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## THE CORPORATION

The Corporation was incorporated on January 9, 2004 as 684784 B.C. Ltd. under the *Company Act* (British Columbia) by filing a Memorandum of Incorporation. On September 23, 2004 the Corporation transitioned under the new *Business Corporations Act* of British Columbia and on September 27, 2004 the Corporation changed its name to Golden Dawn Minerals Inc., increased its authorized capital from 100,000,000 common shares without par value to an unlimited number of common shares without par value and removed the application of Pre-existing Company Provisions under the *Company Act* (British Columbia) in respect of the Corporation.

The Corporation currently has 6,422,946 common shares issued and outstanding.

The Corporation's registered and records office is located at Suite 1100, 888 Dunsmuir Street, Vancouver, British Columbia, V6C 3K4. The Corporation's head office is located at Suite 520, 355 Burrard Street, Vancouver, British Columbia, V6C 2G8.

## GENERAL DEVELOPMENT OF THE BUSINESS OF THE CORPORATION

### Overview

The Corporation is engaged in the exploration for precious metals on, and development of properties which it holds under option. Since the incorporation on January 9, 2004, the Corporation has acquired options to acquire interests in the following mineral properties (the "Mining Assets"): (i) an undivided 60% interest in 18 mineral claims located in the Omineca Mining Division of British Columbia (the "Swan Property"); (ii) an undivided 100% interest in 16 mineral claims located in the Omineca Mining Division of British Columbia (the "Pearl Property"); and (iii) an undivided 100% interest in 5 mineral claims located in the Skeena Mining Division of British Columbia (the "VMS Property").

To date the Corporation has raised cash proceeds totalling \$412,950.90 through private placements of its common shares and has expended a total of \$197,783 on the exploration of its Mining Assets.

### Acquisitions and Dispositions

Since its incorporation the Corporation has made two acquisitions, the Pearl Property and the Swan Property, which are deemed "material properties" of the Corporation under NI 43-101:

#### *Pearl Property – Omineca Mining Division, Province of British Columbia*

Pursuant to an option agreement dated December 23, 2004, as amended May 3, 2005, June 15, ~~2005~~ ~~and 2005~~, July 8, 2005 and August 15, 2005, between the Corporation and Arne O. Birkeland of 2069 Westview Drive, North Vancouver, British Columbia, the Corporation received an option to acquire a 100% undivided interest in 16 mineral claims located in the Omineca Mining Division of British Columbia (described below) subject to 3% net smelter return royalty in consideration for 1,425,000 common shares (issuable as to 275,000 shares on signing the agreement, which have been issued; 50,000 common shares upon the Corporation completing this Offering; and 275,000 shares on each of the first, second, third and fourth anniversaries of the agreement), the sum of \$530,000 (as to \$15,000 on signing the agreement, which has been paid; ~~\$15,000~~ ~~2,500~~ on August ~~31, 2005~~ ~~24, 2005~~ and ~~\$12,500 from the~~ ~~proceeds of the Offering~~ which must in turn be used by Birkeland to fulfill the cash payment obligations he has in respect of the Pearl Property with Jon Mirko from whom Birkeland acquired two of the mineral

claims contained in the Pearl Property; \$65,000 on September ~~1~~10, 2005; \$50,000 on the first anniversary of the agreement; \$150,000 on the second anniversary; and \$250,000 on the third anniversary) and incurring expenditures on the property totalling \$4,750,000 (as to \$350,000 by the first anniversary of the agreement of which ~~\$30,000~~10,000 must be advanced by ~~August 15~~each of August 17, 2005 (which has been paid), August 19, 2005 and August 24, 2005 and \$100,000 of which must be advanced by September ~~1~~10, 2005; \$600,000 by the second anniversary; \$1,300,000 by the third anniversary; and 2,500,000 by the fifth anniversary). See "Business of the Corporation – Pearl Property".

The 3% net smelter return royalty may be reduced by the Corporation to a 1.5% net smelter return royalty within 30 days of the royalty vesting by the Corporation paying to Birkeland the sum of \$3,000,000. The Pearl Option also stipulates that the Corporation will engage Arnex Resources Ltd. of North Vancouver, British Columbia (a private company owned by Arne O. Birkeland) as the operator in connection with the first \$2,250,000 of exploration expenditures to be incurred on the Pearl Property. In respect of this engagement the parties have executed an exploration services agreement pursuant to which Arnex is entitled to charge a 15% administration fee (except on expenditures pertaining to helicopter charters, analytical and assay expenditures and drilling contracts for which the Corporation will directly contract with the providers of such services). Following the completion of the services by Arnex under the agreement the Corporation shall become the operator in respect of additional exploration on the Pearl Property.

Since Arne Birkeland is the optionor of the Pearl Property and owns Arnex Resources Ltd. which is to initially act as operator on the property, Birkeland and Arnex are in potential conflicts of interest with the Corporation as it may be in their best interest to see exploration continue on the property when such is not in the best interest of the Corporation and its shareholders.

In respect of two of the claims contained in the Pearl Property (being the PP1 and PP2) Birkeland has a 2% net smelter return royalty obligation in favour of Jon Mirko from whom he originally acquired the claims.

#### ***Swan Property – Omineca Mining Division, Province of British Columbia***

By an option agreement dated August 17, 2004, as amended May 4, 2005 and July 8, 2005, the Corporation acquired an option to acquire a 60% undivided interest in 18 mineral claims located in the Omineca Mining Division of British Columbia (described below) from Stealth Minerals Limited of 2382 Bayview Avenue, Toronto, Ontario, M2L 1A1 in consideration of 700,000 common shares of the Corporation to be issued as fully paid and non-assessable in four tranches (100,000 shares no later than the five days after December 16, 2004, which have been issued; 150,000 shares on or before the first anniversary thereof; 200,000 shares on or before the second anniversary thereof; and 250,000 shares on or before the third anniversary thereof), a cash payment of \$145,000 (due as to \$15,000 on execution of the option agreement, which has been paid; \$25,000 on each of the first, second, third and fourth anniversaries of December 16, 2004; and \$30,000 on the earlier of September 15, 2005 and completion of the Offering) and \$1,750,000 of work expenditures to be incurred prior to the fourth anniversary of December 16, 2004 (as to \$100,000 by the first anniversary thereof, which has been incurred; \$250,000 by the second anniversary thereof, of which \$64,320 has been incurred; \$500,000 by the third anniversary thereof; and \$900,000 by the fourth anniversary thereof). See "Business of the Corporation - Swan Property".

Since its incorporation the Corporation has also made the following acquisition which however is not deemed a "material property" of the Corporation under NI 43-101:

*Geology Report*

A report titled "Geological Report on the Porphyry Pearl Property, Toodoggone River Area, Omineca Mining Division, British Columbia" dated February 22, 2005 (the "**Pearl Report**") was prepared for the Corporation by N.C. Carter, Ph.D., P. Eng. The following summary has been included with the consent of N.C. Carter and is substantially a direct extract from the Pearl Report. During the period of the Offering, a copy of the Pearl Report can be obtained at the head office of the Corporation, Suite 520, 355 Burrard Street, Vancouver, British Columbia, V6C 2G8, and may be examined during normal business hours. The Pearl Report will also be available through SEDAR (at [www.sedar.com](http://www.sedar.com)) on issuance of the final decision document for this Prospectus.

