

765 → Old Nick  
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**GOLD CITY MINING CORPORATION (VSE:GCP)**  
**OLD NICK PROJECT**

**FACT SHEET**  
**March 1997**

<b>Joint Venture:</b>	Applied Mine Technologies Inc. (AMT) has the option to acquire a 50% joint venture interest in the Old Nick Project from Gold City Mining Corporation (50%), Phoenix Gold Resources Ltd. (25%) and Orion International Minerals Corp. (25%). At January 1997 AMT had earned a 5% interest						
<b>Location:</b>	At Rock Creek in the famous Boundary Gold Fields, 36 kilometres east of the town of Osoyoos, British Columbia, Canada						
<b>Regional Metal Production:</b>	More than 6.0 million ounces of gold have been produced from the region. Battle Mountain Gold Company's Crown Jewel deposit (1.8 million ounces of gold), located only 10 kilometres south of Old Nick, is scheduled for production in 1998. Also, significant copper has been produced from the nearby Buckhorn Mountain and Greenwood camps						
<b>Old Nick History:</b>	The deposit area was prospected for gold during the 1850's when Rock Creek was an active placer gold camp. However, it was not until the 1960's that the deposit was explored for its nickel and cobalt potential. At that time Newmont Mining Corp. of Canada Ltd. did extensive drilling, trenching and metallurgical testing. They relinquished the Property because of poor metallurgical (flotation) results, but did recognize the potential for possible future deposit development by leaching, subject to advances in hydrometallurgical technology						
<b>Land Package:</b>	88 contiguous mineral claim units (2,100 hectares)						
<b>Mineral Inventory:</b>	<table border="1" style="width: 100%;"> <tr> <td><b>Measured &amp; Indicated:</b></td> <td>30 million tonnes at 0.2% nickel &amp; 0.01% cobalt</td> </tr> <tr> <td><b>Inferred:</b></td> <td>15 million tonnes at 0.2% nickel &amp; 0.01% cobalt</td> </tr> <tr> <td><b>Potential:</b></td> <td>+70 million tonnes of similar Ni/Co grades</td> </tr> </table>	<b>Measured &amp; Indicated:</b>	30 million tonnes at 0.2% nickel & 0.01% cobalt	<b>Inferred:</b>	15 million tonnes at 0.2% nickel & 0.01% cobalt	<b>Potential:</b>	+70 million tonnes of similar Ni/Co grades
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<b>Potential:</b>	+70 million tonnes of similar Ni/Co grades						
<b>Metallurgy:</b>	Bench scale and large column testing of nickel/cobalt bearing samples from surface and subsurface (diamond drill core) by AMT in 1995 and 1996 indicates that there is potential for economic recovery of nickel and cobalt by on-site leaching, solvent extraction and electrowinning						
<b>Exploration Targets:</b>	The Main zone requires additional trenching and drilling along strike and down-dip, as mineralization is open in these directions. There are mineralized outcrops and nickel-in-soils anomalies over several kilometres east and west of the Main zone						
<b>Exploration (1997):</b>	Main zone development will be continued by trenching and drilling while geochemical and Induced Polarization surveys will be extended beyond the Main zone to better define potential new deposit targets. Metallurgical work will continue and subject to permitting may be advanced to pad preparation for a trial heap leach						
<b>Environment:</b>	The deposit is located on a gently rolling hill one kilometre south of Trans-Provincial Highway #3 and within 5 kilometres of the Canada/USA boundary. The mineral claim area has been actively logged in recent years and has an extensive network of logging roads. The region is one of the hottest and driest climates in Canada - Osoyoos boasts of having the only desert in Canada. Mining, ranching and logging are historic and on-going enterprises in the region						
<b>Infrastructure:</b>	Mainline power and natural gas parallels the northern boundary of the mineral claims, 3 kilometres from the Main zone. Industrial and social services are located within the nearby towns of Bridesville, Rock Creek and Osoyoos.						

# GOLD CITY MINING CORPORATION

## OLD NICK

Ni, Co

**SUMMARY** The Old Nick Nickel Deposit is located in South-Central British Columbia, just north of the U.S. border, and south-west of the village of Rock Creek. This unique surface-minable sulphide deposit has been estimated to contain in excess of 100 million tonnes grading 0.22% nickel and 0.015% cobalt.

