

SUMMARY REPORT
ON THE
KLEANZA MTN. PROPERTY
(COLUMARIO GOLD MINE)
near Terrace B.C.

on behalf of

ENDURANCE MINERALS INC.

by

Robert Wolfe, P.Eng.

Vancouver, B.C.

June 30, 1987

1. SUMMARY

1.1 Endurance Minerals Inc. owns the Kleanza Mtn. property, including the old Columario gold mine 10 miles north of Terrace B.C.

1.2 The mine has been idle since 1939 and all workings are inaccessible except for the #7 vein (#8 adit).

1.3 In 1984 a crew under direction of Egil Livgard P.Eng conducted a soil survey over part of the property, opened up and sampled the #7 vein, resampled and traced the Haveroen vein (on the south end of the claims) and conducted general reconnaissance.

1.4 Soil samples were analyzed for Au, Cu, Pb, Zn, but no significant anomalies were outlined. A few scattered gold highs occur in the immediate vicinity of the old workings.

1.5 The #7 vein averaged 0.629 oz/ton gold over a width of 0.34 m and a length of 24 m.

1.6 The Haveroen vein averaged 0.41 oz/ton gold over a width of 0.62 m and a length of 6.5 m.

1.7 An important discovery on the north part of the property was an auriferous syenite. Widely spaced grab samples with minor oxidized sulphides, assayed 0.005, 0.032, 0.012, and 0.050 oz/ton gold.

1.8 Another important discovery was a large area in the center of the claim block of highly silicified andesite breccia.

1.9 Although barren on surface, the intense silicification is considered a probable silica cap with the possibility of epithermal type gold deposits underneath and spatially associated with it.

1.10 To explore for an epithermal type gold deposit, a program is recommended including line grid, geological mapping, and rock and soil geochemistry for Au, Hg, As, Sb.

This program (estimated to cost \$110,000) should outline the

hydrothermal halos which are associated with epithermal deposits so that drilling targets can be prioritized.

1.11 Contingent on results of Phase I, a drilling program is recommended for Phase II estimated to cost \$390,000.

1.12 The total cost estimate for Phase I and II is \$500,000.00.

2. INTRODUCTION

2.0 The writer is retained by the Directors of Endurance Minerals Ltd. to evaluate all work done to date on the Kleanza Mtn. claims and recommend an exploration program.

2.1 The property was visited in person in September 1983 and a preliminary report written at that time (Wolfe, 1983).

2.2 The following summary report combines the original information with results (supplied by Livgard Consultants) from a 1984 exploration program. No further visits to the property have been made.

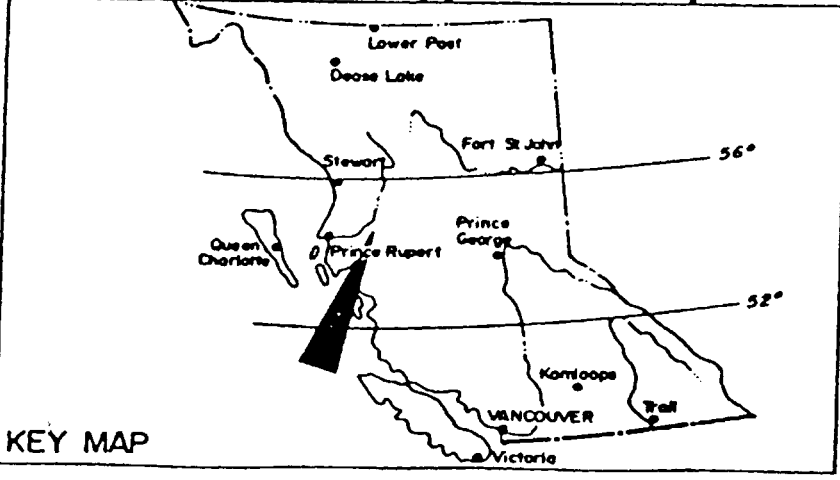
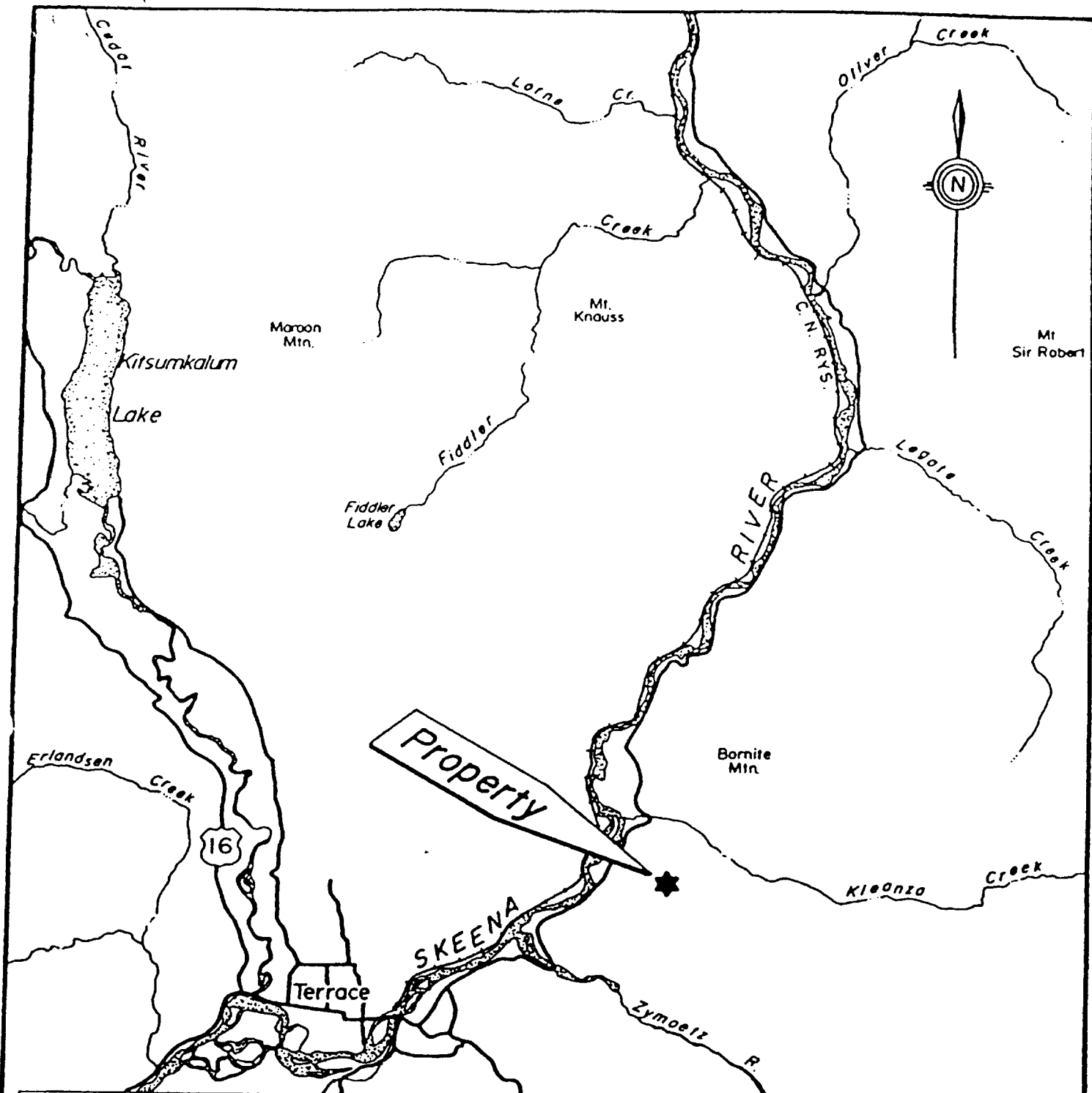
3. LOCATION AND ACCESS

3.1 The property is located on the north side of Kleanza Mtn, 10 miles N.E. of Terrace, British Columbia. Longitude: $128^{\circ} 17'$, Latitude: $54^{\circ} 33'$, N.T.S. code 1031/9.

3.2 The Yellowhead highway passes within 1/2 mile of the western boundary of the property and an old wagon road was built to the workings. This wagon road could be rehabilitated for 4 wheel drive traffic at relatively little cost.

