

Ice River Complex (IRC) (Pb, Zn, REE's)

SUMMARY

The Ice River property is located within the Golden Mining Division at Latitude 51° 11' 30" N, Longitude 116° 22' 00" W. The property is situated 45 km east of Golden, B.C. and is currently accessed by helicopter. Forest Service roads reach to within 5km of property boundaries. The property consists of 11 MTO mineral claims totaling 2169 Ha, and is located entirely within NTS mapsheet 082N/01W.

Bob Sharp at work on the Ice River Project



The tenure area strategically lies along the eastern boundary of the Ice River Complex (IRC). The Complex is one of the largest and best preserved alkaline ijolite/syenite/carbonatite complexes in the world. As such, it has been the focus of several projects from both economic and academic perspectives. Within the 29 square kilometer

Complex, two distinct suites are present: an early, rhythmically layered, feldspar-free intrusion of jacupirangite, ijolite and urtite, cored by a carbonatite plug and crosscut by carbonatite dykes rich in mafic silicates and oxides; and a later zoned and crosscutting syenitic series, associated with a zeolite and feldspar-bearing carbonatite. The alkaline rocks intruded Cambrian and Ordovician shales and carbonates of the Chancellor, Ottertail and McKay Formations. Contact metamorphism of the enclosing sedimentary rocks resulted in the formation of hornfels and skarns. Some limited soda metasomatism also occurred. The complex and its host rocks were deformed and subjected to low-grade regional metamorphism during the Columbian orogeny.

The original focus of explorationists was with the strataform massive sulphides of the Waterloo prospect, the extensive nepheline syenite and the presence of ornamental sodalite. Currie (1975) published a comprehensive 1: 25000 map of the Ice River Complex and surrounding host rock. It remains an invaluable guiding document, aiding in the understanding of, and distribution of the most prospective units. Work since 2005

has demonstrated that much more mapping detail is required to fully evaluate the economic potential of the property area.

Work by Eagle Plains Resources over the last 3 field seasons represents the first systematic, multidisciplinary exploration of the property area. This most recent work concentrated on detailed prospecting, mapping and rock sampling, along with soil and stream silt geochemistry. The 2006 geochemical program proved to be highly successful in being able to delineate Rare Earth Element(REE) and Niobium (Nb) mineralized dyke systems. Detailed mapping in the vicinity of the Waterloo base metal showing, also positively identified stratigraphic and structural features that control sulfide mineralization there. The limited 2007 drill program verified this geological assessment by successfully intersecting a sulfide bearing stock-work zone, located 120 meters along strike west of the known workings.

A number of other commodities are being passively explored for on the property. Those which show some promise include 1) (nepheline) syenite as a source of ceramic grade feldspathic minerals, 2) sodalite syenite as a source of semi-precious gemstones or aggregate, and 3) a wide variety of intrusive phases of the Ice River complex which could be used as dimension stone. Despite the complex structural history of the area, felsic and mafic phases of the complex are remarkably undeformed and could readily be developed into a range of attractive building products.

In terms of recommendations, the latest fieldwork and geochemical programs carried out successfully determined a number of rock type hosts to REE and Nb +/- Zr+-Hf mineralization. Subsequent field programs should be devoted to the collection of samples for petrographic study for the purposes of identifying the mineral carrier of these elements. Field identification of the REE minerals has proven to be very difficult as most samples comprise fine bands, wisps and disseminations of very fine orange, brown and black amorphous mineralization, generally obscured by a strong Fe-Mn overprint.

A number of days should be spent following up the latest rock and soil analytical results along the north and east flanks of Buttress Peak and north of the Waterloo showing area. New work should include a series of traverses in the south bowl and beyond, into newly staked (2008) territory as far as Mount Mollison. The northern limit of the property, along the southeast flank of Sentry peak, also requires detailed prospecting and mapping. Systematic stream sediment sampling should be done in both areas, with upwards of 50 sample stations. Another 5 line-kilometers of soil sampling is recommended, along four contours to the south of the current soil grid, at least as far as the main creek draining the south bowl. At 25 meter spacing, this would require approximately 200 samples. Time and budget permitting, contour soil sampling should continue further south across the creek with a western limit of the tree line, and an east limit of approximately 1 kilometer from the IRC contact.

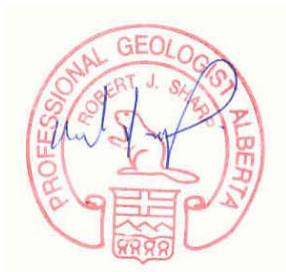
At the Waterloo showing, base metal mineralization should be followed-up using geophysical methods. The massive to semimassive nature of the mineralization should be amenable to both EM and magnetic surveys. Small pods of sulfide mineralization

have been observed at several other localities. This includes late veins of massive pyrrhotite associated with fenite and carbonatite in the zeolite altered units of the Ice River Complex, as well as conformable bands of disseminated galena and sphalerite hosted in hard altered limestone. It is suspected that the latter occur proximal to sub-unit stratigraphic contacts in the limestone, especially in close proximity to dykes and sills of syenite and/or lamprophyre; as such, these associations should be carefully assessed during future field programs both by mapping/ prospecting and by geochemical means. A budget for the proposed work is included with this report.

The results from the 2007 program continue to support the potential for the Ice River Property to host strataform massive sulphide deposits as well as Earth Element (REE) and Niobium (Nb) mineralization. This report includes recommendations for future work on the project, which include continued grass roots exploration within previously unexplored areas of the property and more detailed work in areas of interest identified by historical programs. A detailed budget for this work is included in this report.

The total expenditures on the property by Eagle Plains Resources Ltd. in 2007 were \$199,247.27.

Respectfully submitted:



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INTRODUCTION AND TERMS OF REFERENCE

The writer was retained by the directors of Waterloo Resources Ltd. to author a geological report on the Ice River Property. This report is based on the synthesis of existing geological data and on data and observations generated during the 2007 exploration program conducted by Eagle Plains Resources Ltd. Sources of information included all available published sources, including government and industry assessment reports on the Property and on the area and from other reports that were made available to the writer by the Company. The writer has relied on the truth and accuracy of the aforementioned public data in the preparation of part of this technical report and believes that the past exploration and sampling was done accurately and in a professional manner. All work conducted by Eagle Plains Resources Ltd. and Bootleg Resources Inc. on the Ice River property was under the direction of a qualified person. The writer has visited the Ice River property.

This report follows the layout and format for technical reports as described in Form 43-101F of National Instrument 43-101. Headings follow those as suggested in the Form, and no disclosure is provided for inapplicable items.

Waterloo Resources Ltd. is junior capital pool company registered in British Columbia. It trades on the TSX-V under the symbol WAT.P. As of September 16, 2008, the company had had 1,000,100 shares outstanding.

RELIANCE ON OTHER EXPERTS

This report, written by Mr. Jarrod A. Brown, M.Sc., P.Geo., is a compilation of proprietary and publicly available information as well as information obtained during 2005 to 2007 field seasons. The author, Mr. Brown, directly supervised and partook in all three exploration programs during those seasons. The author's certification sheet is presented at the end of this report. In writing this report, the author has used as sources of information those publications listed in the references section. Government reports referenced by this report were prepared by a person (or persons) holding post secondary geology or related university degrees and, therefore, the information in those reports is assumed to be accurate. Those reports written by other geologists, prior to the implementation of the standards relating to National Instrument 43-101, are also assumed to be accurate, based on a review conducted by the author, although they are not the sole basis for this report.

PROPERTY DESCRIPTION AND LOCATION

The Ice River property consists of 2,169 hectares of mineral claim area on NTS mapsheet 82N/1W centered at Latitude 51° 10' N, Longitude 116° 23' W (Figure 1, Figure 2). It is

located 45 km east of Golden B.C., within the headwaters of Moose Creek, occupying the western side of the valley. Moose Creek drains southward to the Beaverfoot Valley, which flows northwestward to the Kicking Horse River.

All claims are in the in the Golden Mining Division, and are controlled by Eagle Plains Resources Ltd. Claims are a combination of legacy 2-post or 4-post claims and MTO grid cells. As noted in the following table, all of the claims are in good standing until at least November 15, 2011. Certain types of exploration activity require a Land Use Permit, issued by the British Columbia Government, prior to conducting the work on a mineral property. The current or future operations of Waterloo Resources Ltd., including exploration, development and commencement of production activities on this property require such permits. Other permits governed by laws and regulations pertaining to development, mining, production, taxes, labor standards, occupational health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters, may be required as the project progresses.

There are, to the best knowledge of the writer, no liens or encumbrances on the claims. The title was researched using the Mineral Titles Division on-line database.

OPTION AGREEMENT

On September 08, 2008 Waterloo Resources Ltd. and Eagle Plains Resources Ltd. announced an option agreement on the Ice River Property. Under the terms of the option agreement, Waterloo may earn a 60% option in the property by making exploration expenditures of \$3,000,000 and completing payments of 300,000 shares and \$475,000 cash by the fifth anniversary. A 1.0% Net Smelter Return is reserved for Eagle Plains Resources Ltd. Waterloo Resources Ltd. may increase its interest in the property to 75% by delivering a bankable feasibility study by 2015.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The property is located from elevation 1760 to 2800m, and consists of primary subalpine scrub vegetation and talus. Lower elevations are forest-covered, with mature spruce and pine dominating.

The climate is dominated by prevailing moist westerly winds from the Pacific Ocean. Occasionally, drier continental weather patterns extend over the region. Generally, summers are short and cool, with occasional hot spells, while winters are long and snowy. Annual precipitation in the adjacent Kootenay National Park ranges from less than 380 mm at lower elevations to over 1250 mm at higher elevations. In valley bottoms, average January highs are -7°C, while July highs average 22°C. Average temperatures decrease by about 0.5°C for every 100 m of elevation gain.

