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92K/14

Memo To: E. T. Kimura

From: R. H. Pinsent

Date: July 20th, 1990

Subject: Apple Au, Ag Property: Apple River Area; 92K/14

The attached description of the Apple Property has been taken from Dale Sketchley's "Northern Vancouver Island and Bute Inlet Areas Reconnaissance Program" report, which was prepared in March, 1990. It is the best description of the property currently available.

R. H. Pinsent

7.4 Apple Property (Placer Dome Inc.)

Introduction

The Apple property is 95 km north of Campbell River (Figure 2). Access to the property is by helicopter. An overgrown logging road, which can be rehabilitated, leads from Loughborough Inlet to the southeast corner of the property, a distance of approximately 15 km. The property comprises six claims, Apple 1 to 6, which total 110 units. The property is owned by Placer Dome Inc. Anniversary dates are August 1, 1990 for Apple 1 and 2, and August 10, 1990 for Apple 3 to 6.

The claims were staked to cover drainage basins with stream sediment samples anomalous in gold, and the source area of gold-silver-bearing epithermal vein float. The vein float was discovered during a stream sediment sampling program conducted in the Bute Inlet area. The purpose of the program was to conduct additional stream sediment sampling in the area of several gold silt anomalies defined by B.C. R.G.S. 22. One of these anomalies (883258) returned 45 ppb gold and 1.4 ppm silver; a repeat analysis for gold returned 205 ppb (Appendix IV - Database 2.2.1). Follow-up bulk samples (B89078; B89133) taken by Placer Dome Inc. returned up to 510 ppb gold and 2.5 ppm silver; washed moss mat samples up to 75 ppb gold and 1.0 ppm silver; and a silt sample 105 ppb gold and 1.3 ppm silver. Samples of the float (34650; 34751 - 34752) returned up to 34.2 ppm gold and 87 ppm silver (Appendix IV - Database 3.1.3). No known mineral occurrences exit within and adjacent to the drainage basins with anomalous results.

Geology

The property is underlain by Coast Plutonic Complex, which comprises granodiorite, granitoid gneiss, amphibolite and schist (Roddick, 1977). The metamorphic rocks generally occur as small fault-bounded pendants. Feldspar porphyry dykes are locally abundant.

Mineralization

Mineralization on the property generally occurs in or adjacent to quartz veins. The quartz veins have been classified into four catagories based on age, mineralogy, texture and type of occurrence: irregular pyrite and molybdenite-bearing; vuggy pyrite, chalcopyrite and molybdenite-bearing; massive pyrite and chalcopyrite-bearing; and vuggy pyrite-bearing. Geochemical results support this classification.

Irregular pyrite and molybdenite-bearing veins are probably early. These veins were observed only within epidotized granodiorite, in the northern portion of the property, where they trend southeasterly and dip shallowly to the northeast. They are composed of narrow irregular lenses and blobs of white quartz that contain blebs of pyrite and molybdenite, and masses of epidote and fine-grained chlorite.

Vuggy pyrite, molybdenite and chalcopyrite-bearing veins are a part of a middle stage of mineralization. They occur as narrow veins composed of white vuggy quartz that characteristically contains coarse blebs of pyrite with lesser chalcopyrite. Minor fine-grained molybdenite is present along vein margins. A narrow envelope of sericite or clay alteration locally surrounds the veins. Fine-grained disseminated pyrite also may be present in the altered wallrock adjacent to the veins. These veins trend north-northeast and east-southeast, and generally have steep to moderate dips. They were observed in two prominently rusty zones in the central and south-central portions of the property, herein called "Glacier Zone" and "Valley Zone".

Massive pyrite and chalcopyrite-bearing veins are probably a part of the middle stage of mineralization, but may be later. They are up to 50 cm wide and are generally composed of massive white quartz, although some of the narrower veins are vuggy. Large masses of pyrite, which are locally common, are characteristic of these veins. Pyrite also occurs as ribbons. Chalcopyrite is not common; however, in one location a football size mass that contains a coarse cube of pyrite was noted. Envelopes of pyritic clay-altered rock up to one metre or more in width surround the veins. Veins of this type trend southeast and dip shallowly to the southwest. They are most common in the northeast portion of the

claims on the lip of a cirque that is drained by the stream containing the silt, bulk and washed moss mat anomalies and the gold-silver-bearing vein float. This stream is herein called "Grizzly Creek". The most prominent of the pyrite and chalcopyrite-bearing veins is about 150 m long and is herein called the "Grizzly vein". Similar veins appear to occur on the south cirque wall of "Grizzly Creek" and on the east side of Apple River adjacent to the northeast side of the property.

