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GEOLOGICAL SUMMARY AND CONCEPTUAL STATEMENT OF THE MT. MILLIGAN GOLD - COPPER PORPHYRY DEPOSIT.

Prince George Mining Division,

British Columbia.

Report Commissioned By:

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1.0 REPORTING PARAMETERS

The following document represents a short geological analysis of the results of drilling on the Mt. Milligan porphyry copper-gold occurrence. Emphasis is placed on salient features of lithology, structure and the style and form of alteration and mineralization at Mt. Milligan. Most of these comments should have direct application to subsequent exploration within the deposit area. This report has been prepared at the request of Mr. J. Franzen.

The analysis is based on the author's personal examination of some 18,000 metres of core, as well as selected synoptic drill logs, and 1:2500 scale geological cross sections. Access to complete assay data, detailed 500 scale cross sections, and geological level plans was not available at the time of writing. For this reason, the report addresses broader scale and general features of this deposit. This report is a conceptual summary, and is not a substitute for a comprehensive geological report. This summary does not document the results of drilling subsequent to DDH 89 - 135.

The comments which follow relate to the lithology, alteration, structure and mineralization at Mt. Milligan. They should be used in close conjunction with the 500 scale geological cross sections and 2000 scale 1050 m. geological level plan.

2.0 MT. MILLIGAN: REGIONAL TECTONIC FRAMEWORK

Several large scale tectonic features may influence the potential for exploration on the property and camp scale:

i. The deposit is located within an alkaline intrusive and volcanic suite immediately offboard from the Paleozoic continental margin (GSC Map 1424 - A). This tectonic environment, favors the development and emplacement of both alkaline and ultrabasic intrusive suites associated with persistent, and deep rooted extensional environments.

Within this tectonic framework, additional intrusive bodies, closely related in space and time to the known mineralization on at Mt. Milligan are likely to be developed.

ii. No evidence exists for the presences of major terrane boundaries within the Mt. Milligan area. Significant metamorphic or lithologic discontinuities are not defined across the principle west to southwest verging, low angle (Rainbow) fault.

The polarity of the Rainbow Fault, opposes the regional trends of the more common northeast verging structures. This difference in sign, and the finding that the Rainbow Fault is mineralized, infers a unique genesis for the principle known fault on this property.

iii. Regional metamorphic grades within the project area appear to be subgreenschist, and perhaps as low as laumontite.

Local perturbations of the low grade field, eg. to phrenite-pumpellyite, may reflect the influence of hydrothermal activity related to mineralization. Such changes are identifiable in hand specimen (drill core), and have been documented within other closely related deposits eg. Susut (Wilson and Sinclair, 1987). These shifts are one of several lithologic and chemical vectors which may be utilized to assess and direct drill results particularly within untested areas.

iv. Supracrustal rocks in the vicinity of the deposit appear to belong to the Upper Triassic Takla group. This alkaline, and often highly potassic series, extends in narrow belt across the eastern margin of the Cordillera, and includes equivalent rocks of the Rossland, Nicola, Stuhinia and Takla groups (Mortimer, 1986). The close spatial relationship between intrusive rocks and coeval volcanics, often documented in these environments, (Souther, 1977; Preto, 1979; Fox, 1975) may not apply to the Mt. Milligan deposit.

Preliminary age data on alteration mineralogy, and selective intrusive rocks at Mt. Milligan, suggests Late Cretaceous to Mid Tertiary igneous and hydrothermal events. These unexpectedly young ages are not viewed as impediment to the development of discordant copper gold mineralization on the property. To the contrary, an even broader window of intrusions, of various ages, may initiate mineralizing events.

3.0 MT. MILLIGAN: LITHOLOGY

3.1 SUPRACRUSTAL ROCKS

Volcanic rocks at Mt. Milligan, are correlated regionally with Upper Triassic lithologies, chiefly Takla Group which form the core of the Quesnel Trough.

Selected whole rock chemical data suggest's, that most of these rocks, based on the alkali silica plot of Irvine and Baragar (1971), lie within an alkaline field. Based on hand specimen data, three major volcanic units are used to describe the majority of rocks within the deposit area:

Unit 3: Latitic Flows and Fragmentals

Unit 2: Trachyte Tuffs and Flows

Unit 1: Andestitic Flows and Fragmentals

A tightly constrained chemical classification of these rocks has not yet been formulated, and would require a significantly larger data base. The rock names, currently based on handspecimen data, may be revised when an updated whole rock analytical base develops.