The property is currently accessed by helicopter with the nearest base located in Golden B.C, 45 kilometers to the west. Forest service roads reach to within 5 km of the main showings, from which a primitive pack trail can be utilized to access the valley bottom along the eastern boundary of the claims.

HISTORY OF THE PROPERTY

The Ice River group of claims overlies a sequence of rocks that has seen geologic investigation since the early 1900s. This is due to both the unique geological and geochemical characteristics of the area, and the considerable economic potential located there. Various groups have completed programs in the area, first described in 1914 by J.A. Allan in GSC Memoir No. 55, Map 142A. Albany Oil and Gas in 1971 staked the Bow 1-49 claims, which cover most of the area now underlain by the Ice River tenures. Their work consisted of evaluating the property for a number of commodities, including titaniferous magnetite, uranium, columbium/niobium, and sodalite. Cominco Ltd. investigated the Moose Creek area in 1971 (Webber and MacKean, 1971).

In the late 1980's to early 1990's the property was revisited for its sodalite potential (Addie, 1990). The area is of great interest to mineral collectors primarily for sodalite, and also for a wide variety of rare minerals associated with alkaline complexes (<http://www.mindat.org/loc-475.html>).

In 1993, the headwaters of the Moose Creek basin were acquired by Magtite Mineral Ltd. and restaked as the Kim and Gust claims. The initial focus of work was to test the potential of industrial quality titaniferous magnetite and ilmenite (Termuende, 1998; Butrenchuck, 2001). Results included a rough resource calculation and brief notes on the distribution of sodalite on the property.

The Ice River Complex is one of the largest and best preserved alkaline ijolite/syenite/carbonatite complexes in the world. As such, it has been the focus of several projects from both economic and academic perspectives. Over the decades since its discovery, several competing theories have been presented to explain its derivation, evolution, and emplacement. Many details remain speculative or controversial. In particular, little work on the metallogenesis of the complex has been reported.

Allan (1914) originally mapped the central core carbonate units as limestone inclusions. Allan's work was revised and updated by Currie (1975) after Rapson (1963) argued for the presence of an igneous carbonatite body. Gussow (1977) supported Allan's interpretation that the crystalline limestone masses of the complex are recrystallized and remobilized limestone. He went further to suggest that the entire complex is actually a Precambrian basement complex brought to the surface in two thrust sheets, comprising nepheline and sodalite syenite, paragneiss and crystalline limestones. These arguments were made despite the prevailing body of knowledge supporting igneous derivation and emplacement, supported by textural evidence (Currie, 1975), differentiation trends (Campbell, 1961) and Devonian K-Ar mica dates (Baadsgaard, 1961; Rapson 1963).

Parrish et al., (1987) proposed an age of 368±4 Ma for the complex, based on a synthesis of dating techniques, including U-Pb dating of zircon and sphene, Rb-Sr analysis of various minerals, and $^{40}\text{Ar}/^{39}\text{Ar}$ age spectrum on hornblende. He acknowledged that all isotopic systems are disturbed. Locock (1994) discussed the metamorphic conditions that affected these and other isotopic systems, and provided a concordant U-Pb age date of 356±6 Ma.

Questions are ongoing regarding the petrogenetic evolution of the complex. Currie (1975), and Locock (1994) concluded that the complex was emplaced mainly as sill-like bodies and subordinate dykes and plugs. The diverse array of rock types were derived from a single magma pulse, ultimately affected by various combinations of fractional crystallization, and silicate/carbonate and silicate/silicate immiscibility. Work done by Peterson (1983) agreed with Currie's petrologic subdivisions, but brought into question the role of liquid immiscibility and specifics of emplacement.

Peterson and Currie (1994) provided evidence to suggest that the ijolite and nepheline syenite were derived from separate magma batches, but that the evolution of the igneous system is complex because of variable degrees of incorporation of country rock. They also suggested that metasomatic activity may provide possible mechanisms for the formation of some of the rock types in the complex, particularly the units rich in zeolites. They concluded that it is difficult to explain the complex shape and distribution of the units of the Ice River Complex while envisioning a single source pluton of simple shape.

History of work by Eagle Plains Resources

The northern half of the current tenure was staked by Eagle Plains Resources in October of 2003. Work commenced in 2005 and included reconnaissance rock geochemical sampling and prospecting of talus and outcrop in the cirques and valleys east of the Yoho National park boundary (Brown, 2006). Two persons spent five days exploring alpine and subalpine areas north and east of the ridges delimited by Buttress Peak west to Manganese Mountain, and Manganese Mountain north to the minor peak between Zinc Mountain and Sentry Peak.

Traverses in the property area successfully located or verified mineral potential for the semiprecious gemstone sodalite, dimension stone (syenite, and alkaline mafic intrusive rock), and industrial or rare metals including titanium, niobium, zirconium and a variety of rare earth elements (REEs). Many occurrences of zeolite mineralization/ alteration were also noted throughout the property area, both as large euhedral vug filling masses, and as microscopic alteration of syenite as mapped by Currie (1975). Massive sulfide mineralization at the Waterloo showing comprises structurally controlled and replacement mineralization, with 2005 outcrop samples containing up to several percent lead and zinc, greater than 6500 ppm copper, 1200 ppb gold, and above detection limit silver (>100 ppm) (Brown, 2006). Total expenditures for the 2005 program were \$19,186.51.

The 2006 Bootleg Exploration program (Brown 2007) at the Ice River property consisted of four components:

- i) Detailed stratigraphic and structural mapping of country rock in the vicinity of the Waterloo Zn-Pb-Ag showing;
- ii) property-scale geology mapping of the circ east and north of the divides defined by Zinc Mountain, Manganese Mountain and Buttress Peak;
- iii) litho-geochemical and contour soil geochemical sampling within areas iⅈ and
- iv) stream, silt and heavy mineral sampling of Moose Creek and tributaries.

The Geologic mapping at the Waterloo showing area identified a significant sub-unit lithological contact within the Ottertail Formation, and a swarm of lamprophyre and syenite dykes and a dominant WNW trending, tight fold system. Mapping of the cirque below Zinc and Manganese mountains provided greater detail of the distribution of the zoned syenite and layered mafic intrusions of the Ice River complex. Mapping also revealed the presence of two previously unreported zones rich in sodalite syenite. One such zone coincides with a multi-element soil geochemical anomaly (Zn, Pb, Li, Mo, Y, and Ba and spot high to extreme Cu, La, and Nb). Total expenditures for the 2006 program were \$40,015.81.

Two field programs were carried out at the Ice River property during the 2007 field season:

- 1) July 11 to July 19 fieldwork included 2 helicopter supported camps for the purposes of prospecting, soil geochemical sampling, and follow-up of 2006 geochemical anomalies. Twelve man-days were spent soil sampling and prospecting, mostly to south of the camp along the east flank of Buttress Peak. An additional twenty-three man-days were spent soil sampling, prospecting and mapping the upper benches from Sodalite circ to the 2800m elevation marker on the south flank of Sentry peak.
- 2) A program of diamond drilling at the Waterloo Showing was completed between August 15th and August 19th, 2007. The program was helicopter supported with personnel housed in Golden BC. Field and drilling crews rotated on 12 hour shifts, supported by two daily flights out of Golden. Concurrent to the drilling program, 6 man-days were spent prospecting and sampling the ridge lines and bowls of the northern and southernmost bowls below Sentry peak and south of Buttress peak respectively.

A total of 77 rock samples were collected for analysis, and approximately 2000 lbs. of sodalite syenite boulders and hand specimens were flown out by sling. The soil and silt geochemical sampling program included 156 soil samples, and 3 silt samples. Total 2007 expenditures were \$199,247.27.

GEOLOGICAL SETTING

The Ice River Complex (IRC) is a large, J-shaped alkaline intrusion, approximately 18 kilometres in length with a total exposure of 29 square kilometers. Within the complex, two distinct suites are present: an early, rhythmically layered, feldspar-free intrusion of jacupirangite, ijolite and urtite, cored by a carbonatite plug and crosscut by carbonatite dykes rich in mafic silicates and oxides; and a later zoned and crosscutting syenitic series, associated with a zeolite and feldspar-bearing carbonatite. The alkaline rocks intruded Cambrian and Ordovician shales and carbonates of the Chancellor, Ottertail and McKay Formations. The following unit descriptions are derived mainly from Currie (1975):

Country Rock

The oldest country rock in the area consists of sheared argillaceous rocks of the Upper Cambrian *Chancellor Formation* (Unit 1). The lowest parts of the formation comprise grayish calcareous shales or argillites, sometimes showing phyllitic parting, whereas upper lithologies are dominated by reddish slate interbedded with dolomite or siliceous limestone (Currie, 1975). In the Ice River Valley, a succession more than 600m thick is exposed. No exposures have been documented in the Moose Creek drainage area. Macroscopically there is a sharp contact between the Chancellor Formation and the overlying Ottertail limestone; however, lithologies consistent with one formation are noted to interbed in the adjacent one, suggesting a conformable gradational contact at a local scale.

The overlying *Ottertail Formation* (Unit 2) consists of essentially massive limestone with some intercalated shaly beds near the base. On a fresh surface the rock displays a blue-grey shade, weathering to pale grey. This unit is the most common throughout the map area, and may obtain thicknesses greater than 500m (Currie, 1975). The unit is almost pure carbonate, with only minor insoluble constituents including argillaceous material and lesser quartz. Towards the top of the formation, lithologies exhibit a characteristic olive shade, with a transition from massive cliff-forming limestone to sharply angular blocks. This physical variation demarcates a transition to the overlying McKay Group.

