

Geological Assessment Report

for the

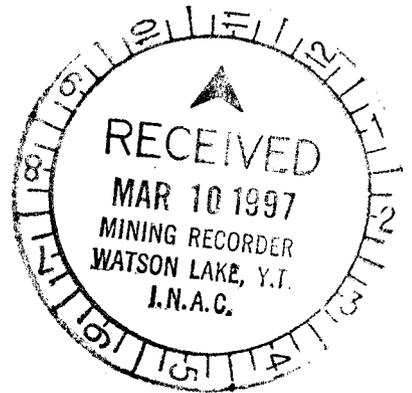
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Ice 1-10 Mineral Claims,

Watson Lake Mining District, Yukon Territory

N.T.S. 105 F-~~8~~¹⁰

- Prepared For -

Eagle Plains Resources Limited (EPL)



- by -

093608

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November 10, 1996

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 3000.

M. B. B.
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

Eagle Plains Resources Limited

Ice Claims - VMS Exploration Target, Yukon

INTRODUCTION

- 1) Previously staked as the Bnob Claim Group by *Cyprus Anvil Mining Corporation*.
- (2) Last exploration in 1977-78.
- (3) Current claim block includes Ice 1-10 claims) covering the known showings and a significant Pb-Zn-Cu soil geochemical anomaly. Metal values in soils of up to 1500 ppm Pb and 1460 ppm Zn extend across a projected strike-length of greater than 1000 m.
- (4) Galena and sphalerite, associated with massive, bedded barite, occur within a felsic volcanic succession of crystal-lithic tuff, amygdaloidal flows, and minor, coarse lapilli tuff and breccia.
- (5) *Eagle Plains Resources Limited (EPL)* owns a 100% interest in the Ice 1-10 claims (less a 1% NSR); Krefit-Dickie Partnership acquired said claims in return for an open-ended, "first-refusal" exploration and development work commitment. Relinquishing said work commitment is to be negotiated between EPL and Krefit-Dickie.

LOCATION

The Ice Claim Group is located near the headwaters of the McConnell River. Access is by helicopter, based either in Ross River, 30 miles to the north, or in Whitehorse. The terrain is moderate to rugged. North-facing slopes retain snow cover into June.

-Property Summary-

GEOLOGY

Upper Devonian and Mississippian rocks underlying the claim group, consist of black, graphitic argillite, felsic, amygdaloidal volcanic flows, crystal-lithic tuff, and coarse lapilli tuff and agglomerate. Clasts within the coarse fragmental units reach 3-4 cm. Regional studies indicate that many of the volcanic units are trachytes, based on Nb/Y vs. Zr/TiO₂ plots.

Two showings of flat-bedded, sucrosic barite with a 10 m stratigraphic thickness, contain banded and disseminated galena and sphalerite mineralization.

Alteration in the form of chlorite-epidote or quartz-sericite-pyrite is locally intense. Fluorine is locally anomalous.

Structures on the property reveal at least two phases of coaxial folding, likely related to a major thrust event in Jurassic time. Possible evidence for a third, unrelated event exists. The rocks are strongly foliated with a penetrative S₁ in evidence across the property. Faults tend to be steep, northeast or northwest trending structures. Slickensides and steps indicate reverse or transpressional slip. Thrust faults have not been recognized, however, mapped structures may be related to footwall deformation of a since-eroded thrust.

EXPLORATION

Exploration work initiated in June,

1996, consisted of preliminary mapping of Ice 1-6, minor hand trenching, plus rock and soil sampling. All samples were analysed for gold and submitted for 30-element ICP analysis. Results include:

- (1) a stratigraphic horizon, consisting of mineralized sedimentary barite, has been outlined as being potentially favourable for VMS-style lead-zinc mineralization;
- (2) this horizon coincides with a geophysical conductor and a magnetic anomaly (pyrrhotite as in the MM massive sulphide deposit?) recognized by previous workers;
- (3) amygdules within rhyolite flows contain abundant pyrite.
- (4) massive pyrite-sphalerite-galena mineralization exhibits syn-sedimentary features, including slump folds and graded sulphide clast horizons.
- (5) rocks yielded up to 4.74% Zn, 9.53% Pb, and 55.6 g/mt Ag.

Selected References

- Morin, J.A. 1977. Ag-Pb-Zn mineralization in the MM deposit and associated Mississippian felsic volcanic rocks in the St. Cyr Range, Pelly Mountains, in 1976 Mineral Inventory Report: Whitehorse DIAND, p. 83-97.
- Mortenson, J.K. and Godwin, C.I. 1982. Volcanogenic massive sulphide deposits associated with highly alkaline rift volcanics in southeastern Yukon Territory. *Economic Geology*, V. 77, No. 5, p.1225-1230.

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1.0 Summary and Conclusions

Preliminary exploration work completed on the Ice 1-10 claims consisted of geological mapping, hand trenching and sampling. This work program was designed to test the mineral potential of the property through a re-assessment of anomalous results from a previous soil geochemical survey and a geological mapping and sampling program. Previous work had outlined mineralized outcrop and talus which, combined with a favourable felsic volcanic stratigraphy, inferred a positive exploration environment for volcanogenic massive sulphide (VMS) style mineralization.

A previously known showing consisting of approximately 9.0 m (stratigraphic thickness) of bedded, pale grey to white, sucrosic barite contains an estimated 0.5 to 1.0% galena as blebs and disseminations. This showing was re-examined and sampled. In addition to galena, very finely disseminated, pale honey-coloured to white sphalerite exists within this unit, but it is not readily visible within the barite groundmass in hand specimens and was not recognized by previous workers. A 2 metre chip-sample across this sedimentary barite showing yielded 0.44% Pb, 0.1% Zn and 18.9 ppm Ag.

A new showing, consisting of a 10 m stratigraphic thickness of massive, bedded barite containing large disseminations, blebs and stratiform bands of galena, with disseminated fine- to coarse-grained pyrite and disseminated sphalerite intergrown(?) with galena, was discovered on claim Ice 1. This is the most significant surface showing noted on the property to date. Select grab samples yielded geochemical results of up to 9.53% Pb, 4.74% Zn and 55.6 g/mt Ag. Previous workers had not recognized the grade of zinc mineralization associated with the galena and barite, which significantly improves the exploration potential of the property. Zinc to lead ratios are highly variable but reach a maximum of 2.89. Cobalt values are below detection limits or are very low, suggesting that, when added to the stratigraphic setting of the property, the showings exhibit a closer resemblance to VMS rather than to SEDEX-style mineralization, particularly since several base metal occurrences in the region would be best described as sedimentary exhalative in origin.