Short descriptive comments for each of these major units follows:

Unit 3: Latitic Flows and Fragmentals

In an unaltered form the principle diagnostic features of these units are:

i) A very dark colour index, C.I.> 40, in unaltered rocks.

ii) Relatively high primary matrix potassium, in both fragmental and flow forms. Matrix potassium feldspar typically ranges from 40 - 60 percent.

iii) Within flow sequences, short stubby pyroxene crystals are abundant in the matrix and are usually much more abundant than amphibole. Harris (1989) suggests that most of these pyroxenes appear, in thin section, to be fine grained actinolite, potentially after pyroxene. Pillowed flow sequences have not been identified in drill core. The general absence of vesicles, in flow members, suggests that the subaqueous deposition of these rocks occurred at significant water depth's, greater than 1000 metres. The general absence of coarse clastic and carbonate rocks also suggest deep water depositional conditions.

iv) Fragmental components of this series are quite diverse ranging from extremely coarse pyroclastics to fine grained ash flows and crystal tuffs. Distribution of coarse pyroclastics does not appear related to local a volcanic centre. Mapping of fragment size variations is unlikely to prove a useful exploration tool for this style of mineralization due to the strongly diachronous nature of the volcanic and intrusive events.

Unit 2: Trachyte Tuffs and Pyroclastics

Rocks in this category form some of the most useful stratigraphic and structural markers on the property. Because of their unique chemistry these units are also important as a favorable host for ore. In the vicinity of the main deposit, 4 to 5 trachyte tuff units may be reliably identified. These units range in thickness from only a few metres to several tens of metres. Principle diagnostic features of these units are:

i. Primary matrix potassium is abundant, often forming greater than 70% of the rock volume. Potassic feldspars are present as extremely fine grained microliths.

ii. Residual mafics are extremely low, < 5%, rock volume. Mafic content may slightly increase toward latite contacts. Colour ranges from a soft pearl grey to dull black green.

iii. Fine grained tuffaceous units, may be locally well bedded, often near the upper and lower contacts of more massive members. These units appear to form as distal turbidites. The stratigraphically lowest, trachyte tuff often displays massive lower divisions bounded above by finely laminated bedded sequences. These features are often cited as diagnostic of subaqueous pyroclastic flow deposits (Fisher, 1982). Textural features indicative of ash falls are generally absent.

iv. Coarse fragments, lapilli and larger, are only rarely noted within trachytic rocks. Chlorite filled amygdales, or possibly porphyroblastic chlorite ovoids, nucleating around pyrite, are infrequently noted.

v. Rapid lateral changes in thickness may be noted within these tuffaceous units. These changes appear to reflect primary topographic features and are on the scale of small third order basins.

Unit 1 Andesitic Flows and Pyroclastics

Andesitic volcanics occupy the stratigraphic base of this succession. These rocks are dominant in the southwesterly portions of the map area. Many of the boreholes on the Creek and Esker Zones are collared in this series. Significant features of these units include:

i. The dominance of amphibole phenocrysts over pyroxene. Unlike latitic flows and pyroclastics, amphiboles within Unit 1 are clearly and readily identifiable.

ii. An increase in matrix plagioclase. Well preserved albite phenocrysts are easily identifiable within the rock matrix. Elevated plagioclase contents cause the overall colour index of the rock to decrease, 20 - 40%.

iii. Fragmentals within this sequence are generally unaltered, dominated by lapilli size fractions, and often heterolithic.

iv. Variations of this interval may include trachyandesites. These rocks are characterized by strongly elevated primary potassium feldspar within the matrix, often within megacrystic amphibole and pyroxene flows, and crystal tuffs.

