

81 - #954 - #9904
COMINCO LTD.

EXPLORATION
SITS: T03H/2W

WESTERN DISTRICT

DRILLING ASSESSMENT

SURF INLET PROPERTY

PRINCESS ROYAL ISLAND, BRITISH COLUMBIA

SKEENA MINING DIVISION

LATITUDE: 53⁰05' LONGITUDE: 128⁰53'

PERIOD OF WORK

MAY 15, 1981 to OCTOBER 16, 1981

26 OCTOBER 1981

A.C.FREEZE

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 103H/2W

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SURF INLET PROPERTY

PRINCESS ROYAL ISLAND, BRITISH COLUMBIA

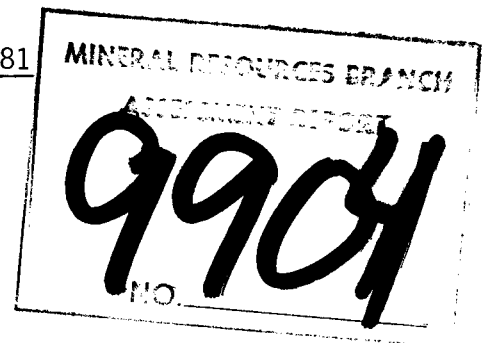
SKEENA MINING DIVISION

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EXPLORATION
NTS: 103H/2W

WESTERN DISTRICT
20 April 1982

DIAMOND DRILLING

ASSESSMENT REPORT

ON THE

BONANZA, ANACONDA, INDEPENDENCE, EXCELSIOR,
HOMESTAKE, SADIE, SEAGULL, D.L.S., LAKE FRACTION

MINERAL CLAIMS

PRINCESS ROYAL ISLAND, BRITISH COLUMBIA

SKEENA MINING DIVISION

I. INTRODUCTION

Cominco Ltd., Placer Development Ltd., and Matachewan Consolidated Mines Ltd., entered an agreement in 1981 to carry out exploration along the shear system hosting the former Surf and Pugsley Mines.

II. LOCATION

The dormant Surf and Pugsley Mines are situated within the Skeena Mining Division (map 103H/2W) at 53°05'N latitude and 128°53'W longitude. The property is best accessed through Prince Rupert located approximately 160 kilometers to the northwest.

The included Claim Location map and Diamond Drill Hole Location map display the claims, drill hole locations and core storage location relative to geographic features in the area.

Objective of the Drill Programme:

Through shallow diamond drilling, the objective was to test the large tonnage, low grade gold potential of the shear systems hosting the Surf and Pugsley Mines.

III. DIAMOND DRILL HOLE SUMMARY

The following is a breakdown of all significant geological information pertaining to each drill hole.

2.

(a) DDH Surf 81-1

Hole 1 penetrated a complex alternating sequence of gneiss and diorite. Preceding the footwall shear, 15 distinct fracture-shear zones ranging from 1-2 meters were cut. Intensity of shearing and degree of alteration varies. Sulfide content is low.

The footwall shear was intersected between 108.1 and 139.9 meters. Intensity of deformation, alteration and mineralization varies through the interval. Trace to 1 percent pyrite occurs in this section. The hole bottomed in fresh diorite.

(b) DDH Surf 81-2

Hole 2 penetrated a complex series of intermixed gneiss and diorite. Preceding the footwall shear, 12 distinct shear fracture zones were cut. Average thickness of these systems varies between 1 and 2 meters. Intensity of alteration varies and sulfide content is low.

The main footwall shear was intersected between 102.6 and 127 meters. From 116 - 124 meters a dilatant zone of intense silica, sericite, chlorite, and ankerite alteration was cut. Coarse pyrite averaging 1 percent as vein fill and breccia matrix occurs throughout this, the most economically significant intersection encountered. Beneath the footwall shear, diorite and lesser gneiss was cut.

(c) DDH Surf 81-3

Hole 3 was drilled well beyond the footwall shear zone to test for vein systems to the east. Preceding the footwall shear, 5 distinct 1-2 meter wide shear fracture zones were intersected. The main footwall shear was intersected between 67.5 and 90.2 meters. Local intense alteration with modest pyrite mineralization (1 - 1.5 percent) occurs in this interval. Beneath the footwall shear, 3 distinct bands of fracturing and shearing were encountered over 1-2 meter intervals.

(d) DDH Surf 81-4

Hole 4 penetrated a complex sequence of diorite and gneiss. Preceding the footwall shear, 4 distinct fracture alteration zones were cut. The main footwall shear was intersected between 109.7 and 131.6 meters. Select intervals contain up to 2 percent pyrite associated with quartz, chlorite, sericite and ankerite. No shearing of consequence occurs beneath the footwall shear. The hole bottomed in fresh diorite.

(e) DDH Surf 81-5

Hole 5 was collared at a point between two extensive stopping blocks in the Pugsley Mine. Gneissic pegmatite containing disseminated and fracture controlled pyrite and pyrrhotite occurs near the collar of the hole between 7.1 and 14.6 meters.

3.

The hangingwall shear (west vein) represented by a quartz vein with 3 percent pyrite was intersected between 44.2 and 44.7 meters. Shearing and alteration span the 43.2 - 53.9 meter interval.

A poor expression of the footwall shear was intersected between 86.2 and 90.8 meters. Only 0.1 - 0.2 percent pyrite was encountered.

Four distinct weakly chalcopyrite, pyrite mineralized E-W shears occur within diorite beneath the footwall zone.

(f) DDH Surf 81-6

Drilling problems forced abandonment of this hole near the end of the ore zone at 147.8 meters.

Hole 6 was drilled to test the convergence of the hangingwall and footwall shear systems along the northern extent of mining in the Pugsley orebody. The combined shears were intersected between 115.9 and 147.8 meters.

Roughly 5 meters of this section is represented by massive quartz distributed over several distinct bands. Intense chlorite, sericite, ankerite alteration also occurs. Pyrite content varies from trace to one percent over most of the zone with a few assay intervals averaging 1.5 - 3.0 percent pyrite.

(g) DDH Surf 81-7

One main shear was intersected between 58.3 and 72.8 meters. Section 60-1 - 60.8 averages 3.0 percent pyrite with massive pyrite occurring between 61.4 and 61.5 meters. Approximately 2 meters of quartz was intersected in this zone. The remainder of the zone averages 0.1 - 1.0 percent pyrite occurring with locally intense sericite, chlorite, calcite and ankerite alteration. The hole was terminated in fresh diorite.

(h) DDH Surf 81-8

Hole 8 cut a broad erratic zone of shearing (main shear) and moderate alteration between 67.2 and 111.6 meters. Several narrow zones of fresh rubbly diorite occur within this section. The 82.7 - 83.1 meter interval averages 10 percent pyrite. The remaining assay intervals range from trace to 2.0 percent pyrite. Chalcopyrite occurs intermittently. Several weakly mineralized E-W shears occur footwall to the main zone. The hole terminated in fresh competent diorite.

(i) DDH Surf 81-9

The main shear was intersected between 22.8 and 47.0 meters. This zone is very weak and no mineralization of significance was cut. Epidote and chlorite represent the main alteration phases.

The hole was continued well into the footwall of the main shear. Minor zones of shearing with weak alteration and traces of mineralization occur through the remainder of the hole.

4.

(j) DDH Surf 81-10

The main shear was intersected between 53.4 and 72.2 meters. Quartz veining of an aggregate total of roughly one meter occurs within this zone. Assay intervals range between trace and 5.0 percent pyrite. A few narrow E-W shears were cut beneath the main zone.

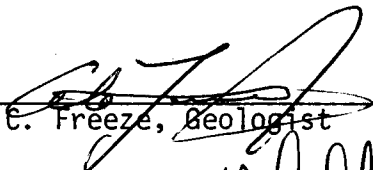
IV. INTERPRETATION AND CONCLUSIONS

Results from drill core investigations and sampling definitely established that there is no possibility of creating a large tonnage open pit deposit on the property.

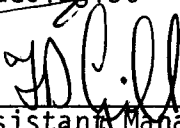
Mineralization is mainly restricted to one main shear system that splits into a multiplicity of shears in the area of the Pugsley and Surf ore-bodies.

Each hole intersected a substantial thickness of the main shear system containing alteration and mineralization that is within an order of magnitude comparable to alteration and mineralization contained in the Surf and Pugsley productive centers.

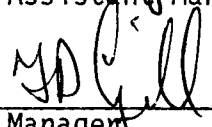
Report by:


A.C. Freeze, Geologist

Endorsed by:


F.D. Gill, Assistant Manager

Approved for
Release by:


G. Harden, Manager
Exploration
Western District

ACF/skg

Distribution

Mining Recorder (2)

Western District (1)

ACF (1)

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- (IV) INDEX MAP 1:50,000
- (V) DIAMOND DRILL HOLE LOCATION MAP 1"=1,000'

Scale

Colour Plot
& No.

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1															
Commenced	June 13, 1981	Location	South of Pugsley @ 700m	Tests at	151.8 m	Hor. Comp.	107 meters													
Completed	June 15, 1981	Core Size	NQ	Corr. Dip	-45°	Vert. Comp.	107 meters													
Co-ordinates	5880 056N; 508 512E		True Brg.	090°	Logged by	A.C. Freeze														
Objective	A test for large tonnage low grade potential of shear			% Recov.	96.5%	Date	9 September 1981													

Footage From To	Description	Sample No.	Length	Analysis			
0.0 - 2.6	CASING - No core recovery						
2.6 - 5.0	GNEISS - Hornblende, Biotite - 30% mafics, 2-10% quartz, 10-40% plagioclase; trace magnetite and potash feldspar. - banding perpendicular - 60° to core axis; anhedral-subhedral grains; minor mylonitization locally. - predominantly fresh; minor quartz, epidote, k-spar veining; hornblende and biotite locally chloritized.						
5.0 - 5.6	GNEISS - Hornblende, Biotite-Phlogopite - 20% mafics; disseminated magnetite - minor fracturing with quartz epidote heal; trace boxwork after pyrite in quartz vein.						
5.6 - 8.6	GNEISS - GNEISSIC PORPHYRY - patchy plagioclase - quartz rich sections; disseminated magnetite - banding parallel - 35° to core axis; brecciated locally with quartz biotite, hornblende heal; - local complex folding. - predominantly fresh; local kaolinization of feldspars.						
8.6 - 9.3	DIORITE PORPHYRY - 70% plagioclase, 8-10% quartz, 20% hornblende; biotite-hornblende phenocrysts up to 3mm, intermixed with bands of biotite, phlogopite; trace siderite. - few fractures with quartz, k-spar, epidote, feldspars kaolinized along fractures.						
9.3 - 10.0	GNEISS, HORNBLLENDE-BIOTITE - as in 2.6 - 5.0 meters - 50% mafics; few coarse plagioclase phenocrysts - numerous chloritized and silicified crosscutting fracture sets.						

Claim ANACONDA
T Brg. 090°
Collar Dip -45°
Elev. 700 meters
Length 151.8 meters
Hole No. 81-1
Sheet

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
10.0 - 10.5	GNEISS plus PORPHYRY - fine laminations mixed with euhedral hornblende in quartz; plagioclase seams. - local breccia with quartz - k-spar heal								
10.5 - 11.6	GNEISS plus QUARTZ DIORITE, BRECCIA - 75% plagioclase 15% quartz, 10% hornblende, hintite, trace sericite - foliation perpendicular - 80° to core axis - quartz seams with few specs pyrite locally								
11.6 - 12.1	TRAP - AMPHIBOLITE (Lamprophyre Dyke) - 60% hornblende, trace biotite, scattered plagioclase plus quartz porphyroblasts. - fine grained; fractured with quartz epidote and quartz heal								
12.1 - 14.1	GNEISS PLUS DIORITE PORPHYRY - trace magnetite - foliation 80-40° to core axis - brecciated with quartz, chlorite, plagioclase heal								
14.1 - 14.6	MICRO FELDSPAR PORPHYRY - 50% hornblende								
14.6 - 16.5	DIORITE PORPHYRY plus GNEISS - local quartz feldspar porphyroblasts - flaser texture; hornblende + chlorite breccia pods healed by quartz, plagioclase, sericite, phlogopite, trace magnetite								
16.5 - 18.4	GNEISS -(BIOTITE, HORNBLLENDE) - as in 2.6 - 5.0 meters - well banded with bands at 90°-70° to core axis								

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Verl. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
18.4 - 19.2	- local breccia with hornblende knots DIORITE PORPHYRY plus gneiss - hornblende laths up to 5mm diameter - feldspars kaolinized in fine grained mafic pods - trace pyrite on quartz, k-spar seams														
19.2 - 19.9	GOUGE ZONE - hornblende - chlorite, oxidized biotite - occasional altered feldspar porphyry														
19.9 - 20.1	QUARTZ BAND lenses of hornblende, no sulfides														
20.1 - 21.4	HORNBLLENDE PORPHYRY - 50% hornblende, 30% plagioclase, 20% quartz, sphene - brecciated														
21.4 - 22.2	GNEISS, (HORNBLLENDE, QUARTZ, FELDSPAR) - as in 2.6 - 5.0 - trace sphene, magnetite - some kaolinization of plagioclase														
22.2 - 22.5	AUGEN GNEISS - mylonitized sheared, highly foliated - sericite chlorite alteration														
22.5 - 22.9	GNEISS, HORNBLLENDE PORPHYRY, BRECCIA - quartz seams, altered feldspar porphyroblasts														
22.9 - 23.2	GOUGE, CHLORITE-SERICITE - as in 2.6 - 5.0 - trace leached and visible pyrite														

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					Claim	T. Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
23.2 - 25.3	GNEISS -(HORNBLLENDE, BIOTITE)- as in 2.6 - 5.0 - biotite locally exceeds hornblende; local feldspar porphyroblasts - mylonitized; fracturing with epidote heal.														
25.3 - 35.3	GNEISS -(HORNBLLENDE, PLAGIOCLASE, BIOTITE, QUARTZ,) - as in 2.6 - 5.0 - moderate - well foliated; local complex folding; moderate - well segregated; local biotite rich pods; scattered sphene; trace magnetite; local feldspar porphyroblasts. - 1% epidote as disseminations and on fractures; local narrow chlorite, sericite, quartz stringers; feldspars locally kaolinized, local calcite lenses. - trace pyrite associated with quartz														
35.3 - 36.3	SHEAR ZONE - MYLONITIZED GNEISS - chlorite sericite calcite alteration; 4 discreet quartz bands with sericite, ankerite envelopes - one bleb coarse pyrite at 35.5 m; chalcopyrite, malachite at 36.2 m.														
36.3 - 43.0	GNEISS - Hornblende Biotite (mixed with fresh equigranular diorite) - trace epidote; minor magnetite - gneiss locally complexly folded; banding parallel - 40° to core axis - plagioclase locally kaolinized														
43.0 - 47.3	DIORITE plus minor GNEISS - diorite → equigranular, partially corroded; gneiss → folded - trace magnetite, epidote on fractures - .2 meter band, chlorite, sericite, silica, carbonate alteration														
47.3 - 47.7	SHEAR ZONE														

