BARKER MINERALS LIMITED
Goose Range Exploration Outline

During regional reconnaissance geologic mapping of exposures and subcrop, Barker Mineral's geologist, Mr. Stephen Roach has collected grab samples and / or chip samples of altered and mineralized rocks. Systematic note taking and locations of the samples as well as rock exposures not sampled but mapped are recorded on forest inventory and / or trim orthophoto maps.

All sampling sites are numbered, clearly flagged and outcrops painted for future reference.

A representative rock sample depicting the type of alteration, mineralization or background lithologic unit sampled is archived, numbered and stored at the Likely, BC field office.

Numbered rock sample bags are shipped or delivered to ACME Analytical Laboratories in Vancouver. The submitted rock samples are prepared by standard crushing and grinding methods to produce at least 30 grams of minus 150 mesh material. A 0.5 gram sub sample is digested with 3 ml 3-2-1 HCL-HNO^3-H^2O at 95°C for one hour and is diluted to 10 ml with water before ICP analysis. This leach is a partial extraction for Mn, Fe, Sr, Ca, P, La, Cr, Mb, Ba, Ti, B, W and limited for Na, K, and Al.

This leach is suitable for the analysis of trace elements of exploration interest such as: Mo, Cu, Pb, Zn, Ag, Ni, Co, As, Cd. Any rock samples containing 1% Cu, Pb, Zn or As and Ag greater than 30 ppm will be analyzed by other appropriate assay methods. Of note is that cadmium contents may reach over 500 ppm in zinc silver bearing ores.

As Barker Minerals Ltd. has recognized the need for the characterization of Au - pathfinder elements at detection limits not offered by the ICP standard method, we have also introduced

Hydride analysis of our rock samples. This analytical method supports detection limits of 1.0 ppm for Sb, Bi, Se and 0.2 ppm for Te. Low levels of As and partial Ge are also detected by Hydride generation analysis. Many of the different styles of mineralization and hydrothermally altered zonation is being delineated within the Goose Range Program area. Significant Se, Te, and Bi concentrations are being observed in some locales. Concentrations of these elements suggest that further mineralogical work by thin-section, XRD and microprobe maybe required. The low detection limits, especially Bi and Te, within the Hydride analysis data help to vector further detailed rock sampling towards potentially gold-rich zones. Our interpretation to date suggests that Bi and Te are more important than arsenic in the delineation of gold anomalies related to volcanogenic massive sulphide related ores. Bi concentrations of over 2,000 ppm and Te greater than 6 ppm have been encountered. Selenium may reach 20 ppm but arsenic is rarely greater than 50 ppm.

Hg in ppb is determined by flameless atomic adsorption methods on all rock samples. The mercury contents of some ore types is in the ppm levels (2-3 ppm). Thus it may be a useful pathfinder element for base metal and gold ores.

Mercury is also an important element in establishing leakage along certain fault structures. Many RGS stream sediment sample sites are Hg anomalies with associated base metal anomalies. It is therefore important to establish the mercury contents in rocks related to particular structured trends, base-metal ore types and gold-bearing zones. This mercury in rock analysis is critical in establishing criteria for the interpretation of the B-horizon soil mercury contents of our regional soil sampling program. The low level detection hydride suite of elements is also necessary to evaluate their ultra-trace concentrations in soils.

All rock samples are subjected to whole rock ICP analysis where 0.2 grams is fused with 1.2 grams of $LiBO^2$ and dissolved in 100 ml 5% HNO^3. Major and minors as oxides and LOI in percent is reported. Traces such as Ba, Sr, Zr, Y, Nb and Sc (in ppm) can be used with the immobile element oxide Ti to determine rock type (s). MnO, CaO, Na^2O, K^2O and MgO along with total Fe^2O^3 can be used with LOI to determine the degree and types of alteration exhibited

in the samples of hydrothermally or tectonically altered rocks and of the sample ores types. To date, alkali alteration is predominantly Na^2O enrichment to over 10 weight percent with coincident K^2O depletion to less than 1 weight %. Potassic enrichment with coincident Na^2O depletion of less than 1 weight % rarely reached 5 weight %. Evidence of chloritization (MgO) enrichment and carbonate gange in ores (CaO, MgO) is of a local nature.

Au contents of rock samples is determined on a 30 gram sub sample of the crushed (approximately minus - 150 mesh) rock material.

It is a geodemical analysis by FA / ICP and not of assay certified quality.

Rock sample preparation, multi-acid digestion ICP, Hg by flameless AA, geochemical Au by FA / ICP (30 gram), hydride ICP suite and ICP geochemical whole rock analysis costs $42.91 including GST on a per sample basis. To date Goose Range reconnaissance rock sampling by Stephen Roach has resulted in the collection of 267 rock samples which have been prepared and analyzed by ACME ANALYTICAL Laboratories for a total cost of $11,456.97.