3.2 INTRUSIVE LITHOLOGIES

Age relations between the following intrusive rocks are used only in an relative sense. Tentative ages on the monzonite and intrusive related alteration, suggests that these rocks are much younger than Jurassic ages initially assigned to them. Of the four intrusive units described, two appear to be contemporaneous with mineralization (Units 4 and 5) and two clearly post-date mineralization (Units 6 and 7). Capsule details of each of the broad categories are briefly summarized:

Unit 4: Monzonite and Related Intrusions

Most of the mineralization on the property may be directly or indirectly related to a relative small 300 x 400 metre, distorted oval shaped monzonite stock. It is unlikely that this body represents the kind of comppsite intrusion best represented by the Hotailuth, Stikine and Hogem batholiths, all of which have protracted intrusion histories. However, used in the context of Northcote (1969), the main monzonite body may be characterized by a series of phases closely related temporally. Contacts between phases may be sharp, sometimes brecciated and alse defined by dykes. Compositional variations within phases are typically gradational. Variations within the monzonite and related intrusions include:

i. Syenomonzonite: This rock forms a minor component of the main monzonite body, usually forming minor dykes (0.5 to 10m's) apparently discordant to the main monzonite. The predominance of dull red potassic feldspar, > 60%, and proportionately decreased plagioclase feldspar, , < 20 percent, amphibole and biotite (< 5%) characterize these rocks. All of these components appear primary.

ii. Porphyritic Monzonite: This unit forms the principle mineralized dyke on the property and has significant economic importance due its close spatial relation to both copper and gold mineralization (cf. DDH 89 - 115). Moderate to crowded plagioclase lathes, (25-40%), light grey colored matrix potassic feldspar (50%) and lesser hornblende and biotite are the principle components of this rock.

Contact relations between the porphyritic monzonite and the main stock may be crosscutting, but are not yet conclusively established. Contact relations between this dyke and the supracrustals are clearly discordant, with the dyke rock typically cutting up section at low angles. The majority of these contacts are also fault bounded.

iii. Intrusion Breccias and Xenolithic Monzonite: Both of these rock types may be closely related. Both usually are developed within, and define, the contact phase of the main intrusive body. Fragmentation within intrusion breccias may be extremely angular with little evidence of resorption of volcanic material. In contrast, the xenolithic phases often does show partial assimilation of volcanic fragments.

iv. Monzonite - Melano and Leuco Phases: Intrusive rocks forming the main stock are characterized by pink to grey pink potassic feldspar matrices, which support sub-aligned plagioclase phenocrysts. All phenocrysts are quite small, 1.0 to 4.0 mm, the entire intrusive body is fine grained. Variations between melano and leuco phases are usually defined by shifts in the percentage of matrix K-spar, and by variations in biotite, magnetite and hornblende. Changes between these two phases often appear to be gradational and may not form mappable units at the present map scale (1:2000).

Very fine grained free quartz, <0.5 mm, phenocrysts are distributed at low levels, 1.0 - 2.0%, in both melano and leuco phases.

Although not definitive, copper mineralization within the intrusion generally favors the more potassic, and potentially later, phases of this body.

Unit 5: Diorites and Dioritic Subvolcanic Intrusions

These rocks are identified as synmineral intrusions based on alteration levels and sulphide (pyrite) development. They may be easily identified on the basis of abundant pale cream matrix plagioclase, a separate phenocrystic plagioclase phase and well developed amphibole phenocrysts.

These intrusions are best developed within Zone 66, eg at the base of boreholes 89-88 and 89-92, as well within selected areas of the Creek and Esker Zones. In the latter, dioritic subvolcanic intrusions may host gold mineralization in discrete veins.

Unit 6: Post-Mineral Diorites

Both fine grained and glomeroporphyritic plagioclase diorite dykes have been drilled throughout the property. These dykes are generally subvertical, and may have a preferential north south alignment. Most of them average 2.0 to 10. m's thick, and are discordant to all other structures except Unit 7 (Trachyte Dykes).

The dykes are unaltered and unmineralized. Due to their relatively small volume, probably less than 5% of the total rock mass, it is not likely that these bodies will significantly dilute mineralization within the main deposit area.

Unit 7: Trachyte Dykes

These extremely fine grained, light grey dykes, are the youngest and volumetrically least significant dyke rock on the property. The matrix is composed very fine grained potassic feldspars (70%) which may support rare (<5%) fine grained plagioclase. These rocks seldom exceed 2.0 m's in true thickness.

