Kamaka Resources Ltd.
6074, 45A Avenue, Delta, B.C. V4K 1M7 (604) 940-1591

GEOPHYSICAL, GEOCHEMICAL and GEOLOGICAL

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

Peter G. Dasler, M.Sc., P. Geo.

David G. Mark, B.Sc. P. Geo.

October 29, 1993

Quatse01.rpt

TABLE OF CONTENTS

Appendices

List of Figures

SUMMARY

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

There is a conformable sequence of generally east-west striking, moderately south-dipping basalt flows 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 underlying the property. This sequence appears to have been intruded by several phases of dykes, sills and stocks, and later cut by a complex series of faults.

The Caledonia Mine was developed on a series of massive copper-zinc showings in the 1920's. The mineralization is associated with the contact of the Quatsino 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 lower parts of the property. Outcrops are rare south of the ridge.

The main purpose of the geophysics was to locate possible areas of mineralization similar to that of the nearby Island Copper mine, which occurs 7 km to the east southeast. Island Copper's mineralization occurs as sulphide ore zones occurring on the north side and the south side of a north-dipping, easterly-striking quartz feldspar porphyry dyke. According to the paper by Cargill, et al, of Utah Mines, the magnetics responds as a high over both the dyke and the adjacent mineralization; the IP responds as a chargeability high to the sulphides, and the resistivity results are inconclusive.

A secondary purpose of the work was to locate skarn-type mineralization, much of which occurs in the general area. It should respond as a magnetic high and an IP high.

The geochemical soil sampling and IP, resistivity and magnetometer surveys carried out over the property in October 1993 targetted the low-lying, overburden covered terrain. Survey lines were cut through the heavy second growth fir, cedar and underbrush from the lake to a short distance up the northern hillsides, at two hundred metre intervals. The entire grid was soil sampled at 50 metre stations, and covered by magnetometer at 25 metre stations. IP chargeability and resistivity measurements were carried out over four lines on the western side of the property and over two lines on the eastern side of the property. Limited field checking of the geology, as mapped previously, was carried out by the author.

Expenditures on the property between October 5 and October 29 totalled $53,517.93

INTRODUCTION

At the request of Mr. Ron Webb, Director of Hisway Resources Corp. and Mr Michael Foley, President of Winfield Resources Corp. the author carried out a programme of linecutting, geochemical soil sampling and geophysical surveying encompassing magnetometer and IP surveys, on the Quatse property.

LOCATION AND ACCESS

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

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

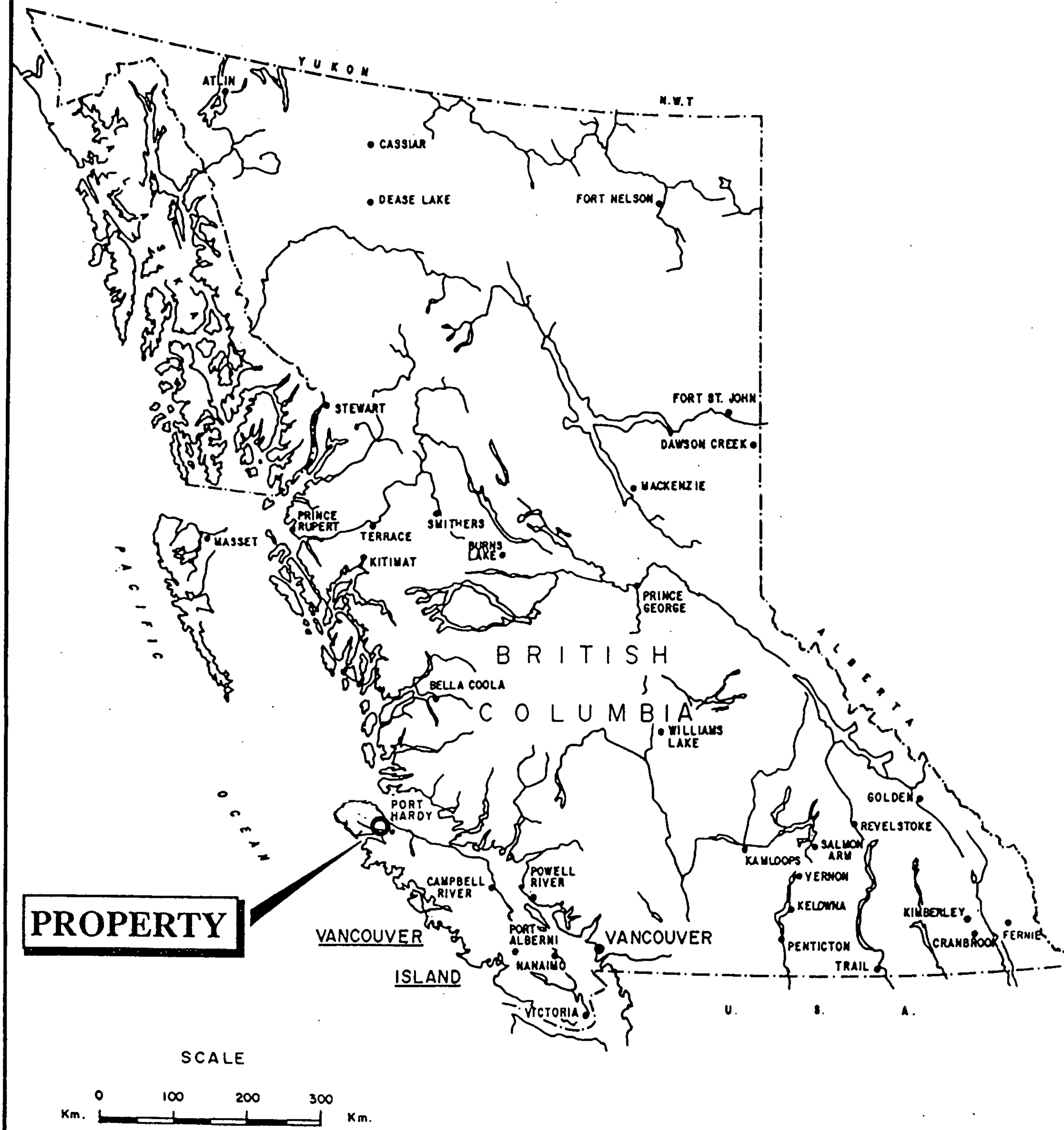
Property access is presently via the Coal Harbour-Port Hardy road and a old 6.5 kilometer (4 mile) tractor road built by North Island Mines. The 1993 programme involved brushing out the access roads and tracks into the centre of the property. The bridge at Kettle Pot creek was not replaced for this programme because of possible approval delays.

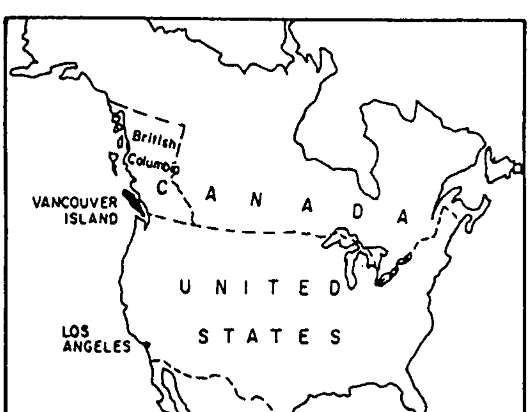
The claims cover a gently rising slope with Quatse Lake, at elevation 70 meters (230 feet) to the south and an east trending ridge, at elevations of 305 meters (1000 feet) to 427 meters (1400 feet) in the northern part of the claim area.

TOPOGRAPHY AND VEGETATION

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, traverses are very difficult because of the dense secondary growth. The property grid was cut to overcome this problem.

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 current grid.





WINFIELD RESOURCES LTD.

QUATSE PROPERTY

LOCATION MAP

KAMAKA RESOURCES LTD.

Scale: As Shown		Date: OCT. 1993

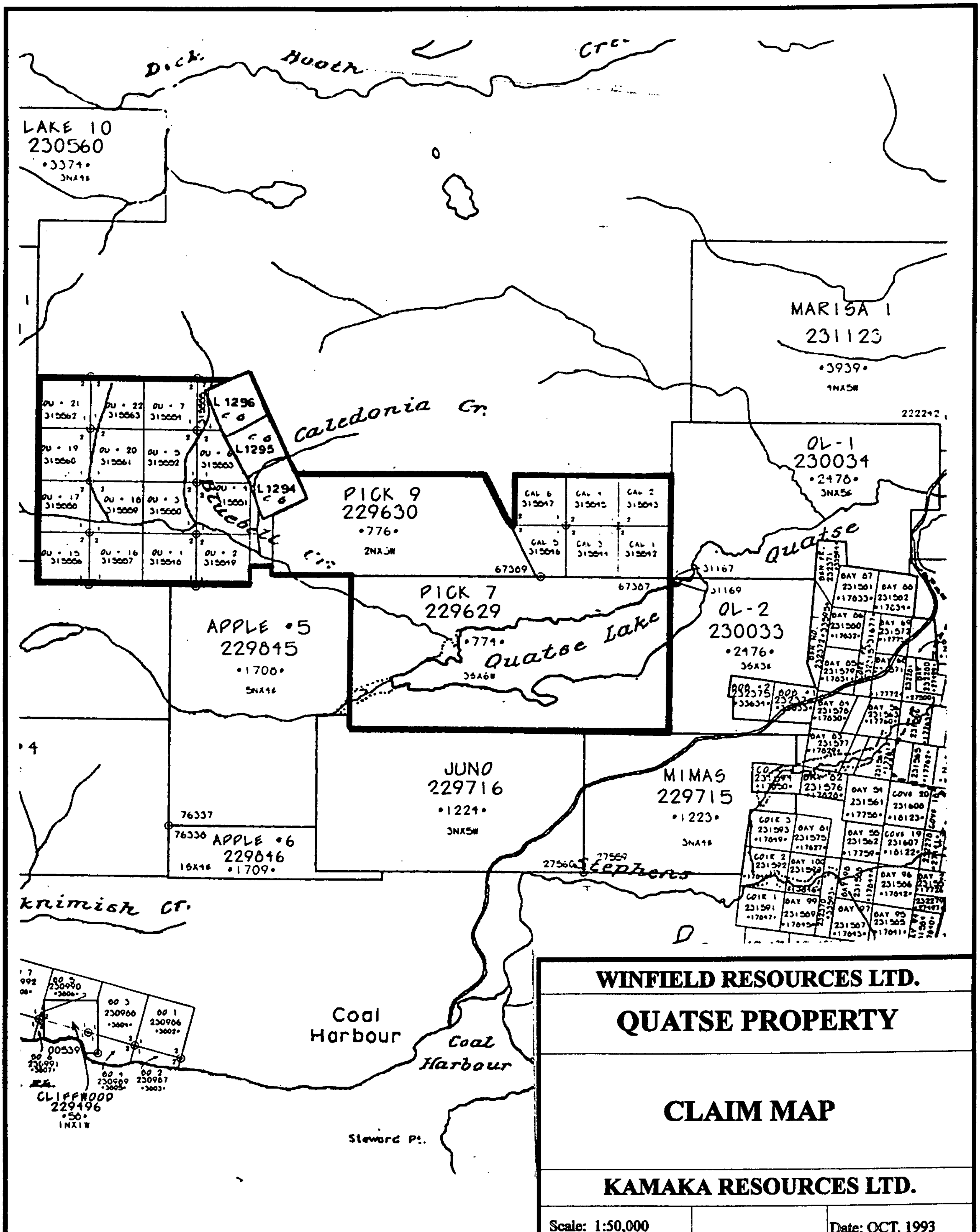
PROPERTY

This property consists of 24 claims totalling 46 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:

Name	Record No.	Units	Expiry	Recorded Owner
Pick 7	229629	18	13 February 1994	P.G. Dasler*
Pick 9	229630	6	13 February 1994	P.G. Dasler*
Cal #1	315542	1	4 February 1994	R. Bilquist**
Cal #2	315543	1	" "	" "
Cal #3	315544	1	" "	" "
Cal #4	315545	1	" "	" "
Cal #5	315546	1	" "	" "
Cal #6	315547	1	" "	" "
Qu #1	315548	1	2 February 1994	R. Bilquist**
Qu #2	315549	1	" "	" "
Qu #3	315550	1	" "	" "
Qu #4	315551	1	" "	" "
Qu #5	315552	1	" "	" "
Qu #6	315553	1	" "	" "
Qu #7	315554	1	" "	" "
Qu #8	315555	1	" "	" "
Qu #15	315556	1	" "	" "
Qu #16	315557	1	" "	" "
Qu #17	315558	1	" "	" "
Qu #18	315559	1	" "	" "
Qu #19	315560	1	" "	" "
Qu #20	315561	1	" "	" "
Qu #21	315562	1	" "	" "
Qu #22	315563	1	" "	" "

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

* Held in trust for Hisway; ** Bills of sale held by Dasler for Hisway Resources Corp. The expiry dates shown are the current date, and do not show credit for this assessment report. One year of assessment has been applied for.



WINFIELD RESOURCES LTD.

QUATSE PROPERTY

CLAIM MAP

KAMAKA RESOURCES LTD.

Scale: 1:50,000		Date: OCT. 1993

HISTORY

Much of the following detail was transcribed from the historical report by Mr. P. Christopher, P. Eng., writing for Hisway Resources Ltd...

The Quatse Lake Property covers the Caledonia mineral deposit (MI92L-61 & 209) and Hill 140 and Scissor 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.

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 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.

Exploration of the Quatse Lake 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).

Following Cominco's work, the property appears to have 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. with 15 diamond drill holes totalling 2,300 feet, a geochemical survey, bulldozer trenching, road building and camp construction completed in 1968. Following the diamond drilling, a tonnage calculation was made for the Caledonia mineral deposit by D.C. Malcolm, P.Eng. The estimate was 75,000 tons averaging 6.09% copper, 7.45% zinc, 0.6% lead, 20.54 oz Ag/ton and 0.01 oz Au/ton.

Recorded claims were allowed to lapse after 1973 and 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 from 1982 till 1985 when the property was sold back to Mr. Kirk by Energex Minerals. Energex Minerals completed considerable work on the property mainly in the area of the old mine workings. They also carried out and airborne magnetometer and EM survey of the current property and the areas to the east.

In June 1989, the Quatse Lake Property was sold to Hisway Resources Corp. and in September 1989, a prospecting program and 501.5 foot diamond drill hole were completed.

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.

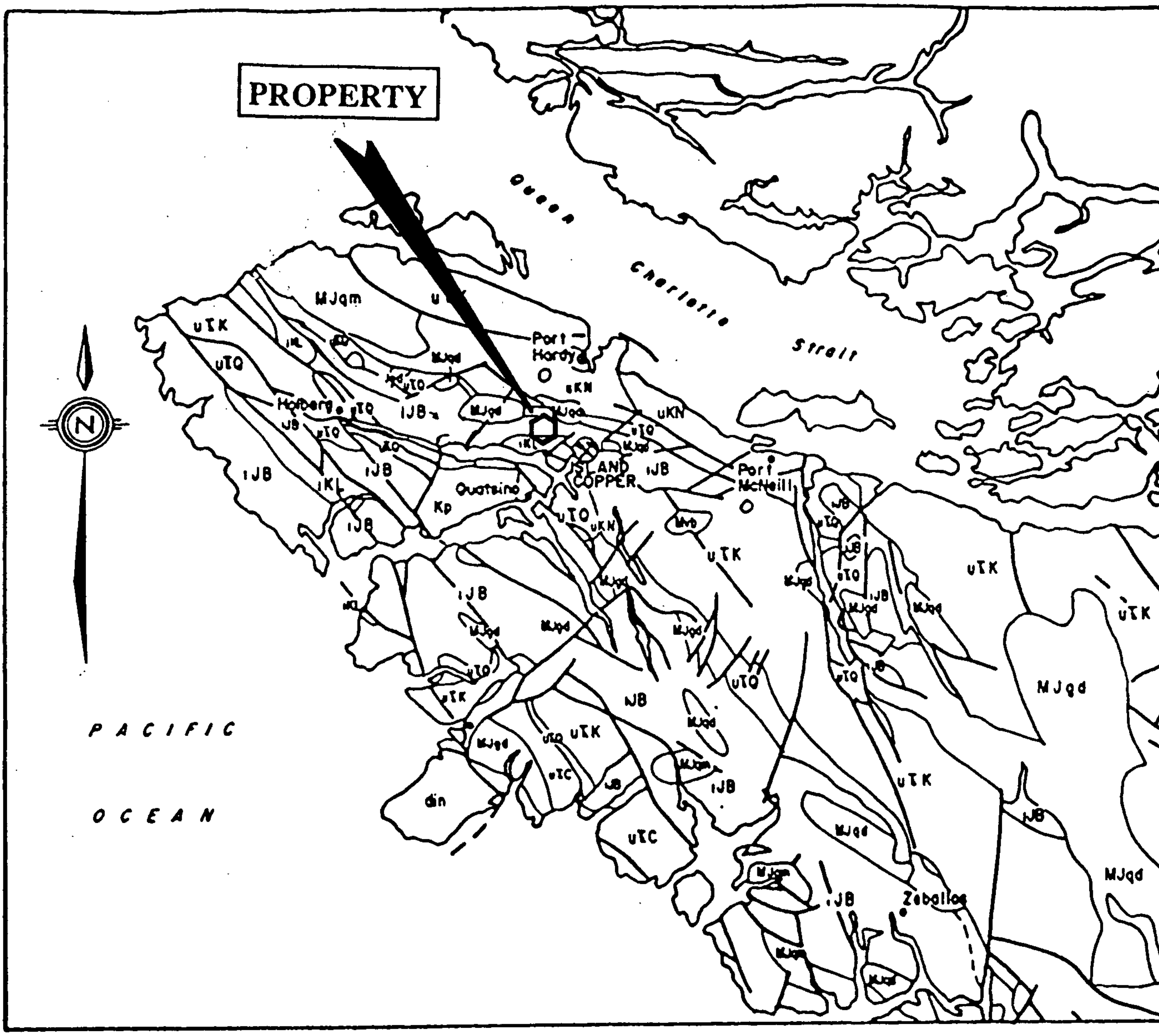
The present survey was carried out following an agreement for option between Winfield Resources Ltd and Hisway Resources Corp.

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.).

Vancouver Group



LEGEND

MIOCENE
- Mvb basalt flows,sills and dykes

UPPER CRETACEOUS, PALEOCENE,EOCENE
- Kp QUEEN CHARLOTTE GROUP: siltstone,shale,greywacke

UPPER CRETACEOUS
- uKN NANAIMO GROUP: sandstone,shale,conglomerate

LOWER CRETACEOUS
- lKL LONGARM;greywacke,conglomerate

JURASSIC
- Jgd granodiorite,quartz diorite

MIDDLE JURASSIC
- MJqm quartz monzonite,granite,monzonite
- MJgd granodiorite
- MJqd quartz diorite

LOWER JURASSIC
- lJB BONANZA;andesite,dacite,rhyolite

UPPER TRIASSIC
- uTQ QUATSINO and PARSON BAY: limestone,argillite
- uTK KARMUTSEN:basalt, pillow lava

AFTER MULLER et al (1974)

SCALE

0 25 50

kilometers

WINFIELD RESOURCES LTD.

QUATSE PROPERTY

REGIONAL GEOLOGY

KAMAKA RESOURCES LTD.

Scale: As Shown		Date: OCT. 1993

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 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. The quartz-feldspar porphyries are thought to be differentiates of middle Jurassic felsic intrusive rocks.