Regional reconnaissance soil sampling surveys were initiated as part of our assessment of the mineral potential of the staked Goose Range Program area.

Sampling surveys have been conducted along logging roads and skid-trails and in some portions of major clear-cut blocks reconnaissance flagged grids have been established. Soil survey traverse lines were established to cross-cut known lithologic units or stratigraphy and/or known or suspected structural trends — lineaments.

At each sample site a long-nosed shovel was used to dig a pit to expose the soil profile. Generally the pit was dug to a depth to expose the un-oxidized C-horizon material. At the lip of the soil pit the A-horizon material was removed and a stainless steel garden trowel was then used to shave off the newly exposed B-horizon material to the depth which was previously exposed along the pit edge. Two previously numbered kraft soil bags, each with the same site location number, were filled with B-horizon soil material. Rock chips were removed from the trowel before filling the bag. Soil sample site information i.e.: colour, depth of profile, slope, etc. was recorded for each sample site. Each site was plotted on forest inventory or trim data road maps. A master copy of all sample sites was created. Each field sample site was flagged and a painted 3 - 4 foot wooden picket and numbered metal tag was erected at the sample profile pit location. Flagged lines between grid samples were created. Flagging from the road sample site into the undisturbed bush or cut-over soil profile site was established.

Sample sites along logging roads and skid trails or spurs were dug at 200 metre intervals. Grid lines in cut over areas were established at approximately 500 metres distance between the picketed and flagged lines and again the samples were collected along the lines at an interval of 200 metres.

For safety purposes and the simultaneous creation of grid and flagged picketed sample sites it was necessary to utilize two man trained sampling crews. Each crew was given specific crew designated sampling numbers. Traverses and sample proposed site locations were established for each individual crew on a daily basis. Hip chained sample site distances were recorded in the field and all actual field locations are clearly established with a numbered, painted, wooden picket.

Within the Goose Range soil development is variable. Crews were taught to distinguish sample material based on the categories, talus, colluvium, till and glacial outwash (sand and gravel).

In overburden covered areas our previous experience and interpretation of the soil data from the ACE CLAIMS grid led to this widely spaced sample interval and design. In most cases, tills appear to be local in origin and of a thin veneer in thickness. As our reconnaissance sampling is designed to outline stratigraphic units and stratiform alteration — mineralization associated with particular lithologic units — contacts, it is expected that broad-scale anomalous features in the B-horizon soil sampling will lead to more detailed survey sampling.

Our soil sample preparation and analytical methodologies were designed to focus on broad-scale anomalous features in support of the sample survey design.

Two sample bags were collected at each site. All samples were sorted and air-dried at the Likely, BC field office facility. One sample from each sample sequence of bags was packaged and shipped or delivered to the ACME ANALYTICAL Laboratory preparation facilities in Vancouver. ACME then prepared a plus 30 gm sample of minus 230 - 250 mesh B-horizon soil material. The sample constitutes the silt and clay sized portion of the soil material. This minus 63 micron fraction is the same fraction which is analyzed by Mineral Development Agreement programs as conducted by the BC and GSC quaternary geology program officers. Our data utilizing this same mesh fraction can therefore be used and compared to other regional programs data from other parts of the province. No publicly available government derived soil data is

available for NTS map sheet 93A. Therefore, Barker Minerals Limited is establishing its own regional soil data base within the Goose Range Program area.

It is now well established that the base metal and gold signature of soils is enhanced by utilizing this finer mesh fraction. Anomalous contrasts are enhanced due to a higher portion of clay material being available (base-metals) and a diminished gold nugget effect (numerous small fine particles per given sample weight). As compared to conventional minus 80 mesh or less than 177 micron soil samples usually collected on detailed soil surveys (i.e.: 25 metre sample intervals) the finer minus 63 micron soil material is less likely to contain "spot" individual highly anomalous samples. To further enhance our regional ability to distinguish broad scale anomalous patterns related to variable unknown lithologic units (overburden covered), alteration, mineralization and structure(s) we have instructed ACME ANALYTICAL to utilize a large sample size (30 gm) and ULTRATRACE analytical procedures (i.e.: very low detection limits for key are and pathfinder elements).

The B-horizon, minus 63 micron, 30 gm soil sample is digested with 180 m 3-1-2 HC1 HNO_3 - H_2O at 95°C for one hour and hen is diluted to 100 ml with water where upon this partial leach solution is directly analyzed by ICP. Mo, Cu, Pb, Zn, Ag, As, Au, Cd, Sb, Bi, Tl, Hg, Se, Te and Ga are then extracted with MIBK — Aliquat 336 and analyzed by ICP. Less than 1 ppm detection limits are thus achieved for these important ore and pathfinder elements. Geochemical Au is determined (PPb) using Aqua-Regia / MIBK extract and then finished with a graphite-furnace atomic absorption methodology.

Although Group IF ULTRATRACE ICP and Wet Air GF/AA is our recommended analytical method it must be noted that data for the elements Mn, Fe, Sr, Ca, P, La, Cr, Mg, Ba, Th, B, W is only partial and that it is "limited" for the elements K, Na, Al and Ga.

The second B-horizon soil sample bag was also air-dried and then packed and shipped to Activation Laboratories Ltd., Ancaster, Ontario where a minus 60 mesh fraction of material was prepared for Enzyme leach analysis. The 10 - 20 gm sieved -60 mesh material is selectively

leached to produce a solution which is then run through ICP - Mass Spectrometer instrumentation. Data for some 59 elements is produced at the ppb levels. Enzyme leach methodology has been successfully tested and proven useful in the detection of buried mineralization. The data produced when plotted will produce enrichment and depletion anomalies for variable suites of elements which have been found to vary depending upon the ore-deposit type and its associated alteration. It is therefore a pattern recognition tool. Interpretation of the spatial relationships of the blind or buried oxidizing mineralization to the B-horizon soil results requires that the interpreter recognize specific patterns in the results rather than relying upon the actual concentration levels per se. It is expected that the very low detection limits forthcoming from the ICP-MS for Bi, Te, Sb, As, Ba, W, Hg, Tl, Ag, Cd, Mo, Re, and Se will help to characterize different ore types now overburden covered in the Goose Range Program area.

Enzyme leach B-horizon soil sampling is not restricted by the overburden material type. Because it is believed that the response produced in B-horizon soils developed upon local tills is equally as valid as that developed upon "exotic" glacial outwash, it is hoped that valid geochemical anomalies will be produced in the glacial valley bottoms where normal conventional soil sampling surveys would be of little practical use.

Very limited soil sample testing of Enzyme leach methods from soils collected on the ACE CLAIM GRID leads us to believe that definitive anomalies can be produced which directly relate to some of the complex mineralogy (Te-Bi) found in ACE CORE float and bedrock samples. Enzyme leach ICP-MS data is generally not expected to produce Au anomalies.

Results from this years enzyme leach sampling have been delayed and the first 167 samples shipped to ACTLABS are scheduled to be run on October 3rd, 1996. Enzyme leach soil data will be produced for all of the soil samples collected as shipments are made during the winter months.

Soil sample pulps will be retrieved from the respective laboratories and systematically stored at the likely field office facility.

To date B-horizon soil sample data for the ACME ULTRATRACE plus wet Au (i.e: G-F / AA) has been received back from the laboratory.

Some preliminary anomalous elemental associations are evident within the data. These include:

1. Mo, Cu, Pb, Zn, Ag, As, Cd, Sb, Ba, Hg, Se
2. Mo, Zn, Ag, Se, Hg
3. Mo, Ag, Bi, Se, Au
4. Mo, Bi, Ag
5. Pb, Zn, Cd, Ba, Hg
6. Cu, Pb, Zn, Ag, Mn, Bi, Hg, Te

Considering that these samples are taken from Cariboo, Barkerville and Quesnel Terranes it is not surprising that variable elemental associations are forthcoming. Further interpretation is required to ascertain the metallogenic significance of specific elemental associations and to clarify if these anomalous patterns cross terrane boundaries due to their association with, for example, cross cutting Tertiary extensional faults.

Stream sediment samples will be collected during a regional reconnaissance sampling program.

These surveys will test some major drainage program systems where road access is developed. Helicopter supported surveys are not expected to be attempted at this time.

The selection of the sites will be based upon the assumption that this is a gold-bearing district (i.e.: The Goose Range) which has not previously been recognized in the Cariboo.

Mineralogical study of Barker Minerals Ace property "ores" has shown that the gold is generally less than 63 microns in size. These primary gold particles should therefore report to the minus 230 - 250 mesh size fraction i.e.: hypogene gold in rock is clay and silt size. Previous testing of typical -80 mesh stream sediment sample material versus using only the -250 mesh sediment material has shown significant gold enhancement in the clay and silt sized fraction. In other words, the -80 +250 mesh sediment material contains few gold particles. Within the Goose Range at a reconnaissance scale of sampling, the -80+250 mesh fraction could significantly dilute the gold signature which is predominately found in the minus 63 micron size fraction of the sediment. In order to 'track' gold grain abundance in the clay and silt sized sediment material, 20-30 grams of this material should be prepared and sent for NAA.

Our research has determined that some creeks in the Goose Range were worked by the Chinese alluvial prospectors. It is therefore assumed that fine gold was their target. By using the minus 63 micron sediment fraction strategy, plus low analytical detection limit for gold on large sample (20-30 grams) weights of this material, we envisage that interpretable repeatable patterns in stream sediment gold concentrations will result. Barker Minerals expect to determine if Nevadia-styles of gold concentrations are to be found within the Goose Range thrust plate, extensional faulted and intrusion emplacement zones present throughout the project area.

The original discovery of gold along the Little River by Louis Doyle has important consequences when determining a sediment sampling strategy. His "culvert" gold was in fact supergene-developed, secondary gold which was determined to have a very high fineness in composition. These flakes were delicate, and of course, "visible" to the naked eye. Although the original material was sent to the laboratory without any grain size measurements, photos and description of the material would appear to indicate that 200 micron sized grains would be the lower limits of their size.

In stream sediment sampling, the location of delicate supergene gold particles in the alluvial sediments could lead directly to "in site" supergene gold enrichment zones and primary gold concentrations in bedrock. The Ace Core claims constitute a setting where the hypogene gold particle size is very tiny as compared to the supergene gold-alluvial gold particles produced during the weathering cycles (s) of pyritic massive sulfide deposits. It is therefore recommended that during the first-phase reconnaissance stream sediment sampling a large sediment bulk sample be collected.

The sediment sample material will be wet-sieved through a set of three portable screens of various mesh sizes. This screened material will be caught in a conical shaped bottom "catch" pan. The water in the pan will be decanted from the top of this material and all the clay-silt and sand sized "heavies" and "lights" will be bagged together into a numbered plastic sample bag. The volume of the bagged material will vary as will the weight of the sample (i.e.: common sturdy plastic rock sample bags will be used for sediment sampling).

This material, once bagged, can be returned to base camp where it will be halved, with one half being rebagged and stored. The second half will be air dried and then sent for sample preparation where it will be sieved to minus 63 microns.

It is assumed that our preliminary tests of the volume of minus 63 micron material produced during this methodology is sufficient to produce plus 30 grams of sediment for NAA with some archival and optional analytical material left over.

If the original sediment sample yields gold and / or other pathfinder element anomalies then the second split of the sample material can be introduced into the stream sampling methodology and analytical stream.

This material can be halved again and one half of the material can be panned in the conical pan. (Catch pan) The residual heavy mineral concentrate material can then be examined for supergene grain sized material as well as hypogene sized gold particles.

If gold "colors" are found in the heavies then more detailed stream sediment collection at a much higher sample site location density can be initiated. In this second-pass phase of sampling, all tributaries or "pups" would be sampled to their headwaters until no suitable heavy mineral dumping sites are observed.

The second one half of the second original sample split would be sent away for size fraction sample preparation. This would include the preparation of another minus 63 micron silt and clay size fraction (to be analyzed as a check assay of the first minus 63 micron anomaly.) The plus 63 micron minus 177 micron (80 mesh) size fraction would also be prepared for NAA assay determinations. By analysis of this fraction, the presence of "sand-sized" gold particles can be determined. The gold particles found in this fraction can be the result of "coarse" hypogene primary gold liberation or supergene gold grain enlargement processes and subsequent transport into the alluvial environment.

In any case, the first gold determination of the minus 63 micron sized fraction can be verified with new check analysis. The presence of coarse gold being present in the sample is verified by new hard data gold analysis (-177+63 mieron) and in the field heavy mineral concentrate gold particle panning and identification and counting of "colors".

Lake sediment sampling may be utilized as an effective geochemical survey exploration technique for cirque lakes and pot hole lakes in valleys if lithologic-stratigraphic units having a potential for gold and / or base metal enrichment are identified by the stream sediment surveys,

geologic-mapping and / or prospecting. NAA determination of gold on the minus177 micron size fraction will be conducted.

All sediment samples and heavy mineral concentrate products will be archived by Barker Minerals.

All sediment sample site locations will be plotted by GPS and 1:20,000 orthophoto Trim maps. Sites will be flagged in the field with the appropriate sediment sample number. Sample note taking similar to soil sample field coding descriptions will be utilized.

It is expected that minor stream sediment sampling surveys will be implemented this field season. The nature and distribution of sediment sample sites will constitute an orientation survey to cover example drainage's within the three major terranes found with the Goose Range area.

POSTNET

FAX Cover Sheet

Fax Number: 604 477 0419

To: NICK CARTER

From: Bruce Ballantyne.

Date: Sept 25 / 96.

# of pages including this one: 13

Message: Dear Nick I completed this am and have it typed and on floppy. I hope this is generally what you wanted

Bruce.

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