

### **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

Ed McCrossan, P.Geo., FGAC (604) 681-7362 e-Mail: edmccrossan@hotmail.com

website: www.geocities.com/circlepacific

November 22, 2000

CONTOGICAL SURVEY BRANCH



# **TABLE OF CONTENTS**

<u>P</u>	<u>'age</u>
Summary	1
Introduction	2
Location and Access	2
Claim Data	2
Topography, Vegetation and Climate	2
History and Previous Work	3
Regional Geology	4
Property Geology	4
Geochemical Sampling and Assay Results	5
Conclusions and Recommendations	6
Cost Statement	7
References	8
Statement of Qualifications	9
Appendices	
Appendix I: Rock Sample Descriptions Appendix II Assay Results	10 13
Figures	
<ol> <li>Location Map (after page 1)</li> <li>Claim Map (after page 2)</li> <li>General Geology (after page 3)</li> <li>Property Geology (after page 4)</li> <li>Rock Sample Locations and Assay Results (after page 4)</li> <li>Main Vein (#6) Area</li> <li>Veins 4 &amp; 5</li> </ol>	

#### 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.

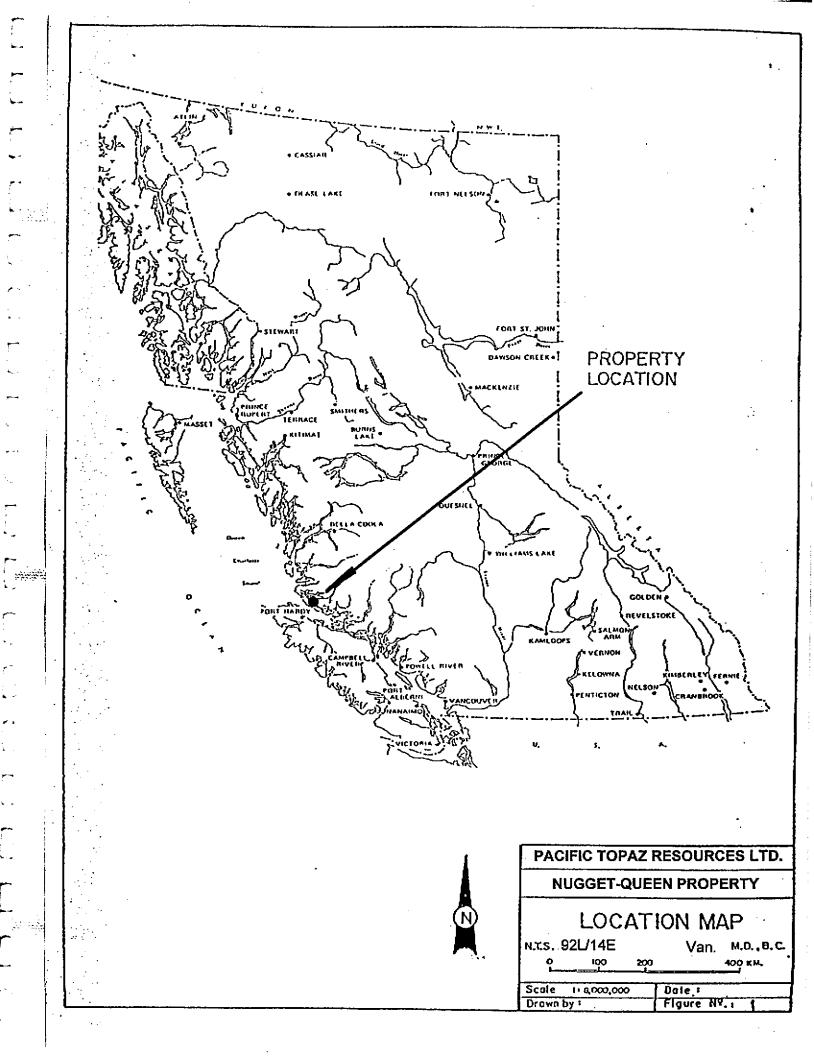
Assay results from samples collected by the writer include 0.93% copper, 1.58% lead, 1.04% zinc, 162.1 gpt silver and 5.7 gpt gold (selective composite grab sample from the "waste" dump at Vein #6); 8.8 gpt gold from silicified metasediment adjacent to Vein #5; and 6.1 gpt gold, 1423 ppm copper, 1.16% lead, 931 ppm zinc and 81.2 gpt silver from Vein #4.