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 quartz-carbonate veins, with no apparent relationship to intrusive rocks,
3. Veins: with gold and/or base metal sulphides, reacted to intrusive rocks,
4. Porphyry copper deposits: largely in the country rock surrounding or enveloping granitic rocks and their porphyritic phases.

PROPERTY GEOLOGY

The Quatse property is underlain by a conformable sequence of generally east-west striking, moderately south-dipping basalt flows 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.

MINERALIZATION

The main exploration targets in the past were the Quatsino Formation limestone and Parson Bay Formation 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.

Mineralization at the Caledonia deposit consists of an irregular replacement of sphalerite, chalcopyrite, magnetite, specularite, bornite, galena and pyrite with a gangue of epidote, garnet and minor quartz. Amethystine quartz is reported to be present in silicified limestone areas in the Caledonia drift. Select sample sample 891111-1 (Christopher), from the Caledonia dump contained 25.42% copper, 4.27% zinc, 77.33 oz Ag/ton, and 1.84% arsenic. The high arsenic content suggests the presence of either a silver sulphosalt or arsenopyrite.

Mineralization at the Hill 160 North showing consists of bornite and chalcopyrite replacement of silicified sediments and tuffs. A two metre chip sample collected by Christopher from Hill 160 contained 2.81% copper and 10.6 ppm silver. A select sample from the Hill 160 showing contained 2.46% copper and 8.0 ppm silver. Select sample 149970 collected by prospector Steve Oakley from Hill 140 contained >10000 ppm copper and 2.5 ppm silver.

In 1989 drill hole Q89-1 was drilled between Hill 140 and Hill 160 in an area of Karmutsen basaltic volcanics. 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, occurs throughout the hole but generally represents less than 3% of the rock.

1993 FIELDWORK

GEOCHEMICAL SURVEY

Two Hundred and forty-nine soil samples were collected from across the grid area. The samples of "b" horizon soil were obtained using a long handled auger from depths of 10cm to 1 metre. Each sample wes 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, zinc and arsenic. A full listing of assay results is included in appendix 1. The significant results are plotted on figure 4. The copper results are of most significance as the potential target is a disseminated copper deposit surrounding a porphyry dyke, such as what occurs at Island Copper, seven kilometres to the southeast.

The survey produced a number of significant copper anomalies, including a very strong anomaly of 1509 ppm copper on line 36. From the author's experience in the area and from previous surveys, background values for copper overlying bonanza volcanic rocks are approximately 25 ppm copper. The more significant copper zones are overlain by copper in soil of 75-150 ppm. Values over 500 ppm are rare. The copper values on figure 4 have been contoured with a 50 ppm Cu threshold. In general the results are lower than anticipated, however the stronger results appear to mimic the geophysical anomalies. The 50 ppm threshold also appears to mimic the geophysical anomalies, and is therefor probably reflecting the underlying geology. At this stage the effect of the glacial cover is not fully understood.

MAGNETOMETER SURVEY

Instrumentation

The magnetic survey was carried out with two model MP-2 proton precession magnetometers, manufactured by Scintrex Limited of Concord, Ontario. This instrument reads out directly in gammas to an accuracy of ± 1 gamma, over a range of 20,000 - 100,000 gammas. The operating temperature range is -35^0 to $+50^0$ C, and its gradient tolerance is up to 5,000 gammas per meter.

Theory

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite. Magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Therefore, if magnetite or pyrrhotite occurs with economic mineralization, magnetic surveys are used to locate this type of mineralization. Magnetic surveys are also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

Survey Procedure

The readings of the earth's total magnetic field were taken at the 25 m stations along 13 north-south lines 200 m apart. The diurnal variation was monitored in the field by the closed loop method to enable the variation to be removed from the raw data prior to plotting. However, loops were closed within 50 nT (gammas) and thus no diurnal corrections were needed. That is, the magnetic features being explored for were expected to have amplitudes in the order of hundreds of gammas. A total of 12,850 meters were surveyed.

Compilation of Data

The data were contoured on a 1:2,500 plan map at an interval of 100 nT (gammas).

IP CHARGEABILITY AND RESISTIVITY SURVEYS

Instrumentation

The transmitter used for the induced polarization and resistivity surveys was a Model IPT-1, manufactured by Phoenix Geophysics Ltd. of Markham, Ontario. It was powered by a 2.5 kw motor generator, Model MG-2, also manufactured by Phoenix.

The receiver used was a model TDR-6, manufactured by Androtex Limited of Mississauga, Ontario. The main feature is that it measures up to 6 channels (or dipoles) simultaneously. It also features automatic stacking, gain setting, SP compensation, and programmable delay and integration times. Data are stored in internal memory with a capacity of 2700 readings, i.e., 450 stations.

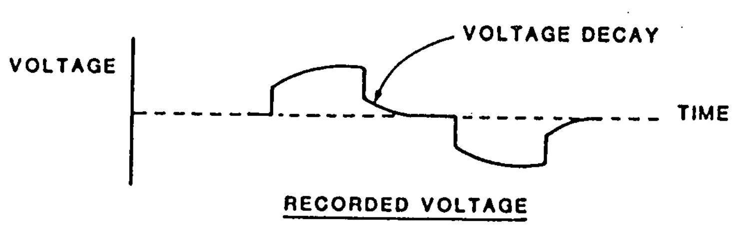
Theory

When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (most sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to chargeable bodies.

Most IP surveys are carried out by taking measurements in the "time-domain" or the "frequency-domain".

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability, "M", which is a measure of the strength of the induced polarization effect. Measurements in the frequency-domain are based upon the fact that the resistance produced at the electrolyte-charged particle interface decreases with the increasing frequency. The difference between the apparent resistivity readings at high and low frequency is expressed as the percentage frequency effect, "PFE".



The quantity apparent resistivity, ρ_a, computed from electrical survey results in only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they always will in the real world, the apparent resistivity will be influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading cannot therefore be attributed to a particular depth.

The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely depending on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

$$\frac{R_o}{R_w} = 0^{-2}$$

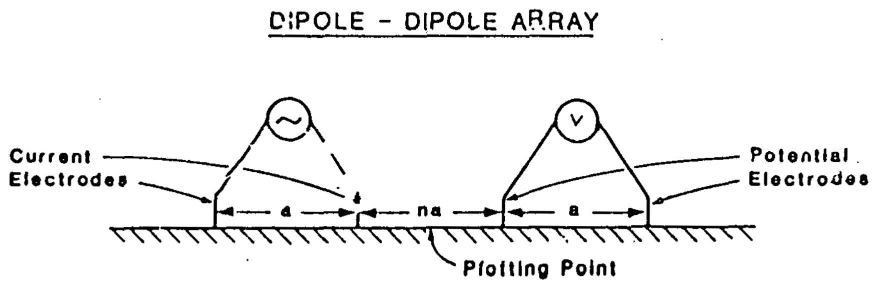
Where: R_o is formation resistivity, R_w is pore water resistivity, O is porosity.

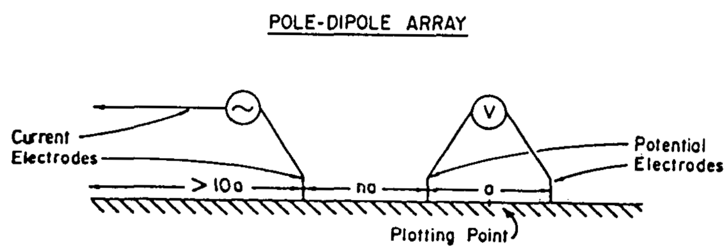
Survey Procedure

All survey lines were cut out in a north-south direction and the stations marked thereon. The IP/resistivity survey was carried out along six of these lines, namely: (1) 3000E, 3200E, 3400E, and 3600E, using the dipole-dipole array, and (2) 4800E and 5000E using the pole-dipole array. The lines averaged 1000 m a piece to give a total survey length of 6000 m.

The IP and resistivity measurements were taken in the time-domain mode using an 8-second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 80 milliseconds and the integration time used was 1,840 milliseconds divided into 10 windows.

The arrays chosen were the dipole-dipole and the pole-dipole, each shown as follows:





The dipole length and reading interval was chosen to be 50 metres for all survey lines. The lines were read to six separations which gives a theoretical depth penetration of 180 m (about 600 feet).

Stainless steel stakes were used for current electrodes and metallic copper in a copper sulphate solution, in non-polarizing, unglazed, porcelain pots were used for the potential electrodes.

COMPILATION OF DATA

All the data were reduced by a computer software program developed by Geosoft Inc. of Toronto, Ontario. Parts of this program have been modified by Geotronics for its own applications. The computerized data reduction included the resistivity calculations, pseudosection plotting, survey plan plotting and contouring.

The chargeability (IP) values are read directly from the instrument and no data processing is therefore required prior to plotting. The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipole-dipole or pole-dipole array, to compute the apparent resistivity.

All the data has been plotted in pseudosection form at a scale of 1:2,500. Each value is plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles. The result of this method of plotting is the farther the dipoles are separated, the deeper is the reading. The resistivity pseudosection is plotted on the upper part of the map for each of the lines, and the chargeability pseudosection is plotted on the lower part.

Four survey plans were drawn at a scale of 1:2,500. These consisted of apparent chargeability at two different separations (n=1 and n=3) and apparent resistivity at the same separations, but only for the four lines of 3000E to 3600E. Lines 4800E and 5000E were considered to be too far away to be meaningfully plotted in plan. These plan maps were produced by taking the measured values from their exact subsurface locations, and vertically projecting them to the ground surface. The purpose was to determine anomalous trends and thus mineralogical and geological trends.

All pseudosections and plans were contoured at an interval of 3 milliseconds for the chargeability results, and at an interval of logarithmic to the base 10 for the resistivity results.

DISCUSSION

The IP, resistivity, and magnetic surveys have revealed at least two geophysical features that are of strong exploration interest. One feature suggests a porphyry copper-molybdenum deposit similar to the nearby Island Copper deposit. The other features are suggestive of a carbonate-sulphide skarn deposits.

The first feature occurs on the southern part of lines 3000E to 3600E. It therefore has a minimum strike length of 600 m in an east-west direction, being open to both the east and west.

This feature consists of a magnetic high correlating directly with, or on the north side of, a resistivity high that suggests the causative source, probably a dyke, dips northerly. The 100-meter wide dyke that strikes westerly through the center of the Island Copper deposit is a quartz-feldspar porphyry type, dips to the north, and has a magnetic signature. As a result, it is quite likely that the magnetics and resistivity data on the Quatse property are reflecting a north-dipping quartz-feldspar porphyry dyke as well (see the magnetic survey plan on Figure 5 and the n=1 resistivity survey plan on Figure 6b).

In addition, the IP chargeability survey has revealed anomalous results of low to moderate amplitude associated with the resistivity high/magnetic high. This can be seen on the pseudosections, but is especially clear on the n=1 chargeability plan (Figure 6a). The anomaly occurs to the immediate south of the resistivity/magnetic anomaly. There are also some low to moderate chargeability anomalous results to the immediate north of the resistivity magnetic anomaly, but at depth.

Almost always, IP highs are a reflection of sulphides. Furthermore, anomalous copper results in the soil correlate with the suggested dyke, or occur to its immediate south. As indicated above, the suggested interpretation, therefore, of this geophysical feature, is a westerly-striking, quartz-feldspar porphyry dyke that dips to the north. Occurring with this dyke, probably on both sides, is copper sulphide mineralization, occurring as a porphyry copper deposit. It should be pointed out that this is the suggested interpretation based on the evidence to date.

(As an aside, the writer would also like to point out that it can be difficult to locate exactly the causative source of an anomaly within a pseudosection. In this case, for example, if the overburden is 30 m or more deep then the up dip location of the causative source is accurately shown by the anomaly at the n=1 level. This is what the writer believes to be the case here for the resistivity high that correlates with a magnetic high. However, if the overburden is shallow and the dip of the causative source is closer to 45°, then the location of the sub-outcropping of the causative source would be up dip from the n=1 location of the anomaly.)

As can be seen on Figures 5 and 6b, as well as the pseudosections, there occurs a second resistivity high/magnetic high geophysical feature to the south of the first feature, but at the southern edge of the survey area. It too appears to strike westerly, is open to both the east and west, has a minimum strike length of 600 m, and correlates with anomalous soil results in copper. The westerly-striking anomaly that is mentioned above occurs between the first feature and this feature. The suggested interpretation is therefore the same, that is, a westerly-striking quartz-feldspar porphyry dyke with associated copper mineralization. Its suggested dip is north, though this is less certain since the anomalous feature occurs at the edge of the survey area.

The second feature of main exploration interest occurs at the northern end of lines 4800E and 5000E. It consists of a resistivity high with an IP chargeability high occurring to its immediate south. The resistivity high, when projected up dip correlates directly with a known outcropping of Quatsino limestone that apparently dips 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 Quatsino limestone, then the southern resistivity high could well be reflecting Quatsino limestone as well. The associated IP chargeability highs are undoubtedly reflecting sulphides, that, because of the adjacent Quatsino limestone, may be occurring within a skarn deposit. However, there are no associated copper soil anomalies there are associated zinc and molybdenum anomalies.

A similar feature also occurs at the northern edge of the survey area on lines 3000E to 3600E. Here it consists of one resistivity high with a strong IP chargeability anomaly correlating with a resistivity low occurring to the immediate south. It appears the dip of the causative source is to the south. On line 3200 E, an outcropping of Quatsino limestone correlates with the up dip extension of the resistivity high. Also, anomalous copper soil results correlate with the resistivity high or the IP high. The suggested interpretation therefore is copper sulphide mineralization occurring within a carbonate skarn deposit. It could be an extension of the one occurring at the north end of lines 4800E and 5000E.

Other geophysical features of interest are as follows:

On the southern part of lines 4800E and 5000E occurs a resistivity high that actually seems to be composed of two sub-highs. These sub-highs appear to be caused by two sources, perhaps an intrusive, that dips southerly. In between these two sub-highs is a south dipping IP chargeability high that also dips southerly. The IP high is probably due to sulphides.

A strong feature of the magnetic survey is an anomalous high, as defined by the 6200 gamma contour, occurring along the northern and eastern edges of the survey area. The western part of this anomaly correlates directly with the Karmutsen volcanics. However, to the east, the Karmutsen volcanics occur to the north of the 6200 gamma contour. Perhaps here the Karmutsen volcanics are thinly covered by Bonanza volcanics.

CONCLUSIONS

1) There is a very strong correlation between the geological model and the geochemical and geophysical results obtained from the property.

2) The geological model predicts a zone of copper mineralization surrounding a porphyry dyke system. The dyke is intruding bonanza volcanic rocks, and there is a strong magnetite alteration halo on the periphery of the dyke.

3) The copper in soils defines a pair of low level anomalies (50ppm) straddling a strong magnetics anomaly in the centre of the property, with a possible second zone further to the south.

4) The resistivity survey on the western end of the grid outlines what appears to be south dipping horizons on the north of the grid, cut by a north dipping dyke system.

5) The IP, resistivity and magnetic survey results on the southern part of lines 3000E to 3600 E are strongly suggestive of a porphyry copper deposit similar to that of the Island Copper Mine located 7 km to the east-southeast. The resistivity and magnetic surveys indicate a north-dipping dyke that could be a quartz-feldspar porphyry. The IP survey indicates associated sulphides. Correlating with this geophysical feature are soil values anomalous in copper. The suggested dyke with its associated sulphides strikes westerly, has a minimum strike length of 600 m and is open to the east and west (although the magnetics suggest that it ends easterly at line 3600E).

6) A contact carbonate skarn deposit(s) is(are) suggested to occur at the northern end of lines 4800E and 5000E as well as at the northern ends of lines 3000E to 3600E. South-dipping resistivity highs appear to be reflecting a westerly-trending band of Quatsino limestone. Occurring to the immediate south are strong IP chargeability highs which are indicative of sulphides. Copper soil anomalous results correlate with the western geophysical anomaly on lines 3000E to 3600E.

8) On the southern part of lines 4800E and 5000E occurs 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 an associated sulphide deposit.

RECOMMENDATIONS

1. The magnetic, resistivity and IP surveys should be extended to the north, south and west, although the southern extension will be limited by Quatse Lake.

2. The geophysically-interpreted porphyry copper deposit should be drill tested by at least two holes. Based on the geophysics, the two suggested locations of the collars would be: (1) Line 3200E, 4975N at -45°S to a depth of 200 m, and (2) L 3600E, 4925N at -45°S to a depth of 150 to 200 m.

3. The geophysically suggested skarn deposit to the north on lines 3000E to 3600E should also be drill tested by at least two holes. Two suggested collars are: (1) 3000E, 5100N, -45°N to a depth of 300 m, and (2) 3600E, 5225N, -45°N to a depth of at least 200 m.

REFERENCES

Christopher, P.E.(1989)

Malcolm D.G. (1970) Report on North Island Mines Limited. Private company report, June 15 1970.

Muller, J.E., et al(1974) Geology and mineral deposits of Alert Bay-Cape Scott map-area (92L - 102I) Vancouver Island, British Columbia; Geological Survey of Canada Paper 74-8.

Saunders C.R. (1968) Report on Caledonia claim group and mineral showings for Danaldson Securities, March 20 1968. Dolmage Campbell and Associates.

Sheldrake, R.F. (1981) Report on a helicopter EM and magnetometer survey over the Pick and Cliff Claims.. private report for Energex Minerals Ltd, August 4,5 1981. by Apex Airborne Surveys.

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 examination of the Quatse Property in October 1993, and from reports of Professional Engineers and others working in the area.

6. This report was prepared for assessment purposes only.

Peter G. Dasler, M.Sc., FGAC P. Geo.
October 29, 1993

GEOPHYSICIST'S CERTIFICATE

I, David G. Mark, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #405 - 535 Howe Street, Vancouver, British Columbia.

I further certify that:

1. I am registered as a professional geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

2. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

3. I have been practicing my profession for the past 25 years and have been active in the mining industry for the past 28 years.

4. This report is compiled from data obtained from IP, resistivity and magnetic surveys carried out over a portion of the Quatse property under the direction of the writer and under the field direction of Andrew Rybaltowski, Geophysicist, from October 24 to 29, 1993.

5. I hold no interest in Winfield Resources Ltd., Hisway Resource Corporation nor in the properties discussed in this report, nor will I receive any interest as a result of writing this report.

October 29, 1993 David G. Mark, P.Geo.
Geophysicist

STATEMENT OF COSTS

The following expenditures were incurred for exploration on the Quatse property between October 6 and 29 1993 .

