2001 SUMMARY REPORT

on the

A-J GROUP

Greenwood Mining Division
British Columbia

North Latitude 49° 04′ N West Latitude 118° 34′ W
NTS 82E/2

Prepared for

Wilbur Hallauer
Route #1 Box 35
Oroville, Washington
98844

Prepared by

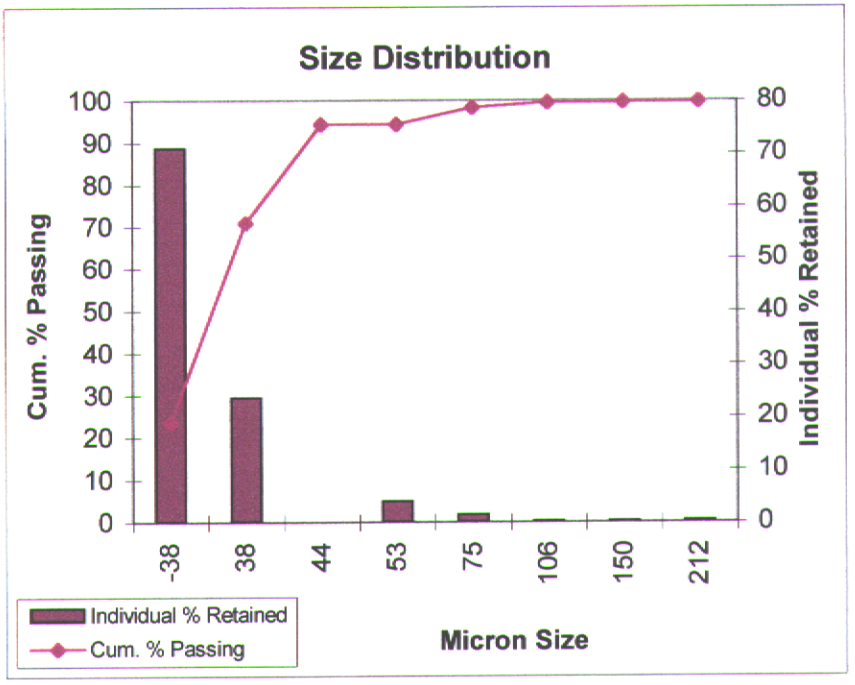
R.E. Miller B.Eng. Sci., P. Geo.
P.O. Box 2941
Grand Forks, British Columbia
Canada
V0H 1H0

February 2002

International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Echo Bay
Sample: Applestand Leach 100 Residue
Date: October 15, 2001
90 % passing **39** **µm**

Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	0.1	0.1	99.9
100	150	0.1	0.2	99.8
150	106	0.1	0.2	99.8
200	75	0.4	0.6	99.4
270	53	1.1	1.8	98.2
400	38	10.3	12.1	87.9
-400	-38	87.9	89.7	10.3



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A-J GROUP PROSPECT

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SUMMARY

The A-J Group is located 9 km east-southeast of Greenwood, 4 km southeast of Phoenix and 12 road km northwest of Grand Forks, B.C. Production from the property was intermittent from 1901 to 1940.

1.0 INTRODUCTION

This assessment report is prepared at the request of Mr. Wilbur Hallauer owner of the subject property. The report includes excerpts from Robert Grants private reports for Arrowhead Resources and James J. McDougall's report for Tuoscano Resources Ltd. The Athelstan-Jackpot mines produced approximately 6,979 ounces gold and 8,234 ounces silver from 38,665 tons of ore intermittently during the period from 1900 through 1940. Precious metal mineralization occurs mainly in massive sulfide lenses within talc-carbonate altered, serpentinized ultramafic rocks. Several lenses appear to be present within the altered section over a vertical range of approximately 100 metres.

2.0 LOCATION, ACCESS, PHYSIOGRAPHY and SUPPORT

2.1 Location (Figure #1)

The property is located at Latitude 49° 04'N; Longitude 118° 34'W N.T.S. map 82 E/2 Greenwood Mining District about 9.0 km southeast of Greenwood and 4.0 km south of Phoenix in southern British Columbia.

2.2 Access

The property is accessible via several dirt and gravel roads used for logging and mining. During the early 1900's, a 5.0 km railroad spur was built from the Phoenix Camp area to the Jackpot workings. The railroad spur has been abandoned and the rails removed. The remaining bed could easily be cleared creating a gentle grade road which would provide direct access to the Jackpot mine area. The abandoned railroad bed that connected Hartford Junction with the Winnipeg mine provides access to the Athelstan workings via a connecting unimproved 2.0 km road from the Winnipeg Crown workings to the Athelstan mine area.

2.3 Physiography

Property relief is approximately 500 metres ranging from 900 to 1400 metres. The area is covered with light timber mainly re-growth related to earlier logging activities. Overburden is light to moderate and about 5% bedrock is exposed naturally. Precipitation is light in the summer months and up to 1.0 metre of snow may be present between late November and late March.

