

**GEOLOGY, MINERAL POTENTIAL & 2005 WORK
COMPLETED AT THE ROMIOS GOLD
RESOURCES PROPERTY, McLYMONT CREEK-
FORREST KERR AREA, NW BRITISH COLUMBIA.**

NEWMONT LAKE GOLD-COPPER PROJECT

LATITUDE: 56 52' 00"

LONGITUDE: 130 55' 00"

NTS MAPSHEET Nos: 104B086 / 096

**An Assessment Report Prepared for
Romios Gold Resources Inc.**

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GEOLOGY, MINERAL POTENTIAL & 2005 WORK COMPLETED AT THE ROMIOS GOLD RESOURCES PROPERTY, McLYMONT CREEK-FORREST KERR AREA, NW BRITISH COLUMBIA.

1. INTRODUCTION

In late August and early September 2005, I spent 16 days examining and mapping some prospective parts of the very large claim block held by Romios Gold resources Inc., in the Iskut River area of northern BC (Figs. 1A and 1B; Appendix A). Our exploration crew was based on the property at the old Gulf International Minerals Ltd camp situated on McLymont Creek at UTM 383121E-6298595N (*Note: unless otherwise stated, all UTM's quoted in this report are using a NAD 83 datum*). The crew, which was headed by Carl Von Einsiedel, also included prospector Brian Dahl and two young field assistants. Later, prospector Pat Suratt joined the work-party. Access for mapping around the camp area (Map 1) was made by foot, but a helicopter was necessary for transport elsewhere on the property (Maps 2, 3 and 4).

Numerous, widely scattered Cu, Pb-Zn-Ag and Au mineral showings occur throughout the Romios claim block, some of which were the focus of previous exploration and drilling in the 1970's and 1980's. There is a wide variety of mineralization styles on the property, including:

- (1) Intrusion-hosted meso-thermal quartz-pyrite veins that contain some Au-Ag ± Cu mineralization. This is typified by the **Camp Zone** mineralization where veins reach 1 meter in thickness and can be discontinuously traced along strike for up to 400 meters.
- (2) Fault-controlled, carbonate-hosted silica-quartz ± barite veins and replacements that contain Zn, Pb, Ag and sporadic Au mineralization, as seen at the **Cuba South and Cuba North** showings.
- (3) Sediment-hosted, structural and stratigraphically-controlled mantos, chimneys and irregular replacement bodies of massive, pyrite-rich Au-Ag-Cu ± magnetite mineralization, as present at the **NW Zone** and the **Jazzman and Boulder-Arseno-sulfide occurrences**. Locally, the carbonate-hosted mineralization contains minor amounts of garnet-clinopyroxene skarn mineral assemblages.
- (4) Sediment-hosted Cu-Au-Ag skarns represented by the mineralization at the **Ken, Glacier and Rope Zones**. In addition to the garnet-pyroxene-epidote mineral assemblages, these contain abundant pyrite and magnetite together with sporadic chalcopyrite and secondary Cu oxides and carbonates.
- (5) Extensive and massive silica-chert ± pyrite replacement of various sedimentary and tuffaceous packages as seen at the **Black Bear and Gorge Zones**. This alteration is locally associated with minor sporadic Au-Ag ± Pb ± Zn mineralization.
- (6) Areas with either extensive Fe carbonate ± barite ± Zn and clay alteration as present at the **North Grid Zone**, or irregular jasper replacements as seen at the **Podded Jasper occurrence**. Both these styles of alteration may be surface expressions of the NW Zone-type massive pyritic mineralization at depth.
- (7) Thin, stratiform jasper beds containing trace pyrite and specular hematite as seen at the **Bedded Jasper occurrence**. These jasper horizons were seen south of the

North Grid Zone, where they probably represent distal hydrothermal expressions of either sedex or VMS (volcanogenic massive sulfide) mineralization.

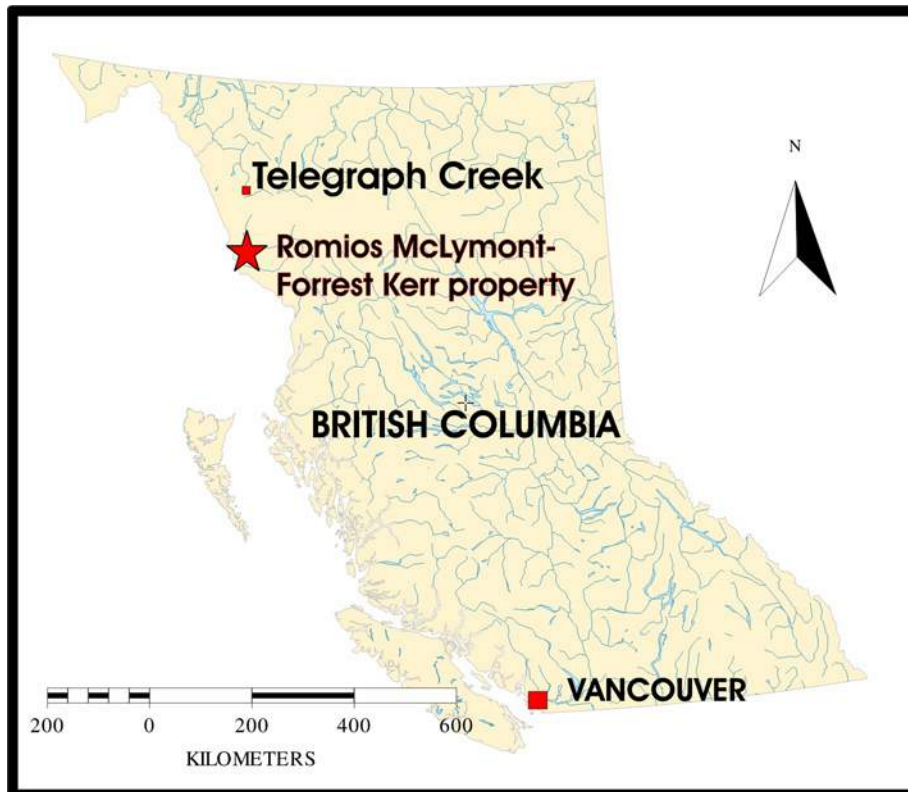


Figure 1A: Location of the Romios Gold Resources property in the McLymont Creek-Forrest Kerr area of NW British Columbia.

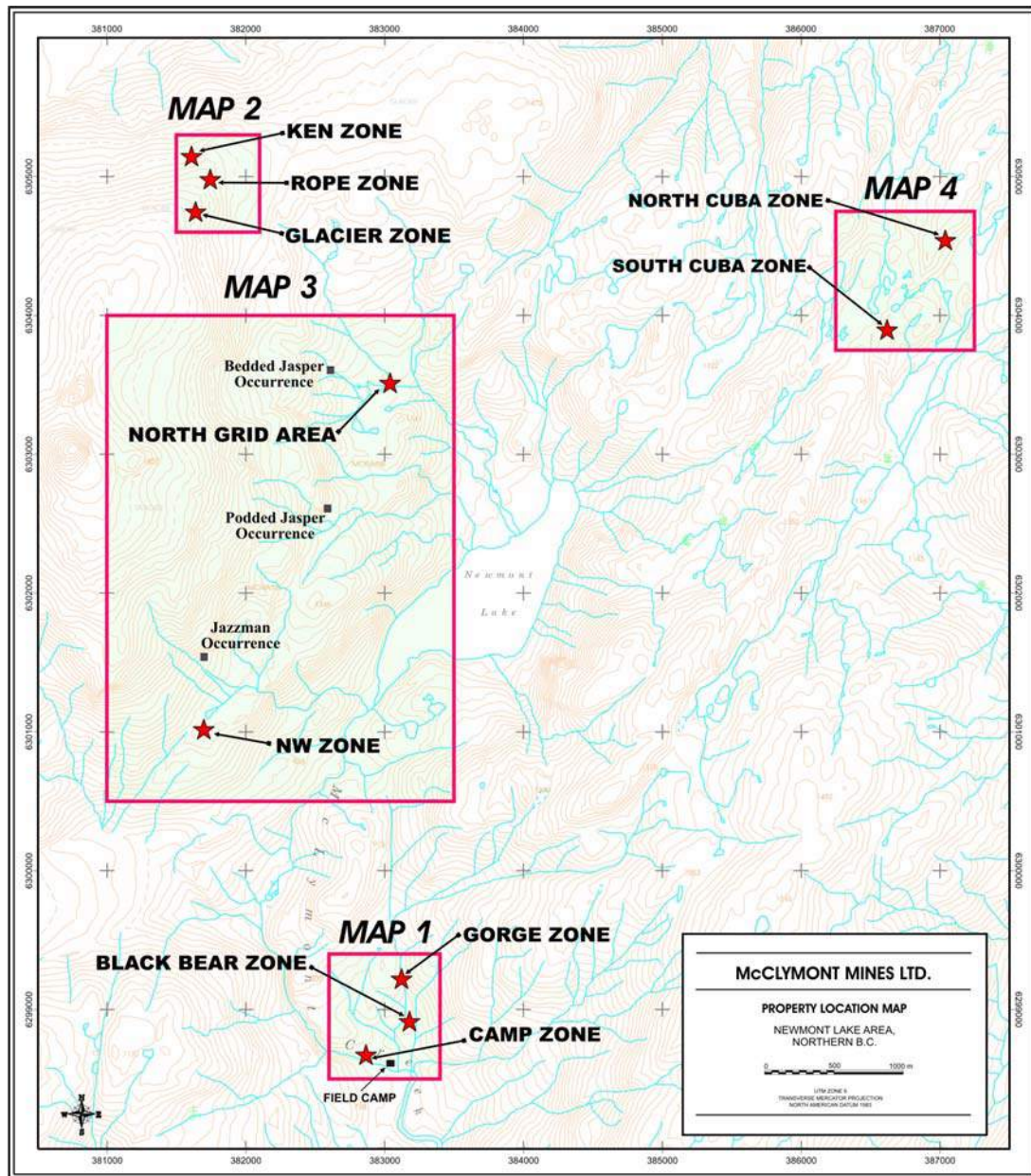


Figure 1B: Location of the Romios Gold Resources property showing the specific areas mapped and examined during the 2005 field season.

2. WORK ACCOMPLISHED

During the 2005 season the following work was accomplished on the property:

- (a) A helicopter borne magnetometer survey by Fugro Airborne Surveys Corp, the results of which are outlined by Harrison (2005) (Appendix B). The survey was completed between the 18th and 22nd of May 2006, and covered a 1144 km² area. Flight lines were spaced between 100 and 400 meters apart and flown in either E-W or N-S directions. The airborne sensors were flown at a height of approximately 40 meters above the ground.
- (b) A 3D induced polarization survey (IP) conducted by SJ Geophysics Ltd., which was completed between the 13th and 28th of September 2005 (Sheldrake, 2005;

- Appendix C). IP/resistivity measurements were taken along a total distance of 7.2 km, and the lines were orientated approximately NW-SE. Surveys were completed over three separate grids, each lying close to a major structure, the McLymont Fault.
- (c) A program of core-sampling was undertaken to test and check some of the richer auriferous intersections outlined by previous drilling in the 1980's and 1990's. Since the original drilling took place, the core has been stored at the McLymont Creek camp, which is only accessible by air. The 2005 test sampling was supervised by Carl Von Einsiedel and focused on mineralized intersections through the NW and Ken Zones, as well as some core from the Jazzman and Boulder zones. Assay results of the test sampling are shown in Appendices D, E and F.
- (d) The author examined the six holes drilled at the Ken Zone (Map 2), and the 60.7 meter-long hole 88PG-06 was re-logged. Details of the geology and alteration are presented in Figure 2 (in pocket).
- (e) In August and September 2005, the author completed geological mapping in the following areas:
- i. Three days of 1:2500 scale mapping over parts of the Camp, Black Bear and Gorge Zones (Map 1).
 - ii. Three days doing 1:2000 scale mapping over the Ken, Rope and Glacier Cu-Au skarn zones (Map 2).
 - iii. Two days completing 1:5000 scale reconnaissance mapping along the structural trend that marks the NW, Jazzman and North Grid Zones (Map 3).
 - iv. One day competing 1:5000 scale mapping in the vicinity of the North and South Cuba Zones (Map 4).
- (f) During the 2005 season, a number of mineralized rock samples were collected, and most were submitted for assay (Appendix G). Prospectors Pat Suratt and Brian Dahl collected 10 and 7 samples respectively, while one sample was taken by Carl Von Einsiedel (Appendix G). In addition, the author collected 25 samples of which 24 were assayed (Appendix G). Since drilling and sampling in the 1980's at the Ken Zone had presented a large geochemical database for this prospect, no assay surface samples were collected from this area. Instead, the assay samples collected by the author were taken from Gorge, Black Bear, Jazzman Zone, North and South Cuba, Bedded Jasper, Podded Jasper and Camp zones; the assay data for these and other surface samples are presented in Appendix G.
- (g) During the 2005 season, Romios drilled one test hole (DDH-0501) on the property using a helicopter-borne set-up. In the 1990's, Gulf International Minerals Ltd had planned to drill two holes to test the Black Bear Zone at UTM's 383176E-6298925N and 383181E-6298952N. However, these were never completed due to bad weather. Subsequent to the 2005 mapping program, the author recommended (Ray, 2005) that a minus 60 degree hole be driven in a 185 degree azimuth direction from a pad constructed at UTM 383153E-6298635N (Map 1). Since this pad lay only a few hundred meters north of the McLymont camp it was hoped that drill costs would be kept to a minimum. The purpose of the hole was to intersect the Black Bear Zone pyritic silica adjacent to the

northern margin of the auriferous Camp Stock. In September 2006, subsequent to my departure, the hole was driven to a depth of 787 feet but it was not logged or sampled in detail (C. Von Einsiedel, personal communication, 2006). The hole reportedly intersected variably silicified and pyritized metavolcanics but did not reach the margin of the Camp Stock. It is recommended that this test hole should be logged in detail and sampled.