If the two barite occurrences represent the same stratigraphic horizon, then a potential strike length of mineralized barite/exhalite could exceed 1000 m. An alternative hypothesis, that the barite showings are two discrete horizons, is also favourable from an exploration standpoint, given their thickness. The down-dip mineral potential of the barite-sulphide horizon(s) remains untested but might be expected to grade into zinc-lead-silver massive sulphide mineralization. A possible stratigraphically equivalent horizon intersected by a single diamond drill-hole at the far end of the existing property boundaries yielded bedded, massive pyrite with associated sphalerite and galena.

The thickness and potential strike-length of the barite exhalite horizon, with associated sphalerite and galena mineralization, together suggest a positive exploration environment for the Ice 1-8 claim group. Significant volcanogenic massive sulphide mineralization grades laterally from thick exhalite barite zones on other properties in the district, therefore it is suggested that the potential for similar mineralization also exists for the Ice claims. A ground-based geophysical survey, utilizing either I.P. or E.M. methods, may help to delineate subsurface conductors associated with the barite zone. Results from previous geophysical

studies could not be tied to current work or to any "fixed points" since the old grid stations can no longer be located accurately. In addition, it appears that previous geophysical assessment may not have included the site of the new barite-galena-sphalerite showing. A geochemical soil-sample grid positioned above the surface projection of the barite horizon could indicate additional sulphide mineralization occurring along-strike in this area.

Given positive geochemical results from a preliminary surface program designed to delineate potential exploration targets, it is recommended that the barite-sulphide horizon should be tested at depth by a limited diamond-drilling program consisting of at least two to four shallow holes collared along-strike from the new barite-sulphide showing.

2.0 Introduction

The Ice 1-10 claims lie in the valley of the McConnell River, south-central Yukon Territory, at about 132° 30' W by 61° 35' N. Access is only possible by helicopter from Ross River, about 40 km to the north, or from Whitehorse. The claims cover a prominent hill of gossanous, frost-heaved outcrop, and sub-outcrop or felsenmeer. True outcrop is uncommon, being limited to isolated steep faces and small exposures along valley bottoms. Elevations range between roughly 1300 and 1600 m with topography being moderate to (locally) steep. Snow cover can be an impediment to exploration work on north-facing slopes into late June.

The claims were staked by Mr. B. Kreft of Whitehorse, Yukon, as Ice 1-10 recorded with tag numbers YB74425-YB74428; YB84555-6; YB87288-9, inclusive. Ice 1-10 claims were subsequently transferred to Eagle Plains Resources Limited (EPL) which presently holds a 100% interest, less a 1% NSR.

The Ice claim group consists of eight contiguous claims staked to cover a soil geochemical anomaly and associated mineralized outcrops. The target was originally recognized during exploration work carried out by *Cyprus-Anvil Mining Corporation* in 1977, but the extent of barite, galena and sphalerite mineralization had not been recognized prior to the current program. A soil geochemical survey conducted in 1977, based on a chained and picketed grid, identified mineralization which was interpreted as being potentially more extensive than that observed in outcrop. It was not possible to locate the precise position of the previous grid, although individual unmarked pickets were located. As such, previous geochemical results could not be tied into the present work. Geophysical surveys conducted by *Cyprus-Anvil Mining Corporation* failed to detect suitable targets. A magnetic anomaly discovered by past workers was attributed to magnetite within ultrabasic volcanic rock which does not crop out within the study area. Since chert-magnetite exhalite is commonly associated with VMS deposits as a near-vent facies, an alternative explanation for the magnetic anomaly is possible. On neighboring properties, massive sulphide pods also contain significant pyrrhotite. A similar mineralogical suite may exist on the Ice claims.

The methods employed in the field consisted of outcrop mapping, prospecting, rock sampling and hand-trenching. Results from the mapping exercise are summarized in a geology map included within the body of this report. Rock sample descriptions are summarized (Appendix A). Sample stations were recorded and flagged in the field. All samples were submitted to *International Plasma Laboratory Limited*, Vancouver, B.C., for 30-element ICP

analysis. All samples were submitted to *Northern Analytical Laboratories Limited*, Whitehorse, Yukon, for gold analysis. Pulps from anomalous samples (ICP) were resubmitted and assayed for Pb, Zn, Ag and Cu. The results are appended (Appendix B) and are discussed later in the text. An additional four claims, Ice 7-10, were staked in the vicinity of the original barite showing. Fire 1-12 claims (described in a separate report) were studied as part of a joint Ice-Fire exploration program, the results of which appear together on the assay certificates (appended). A secondary property visit yielded additional ICP geochemical results from seven rock samples collected by personnel from *Westmin Resources Limited*, the results of which are also appended.

3.0 Geology

3.1 Regional Geology

Ice 1-10 claims are situated in the Pelly Mountains in south-central Yukon Territory. The Pelly Mountains lie at the northern extremity of the Omineca Crystalline Belt (Tempelman-Kluit 1977). The area has been mapped by various workers (e.g., Wheeler 1960, Tempelman-Kluit 1975, 1976, Gordey 1977) with mineral deposits of the area having been the target of various studies (e.g., Morin 1977, Mortenson 1979). Most recently, significant base metal discoveries were made in the area by *Cominco* (Kudz a Kaya) and by an *Atna-Westmin* joint-venture exploration program (Wolverine).

The regional stratigraphy consists of lower to mid-Paleozoic sedimentary rocks, notably quartzite, shale, and limestone interbedded with felsic volcanic flows, ash to lapilli tuffs, and flow-breccia. The succession is intruded by mafic and felsic dykes, a topographically prominent basaltic plug situated close to the Ice and Fire claims, and by syenite sills and plugs probably comagmatic with the felsic volcanic rocks covered by the Ice work program. Both the felsic volcanic succession and the syenite intrusive rocks are considered to be Mississippian in age. Detailed geochemical work (e.g., Mortenson 1982) shows that the volcanic rocks are highly alkaline and may be classified as trachytes. Given the abundance of volcanogenic massive sulphide showings in the area, it is expected that hydrothermal activity was dominant in areas surrounding felsic domes, the existence of which is supported by thick lenses of bouldery tuff that thin and fine outward from interpreted felsic centers. Despite the degree of hydrothermal alteration expected for felsic volcanic rocks in this setting, Mortenson (1982) demonstrated that plots of immobile elements, notably Nb/Y versus Zr/TiO₂, indicate that samples of felsic volcanic rocks (including samples from the present Ice claims) plot within the trachyte field.

Major structures in the area trend northwest. Ice 1-10 claims lie within a belt of folded and faulted Paleozoic strata situated southwest of the Porcupine Thrust Fault and related allochthons. In the area east of the Seagull Fault (a prominent lineament west of and parallel to the McConnell River valley) the Paleozoic succession displays obscure structural trends (location of Ice 1-8). Regionally, these rocks may display a wide range of bedding orientations with gentle (4-5°) to steep (70-75°) dips in the vicinity of the Ice property.