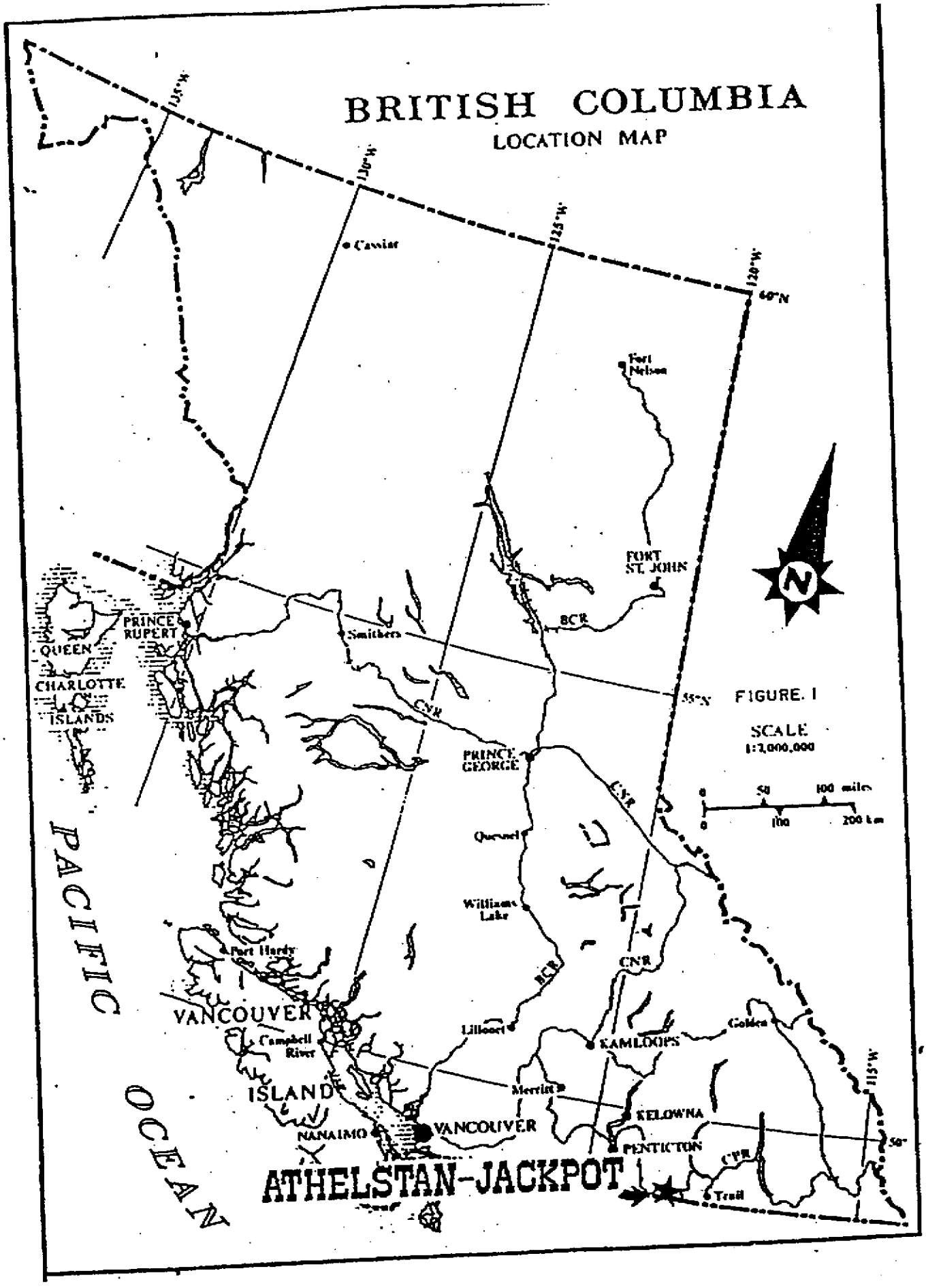


FIGURE. 1

SCALE
1:3,000,000

2.4 Support

2.4.1 Water and Power

Water from local creeks and ponds is available on and adjacent to the property and would appear to be sufficient for envisioned exploration and development programs. Local power lines cross the property and a major power line passes six kilometres north of the property. Further assessment of the water and power availability would need to be conducted if future production was planned.

2.4.2 Supplies, Transportation and Labour

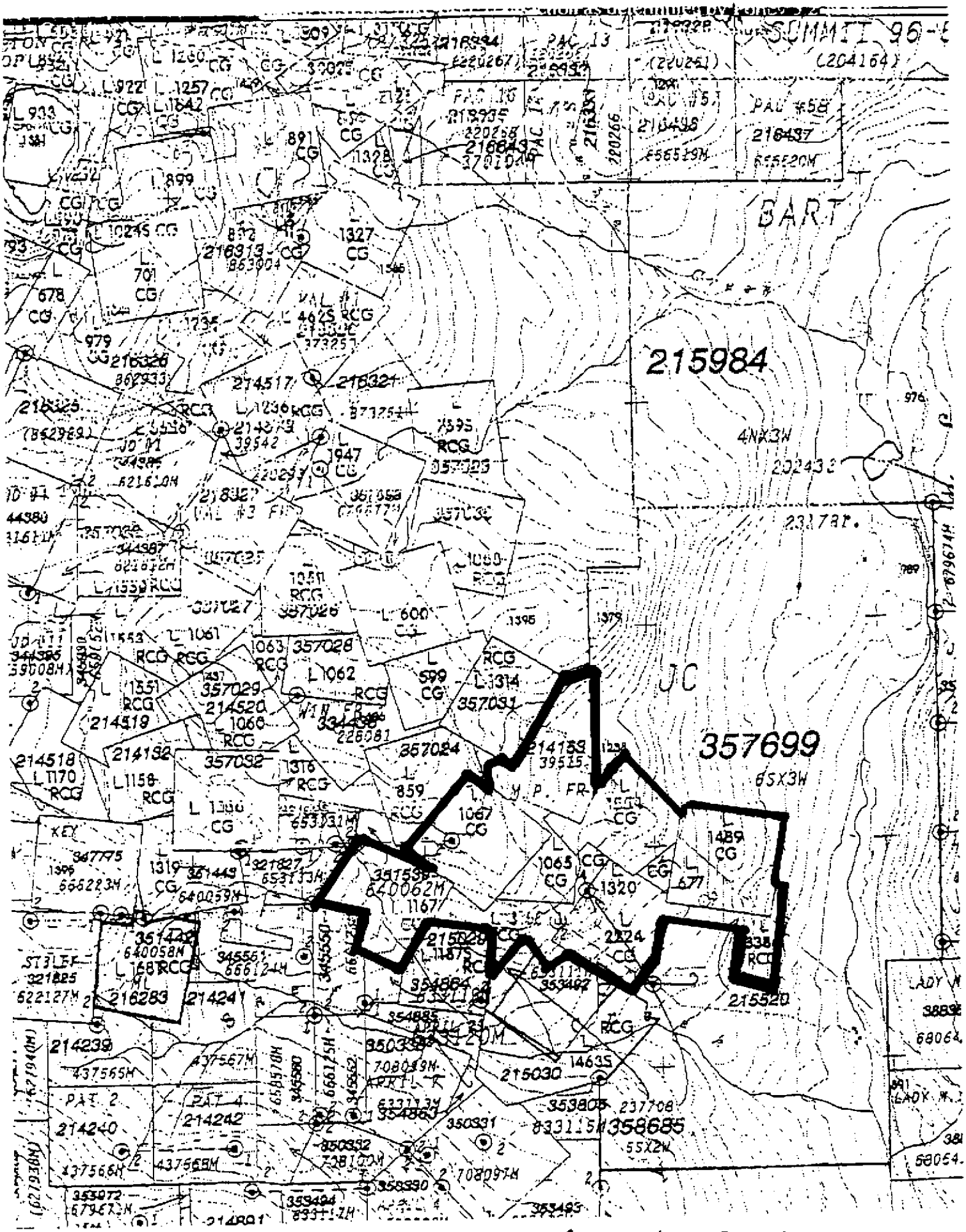
The local cities of Greenwood and Grand Forks are small communities with limited supplies but excellent potential for mining personnel. Timber, water, sand and gravel are available on the property. Heavy and light duty equipment is available for lease, rent or purchase locally as well as in the Okanagan area of central British Columbia. A more competitive availability of equipment could be obtained in the Vancouver area on the west coast.

