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I.M. WATSON & ASSOCIATES LTD.

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680948

EXPLORATION PROGRAMME & BUDGET PROPOSAL

VANCO EXPLORATIONS LTD.

ASPEN GROVE PROPERTY

NICOLA M.D., B.C.

92H/15E

Vancouver, B.C.

September, 1984

## INTRODUCTION

The Aspen Grove properties consist of 254 units in four separate blocks, situated in the Aspen Grove area, approximately half-way between Merritt and Princeton, in the Nicola and Similkameen Mining Districts of B.C.

The Aspen Grove area was the scene of intense exploration for porphyry copper type deposits during the 60's and 70's. Current interest in the area derives from the similarity of the geological setting to that hosting porphyry copper-gold deposits presently being explored in the Quesnel-Cariboo area; the rocks underlying the Aspen Grove property belong to the Nicola Belt, which forms the southern extension of the Quesnel Belt or Trough.

A more specific attraction to the area is the recent 're-discovery' of gold mineralisation on the Snowflake property immediately north of the Aspen Grove claims. Here Laramide Resources carried out geophysical and drilling programmes over an area previously explored in 1967, when significant gold intersections of up to 0.15 ozs Au/ton over 60 feet were reported. Laramide confirmed the presence of gold in a structurally and lithologically complex succession of black calcareous argillites and andesitic flows and pyroclastics. The disposition and control of the mineralisation on the Laramide property is still uncertain, but the overall geological environment is closely similar to that of the Dome QR porphyry gold copper deposit.

During August 1984, I.M. Watson & Associates Ltd. in partnership with J.H. Randa, began staking available ground in the Aspen Grove Area. Areas were selected on the basis of favourable geology, mineral occurrences, and airborne magnetic anomalies.

Following the signing of a letter of agreement with Vanco Explorations (21st August 1984), Vanco acquired the claims and additional ground was staked on Vanco's behalf.

