

ASSESSMENT REPORT ON THE

QUATSE PROPERTY

NANAIMO MINING DIVISION

BRITISH COLUMBIA

N.T.S.: 92L\12

Latitude: 50° 39' N Longitude: 127° 35' W

For

WINFIELD RESOURCES LTD.

700, 625 Howe Street, Vancouver, B.C. Canada. V6C 2T6

By

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October 31, 1997 GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

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SUMMARY

The Quatse property is located on northern Vancouver Island, twelve kilometres south west of Port Hardy, and seven kilometres northwest of the decommissioned Island Copper mine. The property overlies the old Caledonia mine claims, and the area south and southeast to the south shore of Quatse Lake.

A conformable sequence of generally east-west striking, moderately south-dipping basalt flows with interlaminated limestone of the Karmutsen Formation, limestone of the Quatsino Formation, siliceous siltstone of the Parson Bay Formation (collectively the Triassic Vancouver Group) and mafic to intermediate volcaniclastics of the Jurassic Bonanza Group underly the property. This sequence appears to have been intruded by several phases of dykes, sills and stocks, and later cut by a series of northeast and northwest trending faults.

The Caledonia mine was developed on a series of massive copper-zinc showings in the 1920's, and has had several periods of sporatic exploration since then. The mineralization is associated with the contact of a limestone horizon which trends northwest-southeast across the property. This limestone horizon, and the adjacent Karmutsen volcanics form the height of land on the north side of the property. To the south of the ridge the topography is subdued and relatively flat to the shore of Quatse Lake. There is a large amount of glacial outwash covering the southern half of the property. Outcrops are rare south of the ridge.

In October 1994, geophysical and geochemical surveys were carried out on the eastern and central portions of the property, two diamond drill holes, out of a proposed four drillholes, were completed in the centre of the property. These holes identified intensely chlorite/hydrobiotite/magnetite altered rocks of the Bonanza Formation, and extensive pyrite mineralization in the Parsons Bay sediments. Previous geophysical and geochemical surveys indicate the potential for a mineralized dyke system in the Bonanza Formation. The magnetite/chlorite/hydrobiotite mineralization is a typical alteration feature of other porphyry deposits in the area.

The current work focussed on determining the extent of mineralized zones in the Hill 160 area, which show linear zones of copper mineralization in limestone, cherts, and on the area to the east where previous work had identified a larget airborne magnetic and electromagnetic anomaly.

The work programme was carried out over a period of seven days, and involved compilation of previous work, mapping, old drill site evaluation, and geochemical soil sampling across the geophysical anomalies. The total programme cost \$12,894.54

INTRODUCTION

At the request of Mr Michael Foley, President of Winfield Resources Corp. the author revisited the Quatse property to carry out geochemical and geological surveys in the Hill 160, Hill 140 and Kettle Pot creek areas. The work was carried out from October 15 to October 31, and included a visit to the mining recorders office in Victoria to research old drill and mapping records.

LOCATION AND ACCESS

The Quatse Lake Property is located about 12 kilometres southwest of Port Hardy and 3 kilometres north of Coal Harbour and Holberg Inlet on northern Vancouver Island, British Columbia (Figure 1).

The claims are centred at geographic coordinates 50° 39'N. latitude and 127° 35'W. longitude on map sheet (NTS 92L/12E) in the Quatsino Provincial Forest and the Nanaimo Mining Division. The claims cover and lie north of Quatse Lake (Figure 2).

Property access is presently via the Coal Harbour-Port Hardy road and an old 6.5 kilometre (4 mile) tractor road built by North Island Mines. Alternate access is has recently become available from the Quatse main logging road, and branch roads Q126 and Q127. The work programme involved temporary repairs to the old access road and bridge leading to the centre of the property (accessed at 800m on Quatse Main forest road. The main bridge at the Quatse river crossing is no longer passable because of collapse and obstruction by an abandoned vehicle. The bridge at Kettle Pot creek is also impassable.

The claims cover a gently rising slope with Quatse lake, at elevation 70 meters (230 feet) to the south and an east trending ridge, at elevations of 305 meters (1000 feet) to 427 meters (1400 feet) in the northern part of the claim area. One new claim, the SAM was staked in the Kettle pot creek area to protect the airborne geophysical anomaly. The work programme established a flagged grid across the property in the Kettle Pot creek area.

TOPOGRAPHY AND VEGETATION

The western half of the Quatse property is predominantly covered with old growth fir and cedar forest. The eastern half of the property is within an old logging area with forest cover ranging from mature fir, hemlock, spruce and cedar stands to dense second growth in old open clear-cut areas. In these areas of previous logging activity, especially in the hill 160 area, traverses are very difficult because of the dense secondary growth.



Rock outcrops are exposed within creek gullies, in logging road cuts and on the steeper hillsides. Thick accumulations of sand and gravel are present throughout most of the area covered by the southern part of the old cut grid. There is very little outcrop on the area surveyed east of Hill 160, and virtually none along the old roads. Outcrop along Kettle Pot creek is sporatic. Thick salal to shoulder height covers much of the grid area.

PROPERTY

This property consists of 25 claims totalling 45 claim units and three crown grants within N.T.S. map-sheet 92L/12. in the Nanaimo Mining Division. The claims are depicted on Figure 2 and listed below:

<u>Name</u>	Record No.	Units	Expiry	Recorded Owner
Pick 7	229629	18	13 February 1998	P.G. Dasler*
Pick 9	229630	6	13 February 1998	P.G. Dasler*
Cal #1-6	315542-47	6	4 February 1998	P. G. Dasler*
Qu #1-8	315548-55	8	2 February 1998	P. G. Dasler*
Qu #15-22	315556-63	8	2 February 1998	P. G. Dasler
SAM	tag 672039	1	7 November 1998	P. G. Dasler*

Crown Grants: Caledonia (lot 1294), Cascade (lot 1295) and Bluebell (lot 1296).

* Held in trust for Hisway Resources Corp.

HISTORY

The Quatse property covers the Caledonia mineral deposit (MI92L-61 & 209) and Hill 140 and Hill 160 copper occurrences. The Caledonia mineral deposits occur on the Caledonia, Bluebell and Cascade crown granted mineral claims which were located in the early 1920's with crown grants issued on April 27, 1927.

