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# BLANEY 1,2,3,4 and SAM CRAIG I,II,III.IV Expropriated Mineral Claims Strathcona Park Alberni Mining Division British Columbia

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December 15, 2000

Ms. Joan Hesketh Assistant Deputy Minister Energy and Minerals Division Ministry of Energy and Mines PO Box 9320 Stn Prov Govt 5th Floor, 1810 Blanshard Street Victoria, B.C. V8W 9N3

Dear Ms. Hesketh:

## Re: BLANEY 1,2,3,4 and SAM CRAIG I,II,III,IV Expropriated Mineral Claims, Strathcona Park, Alberni Mining Division, British Columbia

Further to the Framework Dispute Resolution Agreement with respect to the foregoing mineral claims, which was executed by Thomas E. Kirk, on April 13, 2000, the following submission is intended as the affidavit required pursuant to Schedule B, section 2(1). Several supporting documents are included with this submission as Appendices 1-5.

## **Expropriated Mineral Tenures**

The following mineral tenures were expropriated by the Province of British Columbia by way of Order-in-Council 649-90 on April 19,1990.

Claim Name	Record No.	<u>Units</u>	Location Date	Record Date	Recorded Work
BLANEY 1	200568	1	Aug.7,1987	Aug.10.1987	Aug.10,1990
BLANEY 2	200569	1	Aug.7,1987	Aug.10,1987	Aug.10,1990
BLANEY 3	200570	1	Aug.7,1987	Aug.10,1987	Aug.10,1990
BLANEY 4	200571	1	Aug.7,1987	Aug.10,1987	Aug.10,1990
SAM CRAIG I	200572	1	Aug.7,1987	Aug.10,1987	Aug.10,1990
SAM CRAIG II	200573	1	Aug.7,1987	Aug.10,1987	Aug.10,1990
SAM CRAIG III	200574	1	Aug,7,1987	Aug.10,1987	Aug.10,1990
SAM CRAIG IV	200575	1	Aug.7,1987	Aug.10,1987	Aug.10,1990

The above listed mineral claims were protected by a Time Extension Order (210/90) issued by the Minister of Energy, Mines and Petroleum Resources September 17,1990, nearly five months after the effective date of expropriation.

The subject 2-post mineral claims were located on behalf of Thomas E. Kirk following the exclusion of the Bedwell River drainage from the southern part of Strathcona Park in 1987. The SAM CRAIG I-IV claims were staked to cover the past producing Musketeer gold property; the adjacent BLANEY 1-4 claims include the Buccaneer property, also a past gold producer.

## **Location and Access**

The expropriated mineral claims are situated immediately south of the Bedwell River 35 km northeast of Tofino on the west coast of Vancouver Island. The geographic centre of the four SAM CRAIG claims is at latitude 49 <sup>o</sup>25.9' North and longitude 125<sup>o</sup>41.7' West in NTS map-area 92F/5E; the four BLANEY claims are immediately east at latitude 49 25.9' North and longitude 125 40.8' West (Appendix 1).

Access to the Musketeer and Buccaneer properties in the late 1930s and early 1940s was by way of a 15 km truek road up the Bedwell River valloy from tidewater at the head of Bedwell Sound. Sections of this road were reported as being serviceable as recently as 1974. Access to the two properties in recent years has been by helicopter from Tofino airport.

## History of Mining Activity in the Bedwell River Area

The earliest documented activity in the area was between 1860 and 1887 when gold placer deposits on tributaries of the Bedwell River were exploited. The discovery of lode gold and copper deposits near the head of Bedwell Sound in the late 1800s resulted in renewed prospecting activity which led to the discovery of a gold-bearing quartz vein on what was later to become the Musketeer property. Immediately prior to World War I, the discovery of copper mineralization on Big Interior Mountain, north of the headwaters of Bedwell River, caused initial construction of a wagon road up the Bedwell River Valley. The You gold prospect, at the junction of Bedwell River and You Creek, was also discovered at this time.

The most intense period of exploration activity in the district was an outcome of the gold discoveries in the Zeballos area (110 km northwest of Bedwell Sound) in the mid-1930s. The main part of the Musketeer and the adjecent Buccaneer gold properties were discovered in 1938 and subsequent exploration and development work culminated in limited production from both properties in 1942. The onset of World War II and the resulting manpower and supply shortages curtailed these activities. As noted in the succeeding section, limited investigations of both these properties, undertaken at various times up to 1974, were hampered by weak gold prices.

The creation of Strathcona Park in 1911 has historically had a major impact on mining-related activities in the Bedwell River area. Such activities were permitted between 1918 and 1973 when a Provincial government moratorium was placed on claim staking and mineral exploration in all provincial parks. Park Use Permits, allowing work on existing mineral tenures, could be issued only at the discretion of the Minister responsible. Very few of these permits were issued for mineral claims in Strathcona or other provincial parks.

Dramatic increases in the price of gold in the mid to late 1970's refocused attention on prospective areas for gold on Vancouver Island. While the Bedwell River area was an obvious area of interest, the 1973 moratorium effectively prohibited work in this area.