Personnel		
P. Dasler - Geologist		
- 8.25 days @ $ 380/day,		
- logistics, report		3,135.00
R. Bilquist - Field Assistant		
- 22 days @ $ 275/day, linecutting, soils	6,050.00	
A. Zuk - Field Assistant		
- 14 days @ $ 275/day, linecutting		3,850.00
L. Allen - Field Assistant		
- 21 days @ $ 275/day, line, mag, soils	5,775.00	
S. Oakley - Field Assistant		
- 1 day @ $ 275/day,linecutting		275.00
D. Cosgrove - Field Assistant		
- 7 days linecutting, geophysics		1,925.00
D. O'Neill - Field Assistant		
- 8 days mob, geophysics		2,200.00
M. Kaczan -Field Assistant		
- 8 days mob, linecutting		2,200.00
Total Personnel		**$25,410 .00**

Disbursements

Transportation incl MOB		
4 x 4's - 22 days incl mileage		1,977.90
Equipment Rental, saws, radios,ATV, mags.		3,498.25
Food & Accommodation		
84 man days @ $42.45/day		3,565.91
IP Survey		9,500.00
Assays		
249 samples, 30 element ICP freight etc	1,311.46	
Office, tel, copying etc		176.72
Field supplies		509.86
Drafting		765.00
Disbursement and management		5,888.26
SUBTOTAL		50,016.76
Plus GST		3,501.17
TOTAL		**$ 53,517.93**

APPENDIX A

GEOCHEMICAL ANALYSIS CERTIFICATES

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Kamaka Resources Ltd. File # 93-3126 Page 1

6074 - 45A Ave, Delta BC V4K 1M7 Submitted by: Ron Bilquist

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L2800E 5500N	2	76	2	58	.2	25	10	192	5.20	3	<5	<2	<2	20	.4	<2	<2	141	.52	.018	4	70	.29	29	.49	4	5.74	.03	<.01	<1
L2800E 5450N	1	55	2	28	.1	14	5	136	4.73	<2	<5	<2	<2	14	.5	<2	<2	142	.39	.023	4	68	.25	15	.46	4	6.41	.03	<.01	1
L2800E 5400N	<1	74	2	40	.1	20	15	243	4.60	5	<5	<2	<2	19	.3	<2	<2	163	.49	.019	6	59	.34	48	.49	4	4.69	.03	.01	<1
L2800E 5350N	1	38	<2	25	.1	11	3	118	6.91	2	<5	<2	<2	13	<.2	<2	<2	194	.30	.014	2	92	.20	13	.60	3	5.37	.02	<.01	1
L2800E 5300N	1	23	2	21	.1	7	2	94	10.74	<2	<5	<2	2	10	<.2	<2	<2	272	.20	.019	3	94	.13	12	.79	<2	3.30	.03	.01	<1
L2800E 5250N	2	44	5	41	.1	17	7	218	5.33	3	<5	<2	<2	23	.4	<2	<2	153	.65	.017	4	51	.36	23	.54	3	3.42	.03	<.01	<1
L2800E 5200N	2	90	4	54	.4	19	6	232	6.10	5	<5	<2	<2	19	.5	<2	<2	163	.48	.023	4	71	.25	21	.51	4	5.00	.02	<.01	<1
L2800E 5150N	2	66	2	46	.2	24	8	281	2.60	3	<5	<2	<2	27	.3	<2	<2	91	.77	.019	3	43	.41	44	.40	4	3.21	.03	.01	1
L2800E 5100N	<1	65	<2	37	.1	21	7	134	4.98	5	<5	<2	<2	17	.4	<2	<2	147	.37	.016	4	64	.24	27	.46	5	5.03	.03	.01	1
L2800E 5050N	1	59	6	57	.3	24	18	638	4.04	3	<5	<2	<2	26	.5	<2	<2	125	.73	.038	5	51	.39	31	.35	3	3.76	.03	<.01	<1
RE L2800E 5050N	1	58	2	54	.3	22	17	634	3.89	2	<5	<2	<2	26	.4	<2	<2	120	.68	.037	5	48	.37	31	.33	2	3.68	.03	.01	<1
L2800E 5000N	3	64	2	48	.1	19	29	4583	5.65	3	<5	<2	<2	23	.7	<2	<2	153	.47	.028	4	67	.21	44	.37	3	3.39	.03	.01	<1
L2800E 4950N	1	77	2	20	.3	6	1	84	6.06	5	<5	<2	<2	6	.4	<2	<2	123	.09	.024	4	87	.11	12	.33	3	8.73	.02	<.01	2
L2800E 4900N	1	38	2	20	<.1	7	3	113	3.85	<2	<5	<2	<2	16	.4	<2	<2	132	.32	.016	4	67	.22	17	.44	2	5.84	.02	<.01	<1
L2800E 4850N	1	38	2	17	<.1	8	1	129	8.20	3	<5	<2	<2	14	.2	<2	<2	196	.24	.017	2	74	.16	17	.49	<2	4.74	.02	<.01	<1
L2800E 4800N	2	39	4	42	.1	12	7	227	3.94	3	<5	<2	2	36	.3	<2	<2	90	.56	.017	5	34	.40	62	.28	<2	4.03	.03	.02	<1
L2800E 4750N	2	31	9	36	.1	8	7	250	3.81	<2	<5	<2	2	35	.3	<2	<2	96	.48	.016	5	27	.33	74	.26	<2	2.83	.03	.01	1
L2800E 4700N	1	36	<2	26	.4	12	3	110	6.62	<2	<5	<2	<2	14	.2	<2	<2	194	.22	.016	2	73	.18	25	.52	<2	4.13	.02	.01	<1
L2800E 4650N	1	32	5	22	.2	6	1	157	3.97	<2	<5	<2	<2	15	.2	<2	<2	151	.30	.017	5	42	.16	17	.47	2	2.53	.02	.01	<1
L2800E 4600N	1	50	2	40	.3	16	4	167	1.32	<2	<5	<2	<2	27	.6	<2	2	102	.54	.023	4	54	.35	49	.34	3	3.87	.03	.01	1
L2800E 4550N	2	22	<2	42	.1	1	1	97	.17	<2	<5	<2	<2	10	.6	<2	<2	15	.12	.028	2	6	.04	22	.03	<2	.54	.03	.02	1
L2800E 4500N	1	16	2	16	<.1	2	2	100	.19	<2	<5	<2	<2	17	.6	<2	<2	13	.29	.025	2	3	.05	31	.02	<2	.41	.04	.02	<1
L3000E 5500N	<1	82	<2	39	.1	20	7	166	3.93	<2	<5	<2	<2	21	.6	<2	<2	134	.38	.012	2	55	.33	24	.41	<2	5.16	.03	.01	1
L3000E 5450N	1	26	4	23	.1	6	3	180	5.68	<2	<5	<2	<2	13	.5	<2	<2	224	.24	.009	2	50	.09	11	.55	<2	2.82	.02	.01	1
L3000E 5400N	1	34	<2	29	.2	8	2	119	6.34	3	<5	<2	<2	15	.4	<2	<2	182	.33	.010	2	63	.19	16	.51	2	3.53	.03	.01	1
L3000E 5350N	1	68	<2	34	.2	15	4	129	4.73	<2	<5	<2	<2	12	.7	<2	<2	143	.32	.017	3	61	.23	14	.40	<2	5.57	.02	<.01	1
L3000E 5300N	1	53	<2	43	<.1	14	9	220	6.45	<2	<5	<2	<2	14	.7	<2	<2	185	.30	.018	2	73	.12	20	.49	<2	5.36	.02	<.01	1
L3000E 5250N	1	77	<2	54	.1	16	12	283	4.05	<2	<5	<2	<2	14	.6	<2	<2	125	.30	.026	8	58	.16	18	.36	<2	5.39	.02	.01	<1
L3000E 5200N	2	60	21	92	.7	25	37	1301	4.62	2	6	<2	2	21	1.1	2	<2	120	.45	.026	4	66	.20	29	.34	3	5.83	.03	.01	2
L3000E 5150N	2	68	11	45	.3	15	7	269	2.75	<2	<5	<2	<2	25	.5	<2	<2	88	.62	.023	4	49	.32	29	.39	3	3.45	.03	.02	1
L3000E 5100N	1	58	7	53	.2	19	8	280	4.65	3	<5	<2	<2	30	.4	<2	<2	161	.61	.023	4	49	.39	31	.44	3	3.63	.03	.02	<1
L3000E 5050N	1	35	<2	23	<.1	9	3	115	6.13	<2	<5	<2	<2	12	.2	<2	2	197	.28	.015	3	68	.15	13	.51	<2	4.58	.02	<.01	<1
L3000E 5000N	1	50	<2	33	.3	12	5	144	5.57	3	<5	<2	<2	15	.4	<2	<2	180	.27	.024	4	65	.24	22	.46	4	6.01	.03	.01	3
L3000E 4950N	1	17	<2	15	.1	7	2	94	6.10	<2	<5	<2	<2	11	<.2	<2	3	222	.27	.012	3	58	.10	11	.52	2	3.04	.02	<.01	<1
L3000E 4900N	1	34	<2	28	.3	11	3	129	2.37	<2	<5	<2	2	14	.4	<2	<2	169	.46	.022	4	77	.29	13	.47	3	5.62	.02	<.01	2
STANDARD C	18	60	38	125	7.6	71	30	1004	3.95	40	20	7	35	52	18.5	14	20	60	.51	.086	40	60	.89	184	.09	34	1.88	.10	.16	11

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 NA K AND AL.
- SAMPLE TYPE: SOIL <u>Samples beginning 'RE' are duplicate samples.</u>

DATE RECEIVED: NOV 1 1993 **DATE REPORT MAILED:** Nov 5/93. **SIGNED BY**.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L3000E 4850N	<1	41	2	28	.3	13	3	105	6.31	7	<5	<2	2	9	<.2	8	<2	113	.25	.020	2	90	.22	11	.39	4	7.90	.03	.02	6
L3000E 4650N	2	29	6	39	.2	11	14	478	3.25	8	<5	<2	<2	45	.2	<2	<2	94	.74	.022	4	27	.49	73	.24	4	2.40	.05	.02	2
L3000E 4600N	2	29	10	37	.2	11	6	201	1.75	6	<5	<2	<2	45	.3	3	3	91	.71	.033	7	32	.41	71	.26	3	3.07	.04	.03	2
L3200E 5600N	<1	56	2	32	.2	18	5	168	3.83	5	<5	<2	<2	18	<.2	2	<2	137	.54	.028	4	55	.36	18	.48	5	4.94	.03	.01	3
L3200E 5550N	1	14	5	17	<.1	12	2	113	5.08	2	<5	<2	<2	11	<.2	<2	<2	273	.19	.007	2	59	.10	15	.75	3	1.00	.01	.01	<1
L3200E 5500N	1	39	3	53	.1	18	17	367	6.93	4	<5	<2	<2	23	<.2	<2	<2	223	.30	.019	2	80	.27	18	.68	<2	3.48	.03	.02	1
L3200E 5450N	1	49	<2	34	.2	12	2	142	6.91	6	<5	<2	<2	13	<.2	4	<2	214	.29	.023	4	71	.15	14	.60	3	4.35	.02	.01	4
L3200E 5400N	1	40	2	40	.4	11	3	111	7.73	6	<5	<2	<2	14	<.2	2	<2	209	.24	.015	3	65	.14	21	.57	<2	4.27	.02	.01	2
L3200E 5350N	<1	70	<2	44	<.1	25	6	133	5.84	<2	<5	<2	<2	15	.3	<2	<2	165	.35	.018	3	78	.29	19	.51	2	6.88	.03	.01	3
L3200E 5300N	1	60	4	70	.2	23	10	387	4.79	7	<5	<2	<2	25	.6	<2	<2	158	.73	.023	5	41	.36	29	.40	3	2.81	.03	.02	1
L3200E 5250N	2	29	4	34	.3	18	4	133	3.05	6	<5	<2	<2	17	.4	5	<2	141	.50	.019	3	60	.36	17	.57	4	4.41	.03	.02	3
L3200E 5200N	1	63	<2	49	.2	44	16	336	3.31	4	<5	<2	<2	22	.4	<2	<2	98	.81	.018	3	46	.74	21	.41	4	2.96	.03	.02	2
L3200E 5150N	1	79	<2	72	.1	35	15	1434	3.35	4	<5	<2	<2	28	.6	<2	<2	104	.90	.027	4	49	.62	45	.33	4	2.80	.03	.03	1
L3200E 5100N	1	48	<2	34	.1	21	6	163	3.47	5	<5	<2	<2	16	.2	<2	2	158	.47	.022	4	60	.38	18	.48	4	4.37	.02	.01	2
RE L3200E 5100N	1	48	2	33	.3	21	7	158	3.47	4	<5	<2	<2	16	<.2	3	<2	157	.48	.022	4	60	.39	18	.47	3	4.35	.02	.02	2
L3200E 5050N	1	37	<2	21	<.1	8	1	100	5.59	<2	<5	<2	<2	19	<.2	<2	2	168	.32	.019	2	56	.19	17	.48	2	4.10	.04	.03	<1
L3200E 5000N	<1	45	<2	30	.2	17	4	117	4.63	5	<5	<2	2	11	<.2	2	<2	111	.34	.019	3	78	.26	16	.37	3	7.26	.02	.01	4
L3200E 4950N	<1	19	4	14	<.1	6	<1	96	4.80	4	<5	<2	<2	9	<.2	<2	2	229	.19	.009	<2	51	.09	9	.54	3	2.63	.02	.01	1
L3200E 4900N	1	57	3	34	.2	15	5	183	3.03	12	<5	<2	<2	21	.4	4	2	115	.59	.015	5	46	.39	25	.41	4	4.22	.03	.02	4
L3200E 4850N	1	53	4	35	.3	17	6	180	1.53	4	<5	<2	<2	32	.2	3	<2	81	.84	.031	5	31	.42	42	.32	3	2.72	.04	.03	2
L3200E 4700N	1	23	9	17	.2	6	<1	76	3.51	6	<5	<2	<2	17	<.2	<2	2	225	.34	.016	5	53	.15	18	.58	3	2.79	.04	.03	1
L3400E 5600N	<1	19	5	14	.1	6	1	144	4.53	<2	<5	<2	2	13	<.2	<2	3	281	.24	.005	2	32	.08	10	.64	3	.97	.02	.02	<1
L3400E 5550N	<1	43	<2	33	.7	16	5	169	5.59	7	7	2	3	17	<.2	6	<2	182	.34	.012	3	50	.20	50	.51	3	3.57	.03	.02	3
L3400E 5500N	<1	53	<2	33	.5	13	5	229	7.41	4	8	<2	2	11	.2	6	<2	231	.27	.022	4	75	.15	15	.57	<2	6.08	.02	.01	4
L3400E 5450N	<1	26	3	25	.3	8	1	97	7.52	3	<5	<2	2	14	<.2	4	<2	238	.29	.016	2	68	.12	14	.60	<2	3.43	.03	.02	2
L3400E 5400N	1	38	4	30	.2	11	3	132	8.21	<2	<5	<2	<2	14	<.2	2	<2	267	.29	.019	2	76	.18	17	.73	<2	3.40	.03	.02	1
L3400E 5350N	1	26	6	31	.1	10	1	143	7.04	<2	<5	<2	<2	16	<.2	<2	2	234	.35	.016	<2	45	.14	19	.61	<2	2.03	.02	.03	<1
L3400E 5300N	2	46	6	75	.3	15	4	208	6.45	<2	<5	<2	2	27	<.2	<2	<2	223	.70	.012	3	48	.38	30	.73	<2	2.23	.03	.04	<1
L3400E 5250N	4	119	2	83	.2	24	22	358	5.65	4	<5	<2	<2	31	.9	<2	<2	174	.89	.022	5	49	.58	28	.40	2	2.66	.03	.02	1
L3400E 5200N	2	87	2	53	<.1	21	10	521	2.19	2	<5	<2	<2	31	.4	<2	<2	87	.98	.026	4	37	.51	31	.31	3	3.14	.03	.02	<1
L3400E 5150N	1	86	3	86	.3	22	11	650	3.29	6	<5	<2	<2	34	1.0	<2	3	122	.97	.020	3	38	.53	31	.32	4	2.36	.03	.03	<1
L3400E 5100N	3	23	7	32	.1	11	5	349	2.73	<2	<5	<2	<2	23	<.2	<2	6	157	.65	.008	2	37	.27	27	.55	2	1.20	.02	.04	1
L3400E 5050N	1	32	6	39	<.1	18	4	221	5.39	2	<5	<2	<2	29	<.2	<2	<2	226	.73	.011	<2	42	.39	46	.65	2	1.72	.03	.03	<1
L3400E 5000N	2	44	4	48	.4	16	16	332	3.51	11	<5	<2	<2	31	.2	5	2	136	.81	.026	4	37	.39	32	.31	5	2.71	.04	.03	2
L3400E 4950N	<1	28	4	21	.3	9	2	115	5.14	8	<5	<2	<2	19	<.2	6	<2	184	.37	.013	2	57	.19	13	.52	4	2.64	.02	.01	2
STANDARD C	20	63	42	134	6.9	75	32	1076	4.08	43	16	7	36	53	19.1	13	22	61	.51	.084	42	60	.92	186	.09	33	1.90	.08	.17	10

