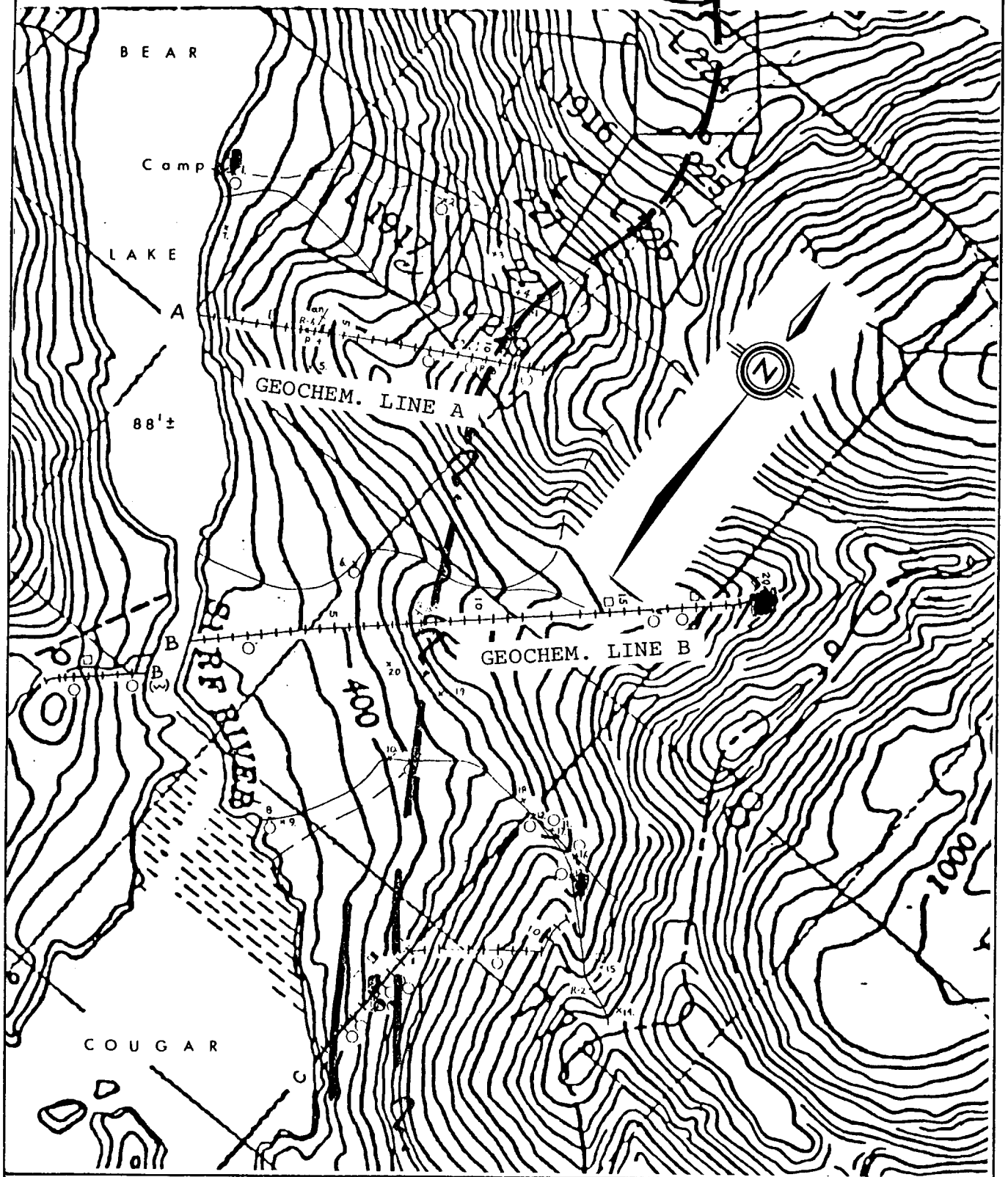


FIGURE 8

FLEET DEVELOPMENTS LTD.

LOCATION OF RECONNAISSANCE GEOCHEMISTRY
SOUTH OF CASSIE AND LAKEVIEW CLAIMS

(After Armstrong, 1981)

Scale 1 inch = 1,500 feet

RECOMMENDATION

In light of the foregoing, a program of geochemical sampling and geological mapping is recommended to evaluate the southern extension of the Pugsley structure on the Cougar 1, 2 and Surf Three mineral claims.