Scale
Colour Plot
& Data

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	81-1
Sheet	5

Footage From	To	Description	Sample No.	Length	Analysis
		- intense chlorite, sericite, silica alteration, narrow quartz plus ankerite seams with leached pyrite,			
		- trace visible pyrite			
47.7	51.2	DIORITE			
		- equigranular, low mafic, biotite hornblende			
		- local quartz, plagioclase seams			
51.2	58.5	GNEISS - GNEISSIC BRECCIA			
		- high biotite initially, grading to amphibole, biotite, quartz plagioclase breccia			
		- equigranular; sucrosic sections; local quartz seams up to two cm. thick; local hornblende porphyry			
		- fresh, no sulfides.			
58.5	60.3	DIORITE, FELDSPAR PORPHYRY			
		- fine-medium grained			
		- Minor quartz, plagioclase fracture fill; epidote on fractures			
		- moderate kaolinization of feldspars			
60.3	63.1	GNEISS-GNEISSIC DIORITE			
		- 20% biotite, 10% hornblende 65% plagioclase 5% quartz			
		- banding at 45° to core axis			
		- local chlorite epidote seams; disseminated epidote paralleling foliation			
		- some kaolinization of feldspar porphyry			
63.1	67.1	DIORITE			
		- equigranular - crudely foliated			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
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Footage From	To	Description	Sample No.	Length	Analysis
		- some feldspar kaolinization			
67.1	67.6	SHEAR - MICRO MYLONITE - pervasive chloritization, sericitization; weak carbonate alteration - @ 67.4 - quartz, chlorite, epidote, sericite seam with leached pyrite - vugs with quartz crystals			
67.6	74.5	GNEISS - GNEISSIC DIORITE - 30% hornblende, 10% biotite; biotite rich bands - poor gneissic segregation; foliation perpendicular - 60° to core axis - minor crackling with epidote heal - some kaolinization of feldspar porphyroblasts			
74.5	75.3	SHEAR - light green; high chlorite, sericite, sphene - narrow ankerite bands with pyrite			
75.3	77.6	GNEISS - BIOTITE, HORNBLENDE - as in 2.6 - 5.0 - banding @ 90°-70° to core axis - epidote on fractures			
77.6	78.6	SHEAR - chlorite carbonate sericite alteration plus minor quartz epidote veining - pyrite (trace) disseminated and on fractures			
78.6	79.6	SHEAR - quartz seam @ 79.3 - 79.4; high carbonate; 5-6 grains pyrite in quartz; narrow band averaging 5-6% pyrite; chlorite-sericite with quartz.			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
		- shredded sphene								
79.6	90.0	GNEISSIC DIORITE - (HORNBLENDE = BIOTITE) - as in 2.6 - 5.0 meters - foliation 90°-60° to core axis - epidote on fractures and selvages; narrow chlorite band @ 81.7 m - occasional narrow milky quartz band - stringer of leached pyrite at 89.0 m.								
90.0	90.6	SHEAR - rock predominantly foliated diorite gneiss - chlorite, sericite, ankerite alteration - trace pyrite								
90.6	91.6	SHEAR - mylonitized gneiss; sphene - chlorite, sericite, silica altered; minor carbonate - tiny quartz veins with pyrite, ankerite - traces of disseminated pyrite								
91.6	95.9	GNEISSIC DIORITE - 25% hornblende, 15% biotite - foliation 90° to core axis								
95.9	96.9	SHEAR - mylonitic, interval 50% unaltered - chlorite, sericite, silica alteration - few quartz ankerite seams with Fe stain								

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
		- trace pyrite								
96.9	97.9	GNEISS-DIORITE BRECCIA								
97.9	98.4	AS IN 95.9 - 96.9								
98.4	99.0	DIORITE PORPHYRY GNEISS - feldspars kaolinized								
99.0	99.4	SHEAR - (WEAK, AS IN 95.9 - 96.9)								
99.4	101.4	DIORITE GNEISS - dark, mafic - banding at 90° to core axis - locally brecciated								
101.4	101.7	SHEAR - fracture - alteration zone - potash feldspar, epidote, quartz and ankerite on a fracture - iron stain from trace leached pyrite								
101.7	108.1	DIORITE PORPHYRY, - 40-50% biotite and hornblende - feldspars rolled and kaolinized - epidote and chlorite on fractures								
108.1	109.1	FOOTWALL SHEAR SYSTEM - START - light grey green; mylonitized; silicified, sericitized - 5% discreet quartz veining with ankerite envelopes - disseminated pyrite in quartz seams								
109.1	110.1	MYLONITIZED, BRECCIATED, ALTERED								

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis				
	- silicified, chloritized, sericitized; minor epidote; feldspars kaolinized - fractures with chlorite, ankerite - no visible sulfides							
110.1 - 111.1	DIORITE - crackled and chloritized; minor epidote; feldspars kaolinized - shredded sphene; minor carbonatization - no visible sulfides							
111.1 - 112.1	DIORITE - quartz, sericite plus epidote on fractures							
112.1 - 112.7	DIORITE - silicified - crackled with quartz, sericite, epidote heal; no sulfides							
112.7 - 113.1	DIABASE DYKE - dark green; fine grained							
113.1 - 114.2	DIORITE BRECCIA - highly silicified, sericitized, chloritized, epidotized - traces of carbonate - no visible sulfides							
114.2 - 115.6	SERICITE - CHLORITE GOUGE BRECCIA - knots of sericite after quartz and feldspar; few crosscutting quartz veins; quartz chlorite fractures with traces of pyrite							
115.6 - 116.2	GOUGE - quartz, sericite, chlorite; calcite + extreme							

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. 81-1 Sheet 9

Scale

Compass Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 81-1	Sheet 10
116.2 - 118.7	<ul style="list-style-type: none"> - purplish calcite stringer with specular hematite (2% pyrite, .2% chalcopyrite) MICRO MYLONITE - hornblende partially altered; feldspars kaolinized - sericite plus calcite fracture fill increasing towards end - quartz seams with trace ankerite towards end - few specs of pyrite in section 														
118.7 - 120.0	<ul style="list-style-type: none"> DIORITE (highly altered) - biotite plus hornblende locally fresh - section moderately to extensively brecciated - coarse quartz epidote seams - trace - 1% pyrite in two narrow bands. 														
120.0 - 122.0	<ul style="list-style-type: none"> DIORITE - (sheared altered) - mylonitized, chloritized - modest silicification and sericitization; local quartz epidote fracture fill - no visible sulfides 														
122.0 - 123.3	<ul style="list-style-type: none"> DIORITE - mylonitized, chloritized, carbonatized - few specs of pyrite associated with calcite 														
123.3 - 125.3	<ul style="list-style-type: none"> DIORITE - locally mylonitized, mainly hornblende as mafic - locally intense silicification, chloritization, sericitization - occasional calcite, chlorite, ankerite seams 														

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
		- trace pyrite								
125.3	128.3	DIORITE								
		- local siliceous bands, minor epidote, carbonate, (altered, brecciated sections)								
128.3	129.3	DIORITE								
		- banded cherty carbonate fragment								
		- unit silicified, chloritized, sericitized, ankeritized, carbonatized								
		- numerous quartz, calcite ankerite seams with pyrite								
		- trace disseminated pyrite								
129.3	131.3	SAME AS 128.3 - 129.3								
		- less veining; more chloritic; trace disseminated pyrite								
131.3	132.3	QUARTZ SERICITE ROCK 20%								
		- lesser chlorite; highly sheared								
		- 10% discreet quartz veining with calcite, ankerite, pyrite								
		- 1% fracture controlled and disseminated pyrite; trace chalcopryrite								
132.3	133.3	QUARTZ CHLORITE SERICITE ROCK								
		- quartz feldspar knots; few quartz seams								
		- trace pyrite								
133.3	135.3	DIORITE - sheared								
		- highly chloritized, sericitized, silicified								
		- minor epidote; calcite veinlets								
		- trace disseminated pyrite								
135.3	136.7	SAME AS 133.3 - 135.3								

Hole No. 81-1 Sheet 11

Scale

Colour Plot
& Dings

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
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Footage From To	Description	Sample No.	Length	Analysis						
136.7 - 138.1	INTENSE SILICIFIED, CHLORITIZED, SERICITIZED ROCK - 15% quartz veining; plagioclase and ankerite with quartz - chlorite abundant - local intense kink folding - <1% pyrite as disseminations and on fractures; trace chalcopyrite									
138.1 - 139.1	GOUGE & QUARTZ VEINING - trace chalcopyrite and pyrite on fractures with quartz									
139.1 - 139.9	DIORITE - altered - hornblende plus biotite - minor chlorite, sericite, few quartz veins - kaolinized feldspars; epidote fracture fill									
139.9 - 151.8	DIORITE - 40% mafics, dominantly hornblende - crude banded aspect, feldspars locally kaolinized - 2% epidote on fractures - 145.4 - 145.7 + somewhat sheared									
	END OF HOLE @ 151.8 meters									

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2		
Commenced	June 18, 1981	Location		Tests at	Nil		
Completed	June 20, 1981	Core Size	NQ	Hor. Comp.	100.8 meters		
Co-ordinates	5880 237N; 508 350E			Vert. Comp.	100.8 meters		
Objective	A test for large tonnage low grade potential of shear		% Recov.	97%	Date	10 September 1981	
				True Brg.	090 ⁰	Logged by	A.C. Freeze

Claim	ANACONDA
T Brg.	090 ⁰
Collar Dip	-45 ⁰
Elev.	560 meters
Length	142.6 meters
Hole No.	81-2
Sheet	1

Footage From	To	Description	Sample No.	Length	Analysis
0.0	2.8	CASING - No core recovery			
2.8	8.2	GNEISS - Biotite, Hornblende - banding 80 ⁰ -30 ⁰ to core axis - minor chloritization in mafic rich bands - distorted feldspars up to ½ cm. diameter; minor magnetite			
8.2	9.1	GNEISS - sheared - silicified, chloritized, sericitized; minor carbonate - shredded sphene; magnetite - few quartz sericite seams with visible pyrite; disseminated pyrite up to 3 cm. from seams.			
9.1	9.6	DIORITE - fresh - 10% mafics, mainly hornblende			
9.6	10.6	DIORITE - DIORITE GNEISS - minor fracturing with quartz, epidote, calcite, chlorite fill - trace associated pyrite			
10.6	11.6	DIORITE GNEISS 60% mafics; banded; somewhat chloritized			
11.6	12.1	SAME AS 9.6 - 10.6, locally silicified and mylonitized			
12.1	21.2	DIORITE - GNEISSIC DIORITE, - locally banding @ all angles to core axis - local kaolinization; sphene, magnetite			
21.2	25.1	GNEISS with minor diorite - gneiss bands contorted and locally complexly folded			

Scale
Colour Plot
& Dip
0

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim
T Brg.
Collar Dip
Elev.
Length
Hole No. 81-2
Sheet 2

Footage		Description	Sample No.	Length	Analysis				
From	To								
		- minor magnetite							
25.1	25.4	SHEAR ZONE - silicified, chloritized, sericitized, carbonatized - trace fracture controlled pyrite							
25.4	29.8	GNEISSIC DIORITE - local mafic segregation, foliation 90°-60° to core axis - trace epidote, sphene; few micaceous lenses - feldspar and quartz strained, re-aligned							
29.8	30.0	FRACTURE ZONE - silicification, chloritization, sericitization - small vein with quartz, pyrite, ankerite, siderite							
30.0	31.0	GNEISSIC DIORITE - 40% hornblende plus biotite - somewhat chloritic; feldspars locally kaolinized							
31.0	31.8	SHEAR plus GNEISSIC DIORITE - mylonitized; fractures 3 cm.-10 cm. thick with quartz, chlorite sericite fill - minor carbonatization; sphene							
31.8	34.8	GNEISS plus minor DIORITE - foliation parallel → subparallel to core axis - light bands of white and pink feldspar - quartz, chlorite epidote seams							
34.8	36.0	FRACTURE ZONE							

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
		- minor silicification, chloritization, sericitization, carbonatization								
		- local epidote plus quartz ankerite lenses; sphene; magnetite								
36.0	40.0	GNEISSIC DIORITE								
		- banding at 70-60° to core axis								
		- @ 37.3 narrow quartz epidote seam plus k-spar, chlorite, epidote seams								
40.0	44.2	DIORITE - GNEISSIC DIORITE								
		- 40-50% hornblende and biotite; sphene, magnetite								
		- banding perpendicular - 60° to core axis								
		- few chlorite seams								
44.2	45.1	ALTERATION - FRACTURE ZONE								
		- mylonitic								
		- silicification, chloritization, carbonatization; minor epidote								
		- 1 cm quartz ankerite vein with pyrite								
45.1	45.8	GNEISSIC DIORITE - weakly altered								
45.8	46.5	SHEAR - FRACTURE ZONE								
		- breccia aspect								
		- silicified, chloritized, sericitized								
		- calcite ankerite fractures with pyrite								
		- quartz chlorite fractures with pyrite								
		- sericitic bands								
46.5	50.1	GNEISS - GNEISSIC DIORITE - GNEISSIC QUARTZ DIORITE								
		- foliation perpendicular to core axis								

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 81-2	Sheet 4
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Footage From	To	Description	Sample No.	Length	Analysis						
		- feldspars locally kaolinized; mafics weakly chloritized; trace carbonate, epidote, quartz, chlorite									
50.1	51.3	ALTERATION - FRACTURE ZONE, somewhat brecciated - chloritization carbonatization, sericitization, silicification - sporadic quartz ankerite calcite, chlorite fractures; few quartz chlorite seams; epidote seams - trace pyrite with all alteration phases									
51.3	58.0	DIORITE - GNEISSIC DIORITE - 30-40% mafics; hornblende > biotite; occasional mafic free bands - foliation perpendicular - 20° to core axis; local contorted bands - mafic rich clots; magnetite - local chlorite, epidote fractures									
58.0	61.4	DIORITE - minor sphene, magnetite, equigranular, hornblende rich - traces of epidote on or near fractures									
61.4	66.4	GNEISSIC DIORITE - banding at 70° to core axis - crisscross fracture systems of feldspar, epidote - kaolinized feldspar porphyroblasts; high sphene, magnetite									
66.4	78.6	GNEISSIC DIORITE - 40% biotite, hornblende, display greater segregation - more persistent epidotization, 1% broken sphene, magnetite									

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2														
Commenced		Location		Tests at		Hor. Comp.													
Completed		Core Size		Corr. Dip		Vert. Comp.													
Co-ordinates				True Brg.		Logged by													
Objective				% Recov.		Date													
Footage From	To	Description				Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet					
		- @ 74.5 - quartz epidote band with trace pyrite											81-2	5					
		- @ 76.3 - chlorite band with trace pyrite																	
78.6	80.1	DIORITE - fractured																	
		- few milky quartz stringers; numerous epidote pink k-spar veinlets with attendant chlorite, mafics somewhat chloritic; feldspars somewhat kaolinized.																	
80.1	81.1	DIORITE - sheared																	
		- silicification, ankeritization, sericitization, chloritization																	
		- massive quartz vein 80.3 - 80.6 with calcite and pyrite grains up to 4 mm. diameter																	
		- dense chlorite clots																	
81.1	82.1	MICRO MYLONITE																	
		- silica, chlorite, sericite alteration; sphene																	
		- numerous hairline quartz, ankerite, pyrite fractures																	
		- quartz calcite veins																	
82.1	83.1	DIORITE																	
		- local chlorite, sericite, silica alteration																	
		- few quartz, calcite ankerite seams																	
83.1	98.7	DIORITE -																	
		- banding perpendicular to core axis, porphyritic																	
		- sphene, magnetite																	
		- minor fracturing with epidote; feldspar epidote; epidote chlorite; chlorite, ankerite, sericite seams.																	
98.7	99.0	ALTERATION ZONE																	

Scale
Colour Plot
& Dip



Drill Hole Record

Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 81-2	Sheet 6
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Footage From	To	Description	Sample No.	Length	Analysis						
		- chlorite silica sericite alteration; few quartz ankerite seams									
		- feldspars somewhat kaolinized									
99.0	102.6	GNEISSIC DIORITE									
		- medium-fine grained; sphene, magnetite									
		- numerous hairline fractures with epidote-k-spar fractures.									
		- mafics more chloritic at end of section									
102.6	104.6	START MAIN FOOTWALL SHEAR									
		- Gneissic diorite; mylonitic									
		- chloritized; weakly silica sericite altered; few barren quartz lenses; feldspars locally kaolinized									
		- @ 104.3 - quartz ankerite carbonate lens with trace pyrite									
104.6	106.6	SAME AS 102.6 - 104.6 - increased brecciation, rubbly									
		- alteration increasing; numerous epidote fracture fills; narrow barren quartz veins, plus quartz ankerite veins with trace pyrite									
		- chloritic and gougy									
106.6	108.6	SAME AS 104.6 - 106.6									
		- increasing chlorite epidote; minor quartz; ankerite on narrow fractures, rubbly									
108.6	109.1	SHEAR									
		- chlorite, silica, sericite alteration plus carbonatization									
		- cherty ankerite bands at 107.9, 108.9									
		- disseminated epidote; trace disseminated pyrite									
109.1	109.8	SHEAR									

