

1990 "SNAPSHOT" REVIEW FORM

Property/ProjectAuthor

Name : GOLDSTREAM MINE

L.R. Bottomer

Prime Explorations Ltd.

NTS : 82M/9

Claims : Pat Group (99 units)

Acreage: 4692 hectares

Commodities: Cu, Zn

Agreements

Joint Venture between Goldnev Resources Inc. (50%) and Bethlehem Resources Corporation (50%), subject to a 12.5% net profits royalty to MacLaren Forest Products Inc. (MFP), a subsidiary of Noranda Mines Limited, and 12.5% NPR to individual prospectors. Both royalties are payable after payback of capital and interest.

History

Past Exploration Techniques	By Whom	Amount	Type	Cost
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1974 - 76	Noranda Expl.	Surface and udg. diamond drilling, surface exploration		
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Past Development	By Whom	Amount	Type	Cost
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1980 - 83	MFP	Three access levels with interconnecting ramp system		\$74.5 million (mine & mill)
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Past Production	By Whom	Tonnage	Method	Grade
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1983 - 84	MFP	492,650 short tons	i) Open-pit ii) Udg. step room and pillar	3.41% Cu 2.23% Zn
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Reasons for shut-down

Poor metal prices
Poor zinc recoveries

GeologyRegional

Lower Palaeozoic Lardeau Gp. metasediments and subordinate volcanics, forming Goldstream Slice of Selkirk Allochthon.

Local

Orebody consists of a single deformed massive sulphide layer averaging 3 m thick, and 250 m wide, extending downplunge for more than 1 km. Broad similarities with Besshi-type deposit class.

Alteration/Ore Forming Minerals

Minimal wallrock alteration. Major sulphide mineral is pyrrhotite, with subordinate chalcopyrite and sphalerite. Systematic zoning of Cu:Zn ratios across the long axis of the ore lens.

Current Exploration Results

1989

- * Property purchased April 1989.
- * Detailed sampling of open-pit and underground workings (1133 udg. samples, 283 o'pit samples).
- * Rehabilitation of mine and mill.
- * Feasibility study by Wright Engineers Limited.

Reserves

Mineable ore reserves 1,860,000 tonnes @ 4.81% Cu, 3.06% Zn, based on 2 m minimum true thickness, 3% Cu cut-off grade.

Costs

Projected development costs	Capital cost \$15.6 million (includes purchase price and working capital)
Projected operating costs	\$52/tonne milled

1990 "SNAPSHOT" REVIEW FORM

Property/Project

Name: Anialik

NTS: 76 M/2,6,7,10,11,12

Claims: Char, Tam, Anialik, Ani,
Mist, Telly, Star, Joy,
Mona, Hil and Alf

Acreage: 115,000 acres

Commodities: Cu, Zn, Au, Ag

AuthorsGary VivianAgreementsHistory

Past Exploration Techniques	By Whom	Amount	Type	Cost
Airborne EM Surveying	Noranda/ Cominco		1	
Geological Mapping	Cominco		1	
Ground Em & Magnetic	Great Plains/ Noranda		1	
minor diamond drilling	Noranda/ Cominco/ Kennarctic	3 holes 8 holes 5 holes	1 1 1	1--- All before 1976

Past Development (if any)	By Whom	Amount	Type	Cost
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Past Production (if any)	By Whom	Tonnage(s)	Method	Grade
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Reasons for shut-down

Current Exploration Results

i) Geology

12 base-metal massive sulphide environments and 9 precious-metal shear-related gold environments have been delineated.

- The base-metal showings are predominantly at felsic/mafic volcanic contacts
- The precious-metal showings are all shear-related and occur within tremendously carbonatized mafic and felsic volcanic rocks.

ii) Geochemistry

iii) Geophysics

Seven areas have been gridded and completed with geophysics which has essentially brought all grids to a drill stage.

iv) Sampling

A total of 584 samples were collected during 1989. There were approximately 276 geochemically anomalous samples. Detailed sampling and some chip sampling were completed on selected grids.

Reserves: Geological, possible,
probable and/or proven
Number of zones
Number of sample points
Average grade
Average thickness
Cut-off grade

Costs: Recent exploration costs, \$ 600,000.00
i.e. (relating to above)
Projected exploration costs of \$ 2 000 000.00
program ~~to development~~ (if any) (1990)
Projected development costs
given positive economics
Projected operating costs
given positive economics

Geology

Regional

Anialik and High Lake greenstone belts are comprised of an intercalated mafic to felsic sequence of flows and pyroclastics and their metasedimentary equivalents. Greenschist grade metamorphism predominates and the greenstone stratigraphy is cut by late-stage dykes, sills and plutons of both mafic and felsic compositions.

Local

Alteration

Carbonatization, silicification and sericitization locally
- regionally, carbonatization is prominent

Ore Forming Minerals

- Sphalerite, galena, chalcopyrite, native gold, electrum, native silver and unidentified sulfo-salts

1990 "SNAPSHOT" REVIEW FORM

Property/Project

Authors

Name : J&L

NTS : 82M, N

Claims : 367 units & crown grants

Acreage : 18,300

Commodities: Au, Zn, Pb, Ag

Ross Beaty

Agreements Equinox Resources Ltd. holds option to acquire 50% working interest in property and 40% equity interest in Pan American Minerals Corp. which holds other 50% property interest. Equinox also manages Pan American and controls its board of directors.