3.0 PROPERTY (Figure #2)

The A-J Group is centered at approximately Latitude 49° 04'N; Longitude 118° 34'W N.T.S. map 82 E/2 Greenwood Mining District about 9.0 km southeast of Greenwood and 4.0 km south of Phoenix in southern British Columbia and consists of nine Crown Granted claims and two staked fractional claims. When the field work was conducted the claims were held by Wilbur. G. Hallauer of Oroville, Washington

CROWN GRANTS

CLAIM NAME	LOT NO.
Coronet Fr.	677
Athelstan Fr	1065
Butte	1067
Oro	1167
Athelstan Fr.	1320
Iron Clad	1489
Molley Pritchard	1554
Jackpot	2224
Jackpot Fr.	3158



AJ Group Map # M82E008 Fig. 2.

STAKED CLAIM RECORD NUMBER:

CLAIM NAME	TENURE NO.	EXPIRY DATE*
MP Fraction	214153	July 16, 2010
Bay Horse Fraction	215520	July 16, 2010

*pending acceptance of this report

4.0 HISTORY

4.1 General History

Mining exploration in the Phoenix camp area of the Greenwood Mining District increased dramatically after the 1890 gold-copper discovery at Rossland B.C. approximately 90 km east of Greenwood, B.C.. This increased exploration activity resulted in the discovery of the Phoenix camp copper-gold ore bodies in 1891. By 1900 most of the important mines in the district were at a stage of significant exploration and development. A branch of the Kettle Valley Railroad had been constructed from Eholt to Phoenix and smelters at Grand Forks, Greenwood and Boundary Falls were under construction. By 1901 Granby Consolidated Mining Company was formed by the amalgamation of several operating companies in the Phoenix area. These companies included B.C. Copper with mines in the Deadwood camp and Phoenix camps and smelters at Greenwood and Boundary falls; Consolidated Mining and Smelter of Canada Ltd. with mineral holdings at Phoenix and; the New Dominion Copper Company Ltd. with mines at Phoenix and Deadwood

In 1904 a branch line of the Great Northern Railroad connecting Phoenix and Grand Forks was opened to service the smelter at Grand Forks. During this period 1901 to 1904, production was reported for the Athelstan and Jackpot mines of the A-J Group. Production from these mines was also reported from 1908, 1911, 1912. By 1913 the Phoenix camp had reached a record production level of 1,250,000 tons. Due to falling metal prices and lack of coking coal for the smelters, by 1919 the Phoenix area mines were closed. From 1920 to 1933 there was very little activity in the Greenwood district with the exception of investigative work on previously known promising gold and silver deposits.

An increase in the price of gold in 1933 and favorable treatments for siliceous ores by Consolidated Mining and Smelting of Canada resulted in increased mining activity for gold rich quartz-vein systems and the renewed operation of some mines, specifically the Dentonia mine which operated until 1936. Production is reported from the Athelstan and Jackpot mines of the A-J Group for the year 1934. Sporadic shipments from the A-J Group are also reported from 1936 to 1940 . As the Dentonia mine was closing in 1936, the Knobhill and Ironside mines in Phoenix camp were re-opened.

In 1955 Granby Consolidated Mining gained control of the original Phoenix properties and began operations with a 700 ton/day copper flotation mill which was subsequently expanded to 2000 tons/day and operated until 1978. During the late 1960's and early 1970's limited exploration programs were carried out on the A-J Group claims by: Sabina Mines; Colby Resources and; Scurry Rainbow Oil & Gas, for which no written records were available for this report.

From 1978 to 1981 Arrowhead Resources completed exploration programs related to surface and underground sampling and completed 28 short vertical percussion holes and 3 short vertical diamond drill holes on the property. They did mapping and grid work; located numerous shafts, adits and pits and; conducted a VLF-EM and Magnetometer survey on the property that had mixed results.

During 1986 Consolidated Boundary Exploration and Noranda-Kettle River Joint Venture Group conducted a drilling program on properties adjoining the A-J Group to the northwest and reported significant gold intercepts from a geologic setting that projects onto the A-J Group properties. Max Minerals in 1986 and 1987 carried out geologic mapping, surface sampling, rehabilitation of trenches, sampling of trenches, collection of soil samples over a grid, magnetometer and a VLF survey on the A-J Group. One of the more significant results of the Max Minerals program was the Jaworski program related to surface dumps and mineralized workings and the sampling of rehabilitated, new and extended trenching. (Appendix E) This was followed by a program of drilling of 13 vertical NQ diamond drill holes averaging approximately 35 metres in depth. It was also reported that in 1998-990 Minova conducted exploration activities in the area which included the A-J Group. In 1998 it is verbally reported that TerraStar and its predecessor conducted exploration activities in the area that includes the A-J Group. It is said that these activities included mapping, ground magnetics and grid work.

4.2 Production History

British Columbia Mines Minfile records report production statistics for the A-J Group properties as follows:

Ore	16,739 tonnes	(18,542 tons)
Gold	157,195 grams	(5,054 oz.)
Silver	186,681 grams	(6,002 oz)
Copper	50,796 kg.	(111,984 lbs.)