3. PREVIOUS WORK IN THE REGION

Much of the published and unpublished work related to the Iskut River district is listed in the Bibliography (*Section 13.0*). Some of the earliest regional geological mapping in the region was done by Kerr (1948), as well as later work by Anderson (1989), Logan and Koyanagi (1994), and Logan et al. (1997; 2000). Comprehensive reviews of the past exploration work in the region have been given by Nicholson (2004) and Kirkham (2004), and much of the following section is based on their work.

The intrusive geology and structural setting of the Romios claim block has many similarities to the area hosting the **Galore Creek Cu-Au porphyry deposit** (Watson, 1969; Allen et al., 1976; Enns et al., 1995). Thus, this deposit and other alkalic porphyries such as Copper Mountain and Mount Polley (Preto, 1972; Fraser et al., 1995) represent valid exploration models for the claim block, and a considerable part of future efforts should be directed to this type of target. The Galore deposit area was first staked in 1955. Between 1960 and 1979, Kennco, Hudson Bay Exploration and Development and Cominco completed approximately 80,000 meters of drilling on the so-called Central Zone at Galore Creek. In 1987, Hudson Bay Exploration began to assess the Cu-Au potential of mineralization outside the Central Zone, and more recently Galore Creek has been the focus of extensive exploration by Novagold Resources Ltd.

Some of the earliest recorded exploration work in the Newmont Lake area was carried out by Newmont Exploration in the early 1960's. They staked the **Don and Ken Claims**, and during the early 1960's and 1970's they completed geological mapping, magnetic surveys and several small diameter core holes at the Ken Zone to test scattered outcrops of the Cu-Au-bearing skarn mineralization (Map 2).

In 1980, DuPont Canada staked the southern part of the current Romios property (which they referred to as the Warrior Claims). Follow-up work by DuPont and Placer identified the intrusion-hosted Au-bearing quartz veins along McLymont Creek in what is now known as the **Camp Zone**. In addition, other stream sediment anomalies were recorded although Kowalchuk (1982) notes that their source was not discovered, and in 1986 DuPont let Warrior Claims lapse.

The ground was then re-staked as the McLymont Claims by Gulf International Minerals Ltd. In the mid 1980's several significant precious metal-rich deposits were discovered elsewhere in the region. These included **Eskay Creek, Johnny Mountain and the Snip deposits**. The area north and west of the McLymont claims was staked by several small junior mining companies including Jazzman Resources Inc., Pezgold Resources and International Prism Exploration, Kirby Energy Inc., Thumper Resources Corp., Kestrel Resources Ltd., and Consolidated Sea Gold Corp / Bryndon Ventures Ltd.

In 1986 Gulf International Minerals drill-tested the Au-bearing veins in the Camp Zone and completed reconnaissance prospecting and sampling in the northern parts of the McLymont claims. This work identified a previously unknown, northeast trending zone of Au-Ag-Cu mineralization in the north-west part of the McLymont claims. This mineralization, which became known as the **NW Zone**, lay immediately west of the major controlling McLymont Fault (Photo 1). In addition, several other new targets were recognized north of the Camp Zone including the **Black Bear, Valentine and Gorge Zones**, although these were not drilled.

Nicholson (2004) reports that between 1986 and 1990, Gulf International Minerals put down 148 holes totaling 16,633 meters to test the extent of the **NW Zone**. Jaramillo (1991) reported that the zone has a strike length of >300 meters and extends to a depth of 200 meters below surface. It appeared to be open both to the NE and SW along the McLymont structure. However, after 1990 no further exploration work was carried out on the NW Zone. Some petrographic studies proved the presence of andraditic garnets in parts of the deposit, and Pb isotope analyses on galena suggests the mineralization is early Jurassic or older in age (Ray et al., 1991; Godwin et al., 1991).

Nicholson (2004) reports that some prospecting, sampling and diamond drill testing was carried out in the late 1980's by Pezgold Resources and International Prism Exploration, Kirby Energy Inc., Thumper Resources Corp., Kestrel Resources Ltd. and Connecticut Developments Ltd. The former Pezgold-International Prism claims cover the north central part of the current Romios claim group (including the Ken Zone). In 1988 Pezgold Resources drilled six short holes to test the mineralization at the **Ken Zone** (Map 2) which had been identified by Newmont in the early 1960's. Minor test drilling was also completed further south on the **Glacier Zone**, although no drilling was apparently done at the intervening **Rope Zone** (Map 2).

Drilling at the **Ken Zone** intersected several magnetite-garnet skarn units with significant Cu-Au mineralization. Nicholson (2004) reports that results included a 5.4 meter interval in DDH 88PG1 which assayed 0.082 oz/t gold and 0.832% copper and 6.0 meter interval in DDH 88PG5 which averaged 0.076 oz/ton gold and 0.940% copper. Elsewhere, Pezgold Resources also identified extensive areas of brecciated limestone containing Fe carbonate and barite with elevated base metal values and Ag values ranging from trace levels to 1800 grams per tonne.

During 1987, a consortium of companies, not including Gulf Minerals, contracted Dighem Airborne Surveys to fly a helicopter airborne magnetic and VLF-EM survey over the Newmont Lake area. Flight lines were oriented North-South and were spaced at 250 meter intervals. Nicholson (2004) reviewed this survey data but the lack of coverage in the area of the NW Zone and the wide spacing of the survey lines resulted in poor definition of anomalies compared with the survey later completed by McLymont Mines Ltd in 2004.

Prospecting and mapping further east identified some limestone-hosted mineralization at the **North and South Cuba Zones**, which lie near the eastern side of the Newmont Lake Graben. Kiesman and Ikona (1989) note that the mineralization at the Cuba Zones consists of shear-controlled, crackle breccia zones in ferro-carbonate altered limestones

containing barite, calcite and Pb-Zn sulfides with minor tetrahedrite and secondary malachite. Based on the results of the exploration work carried out in 1988, Kiesman and Ikona (1989) recommended continued diamond drilling and trenching with geological mapping, geophysical surveying and prospecting.

Kiesman and Ikona (1989) also noted the discovery of several other areas of interest that returned anomalous Au-Ag and Cu values. These include the “Camp Ridge Zone”, the “Syenite Zone” and an area outside of the Newmont Lake Claim Group referred to as the “Fault Zone”. Kiesman and Ikona (1989) recommended additional exploration work in the vicinity of these newly discovered areas.

Between 1987 and 1990, Jazzman Resources carried out sampling and some diamond test drilling on ground within the west-central part of the Newmont Lake Graben that does not form part of the current Romios property. The former Jazzman Resources claims cover the western part of the Newmont Lake Graben immediately north of Gulf International’s NW Zone. Exploration carried out by Jazzman Resources Inc. comprised surface sampling and 3,377 meters of diamond drilling in eight drill holes between 1988 and 1990 in an attempt to locate extensions of the NW Zone. Montgomery et al (1991) report that grab samples of altered and mineralized limestone collected near the south claim boundary along the projected strike of the NW Zone returned values up to 0.379 oz/ton Au. Drilling near the south claim boundary confirmed the continuation to the northeast onto the Jazzman claims of the stratigraphy hosting the NW Zone mineralization. The best mineralization from drilling was encountered in DDH 90-02 with several 1.0 meter intervals returning anomalous Au values >100 ppb including Au values of 0.332 oz/ton, 0.136 oz/ton, and 0.118 oz/ton. Higher Au values are associated with pyrite and silica alteration within a wider zone of Fe carbonate alteration and dolomitization. Based on these results, Montgomery et al (1991) concluded that continued drilling and evaluation of this area was warranted. There is no published record of any subsequent follow-up work on the former Jazzman claim area.

The only recent work known to have been carried out on the Romios claim block consists of a brief examination of the area in the vicinity of the **Black Bear Zone** and the **Gorge Zone** (Weekes, 2000). This work comprised four 250-meter long soil sample lines. Anomalous levels of As, Pb and Zn were reported, and it was concluded that the area has the potential to host either narrow high-grade structurally-controlled ore-zones similar to the Snip deposit, or lower grade bulk mineable mineralization.

4. LOCATION, ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The area is located in NW British Columbia (Fig. 1A), on the east side of the Coast Mountains and approximately 100 km SSE of Telegraph Creek, between latitude: 56 52' 00" and longitude: 130 55' 00" in NTS mapsheets Nos 104B086 / 096. Full details on accessibility to the Romios claim block, infrastructure etc are given by Nicholson (2004). Access to the property can be made via helicopter or fixed wing aircraft from the airstrip on Highway 37 near Bob Quinn Lake approximately 35 kilometers east of the claims, and five hours drive north of Terrace. On the northern part of the Romios property there is the non-maintained Forrest Kerr gravel airstrip which with a little upgrade work could handle fixed-wing traffic.

The topography in the Newmont Lake Graben is generally subdued relative to surrounding areas which can be extremely rugged (Photo 1). Elevations in the graben range from approximately 700 meters above sea level (asl), to 1,300 meters asl. In the eastern part of the claim block elevations reach up to 1,800 meters asl, while in the western parts they exceed 1,600 meters asl. Higher areas are covered with snowfields or small glaciers. In general, a helicopter is required to access most of the property. Nicholson (2004) notes that during the late 1980's Gulf International transported a John Deere 450 utility tractor to the Forest Kerr airstrip. The operator of the equipment was able to traverse the entire length of the Newmont Lake Graben through the present Romios Newmont Lake claim group and carried out trenching and road construction in the vicinity of the Camp and Black Bear Zones (Map 1). Present and future exploration is helped by the presence at McLymont Creek of a usable 20 person-camp which was constructed by Gulf International in 1988. In the summer of 2005, this camp was rehabilitated and made fully serviceable for summer use.

Satellite imagery quoted by Nicholson (2004) shows that approximately 90% of the area in the Newmont Lake Graben is either forest or overburden-covered. The steeper areas east and west of the graben are well exposed with bedrock (Photo 1). Forested areas at lower elevation comprise stunted spruce, fir and cedar typical of sub-alpine conditions.

5. DISCLAIMER

This report is based largely on my personal geological observations made during 16 days mapping on the property while based at the old Gulf International Minerals camp on McLymont Creek. The work included not only the geological mapping but also surface grab sampling (Appendix G) and the examination of some of the core drilled in the 1980's which is now stored at the camp. The examined core represented part of the 1980's drilling that intersected the Ken and NW Zones.

In addition to the mapping, I had numerous geological conversations in camp with Carl Von Einsiedel, and had access to much of the earlier data from the work of Gulf International Minerals Ltd and other exploration companies. It should be noted that I have not seen the core from the single, 787 foot-long hole (DDH-0501) drilled at the Black Bear Zone in September 2005, and neither have I been given any assay results from this drill-hole. I also have not verified any data or details regarding land-property ownership, title or resource estimates and calculations. Nicholson (2004) presents a detailed description of the Romios property, and a list of the mineral claims is seen in Appendix A.

The test re-sampling of the 1980's drill core from the NW and other zones, as presented in Appendices D, E and F, was completed by two young field assistants under the direct supervision of Carl Von Einsiedel. It should be noted that the re-sampled core boxes had been stored since the early 1990's at the McLymont Creek camp in a non-secure environment. However, the camp is inaccessible by road, and the boxes were in good physical condition and still clearly labeled.

6. REGIONAL GEOLOGY

The area lies within the Stikine litho-structural terrane, which represents a mid-Paleozoic to Mesozoic island-arc sequence of sedimentary, volcanic and tuffaceous rocks, together with some intrusions. The Paleozoic rocks range from Devonian to Permian in age and form part of the Stikine assemblage. The Mesozoic rocks include both the Upper Triassic Stuhini Group and the Jurassic Hazelton Group. These supracrustal rocks are intruded by Early Jurassic to Cretaceous and Tertiary plutons (Logan et al., 1990a and 1990b).

The region is cut by two major sets of brittle structures. The most abundant are narrow, N-striking linear faults, and one of these, the Forrest Kerr Fault, has influenced the lower course of the Forrest Kerr Creek (Logan et al., 1990a and 1990b). The other set forms complex, NNE to NE-trending structures, and the faults bounding the Newmont Lake Graben belong to this set. The graben is between 1 and 3 km wide, and it contains down-dropped Jurassic and Triassic sediments, tuffs and some intrusions that are juxtaposed against Paleozoic rocks to the west and east.



Photo 1: Sub-vertical McLymont Fault separating pale Newmont Lake Graben rocks on the left from darker Paleozoic supracrustals on the right. Photo taken from the NW Zone area at UTM 381346-631030, looking south.

7. GENERAL GEOLOGY & MINERALIZATION ON ROMIOS CLAIM BLOCK

The geology of the property is dominated by the Newmont Lake Graben, a NE trending rift structure that is up to 3 km wide and > 20 km long. The western boundary of the graben is marked by the NE-trending McLymont Fault (Photo 1) while the eastern margin is occupied by the Newmont Fault. The very large Late Devonian Forrest Kerr Pluton lies immediately east of the graben, while west of the rift the rocks comprise Devonian and Carboniferous sediments, tuffs and volcanic flows with only a few small intrusions.