Exploration of the Quatse property started prior to 1923 when T.D. Harris and Robert A. Grierson, of Port Hardy and Mr. and Mrs. Murray C. Potts, of Alert Bay acquired the Bluebell, Caledonia, Cascade and other claims. Early exploration consisted mainly of prospecting, stripping, open cuts and a 50 foot adit to explore



30 feet of mineralization in Caledonia creek. Further exploration, consisting of open cuts in the following two years, demonstrated continuity of the mineralization in excess of 300 feet in a N 60°W (magnetic) direction. In 1926, the owners organized the Caledonia Mines Company Limited and active development was started. By 1929 over 400 feet of underground drifting had been completed when the property was bonded to Cominco.

In 1929, Cominco completed at least 400 feet of drifting eastward and westward from the crosscut and another 50 foot drift westward. A raise was driven to intersect the mineralized band in open cut 3A. The work in 1929 demonstrated that a well mineralized band was shallow dipping at the contact of granodiorite and limestone and the contact was irregular and mineralized with widths of 5 to 25 feet of copper-zinc-lead mineralization "which looked very promising" (BCMM Annual Report 1929).

In 1956 W. N. Plumb, P. Eng reported on the property, which was at that time held under option by Mr G K. Storey of Port Hardy. He recommended prospecting and geophysics to trace the mineralized horizons on the Caledonia claim, and drilling to evaluate the copper mineralization on the Bluebell claim. Plumb's work was reviewed by BHP in 1961, however it does not appear that the proposed exploration was carried out.

The property remained relatively idle until interest in the area was reactivated by discovery of the Island Copper Mine by Utah Mines Ltd. in 1967. The Caledonia and surrounding ground was acquired by North Island Mines Ltd. A geochemical survey, bulldozer trenching, road building and camp construction was completed in 1968. Fifteen diamond drill holes in the vicinity of the Caledonia workings, "Hill 140" and "160", totalling 2,300 feet, were also carried out, following a programme proposed by Mr D. G. Malcolm, P. Eng. An undetermined number of percussion holes, and blast pits were also attempted across the property, however there is only disjointed reporting of their results. Most of the drill samples were never assayed, for reasons not determined. Extensive further work on the hill 160 showing was recommended by Malcolm.

Little other work was carried out on the property during the porphyry copper boom in the area, and the recorded claims were allowed to lapse after 1973. In 1977, Mr. Thomas E. Kirk began acquiring the ground for Ronald Welch. In December 1981, the property was consolidated under the ownership of Thomas E. Kirk with the bulk of the property sold to Energex Minerals Ltd.

Energex Minerals worked the property, concentrating on claims to the east of the current claim block, from 1982 till 1985 when the property was sold back to Mr. Kirk by Energex Minerals. Energex Minerals completed compilation work on the property mainly in the area of the old mine workings. They also carried out an airborne magnetometer and EM survey of the current property and the areas to the east. Targets from this survey were investigated in the current work programme.

In June 1989, the Quatse property was sold to Hisway Resources Corp. and in September 1989, a

prospecting program and a single 501.5 foot diamond drill hole were completed on the ground north of the central camp.

The property was briefly optioned to Universal Trident Industries Ltd. in 1992, but no surveys were competed. Some restaking was carried out to regain lapsed ground.

In 1993 further staking was carried out by the author on behalf of Hisway Resources Corp., again to hold ground which had just expired.

In October 1993 following an agreement for option between Winfield Resources Ltd and Hisway Resources Corp., geophysical and geochemical surveys were carried out on a grid cut across the central part of the property. Followup geological and geochemical work was carried out in February 1994. Limited diamond drilling was carried out in October 1994 to test two of four priority targets identified from the 1993 survey. In January 1995, the property grid was extended to the Caledonia mine area, with further prospecting, new and infill geochemical soil sampling, and magnetometer surveys carried out. In January 1997 a mapping programme and geophysical survey was carried out on the area south of Quatse Lake.

REGIONAL GEOLOGY

Vancouver Island north of Holberg and Rupert inlets is underlain by rocks of the Vancouver Group. These rocks range in age from Upper Triassic to Lower Jurassic. They are intruded by rocks of Jurassic and Tertiary age and disconformably overlain by Cretaceous sedimentary rocks. Figure 3 shows the regional geological mapping of the northern part of the island.

Faulting is prevalent in the area. Large-scale faults with hundreds to thousands of metres of displacement are offset by younger, strike-slip faults with displacements up to 750 metres (2,500 ft.). The faulting is particularly evident from the regional airborne magnetics. The strong northwest orientation of the belt of volcanics and intrusives contrasts with the more northerly trending geology to the south of Holberg inlet.

Vancouver Group

The Vancouver Group rocks consist of the Harbledown Formation sills and argillites, the Karmutsen Formation basalts, the Quatsino Formation limestone, the Parson Bay Formation argillites and cherty tuffs and the Bonanza Formation volcanic breccias and flows.



Intrusive Rocks

The Vancouver Group rocks are intruded by a number of Jurassic-aged stocks and batholiths. In the Holberg Inlet area a belt of northwest-trending stocks extends from the east end of Rupert Inlet to the mouth of the Stranby River on the northern coast of Vancouver Island.

Quartz-feldspar porphyry dykes and irregular bodies occur along the southern edge of the belt of stocks for over 40 kilometres northwest of Island Copper, and are associated with numerous copper showings, and zones of advanced argillic alteration. The mine at Island Copper (345M Tonnes @ 0.41% Cu, 0.017%Mo, 0.19gm/T Au), is developed around one of these porphyry dykes The quartz-feldspar porphyries are thought to be differentiates of middle Jurassic felsic intrusive rocks and strongly follow northwesterly trending structural breaks. Locally some of the larger intrusive stocks within the vicinity of the porphyry dykes are intensely altered by zeolite veining.

REGIONAL MINERALIZATION

A number of types of mineral occurrences are known on northern Vancouver Island, these include:

- 1. Skarn deposits: copper-iron and lead-zinc skarns,
- 2. Copper in basic volcanic rocks (Karmutsen): in amygdules, fractures, small shears and quartzcarbonate veins, with no apparent relationship to intrusive rocks,
- 3. Veins: with gold and/or base metal sulphides, related to intrusive rocks,
- 4. Porphyry copper deposits: largely in the country rock surrounding or enveloping granitic rocks and their porphyritic phases.

This variety of mineral deposits indicate the extensive hydrothermal mineralizing systems which operated throughout the northwesterly trending belt of rocks. There is a general trend from east to west of higher level mineralizing systems, eg the copper molybdenum porphyry at Island Copper, (345M Tonnes @ 0.41% Cu, 0.017% Mo, 0.19g/T Au), to the high level epithermal copper-gold alteration at the higher levels of the Hushamu deposit, (172.5M Tonnes @ 0.28% Cu, 0.009% Mo, 0.34g/T Au) and other zones to the west.

PROPERTY GEOLOGY

The Quatse property is underlain by a conformable sequence of generally east-west striking, moderately south-dipping basalt flows and intercalated limestone of the Karmutsen Formation, limestone of the Quatsino Formation, fine-grained clastic sediments of the Parson Bay Formation (collectively the Triassic Vancouver Group) and intermediate volcaniclastics of the Jurassic Bonanza Group. This sequence has been intruded by several phases of dykes, sills and stocks, and later cut by a complex series of faults. The generalized geology of the central portion of the property is shown in figure 4.

There is strong evidence from the airborne magnetics surveys that the feldspar porphyry dyke system that forms the core of the Island Copper orebody, continues to the north west in an enechelon fashion, to the edge of the Quatse property. A major northeast trending break then appears to off-set the system, but the magnetic features appear again from the centre of Quatse lake, and trend northwest to west across the Quatse property. This postulated dyke system has a definite ground magnetic and IP response, coupled with elevated copper mineralization identified in the surveys completed on the property for Winfield Resources. The current work postulated that mineralizing fluids from the porphyry could have been channeled along NE trending fault systems into the area of the current airborne magnetics anomaly.

On the Quatse property there is extensive skarn mineralization within the vicinity of the Caledonia workings, (locally precious metal bearing), and for some considerable distance to the east (>5km). The locally thick overburden, and the thick vegetation appear to mask further skarn mineralization on the property, as the isolated outcrops observed, and the recent drill testing of the overburden, indicate a significant fluid flow from local intrusive activity in the encompassing volcanics and sediments. At Island Copper the dyke system, has produced a number of precious metal enriched skarn deposits in the area north of the mine open pit in the vicinity of the Quatsino limestone (Little Billy showings). Copper mineralization has also been reported (pers comm J. Fleming) from Quatsino Formation copper skarn drilled at depth from the bottom of the mine pit.

On the western portion of the Quatse property, on the southern QU claims there is an extensive area underlain by zeolite and K feldspar altered diorite and quartz diorite. There is good outcrop of the highly altered and sheared intrusive in Caledonia creek, and it is postulated to extend some distance to the west. The southern boundary of the QU claims has no outcrop, however 300 metres south of the claim boundary there are outcrops of lapilli tuff and brecciated flows within the Bonanza Formation. This would possibly indicate that the a much thinner than usual sequence Quatsino Formation limestone and the Parsons Bay sediments and tuffs subcrop in the area of low relief covered by lines 2200E-3400E. In support of this, the Parsons Bay Formation was discovered in hole Q-93-2 on line 3600E.

The limestone horizon(s) which cross the Caledonia and Bluebell claims, and which show copper and iron mineralization, are suspected by the author to be part of the upper Karmutsen Formation. Further west at Nahwitti lake the author has observed two similar narrow limestones in the volcanic stratigraphy, below the Quatsino Formation. The fieldwork in October was to mainly check this assumption, and to check for mineralization of the eastern extension of these horizons.

The Kettle Pot creek area shows a strong response for airborne magnetics and EM, and an area to the NE of the creek, adjacent to a postulated N-S striking fault, has a large EM response. The current mapping and sampling in Kettle Pot creek located an extensive zone of skarn alteration in the creek, along with stingers and lenses of massive sulphide mineralization.

MINERALIZATION AND CURRENT WORK

The main exploration targets in the past were the limestone, sediments and tuffs which extend along the ridge north of Quatse lake. Significant mineralization is hosted in these rock units in sporadically distributed showings along a discontinuous strike length of 5km.

The B.C. Government mineral inventory shows indicated reserves for the Caledonia mineral deposits to be 75,000 tons grading 0.01 oz Au/ton, 20.54 oz Ag/ton, 6.09% copper, 7.45% zinc and 0.60% lead. An August 16, 1972 North Island Mines Ltd. news release in the George Cross News Letter refers to the above reserves as a tonnage estimate based on 20 diamond drill holes completed in 1972 and on previous underground exploration in the 1920's by Cominco (Consolidated Mining and Smelting Company) and Caledonia Mines Ltd. (The author has however reviewed these "reserve" estimates, the results of the 1972 drilling, and the underground workings, and believes that the tonnage estimate is too high, because of possible lack of continuity within the skarn. The reserve was based on Malcolm's estimate of a mineralised area at the limestone contact 350 feet square and 6.75 feet thick, Malcolm (1970))

The mineralization at the Caledonia adit and trenches consists of an irregular replacement of sphalerite, chalcopyrite, magnetite, specularite, bornite, galena and pyrite with a gangue of epidote, garnet and minor quartz. The mineralized zone is at the contact (faulted?) of an east-west striking and southerly dipping limestone horizon and a granodiorite intrusive. Amethystine quartz is present in silicified limestone in the adit. Select sample 891111-1 (Christopher), from the Caledonia dump contained 25.42% copper, 4.27% zinc, 77.33 opt silver, and 1.84% arsenic. The high arsenic and silver content suggests the presence of either a silver sulphosalt or arsenopyrite. Chip samples from across the zone within the Caledonia workings, by the author in 1995 gave a high of 0.9% copper, 1.18% zinc, 3.73 opt silver, and 0.056% arsenic. R.G. Malcolm, P. Eng. believed that the skarn mineralization was continuous up dip in the limestone horizon, and drill tested this theory. His fences of drillholes clearly identified the limestone at shallow depth, along with skarn mineralization, but only one hole (DDH8) contained significant copper mineralization (5 ft @ 4.82 opt Ag, 315% Cu from 40-45 ft).

North of the Caledonia adit, near the top of the hill, numerous small trenches have been excavated by hand on showings of massive magnetite, which are up to 3 metres wide. They appear to be bedding replacements in or adjacent to the thin limestone horizons which occasionally outcrop.

To the east of the hilltop the bedded skarn mineralization is reported to contain considerable copper mineralization alongside the magnetite. Samples collected in January 1995 (97701-05), from sloughed in trenches, were generally low in copper and precious metals, however one (97703) had 6.3% Cu, 6.2% zinc and 25.1 ppm Ag. To the west of the hilltop, strong copper geochemistry response indicates a similar

situation. This zone also appears to continue to the east, and in the vicinity of Hill 160, there are mineralized horizons in a cherty sediment in the volcanics.

Hill 160 Area

Mineralization at the Hill 160 showing consists of bornite and chalcopyrite replacement of silicified sediments and tuffs which appear to trend down the hillside figure 5. A two metre chip sample collected by Christopher from Hill 160 contained 2.81% copper and 10.6 ppm silver. A select sample by Christopher from the Hill 160 showing contained 2.46% copper and 8.0 ppm silver. Samples collected from this zone in January 1995 (97710-14) gave copper values to 5.8% Cu, silver to 19.9 ppm and gold to 170 ppb Au, indicating the potential for economic mineralization within the horizon. In the current survey a representative sample (28156) across the 25 cm wide showing returned 3.7% copper and 98ppb gold and 11.3 ppm silver. A sample (28157) across 30cm of weakly mineralized cherty sediments returned 1.6% copper and 39 ppb gold. A third sample (28158) 75 metres downhill of ddh 160-2, in pyrite and chalcopyrite bearing basaltic volcanic returned 0.49% copper and 25 ppb gold. Malcolm reported an average grade of 1.66% copper from 20 trenches on the hillside. The current work indicated that there is potential for more extensive copper mineralization.

This mineralization is also highlighted in notes of drillholes into the zone (Appendix 2). These drillholes are reported to show (visually) extensive bornite mineralization as stringers and disseminations. Unfortunately it appears that the core from these holes was never sent for assay, and is now lost. Malcolm (1970) recommended a 2000 foot drill programme in this area, followed by a success based 12,000 foot drill programme.

Mapping of the outcrops and their extension in October provided to be fruitless because of the extremely thick undergrowth and poor weather conditions. The previous drill sites were located and checked, and reconnaissance traverses were carried out to determine any further area of outcrop. Again his was a very difficult exercise and produced no meaningful results.

Hill 140

In the Hill 140 area due east of Hill 160, Malcolm reported two trenches which averaged 0.27% copper (figure 6). In this area select sample 149970 collected by prospector Steve Oakley contained >10000 ppm copper and 2.5 ppm silver. The author and Oakley relocated the sample site in October and collected a representative sample (28159) from the main trench. It returned 0.7% copper, 2 ppm silver and 22 ppb gold. The mineralization did not appear to be continuous between pits however. A distinct bluff near the trench indicated that the mineraliation may be related to a localized fault or shear zone.

32 a¹ 12 Д z 10 × 968 106 2×15 2x20.08 0.25 20 -97° cm. 3158 972 2X2 æ. 2 × 15 1.98 2×2 0.43 2×4 20955 2×2 1.06 9.54. 2.×2 3.05 Ξ., 29 $Z \times Z$ 953 60 20 20952 2×2 .01 WINFIELD RESOURCES LTD. QUATSE PROPERTY SAMPLE LOCATION **LINE 160** KAMAKA RESOURCES LTD. Base from Malcolm (1970) Figure: 5 Date: OCT97 Scale: 1:1200



In 1989, drill hole Q89-1 was drilled between Hill 140 and Hill 160 in an area of Karmutsen volcanics by Hisway Resources. The hole was in basalt throughout it length. The best copper grade was 3600 ppm (0.36%) from 349.5 to 352.5 feet and the best silver value was 6.5 ppm from 387.5 to 399 feet. Bornite was observed in epidote-quartz vesicles between 500' and 501'5". Pyrite, as fracture fillings, fine disseminations, and fine pyrite cubes, occurred throughout the hole but generally represented less than 3% of the rock. The drill log is included in Appendix 2.

Kettle Pot Creek

Because of the lack of success in determing outcrop in the hill 160 and 140 areas, attention was switched to the Kettle pot creek area, and the airborne targets determined from the August 1981 survey. A new grid was laid out across the anomalies, and extensions of the soil survey were carried out along old logging access tracks.

One hundred an three soil samples were collected along with three silt samples were collected from across the grid area in October 1997. Four rock outcrops and showing were sampled. The samples of "B" horizon soil were obtained using a long handled auger from depths of 10cm to 1 metre. Only red-brown "B" horizon soils were collected. These were present at all sites, although some searching was often need to obtain a correct sample. Each sample was numbered using the grid co-ordinate and placed in a kraft envelope for drying and then transport to Acme Labs in Vancouver. The samples were further dried, screened at -100 mesh, and a .5 gm sample was taken for ICP analysis. The samples were digested in HCL-HNO3, and analysed for 30 elements, including copper, molybdenum, and gold.

The significant soil samples are plotted on figure 4. There are few anomalous samples, and although there area a few elevated soil values on line "W" at its western end, overlying the airborne magnetic anomaly, this trend does not continue on line "B" to the north. There is no pattern to the geochemical responses.

In previous work in this area, at the northern end of lines 4800E and 5000E, a resistivity high occurs with an IP chargeability high occurring to its immediate south. The resistivity high, when projected up dip correlates directly with a known outcropping of limestone in Kettle Pot creek. It appears to dip 30° to the south. (The resistivity high on line 4800E occurs at the extreme northern end and is thus barely shown.) To the immediate south of this resistivity high is an IP chargeability high that correlates with a resistivity low. Then occurs a second resistivity high, and then a second chargeability high/resistivity low. All of these features dip to the south. Also, the two resistivity highs correlate with a magnetic low within a much broader magnetic high.

If the northern resistivity high is reflecting the limestone, then the southern resistivity high could well be reflecting limestone as well. The associated IP chargeability highs are undoubtedly reflecting sulphides, that,

because of the adjacent limestone, may be occurring as a skarn deposit. However, there are no associated copper soil anomalies but there are minor associated zinc and molybdenum anomalies. The long extent of skarn in Kettle Pot creek indicated that the skarn is present between two thin limestone horizons. The economic mineralization within the skarn is severely limited to one thin, discontinuous massive sulphide lens approximately 30 cm thick (samples 28168-1700).

INTERPRETATION

The Quatse property is an extensive claim group covering Bonanza Formation volcanic rocks. Elsewhere in this 40km long northwest trending belt of rocks, the Bonanza Formation is shown to host four significant porphyry style copper-gold deposits. Adjacent to the property are the landholdings of BHP Minerals, and the Island Copper mine, where there are numerous zones of copper mineralization.

Airborne magnetics surveys have clearly identified the mineralizing dyke system at Island Copper, and its trend northwest towards the Quatse property. The recent ground surveys by Winfield have identified copper soil anomalies and coincident magnetics and IP anomalies along the trend of the airborne anomalies.

These targets have been tested by two drillholes so far. Both of the drillholes identified sulphide mineralization or alteration suggesting a significant hydrothermal event, similar to that at Island Copper. Drillhole Q94-1 appears to have been drilled either too far north or east of the main part of the anomaly, and a further hole towards the centre of the anomaly is warranted. Drillhole Q94-2 intersected significant sulphide mineralization as expected from the geophysical survey, but did not reach the limestone target horizon.