The *McKay Group* (Unit 3) exposed in the Ice River area is characterized by alternating bands of slate, siliceous slate, siliceous limestone, and dolomite. The colour is commonly olive to brownish, with distinct colour striping, as on Striped Mountain southeast of the area. The unit forms a capping on the ranges of the Ice River, and is thus thickest at higher elevations. Currie (1975) calculated a true thickness of exposure on top of Mt. Goodsir to a minimum of 1035 m. Another large but thin exposure exists on Eagle Ridge and parts of Mt. Mollison, where it appears to form a narrow synclinal core in the Ottertail Formation. Fossil evidence suggests an Ordovician age for the top of the Group, and a Late Cambrian age for the base (Aitken and Norford, 1967).

Layered Mafic Intrusion (units 5-9)

The lowermost units of the Ice River Complex are characterized as mafic mesocratic to melanocratic rocks, with a general lack of feldspar, and a poorly to moderately developed layered structure. Five units were recognized and described by Currie (1975): jacupirangite, mela-ijolite, melanite ijolite, ijolite, and urtite. In general, the units are generally coarse grained with a high proportion of euhedral to subhedral crystals, but textures of the mafic complex are highly variable comprising significant numbers of veins, schlieren and pegmatitic patches. The general pattern of layering consists of a repetitive sequence of graded layers 10-200 m thick, with each layer becoming richer in nepheline towards the top.

The *jacupirangite* (unit 5) is a brown- and green-weathering ultramafic rock having granular and gneissic textures. White carbonate and/or syenitic veining is common. Rocks of the unit are high density with a panidiomorphic texture comprising grains averaging more than 5mm in length. Pyroxene and magnetite are primary constituents, with lesser honey coloured sphene and minor patches of phlogopite flakes. Nepheline and apatite are common minor to trace constituents.

The *mela-ijolite* (unit 6) has a distinctive fine-grained bluish matrix, and contains abundant mica in the form of large euhedral books up to 10 cm across. Pyroxene is the most abundant constituent with lesser nepheline as rounded or scalloped grains approaching a cubic form. Sphene is moderately abundant. Apatite is present, but in lesser volumes in comparison to the jacupirangite.

The *melanite ijolite* (unit 7) exhibits a typical ijolite texture (subequal amounts of cubic nepheline enclosed in stubby laths of pyroxene). Melanite, a black titanium-rich garnet, commonly comprises 5-15% of the volume. The unit is characterized by coarse to pegmatitic grain sizes, with greenish grey nepheline surrounded by greenish black pyroxene. Biotite forms as a minor constituent rimming pyroxene and less commonly as fine disseminations. Apatite is common as sizable euhedra. Sphene occurs rarely and is lesser brown than in the mela-ijolite. Alteration of nepheline to carbonate, natrolite, cancrinite and/or sericite is much more widespread than in the more mafic units.

The *ijolite* (unit 8) is recognized as the largest component of the layered igneous complex, and is characterized as mesocratic to melanocratic in appearance with generally greenish tones, in comparison to the bluish-black tones of the more mafic units. Large scale textures are the most variable of all the mafic units; and may include coxcomb textures, megapoikilitic areas, pegmatitic schlieren and porphyritic textures, and others. Composition is essentially equal proportions of nepheline and pyroxene, with accessory sphene and apatite, and trace biotite and opaques.

Rocks of the *urtite* (unit 9) were identified by Currie (1975) on the basis of nepheline content (>65%) and lack of the typical ijolite or 'buckshot' texture. In hand specimen the urtite is leucocratic with a pale greenish or grayish colour, punctuated by clots of greenish black pyroxene. The texture is always coarse grained with common fissile or

schistose textures due to the elongation of pyroxene or presence of oriented wollastonite. Mafic minerals are commonly poikilitic at fine to coarse scale. Kaersutite and melanite are found occasionally, as is small amounts of anhedral, interstitial albite. This is the only unit of the layered mafic complex that contains primary feldspar. Other trace minerals, also coarse grained, include sphene, apatite and calcite. The urtite unit is believed to represent the end member differentiation product of the mafic layered complex, which culminated in a leucocratic nepheline-rich rock. However, the unit shows an impoverishment of Zr, Nb and REE's compared to the ijolites and syenites of the zoned complex, suggesting that these elements may have been siphoned off elsewhere as residual differentiates (Currie, 1975).

Carbonatite (unit 10)

A 400 m wide intrusive carbonate unit in the northwestern part of the complex occurs as a lenticular mass with occasional apparent layering. Smaller dykes and sills are also evident throughout the complex crosscutting the mafic layered complex, but are clearly crosscut by the later zoned syenite complex. In outcrop, purer carbonatite tends to be buff or reddish brown with a rounded ropy surface. More silicate-rich rocks tend to have a dark greenish appearance, with pronounced fluidal banding. Vugs and solution cavities are prevalent throughout. Composition is >50% carbonate – heavy hand samples suggest high Fe content (Currie, 1975). Crystal faces of the carbonate are always present, and commonly exceed 5 mm in length. Minor minerals include iron-stained to black phlogopitic mica, acmitic pyroxene, and lesser apatite and pyrite. Rare alkali feldspars are interpreted as xenoliths. Margins commonly exhibit skarn-like mineral assemblages including apple green diopside, sprays of white tremolite, epidote and chlorite. Sodalite was observed as veins within the carbonatite, but no disseminations were noted. Anastomosing leucocratic veins are also common in the carbonatite masses, containing abundant natrolite and dark margins of the Fe-serpentine, berthierine (Peterson and Currie, 1994).

Zoned syenite complex (units 11-15)

The syenitic complex as mapped by Currie (1975) comprises 5 units including unit 11) Saturated syenite and contact breccia, 12) Melanocratic syenitic agmatite and migmatite, 13) Leucocratic grey nepheline syenite, 14) Sodalite-nepheline syenite, and 15) Altered zeolite-rich syenite. In simplest terms, the syenite complex is envisioned as an inwardly crystallized mass of feldspar-nepheline-rich rocks, comprising a saturated (contaminated) border zone, and evolution from melanocratic syenites to progressively lighter coloured feldspar-sodalite-zeolite enriched lithologies.

The *contact breccia syenite* (unit 11) is characterized as a white to pale grey, fine-grained, commonly porphyritic syenite, which forms a discontinuous rim varying from a few centimeters up to 200 m in width. In outcrop, it is a drab whitish colour with abundant plate-like crystals of albite, which reveal a distinctive tracery of white lines. Inclusions of all sizes, shapes and compositions are common. Both alkali and plagioclase feldspars are present, commonly comprising more than 75% of rock volume. Pyroxene is the most common mafic mineral, with common but subordinate epidote and Na-rich

amphiboles. Minor minerals include: sphene, commonly partially replaced by ilmenite; analcite, commonly intergrown with thompsonite, natrolite and calcite. Calcite may also be common, and associated with nepheline.

The *melanocratic syenite* (unit 12) comprises mesocratic to melanocratic rocks with variable agmatitic and migmatitic textures. In had specimen the rocks are characterized by large amphibole euhedra and bluish-grey alkali feldspar with good crystal faces but with form variations from near equant grains in more mafic lithologies to elongated laths in the more salic rocks. Alkali feldspar, nepheline and sodalite are virtually always present, with the nepheline vs. feldspar ratio generally higher in the darker lithologies. Kaersutite is very characteristic of this unit, and is closely associated with late pyroxene of aegirinic affinity. Biotite is present in the more mafic rocks, as rimming alteration of pyroxene, and more rarely as chains of small euhedra parallel to foliation defined by alignment of pyroxene and amphibole. Sphene and apatite are the most common accessory minerals.

The *leucocratic grey nepheline syenite* (unit 13) is white to pale grey in outcrop and is readily identifiable as smooth non-weathered cliff forming outcrops. Compared to the melanocratic syenite, rocks of this unit are much more homogeneous and free of inclusions. Many examples have a slight greenish tinge, others show a strong gneissic texture. The previous unit grades continuously into this unit, and is conspicuous by a low content of coarse-grained euhedral mafics which may include hedenbergitic pyroxene, aegirine, kaersutite, hastinsite and biotite. Intensely jade green to opaque aegirine is perhaps quite common, as is poikilitic amphibole. Feldspar is typically up to several centimeters in length as tabular and aligned prisms. Nepheline is less common in this unit than in the darker syenites, rarely exceeding 20%. It typically formed rounded and corroded grains with square or hexagonal cross-section, and is invariably rimmed with cancrinite. Sodalite is commonly associated with nepheline, and may locally exceed nepheline in volume. The sodalite occurs both as overgrowths on nepheline and as individual interstitial grains. It has been noted by previous workers, that intensely blue sodalite is commonly associated with pyrite cubes. Sphene is invariably present, but apatite occurrences are more rare. Sr and Ba contents are among the highest observed in the Ice River Complex, but Nb and rare-earth contents are lower than in the older units (Currie, 1975).

The *sodalite-nepheline syenite* (unit 14) is widely distributed throughout the Ice River complex, but is volumetrically insignificant. Most of the rocks from this unit are coarse grained to pegmatitic. The unit is easily identifiable as containing leucocratic rock rich in jade-green to blue sodalite. The volumetrically lesser mafic minerals, also commonly exhibit a distinct jade-green tinge. Feldspar is volumetrically the most significant mineral, generally occurring as subhedral forms with complex sutured edges. Nepheline is common, but not in large amounts, occurring as rounded and xenomorphic grains with little alteration. In contrast to the other units of the complex, sphene and apatite are essentially absent. Accessory minerals found include disseminated fluorite, and a variety of rare minerals characteristic of sodium-rich rocks, including lavenite, lamprophyllite, ramsayite, and possibly arfvedsonite (Currie, 1975).