Three phases of deformation have been recognized in the study area. The first two are coaxial with a general northwesterly trend, whereas the third tends to be represented by

northeasterly trending regional warps, locally with an accompanying crenulation fabric. Most of the rocks range from lower greenschist to lower amphibolite metamorphic facies. Large faults define topographic linears along valley bottoms but few clear indications of faults could be discerned in the typically rubbly outcrop of the study area.

3.2 Property Geology

The stratigraphy of the Ice 1-10 claims consists of (1) a basal carbonate unit of probable Silurian-Devonian age which crops out to the northeast of the current claims, (2) siliceous, medium- to dark-grey, carbonaceous argillite (commonly phyllite to slate), believed to be Mississippian in age, and (3) trachyte (to possibly rhyolite) tuffs and flows, ranging from unwelded ash to fine-lapilli tuff, and aphyric, locally amygdaloidal flows. Units (2) and (3) are both believed to be Mississippian in age and probably are intercalated at the edge of felsic volcanic centers. The felsic volcanic succession is dominated by fine ash tuffs and flows with only minor horizons of lapilli tuff. Felsic (syenite?) dykes and sills intrude the felsic stratigraphy and may be comagmatic with the enclosing felsic succession. No pillows or hyaloclastic breccias were recognized. Instead, the volcanic succession appears to be restricted to ash tuffs and flows. As such, a clear submarine origin cannot be clearly ascertained from the volcanic stratigraphy alone. Instead, regional geologic relations infer a conformable succession grading from 'deep-basin' turbiditic sandstone-argillite couplets and laminated, graphitic black argillite. No fossils were recovered from the study area but graptolites have been reported from the vicinity of the claim block.

Felsic volcanic rocks on the Ice claims weather pale green-grey to buff and are dark green-grey on fresh surfaces in non-mineralized zones. Where pervasive mineralization occurs, typically in the form of disseminated pyrite, locally reaching 8-10%, the rocks are heavily oxidized and stained bright red. Amygdules within flows contain either chalcedony or a combination of silica and pyrite. The latter is a positive exploration indicator and, where base metal mineralization within amygdules can be identified, amygdules may serve as a vector for locating massive sulphide bodies, as has been demonstrated for Noranda-type deposits.

Massive barite up to 9 m thick was noted by previous workers and was re-examined during this program. The barite is finely bedded with a sucrosic texture and contains disseminated to stringer-style pyrite (locally up to 0.5%). Disseminated to wispy galena, locally as small blebs, occurs within the barite horizon. Samples from this zone returned significant zinc values, supporting field observations that pale sphalerite occurs as a probable intergrowth with barite and galena and is difficult to distinguish in the field. A second barite horizon of similar stratigraphic thickness forms a resistant outcrop on Ice Claim 1, situated in the valley northeast of the prominent knob on which the claim block is centered. This exposure was not described previously and is therefore regarded as a new showing. Galena associated with this horizon is locally significant and is much more extensive than that noted at the original barite showing.

The barite-sulphide horizon occurs within the felsic volcanic package but, near barite showing #2 (see map), it appears to occupy a stratigraphic position immediately above the basal contact between the overlying the volcanic succession and the underlying basal argillites. Assuming that this is the same stratigraphic horizon as barite showing #1, this

exhalite zone is a chronostratigraphic horizon (*i.e.*, a key bed) and suggests a dramatic thickening of the volcanic package toward barite #1. This would indicate that the felsic volcanic center lies roughly west to northwest of the barite occurrences and, possibly, down-plunge along interpreted folds.

The structural geology of the property appears to be complex. Despite an abundance of exposure across the property, true outcrop is scarce, probably not exceeding 5% of the area of the claims. Instead, the property is dominated by frost-heaved subcrop and extensive talus and scree slopes from which no reliable structural information may be obtained. Strata exposed on the Ice claims generally strike northeast and dip steeply to the north. At least one phase of regional folding generated a penetrative fabric, described within the context of this report as S^1 foliation. This foliation locally displays evidence of refolding and a second, localized, semi-penetrative to penetrative S^2 , possibly near inferred fault contacts (?). Few measurements of primary foliation (S^0) could be discerned except at the barite showings and along generally poorly exposed lithofacies contacts, particularly within grey to black argillite. At the property scale, beds tend to be steeply dipping ($60-70^\circ$) and S^0 commonly lies parallel to S^1 . In the vicinity of Claim 3, black argillite is the dominant rock type and exhibits S^0 to S^1 angles of nearly 90° where S^1 is nearly flat-lying, suggesting a position near the hinge of a large recumbent fold. A mild crenulation fabric generated by a local S^2 overprint is strongest at this end of the property. This may be related to the regional F^3 structural event (*e.g.*, Mortenson 1982) and so reflects a (regionally) minor warping of two previous, coaxial fold events. Overall, structures measured during reconnaissance-level mapping of the Ice claims appear to be consistent with those recorded regionally. Thrust-related folding appears to have been complicated by later wrench tectonism during offset of the Tintina Fault system in the Cretaceous.

Interpretations of sparse data collected from outcrops indicate that the stratigraphic package seen across the property has been subjected to a dominant fold style consisting of small (wavelengths of approximately 70-80 m), steeply northwest-plunging moderate to tight folds. Refolding is suggested by the apparent, sequentially alternating foliation trends, at high angles to stratigraphic contacts projected from bedding measurements.

Small-scale structures were rarely observed on the property. The new barite showing (#2; this program) displays minor folds with wavelengths on the order of 0.5 m with tight interlimb closure angles of $30-35^\circ$. Ductile strain may have been focussed along less competent horizons, such as barite-sulphide beds, while strain (where evident) in the enclosing felsic volcanic rocks appears to have been entirely of a brittle nature. Where folds were observed, plunge orientations could not be measured accurately due to rotated blocks and frost-heaved suboutcrop. Alternatively, given the presence of slump-folds in massive, bedded pyrite (seen in core), a thick, semi-consolidated barite-sulphide horizon deposited on a moderate paleoslope could be expected to fail in a ductile manner. Therefore, it is possible that these minor folds are "early" post-sedimentary.

4.0 Mineralization

The mineralization observed on Ice 1-10 is dominated by disseminated pyrite and by

pyrite-filled amygdules in felsic volcanic flows. Pyrite locally accounts for 8-10%, by volume, of these rocks. Pyrite disseminations, blebs and stringers also occur within bedded barite. The two barite showings on the property are significant in that (1) they represent an exhalite horizon, important in volcanogenic massive sulphide (VMS) deposits, (2) they reach about 9 m (>30 ft) in stratigraphic thickness, (3) significant drill-intersected massive sulphide bodies on other properties (*i.e.*, MM showing) grade from similar thicknesses of massive barite, and (4) galena-sphalerite mineralization occurs within both of the barite occurrences on the Ice claims. Assay results of up to 4.74% Zn indicate that sphalerite exists as a significant mineral phase within the barite. In hand specimen, it is difficult to identify sphalerite but it appears to occur as a very finely intergrown phase with galena, and possibly occurs as thin laminations and/or disseminations throughout bedded barite.