Rocks within the rift are dominated by Upper Triassic volcanics, tuffs, carbonates and other sediments, although along the eastern side of the graben, close to the Newmont Fault, there are tectonic slices of Permian sediments, including massive limestones. Several small Triassic-age monzonite-quartz monzonite plugs and stocks intrude the western part of the graben, where they show a close spatial association to the McLymont Fault. The latter represents the most economically important structure in the area, although the Newmont Fault further east is also spatially associated with mineralization. The best-known mineralization on the property, the **NW Zone**, lies immediately (<400 meters) west of the McLymont Fault. However, similar styles of alteration and mineralization are sporadically seen for > 6 km along the structure both SW and NE of the NW Zone; these include the “**Jazzman**”, the “**Podded Jasper**” and the “**North Grid**” Zones or occurrences.

Permian limestones in the eastern part of the rift close the Newmont Fault host several Pb-Zn-Ag showings, including the **Cuba North and Cuba South Zones**. Further SSW and close to a presumed continuation of the Newmont Fault, there are several intrusion and sediment hosted gossans or mineralized veins as seen at the **Camp, Black Bear and Gorge Zones**. Another important and closely spaced group of Cu-Au-bearing garnet-magnetite skarns is seen at the **Ken, Rope and Glacier Zones** which are hosted by calcareous sediments and tuffs of probable Devonian-Carboniferous-Permian age. These occurrences lie approximately 2 km west of the McLymont Fault.

8. GEOLOGY AND MINERALIZATION OF THE EXAMINED AREAS

8.1 INTRODUCTION

The specific areas worked on during this mapping project include:

1. Part of the **Camp Zone** which was mapped at 1:2500 scale (Map 1). This zone contains Au-bearing veins hosted by the quartz-rich granitic Camp Stock which underlies the old Gulf Camp.
2. Parts of the adjacent **Black Bear and Gorge Zones** lying immediately north of the Camp Zone were mapped at 1:2500 scale (Map 1). These zones represent a large gossanous area of pyritic massive cherty silica.
3. The **Ken, Rope and Glacier Zones** lying in the vicinity of UTM 381800E-630500N which were mapped at 1:2000 scale. These occurrences represent chalcopyrite-bearing Cu ± Au skarns marked by garnet-epidote-pyroxene-magnetite mineral assemblages. No holes have been drilled on the Rope occurrence, but at least six holes have been driven on the Ken Zone and another two on the Glacier. The Cu-Au skarn mineralization is hosted by an E-W striking, moderately south-dipping package of andesitic flows and tuffs, some calcareous tuffaceous siltstones and epiclastics, and minor thin units of crinoidal limestone and marble. Apart from some syenites seen in drillcore and some thin (<4m) monzonite dikes mapped on surface, no instructive rocks were identified. Thus, the source of the magmatic fluids responsible for the Cu-Au skarns is unknown.
4. Reconnaissance mapping at 1:5000 scale was completed over parts of the Au ± Cu-bearing **NW Zone** (Map 3). Here the mineralization lies within a series of calcareous sediment ± tuff-hosted replacement mantos and chimneys that have some skarn mineralogies. The zone lies in the vicinity of UTM 381222E-6300800N, a few hundred meters west of the major and economically important

- NE trending McLymont Fault (Photo 1). Extensive and closely spaced past drilling has outlined an orebody of >300 meters in length. It is characterized by massive to semi-massive pyrite with lesser magnetite, chalcopyrite, barite and sporadic garnet. Also present are extensive alteration zones of silica, calcite and Fe-carbonate, together with jasper and both specular and red hematite.
5. The limestone-hosted **Jazzman Zone** that lies approximately 700 meters NE of the NW Zone, close to UTM 381193E-6300775N (Map 3). This small pyritic-Fe carbonate occurrence has an identical mineralogy and structural setting as the NW Zone in lying just west of the McLymont Fault. It could represent either a NE extension of the NW Zone or a separate but similar orebody. It has been tested by several drill holes put down by Jazzman Resources Inc, which intersected some jasper veining. However, this area warrants further prospecting, geophysical (IP) work and possibly more drilling.
 6. A previously unnamed zone of limestone-hosted jasper (hereafter referred to as the “**Podded Jasper**” occurrence) that is situated just west of the McLymont structure, close to UTM 382712E-6302640N and 1.4 km NE of the Jazzman occurrence (Map 3). Pods and irregular veins of jasper occur within limestones, and in some cases the jasper forms a cement in the fault-brecciated carbonates. This zone may overlie a buried area of auriferous pyrite mineralization similar in style to the NW and Jazzman Zones.
 7. The **North Grid Zone** in the vicinity of UTM 382622E-6303606N, which again lies adjacent to, and west of the McLymont Fault, approximately 1 km NNE of the Podded Jasper occurrence (Map 3). It is marked by a N-S trending area of alteration that is 300 to 400 meter long and 200 to 300 meters wide. Alteration includes abundant pervasive and vein Fe carbonate with sporadic silicification and clay; some pale blue-grey alteration that may represent a Zn carbonate was also seen. No drilling is reported for the zone, which may mark the uppermost signature of a buried NW Zone-type orebody.
 8. The so-called “**Bedded Jasper**” occurrence which outcrops close to UTM 382555E-6303630N on the western margin of the North Grid Zone (Map 3). It comprises several jasper horizons, up to 35 cm thick, that lie conformably within a sequence of moderately south dipping bedded tuffaceous turbidites and siltstones. The occurrence may mark distal VMS (volcanic massive sulfide) or sedex mineralization that was coeval with the sedimentation.
 9. The **South and North Cuba** Pb-Zn-Ag occurrences that lie just west of the Newmont Fault at UTM’s 386600E-6303950N and 386990E-6304430N respectively (Map 4). They are hosted by Permian limestones and represent fault-controlled galena-sphalerite-silver rich veins with abundant barite and Fe carbonate, and lesser blue-grey colored silica which is sporadically vuggy.

8.2 CAMP ZONE (BC Minfile No. 104B 126)

8.2.1 Camp Zone Geology

The geology of the Camp Zone along McLymont Creek and in the vicinity of the McLymont camp is seen in Map 1. The area is largely underlain by plutonic rocks of the Camp Stock which may be a satellite body to the much larger Late Devonian Forrest Kerr Pluton. Two lithologically distinct phases are present in the Camp Stock, although their age relationships to one another are unknown. The southern phase (Unit QP; Map 1) is economically important as it hosts a series of Au-bearing quartz-pyrite veins. It is well

displayed along McLymont Creek and comprises a very coarse-grained massive quartz-porphyry granite to quartz monzonite that varies from pale to dark grey to pale pinkish brown in color. It is generally highly leucocratic with up to 5% chloritized biotite and large crowded white quartz phenocrysts up to 0.7 cm in length (Photo 2).



Photo 2: Camp Stock quartz porphyry (Unit QP) with large pale quartz phenocrysts set in a pale to dark grey quartz-feldspathic groundmass. UTM 382749-6298793.

Also present are some smaller feldspar phenocrysts set in a fine to medium grained quartzo-feldspathic matrix, as well as trace amounts of fine-grained pyrite. The porphyry is extensively jointed and fractured, and these steeply dipping minor structures commonly trend ESE, parallel to the auriferous quartz-pyrite vein.

The other phase of the Camp Stock (Unit GM) lies north of the quartz porphyry where it is exposed on a number of small hills. It is a coarse-grained pinkish-grey plutonic rock of granite-quartz monzonite composition that varies from equigranular to weakly K-feldspar porphyritic. It contains up to 6% biotite and 8% hornblende; both minerals can be extensively chloritized. The rock, which contains trace quantities of pyrite and magnetite, is generally more magnetic than the Unit QP quartz porphyry.

No intrusive contacts between Units QP and QM were seen. Both are locally intruded by thin (<5 meters) dikes of a fine-grained greenish-grey altered equigranular andesite (Unit A1). They also both contain mafic xenoliths and screens although these are more common and larger in the Unit QP quartz porphyry. Mafic xenoliths of intrusive or extrusive andesite, up to 1 meter in length, are seen in the Unit GM quartz monzonite at UTM 382698-6298867. In the Unit QP rocks, large screens of andesite or ash tuff, up to

15 meters in length, occur at various localities along McLymont Creek including at UTM 382909-6298623. Many are highly deformed and altered, being cut by veins of quartz, epidote, Fe carbonate and calcite.

8.2.2 Camp Zone Mineralization

Minor amounts of pyrite and magnetite occur within the Camp Stock, but the main focus of past exploration has been on a series of Au-bearing quartz veins which make up the Camp Zone. DuPont of Canada Exploration discovered these in the 1980's after they had outlined some stream sediment anomalies in the area (Kowalchuk, 1982). Later work by Gulf International (Jaramillo, 1991) revealed that the veins lie both north and south of McLymont Creek. Between 1986 and 1988, Gulf drilled 20 holes totaling 2906 meters (Grove, 1987; 1989; Nicholson, 2004). This work led to the recognition of the following two vein types:

- (1) Thin (generally <35 cm but locally up to 1 meter or more) early quartz-pyrite-chalcopyrite veins that trends 120 to 140 degrees and dip steeply northerly. The mineralization includes minor sphalerite, galena, and free gold (Grove, 1987), and has been the main focus of past drilling.
- (2) Younger swarms of NW or NE striking en-echelon ankerite-quartz-pyrite veins that contain sparse chalcopyrite and erratic Au grades. These are considered to have less economic potential than the older veins.

Drilling showed that the older veins show rapid changes in thickness, orientation and Au grades either along strike or down-dip (Grove (1989). For example, one vein intersected by holes DDH88-1, 5 and 6 respectively intersected 0.61 meters grading 82.32 g/t Au, 0.21 meters with 20.0 g/t Au and 1.5 meters grading 6.9 g/t Au.

During the present mapping, I examined two of these older auriferous and pyritic veins that outcrop at UTM 383060-6298584 and 382811-6298677, immediately north of McLymont Creek (Map 1). Both trend ESE, dip northerly between 70 and 82 degrees, and can be traced discontinuously for >100 meters. The veins are hosted by quartz porphyry that is cut by numerous closely spaced, sub-parallel shears and fractures. They consist of white to pale grey quartz with highly variable amounts of fine to very coarse-grained pyrite (Photos 3 & 4), that may locally reach up to 50% by volume. In some cases, as noted at UTM 382811-6298677, the 25 cm thick quartz vein contains a central irregular, bifurcating pyritic zone that reaches 8 cm in width. The quartz veins seldom exceed 35 cm in width but many have rusty pyritic alteration envelopes that are up to 1 meters thick. Locally, the margins of some quartz veins may have blebs and irregular veins, up to 6 cm thick, of coarse grained and pale cream-colored calcite. Trace amounts of chalcopyrite with minor malachite were also seen, as well as some late cross-cutting veins of tan-colored Fe-carbonate ± barite. One sample (GRR05-6) of the pyritic quartz vein at UTM 383032-6298590 was collected for assay (Appendix G).



Photo 3: Camp Zone quartz vein with a central portion of auriferous pyrite. UTM 382811-6298677.

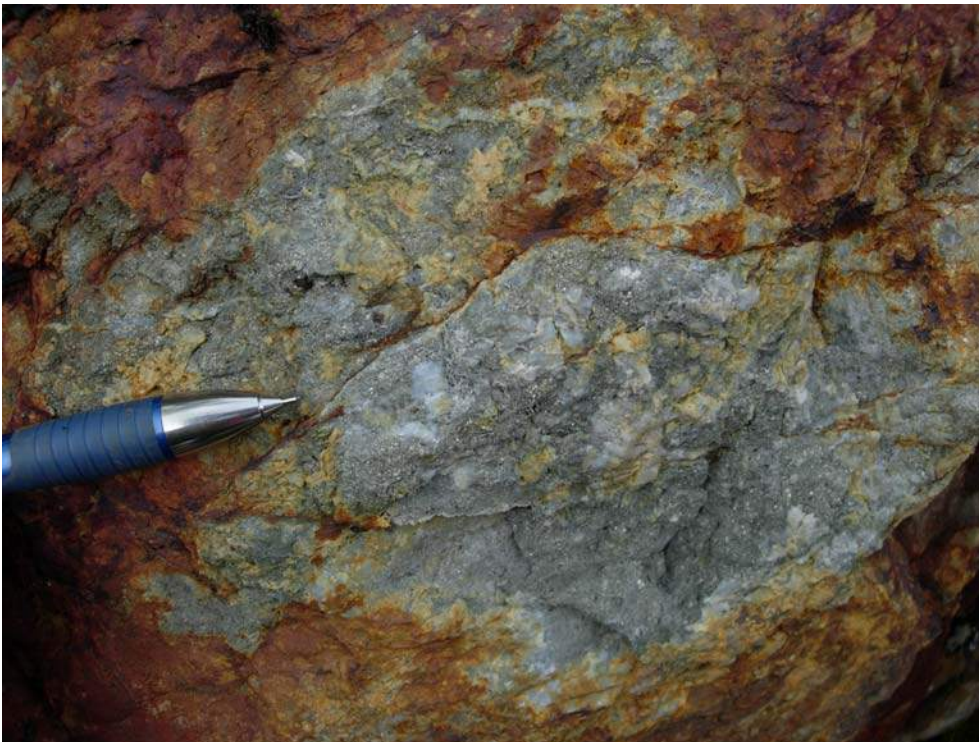


Photo 4: Close-up of a 15 cm-thick auriferous pyritic quartz-pyrite vein, Camp Zone. UTM 383004-6298594.