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## The Musketeer and Buccaneer Gold Properties

*History* - Following their discoveries in 1938, the Musketeer property was acquired by Pioneer Gold Mines of B.C. Ltd. and Anglo Huronian Ltd. Bralome Mines Ltd. purchased the adjoining Buccaneer property. Construction of road access from Bedwell Sound to both properties was undertaken and development work through 1942 included 1480 metres of underground drifting, crosscutting and raising at Musketeer and 715 metres of underground development on the Buccaneer property. Small mills (50 tons per day) were constructed at both properties and these operated until suspension of operations in mid-1942. The Buccaneer mill was removed from the property later that year.

Limited hand mining was undertaken at Buccaneer in 1946 and a watchman remained on site at Musketeer through 1950. Bedwell River Gold Mines Ltd. acquired the Musketeer property from Pioneer in 1958 and through 1959 rehabilitated the mill to process stockpiled ore from Buccaneer. Copper Town Mines Ltd. assumed operation of the two properties and between 1961 and 1963 undertook 170 metres of underground development at Musketeer and shipped high grade material to the Asarco smelter at Tacoma.

Increasing gold prices in the early 1970s resulted in renewed efforts or both properties. Craig Mining Ltd. completed some trenching at Buccaneer in 1973 and New Musketeer Gold Mines began an re-evaluation of the Musketeer property in 1974. Some crude ore was shipped from the property but activities ceased when the camp was destroyed by fire in August of that year.

Production from both the Musketeer and Buccaneer properties between 1942 and 1974 is summarized as follows:

#### Musketeer (1942, 1961-63, 1974)

<u>Year</u> 1942 1961-63 1974	<u>Tonnes Mined</u> 6426 3140 57	<u>Tonnes Milled</u> 4599	<u>Gold(g)</u> 57416 34119 3421	<u>Silver(g)</u> 32161 19409 2426	<u>Copper(kg)</u> 243 220 59	<u>Lead(kg)</u> 5897 2955 2247
Totals	9623	4599	94956	53996	522	11099

Recovered grades (includes 1942 milling) - 12.18 g/t gold, 6.93 g/t silver, 0.007% copper, 0.14% lead

### Buccaneer (1941-42, 1947, 1958-59)

Year	Tonnes Mined	Tonnes Milled	Gold(g)	Silver(g)		Lead(kg)
1941-42	4852	4416	88519	20590	253	-
1947	44		1866	467	-	-
1958-59	91	1541*	31996	18071	62	3206
* Milled at Musketeer						
Totals	4987	5957	121581	39128	315	3206
Recovered grades (includes milled tonnes)			20.26 g/t gold, 6.52 g/t silver, 0.005% copper, 0.05% lead			

The 1973 moratorium prohibiting exploration and mining in provincial parks effectively ended further work on the Musketeer and Buccaneer properties. The work undertaken on the Musketeer in 1974 was probably facilitated by an existing Park Use Permit and by the fact that the property at that time consisted of seven full and fractional Crewn granted mineral claims which were included in a mining lease. The Buccaneer was covered by eight recorded mineral claims which may explain why no work was done here in 1974. Lease rentals and taxes on the Musketeer claims were paid through 1977 after which the claims were canceled; the recorded Buccaneer claims are thought to have lapsed about the same time.

Continued increases in the price of gold into the 1990's refocused attention to areas witn documented potential on the west coast of Vancouver Island. The Musketeer and Buccaneer properties would have been obvious targets for additional investigation had they not been situated in Strathcona Park.

In 1986, The Wilderness Advisory Committee, which had been appointed by the Minister of Environment in late 1985, issued a report recommanding boundary changes for a number of Provincial Parks including Strathcona. In early 1987, the Minister adopted the recommendations of the Committee and, in the case of Strathcona Park, proposed to remove the Bedwell River area from park status.

This announcement immediately caught the attention of Mr. Thomas Kirk who had long been interested in the mineral resources of Vancouver Island and was well aware of the potential of the southern part of Strathcona Park. Mr. Kirk at that time was prasident of a public company, Kilo Gold Mines Ltd., which, through his efforts, had been successful in negotiating an agreement to undertake exploratory work on the nearby You gold property two years previously. This work was made possible by way of an existing Park Use Permit which had been in effect for some time.

Mr. Kirk contacted the Ministers of Energy Mines and Petroleum Resources and Environment and Parks expressing his interest in locating mineral claims when the Bedwell River area officially oame open for staking. A subsequent response from the Minister of Energy Mines and Petroleurn Resources referred to an Order-in -Council amending the park boundaries and advised that when the no-staking reserve was canceled, claim staking in the Bedwell area would be permitted. A similar response was received from the Minister of Environment and Parks.

The no-staking reserve covering the Bedwell River area was canceled August 6,1987 and Mr. Kirk made arrangements to have the subject mineral claims staked the following day. As noted previously, the SAM CRAIG I-IV claims cover the Musketeer workings while the BLANEY 1-4 claims include the Buccaneer mine.