The Porphyry Pearl property consists of two 2-post, ten 4-post and four "cell" mineral claims situated in the Omineca Mining Division of northern British Columbia 300 kilometres north of Smithers (Figure 1). The 2-post and 4-post mineral claims comprise 198 mineral claim units while the four "cell" claims include 47 "cells". The mineral claims collectively cover an area of approximately 5550 hectares between latitudes 57°26.5' and 57°36.0' North and longitudes 127°05.0' and 127°17.5' West in NTS map-areas 94E/06 and 11. (UTM coordinates (NAD 83-Zone 9) 6368000 – 6375800 North, 602400 – 614868 East).

The configuration of the various mineral claims is illustrated on Figure 2. Note that the ten 4-post mineral claims are contiguous and one of these, Pearl 3, includes the PP1 and PP2 2-post mineral claims. The 2-post and 4-post mineral claims were located in the field or in the traditional manner while the more recent "cell" claims were acquired under the new British Columbia online system which came into effect January 12, 2005. Note that these mineral claims, which include "cells" defined by latitude and longitude, immediately adjoin but are not precisely contiguous with the pre-existing, recorded claims. Pursuant to definitions of British Columbia revised Mineral Tenure Act regulations such claims are now referred to as legacy mineral claims. Details of all claims are as listed in Table 1.

Table 1

**Legacy Mineral Claims**

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Record Date</u>	<u>Expiry Date</u>	<u>Recorded Owner</u>
Pearl 1	406021	20	October 11,2003	October 11, 2005	A.O. Birkeland
Pearl 2	406022	20	October 12,2003	October 12,2005	A.O. Birkeland
Pearl 3	406023	20	October 12,2003	October 12,2005	A.O. Birkeland
Pearl 4	406024	16	October 12,2003	October 12,2005	A.O. Birkeland
Pearl 5	409181	20	March 23,2004	March 23,2006	A.O. Birkeland
Pearl 6	409182	20	March 23,2004	March 23,2006	A.O. Birkeland
Pearl 7	409183	20	March 23,2004	March 23,2006	A.O. Birkeland
Pearl 8	409184	20	March 23,2004	March 23,2006	A.O. Birkeland
Pearl 9	409185	20	March 23,2004	March 23,2006	A.O. Birkeland
Pearl 10	409186	20	March 23,2004	March 23,2006	A.O. Birkeland
PP1	414658	1	Sept. 29,2004	Sept. 29,2005	A.O. Birkeland
PP2	414659	1	Sept. 29,2004	Sept. 29,2005	A.O. Birkeland

**"Cell" Mineral Claims**

<u>Claim Name</u>	<u>Record No.</u>	<u>Cells</u>	<u>Record Date</u>	<u>Expiry Date</u>	<u>Recorded Owner</u>
Pearl East 1	502951	20	January 13,2005	January 13,2006	A.O. Birkeland
Pearl East 2	502954	10	January 13,2005	January 13,2006	A.O. Birkeland
Pearl East 3	502957	12	January 13,2005	January 13,2006	A.O. Birkeland
Pearl East 4	502961	5	January 13,2005	January 13,2006	A.O. Birkeland

The legacy mineral claims comprising the Porphyry Pearl property are thought to have been located pursuant to procedures specified by previous regulations of the Mineral Tenure Act of the Province of British Columbia. No claim posts or lines have been inspected by the writer. These mineral claims have not been surveyed. The boundaries of the "cell" mineral claims acquired by the recently initiated online system in British Columbia are precisely defined by UTM coordinates.

The Pearl 1-10 and PP1 and PP2 mineral claims cover the former Moose property which includes previously identified porphyry copper-gold and epithermal silver-base metals mineralized zones; the Pearl East 1-4 mineral claims were acquired to cover known parts of the former Oxide Peak and Amethyst Valley claims which are known to include epithermal precious metals showings and areas of geological interest.

Legacy mineral claims in British Columbia may be kept in good standing by incurring assessment work or by paying cash-in-lieu of assessment work in the amount of \$100 per mineral claim unit per year during the first three years following the location of the mineral claim. This amount increases to \$200 per mineral claim unit in the fourth and succeeding years. Cell claims, which are of varying size depending on their position within the province, require annual expenditures (or cash-in-lieu payments) of \$4 per hectare per annum for the first three years of tenure and \$8 per hectare annually thereafter.

The writer is not aware of any specific environmental liabilities to which the various mineral claims are subject. The claims are immediately east of the recently expanded boundaries of the Spatsizi Plateau Wilderness Park (Figure 3) but to the extent known, there are no apparent problems in terms of access or in carrying out mineral exploration and development. The Porphyry Pearl property is within the Toodoggone district where mining-related activities have been underway for more than 75 years.

#### **Accessibility, Climate, Local Resources, Infrastructure, and Physiography**

The Porphyry Pearl property is situated between 6 and 14 kilometres north of Toodoggone River and is centred on two of the larger south-flowing tributaries, Moosehorn and McClair Creeks (Figure 3). The communities of Smithers and Prince George, both several hundred kilometres south of the property (Figure 1), offer the best range of supplies and services which can be trucked by way of a secondary road linking Kemess mine with Mackenzie (Figure 1). This road extends 35 kilometres further northwest to Sturdee airstrip (Figure 3) which is capable of handling large aircraft, thus providing an alternate means of access into the general area.

Figure 3 shows a number of current and former roads in the general area of the property. Most of these have been decommissioned with the exception of the road linking the airstrip with Baker mine and the former Cheni Resources Lawyers mine. Access to the Porphyry Pearl property from either Sturdee airstrip or Lawyers mine for both supplies and personnel is currently restricted to helicopter.

Other than water, which is abundant, there is no infrastructure in the immediate area of the property. Kemess mine, 100 km south, is connected to the provincial power grid.

The Porphyry Pearl property is situated immediately east of the boundary between the Spatsizi Plateau to the west and the Stikine Ranges of the southern Cassiar Mountains to the east. The immediate area features wide, drift-filled valleys of Toodoggone River, Moosehorn Creek and the lower reaches of McClair Creek, the gently rolling upland surface of the Spatsizi Plateau to the west and steep-sided, maturely dissected mountains throughout the central and eastern property areas. Central to the current claims is a prominent ridge which rises from the broad valley floors occupied by Moosehorn Creek on the west and McClair Creek on the east (Figure 2). Scattered buckbrush and locally dense alpine spruce, balsam and fir is present in valley areas up to elevations of 1600 metres above sea level above which is

The climate is typical of the northern regions of British Columbia with cold temperatures and abundant snow cover during the winter months which extend from mid-October through early May. Field work is best carried out between mid-June and late September when daytime temperatures average 10 to 15 degrees Celsius.

### History

As previously noted, the Porphyry Peal property is in the Toodoggone mining district. Earliest mining-related work in this area was directed to placer gold occurrences along McClair Creek, near its confluence with Toodoggone River, between 1925 and 1935. This operation, one of the first in Canada to be entirely air-supported, recovered only modest amounts of gold (3270 grams = 115 ounces).

Consolidated Mining and Smelting Company discovered base metals mineralization in several areas in the southern part of the district in the early 1930s and reportedly carried out some limited drilling on Oxide Peak immediately east and south of the current Porphyry Pearl property. Other than sporadic investigations of the McClair Creek placer occurrences, the area was virtually dormant until the 1960s. A number of companies, including Canadian Superior Exploration, Cominco, Cordilleran Engineering and Kennco Explorations, conducted regional exploration programs in the search for porphyry copper mineralization. Work by Kennco Explorations led to the recognition of significant gold-silver mineralization at what were to become the Baker mine (Chappelle) and Lawyers (Cheni mine) deposits south of Toodoggone River (Figure 4). This company also discovered porphyry-style copper-gold mineralization at several sites north and south of Finlay River including the currently producing Kemess mine.