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm
L3400E 4900N	3	64	3	68	.4	33	24	504	3.06	6	7	<2	2	25	.4	<2	2	112	.93	.058	8	68	.52	25	.25	3	4.41	.03	.02	<1
L3400E 4850N	2	31	8	46	<.1	16	5	154	4.58	4	<5	<2	2	18	.3	<2	<2	182	.50	.018	3	49	.36	22	.67	4	3.13	.03	<.01	<1
L3400E 4800N	1	23	5	24	.3	10	8	347	2.13	3	<5	<2	<2	23	.4	<2	5	91	.48	.028	4	32	.24	29	.26	3	1.71	.03	.02	1
L3400E 4750N	1	25	7	28	.2	11	3	133	7.69	4	<5	<2	2	13	.4	<2	<2	226	.32	.013	2	80	.17	12	.58	2	3.30	.02	<.01	1
L3400E 4700N	1	46	2	21	.3	9	2	107	5.79	<2	<5	<2	3	16	.3	<2	<2	128	.40	.024	3	80	.16	17	.36	4	6.65	.03	.01	1
L3400E 4650N	1	88	3	43	.2	28	10	258	3.52	7	<5	<2	2	25	.6	<2	2	129	.64	.014	6	51	.57	62	.42	4	4.27	.03	.01	2
L3400E 4600N	1	56	4	38	.2	23	9	157	6.08	4	<5	<2	2	16	.3	<2	4	168	.37	.012	2	71	.34	37	.43	3	5.64	.02	<.01	1
L3600E 5600N	1	43	7	33	<.1	11	3	131	9.99	<2	7	<2	3	16	<.2	<2	<2	331	.35	.015	2	83	.17	20	.85	<2	2.98	.03	.01	<1
L3600E 5550N	1	57	<2	31	.1	18	8	179	7.09	3	<5	<2	<2	15	.5	<2	<2	212	.38	.015	2	76	.23	33	.63	4	5.35	.03	<.01	1
L3600E 5500N	1	24	4	18	.1	8	11	381	6.62	4	<5	<2	<2	12	.3	<2	2	226	.25	.008	2	59	.13	13	.52	3	2.82	.02	<.01	<1
L3600E 5450N	1	42	7	28	.1	12	4	132	9.29	5	<5	<2	<2	14	.2	<2	5	324	.31	.021	3	61	.17	16	.77	3	3.55	.03	<.01	<1
L3600E 5400N	1	40	5	28	<.1	11	3	155	9.70	<2	<5	<2	3	12	<.2	<2	<2	258	.34	.010	2	99	.24	12	.70	<2	4.58	.02	<.01	<1
L3600E 5350N	1	37	<2	24	.2	15	4	115	7.21	<2	<5	<2	2	10	.4	<2	<2	180	.33	.017	5	107	.25	11	.53	4	6.55	.02	<.01	1
L3600E 5300N	1	82	<2	44	.2	22	85	1419	5.77	7	<5	<2	<2	21	.4	<2	<2	167	.50	.054	4	62	.43	24	.50	4	6.61	.03	<.01	1
L3600E 5250N	1	97	<2	49	.3	21	9	205	3.99	4	<5	<2	2	20	.6	<2	<2	141	.54	.027	3	65	.42	21	.47	5	6.11	.02	.01	2
L3600E 5200N	2	29	11	23	.4	9	3	149	1.67	6	<5	<2	3	19	.4	<2	4	136	.44	.014	4	50	.22	20	.64	4	3.07	.02	.02	1
L3600E 5150N	2	50	2	55	.1	19	21	502	6.37	10	<5	<2	<2	26	.7	<2	2	184	.66	.019	2	55	.42	28	.49	5	3.98	.03	<.01	1
L3600E 5100N	1	37	8	24	.3	8	6	149	9.03	4	<5	<2	3	15	<.2	<2	2	242	.34	.009	2	69	.19	15	.66	2	2.65	.02	.01	<1
L3600E 5050N	<1	79	2	40	.1	30	12	186	4.48	8	<5	<2	2	17	.4	<2	<2	150	.46	.016	5	74	.37	29	.45	4	5.91	.03	.01	2
L3600E 5000N	2	158	2	38	.2	18	6	159	2.08	3	<5	<2	<2	25	.5	<2	4	132	.57	.043	9	53	.41	30	.44	4	5.81	.03	.03	2
L3600E 4950N	1	31	8	20	.3	9	6	132	8.86	5	<5	<2	3	15	<.2	<2	<2	331	.20	.017	3	55	.15	56	.67	<2	3.00	.02	.01	<1
L3600E 4900N	1	1509	4	41	.3	12	6	132	9.25	3	<5	<2	4	12	.8	<2	<2	236	.25	.021	3	71	.17	19	.47	2	4.84	.02	.01	<1
L3600E 4850N	1	51	8	49	.3	18	7	166	5.36	5	<5	<2	3	16	.5	<2	<2	187	.42	.018	6	63	.36	18	.55	4	4.86	.03	.02	1
L3600E 4750N	2	38	6	28	.4	12	7	155	1.42	5	<5	<2	2	26	.5	<2	2	115	.54	.030	4	40	.32	40	.32	4	2.30	.04	.03	1
L3600E 4700N	1	88	3	24	.5	13	6	169	6.32	4	<5	<2	<2	17	.4	3	3	214	.33	.039	4	67	.26	24	.46	4	7.36	.04	.02	3
RE L3600E 4700N	1	87	<2	24	.5	12	5	171	6.51	<2	<5	<2	2	17	.3	<2	<2	222	.34	.037	4	67	.26	24	.47	3	7.25	.03	.01	2
L3600E 4650N	3	29	3	15	.2	8	3	134	1.07	6	<5	<2	<2	36	.4	<2	<2	64	1.09	.046	7	25	.23	35	.19	2	1.94	.03	.01	1
L3600E 4600N	1	60	5	42	.3	17	5	132	7.64	<2	<5	<2	3	14	.2	<2	<2	222	.32	.016	2	84	.27	28	.56	2	5.13	.02	<.01	<1
L3800E 5600N	1	54	3	36	<.1	13	28	403	5.34	3	<5	<2	<2	19	.3	<2	4	205	.38	.015	4	61	.21	16	.58	4	3.75	.02	<.01	<1
L3800E 5550N	1	69	3	36	.4	19	13	263	5.44	5	<5	<2	2	21	.5	<2	2	171	.49	.019	5	57	.32	22	.46	4	4.00	.03	.01	1
L3800E 5500N	1	38	5	23	.2	10	3	145	7.28	3	<5	<2	3	16	.5	<2	<2	193	.40	.011	3	69	.22	12	.53	3	3.42	.02	<.01	<1
L3800E 5450N	1	167	<2	41	.1	17	8	206	3.26	<2	<5	<2	<2	21	.5	<2	<2	121	.57	.034	8	52	.40	22	.37	3	5.34	.02	<.01	<1
L3800E 5400N	1	33	4	21	.1	9	3	120	7.76	<2	<5	<2	3	11	<.2	<2	<2	223	.31	.013	3	89	.22	9	.53	<2	4.12	.02	<.01	<1
L3800E 5350N	1	30	5	23	.2	7	1	84	10.45	<2	<5	<2	2	11	<.2	<2	<2	309	.23	.021	3	74	.10	12	.67	<2	4.13	.02	<.01	<1
L3800E 5300N	1	28	5	16	<.1	8	2	104	6.31	<2	<5	<2	<2	12	.3	<2	2	273	.23	.013	2	56	.15	17	.60	4	3.19	.03	<.01	<1
STANDARD C	18	61	36	127	7.4	71	32	1033	4.01	41	19	7	37	53	19.1	14	16	60	.50	.086	41	61	.93	185	.09	34	1.90	.09	.17	11

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L3800E 5250N	1	31	5	18	.6	9	1	105	8.87	<2	<5	<2	2	17	<.2	<2	<2	279	.37	.010	<2	63	.14	17	.72	<2	2.75	.02	<.01	<1
L3800E 5200N	4	56	4	25	<.1	14	5	154	3.64	2	<5	<2	<2	21	.3	<2	<2	175	.50	.037	5	61	.38	19	.45	2	5.98	.02	<.01	<1
L3800E 5150N	1	32	3	14	.1	7	<1	106	9.25	<2	<5	<2	3	10	<.2	<2	<2	336	.21	.008	<2	61	.12	11	.80	<2	2.14	.02	<.01	<1
L3800E 5100N	1	26	5	18	.2	8	<1	102	9.81	<2	<5	<2	3	9	<.2	<2	<2	370	.16	.010	2	58	.06	11	.84	<2	2.48	.02	<.01	<1
L3800E 5050N	1	38	4	28	.1	10	2	158	8.85	3	<5	<2	2	12	.2	<2	<2	182	.30	.016	<2	76	.19	16	.55	<2	4.04	.02	.01	<1
L3800E 5000N	1	28	4	14	.1	8	1	99	8.16	<2	<5	<2	3	10	<.2	<2	2	331	.16	.010	<2	55	.07	10	.64	<2	2.36	.02	.01	<1
L3800E 4950N	1	41	3	33	.1	9	2	108	2.58	<2	<5	<2	<2	15	.3	3	2	210	.38	.027	4	82	.20	21	.56	4	6.06	.02	<.01	<1
L3800E 4900N	<1	41	2	23	.2	9	2	103	5.25	<2	<5	<2	2	12	.3	<2	<2	153	.30	.018	2	59	.17	13	.41	3	5.51	.02	<.01	<1
L3800E 4850N	1	54	<2	33	<.1	15	5	124	7.25	<2	<5	<2	<2	9	.5	<2	<2	208	.21	.032	4	89	.20	17	.53	2	8.15	.02	<.01	<1
L3800E 4800N	1	33	2	20	.3	9	2	98	6.21	<2	<5	<2	2	13	.4	<2	<2	191	.31	.017	3	60	.15	12	.49	2	4.06	.02	<.01	<1
L3800E 4750N	3	60	12	38	.4	17	5	138	2.08	4	9	<2	3	19	.5	6	<2	121	.41	.020	5	56	.37	39	.38	2	4.65	.02	.01	<1
L3800E 4700N	1	33	6	32	.2	10	2	121	6.05	2	<5	<2	2	14	.3	2	<2	191	.26	.015	6	49	.14	25	.43	3	2.88	.02	<.01	<1
L3800E 4650N	1	26	6	32	<.1	9	3	141	6.05	<2	<5	<2	<2	16	.3	<2	<2	191	.33	.017	2	59	.14	26	.45	2	3.37	.02	.01	<1
L4000E 5650N	1	64	5	22	.4	12	5	129	6.45	3	<5	<2	2	18	.3	<2	<2	207	.35	.012	5	53	.13	22	.51	2	3.53	.02	.01	<1
L4000E 5600N	1	78	4	51	.5	22	19	444	5.39	4	<5	<2	2	27	.5	<2	<2	149	.60	.016	6	52	.37	37	.40	5	3.85	.03	.01	<1
L4000E 5550N	1	92	5	42	.2	24	8	233	4.12	4	<5	<2	<2	30	.4	<2	2	115	.72	.019	5	42	.55	27	.38	4	3.97	.03	.02	<1
L4000E 5500N	<1	128	<2	58	.4	24	11	238	3.76	3	<5	<2	2	23	.6	<2	<2	105	.55	.027	5	52	.50	31	.35	4	4.83	.03	<.01	<1
L4000E 5475N	1	49	5	24	.2	10	2	139	4.01	<2	<5	<2	3	15	.4	<2	<2	205	.42	.013	5	82	.28	16	.58	3	5.18	.02	.01	<1
L4000E 5400N	1	31	<2	25	<.1	11	1	80	8.67	<2	<5	<2	2	8	.3	<2	<2	165	.22	.014	<2	100	.20	9	.48	<2	6.24	.02	<.01	<1
L4000E 5350N	1	39	4	21	<.1	7	<1	96	8.83	2	<5	<2	3	13	<.2	<2	<2	279	.16	.011	<2	54	.12	16	.61	<2	1.79	.02	<.01	<1
L4000E 5325N	2	21	8	14	.1	6	<1	69	9.24	<2	<5	<2	2	14	.2	<2	<2	430	.22	.010	<2	47	.07	15	.82	<2	1.51	.02	.01	<1
L4000E 5250N	1	58	3	26	<.1	19	4	151	2.09	<2	<5	<2	<2	21	.3	<2	<2	117	.65	.037	5	57	.43	17	.42	2	4.21	.03	.01	1
L4000E 5200N	1	53	2	32	.3	23	5	107	2.53	<2	<5	<2	<2	11	.4	<2	<2	146	.34	.022	7	72	.33	16	.51	2	5.23	.02	.01	<1
L4000E 5150N	<1	48	6	27	.3	15	4	186	3.85	<2	<5	<2	2	17	.4	<2	<2	133	.49	.022	4	46	.30	22	.42	3	2.90	.03	.02	<1
L4000E 5100N	1	45	2	33	.3	17	4	145	4.68	4	<5	<2	<2	14	.6	<2	<2	166	.38	.013	3	63	.24	16	.46	4	3.85	.02	<.01	1
L4000E 5050N	1	38	2	26	<.1	11	2	103	4.77	4	<5	<2	<2	13	.6	2	<2	157	.36	.016	3	75	.20	13	.47	3	5.41	.02	.01	<1
L4000E 5000N	3	46	4	34	.2	13	3	111	2.00	<2	<5	<2	<2	16	.5	<2	<2	159	.44	.023	6	59	.28	20	.44	3	4.65	.02	.01	<1
L4000E 4950N	1	29	6	23	<.1	8	<1	113	11.60	<2	<5	<2	3	10	.3	<2	<2	267	.25	.013	2	97	.21	9	.65	<2	2.68	.02	.01	<1
L4000E 4900N	4	17	8	33	.2	7	19	414	6.75	4	<5	<2	2	19	.2	<2	<2	216	.32	.013	3	42	.27	22	.56	3	2.33	.02	.01	<1
L4000E 4850N	1	43	5	31	.2	10	2	117	5.43	6	<5	<2	2	14	.4	<2	3	199	.35	.018	3	70	.19	18	.46	3	4.54	.02	<.01	<1
RE L4000E 4850N	1	44	3	31	.4	10	2	112	5.38	5	<5	<2	3	13	.5	2	<2	198	.34	.018	3	70	.19	18	.46	2	4.57	.02	<.01	<1
L4000E 4800N	1	35	8	36	.2	11	3	154	4.22	4	<5	<2	<2	20	.4	<2	<2	171	.49	.015	4	33	.26	21	.48	4	1.80	.02	.01	<1
L4000E 4750N	2	51	4	63	.3	20	8	248	4.27	5	<5	<2	2	19	.6	<2	<2	114	.50	.018	3	59	.45	32	.46	4	4.67	.03	.02	<1
L4000E 4700N	3	34	10	123	.3	29	21	924	5.13	<2	<5	<2	2	23	.7	<2	<2	155	.53	.015	3	47	.51	49	.44	2	2.78	.03	.02	<1
STANDARD C	18	61	37	129	7.0	72	32	1022	4.02	41	16	7	36	53	19.3	15	19	61	.49	.086	40	61	.92	184	.09	34	1.89	.10	.16	11

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm
L4200E 5650N	1	30	<2	16	<.1	9	2	99	6.55	<2	<5	<2	2	10	<.2	<2	<2	198	.26	.010	3	72	.12	11	.57	3	4.01	.01	.01	1
L4200E 5600N	2	41	<2	34	.1	15	6	100	4.86	<2	<5	<2	<2	16	.2	<2	<2	201	.38	.013	5	53	.20	14	.67	3	3.89	.01	.01	<1
L4200E 5550N	2	145	<2	30	.2	11	5	134	4.60	2	<5	<2	<2	17	<.2	<2	<2	176	.34	.013	5	48	.23	13	.57	5	3.07	.01	.01	1
L4200E 5500N	1	143	<2	32	.1	17	7	184	3.92	<2	<5	<2	<2	21	<.2	<2	<2	110	.46	.016	7	48	.44	18	.48	4	4.83	.01	.02	1
L4200E 5400N	<1	26	<2	14	.1	8	2	116	6.18	2	<5	<2	<2	16	<.2	<2	<2	200	.36	.007	<2	49	.17	4	.61	4	1.99	.01	.01	1
L4200E 5350N	1	37	<2	18	.2	8	4	112	6.10	<2	<5	<2	<2	12	.2	<2	<2	178	.33	.010	6	69	.19	13	.55	4	5.19	.01	.01	1
L4200E 5300N	1	25	<2	13	.1	8	1	69	8.01	<2	<5	<2	2	7	.2	<2	<2	200	.18	.008	<2	97	.12	3	.55	<2	5.70	.01	.01	<1
L4200E 5200N	1	23	5	14	.1	9	3	97	3.89	4	<5	<2	<2	11	<.2	2	<2	231	.24	.006	2	52	.15	13	.63	5	2.28	.01	.01	1
L4200E 5150N	1	47	<2	30	.3	19	6	172	5.75	<2	<5	<2	<2	10	<.2	<2	<2	145	.26	.014	3	74	.24	20	.45	<2	5.32	.01	.01	1
L4200E 5100N	1	47	<2	41	.2	16	11	318	5.12	9	<5	<2	<2	16	.4	<2	<2	139	.38	.025	3	57	.23	18	.41	3	5.70	.01	.01	1
L4200E 5050N	2	24	3	34	.2	11	3	113	6.14	3	<5	<2	2	13	.4	<2	<2	168	.26	.015	2	58	.20	10	.50	<2	5.06	.01	.01	2
L4200E 5000N	1	36	<2	14	.2	5	2	77	5.45	<2	<5	<2	2	11	.2	<2	<2	181	.19	.012	4	54	.10	11	.53	3	3.58	.01	.01	<1
L4200E 4950N	1	37	5	27	.2	7	4	139	6.09	<2	<5	<2	2	18	.4	<2	<2	165	.20	.026	7	43	.20	20	.46	<2	6.60	.01	.01	1
L4200E 4900N	1	18	4	24	<.1	10	4	96	6.12	<2	<5	<2	<2	25	<.2	2	<2	264	.28	.014	3	39	.08	79	.64	3	1.30	.01	.01	1
L4200E 4850N	1	60	<2	54	.1	17	8	267	4.63	3	<5	<2	<2	26	.2	<2	<2	129	.40	.037	7	44	.62	38	.35	5	6.01	.01	.02	2
L4200E 4800N	1	58	10	54	.1	14	13	325	5.18	<2	<5	<2	<2	15	.4	<2	<2	164	.37	.022	6	59	.22	23	.45	5	5.14	.02	.01	1
L4200E 4750N	3	70	3	109	.1	36	34	692	2.47	5	<5	<2	<2	32	1.0	<2	<2	80	.70	.047	10	54	.47	52	.29	4	4.74	.02	.01	<1
L4200E 4700N	3	37	5	52	.1	18	7	210	2.81	4	<5	<2	<2	23	.2	<2	<2	108	.47	.017	7	52	.45	45	.42	3	3.39	.01	.01	1
L4200E 4650N	1	23	<2	27	.2	9	5	108	6.85	6	<5	<2	<2	12	.2	<2	<2	214	.13	.011	2	64	.14	63	.39	<2	2.89	.01	.01	1
RE L4200E 4650N	2	23	4	28	.2	9	4	108	6.90	4	<5	<2	<2	12	<.2	3	<2	216	.13	.011	2	65	.14	65	.39	4	2.93	.01	.01	1
L4400E 5650N	2	95	5	38	.2	10	7	181	5.51	<2	<5	<2	<2	24	.4	2	2	170	.44	.011	6	40	.31	25	.51	3	2.77	.01	.01	1
L4400E 5600N	3	81	3	38	.2	12	57	625	5.35	<2	<5	<2	<2	28	.2	2	<2	164	.54	.012	5	36	.28	27	.48	4	2.11	.01	.01	1
L4400E 5550N	2	16	2	16	.1	7	3	168	3.29	<2	<5	<2	<2	21	<.2	2	<2	180	.37	.004	2	26	.19	16	.52	3	.76	.01	.01	1
L4400E 5500N	1	104	<2	47	.1	20	10	275	5.52	4	<5	<2	2	23	.4	<2	<2	125	.44	.003	2	65	.68	22	.46	2	4.25	.01	.02	1
L4400E 5450N	2	29	2	22	.1	6	3	144	2.35	3	<5	<2	<2	19	.2	<2	2	172	.36	.008	3	41	.24	16	.53	4	2.31	.01	.01	1
L4400E 5400N	1	52	<2	26	<.1	17	4	136	5.93	<2	<5	<2	2	12	<.2	<2	<2	168	.34	.008	2	87	.33	10	.54	3	5.16	.01	.01	1
L4400E 5350N	1	35	<2	16	.1	7	1	85	7.79	<2	<5	<2	2	10	.3	<2	2	213	.25	.012	4	85	.13	8	.58	<2	4.58	.01	.01	<1
L4400E 5300N	1	70	<2	26	.2	18	5	116	4.57	<2	<5	<2	2	11	.4	<2	<2	124	.32	.009	3	77	.28	13	.45	4	7.57	.01	.01	2
L4400E 5250N	<1	44	<2	23	.2	18	5	136	6.13	<2	<5	<2	2	11	.7	<2	<2	166	.37	.008	3	82	.44	18	.51	3	4.89	.01	.01	2
L4400E 5200N	1	55	7	27	.2	11	4	109	5.41	<2	<5	<2	2	12	.4	<2	<2	140	.32	.014	2	73	.23	8	.43	<2	5.74	.01	.01	1
L4400E 5150N	1	53	3	33	.1	15	5	149	5.82	2	<5	<2	2	12	.3	<2	<2	143	.30	.016	3	61	.30	22	.45	3	4.66	.01	.01	<1
L4400E 5100N	1	29	4	33	.1	11	8	277	5.96	<2	<5	<2	2	23	.3	<2	<2	170	.37	.033	5	51	.18	29	.49	5	4.06	.02	.01	2
L4400E 5050N	2	14	4	20	.1	7	1	77	7.06	5	<5	<2	<2	14	<.2	3	<2	212	.16	.023	3	34	.05	27	.49	2	2.38	.01	.01	1
L4400E 5000N	2	33	13	46	.1	11	90	3748	2.73	<2	<5	<2	<2	47	.3	<2	<2	108	.69	.021	6	42	.29	45	.52	3	1.91	.01	.01	1
L4400E 4975N	1	23	4	16	.1	3	3	109	6.35	3	<5	<2	2	14	<.2	<2	<2	213	.20	.014	3	40	.10	30	.50	<2	3.79	.01	.01	1
STANDARD C	18	61	38	127	6.9	67	31	1028	3.96	39	24	7	36	53	18.6	14	23	57	.50	.086	40	57	.93	184	.09	33	1.88	.06	.14	9