History

Past Exploration Techniques	By Whom	Amount	Type	Cost
1896-46 Prospecting, shafts	Various	--	--	?
1962-67 Drifting, roads	Weststairs Mines	578 m	drifting	\$1,000,000

Past Development (if any)	By Whom	Amount	Type	Cost
1982-85 Drifting, u/g drilling, metallurg. tests	BP-Selco	871 m drifts, 2640 m drilling		\$3,100,000
1986 Bulk samples, metallurg. tests	Noranda	28-200 kg samples		\$350,000
1987-88 u/g drilling, metallurg. tests	Pan American	1904 m drilling 120 m raises		\$1,800,000
1988-89 u/g drilling, bulk sampling	Equinox	3000 m drilling, 270 t bulk sample		\$2,100,000
			Total	<u>\$8,350,000</u>

Geology

Regional In Selkirk Mtns. east of Columbia River. Complexly deformed Hadrynian Horsethief Creek Group, Lower Cambrian Hamill Group and Badshot FM metasedimentary and metavolcanic rocks. Many Pb-Zn, Cu and Au showings.

Local Cambrian Hamill Group quartzite, schist, phyllite and limestone host 3-4 km long arsenical massive sulphide "sheet" within highly deformed shear zone. Mineralization parallels structural features and perhaps bedding.

Alteration/

Ore Forming Minerals Pyrite, arsenopyrite, sphalerite, galena, sulfosalts form mineralization in bands, lenses and stringers, varying from 0.1-12 m wide and averaging 2.7 m. Footwall ore is massive apy-rich with most gold; hanging wall tends to be clean (no As) sph-gn.

Current Exploration Results

1988-1989

i) **Geology**: Mineralization is exposed at surface in J&L showing for 3.34 km and in many other showings (A & E, Roseberry). Underground, ore zone shows strong spatial relation to phyllite/limestone contact and shows remarkable continuity along 143° strike and down 55° dip. Of 116 holes drilled into zone from underground, all intersected zone. Footwall ore is milled, massive apy-sph-py; hanging wall ore is disseminated sph-gn-py. Genesis unknown.

ii) **Metallurgy**: Gold is refractory being associated with arsenopyrite. Main problem has been producing clean Pb-Zn concentrate. Preferred flowsheet is sink/float upgrading, Pb-Zn flotation, pressure leaching of tailings, cyanidation to yield dore and production of insoluble As tailings.

iii) **Geophysics**: 1095 km airborne EM failed to detect ore zone due to steep terrain, complex geology and 2.5 m ore zone width.

iv) **Sampling**: 116 u/g drill holes, 1012 m drifts in two levels, 100 m raises, extensive surface and u/g sampling and mapping, 28-200 kg sample, 270 tonne bulk sample

		Proven & probable: 808,200 t @ 7.2 g/t Au, 66 g/t Ag, 5.2% Zn, 2.6% Pb, 4.7% As
		& Poss. (50 m beyond probable): 1,478,000 t @ 7.9 g/t Au, 62 g/t Ag, 4.7% Zn, 2.3% Pb, 4.5% As
Reserves:	Geological, possible	
	probable and/or proven	
	Number of zones	Possible(BP-Selco)=11,438,000 tonnes
	one zone	Possible(Noranda)= 12,370,000 tonnes
	Average grade (mineable reserve)	7.83 g/t Au, 62 g/t Ag, 4.9% Zn, 2.3% Pb
	Average thickness	2.7 m
	Cut-off grade	6.0 g/t Au equivalent; 1.6 m minimum mining width
	Number of sample points	>200
Costs:	Recent exploration costs,	
	i.e. (relating to above)	\$2,000,000
	Projected exploration costs of	
	program to development (if any)	\$4,000,000
	Projected development costs	
	given positive economics	\$50,000,000
	Projected operating costs	
	given positive economics	C\$77/tonne, with C\$140/tonne average net smelter return US\$220/oz gold

1990 SNAPSHOT REVIEW FORM

Property/Project

Authors

Name : Windy Craggy B.W.Downing; R.Beckett; N.Callan;
 NTS : 114P/12 M.Webster
 Claims : Windy,Craggy
 Acreage :
 Commodities : Cu, Co, Au, Ag, Zn

Agreements

- 1981 - Joint Venture between Falconbridge Ltd. and Geddes Resources Ltd.
- 1983 - Revision of JV whereby Geddes acquired 100% interest subject to NPI to Falconbridge

History

- 1957 - found by prospecting (J.J.McDougall), Frobisher Ltd.
- 1958 to 1980 - limited drilling, Falconbridge Nickel Mines Ltd.
- 1981 to 1986 - drilling, mapping, Dighem survey, airport construction
- 1987 to 1989 - underground development and bulk sampling, underground and surface drilling, metallurgical, engineering and environmental studies

Total to 1989 - Drilling: 50,134 metres (150 holes)
 Drifting: 4,139 metres

Past Development

N/A

Past Production

N/A

Geology

Regional

Within the fault bounded Alexander Terrane of the Cordilleran Insular Belt, the regional geological setting includes; Paleozoic carbonates to calcareous clastics, Triassic marine clastics and volcanics intruded by Jurassic - Cretaceous granitoid stocks and batholiths.

Property

The Windy Craggy deposit is hosted by Triassic clastic sediments and mafic flows and sills. Massive sulphide mineralization occurs near the transition from a predominantly clastic host to overlying volcanic assemblages. Clastic sediments comprise calcareous, carbonaceous and sulphidic units. Intermediate to mafic volcanic units are carbonate and chlorite altered. Major faults dip steeply, strike northwesterly and trend subparallel to contacts between enclosing lithologies. Two phases of folding, isoclinal and open folds, occur in both massive sulphides and host rocks.

The deposit is currently defined as two bodies which trend northwesterly a minimum strike length of 1.6 kilometres with a vertical extent of at least 600 metres and width greater than 200 metres. A sulphide stringer stockwork comprised of irregular sulphide veins within pervasively chlorite and silica altered wallrock is developed around the northern body and intermittently around the southern body. Principle sulphide minerals are pyrite, pyrrhotite and chalcopyrite with lesser magnetite and sphalerite. Gangue components include silica, iron carbonates, chlorite and calcite.