Vuggy pyrite-bearing veins are late and typically epithermal. They are composed of white to clear vuggy quartz that commonly contains disseminations and ribbons of pyrite. Minor sphalerite is present. The veins occur singly or as stockworks and are characterized by multiple stages of injection and brecciation. Individual veins are up to 25 cm wide. Wallrock is clay-sericite-altered and contains disseminated pyrite.

The pyrite-bearing veins were observed only as angular float in a debris fan at the confluence of "Grizzly Creek" and Apple River. A similar vein, herein called "Down the Hill vein", is exposed about 500 m down the hill from the "Grizzly vein". It occurs adjacent to a late mafic dyke and is northerly-trending and steeply dipping. Because it is unlikely to find angular float 1.5 km downstream after dropping 800 m in elevation from its source, "Down the Hill vein" is not considered to be the source of the float. An examination of airphotographs indicates that several northeasterly-trending lineaments pass through the lower portion of "Grizzly Creek" where slide scarps were noted along the canyon wall. These scarps may be a source of the float.

Geochemistry

Follow-up work on the Apple property consisted of prospecting and rock sampling. Ninety-three rock samples were collected from the main areas of interest after the claims were staked. These samples are tabulated in Table IV. Analytical results are presented in Appendix I; descriptions in Appendix II. Sample locations are plotted on N.T.S. map sheet 92K/14 (Appendix IV -Database 3.1.3). In addition, sample locations for detailed sampling conducted on the "Grizzly vein" are plotted on a separate map (Appendix IV - Database 3.1.4).

TABLE IV

Apple Property Rock Samples

Area	Rock Samples
Grizzly Creek	34737 - 34750 34951 59002 - 59005
Grizzly Vein	34952 - 34954 34967 - 34989 34998 - 34500 59015 - 59016 59026 - 59050
Down the Hill Vein	59006 - 59014
Glacier Zone	34990 - 34994 59017
Valley Zone	34995 - 34997

All rock samples taken from "Grizzly Creek" (Table IV) were obtained from stream float. Samples 37437 to 34750 are from float of vuggy pyrite-bearing quartz veins that occurs in a debris fan at the confluence of "Grizzly Creek" and Apple River. These samples returned up to 14.1 ppm gold, 150 ppm silver, 1,720 ppm arsenic, 90 ppm antimony, 800 ppb mercury, 570 ppm copper, 770 ppm lead and 580 ppm zinc. These samples and three samples taken during the Bute Inlet area program (34650; 34751 - 34752) were resubmitted for analysis to check the repeatability of gold results. Each sample was analyzed three times. Results indicate that a nugget effect is not appreciable.

Sample 34951 was obtained from a float of granodiorite in the upper portion of "Grizzly Creek". A fracture filled with pyrite, chalcopyrite and molybdenite in the rock sample is probably associated with vuggy quartz veins with similar mineralogy. The sample returned 7.0 ppm silver, 820 ppm copper and 0.92% molybdenum.

Samples 59002 - 59005 were taken from pyrite-bearing quartz vein float in the lower portion of "Grizzly Creek". The quartz veins are similar to the "Down the Hill vein". The samples returned up to 1,500 ppb gold, 330 ppm silver, 340 ppm copper, 0.54% lead and 1590 ppm zinc.

Samples taken from the "Grizzly vein" are chip samples of pyrite and chalcopyrite-bearing quartz vein material or adjacent pyritic altered wall rock. They returned up to 1,450 ppb gold, 240 ppm silver, 280 ppm arsenic, 1.35% copper, 205 ppm lead, 366 ppm zinc and 162 ppm molybdenum. Elevated values are associated with sulphides, which occur within the quartz vein and in altered wall rock.

Samples taken from "Down the Hill vein" are chip samples of pyrite-bearing quartz vein material or adjacent altered wall rock. They returned up to 4,500 ppb gold, 131 silver, 600 ppm arsenic, 430 ppm copper, 270 ppm lead and 410 ppm zinc.

"Glacier zone" samples were obtained from mineralized float (34990 - 34991; 34993) or from outcrops (34992; 34994; 59017) with vuggy pyrite, chalcopyrite and molybdenum-bearing veins. These samples returned up to 50 ppb gold, 0.8 ppm

silver, 223 ppm copper and 510 ppm molybdenum.