3.3 An excellent foot trail extends uphill from the main workings to the "Nelson Showing" (now named the Haveroen vein) located on the Nelson claims in the S.W. corner of the claim group.

3.4 The Columario Mine is situated on a steep, heavily timbered sidehill overlooking the Skeena River. Elevations range from 1,000 ft. to 4,000 ft A.S.L. It is understood that continuing logging operations presently on the Western border, will improve access to various parts of the property in the future.



Endurane Minerals Inc.
Kleanza Mtn. Group Terrace, B.C.
Omineca Mining Division 1031/9

0 1 2 3 4 5 10miles

Location Map
 figure 1

4. CLAIMS

4.1 The property consists of the following claims, reversed Crown grants and fractions:

CLAIM NAME	REC. NO.	
VALHALLA	1272	R.C.G.
VALHALLA #1	1273	R.C.G.
VALHALLA #2	1275	R.C.G.
VALHALLA #3	1276	"
VALHALLA #4	1274	"
L.C. FRACTION	1277	"
NORMAN FRACTION	1278	"
NELSON (2 units)	1359	Staked Claim
FIRE #1	5791	Staked Claim
FIRE #2	5792	Staked Claim
SUN (20 units)	6039	" "
CLOUD (20 units)	6038	" "
HANS	Tag No. 71476	
MARY (4 units)	Tag No. 67377	
NOBLE FRACTION	Tag No. 76951	
KP #1	Tag No. 394769M	
KP #2	Tag No. 394770M	
STACY #1	Tag No. 516753M	
STACY #2	Tag No. 516754M	
MIST #1-8	Tag Nos. 3915274M-391534M	
SKY (9 units)	5790	Staked claim

This is a total of 83 contiguous claims, fractions and reverted Crown grants. Endurance Minerals Inc. own the claims 100%.

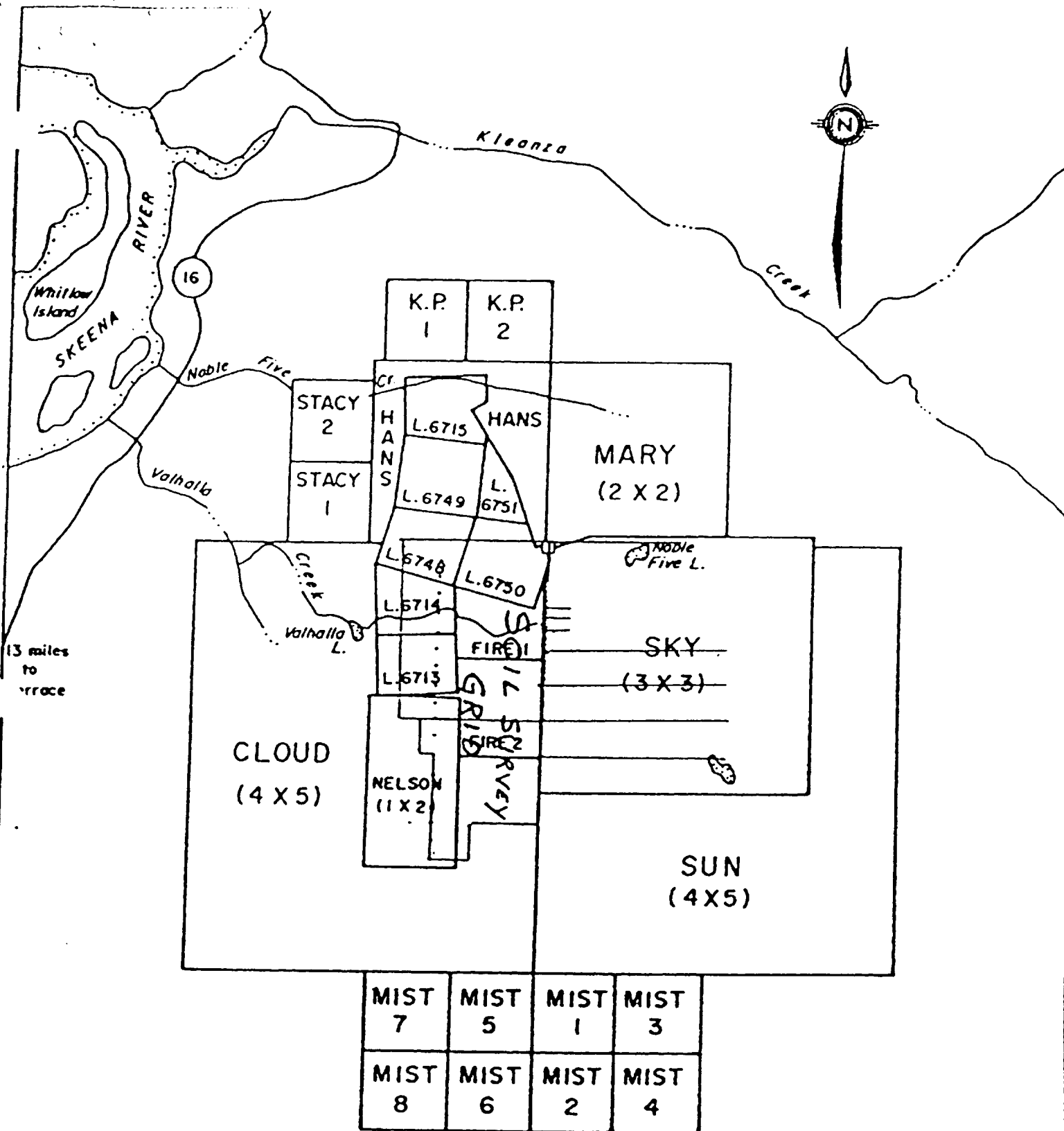


Fig 2

ENDURANCE MINERALS INC.			
COLUMARIO GOLD MINE			
OMINECA MINING DIVISION, B. C.			
CLAIM MAP			
Kilometres 0		0.5	Kilometres 1

5. HISTORY

5.1 Minor work was initiated on the property by the Kleanza Company in 1919. Subsequent prospecting led to the formation of the Columario Gold Mines Limited in 1927. In 1928 and 1929 drifting, raising and crosscutting was carried out on Nos. 4, 5, 6 and 7 veins. Development was continued until 1934 when a flotation plant was erected with a capacity of 75-100 tons/day. The mill operated from September 1934 to June 1935 by which time 8,000 ft of underground development had been completed.

5.2 Production records are not available but it is reported that in 1933, 3 sacks of ore weighing 200 pounds were shipped to the Mines Branch in Ottawa for testing, containing 1.44 oz Au/ton, 3.51 oz Ag/ton and 0.42% Cu/ton. Polished section examination showed that the gold was associated with pyrite.