5.0 Exploration Results

Geochemical results from rock samples collected during the course of this first-pass program are appended (this report). Gold values are consistently low across the Ice claims. Silver results are more encouraging, with the three most anomalous samples returning 55.6 g/mt, 30.3 g/mt and 18.9 g/mt. Two of the three are associated with high lead (and/or zinc) concentrations. It is suspected that silver occurs with argentiferous galena or, alternatively, as an as yet unidentified silver mineral. Copper values are generally very low. Rare malachite-altered samples of trachyte flow rocks containing traces of disseminated chalcopryrite were collected from the stratigraphic footall of the original barite showing. Table 1 summarizes the highest lead, zinc, copper and silver values returned from rock samples. Additional ICP results obtained subsequently, during a property tour, are appended.

Table 1
Ice Assay Results

Sample	Ag (g/mt)	Cu (%)	Pb (%)	Zn (%)
BNOB 3	30.3	-	1.550	0.038
BNOB 4	18.9	1.060	-	0.184
BNOB 8	55.6	-	0.570	0.167
BNOB10	-	-	9.530	4.740
ICEJD-7	-	-	7.820	1.340

The ICP results suggest that the host volcanic rock is sodium-depleted, consistent with volcanogenic massive sulphide mineralization. Mortenson (1982) plotted immobile elements in order to ascertain the geochemical affinity of the volcanic succession. Local enrichments in Sb, As and Mo occur with samples returning high Pb and/or Zn results. Only trace amounts of chlorite alteration could be discerned in hand specimens and outcrop, with the dominant alteration style being that of the association "quartz-sericite-pyrite". The intensity of chlorite

alteration across the property is less than what would be expected in footwall rocks in a vent-proximal VMS setting. As such, most of the outcrop on the Ice 1-8 claims may represent the hanging wall to mineralization. Given the overall stratigraphic and structural interpretation for the property, that the barite-sulphide showings are a single, correlative horizon, then most of the rocks on the property would represent the stratigraphic hanging-wall to mineralization.

A diamond drill hole, collared by *Cyprus-Anvil Mining Corporation* but not discussed in their reports, was noted in government documents. The core had not been sampled and no collar coordinates or drill angle could be found. However, key lithologic contacts were recorded and are summarized below. A 1.5 m intersection (-37.5 to -39.0 m depth) of semi-massive, fragmental sulphide, selected from a zone consisting of several metres' thickness of disseminated to semi-massive pyrite, was split and sampled. The sampled mineralization consists of sulphide clasts deposited by traction carpet dispersions originally shed from a sulphide source. Syndepositional slump folds were also observed in the sulphide horizon and indicate deposition on an inclined plane, down-slope from a sulphide source. Genetically, both of these are significant textures within the context of VMS systems. This material is dominated by pyrite, with subordinate sphalerite and galena. Base metal mineralization is extremely obscure. Geochemical analysis of the sampled interval yielded 880 ppm Pb and 1102 ppm Zn across a 1.5 m true stratigraphic width. No barite occurs within this intersection, suggesting that it may be distal to the barite-galena-sphalerite assemblage. As such, this drill-intersection should be regarded as a strong indicator for other base-metal discoveries on the property.

Table 2
ICE DDH Data

Intersection	Pb (ppm)	Zn (ppm)	Ni (ppm)
37.5-39.0 m	880	1102	139

Table 3
ICE DDH Summary

Depth in Hole (m)	Lithology Noted
0.00 - 37.5	Semi-massive pyrite in tuff
37.5 - 39.0	Fragmental sulphide/debris flow
39.0 - 141	Semi-massive pyrite in rhyolite
141 - 147	Massive bedded pyrite
147 - 190	Pyritic felsic tuff
190+	Black argillite

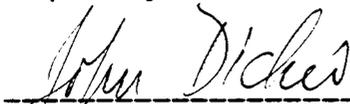
5.0 Discussion

The mapping and sampling of the Ice 1-10 claims yielded the following results: (1) a felsic volcanic stratigraphy considered as favourable for volcanogenic massive sulphide style mineralization exists in the area of the claim block; this stratigraphic succession is associated with black, graphitic argillite typically associated with VMS systems; (2) intense sulphide mineralization exists in the form of ubiquitous pyrite across the property, typically as amygaloidal infilling in felsic volcanic flows; (3) exhalite-style bedded barite is both stratigraphically thick and (likely) continuous along-strike (the area between the barite showings is covered by talus and overburden, however, barite float occurs along the stratigraphic projection of the barite horizon); (4) more significant mineralization than had been noted by previous work exists on the property; (5) appreciable zinc-lead-silver mineralization occurs within the sedimentary barite horizon and may grade, in a down-plunge direction, into thicker massive sulphide pods; (6) significant lead-zinc mineralization on other properties in the area grades from similar, thick sedimentary barite horizons.

A two-metre chip sample across the original barite showing yielded 4414 ppm Pb, 929 ppm Zn and 18.9 ppm Ag, along with anomalous Cd, however, only trace to 0.5% galena-sphalerite mineralization could be discerned in outcrop. Also, the mineralization observed in outcrop predominates within the upper 2-3 metres of the barite horizon. A similar distribution of sulphide mineralization within the new barite (#2) showing provides additional evidence that the two barite-sulphide showings may represent the same stratigraphic horizon.

Overall, the potential for VMS-style mineralization may be considered as very good, based on reports from previous work, and supported by new discoveries of zinc-lead-silver+/- copper mineralization. Minor structural thickening, by small folds, of the barite-sulphide horizon is considered positive as higher-grade horizons may have been thickened into stratigraphic widths of economic significance. More work in the form of a tailored geochemical soil survey, ideally run in concert with a ground-geophysics assessment of the covered area between the barite showings, is proposed to raise the potential of the property to drill-ready status.

Respectfully Submitted,



John R. Dickie, M.Sc.
Consulting Geologist

November 10, 1996

Geologist's Certificate

This is to certify that I, John R. Dickie, of 118-40 Knightsridge Drive in Halifax, Nova Scotia, am a consulting geologist with offices in Halifax and at 1409 Fir Street, Whitehorse, Yukon, and that:

(1) I hold B.Sc. (Honours in Geology), B.Ed. (Chemistry/Environment), and M.Sc. (Geology) degrees from Dalhousie University and University of Toronto;

(2) I have over twelve (12) years' experience with various research institutions and mining companies on projects in Canada (Nova Scotia, New Brunswick, Ontario, British Columbia, Yukon), United States, and Mexico, with over ten years experience on Yukon projects;

(3) I do not hold any interest in Eagle Plains Resources Limited (ASE), nor do I expect to receive securities or related remuneration from Eagle Plains Resources Limited;

(4) This report and the conclusions and recommendations contained herein are based on fieldwork conducted by myself or personally witnessed, on the Ice 1-10 claims, between June 5 and June 8, 1996.,

(5) I am regarded as a Professional Geoscientist, eligible for registration with APENS, in the Province of Nova Scotia, where formal registration of Geoscientists is pending.