4.0 MT. MILLIGAN: STRUCTURE

Structural relations within the current area of drilling on the property are reasonably straightforward.

i. Supracrustal lithologies, strike 20 - 30 degrees west of north, and dip modestly east, 30 to 50 degrees. Close to intrusive contacts, 50 - 75 metres or less, stratigraphy steepens and may locally be reflected into steep drape folds, subparallel to the intrusive contacts.

ii. With very limited exceptions stratigraphy on this portion of the property is upright, based on sedimentalogic younging features.

iii. On both the eastern and western margins of the intrusion, contacts, although somewhat irregular are west dipping at 45 - 70 degrees. The northern contact of the intrusion, L 98+00 N, rakes to the south.

iv. Penetrative secondary fabrics within supracrustal lithologies are extremely weak. Bedding cleavage lineation intersections are typically absent. These data suggest that all penetrative planar fabrics, within supracrustals, are primary in origin and represent original depositional surfaces. Some of the apparent deformation of these surfaces, particularly within fine grained tuffaceous units, is soft sediment in origin.

v. Well defined fault structures have been repeatedly encountered within the area of drilling and demonstrate at least three distinct forms:

1. Low angle reverse faults.

The Rainbow Fault is a persistent east dipping, north striking, low angle reverse fault. The fault is a contraction fault based on the lose of trachytic tuff markers identified on line 91 + 00 N, between boreholes 89-88 and 89-92. Absolute displacements have not been determined. This structure may be used by the porphyritic monzonite dyke as a structural weakness and favored zone of emplacement.

2. East north-east striking dextral faults.

One of these structures is clearly defined on the 1050 m. geological plan. Offsets across this fault are defined by displaced trachyte tuffs. General strike relations within this fault may closely correspond to the orientation and position of vein systems in the Creek zone. A similar, but as yet undetected fault system, may be closely linked to the formation of shear hosted veins in the Esker Zone. North-east striking dextral faults, likely subvertical in orientation, appear to predate formation of the low angle Rainbow fault.

3. Normal Faults.

A significant normal fault structure offsets the porphyritic monzonite, several 10's of metres, between boreholes 89 - 71 and 89 -73, L 97+00 N. The orientation of the dip surface of this structure is currently enigmatic. In the southeast corner of the property, this broad fault appears moderately east dipping, to the north, west dips are required. Several boreholes eg. 89 - 93, 89 - 88, 89 - 111 are essentially collared in a very significant fault. The width of this failure is not consistent with the development of a single discrete fault system. It is likely that the large apparent widths of this fault, in the southeast corner of the deposit area, (L 93+00N to L 90+00N, 136 to 138 E) is caused by the development of anastomosing bridge structures linking several zones of failure. These faults appear to be post mineralization, have formed at very high crustal levels and have been repeatedly activated. Extreme brittle failure, complete gouge development and the formation of extensional carbonate breccias are all common.

5.0 MT. MILLIGAN: ALTERATION

Alteration styles at Mt. Milligan conform quite well with porphyry copper alteration models developed principally for calc-alkalic settings, eg. McMillan and Panteleyev (1980). The unique bulk chemistry of highly potassic volcanic rocks and the monzonitic to syenitic nature of the intrusions does introduce modifications to the standard alteration patterns. The deposit lacks a phyllic core, which potentially reflects the alkalinity of hydrothermal solutions and limited development of hydrogen ion metasomatism.

The distribution of alteration within the deposit area is highly asymmetric. Penetration of potassic, propylitic and carbonate alteration assemblages is much stronger over the eastern flank of the main intrusive body. This asymmetry may be related to the distribution of large scale fault structures, which are predominant on the eastern half of the deposit area. It may also reflect the distribution of a much more diverse range of alkaline rock types over the eastern flank of the intrusion.

Principle features of alteration at Mt. Milligan may be summarized as follows:

i. Potassic Alteration.

This alteration suite forms proximal to the main intrusive body and in association with smaller dyke forms. Within this alteration zone, dominate secondary silicates include potassium feldspars and hydrothermal biotite. Sulphide and oxide phases are dominated by magnetite-chalcopyrite-pyrite. These assemblages are stable and form es a result of wallrock - fluid interactions with weakly alkaline solutions above 300° C (Hudson, 1983).

Secondary potassic alteration assemblages develop in all rock forms, both volcanic and intrusive. It is most easily identified within latitic volcanics where strong, diffuse washes of aphanitic, grey pink K-spar replaces mafics and primary feldspar. K-spar in this setting often forms pervasive replacement of the pre-existing rock matrix. In trachyte tuffs, secondary K-spar may be difficult to distinguish from the abundant primary potassic feldspar microliths in the rock. Corroded crystal forms, alteration byproducts and local permeability changes are useful parameters in distinguishing the origins of potassic feldspars.