8.3 BLACK BEAR & GORGE ZONES

8.3.1 Geology of the Black Bear & Gorge Zones

These two adjacent zones lie immediately north of the Camp Zone (Map 1) where they make up a large extent of silicified gossanous rocks that exceed 0.5 km² in area. The Black Bear Zone is mainly seen exposed on a large hill located approximately 350 meters north of the McLymont Camp while the Gorge Zone zones is exposed further north along the bottom of a deep, N-S trending gorge. Both zones are almost wholly occupied by highly altered pyritic cherty-silica that appears to overprint a package of mostly fine-grained sedimentary and tuffaceous rocks. Prior to this 2005 season, no drilling had apparently been done at the zones, although in the early 1990's drilling was recommended by Gulf International personnel. Previously, these silica-rich rocks were interpreted to be altered dacites and sedimentary-banded cherts. However, there is a strong possibility that the pyritic silica is hydrothermal in origin, and that it may be genetically and temporally related to the nearby Au-bearing Camp Stock. Thus, the silica may represent a relatively barren cap that overlies either a Au or Cu bearing ore body.

Most of the rusty gossanous rocks in the Black Bear and Gorge Zones comprise massive fine-grained cherty-silica rich rocks (Unit CS) that are generally light to very dark grey in color, although some have a pinkish hue. In a few instances (for example at UTM 383104-6299158) the massive silica includes patches with glassy quartz crystals. Most outcrops contain between 1 and 10% disseminated pyrite which is generally very fine grained. In most cases, the silicification is so intense that the original rock lithologies are unknown. However, in a few localities some remnant features are seen including igneous textures, feldspar phenocrysts, and thin, vague layering that could be sedimentary or igneous in origin. This layering was only observed in the Black Bear Zone where it strikes NE to NNE and dips moderately northwesterly (Map 1). Immediately east of the Gorge Zone, some outcrops comprise weakly to moderately silicified and pyritic rocks that appear to be tuffs (Unit At). This, and the remnant igneous features and layering elsewhere, together with the siliceous character of the rocks suggest that the package hosting the pyrite-silica alteration included massive to bedded tuffs of possibly andesitic to dacitic composition.

Like the Camp Stock, the pyritic silica-chert rocks in the Black Bear and Gorge Zones are cut by late, scattered and thin dikes of andesite (Units A1 and A2). One NE trending dike at UTM 382957-6299027 comprises dark green andesite with abundant small white plagioclase crystals up to 0.2 cm long, together with trace pyrite.

8.3.2 Mineralization in the Black Bear & Gorge Zones

Despite the extensive pyrite-silica alteration (Map 1), previous work has only discovered trace amounts of precious or base metal mineralization at the Black Bear and Gorge Zones. Kowalchuk (1982) mapped and sampled an extensive area that included the two zones but the samples from the area were disappointing. Two trenches put down into the Gorge Zone (Map 1) exposed trace sphalerite and chalcopyrite. A soil sample taken from just east and upslope of the eastern trench reportedly assayed 2910 ppb Au. Weekes (2000) ran some soil sampling lines over the two zones but no anomalous Au values were recorded, and the highest As, Pb and Zn values were 1065, 586 and 1160 ppm respectively.

During my present survey I saw no evidence of any base metal mineralization anywhere in the Black Bear Zone and only trace galena and sphalerite in parts of the Gorge Zone (Map 1). I attempted to examine the two Gorge Zone trenches but was unable to find them due to bad weather and thick bush. However, rocks exposed in the gorge-bottom in the vicinity of the trenches and further north were examined. They mostly comprise the usual rusty-weathering greenish pyritic grey cherty silica similar to that seen elsewhere throughout the two zones. In this area, the rocks are cut by abundant fractures and some thin fault-breccia zones that trend NNE to N-S, which suggest that the gorge has followed a major N-S brittle structure. The breccias contain small angular clasts of chert, some of which are cemented with tan colored Fe carbonate. Many of the steeply dipping shears and fractures in this area are also filled with veins of Fe carbonate, up to 6 cm thick, together with veins of white calcite. At one locality in the gorge-bottom (UTM 383115-6299290), the weakly pyritized silica appears to contain trace quantities of galena, and a sample of this material was collected (sample GR05-10).

To summarize, the Black Bear and Gorge Zones represent a very large area of rusty-weathering pyritic cherty-silica. It is uncertain whether the silica-pyrite is sedimentary-volcanic syngenetic in origin or if it represents hydrothermal alteration, perhaps genetically related to the adjacent Camp Stock. Apart from trace sporadic signs of some base and precious metals, most of the surface exposures appear to be barren. However, since the Camp Stock hosts Au-bearing quartz veins of the Camp Zone, it is possible that the pyrite-silica represents a barren cap overlying a Au or Cu bearing ore body. Gulf International had recommended drilling but this was never completed. After my 2005 seasons work, one, and possibly two drill holes were recommended (Ray, 2005) at a pad constructed at UTM 383153-6298635 (Map 1). Subsequent to my departure, one hole was driven to a depth of 787 feet, but the core has not yet been logged or sampled in detail (Carl Von Einsiedel, personal communication 2006).

8.4 KEN, ROPE & GLACIER ZONES (BC Minfile No. 104B 027)

8.4.1 Introduction

These occurrences lie in the NW part of the claim block (Fig. 1B). Three days were spent completing 1:2000 scale mapping over the Ken, Rope and Glacier Zones, which are spaced 200 to 250 meters apart, and the results are seen in Map 2. The exposed area is almost wholly surrounded by ice, but since the showings were first discovered in the 1960's there is now considerably more rock exposure due to the retreating snowfields. The site of the six holes previously drilled at the Ken Zone in the 1980's was located (Map 2), but the holes reportedly drilled at the Glacier Zone further south were not found. Some of the holes drilled into the Ken Zone in the 1980's were examined and one hole was re-logged (Fig. 2).

The geology comprises an E-W to ESE striking, south dipping sequence of Mississippian-age andesite flows, flow breccias, massive to layered ash-lapilli tuffs, together with thin-bedded tuffaceous siltstones, minor grits, and thin (<15 m) units of fossiliferous, crinoid-bearing limestone. A few minor intrusions are present including some dikes of quartz monzonite and andesite. The leuco-syenite dikes cut in hole 88PG-06 (Fig. 2) were not seen during the surface mapping (Map 2).

The bedding in the sedimentary-tuffaceous rocks is mostly moderate-south dipping at between 30 and 65 degrees, but further south in the vicinity the Glacier Zone it is steeply north to south dipping at between 75 and 80 degrees. Weakly developed graded bedding suggests that the rocks hosting the Ken and Rope Zones are not overturned and young northwards, but the younging direction of the rocks at the Glacier Zone is unknown. It is possible that the Ken Zone and the Rope Zone represent structurally offset segments of what was originally a single E-W to ESE trending skarn horizon. The presumed displacement took place along a NNE striking fault which resulted in 150 to 200 meters of right lateral movement.

8.4.2 Geology of the Ken, Rope & Glacier Zones

The presumed basal part of the sequence, east of the Ken and NE of the Rope, is mainly occupied by a thick package of dark mafic flows and tuffs of presumed andesite-basalt composition. These include massive flows with abundant coarse white plagioclase phenocrysts (Unit AFP; Map 2), as well as some lapilli tuffs (Unit ALt) and coarse flow breccias (Unit ALb). One distinctive heterolithic tuffaceous rock-type (Unit Alm) includes very dark magnetite-rich clasts, up to 8 cm in diameter, that are supported in a massive lighter green epidote-rich matrix. The magnetite-rich fragments include massive basalt as well as some flows with calcite-filled vesicle (Photo 10). The clasts vary from subangular to subrounded, and some have scalloped margins.

To the south, the thick volcanic-tuffaceous unit is presumably stratigraphically overlain by a predominantly sedimentary succession of either silica-rich or calcareous thin-bedded siltstones (Unit Ss), bedded andesite ash tuffs (Unit Ts and Tb), and massive andesite ash and lapilli tuffs with lesser flows (Units Aat, Alt and Av). Also present in this succession are thin (<15 meter) beds of grey impure carbonate that are locally packed with broken crinoid fossils (Photo 7). These calcareous beds are mostly massive but some weak bedding is locally preserved. Depending on the degree of hydrothermal alteration, they range from limestone to coarsely recrystallized marble. The calcareous siltstones and carbonate beds appear to be the main host for the garnet-magnetite skarn mineralization present at the Ken and Rope Zones.

Intrusive dikes are rare on the property, and most appear to postdate the skarning event. However, the coarse grained pink leuco-syenite cut in drill core from the Ken Zone (Fig. 2) was not seen on surface. Two types of andesite dikes are present. One of these (Unit A1) is fine-grained, massive, equigranular and lacks feldspar phenocrysts. The other (Unit A2) is feldspar-porphyritic and includes at least two phases, the youngest of which is amygdaloidal. At UTM 381985-6305143, a 2-3 meter-wide E-W trending fault zone with abundant Fe carbonate alteration is intruded by one or more andesite dikes that reach 0.4 meters in thickness.



Photo 5: Ken Zone. Cu oxides coating magnetite-garnet-chalcopyrite skarn. UTM 381765-6305165.



Photo 6: Ken Zone. Epidote-chlorite-altered andesites cut by magnetite-pyrite veins. UTM 3811-6305125.



Photo 7: Ken-Rope Zones. Crinoid fossils in recrystallized limestone. UTM 381813-6305068.



Photo 8: Ken Zone. Epidote-garnet-clinopyroxene ± magnetite skarn selectively replacing bedding in calcareous siltstones. UTM 381709-6305097.



Photo 9: Ken Zone. Ash tuffs cut by Fe carbonate \pm barite vein. UTM 381841-6305199.



Photo 10: Ken Zone. Lapilli tuff with small dark magnetite-rich clasts and a large fragment of basalt with calcite-filled vesicles. UTM 381875-6305170.

Three dikes of monzonite-quartz monzonite were also seen in the vicinity of the Glacier Zone (Map 2). At UTM 381780-6304871, the andesite flows and tuffs are cut by a 2 to 3 meter thick dike of pinkish grey colored quartz monzonite that contains euhedral plagioclase crystals up to 0.5 cm, as well as between 3 and 4% altered hornblende. The rock is moderately magnetic, and the irregular contact with the country rocks trends NE-SW. At UTM 381661-6304811, the rusty-weathered and altered ash tuffs are intruded by a 2 meter thick, SE-trending dike of quartz monzonite that contains pink K-spar phenocrysts, as well as up to 25% clear quartz. Nearby is float of a similar dike-rock with abundant quartz-K-spar veining, as well as float of fractured and altered ash tuffs. The fractures in the latter rocks are filled with chlorite-epidote alteration, and these are enveloped by bleached zones up to 2 cm thick (Photo 11). The third area where quartz monzonite dikes occur is close to the Glacier Zone at UTM 381593-6304720, where there is a considerable quantity of abandoned old drill hose present (this is presumably related to drilling at the Glacier Zone). The large 30 meter-wide outcrop comprises cherty ash tuffs or flows which is cut by numerous E-W to ENE trending Fe-carbonate-altered fault zones, up to 1 meter thick, as well as thin (<2cm) white quartz veins. Nearby, there is a 4 meter-wide, ESE trending quartz monzonite dike that is moderately magnetic. It contains phenocrysts of plagioclase, as well as between 3 and 6% hornblende which occurs as laths up to 0.75 cm in length. Like the float seen at UTM 381661-6304811, the dike is cut by bright pink veins of K-spar and quartz that reach 4 cm wide.

8.4.3 Structural and Geological History at the Ken, Rope and Glacier Zones

Some poorly developed grading in the bedded siltstones suggests that northern part of the package hosting the Ken and Rope Zones youngs northwards, and is thus not structurally overturned. These northern rocks lie on the northern limb of an E-W to ESE trending syncline, but the relationship of the steeply-dipping rocks further south to this fold is unknown. There may be a synclinal fold closure between the Rope and Glacier Zones; alternatively, the rocks at the Glacier Zone may have a similar structural relationship as those further north in also lying on the north limb of the syncline. No small scale folds related to the major syncline were seen.

Numerous brittle faults are present, and these can be broadly separated into those that lack significant alteration and others which are generally older and contain intense alteration comprising tan-colored Fe carbonate with \pm lesser barite and white calcite (Photo 9). Some of the Fe carbonate alteration zones along these faults exceed 4 meters in width.

The older faults associated with Fe carbonate \pm barite alteration have a variety of trends including NNE, NE and ESE. The NNE to NE sets generally dip steeply easterly, although the major structure causing the right-lateral offset of the Ken and Rope Zones dips westerly. This latter important fault has been traced discontinuously for >200 meters, and at its northernmost extremity (UTM 381822-6305185) the 10 meter-wide fault zone contains tectonic slices of marble, skarn and siltstones, as well as abundant Fe carbonate alteration. Throughout its length the fault is spatially associated with Fe carbonate and sporadic secondary Cu carbonates and oxides. The structure is multiphase, and probably includes pre and post skarn episodes of movement.

Between the Ken and Rope Zones, close to UTM 381817-6305064 (Map 2) there are a number of small NE to NNE trending faults that include both older Fe-carbonate-altered structures and younger faults that postdate the alteration. The older faults dip NW to northerly and have caused 3-6 meters of right-lateral, east-side-up movement, which is similar to the presumed offset between the Ken and Rope Zones. The younger unaltered NE trending faults in this area also have resulted in minor right lateral, south-east side up displacement, but these structures dip southeasterly.

Many of the E-W to ESE trending faults lie sub-parallel to the south-dipping bedding, and one of these at UTM 381985-6305143 has controlled the emplacement of several late andesite dikes. However, just east of the Rope Zone there are at least three closely spaced E-W fault zones that dip northwards, and these structures are associated with Cu mineralization and wide haloes of chlorite and Fe carbonate alteration.

