

1868

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MAP

Sketch Map - Geology and Geochemistry, VAN Claims      1" = 400'

KENNCO EXPLORATIONS, (WESTERN) LIMITED

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

VAN CLAIMS

INTRODUCTION

The VAN Claims were located for Kennco Explorations, (Western) Limited in September 1966 on the strength of geochemical indications in streams, as well as some large observable gossans for which geochemical data had not yet been obtained. A preliminary look at the area in 1967 resulted in dropping the westerly twenty (20) of the claims. Cash in lieu of work was applied to the remaining eight (8).

A geological and geochemical reconnaissance of the area was made in August 1968 at a cost of \$4400. Considerable of this work was actually done adjacent to, rather than on, the eight claims, so that of the total amount spent, \$800 is claimed for assessment work.

#### LOCATION AND ACCESS

The claims are on the southerly-facing flank of a mountain ridge lying between Dorothy Creek and Hoodoo Creek, 4 miles east of Klinaklini River and 19 miles north of Knight Inlet. Elevation ranges from about 3500 feet at the south of VAN No. 83, to 6700 feet close to the summit of the mountain on VAN No. 44. Most of the terrane above 5000 feet is a pleasant upland moderately easy to traverse, but avalanche-swept. Lower slopes toward Hoodoo Creek become steep and densely wooded.

Access to date has been by helicopter. Logging roads along Devereaux Valley presently reach within 4 miles of the claims. The remaining ground would be costly to broach by road.

## FIELD METHODS

Pace-compass-aneroid barometer surveys were made along courses governed by topography and rock exposure. Geological observations were recorded along these traverses, and geochemical samples of drainages, soils, and rock debris were taken when information was desirable. The samples were dried and tested in the field for copper and molybdenum, then they were sent to Kennco laboratory in North Vancouver and tested for Cu, Mo, Pb, Zn, Au and Ag. Total metal determinations were made, using perchloric acid digestion of samples followed by Atomic Absorption Spectrometry. Preconcentration was effected in the case of Mo and Au.

## GEOLOGY

The area is underlain mainly by gneissic granodiorite which is considered part of the Coast Crystalline Complex. This may represent advanced granitization of older sedimentary and volcanic rocks. This basement of gneiss has been affected by a much younger igneous event in which several types of dykes, minor stock-size intrusions, and breccias were produced. A late stage of this event produced volcanism, with outflows of breccia and agglomerate. During this event, prior to most of the surface flows, the older gneiss and some intermediate-aged porphyries were mineralized with pyrite, zinc, copper and molybdenum.

Gneiss and Granodiorite: This is the main country rock and it is found generally on all claims. It is a moderately coarse-grained granitoid rock with obvious regular foliation but seldom any strong compositional banding. Such banding is evident near Hoodoo Creek, half a mile southeast of the claims. Some of the exposures on VAN No. 46 and north of it, are only faintly gneissic. Foliation strikes northeast to northwest and has not been systematically mapped. Small irregular pegmatites are common on VAN No. 45. Large areas of gneiss are moderately fractured and show traces of mineralization.

Feldspar Porphyry Dykes: Dykes are represented in a great variety of compositions and only a rude sorting can be made. Feldspar-hornblende porphyry dykes appear to constitute an early widespread set, striking mainly north-northwest and dipping steeply to moderately northeast. They may show some fracturing, alteration and slight mineralization. They occur everywhere but are most abundant on VAN Nos. 83, 84 and southward, sometimes occupying 50 - 75 percent of the volume of the ground.

Biotite Quartz Monzonite: This rock is distinguished by having visible biotite crystals as well as quartz plagioclase and some orthoclase in a fine groundmass. It was recognized on VAN No. 84 northwest of the Initial Post of the claim, and again on a traverse line a few hundred feet east of the eastern border of VAN No. 84. Another small area is found off the southwest corner of VAN No. 49. These areas are uniform in texture and are cut by later dykes. The rock is generally moderately fractured and shows traces of mineralization.

Quartz Porphyry: This is a fresh porphyritic aphanitic rock with characteristic large quartz phenocrysts. It weathers white, with a distinctive black spotting due to manganese. It is little fractured and is essentially barren. A prominent dyke 30 - 50 feet thick, extends through VAN Nos. 84, 50 and westerly. Strikes are more westerly than those of the feldspar porphyries.

Unclassified Porphyry: The summit of the mountain, west of VAN No. 44 is made up of porphyries of varied appearance which may represent nearly coalescent dykes or may possibly represent surface flows.

Tuff-Breccia: A gray fragmental rock with particle size up to a few inches and fragments mainly feldspar porphyry, outcrops west of VAN No. 50 and extends westerly for several thousand feet. This is thought to be an early effusive rock but external structural relations were not observed. It appears to be somewhat older than the agglomerates half a mile west, which are bedded and dip gently to the west.