5.3 In 1939 the property was leased by W.W. Duncan and it is reported that 15.86 tons of selected ore was shipped.

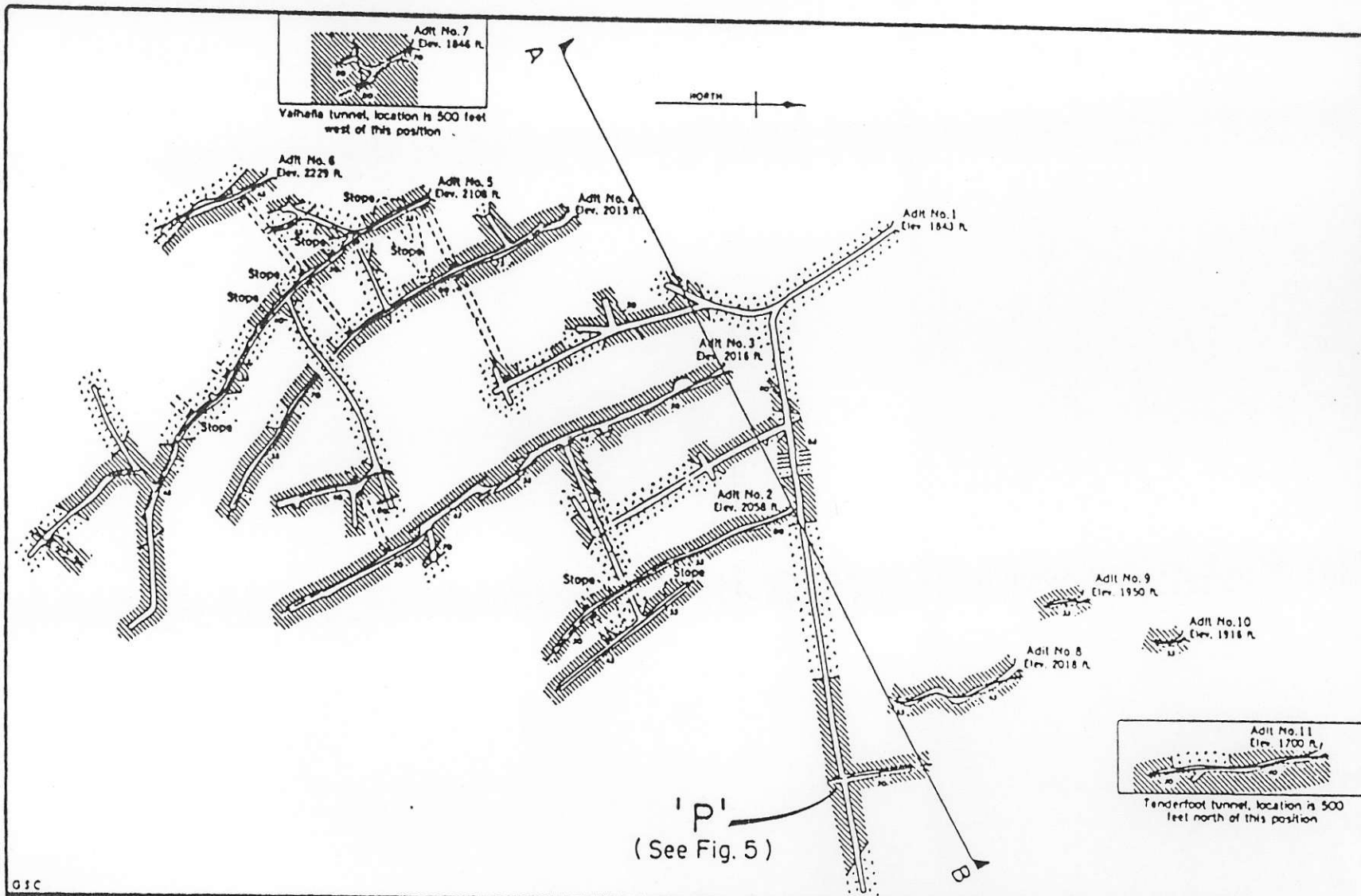
5.4 No other work appears to have been done on the property since 1939 until a crew under the direction of Egil Livgard, P.Eng. conducted a soil survey in 1984. Mr. Livgard also gained access to #7 vein and sampled it in detail. Additional work included resampling of the Haveroen vein, tracing same on surface and reconnaissance geology. (see later sections)

5.5 Results of the 1984 soil survey

i) Soil samples were collected every 50 m on the grid (see Figure 2); in some areas every 25 m, and over mineralized veins every 12.5 m. Both A and B horizons and also C horizon, where available, were sampled.

ii) Samples were analyzed for Au, Pb, Zn, Ag and Cu by Chemex Labs of Vancouver.

iii) The geochemical response for the above metals was essentially flat. A few erratic isolated gold highs occurred immediately below known vein structures.



OSC

LEGEND

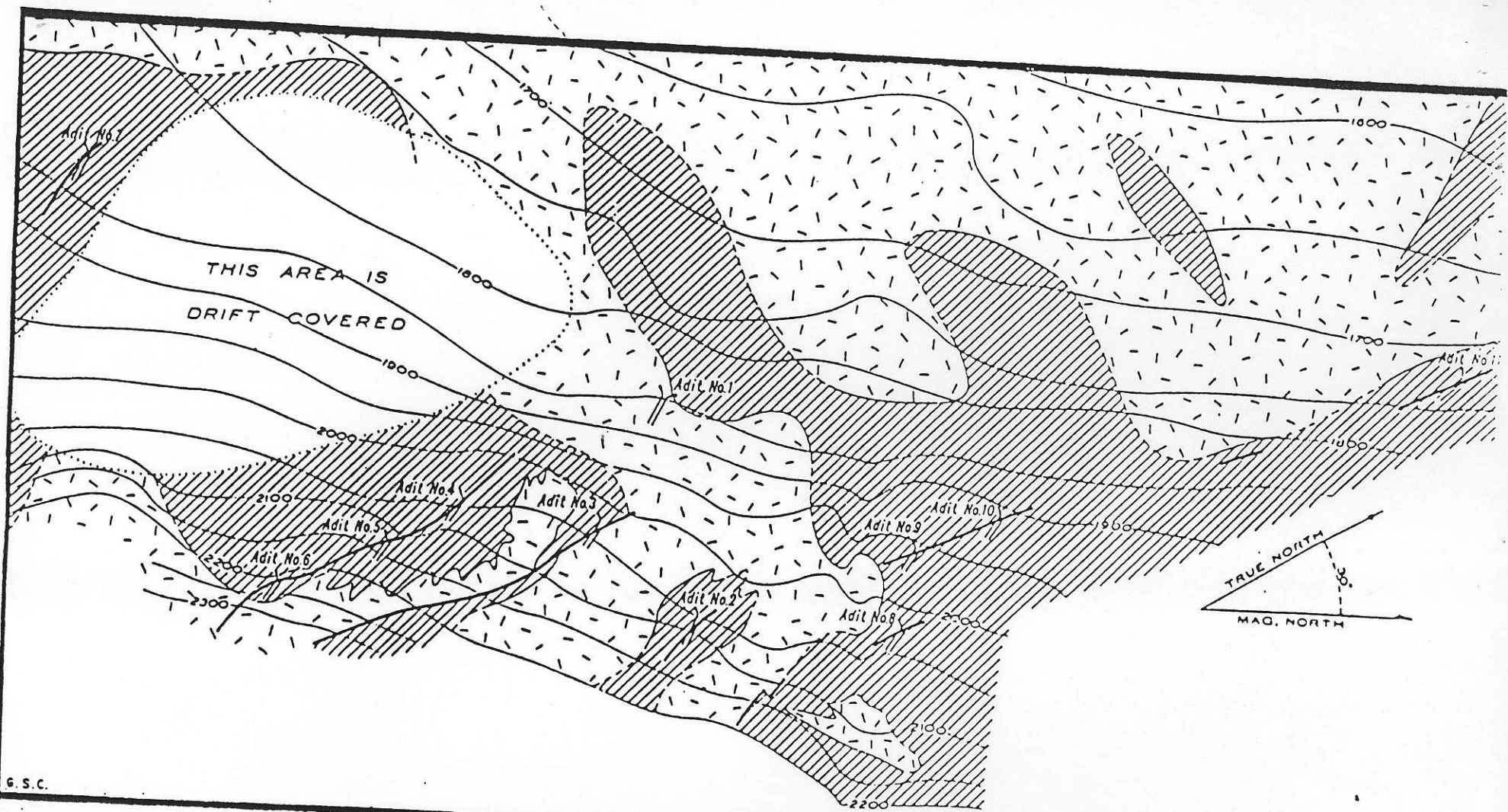
- | | | | |
|--|--------------|--|-----------------------------|
| | Granodiorite | | Vein |
| | Andesite | | Fault (defined approximate) |
| | | | Raise |

Plan of Underground Workings of Columario Mine
(after Kindle, 1937) figure 3

Endurance Minerals Inc.

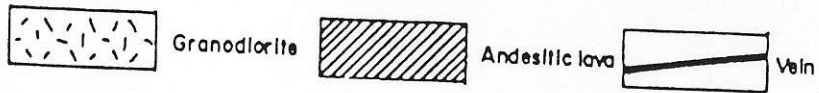
Kleanza Mtn. Group *Terrace, B.C.*
Omineca Mining Division *N.T.S. 1031/9*





G. S. C.

LEGEND

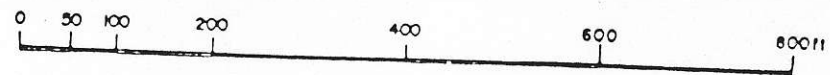


Geology of the Columario Mine area
 figure 4

Endurance Minerals Inc.