The *altered zeolite-rich syenite* (unit 15) is a distinctive buff-weathering, medium-grained, inhomogeneous syenite. It occurs as irregular, poorly defined layers some 10's of metres thick. In hand sample the rock is pale brown and dominated by phenocrysts of alkali feldspar up to 2cm across. Actinitic pyroxene is the dominant mafic mineral, occurring as stubby rounded prisms. Biotite occurs locally as an overgrowth on pyroxene. In thin section, significant volumes of the zeolite natrolite (unit 14), were observed as large radiating sheaves along veins, and as a fine granular mass in the matrix of the rock.

Mafic dyke rocks (unit 16)

Mafic dykes are found crosscutting all units of the Ice River complex and are found most commonly near the presumed roof of the complex. They are all lamprophyric, meaning that they contain only mafic phenocrysts, and no salic phenocrysts. Biotite followed by olivine are the most common phyric components. As determined in thin section (Currie, 1975), alkali feldspar and lesser nepheline are the most common interstitial minerals, along with minor biotite or pyroxene. Sphene, calcite and apatite are common accessory minerals. Chemically, the lamprophyre is identical to the mela-ijolite (Currie, 1975), thus presenting timing and emplacement conundrums considering they also intrude some of the youngest syenite units.

Contact metamorphism and alteration

Emplacement of the Ice River Complex in late Devonian time (Parish et al., 1987; Locock, 1994), resulted in significant contact metamorphism of the surrounding country rock. These effects are most visible within the prevalent Ottertail Formation as extensive and pervasive hornfelsing, and more localized skarn development (=unit 4).

“The hornfels is composed of extremely hard dense, greenish grey to olive rocks with characteristic brownish spots 2-10 mm in diameter. The rocks break into discs or plates a few centimetres thick, commonly along slickensided surfaces which may contain quartz or calcite veinlets up to a centimetre thick forming enechelon gash or ladder veins. Carbonate interbeds in the hornfels are invariably finely saccharoidal marble, even when the containing beds are intensely altered to hornfels. Near the contact of the igneous rocks, the spots in the hornfels tend to become elongate, forming augen, and the rock takes on a more marked foliation becoming phyllitic. Within a few feet of the contact, some hornfels become more massive and pinkish, approaching foliated syenite gneiss, generally with interbeds of syenite material (Currie, 1975, pg. 8).” The margins of the hornfels are difficult to delineate as they blend into low-grade regional metamorphic rocks, which are also characterized as fine grained and hard with an angular habit.

Fenitization is defined as a type of alkali metasomatism characterized by secondary K-feldspar as well as sodic amphiboles and pyroxenes. Typical minerals include sodic amphibole, wollastonite, nepheline, mesoperthite, antiperthite, aegerine-augite, pale brown biotite, phlogopite and albite. Most fenites are zones of desilicification with additions of Fe³⁺, Na and K (Birkett and Simandl, 1999). The net result is to alter the

host to a rock resembling a syenite. Thus, it often becomes difficult to distinguish the alkali intrusives from metasomatically altered gneiss (<http://geology.csupomona.edu/drjessey/fieldtrips/mtp/mtnpass.htm>).

Fenitization is commonly associated with alkaline intrusions. Surprisingly, its recognition is sparse in the vicinity of the Ice River complex (Peterson and Currie, 1994; Currie 1975). Peterson and Currie (1994) did recognize and describe limited examples of fenitic alteration in the Garnet Mountain area.

i) Alteration of limestone screens within ijolite to zeolites+aegirine. Zeolite rich lithologies alter to a distinctive white to pink or red. Large bodies of zeolite-rich syenite recognized by Currie (1975) may represent coalesced, melted fenites.

ii) Secondary? wollastonite in pegmatitic dykes of ijolite and urtite, as evidence for fenitization, and

iii) A cap of pegmatitic syenite overlying an ijolite-carbonatite dyke swarm. It is composed of the only silica saturated rocks known in the drainage area, and is interpreted to be the product of isochoric replacement of country rock.

PROPERTY GEOLOGY

Historic geologic mapping at the Ice River property is limited to regional scale (1:25000) mapping by Currie (1975) and Allan (1914). The western half of the 2.8 km wide by 6.0 km long property is dominated by intrusive units of the zoned syenite complex and subordinate but significant occurrences of the layered mafic complex. The central to eastern parts of the property, including the eastern flanks of Zinc and Buttress peaks down to the valley bottom, is dominated by limestone of the Ottertail formation. The Waterloo prospect (MF 082N 028; Table II) lays essentially dead centre of the property area, within the Ottertail formation, approximately 350 metres east of the northerly trending contact with the syenite complex.

Geological mapping carried out by Jarrod Brown in 2006 contributed greater detail of east aspect lithologies over a 2 x 1.8 kilometer area centred along the ridge separating the sodalite-bearing circ and the Waterloo-bearing bowl. The original Currie (1975) map was used as a basemap with modifications overlain. Important modifications include: Subdivision of the Ottertail Formation (Unit 2) into four subunits:

2a: Tannish-grey, medium- to fine-well bedded, fine to very fine grained, silty to phyllitic limestone.

2b: Brown to grey weathering, light bluish-grey to greenish-grey fresh, hard blocky, medium to finely laminated, poorly bedded, fine to medium grained calcareous limestone. 2bf: Grey, poorly bedded, fragmental limestone; common on the east aspect at the northern limit of mapping

2c: Grey and light grey, thin and thick interbedded, well bedded limestone.

2r: Orange weathering, tannish-grey, thin-well bedded limestone with pervasive iron-carbonate alteration.

Extension of Unit 2 (2b) southwards: Rationale – Several unambiguous limestone outcrops exposed in the main sodalite-bearing bowl.

Additional layered mafic units were observed in several areas of the sodalite-bearing bowl and up to the divide between Manganese and Zinc mountains.

A large unit 14 is interpreted based on abundant exposure of sodalite-bearing syenite at the base of the cliffs at the head of sodalite-bowl. The northern limit of this unit is entirely obscured by talus. The southern limits are tentatively interpreted to extend upslope toward the col between Manganese Mountain and Buttress Peak. Verification of these contacts requires technical climbing traverses.

Structure

Regional mapping of the area by Allan (1914) indicates that the country rock is close to flat lying, with a slight average low angle dip to the east. Local bedding orientation however may vary markedly depending on vicinity to the Ice River Complex, and other regional structures present in the area. Structures in the property area are consistent with the 3 phases of deformation recognized by Currie (1975) for the IRC as a whole.

The earliest fold structures consist of small-scale tight folds around the margins of the zoned syenite complex. The small folds are rare at distances greater than a few hundred metres from the complex, and are interpreted to be related to the intrusion of the complex. Currie (1975) did not observe these structures adjacent to the contact between country rock and the layered mafic complex.

The main fold structure in the area is defined as open to isoclinal folding with a frequency of a couple hundred metres. In the property area, the main expression of this structure is as a NNW to WNW sigmoidal-shaped anticline-trace exposed along the saddle dividing Zinc mountain and Sentry Peak (Figure 4). Currie (1975) tentatively interpreted the fold structure to follow the Moose Creek Valley along the eastern reaches of the property area. A plunge calculation based on So planes from Currie's (1975) map indicates a plunge at the saddle of 69/132.

The sigmoidal shape of the axial traces of the main fold structure mentioned above is a result the 3rd phase of deformation in the region. The axes of the pair of folds defined by the sigmoidal deformation trend north to northwest, approximately parallel to the regional trend, but the plunge of these folds appears to be almost vertical.

Currie (1975) noted a surprising lack of significant faults in the region, and attributed this to a stress regime that decompressed via small-scale displacements and flowage. Much of the deformation appears to have been taken up by homogeneous deformation of the country rock, with the igneous complex largely undeformed. The lack of deformation of

the igneous complex has preserved many primary features such as igneous layering and flow banding.

Structural measurements made by the author in 2006 confirm an increasing intensity of tight folding in proximity to the eastern margin of the Ice River Complex. In the bowl above the Waterloo showing, limestone of the Ottertail Formation exhibits a monoclinical character over several hundreds of meters, with sudden attenuation into tight to isoclinal overturned fold hinge zones on the order of 50-80 meters wide.

DEPOSIT TYPES

Within the property area, a variety of commodities have been recognized or are interpreted to have good economic potential in light of the nature of the mineral deposit type: alkaline/carbonatite intrusive complex. Commodities generated during primary magmatic formation of the layered and syenite complexes could include dimension stone of varying lithologies, industrial minerals such as nepheline and feldspar, and industrial elements including Ti, Fe and P. Deposits containing gemstones (sodalite, corundum?), industrial minerals (zeolite, vermiculite?), high field strength elements such as Nb, Ta, Zr, Hf, and rare metals including U, Th and REE's may also have formed in economic quantities. The latter set of elements is also found associated with base and precious metal occurrences in hydrothermal-replacement, skarn or mantos type deposits within the metasomatic halo of the IRC.

The known style of Nb mineralization at the Ice River property within altered pegmatitic syenite and microsyenite shares similarities to that documented in alkaline complexes in Greenland (Gupta and Suri, 1994). The Sarfortoq deposit in southwest Greenland, is a high grade low tonnage deposit containing mineralized pyrochlore rich veins. The mineralized rock on average carries 1.5% Nb₂O₅, with tonnage estimates on the order of 0.1 million tones. The Motzfeldt So deposits located in south Greenland are made up of multiple intrusions of syenite, broadly divided into central nepheline syenite and an outer altered syenite characterized by hydrothermal alteration. Similar to the Ice River, Nb mineralization at Motzfeldt So is hosted in altered syenite and microsyenite near the outer margins of the intrusive complex. Niobium content in the mineable rock varies between 0.4 and 1.0% Nb₂O₅, contained in nearly 80 million tones of peralkaline microsyenite (Gupta and Suri, 1994). This rock type is also host to huge reserves of zirconium and rare earths with contents of 1-2% ZrO₂ and less than 1% rare earth oxides.