In intrusive rocks, secondary potassic feldspar is usually present within well defined K-spar rich veinlets and microveinlets. Pervasive replacements have not been noted. Matrix feldspar in the monzonite stock is generally primary.

Hydrothermal biotite commonly develops in volcanic rocks in close proximity, 100 m's or less, to the monzonite stock. Secondary biotite is extremely fine grained, < 0.5 mm, and dark brown black in colour. It is usually intimately associated with secondary K-spar and magnetite.

All of the contact effects seen proximal to the main intrusion are metasomatic, none appear to be isochemical, or qualify in the strict sense as hornfelsed.

Contacts between alteration phases, eg. potassic-propylitic, are seldom sharp, and only rarely are well defined alteration fronts noted.

ii. Propylitic Alteration

Propylitic alteration assemblages are developed up to 500 m's from the main monzonite stock. This assemblage forms in response to falling temperature conditions, 230° C, and a shift to slightly more acidic hydrothermal solutions (Hudson, 1983). The alteration assemblage includes epidote, albite, carbonate, chlorite and pyrite. Propylitic assemblages often form coarse aggregates, several cm's across, which form from the core out, the sequence pyrite-epidote-carbonate. Albitization is sporadically developed within the propylitic zone, but volumetrically is very subordinate to epidote dominated alteration types.

Propylitic assemblages may also form the main components of small pyrite - epidote stockwork and carbonate vein complexes. These veinlets are often associated with higher grade gold zones distal to the stock.

This alteration form is only seen in volcanic rocks, and is most obvious in latitic and andestitic fragmentals. Within trachyte tuffs, epidote - albite seldom forms, and the assemblage shifts to chlorite - carbonate - pyrite. As in latitic volcanics, this alteration type may also be related to gold mineralization.

iii. Carbonate Alteration

Development of carbonate alteration is the most distal of all alteration sequences which are related to the main intrusion. Pervasive carbonatization, > 40% matrix calcium carbonate, develops in the extreme south easterly portions of Zone 66, eg. L 90+00 N, 133+00 to 137+00 E.

This alteration sequence is dominated almost exclusively by calcium carbonate, and develops distally to epidote and propylitic assemblages. This alteration type may more simply represent a mon-mineralogic variation of a propylitic form. Pervasive carbonitization, occurs without a strong sulphide or oxide associaion, and only in volcanic rocks. It is not believed to be favorable assemblage for the development of copper - gold mineralizatioo.

Within, and very close to, < 50 m's, the monzonite stock, iron rich carbonates appear as the early stable form of carbonate. This carbonate is very fine grained, < 0.25 mm, and correct identification in handspecimen is difficult.

Post porphyry-mineralization carbonate alteration may found as carbonate filled extensional veins within all rock types on the property. This narrow veins, usually less than 0.5 m, may also occur in fault and shear zones with associated vein type base and precious metals.

6.0 MT. MILLIGAN: MINERALIZATION

Mineralization at Mt. Milligan occurs in three principle forms, within differing temporal, lithologic and hydrothermal systems. These include (i) fault and shear related veins, (ii) porphyry style mineralization developed internal to the main stock, and (iii) porphyry style mineralization formed in the enclosing volcanics, external to the intrusion.

6.1 FAULT AND SHEAR ZONE RELATED BASE AND PRECIOUS METAL VEINS.

Mineralization of this form may show only a loose spatial linkage to the main intrusive event. Two quite different examples may be used to characterize this type of mineralization:

i.) 79 Vein.

A well defined quartz carbonate vein system is intersected in borehole 89 - 79 at approximately the 155 metre mark. Sphalerite and galene are the principle base metals and serve as useful indicators for favorable precious metal development.

The vein system is hosted by latitic fragmentals, which demonstrate moderate sericitization, sulphidation and the development of green micas, within a 1.0 to 2.0 metre envelope around the principle vein. This structure is intersected at relatively oblique angles to the core axis, 30 degrees; true thicknesses may be significantly less than intersected widths.