Continued exploration between the early 1970s and the 1990s resulted in the discovery of a number of additional gold-silver deposits and occurrences throughout the area. The more significant of these are shown on Figure 4.

Production from the Toodoggone district began with the Baker mine operation in 1981 and continues with the current South Kemess mine of Northgate Minerals Corporation. District production through 2004 amounts to more than 1.6 million ounces gold which has been derived from three past producers and one current producer. As indicated on Table 2, more than 80% of this production has been from the South Kemess mine.

Table 2

<u>Deposit Name</u>	<u>Tonnes Milled</u>	<u>Au (kg)</u>	<u>Ag (kg)</u>	<u>Cu (t)</u>	<u>Recovered Grades</u>		
					<u>Au (g/t)</u>	<u>Ag (g/t)</u>	<u>Cu (%)</u>
McClair Creek Placer (1935)		3.3					
Baker Mine (1981-83, 1996-97)	81878	1284	23813	13.1	15.68	290.84	0.02
Lawyers (Cheni) (1989-1992)	619869	5402	113184	N/A	8.71	182.59	N/A
Shas (1989-91, 2000)	113113	603	33019	N/A	5.33	291.91	N/A
South Kemess (1998-present)	<u>78471586</u> 79286446	<u>44968</u> 52260	<u>4781*</u> 173797	<u>165609</u> 165622	0.57	4.13*	0.21

(1,680,200 oz. Au; 6,130,498 oz. Ag)  
\* Ag recovered in 2000 only

The earliest record of work within the area of the present property dates back to 1971 when Sumac Mines Ltd. (an exploration entity of Sumitomo Metal Mining Company) located claims east of Moosehorn Creek to cover anomalous base and precious metals values indicated by a reconnaissance stream sediment geochemical survey. Work on what was known as the Moose property through 1974 included grid construction, the preparation of orthophoto base maps, soil geochemistry, Induced Polarization and magnetic surveys and 493.5 metres of diamond drilling in four holes.

Sumac's claims lapsed in 1977 and were re-staked in 1978 by T.C. Scott and Petra-Gem Exploration Ltd. Energex Minerals Ltd. acquired the property by way of an option agreement and carried out some hand trenching and bedrock and drill core sampling in 1979. Texasgulf Canada Ltd. (latterly Kidd Creek Mines Ltd.) entered into an option agreement with Energex in early 1980 and over the subsequent three field seasons had completed soil and rock geochemical surveys geological mapping, limited geophysical surveys and 494.5 metres of diamond drilling in two holes on the then Moose property.

Energex Minerals Ltd. entered into a joint venture agreement with New Ridge Resources Ltd. in early 1985 for the purpose of carrying out additional exploratory work on the Moose property. A comprehensive program completed that year included soil and rock geochemistry, prospecting, geological mapping and the testing of two mineralized zones by way of 914.6 metres of diamond drilling in eighteen holes.

The most recent exploratory work on the previous Moose property (now the Pearl 1-10 mineral claims) was in 1991 when Golden Rule Resources Ltd. and partner Manson Creek Resources Ltd. were party to an option agreement with Energex Minerals Ltd. 1123.7 metres of diamond drilling was completed in seven vertical holes.

Exploration programs within and adjacent to the current Pearl East 1 and 2 mineral claims were undertaken in 1980 and 1981 by Serem Ltd. and included the collection of stream sediment samples, contour soil and rock sampling, prospecting and geological mapping on Oxide Peak and the southern part of the area now covered by the current claims. Additional work by Newmont of Canada Exploration in 1984 included rock sampling within the area of the Pearl East 2 claim. While the property area also included Oxide Peak during this time frame, much of the geological mapping and bedrock sampling completed by Geostar Mining Corp. in 1985 was directed to the area of the current Pearl East 1 and 2 mineral claims as were subsequent geochemical and geophysical surveys carried out by Shayna Resources Ltd. in 1987. Clipper Minerals Ltd. held property now covered by the Pearl East 1 and 2 claims between 1990 and 1994 and reportedly carried out prospecting and hand trenching in addition to a limited Induced Polarization survey.

Total exploration expenditures within the area of the current mineral claims, as documented by assessment reports, total \$785,000. More than 90% of this amount was spent on the former Moose property, now covered by the Pearl 1-10 claims.

The Moose claims lapsed in the mid-1990s as did a number of other claims throughout the Toadoggonne district. The PP1 and PP2 claims were located in 2001 and the Pearl 1-10 claims in 2003 and 2004. The Pearl East 1-4 claims were acquired early in 2005.

## **Geological Setting**

### *Regional Setting*

The Porphyry Pearl property, situated in the northeastern part of the Intermontane tectonic belt of the Canadian Cordillera, is west of a fault contact between Quesnel terrane of the Omineca crystalline belt on

the east and Stikine terrane on the west (Figure 4). Stikine terrane includes Devonian to Jurassic volcanic and sedimentary rocks which are intruded by coeval and younger plutonic rocks and are locally overlain by younger volcanic and sedimentary units.

Oldest rocks in the area illustrated by Figure 4 are intensely deformed late Carboniferous to Permian Asitka Group volcanic and sedimentary rocks. These have their greatest distribution north of Stikine River where they consist of mafic to felsic volcanic rocks which are mainly converted to chlorite and sericite schists, phyllites derived from clastic sedimentary rocks and younger rhyolites, cherts and carbonate sediments. Remnants of Asitka Group carbonates and cherts, too small to be shown on Figure 4, are present in the vicinity of Baker Mine and north and south of Finlay River and, as noted in the subsequent section of this report, may be present in the eastern part of the subject property.

Volcanic rocks of the late Triassic, Takla (Stuhini) Group, which form mountainous terrain south of Chukachida and Finlay Rivers, are comprised mainly of augite phyric basalt, andesitic flows, tuffs and breccias and subordinate interflow clastic sedimentary rocks and some limestone. Smaller areas underlain by Takla Group rocks include remnants marginal to a granitic stocks in the southern part of the area and east of the Porphyry Pearl property. The volcanic rocks marginal to such plutons feature limonite-rich alteration zones.

Previous geological interpretations, shown on Figure 4, suggested that early Jurassic andesite and dacite flows and volcanoclastic rocks of the Hazelton Group underlie the eastern part of the area between Chukachida and Finlay Rivers (Figure 4). Recent geological mapping by Diakow et al (2004,2005) indicates that the Hazelton Group in this part of Stikine terrane is entirely comprised entirely of Toodoggone Formation volcanic rocks featuring distinctive lithologies and contained in a northwest-trending, 90 by 20-25 km belt centred on Toodoggone River. These subaerial volcanic rocks unconformably overlie, or are in fault contact with older rocks and consist principally of high potassium, calcalkaline latites and dacites (Diakow et al, 1993). Two eruptive cycles have been recognized and Jurassic plutons, numerous throughout the district, are comagmatic with the earlier volcanic cycle.

Cretaceous clastic sedimentary rocks, part of the Sustut Group, unconformably overlie older rocks and form the western boundary of the area illustrated on Figure 4.

The numerous gold-silver deposits of the district are related to the early Jurassic, Hazelton Group (Toodoggone Formation) magmatic event which took place between 190 and 200 million years ago. Extensional tectonics, in the form of regional northwest faults, provided channelways for the circulation of precious metals-rich hydrothermal fluids.