Gold content of the massive sulphides averages 0.22 grams per tonne and exists in part as native gold. Cobalt content of massive sulphides averages about 0.09 percent. High grade gold mineralization also exists in carbonate-sulphide-chert units within argillites adjacent to the southern massive sulphide body.

The deposit has similarities with both Besshi and Cyprus type massive sulphide deposits.

Reserves :	Geological	:	154,000,000 tons (to September, 1989)
	Number of zones	:	2 (North and South)
	Average grade	:	1.74 % Cu; 0.087 % Co; 0.21 g/t Au; 3.85 g/t Ag
	Average thickness	:	N/A
	Cut-off grade	:	1.00 % Cu

Costs :	Recent exploration costs :	1989	-	\$ 13,900,000
		1987-88	-	\$ 21,100,000

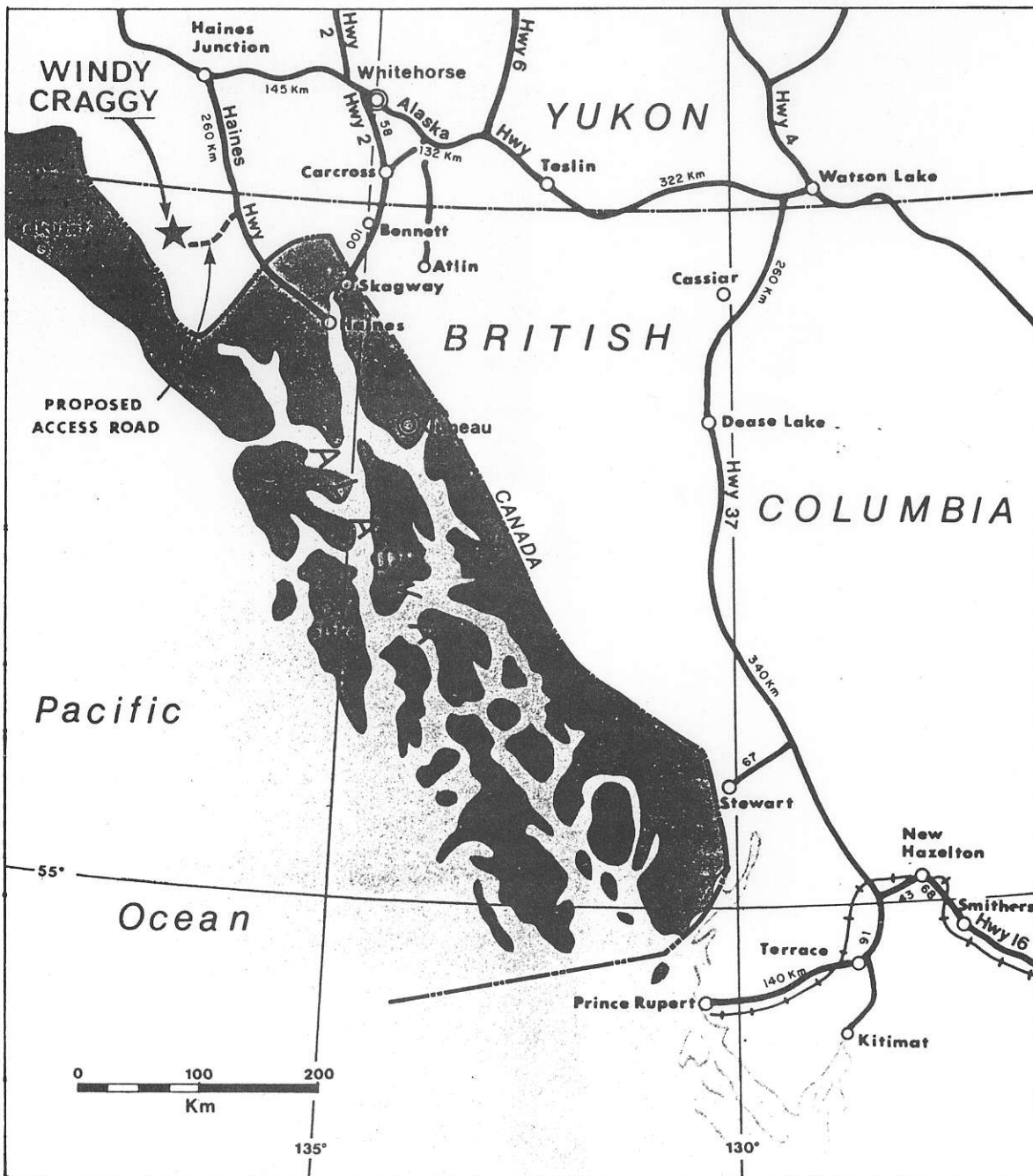
Projected exploration costs : \$ 10 to 15,000,000
to program to development

Projected development costs : \$ 400 to 500,000,000
given positive economics

Projected operating costs : N/A
given positive economics

LOCATION

WINDY CRAGGY DEPOSIT



AIR DISTANCES TO SITE:

Whitehorse	205 Km
Smithers	840 Km
Kitimat	836 Km
Dease Lake	472 Km
Juneau	245 Km

1990 "SNAPSHOT" REVIEW FORM

Property/Project

Name : Chu Chua
 NTS : 92P/8
 Claims : CC 1-11
 CH 1, 2, 4, 9, 11 239 units
 Dixie 4
 Acreage: 14,750 acres
 Commodities: Cu (Zn, Au, Co)

Authors

D. R. Heberlein

I. D. Pirie

Agreements Minnova can earn a 50% interest in the property by spending \$1,500,000 on exploration by Dec 31, 1993. Optionors, Pacific Cassiar, International Vestor and Quinterra, equally share the balance.