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	81-2
Sheet	7

Footage From	To	Description	Sample No.	Length	Analysis					
		- quartz veins 2 cm - 12 cm with pyrite grains up to 1 mm diameter								
		- high chlorite; carbonate alteration								
		- ankerite veining								
		- traces of pyrite through section								
109.8	111.8	DIORITE - mylonitized								
		- lesser chlorite, sericite, silica alteration, calcite, ankerite lenses locally								
		- epidote stringers numerous, local dense chlorite and sericite seams								
111.8	113.8	DIORITE - rubbly, mylonitized, chloritized								
		- quartz ankerite veins; quartz ankerite chlorite seams								
		- trace pyrite through section								
113.8	114.8	SAME AS 111.8 - 113.8								
		- quartz carbonate veins; trace pyrite								
114.8	116.0	SAME AS 111.8 - 113.8 - rubble								
		- chlorite, sericite, silica, carbonate alteration								
		- quartz ankerite stringers with pyrite								
		- trace disseminated pyrite								
116.0	116.6	SHEAR								
		- 30% quartz veining, highly fractured								
		- grey brown colour due to extreme sericitization								
		- chlorite comprises remainder of section								
		- 20 cm. average 7% pyrite								
116.6	117.6	DIORITE - altered, mylonitized								

Scale

Colour Plot
& Dip

Drill Hole Record



Property SURF INLET District SKEENA Hole No. 81-2
 Commenced _____ Location _____ Tests at _____ Hor. Comp. _____
 Completed _____ Core Size _____ Corr. Dip _____ Vert. Comp. _____
 Co-ordinates _____ True Brg. _____ Logged by _____
 Objective _____ % Recov. _____ Date _____

Claim _____
 T Brg. _____
 Collar Dip _____
 Elev. _____
 Length _____
 Hole No. 81-2 Sheet 8

Footage From To	Description	Sample No.	Length	Analysis			
	- all primary minerals virtually obscured - green-grey brown colour due to high chlorite, sericite alteration - <1% disseminated pyrite						
117.6 - 118.6	SAME AS 116.6 - 117.6, brecciated - high chlorite, sericite, silica alteration - milky quartz ankerite bands - 1% disseminated pyrite						
118.6 - 119.6	ALTERED DIORITE 50%, CHLORITE SERICITE ROCK 50% - brecciated with quartz ankerite vein fill - green brown colouration - pyrite - smears, fractures, disseminations, average 1%						
119.6 - 120.6	SERICITE SILICA ROCK - brecciated; relict chlorite diorite seams - milky quartz ankerite seams - pyrite averages 3-4% through section						
120.6 - 121.6	SAME AS 119.6 - 120.6 - pyrite averages 1%						
121.6 - 122.6	SAME AS 119.6 - 120.6 - more intense brecciation - 15-20% milky ankerite fracture fill - chlorite with ankerite - coarse blebs of pyrite; pyrite averages 1-1.5%						

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-2
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
122.6	123.3	MASSIVE SERICITE ROCK - minor ankerite seams - 1% pyrite								
123.2	124.0	BRECCIA - sericite, ankerite, chlorite rock - coarse bands of pyrite up to 1.5 cm. - 6-7% pyrite								
124.0	125.0	TRANSITION ZONE - chloritized, slightly sericitized diorite - calcite veins; trace epidote - few specs of pyrite								
125.0	127.0	DIORITE - altered - chlorite, kaolin, epidote alteration - pervasive silicification; one narrow sericite seam - @ 126.8, crenulated chloritic zone								
127.0	142.6	GNEISSIC DIORITE - fresh - banding perpendicular to core axis - 40% hornblende and biotite - local porphyritic sections - minor chlorite, epidote								
		END OF HOLE @ 142.6								

9

Sheet
81-2

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3
Commenced	June 23, 1981	Location	Tests at	176.8	Hor. Comp. 125.0 meters
Completed	June 26, 1981	Core Size	NQ	Corr. Dip -45 ⁰	Vert. Comp. 125.0 meters
Co-ordinates	5880 456N; 508 205E	True Brg.	099 ⁰	Logged by	A.C. Freeze
Objective	To test for large tonnage low grade potential of shear			% Recov.	97%
				Date	14 September 1981

Claim INDEPENDENCE
T Brg. 099⁰
Collar Dip -45⁰
Elev. 420 meters
Length 176.8 meters
Hole No. 81-3 Sheet 1

Footage From	To	Description	Sample No.	Length	Analysis
0.0	2.1	CASING - No core recovery			
2.1	6.2	GNEISS - GNEISSIC DIORITE - 40% hornblende; biotite, dominantly biotite in gneissic lenses - tight banding - massive dioritic seams - banding perpendicular - 60 ⁰ to core axis - minor epidote; potash feldspar on fractures			
6.2	7.2	FRACTURE ZONE - mylonitized gneiss; grey green colouration - chlorite, silica alteration; feldspar kaolinized - few calcite, epidote, sericite seams - trace disseminated pyrite in section, mainly on fractures			
7.2	8.2	GNEISS plus CHLORITIC FRACTURE ZONE - fracturing at all angles to core axis - calcite, ankerite with chlorite - trace pyrite and chalcopyrite with fracturing			
8.2	9.9	DIORITE, (Fine-medium grained) - narrow gneissic bands perpendicular to core axis - biotite oxidized			
9.9	13.3	GNEISS, (banded-contorted, medium-coarse grained) - local massive fine grained hornblende biotite seams - some mylonitization - @ 13.0 narrow chlorite epidote seam with trace pyrite			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	T Brg.	Collar Dip	Elev.	Length
13.3	18.9	GNEISS -(moderate-poor segregation) - hornblende plus biotite = 30-40%; trace sphene, magnetite - foliation perpendicular to 60° to core axis, some contorted sections - kaolinized feldspars near fractures; trace epidote, k-spar - chloritic mylonite seam @ 18.3 - 18.7							
18.9	19.7	GNEISS, (fractured and altered) - mafics chloritized; quartz, chlorite, ankerite calcite seams cut gneiss at steep angle - trace pyrite on fractures							
19.7	23.3	GNEISS - banding perpendicular - 70° to core axis - few clean light bands							
23.3	23.9	FRACTURE - SHEAR - mylonitic & rubbly - silica, chlorite, epidote, potash feldspar alteration - trace pyrite in high epidote sections							
23.9	32.4	GNEISS, (medium-coarse grained) - banding 90-70° to core axis - trace epidote on fractures, pervasive locally; trace sphene, magnetite - quartz, quartz feldspar, calcite fracture & vug fill - minor mylonite @ 29.8 - 29.9, few fractures with chlorite, epidote, pyrite - feldspars somewhat kaolinized							
32.4	34.4	RUBBLY CHLORITIZED FRACTURE ZONE 50%, ALTERED GNEISSIC DIORITE 50%							

Hole No. 81-3
Sheet 2

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
		ALTERED ZONE - chlorite, carbonate, minor sericite, ankerite - quartz epidote ankerite lenses up to 1.5 cm; trace pyrite								
		GNEISSIC DIORITE - Minor chlorite, epidote on fractures, kaolin								
34.4	46.4	GNEISSIC DIORITE - GNEISS - banding perpendicular - 45° to core axis; moderate - poor foliation - occasional discreet biotite and felsic lenses - coarse feldspars locally; increasing kaolinization with depth								
46.4	63.0	DIORITE - GNEISSIC DIORITE -(medium grained, fresh) - 35% hornblende, 15% biotite - equigranular; anhedral-subhedral; few porphyritic zones - local gneissic biotitic dots - disseminated epidote; sphene - @ 56.5 & 59-63, coarse porphyry diorite								
63.0	64.0	GNEISS, (poorly segregated) - banding perpendicular - 80° to core axis; minor epidote								
64.0	64.4	FRACTURE ZONE - 50% gneiss								
64.4	67.5	50% chlorite, quartz, epidote, ankerite, sericite with trace pyrite DIORITE - coarse grained; somewhat deformed; porphyritic amphibole and feldspar - few chlorite epidote fracture fills through section								
67.5		START FOOTWALL SHEAR ZONE								

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3															
Commenced		Location		Tests at		Hor. Comp.														
Completed		Core Size		Corr. Dip		Vert. Comp.														
Co-ordinates				True Brg.		Logged by														
Objective				% Recov.		Date														
Footage From	To	Description				Sample No.	Length	Analysis												
67.5	69.5	DIORITE -(mylonitic) - zone is 70% relatively fresh hornblende, feldspar porphyry, diorite 30% quartz, epidote, ankerite alteration with disseminated pyrite @ 67.6 - minor carbonatization																		
69.5	71.5	DIORITE -(altered) - 30% sheared with shearing perpendicular to core axis - shears contain chlorite, epidote, plus black banded cherty ankerite																		
71.5	72.5	SAME AS 69.5 - 71.5 - higher mylonitization; feldspars kaolinized; chlorite plus silica alteration																		
72.5	73.5	DIORITE -(altered) - rock becoming more chloritic - increase of quartz epidote seams																		
73.5	74.5	DIORITE -(mylonitized) - unit light green, chloritic; feldspars kaolinized; abundant epidote on random fractures, increase silica and sericite alteration - @ 73.8 - 73.9 quartz, carbonate, chlorite, ankerite lens with trace pyrite, chalcopyrite																		
74.5	75.3	DIORITE -(mylonitized) - 3 mm. ankerite band, abundant epidote																		
75.3	75.8	SHEAR - chlorite, sericite, calcite, quartz, ankerite vein fill - trace hematite with calcite; trace shredded sphene - trace pyrite																		

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. 81-3

Sheet 4

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3																
Commenced		Location		Tests at		Hor. Comp.															
Completed		Core Size		Corr. Dip		Vert. Comp.															
Co-ordinates				True Brg.		Logged by															
Objective				% Recov.		Date															
Footage From	To	Description		Sample No.	Length	Analysis															
75.8	77.1	DIORITE - (altered) - mylonitic; crenulated band @ 77.0 - 77.1 - light green; extensive chlorite, epidote - highly fractured with quartz carbonate fill; kaolin; minor sericite - traces of pyrite																			
77.1	77.6	ALTERATION ZONE, (highly fractured) - 80% quartz, 20% quartz, chlorite, carbonate, sericite, local ankerite plus hematite stain - 1% sulfide in blebs up to 1 cm of pyrite and chalcopyrite in quartz plus quartz chlorite zones.																			
77.6	78.3	ALTERATION ZONE - 70% quartz; massive chlorite - sericite @ 78.0 - 78.1 (.5% pyrite and chalcopyrite) - minor calcite and hematite																			
78.3	79.3	DIORITE - (mylonitized) - quartz, chlorite, sericite, kaolin altered plus carbonatization - 1.5% fracture controlled and disseminated pyrite - few flecks coarse chalcopyrite and pyrite with late stage milky calcite																			
79.3	80.3	DIORITE - (mylonitized) - 79.3 - 79.5 - intense chlorite sericite with 1% disseminated pyrite - remainder of section is chlorite, sericite, kaolinized, silica altered diorite with trace pyrite. - shredded sphene																			
80.3	82.3	DIORITE - (mylonitized)																			

Claim
T Brg.
Collar Dip
Elev.
Length
Hole No. 81-3
Sheet 5

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3							
Commenced		Location		Tests at	Hor. Comp.							
Completed		Core Size		Corr. Dip	Vert. Comp.							
Co-ordinates		True Brg.		Logged by								
Objective		% Recov.		Date								
Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		- moderate-intense chlorite, sericite, silica, kaolin, ankerite, epidote alteration										
		- calcite seams cut; trace pyrite										
82.3	84.3	SAME AS 80.3 - 82.3										
		- local thick ankerite, sericite, chlorite bands (83.2 - 84.2)										
		- pyrite associated; some hematite										
84.3	86.3	DIORITE -(mylonitized)										
		- kaolin, chlorite, minor silica; less sericite alteration										
		- flecks - massive bands of epidote, no visible pyrite										
86.3	87.2	SAME AS 84.3 - 86.3										
87.2	87.8	SHEAR										
		- 30% quartz, 60% chlorite, sericite; 10% ankerite, calcite, hematite										
		- .2-.4% PYRITE										
87.8	88.8	DIORITE -(mylonitized)										
		- pervasive chlorite, kaolin alteration										
		- 5-6% epidote, carbonate stringers										
88.8	90.2	DIORITE										
		- 50% chlorite, kaolin altered; 50% chlorite, epidote										
		- 90-90.1 - Massive epidote plus black banded cherty ankerite; few calcite seams										
		- quartz @ epidote plus a few specs of pyrite in latter part of section										
90.2	93.2	DIORITE										
		- foliation perpendicular -70° to core axis; 30% porphyry diorite										
		- minor kaolin; 2-3% epidote fracture fill (sample @ 93.6)										

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 81-3	Sheet 7
-------	--------	------------	-------	--------	---------------	---------

Footage		Description	Sample No.	Length	Analysis	
From	To					
93.2	95.2	ALTERED DIORITE - GNEISSIC PORPHYRY DIORITE - trace sphene, magnetite - somewhat mylonitic - pink feldspar; epidote seams occupy 15% of section - trace pyrite in massive epidote @ 94.8 - some kaolin, chlorite, calcite, ankerite				
95.2	105.6	HORNBLLENDE DIORITE - (fresh, porphyritic, foliated) - foliation perpendicular to core axis - trace fracture controlled and disseminated epidote - sphene, magnetite, minor biotite - barren milky quartz seam @ 103.0; narrow quartz epidote seam @ 105.7				
105.6	127.0	DIORITE PORPHYRY - 40% mafics, local finer grained pods - minor disseminated epidote - quartz seam 116.4 - 116.6				
127.0	144.6	DIORITE PORPHYRY - dominantly hornblende; 30-40% mafics - few quartz epidote seams				
144.6	145.3	GNEISSIC DIORITE - quartz, chlorite, sericite, epidote seams, trace chalcopryrite.				
145.3	149.3	GNEISSIC DIORITE - biotite lenses; quartz epidote fractures; local chloritized seams.				