*Kleanza Mtn. Group
 Omineca Mining Division*

*Terrace, B.C.
 N. T. S. 103 I / 9*



6. GEOLOGY AND MINERALIZATION

6.1 The property occurs in a contact zone between Coast range diorite and granodiorite (west side) and altered andesites of the Jurassic Hazelton Group (east side). The andesites are probably a roof pendant according to Minister of Mines Report 1934.

6.2 Gold mineralization occurs in N.W. trending quartz veins, (dipping 35° - 75° N.E.) associated with pyrite and some chalcopyrite.

6.3 The contact is very irregular as Figure 4 shows, and both the andesites and granodiorite are cut by quartz albite, diorite and lamprophyre dykes.

6.4 The quartz veins varying in width from 1 to 3 ft. (with occasional lenses 5 ft wide), are barren in many places but where they are mineralized with seams of coarse pyrite a fair amount of gold occurs.

A complete description of the individual veins is included in the Minister of Mines Report 1934. (Appendix I).

6.5 All old Columario workings are presently caved and inaccessible except for #8 adit.

6.6 Most of the ore was apparently taken from the #4 vein. The main haulage level and crosscut was driven to intersect the veins at the 1,843 ft level but apparently was unsuccessful in doing so. A raise from this level to the #4 vein, apparently encountered the vein 115 ft up. The dip of the vein at this point is not reported, but an idealized section (Figure 5) shows that the crosscut may have missed the #4 vein at the 1,843 ft level.

6.7 In addition #7 vein, (#8 adit), Minister of Mines Report 1934, mentions that a narrow vein was encountered in the crosscut at point P (see Figure 3, 5). This is assumed to be #7 vein. However, projecting the #7 vein, using the dip of 45° and/or 35° as reported (see section,

Figure 5) shows that the crosscut would not have reached #7 vein. Number 7 vein was reported to average 0.88 oz Au/ton over a width of 21 inches and a length of 90 ft. In 1984 Mr. Livgard gained access to #7 vein (#8 adit, Figure 8) which averaged 0.629 oz/ton gold over a width of 0.34 m and a length of 24 m.

6.8 The Haveroen vein ("Nelson showing")

i) This vein occurs in the south part of the property and consists of a short (6.5 m) adit striking southeasterly and dipping 70° to the N.E.

ii) In 1983 the author sampled this adit selectively as follows:

SAMPLE	WIDTH AND	GOLD	SILVER	LOCATION
4044	3 ft continuous chip sulphides rare	0.706	0.33	Portal
4045	18" continuous chip & oxidized material	2.980	0.64	On face 20 ft SE of portal
4046	30" continuous chip sulphides rare	0.256	0.34	10 ft SE of portal (in roof)
4047	4" oxidizes material	7.550	4.02	on face
4048	6" coarse pyrite	6.250	5.40	10 ft SE of portal (bottom corner)
4049	20 ft chip of altered andesite, some small quartz stringers on hanging wall side of vein	0.232	0.18	on surface

iii) In 1984 Mr. Livgard channel sampled the vein carefully and obtained an average of 0.41 oz/ton gold over a width of 0.62 m and length 6.5 m. The surface of the vein was traced to 120 m. The width appeared to vary from 0.5 to 0.8 m. One grab sample assayed 1.0 oz/ton Au (see Figure 8).

iv) The 20 ft hanging wall sample the author took in 1983, which assayed 0.232 oz/ton gold, could not be repeated. It appears that the gold occurs

in the small, 1 cm quartz stringers within the andesite hanging wall. Further sampling will be necessary to test the distribution of gold in the wall rock.

6.9 Mr. Livgard also reports the discovery of siliceous breccias and auriferous syenite, which will be discussed separately.

A

B

2,200'

2,100'

2,000'

1,900'

1,800'

• 5(4)

• 4(4)

• 3(5)

• 2(6)

• 8(7)

?

?

?

?

?

'P'

45°

35°

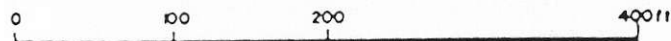
Projection of main haulage level and X-cut

LEGEND

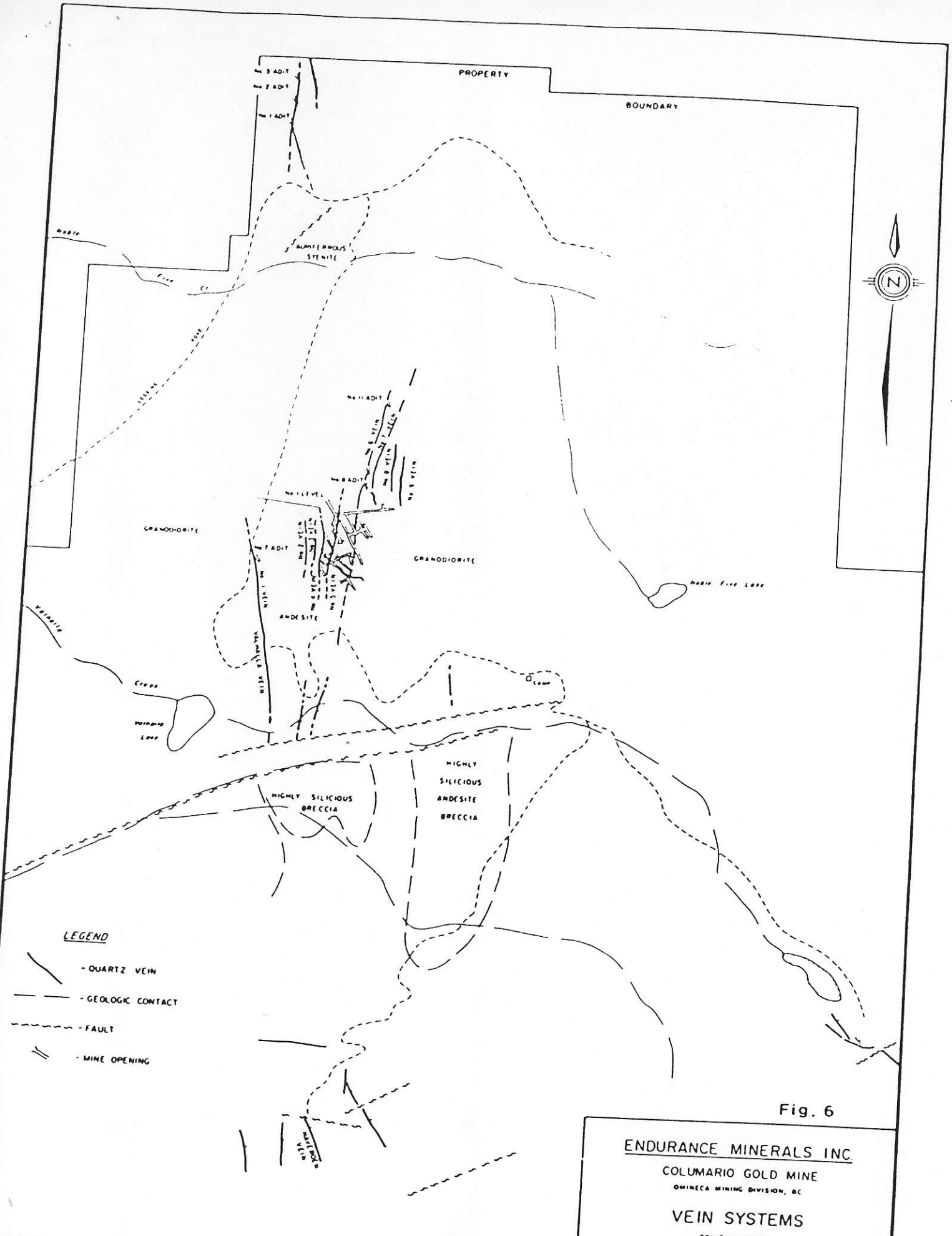
- 5 Adit # 5
- (4) Vein # 4
- Vein

Endurance Minerals Inc.