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
- 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 October, 2000 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
	000447	,	
Queen	333667	6	January 30, 2002
Nugget	333668	18	January 30, 2002

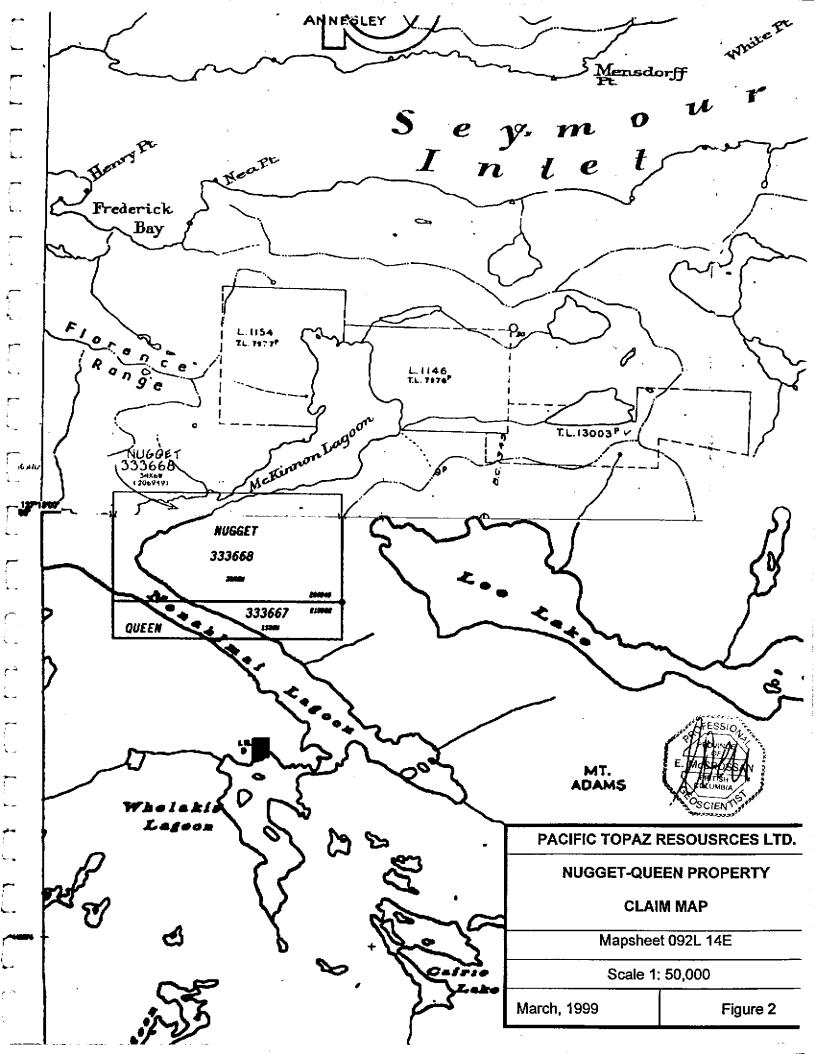
A claim map from the Vancouver Mining Division is included as Figure 2.