Several styles of mineralization are present in the Toodoggone district including volcanic-hosted epithermal gold-silver deposits, porphyry copper-gold deposits and some precious metals-bearing skarns. Epithermal deposits and occurrences are typical of the district and include two principal types of which the low sulphidation, adularia-sericite type is the best known. The Baker Mine, Lawyers and Shas deposits, plus numerous other prospects, are examples of this type and all feature quartz veins emplaced along faults and fracture zones in volcanic host rocks which feature adularia-sericite alteration marginal to the precious metals-bearing veins. Host rocks are Toodoggone Formation latite flows and dacite tuffs with the exception of Baker mine where veins are developed in older, Takla Group volcanic rocks.

The second type of epithermal mineralization is represented by high sulphidation, acid sulphate gold-silver deposits which feature alunite and barite alteration zones formed near surface or above the alunite-sericite types. Examples include the BV (A1) north of Toodoggone River (Figure 4) and the Silver Pond prospect adjacent to the Lawyers deposit.

Porphyry copper-gold mineralization, within and marginal to early Jurassic granitic plutons, has been recognized at a number of localities in the southern part of the district. The best example of this style of mineralization is the currently producing South Kemess mine where chalcopyrite, pyrite, magnetite and minor molybdenite occur as disseminations and in quartz stockwork veinlets both within a gently-dipping, tabular monzonite sill and bordering Takla Group volcanic rocks. This deposit features a 25 metres thick supergene zone containing enhanced copper and gold values. Production of gold and copper through to the end of 2004 are reported in the preceding section; remaining proven reserves are reported by Northgate Minerals Corporation as being 91.72 million tonnes grading 0.23% copper and 0.70 gram/tonne gold.

The adjacent Kemess North deposit, currently the subject of a feasibility study, features pyrite, chalcopyrite and minor molybdenite in quartz-K-feldspar stockwork veinlets and as disseminations related to quartz monzonite dykes which cut Takla Group volcanic rocks. A Northgate Minerals Corporation fact sheet, dated November, 2004, reported proven and probable reserves for Kemess North of 414 million tonnes grading of 0.16% copper and 0.31 gram/tonne gold. These reserve estimates were prepared by a qualified person and are in accordance with Section 1.3 of National Instrument 43-101.

### **Property Geology**

The geological setting of the Porphyry Pearl property is illustrated on Figure 5. As indicated, most of the bedrock exposure is restricted to higher areas bordering the broad, alluvium filled valleys occupied by Mooshorn, McClair and Belle Creeks. Much of the property area is underlain by Toodoggone Formation volcanic rocks which are part of the lower volcanic cycle (Diakow et al, 1993). These unconformably overlie and/or are in fault contact with older lithologic units and all units are intruded by early Jurassic granitic rocks.

The oldest lithologic units present within the current property area include a fault-bounded wedge of Late Triassic, Takla Group volcanic rocks and intercalated sediments which are exposed in the eastern part of the Current Pearl East 1 claim (Figure 5). As described by Lyman (1988), these include plagioclase phyric andesite flows, intravolcanic siltstones and 1 to 6 metres thick limestone lenses. The latter may be part of the older Asitka Group but are more likely part of the Takla Group, comparable to similar limestones noted within Takla Group volcanics elsewhere by Diakow et al (2004).

Toodoggone Formation volcanic rocks within the property area represent a homoclinal succession which strikes northwesterly and dips gently northeast. Three members of the lower volcanic cycle are present including the Adoogacho Member, the oldest stratigraphic division of the Toodoggone Formation recognized north of Toodoggone River. This member, which was observed unconformably overlying Takla Group volcanic rocks 15 kilometres northwest of the Porphyry Pearl property (Diakow et al, 1993), is exposed in the western part of the property (Pearl 10 claim – Figure 5) and consists mainly of reddish to purple welded ash-flows and lapilli tuffs.

The Metsantan Member, which unconformably overlies the Adoogacho Member north of Tuff Peak (Figure 5), is comprised of green and purple, porphyritic latite flows and intercalated epiclastic and pyroclastic rocks. This member is overlain by the McClair Member in the central and eastern parts of the property. McClair Member consists of grey to green, homogeneous, porphyritic andesitic flows which locally exhibit good trachytic flow textures.

Undivided Hazelton Group volcanic rocks, immediately east of the fault-bounded wedge of Takla Group volcanics on the Pearl East 1 and 2 mineral claims (Figure 5), are currently thought (Diakow et al, 2005) to be upper units of the Toodoggone Formation.

Layered rocks of the Toodoggone Formation, principally the McClair Member, are intruded by a number of dykes and irregular bodies of quartz-hornblende-feldspar porphyry in the northern and eastern property areas (unit D – Figure 5). These are subvolcanic intrusions coeval with the enclosing volcanic rocks. Toodoggone Formation volcanic rocks are also intruded by equigranular granodiorites and quartz monzonites south and east of the current property and a buried intrusion of similar composition has been intersected by previous drilling adjacent to Moosehorn Creek on the PP2 claim. These intrusions are also considered to be comagmatic with the volcanic rocks. Late basalt dykes, generally less than 1 metre wide, occupy faults and represent the youngest intrusive event.

Faults of regional extent trend north to north-northwest; examples include those faults east of Moosehorn Creek and along the Belle Creek valley (Figure 5). Subsidiary faults strike both northeast and northwest.

### **Mineralization**

Exploratory work to date indicates that the Porphyry Pearl property hosts two principal styles of alteration and precious metals mineralization. These include epithermal silver-gold-base metals-bearing veins and disseminations at the Moose and Marmot prospects and the Mist and East Ridge showings in the central and eastern property areas respectively. Intrusive-related, porphyry copper-gold mineralization occurs at the Porphyry Pearl prospect centred on the PP mineral claims in southern property area (Figure 6).

The Moose silver-base metals zone in the central property area is coincident with a zone of fracturing and shearing associated with the northwesterly-trending regional fault east of Moosehorn Creek (Figure 5). This zone was first investigated by Sumac Mines Ltd. in the early 1980s while following up anomalous values obtained from soil sampling. Surface sampling of isolated bedrock exposures several years later by Texasgulf-Kidd Creek Mines showed the zone to consist of disseminated and vein-type occurrences of sphalerite, galena, pyrite and lesser chalcopyrite. As noted by Peatfield (1981), quartz-carbonate-sulphide veins are central to disseminated mineralization which in turn is enveloped by widespread, disseminated pyrite. Trench sampling returned values of up to 2.8% lead and zinc, 0.27% copper and 19.54 g/t silver. One float sample from within the zone assayed 7% lead, 1.95% zinc, 0.02% copper and 313.72 g/t silver (Peatfield, 1981).

Further investigation of the zone (Howell and Sivertz, 1985) further refined the alteration patterns including a central banded, brecciated and silicified zone containing varying amounts of barite, chlorite, hematite, sphalerite, pyrite, galena and chalcopyrite enveloped by intense sericite-chlorite-carbonate-pyrite of the volcanic wallrocks and gradational outward to propylitically altered volcanic rocks. The central silicified zones, which have sharp contacts with altered wallrocks, were noted as consisting mainly of silicified volcanic and quartz vein fragments set in a quartz-carbonate-sulphide matrix. These silicified breccias occupy northwest-trending, southwest-dipping fractures, are lens-like in plan, measuring 5 x 1 metres and are best developed within a northwest-trending, 600 metres long by 100-200 metres wide zone (Figure 7).

Sulphide contents of the breccia lenses range up to 30% by volume. Higher silver values are not always coincident with enhanced lead values but rather show some correlation with barite. Highest silver values obtained from grab samples included 2450 and 5340 grams/tonne; gold values were generally low, the best being 2.5 grams/tonne (Howell and Sivertz, 1985).