Quartz Porphyry Breccia: This unit was observed west of VAN No. 50 in an area several hundred feet wide of undetermined length. Characteristically, it shows gneiss fragments up to several feet in diameter in a quartz porphyry matrix. It is believed to be an intrusive or contact breccia related to quartz porphyry.

Pyritic Breccia: This breccia is composed of boulders of gneiss in a pyritic matrix. It is intrusive in origin and carries traces of copper and magnetite. The area of exposure, 200 x 300 feet, lies a few hundred feet southwest of VAN No. 49.

Basaltic Dykes: Several steep dykes with northerly strike 1 - 5 feet wide were noted. They appear to be very late in the sequence of dykes.

Quartz Veins: Veins of quartz a few inches to about one foot wide are common in gneiss. They are mineralized with pyrite and sphalerite. Float fragments of such veins are common in the creek northwest of VAN No. 46. Several veins are also notable along the northeast half of VAN No. 45. Their age is not known but it is probable that they precede the barren quartz porphyry dykes, and are not the youngest event as their position in the map legend might imply.



GEOCHEMICAL DATA

Many of the relevant drainage sample data are off the claims. Sample 520 west of VAN No. 50 is distinctly anomalous in Mo, Cu, Pb and Zn, and reflects traces of mineralization found mainly west of the claim area. Sample 569, south of VAN No. 84, reflects much of 84, 43 and 45. It is distinctly anomalous in Mo and Cu, and is in accord with the observations of weak mineralization in this area. Sample 572 is likewise anomalous in copper. Samples 529, 530 near the north end of VAN No. 46 are slightly anomalous in copper. Sample 525 on a very small drainage within quartz monzonite porphyry, yields a significantly high copper value.

Spot samples of soil or disintegrated rock are informative of possible mineralization in fractured and oxidized ground. They are taken in such ground where mineralization is suspected but not observed.

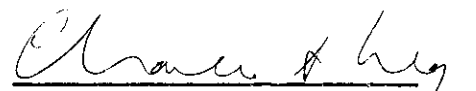
### CONCLUSIONS

The geological features of the vicinity of the VAN claims indicate that this is a mineralized volcanic centre. East of the claims, the rocks are gneisses of the Coast Crystalline Complex crossed by a few dykes. West of the claims the gneisses are overlain largely by bedded agglomerates whose low dip and lack of alteration suggests a Tertiary age. On the claims, gneiss is the principal bedrock but it is intensively invaded by dykes of several ages. The rather consistent attitude of the dyke (strike northwest, dip northeast) suggests control by some regional northwest structure. In addition to dykes, small stock-size intrusions characterized by biotite phenocrysts were emplaced. Small intrusive breccias were also developed.

Traces of copper and molybdenum are found mainly in areas of gneiss which have been moderately fractured and intensively cut by dykes. They are also found in some of the dykes and in the stock-like biotite quartz monzonite porphyry. Quartz veins containing sphalerite are widespread and extend to areas of gneiss containing only rare dykes.

Vancouver, B. C.

October 23, 1968

  
Charles S. Ney  
P. E. 27.

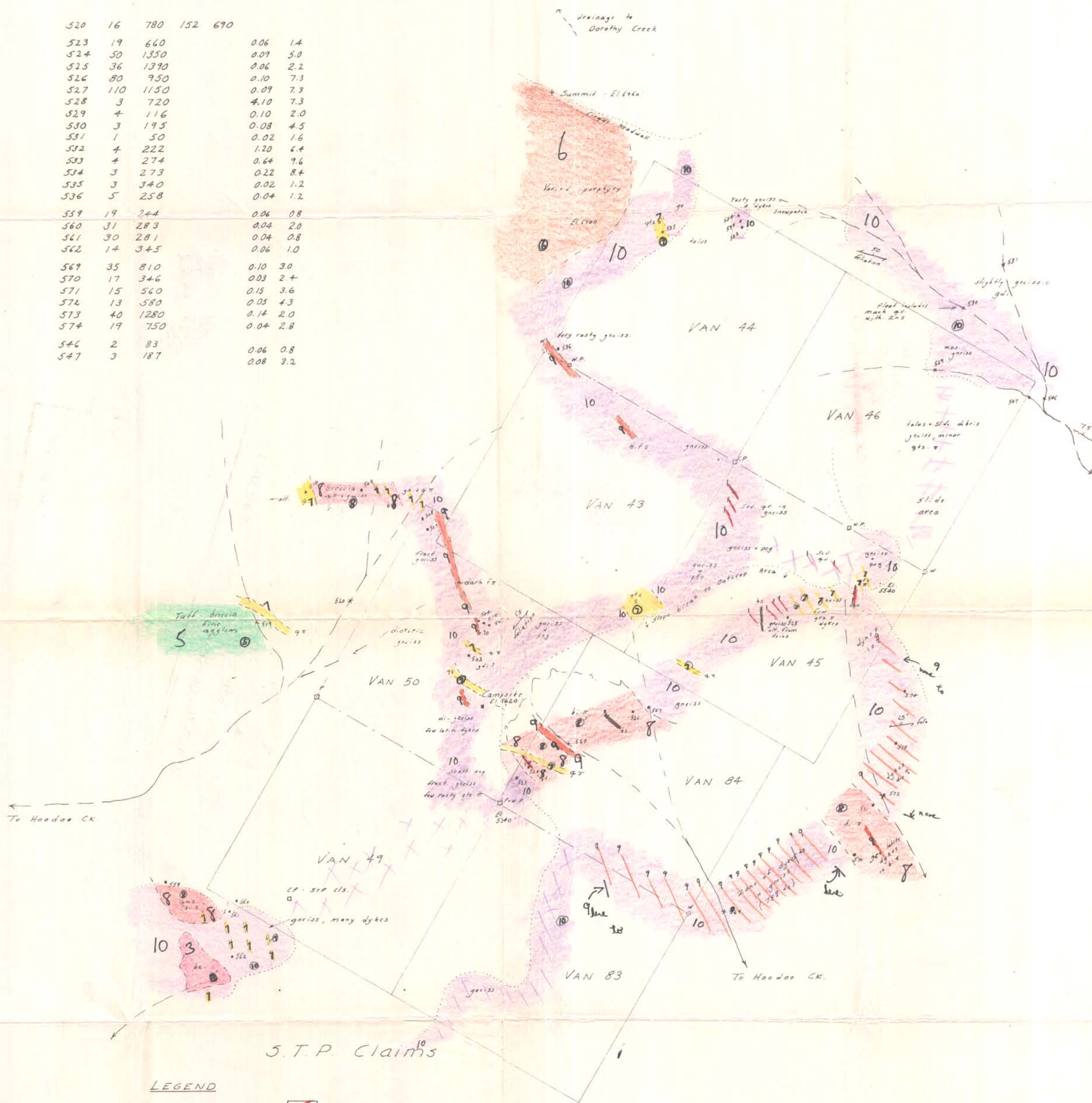
STATEMENT OF COSTS

<u>Personnel</u>	<u>Date</u>	<u>Total Cost</u>
<u>Geochemical Survey</u>		
C. S. Ney	August 13, 1968	\$ 35.00
A. Panteleyev	August 13-17	123.25
R. Sebastian	August 13-17	82.00
<u>Geology</u>		
C. S. Ney	August 14, 15	70.00
A. Panteleyev	August 18-22	123.25
R. Sebastian	August 18-22	82.00
Soil Sample Analysis	20 x \$5.00	100.00
Helicopter	2 hrs @ \$135	<u>270.00</u>
		<u>\$ 885.50</u>



Values in PPM.

	Mo	Cu	Pb	Zn	Au	Ag
29503	53	1640	335	1330		
504	5	260	55	590		
505	6	370	63	740		
506	7	286	195	1950		
507	37	1040	255	760		
508	17	209	270	185		
509	30	166	400	228		
510	10	390	740	640		
520	16	780	152	690		
523	19	660		0.06	1.4	
524	50	1350		0.09	5.0	
525	36	1390		0.06	2.2	
526	80	950		0.10	7.3	
527	110	1150		0.09	7.3	
528	3	720		4.10	7.3	
529	4	116		0.10	2.0	
530	3	195		0.08	4.5	
531	1	50		0.02	1.6	
532	4	222		1.20	6.4	
533	4	274		0.64	7.6	
534	3	273		0.22	8.4	
535	3	340		0.02	1.2	
536	5	258		0.04	1.2	
559	19	244		0.06	0.8	
560	31	283		0.04	2.0	
561	30	281		0.04	0.8	
562	14	345		0.06	1.0	
569	35	810		0.10	3.0	
570	17	346		0.03	2.4	
571	15	560		0.15	3.6	
572	13	580		0.05	4.3	
573	40	1280		0.14	2.0	
574	19	750		0.04	2.8	
546	2	83		0.06	0.8	
547	3	187		0.08	3.2	



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LEGEND

- Quartz veins
- Basaltic dykes
- Pyritic breccia
- Quartz porphyry breccia
- Tuff breccia
- Unclassified porphyry
- Quartz porphyry dykes
- Biotite Qtz-monz. porphyry
- Feldspar porphyry dykes
- Gneiss, older granodiorite
- Scatt. Outcrop, talus
- Foliation in gneiss

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- Stream Sample Site
- Soil Sample site

KENCO EXPLORATIONS (WESTERN) LIMITED

VAN CLAIMS  
VANCOUVER M.D. BC.  
SKETCH MAP  
Geology and Geochemistry

DATE:	DRAWN BY: C.S.N.	PLATE NO.
REVISED BY:	DATE:	SCALE: 1" = 400'

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