Kleanza Mtn. Group Terrace, B. C.
Omineca Mining Division N.T.S. 103 I / 9



Idealized Section A-B of Columario Vein System looking NW (see fig.3) Figure 5



LEGEND

- QUARTZ VEIN
- GEOLOGIC CONTACT
- FAULT
- MINE OPENING

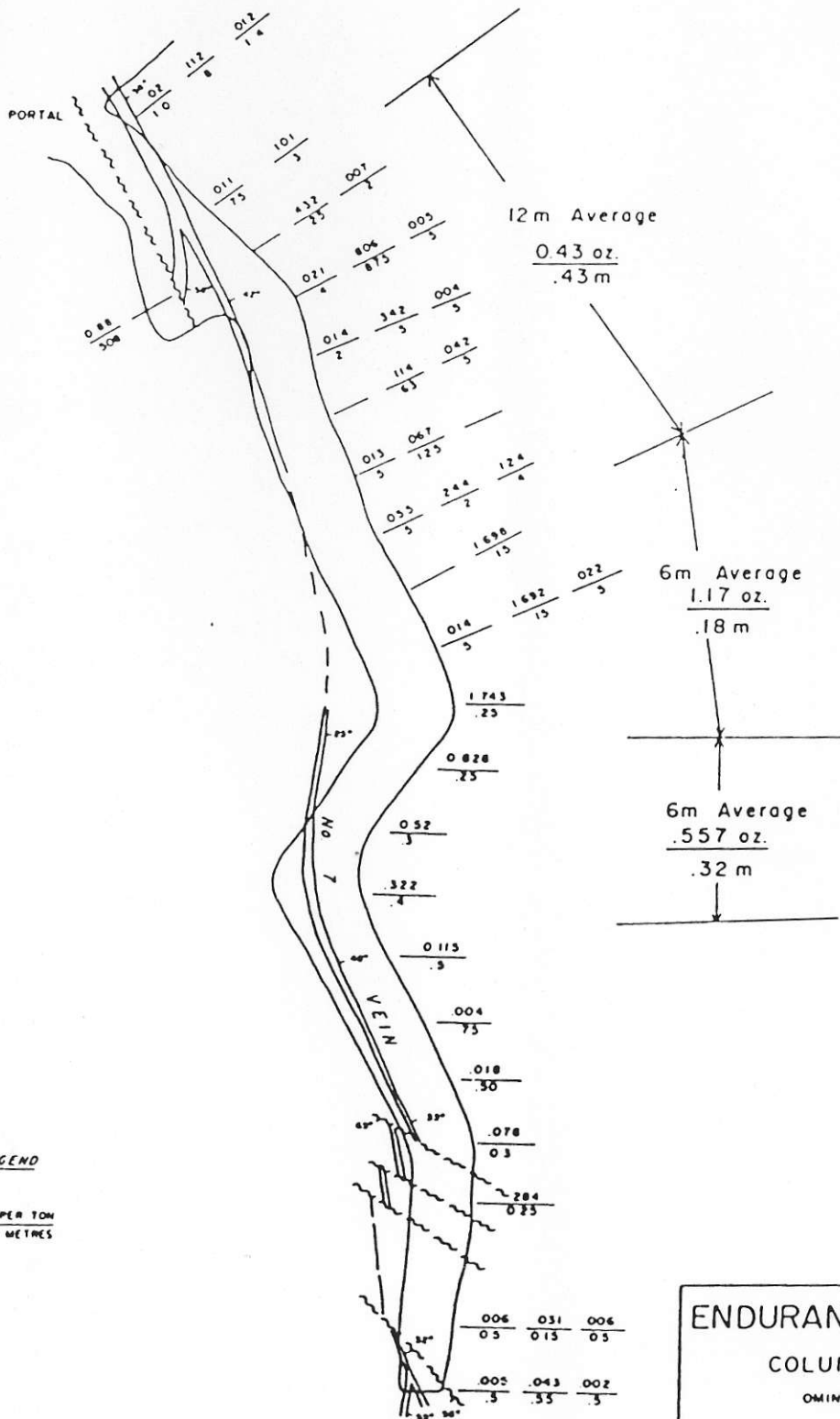
Fig. 6

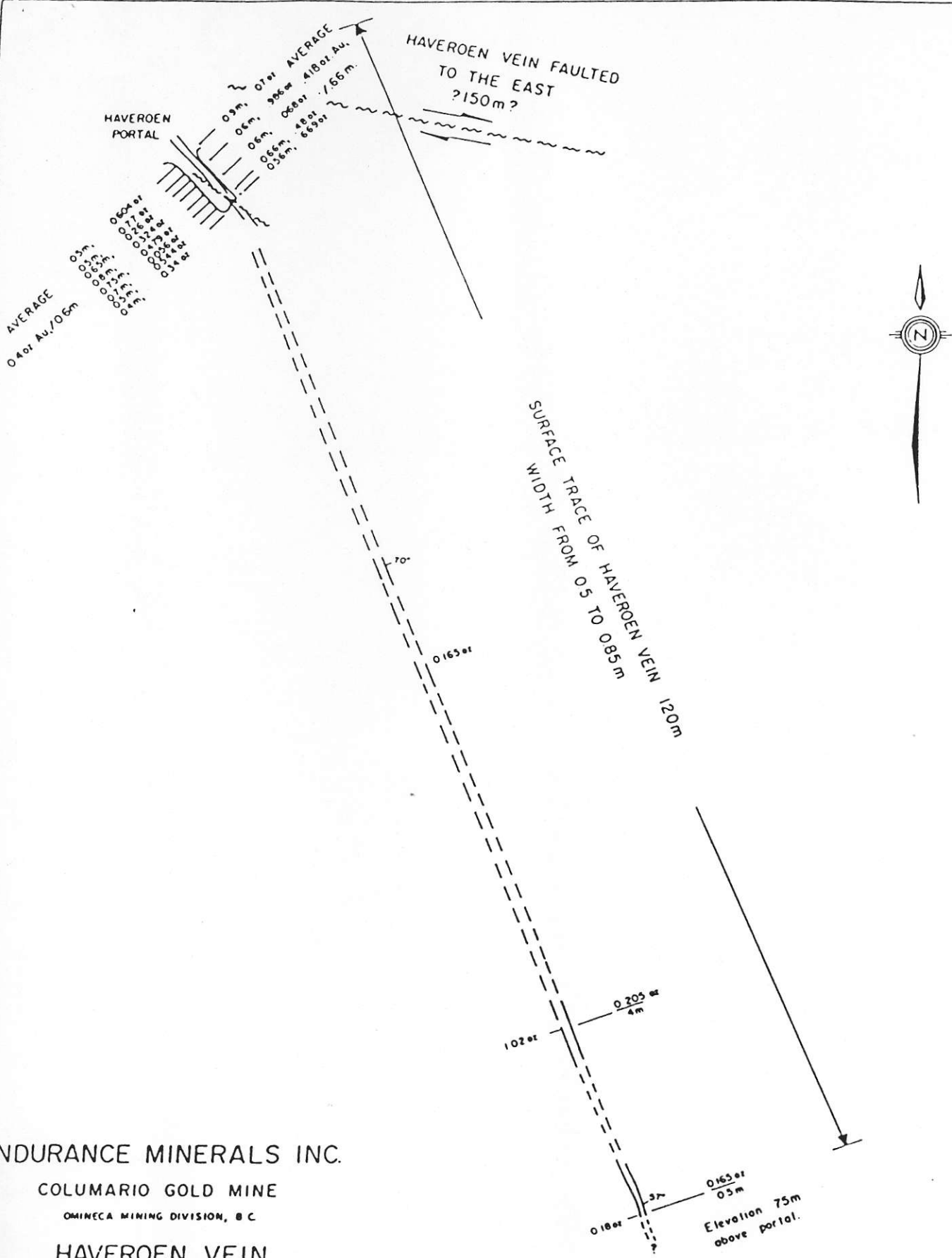
ENDURANCE MINERALS INC.
 COLUMARIO GOLD MINE
 Omineca Mining Division, BC

VEIN SYSTEMS

SCALE IN METRES
 0 200 400

OCT, 1984





NDURANCE MINERALS INC.
 COLUMARIO GOLD MINE
 OMECA MINING DIVISION, B.C.
 HAVEROEN VEIN
 ASSAY PLAN



Fig 8

7. AURIFEROUS SYENITE

7.1 In the north part of the property several widely spaced grab samples were taken from a syenitic intrusive which assayed as follows: 0.005, 0.032 and 0.012 oz/ton gold. Another sample some 150 m to the south assayed 0.05 oz/ton gold. Mr. Livgard reports minor rusty sulphides in the samples.