History

Past Exploration Techniques	By Whom	Amount	Type	Cost
1978-1983	Craigmont	150 km 6000 m	AEM, Geology, geophysics Soils, Drilling	\$1,000,000?
1983-1989	Minnova	120 km 5000 m	Geology, lithochem soils, geophysics, drilling	\$1,000,000
Past Development (if any)	By Whom	Amount	Type	Cost
Past Production (if any)	By Whom	Tonnage(s)	Method	Grade

Reasons for shut-down

Geology

Regional The area is underlain by pillowed to massive tholeiitic basalts, diorite sills and cherts of the Permian age Fennell Formation. To the east these are in fault contact with rocks of the Eagle Bay Assemblage and to the west they are bounded by the North Thompson structure.

Local Two closely spaced lenses of massive sulphides are hosted in chert between footwall massive basalt flows and hangingwall pillowed basalts. They are N-S striking vertically dipping and plunge steeply to the south.

Alteration/

Ore Forming Minerals Mineralization consists of massive pyrite with varying proportions of chalcopyrite and minor covellite, sphalerite, chalcocite, cubanite and stannite. Magnetite is also abundant, principally as massive pods within sulphides and associated with talc. Alteration is almost totally non-existent although very local chloritic fractures are developed.

Current Exploration Results

1988-89

i) **Geology** Mapping at a scale of 1:2500 or better has been completed over approximately 2/3 of the property. The western half, which hosts the deposit, is dominantly basaltic while the eastern half has more sediment and intrusions. All units are well exposed on the north end of the property, but exposure becomes non-existent to the south. Several horizons favourable for VMS deposition have been identified and will form the focus of future exploration.

ii) **Geochemistry** Soil sampling is of limited value in the area because of the fluvio-glacial nature of much of the overburden. However, the deposit, has a very distinct Cu anomaly over and downhill (south) from it. Lithochemical sampling is also of limited value because of the lack of outcrop and the absence of alteration around the deposit.

iii) **Geophysics** The deposit has a very pronounced EM signature which responds well to all types of electrical survey. The abundance of magnetite also produces a strong mag anomaly. Surveys completed to date have produced several more subtle anomalies but few obvious near surface targets.

iv) **Sampling** 8800 m of diamond drilling done on the deposit since 1977.

Reserves:	Geological, possible, probable and/or proven	1,049,000 tonnes probable
	Number of zones	2 lenses, minable as 1 zone
	Number of sample points	50
	Average grade	3.0% Cu, 0.3% Zn, 10.1 g/t Ag,
	Average thickness	0.58 g/t Au
	Cut-off grade	1.5% Cu
		(open pit portion only - within 75 m of surface)
Costs:	Recent exploration costs, i.e. (relating to above)	\$1,000,000
	Projected exploration costs of program to development (if any)	-
	Projected development costs given positive economics	-
	Projected operating costs given positive economics	-

CORDILLERAN ROUNDUP

1990 "SNAPSHOT" REVIEW

Property/Project

Name : Tulsequah Chief
NTS : 104K
Claims: 105 claim units

Authors

M. Casselman - Cominco Ltd.
M. Kenyon - Redfern Resources Ltd.

Acreage: approx. 5,000
Commodities: Cu, Pb, Zn, Au, Ag

Agreements

Cominco Ltd. - Redfern Resources Ltd. 60%-40% joint venture began in 1987. Cominco Ltd. are operator.

History

Past Exploration	By Whom	Amount	Type	Cost
1923-1932	United Eastern Mining Co., Taku Mining Co.	1500 ft. 3 adits 7 drill holes	drifting surface	?
Past Development	By Whom	Amount	Type	Cost
1946-1951	Cominco Ltd.	4 adits 9 levels 1500 foot internal shaft		?
Past Production	By Whom	Tonnage	Method	Grade
1951-1957	Cominco Ltd.	650,000 tons	Shrinkage and open stoping	1.8% Cu 1.3% Pb 6.7% Zn 0.10 Au oz/t 3.16 Ag oz/t

Geology

Regional

Area is on the west edge of the Intermountain Belt probably in the Alexander Terrane, encompassing Carboniferous-Permian volcanic and sedimentary rocks, Triassic intermediate volcanics, and Cretaceous-Tertiary felsic volcanics. Intrusives range from pre-Permian to Tertiary in age and include plugs, dikes and stocks of dioritic to rhyolitic composition.

Local

Carboniferous-Permian intermediate to felsic volcanic flows and pyroclastic rocks form a footwall assemblage capped by a 'mineral horizon' of sericitized, pyritized dacite-rhyolite pyroclastics (lapilli tuffs, cherty tuffs, muds) which host all sulphide bodies. A thick, lenticular dacite-rhyolite pyroclastic unit overlies the mineral horizon and is itself overlain by a hangingwall sequence of mainly andesite pyroclastics. Contemporaneous diorite to rhyolite plugs, dikes and sills intrude these volcanic sequences.

Alteration

Apart from the 'mineral horizon', a discordant footwall alteration pipe which terminates against the 'mineral horizon' and extends at least 1 Km into the footwall, displays a pyrite-sericite core zone, a biotite-pyrite transition zone moving to a chlorite-pyrite outer zone.

Ore Zones

Massive sulphide bodies in the 'mineral horizon' are composed of varying proportions of pyrite, sphalerite, galena, chalcopyrite, tetrahedrite, barite and gypsum. Sulphides are fine to medium grained, massive to well-banded and bedded with local fragmental textures and some contorted banding from soft sediment deformation or slumping.

Current Exploration Results

1987-1989

i) Geology

Regional, local and underground mapping carried out to develop stratigraphic control.

ii) Geochemistry

Some stream sediment and rock chip analysis for metal values and alteration patterns.

ii) Geophysics

No response from airborne geophysics, no surface or down hole geophysics has been done.

iii) Sampling

26 drill holes totalling 39,000 feet have been drilled to establish stratigraphy and test the 'mineral horizon' to a depth of 1600 feet below the lowest mine level. The deposit remains open in all directions.