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-3
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
149.3	151.0	DIORITE WITH GNEISSIC XENOLITHS								
151.0	157.8	DIORITE - GNEISSIC DIORITE, (altered) - kaolin, epidote, calcite, chlorite; barren quartz epidote seams								
157.8	158.5	GNEISSIC DIORITE - high disseminated epidote; pervasive chloritization - pink calcite; quartz seams; sericite increase to end of section - massive chlorite; sericite with trace pyrite over last 3 centimeters								
158.5	159.1	ALTERATION - 60% quartz, 20% coarse sericite, 15% chlorite, 3% epidote, trace calcite - local chalcopryrite								
159.1	160.0	DIORITE - (mylonitized) - moderate-weakly chlorite sericite altered - one pink calcite seam with 1 grain chalcopryrite, 1 grain molybdenite								
160.0	164.0	DIORITE - (fresh porphyritic) - few gneissic bands								
164.0	168.8	DIORITE (50%) MICACEOUS GNEISS (50%) - fine grained amphibolite band - quartz k-spar seams								
168.8	169.8	GNEISS - 80% biotite, 20% feldspar and quartz - 1-2% pyrite in section								
169.8	176.8	DIORITE plus GNEISS,								

 Claim
T Brg.
Collar Dip
Elev.
Length
Hole No. 81-3
Sheet 6

Scale

Color Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4
Commenced	June 28, 1981	Location		Tests at	Hor. Comp. 125.0 meters
Completed	June 30, 1981	Core Size	NQ	Corr. Dip	-45 ⁰ Vert. Comp. 125.0 meters
Co-ordinates	5880 623N; 508 020E			True Brg.	090 ⁰ Logged by A.C. Freeze
Objective	A test for large tonnage low grade potential of shear			% Recov.	97.7% Date 16 Sept. 1981

Claim	EXCELSIOR
T Brg.	090 ⁰
Collar Dip	-45 ⁰
Elev.	310 meters
Length	176.8 meters
Hole No.	81-4 Sheet 1

Footage From	To	Description	Sample No.	Length	Analysis
0.0	4.5	CASING, No core recovery.			
4.5	5.5	GNEISS (Biotite Hornblende) Trace epidote, sphene, magnetite, banding 90 ⁰ -70 ⁰ to core axis; fine-coarse grained			
5.5	6.5	PEGMATITIC BIOTITE GNEISS - HORNBLLENDE PORPHYRY BIOTITE GNEISS - trace epidote; hornblende crystals 1/2 cm. diameter - 0.5% pyrite and pyrrhotite as bands; irregular fractures; disseminated grains			
6.5	7.5	SAME AS 5.5 - 6.5			
7.5	8.5	HORNBLLENDE PORPHYRY GNEISS - 0.5% pyrite and pyrrhotite as in 5.5 - 6.5			
8.5	9.5	BIOTITE AND HORNBLLENDE GNEISS - foliation 45 ⁰ to core axis - 0.2% pyrite - pyrrhotite			
9.5	11.5	GNEISS, (Biotite) - very coarse grained; felsics - sucrosic; contorted - hornblende intermixed; trace pyrite, pyrrhotite			
11.5	13.5	GNEISS -(Hornblende, Biotite) - banding perpendicular - 80 ⁰ to core axis - trace sulfides			
13.5	21.6	GNEISS - 25% biotite, 5% hornblende - banding 70 ⁰ to core axis; equigranular dioritic bands locally - trace pyrite and pyrrhotite			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
21.6	27.5	GNEISS - GNEISSIC DIORITE - banding parallel - perpendicular to core axis; medium grained - few porphyroblasts; discontinuous banding; xenoliths; trace sphene - trace pyrite as disseminations and fractures								
27.5	33.5	GNEISS - (Hornblende, Biotite) - banding parallel - perpendicular to core axis, locally highly contorted - few fractures with quartz feldspar fill; trace sphene								
33.5	41.7	GNEISS, HORNBLende, BIOTITE, same as 27.5 - 33.5 - whispy; dark-light banded; fine-medium grained - banding complex - occasional narrow quartz veins								
41.7	44.6	MICRO DIORITE - fine grained equigranular; few large phenocrysts; sphene - occasional fracture with quartz, epidote								
44.2	56.4	GNEISS - DIORITIC GNEISS - biotite equals 80% of mafics; dioritic sections are coarse grained porphyritic - trace epidote; sphene - few cross fractures with quartz, feldspar, epidote								
56.4	56.8	TACTITE ZONE - 20% quartz; 25% red garnet, 30% epidote, diopside? plus feldspar, chlorite, sericite - carbonate lenses in gneiss								

Hole No. 81-4 Sheet 2

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
56.8	62.3	GNEISS - DIORITIC GNEISS - banding 80-60° to core axis; 40-50% biotite, hornblende - reoriented feldspar porphyroblasts; sphene - local subtle chloritization									81-4	3
62.3	64.3	ALTERATION ZONE (GNEISS) - subtle shearing; modest chloritization plus epidote, sericite locally - somewhat silicified; trace carbonate										
64.3	65.9	DIORITE - FOLIATED DIORITE PORPHYRY - banding 80° to core axis - narrow micaceous lenses; magnetite, epidote, sphene										
65.9	67.4	DIORITE - few milky quartz veins with trace chalcopyrite - @ 67.4, narrow epidote, magnetite seam - minor epidote; chlorite on hairline fractures										
67.4	69.9	DIORITE - local disseminations of pyrite on chlorite-epidote seams										
69.9	71.5	DIORITE - equigranular; foliated; fresh - sphene; disseminated epidote - k-spar, epidote veins										
71.5	79.0	DIORITE WITH LESSER BANDED GNEISS AND GNEISSIC DIORITE - locally very coarse amphibole										

Scale
Colour Plat
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	81-4
Sheet	

Footage From	To	Description	Sample No.	Length	Analysis
		- few chloritic bands; minor fractures with epidote			
		- few quartz feldspar seams			
79.0	86.0	DIORITE			
		- very coarse amphiboles; biotite bands at end of section			
		- some mylonitization			
86.0	87.0	GNEISS			
		- banding at 60° to core axis; sheared			
		- unit resembles an altered crystal tuff			
		- chlorite, silica, epidote, k-spar, alteration			
		- trace pyrite			
87.0	87.6	GNEISS - (CRYSTAL TUFF?)			
		- minor pyrite parallels banding			
87.6	88.6	GNEISS			
		- vitreous quartz crystals in a hornblende biotite, feldspar matrix			
		- one chlorite, sericite, silica altered band with potash feldspar			
		- few quartz-epidote veins with pyrite			
88.6	103.8	DIORITE PORPHYRY, FEW GNEISSIC BANDS			
		- coarse hornblende, subordinate biotite; sphene			
		- banding at 45° to core axis			
		- quartz epidote fracture fill			
103.8	104.8	SHEAR			
		- altered diorite; rocks mylonitized; feldspars kaolinized			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
	- chlorite, sericite, silica, carbonate, ankerite, epidote alteration with trace pyrite in 3 bands								
104.8 - 109.7	DIORITE PORPHYRY - large hornblende and plagioclase phenocrysts; occasional gneissic bands - epidote plus chlorite								
109.7	FOOTWALL SHEAR SYSTEM								
109.7 - 110.7	DIORITE-(altered, mylonitized) - numerous hairline fractures with epidote, chlorite and minor ankerite - feldspars kaolinized								
110.7 - 111.7	DIORITE - (altered, mylonitized) - disseminated and fracture filled epidote, k-spar; minor kaolinization - local silica, sericite, chlorite alteration with ankerite; trace pyrite								
111.7 - 112.7	DIORITE -(moderately mylonitized) - chlorite, ankerite disseminated, and on fractures; trace sphene - kaolinized feldspars; minor epidote								
112.7 - 113.7	DIORITE - (increased mylonitization from 111.7 - 112.7) - increased chlorite, silica, epidote, kaolin alteration - free quartz seams								
113.7 - 114.3	SAME AS 112.7 - 113.7 - more intense alteration								
114.3	START MAIN ALTERATION ZONE								
114.3 - 115.3	DIORITE - (intensely mylonitized, gouge zones)								

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4	Claim		T Brg.		Collar Dip		Elev.		Length		Hole No.	81-4	Sheet	6
Commenced		Location		Tests at		Hor. Comp.		Vert. Comp.		Logged by		Date							
Completed		Core Size		Corr. Dip		% Recov.													
Co-ordinates		True Brg.		Sample No.		Length		Analysis											
Objective		Date		From		To		Description											
								- moderate-intense chlorite, sericite, silica, carbonate alteration											
								- quartz, chlorite, calcite seams; locally contorted quartz sericite bands											
								- pyrite averages 1% through section; trace chalcopryite with calcite											
								115.3 - 116.3 DIORITE -(mylonitized)											
								- high chlorite; moderate sericite, calcite; minor silicification; only few specs pyrite											
								116.3 - 116.9 QUARTZ, SERICITE, CHLORITE SHEAR											
								- 40% quartz, 50% chlorite, sericite, 8% calcite plus minor ankerite											
								- 2% Pyrite as discreet grains and bands on fractures; trace chalcopryite											
								116.9 - 117.9 SAME AS 116.3 - 116.9											
								- 50% quartz, cherty ankerite band											
								- 2% pyrite as blebs and on fractures											
								117.9 - 118.9 DIORITE -(mylonitized)											
								- few remnant plagioclase crystals											
								- high chlorite; moderate carbonatization; minor epidote, sericite											
								- trace pyrite											
								118.9 - 119.9 SAME AS 117.9 - 118.9											
								119.9 - 120.9 DIORITE											
								- partially mylonitized and chloritized											
								- 5% epidote with quartz, calcite											
								- some sericite and minor free quartz veining											
								- trace pyrite, chalcopryite											
								120.9 - 121.9 SAME AS 119.9 - 120.9											

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		- more epidote										
		- few specs of pyrite										
121.9'	122.9	DIORITE										
		- partially mylonitized										
		- chlorite increases down section										
		- 122.7 - 122.9 - chlorite, sericite, calcite gouge; trace pyrite, hematite										
122.9'	123.9	DIORITE										
		- .3 meters high silica, sericite, carbonate, chlorite altered with trace pyrite										
		- .7 meters kaolinized diorite with epidote, chlorite, quartz veining; trace pyrite										
123.9'	124.9	DIORITE										
		- epidote plus minor quartz veining										
		- traces of pyrite										
124.9'	126.9	DIORITE										
		- partially mylonitized; moderate-high alteration										
		- coarse quartz epidote seams with traces of pyrite										
		- calcite, epidote, chlorite seams with traces of pyrite										
126.9'	128.9	SAME AS 124.9 - 126.9 - (increase mylonitization)										
		- some gouge; increased kaolinization										
		- trace ankerite, pyrite										
128.9'	129.9	SHEAR - MYLONITIZED DIORITE										
		- few cherty lenses; epidote, trace ankerite										
		- 1 cm band of pyrite in chlorite, sericite, chert, epidote gouge										

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-4	Tests at	Hor. Comp.
Commenced		Location		True Brg.		Corr. Dip	Vert. Comp.
Completed		Core Size		% Recov.		Logged by	
Co-ordinates						Date	
Objective							

Footage From	To	Description	Sample No.	Length	Analysis			
					Claim	T Brg.	Collar Dip	Elev.
129.9	130.4	- rubble zone average .3% pyrite DIORITE (mylonitized) - minor silica, chlorite, sericite alteration - epidote, calcite, chlorite on fractures						
130.4	131.6	DIORITE (mylonitized) - chlorite, sericite seams with trace pyrite - calcite hematite seams with trace pyrite - black cherty fracture fill locally; chlorite, epidote on fractures						
131.6	150.9	DIORITE - HORNBLende PORPHYRY - crude banding, perpendicular - 70° to core axis - sphene, magnetite - local kaolin; epidote as disseminations and on fractures - 134.9 - 136.0 - crenulated chlorite zone with red cherty lenses - 146.3 - coarse epidote, chlorite seam						
150.9	157.2	DIORITE - MICRO FELDSPAR PORPHYRY - fine grained; dark matrix; coarse plagioclase phenocrysts - 30% epidote on fractures with trace pyrite - 152.8 & 155.8 - quartz, sericite, chlorite seam with trace pyrite						
157.2	176.8	DIORITE - DIORITE PORPHYRY - GNEISSIC DIORITE - biotite rich bands; quartz plagioclase seams - occasional quartz, chlorite, epidote seams; feldspars occasionally kaolinized - no sulfides						

END OF HOLE @ 176.8

Hole No. 81-4
Sheet 8

211-0437

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced	July 2, 1981	Location		Tests at	127.4 meters
Completed	July 6, 1981	Core Size	NQ	Hor. Comp.	91 meters
Co-ordinates	5880 893N; 507 940E			Vert. Comp.	91 meters
Objective	A test for Large tonnage low grade potential of shear			Logged by	A.C. Freeze
				Date	October 1981

Claim	EXCELSIOR
T Brg.	090°
Collar Dip	-45°
Elev.	163.7 meters
Length	127.4 meters
Hole No.	DDH 81-5
Sheet	1

Footage From	To	Description	Sample No.	Length	Analysis
0.0	4.3	CASING - no core recovery			
4.3	9.6	GNEISSIC PEGMATITE - coarse biotite and hornblende pods; dominantly hornblende - contorted - minor epidote seams			
		7.1 - 8.1 - trace disseminated pyrite and pyrrhotite			
		8.1 - 9.1 - trace disseminated pyrite and pyrrhotite			
		9.1 - 10.1 - trace disseminated pyrite and pyrrhotite			
9.6	10.8	DIORITIC HORNBLLENDE GNEISS - few quartz plagioclase seams; coarse biotite bands			
10.8	16.1	GNEISSIC PEGMATITE plus GNEISS - coarse quartz feldspar bands mixed with 80% hornblende porphyry lenses (amphibolite); coarse feldspar; sphene - minor chloritization; feldspar locally kaolinized; minor epidote on fractures - 16.1 sample			
16.1	16.5	GNEISSIC MICRO DIORITE			
16.5	20.7	GNEISS - GNEISSIC DIORITE - MICRO DIORITE - fresh; 25% biotite, 15% hornblende; magnetite, trace sphene - somewhat sucrosic foliated aspect; few contorted bands - local iron stained mafic bands; hairline cracks of chlorite, epidote - feldspars moderately kaolinized; minor quartz; k-spar fracture fill			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	DDH 81-5
Sheet	2

Footage From	To	Description	Sample No.	Length	Analysis
20.7	25.8	DIORITE, MINOR GNEISS - 40% hornblende, biotite; 30% kaolinized feldspar - trace disseminated and fracture controlled epidote			
25.8	37.5	GNEISS - GNEISSIC MICRO DIORITE - banding at 50° to core axis; locally appears as crystal tuff - 60% mafics; local dense biotite bands; pure felsic bands - trace chlorite, epidote on fractures plus k-spar epidote fractures; trace pyrite - minor iron stain			
37.5	43.2	GNEISSIC MICRO DIORITE - banding complex & perpendicular to core axis; rubbly locally - pink k-spar with chlorite on fractures; feldspars kaolinized - rock locally fractured and filled with unconsolidated mud from mining			
43.2	44.2	DIORITE - 20% hornblende; 20% biotite; sphene - disseminated aligned epidote; local subtle chloritization - no sulfides			
44.2	44.7	HANGINGWALL VEIN (WEST VEIN) - 50% quartz, 50% altered diorite - diorite crenulated, chloritized, kaolinized; minor carbonate; leached pyrite - quartz contains 3-4% pyrite - ankerite veins; trace sericite - red oxide colour to entire section			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
44.7	45.7	DIORITE - 50% partially mylonitized, 50% chlorite sericite ankerite altered - 1-2% epidote through section; feldspars kaolinized - section averages .2% pyrite								
45.7	46.7	DIORITE - (Banded) - moderately fresh; rubbly - kaolinization, minor chloritization; epidote chlorite seams - 1-2 cm quartz vein with pyrite - section average 1% pyrite								
46.7	47.9	SAME AS 45.7 - 56.7 - 40% mafics - dominantly hornblende; sphene - .2 meter epidote seam with pyrite - section averages .1% pyrite								
47.9	51.1	DIORITE - crude banding perpendicular to core axis; slightly mylonitic - 4% disseminated epidote; minor sphene - few ankerite, chlorite seams with peripheral sericite								
51.1	52.1	DIORITE - 30% sheared with associated chlorite epidote - minor brown cherty ankerite breccia heal - few quartz chlorite ankerite lenses with trace pyrite								
52.1	53.1	DIORITE								

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	DDH 81-5	Commenced		Location		Tests at		Hor. Comp.	
Completed		Core Size		Corr. Dip		Co-ordinates		True Brg.		Logged by		Vert. Comp.	
Objective		% Recov.		Date		Claim		T Brg.		Collar Dip		Elev.	
Footage From	To	Description	Sample No.	Length	Analysis	Length	Sheet						
		- mylonitized and 50% chloritized											
		- fractures with chlorite epidote fill; feldspars kaolinized											
53.1	53.9	DIORITE											
		- mylonitized; 0.2 meter shear band with chlorite, ankerite, carbonate epidote and .1% pyrite											
		- feldspars kaolinized											
53.9	61.4	DIORITE - DIORITE PORPHYRY											
		- section 80% unaltered; narrow chlorite, sericite ankerite micromylonite zones											
		- few barren milky quartz seams @ 60.2 - 60.3											
		- numerous epidote feldspar seams											
61.4	81.7	DIORITE PORPHYRY											
		- 30% hornblende, 10% biotite; local biotite seams; highly fractured											
		- epidote, k-spar seams; disseminated epidote											
		- few barren quartz seams											
		- few traces of pyrite											
81.7	86.2	DIORITE -(Mylonitized)											
		- only porphyritic phases undestroyed											
		- high epidote in hairline fractures and 4 cm seams											
		- shearing and brecciation increases down section; increased chloritization											
		- no visible sulfides.											
86.2		START FOOTWALL SHEAR											
86.2	87.2	SHEAR - DIORITE											
		- intense chlorite, carbonate, epidote alteration											