The Marmot zone, 2.5 kilometres east of the Moose zone (Figure 6), was initially reflected by a broad gold in soil anomaly. Sphalerite-galena mineralization is contained in narrow (5-15 centimetres) quartz veins and gold and silver values obtained from surface sampling ranged from 40 to 7000 ppb (parts per billion) gold and 8.5 to 1841 ppm (parts per million) silver (Howell and Sivertz, 1985).

The Porphyry Pearl zone, adjacent to Moosehorn Creek in the southern property area (Figure 6), features porphyry style copper-gold mineralization related to an unexposed granodiorite-quartz monzonite intrusion. This zone is discussed in detail in the Drilling section of this report. The periphery of the Porphyry Pearl zone is characterized in part by sericite-pyrite altered rocks in limited exposures along Moosehorn Creek. At one locality, these altered rocks host narrow, east-west striking, moderately to steeply north-dipping quartz-carbonate veins containing sphalerite, galena and chalcopyrite. Chip sampling over exposed lengths of 0.50 to 0.80 metres returned values of between 30 and 1020 ppb gold and 0.9 to 7.3 ppm silver plus lead, zinc and copper values (Howell and Sivertz, 1985).

Other known epithermal mineralization within the current property includes the Mist and East Ridge occurrences in the eastern property area (Figure 6). Initial interest in this area was generated by Serem Ltd. in the early 1980s (Crawford, 1982) following the receipt of anomalous gold values in stream sediment samples. Follow-up work located a quartz breccia zone with low gold and silver values within a prominent gossan in the southeastern part of the current Pearl East 2 claim.

Subsequent work led to the discovery of the East Ridge prospect which is a large silicified zone developed along the north-northwest-trending fault separating Takla volcanic rocks on the east from those of the Toodoggone Formation (Figures 5 and 6). Reported dimensions of this zone (Yeager and Ikona, 1986) were 300 metres in length and up to 100 metres wide and better mineralization was seen to be hosted by north-northeast, vertically dipping cross-fractures containing chalcedonic quartz, barite and galena and sphalerite. Limited bedrock sampling returned values of up to 14.2 grams/tonne silver, 0.34 gram/tonne gold and 1% lead and zinc. A second silicified and pyritized zone along this same fault structure was identified in the northern part of the Pearl East 1 claim by Lyman (1988). The zone, which is up to 50 metres thick, includes narrow quartz veins containing galena and sphalerite. Detailed bedrock sampling returned low gold and silver values of between 5 and 25 ppb and 0.2 to 5.0 ppm respectively.

A north-northeast fault zone, extending through the Pearl East 1 claim, hosts the Mist occurrence which is 1.5 kilometres west-northwest of the East Ridge zone and 0.6 kilometre east of the tarn lake in the western part of the Pearl East 1 claim (Figure 6). As described by Lyman (1988) and Mark (1994) this occurrence consists of lenses of silicified material with disseminated pyrite plus bands of galena, sphalerite and chalcopyrite within a moderately west-dipping zone which has an exposed strike length of 190 metres. The hanging wall of the structure is marked by a 20 to 50 metres thick zone of intense clay-sericite alteration. Hand trenching and sampling of this occurrence was apparently undertaken in 1990 but no results are available.

## Exploration

This section includes a discussion of results of previous surface geochemical and geophysical surveys conducted within the boundaries of the current Porphyry Pearl property for the purpose of providing background information considered to be useful in assessing the merits of the property and in planning future work.

As previously noted, anomalous precious and base metals values in stream sediment samples collected by Sumac Mines Ltd. in the early 1970s led to the staking of the original claims in the area of the current property. Initial exploration work included the collection of soil samples from an initial 19 kilometres of grid consisting of 122 metres spaced northeast-southwest cross lines. Samples were collected from 'B' horizon material from depths of between 15 and 30 cm at 60 metres intervals along the grid lines. This work identified a 1500 x 300 metres northwesterly trending anomalous zone with values of up between 4.0 and 26.0 ppm silver, 500 to 1000 ppm zinc, 260 to 3900 ppm lead and plus 100 ppm copper (Scott, 1972). Spot high gold values of between 320 and 1700 ppb were also identified. Additional sampling of

an expanded area the following year (Rodgers, 1972) established threshold values for the various elements which were reported as being 110 ppm copper, 600 ppm lead, 870 ppm zinc and 8.7 ppm silver.

Texasgulf undertook further soil sampling in 1980 (Peatfield, 1981) along compass lines between the original Sumac grid lines. Results obtained further refined and expanded the previously defined anomalous area. Anomalous values for the various elements within a 2000 x 600 metres zone as reported by Texasgulf were 2.4-25.5 ppm silver, 200-2750 ppm lead, 400-4000 ppm zinc and 50-200 ppm copper. This survey also disclosed the presence anomalous gold and silver values (30-1155 ppb gold; 2.5- 45 ppm silver) in poorly developed soils over an area of 1000 x 500 metres at higher elevations northeast of the original anomalous area. The possible source of these values was thought to be numerous quartz veinlets exposed near the ridge crest (Sutherland, 1981).

Previous geophysical work included two Induced Polarization (IP) and fluxgate magnetometer surveys over the grid area established by Sumac Mines Ltd. A limited pole-dipole IP survey completed in 1972 (Yokoyama and Morita, 1972) identified high apparent resistivities in the central grid area while percent frequency effects (chargeability) were low. A pulse, time domain IP survey conducted over an expanded area the following year (Yoshida and Kawasaki, 1973) delineated the four chargeability anomalies shown on Figure 6. No meaningful results were obtained from the magnetic surveys.

Limited IP and magnetometer surveys, undertaken by Kidd Creek Mines in 1982, were directed to the area of the Porphyry Pearl prospect along Moosehorn Creek (Figure 6) and essentially confirmed the previously identified Sumac IP chargeability anomaly.

Worth noting in this section is a helicopter-borne, high resolution gamma-ray spectrometric and magnetic survey which was completed in the Toodoggone area in 2003 and jointly funded by federal and provincial government agencies and industry partners (Shives et al, 2004). Results of this survey provide new gamma ray data and higher resolution aeromagnetic data for the entire region, including the area of the Porphyry Pearl property. The principal objective of the survey was to provide a consistent geophysical and geochemical (by way of determination of radioactive elements; potassium, uranium thorium) framework to complement both regional geological mapping and property-scale exploration. Hydrothermal alteration minerals associated with porphyry and epithermal mineralization in the Toodoggone area are known to respond well to these airborne techniques. These geophysical data are readily available both in hard copy and digital format and should be of real use in the planning and inception of further work on the Porphyry Pearl property.

## **Drilling**

Initial drilling in the area of the current property, undertaken by Sumac Mines Ltd. in 1974 (Rodgers, 1974) consisted 493.5 metres in four holes designed to test the four IP chargeability anomalies identified by previous surveys. Three of these holes were inclined, one was vertical and BQ-size core was recovered. Locations of these holes (MM-1,-2,-3,-6) are shown on Figure 6. The three widely spaced inclined holes intersected volcanic rocks containing up to 6% disseminated pyrite providing a partial explanation for the chargeability anomalies. No analytical results were provided by Sumac Mines but subsequent re-sampling of these holes by Kidd Creek Mines (Sutherland, 1982) disclosed the presence of elevated gold values (270-1500 ppb) between hole depths of 110.6 and 119.4 metres in hole MM-1. A 3.8 metres section within this interval returned 2795 ppb gold and 0.6 ppm silver.