Veins appear to be emplaced in a steeply orientated north south striking fault system, which is intersected to the south in borehole 89 - 94. This structure is clearly identified on the 2000 scale 1050 m geological level plan.

Vein systems within the Creek and Esker zones share some similarities to the 79 vein intersection. However, veins in these two occurrence areas may carry semi-massive pyrite concentrations, and slightly weaker development of quartz and carbonate gangue products. Vein widths are typically in the range of 1.0 to 2.0 metres. Textural relations in the massive sulphides, the nature and distribution of alteration halo's to the veins, and the lithologic setting all indicate that veins and sulphides of the Creek and Esker zones are not syngenetic and solely represent discrete, discordant shear hosted veins.

The current data base, on these vein structures, in particular their size, the strength of alteration and fabric development, suggests that they should be considered a low priority exploration target.

ii. Rainbow Fault

Gold mineralization associated with this fault appears to form as a diffuse envelope, within and external to, this low angle fault. Although the main fault structure is occasionally mineralized, strongest gold values are more often obtained in proximity to the hangingwall plate.

The zone differs radically from structurally hosted mineralization of the 79 Vein, Creek and Esker zones, in the much weaker development of discrete large scele quartz carbonate veins. In the southeast zone, or Zone 66, higher grade gold mineralization may be related to the formation of small anastomosing pyrite-carbonate-epidote veinlets as well as amorphous pyrite epidote aggregates. These veins are usually less than 1.0 cm in width, and display narrow 1.0 - 2.0 cm alteration halo's. These structures, and the more amorphous sulphide forms, may sum cumulatively to form minable widths, 10's of metres.

Sulphidation of the host rocks in this fault related envelope, pyrite typically ranges in the order 5 - 15 percent, can only be considered modest within a camp scale setting.

Mineralization related to this fault is discordant to stratigraphy, it may also be discordant to the dominant intrusive related alteration assemblages. Additional work should be done to definitively demonstrate the potential concordance or discordance between intrusive related alteration patterns and those associated with gold mineralization in the southeast zone.

The persistence of this fault structure and the general continuity of mineralization within it, renders it an important exploration target over the southeast portions of the property. This structure is likely to persist along strike to the south (south of Line 88+00 N) and potentially to untested regions along strike to the north (north of Line 99+00 N).

6.2. INTRUSIVE RELATED MINERALIZATION: EXTERNAL TO THE MONZONITIC STOCK (Volcanic Hosted)

Intrusive related mineralization external to the main stock, within volcanic lithologies, develops in the following forms:

i). Laminated Bedding Parallel Sulphide Replacements

Within bedded trachyte tuffs, chalcopyrite and pyrite may form bedding parallel lamella. These structures are typically 2.0 to 5.0 cm's in width, and may significantly enhance overall copper grades. This form of sulphide replacement is well demonstrated in borehole DDH 89 - 123, and is directly related to both enhanced copper (0.8%) and gold (0.03 oz./t) mineralization over significant widths, 25.8 metres.

This type of sulphide replacement clearly demonstrates the significance of bulk rock composition in influencing the style, form and strength of mineralization. Within supracrustal rocks, trachyte tuffs often appear preferentially sulphidized. The actual component of the bulk rock chemistry which favorably interacts with transgressing hydrothermal fluids is not yet known. Regardless, the end result is a the development of a favorable host rock to mineralization.

Trachyte tuff units will continue to serve both as excellent stratigraphic markers and as favored ore hosts to the development of higher grade copper-gold zones. Continued delineation of trachyte-intrusive contact zones may critically enhance the overall tenor of this deposit.

The data base to date, suggests that this form of mineralization forms only in close proximity, 50 to 75 metres, of an intrusive source. Distal replacement bodies have not as yet been identified.

ii). Stockwork Chalcopyrite Veinlets

In volcanic rocks, stockwork chalcopyrite veins are generally modestly developed. Most often these veins penetrate volcanic rocks in close proximity, 75 - 100 metres of intrusive contacts. Dominate gangue mineralogy includes carbonates, epidote-chlorite, K-feldspar and lesser silca - albite.

Hairline sulphide filled fracture surfaces, without significant gangue material, may in terms of their net metal content, be a more significant sulphide from than veinlets associated with a well defined gangue mineralogy.

All vein forms are discordant to all rock types, if any lithologic control exists, it is extremely weak.