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L4400E 4900N	1	32	6	38	<.1	12	8	324	5.56	4	<5	<2	<2	12	<.2	5	<2	170	.28	.025	4	51	.20	27	.45	2	4.07	.01	.01	1
L4400E 4850N	1	34	14	54	.1	12	35	1695	5.10	3	<5	<2	<2	25	<.2	3	<2	152	.43	.019	5	46	.23	47	.47	<2	2.96	.02	.01	<1
L4400E 4800N	1	41	4	37	.1	12	4	134	6.09	6	<5	<2	<2	11	.3	<2	<2	164	.28	.013	2	79	.25	10	.49	<2	4.72	.01	.01	<1
L4400E 4750N	1	56	12	48	.1	9	3	104	1.43	7	<5	<2	<2	27	.2	4	<2	94	.62	.027	4	50	.22	26	.43	<2	3.58	.02	.01	1
L4400E 4700N	<1	60	3	31	.1	5	3	113	7.49	2	<5	<2	2	38	.2	<2	2	159	.10	.021	4	46	.17	41	.29	<2	7.55	.01	.01	<1
L4600E 5650N	1	59	3	36	<.1	15	7	217	3.55	2	<5	<2	<2	26	.2	2	2	89	.71	.018	5	41	.43	26	.45	2	3.28	.02	.02	<1
L4600E 5600N	3	58	6	39	<.1	19	9	274	2.73	<2	<5	<2	<2	35	<.2	4	<2	108	.87	.033	5	48	.55	29	.40	4	3.53	.02	.02	1
L4600E 5550N	3	17	4	16	.1	7	3	119	2.82	<2	<5	<2	<2	18	<.2	2	<2	150	.38	.007	2	29	.19	18	.60	<2	1.23	.01	.01	<1
L4600E 5500N	4	32	4	23	.2	8	4	143	3.00	2	<5	<2	<2	19	<.2	3	<2	139	.41	.015	4	41	.23	20	.51	<2	3.01	.01	.01	1
L4600E 5450N	4	13	7	15	<.1	8	2	89	2.05	<2	<5	<2	<2	14	<.2	2	3	174	.33	.007	2	29	.19	15	.62	<2	1.08	.01	.01	<1
L4600E 5400N	1	87	3	42	<.1	23	6	160	5.42	4	<5	<2	<2	16	.6	<2	<2	156	.40	.007	3	66	.35	33	.44	<2	5.28	.01	.01	<1
L4600E 5350N	1	38	4	19	<.1	10	2	92	2.95	3	<5	<2	<2	11	.4	<2	<2	254	.33	.011	5	69	.22	13	.65	<2	3.86	.01	.01	<1
L4600E 5300N	6	42	5	27	.1	8	2	84	.68	<2	<5	<2	<2	19	.9	2	<2	103	.44	.022	4	37	.15	16	.34	<2	1.80	.01	.01	<1
L4600E 5250N	1	40	4	28	.1	14	4	121	3.51	2	<5	<2	<2	14	.4	<2	3	197	.39	.009	3	95	.35	10	.54	4	5.27	.01	.01	<1
L4600E 5200N	1	58	5	27	<.1	13	4	156	5.60	<2	<5	<2	<2	13	<.2	<2	<2	158	.36	.013	4	71	.27	12	.53	<2	5.22	.01	.01	<1
L4600E 5150N	1	52	4	38	<.1	19	8	203	5.92	5	<5	<2	<2	11	.3	3	2	178	.30	.018	4	70	.25	20	.52	<2	4.40	.01	.01	<1
L4600E 5100N	1	42	2	28	.1	10	5	196	4.70	3	<5	<2	<2	17	<.2	4	3	143	.39	.013	3	56	.20	20	.48	4	3.34	.02	.01	1
L4600E 5050N	2	35	6	37	<.1	12	5	213	4.46	<2	<5	<2	<2	19	.4	3	<2	142	.43	.011	3	58	.20	14	.55	3	3.60	.01	.01	<1
L4600E 5000N	3	34	7	62	.1	15	8	341	4.69	3	<5	<2	<2	21	.6	3	<2	146	.49	.016	4	45	.26	20	.47	<2	2.86	.01	.01	<1
RE L4600E 5000N	3	32	5	60	.1	14	7	333	4.53	3	<5	<2	<2	21	.4	2	2	141	.49	.017	4	43	.26	22	.46	<2	2.74	.01	.01	<1
L4600E 4925N	1	34	4	28	.1	11	4	132	5.48	2	<5	<2	<2	13	<.2	<2	2	180	.32	.016	4	60	.17	12	.52	<2	3.56	.01	.01	<1
L4600E 4900N	1	31	3	38	.2	8	5	248	5.63	10	<5	<2	2	31	.3	<2	<2	162	.35	.019	4	39	.28	29	.42	<2	3.76	.01	.01	<1
L4600E 4850N	1	38	8	43	.2	8	3	124	5.60	4	<5	<2	<2	14	.2	<2	2	163	.33	.019	4	63	.15	22	.47	<2	4.03	.01	.01	1
L4600E 4800N	2	46	8	41	.1	12	5	136	1.61	5	<5	<2	<2	16	.2	2	<2	142	.36	.027	6	51	.26	25	.37	<2	4.78	.02	.01	<1
L4600E 4750N	1	25	8	24	.1	7	3	91	6.19	6	<5	<2	<2	10	<.2	2	5	180	.23	.017	3	59	.10	11	.47	<2	3.97	.01	.01	<1
L4600E 4700N	1	52	4	65	.2	16	16	3957	3.83	5	<5	<2	<2	21	.4	<2	<2	110	.47	.041	7	60	.32	33	.38	3	3.53	.02	.02	<1
L4600E 4675N	<1	51	4	47	.1	15	8	208	5.87	<2	<5	<2	2	17	.3	2	4	163	.35	.018	8	46	.32	26	.43	<2	5.72	.02	.02	<1
L4800E 5650N	2	46	2	28	.1	7	4	157	4.91	<2	<5	<2	<2	12	<.2	<2	<2	191	.24	.012	4	39	.11	10	.52	3	2.49	.01	.01	<1
L4800E 5600N	2	37	5	38	.2	8	3	138	6.48	2	<5	<2	2	12	.2	3	6	221	.26	.009	3	57	.14	11	.55	<2	3.65	.01	.01	1
L4800E 5550N	2	44	3	32	.1	14	8	259	4.87	4	<5	<2	<2	23	.2	4	<2	170	.66	.016	4	40	.35	21	.51	<2	2.47	.02	.01	1
L4800E 5500N	2	34	4	18	<.1	4	1	73	7.95	<2	<5	<2	<2	11	<.2	<2	<2	246	.15	.021	2	55	.08	11	.50	2	3.94	.01	.02	<1
L4800E 5450N	2	36	<2	33	.1	9	3	104	6.27	7	<5	<2	<2	12	<.2	3	3	249	.18	.005	2	55	.10	20	.46	<2	4.43	.01	.01	<1
L4800E 5400N	<1	20	<2	18	.1	7	2	93	8.61	3	<5	<2	2	9	<.2	2	<2	299	.22	.009	2	72	.15	8	.70	<2	2.97	.01	.01	<1
L4800E 5350N	<1	35	<2	24	.2	12	5	150	5.09	3	<5	<2	2	13	<.2	<2	<2	141	.40	.004	4	61	.32	6	.43	<2	4.77	.01	.01	<1
L4800E 5300N	1	53	<2	30	.1	16	6	200	5.94	<2	<5	<2	2	12	<.2	<2	<2	134	.32	.006	<2	98	.28	10	.42	<2	6.06	.02	.01	<1
STANDARD C	18	57	38	125	6.7	66	30	1011	3.94	41	20	7	35	52	18.8	14	21	56	.52	.086	39	56	.92	183	.09	34	1.87	.06	.14	11

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm
L4800E 5250N	1	32	5	29	.2	13	4	119	1.74	<2	<5	<2	2	16	.3	<2	<2	111	.44	.016	6	57	.30	16	.49	4	3.47	.02	.01	1
L4800E 5200N	1	37	<2	24	.3	11	3	117	5.40	4	10	<2	3	12	<.2	2	<2	146	.32	.013	4	70	.23	12	.45	3	4.17	.02	.02	2
L4800E 5150N	1	34	2	31	.1	13	5	159	5.74	3	<5	<2	2	13	<.2	<2	<2	161	.31	.014	4	67	.22	19	.50	3	3.55	.03	.01	2
L4800E 5100N	1	51	3	33	.1	13	9	307	5.20	5	<5	<2	2	14	<.2	3	<2	150	.37	.023	5	63	.23	16	.49	3	4.53	.02	.01	2
L4800E 5050N	2	39	2	35	.4	13	11	317	4.71	4	11	<2	3	15	.2	<2	<2	143	.38	.014	5	58	.22	23	.53	3	3.41	.02	<.01	2
L4800E 5000N	1	46	2	49	.2	20	9	221	3.67	3	<5	<2	2	19	.3	<2	<2	97	.60	.019	5	45	.38	20	.38	3	3.60	.02	.01	2
L4800E 4950N	7	42	7	55	.2	14	8	194	3.26	2	<5	<2	2	19	.3	<2	<2	169	.49	.027	5	66	.30	23	.49	3	3.52	.02	.02	1
L4800E 4900N	4	50	5	91	.2	29	19	409	3.20	3	<5	<2	<2	22	.3	<2	<2	98	.61	.035	5	54	.48	37	.35	4	3.47	.03	.02	1
RE L4800E 4900N	3	49	4	88	.3	26	18	400	3.09	4	<5	<2	<2	21	.6	2	<2	94	.57	.034	5	52	.45	36	.34	3	3.36	.02	.02	2
L4800E 4850N	2	33	9	74	.2	16	11	569	3.78	<2	<5	<2	<2	24	.3	<2	<2	116	.64	.024	4	61	.32	29	.48	3	3.43	.02	.01	1
L4800E 4800N	1	47	<2	34	.2	13	3	143	5.17	6	<5	<2	2	14	.2	<2	<2	123	.34	.028	4	51	.21	30	.35	5	4.23	.02	.02	2
L4800E 4750N	1	50	2	54	.1	21	8	176	4.60	4	<5	<2	<2	13	.3	<2	2	112	.30	.041	6	60	.34	31	.38	3	6.07	.02	.02	1
L4800E 4700N	1	28	9	50	.2	13	6	155	5.42	7	<5	<2	2	19	.2	<2	<2	144	.36	.023	5	49	.20	38	.39	3	4.63	.02	.02	<1
L5000E 5650N	1	43	3	29	.3	13	4	154	4.63	7	8	<2	3	18	.3	4	<2	115	.48	.021	4	58	.33	17	.38	4	4.78	.03	.02	1
L5000E 5600N	1	26	3	23	.3	9	2	89	6.98	4	<5	<2	2	12	<.2	3	<2	183	.26	.028	3	67	.13	16	.49	<2	4.61	.02	.01	3
L5000E 5550N	1	28	3	27	.1	9	3	124	6.58	3	6	<2	3	12	.3	<2	<2	170	.33	.013	4	77	.22	11	.51	<2	3.93	.02	.01	1
L5000E 5500N	4	26	2	44	.3	12	3	112	4.08	<2	7	<2	2	14	1.0	<2	<2	130	.36	.015	4	39	.17	15	.39	3	2.79	.02	.02	1
L5000E 5450N	2	17	3	21	<.1	7	1	119	6.75	<2	<5	<2	<2	16	<.2	<2	<2	186	.35	.008	2	44	.18	14	.60	<2	1.77	.02	.01	1
L5000E 5400N	<1	42	3	25	.2	9	2	103	6.52	6	5	<2	2	11	<.2	4	<2	163	.29	.012	3	73	.15	11	.45	2	4.53	.02	.02	2
L5000E 5350N	<1	27	<2	35	.2	10	3	125	5.01	5	<5	<2	2	13	.3	<2	<2	147	.34	.015	2	64	.18	15	.39	3	4.95	.02	.01	2
L5000E 5300N	1	33	2	24	<.1	9	2	106	6.42	5	<5	<2	2	10	<.2	<2	<2	192	.25	.014	3	58	.13	12	.48	<2	3.84	.02	.01	2
L5000E 5250N	1	45	2	38	.4	25	9	254	3.03	6	6	<2	2	19	.3	7	<2	82	.58	.026	6	47	.51	26	.37	5	3.95	.03	.02	3
L5000E 5200N	1	37	2	27	.1	13	4	158	6.41	2	<5	<2	2	12	<.2	<2	<2	185	.31	.013	3	70	.23	14	.51	<2	3.19	.02	.01	1
L5000E 5150N	1	43	4	32	<.1	14	5	180	5.17	9	<5	<2	2	12	.2	<2	3	160	.32	.014	3	70	.21	15	.46	2	4.85	.02	.02	2
L5000E 5100N	1	34	<2	28	<.1	10	3	130	5.91	5	<5	<2	<2	13	<.2	<2	<2	158	.35	.014	5	67	.25	14	.46	2	3.62	.02	<.01	1
L5000E 5050N	1	14	6	17	<.1	5	2	163	3.68	<2	<5	<2	<2	16	<.2	<2	<2	187	.29	.007	2	29	.15	20	.57	3	.81	.02	.02	<1
L5000E 5000N	1	49	3	57	<.1	23	16	465	3.19	<2	<5	<2	<2	22	.4	<2	3	106	.65	.030	3	40	.42	26	.39	3	3.51	.03	.02	<1
L5000E 4950N	1	36	3	25	.1	10	3	115	6.44	<2	8	<2	3	11	.2	<2	<2	183	.27	.012	3	70	.14	13	.54	<2	3.83	.02	.02	<1
L5000E 4900N	2	48	5	54	.2	18	9	225	4.10	4	<5	<2	2	17	.3	<2	<2	106	.51	.023	5	56	.33	21	.42	4	4.39	.02	.02	1
L5000E 4850N	1	45	3	31	<.1	15	5	157	4.28	6	<5	<2	<2	14	.5	2	<2	121	.46	.017	4	60	.33	14	.38	4	4.63	.02	.02	2
L5000E 4800N	1	58	3	31	<.1	15	4	112	5.66	3	<5	<2	<2	10	.3	2	3	136	.24	.015	4	80	.19	14	.39	2	5.13	.02	.01	1
L5200E 5650N	1	28	<2	22	.2	12	3	119	3.13	7	<5	<2	2	14	.3	7	<2	110	.40	.024	4	56	.26	13	.43	5	4.45	.02	.01	3
L5200E 5600N	1	29	4	19	<.1	7	1	104	7.29	2	<5	<2	<2	11	<.2	<2	<2	193	.27	.015	2	69	.13	11	.52	<2	3.63	.02	.01	2
L5200E 5550N	1	62	8	137	.3	31	12	3651	4.10	14	<5	<2	<2	33	2.2	<2	<2	104	1.07	.045	14	48	.46	43	.24	4	4.70	.03	.02	<1
L5200E 5500N	<1	38	3	29	.1	12	3	187	6.22	3	<5	<2	2	11	.2	<2	<2	156	.30	.015	4	74	.24	12	.47	<2	4.71	.02	.01	<1
STANDARD C	17	58	38	128	6.6	69	28	1037	3.94	38	17	5	36	51	16.6	13	18	55	.49	.085	36	57	.87	182	.09	32	1.88	.10	.16	10

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
L5200E 5450N	5	62	12	66	.3	46	22	540	5.82	67	<5	<2	2	34	.7	3	<2	91	.87	.121	16	71	.09	42	.21	<2	5.26	.01	.01	<1
L5200E 5400N	2	21	<2	19	.1	9	2	159	6.52	2	<5	<2	<2	11	<.2	<2	<2	195	.22	.013	3	76	.14	16	.57	<2	4.16	.01	.01	<1
L5200E 5350N	51	24	5	264	.1	18	9	427	4.91	78	<5	<2	<2	28	5.2	<2	<2	366	.84	.016	3	50	.29	24	.40	2	2.67	.02	.01	1
L5200E 5300N	7	30	26	44	.1	10	3	162	6.28	10	<5	<2	<2	10	.4	<2	<2	150	.25	.014	2	76	.19	14	.51	<2	4.14	.01	.01	1
L5200E 5250N	1	58	3	50	.1	27	11	190	2.00	3	<5	<2	<2	31	.2	<2	<2	75	.81	.023	4	40	.43	61	.33	2	3.24	.02	.02	1
L5200E 5200N	1	71	2	52	.3	16	35	1235	2.67	5	<5	<2	<2	18	.4	<2	<2	83	.49	.026	5	60	.33	25	.42	3	3.16	.01	.02	<1
L5200E 5150N	3	54	6	27	.2	17	6	217	5.49	13	<5	<2	<2	16	.2	<2	3	146	.47	.032	5	50	.31	16	.37	3	4.59	.02	.01	8
L5200E 5100N	2	36	<2	39	.2	14	7	193	4.69	<2	<5	<2	<2	14	.3	<2	<2	128	.36	.019	3	70	.23	16	.49	2	5.04	.01	.01	1
L5200E 5050N	1	55	<2	36	<.1	18	6	220	3.97	9	<5	<2	<2	17	.5	<2	<2	120	.48	.028	5	50	.35	17	.44	<2	4.33	.02	.01	<1
RE L5200E 5050N	1	54	<2	35	<.1	18	6	219	3.98	6	<5	<2	<2	17	.5	<2	<2	121	.50	.028	5	47	.35	17	.44	2	4.39	.02	.01	<1
L5200E 5000N	2	38	<2	26	<.1	10	3	185	6.05	4	<5	<2	<2	13	<.2	<2	<2	144	.32	.012	4	79	.20	14	.48	<2	4.22	.01	.01	3
L5200E 4950N	3	28	10	39	<.1	11	4	205	2.99	3	<5	<2	<2	17	.5	<2	<2	118	.44	.009	3	50	.25	19	.62	<2	2.81	.01	.01	1
L5200E 4900N	3	38	3	50	<.1	20	10	173	3.21	6	<5	<2	<2	15	.4	<2	<2	113	.39	.016	4	62	.28	19	.40	<2	4.91	.01	.01	2
STANDARD C	18	59	37	128	6.8	68	29	1041	3.95	43	18	7	35	52	17.9	14	16	56	.50	.086	37	62	.90	182	.08	33	1.90	.06	.14	11

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

APPENDIX B

GEOPHYSICAL DATA

Magnetometer Readings

line 2800

E.STN	N.STN	VALUE
2800	4500	5926
2800	4525	5972
2800	4550	5932
2800	4575	6059
2800	4600	5961
2800	4625	5843
2800	4650	5898
2800	4675	5658
2800	4700	5799
2800	4725	5852
2800	4750	5876
2800	4775	6031
2800	4800	5984
2800	4825	5865
2800	4850	6055
2800	4875	6359
2800	4900	6029
2800	4925	5934
2800	4950	5824
2800	4975	5889
2800	5000	5700
2800	5025	5819
2800	5050	5825
2800	5075	6079
2800	5100	5625
2800	5125	5889
2800	5150	5489
2800	5175	5796
2800	5200	5793
2800	5225	5758
2800	5250	5188
2800	5275	5356
2800	5300	5859
2800	5325	5824
2800	5350	6018
2800	5375	5888

E	N	VALUE
2800	5400	6214
2800	5425	6356
2800	5450	6087
2800	5475	5705
2800	5500	5638

line 3000

3000	4500	5919
3000	4525	6134
3000	4550	6127
3000	4575	6115
3000	4600	6011
3000	4625	6042
3000	4650	6174
3000	4675	6149
3000	4700	6122
3000	4725	5931
3000	4750	5855
3000	4775	5781
3000	4800	5614
3000	4825	6198
3000	4850	6359
3000	4875	6099
3000	4900	6331
3000	4925	5949
3000	4950	5832
3000	4975	5897
3000	5000	5752
3000	5025	6040
3000	5050	6141
3000	5075	6146
3000	5100	5867
3000	5125	5965
3000	5150	5830
3000	5175	5704
3000	5200	5625
3000	5225	5595
3000	5250	5643

E	N	VALUE
3000	5275	5661
3000	5300	5666
3000	5325	5410
3000	5350	5427
3000	5375	5889
3000	5400	6315
3000	5425	6619
3000	5450	6357
3000	5475	6355
3000	5500	6060

line 3200

3200	4500	5957
3200	4525	6133
3200	4550	6151
3200	4575	6158
3200	4600	6271
3200	4625	6498
3200	4650	6378
3200	4675	6159
3200	4700	6257
3200	4725	5993
3200	4750	5767
3200	4775	5799
3200	4800	5885
3200	4825	6184
3200	4850	6152
3200	4875	6288
3200	4900	6218
3200	4925	6515
3200	4950	6132
3200	4975	5738
3200	5000	5746
3200	5025	5627
3200	5050	5563
3200	5075	5791
3200	5100	5629
3200	5125	5613

E	N	VALUE
3200	5150	5348
3200	5175	5635
3200	5200	5656
3200	5225	5710
3200	5250	5610
3200	5275	5642
3200	5300	5752
3200	5325	5904
3200	5350	5898
3200	5375	5793
3200	5400	5977
3200	5425	6093
3200	5450	6041
3200	5475	7023
3200	5500	6871
3200	5525	7100
3200	5550	7091
3200	5575	6406
3200	5600	6945
3200	5625	7920

line 3400

E	N	VALUE
3400	4600	6161
3400	4625	6019
3400	4650	6365
3400	4675	6201
3400	4700	6367
3400	4725	6458
3400	4750	6255
3400	4775	5837
3400	4800	6158
3400	4825	5822
3400	4850	6169
3400	4875	5967
3400	4900	5827
3400	4925	6031
3400	4950	6392
3400	4975	6230
3400	5000	6988
3400	5025	6019
3400	5050	6041
3400	5075	5879
3400	5100	5815
3400	5125	5776
3400	5150	5763
3400	5175	5793
3400	5200	5611
3400	5225	5664
3400	5250	5746
3400	5275	5756
3400	5300	5794
3400	5325	5939
3400	5350	6061
3400	5375	5929
3400	5400	5977
3400	5425	6095
3400	5450	6291
3400	5475	6346
3400	5500	6259
3400	5525	6336
3400	5550	6675
3400	5575	6326
3400	5600	6429

line 3600

E	N	VALUE
3600	4575	6368
3600	4600	5941
3600	4625	5933
3600	4650	6094
3600	4675	5999
3600	4700	5749
3600	4725	5595
3600	4750	5782
3600	4775	5946
3600	4800	5858
3600	4825	5695
3600	4850	5811
3600	4875	5753
3600	4900	5834
3600	4925	5985
3600	4950	5845
3600	4975	5838
3600	5000	6191
3600	5025	6406
3600	5050	6526
3600	5075	6306
3600	5100	5679
3600	5125	5644
3600	5150	5577
3600	5175	5622
3600	5200	5661
3600	5225	5625
3600	5250	5630
3600	5275	5800
3600	5300	5735
3600	5325	5705
3600	5350	5985
3600	5375	6032
3600	5400	6099
3600	5425	6216
3600	5450	6415
3600	5475	6548
3600	5500	6488
3600	5525	6410
3600	5550	6283
3600	5575	6407
3600	5600	6504
3600	5625	6406

line 3800

E	N	VALUE
3800	4575	5946
3800	4600	6179
3800	4625	6060
3800	4650	5957

E	N	
3800	4675	5587
3800	4700	5779
3800	4725	5628
3800	4750	5801
3800	4775	5726
3800	4800	5692
3800	4825	5864
3800	4850	5866
3800	4875	5570
3800	4900	5753
3800	4925	5769
3800	4950	5636
3800	4975	5818
3800	5000	5742
3800	5025	5598
3800	5050	5593
3800	5075	5620
3800	5100	5824
3800	5125	5743
3800	5150	5746
3800	5175	5657
3800	5200	5678
3800	5225	5702
3800	5250	5948
3800	5275	5731
3800	5300	5996
3800	5325	5879
3800	5350	5940
3800	5375	6116
3800	5400	5997
3800	5425	6143
3800	5450	6254
3800	5475	6340
3800	5500	6638
3800	5525	6748
3800	5550	6844
3800	5575	6829

E	N	
3800	5600	6901
3800	5625	7388

line 4000

4000	4700	5746
4000	4725	5744
4000	4750	5859
4000	4775	5782
4000	4800	5900
4000	4825	5830
4000	4850	5871
4000	4875	5910
4000	4900	5841
4000	4925	5564
4000	4950	5915
4000	4975	5522
4000	5000	5539
4000	5025	5644
4000	5050	5827
4000	5075	5787
4000	5100	5713
4000	5125	6033
4000	5150	5895
4000	5175	5794
4000	5200	5842
4000	5225	5702
4000	5250	5803
4000	5275	5811
4000	5300	5902
4000	5325	5981
4000	5350	5913
4000	5375	5938
4000	5400	6070
4000	5425	6065
4000	5450	6263
4000	5475	6396
4000	5500	6805
4000	5525	6711

E	N	
4000	5550	6970
4000	5575	7010
4000	5600	7242
4000	5625	7613
4000	5650	5604

line 4200

4200	4650	5723
4200	4675	5740
4200	4700	5821
4200	4725	5935
4200	4750	6041
4200	4775	5892
4200	4800	5773
4200	4825	5785
4200	4850	5703
4200	4875	5592
4200	4900	5636
4200	4925	5667
4200	4950	5748
4200	4975	5931
4200	5000	5592
4200	5025	5744
4200	5050	5718
4200	5075	5707
4200	5100	6079
4200	5125	5932
4200	5150	5915
4200	5175	6001
4200	5200	5872
4200	5225	5844
4200	5250	5979
4200	5275	6119
4200	5300	5905
4200	5325	6160
4200	5350	6062
4200	5375	6143
4200	5400	6047

E	N	
4200	5425	6250
4200	5450	6298
4200	5475	6414
4200	5500	6580
4200	5525	7029
4200	5550	7175
4200	5575	7334
4200	5600	7413
4200	5625	7586
4200	5650	7660
line 4400		
4400	4700	5942
4400	4725	5888
4400	4750	5885
4400	4775	5853
4400	4800	5839
4400	4825	5704
4400	4850	5730
4400	4875	5782
4400	4900	5894
4400	4925	5846
4400	4950	6191
4400	4975	5862
4400	5000	5783
4400	5025	5930
4400	5050	5805
4400	5075	5854
4400	5100	5868
4400	5125	5918
4400	5150	5858
4400	5175	5879
4400	5200	5987
4400	5225	5880
4400	5250	5947
4400	5275	6266
4400	5300	6019
4400	5325	6206

E	N	
4400	5350	6216
4400	5375	6098
4400	5400	6097
4400	5425	5983
4400	5450	6172
4400	5475	6295
4400	5500	6359
4400	5525	6353
4400	5550	6636
4400	5575	6845
4400	5600	7137
4400	5625	7102
4400	5650	7149
line 4600		
4600	4650	5918
4600	4675	6543
4600	4700	5785
4600	4725	5804
4600	4750	5783
4600	4775	5596
4600	4800	5714
4600	4825	5828
4600	4850	5725
4600	4875	5985
4600	4900	5852
4600	4925	5970
4600	4950	5888
4600	4975	5880
4600	5000	5935
4600	5025	5989
4600	5050	6176
4600	5075	6015
4600	5100	5899
4600	5125	6135
4600	5150	6219
4600	5175	5978
4600	5200	6018

E	N	
4600	5225	6105
4600	5250	5915
4600	5275	6003
4600	5300	6089
4600	5325	6072
4600	5350	6210
4600	5375	6146
4600	5400	6000
4600	5425	6236
4600	5450	6195
4600	5475	6243
4600	5500	6344
4600	5525	6338
4600	5550	6328
4600	5575	6578
4600	5600	6582
4600	5625	6865
line 4800		
4800	4675	6171
4800	4700	6195
4800	4725	5809
4800	4750	5864
4800	4775	5949
4800	4800	5886
4800	4825	5759
4800	4850	5820
4800	4875	5991
4800	4900	6042
4800	4925	6038
4800	4950	5989
4800	4975	5849
4800	5000	5939
4800	5025	6149
4800	5050	6082
4800	5075	6076
4800	5100	6152
4800	5125	6202

E	N	
4800	5150	6242
4800	5175	6115
4800	5200	6215
4800	5225	6361
4800	5250	6095
4800	5275	6221
4800	5300	6212
4800	5325	6130
4800	5350	6406
4800	5375	6362
4800	5400	6116
4800	5425	6146
4800	5450	6262
4800	5475	6283
4800	5500	5887
4800	5525	6280
4800	5550	6218
4800	5575	6446
4800	5600	6397
4800	5625	6470
4800	5650	6714

line 5000

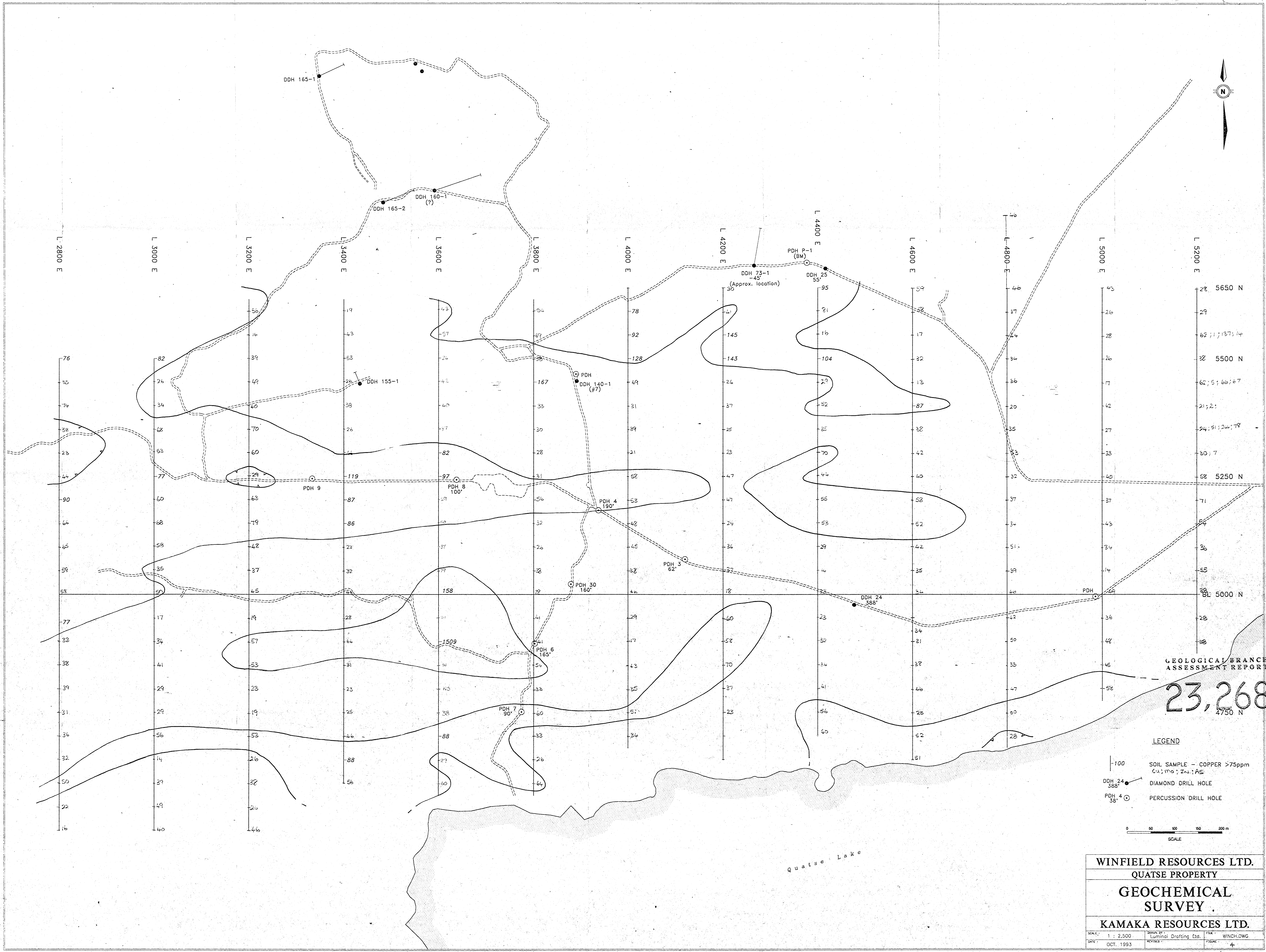
5000	4675	5982
5000	4700	6003
5000	4725	5956
5000	4750	5913
5000	4775	5933
5000	4800	6094
5000	4825	6101
5000	4850	6111
5000	4875	6091
5000	4900	6148
5000	4925	6215
5000	4950	6211
5000	4975	6076
5000	5000	6157
5000	5025	6170

E	N	
5000	5050	6175
5000	5075	6223
5000	5100	6185
5000	5125	6217
5000	5150	6299
5000	5175	6181
5000	5200	6325
5000	5225	6421
5000	5250	6225
5000	5275	6257
5000	5300	6356
5000	5325	6342
5000	5350	6443
5000	5375	6508
5000	5400	6405
5000	5425	6477
5000	5450	6537
5000	5475	6235
5000	5500	6575
5000	5525	6501
5000	5550	6380

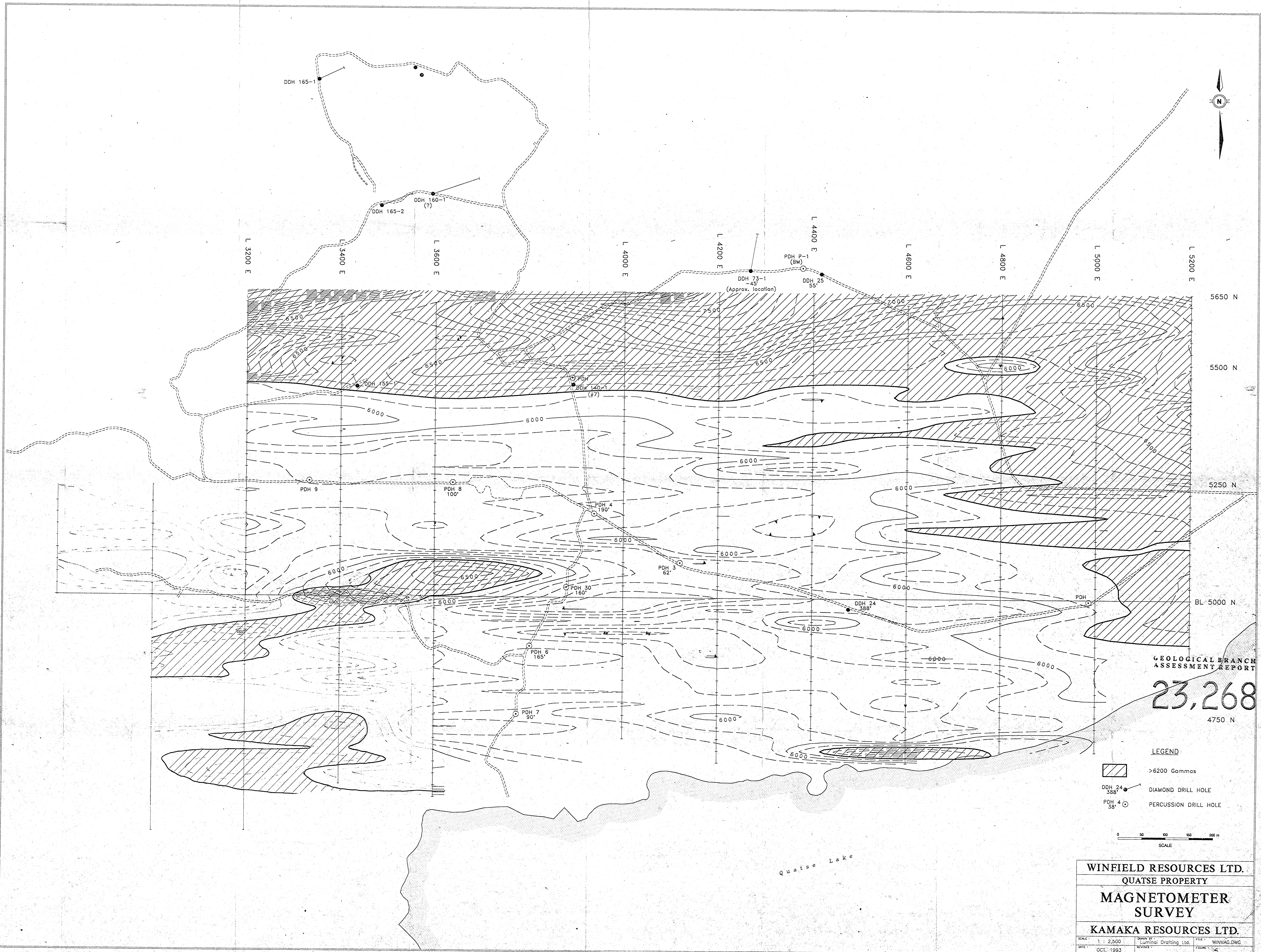
line 5200

5200	4875	6150
5200	4900	6187
5200	4925	6248
5200	4950	6384
5200	4975	6370
5200	5000	6339
5200	5025	6317
5200	5050	6326
5200	5075	6256
5200	5100	6214
5200	5125	6177
5200	5150	6291
5200	5175	6311
5200	5200	6379
5200	5225	6387