7.2 The author considers this an important discovery, which will have to be followed up.

8. SILICEOUS BRECCIAS

8.1 Just south of the Columario workings, Mr. Livgard discovered a large area of intense silicification and brecciation of the andesitic hostrocks (see Figure 6). Such alteration is usually associated with epithermal type gold deposits.

8.2 It should be noted (Figure 6) that the gold mineralization occurs in a strong north-south structural zone. This suggests a possible "feeder fault" at depth.

8.3 Airphotos show strong cross structures at the southend of the main workings and on the northend of the silicified areas.

8.4 It's the author's opinion that the silicified breccias are probably silica "caps". Although this "cap" does not contain gold, the chances of discovering an epithermal type gold deposit below the cap and spatially associated with it can be considered excellent (see sect. 9, Figure 7).

8.5 Figure 6 also shows that the Columario veins tend to converge towards the south and the area of highly silicified breccia. This could be indicative of a "hot" spot occurring in this area.

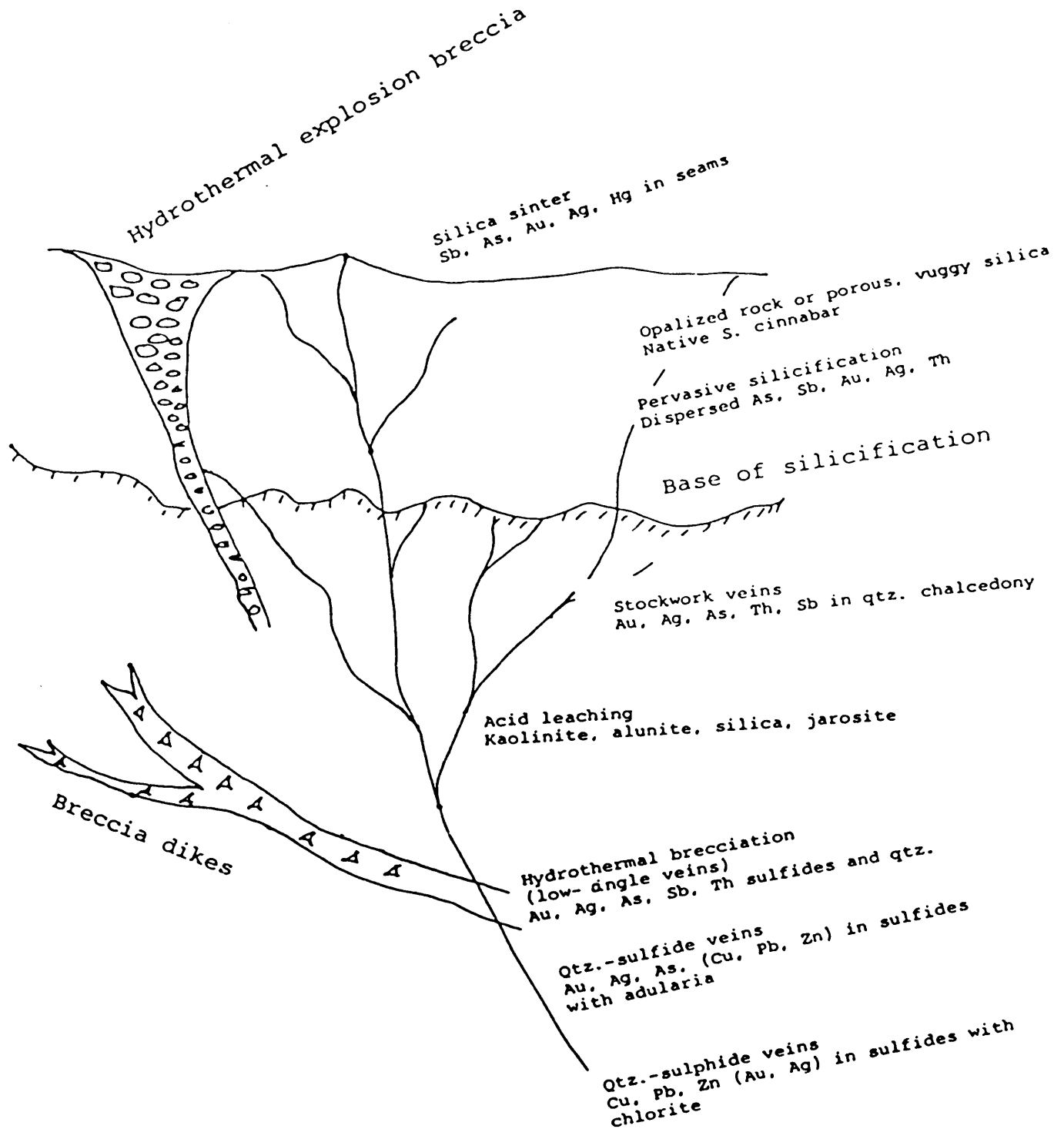


Figure 9 Schematic cross-section of the Hot Springs depositional model, showing the spatial relationships of alteration and trace element geochemistry (from Berger 1982).

9. BRIEF DISCUSSION ON EPITHERMAL GOLD DEPOSITS

9.1 The highly silicified andesite breccias are a typical feature associated with "Hot Spring" type gold deposits.

9.2 Meteoric waters percolating downwards from the surface get heated near magmatic centers and forced up major high angle faults and fracture systems.

9.3 The hot waters leach minerals and particularly silica from the surrounding rocks and redeposit same in the fracture systems at various depths, depending on the precipitation temperature of each individual mineral.

9.4 Epithermal gold (180° - 250° C) is deposited, often in association with silica.

9.5 These hydrothermal fluids are often under considerable pressure, particularly if the system seals itself with silica deposition in the passage ways.

9.6 These "silica caps" fracture explosively if the pressure exceeds certain limits and the fluids "boil" and the whole process is repeated until the system is eventually closed down.

9.7 The important point is that the uppermost silica "caps" are usually quite barren in gold but anomalous in Hg, As, Sb and various other minerals.

9.8 Both vein-stockwork, bonanza deposits as well as disseminated "Carlin" type gold deposits are possible targets.

10. RECOMMENDATIONS

PHASE I

10.1 Line Grid

A north-south baseline (4 km long) should be established through the center of the mineralized zone. Side lines are to be run at 100 m intervals. The length of the sidelines will vary, depending on which area is being covered. On the average, 1000 m per line should be sufficient.

10.2 Geologic Mapping

Every outcrop on the lines and between lines is to be mapped and sampled.

10.3 Geochemical Rock and Soil Survey

Soil and rock samples are to be collected every 25 m in areas of high interest and every 50 m elsewhere. Samples are to be analyzed for Au, Hg, As, Sb. This will outline the hydrothermal alteration halo which may suggest possible drill targets.

10.4 All old mine dumps are to be sampled and analyzed for gold to investigate wall rock mineralization.

10.5 A geophysical orientation should be conducted over known mineralized areas and the highly siliceous zones. Electromagnetic (EM) response to check for possible conductors such as massive pyrite and Induced Polarization (I.P.) response for possible disseminated sulphides.

PHASE II

10.6 Contingent on phase I results a reverse circulation drilling program is recommended to test anomalous areas. If building drill access roads is not cost effective, a small diamond drill will have to be utilized, which can be moved by helicopter.