In most of vein systems, silica is a subordinate component. The exceptionally well presented chalcopyrite quartz stockwork intersected in borehole 89-135, is a strong exception to the general finding. Very strong gold values within this stockwork are surprising in light of the extremely limited wall rock interaction effects identified on vein margins. The high gold and copper values within a silica rich system suggests that silicate-sulphide stockworks represent a very late hypogene mineralizing event, similar to that identified in other porphyry settings, eg. Afton (cf. Wong, 1987).

The control on the emplacement of these late veins becomes an extremely important exploration problem. A strong effort should be made to determine the overall orientation of the silicate sulphide envelope as well as the mean orientation of individual veins, This may be achieved from a careful examination of the vein forms from boreholes near DDH 89-135. An overriding structural control may be in effect.

iii). Chalocopyrite - Bornite Disseminations and Aggregates.

Discrete sulphide aggregates, without a visible stockwork control appear to be the most distal form of sulphide development on the Mt. Milligan property.

This mineralized form most often develops within propylitic alteration assemblages, and in hand specimen, magnetite-chalcopyrite grains appear to nucleate around iron rich mafic precursors. It is unlikely that this nucleation occurs in the absence of enhanced rock permeability via microfractures. These fractures may be below hand specimen resolution. A role of primary permeability, eg. size and angularity of volcanic fragments, cannot be definitively demonstrated as a controlling factor to this more distal form of mineralization. Primary permeability controls on porphyry mineralization have been proposed for mineralization in occurrences between Merritt and Princeton (Preto, 1979) and for the QR deposit (Melling and Watkinson, 1988).

Depending on the presence or absence of bornite two sulphide phase groups develop:

1. chalcopyrite - pyrite - magnetite

2. bornite - chalcopyrite - magnetite

In bornite rich zones, eg DDH 89-105, disseminated pyrite is significantly decreased relative to other sulphide forms. Bornite is deposited proximally to the main stock, chalcopyrite - pyrite, distally.

The presence of disseminated bornite, close to the monzonite stock, may permit the development of a high grade copper shell juxtaposed against the intrusion. This zone would become a priority drill target with subsequent infill drilling, and a preferred target type for subsequent step out exploration work.

6.3. INTRUSIVE RELATED MINERALIZATION, INTERNAL TO THE MAIN STOCK, RELATED DYKE PHASES AND HYBRIDIZED CONTACT ZONES.

Mineralization with the strongest spatial and temporal links to the main intrusive event may be quickly summarized in the following manner:

i. Mineralization Within Hybridized Contact Phases

Mineralization hosted in the immediate proximity to the intrusive stock, 25 - 50 metres, often occurs within a volcanic rock form which has been strongly contaminated by intrusive rock suites. Intrusive and hydrothermal contamination of volcanic rocks increases towards the intrusive contact. Mineralized contact phases have been drilled which flank the main intrusive body, and are associated with several lesser dyke phases including the porphyritic monzonite.

Contact phases are intended here to include, classical intrusive breccias, xenolithic intrusions and dyke swarms. All of these components commonly develop within 25 metres of the main intrusive contact. Contact relations may be extremely irregular for this hybrid rock form.

Mineralization in this zone is dominated by copper. Gold values, even in the context of this deposit, tend to be weak. Chalcopyrite may display a diverse range of form, including well defined copper rich veins, frequently with a potassic gangue, discrete aggregations, fine disseminations and late hairline fractures. Magnetite breccias, with associated chalcopyrite, often are associated with this lithologic type. The typically strong mineralization which develops in these zones reflects the rapid changes in bulk rock and hydrothermal chemistry, and frequently excellent structural preparation encountered in these zones.

Mineralization hosted by contact phases significantly increases the effective size of this stock. More importantly, they may contain a disproportionately higher net metal content, relative to core zones. This hybridized rock type, and mineralized setting, is an extremely important drill target on the property. The irregular nature of contact attitudes, and modest widths of the contact shells may necessitate targeting of boreholes on other than east west / north south azimuths.

ii.) Stockwork and Disseminated Mineralization - Internal to Intrusive Contacts.

Well defined, narrow, usually less than 0.5 cm., chalcopyrite stockworks are often found in the main intrusive body. The strength of potassic alteration selvedges are the principle distinguishing features of these veinlets, when compared to the carbonate - silicate stockwork veinlets hosted by volcanic rocks. The overall distribution, and age relations of a very large variety of stockwork veinlets has as yet not been well established. Chalcopyrite is the dominant copper sulphide in these stockwork systems.

