

NUGGET-QUEEN PROPERTY

Geological Assessment Report Vancouver Mining Division NTS 92L/14 50 ° 59'30"N, 127 ° 14' W

For:

Pacific Topaz Resources Ltd. 501 – 905 West Pender Street Vancouver, B.C.

by

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GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT



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SUMMARY

The Nugget and Queen claims contain a total of 24 units and are located on the B.C. mainland approximately 35 kilometers northeast of Port Hardy and 5 kilometers south of Seymour Inlet.

Southwestern British Columbia has the potential to host precious metal or polymetallic vein, shear, breccia, stockwork, carbonate replacement, porphyry and/or volcanogenic massive sulphide related mineral occurrences or deposits.

The Nugget-Queen property hosts polymetallic mineralization containing significant precious metal values, which are associated with quartz and/or quartz-carbonate veining or silicification that is localized by shear and fracture zones having an east-west to west-northwest structural orientation.

Assay results from samples collected by the writer include 243 ppm copper, 3199 ppm lead, 555 ppm zinc, 12.6 gpt silver and 0.108 opt gold across 1.0 meter; 932 ppm copper, 2467 ppm lead, 6117 ppm zinc, 13.9 gpt silver and 0.458 opt gold (grab sample from a quartz block), and 2174 ppm copper, 2.06% lead, 1.43% zinc, 85.4 gpt silver and 1.01 opt gold (selective composite grab sample of mineralized quartz).

Previous studies have identified up to eight different quartz vein exposures on the property, five of which have a potential collective strike length of over 500 meters (vein numbers 3, 4, 5, 6 and 8). This vein system is open to the west-northwest, to the east-southeast, and at depth.

Further work recommended for the Nugget-Queen claims includes:

- 1. Extending the geochemical grid to the north west beyond Vein 3 and to the southeast; and
- 2. Preparing a detailed structural map for the property with emphasis upon the vein 3-4-5 and Main Showing (Vein 6) areas.

Previous reports have recommended diamond drilling programmes for the property. Vein 6 could be tested for vertical continuity and the structural intersection of veins 4 and 5 is a prospective drill target.

INTRODUCTION

The writer visited the Nugget-Queen property during January, 1999 and completed a site reconnaissance to collect check samples, investigate potential diamond drill hole locations and to make recommendations and cost estimates for future work programmes.



LOCATION AND ACCESS

The Nugget-Queen property is located on the B.C. mainland approximately 35 kilometers northeast of Port Hardy, and 5 kilometers south of Seymour Inlet (Figure 1).

The claims are not currently road accessible but can be easily reached by helicopter, float plane or boat from Port Hardy on Vancouver Island.

CLAIM DATA

Claim Name	Tenure #	# of Units	Expiry Date
Nugget	333667	6	January 30, 2000
Queen	333668	18	January 30

A claim map from the Vancouver Mining Division is included as Figure 2.

TOPOGRAPHY, VEGETATION AND CLIMATE

Topography within the claim area is moderate with elevations ranging between sea level and 1,200 feet (366 meters).

Vegetation and climate is typical for the west coast of the lower B.C. mainland.

Second growth vegetation in previously logged areas can be dense and difficult to traverse. Rainfall, at times, can be heavy and continuous. Some snow cover hindered fieldwork during January, 1999.

HISTORY AND PREVIOUS WORK

- 1938 Mining Company of Canada completes surface work and preliminary geological mapping on seven quartz veins.
- 1939 Property re-staked as the Silta claim
- 1940-1941 604 metric tonnes were mined from Vein 6 (Main Showing) and shipped to Tacoma. Products recovered include 43,047 grams of silver, 20,776 grams of gold, 1,755 kilograms of copper and 9,747 kilograms of lead.



1949	Another 5 metric tonnes was shipped and produced 1,711 grams of silver, 93 grams of gold, 441 kilograms of lead and 234 kilograms of zinc.
1973	QC 1-40 claims staked. An EM geophysical survey was completed on QC 1-4 claims.
1979	Property re-staked as the Whelakis Group by Frank Began Logging Ltd. and a combined geological (mapping and rock sampling) , geophysical (magnetometer and VLF-EM) study was completed.
1983	Five short Winke drill holes were completed around the Main Showing.
1991	Property re-staked as the Cherry 1-4 claims and all available historical data was reviewed and a work program recommended.
1995	Property re-staked as the Nugget and Queen claims and optioned to Solaia Ventures Inc. The company completed geological, geochemical and geophysical exploration work.
1996	A trenching program designed to test known geochemical and geophysical anomalies, as well as an extended geological and geochemical study were completed.