**PROPERTY** The Old Nick deposit is located at 49° 04'N and 119° 06'W, 36 kilometres east of Osoyoos, B.C. and just south of the main Trans-Provincial Highway #3. Services and accommodation are available at the Town of Rock Creek, 10 kilometres east of the Property. Topography is characteristic of a glaciated, maturely-eroded highland, with stands of fir, pine and scrub grasslands. Access to the property is from highway #3 at Rock Creek, onto the abandoned Great Northern Railway right-of-way which passes through the heart of the deposit. Within the deposit, there are numerous logging, mining and drill roads which allow for vehicle access. This property is controlled by the Rock Creek Gold Trend Joint Venture.

**GEOLOGY** Generally, the property is underlain by rocks of the Permian (and/or) Triassic Anarchist Group (greenstone, quartzite greywacke), which have been intruded by Cretaceous Nelson plutonic rocks (granodiorite, quartz diorites, and monzonites) and by ultra-basic magnetic dykes, also of the Nelson series. The structure of the area has been described as being complex with the bedding tightly folded and cut by several fault trends, the dominant being north-westerly.

**MINERALIZATION** Nickel sulphide mineralization occurs in two rock types: (a) in peridotitic dunite rocks as pentlandite occluded in pyrrhotite; pentlandite and pyrrhotite occurring in amphiboles, serpentine and talc in the altered dunite, and (b) in pyrometasomatic quartzite of the Anarchist Group; pentlandite in minute intergrowths with pyrrhotite and pyrite in fine sericitic-chloritic veinlets.

The pentlandite mineralization occurs in pyrometasomatic quartzite, as a band, "2,600 feet long and approximately 400 feet wide, and in adjacent peridotitic-dunite dykes. Petrological work on the mineralized quartzite has revealed the presence of minute injections of basic rock into the sediments. The pentlandite is closely associated with these injections"<sup>1</sup> - "Nickeliferous zones, grading 0.15 to 0.25% nickel, were found to be remarkably uniform and continuous within the quartzite horizon."<sup>1</sup>

<sup>1</sup>

Coope, J.A.; Dolan, W.M.; Costin, C.P. Geological, Geochemical, and Geophysical Exploration of the Nickel Ridge Property (Old Nick Option), Bridesville, B.C. Newmont Mining Corp. of Canada Ltd., May 7, 1968.

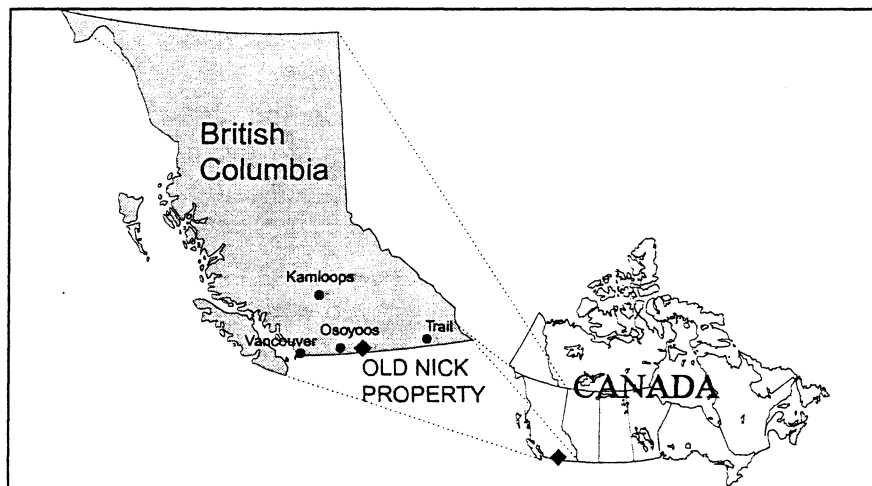
**EXPLORATION HISTO** Since discovery by prospecting in 1960, considerable exploration and development work has been completed, including geological mapping, stream sediment geochemistry, soil geochemistry, ground magnetics and EM, airborne magnetics, trenching, percussion drilling, diamond drilling and metallurgical testing. The property has had the benefit of investigation by major mining companies including Newmont in the 1960's.