The Moose silver-base metals zone was tested by 806.7 metres of BQ diamond drilling in 16 inclined holes completed by New Ridge Resources Ltd. in 1985 (Howell and Sivertz, 1985). Locations of these hole are shown on Figure 7 and the more significant results are listed in Table 2.

Table 3 – Moose Silver Base Metals Zone Drilling

DRILL HOLE	INCL., AZ.	DEPTH(m)	INTERVAL(m)	LENGTH(m)	Ag(g/t)	Pb(%)	Zn(%)	Au(ppb)	
85M-1	-45 @ 035	78.33	0.00-1.60	1.60	23.80				
		Incl.	0.00-0.50	0.50	50.00				
			26.60-28.70	2.10	15.10				
85M-2	-85 @ 035	Incl.	28.30-28.70	0.40	24.00	1.19	4.52		
		45.11	13.44-18.60	5.16	109.30				
		Incl.	17.20-18.60	1.40	367.10				
		Incl.	17.20-18.07	0.87	583.00	0.95	1.45		
85M-3	-60 @ 035	73.76	33.00-35.50	2.50	7.30				
		Incl.	1.83-6.20	4.37	54.30				
		Incl.	1.83-6.00	4.17	56.20				
85M-4	-85 @ 035	37.49	4.00-6.00	2.00	76.00				
		Incl.	2.90-7.10	4.20	35.80				
		Incl.	4.26-7.10	2.84	46.70				
85M-5	-45 @ 035	50.90	Incl.	5.64-7.10	1.45	71.00	0.62	1.96	
			Incl.	23.70-27.13	3.43	50.50			
			Incl.	23.70-26.64	2.94	58.20			
		50.90	Incl.	25.91-27.13	1.22	125.00			
			Incl.	6.10-9.75	3.65	26.70			
			Incl.	6.10-8.72	2.62	34.60			
			Incl.	6.80-9.75	2.95	30.90			
			Incl.	12.93-16.40	3.48	68.50			
			Incl.	14.33-16.40	2.07	100.50			
			Incl.	15.51-16.40	0.90	227.00	0.51	1.09	150
Incl.	24.36-25.50	1.14	13.50						
Incl.	24.84-25.50	0.66	23.60						
Incl.	24.36-24.96	0.60	23.00						
DRILL HOLE	INCL., AZ.	DEPTH(m)	INTERVAL(m)	LENGTH(m)	Ag(g/t)	Pb(%)	Zn(%)	Au(ppb)	
85M-6	-85 @ 035	42.06	1.94-3.16	1.22	70.80				
		Incl.	2.51-3.16	0.65	131.70				
		Incl.	2.51-2.59	0.08	885.00	0.33	2.48	25	
			20.39-25.60	5.21	185.80				
		Incl.	20.39-23.77	3.38	276.90				
		Incl.	21.79-23.76	1.97	462.60				
85M-7	-45 @ 035	69.19	Incl.	21.79-22.10	0.31	2610.00	4.60	13.58	1950
			Incl.	20.39-22.10	1.71	484.60	1.24	3.43	476
			Incl.	7.92-13.43	5.51	20.40			
		69.19	Incl.	9.54-13.43	3.89	28.10			
			Incl.	9.54-11.46	1.92	47.50	1.06	4.50	
			Incl.	9.54-10.15	0.61	128.00	3.12	12.98	600
85M-8	-85 @ 035	22.25	11.58-13.69	2.11	25.40				
		Incl.	13.20-13.69	0.49	93.00	4.66	13.52	250	
85M-9	-45 @ 035	46.33	11.03-14.97	3.94	85.80	0.46	1.22		
		Incl.	12.31-14.97	2.66	121.90	0.65	1.75		
85M-10	-85 @ 035	23.47	Incl.	11.80-14.36	2.56	77.90			
			Incl.	12.80-14.36	1.56	125.00	1.26	3.44	
		Incl.	21.55-23.47	1.92	133.20				
			21.55-22.22	0.67	275.00				
85M-11	-45 @ 035	58.52	Incl.	21.55-21.95	0.40	435.00	1.44	2.76	
			Incl.	8.08-9.60	1.52	4.00	0.15	0.50	
			Incl.	33.53-34.75	1.22	2.00	0.24	0.88	100
			Incl.	43.68-44.20	0.52	3.00	0.23	1.17	100
85M-12	-45 @ 035	78.33	Incl.	46.33-46.76	0.43	4.0	0.29	1.43	100
			Incl.	48.37-49.23	0.86	7.00	0.10	0.32	
			Incl.	57.79-60.05	2.26	3.00	0.12	0.36	200
			Incl.	65.75-68.12	2.37	4.10	0.28	0.76	
85M-13	-45 @ 035	53.95	28.99-32.40	3.41	20.90				
		Incl.	30.14-32.40	2.26	24.50				
		Incl.	30.14-30.48	0.34	64.00	5.46	11.28	6000	
85M-14	-45 @ 035	40.23	Incl.	31.85-32.40	0.55	48.50	0.74	2.54	
			No significant intercepts						
85M-15	-45 @ 035	46.33	No significant intercepts						
85M-16	-45 @ 035	40.23	29.32-31.76	2.44	6.00	0.50	1.38		

The first 6 holes were drilled to test high-grade silver-lead-zinc showings exposed over a 200 metres interval in the western part of the zone illustrated on Figure 7. Zinc and lead values were in all of these holes and silver values greater than 100 grams/tonne were encountered in four holes over hole lengths of between 1.22 and 5.21 metres. Highest grades included 2,610 grams/tonne silver and 1.95 grams/tonne gold over a hole length of 0.31 metres in hole 85M-6.

Holes M85-7 and -8, which tested a quartz-barite-sulphide showing approximately 95 meters southeast of holes M85-3 and -4, returned low silver values compared with those obtained from surface sampling. Drill holes M85-9 and -10, drilled to test strong strongly anomalous lead, zinc, silver values in soils returned some good silver values over limited intervals.

Hole M85-11 intersected breccia-hosted zinc-lead mineralization visually similar to that seen in the first ten holes but silver values were very low. Holes M85-12 and -13 were drilled beneath holes M85-3,-4 and M85-7,-8, respectively, to test the zone at greater depths. Both holes intersected short sections of zinc-lead mineralization with low to moderate silver values.

The northwestern part of the silver-base metal zone was tested by drill holes M85-14 and -15 which returned no significant values.

The foregoing results suggest that the exposed quartz-sulphide veins and breccia zones in the central and western parts of the zone, while discontinuous, are contained within a west- dipping, north-northwest trending zone some 30 meters thick and featuring quart-pyrite alteration, silicification and locally high grade silver, lead and zinc values This zone has been traced by drilling over a strike length of 300 metres and may be open along strike and possibly to depth.

#### *Porphyry Pearl Zone*

Porphyry copper-gold mineralization within the Porphyry Pearl zone was first recognized by Sumac Mines Ltd. in the early 1970s while conducting surface investigation of one of four IP chargeability anomalies. A small exposure of intensely altered rock containing abundant pyrite and base metal sulphides was found in Moosehorn Creek near the western margin of the IP anomaly and samples collected from this exposure returned values of up to 3.4 grams/tonne gold, 20.9 grams/tonne silver, 1.04% zinc, 2.96% lead and 0.06% copper. A 122.5 metres vertical drill hole (MM-2), 180 metres east of this exposure (Figure 6) intersected pink to grey intrusive rock with numerous quartz veinlets containing up to 6% pyrite, some magnetite and traces of sphalerite and chalcopyrite. No analytical data accompanied the drill logs filed by Sumac (Rodgers, 1974) but subsequent re-sampling of this hole by Kidd Creek Mines (Sutherland, 1982) returned values of 600-1800 ppm zinc, 700 ppm lead, 800-2100 ppm copper and 200-4930 ppb gold between hole depths of 53.2 and 107.5 metres.