GENERAL GEOLOGY

SW COAST BRITISH COLUMBIA

FIGURE 3

REGIONAL GEOLOGY

The Nugget-Queen property area lies within the Insular Superterrane of British Columbia which contains the Wrangellia Terrane on Vancouver Island and the Coast Plutonic Complex along the adjacent southwestern mainland (Figure 3).

Lithologies of the Wrangellia Terrane on the mainland consist of island arc volcanic assemblages and associated marine sediments which may range in age from the Middle Triassic (?) to the Early Cretaceous (?). Time equivalent units may correlate with the Bonanza Formation on Vancouver Island, or the Bowen Island Group and the Harrison Lake Formation on the mainland.

The southwestern portion of the Coast Plutonic Complex is of intermediate composition and contains quartz diorite, diorite, tonalite, granodiorite, as well as lesser felsic and gabbroic bodies or phases. It is believed to have been emplaced during the Middle Jurassic to Middle Cretaceous time period.

Remnants of the Wrangellia Terrane on the mainland consist of northwesterly trending roof pendants that have been assimilated to varying degrees by the Coast Plutonic Complex.

The pendants are usually metamorphosed to at least a greenschist facies and are often bordered by migmatitic zones along the intrusive contacts.

The southwestern B.C. mainland has the potential to host precious metal or polymetallic vein, shear, breccia, stockwork, porphyry, carbonate replacement and/or volcanogenic massive sulphide related mineral occurrences or deposits.

PROPERTY GEOLOGY

The Nugget-Queen property is partially underlain by a roof pendant composed of metavolcanic greenstones of intermediate to basic composition, as well as metasediments consisting primarily of a slaty argillite which contains some thin tuffaceous volcanic interbeds (Figure 4).

Intrusive rocks underlying the rest of the claim consist of granodiorite, quartz diorite, and diorite.

Regional structural and lithological trends on the property are northwest. Eastwest and west-northwest structures appear to control quartz vein and shear or fracture related mineralization

Previous studies (Grove, 1996) have identified up to eight different quartz vein exposures on the property. Vein numbers 3, 4, 5, 6 (the Main showing) and 8

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have a potential collective strike length of over 500 meters which is open to the west-northwest, to the east-southeast, and at depth.

Fine to medium grained anhedral to euhedral sulphides including pyrite, pyrrhotite, chalcopyrite, <u>bornite</u>, tetrahedrite (?), galena, and sphalerite occur as disseminations and small concentrations or masses along fracture and/or slip surfaces within quartz and quartz-carbonate veins and within silicified metavolcanic or metasedimentary host rocks.

Associated oxides and oxidation products include magnetite, limonite, <u>goethite</u> and hematite.

Alteration products related to the mineralized areas include clays, carbonates, chlorite, sericite and local silicification.

GEOCHEMICAL SAMPLING AND ASSAY RESULTS

Thirteen rock samples were collected from the Nugget-Queen property (Figure 5). Refer to Appendix I for Rock Sample Descriptions and Appendix II for Analytical Results.

Most of the samples consisted of simple "grab" samples of quartz vein material and/or silicified argillite or metasedimentary host rock.

Composite rock grab samples were taken from the waste dump below the open cut at Vein 6. The degree of selectivity of mineralized material within these samples is reflected in the assay results. Sample number 28857 was a random sample which assayed 547 ppm copper, 1390 ppm lead, 793 ppm zinc, 12.6 gpt silver, and 0.089 opt gold. Sample number 28859 was a selective composite grab sample of mineralized quartz. Mineralization consisted of fine to medium grained pyrite, pyrrhotite, chalcopyrite, galena, tetrahedrite and sphalerite as disseminated anhedral to euhedral crystals or as small concentrations or masses, generally associated with fracture surfaces. This sample returned 2174 ppm copper, 2.06% lead, 1.43% zinc, 85.4 gpt silver and 1.01 opt gold.