The Federal Department of Mines and Resources Report, GS paper 45-20 reports production prior to 1930 as:

Ore	36,614 tons
Gold	5,781 ounces
Silver	6,757 ounces
Copper	15,965 pounds

Mr. W.E. McArthur Sr., previous owner and operator of the property reports the post 1930 production as:

Ore	2,051 tons averaging	0.582	opt gold
		0.72	opt silver
		0.15%	nickel
		12.47%	arsenic

5.0 GEOLOGY

5.1 Regional (map #1 in Pocket)

The first work in the area by the Geological Survey was a reconnaissance program in 1901 by R.W. Brock. By 1902 Brock had mapped the geology in a belt about 28 km wide along the International Boundary from Grand Forks to Midway. R.A. Daly, geologist for the Boundary Commission later mapped a 11 km belt along the International Boundary. Detailed geological work was done at Phoenix and at Deadwood camp from 1908 to 1910 by O.B. LeRoy of the Geological Survey.

In 1984 Church published a geologic map of the general area (Paper 1985-1) and in 1990 James T. Fyles published Open File 1990-25 Geology of the Greenwood-Grand Forks Area, British Columbia NTS 82E/1, 2. These aforementioned works provide a regional geologic background for the area.

5.2 Local Geology (Map #2 in Pocket)

Light to darkish green-gray serpentinite that weathers to a limonitic yellowish brown on the surface, appears to be the most extensive rock type within the A-J Group and was observed to extend well beyond the boundaries of the A-J Group onto adjacent claims. The serpentinite is believed to have been derived from ultramafic igneous rocks that may have intruded a complex of Carboniferous or Permian? age metavolcanics belonging to the Knobhill Group (James T. Fyles) that include andesites and dacites that have been metamorphosed to greenstones and greenschists. Zones of extensive talc carbonate alteration consisting of calcite, magnesite, ankerite, mariposite and/or fuchsite occur within the serpentinite and appear to have a close association with the gold mineralization. The talc carbonate altered serpentinite has been labeled as "listwanite" in previous reports and is a useful field designation. A biotite-horneblende diorite pluton and its porphyritic phase intrudes both the metavolcanics and the serpentinite. A few post-mineral mafic to felsic dikes of probable Tertiary age represent the final stage of igneous activity.

The gold mineralization of potential economic significance appears to occur primarily in the serpentinized ultramafic rocks. Within and adjacent to the zones of mineralization, silicification and talc-carbonate alteration are widespread. In several sections of both the

Athelstan and Jackpot workings, the presence of mariposite and/or fuchsite is common, particularly in zones of intense hydrothermal alteration.

Dr. Robert Grant reported in 1981 that the dominant trend of the shearing on the property, appears to vary from NE-SW to NW-SW. Dips of these structures range from <10 degrees to >70 degrees both E and W. Near horizontal shearing also appears to be common and many of the higher angle shears are normal faults which caused some displacement of the sulfide lenses.

McNaughton 1945 reports that two of the main lenses in the Jackpot stope were crescentric in plan view and plunged 10-40 degrees east suggesting stratiform lenses within an east plunging syncline. These lenses ranged in thickness up to 7.6 metres and had horizontal dimensions of 12 by 30 metres. At the Athelstan mine ore zone, approximately 90 vertical metres above the Jackpot stope, the main ore lens measured about 12 by 18 metres with thicknesses ranging from 0.9 to 2.4 metres. McNaughton 1945 also reports that the ore deposits are displaced by a number of north-easterly striking normal faults that dip 40-50 degrees northwest.

James T. Fyles mapped the Lind Creek thrust fault bordering the south edge of the A-J Group and the north trending tertiary July Creek fault bordering the east side of the A-J Group. Fyles suggested a shallow northerly dip to the Lind Creek thrust fault and a steep dip "west side down" configuration to the July Creek fault. Fyles shows the July Creek fault as the east side termination of the Lind Creek thrust fault.

6.0 ECONOMIC GEOLOGY

The dominant sulfides on the property are pyrite and arsenopyrite with subordinate pyrrhotite, chalcopyrite and locally, sphalerite and galena. Old mine reports have suggested that the sulfide lenses are replacement deposits along localized zones of shearing in the talc-carbonate rocks. Dr. Robert Grant's observations made during property examinations suggested that the lenses more likely are the result of sulfide filling and deposition along pre-existing low-angle shears. According to the Geological Survey (GS Paper 45-20), the shape and size of several of the ore bodies mined could be inferred, based upon examination of the workings still accessible in 1936. According to Paper 45-20, two of the lenses mined at the Jackpot were cresentric in plan, plunged easterly and ranged in thickness up to 25 feet (11 metres) over a length of at least 100 feet (45 metres) with a width of at least 40 feet (18 metres). During the 1930's, narrower parts of these lenses were mined. At the Athelstan approximately 300 vertical feet (90 metres) above the Jackpot, the only accessible stope as of 1936 measured 60 x 40 feet (18 x 12 metres) with an ore thickness ranging from 3 – 8 feet (1-2.5 metres). During 1936, a winze sunk in the floor of this Athelstan stope to a depth of 12 feet (3.6 metres) was entirely in ore (GS Paper 45-20).

Based on Dr. Grant's underground mapping at the Athelstan and Jackpot mines there is strong probably that the Athelstan Jackpot sulfide lenses dip gently east to southeast and

are parallel to sub-parallel to a series of shear zones. These shear zone structures are reported by Grant to be traceable both underground and on surface from "approximately 1,200 feet (360 metres) east of the Jackpot stope area to approximately 600 feet (180 metres) west of the Athelstan stope".

Samples collected by W.E. McArthur, Sr. in the 1930's indicate the variation in grade within the various sulfide shoots. Fourteen samples taken in the Athelstan stope averaged 0.45 opt gold and 1.42 opt silver. Six samples from the Jackpot stope averaged 0.325 opt gold and 1.21 opt silver. Eight samples from various workings of averaged 0.245 opt gold and 0.61 opt silver.

Composite grab samples by Dr. Robert Grant in 1978 from several dumps assayed as follows:

Location	**Description**	**Au**	**Ag**
Athelstan stockpile	siliceous ore	0.356	0.44
Upper Jackpot dump	part oxidized Massive pyrite	0.360	0.38
Lower Jackpot dump	massive unoxidized pyrite	0.680	2.76
Dump of railroad cut-Jackpot dump	pyritic breccia	0.996	5.26

Dr. Robert Grant also reports in 1980 that underground samples taken from the Athelstan and Jackpot stopes indicate the presence of "potential ore-grade material" based on the collection of 29 Athelstan stope samples that assayed from 0.14 to 0.89 opt gold and 36 samples collected in the Jackpot stope that ranged from 0.06 to 0.84 opt gold. The thickest exposed section of massive sulfide in the Jackpot stope that was sampled by Grant was 13.3 feet (4 metres) in thickness averaging 0.26 opt gold and 0.35 opt silver.