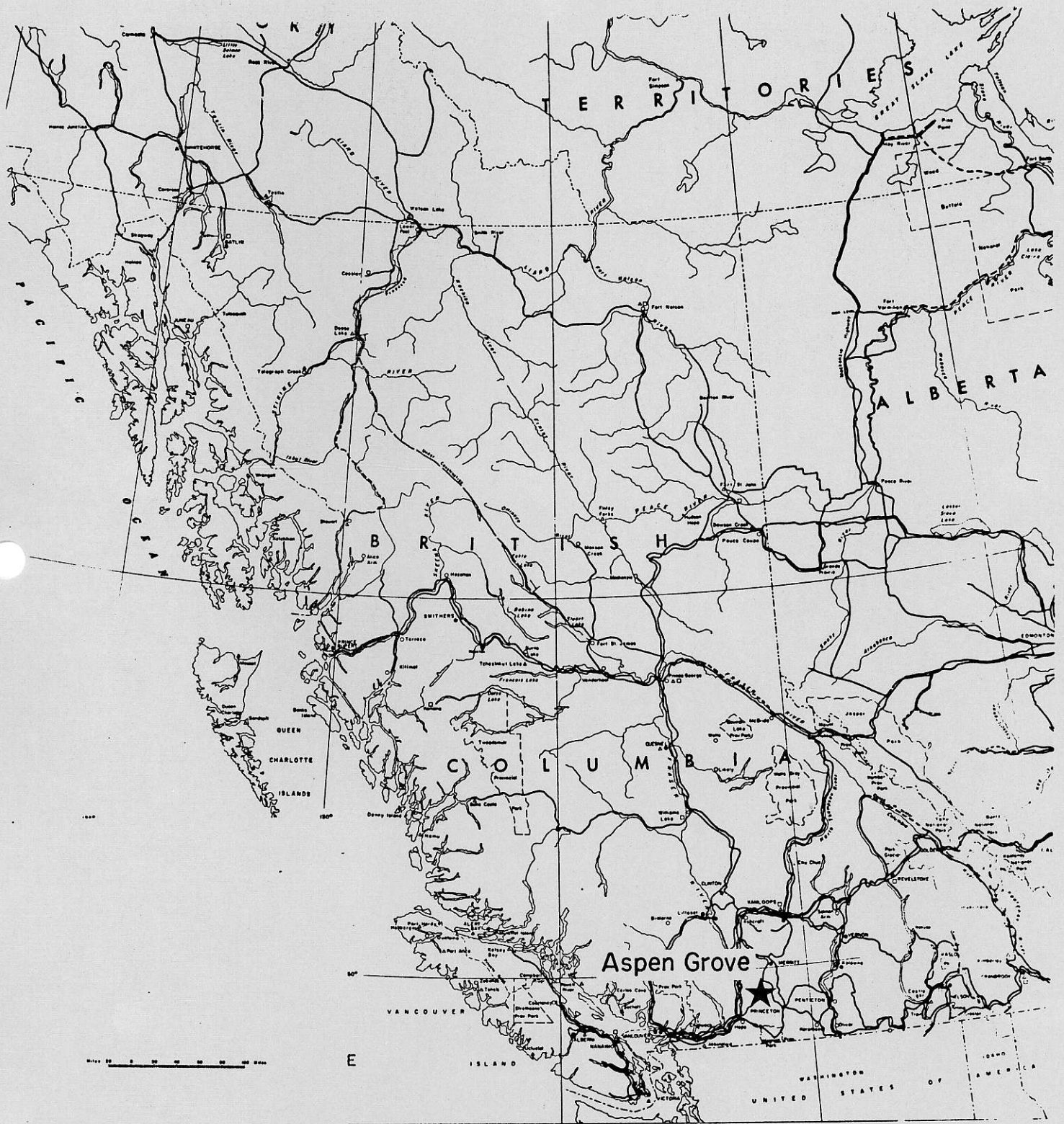


Fig. 1

VANCO EXPLORATIONS LTD.  
ASPEN GROVE PROPERTY

INDEX MAP

LOCATION (Fig. 1)

Midway between Princeton and Merritt, immediately south of Aspen Grove, east of Highway 5. The claims lie within the Nicola and Similkameen Mining Divisions.

ACCESS

All claim blocks are accessible from Highway 5 by a network of logging roads. Topography ranges from gently rolling and open in the north and western areas to moderately steep and heavily wooded in the south and east. Elevations range from 3300 feet on Missezula Lake to 5000 feet on Microwave Tower Hill.

The Duncan Lake-Newmont Power Line crosses the central part of the main block of THOR claims.

CLAIMS (Fig. 2)

Claim data are listed below. Record numbers for the THOR 10 - 14 claims are not yet available.

<u>Claim</u>	<u>Tag #</u>	<u>Record #</u>	<u>Staking Date</u>	<u>Recording Date</u>	<u>No. of Units</u>
BLAK	38073	1551	5 Aug. 1984	31 Aug. 1984	12
BLOO	61940	1553	4 Aug. 1984	31 Aug. 1984	20
MICKEY	38057	1554	20 Aug. 1984	31 Aug. 1984	6
FINN	38056	1555	20 Aug. 1984	31 Aug. 1984	4
THOR	38055	1552	6 Aug. 1984	31 Aug. 1984	10
THOR 2	38058	1556	21 Aug. 1984	7 Sept. 1984	10
THOR 3	38059	1557	22 Aug. 1984	7 Sept. 1984	20
THOR 4	38060	1558	23 Aug. 1984	7 Sept. 1984	20
THOR 5	38061	1559	23 Aug. 1984	7 Sept. 1984	20
THOR 6	38063	1560	23 Aug. 1984	7 Sept. 1984	12
THOR 7	38063	1561	23 Aug. 1984	7 Sept. 1984	12