11. COST ESTIMATE

11.1 PHASE I

LINE GRID AND SAMPLE COLLECTION 40 km @ \$250	10,000.00
SAMPLE ANALYSIS 1600 samples @ \$20	32,000.00
GEOLOGICAL MAPPING 1 Senior Geologist 40 days @ \$400 1 Assistant 40 days @ \$200	16,000.00 8,000.00
FOOD AND ACCOMMODATION 40 days, 6 men 240 mandays @ \$40	9,600.00
TRANSPORTATION Airfares (Vancouver-Terrace) Helicopter support 20 hrs @ \$500 Truck Rental	3,000.00 10,000.00 1,000.00
CONSULTANTS, REPORTS, DRAFTING, ETC.	10,000.00

Contingencies (10%)	99,600.00 10,400.00

TOTAL PHASE I	\$110,000.00

11.2 PHASE II (Contingent on results of Phase I)

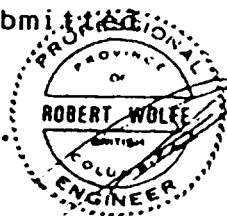
DRILL ACCESS ROADS	90,000.00
REVERSE CIRCULATION DRILLING 15,000 feet @ \$20/ft (including assays, supervision etc.)	300,000.00

TOTAL PHASE II	\$390,000.00

TOTAL PHASE I AND PHASE II	\$500,000.00

Respectfully submitted,

R. Wolfe, P.Eng.

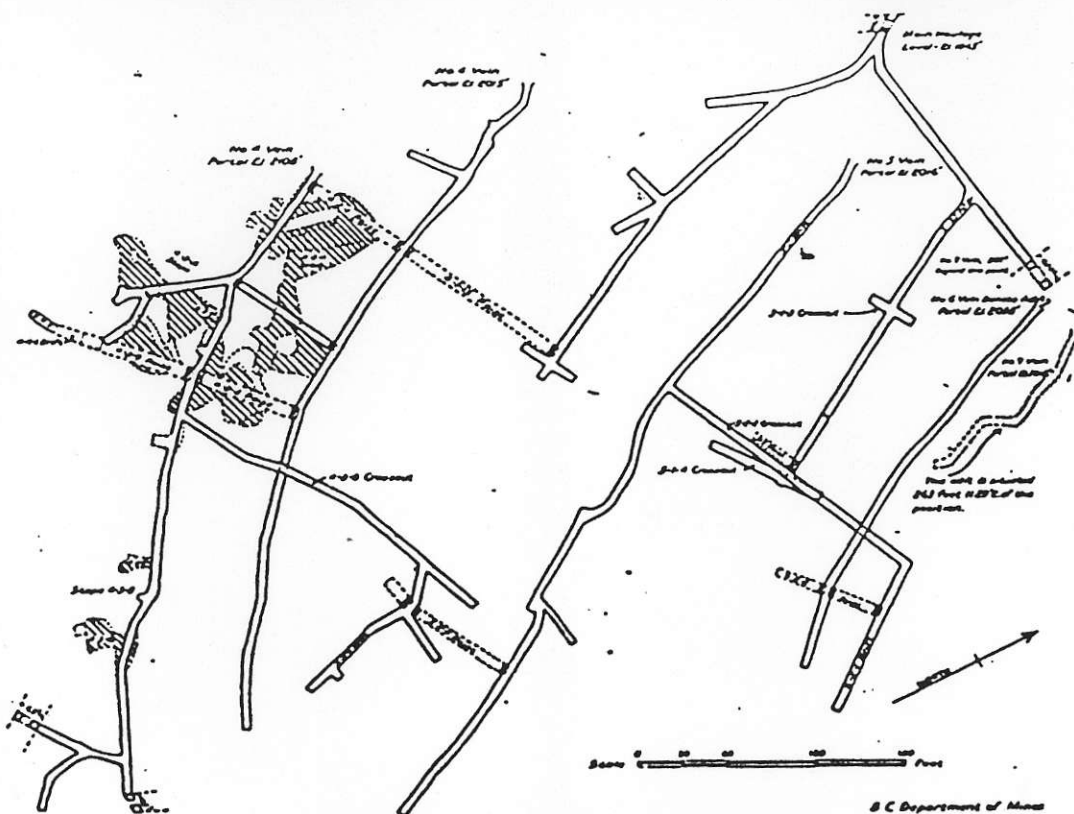


APPENDIX 1
MINISTER OF MINES REPORT 1934 ON COLUMARIO
CONSOLIDATED GOLD MINES LTD.

OMINECA MINING DIVISION.

The *Valhalla*, *Kleanza*, and *Tenderfoot* groups, the property of Columario Consolidated Gold Mines, Limited, consist of the following Crown-granted claims and thirty held on location: *Valhalla No. 2*, *Valhalla No. 3*, *Norman Gold Mines, Ltd. Fraction*, and *L.C. Fraction*. The workings are on the steep and densely-timbered slopes of Kleanza mountain at elevations of 1,400 to 1,800 feet above the Usk-Terrace highway. The mill is situated on the right bank of Noble Five creek on the highway about $4\frac{1}{2}$ miles distant from Usk. A go-devil road and aerial tramway connect mine and mill. The mine may be reached by a shorter trail leaving the highway at Kleanza creek.

Nine parallel quartz veins, with free walls, mainly from 1 to 3 feet wide and in one case 6 feet wide, average distance apart being about 150 feet, outcrop at various points on the steep mountain-side between elevations of 1,700 and 2,100 feet. They strike north 20 to 30 degrees west and dip north-east at angles of about 50 degrees. Sulphide mineralization is chiefly pyrite with some chalcopryrite, and in the case of No. 5 vein, galena. The veins are named in order from west to east, No. 1 being the most westerly and No. 9 the most easterly. The rock formation is



altered andesite (greenstone) intruded by diorite stocks and lamprophyre dykes. Tongues of aplite occur which antedate the veins, and in which the latter pinch. The point at which the eastern flank of the Coast Range batholith plunges downward is not, it is believed, accurately known, but indications point to this plunge taking place just east of Pitman, in which case this property would be situated in a roof-pendant area.

In 1919 the Kleanza Company was organized for the purpose of developing this property, and preliminary prospecting was carried on in that and the following year. In 1921 a syndicate known as the "K. Partnership" acquired a lease on the *Golden Crown* from the Kleanza Company and erected a Ross mill on the property, but work was suspended shortly afterward. During the next few years prospecting operations were carried on under the supervision of

John Willman. A small amount of work was subsequently done annually, with results which led to the incorporation of a company in 1927, the Columarlo Gold Mines, Limited. In that year a portable compressor was installed and an active campaign of development was carried out in the years 1928 and 1929. The work consisted of drifting, raising, and crosscutting on and between Nos. 4, 5, 6, and 7 veins. Development was continued during 1930 and a little work was done in 1931 and 1932. Development was speeded up at the end of 1933 following reorganization of Columarlo Gold Mines, Limited, as Columarlo Consolidated Gold Mines, Limited. In 1934 a flotation plant of about 100 tons daily capacity was erected on the right bank of Noble Five creek on the Usk-Terrace highway, a 12-bucket aerial tram was constructed from the mine to the mill, and an Ingersoll-Rand air-compressor of 500 cubic feet of free air per minute capacity, operated by a 112-114-horse-power Vickers-Petter Diesel engine, installed at the mine. Difference in elevation of the two tram terminals is approximately 1,400 feet. Milling operations were commenced on September 2nd and, simultaneously with construction, underground development was carried on as actively as possible. (Refer also to Annual Reports 1919, 1920, 1921, 1925, 1927 to 1933, inclusive, and Bulletin No. 1, 1932.)

The workings have been driven to explore the downward continuation of the surface showings. Other exposures, it is reported, occur at higher elevations, and this fall a showing is stated to have been discovered some distance above No. 4 upper adit, but these exposures have not been examined by the writer.

Present operations are confined almost entirely to Nos. 4, 5, 6, and 7 veins. Two adits between 550 and 600 feet long have been driven on No. 4 vein at elevations of 2,015 and 2,108 feet. They are known respectively as No. 4 lower and No. 4 upper adits. Two raises about 135 feet apart connect these levels.

Adits have been driven on Nos. 5, 6, and 7 veins at elevations of 2,016, 2,058, and 2,133 feet for distances of about 600, 300, and 150 feet respectively.

A crosscut has been driven from the upper adit on No. 4 vein to No. 5 vein, connecting with a raise from the adit on the latter. The adits on Nos. 5 and 6 veins are connected by a crosscut and short raise on No. 6 vein. This raise has been continued for a considerable distance above the adit-level.

The main haulage-level is at an elevation of 1,843 feet, about 100 feet above the upper terminal of the aerial tram. It is driven in a south-easterly direction for 155 feet, from which point workings have been driven to intersect the downward continuation of Nos. 4, 5, 6, and 7 veins. With the exception of what is presumably No. 7 vein, where a quartz stringer a few inches wide is exposed, no marked evidence of the downward continuation of the veins had been found at the time of the writer's examination on November 2nd.