Rare earth element (REE) mineralization at the Ice River property is in early stages of understanding. REE accumulations have been noted in syenite units containing red minerals visually similar to the Zr-REE bearing silicate eudialyte. Eudialyte is a critical defining component of a rare subgroup of peralkaline intrusive rocks termed *agpaitic* nepheline syenites (Sorensen, 1992). This IUGS rock type definition is limited to nepheline syenites containing chemically complex minerals such as eudialyte or mosandrite, rather than chemically simple minerals such as zircon and ilmenite. Rocks of this type are known to form economic deposits of high field strength elements (Zr, Nb, U, Y) and rare earth elements (REE's). Important examples include the Ilimaussaq





Complex in Greenland and the Khibina and Lovozero Complexes of the Kola Peninsula in Russia (Salvi and Williams-Jones, 2005). Eudialyte is particularly advantageous from a metallurgical perspective, as it is easily digested in weak acid.

REE bearing structures at the Ice River Property, also enriched in barium, zirconium and thorium share similarities to altered fennite/syenite veins and dykes and associated carbonatites in the Southern Bear Lodge Mountains of Northeastern Wyoming (Staatz, 1983) and in the Wet Mountains Area of Colorado (Armbrustmacher, 1988).

MINERALIZATION

Four minfile occurrences are located within the Ice River Complex or within its contact metamorphic halo (Table II). Of the occurrences listed below, only the Waterloo prospect lies within the Eagle Plains Resources tenure area.

Table II: MINFILE Report

MINFILE No.	Name	Status	Commodities	Deposit Type*	Latitude	Longitude	Google Earth
<u>082N 025</u>	SHINING BEAUTY, SHINING BEAUTY CREEK	Past Producer	ZN, AG, PB, CU	I05	51 09 44	116 28 00	
<u>082N 026</u>	ZINC CREEK	Showing	ZN, PB	E12	51 10 50	116 24 46	
<u>082N 027</u>	MOOSE CREEK, BOW, DEMON, COLTI	Developed Prospect	MA, TI, RS, NB, TH	N01	51 11 40	116 21 04	
<u>082N 028</u>	WATERLOO, QEM	Prospect	AG, PB, ZN, CU, AU, GS, UR, NS	E14, J01, N01	51 10 00	116 22 59	

* full definitions of the BCGS deposit types can be found at <http://www.em.gov.bc.ca/Mining/Geosurv/MetallicMinerals/MineralDepositProfiles/MDPDeGrp.htm>

The *Waterloo prospect* and *Shining Beauty mine site* are both hosted in limestone of the Ottertail Formation. Both showings contain Zn-Pb-Ag-Cu base metal mineralization associated with moderate to high temperature replacement, mantos or vein structures. Mining operations at the Shining Beauty from 1908-1911 produced an unspecified

amount of silver and zinc ore from 3 almost parallel tunnels about 60 metres apart. Only the Waterloo prospect lies within the current EPL mineral titles.

The *Zinc Creek showing* occurs within a thick series of thin bedded, well-cleaved calcareous shales of the Chancellor Group. Interbedded with the shales are narrow bands of siliceous limestone 0.6 to 0.9 metre thick. Lead-zinc mineralization is developed within one of these bands. An irregular lenticular pocket of quartz-calcite with bands of pyrite, arsenopyrite, sphalerite and galena replaces a siliceous limestone band about 3 metres thick.

The *Moose Creek developed prospect* contains a number of commodities all hosted in or closely associated with layered mafic units of the Ice River Complex. Ilmenite-magnetite mineralization, mainly as sphene and magnetite, occurs in quartzite, pegmatite and jacupirangite rocks. Assays range to 13.2 per cent TiO₂ and 20.6 per cent iron (Gallant, 1971). Knopite, a cerium-bearing perovskite, is present in a pegmatite dike. Sodalite occurs as veins in the intrusion. Analysis for columbium/niobium yielded 0.67 per cent Cb₂O₅ (Gallant, 1971). A radioactive northeast-trending shear zone, 1200 metres to the south, yielded up to 0.019 per cent uranium. Other commodities include thorium (up to 0.077 per cent ThO₂ over 3 metres) and traces of rare earths, chiefly lanthanum and ytterbium (Minister of Mines Annual Report 1954, page 150).

Ilmenite-magnetite bearing gravels and sands occupy the valley along Moose Creek. A 10 by 300 metre area assayed up to 8.2 per cent TiO₂ (Gallant, 1971).

The most recent discoveries of mineralization are summarized in a February 20, 2008 news release:

Cranbrook, B.C., February 20th, 2008: Eagle Plains Resources (TSX-V:EPL) has recently received whole rock analyses from Eagle Plains 100% owned Ice River Property. Encouraging values were returned, including up to 3.0% REOs (total Rare Earth Oxides), and 5600 g/t Nb₂O₃ (Niobium / “Columbium” oxide). One 2.5 meter chip sample (JBIVR048) returned 2.4% REOs. Mineralization is hosted in syenite and carbonatite dyke systems that are numerous and widespread over a 4+ kilometer long corridor within the Ice River Intrusive Complex, located 40 kilometers southeast of Golden, British Columbia, Canada.

Rare Earth Elements (REEs) and other elements with high-tech applications, including Nb and Zr, have long been suspected as potential commodities on the property; but it was not until results from the recent 2005-2007 mapping and geochemical surveys, that this suite of elements became fully appreciated. Other potential commodities identified include extensive nepheline syenite as an industrial mineral source, and presence of the ornamental mineral sodalite.

Previous and ongoing work by Eagle Plains at the Ice River Property has focused on the economic potential of strataform/replacement massive sulphides of the Waterloo prospect (see August 23, 2007 news release). At the Waterloo occurrence, sulfide horizons are exposed in two historical adits excavated in the early 1900's, with historical samples returning assays up to 3.69% Pb, 16.10% Zn, 1.59% Cu, 27.30% Fe, 99.4 g/T Ag and 1.7 g/T Au (GSC Memoir 55, page 229).

In 2006-2007, detailed surface and underground mapping by EPL Chief geologist Jarrod Brown, P.Geo., revealed a combination of structural and stratigraphic controls over the mineralization. A 5-hole, 259m drill program was completed on the property in August, 2007 and intersected massive to semi-massive strataform sulfide mineralization and associated stockwork zones, hosted in variably altered limestone wall-rock of the Ice River Intrusive Complex.

Drill holes IV07001 to 003 tested under the known workings, while holes IV07004 and 005 were collared 120 meters west to test the strike projection of the suspected mineralization. DDH IV07005 intersected a mineralized stockwork zone, identical to that in DDH IV07003, thus successfully verifying mineralization along the predicted stratigraphic contact. The contact, while well exposed and mappable to the west and south, remains obscured by overburden east and north; consequently, mineralization potential in these directions remains open.

A summary of the most significant intercepts is listed in the table below:

Hole No.	From (m)	To (m)	Intercept (m)	True Thickness (m)	Ag* (g/t)	Pb* (ppm)	Zn* (ppm)	Cu (ppm)	Au (ppb)
IV07001	12.52	14.59	2.07	1.23	27	9019	17401	2753	142
inc.	13.07	13.25	0.18	0.13	27	9226	4.30%	3294	140
inc.	13.25	14.59	1.34	0.71	27	8468	14239	2832	162
IV07002	13.6	14.72	1.12	0.94	11	11261	16542	5427	188
inc.	14.16	14.72	0.56	0.46	2	1.5%	2.7%	7090	340
IV07003	10.04	16.3	6.26	5.92	7.1	6097	5788	156	5.0
inc.	10.04	11.00	0.96	0.90	10	1.80%	1.13%	147	25
inc.	14.48	16.3	1.82	1.72	10	4932	5056	192	3.0
IV07005	4.84	6.84	2.00	1.53	3.2	2484	2409	51.7	1.3
inc.	5.84	6.34	0.5	0.38	12	9030	9083	22.0	5.0

* values listed in % are assay quality

EXPLORATION

Exploration on the property was initiated by Eagle Plains Resources staff beginning in August of 2005. Assessment reports have been submitted to the province of British Columbia, detailing the work done (see Brown, 2006, and Brown, 2007). All work done on the property from 2005 to 2008 has been directly supervised by Eagle Plains Resources, chief geologist, Jarrod Brown, P.Geo.

The first season of work consisted of reconnaissance prospecting, mapping and rock sampling with the intension of familiarizing workers to the wide variety of rock types, and to get a first-hand impression of the economic potential that exists on the property. Massive sulfide mineralization within adits and dumps at the Waterloo showing were an obvious primary target, and was the target of the 2007 drilling campaign. Less straight forward targets included the industrial minerals associated with the syenite complex, rare metals associated with the syenite and carbonatite dyke systems, and industrial metals including Ti and Fe associated with the layered mafic intrusive units of the IRC.

Currie (1975) published a comprehensive 1: 25000 map of the Ice River Complex and surrounding host rock. It remains an invaluable guiding document, aiding in the understanding of, and distribution of the most prospective units. Work since 2005 has demonstrated that much more mapping detail is required to fully evaluate the economic potential of the property area.