One meter discontinuous chip samples across quartz or quartz-carbonate vein exposures were collected at sample location 28854, at the Main Showing (Vein 6), and at location 28860, at Vein 8. Sample 28854 assayed 243 ppm copper, 3199 ppm lead, 555 ppm zinc, 12.6 gpt silver and 0.108 opt gold. A previous chip sample at this location returned 208 ppm copper, 1848 ppm lead, 710 ppm zinc, 11.6 gpt silver and 0.391 opt gold across 1.0 meter and a nearby grab sample assayed 2791 ppm copper, greater than one percent lead, 1560 ppm zinc, greater than 30 gpt silver and 3.169 opt gold (Yacoub, 1997).



At location number 28856, approximately 20 meters east-southeast of Vein 6, a grab sample from an angular quartz block, within the creek, containing fine grained sulphides disseminated throughout returned 932 ppm copper, 2467 ppm lead, 6117 ppm zinc, 13.9 gpt silver and 0.458 opt gold.

Geochemical analyses were performed by Acme Analytical Laboratories Ltd. and included a 30 element ICP package, as well as a gold fire assay, using a standard 1 assay ton sample (29.2g), for each sample.

CONCLUSIONS AND RECOMMENDATIONS

Southwestern British Columbia has the potential to host precious metal or polymetallic veins, shear, breccia, stockwork, carbonate replacement, porphyry and/or volcanogenic massive sulphide related mineral occurrences or deposits.

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COST STATEMENT

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Geologies at \$400/day	\$1,600
Assistant @ \$200/day	800
Vehicle rental	500
Boat charter	1,200
Hotel, food, gas, miscellaneous	880
Assays	350
Report preparation	1,000
Drafting	250
Secretarial, photocopies, etc.	100

Total



<u>\$6,680</u>

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- Grove, E.W. (1996): Geological Report and Work Proposal on the Nugget and Queen Claims, Seymour Inlet Area, B.C.
- Yacoub, F. (1997): Geological and Geochemical Report on the Nugget-Queen Claim Group, Seymour Inlet Area, B.C.

STATEMENT OF QUALIFICATIONS

I, Ed McCrossan of 204 - 1225 Barclay Street, Vancouver, British Columbia hereby certify:

- 1. I am a graduate of the University of British Columbia (1984) and hold a B.Sc. degree in geology.
- 2. I have been employed in my profession by various mining companies since graduation and have worked on projects in Canada, U.S.A., Thailand, China, Argentina, Chile, Bolivia, Peru, Venezuela, Central America and Mexico.
- 3. I am a member of the Society of Economic Geologists, the Canadian Institute of Mining and Metallurgy, a Fellow of the Geological Association of Canada, and a registered member in good standing of the Association of Professional Engineers and Geoscientists of B.C.
- 4. The information and recommendations contained in this report are based upon a two day site visit and a review of pertinent literature.
- 5. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public documents.
- 6. I hold no interest in the property described herein nor in the securities of Pacific Topaz Resources Ltd.
- 7. Neither a claim title, nor a legal due diligence has been performed by the writer for the properties described in this report.

ESSION ACCROSSAN Ed McCrossan. Geologist, F.G.A.C., P.Geo.

Appendix I

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i la j Rock Sample Descriptions

Appendix I

Rock Sample Descriptions

***Please note that the sample descriptions are based upon the visual inspection of hand specimens. No thin sections were prepared for these samples.

White to grey mottled crystalline quartz. Moderately fractured 28851 and stained with limonite. Trace of disseminated, fine grained sulphides associated with fractures. Grab sample of mineralized material from Vein 6. Sheared and 28852 silicified argillite with up to 3% pyrite, pyrrhotite, galena, sphalerite, as fine to medium grained concentrations. Limonite and goethite locally intense. Magnetic. 28853 As in 28851. Quartz fractured and sheared containing fragments of argillitic host rock. Fine grained sulphides associated with fractures and sheared argillite. Pyrite, galena, tetrahedrite? 28854 1 meter chip sample across quartz-carbonate vein containing sheared fragments of argillitic host rock. Traces of fine grained sulphide associated with argillite fragments and fractures. Moderate limonitic staining. 28855 Grab sample from angular guartz blocks in a creek. White to grey mottled quartz containing abundant "assimilated" argillitic material. Fine grained sulphides (pyrite, galena, sphalerite, tetrahederite ?, bornite?, etc.) disseminated throughout. 28856 Grab sample of quartz block in creek. As in 28855 but with less argillitic material. Moderate to intense limonitic staining along fracture surfaces. 28857 Random grab sample of medium grey to white quartz. Fine grained sulphides associated with mafic fragments and along fracture/slip surfaces. Clay and sericitic alteration products. Magnetic. Composite grab of moderately mineralized and sheared quartz 28858 and silicified argillite. Magnetic. Fine to medium grained, subeuhedral pyrite, pyrrhotite, galena, sphalerite, etc. as masses and disseminations associated with fractured quartz.