"Valley zone" samples were obtained from mineralized boulders derived from an adjacent rusty-weathering cliff face. These samples returned up to 0.8 ppm silver, 333 ppm copper and 510 ppm molybdenum.

Conclusions

The presence of locally abundant feldspar porphyry dykes, combined with porphyry and epithermal styles of mineralization, suggests that the area is within the root of a volcanic centre, possibly Tertiary in age. The mineralization is generally restricted to or occurs adjacent to quartz veins that have been classified into four categories based on age, mineralogy, texture, occurrence and geochemical signature. Early irregular pyrite and molybdenite-bearing quartz veins contain only elevated molybdenum values. These veins are localized and economically insignificant. Middle pyrite, chalcopyrite and molybdenite-bearing veins contain elevated silver, copper and molybdenum values. They are widespread ("Glacier and Valley zones") and are representative of porphyry-style mineralization that should be followed-up. Middle-late vuggy pyrite and chalcopyrite-bearing veins ("Grizzly") contain elevated gold, silver, copper, lead, zinc and molybdenum values. However, vein widths are narrow and only the silver values are significant. The "Grizzly vein" itself is not economic, but it is indicative of the type of mineralization that may be economic. Late vuggy pyrite-bearing veins contain elevated gold and silver values that are economically significant. As the source of mineralized float of this type has not been located, follow-up work is necessary.

Recommendations

Prospecting and rock sampling should be conducted in the area of the airphoto lineaments that cross "Grizzly Creek" in order to define a source area for the gold-silver-bearing epithermal quartz vein float. Several lines of detailed soil sampling should be done across the topographic trace of the airphoto lineaments. If this work is successful in delineating a source area of the float, detailed rock and soil samling, hand trenching and geological mapping should be done in the source area.

Prospecting and rock sampling should be done in the prominent rusty areas of the "Valley and Glacier zones" in order to evalute the potential for copper-molybdenum porphyry mineralization. Further work is not required on the "Grizzly vein", although similar occurrences of mineralization should be sampled.

P L A C E R D O M E I N C (V A N C O U V E R L A B O R A T O R Y)

GEOCHEMICAL DATA LISTING: BC GEN EXPL APPLE RIVER DATE: 90:07:20

PDI lab data file: P9287
AREA: APPLE RIVER
MAPSHEET NO: 92K
VENTURE: BC GEN EXPL
GEOLOGIST: D SKETCHLEY
LAB PROJECT NO: 9287

PLEASE DISTRIBUTE RESULTS TO: DS RP LR EK MG RH LAB

REMARKS:
"HIGH PRIORITY; PLEASE RUSH"
"SOME SAMPLES MAY BE HIGH IN AU & AG"
"COPY OF RESULTS TO R PINSENT"
"AU RESULTS WILL BE IN PPM"

STANDARD ANALYSIS METHODS USED BY PDL GEOCHEM LAB ARE LISTED BELOW:
ALL RESULTS EXPRESSED AS INDICATED IN UNITS COLUMN BELOW
ANY EXCEPTIONS FOR THIS PROJECT ARE NOTED ABOVE