Before any meaningful investigation of the new claims could be undertaken, the Minister of Environment and Parks established the Strathcona Park Advisory Committee in early 1988 in response to public protests concerning minoral exploration activity at the south end of Buttle Lake in the nearby Strathcona Recreation Area. In June, this committee recommended that the Bedwell area be reinstated as part of Strathcona Park and that existing mineral claims within this area be denied park use exploration permits. Further work on the Musketeer and Buccaneer properties was thus rendered impossible.

Cash-in-lieu payments were made to keep the SAM CRAIG and BLANEY mineral claims in good standing through 1990 when they were officially expropriated by the Province.

**Geological Setting-** The following comments in this and the succeeding sections of this report are based on published reports, material available in the Ministry of Energy and Mines Property File and on background files pertaining to the two properties which had been assembled by Mr. Kirk over the past number years. A list of references is included with this report as Appendix 2, copies of BC Minfile for 092F060 (Musketeer) and 092F061 (Buccaneer) are included as Appendix 3 and a copy of a 1942 paper prepared by Franc R. Joubin on the Musketeer and Buccaneer properties is included as Appendix 4.

The Musketeer and Buccaneer properties are typical of the numerous quartz vein-hosted gold deposits known on the west coast of Vancouver Island. These occur in four recognized districts including, from north to south, Zeballos, Bedwell River, Kennedy River and Alberni Inlet. The vein deposits are developed in a variety of host rocks but are considered to be genetically related to Tertiary granitic intrusions. The veins, which occupy steeply-dipping fault and fissure zones, are typically narrow with widths ranging from a few centimetres to 2 metres and averaging about 30 centimetres. Strike lengths average less than 50 metres although strike lengths of a few hundred metres are evident at a number of deposits in the Zeballos and Bedwell Rivor districts. Gangue minerals within the veins are quartz with lesser carbonate and gold occurs in the free state and as intergrowths with sulphide minerals which include pyrite, galena, sphalerite and chalcopyrite. Higher sulphida mineral contents, particularly galena, are Indicative of higher gold grades in most deposits. Vein walls are sharply defined and bracketed by narrow (10-15 cm) selvages of sheared and bleached wallrock. Gold values are restricted to the veins with only negligible values present in adjacent wallrocks.

Although the typical Vancouver Island vein gold deposit is relatively small, significant production has come from the Zeballos camp where more than 900000 grams of gold (300,000 ounces) and some silver have been recovered from 16 deposits since 1934. More than 60% of this production was from the Privateen mino which had an average recovered gold grade of about 35 grams/tonne mined. While the principal vein at Privateer was persistent over a strike length of 300 metres and a vertical range of 250 metres, average vein width was 30 cm or less.

Production from 14 vein deposits in the Bedwell River area totaled 311000 grams gold (10,000 ounces) and 227000 grams silver (7300 ounces) Average recovered grade per tonne mined was 18.86 g/t gold and 13.70 g/t silver and more than 75% of this recorded production was from the Musketeer and Buccaneer properties.

The geological settings and styles of gold mineralization on the Musketoer and Buccaneer properties are similar to other known deposits in the Bedwell River - Drinkwater Creek area in the southern part of Strathcona Park. The two deposits; which are about a kilometre apart, are near the western margin of the Bedwell granitic batholith. Host rocks are quartz diorites of varying texture and colour (Sargent, 1941).

Gold-bearing quartz (carbonate)-sulphide veins occupy two principal fault-fracture systems. The most important of these strikes north-northeast and dips steeply east - the Trail vein at Musketeer and the Craig and West veins at Buccaneer are examples. The Main (Musketeer) vein occupies the other fault-fracture direction which strikes east northeast and dips moderately to steeply north. Andesite and dacite dykes, ranging from 0.60 to 3 metres in width, also follow the two fault-fracture directions. These pre-date the quartz-sulphide veins - the Craig and West veins on the Buccaneer property are within and marginal to dykes of this type.

The quartz veins on the Musketeer property contain between 3 and 10% sulphides minerals consisting mainly of pyrite, sphalerite and lesser chalcopyrite and galena. Better gold grades are associated with higher sulphide mineral content (Joubin,1942); the Buccaneer veins, by contrast, contain little or no sulphides although average gold grades are similar. Bleached wallrocks marginal to veins contain few sulphides and negligible gold values.

Two stages of quartz velning were recognized (Joubin,1942) including an earlier, ribboned vein with alternating quartz and sulphide bands which ts evident only in the Main or Musketeer vein and crystalline, vuggy quartz which contains higher gold values; the Trail vein on the Musketeer property and by the West and Craig veins on the Buccaneer are examples of this type.

The north-northeast-striking vein structures (Trail, Craig, West) contain the more important ore shoots although some shoots are present within the east-northeast Main or Musketeer vein. Transverse shears and fractures appear to control the various ore shoots which are subvertical within the plane of the veins. The eight shoots within the Trail vein end the seven within the Craig vein range in length from 8 to 60 metres and have a vertical range of at least 135 metres.