**MINERAL RESERVES** Detailed information in support of the quoted mineral inventory at the Old Nick is being obtained by the Company. Mr. E. Livgard, B.Sc.,P.Eng., in a report dated May, 1982 states that nickel mineralization is "about 120m thick and extends for about 1,500m in an overturned anticline". "The values are in Nickel (0.25%), Cobalt (0.03%) and minor Copper, Silver and Gold." Crown Resources Corp. in an Assessment Report dated June, 1991 states "... Newmont Mining Corp., Nickel Ridge Mines Ltd., and Utica Mines Ltd. have carried out extensive exploration programs, including drilling, that has outlined a minimum of 100,000,000 tons of 0.22% nickel..." Newmont reports that by using a flotation process, nickel recoveries of 75% would be anticipated.

**PROPERTY POTENTIAL** The Property has excellent potential for development as a large-scale +20,000 tonnes of ore per day open-pit operation with either:

- an agitated leach, solvent-extraction and electrowinning plant, or
- a heap leach, solvent-extraction and electrowinning plant.

Recent advances in bio-leaching and ferric chloride leach applications have demonstrable applications at Old Nick. The property location, in British Columbia's driest and warmest region (semi-desert), is a positive attribute for whole-rock leach operations. Soil and silt geochemical surveys and geological mapping indicate there is good potential to expand the known nickel cobalt mineral reserves.



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**Gold City Mining Corporation**  
**Orion International Minerals Corp.**  
**Phoenix Gold Resources Ltd.**

**VSE:GCP**  
**VSE:OIM**  
**VSE:PHO**

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## **JOINT NEWS RELEASE**

JANUARY 8, 1997

FOR IMMEDIATE RELEASE

### **PROGRESS REPORT OLD NICK NICKEL/COBALT PROPERTY BRIDESVILLE, BRITISH COLUMBIA, CANADA**

**Vancouver, B.C.:** John Chapman, President of Gold City Mining Corporation is pleased to announce that the owners (GCP: 50%, OIM: 25%, PHO: 25%) of the Old Nick property have been informed by Applied Mine Technologies Inc. ("AMTI") of positive progress at the Old Nick project.

A six hole (740 meter) NQ diamond drilling program in the Main zone was conducted to obtain representative samples for metallurgical testing. Drilling also confirmed earlier exploration results obtained by Newmont Mining Corporation of Canada Limited (1968). The Main zone mineralization, which has been tested along strike 700 meters and is 100 meters thick, is interpreted as being part of the top limb of an anticline. Assuming the lower limb has the same continuity, which can be inferred from 1968 trenching, the Main zone exploration target contains 300,000 tonnes per down-dip meter. Assay results within the mineralized horizon averaged 0.18% nickel and 0.010% cobalt within metasediments and 0.30% nickel 0.015% cobalt within ultrabasics.

Metallurgical testing of surface samples in 1995 and 1996 indicated recoveries in the 75% to 90% range for both nickel and cobalt, using a 25 hour agitated leach under weak acid conditions at atmospheric pressure. Also, bench scale column leaching on crushed samples (minus 0.6 centimeter) indicates recoveries of up to 60% for nickel and cobalt over a 230 day period. Column testing is now being conducted on a larger scale (25.4 centimeter column diameter) using fresh subsurface samples from the diamond drill program. Early results indicate that nickel and cobalt are leaching at rates similar to those experienced with the surface samples. Solvent extraction tests on the nickel/cobalt solutions from column leaching are on-going. Electrowinning tests are scheduled to commence in February.

AMTI has advised the owners that more than \$250,000 has been expended on the Project in 1996, and therefore AMTI has vested, under the terms of the Option Agreement, to 5% ownership in the Project. AMTI has also informed the owners that the \$750,000 Old Nick program budgeted for 1997 has been approved by AMTI's management. The 1997 program includes diamond drilling, further metallurgical process development and permitting for bulk sampling and on-site pilot plant metallurgical testing.

The Project work to date, indicates a significant nickel/cobalt resource containing \$30 per tonne metal value and a metallurgical process with positive economic potential. The Old Nick deposit has potential to be developed as a large open-pit heap leach operation using solvent extraction and electrowinning processing on-site, to produce high-quality nickel and cobalt metals.