A raise connects the main haulage-level with the lower level on No. 4 vein. In this raise No. 4 vein has apparently been located 115 feet up, where, although narrow, it is said to be well mineralized. Up to the time of the writer's examination all the ore milled had been extracted from No. 4 vein. The necessary connections had not been made with the higher levels on the other veins for passing ore to the main haulage-level. No samples were taken.

Development to date has disclosed in No. 4 vein a fairly continuous ore-shoot between the raises (135 feet apart) connecting the adits on this vein and showing evidence of strong continuation above No. 4 upper adit. This ore-shoot has now been heavily drawn upon to feed the mill. In addition, there is another shorter lens of ore south-east of this shoot showing in the back of No. 4 upper level. The width of ore varies from 12 to 30 inches. The last 200 or so feet driven on both No. 4 upper and No. 4 lower adits did not disclose material amounts of quartz.

The adit on No. 5 vein at 385 feet from the portal encountered an ore-shoot 100 feet long averaging 15 inches in width, containing \$9.60 per ton in gold (gold taken at \$20.67), as stated by W. G. Norrie-Lowenthal. In the raise from this adit to the crosscut from No. 4 upper adit, the average of nine samples taken by the management gave \$34.30 per ton in gold across 20½ inches (value of gold being taken at \$35 per ounce).

The adit on No. 6 vein shows between 215 and 245 feet from the portal an ore-shoot averaging \$14.60 across 21 inches, according to the sampling of W. G. Norrie-Lowenthal. The raise on this vein was carried to a height of 129 feet above the level of the adit on No. 5 vein. The average of fourteen samples taken by the management from this raise is given as \$22.40 across 18 inches (gold valued at \$35 per ounce). The adit on No. 7 vein, elevation 2,133 feet, shows a

shoot of ore 90 feet in length averaging \$16.30 across a width of 21 inches, according to the statement of W. G. Norrie-Lowenthal.

Milling operations were suspended after three months' duration before the end of the year. The following statement has been made by the manager: "The mill was run experimentally for three months at low capacity. The mine is not yet developed to operate the mill at capacity, and it was decided to shut down for the winter, as it is undesirable to run one or two shifts only through the cold weather, as costs are increased if the mill be run below capacity. We are therefore confining our work to development for the next three months."

Data are not available covering the entire mill-run, but from start to finish 101.3 tons of concentrates were produced, containing approximately 492.622 oz. gold and 1,401.23 oz. silver.

Primary crushing is done by an 8-inch Traylor gyratory crusher, belt-fed over a magnetic pulley to eliminate tramp iron. Ore passing from the gyratory crusher is elevated to a 90-ton feed-bin, whence it is delivered by jig-feeder to a 6- by 4-foot Hardinge-type ball-mill (4-ton charge of 4-inch and 3-inch balls) operating in closed circuit with a Dorr-type duplex classifier overflowing at 90 per cent. through 150-mesh to a 6-cell "gravity-flow" flotation-cone, the under-flow passing to a 6-leaf American filter. Reagents used per ton are as follows: 0.1 lb. soda-ash; 0.25 lb. ethyl xanthate; 0.1 lb. G.N.S. No. 5 pine-oil. Xanthate and pine-oil are added to the flotation circuit, half in the first cell and half in the third. Power is supplied by a full Diesel 168-brake-horse-power Petter engine.

APPENDIX 2
ASSAY CERTIFICATE RE SYENITE



General Testing Laboratories

A Division of SGS Supervision Services Inc.

1001 EAST PENDER ST., VANCOUVER, B.C., CANADA V6A 1W7
PHONE (604) 254-1647 TELEEX 04-507514 CABLE SUPERVISE

TO: **ENDURANCE MINERALS**
3475 West 34th Avenue
Vancouver, B.C.
V6R 2K5

CERTIFICATE OF ASSAY

No.: **8406-2252** DATE: **June 26/84**

I hereby certify that the following are the results of assays on: **Ore**

MARKED	GOLD	SILVER	XXX	XXX	XXXX	XXX	XXX	XXX
	(oz/st)	(oz/st)						
<i>COLUMBIA</i>								
4176-B	0.002	Trace	} NOBLE FIVE LK Py SHOWING SYENITE AT LANDING					
4177	0.002	Trace						
4178	0.003	Trace						
4179	0.002	Trace						
4180	0.005	Trace						
4181	0.032	0.05						
4182	0.012	Trace						

cc. Mr. E. Livgard

L. Wong
PROVINCIAL ASSAYER

REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS
REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR
REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS PUBLICATION OF STATEMENTS
OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PERMITTED WITHOUT
WRITTEN APPROVAL ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers

MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association
REFEREE AND/OR OFFICIAL CHEMISTS FOR National Institute of Oilseed Products • The American Oil Chemists' Society

APPENDIX 3
REFERENCES

1. Berger, B.R. and Eimon, P.I. (1982) Comparative models of Epithermal Silver Gold deposits: Society of Mining Engineers reprint 82-13.
2. Duffell, S. and Souther, J.G. GSC Memoir 329.
3. Gildes, D.L. and Nelson, C.E. Principal features of epithermal lode gold deposits of the circum pacific rim.
4. Kindle, E.D. G.S.C. Memoir 205
5. Livgard, E. (1984) Geochemical soil survey on the Kleanza Mtn. property (assessment work report)
6. Siberman, M.L. (1982) Hot-spring type, Large tonnage, Low-grade gold deposits: pp.131-143 in Erickson R. editor characteristics of Mineral Deposit occurrences U.S.G.S. open file Report 82-795.
7. Wolfe, R. (1983) Report on the Keanza Mtn. group.
8. Report of the Mister of Mines 1934

APPENDIX 4
CERTIFICATE

I, Robert Wolfe, of Vancouver, B.C., do hereby certify that:

1. I am a Consulting Geological Engineer with an office at 3919 West 31st Avenue, Vancouver, B.C.
2. I am a graduate of the University of Alberta with a B.Sc. degree in Physics and Geology. I also took an extra year of Geology at the University of British Columbia in 1963-64.
3. I have practised my profession since 1964, while being employed by such companies as Kennco (Western) Exploration, Meridian Exploration Syndicate, (Canex Aerial Exploration Ltd., Noranda Mines Ltd., Home Oil Co.), Orequest Syndicate (Granby Mining Co., Home Oil Co., Homestake Silver Mines.) I have been in private independent practice since 1968.
4. I have no interest, either direct or indirect in the properties or securities of Endurance Minerals Inc., nor do I expect to receive or acquire any such interest.
5. I have been a member in good standing of the Association of Professional Engineers of the Province of British Columbia since 1967 and the Association of Professional Engineers of the Yukon Territory since 1972.
6. Endurance Minerals Inc. has my permission to use this report to satisfy the requirements of the various regulatory bodies in British Columbia. I also consent to the inclusion of this report and/or the summary thereof in the prospectus of the company.

Robert Wolfe
June 30, 1987



TABLE OF CONTENTS

	PAGE
1. SUMMARY	1
2. INTRODUCTION	3
3. LOCATION, ACCESS, SETTING	4
4. CLAIMS	6
5. HISTORY AND PREVIOUS WORK	8
6. GEOLOGY AND MINERALIZATION	11
7. AURIFEROUS SYENITE	18
8. SILICEOUS BRECCIAS	18
9. BRIEF DISCUSSION ON EPITHERMAL GOLD DEPOSITS	20
10. RECOMMENDATIONS	21
11. COST ESTIMATE	22

FIGURES

1. Location Map	5
2. Claim Map (showing 1984 soil survey grid)	7
3. Plan of underground workings	9
4. Geology of the Columaria Mine area	10
5. Idealized section AB of the Columaria vein system looking NW	14
6. Vein systems	15
7. #8 adit (#7 vein) assay plan	16
8. Haveroen vein assay plan	17
9. Schematic cross section epithermal gold deposit	19

APPENDIX

1. Minister of Mines Report 1934 on Columario Consolidated Gold Mines Ltd.	23
2. Assay certificate re syenite	24
3. References	25
4. Certificate	26