To summarize, the geological history of the rocks hosting the Ken-Rope and Glacier Zones is:

1. Paleozoic deposition of the volcanic and sedimentary rocks, including some crinoidal limestones.
2. Major folding of the sequence to produce an E-W trending synclinal structure that closes south of the Ken and Rope Zones. The hinge of this fold may lie between the Rope and Glacier Zones or be found further south.
3. The skarn event may be pre, syn or post the major synformal folding. The introduction of hydrothermal fluids caused the development of the prograde skarn mineral assemblages (garnet, magnetite and lesser pyroxene). This was followed by the retrograde alteration (pyrite, epidote, K-spar, chlorite, epidote, silica and possibly albite), together with the Cu-Au mineralization. The igneous source of the skarn fluids is unknown, although the K-spar-veined quartz monzonite dikes (Unit Mon) may be related to the plutonic event. It may be significant that the alteration in these dikes has a porphyry-type signature.
4. Formation of NNE to ENE trending brittle faults, one of which cause right-lateral offset of the Ken and Rope skarn zones. Many of these faults predate, and have controlled, the extensive Fe carbonate \pm barite alteration in the area, as well as the secondary Cu mineralization.
5. Late, NE trending brittle faulting that lacks Fe carbonate alteration.

Note: the ages of the quartz monzonite (Unit Mon) and andesite dikes (Unit A1 and A2) to the above events are uncertain, although the vesicular andesites appear to be very young.



Photo 11: Glacier Zone. Silicified ash tuff cut by black chlorite-filled fractures which are haloed by bleached K-spar bearing haloes. UTM 381640-6304791.

8.4.4 Alteration and Mineralization at the Ken, Rope and Glacier Zones

Only minor skarn was seen at the Glacier Zone, but at the Ken and Rope Zones the strong skarn alteration is developed extensively. Prograde skarn resulted in early high-temperature assemblages of magnetite and andraditic to grossularitic garnet \pm clinopyroxene \pm K-spar (Ray and Webster, 1997; BC Minfile). The garnet varies in color from pale yellow-green to very dark reddish brown, and occasionally black. Several generations of garnet are seen with veins of darker garnet cutting the paler more grossular variety. In many cases the skarn is layered due to the variable and selective replacement of the original bedded calcareous sediments (Photo 8). Magnetite can occur as disseminated crystals or as massive veins, blebs and irregular masses (Photo 6). Although some thin skarn units at the Ken Zone locally contain up to 70% magnetite (Fig. 2), the thickest and richest magnetite occurs at the Rope Zone where massive magnetite units up to 5 meters thick are present (Map 2). The magnetite and much of the garnet appears to be coeval since garnet veins cut magnetite and visa-versa. Also, in places the magnetite is interstitial to the garnet, suggesting that in these cases the magnetite is younger.

Lower temperature retrograde alteration led to the partial destruction of the garnet-pyroxene assemblages and the formation of vein and disseminated epidote, pale green to black colored chlorite, tremolite-actinolite, pink K-spar and white calcite. This event coincided with the deposition of the pyrite, chalcopyrite, specular and red hematite, and probably the Au and Ag. It is not certain what form the gold takes at the three zones but there are hints that Au correlates with Cu, suggesting that the Au is held in the chalcopyrite. The sporadic chalcopyrite occurs as veinlets, irregular blebs and fine

disseminations, and is most abundant in the garnet-magnetite-rich sections where it shows a strong spatial association with pyrite and black chlorite.

Other reported trace minerals (BC Minfile) include pink secondary cobalt and wollastonite. Also present both on surface and drill core (Map 2: Fig. 2) are substantial areas with masses or veins of pale cream-colored quartz-silica-plagioclase that appear to form more distally to the main garnet-magnetite skarns. The age of this pale alteration relative to the prograde and retrograde mineralization is uncertain. It is possible that the plagioclase is albitic. The youngest alteration appears to be the tan-colored Fe carbonate which sporadically occurs with barite and calcite (Photo 9). This occurs as pervasive alteration or as veins, stock-works or as thicker (>4m) zones that were controlled by faults. As with the pale quartz-silica-?albite alteration, there are hints that the Fe carbonate becomes more intense distal to the main skarns.

8.4.5 Alteration and Mineralization noted in the Ken Drill-holes

In addition to hole 88PG-06 which was re-logged (Fig. 2), hole 88PG-05 was also examined in some detail. The objects of this were to look at the original stratigraphic lithologies and the variable skarn overprinting, and attempt to see if the areas with higher Cu and Au mineralization coincided with any distinctive skarn textures or mineralogies.

In the 60.7 meter-long hole **88PG-06** (Fig. 2), over 26 meters comprises mafic flows and tuffs (Units T and V) which mainly occupy the lower, presumably older part of the stratigraphy. Within this volcanic sequence is a 3.4 meter thick section of grey porphyritic andesite (Unit A) with subhedral phenocrysts of plagioclase up to 0.25 cm and euhedral crystals of black augite up to 1 cm or more in length. This unit is fairly extensive as it is seen in several of the Ken drill holes. It has been previously interpreted as a minor intrusion, but it is more likely to be a flow.

The basal volcanic-dominant sequence in hole 88PG-06 is overlain by several thin (c. 2 meters) horizons of thin bedded calcareous siltstone as well as units, up to 5.5 meters thick, of what are believed to have been massive to weakly bedded limestones; the latter are now almost totally replaced by garnet-magnetite skarn.

Hole 88PG-06 demonstrates the highly variable degree of skarn overprinting that took place, and how the various skarn assemblages are controlled by the original sedimentary-volcanic lithologies. The massive garnet-magnetite-dominant skarns are confined to the limestones, while the bedded calcareous siltstones are replaced by epidote-K feldspar assemblages in which garnet is rare. The volcanic horizons lower in the hole have generally resisted the strong skarn overprinting. Here the alteration comprises pale quartz-silica-?albite together with Fe carbonate veining. There is a tendency for these style of alteration to decrease towards the bottom of the hole.

To summarize, examining the Ken holes 88PG-05 and 06 suggests the following:

- (1) The presence of andraditic garnet, hematite and pervasive epidote shows that the Ken skarn resulted from a highly oxidized hydrothermal system that is typical of many Au-bearing Cu skarns.
- (2) The higher Cu and Au grades appear to coincide with areas having pervasive black chlorite, epidote and pink K-spar. The presence of K-spar in particular

appears to correlate with higher Au, and in some cases the pervasive epidote alteration is cut by veinlets of K-spar \pm specular hematite which are enveloped by thin haloes of black chlorite.

- (3) Minor secondary supergene Au may occur with malachite along some rusty thin shears.
- (4) There appears to be no correlation between higher Au on the one hand and increased Fe carbonate veining or pyrite on the other.

8.5 NW ZONE (BC Minfile No. 104B 281)

8.5.1 Introduction

Two field days were spent completing a reconnaissance-mapping traverse along the McLymont Fault that extended from the North Grid Zone in the NE down to the NW Zone in the extreme SW (Map 3). The purposes of this traverse were:

- (1) To record and compare the intensity and extent of alteration present at the North Grid, the Jazzman and the NW Zones. Since auriferous mineralization is known to underlie the NW Zone, it was hoped that the intensity of the surface mineralization in that area could be used as a guide for the mineral potential of the other zones.
- (2) To prospect for any other mineral showings noted along the McLymont Fault.
- (3) To examine some of the monzonite-quartz monzonite bodies (Unit M; Map 3) previously mapped by Logan et al. (1997). These bodies, which lie immediately east of the McLymont structure, intrude sedimentary rocks in the Newmont Lake Graben. An airborne magnetic survey recently conducted by McLymont Mines Ltd has shown that these bodies are associated with large magnetic anomalies. From this and other evidence, it was speculated that the intrusions could be associated with Cu porphyry mineralization similar to the Galore Cu-Au deposit.

Of the two-day traverse mentioned above, only half of one day was spent doing reconnaissance 1:5000 scale mapping over the NW Zone. An intensive drill program in the late 1980's showed the existence of Au-rich pyritic mineralization that is hosted by Paleozoic marine sediments and tuffs. Grove (1986; 1989), Koyanagi (1990), Jaramillo (1991) and Ray et al. (1991) have presented details on the geology and mineralization.

The main purpose of this visit was to examine the alteration on surface that overlies what is known from drilling to be numerous pyrite-rich ore bodies at depth. It was hoped to compare the extent and intensity of this alteration with that present in other areas further NE along the McLymont Fault, particularly the Jazzman Zone and North Grid area (Fig. 1B; Map 3). The exposed rocks included massive fine-grained andesite ash and lapilli tuffs with some hyaloclastics and epiclastics, with minor flows and siltstones. At the southern end of the traverse close to a trench where massive pyritic mineralization is exposed (at UTM 381205-6300761; Map 3), some marble and altered carbonates are present.

The alteration noted on surface at the NW Zone included:

- (a) Strong Fe carbonate \pm barite \pm white calcite as veins and pervasive overprinting, particularly along and adjacent to some faults.
- (b) Veins and massive replacement by pale quartz-silica-?albite alteration, similar to that seen at the Ken Zone.
- (c) Pale green to black chlorite which is generally fracture-controlled.

- (d) Massive coarse crystalline pyrite \pm magnetite with chlorite, silica and Fe carbonate alteration as seen in a trench located at UTM381205-6300761 (Photo 12). This represents a surface exposure of the mineralization that was drilled at depth.

Considering the extent of the auriferous mineralization known to exist at depth, the alteration seen on surface on the NW Zone does not appear to be any more extensive or intense than that present at the North Grid or parts of the Jazzman Zones. This suggests that the latter two areas have a good potential for NW Zone-type mineralization.

8.5.2 Geology of the NW Zone Area

The deposit lies immediately west of the McLymont Fault close to UTM 381220-6300800, where it is hosted by a Mississippian clastic marine succession that is several hundred meters thick. The NE trending McLymont structure marks the western boundary of the Newmont Lake Graben, and its true dip is unknown although it is probably steeply inclined to east. The rocks on both sides of the fault are cut by northerly striking structures that probably represent second-order splays from the main fault. These secondary structures commonly contain strong Fe-carbonate alteration and are often marked topographically by deep narrow gulleys.

The Mississippian succession includes an upper part dominated by massive ash andesitic ash and lapilli tuffs with thin units of marble. Lower down, where the mineralization occurs, there is a sequence of bedded to massive tuffs, thin-bedded siltstones, and horizons of white to grey marble that carry crinoids. Excellent grading in the siltstones cut by drilling indicate the package is upright. Poorly defined bedding suggest that the main area of past drilling lies close to a north trending and north plunging fold. Jaramillo (personal communication, 1990) believed that the western limb of this fold dips 35 to 75 degrees NW while the eastern limb dips steeply SE. This poorly understood structure may have partly controlled some of the ore zones.

8.5.3 Mineralization at the NW Zone

The deposit plunges gently northwards and has been traced by drilling for >300 meters. Orebodies occur both in steep, narrow, possibly fault-controlled zones, and in gently dipping and thicker units that have apparently replaced the marbles and calcareous siltstones. In one area, several steeply dipping mineralized shoots pass up into an extensive, sulfide-rich area known during the time of the Gulf International exploration as the "Mushroom Zone" (Ray et al., 1991). It is not known if this is a mineralized fold structure or is due to mineralization controlled by the intersection of steep faults and a sub-horizontal carbonate bed.



Photo 12: NW Zone. Massive, coarse grained auriferous pyrite exposed in the trench at UTM 381205-6300761.

Gold grades can be very high. Hole 87-29, located north of the Mushroom Zone, intersected 11.2 meters assaying 55 g/t Au, 1362 g/t Ag and 0.97% Cu (Ray et al., 1991). The mineralization is sporadically associated with enhanced values of Pb, Zn, As, Co, Sb, Bi and Te. It principally consists of pyrite (Photo 12) and lesser magnetite, with subordinate chalcopyrite and trace galena, sphalerite, gold and silver which is generally hosted by a carbonate-quartz-chlorite gangue. Other minerals include covellite, tetrahedrite, red and specular hematite, sericite, jasper, garnet, rutile, sphene, barite, gypsum and possible arsenopyrite (Ray et al., 1991). Minor graphite is present, particularly along some fault zones.

The magnetite has two habits: a rounded nodular form and an acicular to bladed form that results in crystals up to 2 cm long. Small amounts of fractured garnet are present although it is mostly replaced by jasper, chlorite or carbonate. Microprobe analyses show the garnet in Mn-poor and Fe-rich, with isotropic andraditic cores and more grossularitic margins (Ray et al., 1991). Pyrite has two habits, both of which carry Au. The commonest is coarse, rounded subhedral crystals up to 1 cm in diameter (Photo 12). The other pyrite is fine-grained and massive and locally carries very high Au grades. It forms veins and masses that post-date the coarser pyrite.

Although visible gold is seen in chlorite, polished section studies show that most is <15 micrometers in size (Ray et al., 1991). These minute grains occur with chlorite, and as inclusions in both habits of pyrite. Chalcopyrite is widespread and it occurs as overgrowths or veinlets that cut both the coarse and fine-grained pyrite, and as small inclusions within sphalerite. It also occurs as late veinlets with barite, carbonate and

quartz. Galena, sphalerite and tetrahedrite are rare and tend to occur in veinlets. Covellite is fine-grained and occurs with chalcopyrite and tetrahedrite. Chlorite is sporadically distributed but tends to show a spatial correlation with the sulfide-magnetite zones. It forms black to dark green irregular masses and fine-grained clots, and can carry visible gold. The late disseminated fine-grained sericite can make up to 20% by volume in some parts.