Various written and verbal reports indicate that gold values ranging from 0.15 to 0.584 opt gold from semi-massive sulfide lenses up to a meter thick have been obtained from workings on the Butte claim.

7.0 2001 WORK PROGRAM

The 2001 work program focused upon: re-establishing the Arrowhead Resources grid; development of a base map relating topography, claim boundaries, geology, geochemistry and physical features; investigation of the 1986-87 Jaworski trenching as it related to geology, mineralization and physical dimension; collection of samples for assay and metallurgical testing; reconnaissance mapping on the MP Fraction and Bay Horse Fraction and; geologic outcrop mapping related to the re-established grid work and the published geology completed by Grant, McDougall and others along the grid. An effort was made to expand the reconnaissance geology north westerly in the direction of the Winnipeg Crown workings.

8.0 DISCUSSION

A number of old grid pickets were ground located and along with their relationship to physical features such as roads, power lines and telephone right of ways it was possible to re-establish the previous grid work done by Arrowhead Resources and Max Minerals. Utilizing existing topographic and claim maps, accompanied by Trimball's navigation Scoutmaster GPS, grid lines, topography and claim boundaries were integrated into a comprehensive map. GPS information accurately established plan view coordinates but provided only a few accurate elevation reading resulting in questionable placement of contour lines on the map.

The local gold mining operation, within reasonable distance of the A-J Group, is Echo Bay's Kettle River gold operations in Republic, Washington which is reportedly running out of ore to feed its mill. Echo Bay is currently operating at a reduced capacity and appears interested in local properties that have the potential for providing mill feed to supplement their supply of ore. Based on Echo Bay's reported need for ore, it appeared reasonable to follow up on Arrowhead Resources and Max Minerals (prospector Jaworski) sampling that indicated economic gold grades in near surface oxidized host rock which would be amenable to the cyanide leach technology used at Echo Bay's Kettle River operation.

The investigation of the Jaworski assays involved locating sample sites that appeared from the Jaworski notes to be likely sources of gold enriched oxide ore. From Jaworski's notes one such site appeared to be the at 175 S on line 000 where in 1986 Jaworski collected samples J-1 to J-11 from oxidized ore. During the 2001 visit, the caved trenching area was located and measured. It was approximately 80 metres long in a north-east south-west direction and appeared to be connected to a north-west trending trench at the north-east end. Jaworski's sampling suggested a 0.27 opt gold unweighted average from 14 samples collected from post and pre-trenching in this area over a probable thickness of 1 to 2 metres. The mineral zone in this trench appears to be generally flat lying just a few metres north of a diorite andesite contact south-west of the trenching. Further up the hill to the north-west at approximately 50 west 100 south there is a large area of heavy oxidation with some residual sulfide lenses which appears to be flat lying to dipping 30 degrees north-east striking north-west south-east. Jaworski's samples in this area average approximately 0.42 opt gold. It is unclear as to the thickness of this zone as the trench has caved in. Further up the hill to the north-west where Jaworski had collected a series of samples J-34 A & B, J-36 and J-39 averaging 0.94 opt gold from massive sulfide lenses where oxidation was minimal and arsenopyrite was the dominate sulfide and a quartz gangue was evident. Examination of the trench from which Jaworski collected samples in an area east of the Jackpot mine near line 400 east station 050 north suggest that three of the samples in that area were from rusty weathered zones of decomposed sulfides for which Jaworski's assay results show gold values up to 0.846 opt gold. This zone appeared to be very extensive, approximately 75 metres long and over 10 metres wide a with possible thickness of up to 3-5 metres. In addition to these specific trenches other smaller prospect pits and workings containing both oxidized and reduced zones were noted at various points along the grid.

Samples for assay and metallurgical testing were collected from the Athelstan Jackpot area near the baseline at approximately 050 west and from the Jackpot mine area near 300 east 060 north in the vicinity of Jaworski's sample J-17. The initial samples from the area assayed 0.33 opt gold and 0.78 opt silver for the Athelstan and 0.91 opt gold and 3.20 opt silver for the Jackpot. The sites were re-visited and 80 kg samples were collected from the area for metallurgical testing. The large 80 kg sample of massive sulfide ore from the Athelstan mine area consisted mainly of arsenopyrite, pyrite, trace of chalcopyrite and quartz. The bulk metallurgical 80 kg massive sulfide sample from the Jackpot area was predominantly pyrite with arsenopyrite, chalcopyrite, trace of pyrrhotite and a gangue of siliceous serpentine?. Fractures in the massive ore from the Jackpot contained seams of whitish arsenic oxide with minor iron oxides. The metallurgical samples were sent to International Metallurgical and Environmental Laboratories in Kelowna, B.C. and were subjected to bench scale leach tests. Gold leach recoveries were 40% for the Jackpot ore and 13% for the Athelstan (Apple Stand) ore. *Grind was better than 80% minus 400 mesh. Both lime and cyanide consumption were* high with no free cyanide remaining after 48 hours in the Jackpot leach and only 0.06 gms/litre cyanide remaining for the Athelstan (Apple Stand) leach. The Jackpot samples appear to have free gold as shown by the head assay results. The back calculated head of the Jackpot leach was 0.797 opt gold which is close to the average of the two initial assays of 0.82 and 0.917 opt gold. However, two other assays gave higher results of 1.45 and 1.51 opt gold. The leach technique and extractive chemistry were based on the parametres used by Echo Bay at their Kettle River operations for extracting gold from their present ore supply.

The reconnaissance geologic mapping that accompanied re-establishing the grid resulted in the tracing of a tentative contact between the diorite and the meta-volcanic north and west of the present Athelstan Butte workings and an attempt was made to locate the same diorite contact south east of the Jackpot claim in the vicinity of workings near the intersection of the projected Lind Creek and July Creek faults. Diorite outcroppings were also noted in the vicinity of the Jackpot adit and near the upper Athelstan dump. A similar andesite diorite contact geologic setting was noted on the MP Fraction where a slice of serpentinite was located near the contact. Both the Lind Creek thrust fault and July Creek fault were traced onto the comprehensive map from Jim Fyles Open File Report 1990-25.