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For further information contact:

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Bob Boldock, Applied Mine Technologies Inc.	604.488.0100

**Gold City Mining Corporation  
Orion International Minerals Corp.  
Phoenix Gold Resources Ltd.**

**VSE:GCP  
VSE:OIM  
VSE:PHO**

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**JOINT NEWS RELEASE**

AUGUST 20, 1996

FOR IMMEDIATE RELEASE

**OPTION AGREEMENT SIGNED  
OLD NICK NICKEL/COBALT PROPERTY  
BRIDESVILLE, BRITISH COLUMBIA**

**Vancouver, B.C.:** John Chapman, President of Gold City Mining Corporation is pleased to announce that the owners (GCP: 50%, OIM: 25%, PHO: 25%) of the Old Nick property have signed an agreement with Canadian Mine Services Ltd. and Monument Mining Corp. for the exploration, valuation and development of the Old Nick nickel and cobalt deposit. Canadian Mine Services Ltd and Monument Mining Corporation have the right to acquire up to a 70% joint venture interest in the Property by spending \$8 million over the next four years on the development of the Property through to and including a bankable feasibility study.

Canadian Mine Services Ltd. have assumed all prior rights and obligations of Guy F. Atkinson Holdings Ltd. relative to the Old Nick property.

GCP, OIM and PHO jointly will retain at least a 30% participating joint venture interest and in addition they will receive a 3% NSR royalty on production up to receipt of \$10 million and thereafter a 1% NSR, on a pro-rata basis. These Optionors have an obligation to pay Crown Resources Corporation a 3% NSR on production from the Old Nick to a maximum of U.S.\$5 million.

The Old Nick is a unique sulfide deposit that, based upon historical drilling and trenching, contains approximately 30 million tonnes of near-surface mineral inventory, grading 0.22% nickel and 0.015% cobalt. Previous operators estimated the deposit could contain in excess of 100 million tonnes. At present metal prices the contained gross metal value is \$36 per tonne.

Canadian Mine Services Ltd. has commenced a metallurgical testing program on mineralized core from a recent diamond drilling program on the Old Nick deposit. Testing includes leaching, solvent extraction and electrowinning.

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# Gold City Mining Corporation

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VSE:GCP

## NEWS RELEASE

#95-13

SEPTEMBER 21, 1995

FOR IMMEDIATE RELEASE

### OLD NICK DEPOSIT, METALLURGICAL TEST RESULTS

Vancouver, B.C., John Chapman, President reports positive results from agitated leach tests on Old Nick deposit samples containing nickel and cobalt. Results indicate that there may be potential to leach this very large surface exposed sulfide deposit, located adjacent to Highway 3 at Bridesville in Southern British Columbia.

The bench scale agitated leach tests were run under weak acidic conditions at atmospheric pressure on a 10 kilogram sample ground to 65% minus 45 microns (325 mesh). At 25 hours, 81% of the nickel and 80% of the cobalt were released to solution. Two similar tests have just been completed on samples from different parts of the Old Nick deposit and leach solution assays are pending. Also, column leach tests will commence next week on a sample crushed to minus one centimetre diameter. Leaching tests are being conducted in Burnaby, B.C. by International Water Solutions Corporation. The leach solutions will be further tested, in other laboratories, using SX (solvent extraction), precipitation and EW (electrowinning) methods to determine the viability of these modern methods to produce marketable nickel and cobalt from Old Nick.

The Old Nick is a unique sulfide deposit that has been estimated by previous operators to contain in excess of 100 million tons grading 0.22% nickel and 0.015% cobalt. At present metal prices the contained gross metal value is \$3,000,000,000 (\$30 per ton). Gold City management estimates that there is a mineral inventory of 30,000,000 tonnes based upon drilling and trenching done by: Utica Mines Ltd. (1966), Copper Ridge Mines Ltd. (1966), and Newmont Mining Corporation of Canada Limited (1967 & 1968). There is excellent potential to expand the mineral inventory down dip and along strike. In a May 1968 report by Newmont, the authors describe the deposit as follows: "Pentlandite mineralization was found in a pyrometasomatic quartzite band, 2,600 feet long and approximately 400 feet wide, and in adjacent peridotite-dunite dykes...nickeliferous zones grading 0.15% to 0.25% nickel, were found to be remarkably uniform and continuous within the quartzite horizon". In report IR71-34 (1971) prepared by the Department of Energy Mines and Resources, Ottawa, Canada, the authors determined that the nickel occurs as pentlandite in very small grains (average 35 microns).