Reserves

Geological reserves as calculated by Redfern Resources are 5,822,000 tons grading 1.6% Cu, 1.3% Pb, 7.02% Zn, 0.08 oz/ton Au and 2.93 oz/ton Ag.

Reserves based upon existing 800,000 tons proven/probable at mine closure plus 19 recent drill intercepts. The deposit varies from 6 to 52 foot true thickness and averages 20 feet thick and has an average specific gravity of 3.8 g/cc.

Costs

Recent exploration totals \$4,600,000.

1990 "SNAPSHOT REVIEW FORM"

Property/Project

Author - W.D. Eaton
Archer, Cathro & Associates (1981) Limited

Name: **MT. NANSEN**
 NTS: 115I 3/W, Yukon Territory
 Claims: Dome, etc (30 mineral leases and 257 mineral claims)
 Acreage: 13,095 acres
 Commodities: Gold, Silver

Agreements - B.Y.G. Natural Resources Inc. owns the property subject to a 2% NSR held by Chevron Minerals Ltd. that has a \$2,000,000 buyout.

History

<u>Past Exploration Techniques</u>	<u>By Whom</u>	<u>Type</u>	<u>Cost</u>
1946-47	Leitch Gold Mines Ltd., Huestis Synd. and Conwest Exploration Ltd.	diamond drilling, bulldozer trenching	
1962-64	Mt. Nansen Mines Ltd.	soil geochem surveys, bulldozer trenching, diamond drilling	
1985-87	Chevron/B.Y.G.	soil geochemistry, geophysical surveys, excavator and bulldozer trenching, rotary and diamond drilling, and environmental, geotechnical and metallurgical studies	2.5 million

<u>Past Development</u>	<u>By Whom</u>	<u>Type</u>
1946-47	Leitch Gold Mines Ltd.	crosscutting and drifting
1965-68	Mt. Nansen Mines Ltd.	crosscutting and drifting
1975-76	Mt. Nansen Mines Ltd.	crosscutting and drifting

<u>Past Production</u>	<u>By Whom</u>	<u>Tonnage</u>	<u>Method</u>	<u>Grade</u>
1967-68	Mt. Nansen Mines Ltd.	16,330 t	undergorund/ milling	not documented
1975-76	Mt. Nansen Mines Ltd.	7,435 t	underground/ milling	10.3 g/t Au, 240 g/t Ag, 1.0% Pb and 1.0% Zn

Reasons for shut-down - Poor recovery of gold due to refractory nature of sulphide ores and lack of a cyanide circuit to treat oxide ores.

Geology

Regional - Highly deformed, Upper Paleozoic or older gneisses and schists are cut by Upper Triassic and Jurassic granodiorite and syenite batholiths, which are in turn cut or overlain by Mid to Late Cretaceous, mafic to felsic, stocks, dykes, volcanic flows and pyroclastic rocks related to the Coast Plutonic Complex.

Local - A series of subparallel anastomosing veins occur in a 6 km long, 2.5 km wide belt extending the length of the property. The veins strike northwest, exhibit steep northeastern to moderate southwestern dips and cut all rock types on the property. Moderately dipping structures are up to 30 m wide and are often surrounded by highly fractured, weakly mineralized wallrocks whereas steeply dipping veins are usually less than 2 m wide and do not exhibit low grade halos.

Alteration/Ore Forming Minerals - Pyrite with lesser arsenopyrite, galena, sphalerite, sulfosalts and stibnite occur in a predominantly quartz gangue. Alteration envelopes of kaolinite and sericite lie immediately adjacent to the vein, while montmorillonite is found further away. Envelopes are symmetrical around steeply dipping veins but are confined to the hanging wall of moderately dipping structures. Oxidized mineralization responds well to cyanidization but fresh sulphides are generally refractory.

Current Exploration Results - 1988-1989

- i) Geology - Exploration has outlined strongly oxidized, open pitable reserves at the Brown-McDade and Flex Zones and generally unoxidized, underground reserves at the Brown-McDade, Flex, Webber and Huestis Zones. Several other zones have yielded significant intersections but have not yet been explored sufficiently to determine potential. Initial production would likely be oxidized, open pitable material from the Brown-McDade Zone, with later mill feed probably coming from a Flex Zone open pit, then from underground workings on various zones. There is also some lower grade oxidized material that could be mined and treated on heap leach pads.
- ii) Sampling - 5,397 m of diamond drilling were done in 85 holes, with 75 holes delineating near surface mineralization at the Brown-McDade Zone and the remainder testing selected targets at other zones. Holes in the Brown-McDade Zone were drilled at approximately 20 m intervals on lines spaced 33.3 m apart.
- iii) Metallurgy - In 1988, Melis Engineering supervised cyanide amenability tests on samples from the Brown-McDade Zone which indicates the open pitable material should average 86% recovery using a grind of 70% minus 74 microns and a 24 hour hold in the tanks. Preliminary bio-leach tests conducted in 1989 on refractory sulphide mineralization produced encouraging results and more comprehensive tests are planned.
- iv) Geotechnical - Klohn Leonoff investigated three potential tailings pond sites in 1988 and drilled test holes at the most favourable site in 1989. Norecol has conducted environmental baseline surveys since 1985 and is currently preparing an impact study in preparation for permitting.

<u>Reserves</u>	<u>Open Pit</u>			<u>Underground</u>		
	<u>Tonnes</u>	<u>Au g/t</u>	<u>Ag g/t</u>	<u>Tonnes</u>	<u>Au g/t</u>	<u>Ag g/t</u>
Proven	124,606	10.42	98	71,924	13.18	433
Probable	---	---	---	266,033	13.87	178
Possible	62,606	7.44	178	52,245	7.65	226
Total	187,212	9.42	125	390,202	12.91	232

	<u>Tonnes</u>	<u>Total Au g/t</u>	<u>Ag g/t</u>
Proven	196,530	11.43	221
Probable	266,033	13.87	178
Possible	114,851	7.54	200
Total	577,414	11.78	197

Number of zones - Open pit reserves include material from two zones (Brown-McDade and Flex), underground from four zones (Brown-McDade, Huestis, Webber and Flex).