9.0 CONCLUSION

Based on the 2001 work program it appears that on the A-J Group there exists the potential for surface and near surface heavily oxidized ore zones with economic gold grades and poorly understood dimensions. It also appears that surface and near surface massive sulfide lenses of two basic types: massive arsenopyrite ores with subordinate pyrite and chalcopyrite in quartz and; massive sulfide ores consisting mainly of pyrite, arsenopyrite, chalcopyrite and pyrrhotite in silicified serpentine occur on the property.

Another possible source of ore at the surface may be the extensive mine dumps that appear to contain ore grade material as shown in the report by Grant in the 1981 Arrowhead Resources Surface Dump sampling program.

A potential reserve of 2000-5000 ounces of gold in the surface and near surface mineralized areas appears to exist within the A-J Group. There is a lack knowledge regarding the continuity and dimension of these mineralized areas but well within the realm of possibility based on previous trenching, is the identification of one to two areas of ore having dimensions of 2.0 metres thick, 15 metres in width and 90 metres in length with an average grade of 0.3 opt gold.

Mining of oxidized ores will likely improve dramatically the recoveries of gold from cyanide leaching. The present metallurgical testing of massive sulfide bearing ores has shown that even at a grind of –400 mesh the cyanide is not contacting the gold that is present. Some technique will have to be used on the massive sulfide ores to improve recovery rates. These techniques are, but not limited to, mechanical concentration, oxidation by roasting?, bacterial leaching, ultra-fine grind, (likely 5 microns) or pressure leaching. Due to the presence of arsenic, roasting is not likely a choice. Capital costs of pressure leaching require gold reserve greater than what is envisioned therefore concentrating, ultra-fine grinding and bacterial leaching would be probable techniques to be investigated to improve recovery rates.

A deeper drill target may be found on the A-J Group property in a geologic setting that includes a competent host rock with the potential for developing both deep seated vertical open space with horizontal continuum providing more concise containment of hydrothermal solutions rather than the disorganized array of numerous and discontinuous fracture patterns observed in the serpentinite host of the A-J Group. The potential for such a geologic setting may exist near or within the diorite/meta-volcanic contact and could be found within the diorite or meta-volcanic or potentially within a thin confined wedge of serpentine that has developed along the contact.

10.0 RECOMMENDATIONS

It is recommended that geologic mapping continue accompanied by a surface and near surface mining program which would consist of mining both oxidized and massive sulfide ores, separating them into three stock piles: oxidized ores, mixed oxidized/reduced ores and reduced ores. This would be in conjunction with a study of the surface dumps and the potential for separating the barren rock and massive sulfide ores with an objective of concentrating the massive sulfide ores and subjecting them to some form of an inexpensive oxidizing process such as bacterial leaching. Any surface and near surface mining program should be done with the objective of shipping the resulting ore to Echo Bay's Kettle River operation. Echo Bay should be kept apprised of the progress of the mining operation.

Following and based on detailed geologic mapping of the A-J Group, potential drill target areas should be designated. Geochemical (including extractive biological leach technologies) and geophysical techniques applicable to the setting should be applied to the target areas to further define the potential for a deep seated target similar to the Winnipeg Crown mine north of the A-J Group.

11.0 COST OF RECOMMENDED WORK

Stage I

Surface and near surface mining of 1500 tons of ore over 30 days

Bulk Sample Permit and Bond	$15,000.00
Detailed Sampling and Assays	$10,000.00
Trenching & Stockpiling	$ 5,000.00
Surveying & Geological Control	$ 3,000.00
Wages 30 man days @$200.00/day	$ 6,000.00
Lodging @$60/day/man	$ 1,800.00
Truck @$65.00/day	$ 1,950.00
Ore Haul @$10.00/ton	$15,000.00
Supervisor	$ 5,000.00
Field Supplies	$ 2,000.00
Geological Mapping	$ 5,000.00
	$69,750.00
Contingency	$10,500.00
Total	$80,250.00*

*some of this cost would be off-set by potential revenues from shipped gold ore

Stage II

This stage would depend upon a successful surface-near surface mining operation in stage one and the need to identify deeper drill targets.

Continued Mining Operation	
1500 tons @ $50.00/ton	$75,000.00
Geological Mapping	$ 5,000.00
Geochemical Sampling	$ 2,000.00
Geophysical Surveys	$ 3,000.00
Reports	$ 2,000.00
	$87,000.00
Contingency	$10,000.00
Total	$97,000.00*

*some or all of this cost may be offset by potential revenues from shipped gold ore

Stage III

This stage would include drilling favourable drill targets developed in Stage I and Stage II as well as the continuation of the surface-near surface mining operations

Respectfully Submitted by

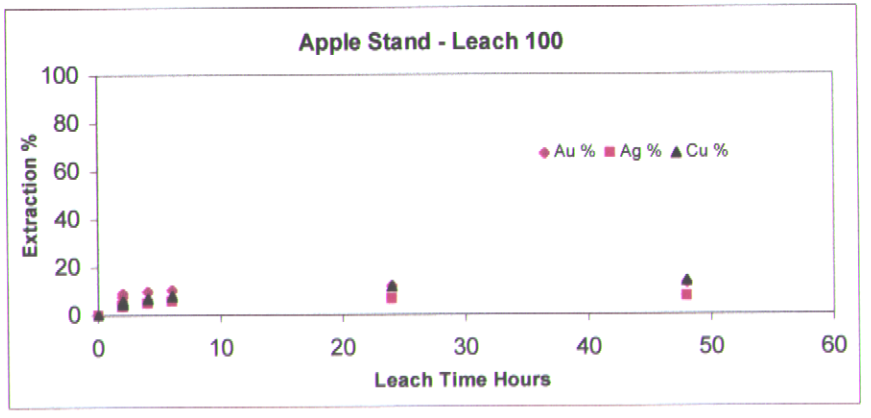
R.E. Miller B. Eng Sci., P. Geo.