A mid October meeting has been scheduled between Gold City and a major company, to discuss an arrangement whereby the major could become involved in the further exploration and development of the Old Nick property.

The Old Nick deposit is controlled by the Rock Creek Gold Trend Joint Venture. The Joint Venture consists of Gold City Mining Corporation (49%), Phoenix Gold Resources Ltd. (25.5%) and Sway Resources Inc. (25.5%).

Gold City Mining Corporation shares are traded under the ticker symbol GCP on the Vancouver Stock Exchange.

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For further information contact John Chapman, President, 604.682.7677

# Gold City Mining Corporation

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## NEWS RELEASE

VSE:GCP  
NOVEMBER 1, 1995

#95-15  
FOR IMMEDIATE RELEASE

### OLD NICK DEPOSIT METALLURGICAL TEST RESULTS

Vancouver, B.C., John Chapman, President, reports additional positive results from agitated leach tests on Old Nick deposit samples containing nickel and cobalt (refer to News Release #95-13 of September 21, 1995 for prior results).

Sample Number	Rock Type	Grade Ni% / Co%	Particle (% -75 $\mu$ )	Retention (hours)	Nickel (% extracted)	Cobalt (% extracted)
ON-1	Quartzite	0.15 / 0.02	75	25	81	80
ON-2	Quartzite	0.16 / 0.01	91	48	92	60
ON-3	Dunite	0.22 / 0.01	81	48	87	76

Results indicate that there may be potential to leach this very large surface-exposed sulfide nickel/cobalt deposit (may be the largest in British Columbia). The Deposit is located within three kilometres of mainline power and natural gas, and immediately adjacent to Highway #3 at the Town of Bridesville in Southern British Columbia. The Deposit may be large enough to support an open-pit operation and an adjacent 20,000 tonne per day whole rock leaching plant.

The bench scale agitated leach tests were run under weak acidic conditions at atmospheric pressure. Leaching tests are being conducted in Burnaby, B.C. by International Water Solutions Corporation. The leach solutions will be further tested, by other laboratories, using SX (solvent extraction), precipitation and EW (electro-winning) methods to determine the viability of these modern methods to produce marketable nickel and cobalt from Old Nick.