Hole No. DDH 81-5 4

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		- relict kaolinized feldspars										
		- few calcite lenses with .1-.2% pyrite										
87.2	88.2	SAME AS 86.2 - 87.2										
		- increased gouge and rubble										
		- brown ankerite breccia heal										
		- trace visible pyrite										
88.2	89.2	SHEAR RUBBLE ZONE										
		- high chlorite carbonate content; local quartz; pink calcite lenses										
		- sericite bands; high epidote in less altered areas										
		- .1-.2% pyrite										
89.2	90.2	DIORITE										
		- moderate-highly altered										
		- chlorite carbonate bands plus epidotized mylonitic zones										
		- occasional quartz veins										
		- 0.1% pyrite										
90.2	90.8	END OF FOOTWALL SHEAR										
		- same as 89.2 - 90.2										
90.8	91.8	DIORITE - GNEISSIC DIORITE										
		- local biotite seams										
		- disseminations and lenses of calcite and epidote with quartz										
		- local chlorite ankerite lenses										
91.8	93.8	DIORITE										

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	- dark; micro mylonitized; banding perpendicular to core axis - local epidote seams with chlorite; minor kaolinization														
93.8 - 94.3	CHLORITE SHEAR - highly mylonitized and chloritized diorite - abundant calcite - narrow quartz sericite seam with 1% pyrite														
94.3 - 95.3	DIORITE - highly epidotized over 0.5 meter														
95.3 - 101.0	GNEISS WITH 30% DIORITE - GNEISSIC DIORITE - banding 80°-60° to core axis - feldspars kaolinized; feldspar epidote fracture fill														
101.0 - 106.0	DIORITE - foliation 70°-55° to core axis; 30% hornblende plus biotite - occasional epidote, feldspar seam; local chlorite - minor kaolinization														
106.0 - 107.5	DIORITE - crudely altered; mylonitized - mafics chloritized; minor epidote.														
107.5 - 118.0	DIORITE PORPHYRY - occasional quartz feldspar epidote seam														
118.0 - 118.4	EAST WEST SHEAR VEIN - coarse chlorite sericite alteration; abundant calcite; minor ankerite silica alteration														

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	T Brg.	Collar Dip	Elev.	Length
		- trace chalcopryite							
118.4	121.0	DIORITE							
		- 119.5 - 119.6 - quartz, sericite, chlorite shear with trace chalcopryite							
		- sphene plus disseminated epidote in section							
121.0	181.8	EAST WEST SHEAR							
		- high chlorite sericite zone							
		- one quartz ankerite chlorite seam with coarse sericite selvage							
		- 0.1% chalcopryite, trace pyrite							
121.8	122.1	DIORITE							
		- altered							
122.1	122.5	EAST WEST SHEAR							
		- intense sericite chlorite altered diorite							
		- 0.3% chalcopryite plus malachite							
		- minor quartz with trace chalcopryite							
122.5	123.6	DIORITE							
		- fresh, unfoliated							
123.6	123.65	NARROW QUARTZ CHLORITE SERICITE VEIN							
123.65	124.7	DIORITE							
		- fresh-moderately altered, minor epidote							
124.7	124.9	EAST WEST SHEAR							
		- quartz chlorite sericite with large bleb chalcopryite							
124.9	127.4	DIORITE							

Hole No. DDH 81-5
Sheet 7

Drill Hole Record



Scale
Colour Plot
& Dip

Property	SURF INLET	District	SKEENA	Hole No.	DDH 81-5
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
From	To										
	- fresh but for two narrow east west unmineralized seams										
	- very coarse sericite & pervasive chlorite on seams										
	END OF HOLE @ 127.4 meters.										

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-6
Commenced	July 10, 1981	Location		Tests at	Hor. Comp. 104.5 meters
Completed	July 14, 1981	Core Size	NQ	Corr. Dip	-45° Vert. Comp. 104.5 meters
Co-ordinates	5881 102N; 107 815E			True Brg.	090° Logged by A.C. FREEZE
Objective	A test for large tonnage low grade potential of shear		% Recov.	97.5% Abandoned	Date 30 Sept. 1981

Claim	SADIE
T Brg.	090°
Collar Dip	-45°
Elev.	130 meters
Length	147.8 meters
Hole No.	81-6
Sheet	1

Footage From To	Description	Sampl No.	Length	Analysis
0.0 - 5.5	CASING - No core recovery			
5.5 - 10.6	GNEISS - complex banding at all angles to core axis - fine grained granular micro diorite bands - coarse felsic rich zones with wispy biotite - quartz feldspar vein fill cut by chlorite epidote veins			
10.6 - 12.6	MICRO DIORITE 50% mafics, occasional gneissic lens			
12.6 - 20.8	GNEISS - complex folded; felsic rich biotite gneiss - occasional chloritic lens parallel to biotite folia - trace pyrite			
20.8 - 22.8	GNEISS - laminated; 25% biotite, 15% hornblende - occasional narrow mafic free band			
22.8 - 40.5	GNEISS - complex folded; banding generally parallel to core axis - local coarse biotite amphibole, feldspar; felsic sections generally clean - local dioritic lenses			
40.5 - 46.4	DIORITE - BANDED DIORITE - GNEISSIC DIORITE - 35% hornblende, 15% biotite; trace sphene - fresh, hornblende porphyroblasts			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-6
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
46.4	52.0	GNEISS - complex banded; 25% biotite, 15% hornblende - local diorite pods - unaltered								
52.0	59.4	GNEISS - less mafics; less complex banding - unaltered								
59.4	61.9	BIOTITE PHYLLITE - dark green; chloritic; fissile; occasional quartz lens - feldspars kaolinized; locally very calcareous - 90% mafic								
61.9	63.4	GNEISSIC DIORITE - banding at 80° to core axis								
63.4	67.9	DIORITE plus narrow GNEISSIC BANDS - banding at 70° to core axis; 40% mafics - 2 cm epidote chlorite seam at 67.4 m.								
67.9	73.7	GNEISS - banding perpendicular - 80° to core axis; local complex folding - disseminated and fracture controlled epidote; sphene								
73.7	74.7	PEGMATITIC AND FINE GRAINED GNEISS - coarse hornblende - subtle chloritization; trace pyrite								

Hole No. 81-6 Sheet 2

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-6						
Commenced		Location		Tests at	Hor. Comp.						
Completed		Core Size		Corr. Dip	Vert. Comp.						
Co-ordinates		True Brg.		Logged by							
Objective		% Recov.		Date							
Footage	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
From To										81-6	3
74.7 - 75.7	HORNBLLENDE PORPHYRY PEGMATITE - 30% mafics; clean felsic sections; epidote plus chlorite - banding at 70-80° to core axis - 0.1% disseminated pyrite; trace chalcopyrite										
75.7 - 76.7	SAME AS 74.7 - 75.7 - coarse chloritized hornblende porphyroblasts; 50% total mafics - minor sphene, epidote - 0.2% pyrite; trace pyrrhotite										
76.7 - 77.7	SAME AS 74.7 - 75.7 - porphyritic biotite - 0.1% pyrite										
77.7 - 78.7	SAME AS 74.7 - 75.7 - minor epidote on fractures - 0.1% pyrite										
78.7 - 79.7	SAME AS 74.7 - 75.7 - increasing epidote plus epidote chlorite - 0.1% pyrite										
79.7 - 81.7	GNEISS - GNEISSIC DIORITE - banding at 70° to core axis; fine-medium grained - local folding - trace pyrite in section										
81.7 - 83.7	GNEISSIC PEGMATITE										

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-6	Claim		T Brg.		Collar Dip		Elev.		Length		Hole No.	81-6	Sheet	4
Commenced		Location		Tests at		Hor. Comp.													
Completed		Core Size		Corr. Dip		Vert. Comp.													
Co-ordinates		True Brg.		Logged by															
Objective		% Recov.		Date															
Footage	Description		Sample No.	Length	Analysis														
From	To																		
		- 50-60% mafics; zones of massive hornblende and biotite																	
		- foliation at 70° to core axis																	
		- trace disseminated epidote with sphene																	
		- 0.1% pyrite																	
83.7	84.7	SAME AS 81.7 - 83.7																	
		- chloritized																	
		- 0.2% - 0.3% disseminated and fracture controlled pyrite with epidote																	
		- trace pyrrhotite																	
84.7	86.7	60% BIOTITE HORNBLENDE SCHIST, 40% FELSIC PEGMATITE																	
		- local carbonatization plus calcite veinlets																	
		- pervasive, chlorite; feldspars kaolinized																	
86.7	87.9	BIOTITE PHYLLITE																	
		- massive, chloritized																	
		- occasional felsic seam with intensely kaolinized feldspar																	
87.9	89.8	DIORITE - GNEISS BRECCIA																	
		- local hornblende breccia bands; kaolinization of feldspars																	
		- few epidote chlorite fracture seams																	
		- one hairline fracture with pyrite fill																	
89.8	91.8	GNEISS - GNEISS DIORITE																	
		- banding at all angles to core axis																	
		- local disseminated epidote, sphene																	
		- feldspars kaolinized; minor Fe oxide after biotite																	

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-6
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
91.8 - 94.0	DIORITE - fine to medium grained; few gneissic bands - feldspars somewhat kaolinized - some k-spar - chlorite seams								
94.0 - 105.0	GNEISS - dark; fine to medium grained; banding at 90° to core axis - narrow fractures with chlorite, epidote, k-spar (kaolinized) - 10% bands of weak chloritization - trace pyrite at 101.5								
105.0 - 115.9	GNEISSIC DIORITE - fine-medium grained; fine biotite; minor sphene, banding at 90° to core axis - fracture controlled and disseminated epidote with chlorite, k-spar								
115.9	START MAIN SHEAR ZONE								
115.9 - 116.4	SHEAR - ALTERED DIORITE - rubbly; mylonitized - high chlorite carbonate alteration - local quartz ankerite seams with medium-coarse euhedral pyrite - quartz chlorite, epidote on fractures								
116.4 - 118.4	GNEISSIC DIORITE - banding at 90° to core axis - epidote on fractures; some kaolinization; minor chloritization - narrow ankerite, chlorite seam								

Hole No. 81-6 Sheet 5

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-6	Hor. Comp.	
Commenced		Location		Tests at		Vert. Comp.	
Completed		Core Size		Corr. Dip		Logged by	
Co-ordinates		True Brg.		% Recov.		Date	
Objective							
Footage	Description	Sample No.	Length	Analysis			
From To							
118.4 - 120.4	GNEISSIC DIORITE, (mylonitic) - fresh but for 3 x 0.1 meters equispaced shear zones with quartz ankerite chlorite; trace pyrite plus carbonate						
120.4 - 121.4	DIORITE, (mylonitic) - 50% fresh, 50% highly altered - chloritized; quartz ankerite plus minor sericite seams with trace pyrite - quartz carbonate veins; epidote in low alteration zones						
121.4 - 122.1	DIORITE (sheared) - rubbly; chlorite gouge; high carbonatization plus calcite veinlets; minor epidote in less altered sections - massive quartz chlorite last .05 meter - trace pyrite						
122.1 - 123.1	80% MASSIVE QUARTZ, 20% SERICITE CHLORITE - 0.1-0.2% pyrite in chlorite sericite breccia fragments within a quartz matrix						
123.1 - 124.1	DIORITE - (sheared and mylonitized) - 0.2 meters massive quartz - calcite on fractures with quartz sericite, chlorite - ankerite grains with calcite - 4 hairline bands of chalcopryrite in with calcite, ankerite						
124.1 - 125.1	SAME AS 123.1 - 124.1 - 0.2 meter of massive chlorite sericite breccia in 80% quartz - 70% of section is massive chlorite sericite shear with numerous narrow ankerite zones.						

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					81-6	6

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	18-6																
Commenced		Location		Tests at		Hor. Comp.															
Completed		Core Size		Corr. Dip		Vert. Comp.															
Co-ordinates				True Brg.		Logged by															
Objective				% Recov.		Date															
Footage From	To	Description		Sample No.	Length	Analysis															
		- section grades 0.3% pyrite																			
		- pyrite on fractures with chlorite, carbonate in with quartz and mixed in massive chlorite sericitic ankerite bands																			
125.1	126.1	DIORITE																			
		- pervasive weak chloritization; feldspars kaolinized; numerous epidote stringers																			
		- highly mylonitized and chloritized over last 0.4 meter																			
		- calcite on fractures																			
		- traces of pyrite																			
126.1	127.1	DIORITE																			
		- 126.2 - 126.3 - chlorite, sericite, quartz, calcite ankerite fill with trace pyrite																			
		- local black cherty ankerite fracture fill; chloritic; matrix light green																			
127.1	128.1	DIORITE altered, mylonitized																			
		- 0.2 meter of ankerite, chlorite, sericite, with two narrow bands grading 0.5% pyrite																			
		- coarse sericite on fractures locally; high carbonate; chlorite epidote bands																			
		- traces of pyrite through section																			
128.1	129.1	DIORITE																			
		- micro mylonitic, moderate chloritization; epidote plus calcite on fractures with trace pyrite.																			
129.1	130.1	SAME AS 128.1 - 129.1																			
130.1	131.1	DIORITE (sheared, mylonitized)																			
		- section 50% intense quartz, chlorite, sericite alteration																			
		- narrow intervals of 2% pyrite with section average of 0.5% pyrite																			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-6	Claim		T Brg.		Collar Dip		Elev.		Length		Hole No.	81-6	Sheet	8
Commenced		Location		Tests at		Hor. Comp.													
Completed		Core Size		Corr. Dip		Vert. Comp.													
Co-ordinates		True Brg.		Logged by															
Objective		% Recov.		Date															
Footage	From	To	Description	Sample No.	Length	Analysis													
	131.1	132.1	- some ankerite calcite seams; local barren quartz veins DIORITE, (mylonitized)																
	132.1	133.1	- moderate chloritization; fresher sections have quartz epidote on fractures; trace sphene - calcite ankerite on fractures; trace pyrite DIORITE (sheared)																
	133.1	134.4	- light green; chloritic; mylonitic - minor quartz sericite; few quartz ankerite chlorite fractures - trace pyrite CHLORITE, SERICITE, QUARTZ ROCK																
	134.4	135.4	- green; few narrow quartz ankerite veins with coarse pyrite - 0.7% fine grained disseminated pyrite SERICITE CHLORITE ROCK																
	135.4	136.4	- 1.5 - 2.0% pyrite mainly concentrated in envelopes adjacent to quartz ankerite chlorite seams. SAME AS 134.4 - 135.4																
	136.4	137.4	- pyrite average 0.5% - two quartz ankerite seams; silicification increasing. DIORITE																
	137.4	138.4	- high sericite chlorite alteration - narrow band of quartz chlorite ankerite DIORITE																
			- sericitized, chloritized																

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-6																
Commenced		Location		Tests at		Hor. Comp.															
Completed		Core Size		Corr. Dip		Vert. Comp.															
Co-ordinates				True Brg.		Logged by															
Objective				% Recov.		Date															
Footage From	To	Description				Sample No.	Length	Analysis													
		- few tight ankerite, chlorite, calcite seams - trace pyrite																			
138.4	139.4	50% SHEAR, 50% ALTERED DIORITE Shear-intense carbonate, chlorite, sericite; quartz ankerite veins; few quartz veins, 0.2% pyrite average																			
139.4	140.4	SAME AS 138.4 - 139.4 - section is 80% carbonate, sericite, chlorite rock - minor calcite hematite seams; 6 narrow quartz ankerite seams - pyrite at 1.5 - 2.0% mainly adjacent to quartz ankerite seams and as disseminations in chlorite, sericite rock																			
140.4	141.4	SHEAR-ALTERATION - intense quartz, chlorite, sericite carbonate alteration - 1 at 0.1 meter quartz seam; 15% of section is quartz, chlorite, ankerite seams; few calcite seams. - pyrite averages 1.5 - 2.0%																			
141.4	142.4	- 70% INTENSE CHLORITE SERICITE ROCK, 30% ALTERED DIORITE - 3-4 barren quartz veins - 1.0% pyrite in sericite chlorite rock - diorite → chloritized with feldspars kaolinized																			
142.4	143.4	70% ALTERED DIORITE, 30% INTENSE CHLORITE SERICITE ALTERED ROCK - diorite - high chloritization; kaolinization - bands of pyrite adjacent to quartz veins																			

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-6
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	T Brg.	Collar Dip	Elev.	Length
		- pyrite averages 0.5% through section							
143.4	144.4	SAME AS 142.4 - 143.4							
		- high carbonate veining in chloritized diorite; fractured and rubbly							
		- minor sericite							
		- pyrite averages 0.5%							
144.4	145.4	50% BULL QUARTZ BRECCIA WITH MINOR CHLORITE SERICITE							
		50% intense chlorite sericite ankerite rock							
		- pyrite averages 1% over section							
145.4	146.6	BULL QUARTZ							
		- highly fractured with 10% sericite chlorite seams							
		- 1% pyrite disseminated in quartz with chlorite, sericite							
146.6	147.8	DIORITE GOUGE RUBBLE							
		- highly sheared and chlorite altered; minor epidote; 0.2% pyrite							
		HOLE ABANDONED AT 147.8 meters.							