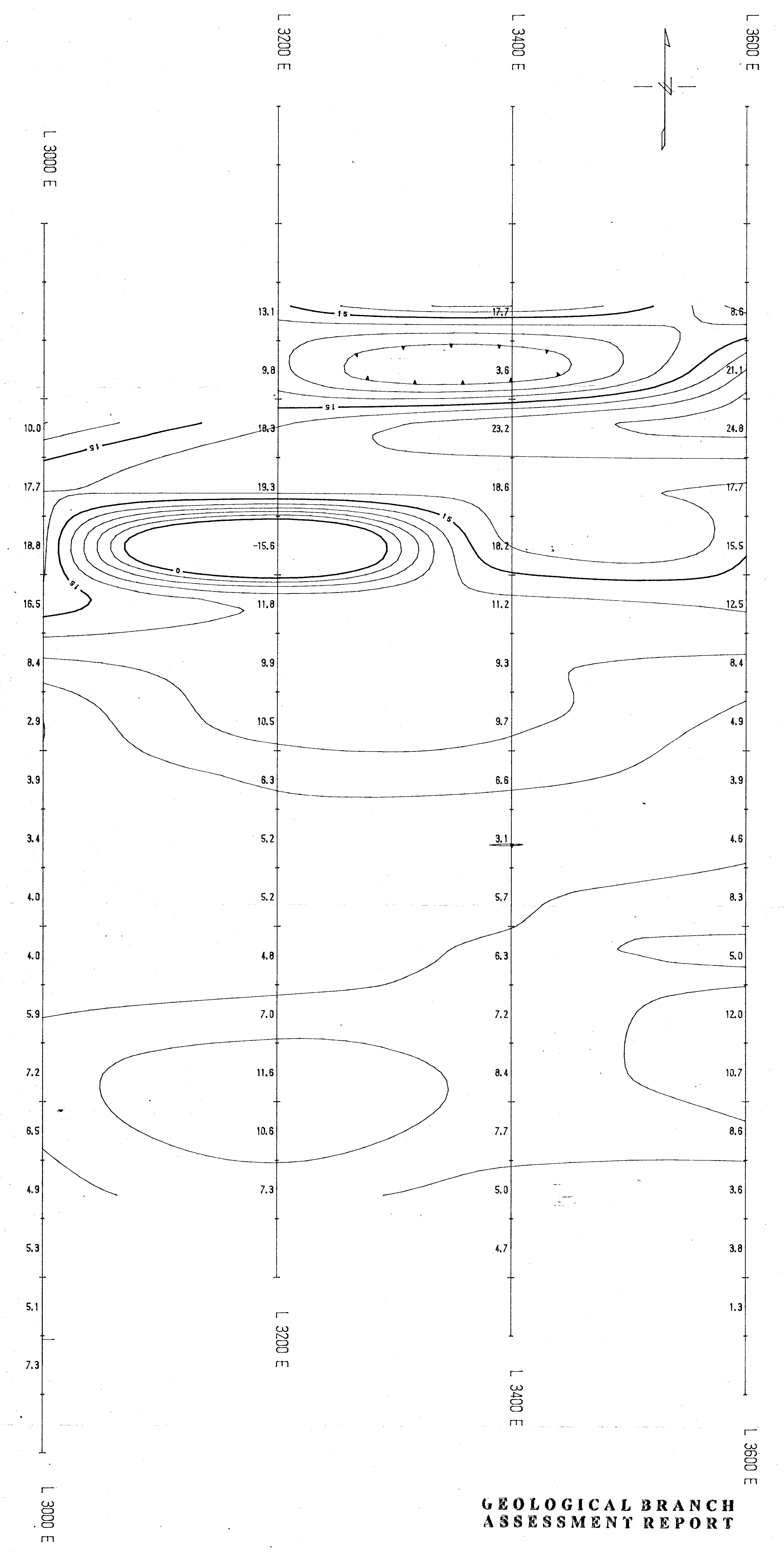
E	N	
5200	5250	6153
5200	5275	6485
5200	5300	6526
5200	5325	6653
5200	5350	6554
5200	5375	6774
5200	5400	6942
5200	5425	6589
5200	5450	6881
5200	5475	7031
5200	5500	6698
5200	5525	6794
5200	5550	6875
5200	5575	6644
5200	5600	6727
5200	5625	6798
5200	5650	7137



L 2800 E
L 3000 E
L 3200 E
L 3400 E
L 3600 E
L 3800 E
L 4000 E
L 4200 E
L 4400 E
L 4600 E
L 4800 E
L 5000 E
L 5200 E
5650 N
5500 N
5250 N
BL 5000 N
4750 N
DDH 165-1
DDH 160-1 (?)
DDH 165-2
DDH 155-1
DDH 73-1 -45° (Approx. location)
PDH P-1 (BM)
DDH 25 55°
PDH
DDH 140-1 (#7)
PDH 9
PDH 8 100°
PDH 4 190°
PDH 3 62°
PDH 30 160°
DDH 24 388°
PDH 6 165°
PDH 7 90°
Quatse Lake
GEOLOGICAL BRANCH ASSESSMENT REPORT
23,268
LEGEND
SOIL SAMPLE - COPPER >75ppm
Cu; Mo; Zn; AS
DIAMOND DRILL HOLE
PERCUSSION DRILL HOLE
SCALE
0 50 100 150 200 m
WINFIELD RESOURCES LTD.
QUATSE PROPERTY
GEOCHEMICAL SURVEY.
KAMAKA RESOURCES LTD.
SCALE: 1 : 2,500
DRAWN BY: Luminal Drafting Ltd.
FILE: WINCH.DWG
DATE: OCT. 1993
FIGURE: 4



L 3200 E
L 3400 E
L 3600 E
L 4000 E
L 4200 E
L 4400 E
L 4600 E
L 4800 E
L 5000 E
L 5200 E
5650 N
5500 N
5250 N
BL 5000 N
4750 N
DDH 165-1
DDH 165-2
DDH 160-1 (?)
DDH 73-1 -45° (Approx. location)
PDH P-1 (BM)
DDH 25 55'
DDH 155-1
DDH 140-1 (#7)
PDH 9
PDH 8 100'
PDH 4 190'
PDH 3 62'
PDH 30 160'
PDH 6 165'
PDH 7 90'
DDH 24 388'
PDH
Quatse Lake
GEOLOGICAL BRANCH ASSESSMENT REPORT
23,268
LEGEND
>6200 Gammas
DDH 24 388' DIAMOND DRILL HOLE
PDH 4 38' PERCUSSION DRILL HOLE
SCALE
WINFIELD RESOURCES LTD.
QUATSE PROPERTY
MAGNETOMETER SURVEY
KAMAKA RESOURCES LTD.
1 : 2,500
Luminai Drafting Ltd.
WINMAG.DWG
OCT. 1993
5



GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

SURVEY PARAMETERS

Contour Intervals:
Resistivity : Log base 10 ohm-metres
Chargeability : 3 milliseconds

Trend Enhancement: 000 degrees
Receiver: ANDROTEX TDR-6
Transmitter: Phoenix IPT-1
Generator: Phoenix MG-2
2.5 kWatt, with
5.0 HP Honda engine

Scale 1:2500
25 0 25 50 75 100 125
(metres)

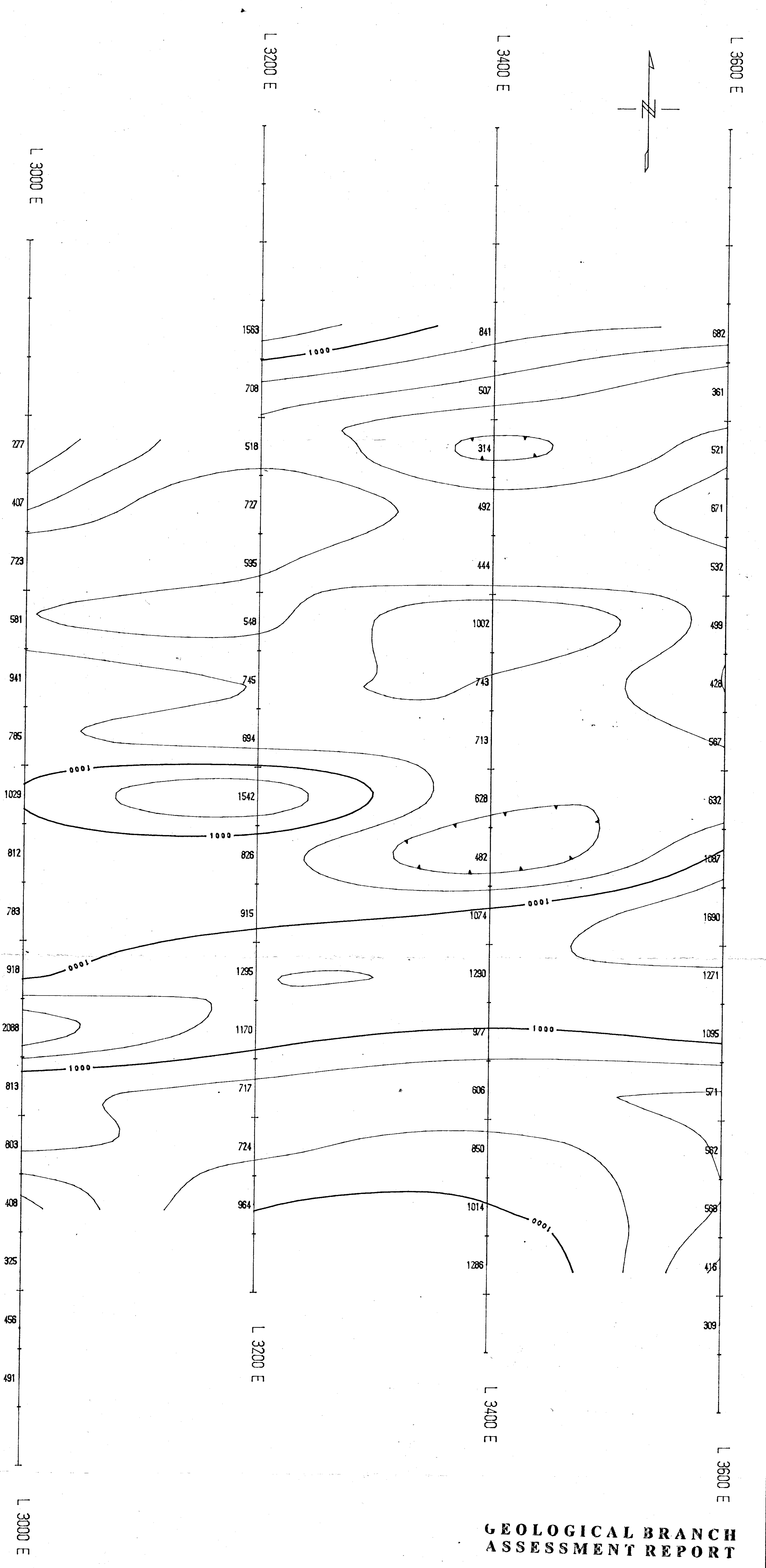
Surveyed by GEOTRONICS SURVEYS LTD..
October 1993

GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY
QUATSE LAKE, NANAIMO M.D., B.C.

Apparent CHARGEABILITY Survey
Data and Contours
For Level n=1

Drawn by	N.T.S.	Scale	Date	Map #
A.R.	92L/12	1:2500	Nov/93	6a



GEOLOGICAL BRANCH ASSESSMENT REPORT

23,268

SURVEY PARAMETERS

Contour Intervals:
Resistivity : Log base 10 ohm-metres
Chargeability : 3 milliseconds

Trend Enhancement: 000 degrees
Receiver: ANDROTEX TDR-6
Transmitter: Phoenix IPT-1
Generator: Phoenix MG-2
2.5 kWatt, with
5.0 HP Honda engine

Scale 1:2500

0 25 50 75 100 125
(metres)

Surveyed by GEOTRONICS SURVEYS LTD.,
October 1993

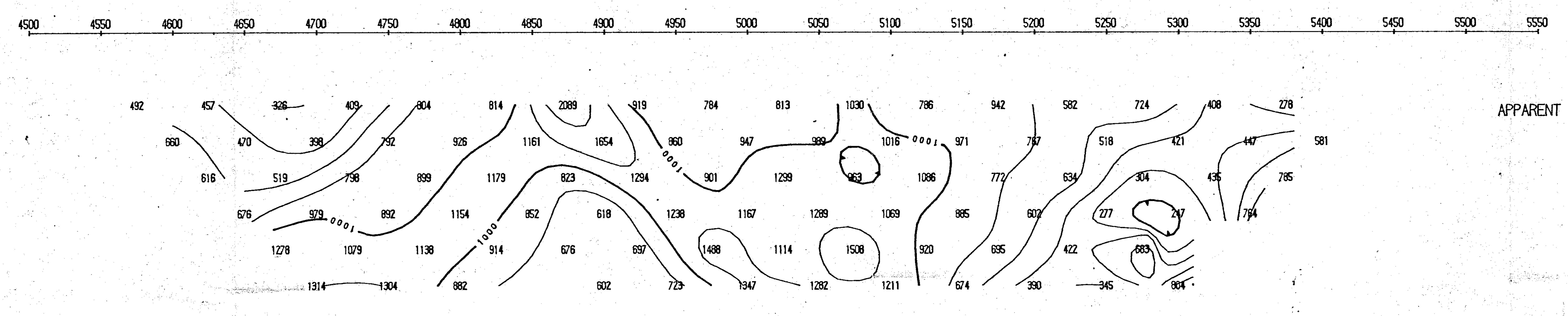
GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY
QUATSE LAKE, NANAIMO M.D., B.C.

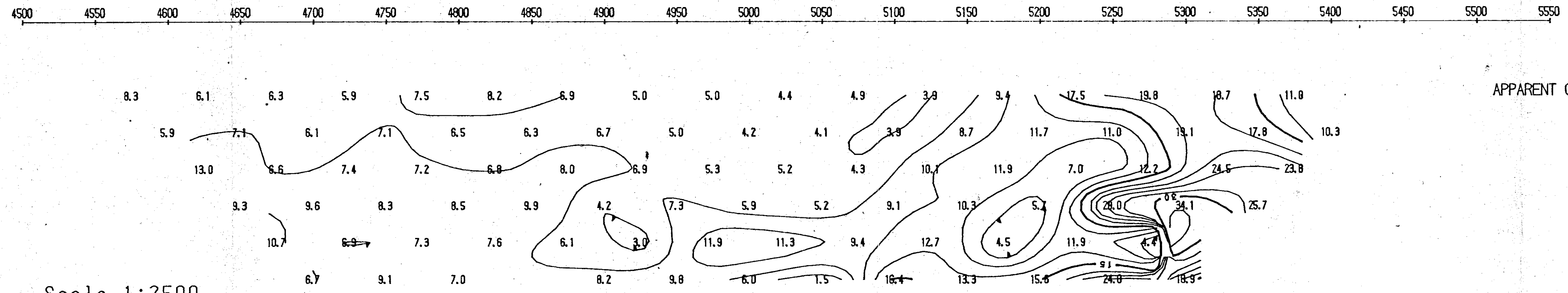
Apparent RESISTIVITY Survey
Data and Contours
For Level n=1

Drawn by	N.T.S.	Scale	Date	Map #
A.R.	92L/12	1:2500	Nov/93	6h

Survey Direction: N



APPARENT RESISTIVITY



APPARENT CHARGEABILITY

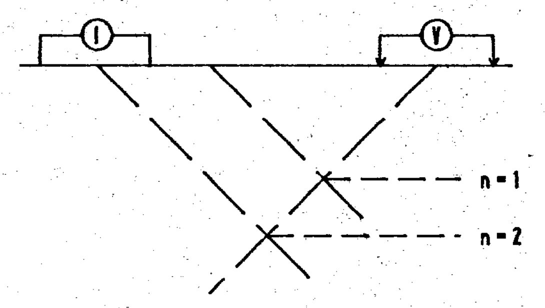
Scale 1:2500

25 0 25 50 75 100 125

(metres)

Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver:	ANDROTEX TDR-6
Transmitter/Generator:	PHOENIX Model IPT-1 2.5 kWatt

SURVEY PARAMETERS

Survey Mode:	Time Domain
Array:	Dipole-Dipole
Dipole Length:	50 metres
Dipole separation:	n=1 to 6
Delay Time:	80 milliseconds
Integration Time:	1840 milliseconds
Charge Cycle:	8 second square wave

GEOTRONICS SURVEYS LTD.

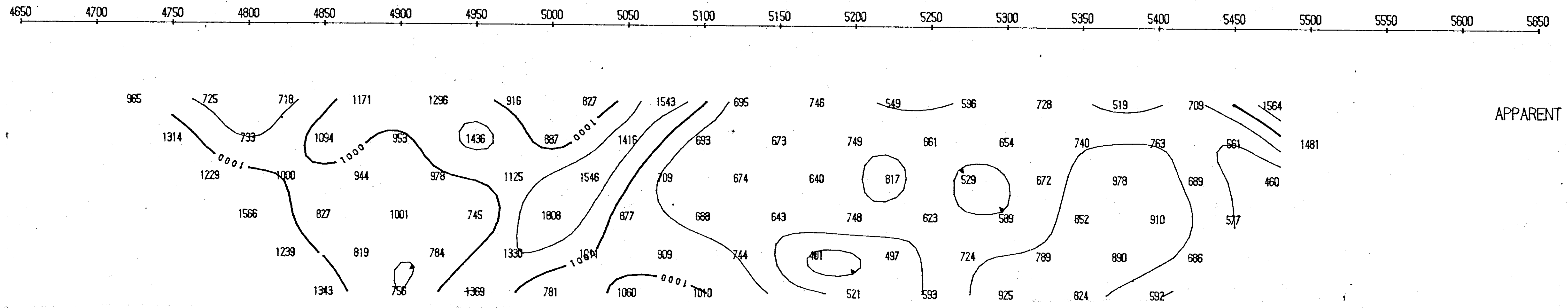
WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

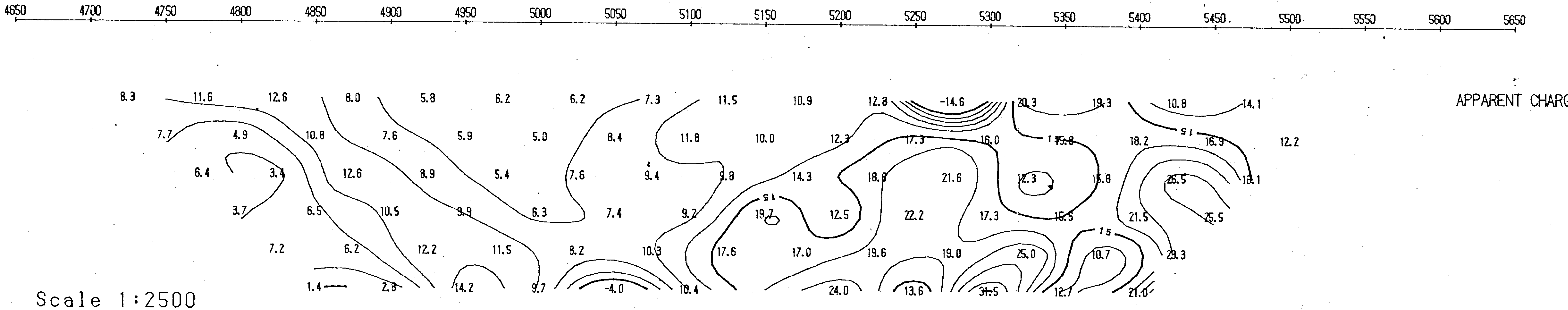
APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 3000E

Drawn by:	Job No.	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	7

Survey Direction: N →



APPARENT RESISTIVITY



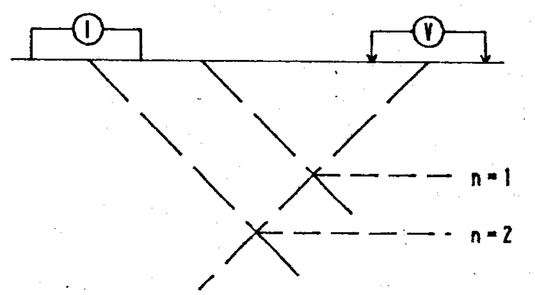
APPARENT CHARGEABILITY

Scale 1:2500

25 0 25 50 75 100 125 (metres)

Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver: ANDROTEX TDR-6
Transmitter/Generator: PHOENIX Model IPT-1 2.5 kWatt

SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 metres
Dipole separation: n=1 to 6
Delay Time: 80 milliseconds
Integration Time: 1840 milliseconds
Charge Cycle: 8 second square wave