Work done in 2006 and 2007 has added much to this evaluation. This most recent work has concentrated on detailed prospecting, mapping and rock sampling, along with soil and stream silt geochemistry. The 2006 geochemical program proved to be highly successful in being able to delineate REE and Nb mineralized dyke systems. Detailed mapping in the vicinity of the Waterloo base metal showing, also positively identified stratigraphic and structural features that control the mineralization. The limited 2007 drill program verified this geological assessment by successfully intersecting a sulfide bearing stock-work zone, located 120 meters along strike west of the known workings. The 2007 field work results are currently unpublished and will be discussed in some detail below.

2007 WORK PROGRAM

Two field programs were carried out at the Ice River property during the 2007 field season.

July 11 to July 19 fieldwork included 2 helicopter supported camps for the purposes of prospecting, soil geochemical sampling, and follow-up of 2006 geochemical anomalies. Camp 1 was located just below tree line, below sodalite circ at 1825m AMSL (543892E,

5668039N). Twelve man-days were spent soil sampling and prospecting, mostly to south of the camp along the east flank of Buttress Peak.

Camp 2 was established near a small tarn east of Zinc Mountain and North of the Waterloo showing at 2300m AMSL (543160E, 5669460N). Twenty-three man-days were spent soil sampling, prospecting and mapping the upper benches from Sodalite circ to the 2800m elevation marker on the south flank of Sentry peak.

A program of diamond drilling at the Waterloo Showing was completed between August 15th and August 19th, 2007. The program was helicopter supported with personnel housed in Golden BC. Field and drilling crews rotated on 12 hour shifts, supported by two daily flights out of Golden. Concurrent to the drilling program, 6 man-days were spent prospecting and sampling the ridge lines and bowls of the northern and southernmost bowls below Sentry peak and south of Buttress peak respectively.

A total of 77 rock samples were collected for analysis, and approximately 2000 lbs. of sodalite syenite boulders and hand specimens were flown out by sling. The soil and silt geochemical sampling program included 156 soil samples, and 3 silt samples. All samples were sent to ACME Laboratories in Vancouver BC. All samples were collected, handled, catalogued and prepared for shipment by Eagle Plains Resources staff.

All samples were input in the creation of a GIS database for the project. All exploration was carried out in accordance to Ministry of Environment, Ministry of Mines and WCB regulations. At no time did personnel enter into any parks in the area. Total 2007 exploration expenditures by Eagle Plains Resources on the Ice River Project were \$198 395

2007 PROGRAM RESULTS

Summary of REE and Nb mineralization at the Ice River Complex (IRC)

REE Mineralization

The most significant host rock assemblages of REE mineralization include: calcium/dolomite-rich carbonatite, barite-rich carbonatite, and zeolite and Fe-Mn altered fenitized syenite, ijolite or jacupirangite lithologies. Any or all of these rock assemblages may be present at an anomalous station. One of the most significant features associated with REE mineralization appears to be the ubiquitous strong alteration of the host rocks. In the syenites, the alteration is expressed as a white-yellow- and brown zeolite alteration as a fine grained pervasive alteration, up to a very coarse grained assemblage containing euhedral zeolite crystal aggregates associated with vugs. Associated yellow brown and black amorphous minerals occur as bands and fracture fill throughout the altered zone, and/or as coatings within vugs. The more mafic host rocks take on a felted to disaggregated assemblage of phlogopite-rich punky material (glimmerite). Late reddish-brown Fe-Mn carbonate rich veins are a common feature of the altered and mineralized zones as well.

As the REE mineralization appears to be strongly associated with this alteration, this opens an avenue for further prospecting. The orientation of mineralization and alteration at several of the areas of interest appears to be conformable to the igneous layering and/or contact orientations between the different intrusive units, as well as the IRC – limestone contact. Another feature of great interest may also be Currie's *unit 15 – the zeolite syenite*. It is suspected that these areas may be broad expressions of the same alteration that is bringing in the mineralization. A petrographic study should be undertaken to validate this possibility. Regardless, contact zones, especially those proximal to the “zeolite syenite” should be assessed carefully. Another noteworthy feature is the high barium contents of some of the dykes. Sample TMIVR032 contains 29% Ba and also has the highest REE values recorded to date (26146 ppm total REE). The mineralogy of these dykes should make them easy to detect with soil and silt geochemistry.

Nb+ Mineralization

Niobium and zirconium+-hafnium are strongly correlated, but mineralization associated with these elements appears to be unrelated to the REE mineralization. To date, results (up to 3923 ppm Nb, 25744 ppm Zr and 464 ppm Hf) show that syenite is the only significant host for these elements. In general, it is the coarser grained (pegmatitic) and sodalite bearing syenite dykes that returned the best values, although some of the dykes encountered in areas -E and -M are texturally and mineralogically unexceptional. The sample taken from area M is quite interesting as it is a representative sample taken from a 4m wide dyke. This dyke can be seen from a distance, cutting across the IRC contact to the east and continues for some distance through the host limestone. Next season, it will be of great interest to see how grades vary with the assumption that fractionation processes should act to enrich the incompatible elements (such as Nb) outwards away from the IRC.

Geochemistry

Of great importance to future exploration at the Ice River property, is the use of soil and stream geochemistry. Results from the 2006 geochemical survey led to the discovery of east-trending sodalite-bearing syenite dykes with significant Nb mineralization along the area-E trend. The latest 2007 geochemical results can now be used to define two other parallel REE-mineralized trends to the south. It is likely not a coincidence that these trends line up with large lamprophyre dyke systems mapped by Currie (1975) to the west. Samples JBIVR046 and TMIVR003, defining the current western extent of the Area-G trend, both returned high REE values (up to 19340 ppm REE). All three trends along the east flank of Buttress peak, still require careful scrutiny. Much prospecting and geochemical sampling remains to be completed further to the south, and into the south bowl. This area remains highly prospective.

DRILLING

The only known drilling on the property occurred at the Waterloo showing in August of 2007. Detailed mapping in the vicinity of the Waterloo showing added to the understanding of the stratigraphic and structural features that contributed to the

mineralization there. The main Waterloo portal exposes a conformable lithological contact between well bedded, silty limestone (unit 2a) to the south, and blocky, hard, poorly bedded limestone (unit 2b) to the north, all of which are contained within the shoulder of a moderately-south dipping, overturned, tight anticlinal fold structure. The stratigraphy and fold structure are crosscut by a syenite-lamprophyre dyke couplet oriented (218/45), all of which, in turn, are crosscut by a magnetite-Cu-Cs rich shear zone on (188/68). Mineralization at the Waterloo is both conformable to bedding and crosscutting; however, most textural and structural observations indicated that the mineralization is strongly controlled by a combination of S1 (axial plane), vein orientations, and the lamprophyre panel, all of which lie close to (110/60). The Waterloo adit was driven in along this orientation.

The 2006 recommendation was to drill test the above 3 structures, and to test the mineralization of the shallow dipping strata through the 2a-2b contact. Three holes were drilled from PAD A located approximately 20 m WSW of the main Waterloo adit.

Two additional holes were drilled from PAD B, located near the projected intersection of the 2a-2b contact and a second parallel set of lamprophyre-syenite dykes, located 120 meters ENE of the Waterloo adit.

Table IV 2007 DDH Locations

2007 DDHs AT THE WATERLOO SHOWING (ICE RIVER PROJECT)

PAD	Name	Azimuth	Dip	Depth (m)	Easting	Northing	Date	Notes
A	IV07-01	70	-45	46.94	543200	5668713	16-Aug-07	ENE towards adit
A	IV07-02	70	-80	106.07	543200	5668713	16-Aug-07	sub vertical to test confluence of 2a-2b contact and structure
A	IV07-03	18	-45	39.13	543200	5668713	17-Aug-07	NNE oblique to 2a-2b contact
B	IV07-04	71	-48	30.78	543094	5668763	18-Aug-07	to intersect syenite dyke and sed cont.
B	IV07-05	20	-45	36.27	543094	5668763	18-Aug-07	to intersect oblique to 2a-2b contact
TOTAL				259.19				

Hole summaries

PAD A was placed approximately 30 m WSW of the upper adit at the Waterloo showing.

IV07001 (-45/070): Intersected a 2.07m zone (@ 33° TCA) of massive and semimassive pyrrhotite-sphalerite-galena-chalcopyrite from 12.52 to 14.59m. The lower adit at the Waterloo showing was intersected at 14.59m. As a result, at least 1.6 meters of probable mineralized core is missing. The bottom of this intersected mineralization is hosted within massive blue gray albite-silicic+-chlorite altered limestone (unit 2b), just below well bedded gray limestone (unit 2a). Variable TCAs in the mineralized zone strongly suggests the mineralization is hosted within a fold hinge zone.

IV07002 (-80/070): The hole collared in gray and white banded unaltered limestone (unit 2a). Moderate to intense texturally destructive albite+-chlorite alteration starts at ~12 m. This alteration coincides with an increase in mineralization starting with calcite-pyrrhotite fracture fill (stockwork), progressing to increasing proportions of conformable bands of semimassive pyrrhotite + minor sphalerite and galena + trace chalcopyrite. An impressive 56 cm massive sulphide zone (55° TCA) was intersected from 14.16 to 14.72. The zone comprises ~95% sulphides including 70% pyrrhotite, 20% sphalerite, 5% chalcopyrite and 5% galena. Footwall limestone from 14.72-15.94m is characterized by intense albite-chl alteration with similar stockwork and disseminated mineralization as above the massive sulphide zone. Grey, massive limestone (unit 2b) characterizes the rest of the hole. Several zones of moderate to intense albite+-silica+-chlorite alteration occur right to EOH (106.07m), but does not appear to be associated with significant sulphides.