While average widths of the various ore shoots are narrow (10 to 30 cm), gold grades are exceptional. Early sampling of 14 trenches, excavated along the Buccaneer Craig vein over a strike length of 135 metres, returned gold values ranging from 0.34 g/t to 881.14 g/t with an overall weighted average grade of 144.34 g/t gold over an average width of 12 cm.

Underground sampling by Sargent (1941), when development work was underway at both properties, also confirmed the high grade nature of the mineralization. Weighted average grades (calculated by N.C. Carter) for the various samples collected by Sargent, are as follows:

## Musketeer

(Irali vein)					
	No.of Samples	Length(m)	Sampled Width(cm)	Gold(g/t)	Silver(g/t)
1000 level	12	47.2	24	45.26	25.371
700 level	6	22.9	15	173.14	88.11
(Main (Musketeer)	Vein) - 2 shoots - A,	В			
1000 level - A	5	27.4	12	72.00	47.31
1000 level - B	5	41.1	16	43.88	39.77
Buccaneer					
(West Vein) - 2 sho	ots - A,B				
Drift - A	4	13.0	17	219.43	47.31
Drift - B	5	18.0	27	67.54	18.17
(Craig Vein)					
1600 level	15	53.3	18	115.54	25.03
1440 ievei	10	61.0	21	44.23	7.54

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## Potential -

An assessment of the remaining potential of the Musketeer property was undertaken by N.C. Carter following a review of some plans and sections for this property which were found in the Ministry of Energy and Mines Property File. These had been prepared for Bedwell River Gold Mines Ltd. in 1959 when this company was engaged in processing stockpiled material from Buccaneer through the rehabilitated Musketeer mill. Longftudinal sections of the Trail vein showed one stope above the 1000 level and three stopes above the 700 level which had been source of the material mined and processed in 1942.

Composite sampling data for a number of ore shoots within both the Trail and Main (Musketeer) veins permit a preliminery estimate of remaining resources within both vein structures. These are expressed as both undiluted and diluted resources. The diluted resource figures assume a minimum mining width of 0.91 metre (3 feet), equivalent to that employed during initial mining. Incorporated wallrock is assumed to be of zero gold grade.

## Musketeer Trail Vein

Undiluted resource (8 mineralized shoots) - 3249 tonnes @ 49.71 g/t goid Average width - 22 cm Average shoot length - 22.3 metres

#### Musketeer Main Vein

Undiluted resource (6 mineralized shoots) - 1321 tonnes @ 105.94 g/t gold Average width - 10 cm Average shoot length - 26.5 metres

Diluted resources (0.91 metre width) 11359 tonnes @ 12.34 g/t gold

### Totals - Trail and Main Vein

Undiluted - 4570 tonnes @ 65.96 g/t gold Diluted - 24172 tonnes @ 12.57 g/t gold

Pursuant to Canadian Institute of Mining Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves, prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council August 20,2000, the foregoing diluted resource is properly categorized as an indicated mineral resource.

Production records indicate that some 3200 tonnes were mined between 1961 and 1974. Accordingly, the remaining indicated mineral resource present on the Musketeer property would be 21000 tonnes grading between 12 and 13 grams/tonne gold. This represents an *in situ* 264000 grams of gold or approximately 8,500 troy ounces.

No similar data are available regarding remaining resources on the Buccaneer property. A January 8,1959 Northern Miner article suggests a possible 7200 tonnes of higher grade material in the 50 g/t gold range.

There is reasonably good potential for additional resources within defined vein structures at both properties, particularly below the lowest underground levels as well as along strike to the south. The Musketeer property reportedly includes 14 vein structures, some of which contain good gold values (Sargent, 1941).

## **Statement of Costs**

Costs incurred by Mr. Kirk with respect to the SAM CRAIG I-IV and BLANEY 1-4 mineral claims relate mainly to claim location and maintenance costs. Work on the ground was not possible due to the reinstatement of the Bedwell River area to Class A Park status in mid-1988 and the impossibility of obtaining a Park Use Permit. An estimate of costs incurred is as follows:

Recording fees, cash-in-lieu Staking costs - travel, fees Data compilation	ı payments	\$1,760.00 \$3,200.00 <u>\$2,500.00</u>	
	Total	\$7,460.00	

## Value of the SAM CRAIG I-IV and BLANEY 1-4 Mineral Claims

A cost approach to estimating the value of the subject mineral claims is not considered to be appropriate in this particular case. As noted, the costs incurred by the claims owner pertain principally to direct acquisition costs; subsequent exploratory work on the claims was rendered impossible by a change in government policy with respect to the Bedwell River area which was reinstated as part of Strathcona Park within a year of the location of the claims.

A more realistic method of determining a value for the SAM CRAIG and BLANEY mineral claims is by comparing market transactions for similar mineral properties between parties acting at arm's length. The fair market value determined by a comparable transaction analysis (Lawrence, 1986, 2000; Ward and Lawrence, 1998) is defined as the highest price available in an open and unrestricted market between a willing buyer and a willing seller.

Mineral property transactions between a buyer and a seller may include a direct cash payment for property, an indirect cash payment for the purchase of shares in the company holding the property, or an option or farm-in agreement which involves a schedule of annual option payments and/or work commitments over a specified time period. Most mineral property transactions usually include a combination of all of the foregoing.