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

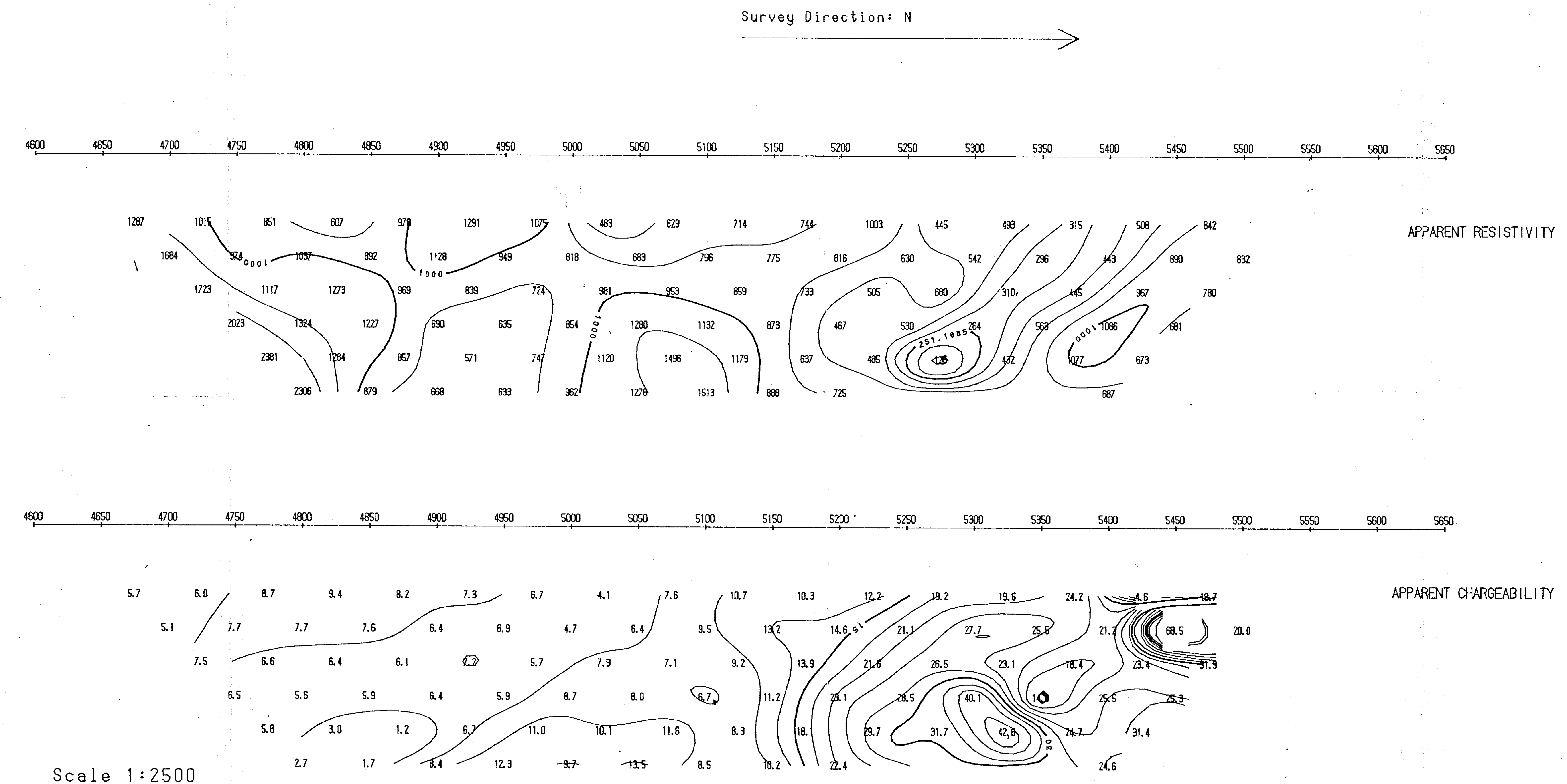
GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 3200E

Drawn by:	Job No.	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	8

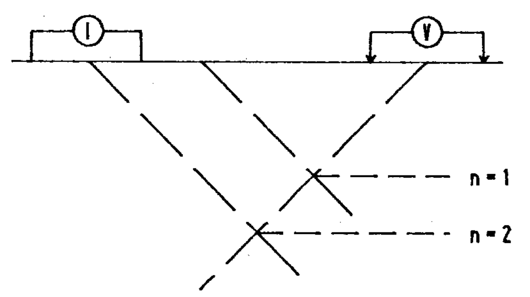


Scale 1:2500

25 0 25 50 75 100 125
(metres)

Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver: ANDROTEX TDR-6
Transmitter/Generator: PHOENIX Model IPT-1
2.5 kWatt

SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Dipole-Dipole
Dipole Length: 50 metres
Dipole separation: n=1 to 6
Delay Time: 80 milliseconds
Integration Time: 1840 milliseconds
Charge Cycle: 8 second square wave

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

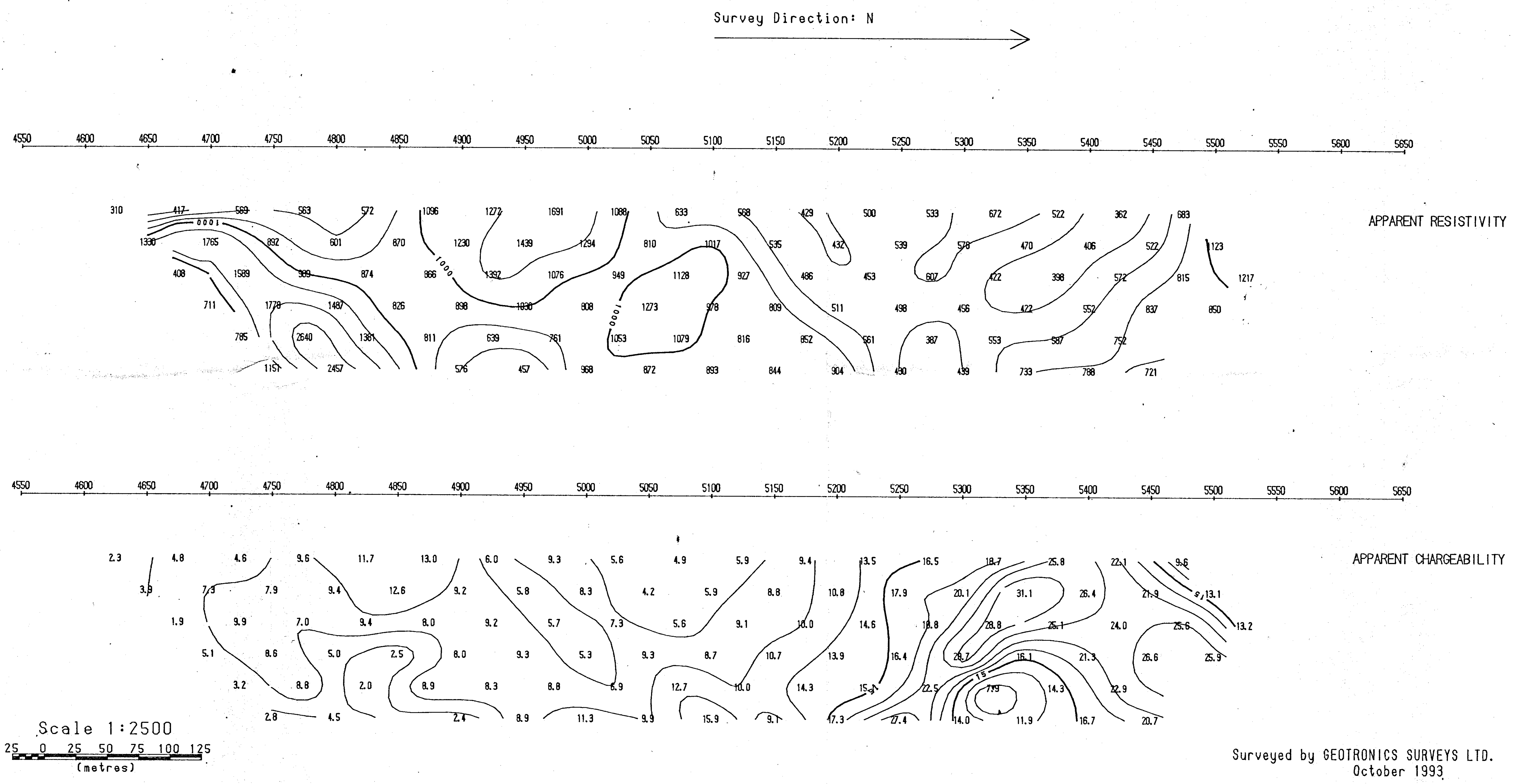
GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

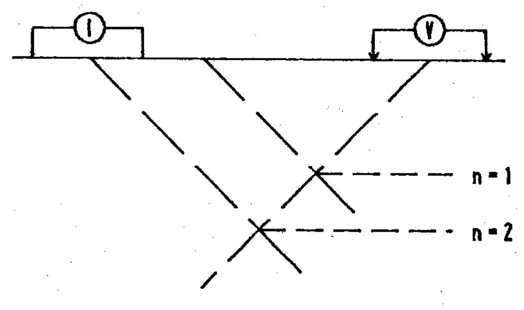
APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 3400E

Drawn by:	Job No.	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	9



Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver: ANDROTEX TDR-6
Transmitter/Generator: PHOENIX Model IPT-1
2.5 kWatt

SURVEY PARAMETERS

Survey Mode:	Time Domain
Array:	Dipole-Dipole
Dipole Length:	50 metres
Dipole separation:	n=1 to 6
Delay Time:	80 milliseconds
Integration Time:	1840 milliseconds
Charge Cycle:	8 second square wave

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

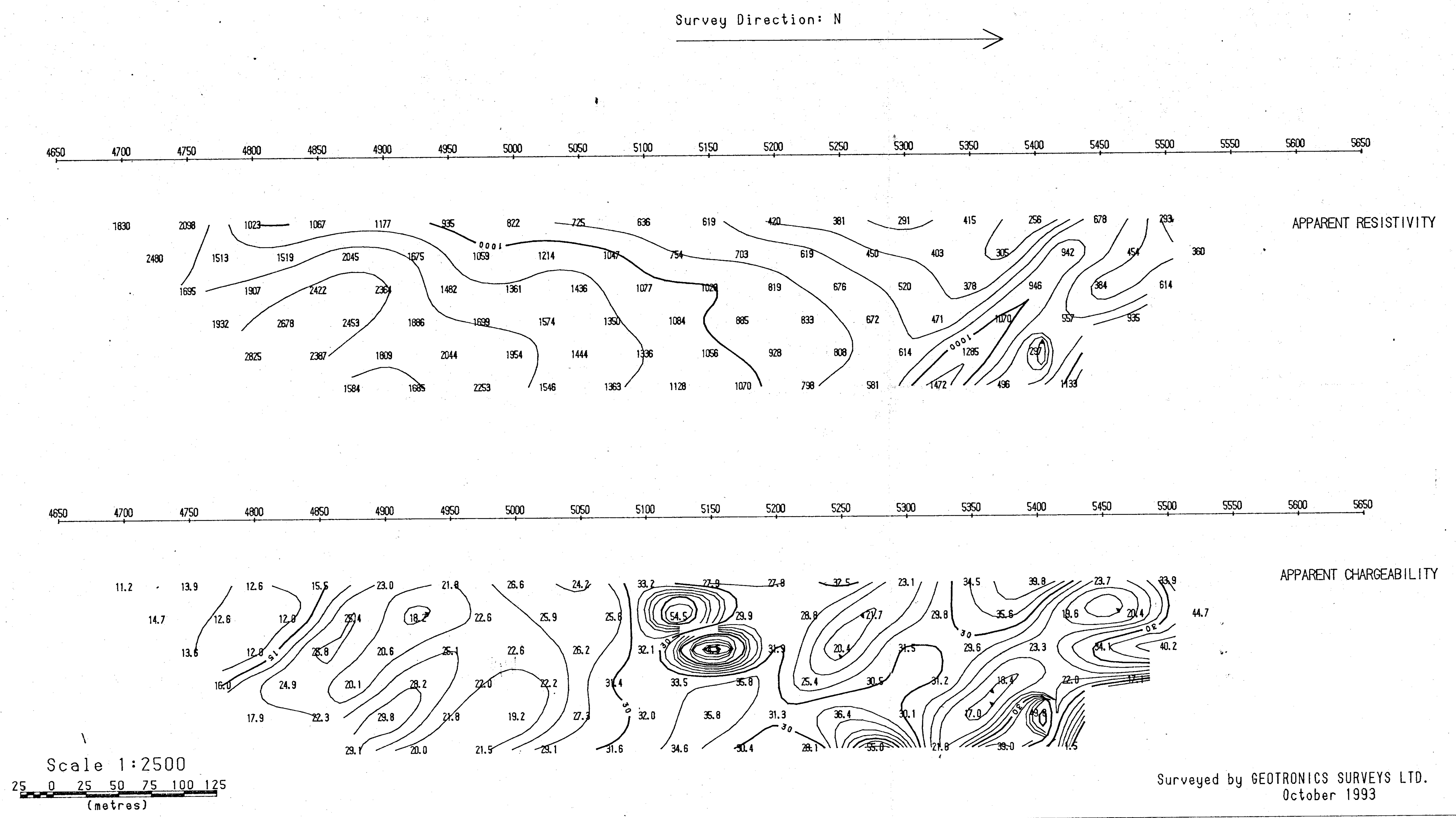
GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

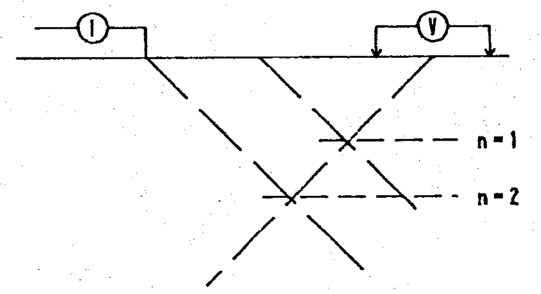
APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 3600E

Drawn by:	Job No:	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	10



Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver: ANDROTEX TDR-6
Transmitter/Generator: PHOENIX Model IPT-1
2.5 kWatt

SURVEY PARAMETERS

Survey Mode:	Time Domain
Array:	Pole-Dipole
Dipole Length:	50 metres
Dipole separation:	n=1 to 6
Delay Time:	80 milliseconds
Integration Time:	1840 milliseconds
Charge Cycle:	8 second square wave

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

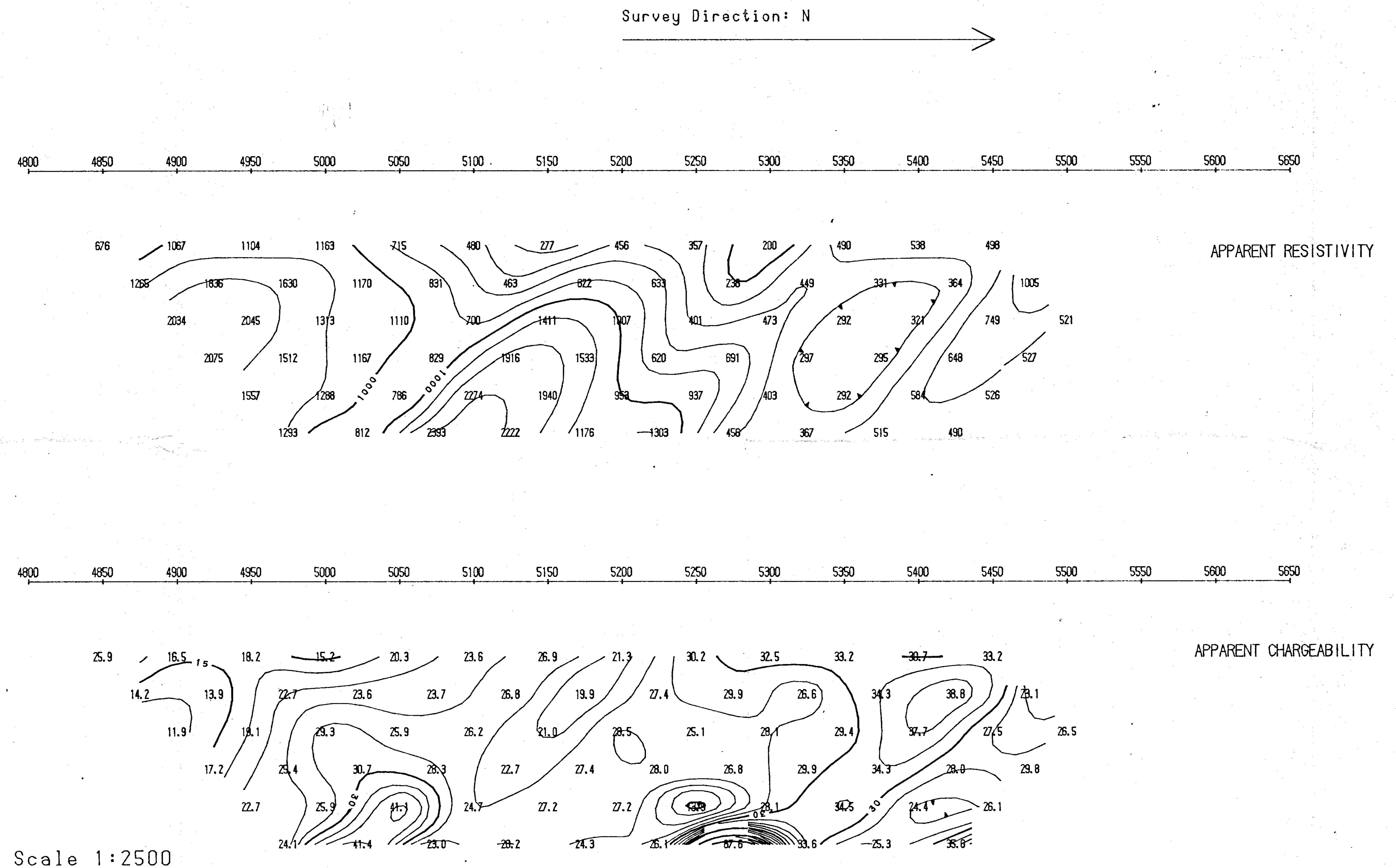
GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 4800E

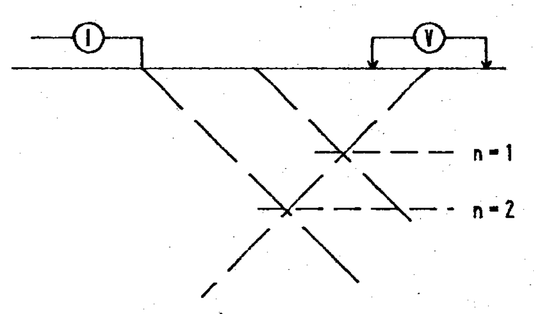
Drawn by:	Job No.	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	11



Scale 1:2500
25 0 25 50 75 100 125
(metres)

Surveyed by GEOTRONICS SURVEYS LTD.
October 1993

Pseudosection Plotting Method



LEGEND

Contour Intervals:
Resistivity : log base 10 ohm-metres
Chargeability: 3 milliseconds

INSTRUMENTATION

Receiver: ANDROTEX TDR-6
Transmitter/Generator: PHOENIX Model IPT-1 2.5 kWatt

SURVEY PARAMETERS

Survey Mode: Time Domain
Array: Pole-Dipole
Dipole Length: 50 metres
Dipole separation: n=1 to 6
Delay Time: 80 milliseconds
Integration Time: 1840 milliseconds
Charge Cycle: 8 second square wave

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,268

GEOTRONICS SURVEYS LTD.

WINFIELD RESOURCES LTD.
QUATSE PROPERTY

QUATSE LAKE, PORT HARDY AREA
NANAIMO M.D., B.C.

APPARENT RESISTIVITY and CHARGEABILITY
PSEUDOSECTIONS
LINE 5000E

Drawn by:	Job No.	NTS	Scale	Date	Map No.
AR	93-05	92L/12	1:2500	Nov.93	12