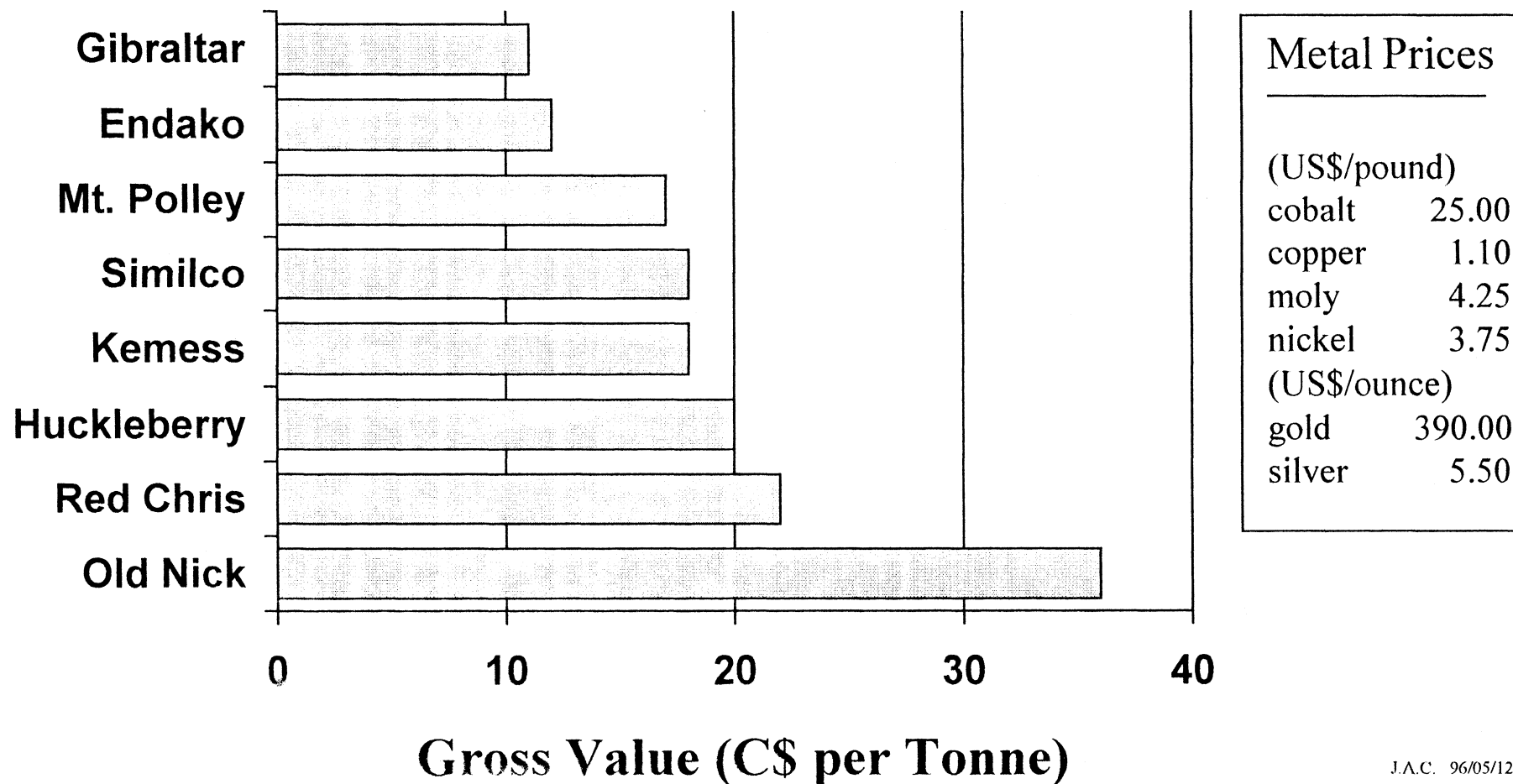
Negotiations are being conducted between Gold City and a major company, toward an arrangement whereby the major could become involved in further exploration and development of the Old Nick property.

The Old Nick deposit is controlled by the Rock Creek Gold Trend Joint Venture. The Joint Venture consists of Gold City Mining Corporation (49%), Phoenix Gold Resources Ltd. (25.5%) and Sway Resources Inc. (25.5%).

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# British Columbia Mineral Deposits