Comparable mineral properties for purposes of estimating a value for the subject mineral claims include those properties with a similar geological setting and style of mineralization and which are situated in the same geographic area. Sources of information with respect to comparable property transactions used in this analysis include a market valuation study prepared by Wright Engineers Ltd. in 1990 and various new clippings (George Cross Newsletter, Northern Miner) and regulatory agency filings pertaining to specific mineral properties contained in the Ministry of

Energy and Mines Property File plus pertinent corporate data from Canadian Mines Handbooks. Transaction dates for the properties selected range from 1983 through 1990 and include the time of location of the SAM Craig and BLANEY mineral claims (1987) and the year of their expropriation (1990).

Data pertaining to ten comparable property transactions have been used in undertaking this analysis and individual property details are contained in Appendix 5. Seven of the properties for which data are available (Fandora, Kennedy River, Lucky, Thunderbird, Spud Valley, Alexandria, Doctor's Point) are quartz vein-hosted gold deposits similar to the Musketeer and Buccaneer; two (Lucky Jim, Thistle) are gold and base metal skarn deposits and one (Debbie/Yellow) is in part a volcanogenic massive sulphide deposit with lesser quartz voin hosted gold mineralization. Seven of the properties are situated on or near the west coast of Vancouver Island (Fandora, Kennedy River, Lucky, Thunderbird, Thistle, Debbie/Yellow, Spud Valley) while three (Lucky Jim, Alexandria, Doctor's Point) are in the southwest coast region.

Most of the property transactions involved an initial cash and/or stock down payment plus increasing annual cash payments and/or issuance of shares and annual work commitments. Only those option payments and work commitments that are documented as having been paid are included with the down payments to arrive at a transaction vslue for each of the ten comparable properties. Details of two transactions within the 1983 to 1990 time frame are available for the Lucky property.

Cash and/or issuance of shares down payments were made in the case of eight of the subject properties. These ranged in value between \$10,000 and \$350,000 with an overall average of \$93,000. Option payments (cash, issuance of shares, advance royalties, lease rentals) formed part of six transactions and totaled between \$20,000 to \$150,000. Overall average paid was \$73,250. The largest variation perteined to work commitments which applied to six of the comparable properties. These ranged from \$25,000 to \$1,200,000 and averaged \$460,000.

The sum of the average down payment, the average option payment total and the average total work commitment yields an average property transaction value for the ten comparable properties of \$626,250. Excluding the work commitments for the Debbie/Yellow and Thistle property transactions (\$1,200,000 and \$750,350 respectively) which were not entirely arm's length transactions, the average total work commitments for the remaining eight properties totaled \$202,500. By cembining this figure with the average down payment of \$93,000 and the total option payment average of \$73,250, the overall average property transaction value is \$368,750.

This average value closely approximates the transaction value of \$350,000 for the Spud Valley property. This former producer, situated in the Zeballos gold camp, is typical of Vancouver Island quartz vein-hosted gold deposits and consequently is vary similar to the Mosketeer and Buccaneer properties. The remaining resource at Spud Valley is reported as 49890 tonnes grading 4.60 g/t gold (7,378 contained ounces) while the Musketeer alone has an estimated diluted resource of 21000 tonnes grading 12.50 g/t gold (8,500 contained ounces).

## Conclusions

A fair market value for the SAM CRAIG and BLANEY mineral claims, between the time of initial claim location and the date of expropriation by the Province of British Columbia, is considered to be \$368,750.

It is important to note that this time period (1987-1990) was a particularly active one for mineral exploration in British Columbia. Exploration expenditures reached an historic high of \$209 million in 1988 and the principal focus of this activity was directed to gold properties. The west coast of Vancouver Island was one of the more active areas Province-wide with expenditures of between \$5 and \$10 million incurred on the Debbie/Yellow property alone between 1985 and 1990.

The SAM CRAIG and BLANEY mineral claims include the Musketeer and Buccaneer gold properties. These are former producing properties and the documented, remaining mineral resources would have rendered them particularly attractive properties in the late 1980's.

The owner of the subject mineral claims located these claims in good faith in August of 1987. Had he not been subject to conflicting Provincial government policies and had been free to negotiate an agreement for these claims, a transaction value of \$368,750 would have been readily attainable.

Prepared on behalf of Thomas E. Kirk by:

N.C. Carter, Ph.D. P.Eng.

Submitted by:

Thomas E. Kirk

## LIST OF APPENDICES

Appendix 1 - Location Diagram

Appendix 2 - List of References

Appendix 3 - BC Minfile Descriptions - Musketeer (092F060) and Buccaneer (092F061)

Appendix 4 - Musketeer - Buccaneer technical paper prepared by Franc R. Joubin, 1942

Appendix 5 - Comparable Mineral Property Descriptions and Details of Transactions



CATION - BLANEY 1,2,3,4 and SAM CRAIG I,II,III,IV MINERAL CLAIMS

## LIST OF REFERENCES

- Joubin, Franc R.(1942): Musketeer Buccaneer Area, V.I., Geology and Ore Deposits, CIM Transactions XLV, 1942, pp.2-14
- Lawrence, R.D.(1988): Evaluation of properties that have no Proven Ore Reserves, The Northern Miner, Dec.26,1988, p.2
- Lawrence, R.D.(2000): Valuation of Mineral Properties without Mineral Resources: A Review of Market-based Approaches, Abstract, Mining Millennium 2000 International Convention, Toronto, March,2000
- Lawrence, Ross.D. and Ward, Mary-Claire(1998): Comparable Transaction Analysis: The Market Place is Always Right, in Mineral property Valuation and Investor Concerns, Proceedings of a Short Course given by the Prospectors and Developers Association of Canada and the Natural Resource and Energy Law Section of the Canadian Bar Association, Toronto, March, 1998
- Sargent, H.(1941): Supplementary report on Bedwell River Area, Vancouver Island, British Columbia, B.C. Department of Mines, Bulletin No.13
- Wright Engineers Ltd.(1990): Market Valuation of the Sherwood Mining Claims, Vancouver Island, British Columbia, prepared for the Expropriation Compensation Board of British Columbia

### MINERAL PROPERTY: Fandora

BC Minfile No. 092F041

LOCATION: head of Tranquil Inlet, 20 km northeast of Tofino

**GEOLOGICAL SETTING:** within pre-Jurassic West Coast Complex andesite tuffs; east-northeast to west-northwest fractures are occupied by feldspar porphyry and mafic dykes.

STYLE OF MINERALIZATION: a 3-6 metre wide andesite dyke, striking easterly and dipping steeply north, hosts two parallel quartz veins which are between 1.2 and 1.5 metres apart and attain widths of up to 0.45 metre. The dyke and contained veins have been traced by underground workings over a strike length of 900 metres and a vertical range of 200 metres. The veins contain fine-grained chalcopyrite, pyrite, galena, sphalerite and arsenopyrite; better gold grades occur in discrete shoots. Gold grades in two of these shoots include 11.21 g/t over a 1.53 metre width and a length of 30.5 metres and 16.49 g/t over a 1.27 metre width and a length of 63.4 metres.

PAST PRODUCTION: 1960-1964 - 972 tonnes yielding 45660 grams Au, 8367 grams Ag (recovered grades - 46.98 g/t Au; 8.61 g/t Ag)

RESOURCE: 180000 tonnes grading 10.30 g/t Au - contained in 10 shoots

TRANSACTION: 1990 - lease agreement between New Privateer Mines Ltd. (owner) and Alice Lake Gold Mines Ltd. Terms included a down payment of \$30,000 (paid in equivalent stock), annual property rentals of \$20,000 plus work commitments of \$100,000 in year one and \$150,000 in year two. First year obligations were met; status of year two commitments not certain and consequently reduced by 50%.

Value of Transaction - \$235,000

## MINERAL PROPERTY: Thunderbird

### BC Minfile No. 092F067, 449, 450

LOCATION: Ursus Creek, 30 km northeast of Tofino.

GEOLOGICAL SETTING: Ursus Creek occupies a west-northwest fault/shear zone separating Jurassic Island intrusions granitic rocks on the north from Triassic Karmutsen Formation volcanics to the south.

STYLE OF MINERALIZATION: A number of west-northwest and northeast-striking quartz veins occur marginal to Ursus Creek over a considerable strike length. A number of grab samples from the Thunderbird locality returned average values of 31.54 g/t Au over an average width of 11 cm; a 34 cm wide quartz vein at the Mid Pad showing yielded 7.35 g/t Au and sheared and silicified granodiorite at the Junction locality returned 3.94 g/t Au over a 0.50 metre width.

**PAST PRODUCTION:** None reported

**RESOURCE:** None reported

**TRANSACTION:** 1984 - option agreement between individual vendor and Eldorado Minerals and Petroleum Corp. Terms included a \$10,000 down payment and issuance of 200,000 shares over two years at an average price per share of \$0.10.

Value of Transaction - \$30,000

## MINERAL PROPERTY: Lucky BC Minfile No. 092F034

LOCATION: 5 km north of Toquart Bay and 20 km northeast of Ucluelet

GEOLOGICAL SETTING: underlain by Triassic Karmutsen Formation intermediate to basic volcanic rocks which are overlain locally by limestone and Bonanza Group intermediate to felsic volcanics. West-northwest structural trends are evident and numerous feldspar porphyry dykes are spatially related to known mineral zones.

STYLE OF MINERALIZATION: The principal mineral zone is the gold-bearing Lucky quartz-carbonate vein which strikes north, dips steeply east and is exposed in open cuts and two adit levels. Vein widths range from a few cm to 40 cm; six vein samples over a strike length of 28 metres in the upper adit averaged 66.38 g/t Au over an average width of 23 cm. Drilling tested the structure over a strike length of 140 metres and a vertical range of 60 metres. Better gold values occur in a steeply north plunging shoot which averages 32.23 g/t Au over a width of about 50 cm.

**PAST PRODUCTION:** None reported

RESOURCE: 3500 tonnes grading 32.23 g/t Au (writer's 1988 estimate)

TRANSACTION: (a) 1983 - option agreement between Victoria Resource Corporation and Electrum Resource Corporation (vendor) involved a down payment of \$25,000 and annual option payments which totaled \$100,000 through 1985 after which the agreement was terminated.

Value of Transaction - \$125,000

(b) 1987 - option agreement between Freemont Gold Corporation and Electrum Resource Corporation - essentially similar to earlier Victoria Resource agreement with a \$25,000 down payment plus annual issuances of shares which amounted to 200,000 shares @ \$0.50 per share through 1990.

Value of Transaction - \$125,000

## MINERAL PROPERTY: Kennedy River BC Minfile No. 092F044, 045, 051

LOCATION: immediately north of Kennedy River, 40 km northeast of Ucluelet

GEOLOGICAL SETTING: underlain by Triassic Karmutsen Formation intermediate to basic volcanic rocks which are transected by east - to northeast trending shear zones.

**STYLE OF MINERALIZATION:** Three principal quartz vein structures follow principal shear zones. The Bear vein strikes east-west and dips moderately north; vein widths range from 0.5 to 3.0 metres, sulphide minerals within quartz include pyrite, arsenopyrite, pyrrhotite, sphalerite; native gold is also reported. The Shack vein occupies a northeast-trending, steeply dipping fault; the structure averages 40 cm in width and has been traced over a strike length of 160 metres and tested by drilling over a vertical range of 120 metres. The nearby Elite vein has a similar orientation and ranges in width from 35 to 75 cm and has a strike length of 50 metres.

## **PAST PRODUCTION:** None reported

- RESOURCE: Variously reported as 160000 tonnes grading 17.40 g/t Au includes the three structures. Optimistic estimate - data prepared by the writer suggests resources of 3500 tonnes @ 10.66 g/t Au for Bear vein, between 1500 and 4500 tonnes @ 20.57 g/t Au for Shack vein and 1500 - 4500 tonnes @ 40.11 g/t Au for Elite vein.
- TRANSACTION: 1985 option/purchase agreements between International Coast Mineral Ltd. and individual vendors. Initial down payment was \$55,000; annual option and advance royalty payments averaged \$37,500 per year. Properties were maintained through 1989 or a period of 4 years.

Value of Transaction - \$205,000

MINERAL PROPERTY: Debbie/Yellow

BC Minfile No. 092F0079

LOCATION: 12 km southeast of Port Alberni.

- **GEOLOGICAL SETTING:** underlain by late Paleozoic Sicker group volcanic rocks which host several volcanogenic massive sulphide zones in addition to gold-bearing quartz veins typical of the west coast of Vaneouver Island.
- STYLE OF MINERALIZATION: The property includes four gold-enriched massive sulphide zones including the 900, Linda, Mineral Creek and Yellow zones. These strike north-northeast and dip east and include, or are marginal to, several narrow (14 to 40 cm wide) gold-bearing quartz-pyrite-arsenopyrite veins which yielded some past production. The principal zones were explored by more than 2 km of underground workings in the late 1980s.
- PAST PRODUCTION: 1898,1934-1936 (Vancouver Island Gold Mines Ltd.) 365 tonnes yielding 9425 grams Au, 1679 grams Ag (Recovered grades - 25.82 g/t Au, 4.6 g/t Ag)

RESOURCE: Global resource (1990) including all principal zones - 471956 tonnes @ 6.23 g/t Au

**TRANSACTION:** 1986 - farm-in agreement with Westmin Resources allowing Nexus Resource Corporation to earn a 50% working interest by incurring \$1 million in expenditures by early 1988. Records indicate that \$1.2 million had been spent by Nexus by April 30,1987 with funds raised by way of flow-through financing. (Aggregate expenditures by both companies through 1990 exceeded more than \$5 million).

Value of Transaction - \$1,200,000

## MINERAL PROPERTY: Thistle BC Minfile No. 092F083

LOCATION: 18 km southeast of Port Alberni.

GEOLOGICAL SETTING: underlain by Triassic Karmutsen Formation intermediate to basic volcanic rocks, Quatsino Formation limestones and late Paleozoic Sicker Group intermediate volcanic rocks

STYLE OF MINERALIZATION: Several styles known including disseminated to massive sulphides, sulphide-rich quartz veins and precious and base metal skarn zones developed in limestone. The latter are the most important and consist of two zones 40 metres apart. Widths range from 1 to 8 metres.

PAST PRODUCTION: 1938 - 1942 -6283 tonnes yielding 85874 grams Au, 65969 grams Ag, 309088 kg Cu (Recovered grades - 13.67 g/t Au, 10.50 g/t Ag, 4.92% Cu

**RESOURCE:** None reported

**TRANSACTION:** 1983 - farm-in agreement whereby Westmin Resources could earn a 60% working interest from nexus resource Corporation by incurring expenditures of \$2.9 million by the end of 1987. Records indicate that Westmin spent \$750,350 through 1985.

Value of Transaction - \$750,350

MINERAL PROPERTY: Spud Valley BC Minfil

BC Minfile No. 092L211

LOCATION: Zeballos gold camp 16 km northwest of Tahsis on the northwest coast of Vancouver Island.

GEOLOGICAL SETTING: host rocks are quartz diorites of the Tertiary Zeballos stock. Northeast fractures control the disposition of gold-bearing quartz veins.

STYLE OF MINERALIZATION: Seven steeply dipping, gold-bearing quartz veins strike northeasterly; the most important of these, the Goldfield vein dips steeply north, ranges in width from 1 to 40 cm and occupies a 60 cm wide shear zone. The vein consists of bands of pyrite, arsenopyrite, sphalerite, galena and chalcopyrite.

PAST PRODUCTION: 1936-1942, 1951-

190754 tonnes yielding 1682859 grams Au, 575219 grams Ag, 9195 kg Cu, 8093 kg Pb (Recovered grades - 8.82 g/t Au, 3.02 g/t Ag, 0.005% Cu, 0.004% Pb)

**RESOURCE:** 1987 - 220429 tonnes @ 10.70 g/t Au Note: following an unsuccessful mill test in the late 1980s, the resource estimate of 49890 tonnes @ 4.60 g/t Au, reported near the end of original production, may be a more realistic estimate.

**TRANSACTION:** 1984 - purchase agreement by McAdam Resources Inc. involved an initial cash payment of \$50,000 plus the issuance of 300,000 shares valued at \$1.00 per share.

Value of Transaction - \$350,000

MINERAL PROPERTY: Lucky Jim

BC Minfile No. 092K015

LOCATION: North end of Quadra Island, 16 km north of Campbell River

GEOLOGICAL SETTING: host rocks are limestones in contact with Coast granitic rocks.

STYLE OF MINERALIZATION: Gold-bearing skarn zones developed along contact between limestones and granitic rocks. Mineralization consists of pyrrhotite, chalcopyrite and pyrite.

PAST PRODUCTION: 1909-1927-478 tonnes yielding 7371 grams Au, 7123 grams Ag, 11274 kg Cu (Recovered grades - 15.42 g/t Au, 14.90 g/t Ag, 2.36% Cu)

RESOURCE: 12700 tonnes @ 10.97 g/t Au

TRANSACTION: 1983 - option agreement between Butler Mountain Minerals Corporation and vendor involving a down payment of 25,000 shares at \$0.79 per share plus an additional 50,000 shares at \$0.79 per share at end of first year of agreement, allotment of 50,000 shares on commercial production and a work commitment of \$25,000 each year of the agreement. First year commitments were reportedly met.

Value of Transaction - \$84,250

MINERAL PROPERTY: Alexandria

BC Minfile No. 092K028

LOCATION: West shore of Phillips Arm, southwest mainland coast, 60 km north of Campbell River.

**GEOLOGICAL SETTING:** A northwest-trending screen or roof pendant of older sedimentary rocks is contained within Coast granitic rocks. A shear zone near the southwest margin of the pendant is host to quartz veins and silicified zones.

STYLE OF MINERALIZATION: Several gold-bearing quartz veins are the principal zones of interest. These seldom exceed 1 metre in width.

PAST PRODUCTION: 1939-1940-

1694 tonnes yielding 22239 grams Au, 40590 grams Ag, 1761 kg Cu (Recovered grades - 13.13 g/t Au, 23.96 g/t Ag, 0.10% Cu)

RESOURCE: 25600 tonnes @ 10.00 g/t Au

TRANSACTION: 1985 - option agreement between Charlemagne Resources Ltd. (vendor) and Falconbridge Ltd. whereby Falconbridge could earn a 70% working interest by incurring expenditures of \$700,000 by the end of 1988. Falconbridge's expenditures totaled \$360,000 in 1985 prior to the option being terminated.

Value of Transaction - \$360,000

## MINERAL PROPERTY: Doctor's Point

## BC Minfile No. 092HNW071

LOCATION: Southwest shore of Harrison Lake, 100 km northeast of Vancouver.

GEOLOGICAL SETTING: Early Cretaceous age sedimentary and volcanic rocks are intruded by a number of small, late Tertiary granitic plutons.

STYLE OF MINERALIZATION: Numerous (12) narrow quartz veins occur within both the granitic plutons and adjacent hornfelsed volcanic and sediments. The gently dipping veins strike northwesterly and range in width from 1 cm to 1 metre.

## **PAST PRODUCTION:** None reported

RESOURCE: "inferred" 113600 tonnes @ 2.16 g/t Au and 6.20 g/t Ag

**TRANSACTION:** 1988 - option agreement with Rhyolite Resources Inc. whereby Universal Trident Industries Ltd. could earn a 71% working interest in the property by making a down payment of \$230,000 and incurring expenditures of \$2.27 million over the following 4 years. Down payment paid and the first year work commitment of \$250,000 is documented as having been completed. Details regarding expenditures in subsequent years are not available.

Value of Transaction - \$480,000



LOCATION - BLANEY 1,2,3,4 and SAM CRAIG I,II,III,IV MINERAL CLAIMS