### TOPOGRAPHY, VEGETATION AND CLIMATE

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

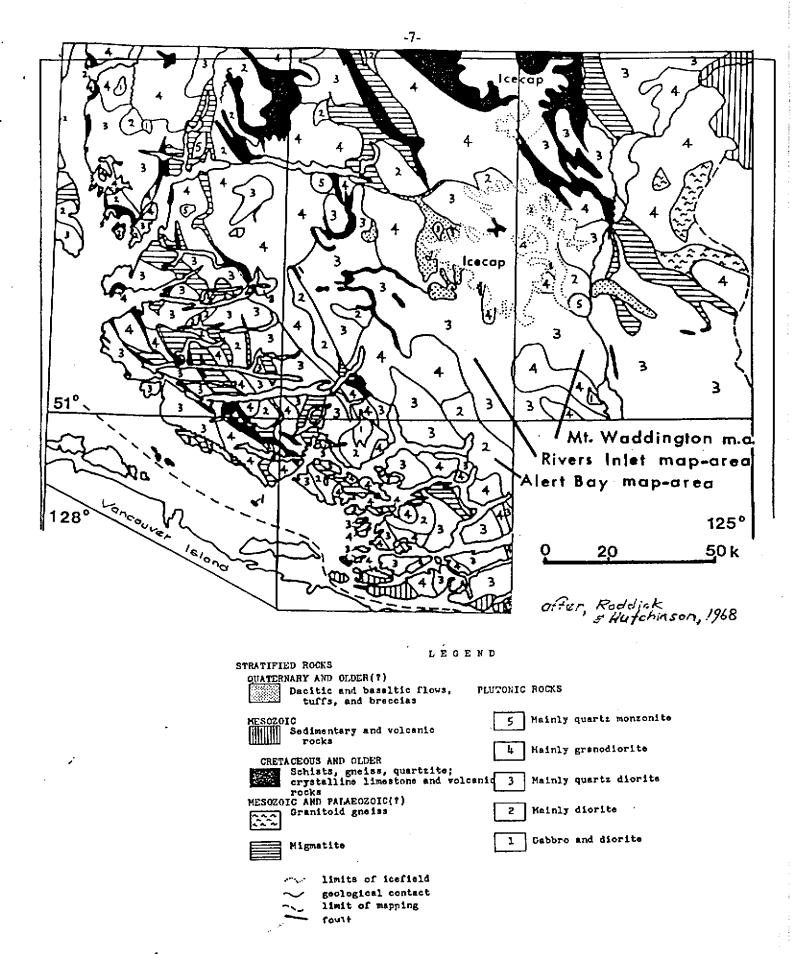
Vegetation and climate is typical for the west coast of the lower B.C. mainland.

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.
1999	Geological assessment work was performed on the property by Pacific Topaz Resources Ltd.



GENERAL GEOLOGY
SW COAST BRITISH COLUMBIA

#### **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.

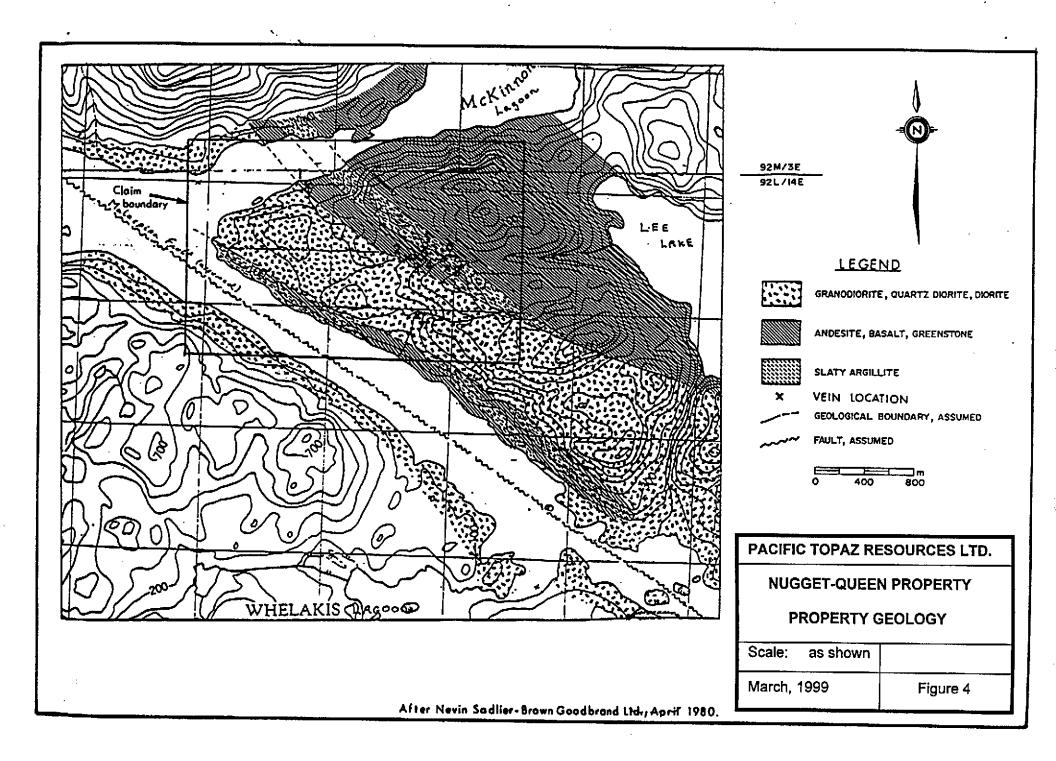
The pendants are usually metamorphosed to at least a greenschist facies and are often bordered by migmatitic zones along the intrusive contacts.