28859	Selective composite grab sample of mineralized quartz from the "waste" dump at Vein 6 consisting of white to grey mottled/banded quartz moderately fractured and iron stained. Mineralization includes fine to medium grained pyrite, pyrrhotite, chalcopyrite, galena, tetrahedrite and sphalerite as disseminated anhedral to euhedral crystals or as small concentrations or masses, generally associated with fractures. Limonite, hematite and goethite locally intense. Magnetic.
28860	1 meter discontinuous chip sample across a light grey crystalline quartz containing argillite. Trace of fine grained pyrite as concentrations within the argillite.
28861	Grab sample of a white quartz vein, moderately fractured and stained with limonite, hematite and goethite? Some fracture surfaces show shear textures. Traces of disseminated pyrite associated with fragments of argillite country rocks included in the sample.
28862	Composite grab sample of quartz vein material and silicified argillite wallrock. Quartz is a white to grey crystalline variety, moderately fractured with some limonitic staining. Minor vuggy porosity associated with some fractures. Traces of fine grained sulphide concentrations also associated with fractures.
28863	Grab sample from a relatively massive and lightly hematized white-grey mottled quartz vein. Minor vuggy porosity contains euhedral quartz crystals. Fine graied, anhedral pyrite as disseminations.

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Appendix II Assay Results

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ACME ANALYTIC	AL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 186 PRONE(604)253-3136 FAL(604)253-111 Accredited Co.) GEOCHEMICAL ANALYSIS CERTIFICATE
ff	Pacific Topaz Res. Ltd. File # 9900317 501 - 905 W. Pander St., Vancouver BC V6C 1L6 Submitted by: Ed NeCrossan
SANPLEN	No Cu P1o Zn Ag Ni Co Mn Fe As U Au Th Sr Col So 8i V Ca P Lo Cr Mg Ba Ti B Al Nos K U Au ^a " ppen ppen ppen ppen ppen ppen ppen ppen
B 28851 B 28852 B 28853 B 28854 B 28855	3 35 720 1124 6.4 9 2 131 .63 19 <8
8 28856 8 28857 8 28858 8 28858 8 28859 8 28860	3 932 2467 6117 13.9 11 4 37 1.18 16 <8 11 <2 3 695.4 6 7 2 .02 .002 <1 28 .01 10<.01 <3 .03 .01 .03 <2 .458 2 547 1390 793 12.6 20 4 62 1.56 7 <8 2 <2 11 47.2 7 3 3 .23 .002 <1 24 .04 13<.01 <3 .05 .01 .01 2 .089 29 1718 9752 3738 51.0 53 9 214 3.13 97 <8 <2 <2 24 199.9 32 11 20 .94 .032 1 22 .21 45<.01 <3 .27 .01 .12 <2 .082 8 2174 20627 14342 85.4 37 6 58 2.49 75 <8 37 2 5 905.4 58 18 4 .12 .006 <1 26 .07 27<.01 3 .09 .01 .04 2 1.008 3 20 164 95 .8 5 <1 27 .34 3 <8 <2 <2 1 5.7 <3 <3 4 .01 .003 1 25 .01 20<.01 <3 .06 .01 .04 5 .002
RE 8 28860 B 28861 B 28862 B 28863 Standard C3/A	3 20 163 99 .8 5 <1
STANDARD G-2	2 5 <3 46 .3 7 5 561 2.13 <2 <8 <2 5 70 <.2 <3 8 42 .70 .093 .8 83 .62 219 .14 <3 .99 .07 .46 <2 <.001
DATE RECEIVE	ICP : .500 GRAM SAMPLE IS OLGESTED WITH 3NL 2.2.2 ECL-HNO3. H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR NN FE SR CA P LA CR HG BA TI B W AND HASSIVE SULFIDE AND LIMITED FOR WA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF EU PB 2N AS > 1%, AG > 30 PPM & AU > 1000 PPB · SAMPLE IYPE: ROCK AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE. <u>Samples beginning 'RE' BIG Beruns and 'RRE' are Reject Beruns</u> . ED: FEB 1 1999 DATE REPORT MAILED: FUB 10/94 SIGNED BY

Date___FA

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