Ranked by Deposit Gross Unit Metal Value



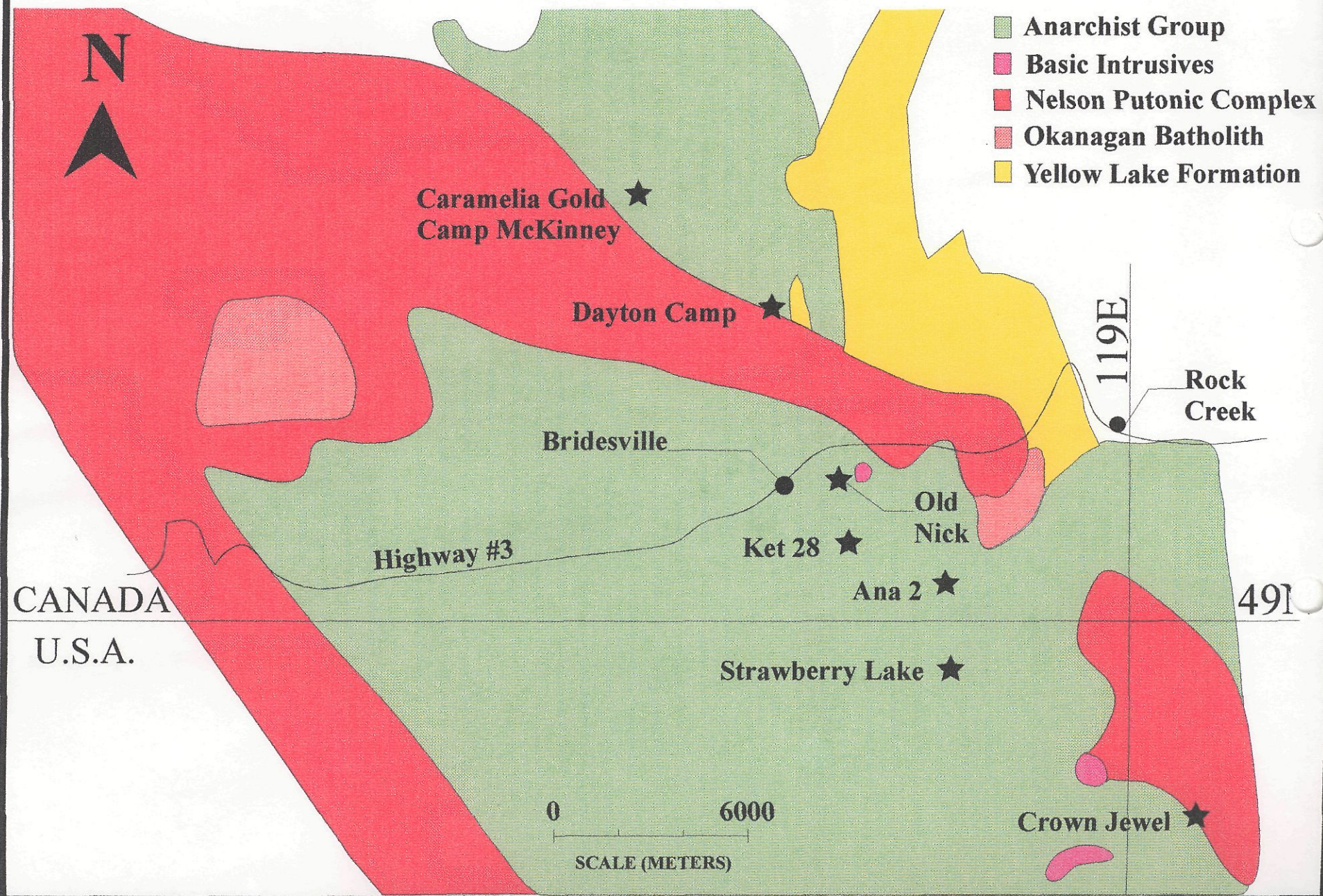


**British Columbia Mineral Deposits**  
**Deposit Gross Unit Metal Value (C\$/Tonne)**

By: J.A. Chapman								5/24/96 18:35
Contained Metal	Copper (%)	Cobalt (%)	Gold (gpt)	Moly (%Mo)	Nickel (%)	Silver (gpt)		
Old Nick		0.015			0.220			
Similco	0.456		0.127			1.724		
Huckleberry	0.513		0.062	0.014		2.812		
Mount Polley	0.300		0.417					
Gibraltar	0.300			0.009				
Kemess	0.220		0.630					
Red Chris	0.480		0.370					
Endako				0.090				
<b>Metal Price (US\$)</b>	<b>1.10</b>	<b>25.00</b>	<b>12.54</b>	<b>4.25</b>	<b>3.75</b>	<b>0.18</b>		
<b>Metal Price (C\$)</b>	<b>1.51</b>	<b>34.25</b>	<b>17.18</b>	<b>5.82</b>	<b>5.14</b>	<b>0.25</b>		
								<b>Gross Value</b>
								<b>C\$/Tonne</b>
Old Nick	0.00	11.30	0.00	0.00	24.86	0.00		36.16
Similco	15.12	0.00	2.18	0.00	0.00	0.43		17.72
Huckleberry	17.01	0.00	1.07	1.79	0.00	0.69		20.56
Mount Polley	9.95	0.00	7.16	0.00	0.00	0.00		17.11
Gibraltar	9.95	0.00	0.00	1.15	0.00	0.00		11.10
Kemess	7.29	0.00	10.82	0.00	0.00	0.00		18.12
Red Chris	15.91	0.00	6.36	0.00	0.00	0.00		22.27
Endako	0.00	0.00	0.00	11.53	0.00	0.00		11.53

# BOUNDARY GOLD FIELDS, GEOLOGY & MINERAL PROPERTIES

## Gold City Mining Corporation (October 1996)



← Old Nick  
119E  
49N