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. East-west 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 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, bornite, 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, goethite and hematite.

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

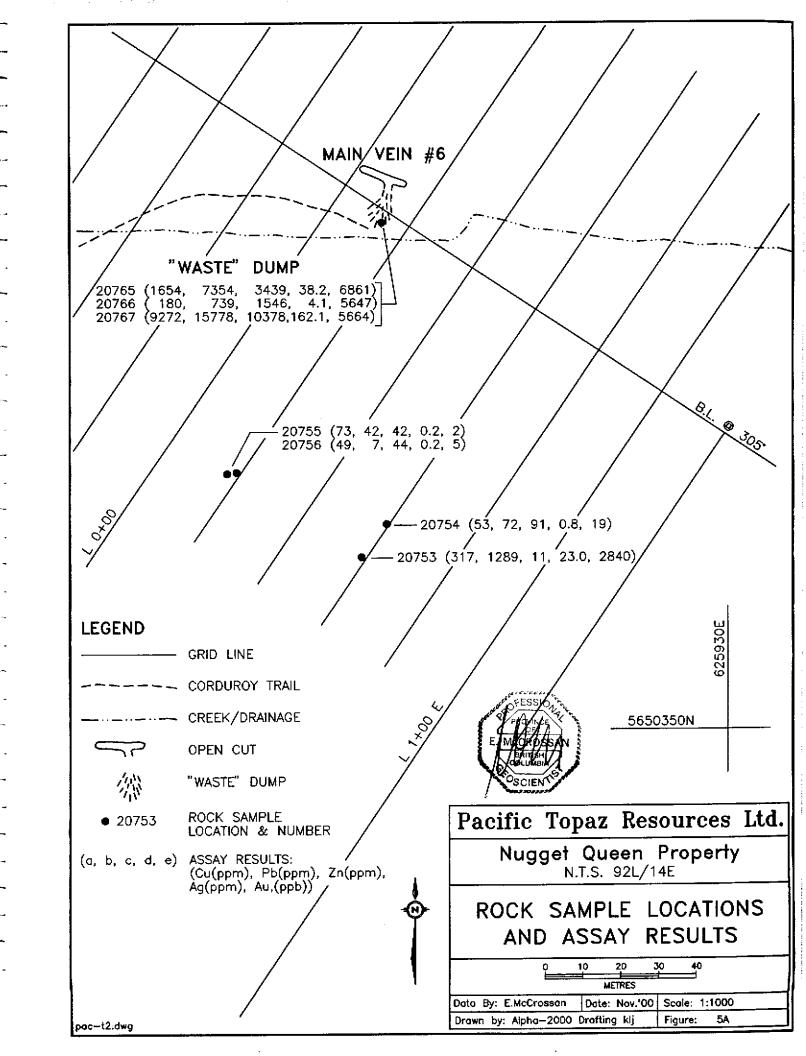
#### GEOCHEMICAL SAMPLING AND ASSAY RESULTS

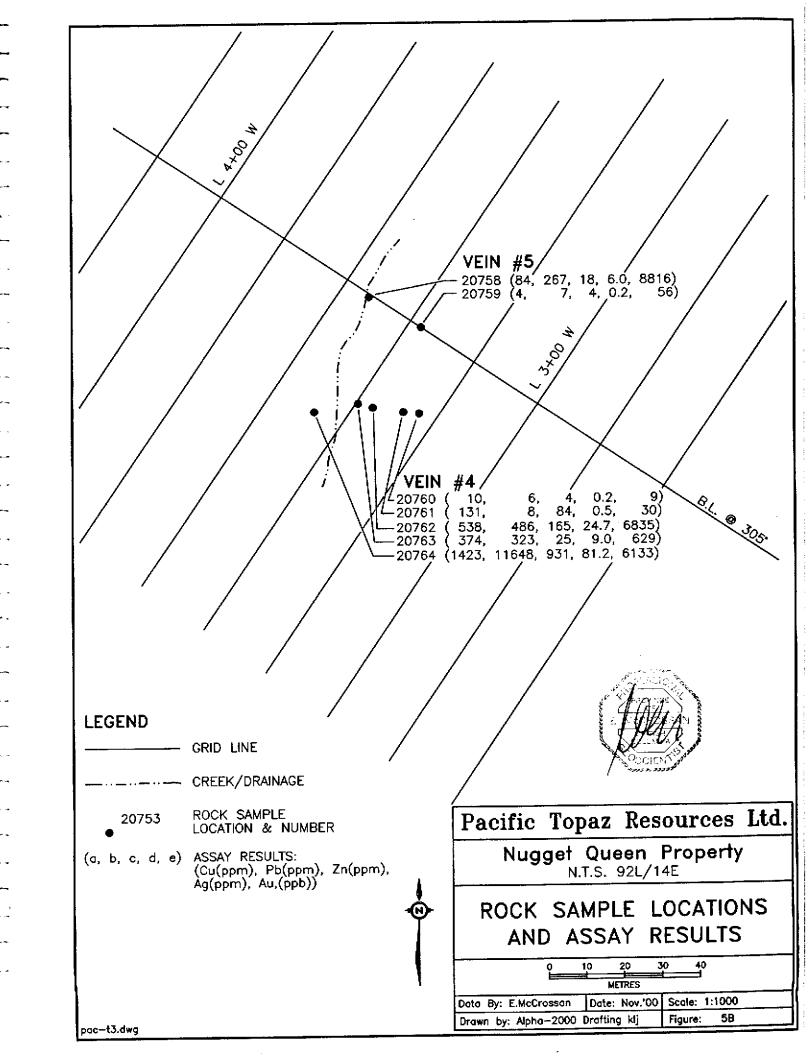
Fifteen rock samples were collected from the Nugget-Queen property (Figure 5). Refer to Appendix I for Rock Sample Descriptions and Appendix II for Analytical Results.

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

Sample #20767 returned the highest copper, lead, zinc, and silver values at 0.93%, 1.58%, 1.04% and 162.1 gpt respectively (Figure 5A). This sample was a selective composite grab of mineralized quartz from the "waste" dump at Vein #6 consisting of white to grey mottled or banded quartz moderately fractured and iron-stained. Mineralization included fine to medium grained pyrite, pyrrhotite, chalcopyrite, galena, tetrahedrite and sphalerite as disseminated crystals or small masses generally associated with fractures. Limonite and hematite was ubiquitous.

The highest gold assay of 8.8 gpt (sample #20758) consisted of a grab sample of silicified metasediment adjacent to Vein #5. This sample was also anomalous in copper, lead, and silver (Figure 5B).





At Vein #4, sample #20764 returned 6.1 gpt gold, as well as 1423 ppm copper, 1.16% lead, 931 ppm zinc and 81.2 gpt silver.

Another exceptional sample at Vein #4 assayed 6.8 gpt gold, 538 ppm copper, 486 ppm lead, 165 ppm zinc and 24.7 gpt silver (#20762).

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.

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 samples collected by the write include 0.93% copper, 1.58% lead, 1.04% zinc, 162.1 gpt silver and 5.7 gpt gold (selective composite grab sample from the "waste" dump at Vein #6); 8.8 gpt gold from silicified metasediment adjacent to Vein #5; and 6.1 gpt gold, 1423 ppm copper, 1.16% lead, 931 ppm zinc and 81.2 gpt silver from Vein #4.

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:

- Extending the geochemical grid to the north west beyond Vein 3 and to the southeast; and
- 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.

# **COST STATEMENT**

Geologist at \$400/day	\$1,600
Vehicle rental	375
Boat charter	1,200
Hotel, food, gas, miscellaneous	600
Assays	350
Report preparation	1,000
Drafting	250
Secretarial, photocopies, etc.	100
Total	<u>\$5.475</u>

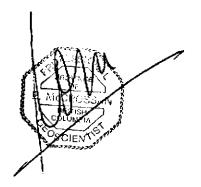


### **REFERENCES**

- 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.
- McCrossan, E. (1999): Nugget-Queen Property, Geological Assessment Report

#### 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.



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

DATED at Vancouver, British Columbia this 22<sup>nd</sup> day of November, 2000

Appendix I

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.

20753	Grab sample of angular quartz float
20754	Grab sample of meta-sediment containing quartz stringers. Angular float.
20755	Grab sample of angular to subround meta-andesite float
20756	As in 20755
20757	As in 20755
20758	Grab sample of silicified metasediment
20759	Grab sample of white to grey mottled crystalline quartz. Moderately fractured and stained with limonite. Trace of disseminated, fine-grained sulphides associated with fractures. Contains fragments of silicified argillite.
20760	As in 20759. Variable amounts of metasedimentary host rocks.
20761	As in 20759. Variable amounts of metasedimentary host rocks.
20762	As in 20759. Variable amounts of metasedimentary host rocks.
20763	As in 20759. Variable amounts of metasedimentary host rocks.
20764	As in 20759. Variable amounts of metasedimentary host rocks.
20765	Composite grab sample of mineralized quartz from the "waste" dump at Vein #6 consisting of white to grey

mottled or banded quartz moderately fractured and iron stained. Mineralization includes fine to medium grained pyrite, pyrrhotite, chalcopyrite, galena, tetrahedrite and sphalerite as disseminated crystals or as small masses, generally associated with fractures. Limonite and hematite locally intense. Magnetic.

20766

Selective composite grab. As in 20765

20767

Selective composite grab. As in 20765

Appendix II

Assay Results

852 %, Hastings st., vancouver bc. v6% 1R6

THUMB LOOK

### Geochemical analysis certificate

Pacific Topaz Rep. Ltd. File # A004425

žŸ	100	~`₩	ş
Ű.	***	1 3	ŝ
	Ť	. 8	d
	44	1	ij.
$\mathbf{z}$	200	- "	
78	8 - 8 × 2	(T)	×3