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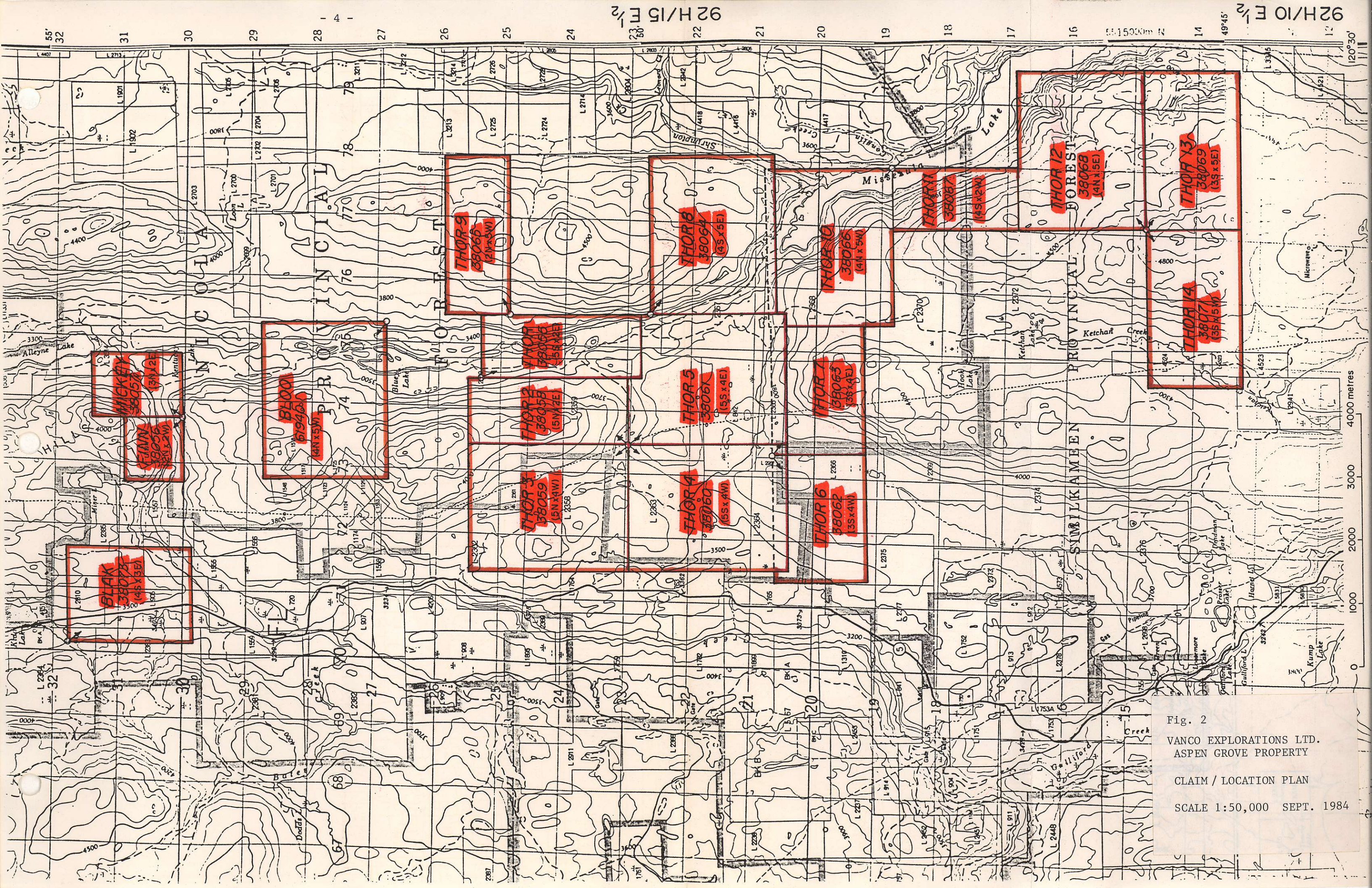