The orebodies are characterized by white to pale cream carbonate that includes calcite, ankerite and dolomite. The mineralized zones and the adjacent barren marble may contain small amounts of red, podiform jasper that may be partially replaced by pyrite and rimmed with magnetite and chlorite. The orebodies are surrounded by irregular envelopes, up to 25 meters thick, of early silica and younger ankerite-dolomite alteration. The silicified rocks vary from grey to pale green to pale brown in color. Silica can crosscut bedding or may selectively replace certain beds in the tuffaceous siltstones, resulting in alternating layers of unaltered and silicified rocks. Where complete silicification has occurred, extensive zones of massive chert-like rock are formed.

Ray et al. (1991) suggest the following mineral paragenesis for the NW Zone:

- (1) Garnet
- (2) Jasper and chlorite (the chlorite possibly replacing earlier pyroxene).
- (3) Magnetite.
- (4) Coarse pyrite with Au.
- (5) Fine-grained pyrite with Au.
- (6) Quartz veining and silicification \pm albite.
- (7) Pervasive and vein Fe carbonate alteration.

There are two generations of chalcopyrite. The first is associated with, but post-dates the pyrite, while the second is found in the late quartz-Fe carbonate-barite veins. Sphalerite may postdate the early chalcopyrite, while specular hematite postdates both the magnetite and pyrite. The relative age of the Au is uncertain, although it appears to be associated with both pyrite and chlorite, but not with the chalcopyrite.

To summarize, the NW Zone appears to comprise a number of pyritic mantos, chimneys and irregular ore-bodies that have structural and stratigraphic-lithologic controls. The hosting package as well as the mineralogy and alteration shows strong similarities to the Ken-Glacier skarns, although the latter have more garnet and magnetite, and less pyrite and Au. Both systems are related to highly oxidized hydrothermal fluids. It is likely that the NW Zone and the Ken-Glacier-Rope Zones were formed during the same igneous hydrothermal event with the NW Zone representing more distal and more structurally controlled mineralization formed at slightly lower temperatures than the Ken-Rope skarns.

8.6 JAZZMAN ZONE

8.6.1 Introduction

Two hours were spent examining and sampling the Jazzman Zone, which lies 800 to 900 meters NE of the NW Zone (Map 3) close to UTM381830-6301530. The area has an identical structural setting and style of mineralization as the NW Zone in consisting mainly of auriferous massive pyrite hosted by carbonates immediately west of the

McLymont Fault. Five samples were collected (GR05-15 to GR05-19) and these assayed up to 8.96 ppm Au and 21 ppm Ag (Appendix G). Jazzman Resources put down a number of holes (Nicholson, 2004) including one more than 600 meters long, which was an unsuccessful attempt to intersect a NE extension of the NW Zone. Some pyritic samples collected by Jazzman Resources assayed > 4 g/t Au.

8.6.2 Geology of the Jazzman Zone

Drilling by Jazzman Resources showed that the area is underlain by an identical sedimentary-volcaniclastic package as present at the NW Zone, as well as having a similar style of alteration, including some jasper. Only a small part of the zone was examined (Map 3) and this was mostly underlain by limestones with lesser green andesite ash tuffs and/or flows. The limestones are light grey colored, massive and coarse grained, and some have dark irregular cherty segregations. All the rocks are highly fractured, presumably due to their proximity to the McLymont Fault.

8.6.3 Mineralization and Alteration at the Jazzman Zone

Veins and massive replacements of Fe carbonate \pm barite are the most common alteration (Photos 13 and 14), and they overprint both the limestones and tuffs (Map 3). In some localities (UTM 381828-6301523) there are irregular zones and pods of Fe carbonate that reach 4 meters in width and over 10 meters in length. The contact between the large Fe carbonate pods and the hosting limestone can be either very sharp or be marked by abundant Fe carbonate veining (Photo 14). Locally, the Fe carbonate pods are associated with small patches of dark gossanous earthy alteration that appears to be highly leached.

The limestone-hosted mineralization is marked by irregular masses of coarse and fine-grained massive pyrite that appears identical to the NW Zone-type. As well as abundant float, it was seen outcropping in closely spaced locations at UTM's 381837-6301555 and 381834-6301546. The outcropping pyritic pods can be discontinuously traced along a 15 meter distance and appear to trend N-S. They reach 1 meter by 1 meter in size, and also contain calcite, azurite and malachite (Photo 15).



Photo 13: Jazzman Zone. Massive Fe carbonate alteration replacing limestones. UTM 381828-6301523.



Photo 14: Jazzman Zone. Veining in limestone on the margin of a massive Fe carbonate zone, UTM 381828-6301523.



Photo 15: Jazzman Zone. Azurite and malachite stained float of massive pyrite with minor quartz. UTM 381837-6301555.



Photo 16: Podded Jasper Occurrence. Red jasper hosted by crinoidal and algal limestones. UTM 382716-6302669.

8.7 PODDED JASPER OCCURRENCE

This limestone-hosted jasper occurrence, which lies 1.4 kilometers NE of the Jazzman Zone close to UTM 382716-6302669, was noted during the traverse made between the North Grid and the Jazzman Zones. It lies just west of the McLymont structure where a large body of unaltered quartz monzonite to the east is down-faulted against algal and crinoidal-bearing limestones to the west (Map 3). The limestones host veins of red jasper, up to 20 cm thick, as well as irregular pods that appear to be replacements (Photo 16), although in some cases they appear to be clasts. At UTM 382712-6302639 however, the limestone is brecciated and the carbonate clasts are re-cemented by jasper. The jasper contains trace pyrite, specular hematite and small white quartz veinlets. A sample (Appendix G 1; GR05-14) was taken but the assay results are not yet available.

8.8 BEDDED JASPER OCCURRENCE

This jasper occurrence (Photo 17), which outcrops at UTM 382555E-6303630N, (Map 3) may mark distal VMS (volcanogenic massive sulfide) or sedex mineralization. The geology comprises a sequence of moderately south dipping fine-grained tuffaceous turbidites and siltstones with beds varying from 1 cm to 1 meter in thickness. Locally there are more coarse-grained tuffaceous clastic horizons that exceed 1 meter in width. The package is cut by a steeply north-dipping, E-W striking fault. Several conformable jasper beds, up to 35 cm thick, occur in the turbidite sequence both north and south of the fault, and angular jasper fragments are also present in the fault zone. In places, the bedded tuffs and siltstones are silicified, and these beds carry rounded pebbles and more angular fragments of jasper. In a few places the rocks are coated with a light bluish-grey alteration that may indicate the presence of Zn oxides. Large pieces of jasper float measuring 40 cm by 50 cm also occur in the area. The jasper contains trace pyrite, calcite and quartz veinlets, and specular and red hematite. Three samples (BD05-10, and GR05-12 and 13) were collected (Appendix G 1).

During my traverse, more jasper horizons were seen outcropping approximately 250 to 300 meters SSW of the Bedded Jasper occurrence (Map 3). These outcrop were only observed from a distance and were not visited. It is recommended that this whole area be prospected.



Photo 17: Bedded Jasper Occurrence. Syngenetic jasper in bedded turbidites, UTM 382555-6303630.

8.9 NORTH GRID ZONE

The **North Grid Zone** is situated 1 km NNE of the Podded Jasper occurrence in the vicinity of UTM 382622E-6303606N. The area lies immediately west of the McLymont Fault, (Map 3), and is marked topographically by a flat depression with little outcrop. Further west however, there is good rock exposure.

The geology of this western part includes massive to well bedded ash and lapilli tuffs as well as some siltstones and coarse polymictic volcanic breccias. Also present are extensive units of andesite flows and some coarse volcanic flow breccias. Good grading is present in the thin-bedded tuffaceous siltstones, but no limestones were seen.

The zone is represented by a N-S trending area of alteration that is 300 to 400 meter long and 200 to 300 meters wide. This poorly exposed area is marked by pervasive bleaching caused by the extensive clay replacement of the original feldspar, as well as sporadic silicification. This extensive clay alteration is locally overprinted and cut by veins and pervasive areas of Fe carbonate \pm barite alteration. Apart from rare trace pyrite, no sulfides were seen, although at UTM 382377-6303763 some pale blue-grey coating on the rocks may represent a Zn carbonate. No drilling is reported for the zone, which may mark the uppermost signature of a buried NW Zone-type ore body.

8.10 NORTH & SOUTH CUBA ZONES

8.10.1 Introduction

The South and North Cuba Pb-Zn-Ag occurrences lie 600 meters apart at UTM's 386600E-6303950N and 386990E-6304430N respectively (Map 4). They may have originally been part of a single mineralized showing that has been offset along a NE-

trending fault by right lateral movement (a similar sense of offset is seen between the Ken and the Rope Zones). The Cuba Zones are unusual in that they lie immediately west of, and appear to be controlled by the Newmont Fault which forms the eastern boundary of the Newmont Lake Graben. They are hosted by Permian limestones and represent fault-controlled galena-sphalerite-silver rich veins with abundant barite and Fe carbonate, and lesser silica which is sporadically vuggy. At the South Cuba Zone, Kiesman and Ikona (1989) report digging two trenches, as well as completing two diamond drill holes. These holes intersected volcanics under the surface-exposed limestones, as well as some jasper and pyrite. A 7.5-meter section of Zn-rich mineralization intersected at between 38.1 and 45.6 meters down hole 88PG-19 assayed between 0.38% and 0.65% Zn and 48 and 78 g/t Ag. No drilling apparently took place at the North Cuba Zone, although chip sampling outlined mineralization assaying >100 g/t Ag and up to 9.5% Zn and 1.6% Pb (Kiesman and Ikona, 1989). The Au content of this mineralization is unknown.

The single reconnaissance traverse I made over this area began at the temporary tent camp located at UTM 386329-6304406 and passed eastwards towards the North and South Cuba occurrences (Map 4). Its purpose was to examine some of the rocks in the graben as well as visit the two Pb-Zn-Ag occurrences.

8.10.2 Geology of the area around the Cuba Zones

The Upper Triassic-age graben rocks west of the occurrences include a NNE striking, steeply dipping package of andesitic ash and lapilli tuffs (Units At, Alt), epiclastics (Unit Te) and limestones (Unit La) with lesser amounts of dacitic and andesitic flows (Units D and Av), flow-breccias, as well as some bedded tuffaceous siltstones (Unit Ts). The epiclastics and lapilli tuffs have sub-rounded to angular fragments of both felsic and mafic volcanics, as well as some intrusive rocks. Locally, these rocks contain larger ?bombs up to 15 cm in diameter suspended in a fine-grained tuffaceous matrix. The tuffaceous siltstones have beds ranging from 0.5 cm to 4 cm thick, and some are very weakly graded although no reliable younging directions were observed. Some siltstones, as seen at UTM 386413-6304482, contain thin interbeds of dark brown impure limestone up to 2 meters thick.

A 20 meter-thick flow of probably dacitic composition (Unit D) is seen close to UTM 3865505-6304515. These cherty rocks are a reddish brown in color and have small white plagioclase crystals up to 0.2 cm long. They also contain quartz and devitrified glass, as well as rounded dark xenoliths up to 5 cm long. Along the eastern margin of the unit there are possible fiamme which would indicate the rocks were deposited under sub-aerial conditions.



Photo 18: North Cuba Zone. Late coarse barite overgrowing earlier Fe carbonate. UTM 386990-6304434.



Photo 19: South Cuba Zone. Very coarse barite crystals replacing or intergrown with Fe carbonate. UTM 386567-6303809.

Upper Triassic limestones (Logan et al., 1997) were the most common graben rocks encountered during the traverse, although in parts they are interlayered with very thin andesite flows (Unit Av). The fine grained limestones form very pale grey, massive to thin-layered rocks. The layering is believed to be due to algal growths, and some deformed shelly fossils were also seen at UTM 386558-6304355. Many contain pale yellow-brown colored irregular cherty layers, nodules and masses that consist of both chert and very fine-grained quartz crystals. The beds and chert layers in many of these limestones west of the Cuba Zones are folded by open to tight structures that have steeply north plunging axes.

Locally, the limestones show evidence of white calcite veining, dolomitization and Fe carbonate veining, and this increased towards the Cuba Zones. White calcite veining and cross-cutting solution zones related to either dolomitization or hydrothermal karsting are seen at UTM 386445-6304026. At UTM 386461-6304016 there is a 3 to 4 meter thick zone of Fe carbonate that trends N-S.



Photo 20: North Cuba Zone. Coarse barite (left) with grey and blue colored silica (center and right). UTM 386990-6304434.

8.10.3 Geology at the North and South Cuba Zones

Unlike the Triassic limestones outcropping further west in the graben, the tectonic slices of carbonates hosting the Cuba Zones are Permian in age (Logan et al., 1997). At North Cuba there is a steeply dipping thick unit of massive pale recrystallized carbonate that is exposed in two large crags. On the west side of the crags there appears to be a NE striking fault zone that dips 70 degrees westerly. This zone is marked by extensive fracturing in the carbonate, together with large amounts of barite, some of which forms crystals exceeding 2 cm in length. Also present are some late Fe carbonate veining,

together with galena and minor pale sphalerite, pyrite, trace chalcopyrite, and Cu and black Mn oxides.

Extensive areas of silicification also occur. The silica is seen in both outcrop and as float, some of which has been crackle-brecciated. It mostly lacks any pyrite and varies from white to dark blue-grey to black in color (Photo 20). Locally the dark silica contains vuggy cavities, up to 0.75 cm in diameter, that are lined with small clear euhedral quartz crystals. The vuggy textures have an epithermal character. Replacement and cross-cutting features suggests that the crystalline barite post-dates both the blue-grey silica and the Fe carbonate alteration (Photo 18). Two samples were taken from the North Cuba Zone (GR 23 and 24; Appendix G 1).