PAGE,002

TOTAL

Sample#	Мо	Cu	Pb	Zn		H i		Mrs		ÀЭ	Ų		th	\$r	¢d	Sþ		٧	Ca	P		Cr	Mg		11	8	AL	Na	K		AU**	
	ppm	ppm	bbur	ppm	ppm	ppm	bbw	ppm	*	þþm	ppm	bbw	bbij	ppm	ppm	ppm	opm	ppui	7,	X	ppm	bbu		ррп	ХP	pm	<u> </u>	X	*	bbu	ppb	
a 20753	6	317	1289	11	23.0	10	<1	30	1.28	23	<8	11	<2	1	1.2	<3	10	1	.01	.001	<1	30	<.01	8<.	01	<3	.03	.01	.02	2	2840	
8 20754	27	53	72	91	.8	46	5	178	2.59	7	<8	<b>₹</b> Z	<2	22	1.6	<3	<3	71	.27	.126	5	36	.62	82 ,	01	<3	.73	.13	.89	3	19	
B 20755	2	73	42	42	<,3	54	22	487	3.07	2	<b>≺8</b>	≺2	₹2	22	.4	<3	₹3	92	1.71	.034	2	44	1.79	23 .	17	<3 2	.25	.40	.08	<2	2	
8 20756	2	49	7	44	₹.3	55	20	315	2,58	6	<8	<2	<2	40	.2	<3	<3	66	2,18	.035	1	65	1,40	1B .	15	<33	.29	.30	.06	<2	5	
B 20757	<1	35	11	79	<.3	45	30	668	6.51	4	<8	<2	<2	₿	<.2	<3	<3	278	.57	.129	5	104	2.73	19 .	15	<3 2	.83	.18	-07	<2	<2	
8 20758	14	84	267	18	6.0	27	6	49	1.99	13	<8	7	<2	2	.6	<3	<3	12	.03	.007	<1	19	.04	26 .	01	<3	.18	.01	.10	2	8816	
B 20759	8	4	7	4	< .3	6	1	56	.84	9	<8	<5	<2	2	<.2	<3	<3	5	.04	_005	<1	27	.02	6.	.01	<3	.08	.01	.02	11	56	
9 20760	7	10	6	4	۲.۶	10	≺1	46	.43	<2	<8	<2	<2	2	<.2	<3	<3	1	.06	.002	<1	28	.02	9<.	01	<3	. 05	.01	.03	2	9	
B 20761	3	131	8	84	.5	17	11	556	3.19	41	<8	<5	3	61	.4	<3	<3	46	1.77	.076	4	21	1.19	215 .	10	<3 2	.38	-14	.82	≺2	20	
8 20762	6	538	486	165	24.7	21	6	65	1.70	272	≺8	18	<2	5	12,7	3	<3	9	.05	.002	≺1	24	.05	36.	01	<3	.26	.01	.11	4	6835	
D COURS			775	- 25	9.0	3	<1	62	.57	8	<8	<2	ر.	2	1.6	<3	4	2	.06	.001	<1	30	.05	6.	.01	<3	.08<	.01	.02	11	515	
RE B 20763	7	375	525	do	V							۔قـ	-5		_1.7			Ž		.001		31	.05	6.	01	_	.08<				629	
B 20764			11648	931	81.2	22	4	56	1.62	89	₹8	15								-	_	'nί	02		01	-	.06<	-			6133	*
B 20765	1 -	1654	7354	3439	38.2	10	2	77	1.20	10	<8	3	<2	12	169.6	15	10	2	.20	.003	- (	-34					114			- 1.7	(0/1	
B 20766	_	180	739	1546	4.1	21	2	89	1.17	4	<8	3	<2	53	66.5	4	<3	8	.42	.013	1	27	.11	41<	01	<3	.12	.02	.04	₹2	2047	
8 <b>2</b> 0767	5	9272	15778	10378	162.1	396	24	319	12.69	77	<b< td=""><td>&lt;2</td><td>&lt;2</td><td>202</td><td>495.2</td><td>55</td><td>34</td><td>4</td><td>1.97</td><td>&lt;.001</td><td>2</td><td>24</td><td>.04</td><td>11&lt;.</td><td>01</td><td>&lt;3</td><td>.04</td><td>.01</td><td>.02</td><td>7</td><td>5664</td><td></td></b<>	<2	<2	202	495.2	55	34	4	1.97	<.001	2	24	.04	11<.	01	<3	.04	.01	.02	7	5664	
STANDARD C3/AU-R	28	67	37	166	5.3	40	12	801	3.52	63	22	4	23	31	23.8	19	23	90	-58	.098	19	175	.63	159 .	09	20 1	.83	. 05	.18	15	468	
STANDARD G-2	1	4	<3	42	<.3	9	4	550	2.08	₹2	<₿	<2	3	96	<.2	<3	<3	37	.70	. 103	8	82	.62	279 .	13	<3 1	. 15	.16	.57	<2	₹2	

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-NNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY 1CP-ES. UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, B1, TH, U & B = 2,000 PPM; CU, PB, ZH, NI, MN, AS, V, LA, CR = 10,000 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZH AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE; ROCK R150 60C AU\*\* GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

Samples beginning 'RE' are Returns and 'RRE' are Reject Returns.

DATE RECEIVED: NOV 1 2000 DATE REPORT MAILED: 10/0/0/00

SIGNED BY .... TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

1