Hole No. 81-6 Sheet 10

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-7
Commenced	July 16, 1981	Location		Tests at	147.2 meters
Completed	July 18, 1981	Core Size	HQ	Hor. Comp.	104.1 meters
Co-ordinates	5881 330N; 507 855E			Vert. Comp.	104.1 meters
Objective	A test for large tonnage low grade potential of shear			True Brg.	090°
				Logged by	A.C. FREEZE
				% Recov.	97.8%
				Date	2 October 1981

Claim

SADIE

T Brg.

090°

Collar Dip

-45°

Elev.

48 meters

Length

147.2 meters

Hole No.

81-7

Sheet

1

Footage From To	Description	Sample No.	Length	Analysis
0.0 - 5.9	CASING - No core recovery			
5.9 - 17.7	DIORITIC GNEISS - banding at 80°-45° to core axis; coarse hornblende and biotite phenocrysts in poorly segregated rock - 30-40% mafics; few clean quartz plagioclase lenses - narrow mud seam at 8.2 meters; local massive biotite lenses			
17.7 - 23.2	BANDED DIORITE - GNEISSIC DIORITE - banding at 90°-60° to core axis; local coarse hornblende clots - local hairline feldspar epidote seams; sphene, magnetite			
23.2 - 29.9	GNEISS - GNEISSIC DIORITE - well banded at 60° to core axis; fresh - local disseminated epidote and chlorite epidote seams - 40% mafics; equal hornblende and biotite			
29.9 - 35.0	DIORITE - crudely → non-foliated; medium to coarse grained; fresh - minor fracturing with k-spar; epidote seams cutting - biotite bands; local kaolinization of feldspar			
35.0 - 50.0	DIORITE - massive; equigranular; crudely foliated - few narrow quartz chlorite epidote seams; sphene - 40% mafics; hornblende phenocrysts up to 1 cm. diameter - few narrow biotite bands			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-7
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
50.0	58.2	DIORITE - massive, coarse grained - epidote increasing, plus quartz epidote increasing - minor chlorite seams appear at 57.0 meters								
58.2	58.3	DIORITE - highly altered								
58.3		MAIN SHEAR								
58.3	58.6	50% BULL QUARTZ, 50% EPIDOTIZED CHLORITIZED DIORITE - minor ankerite seams adjacent to quartz; hematite-calcite seam - some oxide after pyrite in quartz								
58.6	60.1	DIORITE - light green; epidotized; chloritic; feldspars kaolinized - section averages 30% epidote; minor carbonatization								
60.1	60.8	ALTERATION ZONE - 0.1 meter bull quartz containing trace pyrite in chlorite, sericite breccia - 0.6 meter green grey chlorite sericite rock - pyrite averages 3% as disseminations and on fractures								
60.8	61.4	DIORITE - Altered - section 30% chlorite, sericite with calcite seams - 0.3% pyrite								
61.4	61.5	MASSIVE PYRITE - 10% quartz chlorite included								

Hole No. 81-7 Sheet 2

Scale
Colour Plot
& Dip

Drill Hole Record



Property SURF INLET District SKEENA Hole No. 81-7
 Commenced _____ Location _____ Tests at _____ Hor. Comp. _____
 Completed _____ Core Size _____ Corr. Dip _____ Vert. Comp. _____
 Co-ordinates _____ True Brg. _____ Logged by _____
 Objective _____ % Recov. _____ Date _____

Claim _____
 T Brg. _____
 Collar Dip _____
 Elev. _____
 Length _____
 Hole No. 81-7 Sheet 3

Footage From	To	Description	Sample No.	Length	Analysis
61.5	62.6	DIORITE - high chloritization; kaolinization - 0.2 meter zone chlorite, sericite, quartz, calcite - section averages 0.4% pyrite			
62.6	63.8	BULL QUARTZ BRECCIA - 15% sericite; chlorite plus minor ankerite with pyrite; minor disseminated pyrite in quartz - section averages 0.5% pyrite			
63.8	64.8	DIORITE - intensely chloritized and sericitized; 10% discreet quartz veining - 10-15% calcite lenses; local diorite remnants - section averages 0.8% pyrite			
64.8	65.8	SAME AS 63.8 - 64.8 - somewhat less chlorite sericite alteration - section averages 0.5% pyrite			
65.8	66.8	DIORITE - Highly Altered - high chlorite minor sericite; siliceous bands; disseminated carbonate - section averages 0.3% pyrite			
66.8	67.8	DIORITE - moderately altered; rubbly; highly brecciated; 5% epidote locally - two narrow quartz veins with trace pyrite - minor calcite fracture fill			
67.3	68.8	DIORITE - Mylonitized			

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-7
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
	- calcite, chlorite, epidote plus minor sericite altered								
	- feldspar kaolinized; trace chalcopryite on fractures								
68.8 - 70.8	DIORITE								
	- rubbly; altered; mylonitized								
	- moderate-high epidote on close spaced fractures; high chlorite								
	- quartz-epidote veins								
	- traces of pyrite								
70.8 - 72.8	SAME AS 68.8 - 70.8								
	- rubbly; 0.1 meter black cherty ankerite band @ 72.2								
	- high epidote; minor chlorite; calcite lenses								
	- no visible pyrite								
72.8 - 75.0	DIORITE								
	- mylonitized; high epidote in bands; diminished chloritization								
	- kaolinization of feldspars; some pink k-spar veining								
75.0 - 80.7	DIORITE								
	- foliated at 60° to core axis; mainly fresh								
	- feldspar porphyroblasts locally kaolinized								
	- local epidote ankerite seams; minor chlorite on fractures								
80.7 - 93.9	DIORITE PLUS GNEISSIC DIORITE								
	- fresh; 45% mafics; narrow biotite bands; banding at 90°-60°								
	- minor epidote, sphene								
93.9 - 95.9	MIXED								

Hole No. 81-7
Sheet

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-7
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					Hole No.	Sheet	
					Claim	T Brg.	Collar Dip	Elev.	Length			
		93.9 - 94.0 - east-west shear; silica chlorite sericite, no sulfides										
		94.0 - 94.3 - gneissic diorite										
		94.3 - 95.9 - east-west shear plus 50% altered diorite - high chlorite, sericite, carbonate, ankerite alteration; minor epidote - one .05 meter quartz seam										
95.9	97.1	GNEISSIC DIORITE										
97.1	97.4	EAST WEST SHEAR ZONE - chlorite sericite silica alteration; trace pyrite with ankerite										
97.4	98.8	DIORITE - fresh; foliated; narrow mafic rich bands; few specs epidote										
98.8	98.9	EAST WEST SHEAR - intense quartz, chlorite, sericite alteration; minor chalcopyrite with ankerite										
98.9	108.2	DIORITE plus DIORITIC GNEISS - fresh; foliation 90 ⁰ -60 ⁰ to core axis; minor chlorite epidote veining; narrow oxidized biotite lenses - 104.4 - 104.8 - narrow unmineralized east-west shear										
108.2	108.7	TACTITE ZONE - quartz, pink calcite (rhodochrosite?), feldspar, chlorite, epidote zone - gypsum; trace pyrite in epidote pod										
108.7	112.2	GNEISS mixed with DIORITIC GNEISS - thick biotite bands; local chlorite; minor sphene - two narrow east-west veins with trace pyrite										

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-7
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
112.2	121.7	DIORITE - crude banding → massive equigranular - disseminated epidote and sphene - local narrow sericite, chlorite, epidote seams								
121.7	122.3	EAST WEST VEIN - sericite chlorite with quartz ankerite core - trace pyrite, chalcopyrite								
112.3	126.8	DIORITE - fresh; massive; crudely foliated; epidote, sphene; local amphibole porphyroblasts								
126.8	127.2	EAST WEST SHEAR - chlorite sericite with quartz band cutting; coarse sericite - trace pyrite								
127.2	127.4	DIORITE								
127.4	128.4	EAST WEST SHEAR - intense chlorite, sericite - 0.1 meter band ankerite, quartz, siderite with chlorite sericite - minor chalcopyrite								
128.4	129.7	EAST WEST SHEAR CONT. - 40% epidotized, chloritized diorite - few specs chalcopyrite								
129.7	147.2	DIORITE - massive; equigranular; fresh								

Hole No. 81-7 Sheet 6

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8	Hor. Comp.	110.0 meters
Commenced	July 23, 1981	Location		Tests at		Vert. Comp.	110.0 meters
Completed	July 26, 1981	Core Size	NQ	Corr. Dip	-45°	Logged by	A. C. FREEZE
Co-ordinates	5881 490N; 507 805E			True Brg.	090°	Date	20 October 1981
Objective	A test for large tonnage low grade potential of shear			% Recov.	96.9%		

Claim	SEAGULL DLS
T Brg.	090°
Collar Dip	-45°
Elev.	38 meters
Length	155.4 meters
Hole No.	81-8
Sheet	1

Footage From	To	Description	Sample No.	Length	Analysis
0.0	25.0	CASING - No core recovery - 35' casing recovered; 47' casing plus one shoe left in hole			
25.0	37.0	GNEISS - DIORITIC GNEISS - banding at 65°-70° to core axis; 40-50% mafics - numerous 0.1 - 1.0 meter biotite bands; local feldspar porphyroblasts - local narrow quartz feldspar fracture fill - 35.5 - 36.5 → chlorite gouge - 37.0 → narrow chloritic band with trace pyrite			
37.0	42.4	GNEISS - 50% of section is highly broken; occasional feldspar porphyry - local epidote fracture fill; minor sphene - calcite chlorite fracture @ 38.5; occasional milky quartz vein			
42.4	44.1	BANDED GNEISS - DIORITIC GNEISS - fresh; traces of epidote, sphene; minor magnetite - numerous narrow biotite lenses; occasional feldspar porphyroblasts			
44.1	48.4	DIORITE - banded; fresh; competent; disseminated epidote.sphene - local quartz veining			
48.4	55.8	DIORITE - few narrow biotite xenoliths; minor epidote, sphene, magnetite.			
55.8	57.4	GNEISS - DIORITIC GNEISS (Alteration Zone) - crackled; mylonitic; biotite oxidized; hornblende chloritized			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced	Location		Tests at	Hor. Comp.	
Completed	Core Size		Corr. Dip	Vert. Comp.	
Co-ordinates			True Brg.	Logged by	
Objective			% Recov.	Date	

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
57.4	67.2	- minor silica; chlorite, epidote and trace sericite alteration GNEISSIC DIORITE - 45% mafics, dominantly hornblende; banding 90°-45° to core axis - local biotite lenses; fractures with epidote; ground broken - few isolated quartz veins									81-8	2
67.2	67.2	START MAIN SHEAR										
67.2	68.1	- shear; 25% siderite, 25% sericite, 20% coarse ankerite, 30% chlorite, minor calcite - replacement vein with one coarse bleb of pyrite - occasional barren quartz vein										
68.1	69.0	DIORITE - Altered - 50% silica, chlorite, sericite rock; trace pyrite in high altered sections. - carbonate; numerous narrow quartz-ankerite seams - high disseminated epidote in fresher sections										
69.0	69.2	ALTERATION ZONE - intense chlorite, silica, sericite alteration - quartz-ankerite at center of seam - section averages 2.0% pyrite										
69.2	71.6	DIORITE -(Sheared, Altered) - 6 narrow chlorite-silica alteration seams - high epidote in less altered areas; local narrow calcite seams - traces of pyrite										
71.6	72.0	ALTERATION										

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
		- chlorite, sericite, quartz, carbonate - 1.0% pyrite								
72.0	74.1	DIORITE - fresh; moderately altered; banded; moderately fractured - two narrow quartz, chlorite, ankerite seams - minor epidotization								
74.1	74.6	ALTERATION ZONE - intense chlorite, sericite, quartz, ankerite alteration - 10% siderite - ankerite plus siderite on same vein; feldspars kaolinized - pyrite averages 1.5%								
74.6	75.6	DIORITE - all mafics chloritized; moderate silicification; trace sericite - ankerite calcite siderite seams - minor epidote - traces of pyrite								
75.6	75.9	80% milky quartz, 20% ankerite, sericite, chlorite - trace pyrite								
75.9	77.0	DIORITE - mylonitic; local high silica, sericite, chlorite, ankerite alteration - calcite fracture fill - traces of pyrite								

Hole No. 81-8
Sheet 3

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
77.0 - 80.4	DIORITE - banding perpendicular to core axis - fresh; unaltered; local tight chlorite epidote ankerite seams; modest epidote, sphene										
80.4 - 81.3	DIORITE plus ALTERATION - locally mylonitic; chlorite, ankerite, sericite alteration - local quartz ankerite seams - pyrite averages 0.5% over section										
81.3 - 82.2	DIORITE - fresh; crudely banded; disseminated epidote, sphene										
82.2 - 82.7	SHEAR - light green; highly chloritic; few ghosts after diorite - local quartz ankerite seams; high carbonate - trace pyrite										
82.7 - 83.1	ALTERATION - 70% quartz; 18% sericite, chlorite; 2% ankerite with siderite - .05 meter massive pyrite, 1% chalcopyrite										
83.1 - 83.3	ALTERATION - 90% quartz; 10% ankerite, siderite; 0.5% pyrite										
83.3 - 84.3	SHEAR ZONE - highly mylonitized and chloritized diorite - high carbonate; seams of ankerite; local quartz sericite seams - 0.2% pyrite in section										

Scale
 Color Plot
 & Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
84.3	84.5	ALTERATION - intense sericite, chlorite; narrow quartz, ankerite seams - section averages 2.0% pyrite									81-8	5
84.5	87.8	DIORITE - highly broken; some grinding; mainly fresh - local chlorite epidote seams; narrow barren quartz-ankerite band; local brown cherty ankerite fracture fill										
87.8	89.8	DIORITE - rubbly; mylonitic; some kaolinization; local chlorite - numerous cherty ankerite bands; abundant epidote										
89.8	91.8	DIORITE - 4 cm black cherty ankerite band at 89.9 - some kaolinization of feldspars - 91.5 - 91.8 → pebbles and ground core with traces of pyrite										
91.8	92.6	ALTERATION - intense sericite, quartz, chlorite; high post depositional shearing - numerous calcite seams - 0.2 meter band of quartz with 3% pyrite; 0.2% chalcopyrite - disseminated pyrite through rest of section										
92.6	94.6	DIORITE - mylonitized; highly chloritized; numerous pink carbonate veins - minor sericite chlorite seams; high epidote; some kaolinization										