Respectfully Submitted,



John R. Dickie, M.Sc.
Consulting Geologist

John R. Dickie
November 10, 1996

Appendix A
Rock Descriptions

<u>Sample</u>	<u>Description</u>
BNOB-1	0.5 m chip sample of altered rhyolite tuff
BNOB-2	grab sample of fine-grained green-grey rhyolite tuff containing 3% disseminated, euhedral pyrite (3.0 m above BNOB-1)
BNOB-3	select grab of best mineralization from old barite zone; trace galena and pyrite, poss. trace malachite.
BNOB-4	grab sample of quartz vein subcrop down-slope from old barite showing, trace to 1-2% chalcopyrite, pyrite and trace arsenopyrite
BNOB-5	massive pyrite (12 cm diameter)
BNOB-6	vuggy grey rhyolite adjacent to small non-mineralized barite, a possible extension of the main barite horizon
BNOB-7	pyritic, grey rhyolite containing 4% disseminated euhedral pyrite, 1 mm crystals
BNOB-8	grab sample of barite with trace pyrite and blebs of galena from new showing
BNOB-9	grab sample of fractured siltstone containing pyrite stringers in fractures
BNOB-10	select grab of barite containing sphalerite, galena and pyrite in new barite showing
ICEJD-1	Gossanous, amygdaloidal rhyolite flow, amygs. 1-1.5 mm
ICEJD-2	grey-white sucrosic barite with 2-3% disseminated pyrite plus 0.5% galena
ICEJD-3	Grab (rep of 1.5-2.0 m) of aphyric grey rhyolite, slight chlor altn, qz stringers
ICEJD-4	2.0 m chip of bedded barite with irregular blebs and disseminations of galena (up to 3-4%), pyrite (1%) and Tr malachite; barite is laminated, locally vuggy, grey-white
ICEJD-5	Grab of material from ICEJD-4, semi-massive pyrite (10-15%) along barite contact in felsic volcanic rock

<u>Sample</u>	<u>Description</u>
ICEJD-6	Select grab, new barite showing; up to 0.5% galena, Tr sphalerite, Tr malachite(?), galena forms minor stringers in bedded, sucrosic barite
ICEJD-7	Select grab, as above, opposite side of outcrop; galena as stringers and coarse clots 0.5x1.5 cm with black? sphalerite intergrown with galena
134012	massive barite?? With fracture-controlled(?) coarse-grained galena stringers
134013	bedded barite/silica with disseminated bands of fine pyrite
134014	green baritic mica-altered fragmental rhyolite from barite horizon hangingwall
134015	bedded barite>pyrite>galena
134016	bedded barite>pyrite/galena
134017	bedded barite
134018	strongly altered rhyolite/rhyolite porphyry

Appendix B
Geochemistry (ICP/Assay) Results

[052318:03:04:69062696]
Mon=Month Dis=Discard
Rtn=Return Arc=Archive

06:26:36
17:12
iPL 2036 COLUMBIA ST VANCOUVER - 1 403 668 4850
NO. 718 081

INTERNATIONAL PLASMA LABORATORY LTD

thern Analytical Laboratories

75 Samples

0= Rock 0= Soil 0= Core 0=RC Ct 75= Pulp 0=Other
Raw Storage: --- 12Mon/Dis ---
Pulp Storage: --- 12Mon/Dis ---

Jun 26, 1996 Project: W0 10319
Jun 24, 1996 Shipper: Norm Smith
54601 Shipment: ID=C030901
ICP(AqR)30

ument Distribution

thern Analytical Laboratories
Copper Road
Telhorse
VIA 277
Norm Smith
Ph: 403/668-4968
Fax: 403/668-4890

Analytical Summary

##	Code	Met	Title	Limit	Limit	Units	Description	Element	##	
		hod	Low High							
01	721P	ICP	Ag	0.1	100	ppm	Ag ICP	Silver	01	
02	711P	ICP	Cu	1	20000	ppm	Cu ICP	Copper	02	
03	714P	ICP	Pb	2	20000	ppm	Pb ICP	Lead	03	
04	730P	ICP	Zn	1	20000	ppm	Zn ICP	Zinc	04	
05	703P	ICP	As	5	9999	ppm	As ICP 5 ppm	Arsenic	05	
06	702P	ICP	Sb	5	9999	ppm	Sb ICP	Antimony	06	
07	732P	ICP	Hg	3	9999	ppm	Hg ICP	Mercury	07	
08	717P	ICP	Mo	1	9999	ppm	Mo ICP	Molybdenum	08	
09	747P	ICP	Tl	10	999	ppm	Tl ICP 10 ppm (Incomplete	Thallium	09	
10	705P	ICP	Bi	2	999	ppm	Bi ICP	Bismuth	10	
11	707P	ICP	Cd	0.1	100	ppm	Cd ICP	Cadmium	11	
12	710P	ICP	Co	1	999	ppm	Co ICP	Cobalt	12	
13	718P	ICP	Ni	1	999	ppm	Ni ICP	Nickel	13	
14	704P	ICP	Ba	2	9999	ppm	Ba ICP (Incomplete Digest	Barium	14	
15	727P	ICP	W	5	999	ppm	W ICP (Incomplete Digest	Tungsten	15	
16	709P	ICP	Cr	1	9999	ppm	Cr ICP (Incomplete Digest	Chromium	16	
17	729P	ICP	V	2	999	ppm	V ICP	Vanadium	17	
18	716P	ICP	Mn	1	9999	ppm	Mn ICP	Manganese	18	
19	713P	ICP	La	2	9999	ppm	La ICP (Incomplete Digest	Lanthanum	19	
20	723P	ICP	Sr	1	9999	ppm	Sr ICP (Incomplete Digest	Strontium	20	
21	731P	ICP	Zr	1	999	ppm	Zr ICP	Zirconium	21	
22	736P	ICP	Sc	1	99	ppm	Sc ICP	Scandium	22	
23	726P	ICP	Ti	0.01	1.00	%	Ti ICP (Incomplete Digest	Titanium	23	
24	701P	ICP	Al	0.01	9.99	%	Al ICP (Incomplete Digest	Aluminum	24	
25	708P	ICP	Ca	0.01	9.99	%	Ca ICP (Incomplete Digest	Calcium	25	
26	712P	ICP	Fe	0.01	9.99	%	Fe ICP	Iron	26	
27	715P	ICP	Mg	0.01	9.99	%	Mg ICP (Incomplete Digest	Magnesium	27	
28	720P	ICP	K	0.01	9.99	%	K ICP (Incomplete Digest	Potassium	28	
29	722P	ICP	Na	0.01	5.00	%	Na ICP (Incomplete Digest	Sodium	29	
30	719P	ICP	P	0.01	5.00	%	P ICP	Phosphorus	30	