The Porphyry Pearl zone was subsequently tested by more than 1700 metres of drilling in 11 holes between 1982 and 1991. All but two of these holes recovered NQ-size drill core. Significant results of all holes drilled are listed in Table 3 and drill hole locations are shown on Figure 8 which also shows the outlines of 1974 IP chargeability anomalies.

Table 4 – Porphyry Pearl Zone Drilling

DRILL HOLE	INCLINATION, AZIMUTH		DEPTH	INTERVAL(metres)	LENGTH(metres)	Au (g/t)	Cu (%)
(1991)							
PP-91-1	-90		154.5m	18.3-154.5	136.2	0.007	0.002
PP-91-2			163.7m	21.3-164.7	143.4	0.192	0.003
			Incl.	97.0-115.0	18.0	0.446	
				154.0-164.7	10.7		0.018
PP-91-3			185.0m	27.4-185.0	157.6	0.306	0.019
			Incl.	124.0-180.05	6.0	0.463	0.034
			Incl.	124.0-152.0	28.0	0.723	0.058
PP-91-4			126.5m	7.3-125.0	117.7	0.010	0.002
PP-91-5			185.0m	62.2-185.0	122.8	0.274	0.018
			Incl.	117.0-185.0	68.0	0.415	
			Incl.	130.0-185.0	55.0	0.442	0.033
PP-91-6			154.5m	30.5-154.5	124.0	0.350	0.036
			Incl.	98.0-154.5	56.5	0.538	0.043
			Incl.	98.0-126.0	28.0	0.545	0.055
PP-91-7			154.5m	58.0-154.5	96.5	0.014	0.001
DRILL HOLE	INCLINATION, AZIMUTH		DEPTH	INTERVAL(metres)	LENGTH(metres)	Au (ppb)	Cu (ppm)
(1985)							
85M-17	-45 @ 000	61.6m		3.05-61.57	58.52	256	320
			Incl.	36.45-36.85	0.40	13.30g/t	1100
85M-18	-45 @ 180	46.3m		3.66-46.33	42.67	285	624
			Incl.	10.61-11.35	0.74	790	775
			Incl.	31.79-34.41	2.62	750	695
(1982)							
82-1	-80 @ 008	239.3m		85.65-90.70	5.05	903	1095
				136.70-140.20	3.50	615	543
				146.00-147.60	1.60	1403	1315
				151.60-152.30	0.70	1900	950
				156.50-158.50	2.00	1490	710
				186.90-187.70	0.80	1750	320
				191.90-192.90	1.00	2900	220
				209.40-210.35	0.95	1050	900
				219.80-221.80	2.00	1278	5580
DRILL HOLE	INCLINATION, AZIMUTH		DEPTH	INTERVAL(metres)	LENGTH(metres)	Au (ppb)	Cu (ppm)
82-2	-80 @ 008		255.2m	33.00-34.00	1.00	4500	191
				78.00-81.90	3.90	4053	707
			(Assay	78.00-81.90	3.90	2.52 g/t	0.07%)
				87.40-89.10	1.70	1674	708
				94.90-96.00	1.10	3700	511
				108.00-110.00	2.00	1700	815
				128.00-129.00	1.00	1250	480
				171.70-171.95	0.25	2720	8100
				195.00-196.00	1.00	1300	540
				214.00-215.00	1.00	1200	304
				238.00-239.00	1.00	1100	321
				241.00-242.00	1.00	1200	450
				254.00-255.20	1.20	1800	420
(1974)							
MM-2	-90		122.5m	53.2-55.2	2.00	1235	1110
				59.6-70.6	11.00	1393	1537
				90.10-107.5	17.40	2188	998
			Incl.	102.30-106.50	4.20	2936	1320

Kidd Creek Mines drilled two steeply inclined holes (82-1,-2) a short distance north and west of the previous Sumac hole (Figure 8). Both holes intersected what was described (Sutherland, 1983) as porphyritic quartz monzonite below 40 metres of overlying volcanic rocks. Numerous quartz veinlets with magnetite-hematite, pyrite, and lesser sphalerite, galena and chalcopyrite were noted in the altered intrusive rocks as were multiphase intrusive breccias below hole depths of 160 metres. As indicated in Table 3, a number of +1000 ppb gold grades, generally over hole lengths of 1 metre or less, were intersected in both holes. With a few exceptions, copper grades were found to be between 50% and 80% less than those encountered in Sumac hole MM-2.

The two short, inclined holes (85M-17,-18) completed by New Ridge Resources Ltd. in 1985 were designed to test auriferous quartz-carbonate sulphide veins exposed in altered rocks along Moosehorn Creek. Both holes intersected low gold values (256 and 285 ppb) over entire hole lengths and some narrow intervals of less than 1 metre returned multigram gold values. Copper values were low.

The most comprehensive drilling program conducted on the Porphyry Pearl Zone was the 1991 program completed by Golden Rule Resources Ltd. This program involved 1123.7 metres of diamond drilling in seven vertical holes at spacings of approximately 500 metres (Figure 8).

Altered quartz monzonite – granodiorite was intersected in four of the holes and the apparent size of this northwest elongate, buried intrusion measures 1100 x 800 metres and is open both to the northwest and southeast. The length of casing required in holes PP-91-2,-3,-5,-6 and -7 ranged from 21 to 62 metres and is indicative of both significant overburden cover and extensively weathered bedrock below the valley floor marginal to Moosehorn Creek.

As noted, four of the holes completed (PP-91-2,-3, -5 and -6) intersected intensely altered grey-green intrusive rocks of apparent quartz monzonite – granodiorite composition. Observed alteration included abundant feldspar which is completely altered to sericite and locally, alunite (Fraser, 1991) and original mafic minerals in the form of chlorite-sericite. Grey quartz phenocrysts remain intact. The intensity of alteration in the upper parts of holes PP-91-2, -3 and -5 resulted in core recoveries of only 15% to 50% to depths of between 90 and 110 metres (Fraser, 1991).

Locally intense fracturing, both perpendicular and oblique to core axes, was also noted in the intensely altered intrusive rocks. These fractures are occupied by quartz veinlets, quartz stockworks and discrete veins sometimes accompanied by K-feldspar, alunite and barite. Pervasive, disseminated and stringer pyrite within the intrusive rocks averages between 7% and 10% by volume and locally may be up to 15%. Chalcopyrite content averages 1% while galena and sphalerite locally amount to between 1% and 3%.

Enhanced gold and copper values (+0.50 grams/tonne and +0.035% respectively) were found at hole depths of more than 100 metres or below the zone of intensely altered and weathered intrusive rocks.

Holes PP-91-1, -4, and -7 intersected volcanic rocks described as lapilli and crystal tuffs containing 3% to 5% disseminated pyrite and minor sphalerite and magnetite. Hole P-91-4, drilled to test a Sumac IP chargeability anomaly, intersected porphyritic andesite containing 3% pyrite.

## **Sampling Methods and Analyses**

Previous exploratory work within the boundaries of the current Porphyry Pearl property was carried out by a number of companies between 1971 and 1991. Records of sampling procedures and analytical methods employed by these companies are reasonably complete and are considered by the writer to have been in accordance with standard industry practices of the day.