Scale
 Correl Plot
 & Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
94.6 - 95.6	- traces of pyrite SAME AS 92.6 - 94.6								
95.6 - 96.6	- narrow quartz sericite band DIORITE								
96.6 - 99.2	- 10% calcite epidote chlorite fracture fill - trace pyrite DIORITE								
99.2 - 99.7	- fresh; broken; banding perpendicular to core axis - moderate epidote; narrow chlorite carbonate lenses SHEAR								
99.7 - 105.6	- silica epidote and lesser sericite chlorite alteration - section averages 0.5% pyrite DIORITE								
105.6 - 106.6	- mylonitized; local chlorite seams; modest epidote - banding at 80° to core axis - chert ankerite bands - trace pyrite								
106.6 - 109.2	DIORITE - mylonitized; more pervasive chlorite, silica alteration - some kaolinization								
	DIORITE - mylonitized; broken; local quartz chlorite seams								

Sheet 81-8

Scale
Colour Plot
& Dip



Drill Hole Record

Property	SURF INLET	District	SKEENA	Hole No.	81-8
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage from	To	Description	Sample No.	Length	Analysis
109.2	110.2	- chlorite epidote seams DIORITE - mylonitized; 30% high chlorite, sericite, silica alteration - epidote chlorite seams - trace pyrite			
110.2	110.6	ALTERATION - carbonate, chlorite, quartz, ankerite seams - trace pyrite			
110.6	111.6	ALTERATION - intense sericite, chlorite, quartz, carbonate - narrow quartz ankerite seam; calcite hematite seams - pyrite averages 1.0%			
111.6	112.6	DIORITE - mylonitized; locally slightly altered; narrow quartz vein with chlorite			
112.6	113.6	EAST WEST VEIN - .05 meter black cherty band - high quartz, epidote plus sericite, chlorite - trace pyrite			
113.6	117.4	GNEISS - DIORITIC GNEISS - banding perpendicular to core axis; milled; slightly altered - discreet biotite lenses; thick epidote bands - local narrow quartz, sericite, chlorite lenses			

Claim
T Brg.
Collar Dip
Elev.
Length
Hole No. 81-8
Sheet 7

Scale
Colour Plot
& Dip

Drill Hole Record



Property SURF INLET District SKEENA Hole No. 81-8
 Commenced _____ Location _____ Tests at _____ Hor. Comp. _____
 Completed _____ Core Size _____ Corr. Dip _____ Vert. Comp. _____
 Co-ordinates _____ True Brg. _____ Logged by _____
 Objective _____ % Recov. _____ Date _____

Claim _____
 T Brg. _____
 Collar Dip _____
 Elev. _____
 Length _____
 Hole No. 81-8 Sheet 3

Footage From To	Description	Sample No.	Length	Analysis
	@ 116.5 - 116.6 - tactite with garnet, chlorite, quartz, epidote			
117.4 - 118.0	EAST WEST SHEAR - intense chlorite, sericite alteration adjacent to quartz ankerite bands - local fresh gneissic patches			
118.0 - 119.0	GNEISS - high biotite - local chlorite seams with 4% pyrite - section averages 2% fine disseminated pyrite associated with epidote, sericite			
119.0 - 120.0	SAME AS 118.0 - 119.0 - high epidote; banding perpendicular to core axis - section averages 1.5 - 2.0% pyrite			
120.0 - 121.3	GNEISS - banding at 15° to core axis - 0.3% disseminated pyrite with epidote, trace sericite			
121.3 - 129.0	DIORITE - banded; biotite seams, sphene - local gneissic sections; some epidote with trace pyrite - east west shears @ 123.4 - 123.5, 124.2 - 124.4, 126.4 - 126.6, 127.7 - 128.0			
129.0 - 135.0	GNEISSIC DIORITE - massive; local chlorite epidote seams; minor kaolinization - east west shears at 129.0, 132.1 - 132.3			
135.0 - 153.3	GNEISSIC DIORITE			

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-8						
Commenced		Location		Tests at		Hor. Comp.					
Completed		Core Size		Corr. Dip		Vert. Comp.					
Co-ordinates				True Brg.		Logged by					
Objective				% Recov.		Date					

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		- biotite = hornblende; local breccia clots; biotite bands									81-8	9
		- poor gneissic segregation; trace epidote										
		- east west shear at 142.8 - 142.9, 144.0, 144.6										
		- at 151.9 - black chert band; trace pyrite at 152.4 - 152.6										
153.3	155.4	DIORITE										
		- fresh; equigranular; unbroken.										
		END OF HOLE @ 155.4 meters										

Scale

Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9
Commenced	July 20, 1981	Location		Tests at	Hor. Comp. 96.0 meters
Completed	July 22, 1981	Core Size	NQ	Corr. Dip	-50°
Co-ordinates	5881, 700N; 507, 920E			True Brg.	090°
Objective	A test for large tonnage low grade potential of shear			% Recov.	97.5%
				Date	22 October 1981

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	DLS	T Brg.	Collar Dip	Elev.
0.0	8.2	CASING - No core recovery							
8.2	22.8	GNEISSIC DIORITE - banding at 70° to core axis; 30%/10% hornblende/biotite - minor sphene; magnetite - local shearing with chlorite, epidote - local kaolinized feldspars - towards end of section degree of shearing and alteration increases							
22.8		START MAIN SHEAR							
22.8	24.8	DIORITE - mylonitized; moderately fresh; section averages 10% epidote - banding at 90-60° to core axis; locally highly broken - minor kspar on fractures with epidote; local ankerite with epidote							
24.8	26.8	DIORITE - mylonitized; zone averages 25% epidote on bands & fractures - epidote with quartz locally; minor chlorite on shears; trace carbonate - local silicification - some crenulation; rubbly							
26.8	28.8	DIORITE - rubble - light green; high epidote chlorite altered; feldspars kaolinized - 30% epidote, 20% chlorite, 15% silica - late calcite ankerite fractures							
28.8	30.8	SAME AS 26.8 - 28.8							

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9	Claim		T Brg.		Collar Dip		Elev.		Length		Hole No.	81-9	Sheet	2
Commenced		Location		Tests at		Hor. Comp.		Vert. Comp.		Logged by		Date							
Completed		Core Size		True Brg.		% Recov.													
Co-ordinates		Objective																	
Footage From	To	Description	Sample No.	Length	Analysis														
		- numerous quartz, chlorite, pink carbonate seams; only 10% fresh diorite - feldspars kaolinized; numerous late carbonate fracture fills - trace pyrite																	
30.8	32.3	DIORITE - sheared - yellow - light green - 30% epidote, 30% chlorite, 20% milky quartz, 20% altered diorite; trace ankerite - minor sericite, one bleb chalcopryrite - trace pyrite																	
32.3	34.3	DIORITE -(Mylonitic) - 0.6 meter of massive epidote; minor chlorite - trace pyrite																	
34.3	36.3	DIORITE -(Mylonitic) - 20% fracture controlled and disseminated epidote - feldspars kaolinized; chlorite carbonate fractures - trace pyrite with epidote-ankerite at end of section																	
36.3	37.6	DIORITE - banding at 60° to core axis; rubbly - 5% epidote; silica chlorite sections																	
37.6	38.0	ALTERATION - quartz, chlorite, sericite, epidote seam; minor carbonate - 0.5% pyrite																	
38.0	40.0	DIORITE																	

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	81-9
Sheet	3

Footage From To	Description	Sample No.	Length	Analysis			
	- moderately altered; banded; mylonitic - 15% epidote on fractures and seams - trace pyrite						
40.0 - 42.0	DIORITE - mylonitized; relatively fresh; numerous chlorite seams - 5% epidote; minor ankerite						
42.0 - 44.0	SAME AS 40.0 - 42.0 - 43.2 - 43.4 + high chlorite, sericite, silica, carbonate altered - 15% epidote over section - feldspars kaolinized						
44.0 - 46.0	DIORITE - dark; mylonitized; narrow chlorite sericite ankerite shear - 3% epidote - trace pyrite						
46.0 - 47.0	DIORITE - sheared; mylonitized - 20% epidote; local quartz carbonate seams - trace pyrite						
47.0 - 52.0	DIORITE - banded; locally mylonitized - numerous narrow bands of epidote; 3 bands quartz - feldspar kaolinized; chlorite seams						

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
52.0 - 52.4	EAST WEST SHEAR - quartz, chlorite, sericite, ankerite - 0.3% chalcopryrite, 0.5% pyrite								
52.4 - 58.3	GNEISSIC DIORITE - mainly fresh; few narrow east west bands - sphene plus disseminated epidote; some biotite bands								
58.3 - 58.9	ALTERATION - sericite quartz, chlorite, carbonate rock coarse fissile sericite - trace pyrite								
58.9 - 60.2	SAME AS 58.3 - 58.9 - 90% sericite - 1% pyrite in coarse blebs up to 1 cm								
60.2 - 61.6	SAME AS 58.3 - 58.9 - 70% sericite; 20% chlorite; minor ankerite - 0.3% pyrite near chlorite, quartz fracture								
61.6 - 65.5	GNEISSIC DIORITE - GNEISS - numerous discreet felsic bands; feldspars kaolinized - local chlorite pods; minor sphene - trace pyrite with epidote								
65.5 - 66.3	DIORITE - banding 60° to core axis; fresh; biotitic - 2% fracture controlled and disseminated pyrite with epidote								

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	T Brg.	Collar Dip	Elev.	Length
66.3	66.6	SAME AS 65.5 - 66.2 - no epidote; no pyrite							
66.6	68.6	SAME AS 65.5 - 66.3 - some felsic bands; locally quartz chlorite - section averages 1.5% pyrite with epidote							
68.6	77.9	DIORITE - fresh; fine-medium grained; crudely foliated; biotite bands - epidote; sphene; xenolithic clots - few clear quartz veins - trace pyrite with chlorite							
77.9	78.7	EAST WEST SHEAR - 80% sericite chlorite; 0.1 meter quartz sericite siderite band - trace pyrite							
78.7	80.5	DIORITE - banded; biotitic; local iron stain - banding @ 70° to core axis; minor chlorite epidote bands							
80.5	80.7	EAST WEST SHEAR - chlorite, sericite, ankerite; no sulfides							
80.7	80.9	SAME AS 78.7 - 80.5							
80.9	81.6	EAST WEST SHEARS plus BIOTITIC DIORITE - trace pyrite							
81.6	84.6	DIORITE							

Scale

Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-9
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 81-9	Sheet 6
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Footage From	To	Description	Sample No.	Length	Analysis
		- local biotite xenoliths			
		- one narrow chlorite, quartz, ankerite siderite seam			
		- epidote, sphene			
84.6	85.5	EAST WEST SHEAR			
		- massive chlorite sericite with quartz, ankerite, chlorite, siderite			
		- trace pyrite			
85.5	87.6	DIORITE			
		- banding at 80°- 50° to core axis; biotitic			
		- milky quartz veins; trace epidote with pyrite			
87.6	87.9	EAST WEST SHEAR			
		- quartz, chlorite, sericite			
		- .05 meter at 2.0% pyrite			
87.9	90.2	DIORITE			
		- disseminated and fracture controlled epidote; trace sphene			
90.2	91.8	EAST WEST SHEAR			
		- 50% sericite-chlorite alteration			
		- narrow quartz ankerite chlorite seams; carbonate with quartz			
		- trace chalcopryrite			
91.8	148.7	DIORITE			
		- East West shears at 93.9, 99.0, 111.2			
		- diorite fresh, equigranular, porphyritic			
		- trace chalcopryrite at 114.2			

END OF HOLE @ 148.7

211-8437

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-10
Commenced	July 7, 1981	Location		Tests at	Hor. Comp. 107.0 meters
Completed	July 9, 1981	Core Size	NQ	Corr. Dip	-45°
Co-ordinates	5881 990N; 507 940E			True Brg.	090°
Objective	A test for large tonnage low grade potential of shear			% Recov.	97.4%
				Date	23 October 1981

Claim	LAKE FRACTION
T Brg.	090°
Collar Dip	-45°
Elev.	155.0 meters
Length	151.8 meters
Hole No.	81-10
Sheet	1

Footage From To	Description	Sample No.	Length	Analysis
0.0 - 15.0	OVERBURDEN - No core recovery			
15.0 - 26.1	GNEISS plus MICRO DIORITE - high biotite in thick complex twisted bands; minor epidote - few mud lenses; occasional quartz feldspar fracture fill - occasional biotitic xenoliths - banding at 80° to core axis - weak tactite at 24.2 - 24.5 (no garnet)			
26.1 - 27.1	TACTITE GNEISS - 40% epidote plus chlorite with 3% leached sulfides - local gneiss bands contain coarse clots hornblende			
27.1 - 38.2	DIORITIC GNEISS - poor well segregated; rubbly; locally mylonitized - local epidote seams with potash feldspar; biotite bands - amphibole porphyroblasts locally; sphene - some chlorite, epidote fracture fill; local silicification			
38.2 - 39.6	SHEAR - TACTITIC - mylonitized gneissic diorite - 15% epidote, 20% chlorite; minor ankerite on fractures - few quartz seams - traces of pyrite			
39.6 - 40.8	GNEISSIC TACTITE ZONE - purple and green bands			

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
40.8	45.0	DIORITE mixed with GNEISSIC BANDS - few thick biotite bands with chlorite seams - local epidote fracture fill								
45.0	49.2	DIORITIC GNEISS - banding at 90°-70° to core axis - local biotite seams; chlorite seams; epidote kspar seams - kaolinized feldspar; hornblende plus plagioclase porphyroblasts								
49.2	49.5	SHEAR - quartz, sericite lesser chlorite; vuggy - section averages 2.0% pyrite								
49.5	53.4	GNEISSIC DIORITE - banding at 90°-80° to core axis; local micaceous gneissic lenses - disseminated plus fracture controlled epidote - some mylonite with chlorite shears - local quartz breccia with ankerite seams								
53.4		START MAIN SHEAR								
53.4	53.8	DIORITE - mylonitized; chlorite, silica, epidote alteration - few traces of pyrite								
53.8	54.0	ALTERATION - quartz, epidote, chlorite, breccia - minor ankerite								

Hole No. 81-10 Sheet 2

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
54.0	56.0	DIORITE - section averages 4.0% pyrite - mylonitized; mafics extensively chloritized - epidote plus epidote quartz seams; chlorite-ankerite fracture fill - minor pink calcite seams								
56.0	57.0	DIORITE - sheared; mylonitized; all mafics chloritized - numerous quartz epidote seams - ankerite-chlorite with trace pyrite								
57.0	58.0	SAME AS 56.0 - 57.0 - quartz epidote band over last 0.1 meter with trace pyrite								
58.0	59.0	ALTERATION - Shear - 30% quartz bands; 65% chlorite sericite rock - calcite fracture fill; ankerite plus local siderite - section average 0.2% pyrite								
59.0	60.0	SAME AS 58.0 - 59.0 - 50% milky quartz seams; siderite, sericite, chlorite with pink calcite; minor siderite - section averages 0.5% pyrite								
60.0	61.0	SHEAR-BRECCIA - 30% quartz; few visible feldspar remnants - high chlorite; local sericite with quartz - minor siderite, ankerite, calcite								