Number of sample points - + 1,000.

Average thickness - varies from zone to zone but open pit is about 10 m and underground 2 m.

Cutoff grade - open pit 3.43 g/t Au and underground 6.86 g/t Au.

Costs

Recent exploration costs (i.e. relating to above) - approximately \$1.8 million (1988) and \$200,000 (1989).

Projected exploration costs of program to development (if any) - nil.

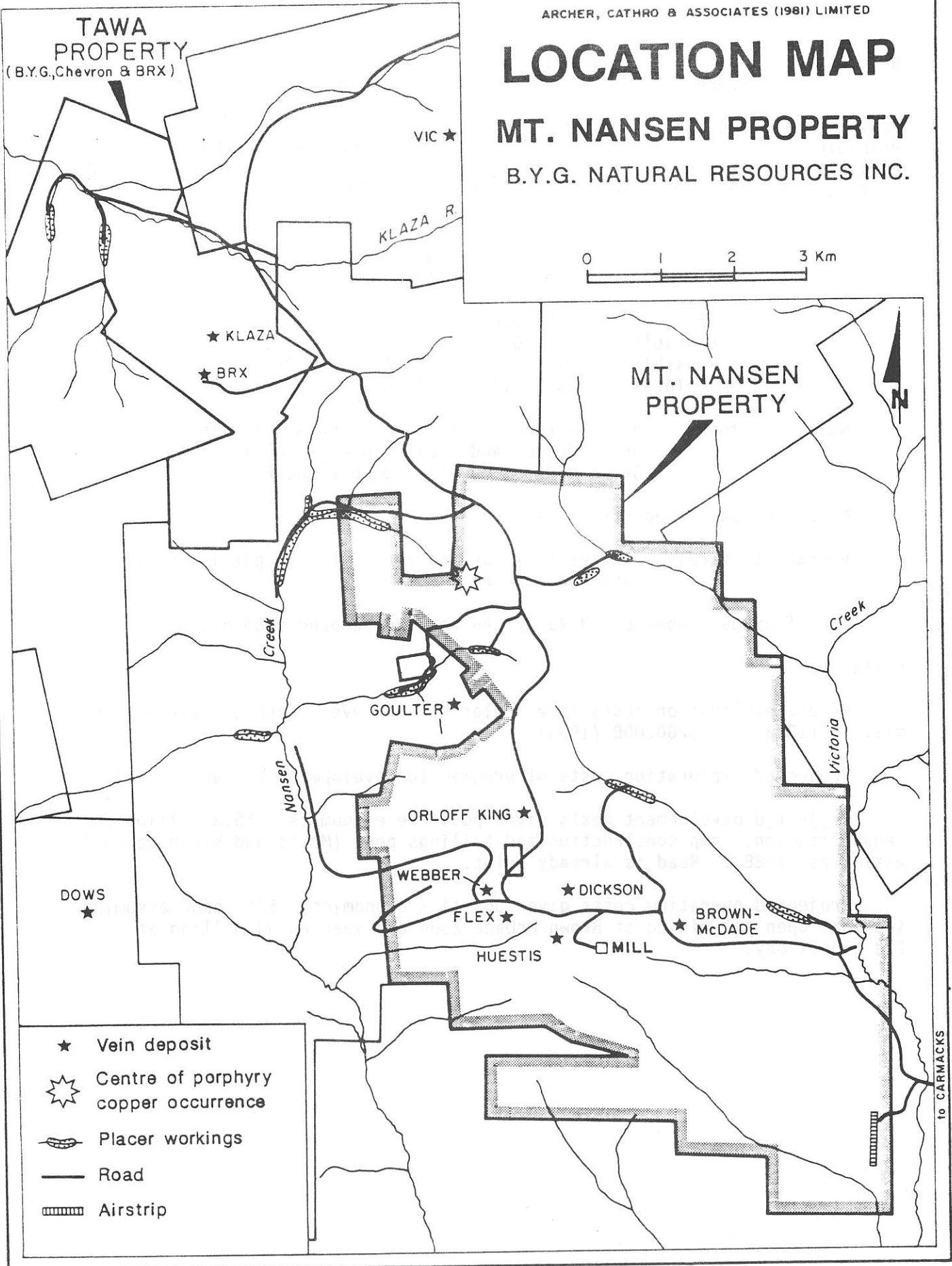
Projected development costs given positive economics - \$5.3 million for mill rehabilitation, camp construction and tailings pond (Melis and Klohn Leonoff estimates, 1988). Road is already built.

Projected operating costs given positive economics - \$86/tonne assuming seasonal open pit mining at Brown-McDade Zone and year-round milling at 270 tonnes/day.

LOCATION MAP

MT. NANSEN PROPERTY

B.Y.G. NATURAL RESOURCES INC.



- ★ Vein deposit
- ★ Centre of porphyry copper occurrence
- Placer workings
- Road
- ▭ Airstrip

TO CARMACKS

1990 "SNAPSHOT" REVIEW FORM

Property/Project

Name : Merry Widow
 NTS : 92L/6
 Claims : 57 Crown granted claims

Authors

Mr. P. Reynolds

Mr. J. D. Graham

Acreage:

Commodities: Au, Cu, Co, Fe

Agreements

Taywin Resources Ltd. owns 100% of the project subject to a 10.5% net profits interest to Quatsino Copper-Gold Mines Inc.