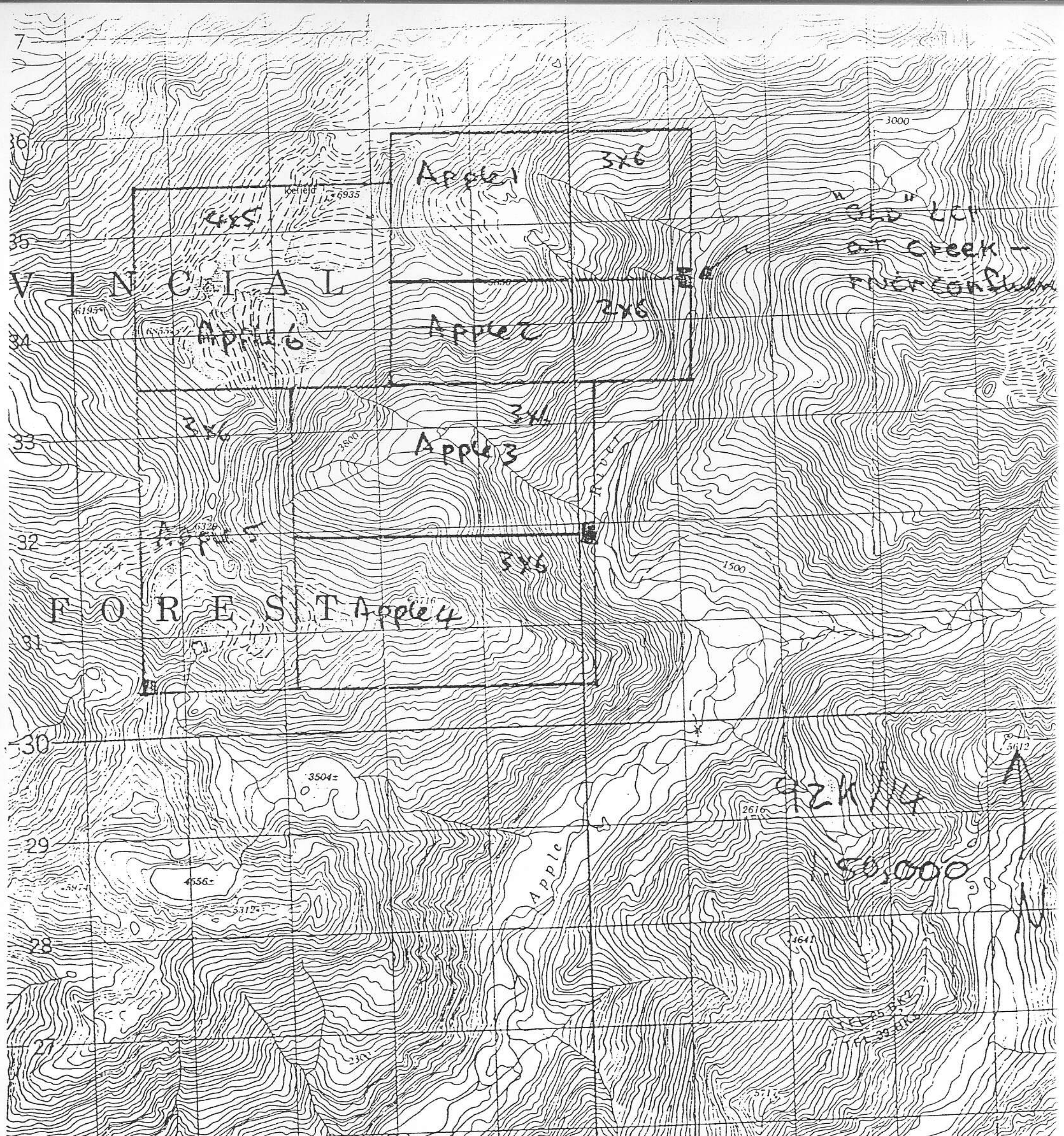
REMARKS: INTERNAL LAB STANDARDS HAVE BEEN INCLUDED FOR REFERENCE.
SAMPLE NUMBERS FOLLOWED BY * ARE DUPLICATE ANALYSES.

	UNITS	WT.G	ATTACK USED	TIME	RANGE	METHOD
AG	PPM	0.5	HCLO4/HNO3	4HRS	0.2-20	A.A. BACKGROUND COR
AS	PPM	0.5	AQUA REGIA	3HRS	2-2000	DC PLASMA
AU	PPM	25.0	FIRE ASSAY	45MIN	0.01-1000	ATOMIC ABSORPTION
CO	PPM	0.5	HCLO4/HNO3	4HRS	2-2000	ATOMIC ABSORPTION
CU	PPM	0.5	HCLO4/HNO3	4HRS	2-4000	ATOMIC ABSORPTION
HG	PPB	0.25	DIL HNO3/HCL	2HRS	5-2000	A.A. COLD VAPOR GEN.
MO	PPM	0.5	HCLO4/HNO3	4HRS	1-1000	ATOMIC ABSORPTION
PB	PPM	0.5	HCLO4/HNO3	4HRS	2-3000	A.A. BACKGROUND COR.
PD	PPB	25.0	FIRE ASSAY	45MIN	DL 5	DC PLASMA
PT	PPB	25.0	FIRE ASSAY	45MIN	DL 10	DC PLASMA
SB	PPM	0.5	HCL/HNO3	3HRS	2-2000	DC PLASMA
ZN	PPM	0.5	HCLO4/HNO3	4HRS	2-3000	ATOMIC ABSORPTION