Fig. 2  
 VANCO EXPLORATIONS LTD.  
 ASPEN GROVE PROPERTY  
 CLAIM / LOCATION PLAN  
 SCALE 1:50,000 SEPT. 1984



<u>Claim</u>	<u>Tag #</u>	<u>Record #</u>	<u>Staking Date</u>	<u>Recording Date</u>	<u>No. of Units</u>
THOR 8	38064	1562	24 Aug. 1984	7 Sept. 1984	20
THOR 9	38065	1563	24 Aug. 1984	7 Sept. 1984	10
THOR 10	38066	*	14 Sept.1984	-	20
THOR 11	38067	*	14 Sept.1984	-	8
THOR 12	38068	*	16 Sept.1984	-	20
THOR 13	38069	*	16 Sept.1984	-	15
THOR 14	38071	*	15 Sept.1984	-	15
				Total	<u>254</u>

### BACKGROUND

Exploration activity in the Aspen Grove area dates back to the turn of the century. Early work focussed on copper showings in the Nicola volcanics, and resulted in a number of trenches, pits, shafts and adits being excavated on the more promising zones. These included the 'CINCINATTI' and 'BANK OF ENGLAND' showings on the MICKEY claim, the 'BUNKER HILL' and 'TOM CAT' on the BLOO claim, and the 'BOSS' on the THOR 7 claim.

During the 1960's and early 1970's, exploration for porphyry copper deposits was at its height, and the Aspen Grove 'camp' was the scene of intense activity. Although porphyry type mineralisation was found over a wide area, no economic concentrations were outlined. Within the boundaries of the present Vanco holdings, over 20 copper occurrences and showings have been documented; most of these are depicted on Preto's geological map, accompanying this report.

During 1967, Vanada Explorations and Merritt Copper Co. carried out I.P. and magnetometer surveys on ground now held by Laramide Resources, 7 kms. due north of the Vanco MICKEY and FINN claims. The resultant anomalies were drilled with the following results:

DDH1:	<u>Au</u>	<u>Ag</u>	<u>Cu</u>	<u>Width</u>
	0.13 ozs	1.15 ozs	0.70%	165' - 175' (10')
	0.15 ozs	0.48 ozs	0.20%	210' - 270' (60')
	0.115 ozs	1.68 ozs	0.26%	310' - 320' (10')

In 1983, Laramide Resources retrieved this information from government files during a computer search for significant gold occurrences. Laramide subsequently acquired the ground (Snowflake claims), duplicated the 1967 geophysical work, and drilled 12 diamond drill holes on the I.P. anomaly detected. Four holes encountered gold mineralisation. Assays range from a few hundred ppb Au to 0.42 ozs Au/ton and 5.2 ozs Ag/ton over 15 feet. The mineralised zones are hosted in limey, pyritic and locally graphitic argillites, close to the contact with underlying andesitic tuffs, and also in the volcanic rocks within a few metres of the argillite/limestone contact. The location of the 'Laramide Gold Zone' is indicated on the geological map. Vanco is presently evaluating the property (ref. A Summary Review of the Snowflake Property of Laramide Resources Ltd., by I.M. Watson, August 1984).