IV07003 (-45/018): Collared in dark and light gray banded limestone at 4.57m depth. 7m depth marks the start of moderate to intense albite alteration and increase in calcite fracture fill. Significant mineralization occurs from 10.04 – 16.30 m (70° TCA) within calcite fracture fill (stockwork) containing 75% pyrrhotite, 20% galena, and 5% sphalerite. The footwall zone to the mineralization is again marked with moderate to intense albitization to 24m, of light to dark gray banded, hard limestone. Alteration intensity wanes below this depth.

PAD B collared 120 meters to West of Pad A to test strike extension of contact between well bedded limestone (unit 2a) and massive Limestone (unit 2b) and an oblique steep crosscutting syenite dyke (identical stratigraphic and structural scenario as at the Waterloo showing)

IV07004 (-48/071): Overburden surprisingly thick. Collared into syenite dyke for 25cm and then into 3m of unit 2b, followed by unit 2a (from 13.32-18.71), and finally back into unit 2b to EOH. No significant mineralization was encountered.

IV07005 (020/-45): Collared into 18 cm of syenite dyke then into unit 2b (4.84-7.26). This unit has a consistent calcite-qtz stockwork with several

percent pyrrhotite-sphalerite-galena mineralization (50 deg TCA) similar to mineralization encountered in DDH IV07003. This was followed by 2.56 m of unit 2a and finally back into unit 2b at 9.82m to EOH (36.27).

A total of 26 sample intervals were selected for sampling. Nine boxes of core for were flown out for splitting and sampling. Sampled core is stored at the EPL *Vine* core storage facility near Moyie Lake, BC. All of the remaining core was dead stacked and stored on the Ice River property in a flat treed area, approximately 300 m SE of the adits. All split core was analyzed at EcoTech Laboratory in Kamloops, British Columbia. The core was crushed and screened with -80 mesh. Digestion was by aquaregia and followed by 28 element ICP-AES and fire assay for samples over limit.

Drill holes IV07001 to 003 tested under the known workings, while holes IV07004 and 005 were collared 120 meters west to test the strike projection of the suspected mineralization. DDH IV07005 intersected a mineralized stockwork zone, identical to that in DDH IV07003, thus successfully verifying mineralization along the predicted stratigraphic contact. The contact, while well exposed and mappable to the west and south, remains obscured by overburden east and north; consequently, mineralization potential in these directions remains open.

A summary of the most significant intercepts is listed in the table below:

Hole No.	From (m)	To (m)	Intercept (m)	True Thickness ^t (m)	Ag* (g/t)	Pb* (ppm)	Zn* (ppm)	Cu (ppm)	Au (ppb)
IV07001	12.52	14.59	2.07	1.23	27	9019	17401	2753	142
inc.	13.07	13.25	0.18	0.13	27	9226	4.30%	3294	140
inc.	13.25	14.59	1.34	0.71	27	8468	14239	2832	162
IV07002	13.6	14.72	1.12	0.94	11	11261	16542	5427	188
inc.	14.16	14.72	0.56	0.46	2	1.5%	2.7%	7090	340
IV07003	10.04	16.3	6.26	5.92	7.1	6097	5788	156	5.0
inc.	10.04	11.00	0.96	0.90	10	1.80%	1.13%	147	25
inc.	14.48	16.3	1.82	1.72	10	4932	5056	192	3.0
IV07005	4.84	6.84	2.00	1.53	3.2	2484	2409	51.7	1.3
inc.	5.84	6.34	0.5	0.38	12	9030	9083	22.0	5.0

*values listed in % are assay quality

^t true thickness calculated from *to-core-axis* (TCA) measurements of conformable mineralized contacts presented in hole summaries above.

SAMPLING METHOD AND APPROACH

The purpose of rock, soil, and stream silt sampling at Ice River property was to locate areas with elevated base metals and high-tech metals, as well as other potential pathfinder

elements, in order to assess the overall economic potential of the area. Known base metal occurrences of economic significance in the area are hosted mainly in limestone host rocks, within the metamorphic halo of the Ice River Complex. Known high-tech metal occurrences have been observed both within and external to the Ice River Complex. The most significant mineralised zones are associated with late? stage dyke systems contained within the complex, but also extend greater than 1 kilometre out into the host limestone. These dyke systems are the main focus of recent prospecting and geochemical sampling programs. The dykes themselves are targets for high-tech metals. For the base-metals, the dyke systems represent possible structural features that may have contributed to the formation of mineralized sulphide zones. Petrographic and isotopic details of these dyke systems are the focus of a M.Sc. thesis project by Thomas Mumford, at the University of New Brunswick. The thesis is expected to be completed by the spring or fall of 2009.

In 2005 and 2006, rock samples were selected for sampling mainly based on visual assessments. Early analyses indicated a discernable correlation between thorium and high- tech metal mineralization. In 2007, rock sampling was mostly scintillometer assisted using a hand-held scintillometer (model RS-120). As a result, many of the 2007 sample results have a thorium-rich bias.

Sampling of the 2007 drill core was designed to determine the extent of base-metal mineralization at the Waterloo showing. Only zones containing visually apparent sulphide mineralization were selected for sampling. All core was analysed with the RS-120 scintillometer in the field. No zones of anomalous gamma radiation were encountered. Sampling intervals were selected and labelled by the logging geologist in the field. Core boxes containing sample intervals were taken off-site by EPL crew, and then split and bagged at EPL's designated core splitting facility near Moyie Lake, BC.

Rock sample types included grab samples to test type and degree of mineralization. Several representative chip samples were also collected across dykes, or zones of elevated scintillometer counts, in order to determine the continuity of grades.

Rock samples were collected in the field by placing 1-3kg of material in heavy grade plastic sample bags with the sample number written on both sides in permanent marker. Each sample bag was then sealed with a plastic cable tie and samples were transported back to camp at the end of each day. A representative piece of each sample was often collected and returned to camp for further examination in the event of an interesting or exceptional analytical result.

Soil samples were collected from the B-horizon where-ever possible. Silt samples were collected from active creeks whenever possible. Both soil and silt samples were placed and sealed into brown paper kraft bags. Samples were dried in the field daily, weather permitting. Relevant details pertaining to the soil and silt samples such as location parameters, depth, horizon, quality, were recorded by the sampler in the field.

Sample sites were marked in the field with orange or pink artic-grade flagging and an aluminium tag, both having been marked with the appropriate sample number. Sample locations were determined by hand-held GPS set to report locations in UTM coordinates using the North American datum established in 1983 (NAD 83). The Ice River property lies within UTM zone 11. Thus, all maps, figures and UTM coordinates referring to herein may be assumed to reference UTM NAD 83 zone 11.

Once returned to camp, samples were organized, dried and catalogued and then placed in poly woven “rice” bags. The samples were maintained as a single group that were demobilized from camp to Cranbrook, BC, at the end of the program with the field crew. Field samples were sent for analysis at ACME labs in Vancouver BC. Drill core samples were analysed by EcoTech labs in Kamloops, BC. There were no issues with respect to sample shipments or sample security during the 2005 to 2007 exploration programs.

SAMPLE PREPARATION, ANALYSES and SECURITY

Surface rock “grab” samples were collected in the field by placing approximately 1-3kg of material in a heavy grade plastic sample bag with the sample number written on both sides with a permanent marker. Each sample bag was sealed with a plastic cable tie and transported back to camp. Sample information was recorded by the sampler and included a location determined by hand-held GPS referencing UTM coordinates relative to the North American datum established in 1983 (NAD 83) and zone 11. Sample sites were marked in the field with orange artic-grade flagging and an aluminum tag, both having been marked with the appropriate sample number. Once returned to camp, samples were organized, dried and catalogued and then placed in poly woven “rice” bags. The samples were maintained as a single group that were demobilized from camp to Cranbrook, BC, at the end of the program with the field crew. Field samples were sent for analysis at ACME labs in Vancouver BC. Drill core samples were analysed by EcoTech labs in Kamloops, BC. The samples were collected under the supervision of a Professional Geologist and there were no irregularities noted by the laboratories with respect to the sample shipment, therefore, the author has no reason to believe that the security of the samples was compromised in any way.

DATA VERIFICATION





A report prepared by ACME Analytical Laboratories and Eco Tech Laboratories describing the preparation, digestion and analysis of the samples, as well as the QA/QC procedures utilized, is appended to this report (Appendix III).

ACME Analytical Laboratories and Eco Tech Laboratories are ISO17025 accredited for Mineral Analysis Testing. The analyses of the standard sample (LS4) inserted in the sample sequence by the laboratory correspond with the accepted values provided. The author has no reason to doubt the accuracy of the analyses.

ADJACENT PROPERTIES

Four minfile occurrences are located within the Ice River Complex or within its contact metamorphic halo (Table II). Of the occurrences listed below, only the Waterloo prospect lies within the Eagle Plains Resources tenure area.

Table II: MINFILE Report

MINFILE No.	Name	Status	Commodities	Deposit Type*	Latitude	Longitude	Google Earth
<u>082N 025</u>	SHINING BEAUTY, SHINING BEAUTY CREEK	Past Producer	ZN, AG, PB, CU	I05	51 09 44	116 28 00	
<u>082N 026</u>	ZINC CREEK	Showing	ZN, PB	E12	51 10 50	116 24 46	
<u>082N 027</u>	MOOSE CREEK, BOW, DEMON, COLTI	Developed Prospect	MA, TI, RS, NB, TH	N01	51 11 40	116 21 04	
<u>082N 028</u>	WATERLOO, QEM	Prospect	AG, PB, ZN, CU, AU, GS, UR, NS	E14, J01, N01	51 10 00	116 22 59	

* full definitions of the BCGS deposit types can be found at <http://www.em.gov.bc.ca/Mining/Geosurv/MetallicMinerals/MineralDepositProfiles/MDPDeGrp.htm>

The *Waterloo prospect* and *Shining Beauty mine site* are both hosted in limestone of the Ottertail Formation. Both showings contain Zn-Pb-Ag-Cu base metal mineralization associated with moderate to high temperature replacement, mantos or vein structures. Mining operations at the Shining Beauty from 1908-1911 produced an unspecified amount of silver and zinc ore from 3 almost parallel tunnels about 60 metres apart. Only the Waterloo prospect lies within the current EPL mineral titles.