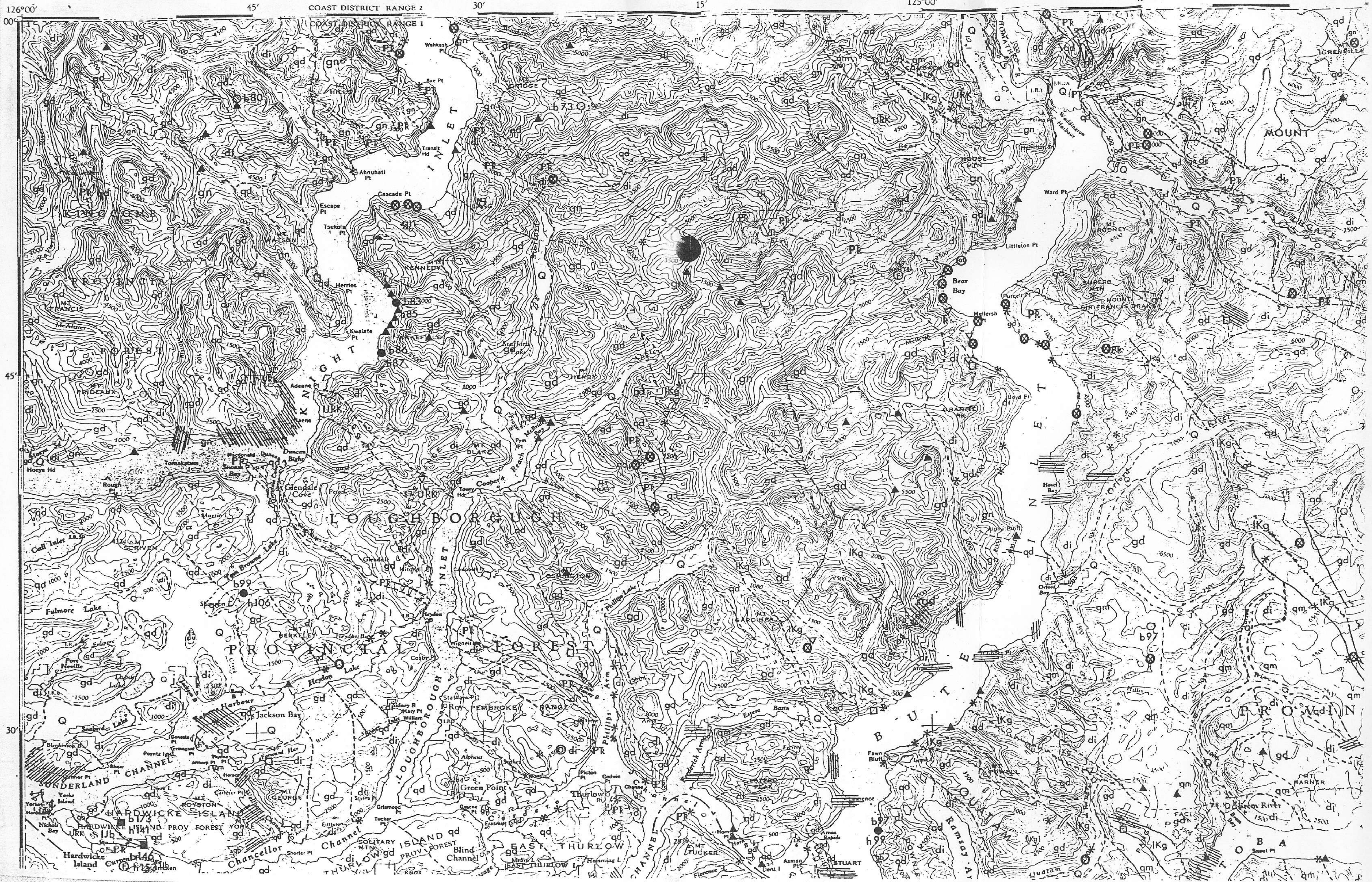
RDI GEOCHEM SYSTEM: Data From: BC GEN EXPL APPLE RIVER DATE: 90:07:20 PAGE: 1