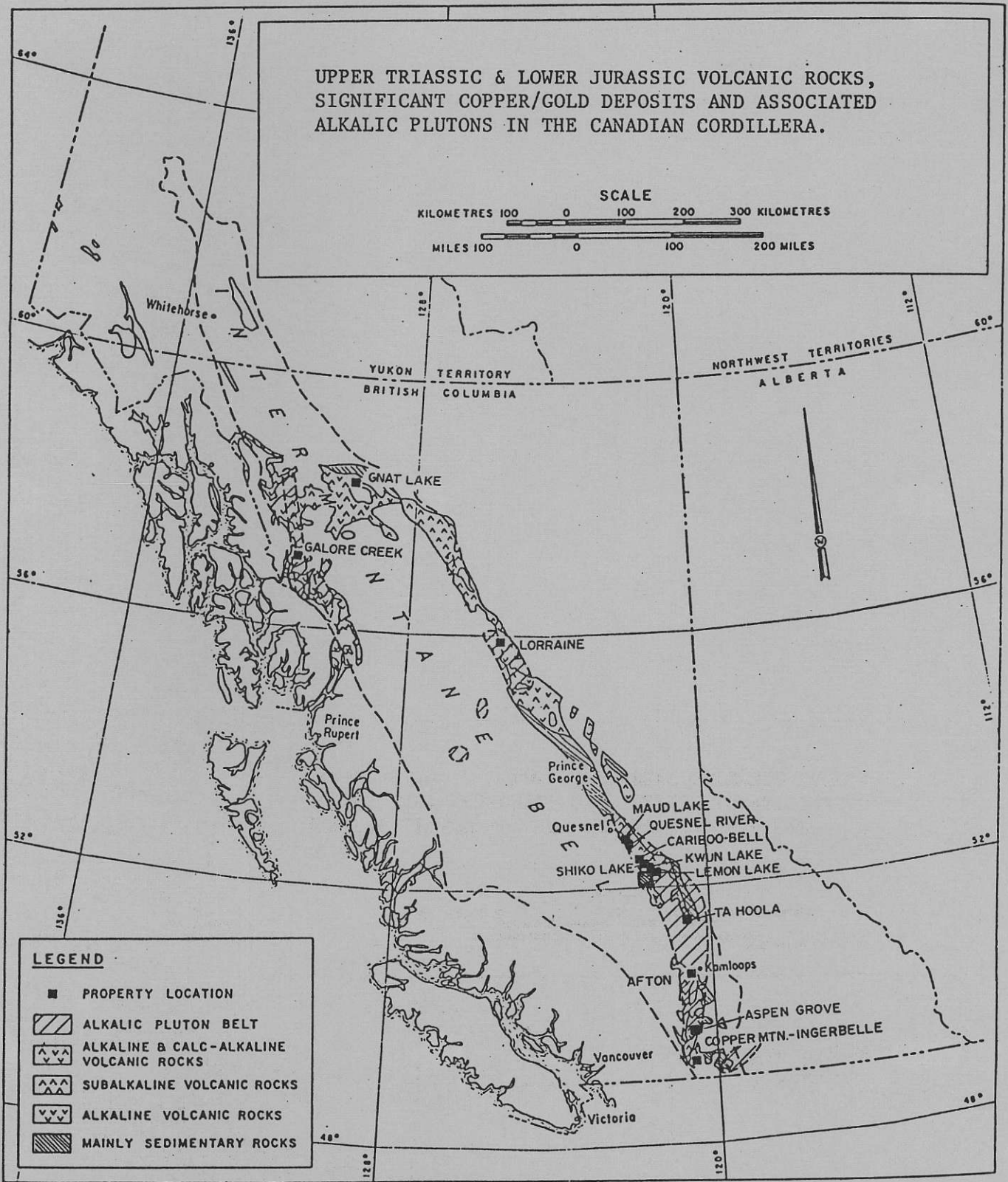
The Vanco Aspen Grove claims were staked to protect ground underlain by favourable geology within the Nicola Belt, along Preto's 'Central Belt' (see below).

#### REGIONAL GEOLOGICAL SETTING

The Vanco Aspen Grove claims lie within the Nicola Belt, which forms the southern portion of a northwesterly trending 30-60 kms. wide assemblage of Upper Triassic volcanic and sedimentary rocks, extending from Princeton in the south to the Stikine in the north. The Nicola Belt passes north under Tertiary volcanics and sediments to reappear as the Quesnel Belt or Trough in the Quesnel-Cariboo area.

The volcanics of the Quesnel and Nicola Belts form a mixed alkaline and calc-alkaline sequence of basalts and derived volcanoclastic monolithic and polyolithic breccias and tuffs, and minor sediments.

The volcanic rocks are intruded by comagmatic alkaline plutons, ranging in composition from syenogabbro to alkali syenite. The intrusions appear to be structure related and occur in belts along major lineaments and faults.



Modified from D. A. Barr et al., C.I.M. Special Volume No. 15, 1976.

FIG. 3



They vary in size from plugs to small batholiths, and have been emplaced into the volcanic centres which produced the abundance of volcanic material (Barr et al, 1976 - Fig. 3).

In the Aspen Grove area, Preto has delineated three assemblages - a Western Belt of easterly dipping calc-alkaline flows, pyroclastics and sediments; a Central Belt of alkaline and calc-alkaline volcanics and intrusions, and minor sediments; and an Eastern Belt of westerly dipping volcanic sediments, tuffs and alkaline flows associated with small monzonite porphyry stocks. The belts are separated by major north-striking faults.

Preto believes that the Central Belt of dominantly volcanic rocks originates from eruptive centres along the major fault system, and points out the greater concentration of mineral deposits along this belt.

The claims of Vanco's Aspen Grove properties straddle the main fault system, and are underlain by 'Central Belt' flows, tuffs and breccias, intruded by diorite plugs, which are magnetically prominent (see airborne magnetic overlay attached).

#### DISCUSSION

The characteristics and settings of the Quesnel Trough porphyry gold-copper deposits have been described and discussed by the writer in earlier reports submitted to Vanco, and need not be reiterated here.

As noted above, the Nicola Belt is the southern extension of the Quesnel Trough and possesses the same general geological character; in the Aspen Grove area, the environment closely resembles that on the Dome QR property, e.g.

1. Thick accumulations of alkaline flows, polyolithic green and maroon breccias, tuffs and minor sediments.

2. Presence of syenite-monzonite-diorite alkaline intrusions aligned along a major fault system.
3. Porphyry copper style mineralisation with associated epidote, carbonate, and pyritic alteration (propylitic).
4. North of the Vanco property, gold occurs at or adjacent to the contact between calcareous argillites and underlying volcanics (see geological plan).

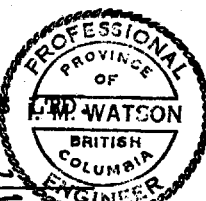


RECOMMENDATIONS

A multi-phase staged exploration programme is recommended for the Vanco Aspen Grove properties. Primary targets are QR and Laramide type gold deposits. Geochemical sampling, magnetic and I.P. surveys, complemented by prospecting and mapping, are the recommended tools.

Phase 1	<u>Office Compilation</u> <u>(Approx. 10 days)</u> <ul style="list-style-type: none"> <li>- Data compilation (assessment, government and company reports)</li> <li>- Air photo interpretation</li> <li>- Base map construction (1:5000 topo enlargements)</li> </ul>	Estimated Cost	\$ 6,500
Phase 2	<u>Preliminary Reconnaissance Exploration</u> <u>(Approx. 25 days)</u> <ul style="list-style-type: none"> <li>- Recce mapping &amp; prospecting, selected areas</li> <li>- Recce geochemical soil/rock sampling, selected areas (broad grid and/or contour sampling)</li> <li>- Sampling of all known showings, mineralised zones</li> </ul>	Estimated Cost	34,500
Phase 3	<u>Detailed Exploration of Areas Defined by Phase 2 (Approx. 42 days)</u> <ul style="list-style-type: none"> <li>- Linecutting (125 X 20 m. grids)</li> <li>- Grid controlled soil sampling</li> <li>- Grid controlled magnetometer survey</li> <li>- Reconnaissance I.P.</li> </ul>	Estimated Cost	53,740
Phase 4	<u>Follow-Up (dependent on results of Phase 3) (Approx. 15 days)</u> <ul style="list-style-type: none"> <li>- Detailed I.P.</li> <li>- Trenching/sampling</li> </ul>	Estimated Cost	44,000
Phase 5	<u>Diamond Drilling (dependent on results of Phase 4) (Approx. 20 days)</u> <ul style="list-style-type: none"> <li>- Preliminary programme 500 m.</li> </ul>	Estimated Cost	60,000
		TOTAL	\$ <u>203,740</u>