All vein syetems internal to the stock show evidence in hand specimen for multiple episodes of healing and refracturing. Both potassic and silicate veins in the stock may be mineralized. The very youngest, carbonate-chlorite-quartz veins are unmineralized.

Extremely fine grained, < 0.5 mm, chalcopyrite - magnetite disseminations may reflect deposition of a primary melt sulphide and oxide phase, prior to latter stockwork mineralization. Bornite is an insignificant copper phase in the monzonite stock. Disseminated mineralization may occur unexpectedly throughout the main body of the monzonite. This finding precludes assuming that any portion of the monzonite stock, for the example the core zone, is unmineralized.

For both stockwork and disseminated forms of mineralization, strongest sulphide deposition appears to occur near components of the stock most subject to rapid changes in bulk rock chemistry, ie. chemical traps, and within structurally favorable sites. These conditions are provided by large xenolithic rafts penetrated deep within the main intrusion, eg. DDH 89 - 110.

7.0 GENERAL COMMENTS

Based on the map and drill data available to date, DDH 89-135, several observations are relevant to the genesis and economic potential of this deposit and its immediate surround.

i. The Mt. Milligan deposit fits closely a model described by Sillitoe (1979), for porphyry copper gold deposits, deposits with greater than 0.5 g/T Au. These deposits are characterized by feldspar stable alteration assemblages (biotite - Kspar), and are usually related to the emplacement of plutons at shallow depths, 1.5 to 4.0 km.

ii. The tectonic significance of alkaline magmas vastly outweighs their distribution. These unusual igneous rocks, usually form along major tectonic sutures, collision boundaries, and may provide access to deep mantle fluids. The association between alkaline rocks and porphyry copper deposits has long been recognized in the Western Canadian Cordillera. More recently, in Archean systems, strong linkages are currently being developed, principally by Colvine and his co-workers at the OGS, between late alkaline intrusions and gold mineralizing events.

iii. Higher grade zones in this porphyry style deposit are undoubtedly controlled by specific and predictable structural, lithologic and hydrothermal parameters. Successful pursuit of these zones will require quantitative and semi-quantitative evaluation of these controls. Included in these categories would be the formulation of semi-quantitative alteration maps, structure contour maps of the distribution of principle lithologic and structural features, and the construction of detailed grade thickness contour plots.

iv. Continental Gold Corporation is ideally positioned to utilize and apply the expertise developed on the Mt. Milligan deposit proper, to more effectively guide and delineate subsequent exploration on the property. In addition, the data base acquired at Mt. Milligan may equally be applied to the evaluation and development of copper gold occurrences in similar tectonic settings, eg. Rossland, Nicola and related volcanic groups, across the Western Cordillera.

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STATEMENT OF QUALIFICATIONS

I, JIM L. OLIVER, of the City of Kamloops, Province of British Columbia, **DO HEREBY CERTIFY THAT:**

1. I am a Consulting Geologist with a business office at 4377 Karindale Road, Kamloops, British Columbia, V2C 1Z3.

2. I hold a combined degree, Bachelor of Science, Honors Geology and Geophysics, granted by the University of British Columbia (1982), a Master of Science in Geology, granted by Queen's University (1985) and I am currently enrolled in a Doctoral program at the latter university.

3. I am a Fellow of the Geological Association of Canada.

4. I have actively practiced my profession as a geologist for the past eight years.

   Pre-graduate work experience includes base and precious metal exploration in British Columbia and the Yukon (1979 - 1981).

   Postgraduate work experience includes exploration for gold and base metals in Ontario, the southwestern United States and in British Columbia (1982 - 1989).

5. Between February 1st, 1989 and May 15, 1989, I examined in detail some 18,000 metres of NQ core drilled on the Mt. Milligan deposit. The statements reached in this report are based on this data base.

6. I own no direct interest in any of the subject property, but I do hold an option on 7,500 shares of Continetal Gold Corporation, granted in accordance with the regulations of the Vancouver Stock Exchange.

Jim L. Oliver, M.Sc.

Dated at Kamloops, British Columbia, this 1 st day of June, 1989.