APPENDIX A
Rock Sampling
And Bench Metallurgical Testing Results

International Metallurgical and Environmental Inc.
Cyanidation Test

Client: Echo Bay
Project: Apple Stand
Test No. 100
Test Sample: Bucket received Sept 26, 2001)
Test Objectives Cyanidation test at 0.2 g/l NaCN
Grind: 18 minutes with 1/2 rod charge in stainless steel mill. 90% passing 39 µm.
Pre-aeration: 24 hours

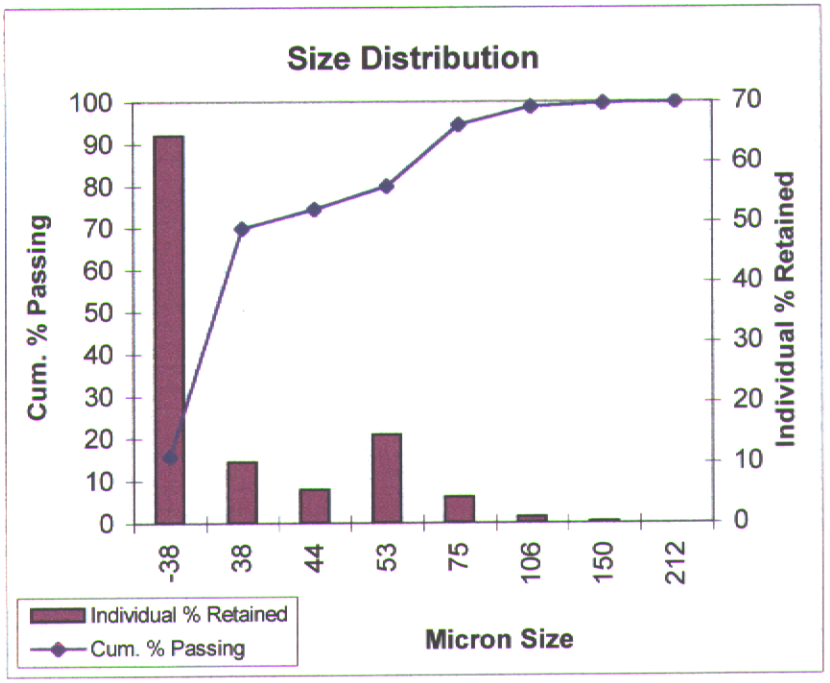
		Pre-aeration and Leach Chemistry			Reagent Consumptions		Assays			Distribution		
Sample	Wt g	pH	Adjusted pH	NaCN g/l	NaCN (lb/t)	Lime (lb/t)	Au (opt)	Ag (opt)	Cu (opt)	Au %	Ag %	Cu %
Pre-air - Start		6.8	10.5			15.4						
Pre-air - 3 Hour		9.3	10.5			17.6						
Pre-air - 6 Hour		9.4	10.6			19.4						
0 Hour		8.8	10.5	0.20	0.00	22.7						
1 Hour		9.6	10.5	0.16	0.49	24.2	0.016	0.013	0.160	8.1	3.8	4.8
2 Hour		10.1	10.7	0.16	0.68	25.7	0.019	0.015	0.195	9.4	4.4	5.9
4 Hour		10.3	10.5	0.20	0.53	26.2	0.020	0.017	0.230	10.1	4.9	6.9
6 Hour		10.3	10.6	0.16	0.87	26.9	0.022	0.020	0.265	10.6	5.8	8.0
24 Hour		10.0	10.6	0.16	1.05	28.3	0.025	0.023	0.400	12.2	6.7	12.0
48 Hour Final soln	815.4	9.8		0.06	1.42	28.3	0.027	0.025	0.470	13.2	7.3	14.1
Final Residue	442.9		Overall Reagent Consumption		1.42	28.3	0.324	0.583	5.250	86.8	92.7	85.9
Percent Solids	35.2				Calculated Head		0.373	0.630	6.11			
					Assayed Head		0.336	0.640	4.96			



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Echo Bay
Sample: Jackpot
Date: October 15, 2001
85 % passing **40** **µm**

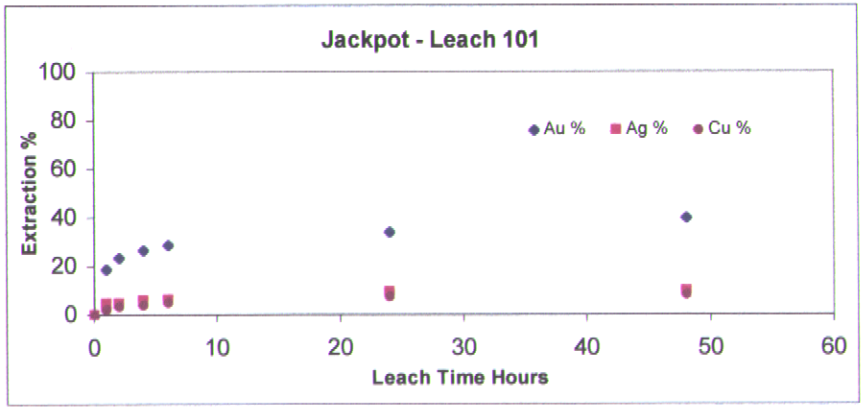
Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	0.1	0.1	99.9
100	150	0.0	0.1	99.9
150	106	0.1	0.2	99.8
200	75	0.5	0.7	99.3
270	53	1.8	2.5	97.5
400	38	14.2	16.7	83.3
-400	-38	83.3	85.8	14.2



International Metallurgical and Environmental Inc.
Cyanidation Test

Client: Echo Bay
Project: Jackpot
Test No. 101
Test Sample: Bucket received Sept 26, 2001)
Test Objectives Cyanidation test at 0.2 g/l NaCN
Grind: 18 minutes with 1/2 rod charge in stainless steel mill. 85% passing 40 µm.
Pre-aeration: 24 hours