The South Cuba Zone has a similar geological and structural setting as the North Cuba (Map 4). A northerly striking unit of grey to brown Permian limestone appears to be cut to the north by a NE trending fault. Approximately 600 meters of right-lateral offset is believed to have taken place along this structure. Mineralization was seen at several localities. At UTM 386567-6303809, the algal limestones are cut by silica and Fe carbonate veins as well as spectacularly large barite crystals up to 2 cm long (Photo 19). Also present are areas of light grayish-blue silica that resemble that seen at the North Cuba (Photo 20), except it contains up to 2% very fine-grained pyrite. Also present are some galena and malachite, Fe carbonate. Sample GR05-25 was taken of this material (Appendix G 1). Mineralization is also seen in two short (< 8 meters) trenches located at UTM's 386609-6303951 and 386600-6303948 Map 4). In these are exposed masses of barite, up to 6 meters in width, together with Fe carbonate alteration, galena, dark sphalerite, pyrite and trace chalcopyrite with malachite. Some minor tetrahedrite was also tentatively identified.

On the ridge immediately above and east of the trenches, the limestones are cut by numerous zones of Fe carbonate and barite that trend SE and reach > 5 meters in thickness. Several of these Fe carbonate zones strike towards the trenches, suggesting that the mineralization there also strikes SE. In lower ground west and SW of the trenches, the massive grey limestones are cut by numerous closely spaced veins of silica and quartz that vary from pinkish grey to black in color. These veins reach more than 60 cm in width, and mostly strike E-W to ESE and dip steeply south. Some have undergone minor right-lateral offset along thin north-trending fractures. It is uncertain whether these represent segregation chert layers in the limestones or are veins related to the Cuba Zone hydrothermal event.

9.0 SAMPLING METHODS AND APPROACH

A number of surface hand grab samples were collected by the author (Gerry Ray), Brian Dahl, Pat Suratt and Carl Von Einsiedel and the description and assay results are presented in Appendix G. The test re-sampling of the old drill core from the 1980's stored at the McLymont camp was supervised by Carl Von Einsiedel. The previously split core was re-split, using a diamond saw, into two equal portions after being aligned and marked by Carl Von Einsiedel. Sample intervals in the core were variable and determined largely on the degree of visible sulfide mineralization.

The surface grab and core samples weighed between 1 and 3 kilograms each. These were placed in marked clean plastic bags and sealed with plastic ties. Batches of bagged samples were then placed in larger rice bags which were sealed with another plastic tie. These were securely stored at the McLymont Creek camp until they were shipped directly via air and road to the ALS Chemex laboratory in Vancouver.

ALS Chemex has ISO 9001:2000 registration which is the industry quality standard and a gauge of quality control management.

10.0 ASSAY RESULTS

Assay results of the recent test re-sampling of core from the 1980's drilling at the NW, Ken, Jazzman and Boulder zones are presented in Appendices D, E, and F. This data validates the presence of high-grade Au-Ag grades in the various zones and confirms the information released by Gulf International Minerals Ltd about their drill intersections through the NW Zone. Highly anomalous Au-Ag values are also present in parts of the Boulder and Jazzman zones (Appendices F and G). A pyrite-rich sample from the Boulder Zone, for example (PS005-08), assayed 164 ppm Au and 55 ppm Ag.

The UTM locations and descriptions of the surface grab samples, together with the chemical data is given in Appendix G. Samples from the Black Bear and Gorge zones are low in Au and Ag, confirming the historic work by Gulf International Minerals and other companies. However, there is a sporadic and minor enrichment in As, Pb and Zn.

Some samples from the Cuba Zones have enhanced values of Ag, Zn, Pb, Hg and Sb, but the blue grey vuggy silica present does not appear to carry Au (e.g. samples GRR05-23 to 25).

The single pyritic sample from a Camp Zone vein (GRR05-06) assayed > 6 ppm Au and 22 ppm Ag, confirming the data released by Gulf International Minerals more than 15 years ago. It was also enhanced in As, Bi and Cu. Some of the Jazzman Zone samples were also auriferous, assaying up to 8.9 ppm Au and 21 ppm Ag, as well as being sporadically anomalous in As, Cu, Bi, Hg, Mn and Sb.

The samples collected from the Podded Jasper and Bedded Jasper occurrences do not show any enhancement of base or precious metals (Appendix G).

To summarize, the recently completed test re-sampling of the old core stored since the early 1990's at the McLymont camp validates the presence of high Au-Ag grades at the NW, Jazzman and Boulder zones on the Romios property. This is also confirmed by some of the surface grab sampling. The highest precious metal grades came from the Boulder, NW and Jazzman zones, which all lie immediately west of the McLymont Fault and share some similarities in their trace chemistry including a sporadic enhancement in Cu, Sb and Hg. The data emphasizes the mineral potential of the McLymont Fault and shows that exploration should be focused in this part of the property, particularly the area between the Boulder-Arseno sulfide and Jazzman zones.

11. CONCLUSIONS

Past exploration indicates that the ground held by Romios Gold Resources Inc., in the McLymont Creek-Forrest Kerr area of NW British Columbia (Figs. 1A and 1B) is highly prospective for the discovery of new Cu and/or Au deposits. Over the past 20 years, this part of BC has witnessed the finding of several major and economically important orebodies including the currently mined Eskay Creek deposit (a Ag-rich VMS), the Au-bearing Snip mine, and the very large **Galore Creek** Cu-Au alkalic porphyry deposit which is situated < 40 km from the Romios ground.

One important reason that the McLymont Creek-Forrest Kerr area is highly prospective is that its geology and structural framework closely resembles those present at the Galore deposit (Allen et al., 1976; Enns et al., 1995). These features include the presence of major long-lived faults, such as those along the edges of the Newmont Lake Graben, together with structurally controlled, high-level alkaline-affinity monzonite stocks that occur along the western margin of the rift. Moreover, some of the known occurrences on the Romios property such as the Ken-Rope-Glacier skarn cluster and the NW Zone auriferous pyritic mineralization, may represent high-level or distal expressions of a Galore-like hydrothermal system. Worldwide, some magnetite-bearing alkalic Cu-Au porphyries such as the **Grassberg deposit** in Irian Jaya (Indonesia) are associated with distal auriferous pyritic replacement bodies that closely resemble the NW Zone mineralization.

Since Galore-type mineralization represents an important target for the Romios ground, it is vital that personnel engaged in future exploration on the property should visit that deposit and examine the mineralization, alteration and host rocks. Galore, like many other alkalic Cu porphyry systems in BC including the Ingerbelle and Mount Polley deposits (Preto, 1972; Fraser et al., 1995), has extensive amounts of prograde exoskarn alteration which constitutes about 80% of the ore reserves. Reserves were originally stated as 284 Mt of 0.67 % Cu and 0.35 g/t Au, although drilling in 2005 has greatly enlarged this figure, and the Galore porphyry deposit appears ready to become the next major mine in the region. The Galore exoskarn is dominated by epidote-actinolite-biotite-K feldspar \pm garnet assemblages. It includes an assemblage of orthoclase and biotite in high-K volcanoclastic host rocks, but changes to a calcic assemblage of andradite, diopside, epidote and vesuvianite in the more calcareous host rocks (Enns et al. 1995; Dawson and Kirkham, 1996).

The NW Zone is the best-known occurrence on the property. Past work shows that it is both structurally and stratigraphically controlled, having subvertical ore zones that presumably followed splay structures related to the McLymont Fault, as well as gentle to steeply dipping ore shoots that were probably controlled by limey sedimentary units. It is noteworthy that compared to other areas along the western margin of the McLymont Fault, there is no marked increase in the intensity of alteration seen on surface over the NW Zone, despite the known existence of the buried orebodies with a SW-NE strike extent of at least 300 meters. In the North Grid area for example, the extent and intensity of the Fe carbonate, silica and clay alteration is far more impressive than any alteration observed on surface at the NW Zone. This demonstrates that other buried NW Zone-type orebodies may exist anywhere along the western side of the extensive McLymont Fault, and future exploration should be focused towards this linear feature. This idea is supported by the existence of numerous small areas along the fault with either favorable

alterations (e.g. the North Grid and Podded Jasper locations) or auriferous pyritic mineralization (as seen at the Jazzman Zone and the Boulder-Arseno sulfide Zones). Unfortunately, due to bad weather, I did not visit the latter, which is located on the McLymont Fault to the southwest of the NW Zone (Fig. 3).

To summarize, the Romios ground has a number of different styles of mineral occurrences or interesting alteration zones, including:

1. Intrusion-hosted meso-thermal auriferous quartz-pyrite veins as present at the Camp Zone.
2. Fault-controlled, carbonate-hosted Pb-Zn-Ag-bearing silica-quartz \pm barite veins as seen at the Cuba South and Cuba North showings.
3. Sediment-hosted, structural and stratigraphically-controlled pyritic replacement orebodies with Au-Ag-Cu mineralization as present at the NW Zone and the Jazzman occurrence.
4. Sediment-hosted, garnet-magnetite dominant Cu-Au-Ag skarns at the Ken, Glacier and Rope Zones.
5. Extensive silica-chert \pm pyrite alteration replacement of sedimentary and tuffaceous rocks as seen at the Black Bear and Gorge Zones.
6. Extensive silica and Fe carbonate \pm barite \pm Zn and clay alteration as present at the North Grid Zone, and irregular jasper replacements as seen at the Podded Jasper occurrence. Both these styles of alteration may be surface expressions of NW Zone-type massive pyritic mineralization at depth.
7. Thin, stratiform jasper beds as seen at the Bedded Jasper occurrence, which may represent distal expressions of either sedex or VMS (volcanogenic massive sulfide) mineralization.

Since the graben-bounding Newmont and McLymont Faults are spatially associated with so many potentially economic areas of mineralization, it is clear that future exploration should continue to be focused along these two major structures.

Excluding the syngenetic Bedded Jasper occurrence, the other diverse styles of epigenetic mineralization on the claim block show many common features. These include:

1. With the exception of the Pb-Zn-Ag bearing Cuba Zones, economic mineralization elsewhere is dominated by chalcopyrite \pm Au.
2. Mineralization at all the occurrences includes pyrite, whereas pyrrhotite is almost totally absent. This, and the other mineral assemblages (specular hematite, magnetite, andraditic garnet, abundant epidote) reflect the highly oxidized nature of the various hydrothermal environments across the property.
3. Late Fe carbonate \pm barite alteration is present at all the mineral zones, including the Camp, NW, Jazzman, Podded Jasper, North Grid, Cuba and parts of the Gorge Zones.
4. All have strong structural and/or stratigraphic controls. Favorable stratigraphy and the presence of re-active host rocks were particularly important at the NW, Ken-Rope-Glacier skarn cluster and the Cuba Zones.

5. The eastern and western bounding faults to the Newmont Lake Graben are clearly the most important mineralized structures on the property, particularly the western boundary fracture, the McLymont Fault.
6. Various degrees of silicification ± albite alteration are a common feature to all. At the North and South Cuba Zones the vuggy, distinctively grayish blue colored silica has a high-level epithermal appearance.
7. Late jasper is present at many occurrences such as the NW, Ken and Cuba Zones, as well as at the Jazzman and Podded jasper occurrences.
8. Abundant magnetite and some garnet-bearing assemblages occur at the Ken-Rope-Glacier skarn cluster and at the NW Zone.

These common features argue that the epigenetic mineralized zones on the property were probably emplaced during the same hydrothermal event. The various styles of mineralization and alteration probably reflect differences in both the host rock lithologies and the structural levels and temperatures at which the mineralization was deposited. The most deep-level, proximal and highest temperature mineralization is probably seen at the Camp and Ken Zones, whereas the Pb-Zn-Ag mineralization at the Cuba Zones was emplaced at a much higher structural level and at lower temperatures. The NZ Zone and Jazzman Zones are thought to be intermediate between the Ken skarn-type on the one hand and the Cuba Zone on the other.

12.0 RECOMMENDATIONS FOR THE 2006 SEASON

12.1 General Recommendations

- Immediately log and sample the single drill hole (DDH-0501) that was completed on the Black Bear Zone in September 2005. This hole was not put down in a high priority area, but was chosen largely because Gulf International Minerals Ltd had hoped to drill the target in the 1980's (but were prevented by bad weather) and in 2005 there was insufficient money to construct pads and drill camps further afield. Having spent the money to drill this hole, Romios should try and get as much information from it as possible.
- Depending on the sampling results of the hole DDH-0501, it may be worth-while extending the hole beyond its current depth of 787 feet, if possible. If not, it is advised that a step-out to the south be made where a hole could approach the intrusive margin of the auriferous Camp Stock. However, unless the assays on hole DDH-0501 are good, this target is relatively low priority.
- The 2006 season exploration and prospecting should be mainly targeted to areas along the eastern and western tectonic margins of the Newmont Lake Graben (Figure 3), particularly the western margin, the McLymont Fault. Specific areas for prospecting and sampling include:
 - (a) North and south extensions of the structures controlling the Ag-Pb-Zn mineralization at the Cuba Zones, along the eastern fault boundaries of the rift (Figure 3)
 - (b) Prospect along the ENTIRE length of the McLymont Fault on Romios ground, particularly between the Boulder, Rusty and Arseno-sulfide

showings to the SW and north of the Jazzman Zone to the NE (Figure 3). Prospecting should be intensive in areas up to 800 m west of the fault.