Soil samples collected by Sumac Mines Ltd. between 1971 and 1974 were analyzed by Chemex Labs Ltd. of North Vancouver, B.C. utilizing perchloric-nitric acid digestion and subsequent atomic absorption spectrophotometry to determine trace amounts of silver and base metals. Trace gold was also determined by atomic absorption methods following an aqua regia digestion. Rock samples were analyzed by the same procedures following crushing and pulverizing.

Bondar Clegg and Company Ltd. and Min-En Laboratories Ltd., both of North Vancouver, B.C., were used by Kidd Creek Mines Ltd. for analyses for soil, rock and drill core samples in between 1980 and 1982. Bondar Clegg used aqua regia sample digestion and subsequent atomic absorption for the determination of silver and base metals; gold contents were determined by fire assay. Min-En used perchloric-nitric acid for sample digestion plus atomic absorption for silver and base metals; gold was determined following a hot aqua regia digestion.

New Ridge Resources Ltd. made use of CDN Resource Laboratories Ltd. of Delta, B.C. during the 1985 exploration program. Atomic absorption procedures were used for determination of trace base and precious metals contents following a nitric acid digestions; gold and silver assays were performed by fire assay with gravimetric finish.

Acme Analytical Laboratories of Vancouver, B.C. was used by Golden Rule for analyses of drill cores recovered in 1991. Pulverized samples were digested by aqua regia for subsequent determination of 30 trace and major elements by ICP methods; gold was determined for 10 gram samples by way of atomic absorption procedures. Drill cores were sampled at 1 metre intervals, split and stored on the property.

The writer is of the opinion that sampling methods and analytical procedures employed between 1971 and 1991 were in accordance with industry standards.

## **Data Verification**

Virtually all of the information used in the preparation of this report is on public record in the form of assessment reports filed with the BC Ministry of Energy and Mines. The writer has no reason to doubt the quality or veracity of these data. All of the exploration work and subsequent reporting was performed by competent, qualified persons.

The writer has not collected samples for analyses from the Porphyry Pearl property.

## **Interpretation and Conclusions**

The Porphyry Pearl property includes at least two styles of gold-base metals mineralization.

The Porphyry Pearl zone in the southern property area, which has received the most attention to date, includes copper-gold mineralization in a porphyry environment consisting of disseminated and fracture-filling sulphide minerals within, and possibly adjacent to, a potentially large, intensely altered, buried granitic intrusion. While values obtained from previous diamond drilling

are generally low, it is significant that entire hole lengths of four 1991 drill holes average 0.28 gram/tonne gold and 0.02% copper. Two of the holes include intervals of 28 and 57 metres averaging 0.723 and 0.538 gram/tonne gold and 0.06% and 0.04% copper. Enhanced gold and copper values within the system are found at hole depths in excess of 100 metres. Only two previous holes have tested the zone to depths of 200 metres.

Gold grades obtained from previous drilling are similar to those reported for the North Kemess deposit in the southern part of the Toodoggone district.

The second style of mineralization known on the Porphyry Pearl property includes a number of epithermal precious and base metals prospects. The Moose silver-base metals zone in the central property area is the most thoroughly investigated of these. Previous closely spaced drilling suggests that the central part of this zone consists of a number of discrete lenses of limited size. Other prospects in the central property area, including the Marmot gold-silver zone and an area of anomalous gold-silver in soils have been only partially investigated.

Epithermal gold-silver mineralization, exposed in several places on the Pearl East claims is associated with northwest and northeast fault zones of regional extent. Only limited exploratory work has been done in this part of the property.

### **Recommendations**

The writer is of the opinion that the Porphyry Pearl property is of sufficient merit to warrant further exploratory work. It is recommended that this additional work be conducted in two phases in order to gain a better understanding of the property. The undertaking of second phase is necessarily contingent on results obtained from the initial work program.

The Porphyry Pearl zone should receive the highest priority for recommended first phase work. Records of previous exploratory work within and marginal to this zone are extensive and in order to prioritize areas for additional work, it is recommended that these data be compiled into a digital, GIS database prior to the undertaking of field work.

A 3D Induced Polarization survey is recommended for the area of the Porphyry Pearl Zone. This system involves a modification of a traditional pole-dipole IP survey but data collected are inverted using 3D inversion computer software to permit a more definitive interpretation. This success of this type of survey depends on the determination of precise station locations and elevations within a surveyed grid. Some 40 kilometres of grid, centred on the currently known limits of the zone, will be required in the Moosehorn Creek valley.

As previously noted, depths of overburden in the area of the Porphyry Pearl zone are in the order of 30 to 50 metres which inhibits conventional geochemical techniques. The writer recommends that an orientation soil geochemical survey utilize partial leach methods prior to analysis.

Surface prospecting and geological mapping in areas of known epithermal mineralization is also recommended as part of first phase work.

A second phase of exploratory work, contingent on the results obtained from phase one work, is recommended to include diamond drilling of targets within and adjacent to the Porphyry Pearl zone as identified by geophysical and geochemical surveys.

## Cost Estimate

### Phase I

GIS data compilation	\$ 25,000.00
3D Induced Polarization survey – 40 line km (includes grid establishment)	\$150,000.00
Geological mapping, prospecting, surface sampling – 50 mandays	\$ 25,000.00
Analytical costs, 500 samples @ \$25/sample	\$ 12,500.00
Air support – fixed wing and rotary	\$ 70,000.00
Camp costs – 270 mandays @ \$100/day	\$ 29,700.00
Technical reporting	\$ 25,000.00
Miscellaneous travel costs	\$ 20,000.00
Contingencies @ 10%	<u>\$ 35,720.00</u>
<b>Total, Phase I</b>	<b><u>\$392,920.00</u></b>

### Phase II

Diamond drilling – 3000 metres @ \$100/metre	\$300,000.00
Analytical costs 1000 samples @ \$28/sample	\$ 28,000.00
Air support- fixed wing and rotary	\$ 80,000.00
Technical reporting	\$ 40,000.00
Camp costs - 300 man days @ \$110/day	\$ 33,000.00
Contingencies @ 15%	<u>\$ 72,150.00</u>
<b>Total, Phase II</b>	<b><u>\$553,150.00</u></b>

## Additional Properties

In addition to the foregoing material property of the Corporation, the Corporation will, if more than the Minimum Offering is raised, also pursue preliminary exploration programs on one or more of the following properties:

### SWAN PROPERTY

#### *Geology Report*

A report titled “Geological, Geochemical and Geophysical Report on the Swan Property, Toodoggone River Area, B.C.” dated July 11, 2005 (the “**Swan Report**”) was prepared for the Corporation by E.T. Kimura, P. Geologist. The following summary has been included with the consent of E.T. Kimura and is substantially a direct extract from the Swan Report. During the period of the Offering, a copy of the Swan Report can be obtained at the head office of the Corporation, Suite 520, 355 Burrard Street, Vancouver, British Columbia, V6C 2G8, and may be examined during normal business hours. The Swan Report will also be available through SEDAR (at [www.sedar.com](http://www.sedar.com)) on issuance of the final decision document for this Prospectus.

The Swan property in the Toodoggone River area (see location in Figure 1) is comprised of 18 contiguous mineral claims totalling 267 units (Figure 2). The total area of the claim block is approximately 6,025 ha. The property is in the Omineca Mining Division on Mineral Titles Reference map sheet M094#035, and more specifically at Latitude 57° 23' N and Longitude 127° 00' W. Two one unit mineral claims, Swan 12 and 13 at the southern boundary are on map sheet M094E025.