		Pre-aeration and Leach Chemistry			Reagent Consumption		Assays			Distribution		
Sample	Wt g	pH	Adjusted pH	NaCN g/l	NaCN (lb/t)	Lime (lb/t)	Au (opt)	Ag (opt)	(opt)	Au %	Ag %	Cu %
Pre-air - Start		6.2	10.8			17.7						
Pre-air - 3 Hour		9.9	10.6			18.5						
Pre-air - 6 Hour		9.3	10.6			19.7						
0 Hour		8.7	10.6	0.20	0.00	22.2						
1 Hour		9.3	10.5	0.06	1.27	23.6	0.085	0.082	1.662	19.0	4.6	2.3
2 Hour		9.8	10.7	0.20	0.77	24.9	0.105	0.082	2.654	23.6	4.6	3.7
4 Hour		10.1	10.5	0.13	1.33	25.6	0.120	0.105	3.062	26.9	5.9	4.3
6 Hour		10.1	10.6	0.06	2.19	26.3	0.128	0.111	3.733	28.9	6.3	5.3
24 Hour		9.3	10.6	0.13	2.25	29.2	0.152	0.169	5.483	34.1	9.6	7.7
48 Hour Final soln	820.3	9.2		0.00	2.71	29.2	0.178	0.172	6.037	40.0	9.7	8.5
			Overall									
Final Residue	457.2		Reagent Consumption		2.71	29.16	0.478	2.858	116.666	60.0	90.3	91.5
Percent Solids	35.8				Calculated Head		0.797	3.167	127.498			
					Assayed Head		0.870	3.200	113.749			



APPENDIX B
Qualifications

STATEMENT OF QUALIFICATIONS

I ROBERT E. MILLER, of N15607 Timberwood Court Spokane, Washington 99208 U.S.A.

DO HEREBY CERTIFY:

1. THAT I am a Geological Engineer with a business address of P.O. Box 2941 Grand Forks, British Columbia. V0H 1H0.

2. THAT I am a graduate from Brigham Young University with a Bachelor of Science in Geological Engineering (1969).

3. THAT I have practiced my profession continuously since graduation.

4,. THAT I personally supervised the 2001 exploration program discussed in this report.

5. THAT I do not own or expect to receive any interest in the property described herein, or in any securities of any company rendered in the preparation of this report.

DATED this 27th day of February, 2002

Robert E. Miller P. Geo.
Geological Engineer

APPENDIX C
References

A-J GROUP
REFERENCES

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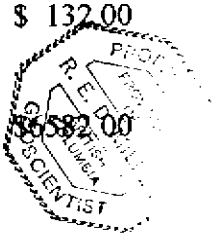
APPENDIX D
Statement of Expenditures

A-J GROUP CLAIMS
2001
STATEMENT OF EXPENDITURES

GEOLOGY	
Mapping, Reconnaissance & Grid	
R.E. Miller 4 days @$350.00/day	$1400.00
J. Falkoski 1 day @$200.00/day	$ 200.00
D. Miller 1 day @$200.00/day	$ 200.00
GEOCHEMICAL	
Rock Samples and Metallurgical Bench Scale Testing	$1525.00
GRID CLAIM LINE TOPOGRAPHY GPS SURVEY	
Re-establish 7.5 line km line of grid	
R.E. Miller 2 days @$350.00/day	$ 700.00
D. Miller 1 day @ $200.00/day	$ 200.00
PREPATORY/PHYSICAL	
Report preparation	$ 600.00
Drafting	$ 350.00
Typing	$ 150.00
Printing	$ 70.00
Field Expenses	
Motel, food and supplies	$ 470.00
Vehicle expenses 9 days @$65.00/day	$ 585.00
Sample shipping ½ day @$265.00/day	$ 132.00
Total	$6582.00



APPENDIX G
B.C. Minfile Report of Athelstan Jackpot

MINFILE NO.: 082ESE047 NATIONAL MINERAL INVENTORY NO.: 82E2 AU1

NAME(S): ATHELSTAN,JACKPOT

STATUS: Unknown
N.T.S.: 082E02E
LATITUDE: 49 03 54
LONGITUDE: 118 34 06
ELEVATION 1367 Metres
COMMENTS: CENTRE OF LOT 2385
LOCATION ACCURACY: Within 500 M

MINING DIVISION: Greenwood
UTM ZONE: 11
UTM NORTHING: 5435647
UTM EASTING: 385435

COMMODITIES: Gold Silver Copper Lead
SIGNIFICANT MINERALS: Arsenopyrite Calcite Pyrite
AGE OF MINERALIZATION: Unknown
DEPOSIT CHARACTER: Unknown
DEPOSIT CLASS.: Unknown

DOMINANT HOST ROCK:

PRODUCTION: ** ALL METRIC VALUES ARE IN KILOGRAMS EXCEPT PRECIOUS METALS WHICH ARE IN GRAMS **
** ALL IMPERIAL VALUES ARE IN POUNDS EXCEPT PRECIOUS METALS WHICH ARE IN OUNCES **

YEAR	Tonnes Mined	Tonnes Milled	Gold	Silver	Copper	Lead
1940	80	0	1,586	2,706	178	
1939	221	0	3,888	5,505	166	
1938	320	0	5,350	9,300	368	36
1937	637	0	12,628	6,532	1,093	78
1936	547	0	11,601	9,549	718	
1934	115	0	2,022	4,759		
1912	367	0	2,550	2,706	299	
1911	6,661	0	55,146	84,849	6,935	
1908	121	0	1,524	1,928		
1904	4,082	0	13,996	7,776	40,823	
1903	2,619	0	33,560	33,964	171	79
1901	499	0	6,221	6,221	45	
1900	470	0	7,123	10,886		
METRIC TOTAL:	16,739	0	157,195	186,681	50,796	193
IMPERIAL TOTAL:	Tons 18,451	Tons 0	5,053	6,001	111,986	425

GEOLOGY: PYRITE AND ARSENOPYRITE OCCUR AS REPLACEMENT DEPOSITS IN TALC-CARBONATE ROCKS CONTAINING SERPENTINE AND INTRUDED BY QUARTZ FELDSPAR PORPHYRY.

WELL-DEFINED FISSURES MARK THE FOOT AND HANGING WALLS OF THE OREBODIES. SEVERAL NE-STRIKING FAULTS CUT THE OREBODY. THE TALC-CARBONATES AND THE OREBODIES ARE CUT BY NUMEROUS VEINS OF CALCITE. OUTCROPS OF THE TALC-CARBONATE ROCKS ARE MARKED BY LIMONITIC GOSSAN.

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EMPR BULL 1-84
GSC MAP 828
GSC PAPER 45-20
GSC SUM RPT 1900-58A,66A, 1902-135A
GCNL #70,#117,#143,#150,1981

DATE CODED: 850724 CODED BY: GSB FIELD CHECK: NO
DATE REVISED: REVISED BY: FIELD CHECK: