

The CHACO BEAR Au-Ag-Cu Prospects

EPITHERMAL to MESOTHERMAL Gold-Silver Prospects
(Including an ESKAY CREEK Gold-Silver Sub-Aerial Equivalent Prospect)
& PORPHYRY Copper-Gold Prospects

Fundamental Gold Deposit Targets & Exploration Features

Privileged and Confidential

The major structural, geological, alteration and mineralogical features found widespread on the Chaco Bear property indicates large scale hydrothermal activity thereby providing the scope to host a **major economic gold camp**.

In terms of probabilities, conditions are most favourable within the Chaco Bear claim area to host one or more **world class** (≥ 100 tonnes Au) epithermal or mesothermal gold deposits. A **giant** gold deposit (≥ 200 tonnes Au to 1,000 tonnes Au; Sillitoe definition) is also a distinct possibility in this classic and rare, shoshonitic (high potassium) magmatic system. In addition there is at least one and possibly two gold-rich copper porphyry deposits formed in association with the magmas which produced the gold bearing fluids to form the epithermal/mesothermal gold deposits.

Geological mapping and geoscience clearly shows that the property is a transitional gold, silver and copper mineralizing environment which has all of the features of a fully preserved epithermal to mesothermal to porphyry mineralizing system. The three principal diagnostic features that indicate a big gold-rich hydrothermal mineralizing system underlies the property are:

- 1). the magmatic system has produced classic shoshonitic (high potassium) igneous rocks throughout the altered volcanic succession which covers an area of 15 square miles.
- 2). the alkalic magmas appear to be products of post-subduction tectonic activity, or back arc activity.
- 3). the widespread network of shoshonitic rhyolite dykes found at surface and near surface and extensive and thick shoshonitic rhyolite and dacite flow rocks found near the top of the volcanic succession that either contain significant Au or contain significant gold pathfinder elements (Au, Ag, As, Mo and Hg).

Shoshonites can be of considerable economic importance as many world class, high gold content, porphyry copper-gold deposits and related **world class** and **giant** epithermal/mesothermal gold deposits are hosted by or are associated with shoshonitic rocks. Shoshonites are potassic igneous rocks characterized by high K_2O/Na_2O ratios (i.e., > 0.5) and high $K_2O + Na_2O$ values (i.e., > 5.0 wt-%).

The Chaco Bear lithology, mapped in 1997, was interpreted in 1998 to be analogous to the lithology which produced the rich Eskay Creek gold-silver deposit. Several major

target areas on the property are clear subaerial equivalents to the Eskay Creek deposit.

Extensive geological mapping, sampling, and assaying completed in the 1997 exploration program shows that there is at least one, and, in all probability, two mineralized magmatic centres underlying the property. They are denoted as an intrusive centre and extrusive centre. Lithologically, a fully preserved transitional mineralizing system from epithermal to mesothermal to porphyry is distinctly evident at each magmatic centre.

The geological model was developed by the writer in 1998 following property inspections and research yet a large amount of credit is due as a direct result of a detailed large scale geological mapping program carried out by P.B. Read, Ph.D., consulting geologist, in 1997 under the auspices of Imperial Metals Corporation, the project operator at the time. Further support of the model was provided by the constructive input of R.E. Kirkham, Ph.D., geoscientist, with the Geological Survey of Canada at the time after the writer discovered his Eskay Creek Model titled "*Schematic Stratigraphy and Syn-intrusive, Syn-volcanic Mineral Deposits*", p497, *in Porphyry Deposits of the Northwest Cordillera of North America, CIM Special Volume 46*. The fundamental difference appears to be that Eskay Creek was subsea during deposit formation whereas Chaco Bear was subaerial. Further dialogue with Dr. Read enhanced the thesis rather than diminish it.

In contrast to the Eskay Creek volcanic succession, at Chaco-Bear part of the upper section of the Hazelton Group is missing and is replaced by a 450 metre thick sequence of felsic extrusives which overlie, unconformably, the thick upper Hazelton andesite-basalt succession. The felsics consist of altered and mineralized dacite and rhyolite flows believed related to a volcanic dome complex at the extrusive centre. The similarity to the Eskay Creek gold-silver deposit environment is striking. See **Figure 1**, after Kirkham et al, for the schematic representation of the geological model titled "Geological Model, Chaco Bear Gold Zones in Comparison with the Sulphurets Gold Camp".

As of this February 2004 re-writing of this overview, following the "Cordilleran Roundup" held in Vancouver, the Geological Survey of Canada (GSC) poster session revealed new research and geochronology data for the Chaco Bear area which supports the Chaco-Bear-Eskay Creek Au-Ag deposit analogue thesis. In summary the GSC stated "***Uppermost Hazelton Group strata in north McConnell Creek map area although Callovian age are lithologically similar to (and in the same stratigraphic position as) strata which host the Eskay Creek Au, Ag deposit on the west side of the Bowser Basin.***"

Regional stream sediment sampling by the British Columbia Geological Survey (BCGS) shows that the combined drainages from each Chaco Bear magmatic centre contains the largest areal extent and highest magnitude values of integral ***Au+Sb+As+Ag+Hg*** gold deposit pathfinder elements and overprinted ***Cu+Pb+Zn+Ag+Ba*** base metal signatures found on the entire 5,400 square mile map sheet which is interpreted as indicating near surface epithermal/mesothermal precious-metals mineralization.

THE INTRUSIVE MINERALIZING CENTRE

The Intrusive Centre, expressed at surface by a 1½ mile by 1 mile colour anomaly alteration zone consisting an altered felsic volcanic pile is so extensively hydrothermally altered over large areas that the protolith is destroyed and replaced by a **porous assemblage of finely disseminated pyrite, quartz, and sericite alteration**. Although outcrop is relatively sparse, where there is outcrop, numerous gold-silver-copper bearing veins are found throughout this area and beyond in the surrounding propylitically altered area. The intrusive centre drains to the south and geochemically is extremely anomalous in gold deposit pathfinder and base metal elements. This area is strikingly obvious by the large colour anomaly that can be seen at altitude in a helicopter.

None of the several drill targets related to this intrusive centre and surrounding area have been explored using advanced geological techniques, geophysics, or drilling. All targets have precious metals signatures and/or base metals signatures including epithermal-mesothermal gold pathfinder element signatures. Targets include but are not limited to:

1. a milled-matrix fluidized-breccia pipe that is intensely altered and silicified. These epithermal/mesothermal mineral hosting breccia structures form in relation to high level porphyry intrusions and commonly host bonanza gold deposits at depth. As well hydrothermal breccias are commonly associated with gold-rich porphyry deposits (Sillitoe).
2. a heavily pyritized volcanic-flow breccia. The root zones of these structures commonly host epithermal/mesothermal bonanza gold deposits.
3. the entire epithermal/mesothermal zone underlying the silicified zone below the **1½ mile by 1 mile** phyllic alteration zone (colour anomaly).
4. the source area of a large transported gossan zone believed to be a **mineralized and gossanous unconformity** between the andesites and overlying rhyolites located east of the large colour anomaly. These open structures are known for their mineral fluid focusing capability resulting in the formation of bonanza epithermal gold deposits.
5. although a speculation at this time; a possible diatreme-breccia maar-volcano within the central part of the large colour anomaly which is clearly defined by its recessive and nearly circular topography. These epithermal/mesothermal mineral hosting breccia structures form in relation to high level porphyry intrusions. At depth these structures can host significant sheeted vein structures at the diatreme margins producing epithermal/mesothermal gold deposits.

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6. a related intersecting mineralized sheeted zone to the diatreme-breccia maar-volcano which is geochemically and geophysically anomalous for 4,000 feet in strike length and up to 500 feet in width. The geochemistry includes an extremely anomalous multi-element (Cu, Pb, Zn) anomaly and downslope related Au anomaly. It coincides with a VLF-EM anomaly along its entire length and 1,200 feet of its strike length at the north was tested by a reconnaissance induced polarization survey and gave a very strong chargeability response with coincident low resistivity indicating significant sulphides close to surface and widening with depth to the south. This one feature is a major target.

Within the intrusive centre aureole there are a preponderance of quartz, quartz-carbonate, and carbonate veins containing specularite, pyrite, chalcopyrite, tetrahedrite, etc., which assayed up to 16.8% Cu, 0.74 oz/t Au, and 12.8 oz/t Ag.

The veins probably represent up flow regions through structural conduits of metal bearing fluids from the intrusive magma.

A large tonnage copper-gold porphyry target is predicted at depth below the epithermal-mesothermal transition zone and central pyrite-quartz-sericite alteration zone within and beyond the aureole of a prominent 500 to 1,000 gamma magnetic ring structure. The magnetic anomaly in the centre of the intrusive centre is eroded in part; probably due to secondary or tertiary alteration.

An interesting and significant geological feature of the area hosting both the intrusive magmatic centre and extrusive magmatic centre is the **resurgent mineralizing environment** which provides additional reason why the Chaco Bear is an excellent gold deposit search area. Approximately 5 km south-southeast of the intrusive centre is an altered and mineralized Tertiary intrusive complex which contains significant copper and molybdenum. Accordingly there could be some interesting overprinting, remobilization and re-concentrating of the portended mineral resources on the Chaco Bear property. It is not uncommon that significant world-class and giant epithermal gold deposits and porphyry copper-gold deposits are found in clusters.

THE EXTRUSIVE MINERALIZING CENTRE

The Extrusive Mineralizing Centre, interpreted from a central intensely silicified dacitic flow unit which exhibits chaotic flow banding and ribboned quartz veins which appears to be extruded from the vicinity of a perfectly circular lake reminiscent of a collapsed volcanogenic main vent structure. The ribboned banded quartz veins occupy an area at least 2,600 feet in strike length by 1,000 feet and is overlain by a thick unit of rhyolite. This extrusive centre, which has not been fully delimited, is interpreted as a volcanic dome complex and representative of the top of a fully preserved epithermal-mesothermal mineralizing system.

The extrusive centre contains very anomalous gold deposit pathfinder elements in the soils and rock which includes arsenic, antimony, silver, and molybdenum. The rhyolite flow is extensive and its base which is represented by an undulating gossan zone also contains vuggy vein structures which assay up to 6.2% Cu, 0.51 oz/t Au and 31.1 oz/t Ag.

In drill testing a mineralized shear structure within the aureole of the extrusive centre within the andesite sequence below the extensive rhyolite flow, intensely altered rhyolite dykes and andesite wall rocks were found to contain significant gold mineralization. **The bulk gold content over the total drill penetrated 239 foot integral interval of mineralized and altered rhyolite dyke-andesite wall rock averaged 0.724 grams/t Au.**

In addition to the rhyolite dykes encountered in the above drilling rhyolite dykes are widespread over the property area from the intrusive centre to the extrusive centre, a distance of more than 5 km (3 miles). All dykes are mineralized with gold, silver or are highly anomalous in gold pathfinder elements. A grab sample from one 10 metre wide dyke assayed 56.5 grams/tonne Ag, and a sample of rhyolite float assayed 5.8 grams/tonne Au.

The rhyolites and dacites are extruded through deep fracture systems directly from their respective magma chambers. They form a significant part of the plumbing system for conveying gold bearing magmatic fluids to favourable deposit sites and which also represent a significant part of the convective circulating and mixing system of meteoric waters with gold and silver pregnant magmatic fluids to similarly deposit the gold at favourable deposit sites.

A multitude of favourable deposit sites are found within this large system and include both structural and lithological traps: i.e., the unconformity, breccias, faults and shears; and permeable tuffs and fragmentals.

The rhyolite dykes will behave like highly permeable zones, like major faults, where rapid ascent of fluids will result in sudden gas exsolution and vigorous boiling causing the formation of bonanza gold deposits. Substantive evidence of the probable formation of gold bonanza deposits below the above referred drilling is exemplified by the brecciation and stockworks development caused by hydraulic fracturing due to explosive boiling within the gold bearing rhyolite dykes at depths. See **Photo's 1, 2, 3, and 4** of drill core which cut the subcropping rhyolite dykes.

This never followed up discovery represents a distal zoning feature to a large gold mineralizing event within favourable tuff and fragmental lithology at depth near this location. The same mechanism has occurred with the numerous target areas on the property; notwithstanding the gold rich porphyry targets which also remain untested.

Specifically, the rhyolites are connected with their magma chambers and represent one of the most significant parts of the “**ore bringer**” system, notwithstanding the other major structural “**ore bringer**” systems identified over the entire area; i.e., the major faults, shear zones, breccia pipes and diatremes.

There are at least four significant epithermal-mesothermal gold targets defined in the extrusive centre part of this giant hydrothermal mineralizing system, notwithstanding the likelihood of a second buried copper-gold porphyry deposit. The targets include but are not limited to:

1. a manganese-carbonate, subaerial, epithermal-mesothermal zoned gold-silver target offset and related to one of the major fault zones.
2. a zoned bonanza epithermal to mesothermal gold-silver target below or offset from the large silicified dacite and rhyolite zone, or lithocap at the top of the volcanic centre. This zone may indicate a silicified epithermal cap which may have great lateral extent in the underlying “dome” complex.
3. A zoned epithermal-mesothermal gold silver vein and lode system target about 1 km south of the extrusive centre. Here angular **massive-sulphide** vein float was found distributed in a linear fashion striking north up an east striking ridge which assayed 307 ounces of Ag per tonne and 37% Cu. The nature of this occurrence is reminiscent of the massive sulphide veins found at surface in the discovery stage of the great Comstock Lode in Nevada in 1859.
4. the extension to the mineralized unconformity between the andesites and overlying dacite and rhyolite flows within the aureole of the extrusive centre yet extending from the intrusive centre part of the property

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Within the extrusive centre local area surrounding the massive sulphide vein occurrence there are at least 5 defined areas hosting a preponderance of quartz, quartz-carbonate, and carbonate veins containing specularite, pyrite, chalcopyrite, tetrahedrite, etc., which assayed up to 12.86% Cu, 0.43 oz/t Au, and 12.8 oz/t Ag.

A second copper-gold porphyry target, the heat and mineral fluid source to the gold and silver vein structures, and disseminated gold in the rhyolites is predicted at depth below the silicified epithermal alteration zone of the extrusive centre. This magmatic centre may be too deep to demonstrate economic viability unless its associated copper-gold porphyry is relatively high grade which in this shoshonitic environment is not impossible. The Grassburg copper-gold porphyry is shoshonitic and has one of the highest copper and gold grades in the world.

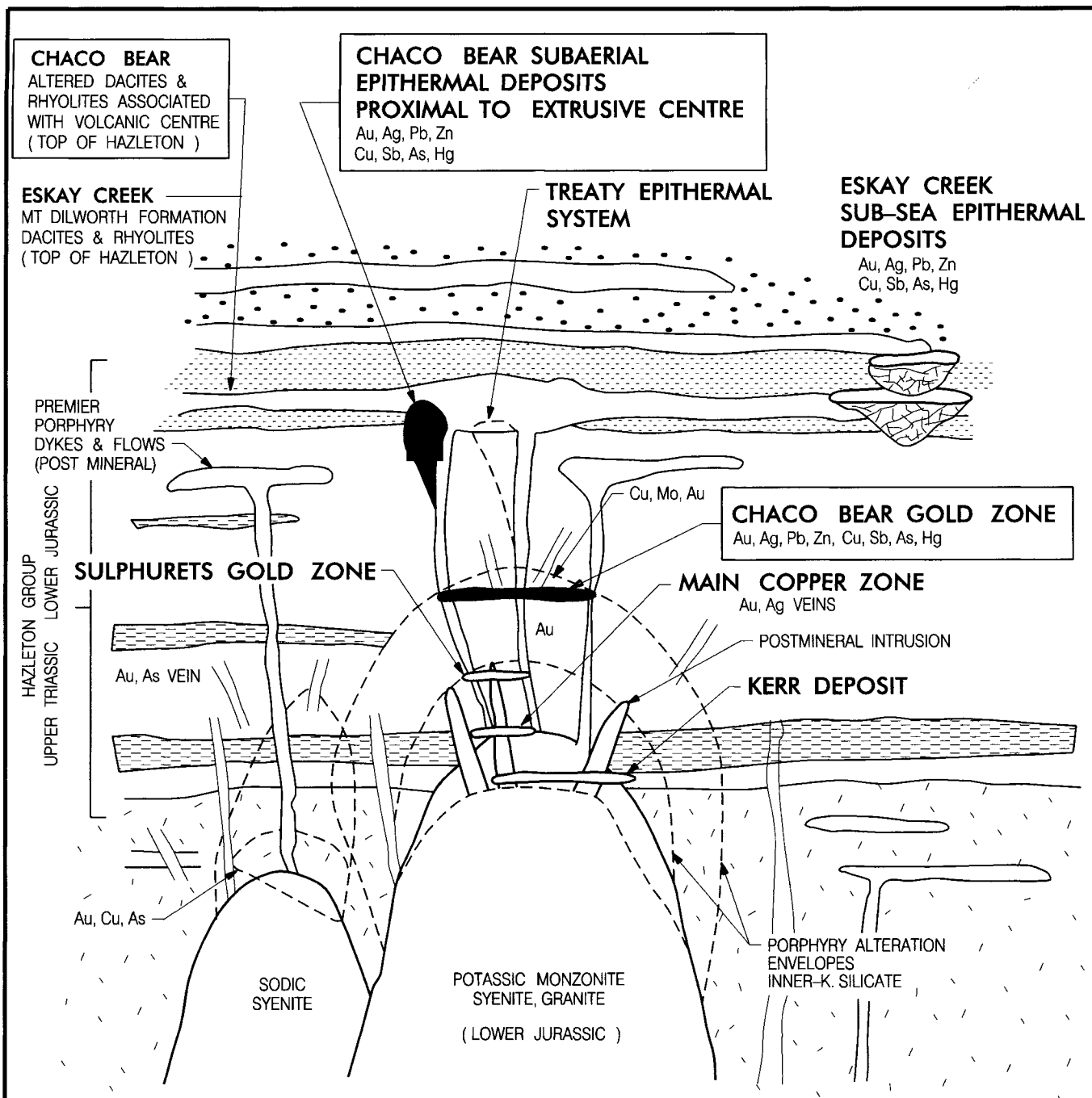
The property consists of 9 mineral claims covering an area of about 9,000 acres, or about 15 square miles. It is located about 100 miles due north of Smithers British Columbia and south of the operating Kemess gold-copper mine. It is located within 3 miles of the British Columbia Railway and a major logging road. A major road will soon connect the seaport of Stewart, British Columbia with the Kemess Mine and will inter-connect with the logging road that passes Chaco Bear.

Historically close to \$1 million has been spent on exploration with about \$800,000 spent in the last decade. At least 10 altered and mineralized target zones were identified in the last exploration program but none have yet received any advanced exploration attention and drilling.

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February, 2004
Vancouver, British Columbia



SCHEMATIC STRATIGRAPHY AND SYN-INTRUSIVE, SYN-VOLCANIC MINERAL DEPOSITS

FIGURE 1

808 EXPLORATION SERVICES LTD.			
CHACO BEAR PROJECT			
BRITISH COLUMBIA			
GEOLOGICAL MODEL			
CHACO BEAR GOLD ZONES IN COMPARISON WITH THE SULPHURETS GOLD CAMP			
BY	J.M. Ashton	SCALE	AS SHOWN
DRAWN	E.B. Catapia	DATE	MARCH 1998
CHECKED	J.M. Ashton	REVISED	

PLOTTED: 29 JAN 2004

MODIFIED AFTER: KIRKHAM et al., 1991



Photo 1, Drillcore (Flow Banded Rhyolite) **Au=0.186 oz/t**



Photo 2, Drillcore (Andesite Flow Breccia) **Au=0.077 oz/t**



Photo 3, Drillcore (Flow Banded Rhyolite) **Au=0.124 oz/t**



Photo 4, Drillcore (Flow Banded Rhyolite) **Au=0.018 oz/t**