GRID	SAMPLE		PROJECT	Ag PPM	As PPM	Au PPM	Co PPM	Cu PPM	Hg PPB	Mo PPM	Pb PPM	Pd PPB	Pt PPB	Sb PPM	Se PPM	Zn PPM
92K		34737	9287	8.0	340	0.75	10	12	800	2	26	<5	<10	7	<0.1	13
92K		34738	9287	20	70	0.23	<2	22	100	5	73	<5	<10	11	<0.1	47
92K		34739	9287	16	185	0.49	<2	198	230	7	25	<5	<10	90	<0.1	32
92K		34740	9287	37	880	2.17	17	72	320	2	86	<5	<10	12	<0.1	262
92K		34741	9287	64	760	1.05	9	33	650	2	62	<5	<10	5	<0.1	86
92K		34742	9287	150	365	14.1	3	56	195	6	330	<5	<10	14	<0.1	264
92K		34743	9287	33	1720	6.63	2	144	95	5	132	<5	<10	20	<0.1	460
92K		34744	9287	75	325	6.75	<2	32	200	2	286	<5	<10	6	<0.1	580
92K		34745	9287	105	740	12.8	3	55	190	4	390	<5	<10	15	<0.1	354
92K		34745*	9287	105	720		2	56		5	384			14		356
92K		34746	9287	52	380	1.25	25	570	190	5	169	<5	<10	5	<0.1	293
92K		34747	9287	1.1	39	0.09	16	12	105	4	5	<5	<10	2	<0.1	50
92K		34748	9287	4.4	113	0.27	2	37	40	7	770	<5	<10	<2	<0.1	26
92K		34749	9287	12	121	1.07	<2	32	110	10	52	<5	<10	5	<0.1	147
92K		34750	9287	14	307	1.70	2	15	285	3	110	<2	10	17	<0.1	90
test	STD P1		9287	0.3	20		10	22		50	51			6		106
test	STD AG		9287	40												

END OF LISTING - 17 RECORDS PRINTED Run on: 90:07:20 at 13:36:49



Apple1
3x6
4x5
Kelleld
6935
"OLD" LCP
at Creek -
river confluence
VINCIAL
Apple6
Apple2
2x6
3x6
3x6
Apple3
3800
River
Apple 5
3x6
1500
FOREST Apple4
3504±
2616
92K/14
1:50,000
4556±
Apple
4641
N
35 20' 36 37 38 39 40 41 15' 42 43 44
50° 49' 120° 18'


126°00'
45'
COAST DISTRICT RANGE 2
30'
15'
125°00'
COAST DISTRICT RANGE 1
Wahkash Pt
Axe Pt
Transit Hd
Ahnuhati Pt
Cascade Pt
Escape Pt
Tsukola Pt
Herries Pt
Kwalate Pt
Adeane Pt
Glendale Cove
Tomakstum
Hoeys Hd
Rough Pt
KINGCOME
PROVINCIAL
FOREST
MT FRANCIS
MT PRIDEAUX
MT KENNEDY
MT BLAKE
MT HENRY
MT PRATT
Stafford Lake
K N I G H T
I N L E T
L O U G H B O R O U G H
Cooper's Reach
Towry Hd
Pym Pt
Call Inlet
MT SCRIVEN
Tom Browne Lake
Fulmore Lake
Port Neville
Heydon Lake
Heydon B
P R O V I N C I A L
F O R E S T
MT BERKELEY
Jackson Bay
Seabird Lake
Sunderland Channel
SUNDERLAND CHANNEL
HARDWICKE ISLAND
HARDWICKE ISLAND PROV FOREST
MT GEORGE
ROYSTON
Hardwicke Island
Nichols Bay
Yorke Island
Chancellor Channel
THURLOW ISLAND PROV FOREST
SOLITARY MTN
Blind Channel
EAST THURLOW
EAST THURLOW I
MT TUCKER
Green Point
Picton Pt
Godwin Pt
Thurlow
LOUGHBOROUGH
Phillips Arm
Phillips Lake
Frederick Arm
Estero Basin
ESTERO PEAK
MT GARDINER
Mt Washington
Shark
B U T E
I N L E T
Fawn Bluff
Ramsay Arm
Quatam
STUART
Arran Rapids
Dent I
Florence
Lawrence
Bear Bay
Mellersh Pt
Littleton Pt
Ward Pt
Purcell Pt
Hovel Bay
Orford Bay
Orford
Boyd Pt
GRANITE PK
HOUSE MTN
Waddington Harbour
Homathko R
MT RODNEY
SUPERB MTN
MOUNT SIR FRANCIS DRAKE
MOUNT
P R O V I N
MT BARNER
O B A
Snout Pt
GRENVILLE