History

Past Exploration Techniques	By Whom	Amount	Type	Cost
	Quatsino	?	Diamond Drilling	?
	Cominco	?	Diamond Drilling	?

Past Development (if any)	By Whom	Amount	Type	Cost
	Quatsino	1300 M.	Drifting	?
		300 M.	Raise	?
	Cominco	1000 M.	Decline	?
		2200 M.	Drifting	?

Past Production (if any)	By Whom	Tonnage(s)	Method	Grade
	Quatsino	3.7 Mt.	Open pit and Long Hole stoping	50% + Fe (magnetite)
	Cominco		Underground	91M pounds Cu
	(Old Sport & Benson Lake Mine)			385000 oz Ag
				125000 oz Au

Reasons for shut-down
 Uneconomic

Geology

Regional: Middle Upper Triassic Quatsino Limestone underlain by early Upper Triassic Karmutsen Volcanics and overlain by late Upper Triassic Bonanza Volcanics. The Quatsino Formation strikes southeasterly and dips gently to the southwest. This entire sequence is intruded by the Coast Copper Gabbro-diorite.

Local: Locally all three formations become intensely buckled near the contact with the Coast Copper Stock. Magnetite and sulphide mineralization is present within skarn zones formed at the Bonanza-Quatsino contact. These mineralized zones strike NNE and dip 70 degrees SE.

Alteration/

Ore Forming Minerals: Mineralized zone is characterized by massive pyrrhotite & chalcopyrite up to five metres thick. The massive sulphides occur within actinolite skarn. Other skarn minerals present include garnet, epidoted calcite. Less common ore minerals include free gold, cobaltite, arsenopyrite and pyrite.

Current Exploration Results

1987-1988

i) Geology

Mapping had been completed at 1:500 in and around the Merry Widow pit. The Coast Copper contact and the Bonanza-Quatsino contact has been traced for 700+ metres. Outcrop confined to pit walls, road cuts and creek gulleys. Bonanza-Quatsino contact is characterized by wide-spread garnetite skarn, epidote skarn and lesser amounts of actinolite skarn. Numerous pods of magnetite and few pods of sulphides outcrop along this contact.

ii) Geochemistry

iii) Geophysics

Magnetometer surveys have helped trace the Bonanza-Quatsino contact to the north of the Merry Widow pit.

iv) Sampling

Surface trenching has been utilized to uncover several old showings. B.Q. diamond drilling to a maximum vertical depth of 120 metres has been completed in 42 holes for a total of 2850 metres.

Reserves: Geological, possible,
probable and/or proven
Number of zones
Number of sample points
Average grade
Average thickness
Cut-off grade

Costs: Recent exploration costs,
i.e. (relating to above) \$500,000

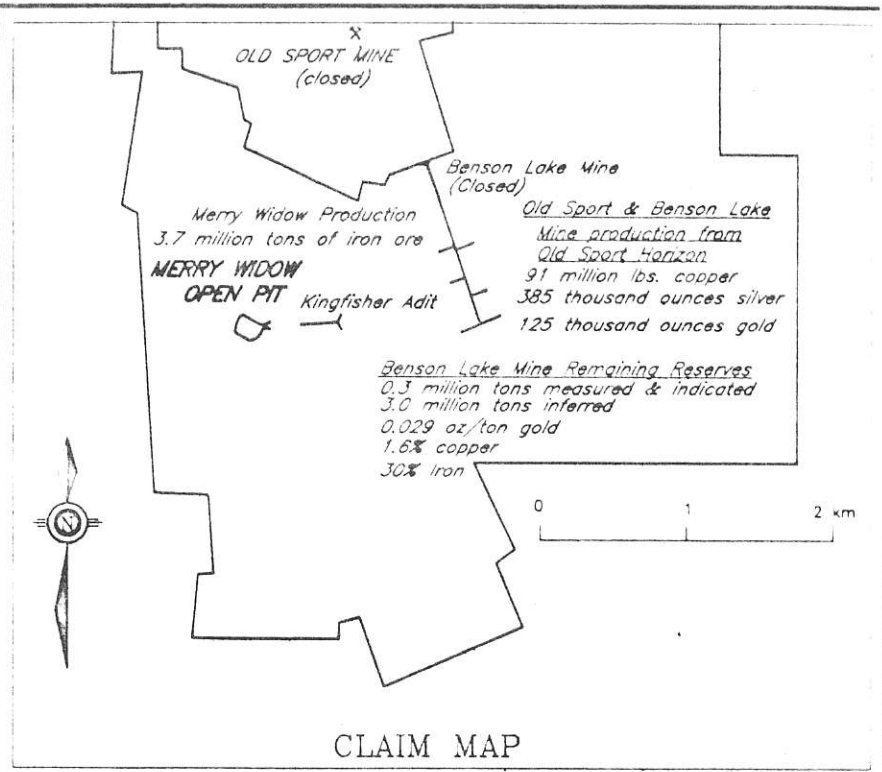
Projected exploration costs of
program to development (if any)