The *Zinc Creek showing* occurs within a thick series of thin bedded, well-cleaved calcareous shales of the Chancellor Group. Interbedded with the shales are narrow bands of siliceous limestone 0.6 to 0.9 metre thick. Lead-zinc mineralization is developed within one of these bands. An irregular lenticular pocket of quartz-calcite with bands of pyrite, arsenopyrite, sphalerite and galena replaces a siliceous limestone band about 3 metres thick.

The *Moose Creek developed prospect* contains a number of commodities all hosted in or closely associated with layered mafic units of the Ice River Complex. Ilmenite-magnetite mineralization, mainly as sphene and magnetite, occurs in quartzite, pegmatite and jacupirangite rocks. Assays range to 13.2 per cent TiO₂ and 20.6 per cent iron (Gallant,

1971). Knopite, a cerium-bearing perovskite, is present in a pegmatite dike. Sodalite occurs as veins in the intrusion. Analysis for columbium/niobium yielded 0.67 per cent Cb_2O_5 (Gallant, 1971). A radioactive northeast-trending shear zone, 1200 metres to the south, yielded up to 0.019 per cent uranium. Other commodities include thorium (up to 0.077 per cent ThO_2 over 3 metres) and traces of rare earths, chiefly lanthanum and ytterbium (Minister of Mines Annual Report 1954, page 150). Ilmenite-magnetite bearing gravels and sands occupy the valley along Moose Creek. A 10 by 300 metre area assayed up to 8.2 per cent TiO_2 (Gallant, 1971).

MINERAL PROCESSING AND METALLURGICAL TESTING

There are currently no mineral reserves or resources on the property and thus there has been no Mineral Processing or Metallurgical Testing completed on material from the property.

MINERAL RESOURCE and MINERAL RESERVE ESTIMATES

There are currently no mineral reserves or resources on the property.

OTHER RELEVANT DATA

The author is not aware of any other relevant information with respect to the Ice River Property.

INTERPRETATION and CONCLUSIONS

REE Mineralization

The most significant host rock assemblages of REE mineralization include: calcium/dolomite-rich carbonatite, barite-rich carbonatite, and zeolite and Fe-Mn altered fenitized syenite, ijolite or jacupirangite lithologies. Any or all of these rock assemblages may be present at an anomalous station. One of the most significant features associated with REE mineralization appears to be the ubiquitous strong alteration of the host rocks. In the syenites, the alteration is expressed as a white-yellow- and brown zeolite alteration as a fine grained pervasive alteration, up to a very coarse grained assemblage containing euhedral zeolite crystal aggregates associated with vugs. Associated yellow brown and black amorphous minerals occur as bands and fracture fill throughout the altered zone, and/or as coatings within vugs. The more mafic host rocks take on a felted to disaggregated assemblage of phlogopite-rich punky material (glimmerite). Late reddish-brown Fe-Mn carbonate rich veins are a common feature of the altered and mineralized zones as well.

As the REE mineralization appears to be strongly associated with this alteration, this opens an avenue for further prospecting. The orientation of mineralization and alteration at several of the areas of interest appears to be conformable to the igneous layering and/or

contact orientations between the different intrusive units, as well as the IRC – limestone contact. Another feature of great interest may also be Currie's *unit 15 – the zeolite syenite*. It is suspected that these areas may be broad expressions of the same alteration that is bringing in the mineralization. A petrographic study should be undertaken to validate this possibility. Regardless, contact zones, especially those proximal to the “zeolite syenite” should be assessed carefully. Another noteworthy feature is the high barium contents of some of the dykes; for example, sample TMIVR032 contains 29% Ba and also has the highest REE values recorded to date (26146 ppm total REE). The mineralogy of these dykes should make them easy to detect with soil and silt geochemistry.

Nb+ Mineralization

Niobium and zirconium+-hafnium are strongly correlated, but mineralization associated with these elements appears to be unrelated to the REE mineralization. To date, results (up to 3923 ppm Nb, 25744 ppm Zr and 464 ppm Hf) show that syenite is the only significant host for these elements. In general, it is the coarser grained (pegmatitic) and sodalite bearing syenite dykes that returned the best values, although some dykes are texturally and mineralogically unexceptional. Next season, it will be of great interest to see how grades vary with the assumption that fractionation processes should act to enrich the incompatible elements (such as Nb) outwards away from the IRC.

Geochemistry

Of great importance to future exploration at the Ice River property, is the use of soil and stream geochemistry. Results from the 2006 geochemical survey led to the discovery of east-trending sodalite-bearing syenite dykes with significant Nb mineralization along the area-E trend. The latest 2007 geochemical results can now be used to define two other parallel REE-mineralized trends to the south. It is likely not a coincidence that these trends line up with large lamprophyre dyke systems mapped by Currie (1975) to the west. Samples JBIVR046 and TMIVR003, defining the current western extent of the Area-G trend, both returned high REE values (up to 19340 ppm REE). All three trends along the east flank of Buttress peak, still require careful scrutiny. Much prospecting and geochemical sampling remains to be completed further to the south, and into the south bowl. This area remains highly prospective.

Waterloo showing drill results

The 2007 drilling program successfully verified significant Pb, Zn, Ag, Cu metal contents in addition to notable gold up to 340 ppb. At the property scale, mineralization is generally conformable to E-W bedding planes, but this association is complicated by other subparallel foliation structures, as well as a number of crosscutting features (dykes and veins), that also exhibit base metal mineralization. Of great significance to future programs at the showing is the fact that associated mineralization was intersected at Pad B, 120 meters west of the showing, thus verifying the continuity of mineralization along a predictable stratigraphic/structural feature. This feature remains obscured and untested to the east and north of the showing and presents a viable exploration target for future geophysical and diamond drilling programs.

Other potential commodities

A number of other commodities are being passively explored for on the property. Those which show some promise include:

- 1) (nepheline) syenite as a source of ceramic grade feldspathic minerals,
- 2) sodalite syenite as a source of semi-precious gemstones or aggregate, and
- 3) a wide variety of intrusive phases of the Ice River complex which could be used as dimension stone. Despite the complex structural history of the area, felsic and mafic phases of the complex are remarkably undeformed and could readily be developed into a range of attractive building products.

The Ice River property has the potential to host several commodities of economic significance both within the intrusive phases of the IRC and within altered and unaltered country rocks proximal to the intrusive contact. The current tenure is well situated by virtue of its location: straddling the easternmost contact of the Ice River Alkaline Complex. Historical exploration on the property was limited mostly to prospecting, and site specific mining activities (i.e. Waterloo adits). Mid elevations on the property do offer good exposure, however access to the upper (>2400 m) elevations on the property is hampered by extreme topography. Below 2000 m AMSL, outcrops are rare due to talus, glacial drift and vegetation cover.

Work by Eagle Plains Resources over the last 3 field seasons represents the first systematic, multidisciplinary exploration in the property area. Advancements have been made: Rare Earth Elements (REEs) and other elements with high-tech applications, including Nb and Zr, have long been suspected as potential commodities on the property, but it was not until results from the recent 2005-2007 mapping and geochemical surveys, that this suite of elements became fully appreciated. Detailed exploration on the property is currently limited to the north central 1/3 of the property area. Many areas exhibiting similar prospective geology remain to be explored, even in a cursory manner.

RECOMMENDATIONS

Fieldwork and geochemical program carried out over the last few seasons has successfully determined a number of rock type hosts to REE and Nb +- Zr+-Hf mineralization. Subsequent field programs should be devoted to the collection of samples for petrographic study for the purposes of identifying the mineral carrier of these elements. Field identification of the REE minerals has proven to be very difficult as most samples comprise fine bands, wisps and disseminations of very fine orange, brown and black amorphous mineralization, generally obscured by a strong Fe-Mn overprint.

In addition to the proposed petrographic work, a number of days should be spent following up the latest rock and soil analytical results. This includes the soil anomalies in areas E,F, and G and extended traverses along all the other known trends in the high country. Also, contact features in the vicinity of Curries' unit 15 require close scrutiny.

New work should include a series of traverses in the south bowl and beyond, into newly staked (2008) territory as far as Mount Mollison. The northern limit of the property, along the southeast flank of Sentry peak, also requires detailed prospecting and mapping. Systematic stream sediment sampling should be done in both areas, with upwards of 50 sample stations. Another 5 line-kilometers of soil sampling is recommended, along four contours to the south of the current soil grid, at least as far as the main creek draining the south bowl. At 25 meter spacing, this would require approximately 200 samples. Time and budget permitting, contour soil sampling should continue further south across the creek with a western limit of the tree line, and an east limit of approximately 1 kilometer from the IRC contact.

At the Waterloo showing, base metal mineralization should be followed-up using geophysical methods. The massive to semimassive nature of the mineralization should be amenable to both EM and magnetic surveys. Small pods of sulfide mineralization have been observed at several other localities. This includes late veins of massive pyrrhotite associated with fenite and carbonatite in the zeolite altered units of the Ice River Complex, as well as conformable bands of disseminated galena and sphalerite hosted in hard altered limestone. It is suspected that the latter occur proximal to sub-unit stratigraphic contacts in the limestone, especially in close proximity to dykes and sills of syenite and/or lamprophyre; as such, these associations should be carefully assessed during future field programs both by mapping/prospecting and by geochemical means.