The recommended program would consist of the following:

- (1) Establish a zero point at the legal corner post of Cougar 2 and Surf Three;
- (2) Construct a baseline along the claim boundary to 5+00N (500 metres to north);
- (3) Collect either soil or rock geochemical samples every 50 metres on lines 250 metres apart traversing eastward. A small boat will allow access along Bear Lake.

In addition, it is recommended that two days be spent traversing and sampling the surface trace of the Pugsley structure between the Bonanza and Summit workings and to the immediate north of the Cassie workings where the inferred trace lies within the Cougar 1 claim.

ESTIMATED COST OF PROPOSED WORK PROGRAM

Phase I

Transportation:	
Fixed wing aircraft from Prince Rupert, B.C. Allow 4 return trips at \$850 each	\$ 3,400.00
Geologist - \$350/day x 10 days	3,500.00
Assistant - \$200/day x 10 days	2,000.00
Camp - 2 men @ \$50/day x 10 days	1,000.00
Rental - small boat, outboard motor, fuel (allow)	500.00
Geochemical assays:	
30 element ICP plus gold - 150 @ \$10.75	1,600.00
Report	<u>1,500.00</u>
Sub-total	\$ 13,500.00
Contingency (11%)	<u>1,500.00</u>
Total Phase I	\$ 15,000.00


Phase II

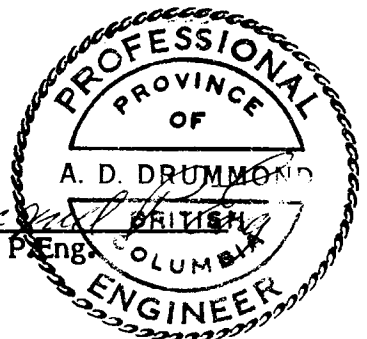
Contingent upon favourable result from Phase I, the estimated cost for a Phase II program to drill the southern extension of the Pugsley structure is outlined.

Transportation:	
Fixed wing aircraft via Prince Rupert 6 return trips @ \$850	\$ 5,100.00
Camp	
4 men @ \$50/day x 14 days	1,400.00
Drilling using a portable Gopher drill BQ core and 300' depth capacity 5 holes @ 300' @ \$36.00 per foot	54,000.00
Helicopter - 10 hours @ \$500/hour	5,000.00
Core logging and supervision \$350/day x 14 days	4,900.00
Assistant \$200/day x 14 days	2,800.00
Assaying allow	350.00
Report	<u>1,500.00</u>
Sub-Total	75,050.00
Contingency (10%)	<u>7,500.00</u>
Total Phase II	\$82,550.00

The total estimate cost of the proposed program is \$97,550.00 comprised of Phase I - \$15,000.00 and Phase II - \$82,550.00.

Respectfully submitted,


A.D. Drummond, Ph.D., P.Eng.
Geological Engineer



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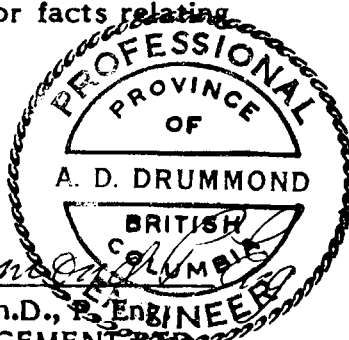
CERTIFICATION

I, Arthur Darryl Drummond of the City of Vancouver, Province of British Columbia, hereby certify as follows:

1. I am a geological engineer residing at 3249 West 35th Avenue, Vancouver, B.C. and employed by D.D.H. Geomanagement Ltd., with an office at 422 - 470 Granville Street, Vancouver, B.C.
2. I am a registered Professional Engineer of the Province of British Columbia, certificate no. 5778. I graduated from the University of British Columbia in 1959 with a B.A.Sc. in geological engineering, and in 1961 with a M.A.Sc. in geological engineering. I graduated from the University of California in 1966 with a Ph.D. in geology.
3. I have practised my profession continuously for 24 years primarily with the Placer Development Group of Companies at Craigmont, Endako and Gibraltar mines, and in mineral exploration in Canada, United States of America, Chile, Argentina, Mexico and the Philippines.
4. I am the author of this report which is based on published and private reports, and on field examination of the property on August 15, 1980.
5. I have an interest in Coastoro Resources Ltd. by acting as the Vice-President - Exploration for that company which company has optioned the Cougar 1 and 2 claims to Fleet Developments Ltd.
6. This report may be utilized for development of the property, providing that no portion may be used out of context in such a manner as to convey a meaning which differs from that set out in the whole.
7. Consent is hereby given to Fleet Developments Ltd. to reproduce this report or any part of it for the purposes of development of the property, or facts relating to the raising of funds.