The extensive nature of the copper and iron skarns of the Caledonia property, and the replacement zones in the volcanics to the east and west indicate a strongly mineralized hydrothermal system in the local area. These mineral occurrences, which are similar to those around the Island Copper deposit, indicate strong potential for porphyry style mineralization on the Quatse property. Locally modest tonnage of massive sulphide skarn may be present in the Parsons Bay/limestone contact, eg Kettle Pot creek area. In the hill 160 area there is still insufficient exposure to determine width and grades for the copper mineralization

CONCLUSIONS

- 1) A strong correlation between a geological model similar to Island Copper and the geochemical, geophysical and drilling results obtained from the Quatse property has been developed.
- 2) There appears to be sulphide alteration away from the postulated intrusive dykes into the limestones on the north of the property
- 3) Carbonate skarn may occur at the northern end of lines 4800E and 5000E as well as at the northern ends of lines 3000E to 3600E. The south-dipping resistivity highs appear to be reflecting a westerly-trending band of limestone and sediments. At 4800E the geophysical anomaly shows up at 55+50 N, which is just north of Kettle Pot creek, and very close to the projection of the limestone bed located in the creek. Increased sulphide is apparent at level 3-5. A strong magnetic anomaly also occurs on this line in this vicinity.
- 4) On the southern part of lines 4800E and 5000E is a resistivity high that appears to be composed of two south-dipping sub-highs. In between is a moderately strong IP high at depth. This feature may be reflecting two south-dipping intrusives with associated sulphide mineralization.
- 5) The large area of copper mineralization at the Hill 160 location was drilled in the past by North Island Mines. The drill log indicates significant copper mineralization in the form of bornite in veinlets, disseminations and amygdule fillings, however it is apparent that the hole was never assayed. The 20 surface pits were sampled and reviewed by Mr D.G. Malcolm P. Eng, providing strong support for mineralization grading 1.66% copper. Samples collected in this programme indicate high copper grades with associated silver-gold values. This area requires further evaluation.

RECOMMENDATIONS

- 1) A tracked excavator should be used to provide access to the western portion of the property, along the old access road, and to investigate the mineralized showings in the vicinity of Hill 160, and the northern part of the Caledonia claim. Trenching should be carried out on the copper anomaly indicated on sample lines 3, 4 and 5, with some investigation of the mineralization in the vicinity of the magnetite and copper showings near sample lines 1 and 2. At the Caledonia workings excavation should be limited to minor work in the area of the existing trenches, to ascertain continuity of mineralization.
- Diamond drilling to test the continuity of surface mineralization on the Hill 160 copper showings.
 One drillhole (road supported), total length 100 metres.
- 3) One diamond drill hole should test the extent of the skarn on line 4800E in the vicinity of Kettle Pot creek.

DETAILED BUDGET

The following detailed exploration budget is for the continued exploration of the Quatse Lake property, as detailed in recommendations in this and previous reports:

PHASE TWO

Mobilization	2,500	
Geologist 30 days @ \$380	11,400	
Prospector 15 days @ \$275	4,125	
Assistant 12 days @ \$250	7,500	
Accommodation	3,600	
Vehicles	2,500	
Excavator 15 days @ \$1,000	15,000	
Supplies	<u>2,000</u>	
	48,625	48,625
Drilling		
Drill Mob	6,500	
Site prep	5,500	
Helicopter, MOB and moves (3), 6 hrs @ \$900	16,200	
Surface Drilling 740 metres @ \$65/m	48,100	
Assays 200 @ \$15.00	<u>3,000</u>	
	79,300	79,300
Office, Misc	1,000	
Report	3,500	4,500
•		132,425
	Contingency 10%	13,200
	SUBTOTAL	145,625
	GST	<u>10,194</u>
	TOTAL	\$155,819

Continued exploration at the end of Phase 2 should be contingent upon a further Engineering and Geological review.

Peter G. Dasler, M.Sc., P. Geo October 31, 1997.

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CERTIFICATE OF QUALIFICATIONS

I, Peter G. Dasler, do hereby certify that:

- 1. I am a geologist and principal for Kamaka Resources Ltd. with offices at 6074, 45A Avenue, Delta, British Columbia.
- 2. I am a graduate of the University of Canterbury, Christchurch, New Zealand with a degree of M.Sc., Geology.
- 3. I am a Fellow of the Geological Association Of Canada, a Member, in good standing, of the Australasian Institute of Mining and Metallurgy, and a Member of the Geological Society of New Zealand and a registered Professional Geologist with the Province of British Columbia.
- 4. I have practised my profession continuously since 1975, and have held senior geological positions and managerial positions, including Mine Manager, with mining companies in Canada and New Zealand.
- 5. This report is based on my field examinations of the Quatse Property in October 1993, and in February 1994, and from field supervision of the October 1994 diamond drill programme and January 1995, from the current sampling and mapping programme, and from reports of Professional Engineers and others working in the area.
- 6. This report, when quoted in full, may be used for Winfield Resources Ltd corporate purposes, and assessment filing.



Peter G. Desler, M.Sc., FGAC, P. Geo. October 31, 1997

STATEMENT OF COSTS

The following expenditures were incurred for exploration on the Quatse Project between October 1 1997 and October 31 1997.

Personnel		
P Dasler, Geologist 10 days @ \$380/day	\$3,800.00	
S. Oakley, Field Technician 8 days @ \$275/day	2,200.00	
	6,000.00	
Total Personnel		\$6,000.00
Disbursements		
MOB Gas truck rental 8 days	1,203.86	
Food & Accommodation 16 man days	1,177.27	
Supplies	60.77	
Assays 15 P.y. 102 soils 30 el ICP and sold	1.497.19	
Office, report & miscellaneous	1,621.45	
	5,560.54	
T-4-1 Dishamamanta		5560.54
Lotal Disdursements		490.43
Dispursement rees		12,050,97
SUBTOTAL		843.57
Plus GS I		
TOTAL		\$12,894.54

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APPENDIX 1

GEOCHEMICAL ANALYSIS CERTIFICATES

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E 28169		11770	4	146	2.3	65	154	2033	24.75	236	<8	<2	2	3	1.1	<3	9	13	3.94	.036	1	10	.10	3	.05	<3	. 82	.01	.01	<2	626	
c 28170	1	5477	<3	130	1.3	65	142	2070	37.13	135	<8	<2	3	1	.4	<3	5	18	2.27	.079	2	15	.09	3	.05	<3	.73	.01	. 02	- 2	263	
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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR WA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: ROCK AU** ANALYSIS BY ULTRA/ICP FROM 30 GM SAMPLE. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Data

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

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Kamaka Resources Ltd. FILE # 97-6429



SAMPLE#	Mo ppni	Cu ppm	Pb ppnt	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe X	As ppm	U ppn	Au ppm	Th PPM	Sr ppn	Cd ppm	Sib ppm	8i ppm	V ppm	Ca %	P X	La ppm	Cr ppm	Mg %	Ba ppm	Ti X	B ppm	Al %	Na %	K %	H PPm	Au* ppb
LINE-L 1+50 LINE-L 1+75 LINE-L 2+00 LINE-L 2+25 LINE-L 2+50	2 5 6 4 3	58 16 48 36 46	6 11 8 5 6	31 21 22 22 20	<.3 <.3 <.3 <.3 <.3 <.3	21 9 11 11 13	15 5 6 5 9	951 297 335 188 320	4.42 4.17 2.25 6.29 5.11	4 4 ~2 ~2 ~2 ~2	<8 <8 <8 <8 <8 <8	√2 √2 √2 √2 √2 √2 √2 √2 √2 √2 √2 √2 √2 √	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	27 19 19 16 22	<.2 <.2 .2 .3 <.2	ব ব ব ব	4 3 3 3 3	199 215 201 219 213	.89 .43 .44 .41 .63	.023 .010 .017 .021 .019	4 4 5 4 5	37 43 55 67 45	.46 .22 .27 .27 .33	27 22 20 16 20	.34 .65 .47 .56 .46	3 उ उ उ उ उ	2.00 1.85 2.64 3.90 2.04	.02 .01 .01 .01 .02	.02 .02 .02 .02 .02	<2 <2 <2 <2 <2 <2 <2	<1 2 <1 <1 19
LINE-L 2+75 LINE-L 3+00 LINE-W 0+25 LINE-W 0+50 LINE-W 0+75	4 4 1 1	33 40 35 46 36	9 9 5 6 7	38 36 30 40 24	<.3 <.3 <.3 <.3 <.3	17 18 23 51 19	15 11 11 15 7	500 505 251 290 181	5.84 3.59 4.76 5.93 7.12	<2 <> <> <> <> <> <> <> <> <> <> <> <> <>	<8 <8 <8 <8 <8	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<2 <2 <2 <2 <2 <2 <2	25 25 14 14 11	<.2 .2 .2 .2 .2	८ ८८ ८८ ८८ ८८ ८८	33333 333 333	226 162 177 193 243	.58 .60 .44 .50 .30	.025 .018 .024 .027 .028	4 5 5 5 4	61 51 70 91 100	.38 .43 .33 .58 .26	30 29 15 19 14	.64 .50 .48 .60 .60	ও ও ও ও ও	2.97 2.50 4.26 4.88 4.88	.02 .02 .02 .02 .02	.02 .02 .01 .02 .01	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	1 <1 <1 <1
LINE-W 1+00 RE LINE-W 1+00 LINE-W 1+25 LINE-W 1+50 LINE-W 1+75	1 2 1 1	38 38 29 37 25	4 6 4 6 7	26 26 40 41 28	<.3 <.3 <.3 <.3 <.3	21 21 35 35 17	7 7 17 21 14	188 195 410 468 357	7.03 7.31 5.56 4.84 5.37	<2 <2 <2 <2 <2 <2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2	<2 <2 <2 <2 <2 <2	11 11 19 21 15	.2 <.2 .3 <.2 .4	3 3 3 3 3 3	उ उ उ उ उ उ	261 267 204 185 216	.32 .33 .60 .71 .43	.022 .023 .024 .025 .023	4 4 5 6 4	97 103 78 88 72	.25 .26 .51 .55 .26	13 13 29 31 16	.65 .66 .58 .60 . 63	ব ব ব ব ব ব	4.36 4.52 3.28 4.42 3.13	.01 .01 .02 .02 .01	.02 .02 .02 .01 .01	₹ ₹ ₹ ₹ ₹ ₹ ₹	2 <1 1 <1
LINE-W 2+00 LINE-W 2+25 LINE-W 2+50 LINE-W 2+75 LINE-W 3+00	1 2 2 <1 2	34 40 51 48 29	6 6 4 7 6	36 41 33 32 35	<.3 <.3 <.3 <.3 <.3	27 26 26 30 20	38 26 20 20 18	666 2679 1369 477 950	5.46 6.44 5.00 6.51 3.97	<>> < < < < < < < < < < < < < <>> <> <>> <><>> <>> <>><>>	<8 <8 <8 <8 <8	< < < < < < < < < < < < < < < < < < < <	2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2 <	19 13 13 12 16	<.2 .5 .3 <.2 .3	3 3 3 3 3	ও ও ও ও ও	212 206 168 223 201	.60 .33 .38 .38 .38	.024 .048 .041 .042 .050	6 7 6 5	72 86 77 95 60	.42 .24 .32 .32 .23	27 22 19 15 22	.59 .53 .49 .57 .44	उ उ उ उ	3.72 5.54 5.20 6.86 3.53	.02 .01 .01 .01 .01	.01 .01 .01 .01 .02	<2 <2 <2 <2 <2 <2	5 1 1 1 <1
LINE-W 3+25 LINE-W 3+50 LINE-W 3+75 LINE-W 4+00 LINE-W 4+25	1 1 6 5 4	43 59 38 27 33		30 21 54 7 24 7 39) <.3 / <.3 / <.3 / <.3 / <.3	28 28 27 15 27	8 8 16 6 11	173 164 419 132 152	3.12 5.24 2.28 5.66 2.60	3 <2 <2 3 <2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2	<2 <2 <2 <2 <2 <2	15 10 20 13 14	.2 <.2 .4 .2 <.2	ও ও ও ও ও	८ ८ ८ ८ ८ ८ ८ ८ ८	154 187 143 213 161	.52 .34 .67 .34 .39	.031 .032 .034 .024 .018	5 5 4 3 4	80 92 62 68 63	.44 .27 .31 .24 .29	13 13 30 16 15	.48 .46 .38 .54 .43	<3 <3 <3 <3 <3	4.45 6.13 4.87 4.62 4.40	.02 .01 .01 .01 .01	.01 .01 .01 .01 .01	<2 <2 <2 <2 <2	1 3 4 <1 <1
LINE-W 4+50 LINE-W 4+75 LINE-W 5+00 LINE-W 5+25 LINE-W 5+50	13	20 21 25 20		2 3 2 2 5 1 7 1 9 1	1 <.1 1 <.2 7 <.1 6 <.1	5 1° 5 12 5 16 5 16 5 16	1 45 2 5 0 3 8 3 0 3	1499 172 94 92 93	9 6.63 2 6.22 6.82 2 5.14 5 4.49	<2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2	<2 <2 <2 <2 <2	21 13 9 9	.2 .2 <.2 .2	ব্য ব্য ব্য ব্য ব্য	য় ব্য ব্য ব্য ব্য	206 245 229 182 255	.40 .33 .20 .24 .20	020 018 024 024 019 020	4 4 2 4	51 70 76 78 71	.21 .18 .11 .12 .12	33 17 12 9 12	.41 .53 .49 .43 .62	<3 <3 <3 <3 <3	4.01 4.46 4.77 4.79 4.23	.02 .01 .01 .01 .01	.01 .01 .01 <.01 .01	<2 <2 <2 <2 <2	4 3 2 2
LINE-W 5+75 LINE-W 6+00 0+25 0+50 0+75		4 29 1 30 1 59 3 40 2 30	9 6	72 61 52 82 71	0 < 2 < 6 < 3 < 7 <	3 1 3 1 3 1 3 1 3 1	1 5 B 3 7 12 3 7 7 3	95 11 62 33 9	9 4.19 5 4.51 5 4.79 0 4.00 1 6.91) <2 2 5 5 3	<8 <8 <8 <8 <8 <8	\lambda \lambd	2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	10 11 18 18 7	.2 .2 .6 <.2 .2	ব্য ব্য ব্য ব্য ব্য	ୟ ସ ସ ସ	200 204 222 240 282	.23 .24 .59 .44	5 .023 5 .014 7 .059 4 .041 5 .030	4 5 6 4	62 71 46 44 79	. 12 . 14 . 32 . 25 . 10	14 13 19 21 12	-44 -43 -33 -48 -40		4.25 4.46 3.46 2.56 6.39	.01 .01 .02 .02 .01	.01 .01 .01 .02 .01	<2 <2 <2 <2 <2 <2	1 <1 2 <1
STANDARD C3/AU-S Standard G-1	2	56	33 3	5 15 4 4	05. 0<.	23 3	5 12 9 4	2 73	7 3.2	7 51 4 <2	24 <u>2 <8</u>		2 18 2 4	3 28 74	21.8 <.2	15 <3	21 3	81 43	.50 .61	5 .084 5 .093	18 10	172 74	.57	141 223	. 10	19	1.81	.04 .08	. 15 . 46	19 5	47 <1

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

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ACHE ANALYTICAL

Kamaka Resources Ltd. FILE # 97-6429

ACHE ANALYTICAL

ACHE ANALYTICAL																						<u>, ,,</u>	<u></u>								
SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppnt	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca X	P %	La ppm	Сг ррт	Mg X	Ba ppm	Ti X	B ppm	A1 %	Na %	к %	N Mada	Au* ppb
1+00 1+25 1+50 1+75 2+00	5 3 2 6 4	47 27 27 27 27 21	4 6 14 7	56 37 30 44 17	<,3 <,3 <,3 <,3 <,3	9 14 14 12 11	16 6 15 4 4	930 195 589 140 161	4.39 5.25 3.72 6.07 6.70	153 3 2 4 <2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2	< <	149 20 20 14 14	1.0 <.2 <.2 .4 <.2	ও ও ও ও ও ও	3 3 3 3 3	118 227 165 320 288	3.46 .52 .53 .42 .38	.053 .020 .022 .020 .020 .015	7 6 4 5 4	14 58 44 68 56	.76 .25 .31 .21 .15	69 26 19 15 18	.11 .61 .47 .59 .55	ব ব ব ব ব	5.68 2.33 1.79 3.30 2.01	.03 .01 .01 .01 .01	.06 .01 .02 .01 .01	<2 <2 <2 <2 <2 <2 <2 <2	<1 8 1 <1 <1
2+25 2+50 2+75 3+00 3+25	3 9 28 1	22 27 25 37 46	9 7 9 4 7	21 30 21 20 20	<.3 <.3 <.3 <.3 <.3	9 9 8 13 17	3 4 10 4 5	299 264 401 124 190	7.23 2.88 9.42 3.65 6.21	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	12 16 12 12 12	<.2 <.2 <.2 <.2 <.2	उ उ उ उ उ		307 158 242 156 237	.27 .38 .27 .37 .40	.022 .019 .022 .023 .029	4 5 3 4 5	66 43 64 66 85	. 13 . 18 . 15 . 20 . 23	21 20 15 13 13	.55 .44 .42 .39 .49	८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८ ८	2.57 1.96 2.85 4.30 4.55	.01 .01 .01 .01 .01	.02 .01 .01 .01 .01	<2 <2 <2 <2 <2 <2 <2	<1 <1 <1 <1 <1 4
3+50 3+75 4+00 4+25 4+50	2 1 1 2	47 47 38 65 42	7 5 3 12 9	24 11 20 34 26	<.3 <,3 <.3 <.3 <.3	17 11 15 21 14	7 2 6 11 9	223 104 266 468 243	4.75 9.55 5.91 4.14 5.58	2 <2 <2 <2 <2 <2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2	<2 <2 <2 <2 <2	17 9 12 25 15	<.2 <.2 <.2 .2 .2	ব্য ব্য ব্য ব্য ব্য	ব্য ব্য ব্য ব্য ব্য	208 226 245 174 229	.46 .27 .39 .81 .39	.025 .021 .026 .033 .020	5 4 3 5 3	69 103 76 54 66	.25 .17 .20 .39 .22	20 10 12 32 14	.49 .55 .52 .39 .50	ସ ସ ସ ସ ସ	3.45 4.57 3.96 3.40 3.48	.01 .01 .01 .03 .01	.02 .01 .01 .02 .02	<>><><><><><><><><><><><><><><><><><><	1 1 1 <1
4+75 5+00 5+25 5+50 RE 5+50	<1 1 1 1	51 20 41 31 31	1 3 6 6 8 5 8 9 2	i 21 i 10 i 33 0 30 3 31	<	17 8 23 24 24	9 2 12 10 2 10	216 100 224 287 291	4.61 6.62 5.02 6.17 6.20	<2 <2 <2 <2 <2	<8 <8 <8 <8 <8	<2 <2 <2 <2 <2 <2	<2 <2 <2 <2 <2	16 11 15 18	<.2 <.2 <.2 <.2 <.2	ব্য ব্য ব্য ব্য ব্য	ব ব ব ব ব ব ব	191 301 179 250 250	.49 .24 .40 .46 .45	.025 .015 .044 .027 .026	4 3 6 5 6	58 58 77 74 74	.25 .11 .25 .21 .21	24 11 26 32 32	.41 .62 .41 .53 .52	८३ ८३ ८३ ८३ ८३	3.79 2.09 5.75 4.31 4.35	.01 .01 .01 .01 .01	.02 .01 .01 .01 .02	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<1 1 3 1
5+75 6+00 6+25 6+50 6+75	1	2 3 3 4 3	4 1 9 9 6 4	7 17 7 47 5 33 5 37 6 33		5 12 5 24 5 21 5 21 5 21 5 14	2 3 4 17 5 15 5 11 6 5	137 744 269 170 191	6.73 6.05 6.44 6.96 3.7.01		<8 <8 <8 <8 <8 <8			14 22 17 13	<.2 <.2 .3 .2 .2 .2	3 3 3 5 3	ব্য ব্য ব্য ব্য ব্য	297 217 226 272 275	.32 .60 .48 .37 .34	.022 .025 .034 .034 .025	4 4 5 7	66 67 65 84 74	.13 .35 .31 .23 .18	17 25 23 18 13	.61 .53 .52 .60 .62	ব্য ব্য ব্য ব্য	2.51 3.39 4.02 4.34 4.21	.01 .02 .01 .01 .01	.02 .02 .02 .01 .02	<2 <2 <2 <2 <2	<1 <1 <1 2 1
7+00 7+25 7+50 7+75 8+00		4	4 (7 1) 2 (1)	8 2 0 1 4 4 7 2 8 4	5 <. 4 <. 9 <. 8 <.	3 1 3 1 3 2 3 1 3 3	8 (0 2 3 7 3 5 9 10	13 11 20 17 17 20	7 5.22 1 8.94 9 7.34 3 5.84 2 7.1	$\begin{array}{ccc} 2 & < \\ 4 & < \\ 4 & < \\ 7 & \\ 1 & < \\ \end{array}$				2 10 2 11 2 18 2 19 2 19 2 19) .2 1 <.2 3 .3 5 <.2		3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	199 350 271 266 220	3 21 44	3 .023 7 .010 3 .020 1 .010 5 .030	5 5 5 2 3 4 5 4 5 4	75 70 91 71 102	-23 -10 -23 -21 -41	12 18 23 16 19	.55 .70 .62 .71 .63	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4.67 3.06 3.83 2.61 4.90	.01 .01 .01 .01 .01	.01 .01 .01 .02 .02	<2 <2 <2 <2 <2 <2 <2 <2	1 <1 1 <1
8+25 8+50 8+75 9+00 9+25	v v v	1 4 1 3 1 4 1 4	2 34 36 39 30	5 3 5 1 9 3 6 2 9 2	2 <. 8 <. 3 <. 8 <. 5 <.	3 2 3 1 3 2 3 1 3 1 3 1	6 2: 0 : 2 : 9 :	5 37 2 11 8 22 5 14 5 15	0 6.6 5 5.9 5 6.0 2 5.4 5 5.4	8 < 3 < 2 < 5 < 4 <	2 석 2 석 2 석 3 석 2 석	3 < 3 < 3 < 3 < 8 <	2 < 2 < 2 < 2 < 2 <	2 1: 2 1: 2 1: 2 1: 2 1: 2 1: 2 1:	5 .(9 .; 4 .! 3 .(4 .)	6 ♥ 2 ♥ 5 ♥ 3 ♥ 8		5 243 5 246 5 229 5 235 5 208	5 .5 5 .2 5 .4 5 .4	1 .020 3 .010 4 .020 0 .020 1 .020	B 4 B 5 5 2 6 4	74 94 94 91 95 96 4 82	.37 .12 .33 .20	7 21 2 10 5 18 5 13 5 15	.64 .50 .51 .54	20000 20000	3.87 4.52 5.40 5.30 4.57	.02 .01 .01 .01 .01	.02 .02 .02 .02 .02	<2 <2 <2 <2 <2 <2	<1 <1 <1 <1 1
9+50 Standard C3/AU-1 Standard G-1	s 2	1 7 7 (1	24 69 3 3	7 2 57 10 5 0	2 <. 0 5. 3 <.	.3 .4 .3	1 57 1 7	5 15 2 73 4 52	7 6.7 6 3.4 9 2.1	6 < 6 5 1 <	2 < 6 2 2 <	8 < 3 < 8 <	2 < 2 2 2	2 1 0 2 4 7	2 <. 923. 5 <.	2 < 5 1º 2 <	3 <3 9 2/ 3 <	3 265 4 87 3 45	5.3 7.5 5.6	0.02 9.08 9.09	1 8 2 2 1	5 80 0 184 0 78	.1	7 13 0 147 0 224	.11 .11	2 <2 1 20	5 3.57) 1.87 5 .97	.01 .04 .08	.02 .16 .46	<2 20 4	<1 46 <1

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

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Data_AFA

APPENDIX 2

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ROCK SAMPLE DESCRIPTIONS

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Sample notes

P Dasler, Oct 1997

28156 North end of chert horizon on hill 160. 25cm chip across crysacolla and chalcopyrite. 28157 Large fragment of cherty sediments, banded, dk and light chip over 30 cm 28158 75 m downhill of ddh 160-2. Chip sample od 50cm of basaltic volcanic with cchalcopyrite and pyrite 28159 Large trench on hill 140, S. Oakley site malachite, chalcopyrite and py in basalt. Localized. 875 m on right road from fork, silt sample from .5m wide creek, flowing swiftly, good fines, no 28160 o/c glacial till on banks. 28161 700 m on right fork silt sample 50m above road. Creek 0.5 m, no o/c 28162 100m on right fork, 15m ipstream frombridge on north side. Calcite veinined brecciated fg green volcanic rusty w minor py 28163 390m on claim line light green aphanitic dyke 28164 at 500m on claim green volc with 2-3% py 28165 purple tuff, sheared qtz veinlets 28166 Kettle pot creek skarn zone at 254m from bridge. Rusty band in calcite-magnetite skarn. Kettle pot creek at 254 m. Selection of skarn mineralization near sulphide layer. Collected over 28167 2m Kettle pot creek. 3 large boulders in creek ,blasted?. Massive po, py cp[y zn and magnetic. 28168 Sample of first boulder 40 cm long X 30 cm 28169 see above sample of #2 30cmX 20cm 28170 selected chips from 4 smaller sulphide boulders.