(c) Depending on the amount of money available for a geophysics program, ground IP and magnetometer surveys should be run across as much of the McLymont Fault as possible. Attention should be focused on (i) the area between the NW and Boulder-Arseno sulfide zones (Figure 3), (ii) the area between the Jazzman Zone and the Podded Jasper occurrence, which would determine the full NE extent of the IP anomaly partially outlined at the Jazzman Zone in the 2005 survey, (iii) The area between the Ken and Glacier Zones. Unlike the McLymont Fault IP surveys which would have lines orientated approximately NW-SE, the ground IP and magnetometer survey at the Ken Zone should be done on N-S to NNE-SSW striking lines, (iv) if time and money allows, IP could be done across the Cuba Zones, but this is lower priority.

(d) It should be noted that the mineralization and alteration at both the NW Zone and the Ken skarn could represent the distal signature of a Galore type alkalic Cu-Au porphyry. However, the only porphyry style alteration I saw on the property lay close to the Glacier Zone where there is fracture-controlled K-spar veining and overprinting (*see* Photo 11).

(e) The intrusive margin-zones of the monzonitic plugs and stocks in the Newmont Lake Graben, should be prospected. These bodies are magnetite-rich and could be related to Galore-type porphyry systems. Where exposed along the east side of the McLymont Fault, close to the Jazzman and North Grid zone, they looked fresh and uninteresting. However, the contacts with the country rocks should be prospected for any hydrothermal alteration or sulphide-magnetite mineralization.

(f) Prospect and sample any areas with jasper, barite, Fe carbonate, pyrite, magnetite or silica alteration, particularly along the Newmont or McLymont faults.

12.2 Camp Zone

- No immediate further work is recommended for the Camp Zone Au veins. Past drilling shows that the granite-hosted are traceable discontinuously for > 400 meters although their thinness (average width of < 35 cm) makes them uneconomic. However, the Au-bearing Camp Stock may have implications regarding the economic potential of the nearby Black Bear and Gorge Zones.

12.3 Black Bear and Gorge Zones

- Despite showing only moderate precious and base metals, Gulf International had planned to drill two holes in the Black Bear Zone at UTM's 383176E-6298925N and 383181E-6298952N. However, these were not drilled due to bad weather. Following this 2005 mapping program, a minus 60 degree hole be driven in a 185 degree azimuth direction from a pad constructed at UTM 383153E-6298635N (Map 1) was recommended (Ray, 2005). The purpose of this hole was to intersect

both the pyritic silica and the northern margin of the auriferous Camp Stock. The hole (DDH-0501) was completed in September 2006 but the core has not been yet logged or sampled in detail.

- If sampling shows that hole DDH-0501 drilled at UTM 383153E-6298635N was encouraging, then another minus 60 degree holes could be driven from the same site with an azimuth of 290 degrees (Map 1). The target of this hole would be to intersect the N-S structure believed responsible for the deep gossanous gorge. Alternatively, it may be possible to extend hole DDH-0501 beyond its current depth of 787 feet. If not, then a step-out to the south could be made where the hole could approach the intrusive margin of the auriferous Camp Stock. However, unless the assays on hole DDH-0501 are good, this target is relatively low priority.

12.4 Ken, Rope and Glacier Zones

- Map 2 suggests that the E-W striking Ken skarn is cut off to the east by a north to NNE trending fault that has caused right-lateral movement (i.e the rocks to the east are upthrown and moved southwards). It is possible that the Rope magnetite skarn, which now outcrops 180 meters south of the Ken, represents the easterly offset extension of the Ken. Since these skarns were first discovered in the 1960's, the surrounding ice fields have retreated resulting in larger areas of rock exposure. The current mapping completed (Map 2) examined most outcrops in the Ken vicinity, but many exposures east and SE of the Rope and Glacier Zones were not visited. These areas need to be prospected and mapped.
- Past drilling at the Ken indicated that some of the Fe carbonate and pale quartz-feldspar (?albite) alteration in the footwall rocks is weakly to moderately anomalous in Au. Extensive areas with this style of alteration were mapped on surface, particularly between the Ken and Rope occurrences. This alteration should be systematically surface sampled to test its Au potential; it is also important to discover whether the Au resides in the Fe carbonate or in the pale quartz-plagioclase (?albite) alteration.
- Examination of the Ken holes 88PG-05 and 06 (Fig. 2) suggests that the Au mineralization shows a strong spatial association with pink K-spar and black (?Fe-rich) chlorite retrograde alteration. Any future drilling at the Ken Zone should attempt to intersect the southern down-dip extension of the rocks previously drilled during the 1988 season. One possible pad could be placed approximately 50 meters south of the previous sites, close to UTM 381750-6305110. The minus 70 or 80 degree hole should be driven in the 360 degree northerly direction.
- One hole could also test the southern down-dip extension of the Rope magnetite-rich Cu-Au zone. However, the extensive ice-cover, lack of firm bedrock and abundant major faults in this area make it difficult to find a suitable secure pad-site. A pad could be placed close to UTM 381760-6304935 although this apparently lies just south of a major NE trending fault. Like the recommended hole at the Ken Zone, this steep hole should have a northerly azimuth.

12.5 North Grid, Podded Jasper and Jazzman Zones

- Prospect these areas for any NW Zone type alterations (Fe carbonate, silica, jasper, pyrite, magnetite).

- Run IP surveys over the zones, particularly any showing magnetic anomalies.
- If the IP survey is promising, drill targets should be selected.

12.6 Bedded Jasper Occurrence

- Attempt to trace any strike extensions of the outcropping jasper units.
- Prospect the area for any signs of VMS-sedex mineralization or alteration.

12.7 North and South Cuba Zones

- Several sets of faulting are present in the area of the occurrences, including a N-S to NNW trending set and a NE striking set, both of which may be related to the nearby Newmont Fault. Moreover, at the Cuba South Zone, the thin, elongate horizons of Fe carbonate-barite alteration that cut the limestones near the trenches trend SE. It is uncertain which was the main controlling structure for the Cuba mineralization; more mapping should be completed to answer this question. By knowing the orientation of the controlling fault it may be possible to find strike extensions of the mineralization.
- It is possible that the North and South Cuba Zones were originally a single occurrence that was offset from one another by right lateral displacement along a NE trending fault. Alternately, they may represent two separate occurrences developed along this NE structure. For future exploration and drilling it is important to identify the true controlling structure.
- These Pb-Zn-Ag occurrences may represent the uppermost distal expressions of a larger mineralized orebody. The presence of silica with small quartz-crystal-lined vuggy cavities suggests some affinity with an epithermal system. Any future drilling at the North Cuba should involve holes with a SE directed azimuth to intersect the steep westerly inclined mineralized structure.

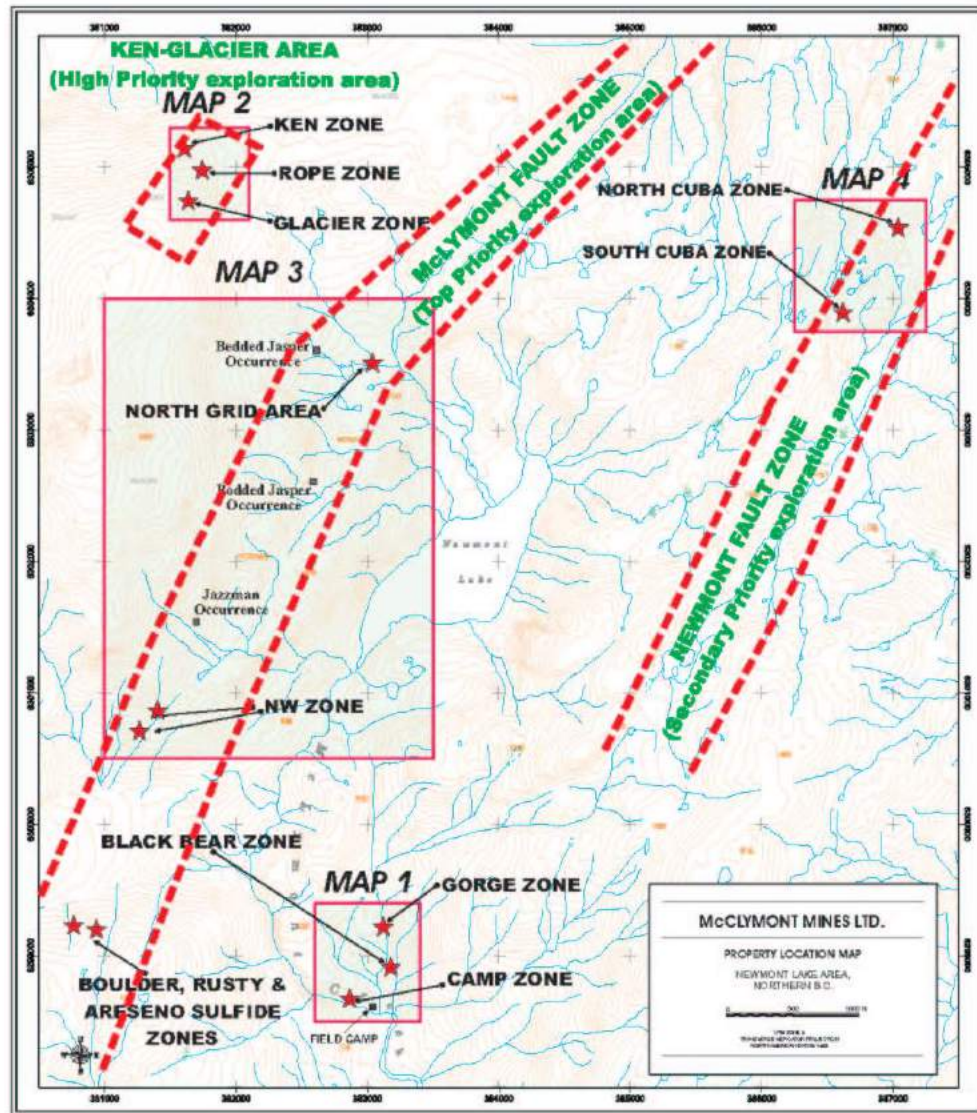


Figure 3:
Red dashed lines represent focus-areas for exploration & prospecting in 2006.

13. BIBLIOGRAPHY

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14. LIST OF MAPS

- Map 1: Geology of the Camp Zone, Black Bear Zone and Gorge Zone Area. Scale 1:2500.
- Map 2: Geology of the Ken, Rope and Glacier Occurrences. Scale 1:2000.
- Map 3: Geology of the NW Zone, Jazzman Zone and North Grid Zone. Scale 1:5000.
- Map 4: Geology of the North and South Cuba Zones. Scale 1:5000.

15. LIST OF FIGURES

- Figure 1A: Location of the Romios Gold Resources property in the McLymont Creek-Forrest Kerr area of NW British Columbia.
- Figure 1B: Location of the Romios Gold Resources property showing the specific areas mapped and examined during the 2005 field season.
- Fig 2: Log of drillhole 88-PG-06, Ken Zone (in pocket).
- Fig. 3: Areas recommended for exploration and prospecting in 2006.

16. LIST OF APPENDICES

- Appendix A: List of claims held by Romios Gold Resources Inc in the Iskut River-McLymont Creek area, northern BC.
- Appendix B: Report describing the helicopter borne magnetometer survey conducted by Fugro Airborne Corp (Harrison, 2005).
- Appendix C: Report outlining the results of a 3D induced polarization survey (IP) conducted by SJ Geophysics Ltd (Sheldrake, 2005).
- Appendix D: Assay data of check re-sampling of the 1980's drilling through the NW Zone.

Appendix E: Assay data of check re-sampling of parts of hole 88PG-5, Ken Zone.

Appendix F: Assay data of check re-sampling of the 1980's drilling through the Jazzman and Boulder zones.

Appendix G: Assay data of McLymont area surface grab samples collected in 2005 season.

17. CERTIFICATION OF THE AUTHOR

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I, Gerald Edwin RAY, P.Geo., P. Eng., do hereby certify that:

1. I was employed for this 2005 field project as a consultant geologist by: **Romios Gold Resources and McLymont Mines Inc.**, of 1124-470 Granville St, Vancouver, BC, Canada.
2. I graduated with B.Sc., degree in Geology from the University of Bristol (UK) in 1966 and obtained a Ph.D., from the “Research Center for African Geology” at the Leeds University (UK) in 1970.
3. I am a member of the Association of Professional Geoscientists of British Columbia (License # 19503) and the Association of Professional Engineers of Saskatchewan (Member No. 2888).
4. I have worked as a geologist a total of 35 years since my graduation from university.
5. I completed 16 field days in August and September 2005, examining, geologically mapping and sampling parts of the McLymont-Romios property in McLymont Creek-Forrest Kerr Area of NW British Columbia, which is held by McLymont Mines Inc and Romios Gold Resources Inc.
6. Other than wages, I hold no shares or economic benefits supplied by McLymont Mines Inc, and a previous offer of options has been relinquished.
7. I have read the definition of “qualified person” set out in the National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
8. I am responsible for the preparation of this report titled **“Geology, Mineral Potential and 2005 Work Completed at the Romios Gold Resources Property, McLymont Creek-Forrest Kerr Area, NW British Columbia”** dated the 16th April 2006.
9. I have not had any prior involvement with the property that is the subject of this report.

10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in this report, the omission to disclose which makes the Technical Report misleading.
11. I am independent of the issuer applying all the tests in section 1.5 of the National Instrument 43-101.
12. I have read National Instrument 43-101 and Form 42-101FI, and the Technical Report has been prepared in compliance with that instrument and form.
13. I consent to the filing of the Technical Report with any stock exchange and any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in public company files on their websites accessible by the public.

Dated at Victoria, British Columbia, Canada this 16th of April 2006

Signature by qualified person

Printed name of qualified person

Stamp of qualified person

G.E. Ray, P.Ge