BEST ATTAINABLE IMAGE

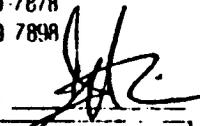
Post-It® Fax Note 7671

Date	9/6/26	# of pages	3
To	Norm Smith		
From	Eddie Tang		
Co./Dept.	NAL		
Co.	iPL		
Phone #			
Fax #			

BEST ATTAINABLE iPL 96F0523

IMAGE

Vancouver B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898



08-28-96
10:11:10
iPL 96F0523
ST. VINCENT
1-800-368-3830
10:11:10
08-28-96

INTERNATIONAL PLASMA LABORATORY LTD

Client: Northern Analytical Laboratories
Project: MO 10119 / 75 Pulp

iPL: 96F0523

Out: Jun 26, 1996
In: Jun 24, 1996

Page 1 of 2
[052318:03:10:69062696]

Section 1 of 1
Certified RC Assayer: David Chiu

File Name	Ag	Ca	Pb	Zn	As	Sb	Hg	Mn	Ti	Ri	Cd	Co	Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Li	Al	Ca	Fe	Mg	K	Na	P			
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
B 1	P	3.8	27	40	37	84	13	<	73	<	<	<	3	3	23	<	55	2	33	12	5	7	<	<	0.21	0.05	4.12	0.02	0.19	0.02	<		
B 2	P	0.1	10	14	40	<	<	<	7	<	<	<	2	4	23	<	38	6	59	17	7	12	<	<	1.18	0.05	6.64	0.51	0.12	0.06	0.01		
B 3	P	34.1	9	1717	379	34	36	<	1	<	2	2.8	1	1	45	<	4	<	4	2	96	2	<	<	0.03	0.01	0.43	0.01	0.02	0.01	<		
B 4	P	20.5	11814	287	1814	3486	2066	<	2	<	30	26.6	3	10	13	<	80	5	2104	8	215	4	1	<	0.19	2.99	4.78	0.89	0.09	0.02	0.03		
B 5	P	1.2	136	242	54	509	13	<	8	<	9	1.6	67	10	13	<	29	12	144	<	6	28	<	<	2.07	0.03	15X1.63	0.04	0.01	<	<		
B 6	P	4.7	117	1110	34	116	29	<	4	<	<	0.6	4	3	51	<	68	5	36	3	57	12	1	0.01	0.36	0.04	2.41	0.11	0.27	0.01	0.01		
B 7	P	17.8	93	175	15	40	11	<	2	<	<	<	11	14	18	<	19	11	55	8	11	4	2	<	0.39	0.01	4.26	0.06	0.47	0.01	0.01		
B 8	P	61.8	36	5684	1671	122	64	8	7	<	<	9.5	1	7	15	<	8	<	6	<	48	1	<	<	0.07	0.02	1.68	0.01	0.02	0.01	<		
B 9	P	0.9	32	1284	596	15	9	<	15	<	<	1.9	1	1	33	<	29	2	44	17	15	9	<	<	0.71	0.07	4.16	0.34	0.06	0.06	0.02		
B 10	P	4.5	81	2.1X	4.6X	24	35	22	1	<	<	0.2m	1	1	<	<	1	<	121	2	41	<	<	<	0.01	0.42	0.35	0.20	0.01	0.01	<		
ICL 1	P	1.5	48	880	1102	<	<	<	10	<	<	7.3	11	139	11	<	46	9	2237	<	32	19	<	<	0.50	1.80	13X1.14	0.17	0.01	0.01	<		
FK- 1	P	14.9	91	9042	2.4X	81	21	8	<	<	<	0.2m	1	2	9	56	13	2	3198	121	51	23	<	<	0.20	5.89	6.89	2.16	0.15	0.01	0.01	<	
FK- 2	P	12.8	81	523	2091	86	11	<	3	<	<	15.4	2	2	15	<	27	9	449	13	5	56	<	<	0.49	0.99	16X0.21	0.52	0.01	<	<		
FK- 3	P	9.4	30	788	1434	50	12	<	4	<	<	11.1	2	3	20	<	7	5	2372	112	23	61	<	0.01	0.87	4.29	11X1.36	0.79	0.01	0.01	<		
FK- 4	P	18.7	36	6792	2.4X	50	21	7	1	<	<	0.2m	2	3	9	58	19	5	3913	106	48	35	<	<	0.35	5.57	12X2.24	0.26	0.01	0.01	<		
FK- 5	P	3.2	18	285	782	<	10	<	7	<	<	6.0	2	6	21	<	12	5	3146	124	83	17	<	<	0.22	7.44	7.81	2.66	0.19	0.01	0.02	<	
FK- 6	P	2.1	16	164	478	11	<	<	2	<	<	3.1	1	2	52	<	22	<	131	57	6	32	<	<	0.53	0.26	2.05	0.10	0.50	0.01	0.01	<	
FK- 7	P	7.0	13	5467	193	8	12	<	3	<	<	1.5	2	4	144	<	192	<	429	44	43	6	<	<	0.12	0.65	0.65	0.07	0.06	0.01	<	<	
FK- 8	P	7.8	26	218	1193	39	12	<	2	<	<	8.1	2	2	24	<	14	8	1221	76	12	45	<	<	0.54	2.80	14X0.64	0.60	0.02	0.01	<	<	
FK- 9	P	10.9	4724	1199	5.9X	48	141	<	1	<	<	0.5m	6	8	24	<	57	2	1075	22	60	5	<	<	0.16	4.52	4.97	1.83	0.08	0.01	0.01	<	
FK- 10	P	1.0	121	63	1441	9	6	<	3	<	<	12.0	1	4	172	<	153	<	79	20	6	15	<	<	0.24	0.15	0.89	0.06	0.29	0.01	<	<	
FK- 11	P	0.3	108	26	735	<	<	<	3	<	<	6.4	16	56	91	<	105	4	418	3	43	4	2	<	<	0.40	6.84	2.50	0.29	0.04	0.01	0.01	<
FK- 12	P	0.3	17	39	150	32	<	<	4	<	<	0.5	3	2	2038	<	16	<	990	240	76	78	<	0.01	3.08	5.38	3.06	0.17	3.26	0.03	0.01	<	
FK- 13	P	0.2	13	34	407	<	<	<	3	<	<	2.8	1	2	174	<	79	<	1221	151	311	16	<	<	0.85	5.27	2.57	0.14	0.19	0.01	<	<	
JD- 1	P	0.4	40	12	65	1466	<	<	6	<	<	<	17	18	86	<	16	20	175	9	29	2	8	<	<	0.71	0.26	3.71	0.03	0.13	0.02	0.19	<
JD- 2	P	0.1	8	34	47	11	6	<	13	<	<	<	1	3	101	<	9	2	45	17	10	5	<	<	0.38	0.02	3.22	0.01	0.17	0.04	0.04	<	
JD- 3	P	0.1	89	10	235	10	<	<	5	<	<	1.5	22	33	64	<	11	88	2281	31	139	5	9	0.01	3.09	6.93	8.68	2.77	0.12	0.02	0.24	<	
JD- 4	P	0.1	3	4	29	<	<	<	17	<	<	<	2	3	184	<	11	2	1885	169	37	16	<	<	0.27	1.64	4.48	0.55	0.21	0.02	0.02	<	
JD- 5	P	0.1	17	7	140	11	<	<	4	<	<	0.9	1	3	160	<	31	2	1079	77	48	12	1	<	0.40	2.26	2.60	0.79	0.27	0.01	0.02	<	
JD- 6	P	0.7	18	53	32	8	<	<	10	<	<	0.1	2	6	172	<	21	2	112	71	35	10	<	<	0.28	0.03	3.85	0.02	0.52	0.01	0.01	<	
JD- 7	P	1.3	19	183	335	<	<	<	10	<	<	6.8	2	4	88	<	45	2	572	230	12	21	<	<	0.37	0.18	3.15	0.04	0.30	0.01	0.02	<	
JD- 8	P	1.5	15	348	415	34	<	<	2	<	<	2.3	1	3	36	<	36	<	42	84	10	42	<	0.01	0.76	0.51	2.39	0.04	0.69	0.02	0.01	<	
JD- 9	P	1.5	51	443	9717	7	27	<	2	<	<	63.0	4	6	119	<	26	<	3260	47	166	10	1	<	0.33	6.07	3.51	2.36	0.20	0.02	0.03	<	
JD- 10	P	0.2	8	23	262	23	<	<	5	<	<	0.1	3	9	137	<	39	6	613	13	11	6	1	<	1.35	0.57	5.51	1.38	0.17	0.04	0.05	<	
JD- 11	P	0.2	9	28	274	22	<	<	2	<	<	1.4	6	18	182	<	42	10	305	17	17	5	1	<	1.36	0.63	2.49	1.30	0.15	0.04	0.07	<	
JD- 12	P	7.8	11452	326	6882	95	10	<	1	<	24	48.7	4	6	14	<	46	2	537	3	18	9	<	<	0.24	1.42	6.96	0.39	0.15	0.01	0.03	<	
JD- 13	P	87.0	2434	1416	15487	129	668	<	<	<	2	0.1m	3	5	150	<	81	4	299	29	31	13	<	0.01	0.24	0.97	1.44	0.39	0.18	0.02	0.01	<	
JD- 14	P	1.5	161	43	757	23	13	<	2	<	<	4.7	1	2	137	<	26	<	27	37	5	23	<	<	0.47	0.04	1.43	0.05	0.43	0.01	0.02	<	
JD- 15	P	2.0	47	163	330	23	13	<	2	<	<	2.1	1	5	66	<	125	<	37	12	11	15	<	<	0.23	0.10	1.63	0.01	0.28	0.01	<	<	

Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Reported	99.9	20000	20000	20000	99																										

05/07/96

Assay Certificate

Page 1

Bernie Kreft

WO#10362

Sample #	Ag g/mt	Cu %	Pb %	Zn %
BNOB 3	30.3		1.550	
BNOB 4	18.9	1.060		
BNOB 8	55.6		0.570	
BNOB 10			9.530	4.740
Fire BK 1			1.060	3.070
Fire BK 4			0.614	2.880
Fire BK 9		0.535		7.120
Fire JD 12		0.962		0.599
Fire JD 13	72.9			1.440
Fire JD 17		0.670		1.160
Ice JD 7			7.820	1.340

Note: Pulp from WO#10319.

01 0

26/06/96

Assay Certificate

Page 1

Bernie Kreft

WO#10319

Sample #	Au ppb
Fire BK 1	26
Fire BK 2	21
Fire BK 3	26
Fire BK 4	17
Fire BK 5	10
Fire BK 6	14
Fire BK 7	8
Fire BK 8	21
Fire BK 9	284
Fire BK 10	27
Fire BK 11	13
Fire BK 12	18
Fire BK 13	20
BNOB 1	32
BNOB 2	16
BNOB 3	31
BNOB 4	76
BNOB 5	41
BNOB 6	28
BNOB 7	48
BNOB 8	58
BNOB 9	15
BNOB 10	12
Ice JD 1	15
Ice JD 2	9
Ice JD 3	9
Ice JD 4	47
Ice JD 5	64
Ice JD 6	10
Ice JD 7	14

26/06/96

Assay Certificate

Page 2

Bernie Kreft

WO#10319

Sample #	Au ppb
Fire JD 1	17
Fire JD 2	8
Fire JD 3	7
Fire JD 4	14
Fire JD 5	7
Fire JD 6	<5
Fire JD 7	11
Fire JD 8	9
Fire JD 9	11
Fire JD 10	12
Fire JD 11	<5
Fire JD 12	78
Fire JD 13	41
Fire JD 14	18
Fire JD 15	11
Fire JD 16	11
Fire JD 17	1063
FN 96-1	12
FN 96-2	8
FN 96-3	14
DDH-Ice 1	12
S - 1	71
S - 2	13
S - 3	13
S - 4	16
S - 5	18
S - 6	16
S - 7	19
S - 8	31
S - 9	19

ICEGS

Certificate	A9634296						
Sample	134012	134013	134014	134015	134016	134017	134018
Au	<5.	15	<5.	25	45	10	15
Ag	4	15.2	0.4	24	20	2	<0.2
Al	<0.01	9.22	5.19	0.05	0.03	12.35	9.55
Ba	150	370	230	330	170	>10000.	330
Be	<0.5	10.5	3	<0.5	<0.5	10.5	7
Bi	<2.	<2.	<2.	<2.	<2.	6	12
Ca	0.81	<0.01	<0.01	<0.01	0.03	<0.01	1.26
Cd	19.5	<0.5	<0.5	3	8.5	<0.5	<0.5
Co	<1.	<1.	1	<1.	<1.	6	4
Cr	<1.	142	78	2	<1.	126	38
Cu	45	15	4	1	3	4	370
Fe	0.28	4	3.24	0.1	0.49	0.59	3.53
K	<0.01	6.93	4.11	0.03	0.02	6.65	6.71
Mg	0.31	0.81	0.35	<0.01	<0.01	0.98	1.03
Mn	230	30	5	<5.	<5.	35	270
Mo	<1.	5	1	3	7	4	<1.
Na	<0.01	0.2	0.12	<0.01	<0.01	0.39	0.34
Ni	<1.	1	5	<1.	<1.	1	<1.
P	<10.	80	40	10	10	400	300
Pb	>10000.	210	156	1560	610	188	42
Sr	371	113	28	154	164	82	38
Ti	<0.01	0.44	0.09	<0.01	<0.01	0.4	0.12
V	<1.	162	4	<1.	<1.	76	4
W	<10.	30	<10.	<10.	<10.	<10.	10
Zn	4110	94	48	564	1715	90	114
134012	massive barite?? with fracture-controlled coarse-grained galena stringers						
134013	bedded barite/silica with disseminated bands of fine-grained pyrite						
134014	green baritic mica altered fragmental rhyolite from hangingwall of barite						
135015	bedded barite>pyrite>galena						
134016	bedded barite>pyrite/galena						
134017	bedded barite						
134018	strongly altered rhyolite/rhyolite porphyry						