I. M. WATSON &amp; ASSOCIATES

Per: 

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DETAILED BUDGET

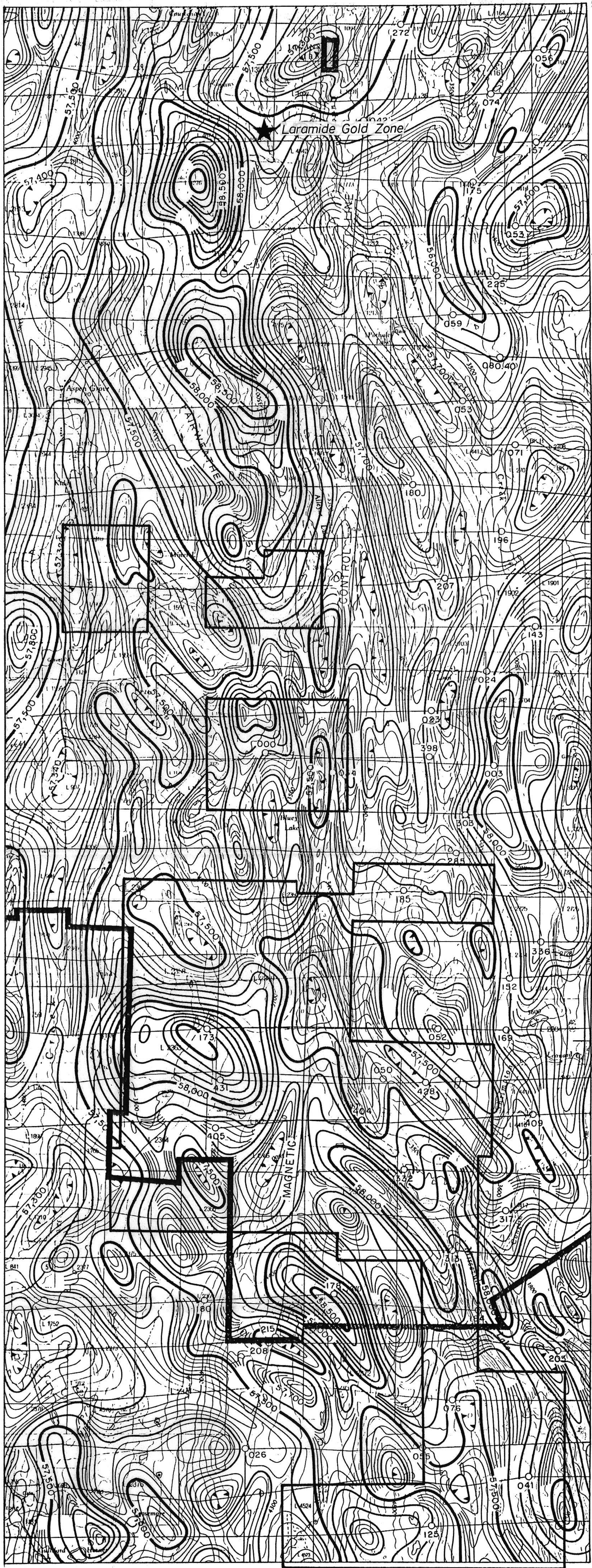
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Totals
Salaries & fringe	-	8,245	4,980	550	-	13,775
Accommodation & board	-	2,695	4,900	1,050	-	8,645
Radio, telephone, freight	50	520	600	125	-	1,295
Vehicle expense	-	1,250	2,100	500	-	3,850
Equipment rental	-	1,500	810	-	-	2,310
Equipment purchase	-	500	175	200	-	875
Geochem/assays	-	15,550	7,300	500	-	23,350
Reproductions, maps	2,000	-	225	-	-	2,225
Drafting	950	-	700	175	-	1,825
Linecutting	-	-	6,900	-	-	6,900
Contract geophysics	-	-	15,300	20,000	-	35,300
Fees/administration	3,500	9,240	9,750	7,900	-	30,390
Diamond drilling	-	-	-	-	60,000	60,000
Trenching	-	-	-	13,000	-	13,000
<b>TOTALS</b>	<b>6,500</b>	<b>39,500</b>	<b>53,740</b>	<b>44,000</b>	<b>60,000</b>	<b>203,740</b>
<b>CUMULATIVE TOTALS</b>	<b>6,500</b>	<b>46,000</b>	<b>99,740</b>	<b>143,740</b>	<b>203,740</b>	