Hole No. 81-10 Sheet 3

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURE INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
61.0	62.0	- section averages 0.6% pyrite; trace chalcopyrite DIORITE									81-10	4
		- highly altered and mylonitized; light green; feldspar remnants										
		- high carbonate; narrow quartz veins; calcite fracture fill										
		- trace pyrite										
62.0	63.3	SAME AS 61.0 - 62.0										
		- one quartz, chlorite, ankerite, siderite seam										
63.3	63.6	ALTERATION										
		- massive foliated chlorite sericite										
		- 5.0% pyrite and 0.5% chalcopyrite in bands										
63.6	64.0	ALTERATION										
		- moderate to high chlorite sericite in mylonitized diorite										
		- calcite ankerite fracture fill; silicification										
64.0	65.2	DIORITE										
		- sheared; mylonitized; chlorite sericite bands										
		- chalcopyrite plus malachite on long fracture with quartz chlorite										
		- section averages 0.2% pyrite, 0.2% chalcopyrite										
65.2	66.2	DIORITE -(Sheared mylonitized)										
		- local chlorite; calcite seams; sericite quartz bands										
		- minor disseminated pyrite										
66.2	68.2	DIORITE										
		- sheared; mylonitized; chloritic										

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis					
					Claim	T Brg.	Collar Dip	Elev.	Length	
68.2	70.2	DIORITE - (Partially mylonitized) - carbonate; chlorite fractures - quartz seam with 0.2% visible sulfides - local quartz, sericite, chlorite, ankerite seams; feldspars kaolinized - section averages 0.5% pyrite; 0.1% chalcopyrite								
70.2	72.2	SAME AS 68.2 - 70.2 - diorite aligned at 80° to core axis; local quartz chlorite carbonate seams - trace pyrite								
72.2	78.6	GNEISSIC DIORITE - banding perpendicular to core axis; numerous epidote chlorite seams - trace pyrite								
78.6	83.0	DIORITE - foliated; biotite seams; fresh - 45% hornblende plus biotite; hornblende porphyroblasts - minor sphene; epidote								
83.0	101.0	GNEISSIC DIORITE - DIORITIC GNEISS - fresh; 25% hornblende, 15% biotite; local complex folding - banding at 80°-90° to core axis; numerous biotitic bands - few chlorite epidote fractures with pyrite								
101.0	102.8	GNEISSIC PEGMATITE - coarse mafic and coarse chloritized felsic bands - pink calcite; trace epidote								

Hole No. 81-10
 Sheet 6

Scale
Colour Plot
& Dips

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		- trace pyrite										
102.8	102.9	RHODO CHROSITE, CALCITE, CHLORITE, EPIDOTE, QUARTZ BAND										
102.9	103.4	GNEISS Banded; minor epidote										
103.4	104.7	EAST WEST SHEAR - mylonitized chloritized diorite; minor sericite - few quartz, chlorite, sericite seams - section averages 0.2% pyrite										
104.7	106.4	DIORITE BRECCIA - chloritized; quartz seams cut										
106.4	106.7	EAST WEST SHEAR - quartz, sericite, chlorite - section averages 1.0% pyrite										
106.7	111.6	BANDED GNEISS plus DIORITE - fractures with chlorite, epidote; thick mafic bands; local complex folding										
111.6	113.0	GNEISSIC DIORITE - epidotized; narrow chlorite kspars shears - feldspars kaolinized - section averages 4.0% pyrite										
113.0	113.5	DIORITE										
113.5	114.3	EAST WEST SHEARS in DIORITE - chlorite, sericite, pyrite, ankerite alteration										

Scale
Colour Plot
& Ops



Drill Hole Record

Property SURF INLET District SKEENA Hole No. 81-10
 Commenced _____ Location _____ Tests at _____ Hor. Comp. _____
 Completed _____ Core Size _____ Corr. Dip _____ Vert. Comp. _____
 Co-ordinates _____ True Brg. _____ Logged by _____
 Objective _____ % Recov. _____ Date _____

Claim _____
 T Brg. _____
 Collar Dip _____
 Elev. _____
 Length _____
 Hole No. 81-10 Sheet 7

Footage From To	Description	Sample No.	Length	Analysis
114.3 - 124.4	DIORITIC GNEISS - section averages 1.0% pyrite - banding at 90°-60° to core axis; 40% biotite plus hornblende - few narrow chloritic shears; epidote-kspar on fractures - trace pyrite			
124.4 - 125.1	EAST WEST SHEAR - mylonitized; chlorite, silica, sericite ankerite, siderite alteration - section averages 0.2% pyrite			
125.1 - 127.1	GNEISSIC DIORITE - broken; fractured; partially altered - local kspar; epidote			
127.1 - 129.0	EAST WEST SHEAR - rubbly; diorite mostly obscured; siderite on fractures - minor quartz sericite - pyrite averages 0.5%			
129.0 - 129.4	DIORITE - fresh, equigranular			
129.4 - 129.9	EAST WEST SHEAR - chlorite, sericite; few quartz veins with chlorite, ankerite, epidote - trace chalcopryrite, pyrite, minor siderite			
129.9 - 132.0	DIORITIC GNEISS - few east west fractures; banding at 70° to core axis			

Scale
Colour Plot
& Dip

Drill Hole Record



Property	SURF INLET	District	SKEENA	Hole No.	81-10
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis				
					Claim	T Brg.	Collar Dip	Elev.	Length
132.0	148.0	- epidote, kspar, chlorite seams DIORITE							
148.0	149.5	- fresh; equigranular; porphyritic - minor chlorite, epidote, kspar SHEAR							
149.5	151.0	- 60% coarse sericite, 10% siderite, 5% ankerite DIORITE							
151.0	151.8	- altered; feldspars kaolinized; high epidote, chlorite DIORITE - fresh; equigranular; porphyritic							
		END OF HOLE @ 151.8 meters							

Hole No. 81-10 Sheet 3

EXHIBIT "A"

DIAMOND DRILLING PERFORMED ON THE
ANACONDA, INDEPENDENCE, EXCELSIOR, HOMESTAKE, SADIE
SEAGULL, DLS, LAKE FRACTION

CLAIMS

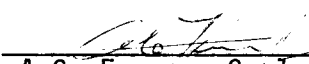
SITUATE AT

53⁰05' LATITUDE

128⁰53' LONGITUDE

N.T.S. 103H/2W

<u>1. Salaries:</u> A.C. Freeze	
40 days office preparation @ 150.00/day	6,000.00
99 days field time(May 15 - Aug.22) @ 150/day	14,850.00
<u>2. Camp Costs:</u>	
food, equipment, expenses, communications, expediting	10,000.00
<u>3. Surveying:</u> Drill site placement	4,000.00
<u>4. Drill costs:</u>	
total 1526.4 meter contract Herb Allen Drilling	243,274.00
<u>5. Transportation:</u>	
(a) Barge (Sabre Marine-Prince Rupert)	12,749.50
(b) Helicopter(Vancouver Island Helicopters)	44,000.00
(c) Helicopter fuel(Imperial Oil-Prince Rupert)	7,000.00
(d) Fixed Wing(Trans Provincial-Prince Rupert)	<u>6,000.00</u>
TOTAL EXPENDITURES:	\$347,873.50

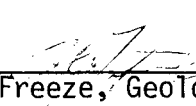
Signed: 
A.C. Freeze, Geologist

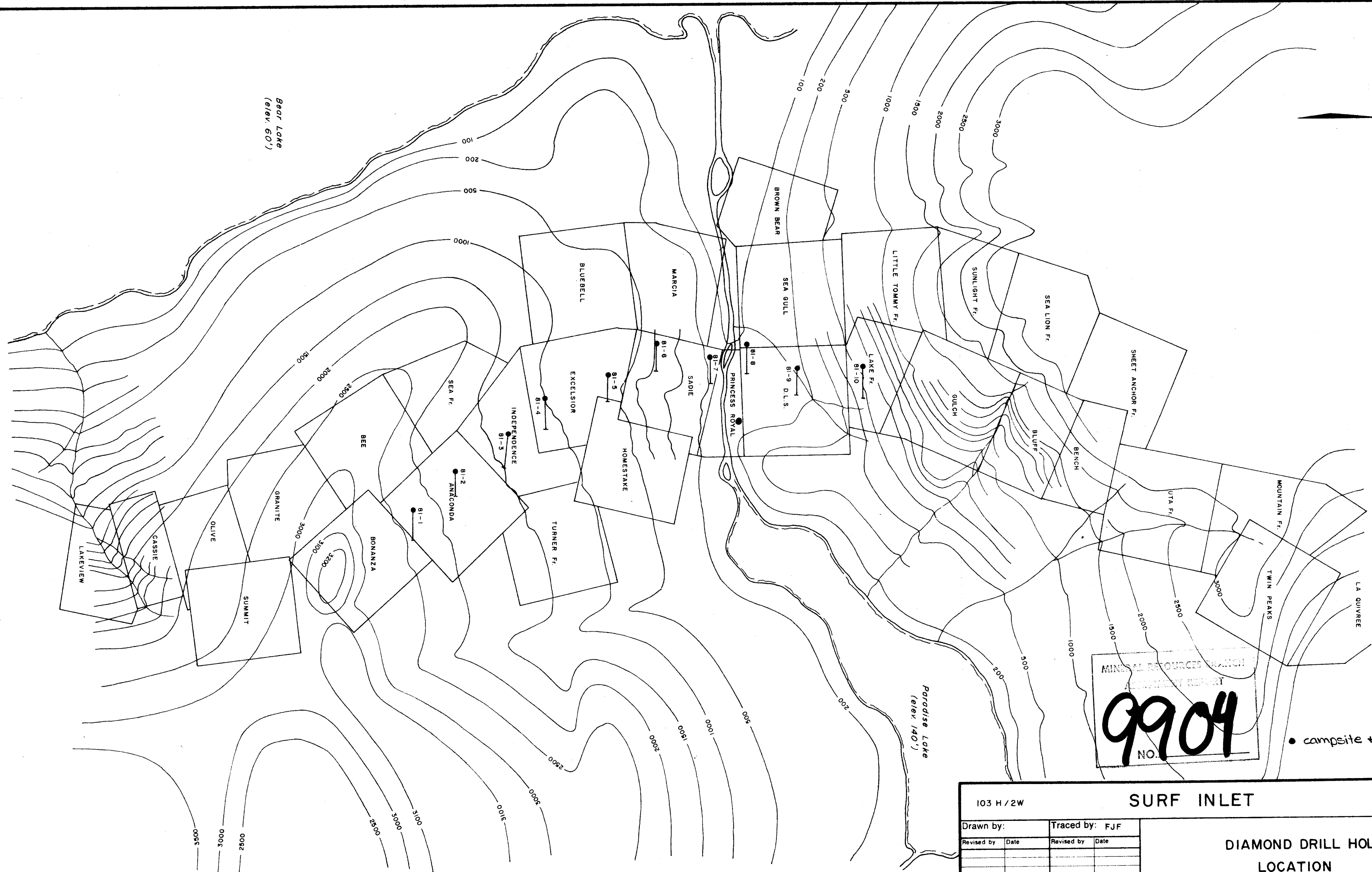
APPENDIX I

STATEMENT OF QUALIFICATIONS

I, ARTHUR C. FREEZE, OF THE CITY OF VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY:-

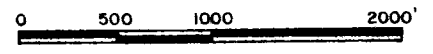
1. THAT I am a geologist residing at 2891 West 14th Avenue, Vancouver, British Columbia, with a business address at 409 Granville Street, Vancouver, British Columbia;
2. THAT I graduated with a B.Sc. in geology from the University of New Brunswick in 1971;
3. THAT I have practised geology with Cominco Ltd. since 1973.

Signed: 
A.C. Freeze, Geologist

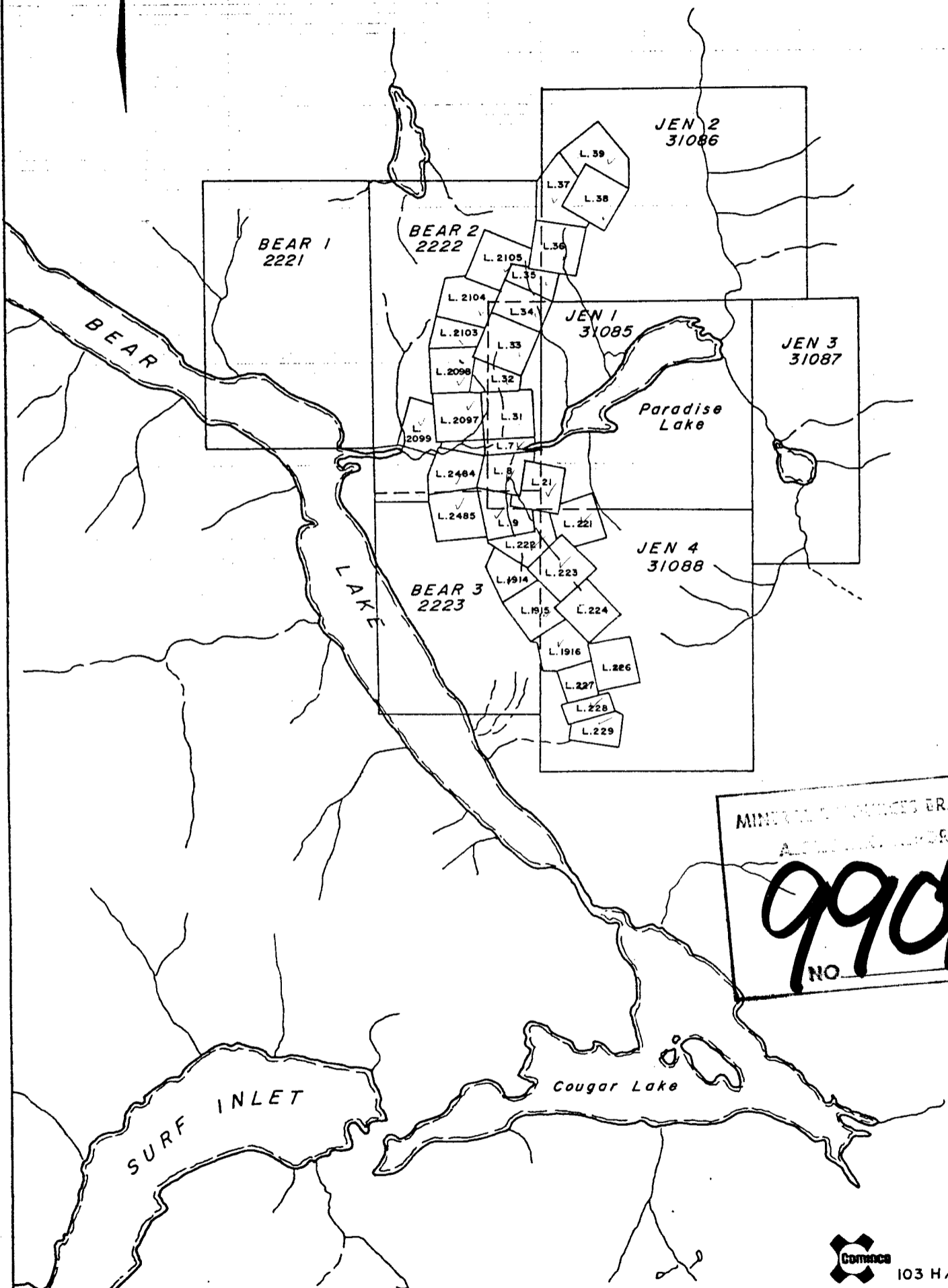


MINERAL RESOURCES BRANCH
RECONSTRUCTION REPORT
9904
NO.

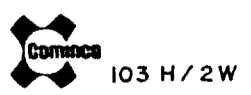
• campsite + core storage



103 H / 2W		SURF INLET			
Drawn by:		Traced by: FJF			
Revised by	Date	Revised by	Date	<p align="center">DIAMOND DRILL HOLE LOCATION</p>	
Scale: 1" = 1000'		Date: October, 1981		Plate:	



MINING DIVISION
 ALASKA
9904
 NO.



Drawn by:		Traced by: FJF		SKEENA MINING DIVISION	
Revised by	Date	Revised by	Date	<h3>CLAIM LOCATION MAP</h3>	
Scale: 1: 50,000		Date: October 1981		Plate:	