Dated at Vancouver, B.C., this 22nd day of May, 1986.


A.D. Drummond, Ph.D., P. ENGINEER
D.D.H. GEOMANAGEMENT LTD.
Geological Engineer



The seal is circular with a double-line border. The outer ring contains the text 'PROFESSIONAL' at the top and 'BRITISH COLUMBIA' at the bottom. The inner ring contains 'PROVINCE OF' at the top and 'ENGINEER' at the bottom. In the center, the name 'A. D. DRUMMOND' is printed.

APPENDIX A

GEOCHEMICAL LAB REPORT
BONDAR - CLEGG AND CO. LTD.
LINES A AND B
ARMSTRONG (1981)



BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

REPORT: 121-3401

FROM: C.M. ARMSTRONG

SUBMITTED BY: C.M. ARMSTRONG

DATE: 14-NOV-81 PROJECT: COUGAR

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Cu	1 PPM	HNO ₃ -HCL HOT EXTR	Atomic Absorption	-80	SOILS	SEIVE -80
Au	5 PPB	AQUA REGIA	Fire Assay AA	-80	SILTS	RETENTION OF REJECTS

REPORT COPIES TO: C.M. ARMSTRONG
BONDAR-CLEGG & COMPANY

INVOICE TO: C.M. ARMSTRONG

REMARKS: SOILS AND RX ON 121-3397

DETECTION LIMITS FOR GOLD

20 gram sample: 5 PPb.
10 gram sample: 10 PPb.
1 gram sample: 100 PPb.

Sample Wt. 20 g. unless otherwise stated.

NOTE:

Check concentration/sample weight ratio
for effective detection level.



BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

REPORT: 121-3397

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Au PPB	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Au PPB	NOTES
A-0+50		7			B-3+50		4		
A-1+00		3			B-4+00		7		
A-1+50		3			B-4+50		8		
A-2+00		2			B-5+00		4		
A-2+50		1			B-5+50		2		
A-3+00		2			B-6+00		2		
A-3+50		1			B-6+50		1		
A-4+00		7			B-7+00		6		
A-4+50		3			B-7+50		4		
A-5+00		1			B-8+50		3		
A-5+50		1			B-9+00		1		
A-6+00		2			B-9+50		6		
A-6+50		1			B-10+00		3		
A-7+00		4			B-10+50		4		
A-7+50		4			B-11+00		3		
A-8+00		16			B-11+50		8		
A-8+50		6			B-12+50		4		
A-9+00		8			B-13+50		3		
A-9+50		12			B-15+50		9		
A-10+00		7			B-16+00		10		
A-10+50		7			B-0+50W		13		
A-11+00		4			B-1+00W		9		
A-11+50		13			B-2+00W		4		
A-12+00		3			B-2+50W		11		
B-0+50		6			B-3+00W		7		
B-1+00		6			B-3+50W		4		
B-1+50		8			C-1+50		18		
B-2+00		17			C-2+00		10		
B-2+50		8			C-2+50		7		
B-3+00		9			C-3+00		26		



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Geochemical Lab Report

REPORT: 121-3401

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Au PPB	NOTES	SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Au PPB	NOTE
A-2+50		3	15		E-1+00		1	40	
A-4+00		3	5		E-1+50		1	75	
A-7+00		5	5		E-2+00		1	20	
A-8+00		4	10		E-2+50		1	75	
A-9+50		5	5		E-3+50		2	10	
B-8+00		2	5		Si-01		12	225	
B-14+00		8	10		Si-02		10	5	
B-14+50		7	15		Si-03		3	10	
B-15+00		5	10		Si-04		5	10	
B-16+50		6	10		Si-05		4	ND	
B-17+00		14	5		Si-06		14	5	
B-17+50		6	15		Si-07		2	ND	
B-18+00		8	10		Si-08		10	ND	
B-18+50		8	5		Si-09		5	ND	
B-19+00		9	10		Si-10		5	ND	
B-19+50		68	10		Si-11		13	ND	
B-20+00		69	15		Si-12		16	ND	
B-1+50W		6	15		Si-13		17	ND	
B-2+00W		3	20		Si-14		7	ND	
B-2+80W		1	10		Si-15		3	15	
C-0+50		7	10		Si-16		10	ND	
C-1+00		7	10		Si-17		11	ND	
C-3+20		26	15		Si-18		7	ND	
C-4+00		17	30		Si-19		6	ND	
C-5+00		7	15		Si-20		4	ND	
C-7+50		5	10						
D-0+50		1	25						
D-9+50		4	15						
D-10+00		1	25						
E-0+50		5	40						