35'

120° 30'

50°00'



55'

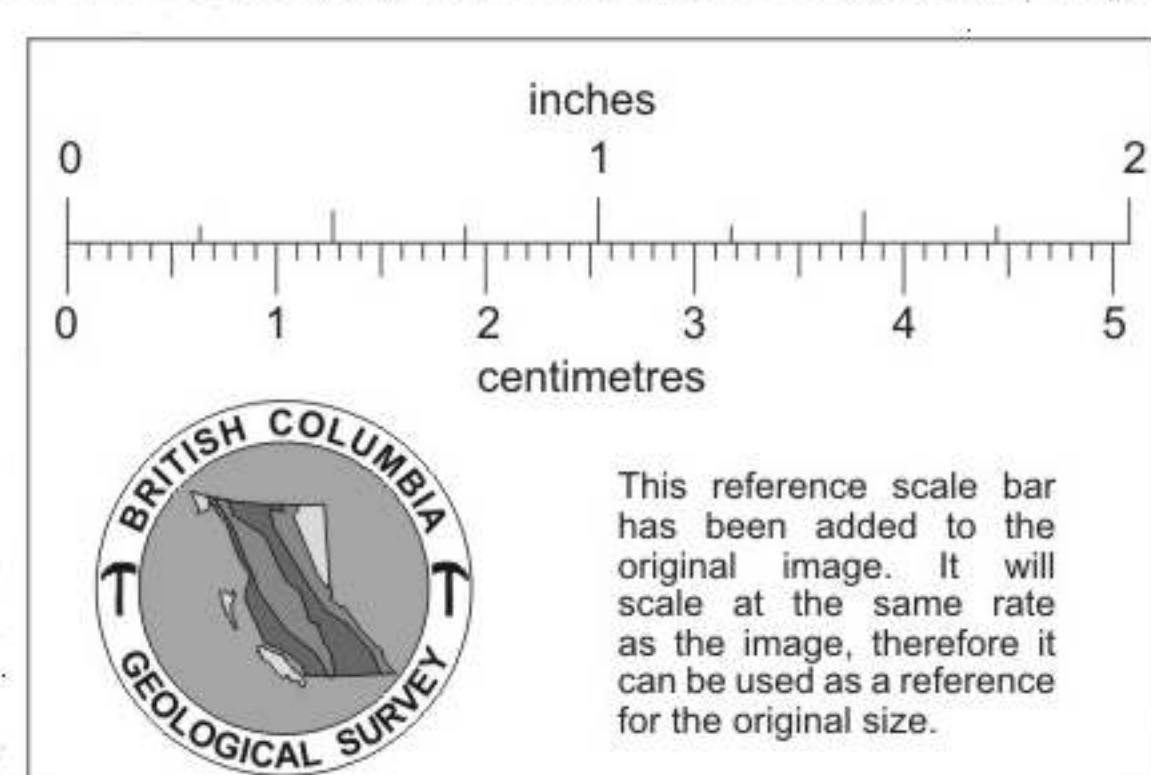
8528 G "Paradise Lake"

50'

49°45'

35'

120° 30'



### AIRBORNE MAGNETICS

### Aspen Grove Area

OVERLAY FOR PRETO  
GEOLOGICAL PLAN,  
BULL. 69, 1979,  
MEMPR B.C.