Projected development costs
given positive economics

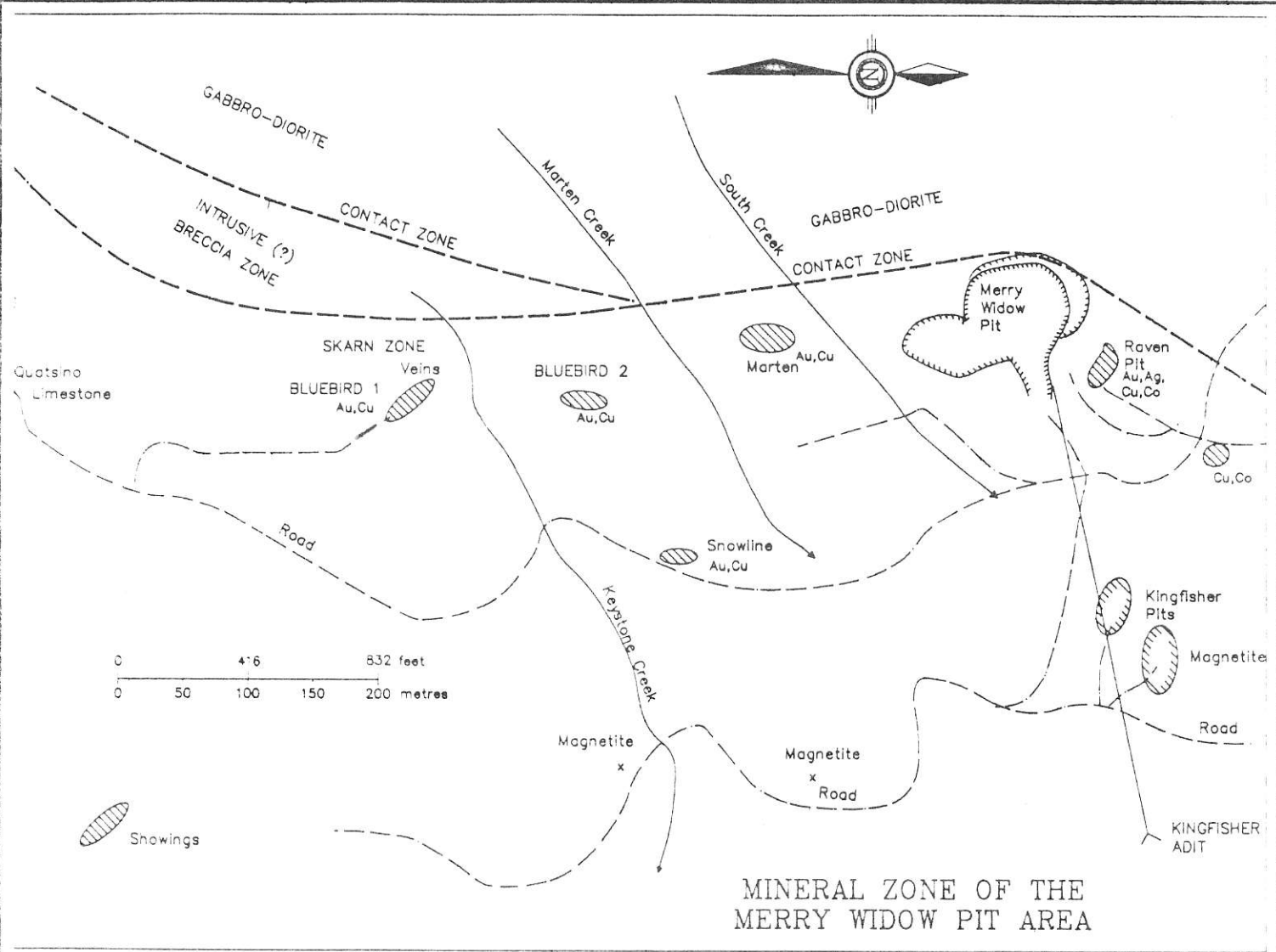
Projected operating costs
given positive economics



LOCATION MAP



CLAIM MAP



TAYWIN RESOURCES LTD.
MERRY WIDOW PROPERTY

1990 "SNAPSHOT" REVIEW FORM

Property/Project

Authors

Name : CRYSTAL PEAK GARNET

NTS : 82E/5W

Helen C. Grond

Claims : 24 Units

Joe H. Montgomery

Acreage: 250

Commodities: Andradite, Garnet

Agreements

Polestar owns claims outright (100%).

History

Past Exploration Techniques	By Whom	Amount	Type	Cost
--				

Past Development (if any)	By Whom	Amount	Type	Cost
--				

Past Production (if any)	By Whom	Tonnage(s)	Method	Grade
--				

Reasons for shut-down

Geology

Regional: The Mt. Riordan skarn deposit is the most easterly of a series of skarns which includes the presently operating Nickel Plate Mine and the old French and Good Hope Mines. Early Jurassic granitic plutons have intruded late Triassic Nicola Group sediments.

Local : The replacement of limestone to garnet is almost complete. No limestone is found on the property and none of the original sedimentary structures have been preserved. Diopside is a more common accessory. Silicate, quartz, epidote, actinolite and calcite also occur.

Alteration/Ore Forming Minerals: Garnet occurs either as massive garnetite or coarsely crystalline, often showing growth zonations. Brown and green are the most common colours, although buff, black and red-brown varieties have been noted.

Current Exploration Results

1987-1988

- i) Geology: Mapping has been completed at a 1:2500 scale. The garnet-rich body has dimensions of \approx 800 m x 300 m. Outcrop exposure is excellent as garnet is resistant to weathering. The granodiorite contact occurs to the east of the garnet body. Patches of meta-diorite which have in some cases been partly replaced by garnet, occur locally and as a significant zone within the garnet body.
- ii) Geochemistry: --
- iii) Geophysics: A magnetometer survey was completed on the property to assist with geological mapping and trace some gossan zones which occur in the Peak area.
- iv) Sampling : Petrographic analyses of 1000 surface samples and 500 drill samples were completed to analyze for garnet content. In addition, 400 drill samples in the west zone were given whole rock petrographic tests.

Reserves:	Geological, possible,	100,000,000	possible
	probable and/or proven	39,000,000	proven
	Number of zones	3	
	Number of sample points	1500	
	Average grade	\approx 80% (garnet)	
	Average thickness	>500 ft.	
	Cut-off grade	N/A	

Costs :	Recent exploration costs, i.e. (relating to above)	\$400,000
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Projected exploration costs of
program to development (if any) --

Projected development costs
given positive economics \$2 million

Projected operating costs
given positive economics \$30/ton
mining and processing