Appendix C
Expense Summary

Expense Summary

Ice Property

<u>Item</u>	<u>Amount</u>	<u>G.S.T.</u>
Helicopter	2886.72	188.85
Geochemistry	570.33	39.92
Camp Supplies	296.22	19.38
Air Reconnaissance	160.50	10.50
Truck Rental	121.50	---
□Claim Posts	---	---
Claim Applications	---	---
Food	122.16	---
Office	127.14	---
Claim Renewal Fees	270.00 N/A	---
Wages* (12.5 days)	4687.50 *	---

J.R. Dickie; Senior Consulting Geologist; 7.5 days @ 375.00/day; field/office

B. Kreft; Project Field Manager; 5 days @ 375.00/day**

**includes 1 day property tour with *Westmin* personnel

Total Expenses \$9400.72

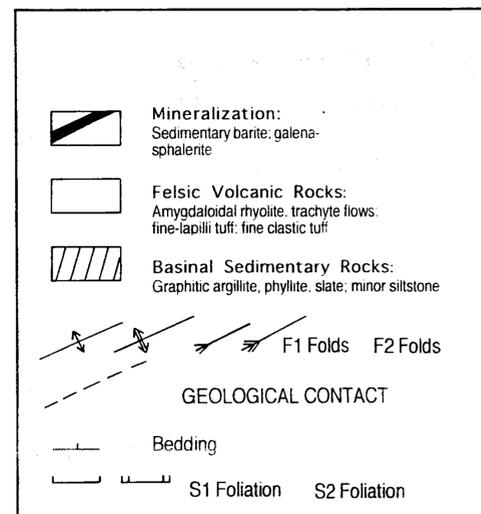
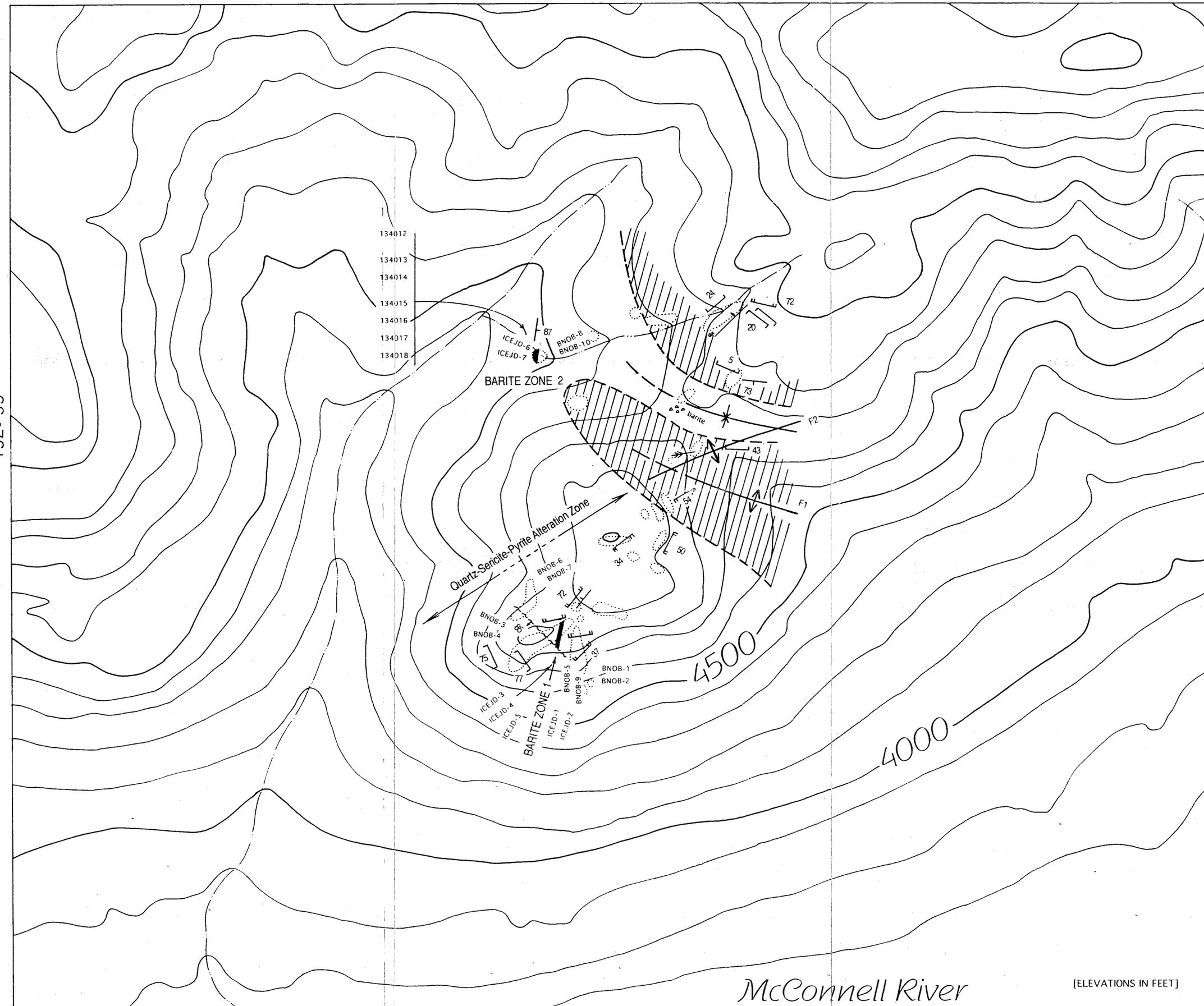
* * * Less Advanced Amount of \$9400.72

Amount Owing: \$0.00

***Cash advanced to Mr. B. Kreft, Whitehorse, from *Eagle Plains Resources Limited*.

61° 36'

132° 33'



ICE 1 - 10 CLAIMS
 YUKON TERRITORY
 PRELIMINARY GEOLOGY

093608 Scale = 1:5000
EAGLE PLAINS RESOURCES LIMITED

FIGURE 2

93608 #1